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
April 13, 2016

Prepared for:
BMC West Corporation

Prepared by:

ZipperGeo
Geoprofessional Consultants

ZipperGeo
Geoprofessional Consultants

April 13, 2016

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

Attn: Mr. Paul S. Street, CAO

RE: 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.

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

State of Washington
Engineering Geologist
1221
Licensed Geologist
Jon Marion Einarsen

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.

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 likely 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.

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.

Table 1. Summarized Analytical Results from TRC Report

Sample #	Media	Units	TPH or VPH	B	T	E	X
BH-1	Soil	mg/kg	99	0.010	0.004	0.0069	0.0065
BH-2			ND[1]	ND	ND	ND	ND
BH-5			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 Cleanup Standard			***30/100***[2]	***0.03***	***7***	***6***	***9***
BH-1	Groundwater	ug/L	2,100	3.0	2.3	2.9	3.8
BH-3			280	ND	ND	ND	6.7
BH-5			3,000	7.3	1.5	10	110
BH-A			5,100	62	96	130	1,300
BH-B			13,000	170	110	350	1,600
BH-C			ND	ND	ND	ND	ND
BH-D			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			***800/1000***[2]	***5***	***1,000***	***700***	***1,000***

TPH, total petroleum hydrocarbons; VPH, volatile petroleum hydrocarbons; B, benzene; T, toluene; E, ethyl benzene; X, xylenes. [1] Not detected; [2] 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.

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:

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 1997 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 and Mr. Jon Einarsen, both licensed geologists 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).

Nine direct push soil borings (GP-1 to GP-9) were advanced in the vicinity of the former UST cavity on the west side of the Property. One direct-push boring (GP-10) was advanced adjacent to a still located outside of the pre-finish room on the east part of the Property.

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 3). 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.

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.

Table 2. Groundwater Elevations (May 24, 2013)

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

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 the available information, the estimated extent of soil contaminated above cleanup levels is indicated on Figure 3.

Table 3. Summarized Analytical Results (Soil)

Sample	Depth (ft.)	Total Petroleum Hydrocarbons (mg/Kg)			Volatile Organic Compounds (mg/Kg)				Metals (mg/Kg)
		GRO	DRO	ORO	B	T	E	X	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 Cleanup Level		100/30*	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 (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). 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.

Table 4. Summarized Analytical Results (Groundwater)

Monitoring Well	Total Petroleum Hydrocarbons (ug/L)			Volatile Organic Compounds (ug/L)					Metals (ug/L)	
	GRO	DRO	ORO	B	T	E	X	MTBE	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

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 have been 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.

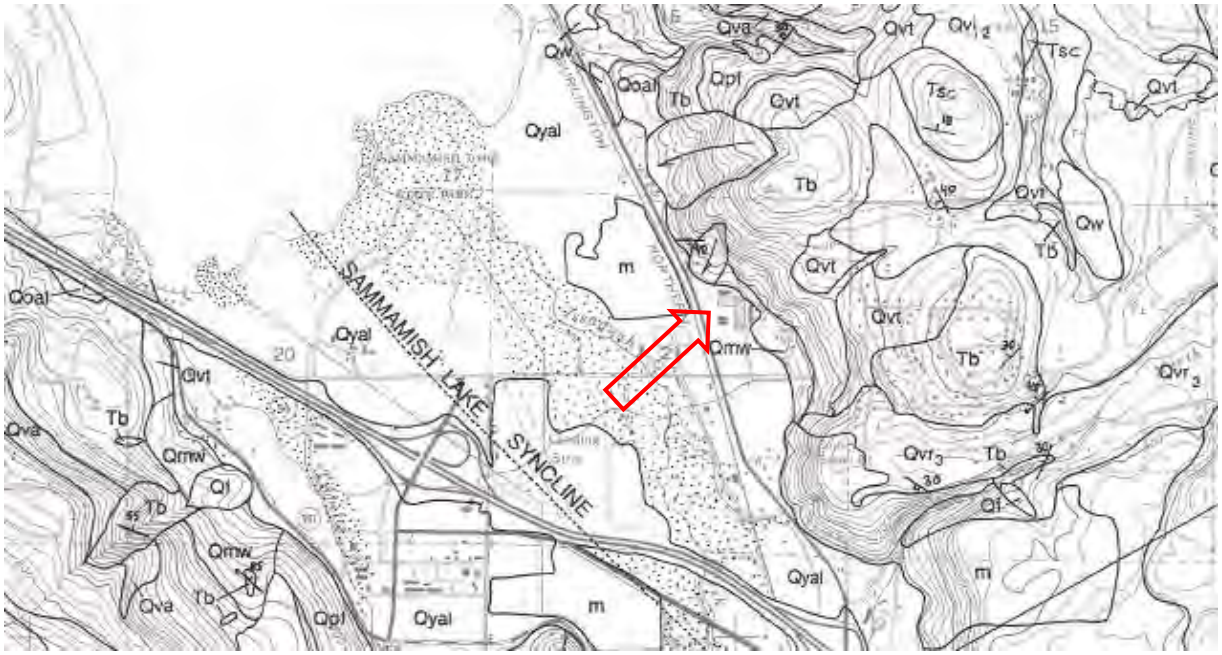

Figure 5. A portion of the Geologic Map of the Issaquah Quadrangle (Booth and Minard, 1992). The approximate location of the Site is indicated by the red arrow.

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.

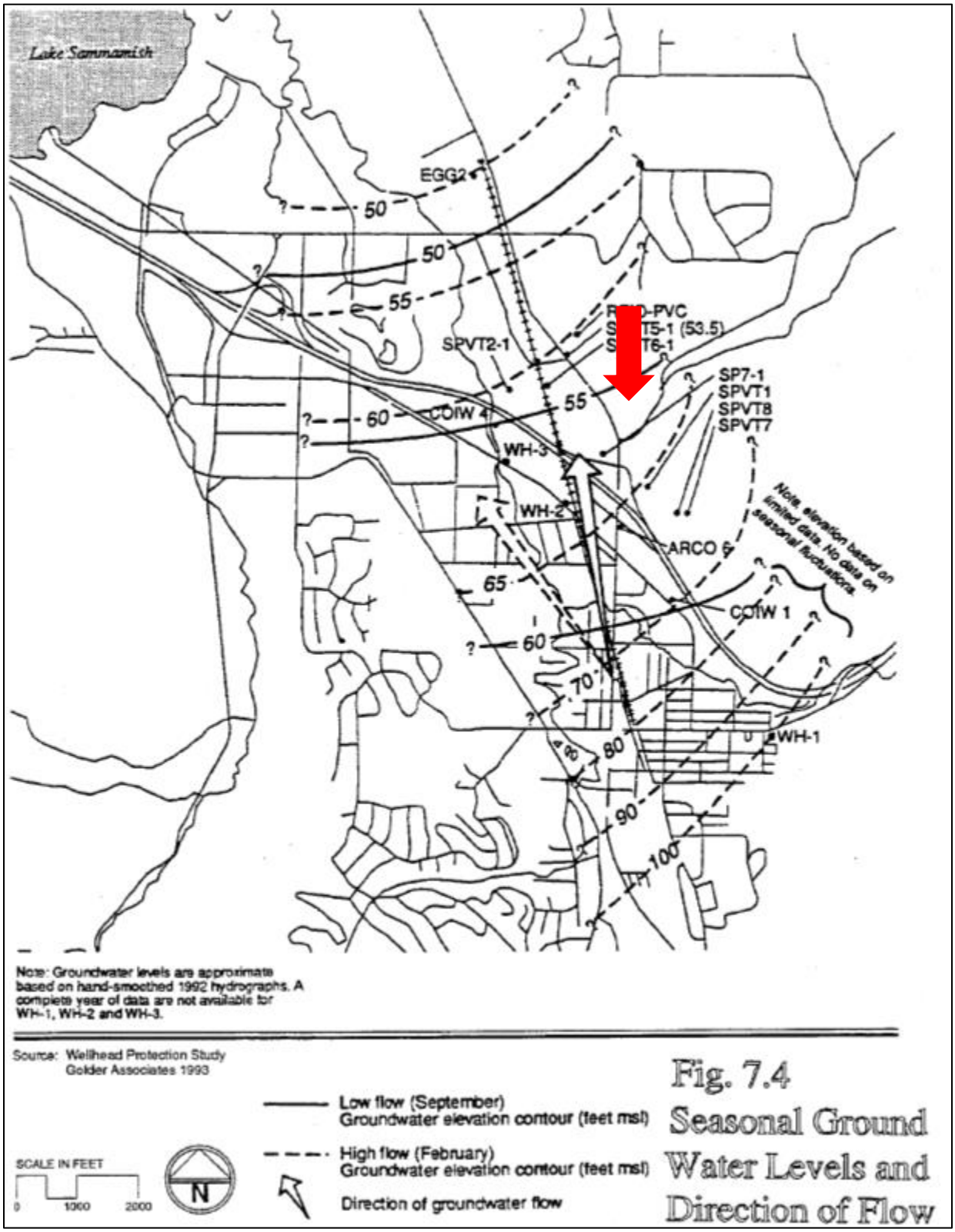

Figure 6. Groundwater contours. The approximate location of the property is indicated by the red arrow.

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).

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.

Soil

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.

Vapor

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 5 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 8 ½ 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".

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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
Institutional Controls	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**
	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**

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

	Protectiveness	Permanence	Long Term Effectiveness	Management of Short Term Risks	Technical and Administrative Implementability	Cost
	• Degree to which existing risks are reduced • Time required to reduce the risk and attain cleanup standards • On-site and off-site risks resulting from implementing the alternative • Improvement of the overall environmental quality	• Degree of permanent reduction of contaminant toxicity, mobility, and volume • Adequacy of destruction of hazardous substances • Reduction or elimination of substance release, and source of release • Degree of irreversibility of waste treatment processes • Characteristics and quantity of generated treatment residuals	• Degree of certainty of that the alternative will be successful • Reliability while contaminants remain on-site greater than cleanup levels • Magnitude of residual risk • Effectiveness of controls implemented to manage residual risk	• Risk to human health and the environment associated with the alternative during construction and implementation • The effectiveness of measures taken manage short-term risks	• Technical possibility • Availability of off-site facilities, services, and materials • Administrative and regulatory requirements • Schedule, size, and complexity of construction • Monitoring requirements • Site access for construction, operations, and monitoring • Integration with existing site operations or other current and potential future remedial action	• Cost of construction • Long-term monitoring, and operations and maintenance costs • Cost to maintain institutional controls • Agency oversight costs
Alternative A 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.	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.

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Table 7. Selected Alternatives Evaluation

	Protectiveness • Degree to which existing risks are reduced • Time required to reduce the risk and attain cleanup standards • On-site and off-site risks resulting from implementing the alternative • Improvement of the overall environmental quality	**Permanence** • Degree of permanent reduction of contaminant toxicity, mobility, and volume • Adequacy of destruction of hazardous substances • Reduction or elimination of substance release, and source of release • Degree of irreversibility of waste treatment processes • Characteristics and quantity of generated treatment residuals	**Long Term Effectiveness** • Degree of certainty that the alternative will be successful • Reliability while contaminants remain on-site greater than cleanup levels • Magnitude of residual risk • Effectiveness of controls implemented to manage residual risk	**Management of Short Term Risks** • Risk to human health and the environment associated with the alternative during construction and implementation • The effectiveness of measures taken manage short-term risks	**Technical and Administrative Implementability** • Technical possibility • Availability of off-site facilities, services, and materials • Administrative and regulatory requirements • Schedule, size, and complexity of construction • Monitoring requirements • Site access for construction, operations, and monitoring • Integration with existing site operations or other current and potential future remedial action	**Cost** • Cost of construction • Long-term monitoring, and operations and maintenance costs • Cost to maintain institutional controls • Agency oversight costs
Alternative B **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.	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

	Protectiveness	Permanence	Long Term Effectiveness	Management of Short Term Risks	Technical and Administrative Implementability	Cost
Alternative C Enhanced Aerobic Bioremediation	• Degree to which existing risks are reduced • Time required to reduce the risk and attain cleanup standards • On-site and off-site risks resulting from implementing the alternative • Improvement of the overall environmental quality	• Degree of permanent reduction of contaminant toxicity, mobility, and volume • Adequacy of destruction of hazardous substances • Reduction or elimination of substance release, and source of release • Degree of irreversibility of waste treatment processes • Characteristics and quantity of generated treatment residuals	• Degree of certainty that the alternative will be successful • Reliability while contaminants remain on-site greater than cleanup levels • Magnitude of residual risk • Effectiveness of controls implemented to manage residual risk	• Risk to human health and the environment associated with the alternative during construction and implementation • The effectiveness of measures taken manage short-term risks	• Technical possibility • Availability of off-site facilities, services, and materials • Administrative and regulatory requirements • Schedule, size, and complexity of construction • Monitoring requirements • Site access for construction, operations, and monitoring • Integration with existing site operations or other current and potential future remedial action	• Cost of construction • Long-term monitoring, and operations and maintenance costs • Cost to maintain institutional controls • Agency oversight costs
	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.	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 groundwater monitoring	$254,000

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 F). 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 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 G.

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 H.

A site plan depicting the location of soil samples collected during the remedial excavation is presented in Figure 7 (Appendix H). 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 H), 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 H). 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)			VOLATILE ORGANIC COMPOUNDS (ug/L)				FATE
			GRO	DRO	ORO	B	T	E	X	
1099-BT1	7-22-15	Baker Tank (Pre-Treatment)	420	790	470	ND<1.0	2.8	11	20	Subsequently treated
1099-BT2	7-24-15		1,100	3,100	490	ND<1.0	1.1	11	16	
TW-1	8-5-15	Poly Tank (Post-Treatment)	ND<50	ND<130	ND<258	ND<1.0	ND<1.0	ND<1.0	ND<3.0	Transmitted to sanitary sewer
TW-2	9-8-15		NA	NA	NA	ND<1.0	ND<1.0	ND<1.0	ND<3.0	

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.

ZipperGeo
Geoprofessional Consultants

Table 9. Remedial Excavation Analytical Results

SAMPLE #	DATE	DEPTH	LOCATION	TOTAL PETROLEUM HYDROCARBONS (mg/kg)			VOLATILE ORGANIC COMPOUNDS (mg/kg)				Pb	FATE
				GRO	DRO	ORO	B	T	E	X		
SP-1	7-20-15	NA	Stockpiled Overburden Soil	ND<3.0			ND<0.03	ND<0.05	ND<0.05	ND<0.2		Clean fill soil returned to excavation
SP-2				ND<3.0			ND<0.03	ND<0.05	ND<0.05	ND<0.2		
SP-3				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	7-21-15	6	Floor North	5.5	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	ND<0.2		Residual
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		6	Floor Southwest	6.5	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	ND<0.2		
1099-6		6	Floor Northeast	4.8	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	ND<0.2		
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	7-22-15	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		6	Sidewall Northwest	ND<3.0	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	ND<0.2		
1099-13		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	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	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	7-24-15	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		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	9-10-15	8	Sidewall South	ND<3.0	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	ND<0.2	5	
1099-19		8		ND<3.0	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	ND<0.2	2.3	
1099-20		8		ND<3.0	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	ND<0.2	3.9	
1099-21		6	Sidewall West	ND<3.0	ND<25	ND<50	ND<0.03	ND<0.05	ND<0.05	ND<0.2	2.9	
1099-21A	9-15-15	6		**120**	ND<25	ND<50	**0.12**	0.29	1.0	0.69	3.4	
1099-22		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	2-4-16	3	Immediately West of the Remedial Excavation in the City of Issaquah Right-Of-Way	ND<3.0			ND<0.03	ND<0.05	ND<0.05	ND<0.2		
HA-2		3		ND<3.0			ND<0.03	ND<0.05	ND<0.05	ND<0.2		
HA-3		3		ND<3.0			ND<0.03	ND<0.05	ND<0.05	ND<0.2		
HA-4		3		ND<3.0			ND<0.03	ND<0.05	ND<0.05	ND<0.2		
Method A Cleanup 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 location of monitoring wells are presented in Appendix J.

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 K. 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.

Table 10. Post-Remediation Groundwater Elevations

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

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 L. Gasoline and BTEX were not reported above laboratory reporting limits in any of the samples.

Table 11. Post-Remediation Groundwater Quality Results

Monitoring Well	Date of Sampling	Gasoline-Range TPH (ug/L)	BTEX (ug/L)			
			Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-1A	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
	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
MW-2	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
	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
MW-3	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
	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
MW-4A	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
	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
MW-5	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
	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

Bkg 4

TRC

April 6, 1998

13945

Mr. Joe Hickey
Washington Department of Ecology
Northwest Regional Office
3190 160th 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.

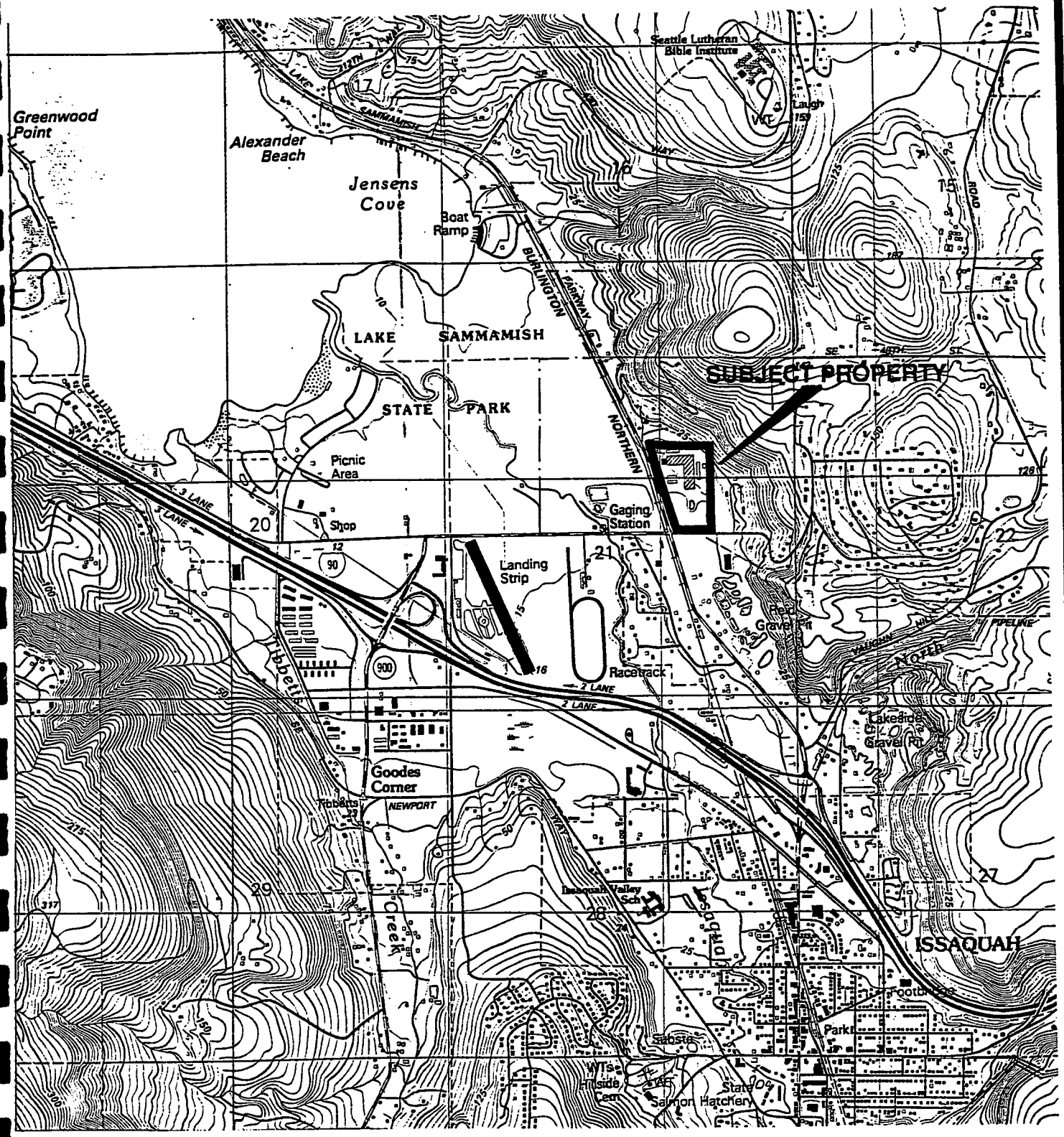
The TRC investigation was conducted in two phases. The first phase consisted of a subsurface investigation conducted on June 25, 1996. Results of the investigation were submitted to the Washington Department of Ecology in a letter report dated July 8, 1996. This investigation was designed with three 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.

TRC Environmental Corporation
11 Inverness Drive East • Englewood, Colorado 80112
Telephone 303-792-5555 • Fax 303-792-0122



SCALE 1 Inch = 250,000 FEET

Bellevue South 1:250,000 Map

N

FIGURE 1

GENERAL SITE LOCATION MAP

BMC WEST

ISSAQUAH, WASHINGTON

TRC	DATE :	PROJECT	FILE ID	REV # :
	1/8/98	13945		1

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.

Table 2
Hnu Photoionization Measurements
Initial TRC Site Investigation

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	5 -.6.5	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

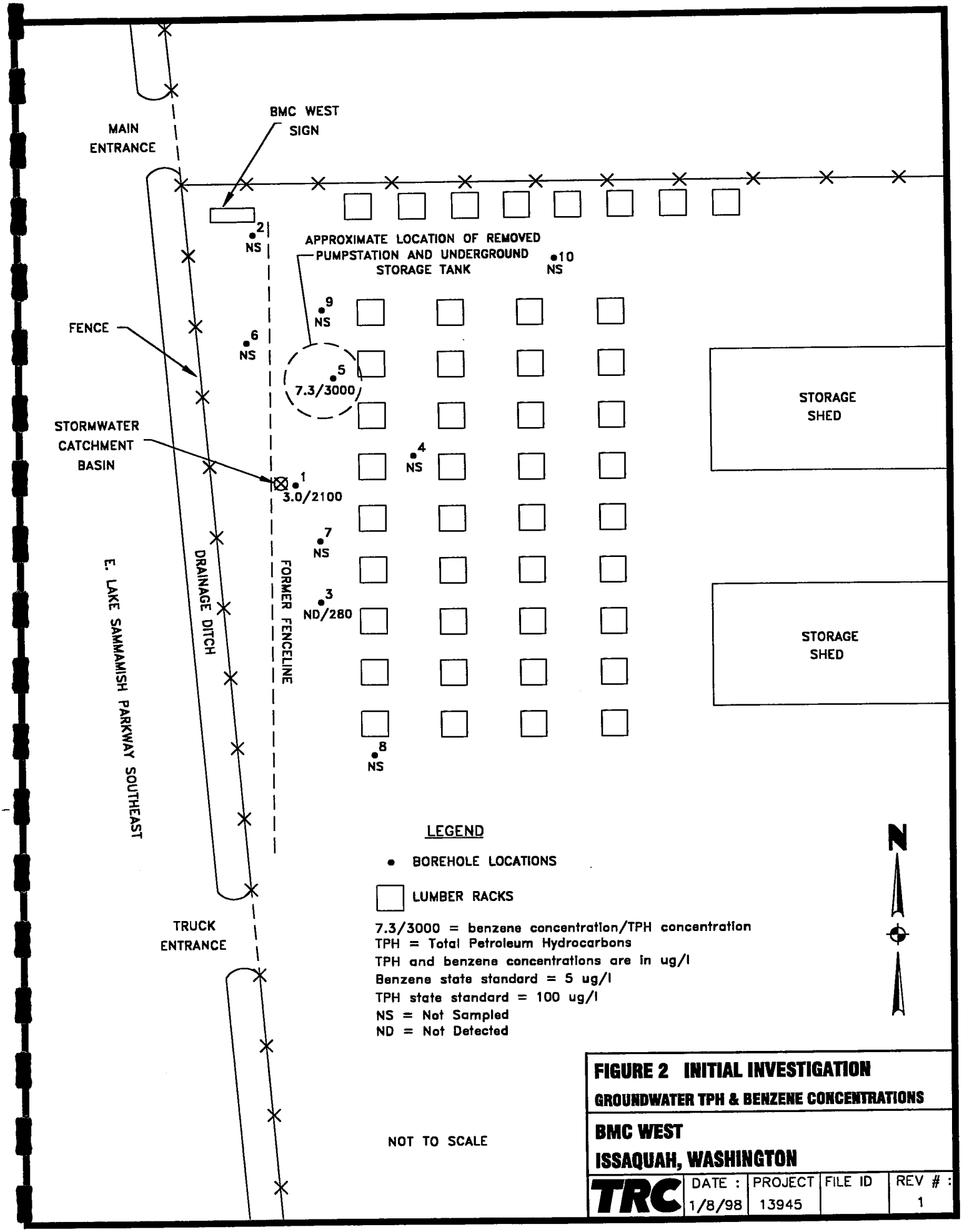


FIGURE 2 INITIAL INVESTIGATION

GROUNDWATER TPH & BENZENE CONCENTRATIONS

BMC WEST

ISSAQUAH, WASHINGTON

TRC	DATE :	PROJECT	FILE ID	REV # :
	1/8/98	13945		1

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
TPH	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 Investigation

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
TPH	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

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).

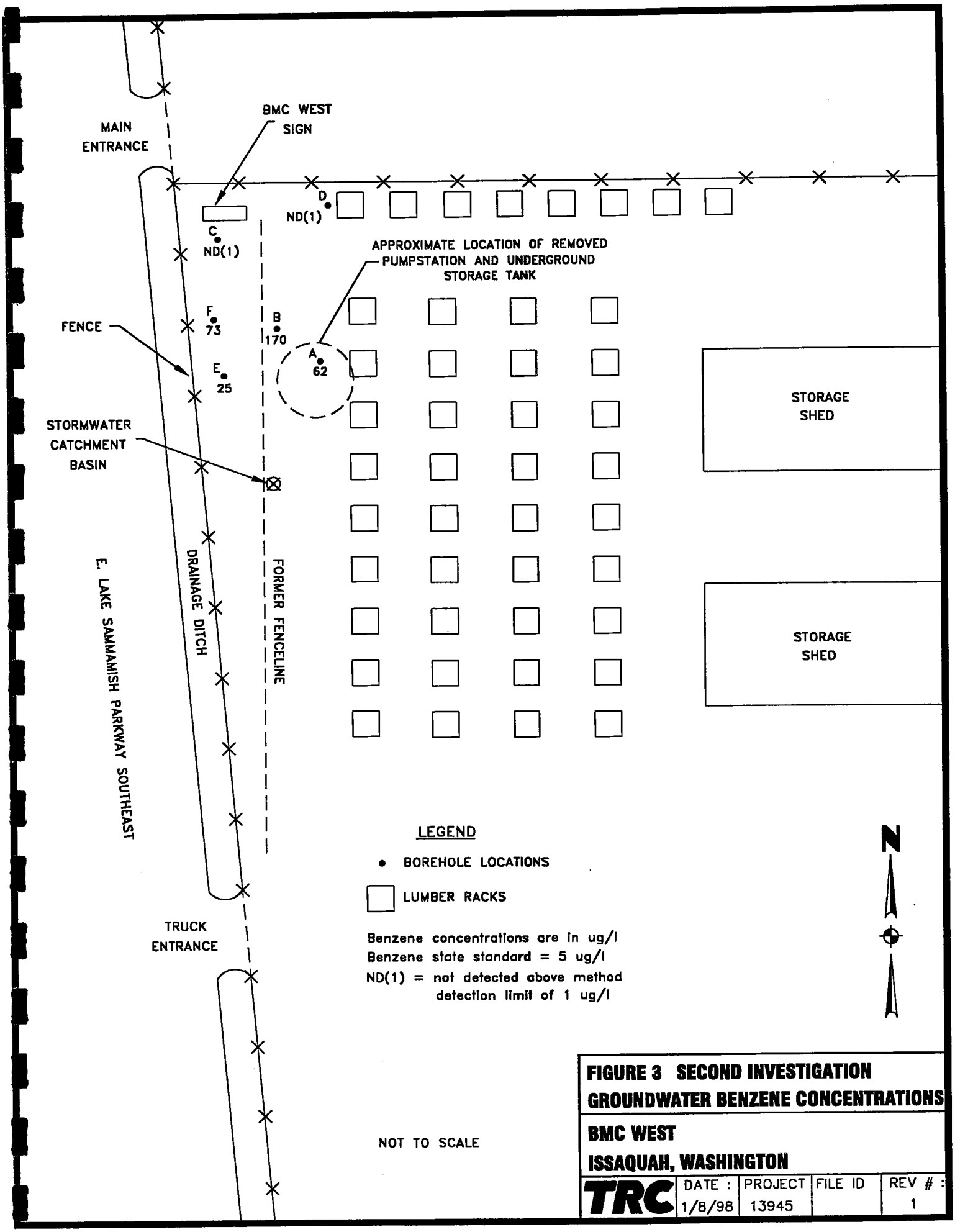


FIGURE 3 SECOND INVESTIGATION GROUNDWATER BENZENE CONCENTRATIONS

BMC WEST

ISSAQUAH, WASHINGTON

TRC	DATE :	PROJECT	FILE ID	REV # :
	1/8/98	13945		1

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.

Table 5
Hnu Photolonization Measurements
Second TRC Site Investigation

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

ppm = parts per million

Table 6
Soil Analytical Results
Second 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

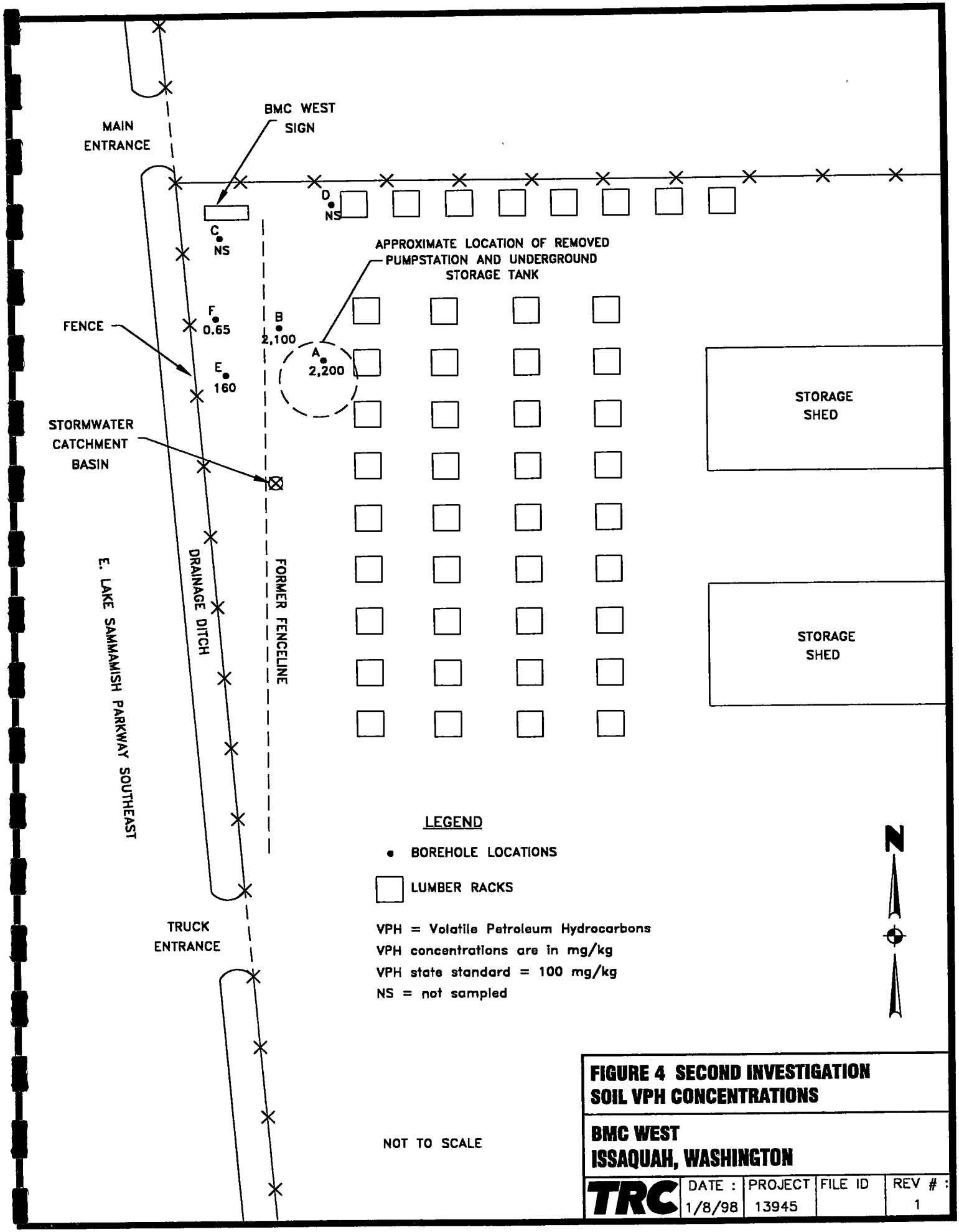


FIGURE 4 SECOND INVESTIGATION SOIL VPH CONCENTRATIONS

BMC WEST
ISSAQUAH, WASHINGTON

TRC	DATE : 1/8/98	PROJECT 13945	FILE ID	REV # : 1

Table 7
Groundwater Analytical Results
Second TRC Site Investigation

Constituent	State Standard	BH-A	BH-B	BH-C	BH-D	BH-E	BH-F
Benzene	5	62	170	$ND_{(1)}$	$ND_{(1)}$	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	$ND_{(2)}$	$ND_{(2)}$	8.2	59
VPH	1000	5100	13000	$ND_{(100)}$	$ND_{(100)}$	870	1500

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 hollow-stem 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

Matt Burrows, P.E.
Principal Design Engineer

cc: P. Street
E. Goebel

Attachments

ATTACHMENT 1

LABORATORY RESULTS

Sample: 02A BH5 Collected: 06/25/96 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units		Analyzed
BTEX	EPA 8020						
Benzene		7.3		1.0	ug/L		06/27/96
Toluene		1.5		1.0	ug/L		06/27/96
Ethylbenzene		10		1.0	ug/L		06/27/96
Xylenes, Total		110		2.0	ug/L		06/27/96
SURROGATES, % Recovery							
p-Bromofluorobenzene		96.7		Min:	80	Max:	120

Sample: 02C BH5 Collected: 06/25/96 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Petroleum Hydrocarbons,T/R	EPA 418.1	3.0		0.10	mg/L	06/28/96

Sample: 03A BH1 Collected: 06/25/96 Matrix: WATER

Test Description	Method	Result	Q	Limit	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 Collected: 06/25/96 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Petroleum Hydrocarbons,T/R	EPA 418.1	2.1		0.10	mg/L	06/28/96

Sample: 04A BH3 Collected: 06/25/96 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
BTEX	EPA 8020					
Benzene		ND		1.0	ug/L	06/28/96
Toluene		ND		1.0	ug/L	06/28/96
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 Collected: 06/25/96 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Petroleum Hydrocarbons,T/R	EPA 418.1	0.28		0.10	mg/L	06/28/96

Sample: 05A BH1 Collected: 06/25/96 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
BTEX	EPA 8020					
Benzene		10		1.3	ug/Kg-DRY	06/27/96
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	WT%	07/01/96
Petroleum Hydrocarbons,T/R	EPA 418.1M	99		4.2	mg/Kg-DRY	06/28/96

Sample: 06A BH2 Collected: 06/25/96 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
BTEX	EPA 8020					
Benzene		ND		1.3	ug/Kg-DRY	06/27/96
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	WT%	07/01/96
Petroleum Hydrocarbons,T/R	EPA 418.1M	31		4.3	mg/Kg-DRY	06/28/96

Sample: 09A BH5 Collected: 06/25/96 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
BTEX	EPA 8020					
Benzene		76	D	6.2	ug/Kg-DRY	06/28/96
Toluene		22	D	6.2	ug/Kg-DRY	06/28/96
Ethylbenzene		100	D	6.2	ug/Kg-DRY	06/28/96
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

Sample: 10A BH6 Collected: 06/25/96 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
BTEX	EPA 8020					
Benzene		28		1.3	ug/Kg-DRY	06/28/96
Toluene		2.2		1.3	ug/Kg-DRY	06/28/96
Ethylbenzene		8.0		1.3	ug/Kg-DRY	06/28/96
Xylenes, Total		31		2.6	ug/Kg-DRY	06/28/96
SURROGATES, % Recovery						
p-Bromofluorobenzene		92.3		Min: 70	Max: 130	
Percent Moisture	ASTM D2216	22.2		0.1	WT%	07/01/96
Petroleum Hydrocarbons,T/R	EPA 418.1M	44		4.2	mg/Kg-DRY	06/28/96

ANALYTICA
ENVIRONMENTAL
LABORATORIES
an Analytica Group company

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

RECEIVED
DEC 23 1997
TRC

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 Number	Client Description
01	BH-A
02	BH-B
03	BH-C
04	BH-D
05	BH-E
06	BH-F
07	BH-A,4'
08	BH-B,4'
09	BH-E,4'
10	BH-F,4'
11	TRIP BLANK

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,

Linda K. Wolf for

Claire Toon
Project Manager

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.

Sample: 01A BH-A Collected: 12/04/97 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units		Analyzed
BTEX	EPA 8021B						
Benzene		62	D	10	ug/L		12/15/97
Toluene		96	D	10	ug/L		12/15/97
Ethylbenzene		130	D	10	ug/L		12/15/97
Xylenes, Total		1300	D	20	ug/L		12/15/97
SURROGATES, % Recovery							
p-Bromofluorobenzene		107		Min:	76	Max:	112
Volatile Pet Hydrocarbons	8015B/API						
VPH		5100	D	1000	ug/L		12/15/97
SURROGATES, % Recovery							
p-Bromofluorobenzene		93.3		Min:	70	Max:	130

Sample: 02A BH-B Collected: 12/04/97 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units		Analyzed
BTEX	EPA 8021B						
Benzene		170	D	10	ug/L		12/15/97
Toluene		110	D	10	ug/L		12/15/97
Ethylbenzene		350	D	10	ug/L		12/15/97
Xylenes, Total		1600	D	20	ug/L		12/15/97
SURROGATES, % Recovery							
p-Bromofluorobenzene		96.7		Min:	76	Max:	112
Volatile Pet Hydrocarbons	8015B/API						
VPH		13000	D	1000	ug/L		12/15/97
SURROGATES, % Recovery							
p-Bromofluorobenzene		117		Min:	70	Max:	130

Sample: 03A BH-C Collected: 12/04/97 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units		Analyzed
BTEX	EPA 8021B						
Benzene		ND		1.0	ug/L		12/15/97
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		107		Min:	76	Max:	112
Volatile Pet Hydrocarbons	8015B/API						
VPH		ND		100	ug/L		12/15/97
SURROGATES, % Recovery							
p-Bromofluorobenzene		100		Min:	70	Max:	130

Sample: 04A BH-D Collected: 12/04/97 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units		Analyzed
BTEX	EPA 8021B						
Benzene		ND		1.0	ug/L		12/15/97
Toluene		1.0		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	8015B/API						
VPH		ND		100	ug/L		12/15/97
SURROGATES, % Recovery							
p-Bromofluorobenzene		100		Min:	70	Max:	130

Sample: 05A BH-E Collected: 12/04/97 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units		Analyzed
BTEX	EPA 8021B						
Benzene		25		1.0	ug/L		12/15/97
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	8015B/API						
VPH		870		100	ug/L		12/15/97
SURROGATES, % Recovery							
p-Bromofluorobenzene		100		Min:	70	Max:	130

Sample: 06A BH-F Collected: 12/04/97 Matrix: WATER

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

Sample: 07A BH-A,4' Collected: 12/04/97 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units		Analyzed
BTEX	EPA 8021B						
Benzene		11000	D	1600	ug/Kg-DRY		12/16/97
Toluene		5200	D	1600	ug/Kg-DRY		12/16/97
Ethylbenzene		24000	D	1600	ug/Kg-DRY		12/16/97
Xylenes, Total		280000	D	3200	ug/Kg-DRY		12/16/97
SURROGATES, % Recovery							
p-Bromofluorobenzene		123	*	Min:	61	Max:	114
Percent Moisture	ASTM D2216	21.9		0.1	WT%		12/10/97
Volatile Pet Hydrocarbons	8015B/API						
VPH		2200000	D	160000	ug/Kg-DRY		12/16/97
SURROGATES, % Recovery							
p-Bromofluorobenzene		104		Min:	50	Max:	150

Sample: 08A BH-B,4' Collected: 12/04/97 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units		Analyzed
BTEX	EPA 8021B						
Benzene		15000	D	1600	ug/Kg-DRY		12/16/97
Toluene		8800	D	1600	ug/Kg-DRY		12/16/97
Ethylbenzene		15000	D	1600	ug/Kg-DRY		12/16/97
Xylenes, Total		110000	D	3200	ug/Kg-DRY		12/16/97
SURROGATES, % Recovery							
p-Bromofluorobenzene		117	*	Min:	61	Max:	114
Percent Moisture	ASTM D2216	22.0		0.1	WT%		12/10/97
Volatile Pet Hydrocarbons	8015B/API						
VPH		2100000	D	160000	ug/Kg-DRY		12/16/97
SURROGATES, % Recovery							
p-Bromofluorobenzene		104		Min:	50	Max:	150

Sample: 09A BH-E,4' Collected: 12/04/97 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units		Analyzed
BTEX	EPA 8021B						
Benzene		1000	D	130	ug/Kg-DRY		12/16/97
Toluene		290	D	130	ug/Kg-DRY		12/16/97
Ethylbenzene		1400	D	130	ug/Kg-DRY		12/16/97
Xylenes, Total		4100	D	270	ug/Kg-DRY		12/16/97
SURROGATES, % Recovery							
p-Bromofluorobenzene		97.5		Min:	61	Max:	114
Percent Moisture	ASTM D2216	6.60		0.1	WT%		12/10/97
Volatile Pet Hydrocarbons	8015B/API						
VPH		160000	D	13000	ug/Kg-DRY		12/16/97
SURROGATES, % Recovery							
p-Bromofluorobenzene		175	*	Min:	50	Max:	150

Sample: 10A BH-F,4' Collected: 12/04/97 Matrix: SOIL

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

Test Description	Method	Result	Q	Limit	Units		Analyzed
BTEX	EPA 8021B						
Benzene		ND		1.0	ug/L		12/15/97
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	8015B/API						
VPH		ND		100	ug/L		12/15/97
SURROGATES, % Recovery							
p-Bromofluorobenzene		100		Min:	70	Max:	130

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

BTEX_S: BTEX (GCPID) METHOD: 8020

BTEX_W: BTEX (GCPID) METHOD: 8020

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.

PMOIST: PERCENT MOISTURE METHOD: ASTM D2216

Sample: 01A BH-A — Matrix: WATER

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

Sample: 02A BH-B — Matrix: WATER

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

Sample: 03A BH-C — Matrix: WATER

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

Sample: 04A BH-D — Matrix: WATER

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

Sample: 05A BH-E — Matrix: WATER

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

Sample: 06A BH-F — Matrix: WATER

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

Sample: 07A BH-A,4' — Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
BTEX	EPA 8021B	12/04/97	12/05/97	NA		12/16/97
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		12/16/97

Sample: 08A BH-B,4' — Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
BTEX	EPA 8021B	12/04/97	12/05/97	NA		12/16/97
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		12/16/97

Sample: 09A BH-E,4' Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
BTEX	EPA 8021B	12/04/97	12/05/97	NA		12/16/97
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		12/16/97

Sample: 10A BH-F,4' Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
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

Sample: 11A TRIP BLANK Matrix: WATER

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

ATTACHMENT 2

CORRESPONDENCE

24/06-21C

Application No. .....

Permit No. .....

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

(1) OWNER: Name Daniel T. Anderson Address 24723 S.E. 30th Issaquah Wash. 98027

(2) LOCATION OF WELL: County King — NE ¼ NW ¼ Sec. 21 T. 24 N., R. 6E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one).... 1
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 8 inches.
Drilled 200 ft. Depth of completed well 200 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 8 " Diam. from 0 ft. to 200 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name Jacuzzi
Type: 2S4C HP 2

(8) WATER LEVELS: Land-surface elevation above mean sea level.... ft.
Static level 130 ft. below top of well Date 5-2-77
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 30 gal./min. with 50 ft. drawdown after 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brown Silt, Sand, Clay	0	3
Gray Sand	3	6
Brown Silty Clay	6	8
Gray Silty Sand	8	11
Brown Silty Sand	11	13
Gray Silty Sand	13	18
Gray Silt Stone	18	119
Bolder & Rock	119	121
Silt Stone	121	200

RECEIVED
OCT 21 1977
DEPARTMENT OF ECOLOGY
SOUTHWEST REGIONAL OFFICE

Work started 5-2 19 77 Completed 5-2 19 77

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Richardson Well Drilling Co.
(Person, firm, or corporation) (Type or print)

Address P.O. Box 44408 Tacoma, Wash.

[Signed] (Well Driller)

License No. 223-02-6500 Date Oct. 7 19 77

(USE ADDITIONAL SHEETS IF NECESSARY)

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.

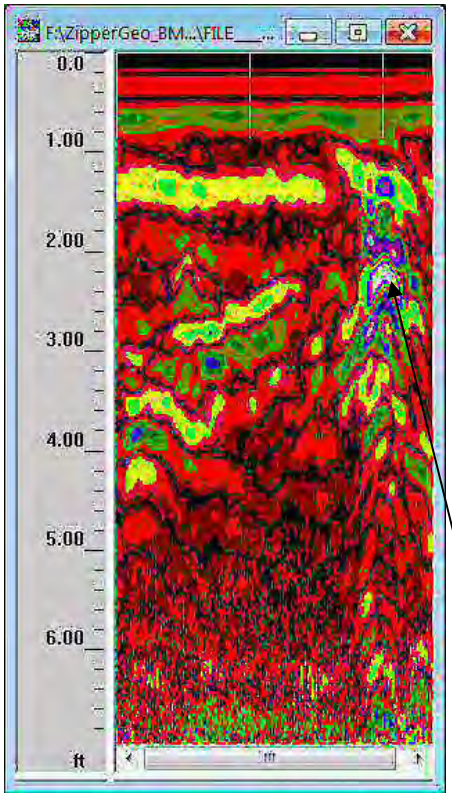
Respectfully,

Richard A. Lund

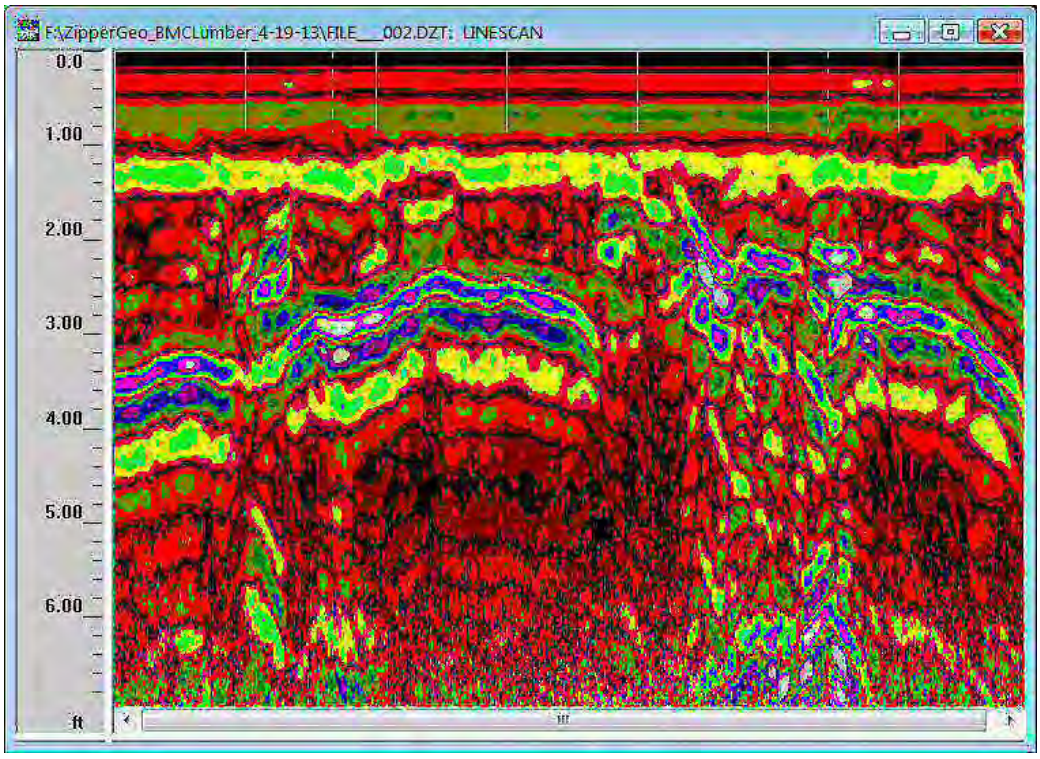
Possible UST pit

Unknown anomaly north of UST pit

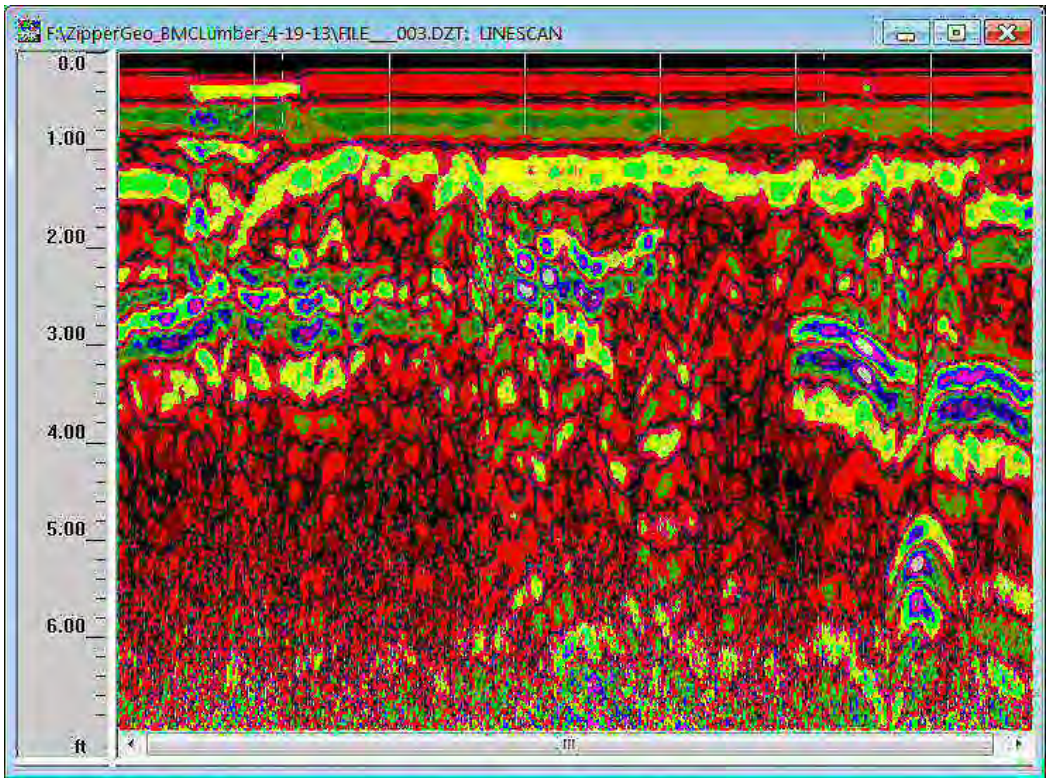
Electrical lines along perimeter fence



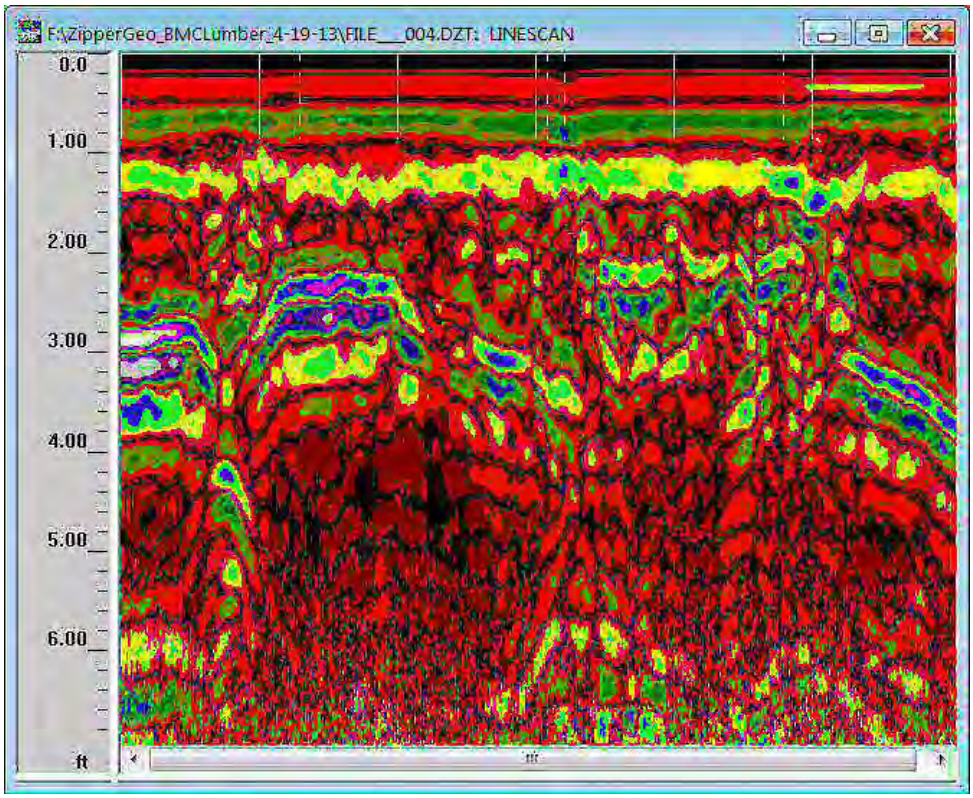
GPR Data; Catch basin, South to North, drain line



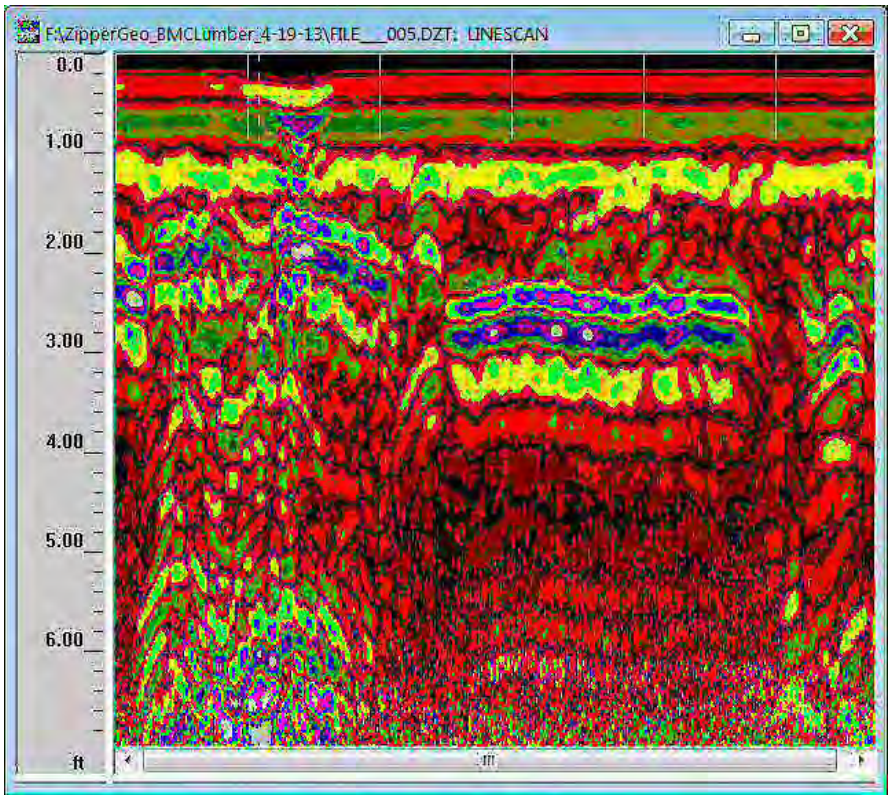
GPR Data; UST oit, East to West



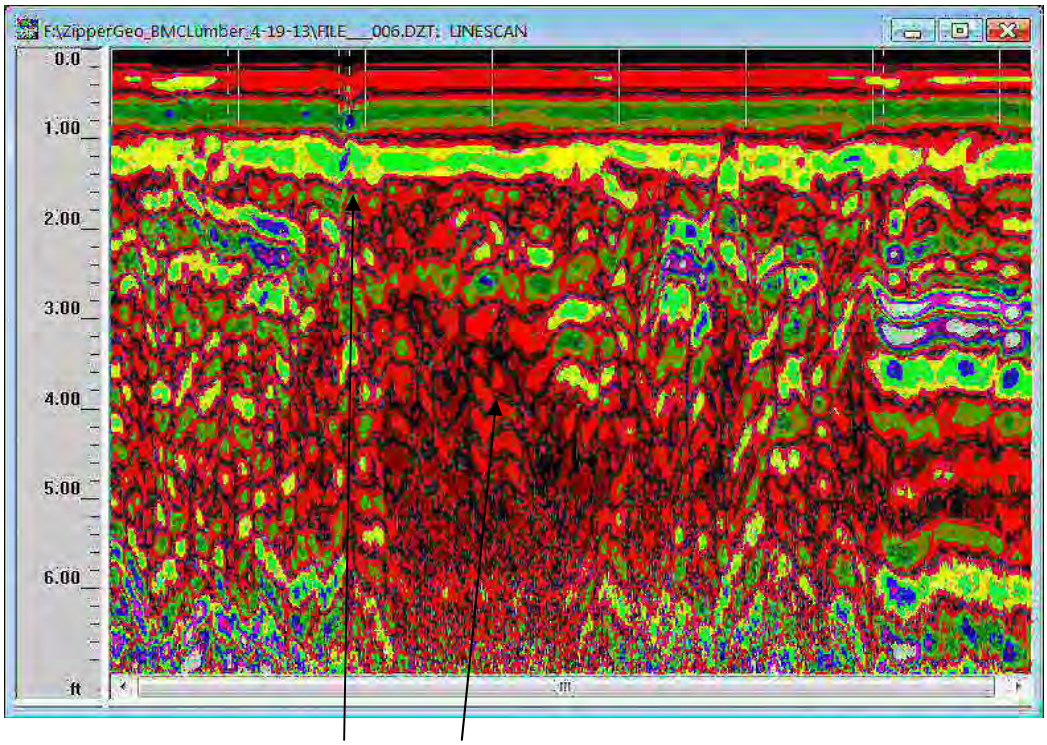
GPR Data; UST pit, W-E



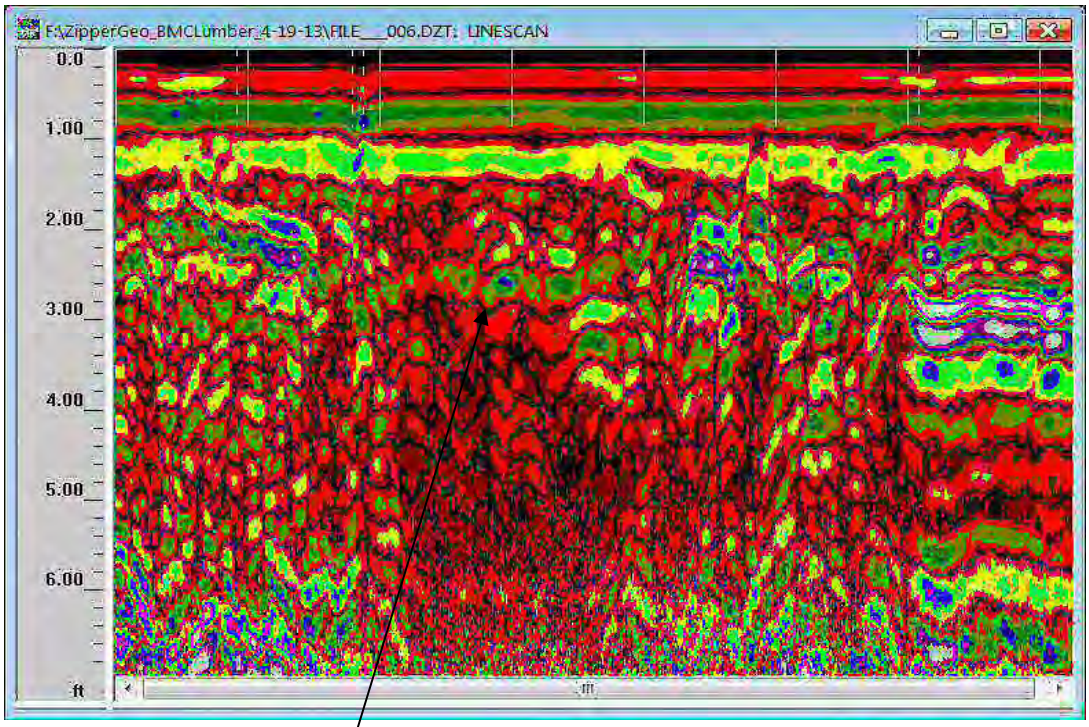
GPR Data; UST pit, S-N



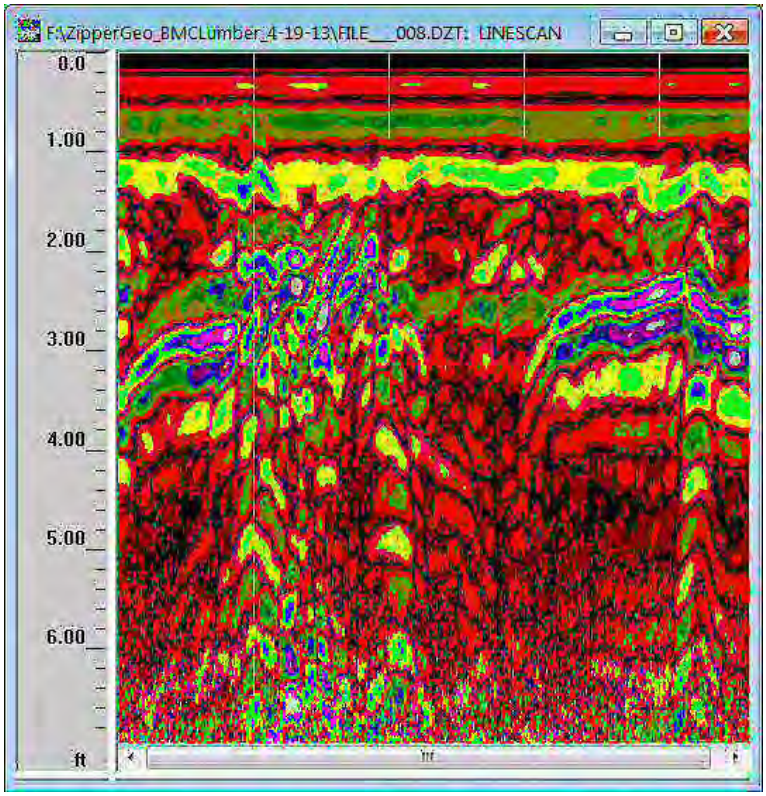
GPR Data; UST pit, N-S



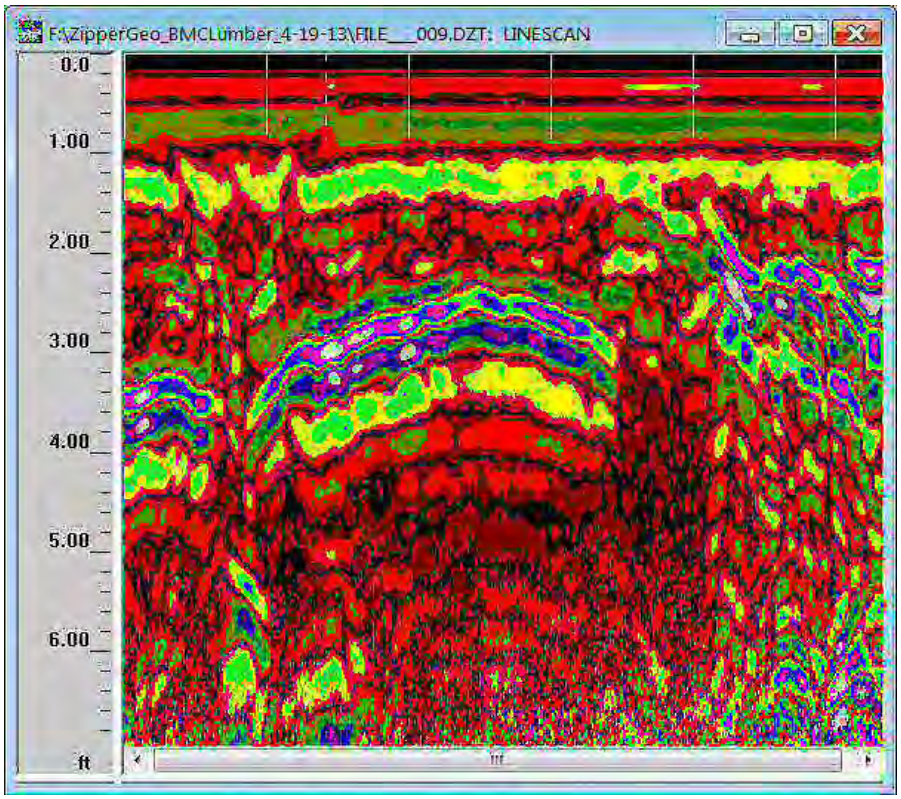
GPR Data; UST pit, S-N, soil boring, excavation



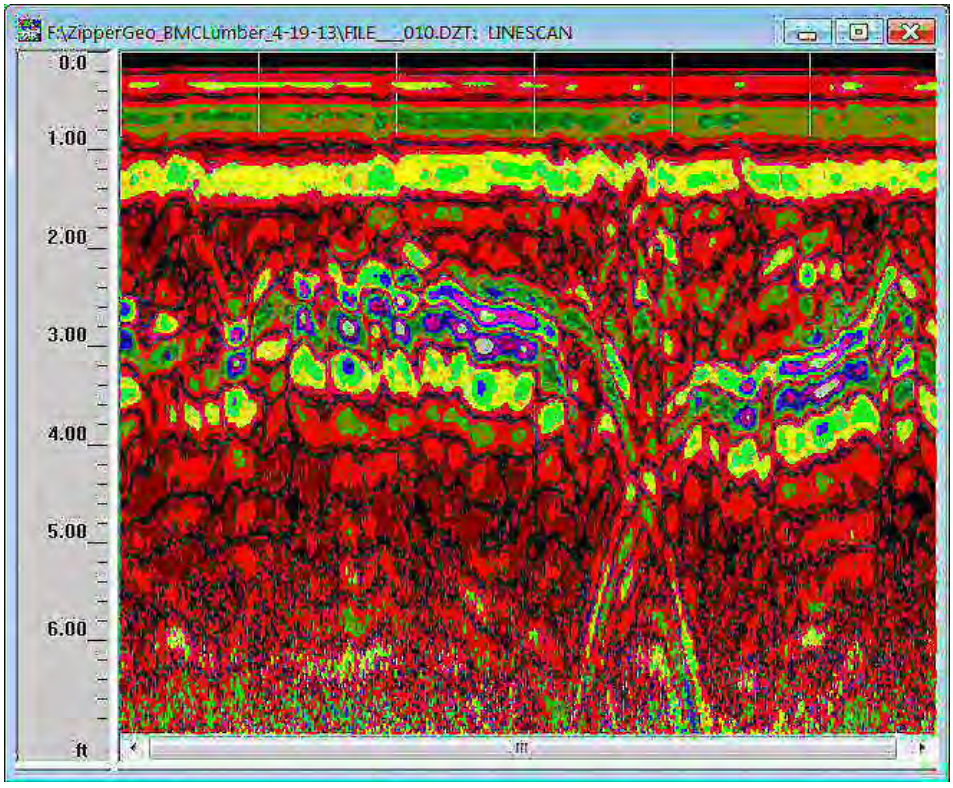
GPR Data; UST pit, S-N, excavation



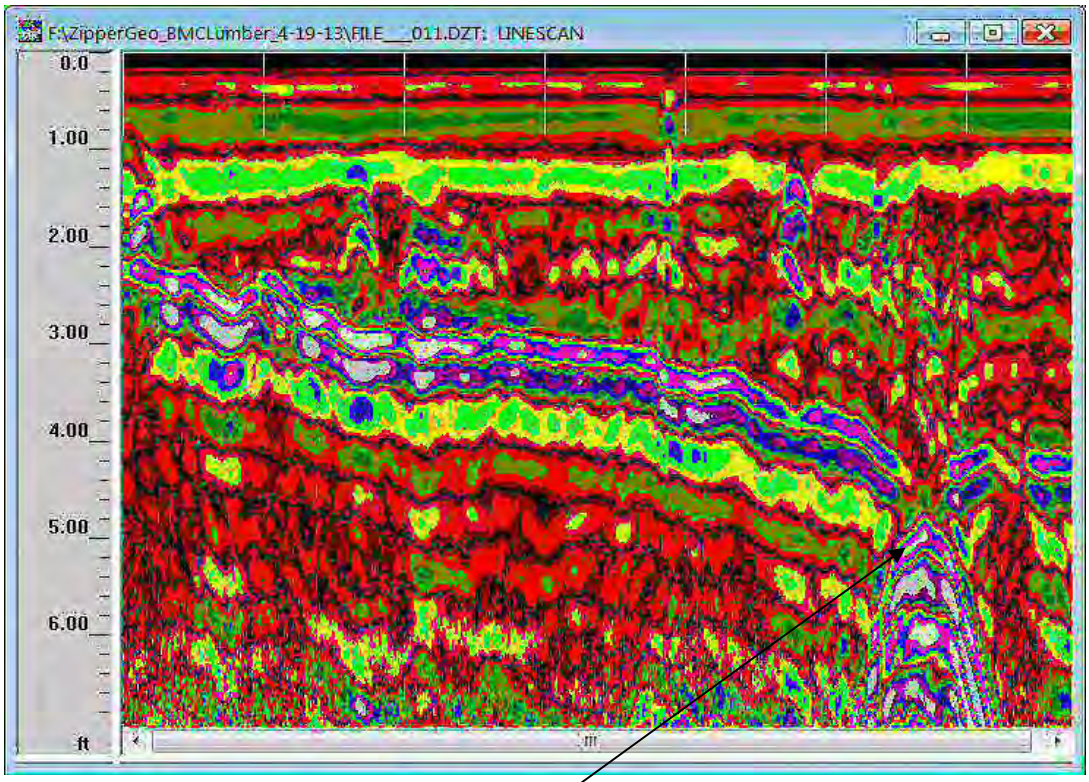
GPR Data; UST pit, W-E



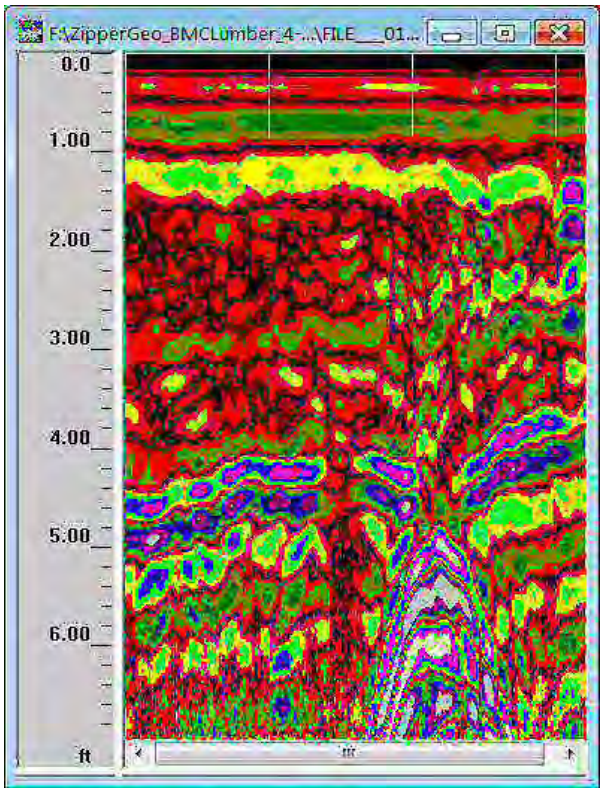
GPR Data; UST pit, E-W



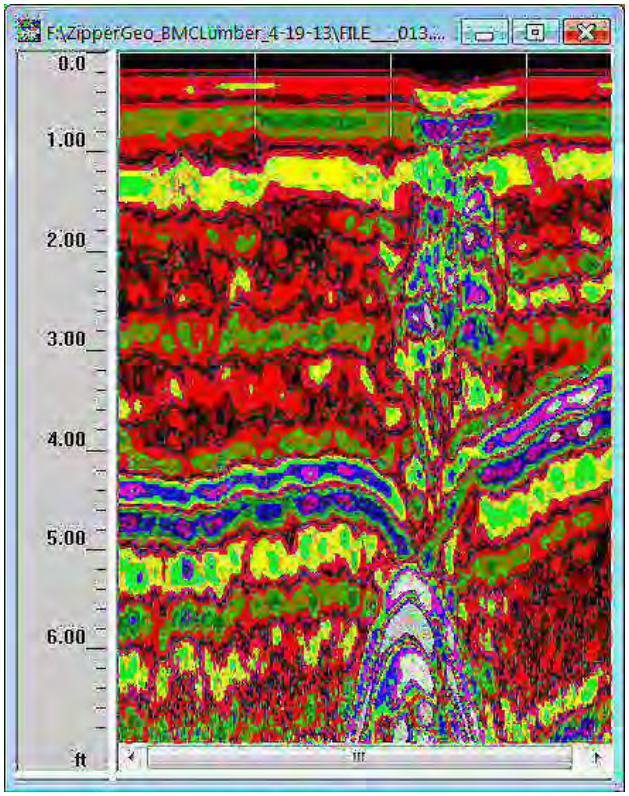
GPR Data; South of UST pit, W-E



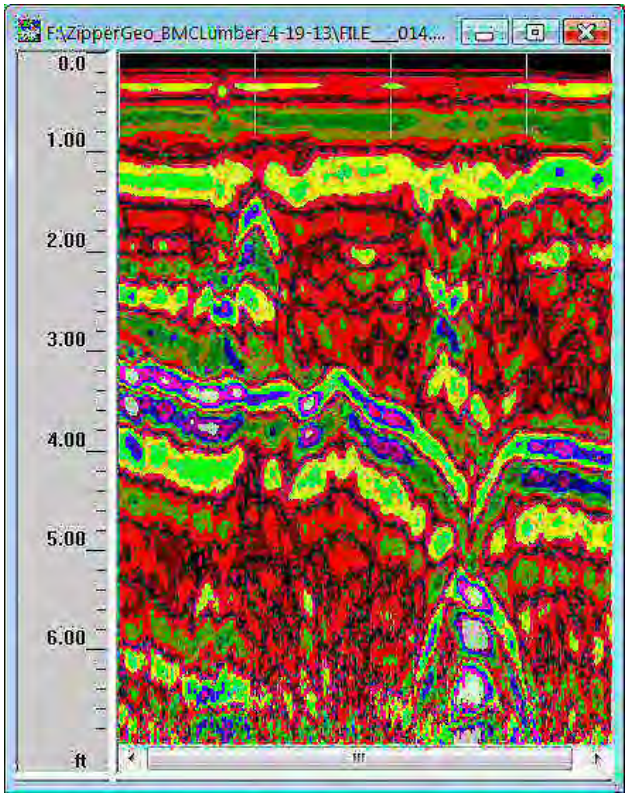
GPR Data; North of UST pit, W-E, unknown anomaly



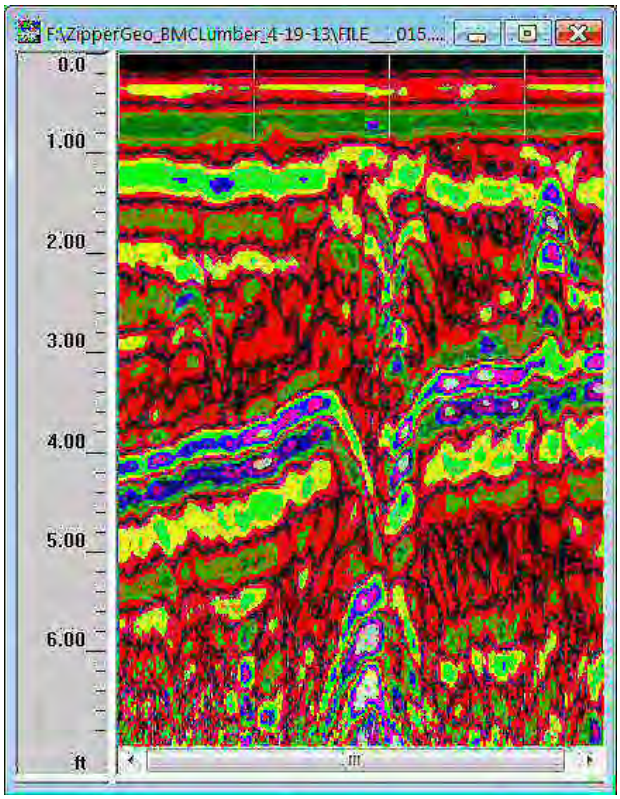
GPR Data; North of UST pit, E-W



GPR Data; North of UST pit, W-E

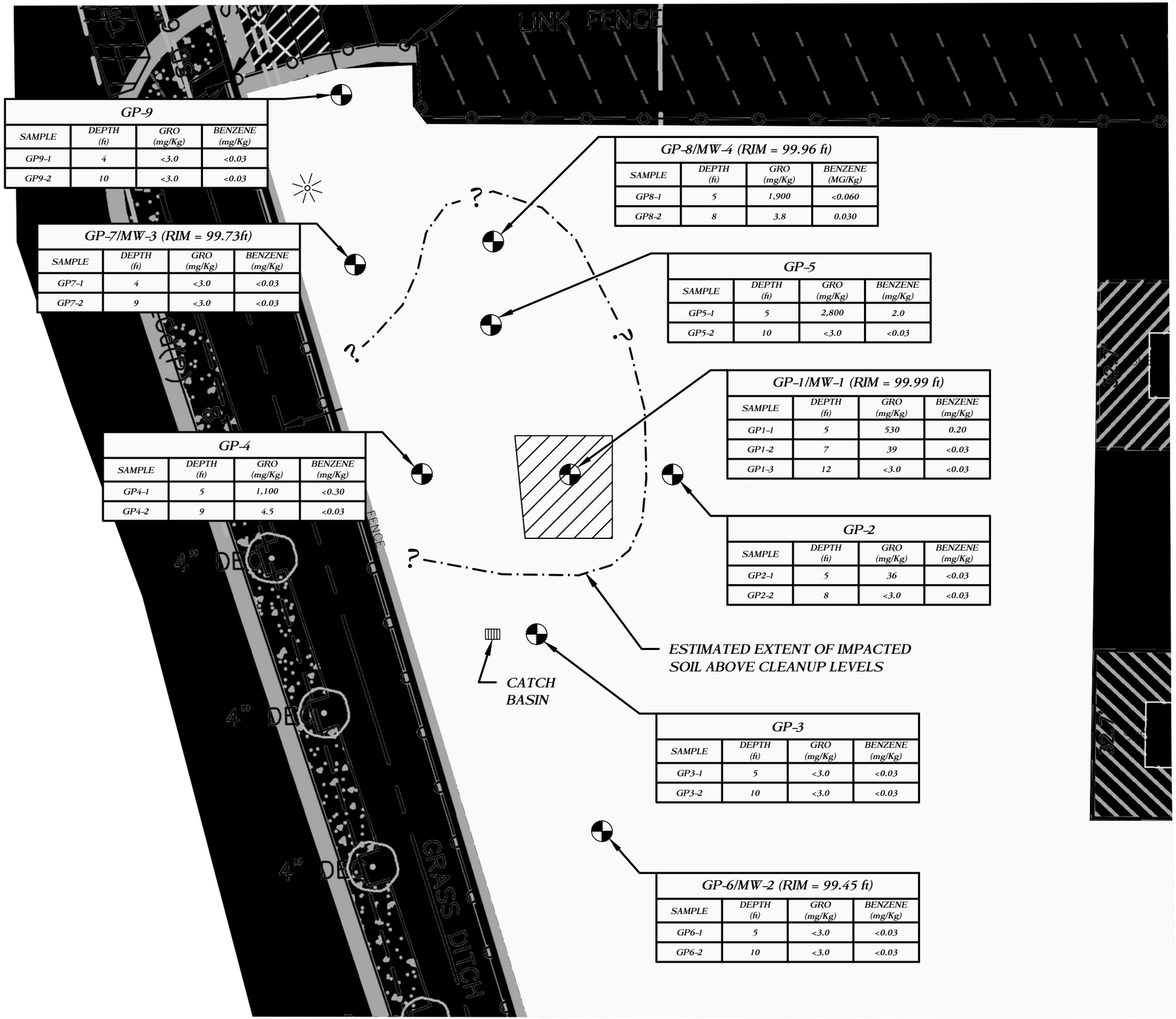


GPR Data; North of UST pit, E-W



GPR Data; North of UST pit, W-E

Appendix C – Supplemental Subsurface Investigation Figures



GP-9

SAMPLE	DEPTH (ft)	GRO (mg/Kg)	BENZENE (mg/Kg)
GP9-1	4	<3.0	<0.03
GP9-2	10	<3.0	<0.03

GP-7/MW-3 (RIM = 99.73ft)

SAMPLE	DEPTH (ft)	GRO (mg/Kg)	BENZENE (mg/Kg)
GP7-1	4	<3.0	<0.03
GP7-2	9	<3.0	<0.03

GP-4

SAMPLE	DEPTH (ft)	GRO (mg/Kg)	BENZENE (mg/Kg)
GP4-1	5	1,100	<0.30
GP4-2	9	4.5	<0.03

GP-8/MW-4 (RIM = 99.96 ft)

SAMPLE	DEPTH (ft)	GRO (mg/Kg)	BENZENE (MG/Kg)
GP8-1	5	1,900	<0.060
GP8-2	8	3.8	0.030

GP-5

SAMPLE	DEPTH (ft)	GRO (mg/Kg)	BENZENE (mg/Kg)
GP5-1	5	2,800	2.0
GP5-2	10	<3.0	<0.03

GP-1/MW-1 (RIM = 99.99 ft)

SAMPLE	DEPTH (ft)	GRO (mg/Kg)	BENZENE (mg/Kg)
GP1-1	5	530	0.20
GP1-2	7	39	<0.03
GP1-3	12	<3.0	<0.03

GP-2

SAMPLE	DEPTH (ft)	GRO (mg/Kg)	BENZENE (mg/Kg)
GP2-1	5	36	<0.03
GP2-2	8	<3.0	<0.03

GP-3

SAMPLE	DEPTH (ft)	GRO (mg/Kg)	BENZENE (mg/Kg)
GP3-1	5	<3.0	<0.03
GP3-2	10	<3.0	<0.03

GP-6/MW-2 (RIM = 99.45 ft)

SAMPLE	DEPTH (ft)	GRO (mg/Kg)	BENZENE (mg/Kg)
GP6-1	5	<3.0	<0.03
GP6-2	10	<3.0	<0.03

LEGEND

GP-1/MW-1 (RIM = 99.99 ft) — DIRECT PUSH/GROUNDWATER MONITORING WELL NUMBER AND APPROXIMATE LOCATION. GROUNDWATER MONITORING WELL MONUMENT RIM ELEVATION IN FEET.

SITE SPECIFIC BENCHMARK PK NAIL WITH WASHER ASSUMED ELEVATION = 100 FEET

APPROXIMATE LOCATION OF UNDERGROUND STORAGE TANK CAVITY IDENTIFIED BY GROUND PENETRATING RADAR SURVEY

N

20 0 10 20

SCALE IN FEET

BMC WEST
5210 East Lake Sammamish Parkway SE
Issaquah, Washington

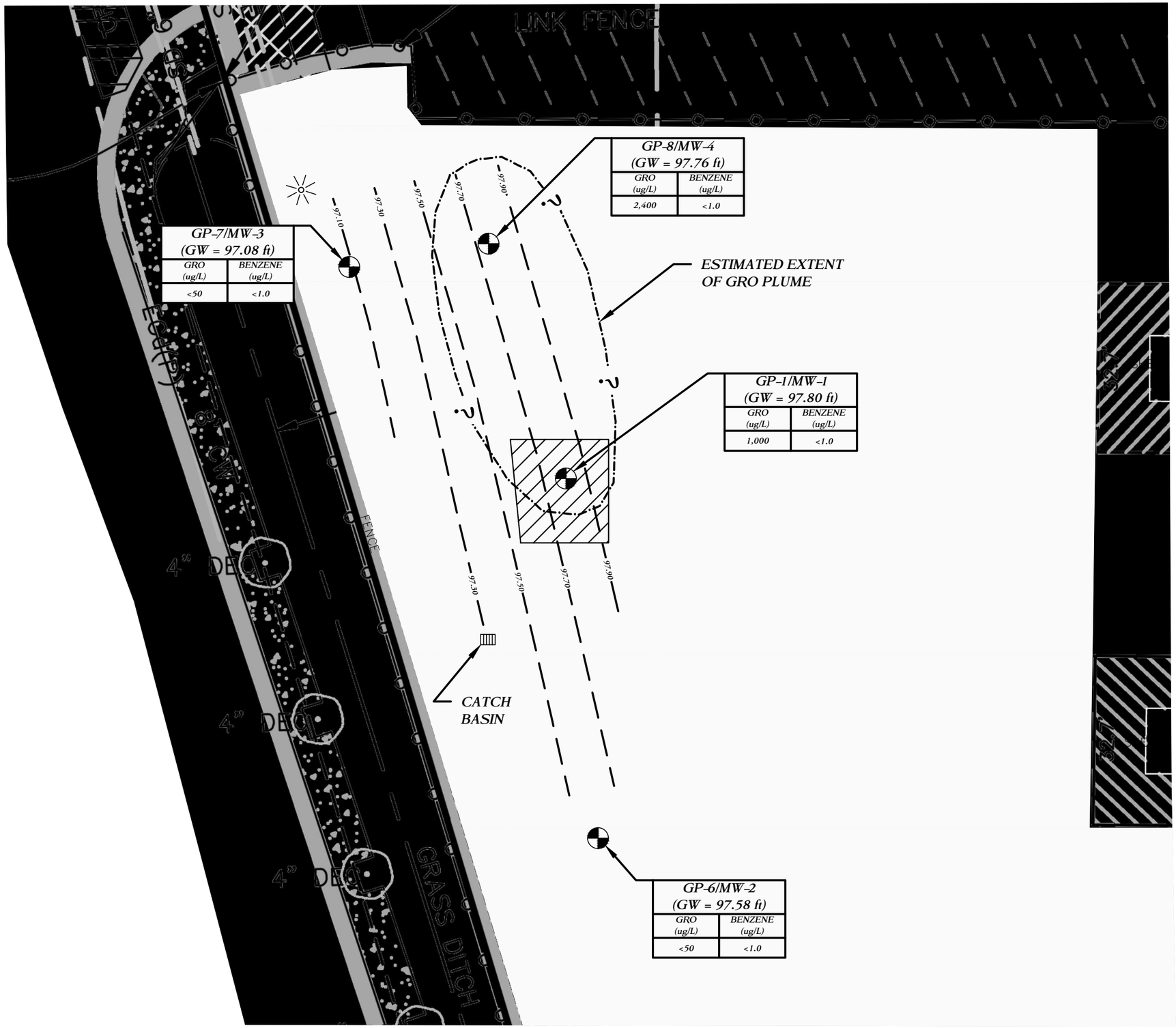
SUMMARY OF
SOIL ANALYTICAL TEST RESULTS

DATE: JUNE 2013 Job No. 1099.22

Zipper Geo Associates, LLC
19023 36th Ave. W.,Suite D
Lynnwood, WA

FIGURE 3

SHT. 1 of 1



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.

SITE SPECIFIC BENCHMARK
PK NAIL WITH WASHER
ASSUMED ELEVATION = 100 FEET

97.60 — ESTIMATED GROUNDWATER SURFACE CONTOUR WITH ELEVATION IN FEET

APPROXIMATE LOCATION OF UNDERGROUND STORAGE TANK CAVITY IDENTIFIED BY GROUND PENETRATING RADAR SURVEY

N

20 0 10 20
SCALE IN FEET

BMC WEST
5210 East Lake Sammamish Parkway SE
Issaquah, Washington

SUMMARY OF GROUNDWATER ANALYTICAL TEST RESILTS

DATE: JUNE 2013 Job No. 1099.22

Zipper Geo Associates, LLC
19023 36th Ave. W.,Suite D
Lynnwood, WA

FIGURE 4
SHT. *1* of *1*

Appendix D – Supplemental Subsurface Investigation Exploration Logs

Boring Location: See Figure 2, Site and Exploration Plan	Drilling Company: Cascade Drilling	Bore Hole Dia.: 2-1/4"	GP1
Top Elevation: -	Drilling Method: Direct Push	Hammer Type: NA	
Date Drilled: 4/25/2013	Drill Rig: Track	Logged by: JPG	

Depth (ft)	SOIL DESCRIPTION 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 to wet, sandy GRAVEL, some silt. Moderate probe resistance. Slight hydrocarbon odor noted at 2 feet. (Fill)					
	Dark brown, wet, SILT, some fine sand, trace fine roots. Easily probed. Moderate hydrocarbon odor noted. (Possible Relic Topsoil)	GP 1-1 6		PID@5'=660ppm	NT	TPH, BTEX, MTBE, LEAD
5	Brown grading to gray, wet grading to saturated, silty fine SAND, trace clay. Easily probed. Moderate hydrocarbon odor noted to about 8 feet. (Alluvium)	GP 1-2 6	4/25/13		NT	TPH, BTEX, MTBE, LEAD
				PID@9.5'=0ppm	NT	
10	Gray, saturated, silty SAND. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)	GP 1-3 6		PID@12'=0ppm	NT	TPH, BTEX, MTBE, LEAD
	Light gray, saturated, SILT. Easily probed. No obvious hydrocarbon odor noted. (Possible Volcanic Ash)					
15	Exploration completed at 15 feet . Groundwater observed at approximately 6 feet ATD. Well tag # BIC-221.					
20						
25						

SAMPLE LEGEND

I Retained portion of 2-inch direct push sample

GROUNDWATER LEGEND

- Clean Sand
- Bentonite
- Grout/Concrete
- Screened Casing
- Blank Casing
- ▼ 11/2/12 Groundwater level at time of drilling (ATD) or on date of measurement.

NOTES

PID = Photoionization detector readings in parts/million

NT = Not tested

BMC West
2510 East Lake Samammish Parkway SE
Issaquah, WA

Date: 4/29/2013 Project No.: 1099.22

Zipper Geo Associates
19023 36th Ave. W, Suite D
Lynnwood, WA

BORING LOG: GP1

Boring Location: See Figure 2, Site and Exploration Plan	Drilling Company: Cascade Drilling	Bore Hole Dia.: 2-1/4"	GP2
Top Elevation: -	Drilling Method: Direct Push	Hammer Type: NA	
Date Drilled: 4/25/2013	Drill Rig: Track	Logged by: JPG	

Depth (ft)	SOIL DESCRIPTION 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 to wet, sandy GRAVEL, some silt. Moderate probe resistance. Slight hydrocarbon odor noted at 2 feet. (Fill)					
	Dark brown, wet, SILT, some fine sand, trace fine roots. Easily probed. Slight hydrocarbon odor noted. (Possible Relic Topsoil)	GP 2-1 I 6		PID@5'=0ppm	NT	TPH, BTEX, MTBE, LEAD
5	Gray, saturated, silty fine SAND, trace clay to sand, some silt, trace clay. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)		▼ 4/25/13			
		GP 2-2 I 6		PID@7'=0ppm	NT	TPH, BTEX, MTBE, LEAD
	Gray, saturated, clayey SILT. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)					
10	Gray, saturated, SAND, some silt. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)			PID@12'=0ppm	NT	
	Light gray, saturated, SILT, some wood. Easily probed. No obvious hydrocarbon odor noted. (Possible Volcanic Ash)					
15	Exploration completed at 15 feet . Groundwater observed at approximately 6 feet ATD.					
20						
25						

SAMPLE LEGEND

I Retained portion of 2-inch direct push sample

GROUNDWATER LEGEND

- Clean Sand
- Bentonite
- Grout/Concrete
- Screened Casing
- Blank Casing
- ▼ 11/2/12 Groundwater level at time of drilling (ATD) or on date of measurement.

NOTES

PID = Photoionization detector readings in parts/million

NT = Not tested

BMC West
2510 East Lake Samammish Parkway SE
Issaquah, WA

Date: 4/29/2013 Project No.: 1099.22

Zipper Geo Associates
19023 36th Ave. W, Suite D
Lynnwood, WA

BORING LOG: GP2

Boring Location: See Figure 2, Site and Exploration Plan	Drilling Company: Cascade Drilling	Bore Hole Dia.: 2-1/4"	GP3
Top Elevation: -	Drilling Method: Direct Push	Hammer Type: NA	
Date Drilled: 4/25/2013	Drill Rig: Track	Logged by: JPG	

Depth (ft)	SOIL DESCRIPTION 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, wet to saturated, GRAVEL, some sand. Moderate probe resistance. No obvious hydrocarbon odor noted. (Fill)		▼ 4/25/13			
5	Gray, saturated, gravely SAND, some silt. Easily probed. Slight hydrocarbon odor noted to about 6 feet. (Alluvium)	GP 3-1 I 6		PID@5'=0ppm	NT	TPH, BTEX, MTBE, LEAD
				PID@8'=0ppm	NT	
10		GP 3-2 I 6				TPH, BTEX, MTBE, LEAD
	Gray, saturated, fine, sandy SILT. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)			PID@13'=0ppm	NT	
	Gray-brown, saturated, SILT, trace fine sand & wood. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)					
15	Exploration completed at 15 feet . Groundwater observed at approximately 4 feet ATD.					
20						
25						

SAMPLE LEGEND

I Retained portion of 2-inch direct push sample

GROUNDWATER LEGEND

- Clean Sand
- Bentonite
- Grout/Concrete
- Screened Casing
- Blank Casing
- ▼ 11/2/12 Groundwater level at time of drilling (ATD) or on date of measurement.

NOTES

PID = Photoionization detector readings in parts/million

NT = Not tested

BMC West
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Issaquah, WA

Date: 4/29/2013 Project No.: 1099.22

Zipper Geo Associates
19023 36th Ave. W, Suite D
Lynnwood, WA

BORING LOG: GP3

Boring Location: See Figure 2, Site and Exploration Plan	Drilling Company: Cascade Drilling	Bore Hole Dia.: 2-1/4"	GP4
Top Elevation: -	Drilling Method: Direct Push	Hammer Type: NA	
Date Drilled: 4/25/2013	Drill Rig: Track	Logged by: JPG	

Depth (ft)	SOIL DESCRIPTION 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	2-1/2 Inches of ASPHALT (Fill)					
	Gray-brown, moist, gravelly SAND, some silt to silty, gravelly SAND. Moderate probe resistance. Slight hydrocarbon odor noted. (Fill)					
	Gray-brown, wet, SILT, some fine sand, trace fine roots. Easily probed. Moderate hydrocarbon odor noted. (Possible Relic Topsoil)					
5	Gray, wet grading to saturated, fine sandy SILT. Easily probed. Moderate hydrocarbon odor noted. (Alluvium)	GP 4-1 I 6	▼ 4/25/13	PID@5'=310ppm	NT	TPH, BTEX, MTBE, LEAD
	Gray, saturated, clayey SILT. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)	GP 4-2 I 6		PID@9'=0ppm	NT	TPH, BTEX, MTBE, LEAD
10	Gray, saturated, silty SAND. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)			PID@12'=0ppm	NT	
	Wood. No obvious hydrocarbon odor noted. (Alluvium)					
	Light gray, saturated, SILT, trace wood. Easily probed. No obvious hydrocarbon odor noted. (Possible Volcanic Ash)					
15	Exploration completed at 15 feet . Groundwater observed at approximately 5 feet ATD.					
20						
25						

SAMPLE LEGEND

I Retained portion of 2-inch direct push sample

GROUNDWATER LEGEND

- Clean Sand
- Bentonite
- Grout/Concrete
- Screened Casing
- Blank Casing
- ▼ 11/2/12 Groundwater level at time of drilling (ATD) or on date of measurement.

NOTES

PID = Photoionization detector readings in parts/million

NT = Not tested

BMC West
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Issaquah, WA

Date: 4/29/2013 Project No.: 1099.22

Zipper Geo Associates
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BORING LOG: GP4

Boring Location: See Figure 2, Site and Exploration Plan	Drilling Company: Cascade Drilling	Bore Hole Dia.: 2-1/4"	GP5
Top Elevation: -	Drilling Method: Direct Push	Hammer Type: NA	
Date Drilled: 4/25/2013	Drill Rig: Track	Logged by: JPG	

Depth (ft)	SOIL DESCRIPTION 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, silty, gravelly SAND. Moderate probe resistance. No obvious hydrocarbon odor noted. (Fill)					
	Gray-brown, wet, SILT, some fine sand, trace fine roots. Easily probed. Moderate hydrocarbon odor noted. (Possible Relic Topsoil)					
5		GP 5-1 I 6	▼ 4/25/13	PID@5'=720ppm	NT	TPH, BTEX, MTBE, LEAD
	Gray, saturated, fine sandy SILT to silty fine SAND. Easily probed. Moderate hydrocarbon odor noted. (Alluvium)			PID@7'=95ppm	NT	
	Gray, saturated, clayey SILT to silty CLAY. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)					
10	Gray, saturated, SAND, some silt. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)	GP 5-2 I 6			NT	TPH, BTEX, MTBE, LEAD
				PID@12'=0ppm	NT	
	Light gray, saturated, SILT, some wood. Easily probed. No obvious hydrocarbon odor noted. (Possible Volcanic Ash)					
15	Exploration completed at 15 feet. Groundwater observed at approximately 5 feet ATD					
20						
25						

SAMPLE LEGEND

I Retained portion of 2-inch direct push sample

GROUNDWATER LEGEND

- Clean Sand
- Bentonite
- Grout/Concrete
- Screened Casing
- Blank Casing
- ▼ 11/2/12 Groundwater level at time of drilling (ATD) or on date of measurement.

NOTES

PID = Photoionization detector readings in parts/million

NT = Not tested

BMC West
2510 East Lake Samammish Parkway SE
Issaquah, WA

Date: 4/29/2013 Project No.: 1099.22

Zipper Geo Associates
19023 36th Ave. W, Suite D
Lynnwood, WA

BORING LOG: GP5

Boring Location: See Figure 2, Site and Exploration Plan	Drilling Company: Cascade Drilling	Bore Hole Dia.: 2-1/4"	GP6
Top Elevation: -	Drilling Method: Direct Push	Hammer Type: NA	
Date Drilled: 4/25/2013	Drill Rig: Track	Logged by: JPG	

Depth (ft)	SOIL DESCRIPTION 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	4 Inches of ASPHALT (Fill) Gray-brown, moist, gravelly SAND, some silt. Moderate probe resistance. No obvious hydrocarbon odor noted. (Fill)					
	Gray-brown, wet, clayey SILT, trace fine sand and roots. Easily probed. No obvious hydrocarbon odor noted. (Possible Relic Topsoil)			PID@4'=0ppm	NT	
5	Gray, saturated, silty SAND. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)	GP 6-1 I 6	4/25/13		NT	TPH, BTEX, MTBE, LEAD
10	Gray, saturated, clayey SILT. Easily probed. No obvious hydrocarbon odor noted. (Alluvium) Gray, saturated, clayey SILT. Easily probed. No obvious hydrocarbon odor noted. (Alluvium) Light gray, saturated, SILT. Easily probed. No obvious hydrocarbon odor noted. (Possible Volcanic Ash) Gray, saturated, well graded SAND, trace silt. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)	GP 6-2 I 6		PID@10'=0ppm	NT	TPH, BTEX, MTBE, LEAD
15	Exploration completed at 15 feet. Groundwater observed at approximately 4.5 feet ATD. Well tag 3 BIC-222.					
20						
25						

SAMPLE LEGEND

I Retained portion of 2-inch direct push sample

GROUNDWATER LEGEND

- Clean Sand
- Bentonite
- Grout/Concrete
- Screened Casing
- Blank Casing
- ▼ 11/2/12 Groundwater level at time of drilling (ATD) or on date of measurement.

NOTES

PID = Photoionization detector readings in parts/million

NT = Not tested

BMC West
2510 East Lake Samammish Parkway SE
Issaquah, WA

Date: 4/29/2013 Project No.: 1099.22

Zipper Geo Associates
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Lynnwood, WA

BORING LOG: GP6

Boring Location: See Figure 2, Site and Exploration Plan	Drilling Company: Cascade Drilling	Bore Hole Dia.: 2-1/4"	GP7
Top Elevation: -	Drilling Method: Direct Push	Hammer Type: NA	
Date Drilled: 4/25/2013	Drill Rig: Track	Logged by: JPG	

Depth (ft)	SOIL DESCRIPTION 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)					
	Gray-brown, wet, clayey SILT, trace fine sand and roots. Easily probed. No obvious hydrocarbon odor noted. (Possible Relic Topsoil)	GP 7-1 I 6	4/25/13	PID@4'=0ppm	NT	TPH, BTEX, MTBE, LEAD
5	Gray, saturated, silty SAND. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)			PID@6'=0ppm	NT	
	Gray, saturated, SILT, some sand and clay. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)			PID@7.5"=0ppm	NT	
	Gray, saturated, sand, some silt. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)					
	Gray, saturated, clayey SILT to silty CLAY. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)	GP 7-2 I 6		PID@9'=0ppm	NT	TPH, BTEX, MTBE, LEAD
10	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						
25						

SAMPLE LEGEND

I Retained portion of 2-inch direct push sample

GROUNDWATER LEGEND

- Clean Sand
- Bentonite
- Grout/Concrete
- Screened Casing
- Blank Casing
- ▼ 11/2/12 Groundwater level at time of drilling (ATD) or on date of measurement.

NOTES

PID = Photoionization detector readings in parts/million

NT = Not tested

BMC West
2510 East Lake Samammish Parkway SE
Issaquah, WA

Date: 4/29/2013 Project No.: 1099.22

Zipper Geo Associates
19023 36th Ave. W, Suite D
Lynnwood, WA

BORING LOG: GP7

Boring Location: See Figure 2, Site and Exploration Plan	Drilling Company: Cascade Drilling	Bore Hole Dia.: 2-1/4"	GP8
Top Elevation: -	Drilling Method: Direct Push	Hammer Type: NA	
Date Drilled: 4/26/2013	Drill Rig: Track	Logged by: JPG	

Depth (ft)	SOIL DESCRIPTION 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)					
5	Brown, wet, clayey SILT, trace fine sand and roots. Easily probed. Moderate hydrocarbon odor noted. (Possible Relic Topsoil)	GP 8-1 6	4/26/13	PID@4.5'=950ppm	NT	TPH, BTEX, MTBE, LEAD
	Gray, saturated, silty SAND to SAND, with silt. Easily probed. Slight hydrocarbon odor noted to depth of about 8 feet. (Alluvium)	GP 8-2 6		PID@7.5"=80ppm	NT	TPH, BTEX, MTBE, LEAD
10				PID@10'=0ppm	NT	
	Gray, saturated, fine sandy SILT, trace clay. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)					
	Gray, saturated, SAND, some silt. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)			PID@13'=0ppm	NT	
15	Exploration completed at 15 feet. Groundwater observed at approximately 4.5 feet ATD. Well tag # BIC-224					
20						
25						

SAMPLE LEGEND

I Retained portion of 2-inch direct push sample

GROUNDWATER LEGEND

- Clean Sand
- Bentonite
- Grout/Concrete
- Screened Casing
- Blank Casing
- ▼ 11/2/12 Groundwater level at time of drilling (ATD) or on date of measurement.

NOTES

PID = Photoionization detector readings in parts/million

NT = Not tested

BMC West
2510 East Lake Samammish Parkway SE
Issaquah, WA

Date: 4/29/2013 Project No.: 1099.22

Zipper Geo Associates
19023 36th Ave. W, Suite D
Lynnwood, WA

BORING LOG: GP8

Boring Location: See Figure 2, Site and Exploration Plan	Drilling Company: Cascade Drilling	Bore Hole Dia.: 2-1/4"	GP9
Top Elevation: -	Drilling Method: Direct Push	Hammer Type: NA	
Date Drilled: 4/26/2013	Drill Rig: Track	Logged by: JPG	

Depth (ft)	SOIL DESCRIPTION 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, some silt. Moderate probe resistance. No obvious hydrocarbon odor noted. (Fill)					
	Gray-brown, wet, SILT, some clay, trace fine roots. Easily probed. No obvious hydrocarbon odor noted. (Possible Relic Topsoil)	GP 9-1 I 6	▼ 4/26/13		NT	TPH, BTEX, MTBE, LEAD
5	Gray, saturated, silty fine SAND, trace clay. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)			PID@4'=0ppm	NT	
				PID@6'=0ppm	NT	
	Gray, saturated, SILT, some fine sand, trace clay. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)					
	Gray, saturated, SAND, with silt. Easily probed. No obvious hydrocarbon odor noted. (Alluvium)					
10		GP 9-2 I 6		PID@10'=0ppm	NT	TPH, BTEX, MTBE, LEAD
				PID@12'=0ppm	NT	
15	Exploration completed at 15 feet. Groundwater observed at approximately 4 feet ATD.					
20						
25						

SAMPLE LEGEND

I Retained portion of 2-inch direct push sample

GROUNDWATER LEGEND

- Clean Sand
- Bentonite
- Grout/Concrete
- Screened Casing
- Blank Casing
- ▼ 11/2/12 Groundwater level at time of drilling (ATD) or on date of measurement.

NOTES

PID = Photoionization detector readings in parts/million

NT = Not tested

BMC West
2510 East Lake Samammish Parkway SE
Issaquah, WA

Date: 4/29/2013 Project No.: 1099.22

Zipper Geo Associates
19023 36th Ave. W, Suite D
Lynnwood, WA

BORING LOG: 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

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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036-	DATE:	5/6/2013
		ALS JOB#:	EV13040174
		ALS SAMPLE#:	-01
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	4/26/2013
CLIENT PROJECT:	BMC	COLLECTION DATE:	4/25/2013 8:00:00 AM
CLIENT SAMPLE ID	GP 1-1	WDOE ACCREDITATION:	C601

DATA 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036-	DATE:	5/6/2013
		ALS JOB#:	EV13040174
		ALS SAMPLE#:	-02
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	4/26/2013
CLIENT PROJECT:	BMC	COLLECTION DATE:	4/25/2013 8:00:00 AM
CLIENT SAMPLE ID	GP 1-2	WDOE ACCREDITATION:	C601

DATA 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 DATE	ANALYSIS 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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036-	DATE:	5/6/2013
		ALS JOB#:	EV13040174
		ALS SAMPLE#:	-03
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	4/26/2013
CLIENT PROJECT:	BMC	COLLECTION DATE:	4/25/2013 8:00:00 AM
CLIENT SAMPLE ID	GP 1-3	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS 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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036-	DATE:	5/6/2013
		ALS JOB#:	EV13040174
		ALS SAMPLE#:	-04
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	4/26/2013
CLIENT PROJECT:	BMC	COLLECTION DATE:	4/25/2013 8:00:00 AM
CLIENT SAMPLE ID	GP 2-1	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS 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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036-	DATE:	5/6/2013
		ALS JOB#:	EV13040174
		ALS SAMPLE#:	-05
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	4/26/2013
CLIENT PROJECT:	BMC	COLLECTION DATE:	4/25/2013 8:00:00 AM
CLIENT SAMPLE ID	GP 2-2	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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 DATE	ANALYSIS 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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CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036-	DATE:	5/6/2013
		ALS JOB#:	EV13040174
		ALS SAMPLE#:	-06
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	4/26/2013
CLIENT PROJECT:	BMC	COLLECTION DATE:	4/25/2013 8:00:00 AM
CLIENT SAMPLE ID	GP 3-1	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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 DATE	ANALYSIS 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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CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036-	DATE:	5/6/2013
		ALS JOB#:	EV13040174
		ALS SAMPLE#:	-07
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	4/26/2013
CLIENT PROJECT:	BMC	COLLECTION DATE:	4/25/2013 8:00:00 AM
CLIENT SAMPLE ID	GP 3-2	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS 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

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

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CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036-	DATE:	5/6/2013
		ALS JOB#:	EV13040174
		ALS SAMPLE#:	-08
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	4/26/2013
CLIENT PROJECT:	BMC	COLLECTION DATE:	4/25/2013 8:00:00 AM
CLIENT SAMPLE ID	GP 4-1	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	**1100**	60	20	MG/KG	05/01/2013	DLC
Benzene	EPA-8021	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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS 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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CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036-	DATE:	5/6/2013
		ALS JOB#:	EV13040174
		ALS SAMPLE#:	-09
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	4/26/2013
CLIENT PROJECT:	BMC	COLLECTION DATE:	4/25/2013 8:00:00 AM
CLIENT SAMPLE ID	GP 4-2	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	**4.5**	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	**4.3**	0.50	5	MG/KG	04/30/2013	RAL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS 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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CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036-	DATE:	5/6/2013
		ALS JOB#:	EV13040174
		ALS SAMPLE#:	-10
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	4/26/2013
CLIENT PROJECT:	BMC	COLLECTION DATE:	4/25/2013 8:00:00 AM
CLIENT SAMPLE ID	GP 5-1	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS 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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CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036-	DATE:	5/6/2013
		ALS JOB#:	EV13040174
		ALS SAMPLE#:	-11
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	4/26/2013
CLIENT PROJECT:	BMC	COLLECTION DATE:	4/25/2013 8:00:00 AM
CLIENT SAMPLE ID	GP 5-2	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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 DATE	ANALYSIS 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

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036-	DATE:	5/6/2013
		ALS JOB#:	EV13040174
		ALS SAMPLE#:	-12
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	4/26/2013
CLIENT PROJECT:	BMC	COLLECTION DATE:	4/25/2013 8:00:00 AM
CLIENT SAMPLE ID	GP 6-1	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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 DATE	ANALYSIS 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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CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036-	DATE:	5/6/2013
		ALS JOB#:	EV13040174
		ALS SAMPLE#:	-13
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	4/26/2013
CLIENT PROJECT:	BMC	COLLECTION DATE:	4/25/2013 8:00:00 AM
CLIENT SAMPLE ID	GP 6-2	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
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

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

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CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036-	DATE:	5/6/2013
		ALS JOB#:	EV13040174
		ALS SAMPLE#:	-14
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	4/26/2013
CLIENT PROJECT:	BMC	COLLECTION DATE:	4/25/2013 8:00:00 AM
CLIENT SAMPLE ID	GP 7-1	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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 DATE	ANALYSIS 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

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

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CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036-	DATE:	5/6/2013
		ALS JOB#:	EV13040174
		ALS SAMPLE#:	-15
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	4/26/2013
CLIENT PROJECT:	BMC	COLLECTION DATE:	4/25/2013 8:00:00 AM
CLIENT SAMPLE ID	GP 7-2	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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 DATE	ANALYSIS 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

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036-	DATE: ALS JOB#: ALS SAMPLE#:	5/6/2013 EV13040174 -16
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	4/26/2013
CLIENT PROJECT:	BMC	COLLECTION DATE:	4/26/2013 8:00:00 AM
CLIENT SAMPLE ID	GP 8-1	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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 DATE	ANALYSIS 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.

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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RIGHT SOLUTIONS RIGHT PARTNER

CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036-	DATE:	5/6/2013
		ALS JOB#:	EV13040174
		ALS SAMPLE#:	-17
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	4/26/2013
CLIENT PROJECT:	BMC	COLLECTION DATE:	4/26/2013 8:00:00 AM
CLIENT SAMPLE ID	GP 8-2	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036-	DATE:	5/6/2013
		ALS JOB#:	EV13040174
		ALS SAMPLE#:	-18
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	4/26/2013
CLIENT PROJECT:	BMC	COLLECTION DATE:	4/26/2013 8:00:00 AM
CLIENT SAMPLE ID	GP 9-1	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**73.7**	04/30/2013	DLC
TFT	EPA-8021	**76.7**	04/30/2013	DLC
C25	NWTPH-DX	**89.2**	04/29/2013	EBS

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

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CERTIFICATE OF ANALYSIS

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 RECEIVED:	4/26/2013
CLIENT PROJECT:	BMC	COLLECTION DATE:	4/26/2013 8:00:00 AM
CLIENT SAMPLE ID	GP 9-2	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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 DATE	ANALYSIS 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

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

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Appendix F – Remedial Action Photographs

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.

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.

Photo #5. The leaking storm water pipe flooded the remedial excavation.

Photo #6. Impacted soil continued to be removed using temporary soil berms to retain the storm water pipe water.

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.

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 G – 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 36th 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:

1) 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:

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.

2. 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:** Peter Rosen

cc: 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

King County

Wastewater Treatment Division
Industrial Waste Program
Department of Natural Resources and Parks
201 South Jackson Street, Suite 513
Seattle, WA 98104-3855
206-477-5300 Fax 206-263-3001
TTY Relay: 711

August 27, 2015

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.

If you have any questions about this discharge authorization or your wastewater discharge, please call me at 206-477-5457, or email me at dana.heinz@kingcounty.gov. You may also wish to visit our program's Internet pages at: www.kingcounty.gov/industrialwaste.

Thank you for helping support our mission to protect public health and enhance the environment.

Sincerely,

Dana Heinz
Compliance Investigator

Enclosures

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

King County

MINOR DISCHARGE AUTHORIZATION
King County Industrial Waste Program
201 S. Jackson Street, Suite 513
Seattle, WA 98104-3855

NUMBER 996-01
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, 2015
Expiration 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

SPECIAL CONDITIONS

A. Discharge to the sanitary sewer **shall not** begin until KCIW has conducted a preoperative inspection of the pretreatment facilities and has sent written notification (email is sufficient) to the permittee that discharges may begin.

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.

K. An accessible sampling spigot must be installed on the discharge pipe from the last treatment unit of the wastewater treatment system. The sample site shall be representative of all industrial waste streams discharged to the sewer from this site. Each sample site shall be accessible to KCIW representatives when discharge to the sewer is occurring.

L. The contractor shall implement erosion control best management practices to minimize the 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.

SELF-MONITORING REQUIREMENTS

A. The following self-monitoring requirements shall be met for this discharge authorization:

Parameter	Frequency	Sample Type/Method
Discharge volume	Daily	In-line flow meter
Discharge rate	Daily	In-line flow meter
Settleable solids	Daily	Grab by Imhoff cone
pH	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.

H. Self-monitoring reports shall be signed by an authorized representative of the industrial user. The authorized representative of the industrial user is defined as:

1. The president, secretary, treasurer, or a vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation

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

GENERAL DISCHARGE LIMITATIONS

Operating criteria

There shall be no odor of solvent, gasoline, or hydrogen sulfide (rotten egg odor), oil sheen, unusual color, or visible turbidity. The discharge must remain translucent. If any of the discharge 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

with a closed cup flashpoint of less than 140° Fahrenheit or 60° Centigrade using the test methods specified in 40 CFR 261.21.

At no time shall two successive readings on an explosion hazard meter, at the point of discharge into the system (or at any point in the system), be more than 5 percent nor any single reading be more than 10 percent of the lower explosive limit (LEL) of the meter.

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 Compounds	**Maximum Concentration 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)[1]**	**Daily Average ppm (mg/L)[2]**
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

[1] 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.

High temperature

The industrial user shall not discharge material with a temperature in excess of 65° C (150° F).

Hydrogen sulfide

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

GENERAL CONDITIONS

A. All requirements of King County Code pertaining to the discharge of wastes into the municipal sewer system are hereby made a condition of this discharge authorization.

B. The industrial discharger shall implement measures to prevent accidental spills or discharges of prohibited substances to the municipal sewer system. Such measures include, but are not 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 until KCIW issues or denies the new 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: Dana Heinz Date: August 27, 2015
Dana Heinz

Industrial Waste Program Self-Monitoring Report

King County

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.KCIW@kingcounty.gov

Project Name: BMC Issaquah - PCS Excavation Construction Project

Authorization No.: 996-01

Project Location: 5210 E Lake Sammamish Parkway Se, Issaquah

Sample Date	pH (s.u.)	Settleable Solids (mL/L)	Nonpolar FOG (mg/L)	Benzene (µg/L)	Ethylbenzene (µg/L)	Toluene (µg/L)	Total Xylenes (µg/L)	Lead, total (mg/L)	Max. flowrate (gallons per min.)	Discharge Volume (gallons)	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.
Total Discharge Volume:											

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further certify that all data requiring a laboratory analysis were analyzed by a Washington State Department of Ecology accredited laboratory for each parameter tested.

Signature of Principal Executive or Authorized Agent

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

REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

Requested Disposal Facility: 4178 Roosevelt Regional MSW LF WA

Waste Profile #

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed.

Sales Rep #:

I. Generator Information

Generator Name: BMC West Corporation			
Generator Site Address: 5210 East Lake Sammamish Parkway Southeast			
City: Issaquah	County: King	State: Washington	Zip: 98029
State ID/Reg No:	State Approval/Waste Code: (if applicable)		NAICS # :
Generator Mailing Address (if different): ☑ 720 Park Boulevard #200			
City: Boise	County:	State: Idaho	Zip: 83712
Generator Contact Name: Mike Da Dalto		Email: Michael.DaDalto@Buildwith BMC	
Phone Number: (425) 657-4013	Ext:	Fax Number: (425) 557-0066	

II. Billing Information

Bill To: Clearcreek Contractors		Contact Name: Kim Curnett	
Billing Address: 3919 88th St NE		Email: Kim@clearcreekcon.com	
City: Marysville	State: WA	Zip: 98270	Phone: (360) 659-2459

III. Waste Stream Information

Name of Waste: Petroleum contaminated soil	
Process Generating Waste: Leaking underground storage tanks	
Type of Waste:	☐ INDUSTRIAL PROCESS WASTE ☐ POLLUTION CONTROL WASTE
Physical State:	☑ SOLID ☐ SEMI-SOLID ☐ POWDER ☐ LIQUID
Method of Shipment:	☑ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:
Estimated Annual Volume:	1,000 Tons
Frequency:	☑ ONE TIME ☐ ONGOING
Disposal Consideration:	☑ LANDFILL ☐ SOLIDIFICATION ☐ BIOREMEDIATION

IV. Representative Sample Certification

☐ NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	☑ YES or ☐ NO
Type of Sample: ☐ COMPOSITE SAMPLE ☑ GRAB SAMPLE	
Sample Date: 04/29/13	
26 soil samples were collected as part of a remedial investigation	

© Republic Services, April 2013

REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

Waste Profile #

V. Physical Characteristics of Waste

Characteristic Components	% by Weight (range)
1. Gasoline range hydrocarbons	<3 ppm to 2,800 ppm
2. Soil	100%
3.	
4.	
5.	

Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
Gray	Slight hydrocarbon	☐ YES or ☑ NO	100	NA	NA °F

Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Chain of Custody and Required Parameters Provided for this Profile

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 261.33?	☐ Yes or ☑ No
Does this waste contain reactive sulfides (greater than 500 ppm) or reactive cyanide (greater than 250 ppm)[reference 40 CFR 261.23(a)(5)]?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐ Yes or ☑ No
Does this waste contain concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	☐ Yes or ☑ No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	☐ Yes or ☑ No
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?	☐ Yes or ☑ No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this waste a reactive or heat generating waste?	☐ Yes or ☑ No
Does the waste contain sulfur or sulfur by-products?	☐ Yes or ☑ No
Is this waste generated at a Federal Superfund Clean Up Site?	☐ Yes or ☑ No
Is this waste from a TSD facility, TSD like facility or consolidator?	☐ Yes or ☑ No

VI. Certification

I hereby certify 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.

I further certify 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.

I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services Inc.

PAUL S. STREET
Chief Administrative Officer
Authorized Representative Name And Title (Type or Print)

BMC West Corporation
Company Name

Authorized Representative Signature

7-8-15
Date

© Republic Services, April 2013

ALLIED WASTE

Certification of UST Corrective Action

The waste described on the attached profile sheet is subject to the UST corrective action regulations under 40 CFR Part 280. Furthermore, 40 CFR 261.4(b)(10) states that 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 considered hazardous waste.

5210 EAST LAKE SAMMAMISH PARKWAY SE

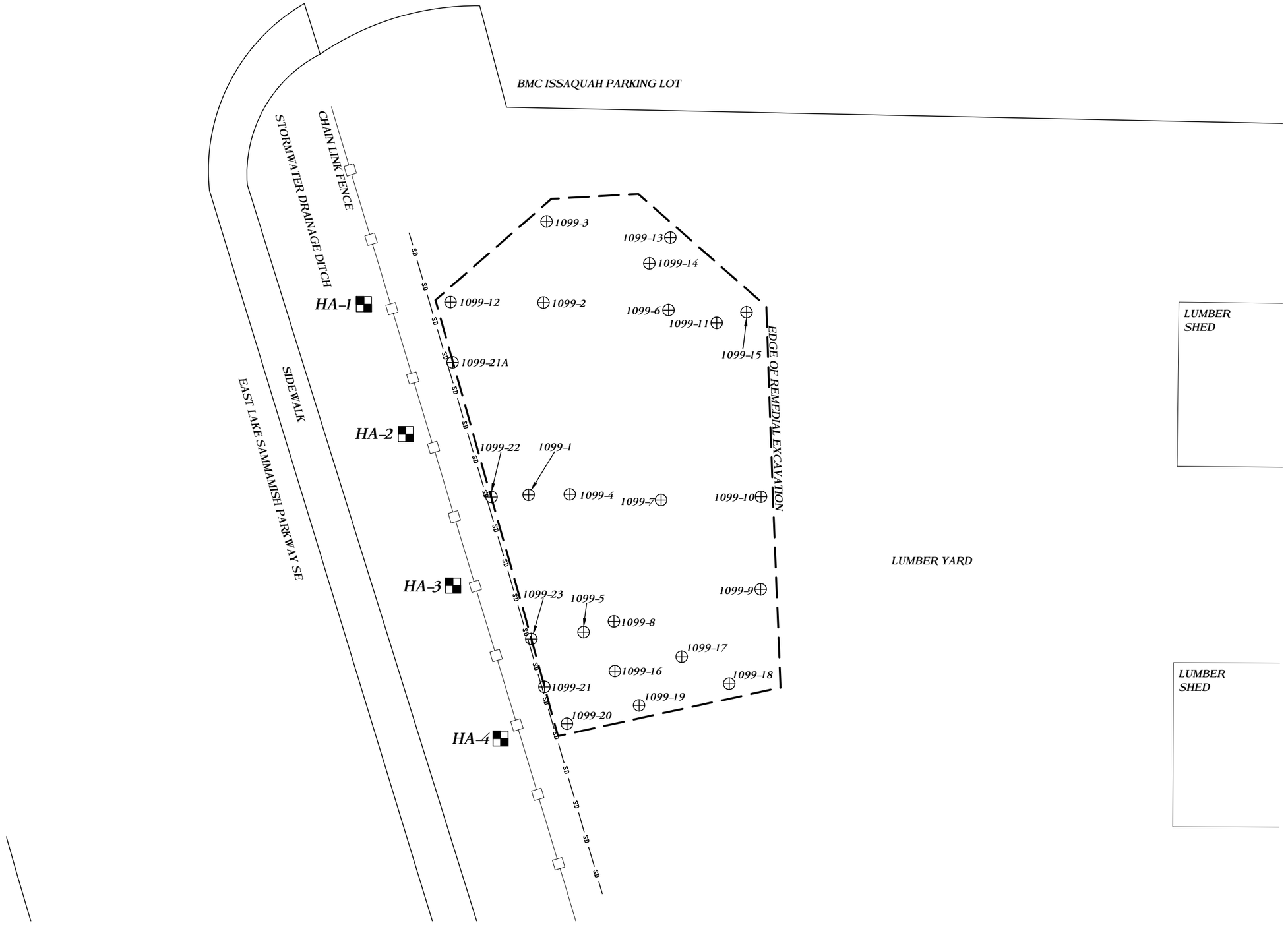
SITE ADDRESS

Generator Signature, Title

7-8-15

Date

Appendix H – Remedial Action Analytical Results



LEGEND

HA–1	APPROXIMATE LOCATION OF HAND AUGER EXPLORATION WITH ID
⊕ 1099-1	APPROXIMATE LOCATION OF REMEDIAL EXCAVATION SOIL SAMPLE WITH ID
— SD — SD —	APPROXIMATE LOCATION OF STORM DRAIN OBSERVED DURING REMEDIAL EXCAVATION

N

20 0 10 20

SCALE IN FEET

REFERENCE: SURVEY PERFORMED BY PLS, INC. ON JAN. 13, 2016; GOOGLE EARTH SATELLITE IMAGE DATED JUNE, 2016; ZGA FIELD MEASUREMENTS COLLECTED DURING REMEDIAL EXCAVATION

BMC ISSAQUAH
5210 East Lake Sammamish Parkway SE
Issaquah, Washington

REMEDIAL EXCAVATION SOIL SAMPLE LOCATIONS

DATE: JANUARY 2017 Job No. 1099.25

Zipper Geo Associates, LLC
19023 36th Ave. W.,Suite D
Lynnwood, WA

FIGURE 7

SHT. 1 of 1

July 22, 2015

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

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

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	7/22/2015
		ALS JOB#:	EV15070089
		ALS SAMPLE#:	EV15070089-01
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	07/20/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	7/20/2015 2:25:00 PM
CLIENT SAMPLE ID	SP-1	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**101**	07/20/2015	PAB
TFT	EPA-8021	**110**	07/20/2015	PAB

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	7/22/2015 EV15070089 EV15070089-02
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	07/20/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	7/20/2015 2:30:00 PM
CLIENT SAMPLE ID	SP-2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**97.4**	07/20/2015	PAB
TFT	EPA-8021	**107**	07/20/2015	PAB

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	7/22/2015
		ALS JOB#:	EV15070089
		ALS SAMPLE#:	EV15070089-03
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	07/20/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	7/20/2015 2:35:00 PM
CLIENT SAMPLE ID	SP-3	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**91.1**	07/20/2015	PAB
TFT	EPA-8021	**103**	07/20/2015	PAB

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	7/22/2015 EV15070089 EV15070089-04
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	07/20/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	7/20/2015 2:40:00 PM
CLIENT SAMPLE ID	1099-1	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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 DATE	ANALYSIS 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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	7/22/2015
		ALS SDG#:	EV15070089
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Jon Einarsen		
CLIENT PROJECT:	1099.25		

LABORATORY BLANK RESULTS

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

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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 DATE	ANALYSIS 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

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	7/22/2015
		ALS SDG#:	EV15070089
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Jon Einarsen		
CLIENT PROJECT:	1099.25		

LABORATORY CONTROL SAMPLE RESULTS

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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS 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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS 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

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
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ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV1507 0089

Date 7-20-15 Page 1 Of 1

PROJECT ID:	1099.25
REPORT TO COMPANY:	2GA
PROJECT MANAGER:	Jon Einarsen
ADDRESS:	
PHONE:	FAX:
P.O. #: 1099.25	E-MAIL:
INVOICE TO COMPANY:	SAME
ATTENTION:	
ADDRESS:	

	SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify): Pb	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1.	SP-1	7/20/15	1425	SOIL	1			X	(X)														
2.	SP-2	↓	1430	↓	2			↓	(X)														
3.	SP-3	↓	1435	↓	3			↓	(X)														
4.	1099-1	7/20/15	1440	↓	4		X	↓	(X)												X		
5.																							
6.																							
7.																							
8.																							
9.																							
10.																							

SPECIAL INSTRUCTIONS (X) Jon E. added BTEX to all samples - 1 day Rush

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: 2GA 7-20-15 1620
   Received By: ALS 7/20/15 16:20
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | X | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | X | SAME DAY

OTHER: Specify:

*Turnaround request less than standard may incur Rush Charges

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

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

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	7/22/2015 EV15070096 EV15070096-01
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	07/21/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	7/21/2015 7:20:00 AM
CLIENT SAMPLE ID	1099-2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS 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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	7/22/2015 EV15070096 EV15070096-02
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	07/21/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	7/21/2015 7:30:00 AM
CLIENT SAMPLE ID	1099-3	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
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

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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	7/22/2015 EV15070096 EV15070096-03
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	07/21/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	7/21/2015 8:50:00 AM
CLIENT SAMPLE ID	1099-4	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS 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

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	7/22/2015 EV15070096 EV15070096-04
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	07/21/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	7/21/2015 10:10:00 AM
CLIENT SAMPLE ID	1099-5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	**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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS 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

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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	7/22/2015 EV15070096 EV15070096-05
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	07/21/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	7/21/2015 11:10:00 AM
CLIENT SAMPLE ID	1099-6	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	**4.8**	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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS 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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	7/22/2015 EV15070096 EV15070096-06
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	07/21/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	7/21/2015 1:05:00 PM
CLIENT SAMPLE ID	1099-7	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**108**	07/22/2015	PAB
TFT	EPA-8021	**108**	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 highly weathered gasoline.

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CERTIFICATE OF ANALYSIS

CLIENT:	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	DATE RECEIVED:	07/21/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	7/21/2015 2:40:00 PM
CLIENT SAMPLE ID	1099-8	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS 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

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

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CERTIFICATE OF ANALYSIS

CLIENT:	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	DATE RECEIVED:	07/21/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	7/21/2015 3:50:00 PM
CLIENT SAMPLE ID	1099-9	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS 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

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	7/22/2015 EV15070096 EV15070096-09
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	07/21/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	7/21/2015 3:35:00 PM
CLIENT SAMPLE ID	SP-4	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**99.7**	07/22/2015	PAB
TFT	EPA-8021	**110**	07/22/2015	PAB
C25	NWTPH-DX	**92.8**	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 lube oil.

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CERTIFICATE OF ANALYSIS

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

LABORATORY BLANK RESULTS

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

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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 DATE	ANALYSIS 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

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	7/22/2015
		ALS SDG#:	EV15070096
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Jon Einarsen		
CLIENT PROJECT:	1099.25		

LABORATORY CONTROL SAMPLE RESULTS

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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS 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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS 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

Laboratory Director

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Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV1507 0096

Date 7/21/15 Page 1 Of 1

PROJECT ID: 1099.25
REPORT TO COMPANY: ZGA
PROJECT MANAGER: Jon Einarsen
ADDRESS:
PHONE: FAX:
P.O. #: 1099.25 E-MAIL:
INVOICE TO COMPANY: ZGA
ATTENTION:
ADDRESS:

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. 1099-2	7/21	0720	soil	1		X	X	X												2	
2. 1099-3		0730		2																	
3. 1099-4		0850		3																	
4. 1099-5		1010		4																	
5. 1099-6		1110		5																	
6. 1099-7		1305		6																	
7. 1099-8		1440		7																	
8. 1099-9		1550		8																	
9. SP-4		1535		9																	
10.																					

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: ZGA 7/21/15 1650
   Received By: Kathy Kunt, ALS, 7/21/15, 1650
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 (Standard) 5 3 2 1 SAME DAY

Fuels & Hydrocarbon Analysis: Standard 3 X SAME DAY

OTHER: Specify:

*Turnaround request less than standard may incur Rush Charges

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:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	7/23/2015 EV15070104 EV15070104-01
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	07/22/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	7/22/2015 8:00:00 AM
CLIENT SAMPLE ID	1099-10	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	7/23/2015 EV15070104 EV15070104-02
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	07/22/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	7/22/2015 8:05:00 AM
CLIENT SAMPLE ID	1099-11	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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 DATE	ANALYSIS BY
TFT	NWTPH-GX	**103**	07/23/2015	PAB
TFT	EPA-8021	**102**	07/23/2015	PAB
C25	NWTPH-DX	**94.4**	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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	7/23/2015 EV15070104 EV15070104-03
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	07/22/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	7/22/2015 10:55:00 AM
CLIENT SAMPLE ID	1099-12	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS 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

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	7/23/2015 EV15070104 EV15070104-04
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	07/22/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	7/22/2015 11:35:00 AM
CLIENT SAMPLE ID	1099-13	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS 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

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	7/23/2015 EV15070104 EV15070104-05
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	07/22/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	7/22/2015 11:40:00 AM
CLIENT SAMPLE ID	1099-14	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS 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

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	7/23/2015 EV15070104 EV15070104-06
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	07/22/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	7/22/2015 12:40:00 PM
CLIENT SAMPLE ID	1099-15	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	**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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**103**	07/23/2015	PAB
TFT	EPA-8021	**102**	07/23/2015	PAB
C25	NWTPH-DX	**92.6**	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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	7/23/2015 EV15070104 EV15070104-07
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	07/22/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	7/22/2015 12:05:00 PM
CLIENT SAMPLE ID	1099-BT1	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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 DATE	ANALYSIS 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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CERTIFICATE OF ANALYSIS

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

LABORATORY BLANK RESULTS

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

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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 Lynnwood, WA 98036	DATE:	7/23/2015
		ALS SDG#:	EV15070104
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Jon Einarsen		
CLIENT PROJECT:	1099.25		

LABORATORY BLANK RESULTS

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

TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	07/21/2015	EBS

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

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CERTIFICATE OF ANALYSIS

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

LABORATORY CONTROL SAMPLE RESULTS

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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range - BS	NWTPH-GX	**82.2**			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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS 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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CERTIFICATE OF ANALYSIS

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

LABORATORY CONTROL SAMPLE RESULTS

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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS 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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Everett, WA 98208
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Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV1507010 4

Date 7/22/15 Page 1 Of 1

PROJECT ID: 1099.25
REPORT TO COMPANY: ZGA
PROJECT MANAGER: Jon Einarsen
ADDRESS:
PHONE: FAX:
P.O. #: 1099.25 E-MAIL:
INVOICE TO COMPANY: ZGA
ATTENTION:
ADDRESS:

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. 1099-10	7/22/15	0800	Soil	1		X	X	X												2	
2. -11		0805		2																	
3. -12		1055		3																	
4. -13		1135		4																	
5. -14		1140		5																	
6. -15	↓	1240	↓	6		↓	↓	↓												↓	
7.																					
8. 1099-BT 1	7/22/15	1205	H_2O	7		X	X	X													
9.																					
10.																					

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: [signature] / ZGA / 7-22-15
   Received By: [signature] ALS 7/22/15 4:30
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 (Standard) | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 (Standard) | 3 | X | SAME DAY

OTHER:
Specify:

*Turnaround request less than standard may incur Rush Charges

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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	7/29/2015
		ALS JOB#:	EV15070121
		ALS SAMPLE#:	EV15070121-01
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	07/24/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	7/24/2015 10:15:00 AM
CLIENT SAMPLE ID	1099-16	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	7/29/2015 EV15070121 EV15070121-02
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	07/24/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	7/24/2015 11:20:00 AM
CLIENT SAMPLE ID	1099-17	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS 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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	7/29/2015 EV15070121 EV15070121-03
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	07/24/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	7/24/2015 11:40:00 AM
CLIENT SAMPLE ID	1099-BT2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
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.

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CERTIFICATE OF ANALYSIS

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

LABORATORY BLANK RESULTS

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

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

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

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CERTIFICATE OF ANALYSIS

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

LABORATORY BLANK RESULTS

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

TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	07/25/2015	EBS

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

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CERTIFICATE OF ANALYSIS

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

LABORATORY CONTROL SAMPLE RESULTS

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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range - BS	NWTPH-GX	**95.1**			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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS 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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS 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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CERTIFICATE OF ANALYSIS

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

LABORATORY CONTROL SAMPLE RESULTS

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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS 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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Everett, WA 98208
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Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV1507012|

Date 2/24/15 Page 1 Of 1

PROJECT ID: 1099.25
REPORT TO COMPANY: ZGA
PROJECT MANAGER: Jon Einarsen
ADDRESS:
PHONE: FAX:
P.O. #: 1099.25 E-MAIL:
INVOICE TO COMPANY: ZGA
ATTENTION: Jon Einarsen
ADDRESS:

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. 1099-16	2/24/15	1015	SOIL	1		X	X	X													2	
2. 1099-17	↓	1120	↓	2		X	X	X													2	
3.																						
4. 1099-BT2	2/24/15	1140	H_2O	3		X	X	X													3	
5.																						
6.																						
7.																						
8.																						
9.																						
10.																						

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: ZGA 7-24-15 1505
   Received By: ALS 7/24/15 15:05
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 (Standard) | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 (Standard) | X | 1 | SAME DAY

OTHER:
Specify:

*Turnaround request less than standard may incur Rush Charges

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

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ALS Group USA, Corp

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	9/11/2015
		ALS JOB#:	EV15090062
		ALS SAMPLE#:	EV15090062-01
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	09/10/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	9/10/2015 9:15:00 AM
CLIENT SAMPLE ID	1099-18	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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 DATE	ANALYSIS 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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	9/11/2015 EV15090062 EV15090062-02
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	09/10/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	9/10/2015 9:20:00 AM
CLIENT SAMPLE ID	1099-19	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS 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

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	9/11/2015 EV15090062 EV15090062-03
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	09/10/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	9/10/2015 9:30:00 AM
CLIENT SAMPLE ID	1099-20	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
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

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	9/11/2015 EV15090062 EV15090062-04
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	09/10/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	9/10/2015 9:35:00 AM
CLIENT SAMPLE ID	1099-21	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS 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

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

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CERTIFICATE OF ANALYSIS

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

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

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

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

ANALYTE	METHOD	RESULTS	QUAL	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS 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

ANALYTE	METHOD	RESULTS	QUAL	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS 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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	9/11/2015
		ALS SDG#:	EV15090062
		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 DATE	ANALYSIS BY
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	ANALYSIS 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 DATE	ANALYSIS BY
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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Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV1509062

Date 9-10-15 Page 1 Of 1

PROJECT ID: 1099.25
REPORT TO COMPANY: ZGA
PROJECT MANAGER: Jon Einarsen
ADDRESS:
PHONE: FAX:
P.O. #: 1099.25 E-MAIL:
INVOICE TO COMPANY: ZGA
ATTENTION:
ADDRESS:

ANALYSIS REQUESTED

OTHER (Specify)

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	Pb							NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. 1099-18	9/10/15	0915	Soil	1		X	X	X												X							2	
2. 1099-19	↓	0920	↓	2		↓	↓	↓												↓							↓	
3. 1099-20	↓	0930	↓	3		↓	↓	↓												↓							↓	
4. 1099-21	↓	0935	↓	4		↓	↓	↓												↓							↓	
5.																												
6.																												
7.																												
8.																												
9.																												
10.																												

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: ZGA/9-10-15/1020
   Received By: ALS 9/10/15 10:20
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY (1 selected)

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY (1 selected)

OTHER:

Specify:

*Turnaround request less than standard may incur Rush Charges

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	9/17/2015
		ALS JOB#:	EV15090097
		ALS SAMPLE#:	EV15090097-01
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	09/16/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	9/15/2015 3:15:00 AM
CLIENT SAMPLE ID	1099-21	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS 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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	9/17/2015 EV15090097 EV15090097-02
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	09/16/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	9/15/2015 3:18:00 AM
CLIENT SAMPLE ID	1099-22	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	9/17/2015 EV15090097 EV15090097-03
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	09/16/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	9/15/2015 3:20:00 AM
CLIENT SAMPLE ID	1099-23	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	**30**	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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS 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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	9/17/2015
		ALS SDG#:	EV15090097
		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 not detected at level above reporting limit.

MB-091015S - Batch 97071 - Soil by EPA-8021

ANALYTE	METHOD	RESULTS	QUAL	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS 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		9/17/2015 MG/KG	50		

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

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

ANALYTE	METHOD	RESULTS	QUAL	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS 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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	9/17/2015
		ALS SDG#:	EV15090097
		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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
Benzene - BS	EPA-8021	**85.1**			09/11/2015	PAB
Benzene - BSD	EPA-8021	**85.9**	**1**		09/11/2015	PAB
Toluene - BS	EPA-8021	**87.9**			09/11/2015	PAB
Toluene - BSD	EPA-8021	**88.7**	**1**		09/11/2015	PAB
Ethylbenzene - BS	EPA-8021	**88.5**			09/11/2015	PAB
Ethylbenzene - BSD	EPA-8021	**88.8**	**0**		09/11/2015	PAB
Xylenes - BS	EPA-8021	**87.7**			09/11/2015	PAB
Xylenes - BSD	EPA-8021	**89.3**	**2**		09/11/2015	PAB

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 DATE	ANALYSIS BY
Lead - BS	EPA-6020	**98.1**			09/17/2015	RAL
Lead - BSD	EPA-6020	**101**	**3**		09/17/2015	RAL

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CERTIFICATE OF ANALYSIS

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

MATRIX SPIKE RESULTS

ALS Test Batch ID: 97179 - Soil
Parent Sample: 1099-22

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

APPROVED BY

Laboratory Director

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Fax (425) 356-2626
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Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV1509097

Date 9-16-15 Page 1 Of 1

PROJECT ID: 1099.25
REPORT TO COMPANY: 2GA
PROJECT MANAGER: JON EINARSEN
ADDRESS:
PHONE: FAX:
P.O. #: 1099.25 E-MAIL:
INVOICE TO COMPANY: 2GA
ATTENTION:
ADDRESS:

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify): Pb	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. 1099-21	9/15/15	0315	SOIL	1		X	X	X												X	2	
2. 1099-22	↓	0318	↓	2		X	X	X												X	2	
3. 1099-23	↓	0320	↓	3		X	X	X												X	2	
4.																						
5.																						
6.																						
7.																						
8.																						
9.																						
10.																						

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: 2GA 9-16-15
   Received By: ALS 9/16/15 4:45
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | X | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | X | SAME DAY

OTHER: Specify:

*Turnaround request less than standard may incur Rush Charges

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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	2/9/2016
		ALS JOB#:	EV16020037
		ALS SAMPLE#:	EV16020037-01
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	02/04/2016
CLIENT PROJECT:	1099.25 BMC Issaquah	COLLECTION DATE:	2/4/2016 10:45:00 AM
CLIENT SAMPLE ID	HA-1	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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 DATE	ANALYSIS 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 Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	2/9/2016 EV16020037 EV16020037-02
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	02/04/2016
CLIENT PROJECT:	1099.25 BMC Issaquah	COLLECTION DATE:	2/4/2016 10:45:00 AM
CLIENT SAMPLE ID	HA-2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**76.6**	02/05/2016	PAB
TFT	EPA-8021	**82.6**	02/05/2016	PAB

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	2/9/2016 EV16020037 EV16020037-03
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	02/04/2016
CLIENT PROJECT:	1099.25 BMC Issaquah	COLLECTION DATE:	2/4/2016 10:45:00 AM
CLIENT SAMPLE ID	HA-3	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**68.0**	02/05/2016	PAB
TFT	EPA-8021	**73.7**	02/05/2016	PAB

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

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Environmental www.alsglobal.com
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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	2/9/2016 EV16020037 EV16020037-04
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	02/04/2016
CLIENT PROJECT:	1099.25 BMC Issaquah	COLLECTION DATE:	2/4/2016 10:45:00 AM
CLIENT SAMPLE ID	HA-4	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**72.7**	02/05/2016	PAB
TFT	EPA-8021	**78.0**	02/05/2016	PAB

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	2/9/2016
		ALS SDG#:	EV16020037
		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	METHOD	RESULTS	UNITS		REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	MG/KG	PAB	3.0		

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

MB-020416S - Batch 101216 - Soil by EPA-8021

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

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	2/9/2016
		ALS SDG#:	EV16020037
		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 DATE	ANALYSIS BY
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	ANALYSIS 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

APPROVED BY

Laboratory Director

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Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only)

EV1602037

Date _____ Page _____ Of _____

PROJECT ID: 1099.25 BMC Issaquah
REPORT TO COMPANY: Zipper Geo Associates
PROJECT MANAGER: Jon Einarsen
ADDRESS: 19023 36th Ave. W, Suite D
Lynnwood, WA 98036
PHONE: (425) 582-9928 FAX:
P.O. #: E-MAIL: jeinarsen@zippergeo.com
INVOICE TO COMPANY:
ATTENTION: SAME
ADDRESS:

ANALYSIS REQUESTED

OTHER (Specify)

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐									NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. HA1	2/4	10:45	S	1			✓	✓																				
2. HA-2	2/4	10:45	S	2			✓	✓																				
3. HA-3	2/4	10:45	S	3			✓	✓																				
4. HA-4	2/4	10:45	S	4			✓	✓																				
5.																												
6.																												
7.																												
8.																												
9.																												
10.																												

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Jeff Tinkelpaugh, ZGA, 2/4, 12:30
   Received By: Shawn Robinson ALS 2/4/16 12:30
2. Relinquished By: _____
   Received By: _____

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 (Standard) | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: ☒ (Standard) | 3 | 1 | SAME DAY

OTHER:
Specify: _____

*Turnaround request less than standard may incur Rush Charges

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

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ALS Group USA, Corp

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	8/6/2015
		ALS JOB#:	EV15080015
		ALS SAMPLE#:	EV15080015-01
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	08/05/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	8/4/2015 12:45:00 PM
CLIENT SAMPLE ID	TW-1	WDOE ACCREDITATION:	C601

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	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 DATE	ANALYSIS 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

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

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CERTIFICATE OF ANALYSIS

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

CLIENT CONTACT: Jon Einarsen
CLIENT PROJECT: 1099.25

DATE: 8/6/2015
ALS SDG#: EV15080015
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

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

ANALYTE	METHOD	RESULTS	QUAL	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS 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

ANALYTE	METHOD	RESULTS	QUAL	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS 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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CERTIFICATE OF ANALYSIS

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

CLIENT CONTACT: Jon Einarsen
CLIENT PROJECT: 1099.25

DATE: 8/6/2015
ALS SDG#: EV15080015
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
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	ANALYSIS DATE	ANALYSIS 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 DATE	ANALYSIS BY
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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http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV1508015

Date 8/5/15 Page 1 Of 1

PROJECT ID: 1099.25
REPORT TO COMPANY: 2GA
PROJECT MANAGER: Jon Emanuelsen
ADDRESS:
PHONE: FAX:
P.O. #: 1099.25 E-MAIL:
INVOICE TO COMPANY: 2GA
ATTENTION:
ADDRESS:

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. TW-1	8/4/15	1245	H_2O	1		X	X	X												3	
2.																					
3.																					
4.																					
5.																					
6.																					
7.																					
8.																					
9.																					
10.																					

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: 2GA 8-5-15 0835
   Received By: ALS 8/5/15 0835
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | ☒ | SAME DAY

OTHER: Specify:

*Turnaround request less than standard may incur Rush Charges

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	9/11/2015
		ALS JOB#:	EV15090054
		ALS SAMPLE#:	EV15090054-01
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	09/08/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	9/8/2015 12:40:00 PM
CLIENT SAMPLE ID	TW-2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	9/11/2015
		ALS SDG#:	EV15090054
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Jon Einarsen		
CLIENT PROJECT:	1099.25		

LABORATORY BLANK RESULTS

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

ANALYTE	METHOD	RESULTS	QUAL	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS 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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ALS Group USA, Corp

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	9/11/2015
		ALS SDG#:	EV15090054
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Jon Einarsen		
CLIENT PROJECT:	1099.25		

LABORATORY CONTROL SAMPLE RESULTS

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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	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
ALS Group USA, Corp

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ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV1509054

Date 9/8/15 Page 1 Of 1

PROJECT ID: 1099.25
REPORT TO COMPANY: ZGA
PROJECT MANAGER: Jon Einarsen
ADDRESS:
PHONE: FAX:
P.O. #: 1099.25 E-MAIL:
INVOICE TO COMPANY: ZGA
ATTENTION:
ADDRESS:

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify): X KOG Total						NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. TW-2	9-8-15	1240	H_2O	1				X												X							3	
2.																												
3.																												
4.																												
5.																												
6.																												
7.																												
8.																												
9.																												
10.																												

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: ZGA / 9-8-15 / 1720
   Received By: ALS 9/8/15 1220
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | X | SAME DAY

OTHER:
Specify: X Added on one Day
Due 9-11-15

*Turnaround request less than standard may incur Rush Charges

Appendix I – Remedial Action Scale Tickets

Clearcreek CONTRACTORS Environmental/Civil

Document ID	Job #	Date	Facility	Material Type	Scale Ticket #	Trucking Co.	Truck #	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	318199	16.95
81678	214058	9/22/2015	Lakeside Industries	Asphalt	318206	Lakeside	46	318206	15.11
81679	214058	9/22/2015	Lakeside Industries	Asphalt	318208	Lakeside	30	318208	16.91
81680	214058	9/22/2015	Lakeside Industries	Asphalt	318210	Lakeside	46	318210	15.25
81676	214058	9/22/2015	Lakeside Industries	Asphalt	319198	Lakeside	46	318198	15.02
				Asphalt Total					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	7/21/2015	Regional Disposal	Class III/IV Soil	926099	Clearcreek	43	7183	30.31
80841	214058	7/21/2015	Regional Disposal	Class III/IV Soil	926105	Winter Trucking	10	5318	43.19
80846	214058	7/21/2015	Regional Disposal	Class III/IV Soil	926109	Springbrook	10	108578	33.99
80855	214058	7/21/2015	Regional Disposal	Class III/IV Soil	926115	Springbrook	25	105795	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		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	7/23/2015	Regional Disposal	Class III/IV Soil	926173	Springbrook	25	105797	43.33
80897	214058	7/23/2015	Regional Disposal	Class III/IV Soil	926176	Springbrook	26	108886	37.23
81134	214058	7/23/2015	Regional Disposal	Class III/IV Soil	926211	Springbrook	25	105797	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 Total					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
				CSTC Total					119.78
81430	214058	9/9/2015	Cadman	Quarry Spalls	3825078	Clearcreek	43	7199	16.83
81435	214058	9/14/2015	Cadman	Quarry Spalls	3825140	Clearcreek	43/50	8602	32.49
81436	214058	9/14/2015	Cadman	Quarry Spalls	3825142	Clearcreek	43/50	8602	32.35
81437	214058	9/14/2015	Cadman	Quarry Spalls	3825143	Clearcreek	43/50	8602	32.57
81438	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	31.70
81440	214058	9/14/2015	Cadman	Quarry Spalls	3825150	Clearcreek	43/50	8602	31.71
81441	214058	9/14/2015	Cadman	Quarry Spalls	3825152	Clearcreek	43/50	8602	32.16
81442	214058	9/14/2015	Cadman	Quarry Spalls	3825153	Clearcreek	43/50	8602	31.84
81443	214058	9/14/2015	Cadman	Quarry Spalls	3825157	Clearcreek	43/50	8602	31.28
81444	214058	9/14/2015	Cadman	Quarry Spalls	3825159	Clearcreek	43/50	8602	31.42
81445	214058	9/14/2015	Cadman	Quarry Spalls	3825160	Clearcreek	43/50	8602	31.93
81446	214058	9/14/2015	Cadman	Quarry Spalls	3825162	Clearcreek	43/50	8602	32.12
				Quarry Spalls Total					400.49
81600	214058	9/15/2015	Cadman	Type 17	3825198	Springbrook			22.14
81601	214058	9/15/2015	Cadman	Type 17	3825199	Springbrook			22.84
81602	214058	9/15/2015	Cadman	Type 17	3825200	Springbrook			23.16
81603	214058	9/15/2015	Cadman	Type 17	3825204	Springbrook			23.28
81604	214058	9/15/2015	Cadman	Type 17	3825206	Springbrook			22.86
81605	214058	9/15/2015	Cadman	Type 17	3825208	Springbrook			22.06
81606	214058	9/15/2015	Cadman	Type 17	3825210	Springbrook			22.62
81607	214058	9/15/2015	Cadman	Type 17	3825213	Springbrook			22.50
81608	214058	9/15/2015	Cadman	Type 17	3825215	Springbrook	949	3825215	22.35
81588	214058	9/16/2015	Cadman	Type 17	3825220	Springbrook	25	108240	29.56
81589	214058	9/16/2015	Cadman	Type 17	3825225	Springbrook	25	108240	29.32
81590	214058	9/16/2015	Cadman	Type 17	3825226	Springbrook	25	108240	29.42
81591	214058	9/16/2015	Cadman	Type 17	3825227	Springbrook	25	108240	29.86
81592	214058	9/16/2015	Cadman	Type 17	3825228	Springbrook	25	108240	29.74
81593	214058	9/16/2015	Cadman	Type 17	3825229	Springbrook	25	108240	29.26
81594	214058	9/16/2015	Cadman	Type 17	3825230	Springbrook	25	108240	28.67
81595	214058	9/16/2015	Cadman	Type 17	3825231	Springbrook	25	108240	29.49
81596	214058	9/16/2015	Cadman	Type 17	3825232	Springbrook	25	108240	29.59
81597	214058	9/16/2015	Cadman	Type 17	3825236	Springbrook	25	108240	29.49
81598	214058	9/16/2015	Cadman	Type 17	3825239	Springbrook	25	108240	29.92
81599	214058	9/16/2015	Cadman	Type 17	3825241	Springbrook	25	108240	29.40
81619	214058	9/17/2015	Cadman	Type 17	3825245	Springbrook	25	108241	28.79
81620	214058	9/17/2015	Cadman	Type 17	3825252	Springbrook	25	108241	29.30
81621	214058	9/17/2015	Cadman	Type 17	3825257	Springbrook	25	108241	29.49
81622	214058	9/17/2015	Cadman	Type 17	3825261	Springbrook	25	108241	29.09
81623	214058	9/17/2015	Cadman	Type 17	3825265	Springbrook	25	108241	28.47
81624	214058	9/17/2015	Cadman	Type 17	3825269	Springbrook	25	108241	28.87
81625	214058	9/17/2015	Cadman	Type 17	3825272	Springbrook	25	108241	28.75
81626	214058	9/17/2015	Cadman	Type 17	3825274	Springbrook	25	108241	28.53
81627	214058	9/17/2015	Cadman	Type 17	3825276	Springbrook	25	108241	29.62
81628	214058	9/17/2015	Cadman	Type 17	3825279	Springbrook	25	108241	29.43
				Type 17 Total					847.87
80847	214058	7/20/2015	Lakeside Industries	Waste Asphalt	310975	Clearcreek	44	8247	13.57
80848	214058	7/20/2015	Lakeside Industries	Waste Asphalt	310987	Clearcreek	44	8247	15.00
80849	214058	7/20/2015	Lakeside Industries	Waste Asphalt	310995	Clearcreek	44	8247	13.83
80850	214058	7/20/2015	Lakeside Industries	Waste Asphalt	311016	Clearcreek	44	8247	14.70
80851	214058	7/20/2015	Lakeside Industries	Waste Asphalt	311024	Clearcreek	44	8247	10.61
81669	214058	9/18/2015	Lakeside Industries	Waste Asphalt	317901	Clearcreek	43		16.40
81670	214058	9/18/2015	Lakeside Industries	Waste Asphalt	317913	Clearcreek	43		23.76
				Waste Asphalt Total					107.87

SITE

REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER

014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926139	

WEIGHMASTER Drinda L.

DATE/TIME IN	DATE/TIME OUT
07-22-2015 12:57 pm	07-22-2015 1:17 pm

VEHICLE	CONTAINER
25 SPRINGBROOK	

REFERENCE INVOICE

BILL OF LADING

SCALE IN	GROSS WEIGHT	93,100	NET TONS	25.88	
SCALE OUT	TARE WEIGHT	41,340	NET WEIGHT	51,760	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
25.88	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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RS-F042UPR (07/12)

SIGNATURE _____

SITE

REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER

014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926124	

WEIGHMASTER JAMIE B.

DATE/TIME IN	DATE/TIME OUT
07-22-2015 8:35 am	07-22-2015 8:57 am

VEHICLE	CONTAINER
25 SPRINGBROOK	

REFERENCE INVOICE

BILL OF LADING

SCALE IN	GROSS WEIGHT	93,440	NET TONS	26.04
SCALE OUT	TARE WEIGHT	41,360	NET WEIGHT	52,080

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
26.04	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT

TENDERED

CHANGE

CHECK#

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RS-F042UPR (07/12) 2/21

SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926147	

WEIGHMASTER
IN - JAMIE B. OUT - Raylene W.

DATE/TIME IN	DATE/TIME OUT
07-22-2015 2:31 pm	07-22-2015 2:43 pm

VEHICLE	CONTAINER
25 SPRINGBROOK	

REFERENCE INVOICE

BILL OF LADING

SCALE IN	GROSS WEIGHT	106,180	NET TONS	32.48	
SCALE OUT	TARE WEIGHT	41,220	NET WEIGHT	64,960	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
32.48	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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RS-F042UPR (07/12)

SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926150	

WEIGHMASTER
IN - JAMIE B. OUT - Raylene W.

DATE/TIME IN	DATE/TIME OUT
07-22-2015 2:53 pm	07-22-2015 3:09 pm

VEHICLE	CONTAINER
26 SPRINGBROOK	

REFERENCE INVOICE

BILL OF LADING

SCALE IN	GROSS WEIGHT 106,540	NET TONS 32.52		
SCALE OUT	TARE WEIGHT 41,500	NET WEIGHT 65,040		INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
32.52	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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SIGNATURE _____

RS-F042UPR (07/12)

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926142	

WEIGHMASTER
IN - Drinda L. OUT - Raylene W.

DATE/TIME IN	DATE/TIME OUT
07-22-2015 1:05 pm	07-22-2015 1:24 pm

VEHICLE	CONTAINER
26 SPRINGBROOK	

REFERENCE
INVOICE

BILL OF LADING

SCALE IN	GROSS WEIGHT	94,560	NET TONS	26.40	
SCALE OUT	TARE WEIGHT	41,760	NET WEIGHT	52,800	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
26.40	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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RS-F042UPR (07/12)

SIGNATURE _____

SITE

REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER

014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926125	

WEIGHMASTER
IN - JAMIE B. OUT - Drinda L.

DATE/TIME IN	DATE/TIME OUT
07-22-2015 8:37 am	07-22-2015 8:58 am

VEHICLE	CONTAINER
26 SPRINGBROOK	

REFERENCE
INVOICE

BILL OF LADING

SCALE IN	GROSS WEIGHT	88,480	NET TONS	23.28
SCALE OUT	TARE WEIGHT	41,920	NET WEIGHT	46,560

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
23.28	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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RS-F042UPR (07/12)

SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926133	

WEIGHMASTER
IN - JAMIE B. OUT - Kim L.

DATE/TIME IN	DATE/TIME OUT
07-22-2015 10:45 am	07-22-2015 11:41 am

VEHICLE	CONTAINER
26 SPRINGBROOK	

REFERENCE INVOICE

BILL OF LADING

SCALE IN	GROSS WEIGHT	93,240	NET TONS	25.45	
SCALE OUT	TARE WEIGHT	42,340	NET WEIGHT	50,900	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
25.45	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT

TENDERED

CHANGE

CHECK#

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RS-F042UPR (07/12)

SIGNATURE _____

SITE: REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926145	

WEIGHMASTER: IN - JAMIE B. OUT - Raylene W.

DATE/TIME IN	DATE/TIME OUT
07-22-2015 2:03 pm	07-22-2015 2:19 pm

VEHICLE	CONTAINER
43 CLEARCREEK	

REFERENCE: INVOICE

BILL OF LADING:

SCALE IN
SCALE OUT

GROSS WEIGHT 112,300
TARE WEIGHT 39,500
NET WEIGHT 72,800

NET TONS 36.40

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
36.40	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT

TENDERED

CHANGE

CHECK#

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SIGNATURE _____

RS-F042UPR (07/12)

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	928926	

WEIGHMASTER IN - JAMIE B. OUT - Drinda L.

DATE/TIME IN	DATE/TIME OUT
09-10-2015 8:49 am	09-10-2015 9:06 am

VEHICLE	CONTAINER
43 CLEARCREEK	

REFERENCE INVOICE

BILL OF LADING

SCALE IN	GROSS WEIGHT	97,340	NET TONS	28.56
SCALE OUT	TARE WEIGHT	40,220	NET WEIGHT	57,120

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
28.56	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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RS-F042UPR (07/12)

SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	928912	

WEIGHMASTER: IN - LARRY C. OUT - Drinda L.

DATE/TIME IN	DATE/TIME OUT
09-10-2015 6:53 am	09-10-2015 7:13 am

VEHICLE	CONTAINER
43 CLEARCREEK	

REFERENCE: INVOICE

BILL OF LADING:

SCALE IN	GROSS WEIGHT	107,520	NET TONS	33.65
SCALE OUT	TARE WEIGHT	40,220	NET WEIGHT	67,300

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
33.65	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT

TENDERED

CHANGE

CHECK#

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RS-F042UPR (07/12)

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SITE

REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER

014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	929111	

WEIGHMASTER: IN Drinda L. OUT Kim L.

DATE/TIME IN	DATE/TIME OUT
09-16-2015 8:23 am	09-16-2015 8:35 am

VEHICLE: 25 SPRINGBROOK

CONTAINER:

REFERENCE: INVOICE

BILL OF LADING:

SCALE IN	GROSS WEIGHT	46,640	NET TONS	9.96	
SCALE OUT	TARE WEIGHT	26,720	NET WEIGHT	19,920	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
9.96	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT

TENDERED

CHANGE

CHECK#

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.

SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	929237	214058

WEIGHMASTER: Drinda L.

DATE/TIME IN	DATE/TIME OUT
09-18-2015 10:52 am	09-18-2015 11:10 am

VEHICLE	CONTAINER
43 CLEARCREEK	

REFERENCE: INVOICE

BILL OF LADING:

SCALE IN	GROSS WEIGHT 61,360	NET TONS 9.61		
SCALE OUT	TARE WEIGHT 42,140	NET WEIGHT 19,220		INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
9.61	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT

TENDERED

CHANGE

CHECK#

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SIGNATURE _____

RS-F042UPR (07/12)

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926063	215092.10.30

WEIGHMASTER: IN - Drinda L. OUT - JAMIE B.

DATE/TIME IN	DATE/TIME OUT
07-21-2015 7:39 am	07-21-2015 7:48 am

VEHICLE: SOIL
CONTAINER:
REFERENCE: 44 CLEARCREEK INVOICE
BILL OF LADING:

SCALE IN	GROSS WEIGHT	105,460	NET TONS	32.50
SCALE OUT	TARE WEIGHT	40,460	NET WEIGHT	65,000

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
32.50	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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SIGNATURE _____

RS-F042UPR (07/12)

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926075	

WEIGHMASTER: IN - Drinda L. OUT - JAMIE B.

DATE/TIME IN	DATE/TIME OUT
07-21-2015 9:25 am	07-21-2015 9:32 am

VEHICLE: SOIL
CONTAINER:
REFERENCE: 44 CLEARCREEK INVOICE
BILL OF LADING:

SCALE IN	GROSS WEIGHT	106,660	NET TONS	33.31
SCALE OUT	TARE WEIGHT	40,040	NET WEIGHT	66,620

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
33.31	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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SIGNATURE _____

RS-F042UPR (07/12)

2/21

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926084	

WEIGHMASTER: IN - Drinda L. OUT - JAMIE B.

DATE/TIME IN	DATE/TIME OUT
07-21-2015 10:53 am	07-21-2015 11:02 am

VEHICLE	CONTAINER
SOIL	

REFERENCE: 44 CLEARCREEK INVOICE

BILL OF LADING:

SCALE IN	GROSS WEIGHT 108,400	NET TONS 34.15		
SCALE OUT	TARE WEIGHT 40,100	NET WEIGHT 68,300	INBOUND	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
34.15	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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SIGNATURE _____

RS-F042UPR (07/12)

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926095	

WEIGHMASTER: IN - Kim L. OUT - Drinda L.

DATE/TIME IN	DATE/TIME OUT
07-21-2015 12:18 pm	07-21-2015 12:27 pm

VEHICLE: 44 CLEAR CREEK
CONTAINER:
REFERENCE: INVOICE
BILL OF LADING:

SCALE IN	GROSS WEIGHT	106,940	NET TONS	33.34
SCALE OUT	TARE WEIGHT	40,260	NET WEIGHT	66,680

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
33.34	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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SIGNATURE _____

RS-F042UPR (07/12)

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926116	

WEIGHMASTER: IN - Raylene W. OUT - Drinda L.

DATE/TIME IN	DATE/TIME OUT
07-21-2015 1:43 pm	07-21-2015 2:19 pm

VEHICLE	CONTAINER
44 CLEAR CREEK	

REFERENCE: INVOICE

BILL OF LADING:

SCALE IN	GROSS WEIGHT 108,500	NET TONS 34.12		
SCALE OUT	TARE WEIGHT 40,260	NET WEIGHT 68,240	INBOUND	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
34.12	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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SIGNATURE _____

RS-F042UPR (07/12)

215092.10.30

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926065	

WEIGHMASTER
IN - Drinda L. OUT - JAMIE B.

DATE/TIME IN	DATE/TIME OUT
07-21-2015 7:56 am	07-21-2015 8:01 am

VEHICLE	CONTAINER
SOIL	

REFERENCE
43 CLEARCREEK INVOICE

BILL OF LADING

SCALE IN	GROSS WEIGHT	107,000	NET TONS	33.63	
SCALE OUT	TARE WEIGHT	39,740	NET WEIGHT	67,260	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
33.63	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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RS-F042UPR (07/12)

SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926076	

WEIGHMASTER: IN - Drinda L. OUT - JAMIE B.

DATE/TIME IN	DATE/TIME OUT
07-21-2015 9:40 am	07-21-2015 9:45 am

VEHICLE	CONTAINER
SOIL	

REFERENCE: 43 CLEARCREEK INVOICE

BILL OF LADING:

SCALE IN	GROSS WEIGHT	95,780	NET TONS	28.07
SCALE OUT	TARE WEIGHT	39,640	NET WEIGHT	56,140

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
28.07	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT

TENDERED

CHANGE

CHECK#

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SIGNATURE _____

RS-F042UPR (07/12)

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926099	

WEIGHMASTER: IN - Kim L. OUT - Drinda L.

DATE/TIME IN	DATE/TIME OUT
07-21-2015 12:31 pm	07-21-2015 12:48 pm

VEHICLE	CONTAINER
43 CLEARCREEK	

REFERENCE: INVOICE

BILL OF LADING:

SCALE IN	GROSS WEIGHT 100,300	NET TONS 30.31		
SCALE OUT	TARE WEIGHT 39,680	NET WEIGHT 60,620		INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
30.31	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT

TENDERED

CHANGE

CHECK#

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SIGNATURE _____

RS-F042UPR (07/12)

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926085	

WEIGHMASTER: IN - Drinda L. OUT - JAMIE B.

DATE/TIME IN	DATE/TIME OUT
07-21-2015 11:04 am	07-21-2015 11:11 am

VEHICLE	CONTAINER
SOIL	

REFERENCE: 44 CLEARCREEK INVOICE

BILL OF LADING:

SCALE IN	GROSS WEIGHT	98,440	NET TONS	29.35
SCALE OUT	TARE WEIGHT	39,740	NET WEIGHT	58,700

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
29.35	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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SIGNATURE _____

RS-F042UPR (07/12)

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926068	

WEIGHMASTER: IN - Drinda L. OUT - JAMIE B.

DATE/TIME IN	DATE/TIME OUT
07-21-2015 8:07 am	07-21-2015 8:19 am

VEHICLE	CONTAINER
SOIL	

REFERENCE: 10 WINTER INVOICE

BILL OF LADING

SCALE IN	GROSS WEIGHT 104,840	NET TONS 32.20		
SCALE OUT	TARE WEIGHT 40,440	NET WEIGHT 64,400		INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
32.20	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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SIGNATURE _____

RS-F042UPR (07/12)

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926078	

WEIGHMASTER
IN - Drinda L. OUT - JAMIE B.

DATE/TIME IN	DATE/TIME OUT
07-21-2015 10:02 am	07-21-2015 10:12 am

VEHICLE	CONTAINER
SOIL	

REFERENCE
10 WINTER INVOICE

BILL OF LADING

SCALE IN	GROSS WEIGHT	100,200	NET TONS	29.99
SCALE OUT	TARE WEIGHT	40,220	NET WEIGHT	59,980

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
29.99	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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SIGNATURE _____

RS-F042UPR (07/12)

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926090	

WEIGHMASTER: IN - Kim L. OUT - Drinda L.

DATE/TIME IN	DATE/TIME OUT
07-21-2015 11:47 am	07-21-2015 11:59 am

VEHICLE: 10 BUD WINTER
CONTAINER:
REFERENCE: INVOICE
BILL OF LADING:

SCALE IN	GROSS WEIGHT	101,300	NET TONS	30.02
SCALE OUT	TARE WEIGHT	41,260	NET WEIGHT	60,040

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
30.02	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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SIGNATURE _____

RS-F042UPR (07/12)

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926105	

WEIGHMASTER IN - Raylene W. OUT - Drinda L.

DATE/TIME IN	DATE/TIME OUT
07-21-2015 1:16 pm	07-21-2015 1:30 pm

VEHICLE	CONTAINER
SOIL	

REFERENCE 10 WINTER TRUCKING INVOICE

BILL OF LADING

SCALE IN	GROSS WEIGHT	127,100	NET TONS	43.19
SCALE OUT	TARE WEIGHT	40,720	NET WEIGHT	86,380

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
43.19	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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RS-F042UPR (07/12)

SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926071	

WEIGHMASTER
IN - Drinda L. OUT - JAMIE B.

DATE/TIME IN	DATE/TIME OUT
07-21-2015 8:40 am	07-21-2015 8:52 am

VEHICLE	CONTAINER
SOIL	

REFERENCE
10 SPRINGBROOK INVOICE

BILL OF LADING

SCALE IN	GROSS WEIGHT	99,980	NET TONS	28.92	
SCALE OUT	TARE WEIGHT	42,140	NET WEIGHT	57,840	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
28.92	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT

TENDERED

CHANGE

CHECK#

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RS-F042UPR (07/12)

SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926082	

WEIGHMASTER
IN - Drinda L. OUT - JAMIE B.

DATE/TIME IN	DATE/TIME OUT
07-21-2015 10:35 am	07-21-2015 10:44 am

VEHICLE	CONTAINER
SOIL	

REFERENCE
10 SPRINGBROOK INVOICE

BILL OF LADING

SCALE IN	GROSS WEIGHT	104,240	NET TONS	31.55
SCALE OUT	TARE WEIGHT	41,140	NET WEIGHT	63,100

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
31.55	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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SIGNATURE _____

RS-F042UPR (07/12)

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926093	

WEIGHMASTER: IN - Kim L. OUT - Drinda L.

DATE/TIME IN	DATE/TIME OUT
07-21-2015 12:04 pm	07-21-2015 12:09 pm

VEHICLE	CONTAINER
10 SPRINGBROOK	

REFERENCE: INVOICE

BILL OF LADING:

SCALE IN	GROSS WEIGHT	100,680	NET TONS	29.73
SCALE OUT	TARE WEIGHT	41,220	NET WEIGHT	59,460

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
29.73	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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SIGNATURE _____

RS-F042UPR (07/12)

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926109	

WEIGHMASTER
IN - Raylene W. OUT - Drinda L.

DATE/TIME IN	DATE/TIME OUT
07-21-2015 1:25 pm	07-21-2015 1:52 pm

VEHICLE	CONTAINER
10 SPRINGBROOK	

REFERENCE INVOICE

BILL OF LADING

SCALE IN	GROSS WEIGHT 109,040	NET TONS 33.99		
SCALE OUT	TARE WEIGHT 41,060	NET WEIGHT 67,980		INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
33.99	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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SIGNATURE _____

RS-F042UPR (07/12)

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926070	

WEIGHMASTER
IN - Drinda L. OUT - JAMIE B.

DATE/TIME IN	DATE/TIME OUT
07-21-2015 8:35 am	07-21-2015 8:47 am

VEHICLE	CONTAINER
SOIL	

REFERENCE
25 SPRINGBROOK INVOICE

BILL OF LADING

SCALE IN	GROSS WEIGHT 107,480	NET TONS 33.17		
SCALE OUT	TARE WEIGHT 41,140	NET WEIGHT 66,340		INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
33.17	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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)

SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926081	

WEIGHMASTER: IN - Drinda L. OUT - JAMIE B.

DATE/TIME IN	DATE/TIME OUT
07-21-2015 10:26 am	07-21-2015 10:38 am

VEHICLE	CONTAINER
SOIL	

REFERENCE: 25 SPRINGBROOK INVOICE

BILL OF LADING

SCALE IN	GROSS WEIGHT	104,480	NET TONS	31.67
SCALE OUT	TARE WEIGHT	41,140	NET WEIGHT	63,340

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
31.67	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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SIGNATURE _____

RS-F042UPR (07/12)

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926115	

WEIGHMASTER: IN - Raylene W. OUT - Drinda L.

DATE/TIME IN	DATE/TIME OUT
07-21-2015 1:40 pm	07-21-2015 2:17 pm

VEHICLE: 25 SPRINGBROOK
CONTAINER:
REFERENCE: INVOICE
BILL OF LADING:

SCALE IN	GROSS WEIGHT	105,880	NET TONS	32.35
SCALE OUT	TARE WEIGHT	41,180	NET WEIGHT	64,700

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
32.35	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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SIGNATURE _____

RS-F042UPR (07/12)

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926091	

WEIGHMASTER
IN - Kim L. OUT - Drinda L.

DATE/TIME IN	DATE/TIME OUT
07-21-2015 11:54 am	07-21-2015 12:05 pm

VEHICLE	CONTAINER
25 SPRINGBROOK	

REFERENCE INVOICE

BILL OF LADING

SCALE IN	GROSS WEIGHT 100,300	NET TONS 29.35		
SCALE OUT	TARE WEIGHT 41,600	NET WEIGHT 58,700		INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
29.35	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT
TENDERED
CHANGE
CHECK#

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)

SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926117	

WEIGHMASTER: IN - Raylene W. OUT - Drinda L.

DATE/TIME IN	DATE/TIME OUT
07-21-2015 1:58 pm	07-21-2015 2:2

VEHICLE	CONTAINER
43 CLEARCREEK	

REFERENCE: INVOICE

BILL OF LADING:

SCALE IN	GROSS WEIGHT	105,800	NET TONS	33.20	
SCALE OUT	TARE WEIGHT	39,400	NET WEIGHT	66,400	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	T
0.00	YD	TRACKING QTY				
33.20	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

214058.30

NET A
TEND
CHA
CHE

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) 2/21

SIGNATURE _____

SITE	REGIONAL DISPOSAL INTERMODAL 3rd and lander Seattle, WA --

CUSTOMER
014755 Clearcreek Contractors 3919 88th ST NE Marysville, WA 98270 LW-15171

SITE	TICKET #	CELL
01	926120	

WEIGHMASTER	
Raylene W.	
DATE/TIME IN	DATE/TIME OUT
07-21-2015 3:27 pm	07-21-2015 4:2
VEHICLE	CONTAINER
25 SPRINGBROOK	
REFERENCE	INVOICE
BILL OF LADING	

SCALE IN	GROSS WEIGHT	98,720	NET TONS	28.97	
SCALE OUT	TARE WEIGHT	40,780	NET WEIGHT	57,940	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	T
0.00	YD	TRACKING QTY				
28.97	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

214058.30

NET A

TEND

CHA

CHE

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RS-F042UPR (07/12) 2/21

SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926256	

WEIGHMASTER
IN - Kim L. OUT - Drinda L.

DATE/TIME IN	DATE/TIME OUT
07-24-2015 8:55 am	07-24-2015 9:5

VEHICLE	CONTAINER
44 CLEAR CREEK	

REFERENCE
INVOICE

BILL OF LADING

SCALE IN	GROSS WEIGHT	90,440	NET TONS	25.18	
SCALE OUT	TARE WEIGHT	40,080	NET WEIGHT	50,360	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	T
0.00	YD	TRACKING QTY				
25.18	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

214058.30

NET A
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CHE

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RS-F042UPR (07/12) 2/21

SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926173	

WEIGHMASTER
IN - JAMIE B. OUT - Drinda L.

DATE/TIME IN	DATE/TIME OUT
07-23-2015 8:50 am	07-23-2015 9:4

VEHICLE	CONTAINER
25 SPRINGBROOK	

REFERENCE INVOICE

BILL OF LADING

SCALE IN	GROSS WEIGHT	128,000	NET TONS	43.33	
SCALE OUT	TARE WEIGHT	41,340	NET WEIGHT	86,660	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	T
0.00	YD	TRACKING QTY				
43.33	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

214058.30

NET A
TEND
CHA
CHE

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RS-F042UPR (07/12) 2/21

SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926176	

WEIGHMASTER
IN - JAMIE B. OUT - Drinda L.

DATE/TIME IN	DATE/TIME OUT
07-23-2015 8:59 am	07-23-2015 9:4

VEHICLE	CONTAINER
26 SPRINGBROOK	

REFERENCE INVOICE

BILL OF LADING

SCALE IN	GROSS WEIGHT	116,500	NET TONS	37.23	
SCALE OUT	TARE WEIGHT	42,040	NET WEIGHT	74,460	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TO
0.00	YD	TRACKING QTY				
37.23	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AM
TEND
CHA
CHE

214058.30

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RS-F042UPR (07/12) 2/21

SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926131	

WEIGHMASTER
IN - JAMIE B. OUT - Kim L.

DATE/TIME IN	DATE/TIME OUT
07-22-2015 11:22 am	07-22-2015 11:3

VEHICLE	CONTAINER
43 CLEARCREEK	

REFERENCE INVOICE

BILL OF LADING

SCALE IN	GROSS WEIGHT	92,280	NET TONS	26.06	
SCALE OUT	TARE WEIGHT	40,160	NET WEIGHT	52,120	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TO
0.00	YD	TRACKING QTY				
26.06	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

214058.36

NET AM
TENDE
CHAN
CHEC

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) 2/21

SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926128	

WEIGHMASTER
IN - JAMIE B. OUT - Drinda L.

DATE/TIME IN	DATE/TIME OUT
07-22-2015 9:58 am	07-22-2015 10:0

VEHICLE	CONTAINER
43 CLEARCREEK	

REFERENCE INVOICE

BILL OF LADING

SCALE IN	GROSS WEIGHT	87,980	NET TONS	23.85
SCALE OUT	TARE WEIGHT	40,280	NET WEIGHT	47,700

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TO
0.00	YD	TRACKING QTY				
23.85	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

214058.30

NET AM
TENDE
CHAN
CHEC

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) 2/21

SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER
014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926138	

WEIGHMASTER
IN - Drinda L. OUT - Kim L.

DATE/TIME IN	DATE/TIME OUT
07-22-2015 12:39 pm	07-22-2015 12:54 pm

VEHICLE	CONTAINER
43 CLEARCREEK	

REFERENCE INVOICE

BILL OF LADING

SCALE IN	GROSS WEIGHT	108,260	NET TONS	34.29	
SCALE OUT	TARE WEIGHT	39,680	NET WEIGHT	68,580	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
34.29	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

214058.30

NET AMOUNT
TENDERED
CHANGE
CHECK#

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) 2/21

SIGNATURE _____

SITE

REGIONAL DISPOSAL INTERMODAL
3rd and lander
Seattle, WA --

CUSTOMER

014755
Clearcreek Contractors
3919 88th ST NE
Marysville, WA 98270
LW-15171

SITE	TICKET #	CELL
01	926132	

WEIGHMASTER
IN - JAMIE B. OUT - Kim L.

DATE/TIME IN	DATE/TIME OUT
07-22-2015 10:26 am	07-22-2015 11:40 am

VEHICLE	CONTAINER
25 SPRINGBROOK	

REFERENCE
INVOICE

BILL OF LADING

SCALE IN	GROSS WEIGHT	87,040	NET TONS	22.39	
SCALE OUT	TARE WEIGHT	42,260	NET WEIGHT	44,780	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
22.39	TN	SW-CONT SOIL W/FUEL ISSAQUAH/KING				

NET AMOUNT

TENDERED

CHANGE

CHECK#

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)

SIGNATURE _____

Appendix J – Post-Remedial Action Well Logs

Boring Location: -
Top Elevation: -
Date Drilled: 11/20/2015

Drilling Company: Environmental
Drilling Method: Hollow Stem Auger
Drill Rig: Truck Mounted

Bore Hole Dia.: 6"
Hammer Type:
Logged by: JST

MW-1A

Depth (ft)	SOIL DESCRIPTION	Sample Number / SAMPLES / Recovery	Ground Water	PENETRATION RESISTANCE (blows/foot)	Blow Counts	Testing
	The stratification lines represent the approximate boundaries between soil types. The transition may be gradual. Refer to report text and appendices for additional information.			▲ Standard Penetration Test △ Hammer Weight and Drop: _____ 0 20 40 60		
0	3 to 4 inches of asphalt					
	Loose, moist, tan, sandy GRAVEL (Fill). No obvious hydrocarbon odor noted.					
	Soft, very moist, blue-gray, SILT with trace fine sand. No obvious hydrocarbon odor noted.					
5	Soft, very moist, mottled green and light brown, SILT with trace fine sand. No obvious hydrocarbon odor noted.	S3	11/20/15		0	
	Soft, wet, gray, SILT with some fine-medium sand. No obvious hydrocarbon odor noted.					
10	Exploration completed at 10 feet. Groundwater observed at approximately 3 feet ATD.					
15						
20						
25						

SAMPLE LEGEND
- 2-inch O.D. split spoon sample
- 3-inch I.D. Shelby tube sample

GROUNDWATER LEGEND
- Clean Sand
- Bentonite
- Grout/Concrete
- Screened Casing
- Blank Casing
- Groundwater level at time of drilling (ATD) or on date of measurement. 11/2/12

◇ % Fines (<0.075 mm)
○ % Water (Moisture) Content
Plastic Limit ⊢—○—⊣ Liquid Limit
Natural Water Content

TESTING KEY
GSA = Grain Size Analysis
200W = 200 Wash Analysis
Consol. = Consolidation Test
Att. = Atterberg Limits

BMC Issaquah
5210 E Lake Sammamish Pkwy SE
Issaquah, WA

Date: -
Project No.: 1099.25

Zipper Geo Associates
19023 36th Ave. W, Suite D
Lynnwood, WA

BORING LOG: MW-1A

Boring Location: -
Top Elevation: -
Date Drilled: 11/20/2015

Drilling Company: Environmental
Drilling Method: Hollow Stem Auger
Drill Rig: Truck Mounted

Bore Hole Dia.: 6"
Hammer Type:
Logged by: JST

MW-4A

Depth (ft)	SOIL DESCRIPTION	Sample Number / SAMPLES / Recovery	Ground Water	PENETRATION RESISTANCE (blows/foot)	Blow Counts	Testing
	The stratification lines represent the approximate boundaries between soil types. The transition may be gradual. Refer to report text and appendices for additional information.			▲ Standard Penetration Test △ Hammer Weight and Drop: _____ 0 20 40 60		
0	3 to 4 inches of Asphalt					
	Loose, moist grading to wet, tan, gravelly SAND with trace silt (Fill). No obvious hydrocarbon odor noted.					
5	Soft, very wet, gray SILT with trace fine sand. No obvious hydrocarbon odor noted.	S1	11/20/15		0	
10	Exploration completed at 10 feet. Groundwater observed at approximately 2.5 feet ATD.					
15						
20						
25						

SAMPLE LEGEND
- 2-inch O.D. split spoon sample
- 3-inch I.D. Shelby tube sample

GROUNDWATER LEGEND
- Clean Sand
- Bentonite
- Grout/Concrete
- Screened Casing
- Blank Casing
- Groundwater level at time of drilling (ATD) or on date of measurement. 11/2/12

TESTING KEY
- GSA = Grain Size Analysis
- 200W = 200 Wash Analysis
- Consol. = Consolidation Test
- Att. = Atterberg Limits

- ◇ % Fines (<0.075 mm)
- ○ % Water (Moisture) Content
- Plastic Limit ⊣—○—⊢ Liquid Limit
- Natural Water Content

BMC Issaquah
5210 E Lake Sammamish Pkwy SE
Issaquah, WA

Date: -
Project No.: 1099.25

Zipper Geo Associates
19023 36th Ave. W, Suite D
Lynnwood, WA

BORING LOG: MW-4A

Boring Location: -
Top Elevation: -
Date Drilled: 11/20/2015

Drilling Company: Environmental
Drilling Method: Hollow Stem Auger
Drill Rig: Truck Mounted

Bore Hole Dia.: 6"
Hammer Type:
Logged by: JST

MW-5

Depth (ft)	SOIL DESCRIPTION	Sample Number / SAMPLES / Recovery	Ground Water	PENETRATION RESISTANCE (blows/foot)	Blow Counts	Testing
	The stratification lines represent the approximate boundaries between soil types. The transition may be gradual. Refer to report text and appendices for additional information.			▲ Standard Penetration Test △ Hammer Weight and Drop: _____ 0 20 40 60		
0	3 to 4 inches of Asphalt					
	Loose, moist grading to wet, tan, sandy GRAVEL with trace silt (Fill). No obvious hydrocarbon odor noted.					
5	Soft, wet, light brownish gray, SILT with some fine sand, little coarse sand near contact. No obvious hydrocarbon odor noted.	S2	11/20/15		0	
10	Exploration completed at 10 feet. Groundwater observed at approximately 2.5 feet ATD.					
15						
20						
25						

SAMPLE LEGEND
- 2-inch O.D. split spoon sample
- 3-inch I.D. Shelby tube sample

GROUNDWATER LEGEND
- Clean Sand
- Bentonite
- Grout/Concrete
- Screened Casing
- Blank Casing
- Groundwater level at time of drilling (ATD) or on date of measurement. 11/2/12

TESTING KEY
- GSA = Grain Size Analysis
- 200W = 200 Wash Analysis
- Consol. = Consolidation Test
- Att. = Atterberg Limits

- ◇ % Fines (<0.075 mm)
- ○ % Water (Moisture) Content
- Plastic Limit ⊣—○—⊢ Liquid Limit
- Natural Water Content

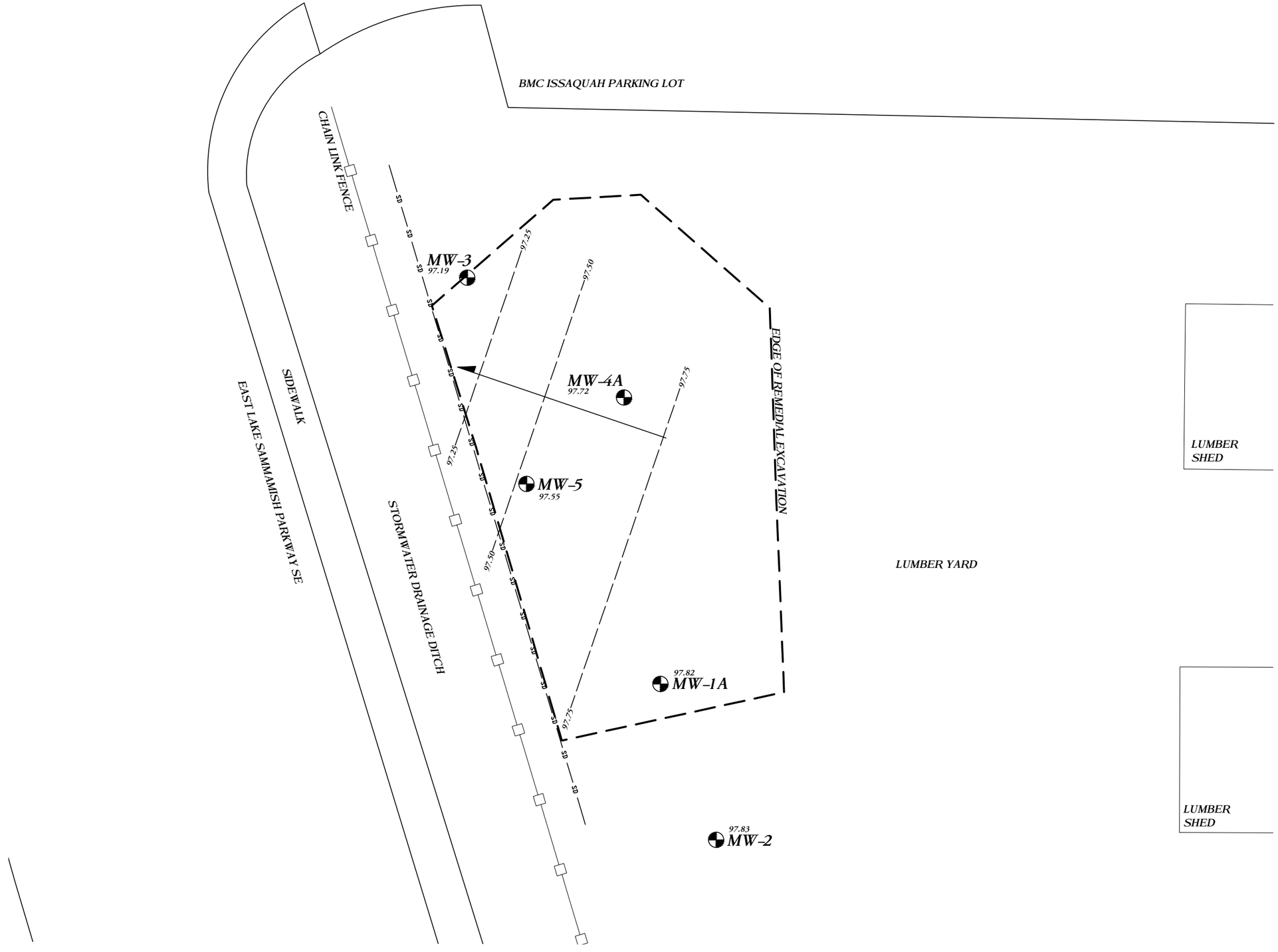
BMC Issaquah
5210 E Lake Sammamish Pkwy SE
Issaquah, WA

Date: -
Project No.: 1099.25

Zipper Geo Associates
19023 36th Ave. W, Suite D
Lynnwood, WA

BORING LOG: MW-5

Appendix K – Post Remediation Groundwater Contour Maps



LEGEND

MW-4A 97.72	APPROXIMATE LOCATION OF MONITORING WELL WITH ID AND RELATIVE GROUNDWATER ELEVATION
— — — 97.25	RELATIVE GROUNDWATER ELEVATION CONTOURS
◀——	INFERRED GROUNDWATER FLOW DIRECTION
— SD — SD —	APPROXIMATE LOCATION OF STORM DRAIN OBSERVED DURING REMEDIAL EXCAVATION

GROUNDWATER ELEVATIONS ARE RELATIVE TO A DATUM OF 100 FEET ESTABLISHED BY A PINK NAIL WITH WASHER DRIVEN INTO ASPHALT TO THE NORTHWEST OF THE REMEDIAL EXCAVATION

N

20 0 10 20

SCALE IN FEET

REFERENCE: SURVEY PERFORMED BY PLS, INC. ON JAN. 13, 2016; GOOGLE EARTH SATELLITE IMAGE DATED JUNE, 2016.

BMC ISSAQUAH
5210 East Lake Sammamish Parkway SE
Issaquah, Washington

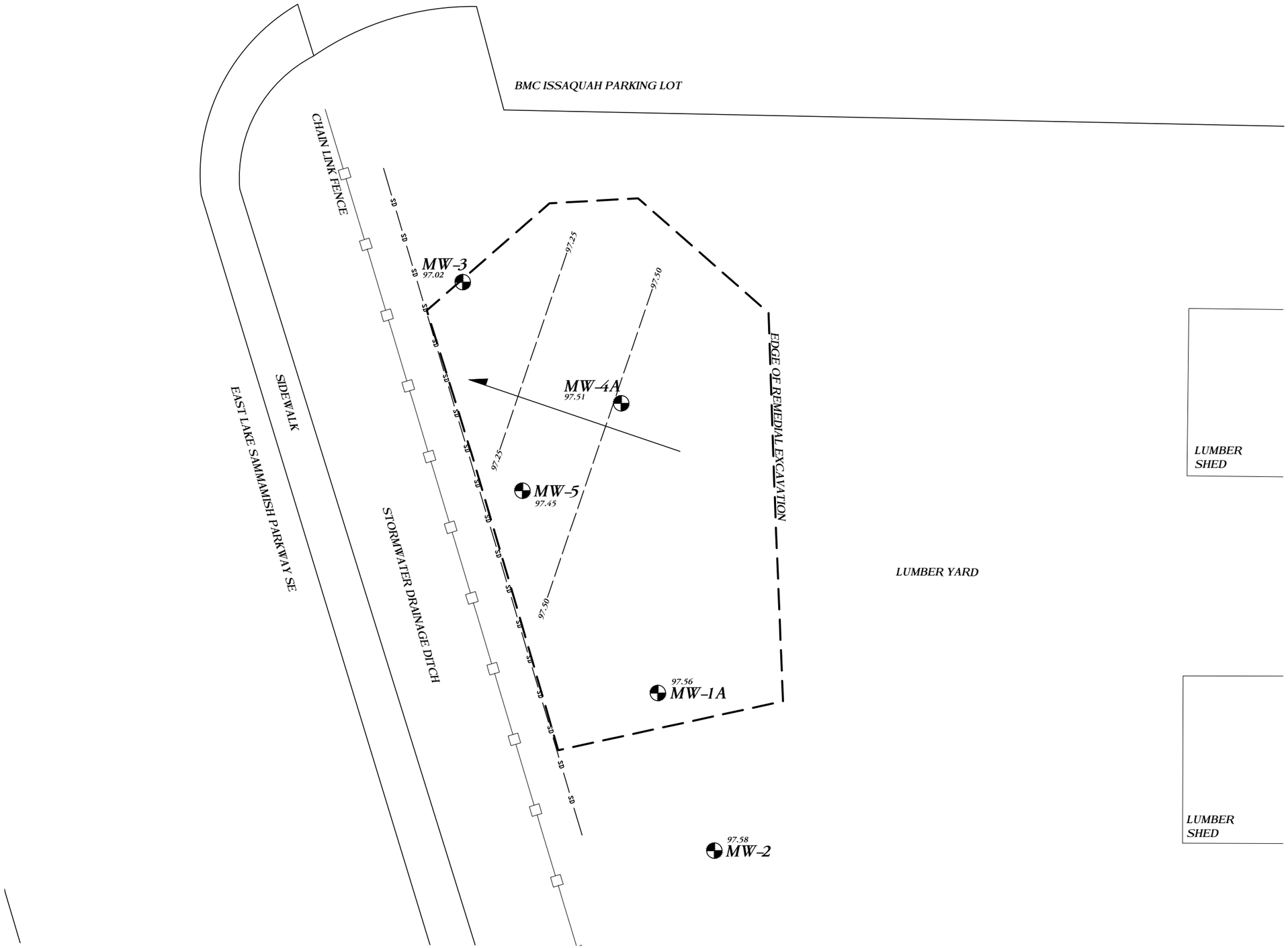
DECEMBER 2015 GROUNDWATER ELEVATIONS AND CONTOURS

DATE: JANUARY 2017 Job No. 1099.25

Zipper Geo Associates, LLC
19023 36th Ave. W.,Suite D
Lynnwood, WA

FIGURE 8

SHT. 1 of 1



LEGEND

MW-4A 97.72	APPROXIMATE LOCATION OF MONITORING WELL WITH ID AND RELATIVE GROUNDWATER ELEVATION
— — — 97.25	RELATIVE GROUNDWATER ELEVATION CONTOURS
◢———	INFERRED GROUNDWATER FLOW DIRECTION
— SD — SD —	APPROXIMATE LOCATION OF STORM DRAIN OBSERVED DURING REMEDIAL EXCAVATION

GROUNDWATER ELEVATIONS ARE RELATIVE TO A DATUM OF 100 FEET ESTABLISHED BY A PINK NAIL WITH WASHER DRIVEN INTO ASPHALT TO THE NORTHWEST OF THE REMEDIAL EXCAVATION

LUMBER SHED

LUMBER SHED

N

20 0 10 20

SCALE IN FEET

REFERENCE: SURVEY PERFORMED BY PLS, INC. ON JAN. 13, 2016; GOOGLE EARTH SATELLITE IMAGE DATED JUNE, 2016.

BMC ISSAQUAH
5210 East Lake Sammamish Parkway SE
Issaquah, Washington

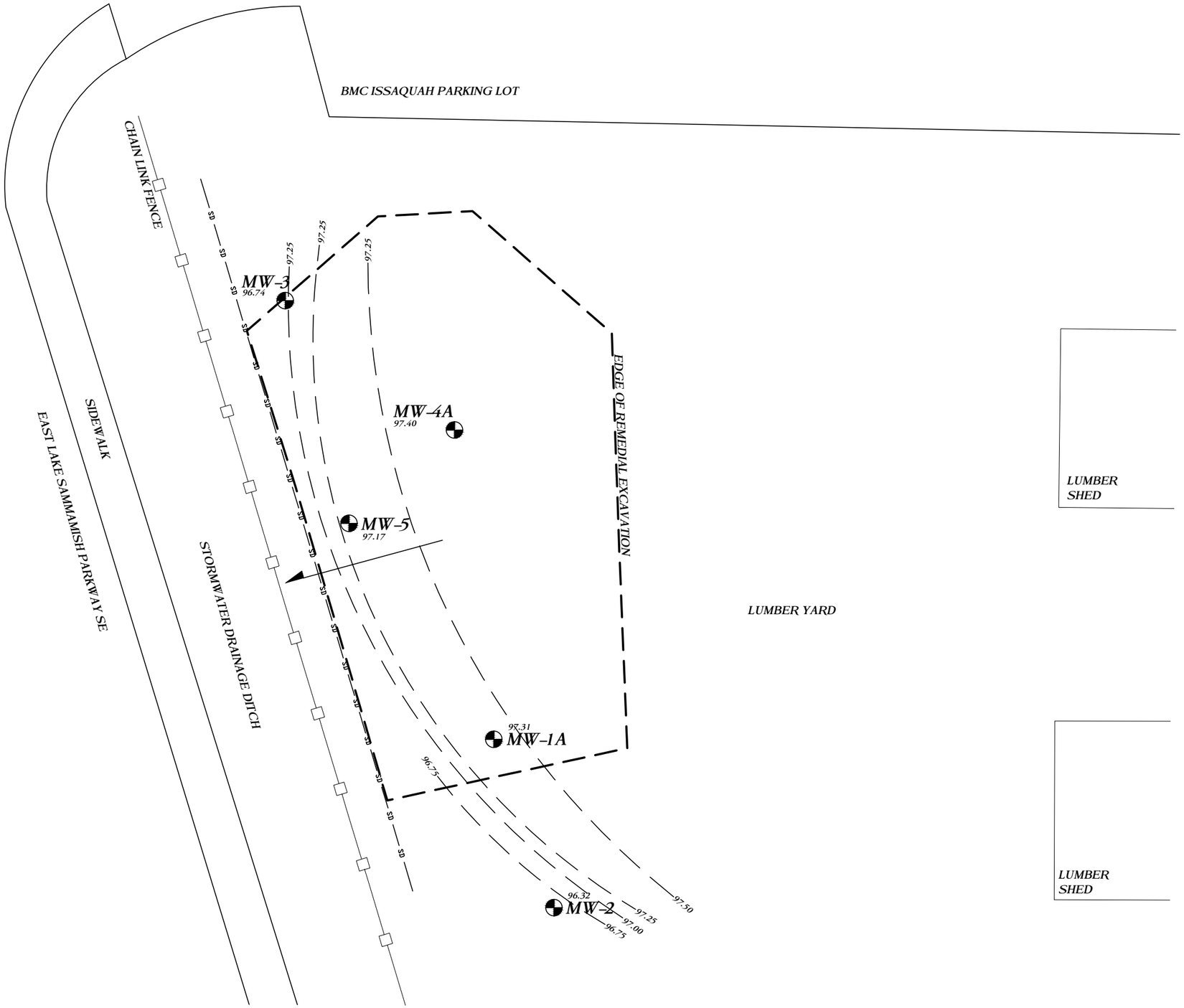
MARCH 2016 GROUNDWATER ELEVATIONS AND CONTOURS

DATE: JANUARY 2017 Job No. 1099.25

Zipper Geo Associates, LLC
19023 36th Ave. W.,Suite D
Lynnwood, WA

FIGURE 9

SHT. 1 of 1



LEGEND

MW-4A 97.40	APPROXIMATE LOCATION OF MONITORING WELL WITH ID AND RELATIVE GROUNDWATER ELEVATION
— — — 97.25	RELATIVE GROUNDWATER ELEVATION CONTOURS
	INFERRED GROUNDWATER FLOW DIRECTION
— SD — SD —	APPROXIMATE LOCATION OF STORM DRAIN OBSERVED DURING REMEDIAL EXCAVATION

GROUNDWATER ELEVATIONS ARE RELATIVE TO A DATUM OF 100 FEET ESTABLISHED BY A PINK NAIL WITH WASHER DRIVEN INTO ASPHALT TO THE NORTHWEST OF THE REMEDIAL EXCAVATION

N

20 0 10 20

SCALE IN FEET

BMC ISSAQUAH
5210 East Lake Sammamish Parkway SE
Issaquah, Washington

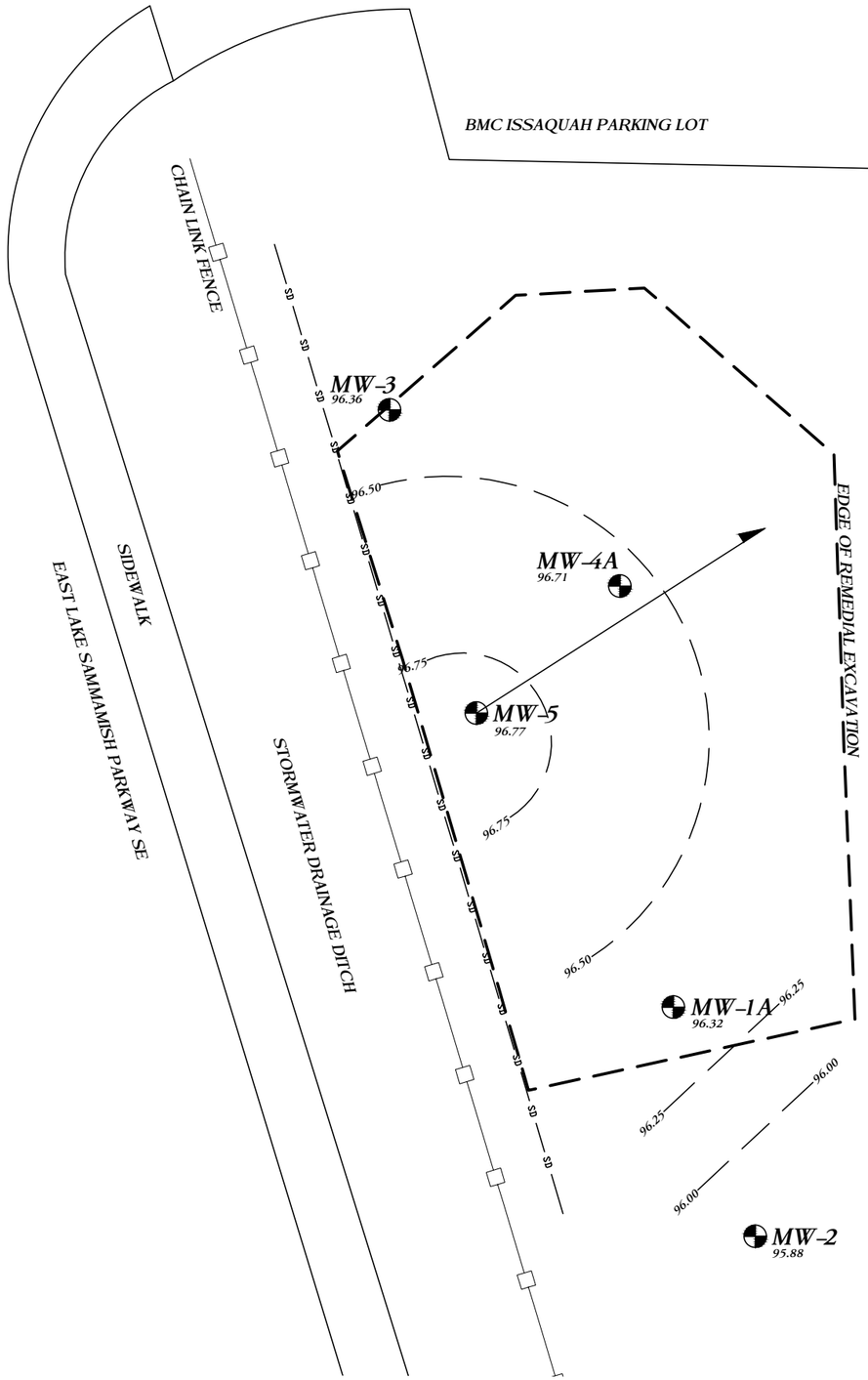
JUNE 2016 GROUNDWATER ELEVATIONS AND CONTOURS

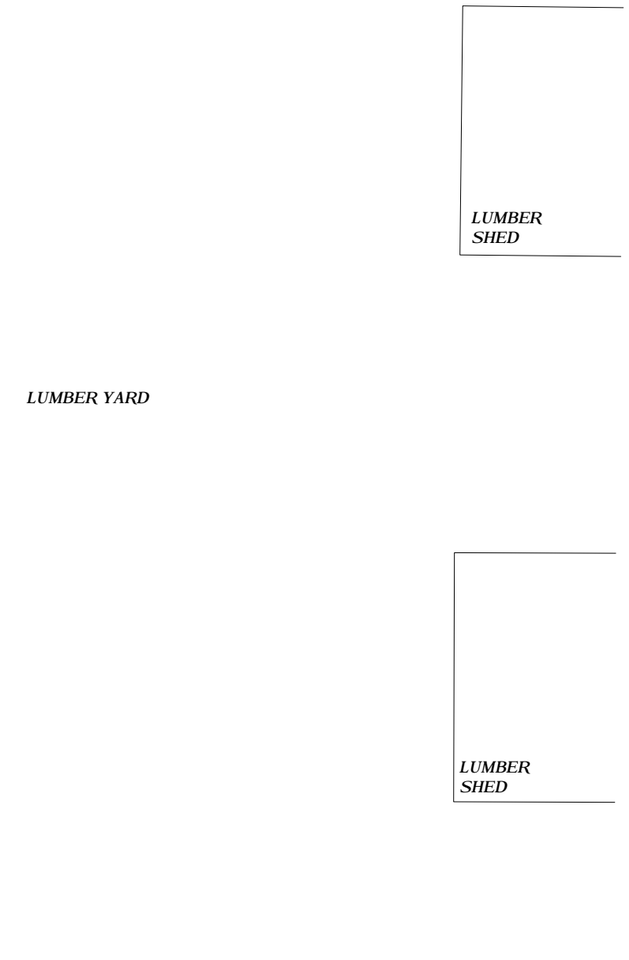
DATE: JANUARY 2017 Job No. 1099.25

Zipper Geo Associates, LLC
19023 36th Ave. W.,Suite D
Lynnwood, WA

FIGURE 10
SHT. *1* of *1*

REFERENCE: SURVEY PERFORMED BY PLS, INC. ON JAN. 13, 2016; GOOGLE EARTH SATELLITE IMAGE DATED JUNE, 2016.





LEGEND

MW-4A 97.40	APPROXIMATE LOCATION OF MONITORING WELL WITH ID AND RELATIVE GROUNDWATER ELEVATION
— — — 97.25	RELATIVE GROUNDWATER ELEVATION CONTOURS
◄——	INFERRED GROUNDWATER FLOW DIRECTION
— SD — SD —	APPROXIMATE LOCATION OF STORM DRAIN OBSERVED DURING REMEDIAL EXCAVATION

GROUNDWATER ELEVATIONS ARE RELATIVE TO A DATUM OF 100 FEET ESTABLISHED BY A PINK NAIL WITH WASHER DRIVEN INTO ASPHALT TO THE NORTHWEST OF THE REMEDIAL EXCAVATION

N

20 0 10 20

SCALE IN FEET

REFERENCE: SURVEY PERFORMED BY PLS, INC. ON JAN. 13, 2016; GOOGLE EARTH SATELLITE IMAGE DATED JUNE, 2016.

BMC ISSAQUAH
5210 East Lake Sammamish Parkway SE
Issaquah, Washington

SEPTEMBER 2016 GROUNDWATER ELEVATIONS AND CONTOURS

DATE: JANUARY 2017 Job No. 1099.25

Zipper Geo Associates, LLC
19023 36th Ave. W.,Suite D
Lynnwood, WA

FIGURE 11
SHT. 1 of 1

Appendix L – 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

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	12/16/2015
		ALS JOB#:	EV15120103
		ALS SAMPLE#:	EV15120103-01
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	12/11/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	12/10/2015 2:06:00 PM
CLIENT SAMPLE ID	MW-2	WDOE ACCREDITATION:	C601

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	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 DATE	ANALYSIS 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.

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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	12/16/2015 EV15120103 EV15120103-02
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	12/11/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	12/10/2015 2:46:00 PM
CLIENT SAMPLE ID	MW-1A	WDOE ACCREDITATION:	C601

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	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 DATE	ANALYSIS BY
TFT	NWTPH-GX	**87.7**	12/14/2015	PAB
TFT	EPA-8021	**84.0**	12/14/2015	PAB

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	12/16/2015 EV15120103 EV15120103-03
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	12/11/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	12/10/2015 3:12:00 PM
CLIENT SAMPLE ID	MW-5	WDOE ACCREDITATION:	C601

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	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 DATE	ANALYSIS BY
TFT	NWTPH-GX	**88.6**	12/14/2015	PAB
TFT	EPA-8021	**85.5**	12/14/2015	PAB

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	12/16/2015 EV15120103 EV15120103-04
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	12/11/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	12/10/2015 3:37:00 PM
CLIENT SAMPLE ID	MW-4A	WDOE ACCREDITATION:	C601

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	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 DATE	ANALYSIS BY
TFT	NWTPH-GX	**90.6**	12/14/2015	PAB
TFT	EPA-8021	**86.7**	12/14/2015	PAB

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	12/16/2015 EV15120103 EV15120103-05
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	12/11/2015
CLIENT PROJECT:	1099.25	COLLECTION DATE:	12/10/2015 4:00:00 PM
CLIENT SAMPLE ID	MW-3	WDOE ACCREDITATION:	C601

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	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 DATE	ANALYSIS BY
TFT	NWTPH-GX	**85.7**	12/14/2015	PAB
TFT	EPA-8021	**86.6**	12/14/2015	PAB

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CERTIFICATE OF ANALYSIS

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

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

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

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS 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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	12/16/2015
		ALS SDG#:	EV15120103
		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	ANALYSIS DATE	ANALYSIS BY
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

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Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV15120103

Date 12/11/15 Page 1 Of 1

PROJECT ID: 1099.25
REPORT TO COMPANY: Zipper Geo Associates
PROJECT MANAGER: Jon Einarsen
ADDRESS: 19023 36th Ave. W., Suite D
Lynnwood, WA 98036
PHONE: (425) 582-9928 FAX:
P.O. #: E-MAIL: jeinarsen@zippergeo.com
INVOICE TO COMPANY: Zipper Geo Associates
ATTENTION: Jon Einarsen
ADDRESS: 19023 36th Ave. W., Suite D
~~Lynnwood~~ Lynnwood, WA 98036

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. MW-2	12/10	2:06	H_2O	1			✓	✓													2	
2. MW-1A	12/10	2:46	H_2O	2			✓	✓													2	
3. MW-5	12/10	3:12	H_2O	3			✓	✓													2	
4. MW-4A	12/10	3:37	H_2O	4			✓	✓													2	
5. MW-3	12/10	4:00	H_2O	5			✓	✓													2	
6.																						
7.																						
8.																						
9.																						
10.																						

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):
1. Relinquished By: Jeff Tinkelpaugh, ZGA, 12/11, 11:47
Received By: [signature] ALS 12/11/15 11:47
2. Relinquished By:
Received By:

TURNAROUND REQUESTED in Business Days*
Organic, Metals & Inorganic Analysis
☐ 10 Standard ☐ 5 ☐ 3 ☐ 2 ☐ 1 ☐ SAME DAY
Fuels & Hydrocarbon Analysis
☒ Standard ☐ 3 ☐ 1 ☐ SAME DAY

OTHER:
Specify:

*Turnaround request less than standard may incur Rush Charges

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	3/17/2016
		ALS JOB#:	EV16030125
		ALS SAMPLE#:	EV16030125-01
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	03/16/2016
CLIENT PROJECT:	1099.25	COLLECTION DATE:	3/16/2016 12:15:00 PM
CLIENT SAMPLE ID	MW-2	WDOE ACCREDITATION:	C601

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	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 DATE	ANALYSIS BY
TFT	NWTPH-GX	**86.9**	03/17/2016	PAB
TFT	EPA-8021	**99.3**	03/17/2016	PAB

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	3/17/2016 EV16030125 EV16030125-02
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	03/16/2016
CLIENT PROJECT:	1099.25	COLLECTION DATE:	3/16/2016 12:40:00 PM
CLIENT SAMPLE ID	MW-1A	WDOE ACCREDITATION:	C601

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	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 DATE	ANALYSIS BY
TFT	NWTPH-GX	**88.8**	03/17/2016	PAB
TFT	EPA-8021	**104**	03/17/2016	PAB

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	3/17/2016 EV16030125 EV16030125-03
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	03/16/2016
CLIENT PROJECT:	1099.25	COLLECTION DATE:	3/16/2016 1:15:00 PM
CLIENT SAMPLE ID	MW-5	WDOE ACCREDITATION:	C601

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	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 DATE	ANALYSIS BY
TFT	NWTPH-GX	**89.6**	03/17/2016	PAB
TFT	EPA-8021	**109**	03/17/2016	PAB

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	3/17/2016 EV16030125 EV16030125-04
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	03/16/2016
CLIENT PROJECT:	1099.25	COLLECTION DATE:	3/16/2016 1:35:00 PM
CLIENT SAMPLE ID	MW-4A	WDOE ACCREDITATION:	C601

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	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 DATE	ANALYSIS BY
TFT	NWTPH-GX	**92.0**	03/17/2016	PAB
TFT	EPA-8021	**110**	03/17/2016	PAB

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	3/17/2016 EV16030125 EV16030125-05
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	03/16/2016
CLIENT PROJECT:	1099.25	COLLECTION DATE:	3/16/2016 1:55:00 PM
CLIENT SAMPLE ID	MW-3	WDOE ACCREDITATION:	C601

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	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 DATE	ANALYSIS BY
TFT	NWTPH-GX	**86.5**	03/17/2016	PAB
TFT	EPA-8021	**103**	03/17/2016	PAB

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CERTIFICATE OF ANALYSIS

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

CLIENT CONTACT: Jon Einarsen
CLIENT PROJECT: 1099.25

DATE: 3/17/2016
ALS SDG#: EV16030125
WDOE ACCREDITATION: C601

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 but not detected at level above reporting limit.

MB-031616W2 - Batch 102321 - Water by EPA-8021

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
Ethylbenzene	EPA-8021	U	UG/L	1.0	03/16/2016	PAB
Xylenes	EPA-8021	U	UG/L	3.0	03/16/2016	PAB

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

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CERTIFICATE OF ANALYSIS

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

CLIENT CONTACT: Jon Einarsen
CLIENT PROJECT: 1099.25

DATE: 3/17/2016
ALS SDG#: EV16030125
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 102321 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
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

Laboratory Director

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http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV16030125

Date 3-16-16 Page 1 Of 1

PROJECT ID: 1099.25
REPORT TO COMPANY: ZGA
PROJECT MANAGER: Jon Einerson
ADDRESS: 19023 36th Ave. W. Suite D
Lynnwood WA
PHONE: 425 582 9928 FAX:
P.O. #: E-MAIL:
INVOICE TO COMPANY: ZGA
ATTENTION:
ADDRESS:

	SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify)							NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1.	MW-2	3/16/16	12:15pm	W	1			X	X																			2	
2.	MW-1A		12:40pm		2			X	X																			2	
3.	MW-5		1:15pm		3			X	X																			2	
4.	MW-4A		1:35pm		4			X	X																			2	
5.	MW-3		1:55pm		5			X	X																			2	
6.																													
7.																													
8.																													
9.																													
10.																													

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):
1. Relinquished By: John P. Cerny / ZGA / 3/16/16 / 4:00pm
Received By: [signature] ALS 3/16/16 4:00
2. Relinquished By:
Received By:

TURNAROUND REQUESTED in Business Days*
Organic, Metals & Inorganic Analysis: ☐ 10 (Standard) ☐ 5 ☐ 3 ☐ 2 ☐ 1 ☐ SAME DAY
Fuels & Hydrocarbon Analysis: ☒ 5 (Standard) ☐ 3 ☐ 1 ☐ SAME DAY
OTHER:
Specify:

*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

Rick Bagan
Laboratory Director

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	6/15/2016 EV16060078 EV16060078-01
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	06/10/2016
CLIENT PROJECT:	1099.25	COLLECTION DATE:	6/10/2016 9:50:00 AM
CLIENT SAMPLE ID	Drum B-1	WDOE ACCREDITATION:	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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	6/15/2016 EV16060078 EV16060078-02
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	06/10/2016
CLIENT PROJECT:	1099.25	COLLECTION DATE:	6/10/2016 11:15:00 AM
CLIENT SAMPLE ID	MW3-6/10	WDOE ACCREDITATION:	C601

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	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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**85.7**	06/13/2016	PAB
TFT	EPA-8021	**85.4**	06/13/2016	PAB

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	6/15/2016 EV16060078 EV16060078-03
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	06/10/2016
CLIENT PROJECT:	1099.25	COLLECTION DATE:	6/10/2016 1:30:00 PM
CLIENT SAMPLE ID	MW2-6/10	WDOE ACCREDITATION:	C601

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	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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**88.6**	06/13/2016	PAB
TFT	EPA-8021	**86.1**	06/13/2016	PAB

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	6/15/2016 EV16060078 EV16060078-04
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	06/10/2016
CLIENT PROJECT:	1099.25	COLLECTION DATE:	6/10/2016 1:10:00 PM
CLIENT SAMPLE ID	MW1A-6/10	WDOE ACCREDITATION:	C601

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	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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**89.1**	06/13/2016	PAB
TFT	EPA-8021	**83.2**	06/13/2016	PAB

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	6/15/2016 EV16060078 EV16060078-05
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	06/10/2016
CLIENT PROJECT:	1099.25	COLLECTION DATE:	6/10/2016 12:23:00 PM
CLIENT SAMPLE ID	MW5-6/10	WDOE ACCREDITATION:	C601

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	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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**86.6**	06/13/2016	PAB
TFT	EPA-8021	**84.4**	06/13/2016	PAB

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE: ALS JOB#: ALS SAMPLE#:	6/15/2016 EV16060078 EV16060078-06
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	06/10/2016
CLIENT PROJECT:	1099.25	COLLECTION DATE:	6/10/2016 11:50:00 AM
CLIENT SAMPLE ID	MW4A-6/10	WDOE ACCREDITATION:	C601

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	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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**86.6**	06/13/2016	PAB
TFT	EPA-8021	**85.4**	06/13/2016	PAB

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	6/15/2016
		ALS SDG#:	EV16060078
		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	06/10/2016 PAB	50		

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

MB-061016W - Batch 105302 - Water by EPA-8021

ANALYTE	METHOD	RESULTS		UNITS		REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U		UG/L		1.0	06/10/2016	PAB
Toluene	EPA-8021	U	0	16 UG/L	PAB	1.0		
Ethylbenzene	EPA-8021	U		10/2016	PAB	1.0		
Xylenes	EPA-8021	U	0	16 UG/L	PAB	3.0		

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	6/15/2016
		ALS SDG#:	EV16060078
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Jon Einarsen		
CLIENT PROJECT:	1099.25		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 105302 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
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

Laboratory Director

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ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV1606078

Date 6/10 Page 1 Of 1

PROJECT ID: 1099.25
REPORT TO COMPANY: ZGA
PROJECT MANAGER: Jon Einarsen
ADDRESS: 19023 36th Ave. W, Suite D Lynnwood
PHONE: (425)582-9928 FAX:
P.O. #: E-MAIL: jeinarsen@zippergeo.com
INVOICE TO COMPANY:
ATTENTION: SAME
ADDRESS:

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021 ☒	BTEX by EPA 8260 ☐	MTBE by EPA 8021 ☐	MTBE by EPA 8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082 ☐	Pesticides by EPA 8081 ☐	Metals-MTCA-5 ☐	RCRA-8 ☐	Pri Pol ☐	TAL ☐	Metals Other (Specify)	TCLP-Metals ☐	VOA ☐	Semi-Vol ☐	Pest ☐	Herbs ☐	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. Drum B-1	6/10	9:50	H_2O	1			X	X																							2	
2. MW3-6/10		11:15		2			X	X																								
3. MW2-6/10		1:30		3			X	X																								
4. MW1A-6/10		1:10		4			X	X																								
5. MW5-6/10		12:23		5			X	X																								
6. MW4A-6/10		11:50		6			X	X																								
7.																																
8.																																
9.																																
10.																																

SPECIAL INSTRUCTIONS CC Jeff on email

SIGNATURES (Name, Company, Date, Time):
1. Relinquished By: ZGA 6-10-16
Received By: ALS 6/10/16 455
2. Relinquished By:
Received By:

TURNAROUND REQUESTED in Business Days*
Organic, Metals & Inorganic Analysis: ☒ Standard ☐ 5 ☐ 3 ☐ 2 ☐ 1 ☐ SAME DAY
Fuels & Hydrocarbon Analysis: ☒ Standard ☐ 3 ☐ 1 ☐ SAME DAY
OTHER:
Specify:

*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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	9/8/2016
		ALS JOB#:	EV16090032
		ALS SAMPLE#:	EV16090032-01
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	09/07/2016
CLIENT PROJECT:	1099.25	COLLECTION DATE:	9/7/2016 9:24:00 AM
CLIENT SAMPLE ID	MW3-090716	WDOE ACCREDITATION:	C601

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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
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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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	9/8/2016
		ALS JOB#:	EV16090032
		ALS SAMPLE#:	EV16090032-02
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	09/07/2016
CLIENT PROJECT:	1099.25	COLLECTION DATE:	9/7/2016 10:26:00 AM
CLIENT SAMPLE ID	MW4A-090716	WDOE ACCREDITATION:	C601

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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**95.9**	09/07/2016	PAB
TFT	EPA-8021	**95.0**	09/07/2016	PAB

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	9/8/2016
		ALS JOB#:	EV16090032
		ALS SAMPLE#:	EV16090032-03
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	09/07/2016
CLIENT PROJECT:	1099.25	COLLECTION DATE:	9/7/2016 11:08:00 AM
CLIENT SAMPLE ID	MW5-090716	WDOE ACCREDITATION:	C601

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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**94.8**	09/07/2016	PAB
TFT	EPA-8021	**90.6**	09/07/2016	PAB

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	9/8/2016
		ALS JOB#:	EV16090032
		ALS SAMPLE#:	EV16090032-04
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	09/07/2016
CLIENT PROJECT:	1099.25	COLLECTION DATE:	9/7/2016 11:52:00 AM
CLIENT SAMPLE ID	MW1A-090716	WDOE ACCREDITATION:	C601

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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**91.6**	09/07/2016	PAB
TFT	EPA-8021	**89.9**	09/07/2016	PAB

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	9/8/2016
		ALS JOB#:	EV16090032
		ALS SAMPLE#:	EV16090032-05
CLIENT CONTACT:	Jon Einarsen	DATE RECEIVED:	09/07/2016
CLIENT PROJECT:	1099.25	COLLECTION DATE:	9/7/2016 12:36:00 PM
CLIENT SAMPLE ID	MW2-090716	WDOE ACCREDITATION:	C601

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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**93.6**	09/07/2016	PAB
TFT	EPA-8021	**91.4**	09/07/2016	PAB

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CERTIFICATE OF ANALYSIS

CLIENT:	Zipper Geo Associates 19023 - 36th Ave W., Suite D Lynnwood, WA 98036	DATE:	9/8/2016
		ALS SDG#:	EV16090032
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Jon Einarsen		
CLIENT PROJECT:	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 not detected at level above reporting limit.

MB-083116W2 - Batch 107649 - Water by EPA-8021

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS 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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CERTIFICATE OF ANALYSIS

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

CLIENT CONTACT: Jon Einarsen
CLIENT PROJECT: 1099.25

DATE: 9/8/2016
ALS SDG#: EV16090032
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 107649 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
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

Laboratory Director

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Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV1609032

Date 9/7/16 Page 1 Of 1

PROJECT ID: 1099.25
REPORT TO COMPANY: ZGA
PROJECT MANAGER: Jon Einarsen
ADDRESS: 19023 36th Ave. W, Suite D
Lynnwood, WA
PHONE: (425) 582-9928 FAX:
P.O. #: E-MAIL: jeinarsen@zippergeo.com
INVOICE TO COMPANY:
ATTENTION: SAME
ADDRESS:

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021 ☒	BTEX by EPA 8260 ☐	MTBE by EPA 8021 ☐	MTBE by EPA 8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082 ☐	Pesticides by EPA 8081 ☐	Metals-MTCA-5 ☐	RCRA-8 ☐	Pri Pol ☐	TAL ☐	Metals Other (Specify)	TCLP-Metals ☐	VOA ☐	Semi-Vol ☐	Pest ☐	Herbs ☐	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. MW3-090716	9/7	09:24	H_2O	1			X	X																							2	
2. MW4A-090716		10:26		2			X	X																							2	
3. MW5-090716		11:08		3			X	X																							2	
4. MW1A-090716		11:52		4			X	X																							2	
5. MW2-090716	↓	12:36	↓	5			X	X																							2	
6.																																
7.																																
8.																																
9.																																
10.																																

SPECIAL INSTRUCTIONS CC Jeff and Evelyn

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: ZGA 9/7 14:53
Received By: ALS 9/7/16 14:53
2. Relinquished By:
Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: ☒ Standard | 3 | 1 | SAME DAY

OTHER:
Specify:

*Turnaround request less than standard may incur Rush Charges