



The Riley Group, Inc.

November 22, 2011

Mr. Tracey Copeland
Hi Tech, Inc.
16822 Pacific Avenue South
Spanaway, WA 98387

**Re: Supplemental Phase II Subsurface Investigation
Parkland Collision
160 108th Street South
Tacoma, Washington
RGI Project No. T2011-066B**

Dear Mr. Copeland:

This letter report summarizes The Riley Group, Inc.'s (RGI's) *Supplemental Phase II Subsurface Investigation* (Phase II) findings for the Parkland Collision property located at 160 108th Street South in Tacoma, Washington (hereafter referred to as the Site, Figure 1).

The Phase II was performed at the request of Hi Tech, Inc. (Client). The scope of work for this project was performed in accordance with our *Supplemental Phase II Subsurface Investigation Proposal* dated October 17, 2011.

PROJECT SETTING & BACKGROUND

The Site consists of two automobile service buildings, referred to herein as Parkland Collision (to the west) and the vehicle customization building (to the east). Based on the significant elevation drop directly south of the Site, inferred groundwater flow direction is generally to the south-southwest.

PHASE I ENVIRONMENTAL SITE ASSESSMENT (ESA)

RGI reviewed a Phase I ESA for the Site prepared by others for U.S. Bank. Based on the Phase I ESA findings, the recognized environmental conditions (RECs) for the Site included:

- ***Historical Underground Storage Tanks (USTs):*** Documentation reviewed for the Site indicated USTs existed on the Site, associated with historical fueling. The USTs may have been removed or closed in place. The status of the former USTs and associated subsurface conditions were unknown.

The complete Phase I ESA findings are provided under separate cover.

PRELIMINARY PHASE II SUBSURFACE INVESTIGATION

RGI completed a Preliminary Phase II, on behalf of the Client, to address the RECs identified above. The scope of work included a geophysical survey and advancement of a total of twelve test probes at the Site: two inferred downgradient of the two garage buildings and an associated

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paint mixing room (B8 and B10), one at the location where the sanitary sewer lines for the two buildings converge (B9), and nine in the vicinity of the suspect UST area (B1 through B7, B11 and B12, shown in Figure 2). The Preliminary Phase II findings included:

- No indications of significant adverse environmental impacts were encountered in test probes advanced inferred downgradient of the two service station buildings and an associated paint mixing area (B8 and B10). In addition, no contaminants of concern (COCs) were identified in soils collected from the test probe advanced in the vicinity of the sanitary sewer (B9).
- A geophysical survey identified a suspected UST and a backfilled area for another former UST, both located north of the eastern Site building (Figure 2). A release of total petroleum hydrocarbons (TPH) was identified in soils in the vicinity of the former UST area. Gasoline TPH, associated volatiles (benzene, ethylbenzene and total xylenes), diesel and oil TPH were identified at concentrations above their respective MTCA Method A Soil Cleanup Levels for Unrestricted Land Use. The Preliminary Phase II soil analytical data is summarized in the attached Table 1 and Figure 2. Soil analytical data suggested that the TPH in soil may extend beneath the Site's vehicle customization building. The eastern and western lateral extent of the TPH plume were unverified.
- Discontinuous occurrences of seasonal groundwater, perched above the underlying glacial till, were encountered in three of the twelve borings. Perched water was also encountered within the backfill of the suspect former UST area. The COCs were identified in the backfill water at concentrations above their respective MTCA Method A Groundwater Cleanup Levels. Concentrations of the COCs were either non-detectable or below their respective MTCA cleanup levels in the groundwater samples from the other three borings, including directly inferred downgradient of the suspect closed-in-place UST. The Preliminary Phase II groundwater analytical data is summarized in the attached Table 2 and Figure 3.

On October 18, 2011, the Client authorized RGI to perform this Supplemental Phase II.

SCOPE OF SERVICES

The scope of services performed for this project included the following tasks:

- Performed public and private utility locating in an attempt to identify the location of the buried metallic utilities servicing the Site.
- Advanced seven soil borings in suspect areas, to a maximum depth of 14 feet below ground surface (bgs) using direct push techniques.
- Collected soil and (where encountered) groundwater grab samples at all test probe locations for laboratory analysis of potential COCs.
- Compared analytical results to the routine Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses and MTCA Method A Cleanup Levels for Ground Water (WAC 173-340).
- Prepared this letter report presenting our findings, observations, conclusions, and recommendations.

REGULATORY ANALYSIS OF SITE CONDITIONS UNDER MODEL TOXICS CONTROL ACT (MTCA)

Washington's hazardous release cleanup law, the Model Toxics Control Act (RCW 70.105D) mandates that site cleanups protect human health and the environment. The MTCA Cleanup Regulation (WAC173-340) defines the approach for establishing cleanup requirements for individual sites, including the establishment of cleanup standards and selection of cleanup actions.

The MTCA regulation provides three options for establishing generic and site-specific cleanup levels for soil and groundwater. Method A cleanup levels have been adopted for specific purposes and are intended to provide conservative cleanup levels for sites undergoing routine site characterization or cleanup actions or those sites with relatively few hazardous substances. Method B and C cleanup levels are set using a site risk assessment, which focus on the use of "reasonable maximum exposure" assumptions based on site-specific characteristics and toxicity of the contaminants of concern.

For purposes of comparison, analytical laboratory data for this project are compared to the MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses (considered protective of drinking water) and the MTCA Method A Cleanup Levels for Ground Water. The MTCA Method A soil and groundwater cleanup levels are summarized in the attached Table 1 and 2, respectively.

SUPPLEMENTAL PHASE II SUBSURFACE INVESTIGATION

On October 24, 2011, RGI advanced a total of seven soil borings at the Site to a maximum depth of 14 feet bgs (Figure 2). Five borings (B13 through B16, and B19) were advanced in the vicinity of the suspect backfill (former UST) area and suspect closed-in-place UST. The borings were advanced at locations intended to delineate the lateral extent of the previously identified release. The two remaining borings (B17 and B18) were advanced inferred downgradient of the Site vehicle customization building, intended to establish conservative points of compliance for the southern extent of the TPH plume.

Soil borings were advanced using a truck-mounted AMS PowerProbe 9630 strataprobe. A strataprobe is a hydraulic and percussion drive-point sampler. Soil boring logs are available in Appendix B.

All drilling and sampling equipment were cleaned prior to commencing probing and in between sampling and boring locations. All field sampling and decontamination procedures were performed in accordance with RGI's standard sampling and decontamination protocols.

All soil cuttings and purge and decontamination water were contained on the Site in one 30-gallon drum. *Disposal of the drum is not included in the scope of work.*

Soil Sampling

During all drilling activities, soil samples were collected, inspected, and classified by RGI's field geologist. Soil conditions encountered were described using the Unified Soil Classification System (USCS). Soils beneath the Site generally consisted of approximately eight to twelve feet of silty sand with varying amounts of clay and/or gravel (weathered till) over dense silty sand (till) to the maximum depth explored (14 feet bgs). Interbedded layers of peat, up to one foot thick, were noted in borings B14 through B17 at depths of approximately 2 to 8 feet bgs.

A total of 27 discrete soil samples were collected during this project. In general, samples were collected at 3- to 4-foot depth intervals and at potentially significant soil interfaces. Soil samples were screened in the field for the presence of volatile organic compounds (VOCs) using a portable photoionization detector (PID) and olfactory methods. PID field screening results are given in Table 1 attached. Field screening results for Site soils ranged from 0.0 to 20.4 volumetric parts per million (Vppm). Petroleum-like odors were observed in boring B13.

Based on our field observations, select soil samples were submitted for laboratory analyses of potential contaminants of concern, listed below. Samples collected for analysis of VOCs were collected using the Ecology-mandated 5035 sample collection method. Samples from the water table interface, exhibiting suspect elevated PID readings, and/or from depths corresponding to potentially significant soil horizons (for example, relative to former USTs, the potentially conductive peat layer, or relative to contaminant detections during the Preliminary Phase II) were selected for laboratory analysis.

Groundwater Sampling

Shallow, perched groundwater was discontinuous throughout the Site; encountered above the dense till in soil borings B13 through B15, B17 and B18, at depths ranging from 8.5 to 10 feet bgs. The water observed in B13, advanced adjacent to and/or inferred downgradient of the former UST areas, could be contributed to or affected by perched backfill water leaching to the underlying till. Groundwater was not encountered above the till in the other two test probes advanced in the vicinity of the former USTs. Where encountered, groundwater exhibited no visible sheen or obvious odors. A groundwater grab sample was collected from each test probe, where encountered, through a temporary 1-inch well using a peristaltic pump and disposable polyvinyl tubing under low-flow conditions. Prior to sample collection, a minimum of three gallons was purged from each borehole.

The groundwater grab samples were submitted for laboratory analysis of select contaminants of concern listed below.

Analytical Laboratory Analysis

Soil and groundwater grab samples collected during this project were submitted to Friedman & Bruya, Inc. of Seattle, Washington, for one or more of the following laboratory analyses:

- TPH identification (HCID) using Ecology Method NWTPH-HCID.
- Gasoline-range TPH using Ecology Method NWTPH-G.
- Diesel- and oil-range TPH using Ecology Method NWTPH-Dx with silica gel cleanup¹.
- BTEX using EPA Method 8021b.

¹ Silica gel cleanup removes naturally occurring organics, which can give falsely elevated diesel/oil TPH readings.

LABORATORY ANALYTICAL RESULTS

Analytical results and field screening data, summarized in the attached Tables 1 and 2 and/or Figures 2 and 3, are discussed below. Copies of the analytical laboratory report and associated sample chain-of-custody forms are included in Appendix A.

Soil Sample Results

Gasoline-range TPH (370 milligrams per kilogram, mg/kg) was detected in a soil sample collected from test probe B13, above the applicable MTCA Method A Soil Cleanup Level of 30 mg/kg. Diesel-range TPH (330 mg/kg), toluene (1.7 mg/kg), ethylbenzene (2.3 mg/kg) and total xylenes (3.7 mg/kg) were detected in the soil sample, below their respective MTCA Method A Soil Cleanup Levels for Unrestricted Land Use². Oil-range TPH was not detected in the sample.

Toluene (0.054 mg/kg), ethylbenzene (0.045 mg/kg) and total xylenes (0.21 mg/kg) were detected in the soil sample collected from boring B16, below their respective MTCA Method A Soil Cleanup Levels for Unrestricted Land Use. The contaminants of concern were not detected in soils analyzed from the other test probes at the Site.

Groundwater Grab Sample Results

Sample B13-GW, collected adjacent to and inferred downgradient of the former UST backfill area, contained gasoline-range TPH (5,500 ug/L), and diesel- and oil-range TPH (16,570 ug/L combined pending further characterization of the petroleum product[s]) concentrations above their respective MTCA Method A Groundwater Cleanup Levels³. BTEX (1.6, 21, 9.6, and 16 ug/L, respectively) were encountered in the sample at concentrations below their respective MTCA Method A Groundwater Cleanup Levels.

The contaminants of concern were not detected in the other groundwater samples collected from the Site.

² The applicable MTCA Method A Soil Cleanup Levels are 2,000 mg/kg, 7.0 mg/kg, 6.0 mg/kg, and 9.0 mg/kg, respectively.

³ The applicable MTCA Method A Groundwater Cleanup Levels are 800 ug/L and 500 ug/L, respectively.

CONCLUSIONS

Based on the findings of the Preliminary Phase II and this Supplemental Phase II Subsurface Investigation, the approximate lateral extents of the adversely affected soils are depicted in Figure 2. The adversely affected soils may extend beneath the vehicle customization building to the south but were not encountered on the far side of the building (south and southwest, inferred downgradient). Soil sample analytical results appear to confirm that the vertical extent of the adversely affected soils is limited to the immediate vicinity of the former UST nests or the underlying dense till.

Discontinuous areas of shallow, perched groundwater were encountered at the site. Shallow groundwater beneath and southwest-adjacent to the former backfill area appears to be adversely affected from perched water leaching from the backfill material. Shallow groundwater samples collected adjacent to and inferred downgradient from the suspect closed-in-place UST did not contain elevated concentrations of the contaminants of concern. No other recoverable groundwater was encountered in the vicinity of the suspect former UST areas.

RECOMMENDATIONS

RGI has completed a Corrective Action Plan (CAP) for the site based on preliminary findings of this Phase II and the previous subsurface investigation. The Site is also being enrolled in Ecology's Voluntary Cleanup Program (VCP). A copy of the CAP, Preliminary Phase II report, and previous Phase I ESA report have been submitted to Ecology, along with the VCP application, for review and comment.

RGI recommends that a copy of this Supplemental Phase II report be submitted to Ecology for review with the other pertinent documents. RGI also recommends that a copy of the reports referenced above be submitted to the TPCHD for review and comment. TPCHD requires a fee for the review service and may require issuance of a UST permit application for administrative purposes.

LIMITATIONS

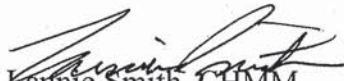
This report is the property of RGI, Hi Tech, Inc., and its authorized representatives or affiliates and was prepared in a manner consistent with the level of skill and care ordinarily exercised by members of the profession currently practicing in the same locality and under similar conditions. This report is intended for specific application to the Parkland Collision property located at 160 – 108th Street South in Tacoma, Washington. No other warranty, expressed or implied, is made.

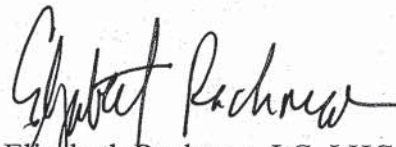
The analyses and recommendations presented in this report are based upon data obtained from our review of available information at the time of preparing this report, our test borings drilled on the Site, or other noted data sources. Conditional changes may occur through time by natural or man-made process on this or adjacent properties. Additional changes may occur in legislative standards, which may or may not be applicable to this report. These changes, beyond RGI's control, may render this report invalid, partially or wholly. If variations appear evident, RGI should be requested to reevaluate the recommendations in this report.

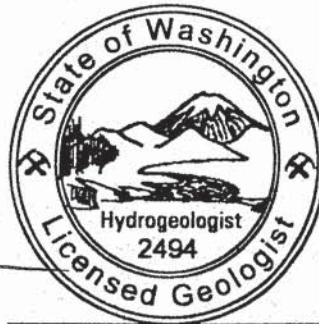
We trust that this letter report meets your current project needs and appreciate the opportunity to be of service. Please contact us at (253) 565-0552, or by e-mail at lsmith@riley-group.com, if you have any questions or need additional information.

Sincerely,

THE RILEY GROUP, INC.


Earnie Smith, CHMM
Senior Project Manager


Elizabeth Rachman, LG, LHG
Senior Hydrogeologist

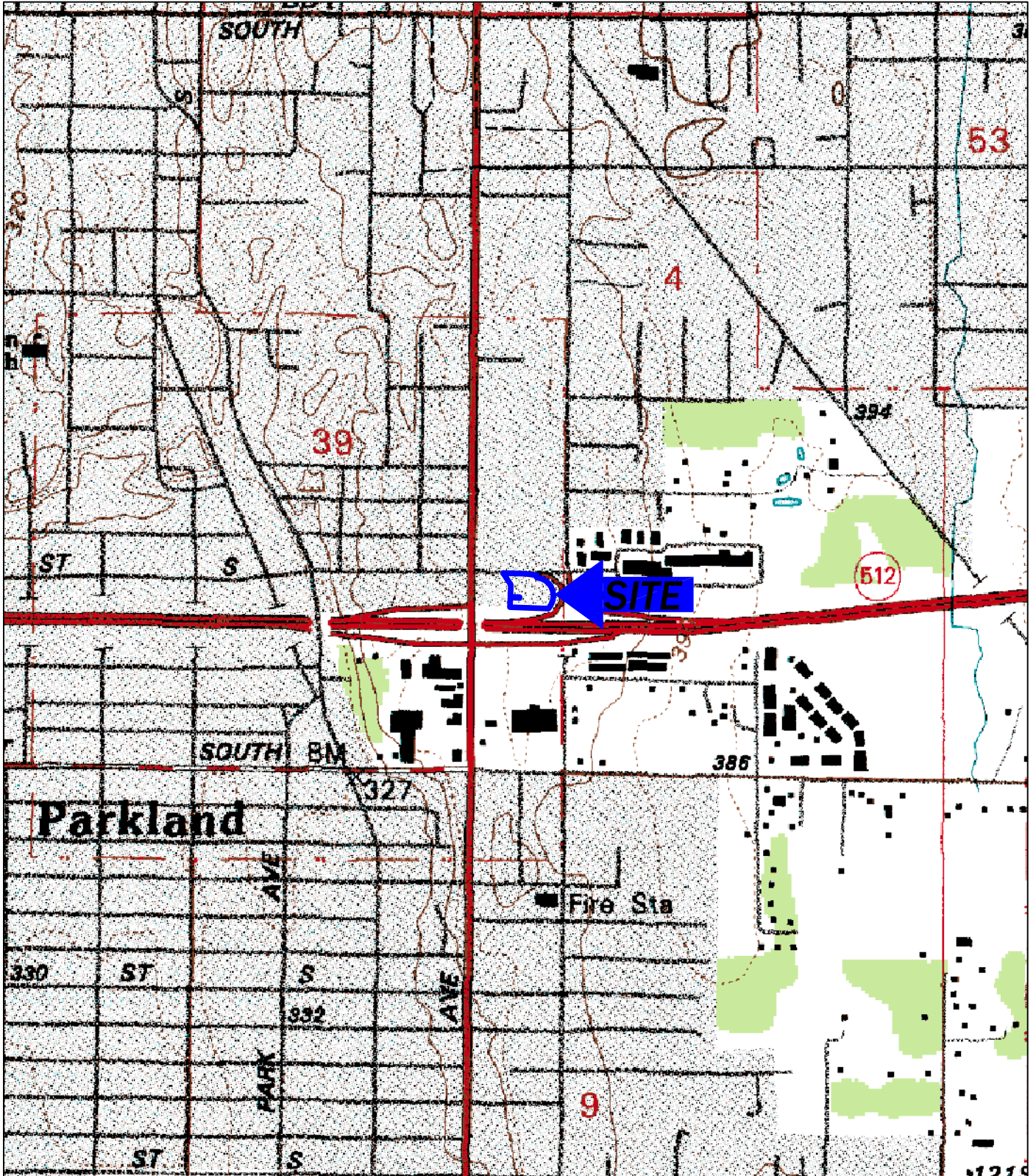


Elizabeth Ann Rachman

Attachments

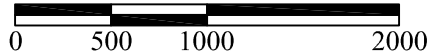
- Figure 1 – Site Vicinity Map*
- Figure 2 – Site Plan with Soil Analytical Results*
- Figure 3 – Site Plan with Groundwater Analytical Results*
- Table 1 – Summary of Soil Sample Analytical Laboratory Results*
- Table 2 – Summary of Groundwater Grab Sample Results*
- Appendix A – Analytical Laboratory Reports & Chains of Custody*
- Appendix B – Soil Boring Logs*

Report Distribution *Mr. Tracey Copeland, Hi Tech, Inc. (one bound copy and PDF)*



USGS, 1994, Tacoma South, Washington
7.5-Minute Quadrangle

Approximate Scale: 1"=1000'



The Riley Group, Inc.

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Parkland Collision Property

Figure 1

RGI Project Number

Site Vicinity Map

Date Drawn:

T2011-066B

11/2011

Address: 160 - 108th Street South, Tacoma, Washington 98444

B9								
Depth	Gas	B	T	E	X	DSL/Oil	VOCs	
3-4	ND	ND	ND	ND	ND	ND	ND	ND

B6							
Depth	Gas	B	T	E	X	DSL/Oil	
4.5-5.5	ND	ND	0.086	0.076	0.29	ND	
11-12	ND	ND	ND	ND	ND	ND	

B13							
Depth	Gas	B	T	E	X	DSL/Oil	
8-8.5	370	ND	1.7	2.3	3.7	330	

B16							
Depth	Gas	B	T	E	X	DSL/Oil	
8-8.5	ND	ND	0.054	0.045	0.21	ND	

B11							
Depth	Gas	B	T	E	X	DSL/Oil	
4-5	24	ND	0.075	ND	0.86	---	
12-13	ND	ND	ND	0.064	0.12	ND	

B17							
Depth	Gas	B	T	E	X	DSL/Oil	
5-6	ND	ND	ND	ND	ND	ND	

B8								
Depth	Gas	B	T	E	X	DSL/Oil	VOCs	
3-4	ND	ND	ND	ND	ND	ND	ND	ND

B18							
Depth	Gas	B	T	E	X	DSL/Oil	
8-9	ND	ND	ND	ND	ND	ND	

B5							
Depth	Gas	B	T	E	X	DSL/Oil	
5-6	500	0.13	0.54	2.3	3.5	8,310	
8-9	4.5	ND	ND	0.04	0.065	550	
11-12	3.5	ND	ND	0.13	0.078	ND	

B1							
Depth	Gas	B	T	E	X	DSL/Oil	
5.5-6	820	ND	3.0	2.1	3.9	8,500	
11-12	ND	ND	ND	0.057	0.24	ND	

B4							
Depth	Gas	B	T	E	X	DSL/Oil	
4-5	ND	ND	ND	ND	ND	ND	

B2							
Depth	Gas	B	T	E	X	DSL/Oil	
4-5	720	ND	ND	0.94	11	23,700	
6-6.5	340	ND	0.045	0.50	3.5	17,500	

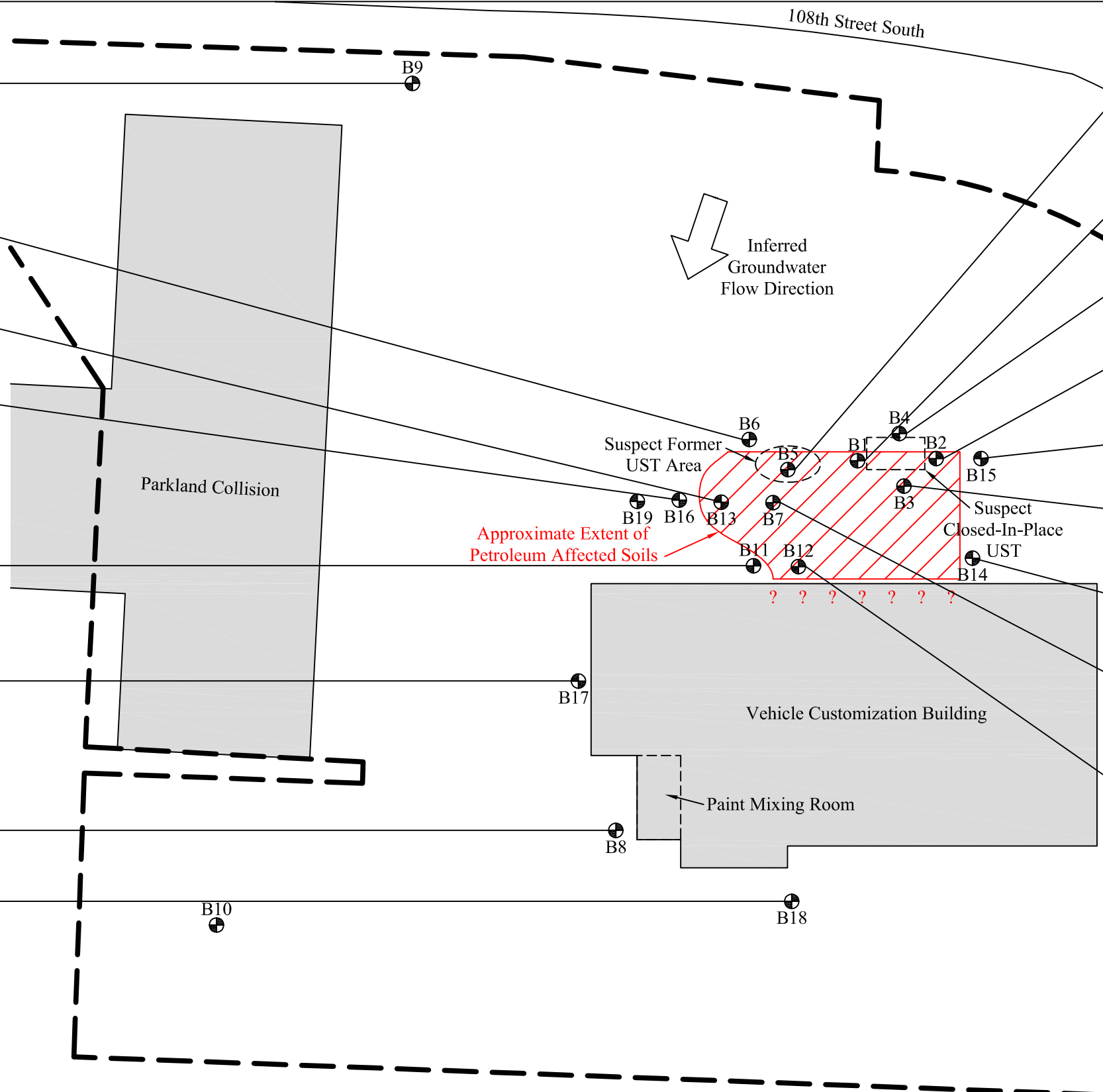
B15							
Depth	Gas	B	T	E	X	DSL/Oil	
5-6	ND	ND	ND	ND	ND	ND	


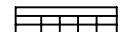
B3							
Depth	Gas	B	T	E	X	DSL/Oil	
4-5	110	ND	0.19	0.14	2.3	ND	
7-8	ND	ND	ND	ND	ND	---	

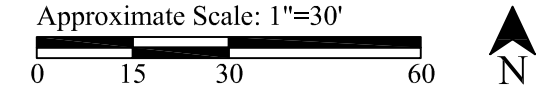
B14							
Depth	Gas	B	T	E	X	DSL/Oil	
4-5	ND	ND	ND	ND	ND	ND	


B7							
Depth	Gas	B	T	E	X	DSL/Oil	
6-7	1,000	ND	0.76	5.0	9.1	1,000	
8-9	130	ND	0.12	0.63	1.3	230	
9-10	2,700	ND	2.2	24	50	130	
11-12	ND	ND	ND	ND	ND	---	

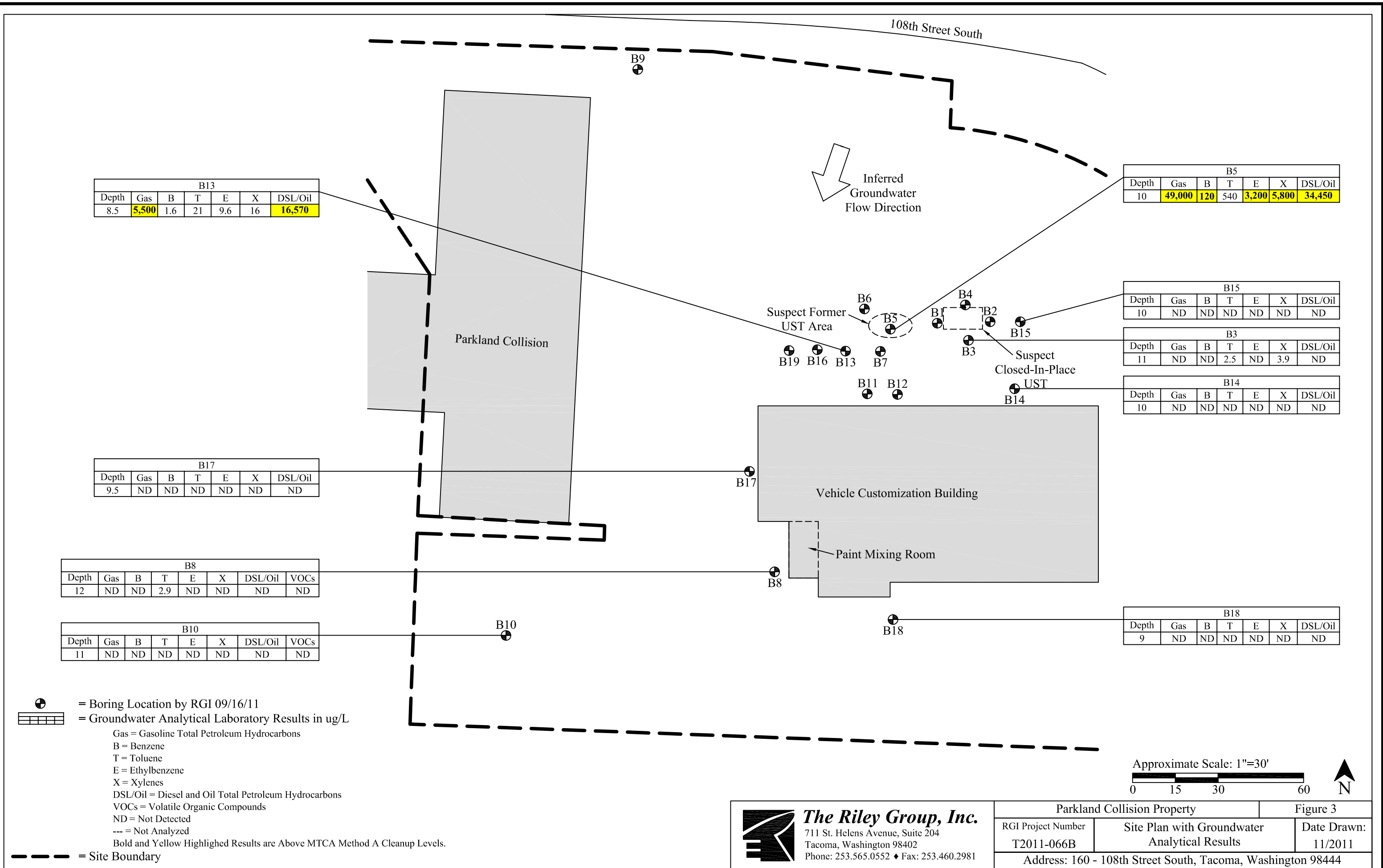
B12							
Depth	Gas	B	T	E	X	DSL/Oil	
5-6	240	0.32	0.18	0.86	28	ND	
9-10	ND	ND	ND	ND	ND	ND	



 = Boring Location by RGI 09/16/11
 = Soil Analytical Laboratory Results in mg/kg
 Gas = Gasoline Total Petroleum Hydrocarbons
 B = Benzene
 T = Toluene
 E = Ethylbenzene
 X = Xylenes
 DSL/Oil = Diesel and Oil Total Petroleum Hydrocarbons
 VOCs = Volatile Organic Compounds
 ND = Not Detected
 --- = Not Analyzed
 Bold and Yellow Highlighted Results are Above MTCA Method A Cleanup Levels.
 - - - - - = Site Boundary



 The Riley Group, Inc. 711 St. Helens Avenue, Suite 204 Tacoma, Washington 98402 Phone: 253.565.0552 ♦ Fax: 253.460.2981	Parkland Collision Property		Figure 2
	RGI Project Number T2011-066B	Site Plan with Soil Analytical Results	Date Drawn: 11/2011
	Address: 160 - 108th Street South, Tacoma, Washington 98444		



B13						
Depth	Gas	B	T	E	X	DSL/Oil
8.5	5,500	1.6	21	9.6	16	16,570

B5						
Depth	Gas	B	T	E	X	DSL/Oil
10	49,000	120	540	3,200	5,800	34,450

B15						
Depth	Gas	B	T	E	X	DSL/Oil
10	ND	ND	ND	ND	ND	ND

B3						
Depth	Gas	B	T	E	X	DSL/Oil
11	ND	ND	2.5	ND	3.9	ND

B14						
Depth	Gas	B	T	E	X	DSL/Oil
10	ND	ND	ND	ND	ND	ND

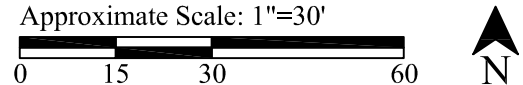
B17						
Depth	Gas	B	T	E	X	DSL/Oil
9.5	ND	ND	ND	ND	ND	ND

B8							
Depth	Gas	B	T	E	X	DSL/Oil	VOCs
12	ND	ND	2.9	ND	ND	ND	ND

B10							
Depth	Gas	B	T	E	X	DSL/Oil	VOCs
11	ND	ND	ND	ND	ND	ND	ND

B18						
Depth	Gas	B	T	E	X	DSL/Oil
9	ND	ND	ND	ND	ND	ND

= Boring Location by RGI 09/16/11
 = Groundwater Analytical Laboratory Results in ug/L
 Gas = Gasoline Total Petroleum Hydrocarbons
 B = Benzene
 T = Toluene
 E = Ethylbenzene
 X = Xylenes
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The Riley Group, Inc. 711 St. Helens Avenue, Suite 204 Tacoma, Washington 98402 Phone: 253.565.0552 ♦ Fax: 253.460.2981	Parkland Collision Property		Figure 3
	RGI Project Number	Site Plan with Groundwater Analytical Results	Date Drawn:
	T2011-066B		11/2011
Address: 160 - 108th Street South, Tacoma, Washington 98444			

Table 1. Summary of Soil Sample Analytical Laboratory Results

Parkland Collision Property

160 - 108th Street South, Tacoma, Washington 98444

The Riley Group, Inc. Project #T2011-066B

Sample Number	Sample Depth	Sample Date	PID	Gas TPH	BTEX				Diesel TPH	Oil TPH	HCID			VOCs
					B	T	E	X			Gasoline	Diesel	Heavy Oil	
B1-1-2	1-2	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B1-3-4	3-4	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B1-5.5-6	5.5-6	09/16/11	0.0	820	ND<0.02	3.0	2.1	3.9	1,300 x	7,200	D>20	ND<50	D>250	----
B1-7-8	7-8	09/16/11	0.2	----	----	----	----	----	----	----	----	----	----	----
B1-11-12	11-12	09/16/11	0.0	----	ND<0.02	ND<0.02	0.057	0.24	----	----	ND<20	ND<50	ND<250	----
B1-12-13	12-13	09/16/11	----	----	----	----	----	----	----	----	----	----	----	----
B2-1-2	1-2	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B2-4-5	4-5	09/16/11	16.7	720	ND<0.02	ND<0.02	0.94	11	4,700 x	19,000	D>20	D>50	D>250	----
B2-6-6.5	6-6.5	09/16/11	12.6	340	ND<0.02	0.045	0.50	3.5	3,500 x	14,000	D>20	D>50	D>250	----
B2-8-9	8-9	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B2-9.5-10	9.5-10	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B3-1-2	1-2	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B3-4-5	4-5	09/16/11	0.0	110	ND<0.02	0.19	0.14	2.3	ND<50	ND<250	D>20	D>50	ND<250	----
B3-5.5-6	5.5-6	09/16/11	0.2	----	----	----	----	----	----	----	----	----	----	----
B3-6-7	6-7	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B3-7-8	7-8	09/16/11	0.0	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	----	----	----	----
B3-9-10	9-10	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B4-1-2	1-2	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B4-3-4	3-4	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B4-4-5	4-5	09/16/11	0.0	----	ND<0.02	ND<0.02	0.047	0.49	----	----	ND<20	ND<50	ND<250	----
B4-6-6.5	6-6.5	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B4-8-9	8-9	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B4-9-10	9-10	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B5-0-1	0-1	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
MTCA Method A Soil Cleanup Levels				100/30¹	0.03	7	6	9	2,000		100/30¹	2,000	2,000	Analyte Specific

Table 1 Continued. Summary of Soil Sample Analytical Laboratory Results														
Parkland Collision Property														
160 - 108th Street South, Tacoma, Washington 98444														
The Riley Group, Inc. Project #T2011-066														
Sample Number	Sample Depth	Sample Date	PID	Gas TPH	BTEX				Diesel TPH	Oil TPH	HCID			VOCs
					B	T	E	X			Gasoline	Diesel	Heavy Oil	
B5-2.5-3	2.5-3	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B5-5-6	5-6	09/16/11	2.1	500	0.13	0.54	2.3	3.5	610 x	7,700	D>20	ND<50	D>250	----
B5-7-8	7-8	09/16/11	1.4	----	----	----	----	----	----	----	----	----	----	----
B5-8-9	8-9	09/16/11	51.4	4.5	ND<0.02	ND<0.02	0.040	0.065	550 x	ND<250	----	----	----	----
B5-11-12	11-12	09/16/11	36.7	3.5	ND<0.02	ND<0.02	0.13	0.078	ND<50	ND<250	----	----	----	----
B6-1-2	1-2	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B6-2-3	2-3	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B6-4.5-5.5	4.5-5.5	09/16/11	1.2	----	ND<0.02	0.086	0.076	0.29	----	----	ND<20	ND<50	ND<250	----
B6-6-7	6-7	09/16/11	0.2	----	----	----	----	----	----	----	----	----	----	----
B6-11-12	11-12	09/16/11	0.0	----	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	ND<20	ND<50	ND<250	----
B7-1-2	1-2	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B7-3-4	3-4	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B7-5-6	5-6	09/16/11	57.8	----	----	----	----	----	----	----	----	----	----	----
B7-6-7	6-7	09/16/11	----	1,000	ND<0.1	0.76	5.0	9.1	1,000	ND<250	----	----	----	----
B7-7-8	7-8	09/16/11	84.2	----	----	----	----	----	----	----	----	----	----	----
B7-8-9	8-9	09/16/11	112.4	130	ND<0.1	0.12	0.63	1.3	230	ND<250	----	----	----	----
B7-9-10	9-10	09/16/11	26.7	2,700	ND<0.4	2.2	24	50	130	ND<250	----	----	----	----
B7-11-12	11-12	09/16/11	0.2	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	----	----	----	----
B8-1-2	1-2	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B8-3-4	3-4	09/16/11	3.6	----	ND<0.03	ND<0.05	ND<0.05	ND<0.1	----	----	ND<20	ND<50	ND<250	ND
B8-4-5	4-5	09/16/11	----	----	----	----	----	----	----	----	----	----	----	----
B8-5-6	5-6	09/16/11	3.4	----	----	----	----	----	----	----	----	----	----	----
B8-6-7	6-7	09/16/11	----	----	----	----	----	----	----	----	----	----	----	----
B8-7-8	7-8	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
MTCA Method A Soil Cleanup Levels				100/30¹	0.03	7	6	9	2,000		100/30¹	2,000	2,000	Analyte Specific

Table 1 Continued. Summary of Soil Sample Analytical Laboratory Results														
Parkland Collision Property														
160 - 108th Street South, Tacoma, Washington 98444														
The Riley Group, Inc. Project #T2011-066														
Sample Number	Sample Depth	Sample Date	PID	Gas TPH	BTEX				Diesel TPH	Oil TPH	HCID			VOCs
					B	T	E	X			Gasoline	Diesel	Heavy Oil	
B8-10-11	10-11	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B8-11-12	11-12	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B9-1-2	1-2	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B9-2-3	2-3	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B9-3-4	3-4	09/16/11	----	----	----	----	----	----	----	----	----	----	----	----
B9-4-5	4-5	09/16/11	0.0	----	ND<0.03	ND<0.05	ND<0.05	ND<0.1	----	----	ND<20	ND<50	ND<250	ND
B9-6-7	6-7	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B9-8-9	8-9	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B9-10-11	10-11	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B9-11-12	11-12	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B10-1-2	1-2	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B10-3-4	3-4	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B11-1-2	1-2	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B11-3-4	3-4	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B11-4-5	4-5	09/16/11	0.0	24	ND<0.02	0.075	ND<0.02	0.86	----	----	----	----	----	----
B11-5-6	5-6	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B11-7-8	7-8	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B11-9-10	9-10	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B11-11-12	11-12	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B11-12-13	12-13	09/16/11	----	----	ND<0.02	ND<0.02	0.064	0.12	----	----	ND<20	ND<50	ND<250	----
B11-13-14	13-14	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B12-0.5-1	0.5-1	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B12-2-3	2-3	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B12-3-4	3-4	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
MTCA Method A Soil Cleanup Levels				100/30¹	0.03	7	6	9	2,000	100/30¹	2,000	2,000	Analyte Specific	

Table 1 Continued. Summary of Soil Sample Analytical Laboratory Results

Parkland Collision Property

160 - 108th Street South, Tacoma, Washington 98444

The Riley Group, Inc. Project #T2011-066

Sample Number	Sample Depth	Sample Date	PID	Gas TPH	BTEX				Diesel TPH	Oil TPH	HCID			VOCs
					B	T	E	X			Gasoline	Diesel	Heavy Oil	
B12-5-6	5-6	09/16/11	1.4	240	0.32	0.18	0.86	28	----	----	D>20	ND<50	ND<250	----
B12-7-8	7-8	09/16/11	0.9	----	----	----	----	----	----	----	----	----	----	----
B12-9-10	9-10	09/16/11	0.6	----	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	ND<20	ND<50	ND<250	----
B12-11-12	11-12	09/16/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B13-3-4	3-4	10/24/11	1.3	----	----	----	----	----	----	----	----	----	----	----
B13-6-7	6-7	10/24/11	4.5	----	----	----	----	----	----	----	----	----	----	----
B13-8-8.5	8-8.5	10/24/11	20.4	370	ND<0.1	1.7	2.3	3.7	330	ND<250	----	----	----	----
B13-10-11	10-11	10/24/11	2.8	----	----	----	----	----	----	----	----	----	----	----
B14-2-3	2-3	10/24/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B14-4-5	4-5	10/24/11	----	----	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	ND<20	ND<50	ND<250	----
B14-9-10	9-10	10/24/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B14-11-12	11-12	10/24/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B15-2-3	2-3	10/24/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B15-5-6	5-6	10/24/11	0.0	----	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	ND<20	ND<50	ND<250	----
B15-9-10	9-10	10/24/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B15-11-12	11-12	10/24/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B16-1-2	1-2	10/24/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B16-6-7	6-7	10/24/11	0.8	----	ND<0.02	0.054	0.045	0.21	----	----	ND<20	ND<50	ND<250	----
B17-0-1	0-1	10/24/11	0.8	----	----	----	----	----	----	----	----	----	----	----
B17-5-6	5-6	10/24/11	0.0	----	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	ND<20	ND<50	ND<250	----
B17-9-9.5	9-9.5	10/24/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B17-12-13	12-13	10/24/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B18-2-3	2-3	10/24/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B18-7-8	7-8	10/24/11	----	----	----	----	----	----	----	----	----	----	----	----
MTCA Method A Soil Cleanup Levels				100/30¹	0.03	7	6	9	2,000	100/30¹	2,000	2,000	Analyte Specific	

Table 1 Continued. Summary of Soil Sample Analytical Laboratory Results
Parkland Collision Property
160 - 108th Street South, Tacoma, Washington 98444
The Riley Group, Inc. Project #T2011-066

Sample Number	Sample Depth	Sample Date	PID	Gas TPH	BTEX				Diesel TPH	Oil TPH	HCID			VOCs
					B	T	E	X			Gasoline	Diesel	Heavy Oil	
B18-8-9	8-9	10/24/11	0.0	----	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	ND<20	ND<50	ND<250	----
B18-11-12	11-12	10/24/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B19-2-3	2-3	10/24/11	0.1	----	----	----	----	----	----	----	----	----	----	----
B19-4-5	4-5	10/24/11	1.6	----	----	----	----	----	----	----	----	----	----	----
B19-7-8	7-8	10/24/11	0.8	----	----	----	----	----	----	----	----	----	----	----
B19-9-10	9-10	10/24/11	0.0	----	----	----	----	----	----	----	----	----	----	----
B19-13-14	13-14	10/24/11	0.0	----	----	----	----	----	----	----	----	----	----	----
MTCA Method A Soil Cleanup Levels				100/30¹	0.03	7	6	9	2,000	100/30¹	2,000	2,000	Analyte Specific	

All results and detection limits are given in mg/kg; equivalent to parts per million (ppm).
Sample Depth = Soil sample depth interval in feet below ground surface (bgs).
PID = Photoionization Detector.
TPH = total petroleum hydrocarbons.
Gasoline TPH determined using Ecology Test Method NWTPH Gx.
BTEX (benzene, toluene, ethylbenzene, and xylenes) determined using EPA Test Method 8021B or 8260C.
Diesel and Oil TPH determined using Ecology Test Method NWTPH Dx with silica gel cleanup.
Gasoline, Diesel, and Oil HCID (Hydrocarbon Identification) determined using Ecology Test Method NWTPH-HCID.
VOCs (Volatile Organic Compounds) determined using EPA Test Method 8260C.
ND = Not Detected at noted analytical detection limit.
---- = Not analyzed or not applicable.

¹ The higher cleanup level is allowed if no benzene is detected in the sample and the total of toluene, ethylbenzene and xylenes is less than 1% of the gasoline mixture.
x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

MTCA Cleanup Level, Ecology Model Toxics Control Act Method A Soil Cleanup Levels for Unrestricted Land Use (WAC 173-340-900, Table 740-1).
Bold & yellow highlighted results indicate concentrations (if any) that exceed MTCA Method A Soil Cleanup Levels.

Table 2. Summary of Groundwater Grab Sample Results

Parkland Collision Property

160 - 108th Street South, Tacoma, Washington 98444

The Riley Group, Inc. Project #T2011-066B

Sample Number	Sample Date	Depth to Water (bgs)	Gas TPH	BTEX				Diesel TPH	Oil TPH	HCID			VOCs
				B	T	E	X			Gasoline	Diesel	Heavy Oil	
B3-GW	09/16/11	11	----	ND<1	2.5	ND<1	3.9	----	----	ND<0.2	ND<0.5	ND<0.5	----
B5-GW	09/16/11	10	49,000	120	540	3,200	5,800	34,000	450 x	----	----	----	----
B8-GW	09/16/11	12	----	ND<0.35	2.9	ND<1	ND<2	----	----	ND<0.2	ND<0.5	ND<0.5	ND
B10-GW	09/16/11	11	----	ND<0.35	ND<1	ND<1	ND<2	----	----	ND<0.2	ND<0.5	ND<0.5	ND
B13-GW	10/24/11	8.5	5,500	1.6	21	9.6	16	16,000	570	----	----	----	----
B14-GW	10/24/11	10	----	ND<1	ND<1	ND<1	ND<3	----	----	ND<0.2	ND<0.5	ND<0.5	----
B15-GW	10/24/11	10	----	ND<1	ND<1	ND<1	ND<3	----	----	ND<0.2	ND<0.5	ND<0.5	----
B17-GW	10/24/11	9.5	----	ND<1	ND<1	ND<1	ND<3	----	----	ND<0.2	ND<0.5	ND<0.5	----
B18-GW	10/24/11	9	----	ND<1	ND<1	ND<1	ND<3	----	----	ND<0.2	ND<0.5	ND<0.5	----
MTCA Method A Groundwater Cleanup Levels			800/1,000¹	5	1,000	700	1,000	500	500	800/1,000¹	500	500	Analyte Specific

Samples collected by RGI field staff using a peristaltic pump under low flow conditions.

Unless otherwise noted, all analytical results are given in micrograms per liter (ug/L), equivalent to parts per billion (ppb).

TPH = total petroleum hydrocarbons.

Gas TPH determined using Ecology Test Method NWTPH-Gx

BTEX (Benzene, Toluene, Ethyl Benzene, and Xylenes) determined using EPA Test Method 8021.

Diesel and Oil TPH determined using Ecology Test Method NWTPH-Dx with silica gel cleanup.

VOCs (Volatile Organic Compounds) determined using EPA Test Method 8260C.

ND = Not Detected at noted analytical detection limit.

---- = Not analyzed or not applicable.

¹ The higher cleanup level is applicable if no benzene is detected in groundwater.

x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

MTCA Cleanup Level = Ecology Model Toxics Control Act Method A Cleanup Levels for Ground Water (WAC 173-340-900, Table 720-1).

Bold & yellow highlighted results indicate concentrations (if any) that exceed MTCA Method A Groundwater Cleanup Levels.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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November 1, 2011

Lannie Smith, Project Manager
The Riley Group, Inc.
711 St. Helens Avenue, Suite 204
Tacoma, WA 98402

Dear Mr. Smith:

Included are the results from the testing of material submitted on October 25, 2011 from the T2011-066b, F&BI 110330 project. There are 16 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
TRG1101R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on October 25, 2011 by Friedman & Bruya, Inc. from the The Riley Group T2011-066b, F&BI 110330 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>The Riley Group</u>
110330-01	B13-10-11
110330-02	B13-GW
110330-03	B13-8-8.5
110330-04	B13-6-7
110330-05	B13-3-4
110330-06	B14-GW
110330-07	B14-11-12
110330-08	B14-9-10
110330-09	B14-4-5
110330-10	B14-2-3
110330-11	B15-GW
110330-12	B15-11-12
110330-13	B15-9-10
110330-14	B15-5-6
110330-15	B15-2-3
110330-16	B16-6-7
110330-17	B16-1-2
110330-18	B17-GW
110330-19	B17-0-1
110330-20	B17-9-9.5
110330-21	B17-12-13
110330-22	B17-5-6
110330-23	B18-GW
110330-24	B18-2-3
110330-25	B18-7-8
110330-26	B18-8-9
110330-27	B18-11-12
110330-28	B19-2-3
110330-29	B19-4-5
110330-30	B19-7-8
110330-31	B19-9-10
110330-32	B19-13-14

All quality control requirements were acceptable.

Date of Report: 11/01/11
 Date Received: 10/25/11
 Project: T2011-066b, F&BI 110330
 Date Extracted: 10/27/11
 Date Analyzed: 10/28/11

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
 FOR GASOLINE, DIESEL AND HEAVY OIL BY NWTPH-HCID
 Results Reported as Not Detected (ND) or Detected (D)**

**THE DATA PROVIDED BELOW WAS PERFORMED PER THE GUIDELINES ESTABLISHED BY THE
 WASHINGTON DEPARTMENT OF ECOLOGY AND WERE NOT DESIGNED TO PROVIDE INFORMATION
 WITH REGARDS TO THE ACTUAL IDENTIFICATION OF ANY MATERIAL PRESENT**

<u>Sample ID</u> Laboratory ID	<u>Gasoline</u>	<u>Diesel</u>	<u>Heavy Oil</u>	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 50-150)
B14-GW 110330-06	ND	ND	ND	128
B15-GW 110330-11	ND	ND	ND	111
B17-GW 110330-18	ND	ND	ND	110
B18-GW 110330-23	ND	ND	ND	111
Method Blank 01-1956 MB	ND	ND	ND	122

ND - Material not detected at or above 0.2 mg/L gas, 0.5 mg/L diesel and 0.5 mg/L heavy oil.

Date of Report: 11/01/11
 Date Received: 10/25/11
 Project: T2011-066b, F&BI 110330
 Date Extracted: 10/26/11
 Date Analyzed: 10/26/11

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
 FOR GASOLINE, DIESEL AND HEAVY OIL BY NWTPH-HCID
 Results Reported as Not Detected (ND) or Detected (D)**

**THE DATA PROVIDED BELOW WAS PERFORMED PER THE GUIDELINES ESTABLISHED BY THE
 WASHINGTON DEPARTMENT OF ECOLOGY AND WERE NOT DESIGNED TO PROVIDE INFORMATION
 WITH REGARDS TO THE ACTUAL IDENTIFICATION OF ANY MATERIAL PRESENT**

<u>Sample ID</u> Laboratory ID	<u>Gasoline</u>	<u>Diesel</u>	<u>Heavy Oil</u>	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 50-150)
B14-4-5 110330-09	ND	ND	ND	119
B15-5-6 110330-14	ND	ND	ND	135
B16-6-7 110330-16	ND	ND	ND	116
B17-5-6 110330-22	ND	ND	ND	116
B18-8-9 110330-26	ND	ND	ND	117
Method Blank 01-1950 MB	ND	ND	ND	113

ND - Material not detected at or above 20 mg/kg gas, 50 mg/kg diesel and 250 mg/kg heavy oil.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/01/11
 Date Received: 10/25/11
 Project: T2011-066b, F&BI 110330
 Date Extracted: 10/26/11
 Date Analyzed: 10/26/11

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

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

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
B14-4-5 110330-09	<0.02	<0.02	<0.02	<0.06	103
B15-5-6 110330-14	<0.02	<0.02	<0.02	<0.06	103
B16-6-7 110330-16	<0.02	0.054	0.045	0.21	106
B17-5-6 110330-22	<0.02	<0.02	<0.02	<0.06	103
B18-8-9 110330-26	<0.02	<0.02	<0.02	<0.06	102
Method Blank 01-1946 MB	<0.02	<0.02	<0.02	<0.06	104

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/01/11
Date Received: 10/25/11
Project: T2011-066b, F&BI 110330
Date Extracted: 10/26/11
Date Analyzed: 10/28/11

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING EPA METHOD 8021B AND NWTPH-Gx**

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

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
B13-8-8.5 110330-03 1/5	<0.1	1.7	2.3	3.7	370	139
Method Blank	<0.02	<0.02	<0.02	<0.06	<2	104

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/01/11
Date Received: 10/25/11
Project: T2011-066b, F&BI 110330
Date Extracted: 10/26/11
Date Analyzed: 10/26/11

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING EPA METHOD 8021B AND NWTPH-Gx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
B13-GW 110330-02	1.6	21	9.6	16	5,500	91
Method Blank 01-1947 MB	<1	<1	<1	<3	<100	105

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/01/11
 Date Received: 10/25/11
 Project: T2011-066b, F&BI 110330
 Date Extracted: 10/26/11
 Date Analyzed: 10/26/11

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

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Surrogate (% Recovery)</u> Limit (52-124)
B14-GW 110330-06	<1	<1	<1	<3	98
B15-GW 110330-11	<1	<1	<1	<3	102
B17-GW 110330-18	<1	<1	<1	<3	102
B18-GW 110330-23	<1	<1	<1	<3	102
Method Blank 01-1947 MB	<1	<1	<1	<3	105

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/01/11
Date Received: 10/25/11
Project: T2011-066b, F&BI 110330
Date Extracted: 10/25/11
Date Analyzed: 10/28/11

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx
Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis
Results Reported as ug/L (ppb)**

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 51-134)
B13-GW 110330-02	16,000	570	88
Method Blank 01-1929 MB2	<50	<250	109

Date of Report: 11/01/11
 Date Received: 10/25/11
 Project: T2011-066b, F&BI 110330
 Date Extracted: 10/26/11
 Date Analyzed: 10/26/11

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
 FOR TOTAL PETROLEUM HYDROCARBONS AS
 DIESEL AND MOTOR OIL
 USING METHOD NWTPH-Dx
 Sample Extracts Passed Through a
 Silica Gel Column Prior to Analysis
 Results Reported on a Dry Weight Basis
 Results Reported as mg/kg (ppm)**

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 50-150)
B13-8-8.5 110330-03	330	<250	116
Method Blank 01-1951 MB	<50	<250	123

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/01/11

Date Received: 10/25/11

Project: T2011-066b, F&BI 110330

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES, AND TPH AS GASOLINE
USING EPA METHOD 8021B AND NWTPH-Gx**

Laboratory Code: 110305-03 (Duplicate)

Analyte	Reporting Units	(Wet Wt) Sample Result	(Wet Wt) Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	92	69-120
Toluene	mg/kg (ppm)	0.5	105	70-117
Ethylbenzene	mg/kg (ppm)	0.5	105	65-123
Xylenes	mg/kg (ppm)	1.5	105	66-120
Gasoline	mg/kg (ppm)	20	110	71-131

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/01/11

Date Received: 10/25/11

Project: T2011-066b, F&BI 110330

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES, AND TPH AS GASOLINE
USING EPA METHOD 8021B AND NWTPH-Gx**

Laboratory Code: 110305-03 (Duplicate)

Analyte	Reporting Units	(Wet Wt) Sample Result	(Wet Wt) Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	92	69-120
Toluene	mg/kg (ppm)	0.5	105	70-117
Ethylbenzene	mg/kg (ppm)	0.5	105	65-123
Xylenes	mg/kg (ppm)	1.5	105	66-120
Gasoline	mg/kg (ppm)	20	110	71-131

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/01/11

Date Received: 10/25/11

Project: T2011-066b, F&BI 110330

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES, AND TPH AS GASOLINE
USING EPA METHOD 8021B AND NWTPH-Gx**

Laboratory Code: 110329-04 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	93	72-119
Toluene	ug/L (ppb)	50	93	71-113
Ethylbenzene	ug/L (ppb)	50	94	72-114
Xylenes	ug/L (ppb)	150	89	72-113
Gasoline	ug/L (ppb)	1,000	96	70-119

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/01/11

Date Received: 10/25/11

Project: T2011-066b, F&BI 110330

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

Laboratory Code: 110329-04 (Duplicate)

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	93	72-119
Toluene	ug/L (ppb)	50	93	71-113
Ethylbenzene	ug/L (ppb)	50	94	72-114
Xylenes	ug/L (ppb)	150	89	72-113

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/01/11

Date Received: 10/25/11

Project: T2011-066b, F&BI 110330

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

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	80	89	63-142	11

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/01/11

Date Received: 10/25/11

Project: T2011-066b, F&BI 110330

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

Laboratory Code: 110358-01 (Matrix Spike) Silica Gel

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	540	101	111	63-146	9

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	105	79-144

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- A1 - More than one compound of similar molecule structure was identified with equal probability.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte indicated may be due to carryover from previous sample injections.
- d - The sample was diluted. Detection limits may be raised due to dilution.
- ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.
- dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.
- fb - Analyte present in the blank and the sample.
- fc - The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.
- ht - Analysis performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The result is below normal reporting limits. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.
- jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the compound indicated is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.
- pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.
- ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

110330

Chain of Custody ME 10/25/11

V53/v2/203

OnSite Environmental Inc.
 14648 NE 95th Street • Redmond, WA 98052
 Phone: (425) 883-3881 • www.onsite-env.com

Company: The Poley Group, Inc
 Project Number: T201-0066
 Project Name: Parkland Chloron PAF
 Project Manager: Lianne Smith
 Sampled by: Chelsea Jefferson

Turnaround Request (in working days)

(Check One)

Same Day 1 Day

2 Days 3 Days

Standard (7 Days)
 (TPH analysis 5 Days)

_____ (other)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	Laboratory Number:													% Moisture						
						NWTPH-HCID	NWTPH-GX/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA / MTCA Metals (circle one)		TCLP Metals	HEM (oil and grease) 1664				
01	B13-10-11	10/24	0920	Soil	5																				
02	B13-6W		0931	H ₂ O				X	X														X		
03	B13-8-8.5		0937	Soil				X	X													X			
04	B13-6-7		0945	↓																					
05	B13-3-4		0951	↓																					
06	B14-6W		0954	H ₂ O		X																X			
07	B14-11-12		1014	Soil																					
08	B14-9-10		1022	↓																					
09	B14-4-5		1027	↓		X																X			
10	B14-2-3		1031	↓																					

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished	<i>Chelsea Jefferson</i>	RO1	10/25	1130	Samples received at <u>6 °C</u>
Received	<i>Chelsea Jefferson</i>	ETS Inc	10/25	1130	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report <input type="checkbox"/>

110330

Chain of Custody

ME 10/25/11

US3/V2/D03

Page 2 of 4



OnSite Environmental Inc.

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Phone: (425) 883-3881 • www.onsite-env.com

Company: The Policy Group, Inc (PBI)
 Project Number: T201-0666
 Project Name: Parkland Collision
 Project Manager: Lannie Smith
 Sampled by: Chelsea Jefferson

Turnaround Request (if working days)

(Check One)

Same Day 1 Day

2 Days 3 Days

Standard (7 Days)
(TPH analysis 5 Days)

_____ (other)

Laboratory Number:

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HClD	NWTPH-GW/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total PCRA / MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664	BTEX	% Moisture	
11	B15-GW	10/24	1048	H ₂ O	5	X															X		
12	B15-11-12	↓	1053	Soil																			
13	B15-9-10		1057																				
14	B15-5-6		1105				X															X	
15	B15-2-3		1109																				
16	B16-6-7		1135				X															X	
17	B16-1-2		1140	↓																			
18	B17-GW		1236	H ₂ O			X															X	
19	B17-0-1		1243	Soil																			
20	B17-9-9.5		1253	↓																			

Signature	Company	Date	Time	Comments/Special Instructions
<u>Chelsea Jefferson</u>	<u>PBI</u>	<u>10/25</u>	<u>1130</u>	Samples received at <u>6</u> °C
<u>[Signature]</u>	<u>FTB Inc</u>	<u>10/25</u>	<u>1130</u>	
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date	Reviewed/Date	Chromatograms with final report <input type="checkbox"/>		



110330

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Chain of Custody

ME 10/25/11

US3/V2/D03

Page 3 of 4

Company: The Riley Group, Inc. (RGI)
 Project Number: 1700-0666
 Project Name: Parkland Collision
 Project Manager: Lanette Smith
 Sampled by: Chelsea Jefferson

Turnover (in weeks)

(Check One)

Same Day 1 Day

2 Days 3 Days

Standard (7 Days)
(TPH analysis 5 Days)

_____ (other)

Laboratory Number: _____

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA / MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664	BTEX	% Moisture		
21	B17-12-13	10/24	1257	Soil	5																			
22	B17-5-6	}	1251	↓	1	X															X			
23	B18-6W		1234	H ₂ O	1	X																X		
24	B18-2-3		1330	Soil	1																			
25	B18-7-8		1333		1																			
26	B18-8-9		1336		1	X																	X	
27	B18-11-12		1339		1																			
28	B19-2-3		1350		1																			
29	B19-4-5		1406		1																			
30	B19-7-8		1410		1																			

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished	<u>Chelsea Jefferson</u>	<u>RGI</u>	<u>10/25</u>	<u>1130</u>	Samples received at <u>6</u> °C
Received	<u>[Signature]</u>	<u>F+B Inc</u>	<u>10/25</u>	<u>1130</u>	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report <input type="checkbox"/>

Project Name: Parkland Collision Property

Project Number: T2011-066B

Client: Hi Tech, Inc.



Boring No.: B13

Sheet 1 of 1

Date(s) Drilled: 10/24/11	Logged By: CJ	Surface Conditions: Asphalt
Drilling Method(s): Direct Push	Drill Bit Size/Type: 2.5" Diameter	Total Depth of Borehole: 11.5 feet bgs
Drill Rig Type: Truck Mounted	Drilling Contractor: Pacific NW Probe	Approximate Surface Elevation: n/a
Groundwater Level and Date Measured: 8.5' bgs	Sampling Method(s): Continuous	Hammer Data : n/a
Borehole Backfill: Bentonite Chips	Location: 160 - 108th Street South, Tacoma, Washington 98444	

PID Reading, ppm	Sample ID	Sample Type	Sampling Resistance, blows/ft	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
0.0					0	Dark grayish-brown, SILTY SAND with gravel, damp	
0.0							
1.3	B13-3-4						
0.8					5	Brownish-gray, clayey SILT with gravel, damp, petroleum odor observed	
4.5	B13-6-7						
20.4	B13-8-8.5			8.5		Gray, coarse to fine, SILTY SAND, moist to saturated, petroleum odor	
2.8	B13-10-11			10		Gray, SILTY SAND, dense, damp	
					11.5	Boring terminated at 11.5 feet bgs	
					15		
					20		
					25		
					30		

Project Name: Parkland Collision Property

Project Number: T2011-066B

Client: Hi Tech, Inc.



Boring No.: B14

Sheet 1 of 1

Date(s) Drilled: 10/24/11	Logged By: CJ	Surface Conditions: Asphalt
Drilling Method(s): Direct Push	Drill Bit Size/Type: 2.5" Diameter	Total Depth of Borehole: 12 feet bgs
Drill Rig Type: Truck Mounted	Drilling Contractor: Pacific NW Probe	Approximate Surface Elevation: n/a
Groundwater Level and Date Measured: 10' bgs	Sampling Method(s): Continuous	Hammer Data : n/a
Borehole Backfill: Bentonite Chips	Location: 160 - 108th Street South, Tacoma, Washington 98444	

PID Reading, ppm	Sample ID	Sample Type	Sampling Resistance, blows/ft	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
0.0					0	Dark brownish-black, SILTY SAND with gravel, damp	
0.0	B14-2-3					Dark brownish-gray, clayey SILT with gravel, damp (fines with depth and interbedded peat)	
0.0	B14-4-5				5	Light gray CLAY and clayey SILT, damp to moist	
0.0						Light gray, SILTY SAND, moist to saturated	
0.0	B14-9-10			10		Very dense	
0.0	B14-11-12					Boring terminated at 12 feet bgs	
					15		
					20		
					25		
					30		

Project Name: Parkland Collision Property

Project Number: T2011-066B

Client: Hi Tech, Inc.



Boring No.: B15

Sheet 1 of 1

Date(s) Drilled: 10/24/11	Logged By: CJ	Surface Conditions: Asphalt
Drilling Method(s): Direct Push	Drill Bit Size/Type: 2.5" Diameter	Total Depth of Borehole: 12 feet bgs
Drill Rig Type: Truck Mounted	Drilling Contractor: Pacific NW Probe	Approximate Surface Elevation: n/a
Groundwater Level and Date Measured: 10' bgs	Sampling Method(s): Continuous	Hammer Data : n/a
Borehole Backfill: Bentonite Chips	Location: 160 - 108th Street South, Tacoma, Washington 98444	

PID Reading, ppm	Sample ID	Sample Type	Sampling Resistance, blows/ft	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
0.0					0	Light brownish-gray, SILTY SAND with gravel, dry to damp	
0.0	B15-2-3					Brownish-gray SILT with interbedded peat, damp	
0.0							
0.0	B15-5-6				5	Sandy SILT and SILT, damp to moist	
0.0							
0.0	B15-9-10					Light gray, SILTY SAND with medium sand interbedded, moist to saturated	
0.0	B15-11-12						
					10		
						Boring terminated at 12 feet bgs	
					15		
					20		
					25		
					30		

Project Name: Parkland Collision Property

Project Number: T2011-066B

Client: Hi Tech, Inc.



Boring No.: B16

Sheet 1 of 1

Date(s) Drilled: 10/24/11	Logged By: CJ	Surface Conditions: Asphalt
Drilling Method(s): Direct Push	Drill Bit Size/Type: 2.5" Diameter	Total Depth of Borehole: 11 feet bgs
Drill Rig Type: Truck Mounted	Drilling Contractor: Pacific NW Probe	Approximate Surface Elevation: n/a
Groundwater Level and Date Measured: Not Encountered	Sampling Method(s): Continuous	Hammer Data : n/a
Borehole Backfill: Bentonite Chips	Location: 160 - 108th Street South, Tacoma, Washington 98444	

PID Reading, ppm	Sample ID	Sample Type	Sampling Resistance, blows/ft	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
0.0	B16-1-2				0	Grayish-brown, SILTY SAND with gravel, damp	
0.3						Gray, SILTY SAND, damp	
0.2							
0.0							
0.0	B16-6-7				5	Brownish-gray, sandy SILT with interbedded silt and peat, damp	
0.8						No recovery	
0.0							
					10	Refusal at 11 feet bgs	
					15		
					20		
					25		
					30		

Project Name: Parkland Collision Property

Project Number: T2011-066B

Client: Hi Tech, Inc.



Boring No.: B17

Sheet 1 of 1

Date(s) Drilled: 10/24/11	Logged By: CJ	Surface Conditions: Asphalt
Drilling Method(s): Direct Push	Drill Bit Size/Type: 2.5" Diameter	Total Depth of Borehole: 13 feet bgs
Drill Rig Type: Truck Mounted	Drilling Contractor: Pacific NW Probe	Approximate Surface Elevation: n/a
Groundwater Level and Date Measured: 9.5' bgs	Sampling Method(s): Continuous	Hammer Data : n/a
Borehole Backfill: Bentonite Chips	Location: 160 - 108th Street South, Tacoma, Washington 98444	

PID Reading, ppm	Sample ID	Sample Type	Sampling Resistance, blows/ft	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
0.8	B17-0-1				0	Brownish-gray, SILTY SAND with gravel, dry to damp	
0.0						Gray, sandy SILT with silt interbedded, damp	
0.0						PEAT	
0.0	B17-5-6				5	Light brownish-gray SILT, damp	
0.0						Gray, SILTY SAND, damp to saturated	
0.0	B17-9-9.5			9.5			
0.0	B17-12-13					Refusal at 13 feet bgs	

Project Name: Parkland Collision Property

Project Number: T2011-066B

Client: Hi Tech, Inc.



Boring No.: B18

Sheet 1 of 1

Date(s) Drilled: 10/24/11	Logged By: CJ	Surface Conditions: Gravel
Drilling Method(s): Direct Push	Drill Bit Size/Type: 2.5" Diameter	Total Depth of Borehole: 12 feet bgs
Drill Rig Type: Truck Mounted	Drilling Contractor: Pacific NW Probe	Approximate Surface Elevation: n/a
Groundwater Level and Date Measured: 9' bgs	Sampling Method(s): Continuous	Hammer Data : n/a
Borehole Backfill: Bentonite Chips	Location: 160 - 108th Street South, Tacoma, Washington 98444	

PID Reading, ppm	Sample ID	Sample Type	Sampling Resistance, blows/ft	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
0.0	B18-2-3				0	Brownish-gray, SILTY SAND with gravel, dry to damp	
0.0					0.0		
0.0					0.0		
0.0					5	Light brown, sandy SILT, damp (fining with depth)	
0.0	B18-7-8				8	Brownish-gray, SILTY SAND with interbedded silt, damp to saturated	
0.0	B1-8-9				10		
0.0	B18-11-12				12	Boring terminated at 12 feet bgs	
0.0					15		
0.0					20		
					25		
					30		

Project Name: Parkland Collision Property

Project Number: T2011-066B

Client: Hi Tech, Inc.



Boring No.: B19

Sheet 1 of 1

Date(s) Drilled: 10/24/11	Logged By: CJ	Surface Conditions: Gravel
Drilling Method(s): Direct Push	Drill Bit Size/Type: 2.5" Diameter	Total Depth of Borehole: 14 feet bgs
Drill Rig Type: Truck Mounted	Drilling Contractor: Pacific NW Probe	Approximate Surface Elevation: n/a
Groundwater Level and Date Measured: Not Encountered	Sampling Method(s): Continuous	Hammer Data : n/a
Borehole Backfill: Bentonite Chips	Location: 160 - 108th Street South, Tacoma, Washington 98444	

PID Reading, ppm	Sample ID	Sample Type	Sampling Resistance, blows/ft	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
0.0					0	Gray, SILTY SAND with gravel, damp	
0.1	B19-2-3						
0.0							
1.6	B19-4-5				5	Brown SILT with interbedded silt, damp	
0.2							
0.8	B19-7-8						
0.4							
0.0	B19-9-10				10	Grayish brown SILT with sandy silt interbedded, damp to wet	
0.0							
0.0	B19-13-14						
					15	Refusal at 14 feet bgs	
					20		
					25		
					30		

Project Name: Parkland Collision Property

Project Number: T2011-066B

Client: Hi Tech, Inc.



Boring Log Key

Sheet 1 of 1

PID Reading, ppm	Sample ID	Sample Type	Sampling Resistance, blows/ft	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
1	2	3	4	5	6	7	8

COLUMN DESCRIPTIONS

- 1** PID Reading, ppm: The reading from a photo-ionization detector, in parts per million.
- 2** Sample ID: Sample identification number.
- 3** Sample Type: Type of soil sample collected at the depth interval shown.
- 4** Sampling Resistance, blows/ft: Number of blows to advance driven sampler one foot (or distance shown) beyond seating interval using the hammer identified on the boring log.
- 5** GW Depth: Groundwater depth in feet below the ground surface.
- 6** Depth (feet): Depth in feet below the ground surface.
- 7** MATERIAL DESCRIPTION: Description of material encountered. May include consistency, moisture, color, and other descriptive text.
- 8** Graphic Log: Graphic depiction of the subsurface material encountered.

FIELD AND LABORATORY TEST ABBREVIATIONS

- CHEM: Chemical tests to assess corrosivity
- COMP: Compaction test
- CONS: One-dimensional consolidation test
- LL: Liquid Limit, percent
- PI: Plasticity Index, percent
- SA: Sieve analysis (percent passing No. 200 Sieve)
- UC: Unconfined compressive strength test, Qu, in ksf
- WA: Wash sieve (percent passing No. 200 Sieve)

MATERIAL GRAPHIC SYMBOLS

- No material type.
- SILTY CLAY (CL-ML)
- SILT, SILT w/SAND, SANDY SILT (ML)
- Peat
- Silty SAND (SM)

TYPICAL SAMPLER GRAPHIC SYMBOLS

- Shelby Tube (Thin-walled, fixed head)
- Auger sampler
- Bulk Sample
- 3-inch-OD California w/ brass rings
- CME Sampler
- Continuous Core Sampler
- Grab Sample
- 2.5-inch-OD Modified California w/ brass liners

OTHER GRAPHIC SYMBOLS

- Water level (at time of drilling, ATD)
- Water level (after waiting)
- Minor change in material properties within a stratum
- Inferred/gradational contact between strata
- Queried contact between strata

GENERAL NOTES

- 1: Soil classifications are based on the Unified Soil Classification System. Descriptions and stratum lines are interpretive, and actual lithologic changes may be gradual. Field descriptions may have been modified to reflect results of lab tests.
- 2: Descriptions on these logs apply only at the specific boring locations and at the time the borings were advanced. They are not warranted to be representative of subsurface conditions at other locations or times.