



# REVISED SUPPLEMENTAL REMEDIAL INVESTIGATION REPORT

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**RGI PROJECT No. 2012-107L**

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**REVISED SUPPLEMENTAL REMEDIAL INVESTIGATION REPORT**

**MAIN STREET APARTMENTS DEVELOPMENT  
10505 MAIN STREET  
BELLEVUE, WASHINGTON 98004**

**JANUARY 18, 2017**

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## TABLE OF CONTENTS

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<b>1</b>	<b>INTRODUCTION .....</b>	<b>1</b>
1.1	PURPOSE .....	1
1.2	PROPERTY AND SITE LOCATIONS .....	1
1.3.1	<i>Property Location</i> .....	1
1.3.2	<i>Site Location</i> .....	2
1.3	PROPERTY HISTORY .....	2
1.3.1	<i>Former Parcel 0005 (Eastern Portion of Property)</i> .....	2
1.3.2	<i>Former Parcel 0015 (Western Portion of Property)</i> .....	2
1.4	PREVIOUS INVESTIGATIONS .....	2
1.4.1	<i>Remedial Action (2013)</i> .....	3
1.4.2	<i>Groundwater Characterization (2014-2015)</i> .....	4
1.4.3	<i>Correspondences with Ecology</i> .....	4
<b>2</b>	<b>SCOPE OF WORK .....</b>	<b>5</b>
<b>3</b>	<b>REGULATORY ANALYSIS OF PROPERTY CONDITIONS UNDER MTCA .....</b>	<b>6</b>
3.1	MTCA CLEANUP REGULATION .....	6
3.2	SOIL CLEANUP LEVELS .....	6
3.3	GROUNDWATER CLEANUP LEVELS .....	6
3.4	VAPOR INTRUSION SCREENING LEVELS .....	7
<b>4</b>	<b>SUPPLEMENTAL REMEDIAL INVESTIGATION .....</b>	<b>7</b>
4.1	<i>Utility Locating &amp; Concrete Coring</i> .....	7
4.2	SUBSURFACE INVESTIGATION .....	7
4.3	GROUNDWATER MONITORING WELL SURVEYING .....	8
4.4	GROUNDWATER MONITORING WELL SAMPLING EVENTS .....	9
4.5	INVESTIGATION DERIVED WASTE .....	10
<b>5</b>	<b>ANALYTICAL LABORATORY ANALYSES .....</b>	<b>10</b>
5.1	GROUNDWATER ANALYTICAL RESULTS .....	11
5.1.1	<i>On-Property Groundwater Analytical Results</i> .....	11
5.1.2	<i>Off-Property Groundwater Analytical Results</i> .....	11
<b>6</b>	<b>FINDINGS .....</b>	<b>12</b>
6.1	PRELIMINARY HYDROGEOLOGICAL EVALUATION .....	12
6.2	SOIL .....	13
6.3	GROUNDWATER .....	14
<b>7</b>	<b>VAPOR INTRUSION EVALUATION .....</b>	<b>14</b>
7.1	VAPOR INTRUSION REGULATIONS .....	14
7.2	IDENTIFICATION OF COMPOUNDS FOR VAPOR INTRUSION ASSESSMENT .....	15
7.2.1	<i>Compounds Identified in Soil</i> .....	15
7.2.2	<i>Compounds Identified in Groundwater</i> .....	15
7.3	SOIL VAPOR INTRUSION ASSESSMENT .....	16
	<b>CONCLUSIONS &amp; RECOMMENDATIONS .....</b>	<b>18</b>

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## LIST OF APPENDICES

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Figure 1 .....	Property Vicinity Map
Figure 2 .....	Property Representation With Groundwater Monitoring Well Locations
Figure 3 .....	Property Representation With Previous Investigation Locations and Select Analytical Data
Figure 4 .....	Property Representation With Subsurface Silt Contours and Elevations
Figure 5 .....	Groundwater Elevation Contours August 29, 2016
Figure 6 .....	Groundwater Elevation Contours October 28, 2016
Figure 7 .....	Groundwater Elevation Contours January 4, 2017
Figure 8 .....	Post 2013 RA Groundwater Analytical Data With Estimated Extent of Remaining Soil Impacts
Figure 9 .....	Cross Section B-B' With Select Soil and Groundwater Data
Table 1.....	Summary of Groundwater Analytical Laboratory Results
Appendix A .....	2013 Remedial Action Report Tables, Figures, and Borelogs
Appendix B .....	MTCA Method B Evaluation Spreadsheets
Appendix C .....	Borelogs
Appendix D.....	Investigation Derived Waste Disposal Documentation
Appendix E .....	Analytical Laboratory Reports

## 1 INTRODUCTION

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### 1.1 PURPOSE

The Riley Group, Inc. (RGI) is pleased to present this Supplemental Remedial Investigation Report (SRI Report) documenting additional environmental work performed on the Alamo Manhattan Main Street project located at 10505 Main Street in Bellevue, Washington (herein referred to as the Property). The general location of the Property is depicted on Figure 1.

The Property is currently owned by Alamo Manhattan Bellevue, LLC (Alamo) and has been enrolled in the Washington State Department of Ecology (Ecology) Voluntary Cleanup Program (VCP) since December of 2013. The Property is identified by Ecology as the Alamo Manhattan Main Street project with VCP project number NW2811.

RGI has had frequent correspondence with Ecology over the past few years and most recently Ecology has requested the SRI be performed to determine if the Property qualifies for regulatory closure.

Alamo has retained RGI to complete the environmental work requested by Ecology. The work presented herein is intended to supplement the work documented in previous investigations and remedial action reports with the ultimate objective of obtaining a No Further Action determination with an Environmental Covenant (NFA/EC) for the Property from Ecology.

This work documented in this SRI Report was performed in general accordance with the Model Toxics Control Act (MTCA) regulation, the *Supplemental Remedial Investigation Work Plan* and RGI's *Proposal for Additional Tasks Required by Ecology and Change Order No. 1* dated August 23 and October 26, 2016, respectively. Authorization to proceed with this work was granted by Mr. Matt Segrest of Alamo Manhattan Bellevue, LLC.

### 1.2 PROPERTY AND SITE LOCATIONS

The Property is defined as the area situated with the Property boundaries. The Site is defined as the location where soil and/or groundwater containing concentrations of contaminants of potential concern (COPCs) exceeding applicable MTCA cleanup levels have come to be located, irrespective of the Property boundary. The Property and Site locations are depicted on Figure 2 and discussed below.

#### 1.3.1 PROPERTY LOCATION

The Property is located at 10505 Main Street in Bellevue, Washington and is located on the United States Geologic Survey (USGS) Bellevue South, Washington, 7.5-Minute Topographic Map at an elevation of approximately 100 feet above mean sea level (See Figure 1).

The Property is located in the southwest quarter of Section 32 of Township 25 North, Range 5 East of the Willamette Meridian. The King County tax parcel number associated with the Property is 5223300005 and the Property occupies approximately 1.45 acres of land. Prior to the redevelopment of the Property in 2013 as the Main Street Apartments, the Property consisted of two King County tax parcels. Parcel 5223300005 (Parcel 0005) represented the eastern half of the Property and parcel 5223300015 (Parcel 0015) represented the western half of the Property.

The Property is generally flat except for a steep slope along the southern boundary of the Property. The surrounding area also slopes down to the northwest. Typical property use in the vicinity is a mixture of retail and residential properties.



### 1.3.2 SITE LOCATION

The Site consists of two Areas (Area 1 and Area 2), which are both situated on the southwestern portion of the Property. In Area 1, diesel-range total petroleum hydrocarbons (TPH) impacted soil is present between approximately elevations 74' to 62'. In Area 2, diesel-range TPH and PCE impacted soil is present between approximately elevations 62' and 59'. The Site is confined to within the Property boundaries.

### 1.3 PROPERTY HISTORY

Prior to 1946, the Property consisted of undeveloped, vegetated land. The Property history of both parcels is discussed below.

#### 1.3.1 FORMER PARCEL 0005 (EASTERN PORTION OF PROPERTY)

Development was first observed on Parcel 0005 in 1946 when a building was constructed for use as an automobile repair garage, gas station, and a sales facility. Historical records indicated that this building was originally heated by an oil burner, but no indications as to how the fuel was stored was encountered.

Historical tax assessor records and previous reports indicated that three 1,000-gallon tanks and dispenser pumps were present. Historical records also indicated that underground hydraulic hoists were also present at one time. Historical city directories indicated this building was previously occupied by a gas station, auto repair facilities, car dealerships and other general retail businesses. The building on the eastern portion of the Property was demolished in 2013 prior to the redevelopment of the Property as the current Main Street Apartments.

#### 1.3.2 FORMER PARCEL 0015 (WESTERN PORTION OF PROPERTY)

Development was first observed on Parcel 0015 in 1953 when a building was constructed and primarily used for retail stores. Historical records indicated that this building was originally heated by an oil burner, but no indications as to how the fuel was stored were encountered during previous investigations.

Historical records and previous reports indicated that a 2,000-gallon UST and dispenser pump were present. Previous uses considered environmentally significant included use as a dry cleaning facility, machine shop, Puget Power, McCall Oil Fuel, RP Automotive, Bellevue Camera Shop, Overlake Photo Company photo developing, and B&B Auto Parts. The building was demolished in 2013 prior to the redevelopment of the Property as the current Main Street Apartments.

### 1.4 PREVIOUS INVESTIGATIONS

Several documents pertaining to previous environmental investigations on the Property have been prepared and are described in the following documents:

- *Phase I Environmental Site Assessment Report (Phase I ESA); Aaron Bothers Retail Property* dated March 21, 2012 by RGI.
- *Phase II Subsurface Investigation Report (Phase II); Proposed Main Street Development* dated July 24, 2012 by RGI.
- *Additional Groundwater Monitoring Well Installation and Sampling Report (Well and Sampling Report) Proposed Main Street Development* dated June 19, 2013 by RGI.
- *Phase I Environmental Site Assessment Update Report (Phase I ESA Update) Main Street Development* dated June 26, 2013 by RGI.

- *Excavation Work Plan, Main Street Development (RA Work Plan)* dated July 17, 2013 by RGI.
- *Remedial Action Report (RA Report)* dated June 13, 2014 by RGI.
- *Groundwater Characterization Work Plan (GC Work Plan)* dated October 30, 2014 by RGI.
- *Groundwater Characterization Report (GC Report)* dated July 21, 2015 by RGI.
- *Further Action at the following Site: Alamo Manhattan Main Street (2016 Opinion Letter)* dated June 6, 2016 by Ecology.
- *Method B Groundwater Evaluation Technical Memorandum (GE Memorandum)* dated July 21, 2016 by RGI.
- *Supplemental Remedial Investigation Work Plan (2016 Work Plan)* dated August 11, 2016 by RGI.
- *Response to Ecology June 6, 2016 Opinion Letter Technical Memorandum (2016 Response Memorandum)* dated August 11, 2016. This document was included as an attachment to the 2016 Work Plan.
- *Draft Focused Feasibility and Disproportionate Cost Analysis* dated January 18, 2017 by RGI.

All environmental investigation work conducted prior to the RA in 2013 is summarized in the RA Report. Summaries of the work performed during the RA and subsequent investigations are provided below.

#### **1.4.1 REMEDIAL ACTION (2013)**

RGI completed a RA on the Property in 2013 where soil was remediated in seven areas in accordance with the MTCA regulation. Groundwater monitoring wells RW1 and RW2 were also installed. Copies of tables, figures, and borelogs pertaining to the RA Report are included in Appendix A.

Based on the results of the RA, RGI drew the following conclusions:

- All soil contamination on the Property had been fully remediated to a depth of approximately 23 feet below ground surface (bgs) or elevation 74'. The cleanup levels selected for COPCs in soil were the MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses (WAC 173-340-740). A total of approximately 1,434 tons of contaminated soil were removed from the Property and disposed of in accordance with applicable regulations.
- A limited amount of diesel-range total petroleum hydrocarbons (TPH) remains on the Property at depths between approximately 23 and 32 feet bgs (elevations 74' and 65') on the southwestern portion of the Property. A limited amount of diesel-range TPH and tetrachloroethene (PCE) impacted soil is also present at approximately 36 feet bgs. None of the observed soil impacts have migrated off the Property.
- Groundwater was encountered between approximately 42 and 50 feet bgs (elevations 56' to 48') on the western portions of the Property. Benzene was detected in groundwater at concentrations that slightly exceeded the MTCA Method A Cleanup Levels for Ground Water on the southwestern portion of the Property and the extent of this benzene-impacted groundwater appeared to be confined to a relatively small area. The observed groundwater impacts did not represent a threat to human health and the environment.

- The impacted soil and groundwater that remained on the Property did not represent a vapor intrusion risk for Property.
- No further action was necessary at the Property.

Based on the results of the RA, RGI and Alamo enrolled the Property into Ecology's VCP program and requested that Ecology grant a NFA determination for the Property.

After Ecology reviewed the RA report and previous investigation reports, Ecology indicated that prior to issuing a NFA determination for the Property, additional groundwater characterization would be required.

#### **1.4.2 GROUNDWATER CHARACTERIZATION (2014-2015)**

RGI completed the Groundwater Characterization on the Property between December 2014 and May of 2015. This work primarily consisted of installing, developing and sampling groundwater monitoring well MW5 off-Property to the west on 105th Avenue Southeast. This work also included groundwater sampling of wells RW1 and RW2 on the Property. The work was performed in accordance with the GC Work Plan, which was approved by Ecology prior to performing the work.

Based on the findings of this investigation, RGI drew the following conclusions;

- The completed cleanup has met the substantive requirements of the MTCA regulation.
- Groundwater on the Property had been characterized and groundwater on the Property was in compliance with the MTCA regulation. In addition, no evidence of off-Property migration of contaminants was observed.
- RGI concluded that the limited nature and extent of any residual groundwater contamination underlying the southwest portion of the Property no longer posed a threat to human health and the environment.

RGI submitted the GC Report to Ecology for review on July 23, 2015 and requested that Ecology grant a NFA determination for the Property. On January 27, 2016, the Ecology Project Manager (PM) at the time verbally indicated to RGI that he had completed his review of all files pertaining to the Alamo Manhattan Main Street project and was recommending that the Property receive a NFA determination.

#### **1.4.3 CORRESPONDENCES WITH ECOLOGY**

On May 6, 2016, Ecology indicated that the project was being transferred to a different Ecology PM in an effort to expedite the issuance of the Ecology Opinion Letter.

On June 9, 2016, Ecology forwarded a copy of the June 2016 Opinion Letter to RGI and Alamo. Pertinent information in this letter included that Ecology indicated that additional environmental work was necessary for the Property prior to issuing a NFA determination. Ecology also indicated that they would not accept diesel-range TPH groundwater data that was obtained using silica gel cleanup.

This information contradicted what was verbally indicated to RGI in early 2016 and led to a meeting between Ecology, RGI, and Alamo Manhattan, which took place on June 16, 2016 at Ecology's Northwest Regional office in Bellevue, Washington. Pertinent points discussed during this meeting and subsequent follow-up communications included the following:

- RGI and Ecology agreed that MTCA Method B was appropriate to evaluate groundwater for compliance with the MTCA regulation.

- RGI and Alamo Manhattan indicated that no additional soil or groundwater characterization was warranted for the eastern portion of the Property. Ecology subsequently agreed with RGI and Alamo after further review of Property data pertaining to the eastern portion of the Property.
- Ecology requested that the potential for vapor intrusion be evaluated using the most recent Ecology and EPA vapor intrusion guidance's and that RGI prepare an east-west cross section for the Property.
- Ecology requested that RGI conduct a SRI and subsequently prepare a Focused Feasibility Study and Disproportionate Cost Analysis (FS/DCA) to address remaining known contamination on the Property.
- Ecology requested that a Work Plan be submitted to Ecology prior to performing any additional work on the Property.

Based on what was discussed during this meeting and subsequent correspondences, RGI prepared the SRI Work Plan to install well MW6 and address all of Ecology's concerns regarding the Property. The SRI Work Plan was reviewed by Ecology and approved on August 11, 2016. The scope of work presented in this SRI report was generally consistent with the SRI Work Plan.

## **2 SCOPE OF WORK**

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The scope of work for the SRI included the following tasks:

- Performed public and private utility locating in an attempt to identify the locations of buried utility lines located beneath the Main Street Apartments building in the drilling area.
- Installed and developed groundwater monitoring well MW6 in the parking garage of the Main Street Apartments building using limited access hollow stem auger (HSA) drilling techniques. Diesel exhaust generated by the drill rig was vented to the outside during drilling.
- Retained the services of a licensed surveyor to survey the elevations at the north side of the top of the PVC casing and ground surface at MW6.
- Obtained Right-Of-Way Permit 16 139863 TE from the City of Bellevue and traffic control necessary to sample well MW5 situated on 105th Avenue Southeast.
- Collected and analyzed groundwater samples obtained from groundwater monitoring wells for COPCs during quarters 2, 3, and 4 of 2016 and quarter 1 of 2017.
- Obtained depth to groundwater data from all groundwater monitoring wells and utilized this data to generate groundwater elevations contours and determine groundwater flow direction and hydraulic gradient across the Property. RGI also performed a hydrogeological evaluation to further assess groundwater conditions and flow direction beneath the Property.
- Compared groundwater analytical results to MTCA Method B Cleanup Levels for Groundwater and calculated a MTCA Method B TPH groundwater cleanup levels in accordance with the MTCA regulation.
- Coordinated removal of Investigation Derived Waste (IDW) generated during well installation, development and sampling.



- Evaluated the vapor intrusion risk for the Property in accordance with significant changes to vapor intrusion regulations, which occurred in 2015.
- Corresponded with the Client and Ecology as necessary.
- Prepared this SRI Report presenting our findings, observations, conclusions, and recommendations.

### **3 REGULATORY ANALYSIS OF PROPERTY CONDITIONS UNDER MTCA**

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#### **3.1 MTCA CLEANUP REGULATION**

In Washington State, the Model Toxics Control Act (MTCA, RCW 70.105D), mandates that site cleanups protect human health and the environment. The MTCA Cleanup Regulation (173-340 WAC) 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 focuses on the use of “reasonable maximum exposure” assumptions based on site-specific characteristics and toxicity of COPCs.

#### **3.2 SOIL CLEANUP LEVELS**

Soil assessment was not included in the SRI due to the fact that soil on the Property has been remediated to the fullest extent possible. Soil cleanup levels compliant with the MTCA regulation were previously used to demonstrate that soil was remediated on the Property to the fullest extent practicable.

The soil cleanup was documented in great detail in the RA Report. Tables and figures summarizing previous soil analytical data and MTCA soil cleanup levels are included in Appendix A.

#### **3.3 GROUNDWATER CLEANUP LEVELS**

Groundwater samples obtained during SRI and previous investigations were previously analyzed for a suite of COPCs including gasoline-, diesel-, and oil-range TPH, extractable petroleum hydrocarbons (EPH), volatile petroleum hydrocarbons (VPH), volatile organic compounds (VOCs), carcinogenic polycyclic aromatic hydrocarbons (cPAHs), and naphthalenes.

Diesel-range TPH and benzene were the only compounds detected in groundwater at concentrations above applicable groundwater cleanup levels at a few locations on the southwestern portion of the Property and are therefore considered the only Contaminants of Concern (COCs) for groundwater on the Property. However, as requested by Ecology, RGI submitted groundwater samples collected during the SRI for the additional analyses described in Section 5 in order to confirm that these are the only COCs for the Property.

Prior to June of 2016, the MTCA Method A Cleanup Levels for Groundwater were selected for evaluating groundwater quality on the Property. However beginning in June of 2016, the MTCA Method B Cleanup Levels for Groundwater were selected for determining if groundwater concentrations of COPCs were in compliance with the MTCA regulation. Ecology agreed that MTCA Method B cleanup levels are appropriate for evaluating groundwater on the Property.

In order to evaluate petroleum hydrocarbons (diesel-range TPH) using Method B, RGI utilized the *Ecology Worksheet for Calculating Potable Groundwater Cleanup Levels* (Cleanup Level Worksheet), which uses MTCA Equation 720-3 [WAC 173-340-720(4)(C)] and calculates a Method B groundwater cleanup level. This approach takes into account the additive effects of the petroleum fractions and VOCs present in the mixture. Copies of spreadsheets used to execute the calculation are included in Appendix B and groundwater analytical data and cleanup levels are summarized in Table 1.

### **3.4 VAPOR INTRUSION SCREENING LEVELS**

A relatively isolated amount of PCE remains in soil on the southwestern portion of the Property at approximately elevation 62', which is situated approximately 16 feet below the ground floor of the existing parking garage floor. Given that PCE is considered sufficiently volatile and toxic enough to cause a vapor intrusion concern, RGI evaluated whether or not a vapor intrusion concern exists for the Property.

Ecology has established screening levels for groundwater and soil vapor that are considered protective of MTCA Method B Indoor Air Cleanup Levels. These screening levels were used to determine if there was the potential for a vapor intrusion concern for the Property. These screening levels were obtained from *Table B-1 Indoor Air Cleanup Levels, Groundwater Screening Levels, and Soil Gas Screening Levels* (Amended April 6 of 2015) of the *Draft Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action* (Draft Ecology VI Guidance) dated 2009 by Ecology. Groundwater screening levels protective of MTCA Method B Indoor Air Cleanup Levels are summarized in Table 1 and the soil vapor screening level for PCE is discussed in Section 7.

## **4 SUPPLEMENTAL REMEDIAL INVESTIGATION**

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Fieldwork associated with the SRI was performed between June of 2016 and January of 2017. Details pertaining to this work are described below.

### **4.1 UTILITY LOCATING & CONCRETE CORING**

At least 48 hours prior to commencing with the subsurface investigation activities, RGI contacted One-Call, public locate service, to locate public underground utilities situated in the drilling location. In addition, RGI reviewed utility maps associated with the construction of the Main Street Apartments and retained the services of Applied Professional Services, Inc. (APS) to locate privately owned utilities.

After utility locating was completed, RGI retained the services of Evergreen Concrete Coring, Inc. to core concrete in the garage floor slab in the location well MW6.

### **4.2 SUBSURFACE INVESTIGATION**

The subsurface investigation was conducted on August 24, 2016 and consisted of the installation and development of groundwater monitoring well MW6. Groundwater monitoring well construction details, subsurface conditions and the results of field screening are presented on the borelog in Appendix C.

RGI retained the services of Cascade Drilling, Inc. (Cascade) to advance one boring to approximately elevation 39', which is situated approximately 40 feet below the grade of the garage floor slab, using limited access hollow stem auger (HSA) drilling techniques. MW6 was installed in the north-central portion of the parking garage in the location indicated on Figure 2

and subsequent figures.

Diesel exhaust generated by the HSA drill rig during drilling was routed to exhaust fans situated in the southern portion of the garage using ducting and blowers.

Soil assessment was not necessary during the SRI since soil contamination was not suspected to be present in the location of MW6. Therefore, the boring was advanced directly to approximately ten feet above where groundwater was anticipated to be present without logging soils. This depth was approximately 17.5 feet below the garage floor slab (or elevation 61'). Logging at this point was necessary to accurately identify the depth that saturated soils were encountered. Starting at elevation 61', a decontaminated 18-inch long, steel split spoon sampler was inserted into the auger stem and driven through an 18-inch interval. Blow counts were recorded during sample collection. After driving the sampler a total of 18 inches or encountering refusal (i.e., >50 blows per 6-inch interval) the sampler was retrieved and the soil samples were removed from the split spoon sampler.

The soil conditions encountered during drilling were described using the Unified Soil Classification System (USCS) and subsurface conditions generally consisted of medium sand to approximately elevation 56' beneath which a silty sand layer was encountered to the maximum depth of exploration of elevation 39'. Soil was screened for the presence of VOCs using a photoionization detector (PID). Field screening did not indicate the presence of soil contamination. Groundwater was encountered at approximately elevation 49' at the time of drilling. Subsurface conditions encountered during drilling are described on the borelog presented in Appendix C.

The boring was completed as groundwater monitoring well MW6 in accordance with the well construction standards found in the Minimum Standards for Construction and Maintenance of Water Wells (Chapter 173-160 WAC).

MW6 was constructed of 2-inch diameter, flush-threaded, Schedule 40 polyvinylchloride (PVC) well casing and screen. The well screen was placed between approximately elevations 39' and 54' in order to allow the water table to intersect the well screen throughout the normal annual fluctuations in water table elevation. Flush-threaded, Schedule 40 PVC blank casing was placed from the top of the screened interval to a few inches below the grade of the garage floor slab. A sand filter pack was placed in the annulus and extended to approximately 2-feet above the top of the screened interval. Hydrated bentonite chips were placed in the annular space immediately above the sand filter pack and extended to approximately one foot below the grade of the garage floor. The well was secured with flush-completion steel protective monument set in approximately one foot of concrete. A 2-inch diameter, locking, watertight PVC well cap was used to secure the well.

After installation, the well was developed by Cascade using a combination of pumping and surging. Well development was terminated once the turbidity of the discharge water decreased to the satisfaction of RGI personnel. Approximately 30 gallons of groundwater were purged from MW6 during well development.

### **4.3 GROUNDWATER MONITORING WELL SURVEYING**

On September 6, 2016, the Client retained the services of Bush, Roed, and Hitchings (BRH) to survey the horizontal position and vertical elevations at the north side of the PVC casing, the top of the well monument and the ground surface in the immediate vicinity of well MW6.

Vertical elevations were surveyed to the North American Vertical Datum of 1988 (NAVD88) to an accuracy of  $\pm 0.01$  foot and horizontal position was surveyed to the North American Datum of 1983 and 1991 (NAD 83/91) accuracy of  $\pm 0.01$  foot.

#### **4.4 GROUNDWATER MONITORING WELL SAMPLING EVENTS**

On June 24, August 29 and 30, September 21, and October 28 of 2016 and January 4 of 2017, RGI collected groundwater elevation data and/or groundwater samples from groundwater monitoring wells situated in the Main Street Apartments parking garage (RW1, RW2, and MW6) and/or off-Property well MW5, which is situated adjacent to the west of the Property on 105th Avenue Southeast.

Details pertaining to groundwater sampling events are included below. Groundwater elevation contours pertaining to the August 29 and October 28, 2016 and January 4, 2017 sampling events are included on Figures 5, 6, 7, respectively. Groundwater elevations do not appear to be a good indicator of groundwater flow direction across the Property. These figures are presented for information purposes and to demonstrate why further evaluation of groundwater flow across the Property was necessary. A Preliminary Hydrogeological Evaluation was conducted for the Property and is presented in Section 6.1.

Prior to groundwater sampling, the depth to groundwater in all wells was measured from the northernmost point of the top of the well casing using an electronic water level meter.

After collection of groundwater level data, each well was purged using a submersible geosub pump and dedicated tubing. Measurements of water quality parameters (temperature, pH, conductivity, dissolved oxygen, turbidity, oxidation/reduction potential, and/or total dissolved solids) were recorded during purging to ensure that water entering the well casing had stabilized prior to sample collection. Purging continued until either water quality parameters had stabilized or three wetted casing volumes were purged from each well.

During sample collection, the flow rate of the pump was reduced to less than 100 milliliters per minute (mL/min) and groundwater was pumped directly through dedicated tubing into laboratory-supplied containers appropriate for the intended analyses.

Immediately after collection, samples were labeled and placed in an iced cooler pending submittal to the analytical laboratory under standard chain of custody protocols.

Purge water was temporarily stored in 55-gallon drums and later removed from the Property. Investigation derived waste (IDW) disposal is discussed in Section 4.5.

On June 24, 2016, RGI collected groundwater samples from wells RW1 and RW2. A total of two samples were submitted to the laboratory for analysis of COPCs. Groundwater elevation data collected from these wells prior to sampling and indicated elevations of 51.61' in RW1 and 48.90' in RW2. Groundwater elevation contours were not generated for this sampling event as only two data points were available.

On August 29 and 30, 2016, RGI collected samples from on-Property wells (RW1, RW2, and newly installed well MW6) and off-Property well MW5. In order to sample MW5, which is situated on 105th Avenue SE, RGI obtained Right of Way Street Use Permit No. 16 139863 TE from the City of Bellevue. This permit allowed RGI to sample well MW5 from August 24 through December 30 of 2016. RGI also provided the signage and traffic control services required to complete the work in accordance with the permit.

A total of four groundwater samples were submitted to the laboratory for analysis of COPCs. Groundwater elevation data was collected from all four wells and ranged from elevations 48.61' to

51.11'. Groundwater elevation contours generated from data obtained during this sampling event are presented on Figure 5.

On September 21, 2016, RGI collected groundwater elevation data from on-Property wells RW1, RW2, and MW6. Groundwater elevation data was collected from all three wells and ranged from elevations 48.50' to 50.45'. The data was determined to be consistent with the August 30, 2016 sampling event and no groundwater elevation contours were generated for this event.

On October 28, 2016, RGI collected groundwater samples from on-Property wells RW1, RW2, and MW6. A total of three groundwater samples were collected and submitted to the laboratory for analysis of COPCs. Groundwater elevation data was collected from all three wells and ranged from elevation 48.23' to 50.41'. Groundwater elevation contours generated from data obtained during this sampling event are presented on Figure 6.

On January 4, 2017, RGI collected groundwater samples from on-Property wells RW1, RW2, and MW6. A total of three groundwater samples were collected and submitted to the laboratory for analysis of COPCs. Groundwater elevation data was collected from all three wells and ranged from elevation 48.07' to 50.07'. Groundwater elevation contours generated from data obtained during this sampling event are presented on Figure 7.

#### **4.5 INVESTIGATION DERIVED WASTE**

IDW consisted of soil cuttings and decontamination/purge water generated during installation and development of well MW6 and sampling of wells during groundwater sampling events. IDW was stored in seven 55-gallon Department of Transportation (DOT) approved drums, which were appropriately labeled and temporarily stored in the southwest corner of parking garage level P4.

On September 21, 2016, three soil drums and three water drums were removed from the Property by Marine Vacuum Services, Inc. (Marvac) and transported off-Property. All IDW was removed from the Property and disposed of in accordance with applicable regulations. One drum of purge water remains in the southwest corner of the garage. Documentation pertaining to IDW disposal is included in Appendix D.

### **5 ANALYTICAL LABORATORY ANALYSES**

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During the SRI, a total of 12 groundwater samples were submitted to ALS Laboratory in Everett, Washington for one or more of the following analyses:

- Benzene, toluene, ethylbenzene, xylenes, and halogenated VOCs [PCE, trichloroethene (TCE), cis 1,2-dichloroethene (DCE), trans 1,2-DCE, 1,1-DCE, and vinyl chloride] using EPA Method 8260C.
- Extractable petroleum hydrocarbons (EPH) using Method NWEPH.
- Volatile petroleum hydrocarbons (VPH) using Method NWVPH.
- Carcinogenic polycyclic aromatic hydrocarbons (cPAHs) using EPA Method 8260 Select Ion Monitoring (SIM).

In addition, the following analyses were requested by Ecology for the sole purpose of comparing data to historical analytical data:

- Gasoline-range TPH using Method NWTPH-Gx.
- Diesel-range- and oil-range TPH using Northwest Method NWTPH-Dx without silica gel cleanup

All groundwater sample analytical results are summarized in Table 1 and post-2013 RA groundwater analytical results are displayed graphically on Figure 8. Copies of final analytical laboratory reports for groundwater samples collected during the SRI are included in Appendix E.

## **5.1 GROUNDWATER ANALYTICAL RESULTS**

Groundwater samples were analyzed for COPCs from locations on-Property in wells RW1, RW2, and MW6 and off-Property to the west in well MW5.

### **5.1.1 On-Property Groundwater Analytical Results**

A total of 12 groundwater samples were analyzed for COPCs from on-Property groundwater monitoring wells RW1, RW2, and MW6 and off-Property well MW5.

TPH (diesel-range fractions) was the only COPC detected in groundwater on the Property in the location of RW1 on June 24, 2016 and January 4, 2017. The detected concentrations were 675 µg/L and 614 µg/L, respectively. These concentrations were below the corresponding calculated MTCA Method B TPH groundwater cleanup levels of 795 µg/L and 684 µg/L. RGI utilized a conservative approach when calculating these cleanup levels using half the detection limit instead of zero for TPH fractions that were not detected at concentration above laboratory method detection limits. The spreadsheets used to calculate the MTCA Method B cleanup levels for TPH are included in Appendix B.

It should be noted that aromatic and aliphatic TPH fractions were not detected at concentrations above laboratory detection limits during the August and October groundwater sampling events. Therefore, no Method B groundwater cleanup levels were calculated for these events.

At the request of Ecology, RGI also analyzed samples for diesel-range TPH using Method NWTPH-Dx. Diesel-range TPH was detected in these samples at concentrations ranging from 400 µg/L to 1200 µg/L during the August and October of 2016 and January of 2017 sampling events in wells RW1 and RW2. These concentrations were flagged by the laboratory and the laboratory report indicated that these results were likely biased high due to biogenic interference. Oil-range TPH was detected in groundwater at a concentration of 280 µg/L in the January 4, 2017 sampling event and was not detected at concentrations above laboratory detection limits in the June, August, and October of 2016 sampling events. All groundwater analytical results are summarized in Table 1. As discussed with Ecology, the data obtained using the NWTPH-Dx analytical method were obtained for comparison purposes only and the EPH/VPH data was used to demonstrate groundwater compliance with the MTCA regulation under MTCA Method B.

No other COPCs were detected in groundwater at concentrations above compound-specific laboratory detection limits during any of the four sampling events.

### **5.1.2 Off-Property Groundwater Analytical Results**

One groundwater sample was collected and analyzed for COPCs from off-Property groundwater monitoring well MW5 on August 29, 2016. MW5 is situated adjacent to the west of the Property on 105th Avenue Southeast.

No COPCs were detected in groundwater at concentrations above compound-specific laboratory detection limits during this sampling event.

This data represented the fourth sampling event since December of 2014 for MW5. COPCs have never been detected at concentrations exceeding applicable MTCA groundwater cleanup levels in this location during any of the four sampling events. Based on these data, Ecology and RGI agreed that further groundwater sampling of MW5 was necessary.

## 6 FINDINGS

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During the SRI and previous investigations, data was obtained and analyzed pertaining to subsurface conditions including soil and groundwater. These findings are discussed below.

Soil analytical results pertaining to contaminated soil that remains in place on the Property is summarized in the RA tables and figures included in Appendix A. The estimated extent of remaining soil contamination on the Property is displayed on Figures 8 and 9. Groundwater analytical results are summarized in Table 1 and post-2013 RA results are displayed on Figure 8. Figure 4 presents contours generated from the elevations where the silt layer was encountered on the Property. Borelogs depicting subsurface conditions encountered in the location of well MW6 and locations used to generate the silt surface elevation contours are included in Appendix C. A cross section depicting subsurface condition in areas where soil contamination remains is included as Figure 9.

### 6.1 PRELIMINARY HYDROGEOLOGICAL EVALUATION

In order to conduct the preliminary hydrogeological evaluation, RGI obtained information from this SRI and the following reports:

- Phase II dated July 24, 2012 by RGI.
- *Geotechnical Engineering Report* dated July 12, 2012 by RGI.
- Well and Sampling Report dated June 19, 2013 by RGI.
- RA Report dated June 13, 2014 by RGI.
- GC Report dated July 21, 2015 by RGI.

The Main Street Property is located on the northern slope of a north-south trending ridge. Based on regional geologic mapping and our subsurface explorations at the Property the geologic stratigraphy at the Property includes Vashon-age lodgment till mapped as the surficial unit on the ridge, underlain by a fine sand interpreted to be Vashon-age advance outwash deposits. The advance outwash deposits are underlain by silt, interpreted to be a pre-Vashon age deposit (pre-glacial).

Groundwater is present at the Property in the lower portion of the advance outwash deposits, with the underlying very low permeability pre-glacial silt unit forming the base of the groundwater system or perching layer. RGI has collected approximately four years of periodic groundwater elevation data from the Property monitoring wells from 2012 through 2016.

Based on data collected during previous investigations, the inferred orientation of the silt layer surface appears to influence groundwater flow direction generally to the north across the Property. Contours generated from the elevation that the silt layer was encountered on the Property along with estimated groundwater flow direction at different portions of the Property is presented on Figure 4.

Borehole data obtained from borings B3 and MW3 situated on the western portion of the Property indicates the surface of the silt layer drops in elevation from approximately 63' in the southwest corner of the Property to an elevation of approximately 45' in the northwest portion of the site. Borehole data for well MW-5 situated adjacent to the west of the Property on 105th Ave SE and on-Property locations B3, RW1, RW2, and MW3 also indicate that the surface of the silt unit on the west half of the Property is sloping to the northeast. Therefore, groundwater on this portion of the Property is anticipated to flow to the northeast towards the location of MW6.

Borehole data obtained from borings B4 and B2 situated on the eastern portion of the Property indicates that the surface of the silt layer is present at an elevation of approximately 69' in the southeast corner of the Property and rises to an elevation of approximately 74' in the northeast corner of the Site. Borehole data pertaining to borings B2, B3, B4, RW2, and MW3 indicates the surface of the silt unit on the east half of the Property is sloping to the northwest towards the location of MW6. Therefore, groundwater on the eastern portion of the Property is anticipated to flow to the northwest. Borelogs obtained from previous investigations and used to assess the silt layer across the Property are included in Appendix C.

The groundwater system is relatively thin and varies in thickness across the Property. In monitoring well RW-1 located in the southwest portion of the Property, approximately 6 to 7 feet of groundwater overlying the silt layer has been documented from water level measurements. However, in monitoring well RW2, located only 40 feet east of well RW2 only approximately 2 to 3 feet of groundwater overlying the silt layer has been documented. The elevation of the silt surface in the locations of wells RW1 and RW2 is approximately elevation 46'.

In monitoring well MW5, located approximately 25 feet west of the Property boundary on 105th Avenue Southeast, approximately 8 to 9 feet of groundwater has been documented above the silt layer based on water level measurements. The elevation of the silt layer is approximately 5 feet lower than the elevation at RW1 and RW2. In monitoring well MW-6 there is at least 10 feet of groundwater thickness based on the depth to groundwater and the depth of the monitoring well. The silt unit was not encountered in well MW6 to the maximum depth of exploration of approximately elevation 39' indicating that the groundwater thickness at this location is likely greater than 10 feet.

The variability in the thickness of the groundwater is likely controlled by undulations and preferential flow paths on the silt surface. The configuration of the surface of the silt layer appears to strongly influence groundwater flow direction across the Property, with localized gradients, as opposed to a classic unconfined aquifer of significant thickness (i.e. Marysville Valley aquifer) where regional gradients exist.

Groundwater flow direction and thickness beneath the Property is variable based on the geometry of the surface of the silt unit. As discussed above, based on our understanding of the orientation of the surface of the silt unit, we would expect groundwater flow to generally be from southwest to northeast on the west half of the Property and from southeast to northwest on the east half of the Property, with groundwater flow generally to the north as groundwater as it leaves the northern Property boundary.

## 6.2 SOIL

As previously indicated, soil cleanup on the Property was completed to the maximum extent practicable in 2013 and the soil cleanup was documented thoroughly in the RA Report. Therefore, no further soil investigation was required during the SRI. Contaminated soil remains in place in two locations on the Property, which are described below. The estimated lateral and vertical extent of soil contamination in these locations is displayed on Figures 8 and 9, respectively.

On the southwestern portion of the Property in the location of Area 1 (former RA Area 3), a limited amount of diesel-range TPH impacted soil remains on the Property between approximately elevations 74' and 62', which is approximately 4 to 16 feet below the garage floor slab.

On the southwestern portion of the Property in the location of Area 2 (former well MW4), a limited amount of diesel-range TPH and PCE impacted soil remains on the Property between



approximately elevations 62' and 59', which is approximately 16 to 19 feet below the garage floor slab situated approximately 20 feet below the surface.

Since diesel-range TPH and PCE impacted soil remains on the Property, Ecology required that a vapor intrusion assessment be performed to determine if there is a vapor intrusion concern for the Main Street Apartments building. The vapor intrusion evaluation is presented in Section 7.

### **6.3 GROUNDWATER**

Groundwater has been encountered on and off-Property between elevations of approximately elevations 52' to 48' and groundwater movement across the Property is generally to the northeast on the western portion of the Property, to the north on the northern portion of the Property, and to the northwest on the eastern portion of the Property.

Groundwater concentrations of COPCs have decreased significantly since the RA performed in 2013. This is attributed to source removal in conjunction with natural attenuation.

Groundwater is currently in compliance with the MTCA regulation in locations on- and off-Property and groundwater has been in compliance with the MTCA regulation for the past four groundwater sampling events, which took place in quarters 2, 3, and 4 of 2016 and quarter 1 of 2017.

Ecology previously indicated that prior to granting a NFA with EC for the Property, groundwater must be in compliance with the MTCA regulation for four consecutive quarters. Therefore, the property currently qualifies for a NFA/EC.

## **7 VAPOR INTRUSION EVALUATION**

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Vapor intrusion is the migration of volatile hazardous substances in the vapor phase from the subsurface to indoor air. The MTCA regulation stipulates that subsurface soil and groundwater contaminant concentrations must be protective of indoor air. The following section presents RGI's evaluation of the vapor intrusion risk associated with the COPCs encountered in soil and groundwater on the Property.

### **7.1 VAPOR INTRUSION REGULATIONS**

In 2009, Ecology published the Draft VI Guidance. Which provides guidelines for evaluating the vapor intrusion pathway in Washington State and is consistent with MTCA rule requirements.

As discussed in Section 1.4.1, RGI performed a Vapor Intrusion Assessment for the Property in 2013, which was documented in the RA Report. Based on the results of that assessment, RGI concluded that vapor intrusion was not a concern for the Property.

Since that time, there have been significant changes to the vapor intrusion regulations and the following documents pertaining to vapor intrusion have been released by Ecology and the Environmental Protection Agency (EPA):

- *Updated Process for Initially Assessing the Potential for Petroleum Vapor Intrusion Implementation Memorandum No. 14* (2016 Ecology PVI Guidance Memorandum) dated March 31, 2016 by Ecology.
- *OSWER Technical Guide For Assessing and Mitigating the Vapor Intrusion Pathway From Subsurface Vapor Sources to Indoor Air* (2015 EPA VI Guidance) dated June 2015 by the EPA.

- *Technical Guide For Assessing Petroleum Vapor Intrusion at Leaking Underground Storage Tank Sites* (2015 EPA PVI Guidance) dated June 2015 by the EPA.
- *Updated Table B-1 Indoor Air Cleanup Levels, Groundwater Screening Levels, and Soil Gas Screening Levels revised April 6, 2015 by Ecology*. Table B-1 was originally included in the Draft Ecology Draft VI Guidance dated 2009 by Ecology.

One of the major changes in the vapor intrusion regulations was that the EPA no longer recommended the use of the Johnson & Ettinger Model (JEM) for assessing vapor intrusion risks. The JEM model had been an accepted method of assessing for vapor intrusion since 1991 prior to the release of these documents. JEM was used to assess the potential for vapor intrusion at the Property in the 2013 vapor intrusion assessment.

In a meeting with Ecology which took place in June of 2016, Ecology indicated that the vapor intrusion risk for the Property must be evaluated in accordance with the recent changes to vapor intrusion regulations.

## **7.2 IDENTIFICATION OF COMPOUNDS FOR VAPOR INTRUSION ASSESSMENT**

RGI utilized data obtained during the SRI and previous investigations in order to identify compounds in soil and groundwater that could potentially pose a vapor intrusion risk for the Property.

Soil analytical data pertaining to impacted soil that remains in place on the Property is summarized in the RA tables and figures, which are included in Appendix A. Cross section B-B' displays the two locations where contaminated soil remains in place on the Property and is presented on Figure 9.

Groundwater analytical data with corresponding groundwater screening levels that Ecology considers protective of MTCA Method B Indoor Air Cleanup Levels are summarized in Table 1.

### **7.2.1 COMPOUNDS IDENTIFIED IN SOIL**

After soil on the Property was remediated to the maximum extent practicable in 2013, RGI identified all the compounds which remained in soil on the Property that would be considered sufficiently volatile and toxic enough to cause a vapor intrusion concern. The following compounds were identified and targeted for further vapor intrusion assessment:

- Diesel-range TPH
- PCE

WAC 173-340-740(3)(C)(III) stipulates that the soil to vapor pathway be evaluated for diesel-range organics whenever the TPH concentration is greater than 10,000 mg/kg. No soils were left in place on Property that contained concentrations of diesel-range TPH greater than 10,000 mg/kg after the RA was completed. Therefore, no vapor intrusion evaluation pertaining to diesel-range TPH in soil was required and diesel-range TPH in soil was eliminated from further vapor intrusion assessment.

The evaluation of the vapor intrusion risk associated with the PCE impacted soil that remains in place on the southwestern portion of the Property is presented in Section 7.3.

### **7.2.2 COMPOUNDS IDENTIFIED IN GROUNDWATER**

RGI compared concentrations of all compounds historically detected in groundwater on the Property to the appropriate groundwater screening levels considered protective of indoor air summarized in Table 1. After evaluation of all detected compounds in groundwater, RGI

determined that no further vapor intrusion evaluation pertaining to groundwater was necessary due to the fact that all detected concentrations of COPCs have been below applicable groundwater screening levels considered protective of indoor air since December of 2013.

The only compound to historically exceed the groundwater screening level was chloroform, which was detected in wells RW1 and RW2 in November of 2013. This was the only sampling event where chloroform was detected. Chloroform is byproduct of the chlorination process used in the public water supply. The November 2013 sampling event took place shortly after wells RW1 and RW2 were installed. Therefore, the detected chloroform may have been associated with public water used during installation of these wells. Chloroform has not been detected at a concentration above the laboratory detection limit since November of 2013.

### 7.3 SOIL VAPOR INTRUSION ASSESSMENT

As discussed above, all compounds detected in soil and groundwater have been eliminated from the vapor intrusion evaluation except for a small amount of PCE impacted soil situated on the southwestern portion of the Property. This PCE impacted soil extends from approximately elevations 62' to 59', which is approximately 16 to 19 feet below the parking garage floor. The detected PCE concentration in this location was 0.40 mg/kg in 2013. This concentration also exceeds the MTCA Method A Soil Cleanup Level for Unrestricted Land Uses of 0.05 mg/kg for PCE. Diesel-range TPH was also present in this location at a concentration of 7,500 mg/kg, however, as previously indicated, MTCA does not require evaluation of the vapor intrusion pathway for soil concentrations of diesel-range TPH less than 10,000 mg/kg. Therefore, assessment of diesel-range TPH was not warranted.

Soil screening levels considered protective of indoor air have not been established by Ecology. Therefore, it was necessary to generate a predicted PCE soil vapor concentration that would result from a PCE soil concentration of 0.4 mg/kg.

RGI discussed the methodology for performing the soil vapor intrusion assessment with Mr. Charles San Juan (Hydrogeologist at Ecology) and confirmed that Ecology concurred with the methodology used to conduct the assessment described below. Mr. San Juan provided RGI with a spreadsheet used to calculate a predicted soil vapor concentration from a soil concentration along with references to the equations used to perform the calculations.

The first step in this process was to obtain a predicted soil porewater PCE concentration that would result from a PCE soil concentration of 0.4 mg/kg. After a discussion with Mr. Juan at Ecology, RGI referenced the equations obtained from page 129 of the *Groundwater Monitoring & Remediation Spring 1991 Edition: A Method for Assessing Residual NAPL Based on Organic Chemical Concentrations in Soil Samples* by Stan Feenstra, Douglas M. Mackay, and John A. Cherry. The first equation is a rearrangement of MTCA Equation 747-1 and used to obtain the predicted PCE soil porewater concentration ( $C_w$ ), the second equation is MTCA Equation 747-2 and used to obtain the distribution coefficient ( $K_d$ ), and the third equation is used to predict the soil vapor concentration ( $C_a$ ) from the predicted soil porewater concentration.

#### **1) Rearranged MTCA Equation 747-1 used to determine soil porewater concentration**

$$C_w = \frac{C_t \rho_b}{K_d \rho_b + \phi_w + H_c \phi_a}$$

Where:

$C_w$  = Soil porewater concentration (mg/L).



$C_t$  = Soil concentration. (PCE 0.4  $\mu\text{g/g}$ )

$\rho_b$  = Dry soil bulk density (1.5  $\text{g/cm}^3$ )

$K_d$  = Distribution coefficient ( $\text{cm}^3/\text{g}$ ). 0.265 for PCE obtained from equation 2.

$\phi_w$  = Water filled soil porosity (volume fraction). Default value of 0.3 for unsaturated zone soil.

$\phi_a$  = Air filled soil porosity (volume fraction). Default value of 0.13 for unsaturated zone soil.

$H_c$  = Henry's law constant (dimensionless) 0.399 for PCE at 55 F.

## **2) MTCA Equation 747-2 used to obtain the distribution coefficient**

$$K_d = K_{oc} * f_{oc}$$

Where:

$K_d$  = Distribution coefficient ( $\text{cm}^3/\text{g}$  or  $\text{L/kg}$ ).

$K_{oc}$  = Soil organic carbon-water partitioning coefficient ( $\text{ml/g}$ ). For PCE 265 obtained from MTCA Table 747-1

$f_{oc}$  = Soil fraction organic carbon. Default value of 0.1%

## **3) Equation used to determine soil vapor concentration**

$$C_a = C_w * H_c * \text{VAF} * \text{UCF}$$

Where:

$C_a$  = Soil vapor concentration ( $\mu\text{g}/\text{m}^3$ ).

$C_w$  = Soil porewater concentration. PCE 801  $\mu\text{g/L}$  obtained from equation 2.

$H_c$  = Henry's law constant (dimensionless) 0.399 for PCE at 55 F.

VAF= Vapor attenuation factor. 0.002 (obtained from *Groundwater Monitoring & Remediation Fall 2014 Edition: Estimation of Generic Subslab Attenuation Factors for Vapor Intrusion* by Roger Brewer, Josh Nagashima, Mark Rigby, Martin Schmidt, and Harry O'Neil).

UCF= Unit conversion factor (1  $\mu\text{g/L}$  /1000  $\mu\text{g}/\text{m}^3$ ).

The first step is to use equation 747-2 to calculate the distribution coefficient value of 0.265  $\text{cm}^3/\text{g}$  for PCE.

Using the distribution coefficient value of 0.265  $\text{cm}^3/\text{g}$  and the actual PCE soil concentration of 0.4  $\text{mg/kg}$ , rearranged MTCA Equation 747-1 is used to determine the PCE soil porewater concentration of 0.801  $\mu\text{g/g}$  or 801  $\mu\text{g/L}$ .

In order to obtain the predicted soil vapor concentration resulting from the predicted PCE soil porewater concentration of 801  $\mu\text{g/L}$ , the third equation is utilized. The resulting predicted PCE soil vapor concentration is 639  $\mu\text{g}/\text{m}^3$  based on a PCE soil concentration of 0.4  $\text{mg/kg}$ .

Given that the PCE impacted soil in question is situated at a depth greater than 15 feet below the parking garage floor slab, the Ecology deep (>15 ft) soil vapor screening level of 962  $\mu\text{g}/\text{m}^3$  for PCE (obtained from Ecology's CLARC database on November 18, 2016) was referenced. Since the conservatively predicted soil vapor concentration of 639  $\mu\text{g}/\text{m}^3$  is well below the Ecology screening level of 962  $\mu\text{g}/\text{m}^3$ , a vapor intrusion risk does not exist for the Property and no further vapor intrusion assessment is warranted.

It should be noted that in addition to the predicted soil vapor concentration being below the Ecology soil vapor screening level, there are three levels of underground parking situated above this location. RGI obtained actual air exchange values (ACH) for all three levels of the parking garage which ranged from 3.7 to 5.0. These ACH values are at least 10 times higher than the ACH

value used to calculate the Ecology soil vapor screening levels. Therefore, PCE soil vapor concentrations much higher than Ecology screening level of 962  $\mu\text{g}/\text{m}^3$  would have to be present in order for a vapor intrusion concern to exist for the Property. This data further supports the conclusion that no further vapor intrusion assessment is required for the Property.

## CONCLUSIONS & RECOMMENDATIONS

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Based on the data obtained during the SRI and previous investigations, RGI draws the following conclusions:

- Groundwater situated on and off-Property is currently in compliance with the MTCA regulation and has been in compliance for the past four consecutive quarters. Therefore, no further groundwater investigation is warranted and the Property qualifies for a No Further Action with Environmental Covenant.
- Groundwater flow direction across the Property appears to be strongly influenced by the silt layer underlying the Property. Groundwater flow direction is generally to the north across the Property.
- Diesel-range TPH impacted soil remains in place on the southwestern portion of the Property in Area 1 (former RA Area 3). Soil impacts in this location extend from approximately elevation 74' to 62', which is the equivalent of 4 to 16 feet below the parking garage floor. Diesel-range TPH and PCE impacted soil also remains in place approximately 40 feet east of this location in Area 2 (former location of well MW4). Soil impacts in this location extend from approximately elevations 62' and 59', which is the equivalent of 16 to 19 feet below the parking garage floor. The estimated lateral and vertical extent of these soil impacts has been well characterized and these areas of impacted soil have not reached the level of groundwater. Additionally, both of these areas are covered by the parking garage floor of the Main Street Apartments building, which would prevent any exposure to this soil contamination. Therefore, these soil impacts do not represent a threat to human health or the environment.
- The impacted soil that remains on the Property does not represent a vapor intrusion concern for the Property and no further vapor intrusion assessment is necessary.

RGI also recommends the following:

- Submit this SRI Report to Ecology with a request for a No Further Action with an Environmental Covenant for the Property.
- Dispose of the one drum of purge water stored in the southwest portion of the parking garage in accordance with applicable regulations.
- After the NFA/EC is received and recorded for the Property, decommission all four on- and off-Property groundwater monitoring wells provided that the well decommissioning complies with the terms of the NFA/EC.

If you have any questions, or need additional information pertaining to this SRI report, please contact us at (425) 415-0551.

Sincerely,

**THE RILEY GROUP, INC.**

Jerry Sawetz  
Senior Environmental Scientist

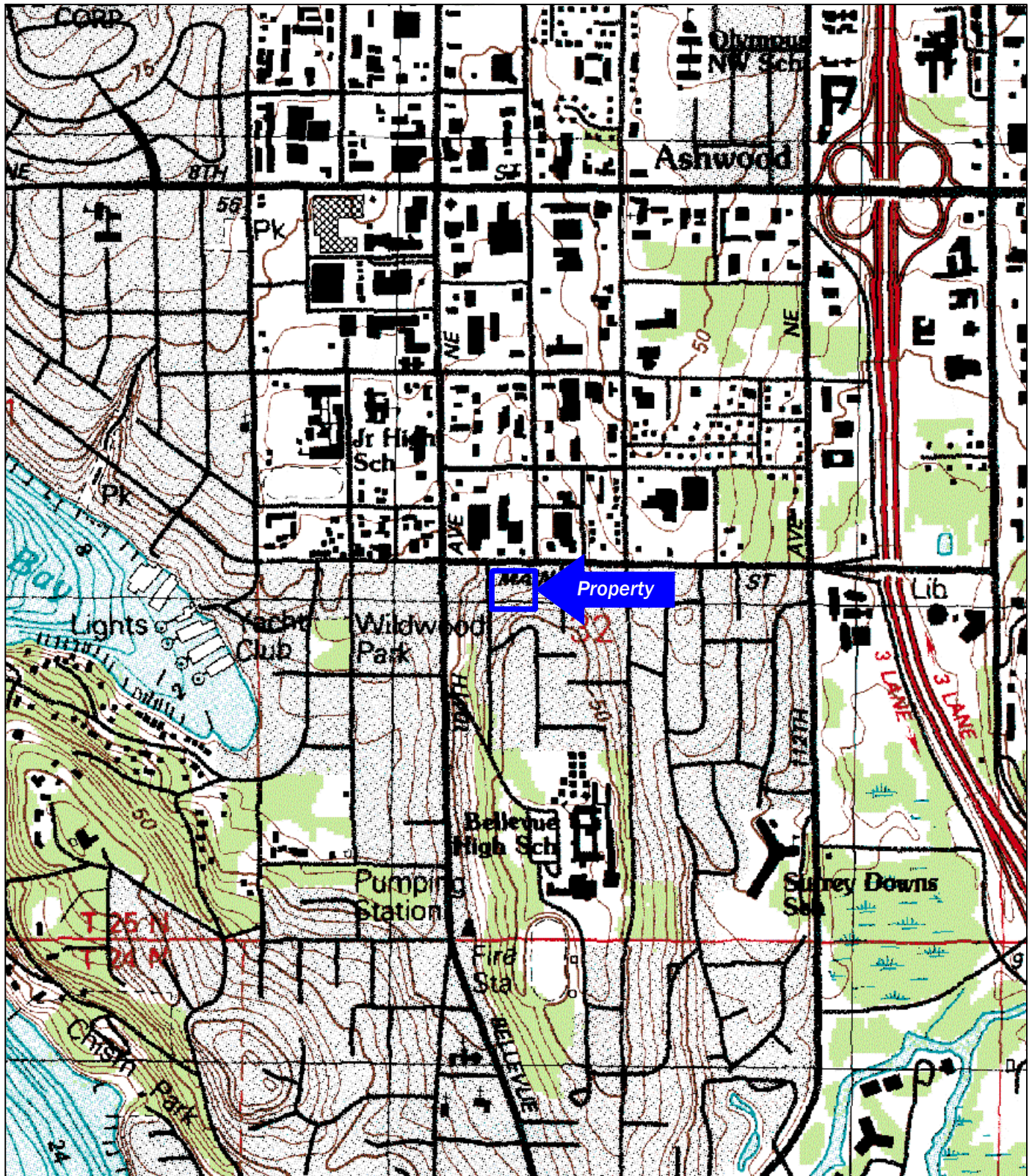
Paul D. Riley, LG, LHG  
Principal



David J. Baumgarten  
Dave Baumgarten, LHG  
Senior Hydrogeologist

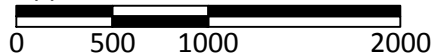
*Report Distribution*    *Mr. Matt Segrest, Alamo Manhattan, LLC, (1 PDF copy)*  
*Mr. Michael Warfel, Ecology (1 hard copy and 1 PDF copy)*

# *Figures*



USGS, 1983, Bellevue South, Washington  
7.5-Minute Quadrangle

Approximate Scale: 1"=1000'



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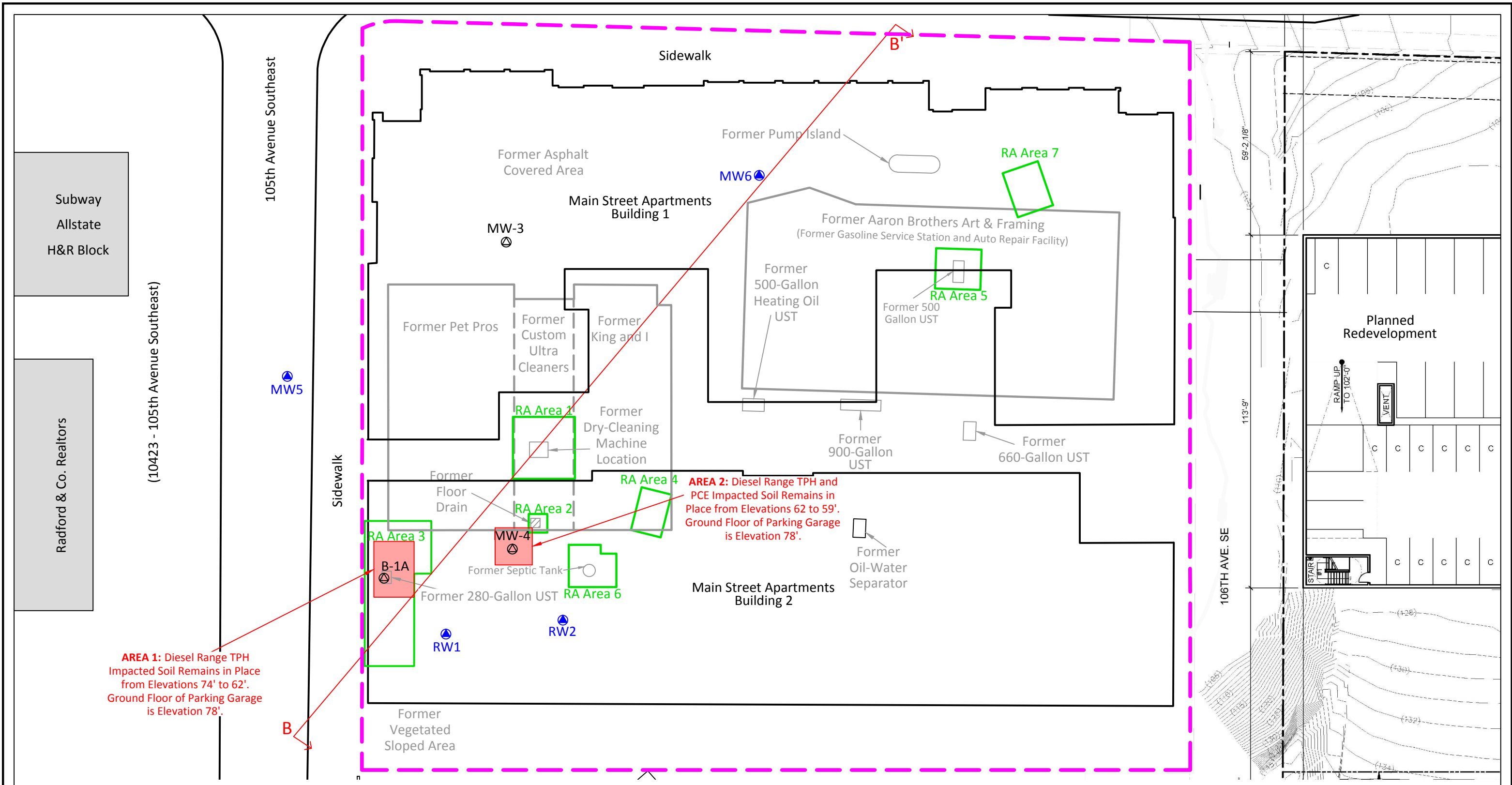
RGI Project Number  
2012-107L

Main Street Bellevue  
Property Vicinity Map

Figure 1  
Date Drawn:  
01/2017

Address: 10505 Main Street, Bellevue, Washington 98004



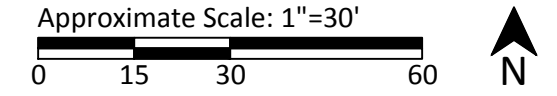


**AREA 1:** Diesel Range TPH Impacted Soil Remains in Place from Elevations 74' to 62'. Ground Floor of Parking Garage is Elevation 78'.

**AREA 2:** Diesel Range TPH and PCE Impacted Soil Remains in Place from Elevations 62 to 59'. Ground Floor of Parking Garage is Elevation 78'.

- = Cross section location
- = Area where soil was remediated during RA in 2013
- = Existing groundwater monitoring well location
- = Former groundwater monitoring well location
- = (in pink) Property boundary

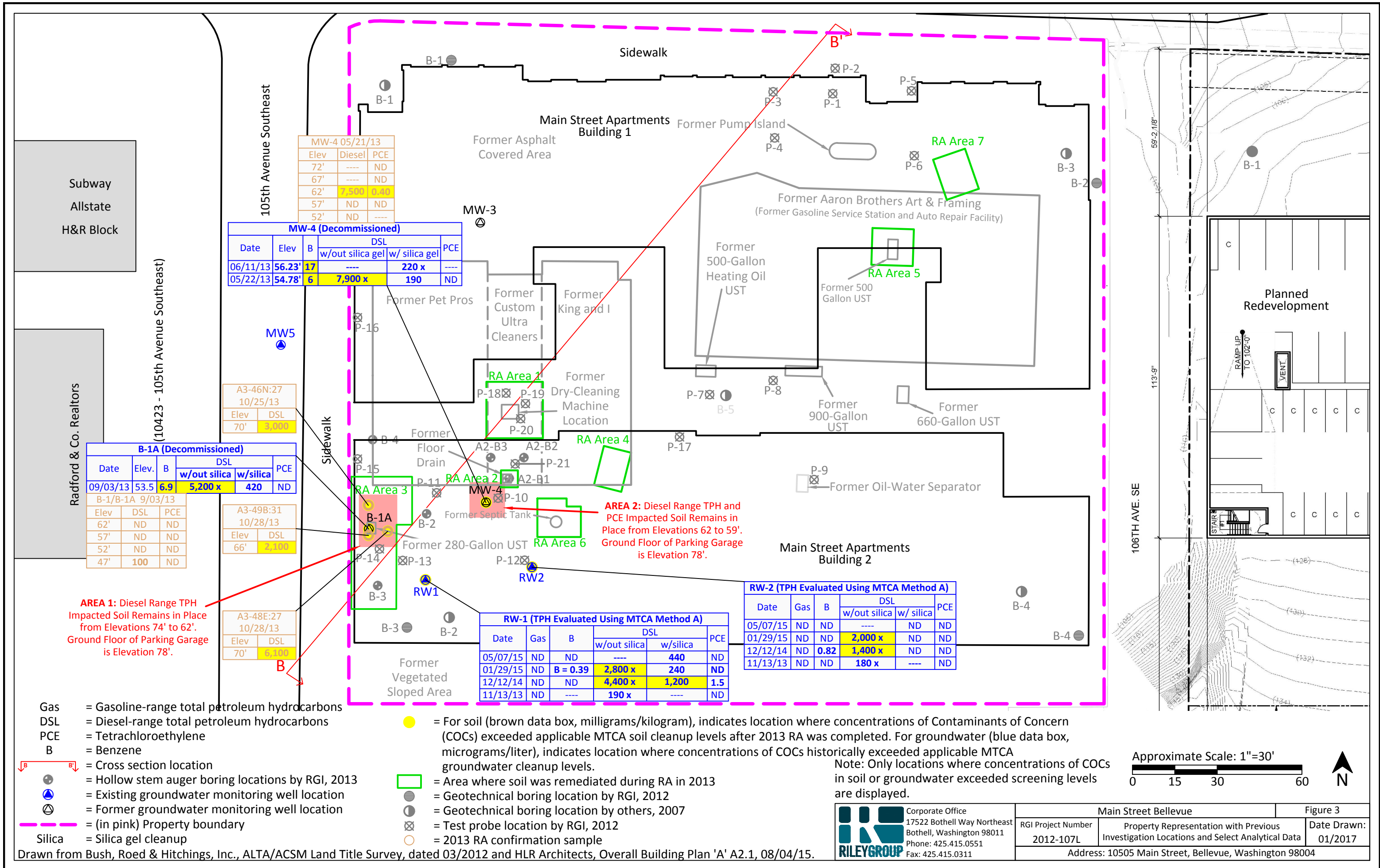
TPH = Total petroleum hydrocarbons  
 PCE = Tetrachloroethylene



Drawn from Bush, Roed & Hitchings, Inc., ALTA/ACSM Land Title Survey, dated 03/2012 and HLR Architects, Overall Building Plan 'A' A2.1, 08/04/15.

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Main Street Bellevue		Figure 2
RGI Project Number 2012-107L	Property Representation with 2013 Remedial Excavation Areas and Areas Where Soil Remains Impacted	Date Drawn: 01/2017
Address: 10505 Main Street, Bellevue, Washington 98004		



MW-4 05/21/13			
Elev	Diesel	PCE	
72'	---	ND	
67'	---	ND	
62'	7,500	0.40	
57'	ND	ND	
52'	ND	---	

MW-4 (Decommissioned)						
Date	Elev	B	DSL		PCE	
			w/out silica gel	w/ silica gel		
06/11/13	56.23'	17	---	220 x	---	---
05/22/13	54.78'	6	7,900 x	190	ND	---

A3-46N:27 10/25/13		
Elev	DSL	
70'	3,000	

B-1A (Decommissioned)						
Date	Elev.	B	DSL		PCE	
			w/out silica	w/silica		
09/03/13	53.5	6.9	5,200 x	420	ND	---

B-1/B-1A 9/03/13		
Elev	DSL	PCE
62'	ND	ND
57'	ND	ND
52'	ND	ND
47'	100	ND

A3-49B:31 10/28/13		
Elev	DSL	
66'	2,100	

A3-48E:27 10/28/13		
Elev	DSL	
70'	6,100	

RW-1 (TPH Evaluated Using MTCA Method A)						
Date	Gas	B	DSL		PCE	
			w/out silica	w/silica		
05/07/15	ND	ND	---	440	ND	---
01/29/15	ND	B = 0.39	2,800 x	240	ND	---
12/12/14	ND	ND	4,400 x	1,200	1.5	---
11/13/13	ND	---	190 x	---	ND	---

RW-2 (TPH Evaluated Using MTCA Method A)						
Date	Gas	B	DSL		PCE	
			w/out silica	w/ silica		
05/07/15	ND	ND	---	ND	ND	---
01/29/15	ND	ND	2,000 x	ND	ND	---
12/12/14	ND	0.82	1,400 x	ND	ND	---
11/13/13	ND	ND	180 x	---	ND	---

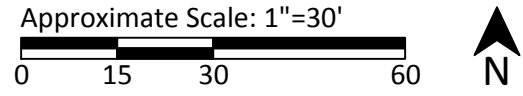
**AREA 1:** Diesel Range TPH Impacted Soil Remains in Place from Elevations 74' to 62'. Ground Floor of Parking Garage is Elevation 78'.

**AREA 2:** Diesel Range TPH and PCE Impacted Soil Remains in Place from Elevations 62 to 59'. Ground Floor of Parking Garage is Elevation 78'.

- Gas = Gasoline-range total petroleum hydrocarbons
- DSL = Diesel-range total petroleum hydrocarbons
- PCE = Tetrachloroethylene
- B = Benzene
- ↔ = Cross section location
- ⊙ = Hollow stem auger boring locations by RGI, 2013
- ⊕ = Existing groundwater monitoring well location
- ⊖ = Former groundwater monitoring well location
- (in pink) = (in pink) Property boundary
- Silica = Silica gel cleanup

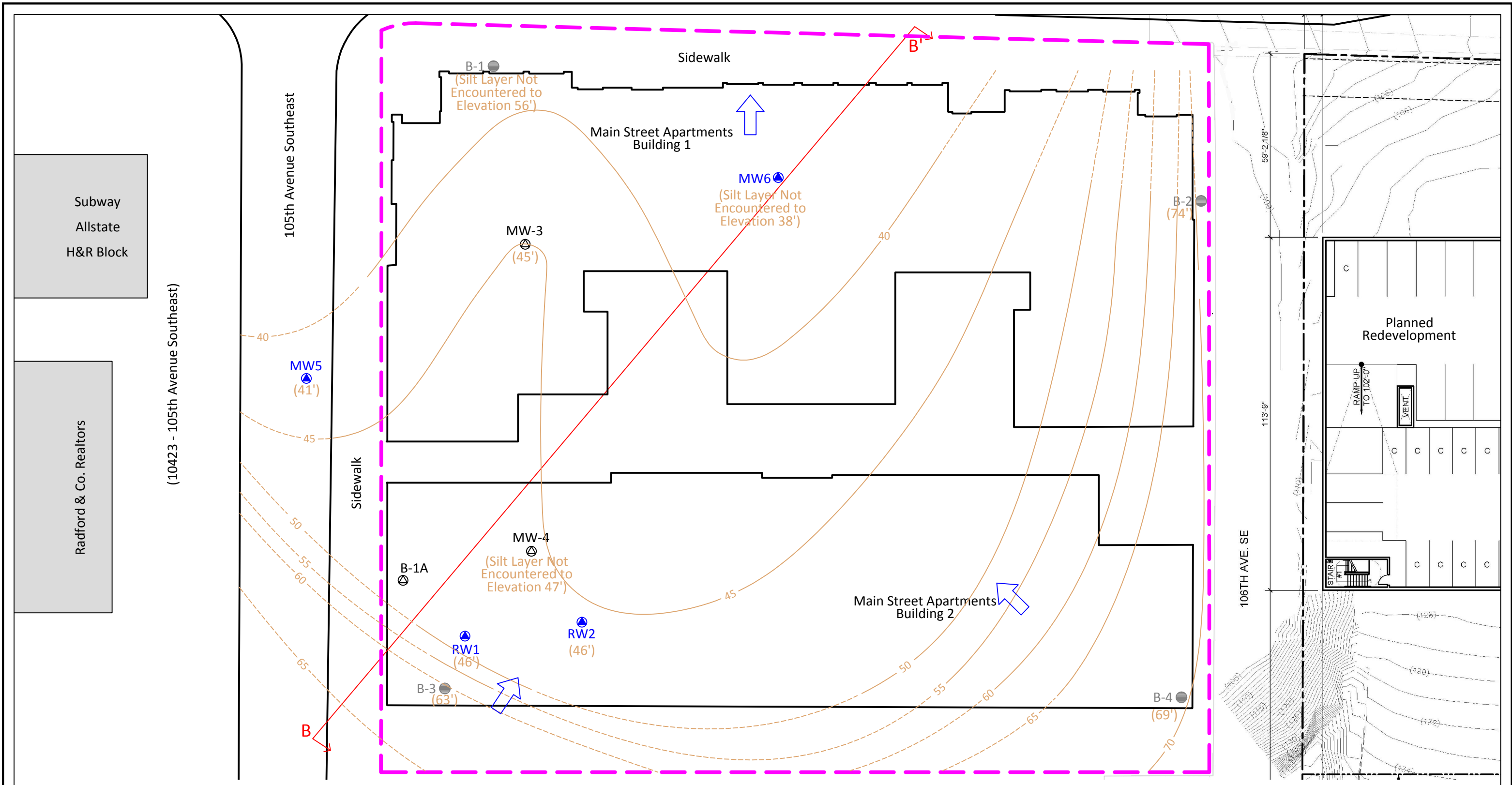
- = For soil (brown data box, milligrams/kilogram), indicates location where concentrations of Contaminants of Concern (COCs) exceeded applicable MTCA soil cleanup levels after 2013 RA was completed. For groundwater (blue data box, micrograms/liter), indicates location where concentrations of COCs historically exceeded applicable MTCA groundwater cleanup levels.
- = Area where soil was remediated during RA in 2013
- = Geotechnical boring location by RGI, 2012
- = Geotechnical boring location by others, 2007
- ⊗ = Test probe location by RGI, 2012
- = 2013 RA confirmation sample

Note: Only locations where concentrations of COCs in soil or groundwater exceeded screening levels are displayed.



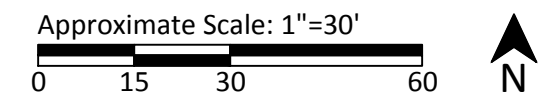
Drawn from Bush, Roed & Hitchings, Inc., ALTA/ACSM Land Title Survey, dated 03/2012 and HLR Architects, Overall Building Plan 'A' A2.1, 08/04/15.

Corporate Office 17522 Bothell Way Northeast Bothell, Washington 98011 Phone: 425.415.0551 Fax: 425.415.0311	Main Street Bellevue		Figure 3
	RGI Project Number 2012-107L	Property Representation with Previous Investigation Locations and Select Analytical Data	Date Drawn: 01/2017
	Address: 10505 Main Street, Bellevue, Washington 98004		



- = Cross section location
- = Existing groundwater monitoring well location
- = Former groundwater monitoring well location
- = Geotechnical boring location by RGI, 2012
- = (in pink) Property boundary

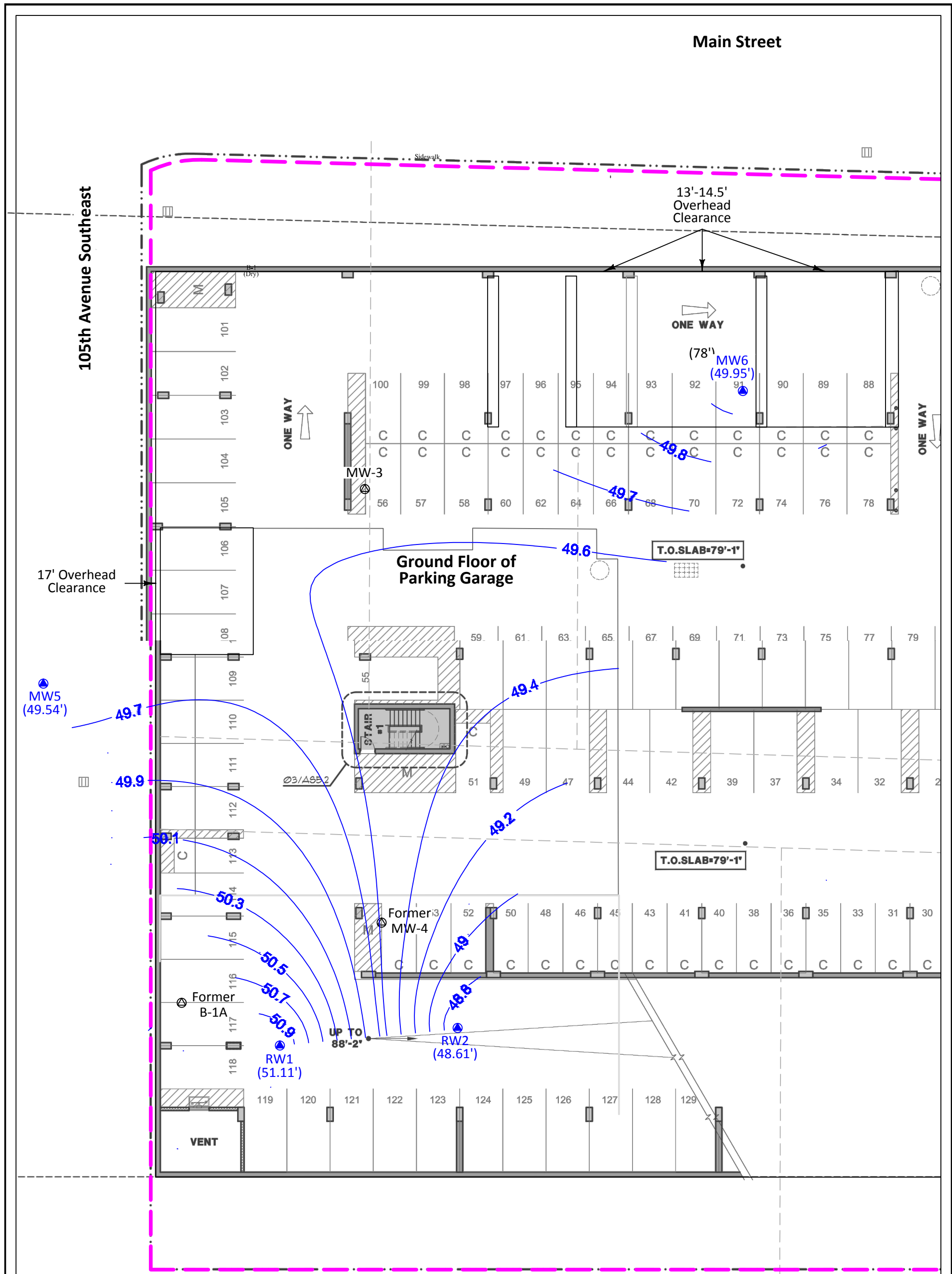
- 60 = Silt subsurface contours based on depth silt layer was encountered on borelogs. Dashed where inferred.
- (60') = Elevation at which silt was encountered.
- = Estimated groundwater flow direction based on elevation of silt layer



Drawn from Bush, Roed & Hitchings, Inc., ALTA/ACSM Land Title Survey, dated 03/2012 and HLR Architects, Overall Building Plan 'A' A2.1, 08/04/15.

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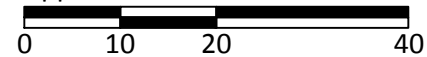
Main Street Bellevue		Figure 4
RGI Project Number 2012-107L	Property Representation with Subsurface Silt Contours and Estimated Groundwater Flow Direction	Date Drawn: 01/2017
Address: 10505 Main Street, Bellevue, Washington 98004		



— 90.75 — = Groundwater contours generated using Surfer Software (based on Kriging method).  
 Contours based on August 29, 2016 water level measurements.  
 Dashed where inferred, queried where uncertain.

- (#') = Approximate elevation
- (51.11) = Groundwater elevation (in feet)
- ↔ = Groundwater flow direction based on groundwater elevations recorded on August 29, 2016
- = Existing groundwater monitoring well location
- ⊙ = Former groundwater monitoring well location

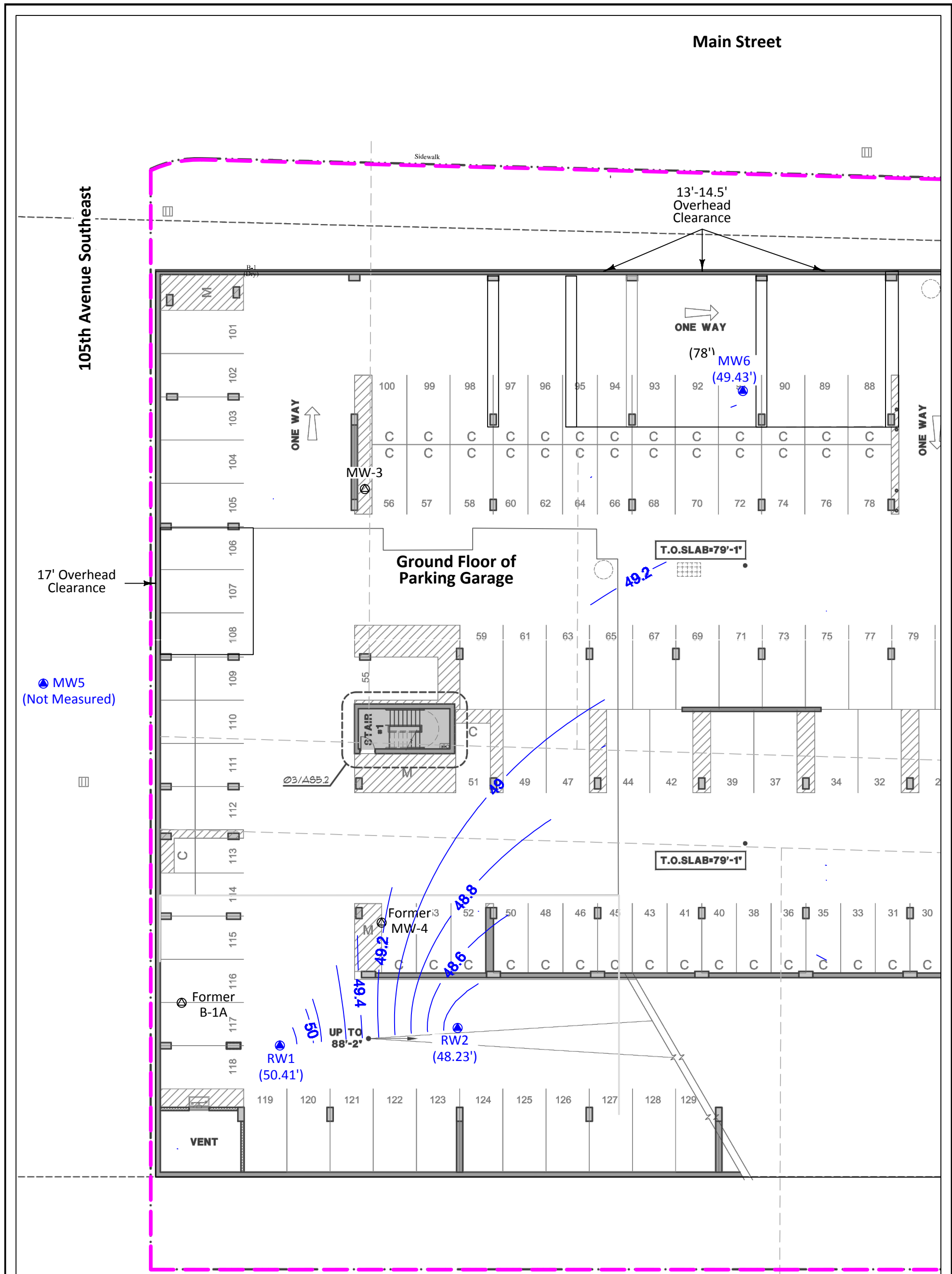
Approximate Scale: 1"=20'



Drawn from Bush, Roed & Hitchings, Inc., ALTA/ACSM  
 Land Title Survey, dated 03/2012.

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Main Street Bellevue		Figure 5
RGI Project Number 2012-107L	Groundwater Elevation Contours August 29, 2016	Date Drawn: 01/2017
Address: 10505 Main Street, Bellevue, Washington 98004		



— 90.75 — = Groundwater contours generated using Surfer Software (based on Kriging method).  
 (51.11) = Groundwater elevation (in feet)  
 Contours based on October 28, 2016 water level measurements.

- (#') = Approximate elevation
- ↔ = Groundwater flow direction based on groundwater elevations recorded on October 28, 2016
- = Existing groundwater monitoring well location
- ⊙ = Former groundwater monitoring well location

Approximate Scale: 1"=20'



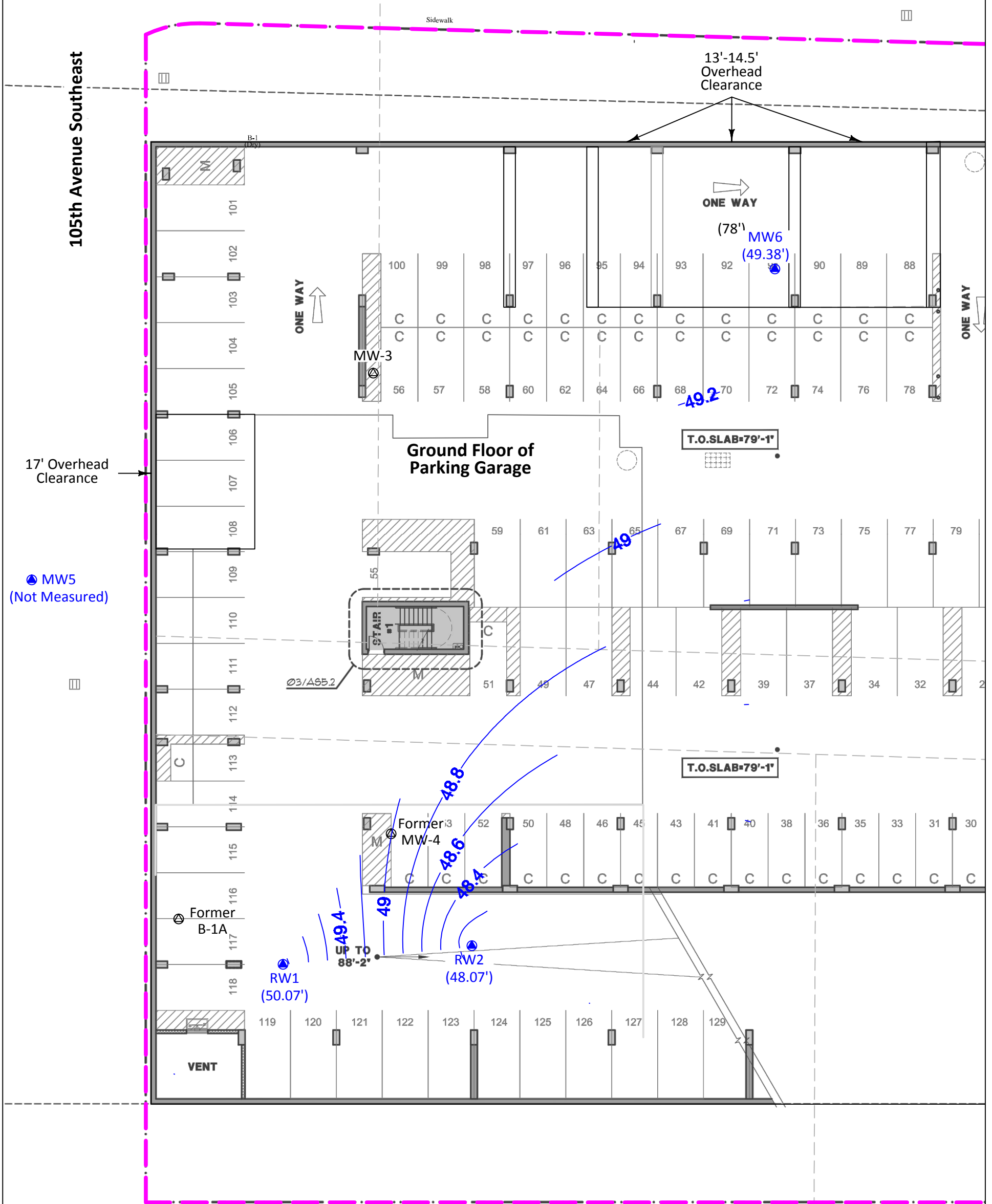
Drawn from Bush, Roed & Hitchings, Inc., ALTA/ACSM Land Title Survey, dated 03/2012.

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Main Street Bellevue		Figure 6
RGI Project Number 2012-107L	Groundwater Elevation Contours October 28, 2016	Date Drawn: 01/2017
Address: 10505 Main Street, Bellevue, Washington 98004		

Main Street

105th Avenue Southeast

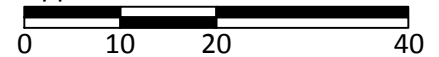


— 90.75 — = Groundwater contours generated using Surfer Software (based on Kriging method).  
 (51.11) = Groundwater elevation (in feet)  
 Contours based on January 4, 2017 water level measurements.

- (#') = Approximate elevation
- ↔ = Groundwater flow direction based on groundwater elevations recorded on January 4, 2017
- = Existing groundwater monitoring well location
- ⊙ = Former groundwater monitoring well location

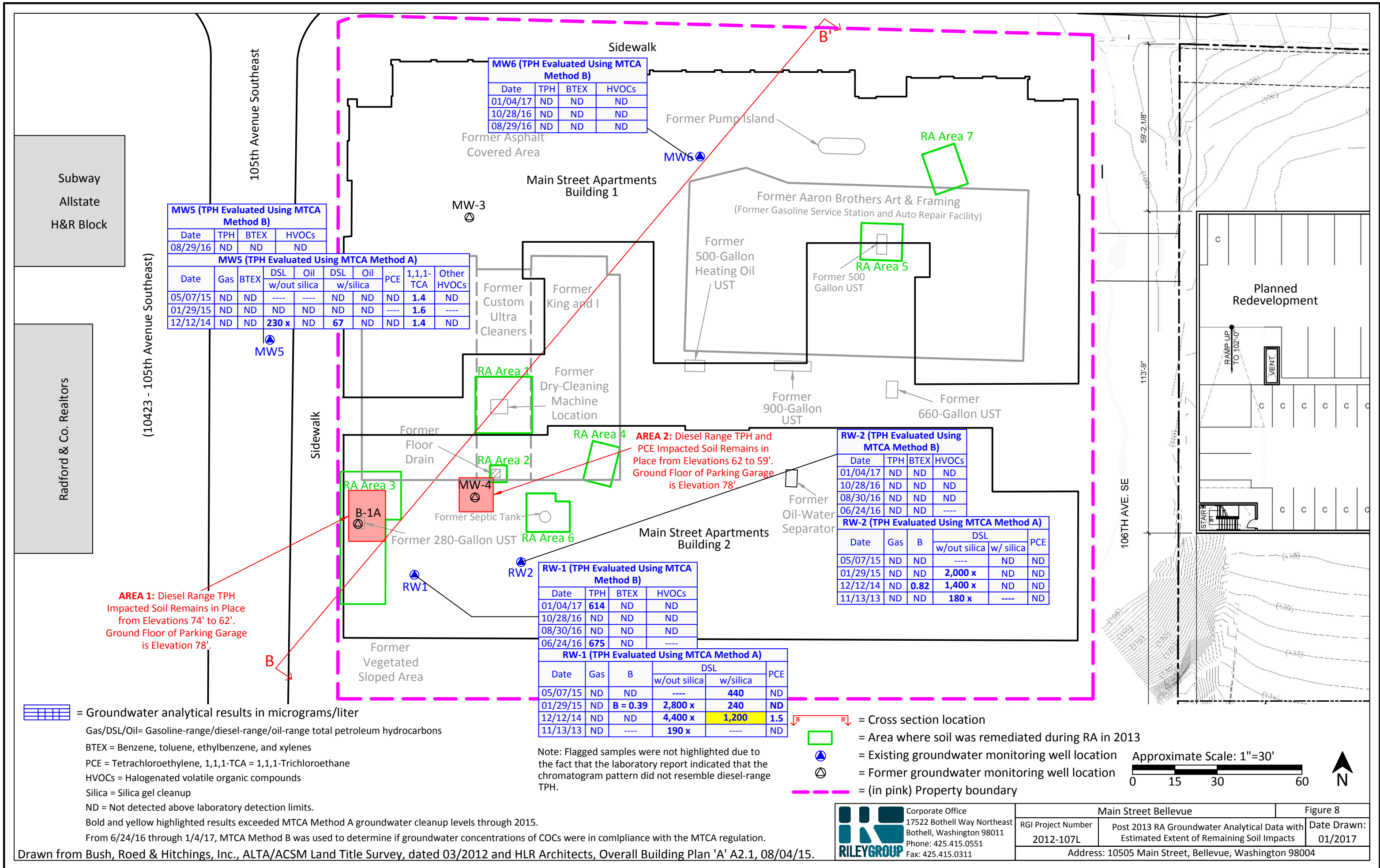
— (in pink) Property boundary  
 Drawn from Bush, Roed & Hitchings, Inc., ALTA/ACSM Land Title Survey, dated 03/2012.

Approximate Scale: 1"=20'



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Main Street Bellevue		Figure 7
RGI Project Number 2012-107L	Groundwater Elevation Contours January 4, 2017	Date Drawn: 01/2017
Address: 10505 Main Street, Bellevue, Washington 98004		



**MW5 (TPH Evaluated Using MTCA Method B)**

Date	TPH	BTEX	HVOCs
08/29/16	ND	ND	ND

**MW5 (TPH Evaluated Using MTCA Method A)**

Date	Gas	BTEX	DSL w/out silica	Oil w/silica	PCE	1,1,1-TCA	Other HVOCs
05/07/15	ND	ND	---	ND	ND	1.4	ND
01/29/15	ND	ND	ND	ND	---	1.6	---
12/12/14	ND	ND	230 x	67	ND	1.4	ND

**MW6 (TPH Evaluated Using MTCA Method B)**

Date	TPH	BTEX	HVOCs
01/04/17	ND	ND	ND
10/28/16	ND	ND	ND
08/29/16	ND	ND	ND

**RW-1 (TPH Evaluated Using MTCA Method B)**

Date	TPH	BTEX	HVOCs
01/04/17	614	ND	ND
10/28/16	ND	ND	ND
08/30/16	ND	ND	ND
06/24/16	675	ND	---

**RW-1 (TPH Evaluated Using MTCA Method A)**

Date	Gas	B	DSL w/out silica	w/silica	PCE
05/07/15	ND	ND	---	440	ND
01/29/15	ND	B = 0.39	2,800 x	240	ND
12/12/14	ND	ND	4,400 x	1,200	1.5
11/13/13	ND	---	190 x	---	ND

**RW-2 (TPH Evaluated Using MTCA Method B)**

Date	TPH	BTEX	HVOCs
01/04/17	ND	ND	ND
10/28/16	ND	ND	ND
08/30/16	ND	ND	ND
06/24/16	ND	ND	---

**RW-2 (TPH Evaluated Using MTCA Method A)**

Date	Gas	B	DSL w/out silica	w/silica	PCE
05/07/15	ND	ND	---	ND	ND
01/29/15	ND	ND	2,000 x	ND	ND
12/12/14	ND	0.82	1,400 x	ND	ND
11/13/13	ND	ND	180 x	---	ND

**AREA 1:** Diesel Range TPH Impacted Soil Remains in Place from Elevations 74' to 62'. Ground Floor of Parking Garage is Elevation 78'.

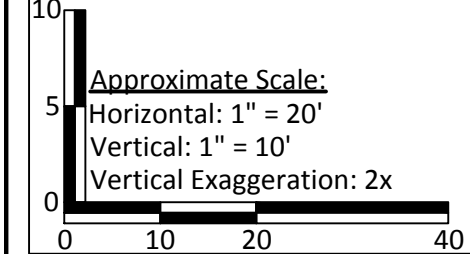
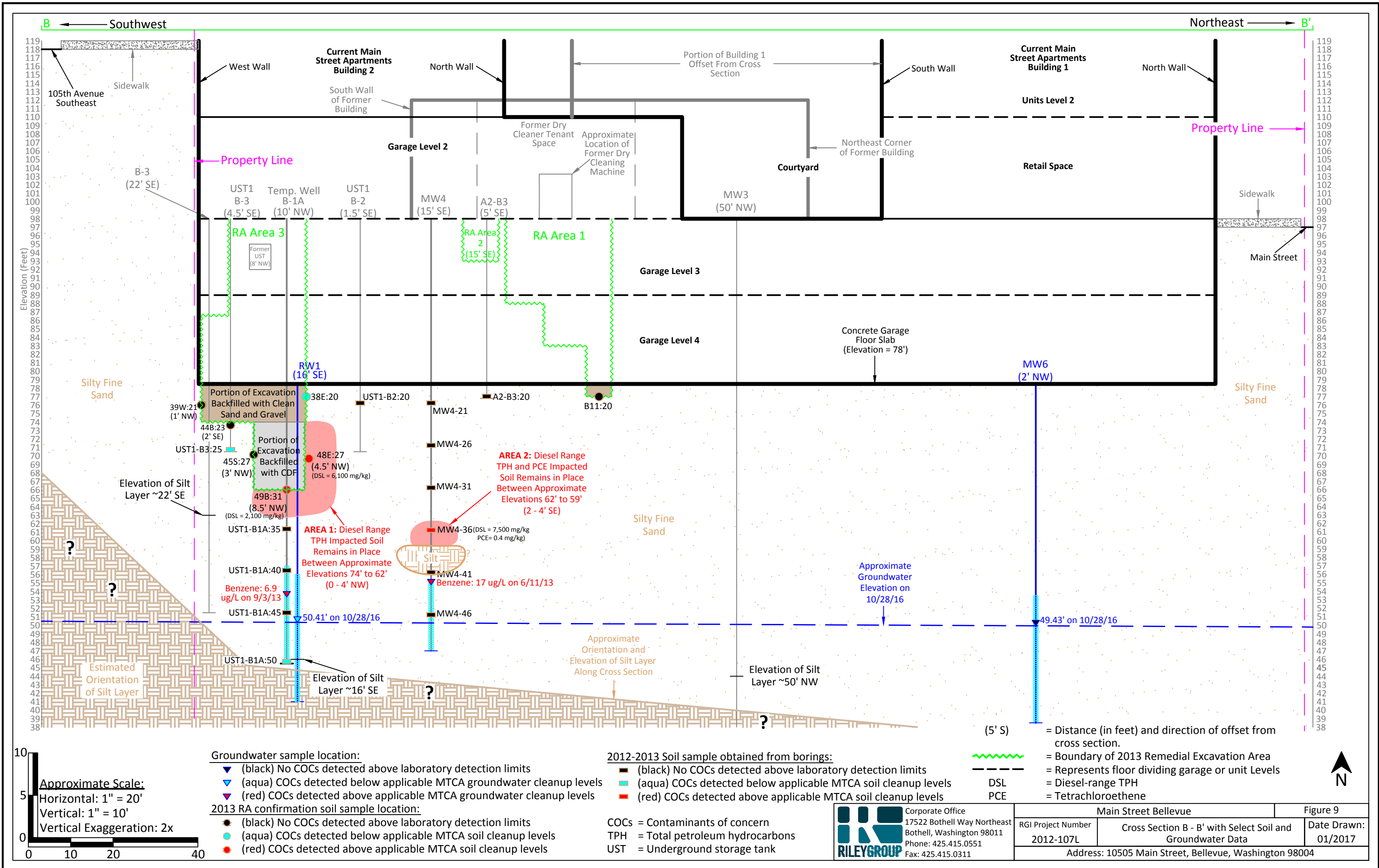
**AREA 2:** Diesel Range TPH and PCE Impacted Soil Remains in Place from Elevations 62 to 59'. Ground Floor of Parking Garage is Elevation 78'.

= Groundwater analytical results in micrograms/liter  
 Gas/DSL/Oil= Gasoline-range/diesel-range/oil-range total petroleum hydrocarbons  
 BTEX = Benzene, toluene, ethylbenzene, and xylenes  
 PCE = Tetrachloroethylene, 1,1,1-TCA = 1,1,1-Trichloroethane  
 HVOCs = Halogenated volatile organic compounds  
 Silica = Silica gel cleanup  
 ND = Not detected above laboratory detection limits.  
 Bold and yellow highlighted results exceeded MTCA Method A groundwater cleanup levels through 2015.  
 From 6/24/16 through 1/4/17, MTCA Method B was used to determine if groundwater concentrations of COCs were in compliance with the MTCA regulation.

Note: Flagged samples were not highlighted due to the fact that the laboratory report indicated that the chromatogram pattern did not resemble diesel-range TPH.

= Cross section location  
 = Area where soil was remediated during RA in 2013  
 = Existing groundwater monitoring well location  
 = Former groundwater monitoring well location  
 = (in pink) Property boundary

Approximate Scale: 1"=30'  
 0 15 30 60 N



- Groundwater sample location:**
- ▼ (black) No COCs detected above laboratory detection limits
  - ▼ (aqua) COCs detected below applicable MTCA groundwater cleanup levels
  - ▼ (red) COCs detected above applicable MTCA groundwater cleanup levels
- 2013 RA confirmation soil sample location:**
- (black) No COCs detected above laboratory detection limits
  - (aqua) COCs detected below applicable MTCA soil cleanup levels
  - (red) COCs detected above applicable MTCA soil cleanup levels

- 2012-2013 Soil sample obtained from borings:**
- (black) No COCs detected above laboratory detection limits
  - (aqua) COCs detected below applicable MTCA soil cleanup levels
  - (red) COCs detected above applicable MTCA soil cleanup levels
- COCs = Contaminants of concern**  
**TPH = Total petroleum hydrocarbons**  
**UST = Underground storage tank**
- Legend:**
- (black) = Represents floor dividing garage or unit Levels
  - (red) = Diesel-range TPH
  - (blue) = Tetrachloroethene

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Main Street Bellevue		Figure 9
RGI Project Number 2012-107L	Cross Section B - B' with Select Soil and Groundwater Data	Date Drawn: 01/2017
Address: 10505 Main Street, Bellevue, Washington 98004		



# ***Table***

Table 1, Page 1 of 2. Summary of Current and Historical Groundwater Analytical Data

Main Street Apartments Development  
 10505 Main Street, Bellevue, Washington 98004  
 The Riley Group, Inc. Project No. 2012-107L

Sample Number	Sample Date	TOC Elevation (feet)	Depth to Water (feet)	Groundwater Elevation (feet)	Gas TPH	BTEX				Diesel TPH w/out silica gel	Oil TPH with silica gel	Diesel TPH with silica gel	Oil TPH with silica gel	C5-C8 <sup>8</sup> Aliphatics	C8-C12 <sup>9</sup> Aliphatics	C8-C12 <sup>10</sup> Aromatics	Total Naphthalenes <sup>2</sup>	PCE	1,1,1-TCA	MTCA Method B for TPH <sup>3</sup>	Other VOCs
						B	T	E	X												
<b>Current Groundwater Monitoring Well Data</b>																					
RW1, Screened from approximate elevation of 58.3' to 43.3', Total well length 35.5'																					
RW-1	01/04/17	78.78	28.71	50.07	ND<50	ND<2.0	ND<2.0	ND<2.0	ND<6.0	1,200 h	280	----	----	ND	ND	ND	----	ND<2.0	----	614	ND
RW-1	10/28/16	78.78	28.37	50.41	ND<50	ND<2.0	ND<2.0	ND<2.0	ND<6.0	470 h	ND<250	----	----	ND	ND	ND	----	ND<2.0	----	ND	ND
RW-1	09/21/16	78.78	28.33	50.45	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
RW-1	08/30/16	78.78	27.67	51.11	ND<50	ND<2	ND<2	ND<2	ND<6	700	ND<250	----	----	ND	ND	ND	----	ND<2	----	ND	ND
RW-1	06/24/16	78.78	27.17	51.61	----	ND<2	ND<2	ND<2	ND<4	----	----	----	----	ND	ND	ND	ND<0.02	----	----	675	----
RW1	05/07/15	78.78	26.49	52.29	ND<100	ND<0.35	ND<1	ND<1	ND<2	----	----	440	ND<250	----	----	----	ND<1	ND<1	ND<1	----	ND
RW1	01/29/15	78.78	27.08	51.7	ND<100	0.39	ND<1	ND<1	ND<2	2,800x	540x	240	ND<250	----	----	----	ND<1	ND<1	ND<1	----	ND
RW1	12/12/14	78.78	27.45	51.33	ND<100	ND<0.35	ND<1	ND<1	ND<2	4,400x	840x	1,200	ND<250	----	----	----	ND<1	1.5	ND<1	----	ND
RW1	11/13/13	78.78	27.57*	51.21	ND<100	ND<0.35	14	ND<1	ND<2	190 x	ND<250	----	----	----	----	----	ND<1	ND<1	ND<1	----	Acetone = 770 Chloroform = 13 <sup>12</sup> 2-Butanone = 1,100
RW2, Screened from approximate elevation of 57.2' to 42.2', Total well length 37.3'																					
RW-2	01/04/17	79.46	31.39	48.07	ND<50	ND<2.0	ND<2.0	ND<2.0	ND<6.0	330 h	ND<250	----	----	ND	ND	ND	----	ND<2.0	----	ND	ND
RW-2	10/28/16	79.46	31.23	48.23	ND<50	ND<2.0	ND<2.0	ND<2.0	ND<6.0	400 h	ND<250	----	----	ND	ND	ND	----	ND<2.0	----	ND	ND
RW-2	09/21/16	79.46	30.96	48.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
RW-2	08/30/16	79.46	30.85	48.61	ND<50	ND<2	ND<2	ND<2	ND<6	500	ND<250	----	----	ND	ND	ND	----	ND<2	----	ND	ND
RW-2	06/24/16	79.46	30.56	48.90	----	ND<2	ND<2	ND<2	ND<4	----	----	----	----	ND	ND	ND	ND<0.060	----	----	ND	----
RW2	05/07/15	79.46	29.68	49.78	ND<100	ND<0.35	ND<1	ND<1	ND<2	----	----	ND<50	ND<250	----	----	----	ND<1	ND<1	ND<1	----	ND
RW2	01/29/15	79.46	29.87	49.59	ND<100	ND<0.35	ND<1	ND<1	ND<2	2,000x	360x	ND<50	ND<250	----	----	----	ND<1	ND<1	ND<1	----	ND
RW2	12/12/14	79.46	29.99	49.47	ND<100	0.82	3.1	1.8	9.7	1,400x	ND<250	ND<50	ND<250	----	----	----	ND<1	ND<1	ND<1	----	1,3,5-TMB = 1.3 1,2,4-TMB = 4.0 Acetone = 110 BDM = 1.2 Chloroform = 26 <sup>5/12</sup> 2-Butanone = 170
RW2	11/13/13	79.46	30.68*	48.78	ND<100	ND<0.35	3.7	ND<1	ND<2	180 x	ND<250	----	----	----	----	----	ND<1	ND<1	ND<1	----	
MW5, Screened from approximate elevation of 51.4' to 36.4', Total well length 65'																					
MW-5	08/29/16	101.44	51.90	49.54	ND<50	ND<2	ND<2	ND<2	ND<6	ND<130	ND<250	----	----	ND	ND	ND	----	ND<2	----	ND	ND
MW5	05/07/15	101.44	50.91	50.53	ND<100	ND<0.35	ND<1	ND<1	ND<2	----	----	ND<50	ND<250	----	----	----	ND<1	ND<1	1.4	----	ND
MW5	01/29/15	101.44	51.31	50.13	ND<100	ND<0.35	ND<1	ND<1	ND<2	ND<50	ND<250	ND<50	ND<250	----	----	----	ND<1	ND<1	1.6	----	ND
MW5	12/12/14	101.44	51.59	49.85	<100	ND<0.35	ND<1	ND<1	ND<2	230x	ND<250	67	ND<250	----	----	----	ND<1	ND<1	1.4	----	ND
MW6, Screened from approximate elevation of 73' to 58', Total well length 40'																					
MW-6	01/04/17	78.7	29.32	49.38	ND<50	ND<2.0	ND<2.0	ND<2.0	ND<6.0	ND<130	ND<250	----	----	ND	ND	ND	----	ND<2.0	----	ND	ND
MW-6	10/28/16	78.7	29.27	49.43	ND<50	ND<2.0	ND<2.0	ND<2.0	ND<6.0	ND<130	ND<250	----	----	----	----	----	----	ND<2.0	----	ND	ND
MW-6	09/21/16	78.7	28.96	49.74	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-6	08/29/16	78.7	28.75	49.95	ND<50	ND<2	ND<2	ND<2	ND<6	ND<130	ND<250	----	----	----	----	----	----	ND<2	----	ND	ND
<b>Historical Groundwater Monitoring Well Data</b>																					
B1A (Decommissioned) Screened from approximate elevation of 57' to 47', Total well length 50'																					
UST1-B1A-W	09/03/13	~97	43.5	~53.5	360	6.9	28	6.1	44	5,200 x	1,000 x	420	ND<300	----	----	----	2.3	ND<1	ND<1	----	ND
Groundwater Screening Levels	MTCA Method A Cleanup Levels for Ground Water				800/1,000 <sup>1</sup>	5	1,000	700	1,000	500	500	500	500	----	----	----	160	5	200	Not Applicable	Analyte Specific
	ARAR State and Federal Primary Maximum Contaminant Level (MCL)				----	5	1,000	700	10,000	----	----	----	----	----	----	----	----	5	200	Not Applicable	Analyte Specific
	MTCA Method B Cleanup Levels for Ground Water				5	5 <sup>6</sup>	----	----	----	----	----	----	----	----	----	----	160	20.8	16,000 <sup>4</sup>	795 <sup>7</sup> (6/24/16) 684 <sup>7</sup> (1/04/17)	1,3,5-TMB = 80 1,2,4-TMB = NVE
	Ecology Groundwater Screening Level Protective of Indoor Air (micrograms/liter) <sup>11</sup>				----	2.4	15600 <sup>4</sup>	2780 <sup>4</sup>	310 <sup>4</sup>	----	----	----	----	140	2.9	1,300	8.93	22.9	5,240 <sup>4</sup>	----	1,3,5-TMB = NVE 1,2,4-TMB = 28.4 2- Butanone = 1,740,000 <sup>4</sup> Acetone = NVE BDM = 1.84 Chloroform = 1.2

**Table 1, Page 2 of 2. Summary of Current and Historical Groundwater Analytical Data**

**Main Street Apartments Development  
10505 Main Street, Bellevue, Washington 98004  
The Riley Group, Inc. Project No. 2012-107L**

Sample Number	Sample Date	TOC Elevation (feet)	Depth to Water (feet)	Groundwater Elevation (feet)	Gas TPH	BTEX				Diesel TPH w/out silica gel	Oil TPH with silica gel	Diesel TPH	Oil TPH	C5-C8 <sup>8</sup> Aliphatics	C8-C12 <sup>9</sup> Aliphatics	C8-C12 <sup>10</sup> Aromatics	Total Naphthalenes <sup>2</sup>	PCE	1,1,1-TCA	MTCA Method B for TPH <sup>3</sup>	Other VOCs	
						B	T	E	X													
MW3 (Decommissioned), Screened from approximate elevation of 52.41' to 37.41', Total well length 60'																						
MW-3	06/11/13	97.41	43.44	53.97	ND<100	ND<1	ND<1	ND<1	ND<3	----	----	ND<50	ND<250	----	----	----	----	----	----	----	----	
MW-3	05/22/13	97.41	43.1	54.31	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	
MW-3	05/14/12	97.41	50.51	46.90	----	----	----	----	----	----	----	----	----	----	----	----	ND<0.20	<b>0.40</b>	----	----	<b>Chloroform = 0.24</b>	
MW4 (Decommissioned), Screened from approximate elevation of 55.29' to 45.29', Total well length 53'																						
MW4	06/11/13	98.29	42.06	56.23	<b>800</b>	<b>17</b>	<b>62</b>	<b>15</b>	<b>90</b>	----	----	<b>220 x</b>	ND<250	----	----	----	----	----	----	----	----	
MW4	05/22/13	98.29	43.51	54.78	<b>340</b>	<b>6</b>	<b>25</b>	<b>5.7</b>	<b>39</b>	<b>7,900 x</b>	<b>1,300 x</b>	<b>190</b>	ND<250	----	----	----	ND<1	ND<1	----	ND		
Groundwater Screening Levels	MTCA Method A Cleanup Levels for Ground Water				800/1,000 <sup>1</sup>	5	1,000	700	1,000	500	500	500	500	----	----	----	160	5	200	Not Applicable	Analyte Specific	
	ARAR State and Federal Primary Maximum Contaminant Level (MCL)				----	5	1,000	700	10,000	----	----	----	----	----	----	----	----	----	5	200	Not Applicable	Analyte Specific
	MTCA Method B Cleanup Levels for Ground Water				5	5 <sup>6</sup>	----	----	----	----	----	----	----	----	----	----	160	20.8	16,000 <sup>4</sup>	795 <sup>7</sup> (6/24/16) 684 <sup>7</sup> (1/04/17)	1,3,5-TMB = 80 1,2,4-TMB = NVE	
	Ecology Groundwater Screening Level Protective of Indoor Air (micrograms/liter) <sup>11</sup>				----	2.4	15600 <sup>4</sup>	2780 <sup>4</sup>	310 <sup>4</sup>	----	----	----	----	140	2.9	1,300	8.93	22.9	5,240 <sup>4</sup>	----	1,3,5-TMB = NVE 1,2,4-TMB = 28.4 2- Butanone = 1,740,000 <sup>4</sup> Acetone = NVE BDM = 1.84 Chloroform = 1.2	

Notes:

Samples collected by RGI field staff using a submersible 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).

Gasoline-range TPH (total petroleum hydrocarbons) determined used Northwest Test Method NWTPH-Gx.

BTEX (benzene, toluene, ethylbenzene and xylenes) determined using EPA Test Method 8021B or 8260C.

Diesel and Oil-Range TPH determined used Northwest Test Method NWTPH-Dx with and without silica gel cleanup.

Silica gel = Sample extract is passed through a silica gel column prior to analysis. The silica gel column removes natural occurring biogenic material that can interfere with the TPH result when present.

PCE (tetrachloroethene), 1,1,1-TCA (1,1,1-trichloroethane), 2-butanone, acetone, BMD (Bromodichloromethane), chloroform, TMB (Trimethylbenzene), and other VOCs (volatile organic compounds) determined using EPA Test Method 8260C.

ND = Not detected above noted analytical detection limit.

NVE = No value established.

TOC = Top of casing. Depth to water measurements were obtained from TOC (in feet).

---- = Not analyzed or not applicable.

x = According to the analytical chemist, the sample chromatographic pattern does not resemble the fuel standard used for quantification.

h = Chromatogram indicates that it is likely that sample contains a diesel range product that is likely biased high due to biogenic interference.

\* Depth to water measurements obtained on December 23, 2013.

<sup>1</sup> 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.

<sup>2</sup> Analyzed using EPA Test Method 8260C.

<sup>3</sup> Measured TPH groundwater concentration used for Method B evaluation (as approved in advance by Ecology). As discussed with Ecology and stated in the Ecology approved SRI Work Plan, beginning in June of 2016 MTCA Method B was used to evaluate total petroleum hydrocarbons (TPH) concentrations in groundwater.

<sup>4</sup> The non-carcinogenic MTCA Method B value was referenced due to the fact that a carcinogenic Method B value does not exist.

<sup>5</sup> No carcinogenic Method B was available in the searchable CLARC database at the time the Remedial Action report was prepared. Therefore, this concentration was compared to the Method B non-carcinogenic level of 80 micrograms/liter at that time.

<sup>6</sup> RGI evaluated the cancer risk for the ARAR which was determined to be greater than 10<sup>-5</sup>. Therefore, the ARAR is adjusted down to a cancer risk of 10<sup>-5</sup>.

<sup>7</sup> Method B groundwater cleanup level calculated using the Ecology *Worksheet for Calculating Potable Groundwater Cleanup Levels*. See Section 3.3 of the SRI Report and Appendix B of report for details. The calculated TPH cleanup levels were 795 ug/L for the 6/24/16 event and 684 ug/L for the 1/4/17 event.

<sup>8</sup> Concentration obtained by adding the C5-6 and C6-8 aliphatic concentrations from the NWVPH analysis. ND indicates none of the indicated compounds were detected at a concentration above the laboratory detection limit.

<sup>9</sup> Concentration obtained by adding the C8-C10 and C10-12 aliphatic concentrations from the NWVPH and NWEPH analyses. ND indicates none of the indicated compounds were detected at a concentration above the laboratory detection limit.

<sup>10</sup> Concentration obtained by adding the C8-10 and C10-12 aromatic concentrations from the NWVPH and NWEPH analyses and subtracting the naphthalene concentration. ND indicates none of the indicated compounds were detected at a concentration above the laboratory detection limit.

<sup>11</sup> Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method B groundwater screening level considered protective of indoor air. Obtained from Ecology's Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action dated October 2009 (Table B-1, amended April 6, 2015)

<sup>12</sup> Groundwater concentration exceeded Ecology's Screening Level Protective of Indoor Air.

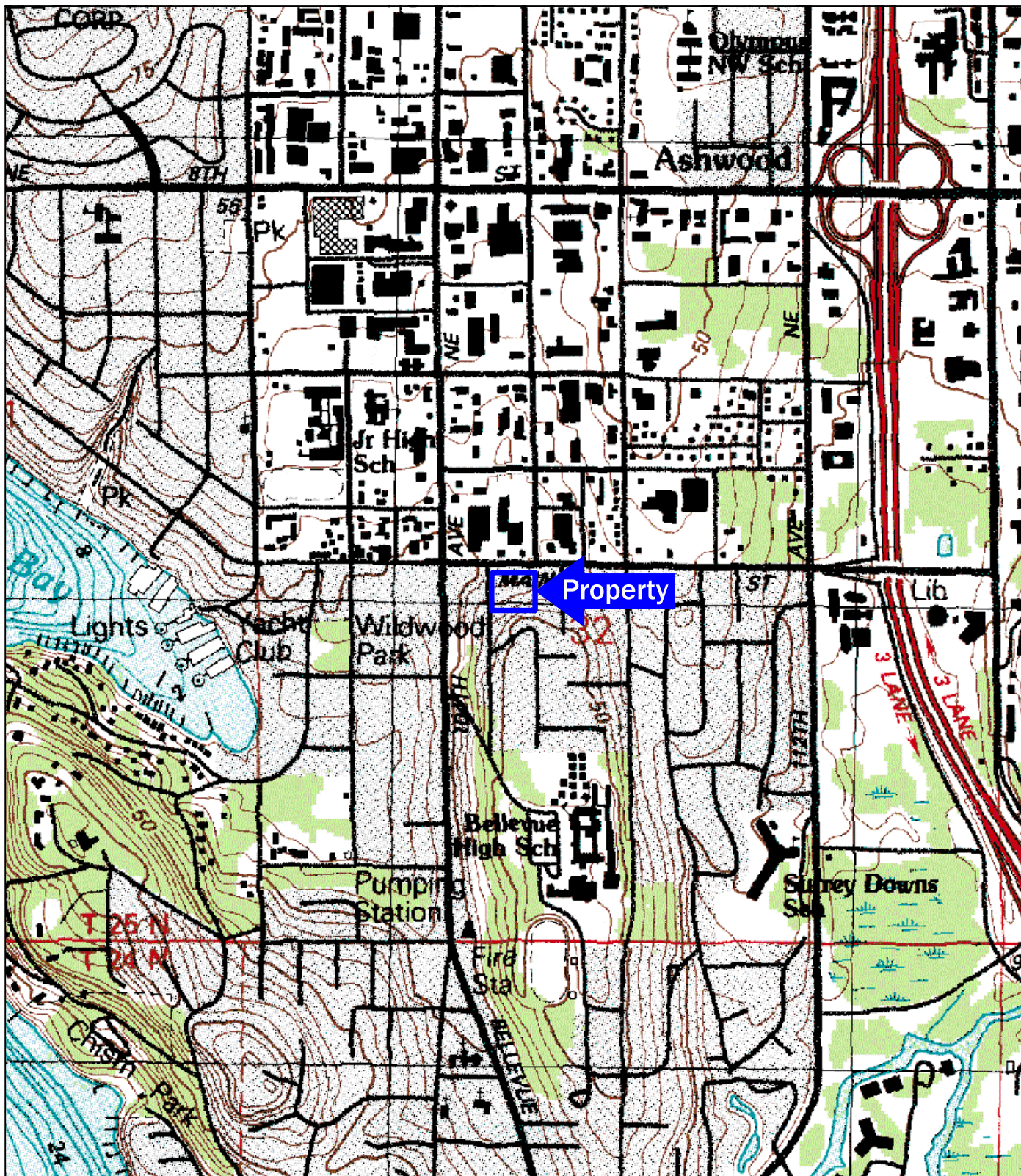
Ecology Model Toxics Control Act Method A or B Cleanup Levels for Ground Water and groundwater ARARs obtained from WAC 173-340-900, Table 720-1 and CLARC database.

ARAR = Applicable or Relevant and Appropriate Requirement. ARARs for the Property are the Federal and State Primary Maximum Contaminant Levels (MCLs) as established under the Environmental Protection Agency (EPA) National Primary Drinking Water Regulations. ARARs are referenced in Ecology's CLARC database.

**Bold** results indicated concentrations above laboratory detection limits.

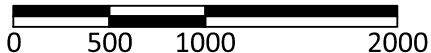
**Bold and yellow highlighted** results indicate concentrations (if any) that were not in compliance with MTCA Method A groundwater cleanup levels from May of 2013 to June of 2016 or Method B from June of 2016 to January of 2017.

# ***Appendix A***



USGS, 1983, Bellevue South, Washington  
7.5-Minute Quadrangle

Approximate Scale: 1"=1000'



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Main Street Apartments Development

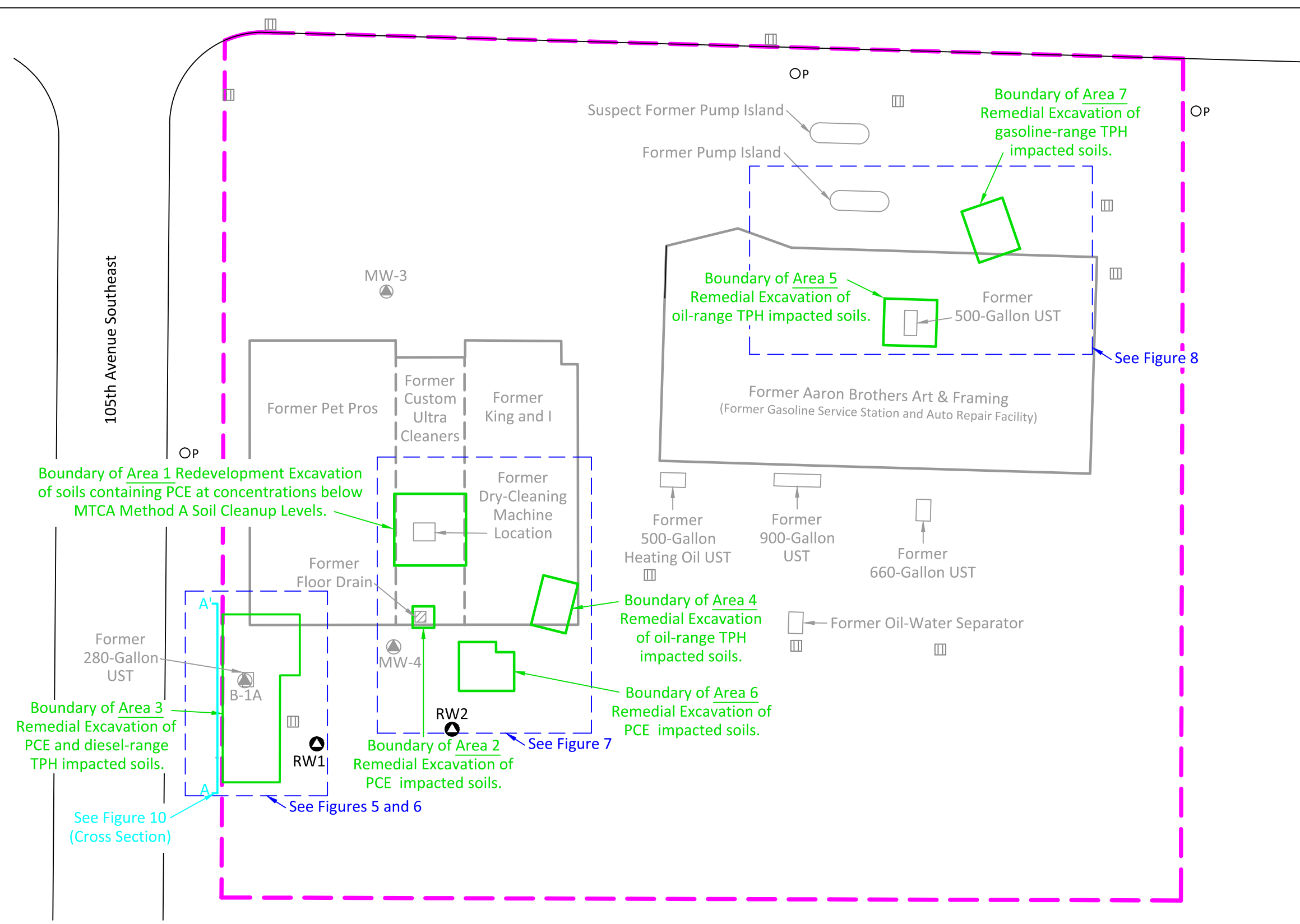
RGI Project Number  
2012-107J

Property Vicinity Map

Figure 1

Date Drawn:  
06/2014

Address: 10505 Main Street, Bellevue, Washington 98004



Boundary of Area 1 Redevelopment Excavation of soils containing PCE at concentrations below MTCA Method A Soil Cleanup Levels.

Boundary of Area 3 Remedial Excavation of PCE and diesel-range TPH impacted soils.

See Figure 10 (Cross Section)

Boundary of Area 2 Remedial Excavation of PCE impacted soils.

See Figures 5 and 6

Boundary of Area 4 Remedial Excavation of oil-range TPH impacted soils.

Boundary of Area 6 Remedial Excavation of PCE impacted soils.

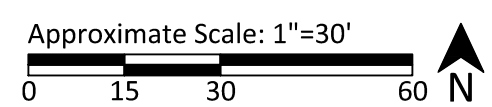
Boundary of Area 5 Remedial Excavation of oil-range TPH impacted soils.

Boundary of Area 7 Remedial Excavation of gasoline-range TPH impacted soils.

See Figure 8

- = Existing Groundwater Monitoring Well
- = Former Groundwater Monitoring Well Location
- ▤ = (in gray) Former Catch Basin
- (in green) = (in green) Approximate Extent of Excavation Limits
- (in pink) = (in pink) Property Boundary

- OP = Utility Pole Location
- TPH = Total Petroleum Hydrocarbons
- PCE = Tetrachloroethene



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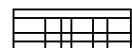
Main Street Apartments Development		Figure 2
RGI Project Number 2012-107J	Property Representation Map	Date Drawn: 06/2014
Address: 10505 Main Street, Bellevue, Washington 98004		

Drawn from Bush, Roed & Hitchings, Inc., ALTA/ACSM Land Title Survey, dated 03/2012.

MW-3 Groundwater					
Date	Gas	BTEX	DSL	PCE	Other VOCs
06/11/13	ND	ND	ND	----	----
05/22/13	----	----	----	ND	<b>Chloroform=0.24</b> <b>1,1,1-Trichloroethane=0.40</b>

MW-4 Soil 05/21/13		
Depth	Diesel	PCE
6	----	ND
11	----	ND
16	----	ND
21	----	ND
26	----	ND
31	----	ND
36	<b>7,500</b>	<b>0.40</b>
41	ND	ND
46	ND	----

MW-4 Groundwater								
Date	Gas	B	T	E	X	DSL	PCE	Other VOCs
06/11/13	800	<b>17</b>	<b>62</b>	<b>15</b>	<b>90</b>	<b>220 x</b>	----	----
05/22/13	340	<b>6</b>	<b>25</b>	<b>5.7</b>	<b>39</b>	<b>190</b>	ND	ND



= Select Analytical Results

Gas/DSL = Gasoline/Diesel Total Petroleum Hydrocarbons

BTEX = Benzene, Toluene, Ethylbenzene, Xylenes

PCE = Tetrachloroethene

HVOCs = Halogenated Volatile Organic Compounds

ND = Not Detected Above Laboratory Detection Limits

---- = Not Analyzed

Soil Results (brown) in mg/kg.

Groundwater Results (blue) in ug/L.

Only data for locations where Contaminants of Concern (COCs) were detected above laboratory detection limits are displayed.

Bold results indicate concentrations above laboratory detection limits.

Bold and yellow highlighted results indicate concentrations (if any) that exceed the applicable soil screening level.

= (in green) Former Geotechnical Boring Location by RGI [B-1 to B-4] in 07/2012

= (in gray) Former Geotechnical Boring Location by Others in 2007

= (in blue) Test Probe Location by RGI on 05/04/12 [P-1 to P-17] and 07/09/12 [P-18 to P-21]

= (in gray) Former Catch Basin

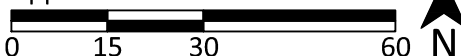
= (in pink) Property Boundary

OP = Utility Pole Location

= (in blue) Former Monitoring Well Location Installed by RGI [MW-3 on 05/11/12 and MW-4 on 05/21/13]

= (in blue) Former Geotechnical Observation Well [Boring B-1 to B-5] Installed by Others in 04/2007

Approximate Scale: 1"=30'



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Main Street Apartments Development		Figure 3
RGI Project Number 2012-107J	Historical Property Features and Initial Phase II Sample Locations with Select Soil and Groundwater Analytical Data	Date Drawn: 06/2014
Address: 10505 Main Street, Bellevue, Washington 98004		

Drawn from Bush, Roed & Hitchings, Inc., ALTA/ACSM Land Title Survey, dated 03/2012.

105th Avenue Southeast

Asphalt Cut and Property Boundary

OP

Former MW-3

Former Pet Pros

Former Custom Ultra Cleaners

Former King and I

Boundary of Area 1 Excavation: PCE detected in soil at concentrations below the MTCA Method A Cleanup Levels. See Figure 7 for details.

Boundary of Former Pump Island Excavation: No contamination was encountered.

Boundary of Area 7 Remedial Excavation: Gasoline-range TPH impacted soil was detected in soil at concentrations above the MTCA Method A Cleanup Level. See Figure 8 for details.

Boundary of Area 5 (UST 3) Remedial Excavation: Former 500-gallon waste oil UST location and location where oil-range TPH was detected in soil at concentrations exceeding MTCA Method A Cleanup Levels. See Figure 8 for details.

Former Aaron Brothers Art & Framing Former Gasoline Service Station and Auto Repair Facility

UST 2: Former 500-gallon heating oil UST location. UST was decommissioned on 08/20/13. No contamination encountered.

UST 4: Former 900-gallon UST location. UST was decommissioned on 08/27/13. No contamination encountered.

Former approximately 660-gallon UST location. UST was decommissioned on 09/03/13. No contamination encountered.

MW-4 05/21/13				
Depth	Gas	Benzene	Diesel	PCE
6	----	----	----	ND
11	----	----	----	ND
16	----	----	----	ND
21	----	----	----	ND
26	----	----	----	ND
31	----	----	----	ND
36	<b>100</b>	ND	<b>7,500</b>	<b>0.40</b>
41	----	----	ND	ND
46	----	----	ND	----

B-4 Soil 08/24/13		
Depth	Diesel	PCE
5'	ND	ND
10'	ND	ND
15'	ND	ND
20'	ND	ND

A2-B3 09/03/13	
Depth	HVOCs
5'	ND
10'	ND
15'	ND
20'	ND

A2-B2 09/03/13	
Depth	HVOCs
5'	ND
10'	ND
15'	ND
20'	ND

Boundary of Area 2 Remedial Excavation: PCE detected in soil at concentrations above the MTCA Method A Cleanup Level. See Figure 7 for details.

A2-B1 09/03/13	
Depth	HVOCs
5'	ND
10'	ND
15'	ND
20'	ND

A4-C:3				
Date	Gas	BTEX	Diesel	Oil
08/22/13	<b>34</b>	Toluene = 0.24	<b>12,000 x</b>	<b>46,000</b>

Boundary of Area 4 Remedial Excavation: Oil-range TPH detected in soil at concentrations above the MTCA Method A Cleanup Level. See Figure 7 for Details.

DC-D:4		
Date	PCE	Other VOCs
08/19/13	<b>0.17</b>	ND

Boundary of Area 6 Remedial Excavation: PCE detected in soil at concentrations exceeding the MTCA Method A Cleanup Level. See Figure 7 for Details

UST1-B:7		
Date	Diesel	PCE
08/19/13	<b>21,000</b>	<b>0.28</b>

A6-1:9	
Date	PCE
09/17/13	<b>0.053</b>

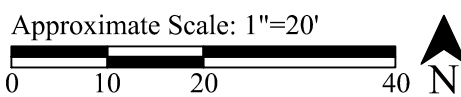
Largest Lateral Extent Area 3 (UST 1) Remedial Excavation (conducted in 5 separate phases): Former 280-gallon heating oil UST (UST 1) where soil was impacted with diesel-range TPH and PCE at concentrations above the MTCA Method A Cleanup Levels. See Figures 5 and 6 for details.

B-2 08/24/13		
Depth	Diesel	PCE
5'	ND	ND
10'	ND	ND
15'	ND	ND
20'	ND	ND

UST1-W:7		
Date	Diesel	PCE
08/19/13	<b>13,000</b>	<b>0.36</b>

B-1/B-1A 08/24/13 and 9/03/13 (Samples Below UST)		
Depth	Diesel	PCE
7.5'	<b>6,367</b>	ND
10'	<b>10,952</b>	ND
20'	<b>19,912</b>	ND
25'	<b>20,178</b>	ND
30'	<b>2,825</b>	ND
35'	ND	ND
40'	ND	ND
45'	ND	ND
50'	<b>97</b>	ND

B-3 08/24/13		
Depth	Diesel	PCE
5'	ND	ND
10'	ND	ND
12.5'	<b>90</b>	ND
15'	<b>108</b>	ND
25'	<b>92</b>	ND



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Main Street Apartments Development		Figure 4
RGI Project Number 2012-107J	Property Plan with Supplemental Phase II and UST Site Assessment Soil Sample Locations and Analytical Data	Date Drawn: 06/2014
Address: 10505 Main Street, Bellevue, Washington 98004		

- |  |  |  |  |  |
|--|--|--|--|--|
|  |  |  |  |  |
|--|--|--|--|--|

 = Select Soil Analytical Results in Milligrams per Kilogram (mg/kg)
- Gas/Dsl/Oil = Gasoline/Diesel/Oil Total Petroleum Hydrocarbons (TPH)
- BTEX = Benzene, Toluene, Ethylbenzene, Xylenes
- PCE = Tetrachloroethene
- (H)VOCs = (Halogenated) Volatile Organic Compounds
- ND = Not Detected Above Laboratory Detection Limits
- = Not Analyzed
- = Bold and yellow highlighted result exceeds the MTCA Method A Cleanup Level.
- = Bold results indicate compound was detected at a concentration above the laboratory detection limit.
- \* = Indicates sample was collected from inside septic tank.
- (ND) = No contaminants of concern (COCs) detected at concentrations above laboratory detection limits.
- = (in blue) Temporary Monitoring Well Location B-1A Installed by RGI on 09/03/13
- = (in gray) Former Monitoring Well Location Installed by RGI [MW-3 on 05/11/12 and MW-4 on 05/21/13]
- ⊕ = (in blue) Hollow Stem Auger (HSA) Boring Location by RGI
- = (in gray) Soil Characterization Sample Location by RGI
- = Existing Groundwater Monitoring Well Installed by RGI
- OP = Utility Pole Location
- = Property Boundary

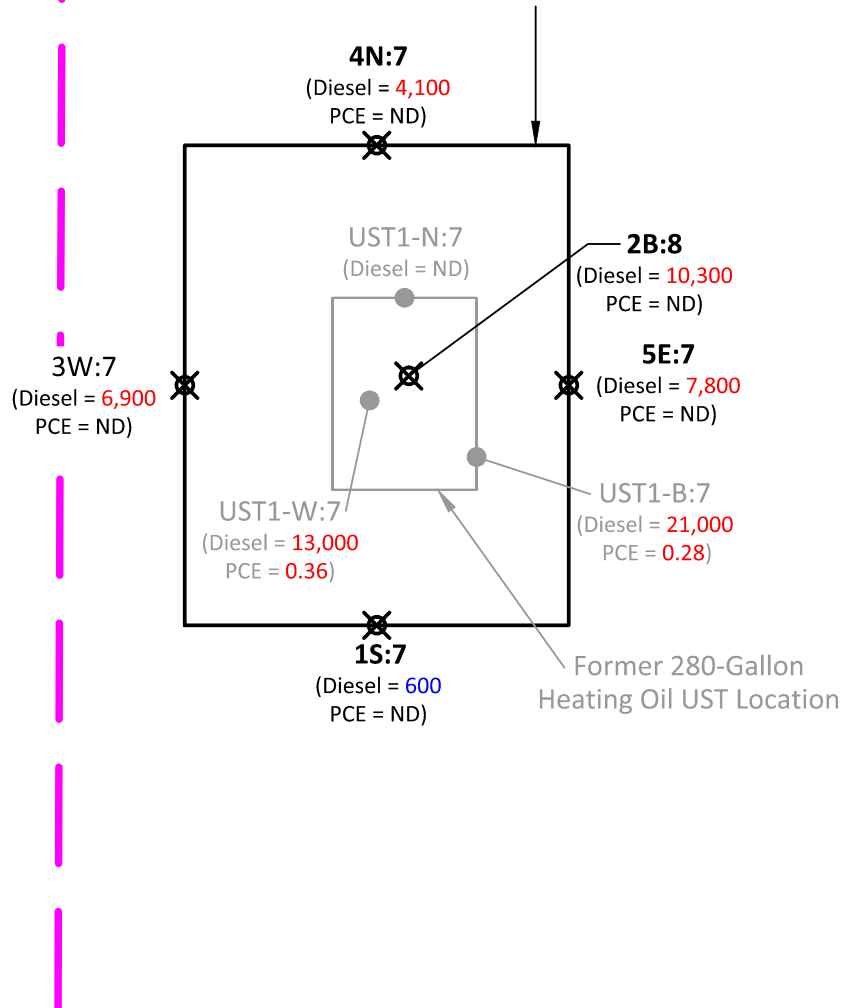
Drawn from Bush, Roed & Hitchings, Inc., ALTA/ACSM Land Title Survey, dated 03/2012.



Southwest Corner of  
Former Western Building

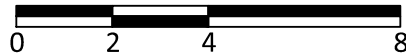
Western Property Boundary

**Limits of Area 3 Phase I - Remedial Excavation** - Area where PCE and diesel-range TPH were detected in soil at concentrations exceeding the MTCA Method A Soil Cleanup Levels beneath a 280-gallon heating oil UST. Phase I of the remedial excavation focused on removal of all PCE impacted soil. Diesel-range TPH impacts extended beyond the limits of the PCE soil impacts and was addressed in Phases II through V (see Figure 6). Soil concentrations of PCE and diesel-range TPH are given in mg/kg. Sample prefix (A3) not included in sample ID.



- bgs = Below ground surface, which was the grade of the Property prior to redevelopment.
- (0.28) = Red indicates soil concentration exceeds MTCA Method A Cleanup Level.
- (600) = Blue indicates soil concentration was below the MTCA Method A Cleanup Level.
- ND = No contaminants of concern (COCs) detected at concentrations above laboratory detection limits.
- = Soil Characterization sample. Soil was removed under a Contained-In determination from Ecology.
- ⊗ = Final performance sample. Indicates extent of PCE impacts, not diesel-range TPH impacts.

Approximate Scale: 1"=4'



Drawn from Bush, Roed & Hitchings, Inc., ALTA/ACSM Land Title Survey, dated 03/2012.



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Main Street Apartments Development

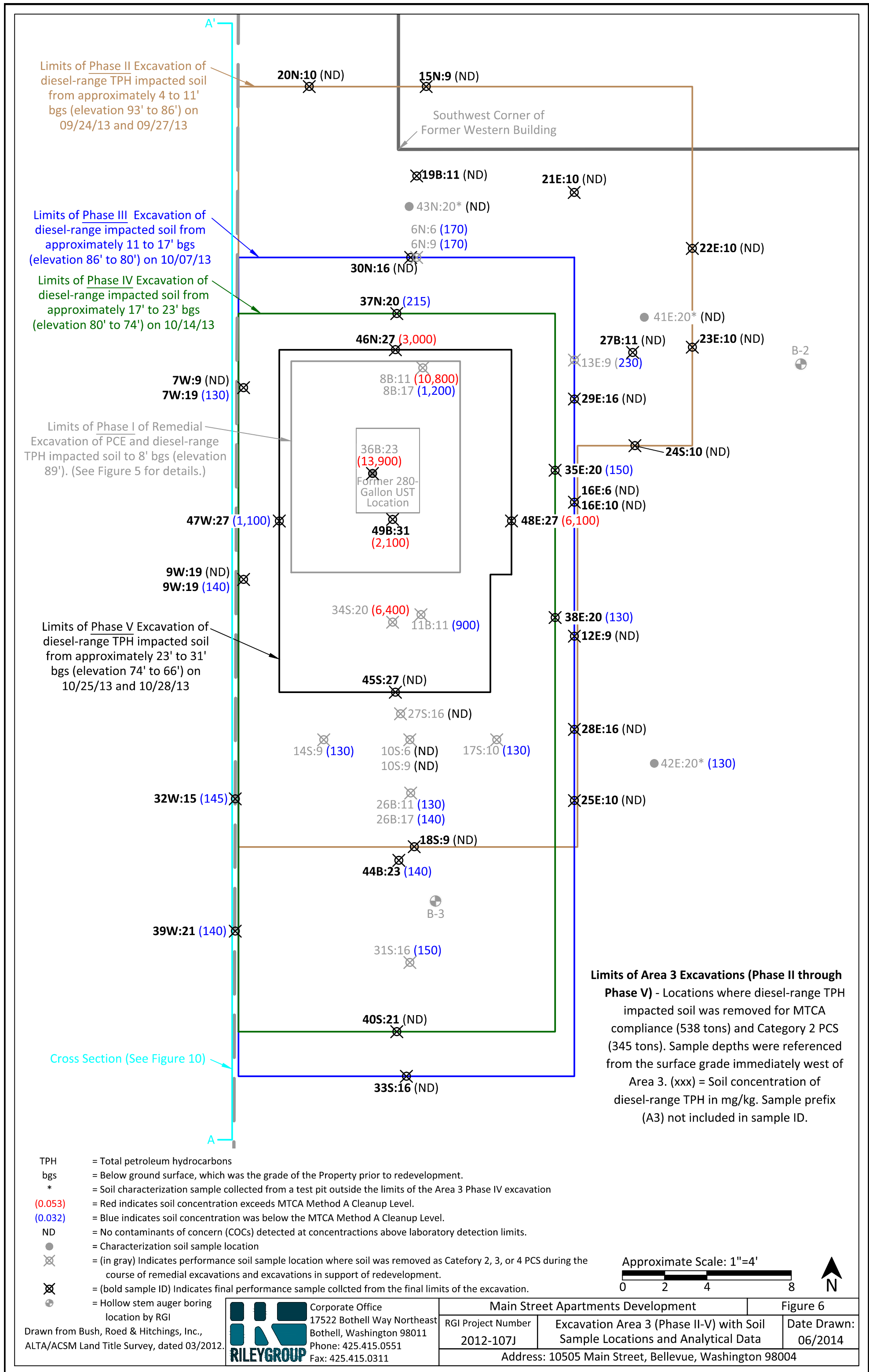
RGI Project Number  
2012-107J

Remedial Excavation Area 3 with Extent of PCE  
Impacted Soil, Sample Locations, and Analytical Data

Figure 5

Date Drawn:  
06/2014

Address: 10505 Main Street, Bellevue, Washington 98004



Limits of Phase II Excavation of diesel-range TPH impacted soil from approximately 4 to 11' bgs (elevation 93' to 86') on 09/24/13 and 09/27/13

Limits of Phase III Excavation of diesel-range impacted soil from approximately 11 to 17' bgs (elevation 86' to 80') on 10/07/13

Limits of Phase IV Excavation of diesel-range impacted soil from approximately 17' to 23' bgs (elevation 80' to 74') on 10/14/13

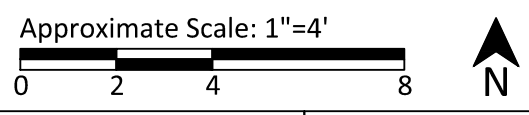
Limits of Phase I of Remedial Excavation of PCE and diesel-range TPH impacted soil to 8' bgs (elevation 89'). (See Figure 5 for details.)

Limits of Phase V Excavation of diesel-range TPH impacted soil from approximately 23' to 31' bgs (elevation 74' to 66') on 10/25/13 and 10/28/13

Cross Section (See Figure 10)

- TPH = Total petroleum hydrocarbons
- bgs = Below ground surface, which was the grade of the Property prior to redevelopment.
- \* = Soil characterization sample collected from a test pit outside the limits of the Area 3 Phase IV excavation
- (0.053) = Red indicates soil concentration exceeds MTCA Method A Cleanup Level.
- (0.032) = Blue indicates soil concentration was below the MTCA Method A Cleanup Level.
- ND = No contaminants of concern (COCs) detected at concentrations above laboratory detection limits.
- = Characterization soil sample location
- ⊗ (in gray) = Indicates performance soil sample location where soil was removed as Category 2, 3, or 4 PCS during the course of remedial excavations and excavations in support of redevelopment.
- ⊗ (bold sample ID) = Indicates final performance sample collected from the final limits of the excavation.
- ⊕ = Hollow stem auger boring location by RGI

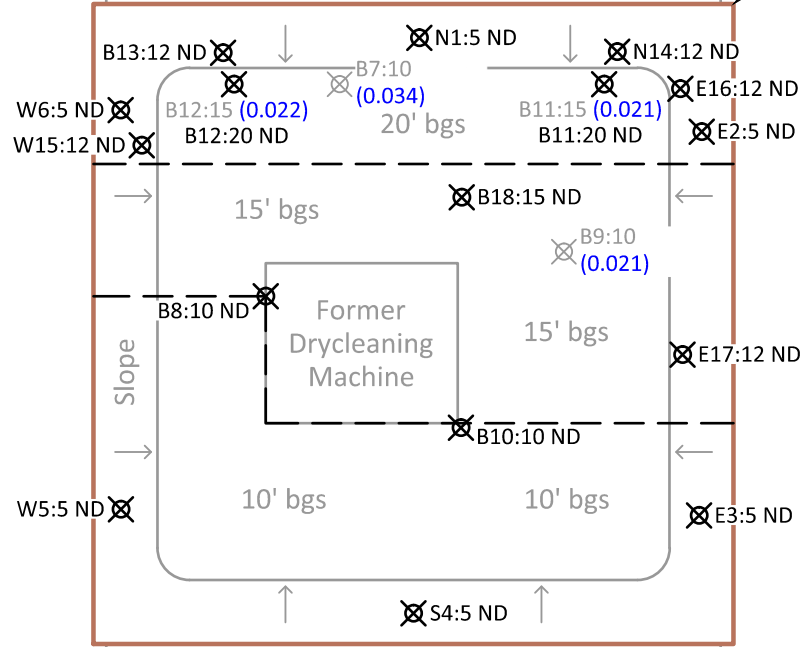
**Limits of Area 3 Excavations (Phase II through Phase V)** - Locations where diesel-range TPH impacted soil was removed for MTCA compliance (538 tons) and Category 2 PCS (345 tons). Sample depths were referenced from the surface grade immediately west of Area 3. (xxx) = Soil concentration of diesel-range TPH in mg/kg. Sample prefix (A3) not included in sample ID.



Former Ultra Custom Cleaners

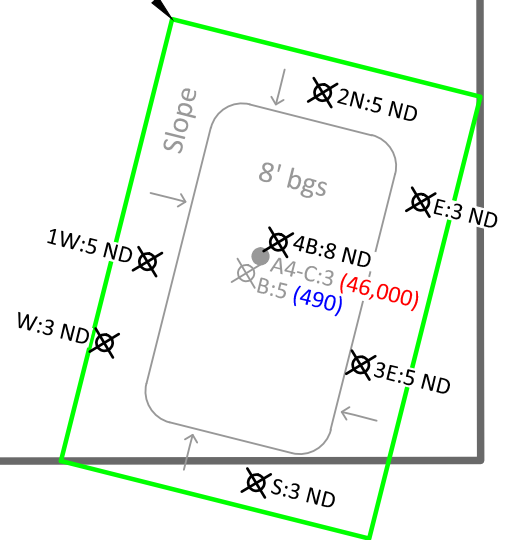
Former King and I Restaurant

**Limits of Area 1 - Redevelopment Excavation -** Area where PCE was detected in soil at concentrations below MTCA Method A Soil Cleanup Levels. Approximately 265 tons of Class 2 soils were removed from this area in support of redevelopment activities. (xxx) = Soil concentration of PCE in mg/kg. Sample prefix (A1) not included in sample ID.

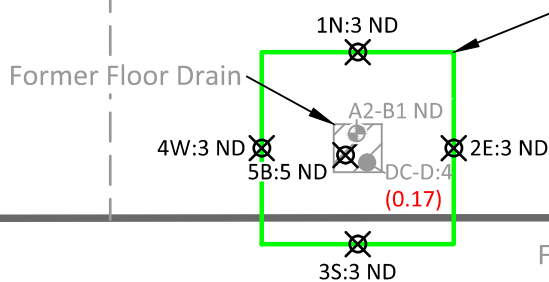


Former Eastern Wall of Western Building

**Limits of Area 4 - Remedial Excavation -** Area where oil-range TPH was encountered in soil at concentrations exceeding MTCA Method A Soil Cleanup Levels. Approximately 41 tons of oil-range TPH impacted soil was removed from this location for MTCA compliance. Excavation starting depth was 2 feet bgs. (xxx) = Soil concentration of oil-range TPH in mg/kg. Sample prefix (A4) not included in sample ID.

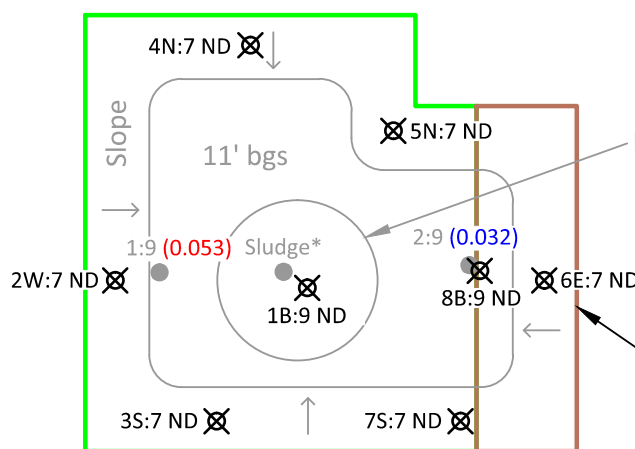


**Limits of Area 2 - Remedial Excavation -** Area where PCE was detected in soil at concentrations above MTCA Method A Soil Cleanup Levels beneath the location of a former floor drain. Approximately 7 tons of PCE impacted soils were removed from this location for MTCA compliance. (xxx) = Soil concentration of PCE in mg/kg. Sample prefix (A2) not included in sample ID.



Former Southern Wall of Western Building

Former Septic Tank Location



**Limits of Area 6 - Remedial Excavation -** Former 750-gallon septic tank location where PCE was detected in soil at concentrations above MTCA Method A Soil Cleanup Levels. Approximately 49 tons of PCE impacted soils and the septic tank and contents were removed from the eastern portion of the excavation for MTCA compliance. An additional 13 tons of Category 2 soils were removed in support of redevelopment activities. Sample depths were referenced from top of septic tank which was situated at approximately 2 feet bgs. Excavation starting depth was approximately 4 feet bgs. (xxx) = Soil concentration of PCE in mg/kg. Sample prefix (A6-EX) not included in sample ID.

- = Green boundary indicates excavation for MTCA compliance.
- = Brown boundary indicates excavation in support of redevelopment activities.
- bgs = Below ground surface, which was the grade of the Property prior to redevelopment.
- \* = Sludge sample was collected from inside septic tank. See Table 7 for analytical data.
- (0.053) = Red indicates soil concentration exceeds MTCA Method A Cleanup Level.
- (0.032) = Blue indicates soil concentration was below the MTCA Method A Cleanup Level.
- ND = No contaminants of concern (COCs) detected at concentrations above laboratory detection limits.
- = Soil Characterization sample
- ⊗ = Performance sample. Black indicates final performance sample.
- ⊕ = Hollow stem auger boring location by RGI
- = Slope
- ⊙ = Former monitoring well location
- ⊕ = Existing 4-inch groundwater monitoring well installed by RGI

Drawn from Bush, Roed & Hitchings, Inc., ALTA/ACSM Land Title Survey, dated 03/2012.

Approximate Scale: 1"=6'



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Main Street Apartments Development

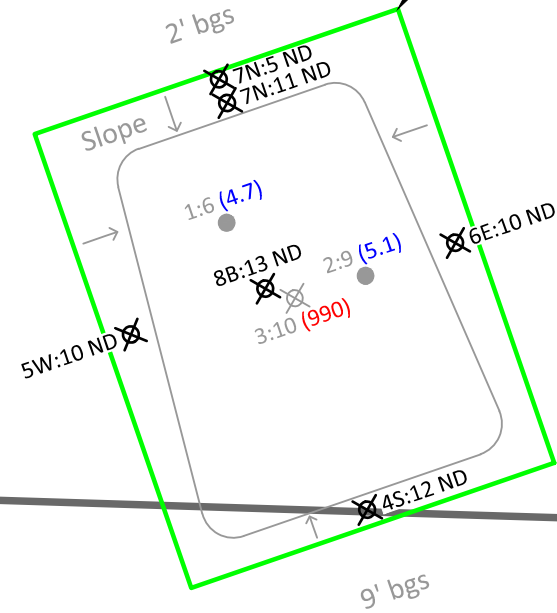
Figure 7

RGI Project Number 2012-107J	Excavation Areas 1, 2, 4, and 6 with Performance Soil Sample Locations and Analytical Data	Date Drawn: 06/2014
Address: 10505 Main Street, Bellevue, Washington 98004		

Former Pump Island Location.  
No gasoline-, diesel-, or oil-range TPH or BTEX was detected in soil at concentrations above the laboratory detection limit.

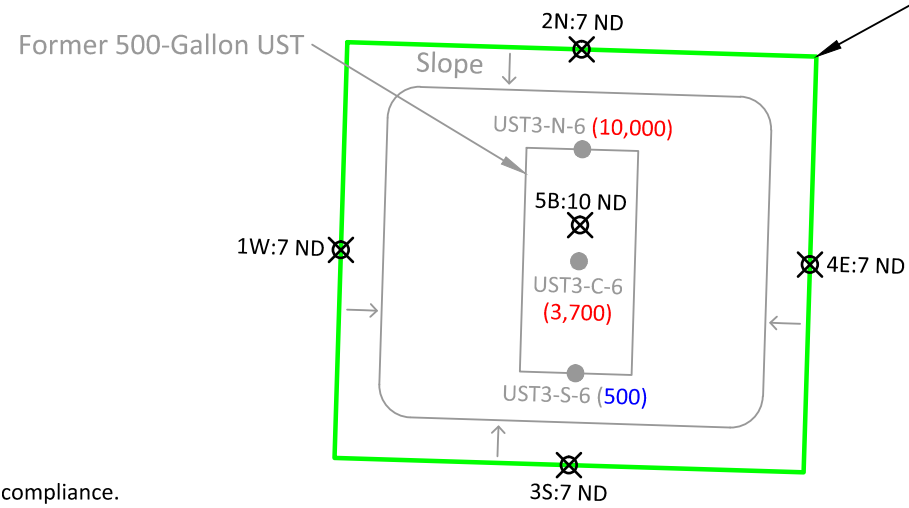


**Limits of Area 7 - Remedial Excavation** - Area where gasoline-range TPH was detected in soil at concentrations above MTCA Method A Soil Cleanup Levels in the vicinity of the former gasoline station. Approximately 73 tons of impacted soil was removed from the excavation for MTCA compliance. Sample depths were referenced from the surface grade on the eastern portion of the Property. The grade at the northern portion of the excavation was approximately 2' bgs and 9' bgs at the southern portion of the excavation (xxx) = Soil concentration of gasoline-range TPH in mg/kg. Sample prefix (A7) not included in sample ID.

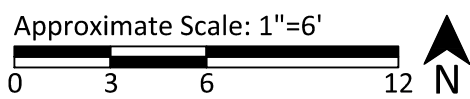


Former Northern Wall of Eastern Building

**Limits of Area 5 (UST3) - Remedial Excavation** - Area where oil-range TPH was detected in soil at concentrations above MTCA Method A Soil Cleanup Levels beneath a 500-gallon UST that was decommissioned on August 27, 2013. Approximately 103 tons of oil-range TPH impacted soil was removed from the excavation for MTCA compliance. Excavation depths were referenced from the surface grade on the northern portion of the Property. (xxx) = Soil concentration of oil-range TPH in mg/kg. Sample prefix (A5) not included in sample ID.



- = Green boundary indicates portion of excavation removed for MTCA compliance.
- bgs = Below ground surface, which was the grade of the Property prior to redevelopment.
- (10,000) = Red indicates soil concentration exceeds MTCA Method A Cleanup Level.
- (500) = Blue indicates soil concentration was below the MTCA Method A Cleanup Level.
- ND = No contaminants of concern (COCs) detected at concentrations above laboratory detection limits.
- = Soil Characterization sample
- ⊗ = Performance sample. Black indicates final performance sample.
- = Slope



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Main Street Apartments Development		Figure 8
RGI Project Number 2012-107J	Excavation Areas 5 and 7 with Soil Sample Locations and Analytical Data	Date Drawn: 06/2014
Address: 10505 Main Street, Bellevue, Washington 98004		

Drawn from Bush, Roed & Hitchings, Inc., ALTA/ACSM Land Title Survey, dated 03/2012.

MW-3					
Date	Depth	DSL	PCE	Other VOCs	
06/11/13	43.44'	ND	----	----	
05/14/12	50.51'	----	ND	Chloroform=0.24 1,1,1-Trichloroethane=0.40	

MW-4									
Date	Depth	Gas	B	T	E	X	DSL	PCE	Other VOCs
06/11/13	42.06'	800	17	62	15	90	220 x	----	----
05/22/13	43.51'	340	6	25	5.7	39	190	ND	ND

B-1A									
Date	Depth	Gas	B	T	E	X	Diesel	PCE	Other VOCs
09/03/13	43.5'	360	6.9	28	6.1	44	420	ND	ND

RW-2									
Date	Depth	Gas	B	T	E	X	DSL	PCE	Other VOCs
11/13/13	47.9'	ND	ND	3.7	ND	ND	180 x	ND	Chloroform = 26 2-Butanone = 170 Bromodichloromethane = 1.2 Acetone = 110

RW-1									
Date	Depth	Gas	B	T	E	X	DSL	PCE	Other HVOCs
11/13/13	49.1'	ND	ND	14	ND	ND	190 x	ND	Acetone = 770 2-Butanone = 1,100 Chloroform = 13

= Groundwater Analytical Results in Micrograms per Liter (ug/L)

Gas/DSL = Gasoline/Diesel Total Petroleum Hydrocarbons (TPH)

BTEX = Benzene, Toluene, Ethylbenzene, Xylenes

PCE = Tetrachloroethene

VOCs = Volatile Organic Compounds

ND = Not Detected Above Laboratory Detection Limits

---- = Not Analyzed

Depth = Approximate depth to water from surface grade prior to redevelopment.

Only data for locations where Contaminants of Concern (COCs) were detected above laboratory detection limits are displayed.

OP = Utility Pole Location

= Existing Groundwater Monitoring Well

= (in blue) Former Groundwater Monitoring Well Location.

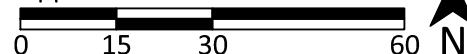
MW-3 and MW-4 were installed by RGI prior to redevelopment.

B-1A was a temporary monitoring well installed by RGI and decommissioned during redevelopment.

= (in gray) Former Catch Basin

= (in pink) Property Boundary

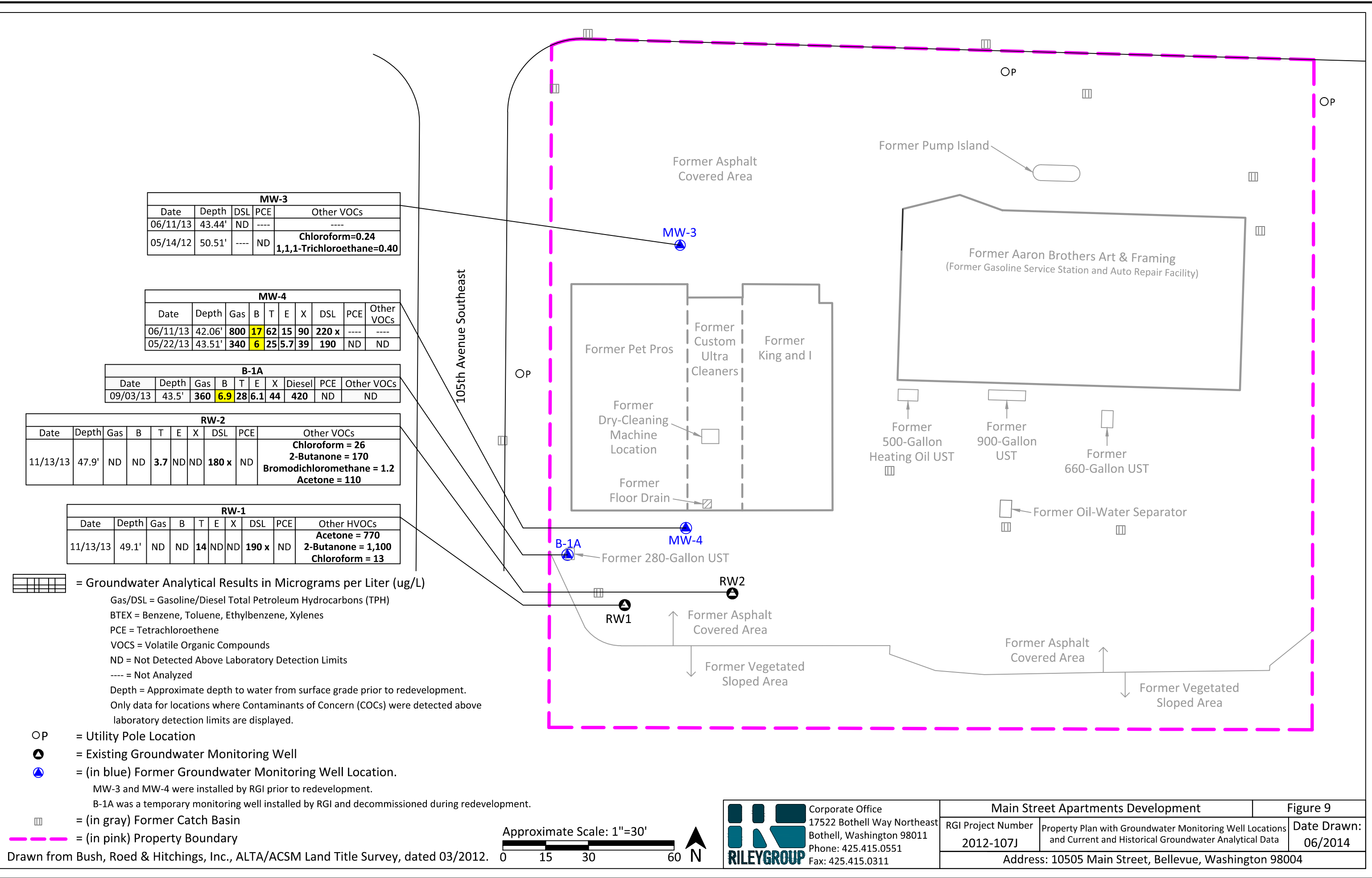
Approximate Scale: 1"=30'

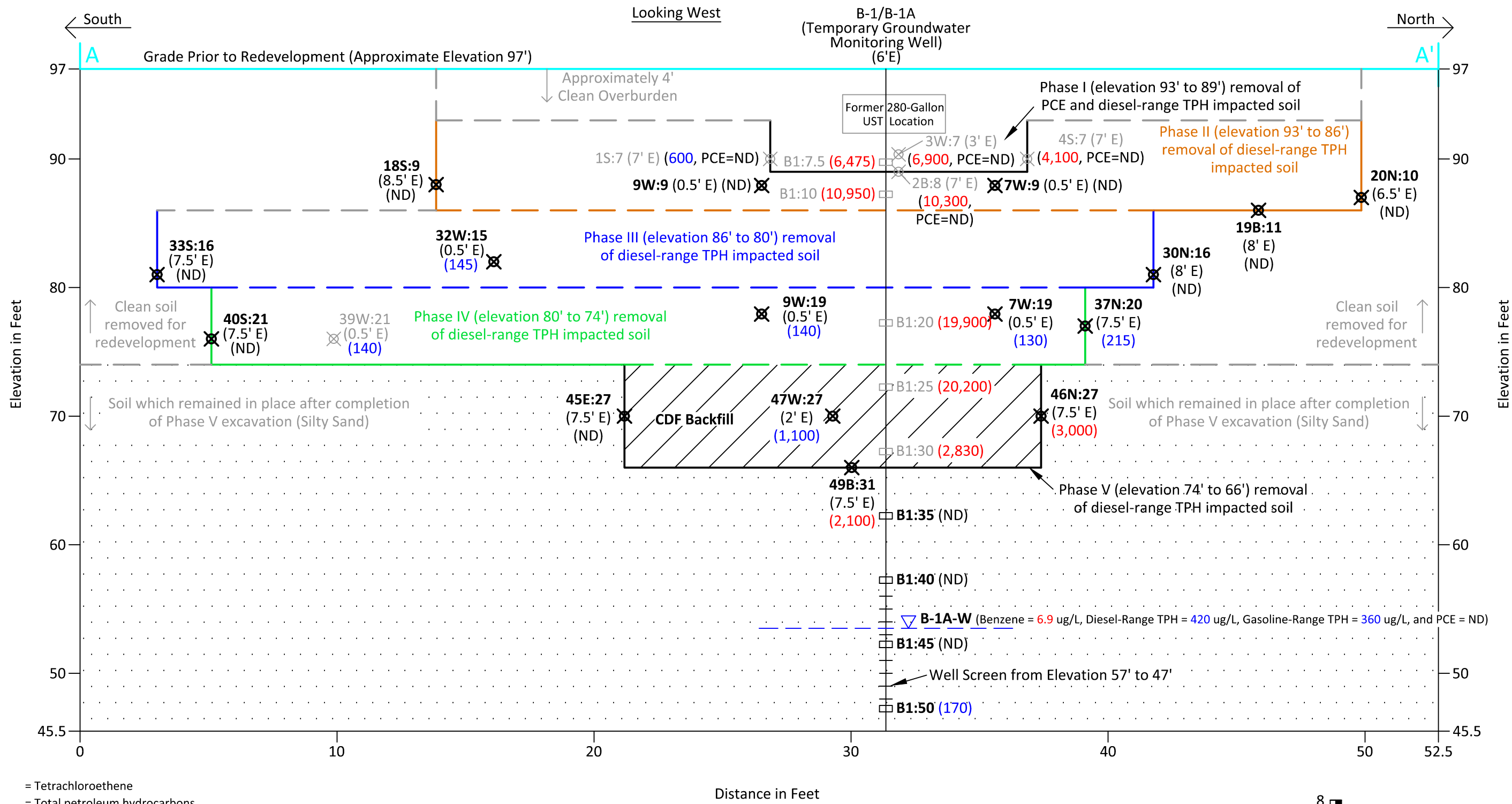


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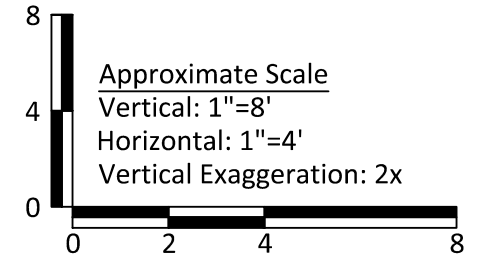
Main Street Apartments Development		Figure 9
RGI Project Number 2012-107J	Property Plan with Groundwater Monitoring Well Locations and Current and Historical Groundwater Analytical Data	Date Drawn: 06/2014
Address: 10505 Main Street, Bellevue, Washington 98004		

Drawn from Bush, Roed & Hitchings, Inc., ALTA/ACSM Land Title Survey, dated 03/2012.





PCE = Tetrachloroethene  
 TPH = Total petroleum hydrocarbons  
 (8.5' E) = Indicates distance (in feet) and direction sample was offset from cross section.  
 (2,100) = Unless otherwise indicated, diesel-range TPH concentration in milligrams per kilogram (mg/kg). For groundwater, concentrations of contaminants of concern (COCs) are displayed in micrograms per liter (ug/L)  
 Red indicates soil or groundwater concentration exceeds MTCA Method A Cleanup Level.  
 Blue indicates soil or groundwater concentration was below the MTCA Method A Cleanup Level.  
 ND = No contaminants of concern (COCs) detected at concentrations above laboratory detection limits.  
 ⊗ (in gray) = Indicates performance soil sample location where soil was removed as Category 2, 3, or 4 PCS during the course of remedial excavations and excavations in support of redevelopment.  
 ⊗ (bold sample ID) = Indicates final performance sample collected from the final limits of the excavation.  
 □ = Soil boring sample location. Gray indicates soil was removed during Area 3 excavation.  
 ▽ (in blue) = Depth to groundwater observed in temporary groundwater monitoring well B-1A on 09/03/13



	Corporate Office		Main Street Apartments Development		Figure 10
	17522 Bothell Way Northeast		RGI Project Number	Area 3 Cross Section A-A'	
	Bothell, Washington 98011		2012-107J	Date Drawn: 06/2014	
Phone: 425.415.0551		Address: 10505 Main Street, Bellevue, Washington 98004			
Fax: 425.415.0311					

**Table 1. Summary of UST, Pump Island, and Septic Drain Line Assessment Soil Sample Analytical Laboratory Results**

**Main Street Apartments Development  
10505 Main Street, Bellevue, Washington 98004  
The Riley Group, Inc. Project No. 2012-107J**

Sample Number	Sample Depth	Approximate Elevation (Feet)	Sample Date	Gas TPH	BTEX				Diesel TPH	Oil TPH	HCID			PCBs	Carcinogenic PAHs	Other PAHs	VC	TCE	PCE	trans-1,2-DCE	cis-1,2-DCE	1,1-DCE	Other VOCs	Lead
					B	T	E	X			Gasoline	Diesel	Heavy Oil											
<b>Pump Island</b>																								
PI-W-4	4	93	08/26/13	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	----	
PI-E-4	4	93	08/26/13	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	----	
PI-C-4	4	93	08/26/13	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	----	
PUST3-C	----	----	08/26/13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	
<b>UST1</b>																								
UST1-C-1	1	96	08/19/13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	
UST1-B:7	7	90	08/19/13	<b>98 x</b>	----	----	----	----	<b>21,000</b>	<b>1,100 x</b>	----	----	----	----	----	----	ND<0.05	ND<0.03	<b>0.28</b>	ND<0.05	ND<0.05	ND<0.05	ND	----
UST1-N:7	7	90	08/19/13	----	----	----	----	----	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	----	----
UST1-W:7	7	90	08/19/13	<b>180 x</b>	----	----	----	----	<b>13,000</b>	<b>650 x</b>	----	----	----	----	----	----	ND<0.05	ND<0.03	<b>0.36</b>	ND<0.05	ND<0.05	ND<0.05	ND	----
<b>UST2</b>																								
UST2-B7	7	90	08/20/13	----	----	----	----	----	ND<25	ND<40	----	----	----	----	----	----	----	----	----	----	----	----	----	----
UST2-E7	7	90	08/20/13	----	----	----	----	----	ND<25	ND<40	----	----	----	----	----	----	----	----	----	----	----	----	----	----
UST2-W7	7	90	08/20/13	----	----	----	----	----	ND<25	ND<40	----	----	----	----	----	----	----	----	----	----	----	----	----	----
<b>UST3</b>																								
UST3-N-6	6	91	08/27/13	<b>2</b>	ND<0.02	ND<0.02	ND<0.02	ND<0.06	<b>2,300 x</b>	<b>10,000</b>	----	----	----	----	----	----	----	----	----	----	----	----	----	----
UST3-S-6	6	91	08/27/13	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	<b>190 x</b>	<b>500</b>	----	----	----	----	----	----	----	----	----	----	----	----	----	----
UST3-C-6	6	91	08/27/13	ND<2	ND<0.03	ND<0.05	ND<0.05	ND<0.1	<b>1,800 x</b>	<b>3,700</b>	----	----	----	ND<0.1	ND<0.1	<b>Fluoranthene = 0.02</b>	ND<0.05	ND<0.03	ND<0.025	ND<0.05	ND<0.05	ND<0.05	ND	<b>1.95</b>
<b>UST4</b>																								
UST4-W-7	7	90	08/27/13	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	----	----
UST4-C-7	7	90	08/27/13	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	----	<b>34.2</b>
UST4-E-7	7	90	08/27/13	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	----	----
<b>UST5</b>																								
UST5-SP	----	----	09/03/13	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	----	<b>1.87</b>
UST5-W:5.5	5.5	91.5	09/03/13	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	----	----
UST5-S:5.5	5.5	91.5	09/03/13	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	----	----
UST5-B:6	6	91	09/03/13	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	----	----
<b>Septic Drain Line</b>																								
SP-W:5	----	----	09/03/13	----	ND<0.03	ND<0.05	ND<0.05	ND<0.1	----	----	ND<20	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
SP-E:5	5.5	91.5	09/03/13	----	ND<0.03	ND<0.05	ND<0.05	ND<0.1	----	----	ND<20	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
Soil Screening Levels	MTCA Method A Soil Cleanup Levels For Unrestricted Land Uses			100/30 <sup>1</sup>	0.03	7	6	9	2,000		100/30 <sup>1</sup>	2,000		1	0.1	----	NVE	0.03	0.05	NVE	NVE	NVE	Analyte Specific	250
	MTCA Method B Soil Cleanup Levels (Direct Contact)			----	----	----	----	----	----		----	----		----	----	Fluoranthene = 3,200 <sup>3</sup>	0.67 <sup>2</sup>	----	----	1,600 <sup>3</sup>	160 <sup>3</sup>	4,000 <sup>3</sup>	Analyte Specific	----

**Table 1. Summary of UST, Pump Island, and Septic Drain Line Assessment Soil Sample Analytical Laboratory Results**

**Main Street Apartments Development**

**10505 Main Street, Bellevue, Washington 98004**

**The Riley Group, Inc. Project No. 2012-107J**

Notes:

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).

Gasoline-range TPH (total petroleum hydrocarbons) determined using Ecology Test Method NWTPH Gx.

BTEX (benzene, toluene, ethylbenzene, and xylenes) determined using EPA Test Method 8021B or 8260C.

Diesel- and Oil- Range TPH (total petroleum hydrocarbons) determined using Ecology Test Method NWTPH Dx.

Gasoline, Diesel, and Oil HCID (Hydrocarbon Identification) determined using Ecology Test Method NWTPH-HCID.

PCBs (Polychlorinated Biphenyls) determined using EPA Test Method 8082A for Arcolor 1221, 1232, 1016, 1242, 1248, 1254, and 1260.

PAHs (Polynuclear Aromatic Hydrocarbons) determined using EPA Test Method 8270D SIM.

VC (vinyl chloride), TCE (trichloroethene), PCE (tetrachloroethene), trans-1,2-DCE (trans-1,2-dichloroethene), cis-1,2-DCE (cis-1,2-dichloroethene), and 1,1-DCE (1,2-dichloroethene) and other VOCs (volatile organic compounds) determined using EPA Test Method 8260C.

Total lead determined using EPA Method 200.8.

ND = Not detected above noted analytical detection limit.

NVE = No value established.

---- = Not analyzed or not applicable.

<sup>1</sup> 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.

<sup>2</sup> Indicates that the MTCA Method B carcinogenic value was referenced.

<sup>3</sup> Indicates that the MTCA Method B non-carcinogenic value was referenced.

Ecology Model Toxics Control Act Method A Soil Cleanup Levels for Unrestricted Land Uses (WAC 173-340-900, Table 740-1).

**Bold** results indicated concentrations above laboratory detection limits.

**Bold and yellow highlighted** results indicate concentrations (if any) that exceed the applicable soil screening level.



**Table 2. Summary of Soil Sample Analytical Laboratory Results For Area 1 Redevelopment Excavation  
Main Street Apartments Development  
10505 Main Street, Bellevue, Washington 98004  
The Riley Group, Inc. Project No. 2012-107J**

Sample Number	Sample Depth (bgs)	Approximate Elevation (feet)	Sample Date	VC	TCE	PCE	trans-1,2-DCE	cis-1,2-DCE	1,1-DCE
<b>Pre-Redevelopment Soil Characterization Samples</b>									
P-18:1*	1	96	07/09/13	ND<0.01	ND<0.01	ND<0.01	ND<0.01	ND<0.01	ND<0.01
P-18:3*	3	94	07/09/13	ND<0.01	ND<0.01	ND<0.01	ND<0.01	ND<0.01	ND<0.01
P-18:5.5*	5.5	92	07/09/13	ND<0.01	ND<0.01	ND<0.01	ND<0.01	ND<0.01	ND<0.01
P-19:2*	2	95	07/09/13	ND<0.01	ND<0.01	<b>0.014</b>	ND<0.01	ND<0.01	ND<0.01
P-19:5*	5	92	07/09/13	ND<0.01	ND<0.01	ND<0.01	ND<0.01	ND<0.01	ND<0.01
P-19:8*	8	89	07/09/13	ND<0.01	ND<0.01	ND<0.01	ND<0.01	ND<0.01	ND<0.01
P-20:2*	2	95	07/09/13	ND<0.01	ND<0.01	<b>0.016</b>	ND<0.01	ND<0.01	ND<0.01
P-20:5*	5	92	07/09/13	ND<0.01	ND<0.01	ND<0.01	ND<0.01	ND<0.01	ND<0.01
P-20:8*	8	89	07/09/13	ND<0.01	ND<0.01	0.023	ND<0.01	ND<0.01	ND<0.01
<b>Redevelopment Excavation Soil Samples</b>									
DC-N1:5	5	92	08/20/13	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05
DC-E2:5	5	92	08/20/13	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05
DC-E3:5	5	92	08/20/13	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05
DC-S4:5	5	92	08/20/13	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05
DC-W5:5	5	92	08/20/13	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05
DC-W6:5	5	92	08/20/13	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05
DC-B7:10	10	87	08/20/13	ND<0.02	ND<0.03	<b>0.034</b>	ND<0.02	ND<0.02	ND<0.05
DC-B8:10	10	87	08/20/13	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05
DC-B9:10	10	87	08/20/13	ND<0.02	ND<0.03	<b>0.021</b>	ND<0.02	ND<0.02	ND<0.05
DC-B10:10	10	87	08/20/13	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05
DC-B11:15	15	82	08/20/13	ND<0.02	ND<0.03	<b>0.021</b>	ND<0.02	ND<0.02	ND<0.05
DC-B11:20	20	77	08/20/13	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05
DC-B12:15	15	82	08/20/13	ND<0.02	ND<0.03	<b>0.022</b>	ND<0.02	ND<0.02	ND<0.05
DC-B12:20	20	77	08/20/13	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05
DC-N13:12	12	85	08/21/13	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05
DC-N14:12	12	85	08/21/13	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05
DC-W15:12	12	85	08/21/13	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05
DC-E16:12	12	85	08/21/13	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05
DC-E17:12	12	85	08/21/13	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05
DC-B18:15	15	85	08/21/13	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05
Soil Screening Levels	MTCA Method A Soil Cleanup Levels For Unrestricted Land Uses			NVE	0.03	0.05	NVE	NVE	NVE
	MTCA Method B Soil Cleanup Levels (Direct Contact)			0.67 <sup>1</sup>	12	480	1,600 <sup>2</sup>	160 <sup>2</sup>	4,000 <sup>2</sup>

**Table 2. Summary of Soil Sample Analytical Laboratory Results For Area 1 Redevelopment Excavation  
Main Street Apartments Development  
10505 Main Street, Bellevue, Washington 98004  
The Riley Group, Inc. Project No. 2012-107J**

Notes:

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).

VC (vinyl chloride), TCE (trichloroethene), PCE (tetrachloroethene), trans-1,2-DCE (trans-1,2-dichloroethene), cis-1,2-DCE (cis-1,2-dichloroethene), and 1,1-DCE (1,1-dichloroethene) determined using EPA's Test Method 8260C and 8021B.

ND = Not detected above noted analytical detection limit.

NVE = No value established.

---- = Not analyzed or not applicable.

<sup>1</sup> Indicates that the MTCA Method B carcinogenic value was referenced.

<sup>2</sup> Indicates that the MTCA Method B noncarcinogenic value was referenced.

\*Sample collected during RGI's 2012 Phase II Investigation.

Ecology Model Toxics Control Act Method A Soil Cleanup Levels for Unrestricted Land Uses (WAC 173-340-900, Table 740-1).

**Bold** results indicated concentrations above laboratory detection limits.

**Bold and yellow highlighted** results indicate concentrations (if any) that exceed the applicable soil screening level.

**Table 3. Summary of Soil Sample Analytical Laboratory Results For Area 2 Remedial Excavation  
Main Street Apartments Development  
10505 Main Street, Bellevue, Washington 98004  
The Riley Group, Inc. Project No. 2012-107J**

Sample Number	Sample Depth (bgs)	Elevation (feet)	Sample Date	Final Performance Sample (Status)	VC	TCE	PCE	trans-1,2-DCE	cis-1,2-DCE	1,1-DCE	Other VOCs
<b>Soil Characterization Samples</b>											
DC-D:4**	4	93	08/19/13	No (Excavated)	ND<0.05	ND<0.03	<b>0.17</b>	ND<0.05	ND<0.05	ND<0.05	ND
A2-B1:10	10	87	09/03/13	No (Excavated*)	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
A2-B1:15	15	82	09/03/13	No (Excavated*)	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
A2-B1:20	20	77	09/03/13	No (In-Situ)	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
A2-B2:5	5	92	09/03/13	No (Excavated*)	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
A2-B2:10	10	87	09/03/13	No (Excavated*)	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
A2-B2:15	15	82	09/03/13	No (Excavated*)	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
A2-B2:20	20	77	09/03/13	No (In-Situ)	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
A2-B3:5	5	92	09/03/13	No (Excavated*)	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
A2-B3:10	10	87	09/03/13	No (Excavated*)	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
A2-B3:15	15	82	09/03/13	No (Excavated*)	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
A2-B3:20	20	77	09/03/13	No (In-Situ)	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
<b>Remedial Excavation Performance Soil Samples</b>											
A2-5B:5	5	92	09/11/13	Yes (Excavated*)	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
A2-1N:3	3	94	09/11/13	Yes (Excavated*)	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
A2-2E:3	3	94	09/11/13	Yes (Excavated*)	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
A2-3S:3	3	94	09/11/13	Yes (Excavated*)	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
A2-4W:3	3	94	09/11/13	Yes (Excavated*)	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
Soil Screening Levels	MTCA Method A Soil Cleanup Levels For Unrestricted Land Uses				NVE	0.03	0.05	NVE	NVE	NVE	Analyte Specific
	MTCA Method B Soil Cleanup Levels (Direct Contact)				0.67 <sup>1</sup>	12	480	1,600 <sup>2</sup>	160 <sup>2</sup>	4,000 <sup>2</sup>	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).

VC (vinyl chloride), TCE (trichloroethene), PCE (tetrachloroethene), trans-1,2-DCE (trans-1,2-dichloroethene), cis-1,2-DCE (cis-1,2-dichloroethene), and 1,1-DCE (1,1-dichloroethene) and other VOCs (volatile organic compounds) determined using EPA Test Methods 8260C and 8021B.

ND = Not detected above noted analytical detection limit.

NVE = No value established.

<sup>1</sup> Indicates that the MTCA Method B carcinogenic value was referenced.

<sup>2</sup> Indicates that the MTCA Method B non-carcinogenic value was referenced.

\* Soil was excavated as part of routine mass excavation activities and was not disposed of as contaminated soil.

\*\*Sample collected from track hoe bucket at approximately 3 feet bgs. All other soil characterization samples were collected during drilling.

Ecology Model Toxics Control Act Method A Soil Cleanup Levels for Unrestricted Land Uses (WAC 173-340-900, Table 740-1).

**Bold** results indicated concentrations above laboratory detection limits.

**Bold and yellow highlighted** results indicate concentrations (if any) that exceed the applicable soil screening level.

**Table 4. Summary of Soil Sample Analytical Laboratory Results For Area 3 (UST1) Remedial Excavation**

**Main Street Apartments Development  
10505 Main Street, Bellevue, Washington 98004  
The Riley Group, Inc. Project No. 2012-107J**

Sample Number <sup>7</sup>	Sample Depth (bgs)	Approximate Elevation (feet)	Sample Date	Final Performance Sample (Status)	Gas TPH	Diesel TPH	Oil TPH	Diesel TPH	Oil TPH	Total Naphthalenes <sup>3</sup>	VC	TCE	PCE	trans-1,2-DCE	cis-1,2-DCE	1,1-DCE	Other VOCs
						W/O Silica Gel		With Silica Gel									
<b>UST Assessment and Soil Characterization Samples</b>																	
UST1-C-1	1	96	08/19/13	No (Excavated)	---	---	---	---	---	---	---	---	---	---	---	---	---
UST1-B:7	7	90	08/19/13	No (Excavated)	98 x	---	---	21,000	1,100 x	ND<0.05 <sup>4</sup>	ND<0.05	ND<0.03	0.28	ND<0.05	ND<0.05	ND<0.05	ND
UST1-N:7	7	90	08/19/13	No (Excavated)	---	---	---	ND<50	ND<250	---	---	---	---	---	---	---	---
UST1-W:7	7	90	08/19/13	No (Excavated)	180 x	---	---	13,000	650 x	ND<0.05 <sup>4</sup>	ND<0.05	ND<0.03	0.36	ND<0.05	ND<0.05	ND<0.05	ND
UST1-CDF <sup>4</sup>	---	---	08/21/13	No (Excavated)	13	640	ND<100	---	---	---	ND<0.02	ND<0.03	0.037	ND<0.02	ND<0.02	ND<0.05	---
UST1-B1:2.5	2.5	94.5	08/24/13	No (Excavated)	---	---	---	---	---	---	---	---	---	---	---	---	---
UST1-B1:7.5	7.5	89.5	08/24/13	No (Excavated)	---	6,470	ND<100	---	---	---	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	---
UST1-B1:10	10	87	08/24/13	No (Excavated)	---	10,950	ND<100	---	---	---	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	---
UST1-B1:12.5	12.5	84.5	08/24/13	No (Excavated)	---	---	---	---	---	---	---	---	---	---	---	---	---
UST1-B1:15	15	82	08/24/13	No (Excavated)	---	---	---	---	---	---	---	---	---	---	---	---	---
UST1-B1:17.5	17.5	79.5	08/24/13	No (Excavated)	---	---	---	---	---	---	---	---	---	---	---	---	---
UST1-B1:20	20	77	08/24/13	No (Excavated)	---	19,900	ND<100	---	---	---	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	---
UST1-B1:22.5	22.5	74.5	08/24/13	No (Excavated)	---	---	---	---	---	---	---	---	---	---	---	---	---
UST1-B1:25	25	72	08/24/13	No (Excavated)	---	20,200	ND<100	---	---	---	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	---
UST1-B1A:30	30	67	09/03/13	No (Excavated)	---	2,830	ND<100	---	---	---	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	---
UST1-B1A:35	35	62	09/03/13	No (In-Situ)	---	ND<25	ND<100	---	---	---	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	---
UST1-B1A:40	40	57	09/03/13	No (In-Situ)	---	ND<25	ND<100	---	---	---	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	---
UST1-B1A:45	45	52	09/03/13	No (In-Situ)	---	ND<25	ND<100	---	---	---	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	---
UST1-B1A:50	50	47	09/03/13	No (In-Situ)	---	100	ND<100	170	ND<100	---	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	---
UST1-B2:2.5	2.5	94.5	08/24/13	No (Excavated)	---	---	---	---	---	---	---	---	---	---	---	---	---
UST1-B2:5	5	92	08/24/13	No (Excavated)	---	ND<25	ND<100	---	---	---	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	---
UST1-B2:7.5	7.5	89.5	08/24/13	No (Excavated)	---	---	---	---	---	---	---	---	---	---	---	---	---
UST1-B2:10	10	87	08/24/13	No (Excavated)	---	ND<25	ND<100	---	---	---	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	---
UST1-B2:12.5	12.5	84.5	08/24/13	No (Excavated)	---	---	---	---	---	---	---	---	---	---	---	---	---
UST1-B2:15	15	82	08/24/13	No (Excavated)	---	ND<25	ND<100	---	---	---	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	---
UST1-B2:17.5	17.5	79.5	08/24/13	No (Excavated)	---	---	---	---	---	---	---	---	---	---	---	---	---
UST1-B2:20	20	77	08/24/13	No (In-Situ)	---	ND<25	ND<100	---	---	---	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	---
UST1-B2:22.5	22.5	74.5	08/24/13	No (In-Situ)	---	---	---	---	---	---	---	---	---	---	---	---	---
UST1-B2:25	25	72	08/24/13	No (In-Situ)	---	---	---	---	---	---	---	---	---	---	---	---	---
Soil Screening Levels	MTCA Method A Soil Cleanup Levels For Unrestricted Land Uses				100/30 <sup>1</sup>	2,000		2,000		5	NVE	0.03	0.05	NVE	NVE	NVE	Analyte Specific
	MTCA Method B Soil Cleanup Levels (Direct Contact)				---	---		---		1,600 <sup>2</sup>	0.67 <sup>1</sup>	12	480	1,600 <sup>2</sup>	160 <sup>2</sup>	4,000 <sup>2</sup>	Analyte Specific
Category 1 Soil Ranges <sup>5</sup>					<5	<25	<25	<25	<25	<0.05	---	---	---	---	---	---	---
Category 2 Soil Ranges <sup>5</sup>					5 to 30	25 to 200	25 to 200 <sup>6</sup>	25 to 200	25 to 200 <sup>6</sup>	0.05 to 5	---	---	---	---	---	---	---
Category 3 Soil Ranges <sup>5</sup>					30 to 100	200 to 500	200 to 500	200 to 500	200 to 500	5 or less	---	---	---	---	---	---	---
Category 4 Soil Ranges <sup>5</sup>					>100	>500	>500	>500	>500	>5	---	---	---	---	---	---	---

**Table 4 Continued. Summary of Soil Sample Analytical Laboratory Results For Area 3 (UST1) Remedial Excavation**  
**Main Street Apartments Development**  
**10505 Main Street, Bellevue, Washington 98004**  
**The Riley Group, Inc. Project No. 2012-107J**

Sample Number <sup>7</sup>	Sample Depth (bgs)	Approximate Elevation (feet)	Sample Date	Final Performance Sample (Status)	Gas TPH	Diesel TPH	Oil TPH	Diesel TPH	Oil TPH	Total Naphthalenes <sup>3</sup>	VC	TCE	PCE	trans-1,2-DCE	cis-1,2-DCE	1,1-DCE	Other VOCs
						W/O Silica Gel		With Silica Gel									
UST1-B3:2.5	2.5	94.5	08/24/13	No (Excavated)	----	----	----	----	----	----	----	----	----	----	----	----	----
UST1-B3:5	5	92	08/24/13	No (Excavated)	----	ND<25	ND<100	----	----	----	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
UST1-B3:7.5	7.5	89.5	08/24/13	No (Excavated)	----	----	----	----	----	----	----	----	----	----	----	----	----
UST1-B3:10	10	87	08/24/13	No (Excavated)	----	ND<25	ND<100	----	----	----	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
UST1-B3:12.5	12.5	84.5	08/24/13	No (Excavated)	----	<b>90</b>	ND<100	<b>110</b>	ND<100	----	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
UST1-B3:15	15	82	08/24/13	No (Excavated)	----	<b>110</b>	----	<b>100</b>	ND<100	----	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
UST1-B3:17.5	17.5	79.5	08/24/13	No (Excavated)	----	----	----	----	----	----	----	----	----	----	----	----	----
UST1-B3:20	20	77	08/24/13	No (In-Situ)	----	----	----	----	----	----	----	----	----	----	----	----	----
UST1-B3:22.5	22.5	74.5	08/24/13	No (In-Situ)	----	----	----	----	----	----	----	----	----	----	----	----	----
UST1-B3:25	25	72	08/24/13	No (In-Situ)	----	<b>92</b>	ND<100	<b>90</b>	ND<100	----	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
UST1-B4:2.5	2.5	94.5	08/24/13	No (Excavated)	----	----	----	----	----	----	----	----	----	----	----	----	----
UST1-B4:5	5	92	08/24/13	No (Excavated)	----	<b>89</b>	ND<100	ND<25	ND<100	----	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
UST1-B4:7.5	7.5	89.5	08/24/13	No (Excavated)	----	----	----	----	----	----	----	----	----	----	----	----	----
UST1-B4:10	10	87	08/24/13	No (Excavated)	----	<b>122</b>	ND<100	ND<25	ND<100	----	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
UST1-B4:12.5	12.5	84.5	08/24/13	No (Excavated)	----	----	----	----	----	----	----	----	----	----	----	----	----
UST1-B4:15	15	82	08/24/13	No (Excavated)	----	ND<25	ND<100	----	----	----	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
UST1-B4:17.5	17.5	79.5	08/24/13	No (Excavated)	----	----	----	----	----	----	----	----	----	----	----	----	----
UST1-B4:20	20	77	08/24/13	No (In-Situ)	----	ND<25	ND<100	----	----	----	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
UST1-B4:22.5	22.5	74.5	08/24/13	No (In-Situ)	----	----	----	----	----	----	----	----	----	----	----	----	----
UST1-B4:25	25	72	08/24/13	No (In-Situ)	----	----	----	----	----	----	----	----	----	----	----	----	----
<b>Phase I Remedial Excavation Performance Soil Samples</b>																	
A3-1S:7.0	7	90	09/11/13	No (Excavated)	----	<b>600</b>	ND<100	----	----	----	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
A3-2B:8	8	89	09/11/13	No (Excavated)	----	<b>10,300</b>	ND<100	----	----	----	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
A3-3W:7.0	7	90	09/11/13	No (Excavated)	----	<b>6,900</b>	ND<100	----	----	----	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
A3-4N:7	7	90	09/11/13	No (Excavated)	----	<b>4,100</b>	ND<100	----	----	----	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
A3-5E:7.0	7	90	09/11/13	No (Excavated)	----	<b>7,800</b>	ND<100	----	----	----	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----
Soil Screening Levels	MTCA Method A Soil Cleanup Levels For Unrestricted Land Uses				100/30 <sup>1</sup>	2,000		2,000		5	NVE	0.03	0.05	NVE	NVE	NVE	Analyte Specific
	MTCA Method B Soil Cleanup Levels (Direct Contact)				----	----		----		1,600 <sup>2</sup>	0.67 <sup>1</sup>	12	480	1,600 <sup>2</sup>	160 <sup>2</sup>	4,000 <sup>2</sup>	Analyte Specific
Category 1 Soil Ranges <sup>5</sup>					<5	<25	<25	<25	<25	<0.05	----	----	----	----	----	----	----
Category 2 Soil Ranges <sup>5</sup>					5 to 30	25 to 200	25 to 200 <sup>6</sup>	25 to 200	25 to 200 <sup>6</sup>	0.05 to 5	----	----	----	----	----	----	----
Category 3 Soil Ranges <sup>5</sup>					30 to 100	200 to 500	200 to 500	200 to 500	200 to 500	5 or less	----	----	----	----	----	----	----
Category 4 Soil Ranges <sup>5</sup>					>100	>500	>500	>500	>500	>5	----	----	----	----	----	----	----

**Table 4 Continued. Summary of Soil Sample Analytical Laboratory Results For Area 3 (UST1) Remedial Excavation**  
**Main Street Apartments Development**  
**10505 Main Street, Bellevue, Washington 98004**  
**The Riley Group, Inc. Project No. 2012-107J**

Sample Number <sup>7</sup>	Sample Depth (bgs)	Approximate Elevation (feet)	Sample Date	Final Performance Sample (Status)	Gas TPH	Diesel TPH	Oil TPH	Diesel TPH	Oil TPH	Total Naphthalenes <sup>3</sup>	VC	TCE	PCE	trans-1,2-DCE	cis-1,2-DCE	1,1-DCE	Other VOCs
						W/O Silica Gel		With Silica Gel									
<b>Phase II Remedial Excavation Performance Soil Samples</b>																	
A3-6N:6	6	91	09/24/13	No (Excavated)	----	170	ND<100	----	----	----	----	----	----	----	----	----	----
A3-6N:9	9	88	09/24/13	No (Excavated)	----	170	ND<100	----	----	----	----	----	----	----	----	----	----
A3-7W:9	9	88	09/24/13	Yes (In-Situ)	----	ND<25	ND<100	----	----	----	----	----	----	----	----	----	----
A3-8B:11	11	86	09/24/13	No (Excavated)	----	10,800	ND<100	----	----	----	----	----	----	----	----	----	----
A3-9W:9	9	88	09/24/13	Yes (In-Situ)	----	ND<25	ND<100	----	----	----	----	----	----	----	----	----	----
A3-10S:6	6	91	09/24/13	No (Excavated)	----	ND<25	ND<100	----	----	----	----	----	----	----	----	----	----
A3-10S:9	9	88	09/24/13	No (Excavated)	----	ND<25	ND<100	----	----	----	----	----	----	----	----	----	----
A3-11B:11	11	86	09/24/13	No (Excavated)	----	900	ND<100	----	----	----	----	----	----	----	----	----	----
A3-12E:9	9	88	09/24/13	Yes (Excavated*)	----	ND<25	ND<100	----	----	----	----	----	----	----	----	----	----
A3-13E:9	9	88	09/24/13	No (Excavated)	----	230	ND<100	----	----	----	----	----	----	----	----	----	----
A3-14S:9	9	88	09/24/13	No (Excavated)	----	130	ND<100	----	----	----	----	----	----	----	----	----	----
A3-15N:9	9	88	09/24/13	Yes (Excavated*)	----	ND<25	ND<100	----	----	----	----	----	----	----	----	----	----
A3-16E:6	6	91	09/24/13	Yes (Excavated*)	----	ND<25	ND<100	----	----	----	----	----	----	----	----	----	----
A3-16E:10	10	87	09/24/13	Yes (Excavated*)	----	ND<25	ND<100	----	----	----	----	----	----	----	----	----	----
A3-17S:10	10	87	09/24/13	No (Excavated)	----	130	ND<100	----	----	----	----	----	----	----	----	----	----
A3-18S:9	9	88	09/24/13	Yes (Excavated*)	----	ND<25	ND<100	----	----	----	----	----	----	----	----	----	----
A3-19B:11	11	86	09/27/13	Yes (Excavated*)	----	ND<25	ND<100	----	----	----	----	----	----	----	----	----	----
A3-20N:10	10	87	09/27/13	Yes (Excavated*)	----	ND<25	ND<100	----	----	----	----	----	----	----	----	----	----
A3-21E:10	10	87	09/27/13	Yes (Excavated*)	----	ND<25	ND<100	----	----	----	----	----	----	----	----	----	----
A3-22E:10	10	87	09/27/13	Yes (Excavated*)	----	ND<25	ND<100	----	----	----	----	----	----	----	----	----	----
A3-23E:10	10	87	09/27/13	Yes (Excavated*)	----	ND<25	ND<100	----	----	----	----	----	----	----	----	----	----
A3-24S:10	10	87	09/27/13	Yes (Excavated*)	----	ND<25	ND<100	----	----	----	----	----	----	----	----	----	----
A3-25E:10	10	87	09/27/13	Yes (Excavated*)	----	ND<25	ND<100	----	----	----	----	----	----	----	----	----	----
A3-26B:11	11	86	09/27/13	No (Excavated)	----	130	ND<100	----	----	----	----	----	----	----	----	----	----
A3-27B:11	11	86	09/27/13	Yes (Excavated*)	----	ND<25	ND<100	----	----	----	----	----	----	----	----	----	----
<b>Phase III Remedial Excavation Performance Soil Samples</b>																	
A3-8B:17	17	80	10/07/13	No (Excavated)	----	1,200	ND<100	----	----	----	----	----	----	----	----	----	----
A3-26B:17	17	80	10/07/13	No (Excavated)	----	140	ND<100	----	----	----	----	----	----	----	----	----	----
Soil Screening Levels	MTCA Method A Soil Cleanup Levels For Unrestricted Land Uses				100/30 <sup>1</sup>	2,000		2,000		5	NVE	0.03	0.05	NVE	NVE	NVE	Analyte Specific
	MTCA Method B Soil Cleanup Levels (Direct Contact)				----	----		----		1,600 <sup>2</sup>	0.67 <sup>1</sup>	12	480	1,600 <sup>2</sup>	160 <sup>2</sup>	4,000 <sup>2</sup>	Analyte Specific
Category 1 Soil Ranges <sup>5</sup>					<5	<25	<25	<25	<25	<0.05	----	----	----	----	----	----	----
Category 2 Soil Ranges <sup>5</sup>					5 to 30	25 to 200	25 to 200 <sup>6</sup>	25 to 200	25 to 200 <sup>6</sup>	0.05 to 5	----	----	----	----	----	----	----
Category 3 Soil Ranges <sup>5</sup>					30 to 100	200 to 500	200 to 500	200 to 500	200 to 500	5 or less	----	----	----	----	----	----	----
Category 4 Soil Ranges <sup>5</sup>					>100	>500	>500	>500	>500	>5	----	----	----	----	----	----	----

**Table 4 Continued. Summary of Soil Sample Analytical Laboratory Results For Area 3 (UST1) Remedial Excavation**

**Main Street Apartments Development  
10505 Main Street, Bellevue, Washington 98004  
The Riley Group, Inc. Project No. 2012-107J**

Sample Number <sup>7</sup>	Sample Depth (bgs)	Approximate Elevation (feet)	Sample Date	Final Performance Sample (Status)	Gas TPH	Diesel TPH	Oil TPH	Diesel TPH	Oil TPH	Total Naphthalenes <sup>3</sup>	VC	TCE	PCE	trans-1,2-DCE	cis-1,2-DCE	1,1-DCE	Other VOCs
						W/O Silica Gel	With Silica Gel	With Silica Gel	With Silica Gel								
A3-27S:16	16	81	10/07/13	No (Excavated)	----	ND<25	ND<100	----	----	----	----	----	----	----	----	----	----
A3-28E:16	16	81	10/07/13	Yes (Excavated*)	----	ND<25	ND<100	----	----	----	----	----	----	----	----	----	----
A3-29E:16	16	81	10/07/13	Yes (Excavated*)	----	ND<25	ND<100	----	----	----	----	----	----	----	----	----	----
A3-30N:16	16	81	10/07/13	Yes (Excavated*)	----	ND<25	ND<100	----	----	----	----	----	----	----	----	----	----
A3-31S:16	16	81	10/07/13	No (Excavated)	----	150	ND<100	----	----	----	----	----	----	----	----	----	----
A3-32W-15	15	82	10/07/13	Yes (In-Situ)	----	145	ND<100	----	----	----	----	----	----	----	----	----	----
A3-33S-16	16	81	10/07/13	Yes (Excavated*)	----	ND<25	ND<100	----	----	----	----	----	----	----	----	----	----
<b>Phase IV Remedial Excavation Performance Soil Samples</b>																	
A3-7W:19	19	78	10/14/13	Yes (In-Situ)	----	130	ND<100	----	----	----	----	----	----	----	----	----	----
A3-9W:19	19	78	10/14/13	Yes (In-Situ)	----	140	ND<100	----	----	----	----	----	----	----	----	----	----
A3-34S:20	20	77	10/14/13	No (Excavated)	----	6,400	ND<100	----	----	22	----	----	----	----	----	----	Ethylbenzene = 0.12 Xylenes = 1.63
A3-35E:20	20	77	10/14/13	Yes (In-Situ)	----	150	ND<100	----	----	----	----	----	----	----	----	----	----
A3-36B:23	23	74	10/14/13	No (Excavated)	----	13,900	ND<100	----	----	55	----	----	----	----	----	----	Ethylbenzene = 0.11 Xylenes = 2.3
A3-37N:20	20	77	10/14/13	Yes (In-Situ)	----	215	ND<100	----	----	----	----	----	----	----	----	----	----
A3-38E:20	20	77	10/14/13	Yes (In-Situ)	----	130	ND<100	----	----	----	----	----	----	----	----	----	----
A3-39W:21	21	76	10/14/13	Yes (In-Situ)	----	140	ND<100	----	----	----	----	----	----	----	----	----	----
A3-40S:21	21	76	10/14/13	Yes (In-Situ)	----	ND<25	ND<100	----	----	----	----	----	----	----	----	----	----
A3-41E:20**	20	77	10/14/13	No (Excavated)	----	ND<25	ND<100	----	----	----	----	----	----	----	----	----	----
A3-42E:20**	20	77	10/14/13	No (Excavated)	----	130	ND<100	----	----	----	----	----	----	----	----	----	----
A3-43N:20**	20	77	10/14/13	No (Excavated)	----	ND<25	ND<100	----	----	----	----	----	----	----	----	----	----
A3-44B:23	23	74	10/14/13	Yes (In-Situ)	----	140	ND<100	----	----	----	----	----	----	----	----	----	----
<b>Phase V Remedial Excavation Performance Soil Samples</b>																	
A3-45S:27	27	70	10/25/13	Yes (In-Situ)	----	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----
A3-46N:27	27	70	10/25/13	Yes (In-Situ)	----	3,000	ND<100	----	----	----	----	----	----	----	----	----	----
A3-47W:27	27	70	10/28/13	Yes (In-Situ)	----	1,100	ND<250	----	----	2.83	----	----	----	----	----	----	----
A3-48E:27	27	70	10/28/13	Yes (In-Situ)	----	6,100	ND<250	----	----	----	----	----	----	----	----	----	----
A3-49B:31	31	66	10/28/13	Yes (In-Situ)	----	2,100	ND<250	----	----	----	----	----	----	----	----	----	----
Soil Screening Levels	MTCA Method A Soil Cleanup Levels For Unrestricted Land Uses				100/30 <sup>1</sup>	2,000		2,000		5	NVE	0.03	0.05	NVE	NVE	NVE	Ethylbenzene = 6 Xylenes = 9
	MTCA Method B Soil Cleanup Levels (Direct Contact)				----	----		----		1,600 <sup>2</sup>	0.67 <sup>1</sup>	12	480	1,600 <sup>2</sup>	160 <sup>2</sup>	4,000 <sup>2</sup>	Analyte Specific
Category 1 Soil Ranges <sup>5</sup>					<5	<25	<25	<25	<25	<0.05	----	----	----	----	----	----	----
Category 2 Soil Ranges <sup>5</sup>					5 to 30	25 to 200	25 to 200 <sup>6</sup>	25 to 200	25 to 200 <sup>6</sup>	0.05 to 5	----	----	----	----	----	----	----
Category 3 Soil Ranges <sup>5</sup>					30 to 100	200 to 500	200 to 500	200 to 500	200 to 500	5 or less	----	----	----	----	----	----	----
Category 4 Soil Ranges <sup>5</sup>					>100	>500	>500	>500	>500	>5	----	----	----	----	----	----	----

**Table 4 Continued. Summary of Soil Sample Analytical Laboratory Results For Area 3 (UST1) Remedial Excavation**

**Main Street Apartments Development  
10505 Main Street, Bellevue, Washington 98004  
The Riley Group, Inc. Project No. 2012-107J**

Notes:

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).

Gasoline-range TPH (total petroleum hydrocarbons) determined using Ecology Test Method NWTPH Gx.

Diesel- and Oil- Range TPH (total petroleum hydrocarbons) determined using Ecology Test Method NWTPH Dx.

VC (vinyl chloride), TCE (trichloroethene), PCE (tetrachloroethene), trans-1,2-DCE (trans-1,2-dichloroethene), cis-1,2-DCE (cis-1,2-dichloroethene), and 1,1-DCE (1,2-dichloroethene) and other VOCs (volatile organic compounds) determined using EPA Test Method 8021B or 8260C.

bgs = Below ground surface. The grade of the surface immediately west of Area 3 was referenced.

ND = Not detected above noted analytical detection limit.

NVE = No value established.

---- = Not analyzed or not applicable.

<sup>1</sup> Indicates that the MTCA Method B carcinogenic value was referenced.

<sup>2</sup> Indicates that the MTCA Method B non-carcinogenic value was referenced.

<sup>3</sup> Analyzed using EPA Test Method 8270 SIM unless otherwise indicated. Naphthalenes are factored into the TPH screening level calculation but are evaluated separately due to the fact that some mixtures of TPH may contain amounts of naphthalenes that did not match the assumptions used in the TPH calculations.

<sup>4</sup> Analyzed using EPA Test Method 8260C. Sample was collected from inside the bottom of the UST.

<sup>5</sup> Values obtained from Guidance for Remediation of Petroleum Contaminated Sites dated September, 2011 by Ecology.

<sup>6</sup> For heavy oils (diesel-range TPH in the C12-C34 range), the Category 1 range is <100 and the Category 2 range is 100-200. The remaining categories are the same. Does not include waste oil contaminated soils, which should be disposed of in a landfill.

<sup>7</sup> Shade color in sample number column indicates soil category designation.

\* Soil was excavated as part of routine mass excavation activities and was not disposed of as contaminated soil.

\*\* Test pit sample collected from outside the final limits of the Area 3 remedial excavation.

Soil samples collected from UST-B1 through UST1-B4 were collected during drilling. All other soil samples were collected from the track hoe bucket.

Ecology Model Toxics Control Act Method A Soil Cleanup Levels for Unrestricted Land Uses (WAC 173-340-900, Table 740-1).

**Bold** results indicated concentrations above laboratory detection limits.

**Bold and yellow highlighted** results indicate concentrations (if any) that exceed the applicable soil screening level.

**Bold and brown highlighted** sample indicates concentrations (if any) that deem soil a Category 2 petroleum contaminated soil.

**Bold and green highlighted** sample indicates concentrations (if any) that deem soil a Category 3 petroleum contaminated soil.

**Bold and blue highlighted** sample indicates concentrations (if any) that deem soil a Category 4 petroleum contaminated soil.



**Table 5. Summary of Soil Sample Analytical Laboratory Results For Area 4 Remedial Excavation**

**Main Street Apartments Development  
10505 Main Street, Bellevue, Washington 98004  
The Riley Group, Inc. Project No. 2012-107J**

Sample Number <sup>6</sup>	Sample Depth	Approximate Elevation (feet)	Sample Date	Final Performance Sample (Status)	Gas TPH	BTEX				Diesel TPH	Oil TPH	Diesel TPH	Oil TPH	Total Naphthalenes <sup>2</sup>	VOCs Included in TPH Screening Level Calculation <sup>3</sup>	Other VOCs
						B	T	E	X	W/O Silica Gel	With Silica Gel					
<b>Characterization Soil Sample</b>																
A4-C:3	3	94	08/22/13	No (Excavated)	34	ND<0.03	0.24	ND<0.05	ND<0.1	----	----	12,000 x	46,000	0.36	n-Propylbenzene = 0.052 1,3,5-Trimethylbenzene = 0.30 1,2,4-Trimethylbenzene = 0.64 sec-Butylbenzene = 0.052	2-Chlorotoluene = 0.63 4-Chlorotoluene = 0.11 Methylene chloride = 0.83 lc Tetrachloroethene = 0.031
<b>Remedial Excavation Soil Samples</b>																
A4-S:3	3	94	08/27/13	Yes (Excavated*)	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	ND<50	ND<250	----	----	----
A4-B:5	5	92	08/27/13	No (Excavated)	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	79 x	490	----	----	----
A4-W:3	3	94	08/27/13	Yes (Excavated*)	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	ND<50	ND<250	----	----	----
A4-E:3	3	94	08/27/13	Yes (Excavated*)	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	ND<50	ND<250	----	----	----
A4-1W:5	5	92	08/29/13	Yes (Excavated*)	ND<5	ND<0.01	ND<0.1	ND<0.1	ND<0.1	ND<25	ND<100	----	----	----	----	----
A4-2N:5	5	92	08/29/13	Yes (Excavated*)	ND<5	ND<0.01	ND<0.1	ND<0.1	ND<0.1	ND<25	ND<100	----	----	----	----	----
A4-3E:5	5	92	08/29/13	Yes (Excavated*)	ND<5	ND<0.01	ND<0.1	ND<0.1	ND<0.1	ND<25	ND<100	----	----	----	----	----
A4-4B:8	8	89	08/29/13	Yes (Excavated*)	ND<5	ND<0.01	ND<0.1	ND<0.1	ND<0.1	ND<25	ND<100	----	----	----	----	----
Soil Screening Levels	MTCA Method A Soil Cleanup Levels For Unrestricted Land Uses				100/30 <sup>1</sup>	0.03	7	6	9	2,000		2,000		5	----	Methylene chloride = 0.02 Tetrachloroethene = 0.05
	MTCA Method B Soil Cleanup Levels (Direct Contact)				----	----	----	----	----	----		----		1,600 <sup>2</sup>	----	2-Chlorotoluene = 1,600 4-Chlorotoluene = NVE <sup>4</sup>
Category 1 Soil Ranges <sup>6</sup>					<5	<0.005	<0.005	<0.005	<0.015	<25	<25	<25	<25	<0.05	----	----
Category 2 Soil Ranges <sup>6</sup>					5 to 30	0.005 to 0.03	0.005 to 6	0.005 to 7	0.015 to 9	25 to 200	25 to 200 <sup>7</sup>	25 to 200	25 to 200 <sup>7</sup>	0.05 to 5	----	----
Category 3 Soil Ranges <sup>6</sup>					30 to 100	0.03 or less	6 or less	7 or less	9 or less	200 to 500	200 to 500	200 to 500	200 to 500	5 or less	----	----
Category 4 Soil Ranges <sup>6</sup>					>100	---- <sup>5</sup>	>6	>7	>9	>500	>500	>500	>500	>5	----	----

**Notes:**

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).

Gasoline-range TPH (total petroleum hydrocarbons) determined using Ecology Test Method NWTPH Gx.

BTEX (benzene, toluene, ethylbenzene, and xylenes) determined using EPA Test Method 8021B or 8260C.

Diesel- and Oil- Range TPH (total petroleum hydrocarbons) determined using Ecology Test Method NWTPH Dx.

VOCs (volatile organic compounds) determined using EPA Test Method 8260C.

ND = Not detected above noted analytical detection limit.

NVE = No value established.

lc = The presence of methylene chloride is likely due to laboratory contamination.

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

---- = Not analyzed or not applicable.

<sup>1</sup> 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.

<sup>2</sup> Analyzed using EPA Test Method 8260C. Naphthalenes are factored into the TPH screening level calculation but are evaluated separately due to the fact that some mixtures of TPH may contain amounts of naphthalenes that did not match the assumptions used in the TPH calculations.

**Table 5. Summary of Soil Sample Analytical Laboratory Results For Area 4**

**Main Street Apartments Development**

**10505 Main Street, Bellevue, Washington 98004**

**The Riley Group, Inc. Project No. 2012-107J**

Notes Continued:

<sup>3</sup> It is not necessary to evaluate these compounds for screening level exceedances due to the fact that they are factored into the TPH screening level calculations.

<sup>4</sup> No MTCA cleanup levels have been established for the indicated compound.

<sup>5</sup> Toxic characteristic leaching procedure (TCLP) testing must be conducted for soil containing concentrations of lead and benzene exceeding 220 mg/kg and 0.03 mg/kg, respectively. Soils that fail the TCLP test must be disposed of as hazardous waste unless exempt under WAC 173-303-071(3)(t).

<sup>6</sup> Values obtained from Guidance for Remediation of Petroleum Contaminated Sites dated September, 2011 by Ecology.

<sup>7</sup> For heavy oils (diesel-range TPH in the C12-C34 range), the Category 1 range is <100 and the Category 2 range is 100-200. The remaining categories are the same. Does not include waste oil contaminated soils, which should be disposed of in a landfill.

<sup>8</sup> Shade color in sample number column indicates soil category designation.

\* Soil was excavated as part of routine mass excavation activities and was not disposed of as contaminated soil.

Ecology Model Toxics Control Act Method A Soil Cleanup Levels for Unrestricted Land Uses (WAC 173-340-900, Table 740-1).

**Bold** results indicated concentrations above laboratory detection limits.

**Bold and yellow highlighted** results indicate concentrations (if any) that exceed the applicable soil screening level.

**Bold and brown highlighted** sample indicates concentrations (if any) that deem soil a Category 2 petroleum contaminated soil.

**Bold and green highlighted** sample indicates concentrations (if any) that deem soil a Category 3 petroleum contaminated soil.

**Bold and blue highlighted** sample indicates concentrations (if any) that deem soil a Category 4 petroleum contaminated soil.

**Table 6. Summary of Soil Sample Analytical Laboratory Results For Area 5 (UST3) Remedial Excavation**

**Main Street Apartments Development  
10505 Main Street, Bellevue, Washington 98004  
The Riley Group, Inc. Project No. 2012-107J**

Sample Number <sup>5</sup>	Sample Depth (bgs)	Approximate Elevation (feet)	Sample Date	Final Performance Sample (Status)	Gas TPH	BTEX				Diesel TPH	Oil TPH	PCBs <sup>1</sup>	Carcinogenic PAHs	Other PAHs	Other VOCs	Lead
						B	T	E	X							
<b>UST Assessment and Soil Characterization Samples</b>																
UST3-N-6	6	92	08/27/13	No (Excavated)	2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	2,300 x	10,000	----	----	----	----	----
UST3-S-6	6	92	08/27/13	No (Excavated)	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	190 x	500	----	----	----	----	----
UST3-C-6	6	92	08/27/13	No (Excavated)	ND<2	ND<0.03	ND<0.05	ND<0.05	ND<0.1	1,800 x	3,700	ND<0.1	ND<0.1	Fluoranthene = 0.02	ND	1.95
<b>Remedial Excavation Performance Soil Samples</b>																
A5-1W:7	7	91	08/29/13	Yes (Excavated*)	ND<5.0	ND<0.01	ND<0.10	ND<0.10	ND<0.10	ND<25	ND<100	----	----	----	----	----
A5-2N:7	7	91	08/29/13	Yes (Excavated*)	ND<5.0	ND<0.01	ND<0.10	ND<0.10	ND<0.10	ND<25	ND<100	----	----	----	----	----
A5-3S:7	7	91	08/29/13	Yes (Excavated*)	ND<5.0	ND<0.01	ND<0.10	ND<0.10	ND<0.10	ND<25	ND<100	----	----	----	----	----
A5-4E:7	7	91	08/29/13	Yes (Excavated*)	ND<5.0	ND<0.01	ND<0.10	ND<0.10	ND<0.10	ND<25	ND<100	----	----	----	----	----
A5-5B:10	10	88	08/29/13	Yes (Excavated*)	ND<5.0	ND<0.01	ND<0.10	ND<0.10	ND<0.10	ND<25	ND<100	----	----	----	----	----
Soil Screening Levels	MTCA Method A Soil Cleanup Levels For Unrestricted Land Uses				100/30 <sup>1</sup>	0.03	7	6	9	2,000		1	0.1	----	Analyte Specific	250
	Non-Carcinogenic MTCA Method B Soil Cleanup Levels (Direct Contact)				----	----	----	----	----	----		----	----	Fluoranthene = 3,200	Analyte Specific	----
Category 1 Soil Ranges <sup>3</sup>					<5	<0.005	<0.005	<0.005	<0.015	<25	<25	----	<0.05	----	----	<17
Category 2 Soil Ranges <sup>3</sup>					5 to 30	0.005 to 0.03	0.005 to 6	0.005 to 7	0.015 to 9	25 to 200	25 to 200 <sup>4</sup>	----	0.05 to 0.1	----	----	17 to 50
Category 3 Soil Ranges <sup>3</sup>					30 to 100	0.03 or less	6 or less	7 or less	9 or less	200 to 500	200 to 500	----	0.1 to 2	----	----	50 to 220
Category 4 Soil Ranges <sup>3</sup>					>100	---- <sup>2</sup>	>6	>7	>9	>500	>500	----	>2	----	----	---- <sup>2</sup>

Notes:  
 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).  
 Gasoline-range TPH (total petroleum hydrocarbons) determined using Ecology Test Method NWTPH Gx.  
 BTEX (benzene, toluene, ethylbenzene, and xylenes) determined using EPA Test Method 8021B.  
 Diesel- and Oil- Range TPH (total petroleum hydrocarbons) determined using Ecology Test Method NWTPH Dx.  
 PCBs (Polychlorinated Biphenyls) determined using EPA Test Method 8082 for Aroclor 1221, 1232, 1016, 1242, 1248, 1254, and 1260.  
 PAHs (Polynuclear Aromatic Hydrocarbons) determined using EPA Test Method 8270D SIM.  
 VC (vinyl chloride), TCE (trichloroethene), PCE (tetrachloroethene), trans-1,2-DCE (trans-1,2-dichloroethene), cis-1,2-DCE (cis-1,2-dichloroethene), and 1,1-DCE (1,2-dichloroethene) and other VOCs (volatile organic compounds) determined using EPA Test Method 8260C.  
 Total lead determined using EPA Method 200.8.  
 ND = Not detected above noted analytical detection limit.  
 NVE = No value established.  
 ---- = Not analyzed or not applicable.  
<sup>1</sup> 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.  
<sup>2</sup> Toxic characteristic leaching procedure (TCLP) testing must be conducted for soil containing concentrations of lead and benzene exceeding 220 mg/kg and 0.03 mg/kg, respectively. Soils that fail the TCLP test must be disposed of as hazardous waste unless exempt under WAC 173-303-071(3)(t).  
<sup>3</sup> Values obtained from Guidance for Remediation of Petroleum Contaminated Sites dated September, 2011 by Ecology.  
<sup>4</sup> For heavy oils (diesel-range TPH in the C12-C34 range), the Category 1 range is <100 and the Category 2 range is 100-200. The remaining categories are the same. Does not include waste oil contaminated soils, which should be disposed of in a landfill.  
<sup>5</sup> Shade color in sample number column indicates soil category designation.

**Table 6. Summary of Soil Sample Analytical Laboratory Results For Area 5 (UST3) Remedial Excavation**

**Main Street Apartments Development**

**10505 Main Street, Bellevue, Washington 98004**

**The Riley Group, Inc. Project No. 2012-107J**

Notes Continued:

\* Soil was excavated as part of routine mass excavation activities and was not disposed of as contaminated soil.

Ecology Model Toxics Control Act Method A Soil Cleanup Levels for Unrestricted Land Uses (WAC 173-340-900, Table 740-1).

**Bold** results indicated concentrations above laboratory detection limits.

**Bold and yellow highlighted** results indicate concentrations (if any) that exceed the applicable soil screening level.

**Bold and brown highlighted** sample indicates concentrations (if any) that deem soil a Category 2 petroleum contaminated soil.

**Bold and green highlighted** sample indicates concentrations (if any) that deem soil a Category 3 petroleum contaminated soil.

**Bold and blue highlighted** sample indicates concentrations (if any) that deem soil a Category 4 petroleum contaminated soil.

**Table 7. Summary of Soil Sample Analytical Laboratory Results For Area 6 Remedial Excavation**

**Main Street Apartments Development  
10505 Main Street, Bellevue, Washington 98004  
The Riley Group, Inc. Project No. 2012-107J**

Sample Number	Sample Depth	Approximate Elevation (feet)	Sample Date	Final Performance Sample (Status)	Gas TPH	BTEX				Diesel TPH	Oil TPH	VC	TCE	PCE	trans-1,2-DCE	cis-1,2-DCE	1,1-DCE	Naphthalene <sup>5</sup>	VOCs Included in TPH Screening Level Calculation <sup>6</sup>	Other VOCs	Total MTCA 5 Metals					
						B	T	E	X												As	Cd	Cr	Pb	TCLP Pb	Hg
<b>Septic Tank Contents</b>																										
Septic Sludge	----	----	09/13/13	No (Excavated)	750	ND<0.03	0.16	0.22	1.72	670 x	1,400	ND<0.05	ND<0.03	0.073	ND<0.05	ND<0.05	ND<0.05	0.81	Isopropylbenzene = 0.26 n-Propylbenzene = 0.98 1,3,5-Trimethylbenzene = 2.2 1,2,4-Trimethylbenzene = 8.3 sec-Butylbenzene = 0.46 p-Isopropyltoluene = 0.80	Chlorobenzene = 0.098 1,3-Dichlorobenzene = 1.4 1,4-Dichlorobenzene = 16 1,2-Dichlorobenzene = 81 1,2,4-Trichlorobenzene = 0.38	2.84	3.69	15.0	503	1.74	0.14
<b>Soil Characterization Samples</b>																										
A6-1:9	9	88	09/17/13	No (Excavated)	ND<2	ND<0.03	ND<0.05	ND<0.05	ND<0.1	ND<50	ND<250	ND<0.05	ND<0.03	0.053	ND<0.05	ND<0.05	ND<0.05	----	----	ND	----	ND<1	----	1.80	----	----
A6-2:9	9	88	09/17/13	No (Excavated)	ND<2	ND<0.03	ND<0.05	ND<0.05	ND<0.1	ND<50	ND<250	ND<0.05	ND<0.03	0.032	ND<0.05	ND<0.05	ND<0.05	----	----	ND	----	ND<1	----	2.12	----	----
<b>Remedial Excavation Performance Soil Samples</b>																										
A6-EX-1B:9	11	86	09/18/13	Yes (Excavated*)	ND<25	----	----	----	----	ND<25	ND<100	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----	----	----	----	----	----	----	----	----
A6-EX-2W:7	9	88	09/18/13	Yes (Excavated*)	ND<25	----	----	----	----	ND<25	ND<100	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----	----	----	----	----	----	----	----	----
A6-EX-3S:7	9	88	09/18/13	Yes (Excavated*)	ND<25	----	----	----	----	ND<25	ND<100	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----	----	----	----	----	----	----	----	----
A6-EX-4N:7	9	88	09/18/13	Yes (Excavated*)	ND<25	----	----	----	----	ND<25	ND<100	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----	----	----	----	----	----	----	----	----
A6-EX-5N:7	9	88	09/18/13	Yes (Excavated*)	ND<25	----	----	----	----	ND<25	ND<100	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----	----	----	----	----	----	----	----	----
A6-EX-6E:7	9	88	09/18/13	Yes (Excavated*)	ND<25	----	----	----	----	ND<25	ND<100	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----	----	----	----	----	----	----	----	----
A6-EX-7S:7	9	88	09/18/13	Yes (Excavated*)	ND<25	----	----	----	----	ND<25	ND<100	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----	----	----	----	----	----	----	----	----
A6-EX-8B:9	11	86	09/18/13	Yes (Excavated*)	ND<25	----	----	----	----	ND<25	ND<100	ND<0.02	ND<0.03	ND<0.02	ND<0.02	ND<0.02	ND<0.05	----	----	----	----	----	----	----	----	----
<b>MTCA Method A Soil Cleanup Levels For Unrestricted Land Uses</b>					100/30 <sup>1</sup>	0.03	7	6	9	2,000	NVE	0.03	0.05	NVE	NVE	NVE	5	----	----	1,3-Dichlorobenzene = NVE <sup>4</sup> 1,4-Dichlorobenzene = NVE <sup>4</sup>	20	2	19/2,000 <sup>2</sup>	250	250	2
<b>MTCA Method B Soil Cleanup Levels (Direct Contact)<sup>4</sup></b>					----	----	----	----	----	----	0.67 <sup>2</sup>	----	----	1,600	160	4,000	1,600 <sup>5</sup>	----	----	Chlorobenzene = 1,600 <sup>3,4</sup> 1,2-Dichlorobenzene = 7,200 <sup>3,4</sup> 1,2,4-Trichlorobenzene = 35 <sup>2,4</sup>	----	----	----	----	----	----

Notes:  
 All results and detection limits are given in mg/kg; equivalent to parts per million (ppm). TCLP Lead results in mg/L  
 Sample Depth = soil sample depth interval in feet below ground surface (bgs).  
 Gasoline-range TPH (total petroleum hydrocarbons) determined using Ecology Test Method NWTPH Gx.  
 BTEX (benzene, toluene, ethylbenzene, and xylenes) determined using EPA Test Method 8260C.  
 Diesel- and Oil- Range TPH (total petroleum hydrocarbons) determined using Ecology Test Method NWTPH Dx.  
 HCID (hydrocarbon identification) determined using Ecology Test Method NWTPH-HCID.  
 VC (vinyl chloride), TCE (trichloroethene), PCE (tetrachloroethene), trans-1,2-DCE (trans-1,2-dichloroethene), cis-1,2-DCE (cis-1,2-dichloroethene), and 1,1-DCE (1,2-dichloroethene) and other VOCs (volatile organic compounds) determined using EPA Test Methods 8021B or 8260C.  
 MTCA 5 Metals (As = Arsenic, Cd = Cadmium, Cr = Chromium, Pb = Lead, Hg = Mercury) determined using EPA Method 200.8 and 1631E.  
 TCLP (toxicity characteristic leaching procedure) determined using EPA Method 200.8 and 40 CFR Part 261.  
 ND = Not detected above noted analytical detection limit.  
 NVE = No value established.  
 ---- = Not analyzed or not applicable.

<sup>1</sup> 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.  
<sup>2</sup> Indicates that the MTCA Method B carcinogenic value was referenced.  
<sup>3</sup> Indicates that the MTCA Method B non-carcinogenic value was referenced.  
<sup>4</sup> No MTCA Method B value protective of groundwater was calculated for the indicated compounds due to the fact that they were only encountered inside the septic tank and not in the soil surrounding the tank.  
<sup>5</sup> Analyzed using EPA Test Method 8260C. Naphthalenes are factored into the TPH screening level calculation but are evaluated separately due to the fact that some mixtures of TPH may contain amounts of naphthalenes that did not match the assumptions used in the TPH calculations.  
<sup>6</sup> It is not necessary to evaluate these compounds for screening level exceedances due to the fact that they are factored into the TPH screening level calculations.

**Table 7. Summary of Soil Sample Analytical Laboratory Results For Area 6**

**Main Street Apartments Development**

**10505 Main Street, Bellevue, Washington 98004**

**The Riley Group, Inc. Project No. 2012-107J**

Notes Continued:

\* Soil was excavated as part of routine mass excavation activities and was not disposed of as contaminated soil.

Ecology Model Toxics Control Act Method A Soil Cleanup Levels for Unrestricted Land Uses (WAC 173-340-900, Table 740-1).

**Bold** results indicated concentrations above laboratory detection limits.

**Bold and yellow highlighted** results indicate concentrations (if any) that exceed the applicable soil screening level.

**Table 8. Summary of Soil Sample Analytical Laboratory Results For Area 7 Remedial Excavation**

**Main Street Apartments Development  
10505 Main Street, Bellevue, Washington 98004  
The Riley Group, Inc. Project No. 2012-107J**

Sample Number	Sample Depth (bgs)	Final Performance Sample (Status)	Approximate Elevation (feet)	Sample Date	Gas TPH	BTEX				Diesel TPH	Oil TPH	VOCs Included in TPH Screening Level Calculation <sup>2</sup>	Other VOCs	Total Lead
						B	T	E	X					
<b>Soil Characterization Samples</b>														
A7-1:6	6	No (Excavated)	91	10/10/13	<b>4.7</b>	ND<0.03	ND<0.05	ND<0.05	ND<0.1	ND<50	ND<250	1,3,5-Trimethylbenzene = 0.065 1,2,4-Trimethylbenzene = 0.13	ND	2.92
A7-2:9	9	No (Excavated)	88	10/10/13	<b>5.1</b>	ND<0.03	ND<0.05	ND<0.05	ND<0.1	ND<50	ND<250	----	ND	2.24
<b>Remedial Excavation Performance Soil Samples</b>														
A7-3:10	10	No (Excavated)	87	10/14/13	<b>990</b>	ND<0.01	ND<0.10	<b>6.16</b>	<b>10.2</b>	----	----	----	----	----
A7-4S:12	12	Yes (Excavated*)	85	10/14/13	ND<5.0	ND<0.01	ND<0.10	ND<0.10	ND<0.10	----	----	----	----	----
A7-5W:10	10	Yes (Excavated*)	87	10/14/13	ND<5.0	ND<0.01	ND<0.10	ND<0.10	ND<0.10	----	----	----	----	----
A7-6E:10	10	Yes (Excavated*)	87	10/14/13	ND<5.0	ND<0.01	ND<0.10	ND<0.10	ND<0.10	----	----	----	----	----
A7-7N:5	5	Yes (Excavated*)	92	10/14/13	ND<5.0	ND<0.01	ND<0.10	ND<0.10	ND<0.10	----	----	----	----	----
A7-7N:11	11	Yes (Excavated*)	86	10/14/13	ND<5.0	ND<0.01	ND<0.10	ND<0.10	ND<0.10	----	----	----	----	----
A7-8B:13	13	Yes (Excavated*)	84	10/14/13	ND<5.0	ND<0.01	ND<0.10	ND<0.10	ND<0.10	----	----	----	----	----
<b>MTCA Method A Soil Cleanup Levels For Unrestricted Land Uses</b>					<b>100/30<sup>1</sup></b>	<b>0.03</b>	<b>7</b>	<b>6</b>	<b>9</b>	<b>2,000</b>		----	<b>Analyte Specific</b>	<b>250</b>
<b>Category 1 Soil Ranges<sup>5</sup></b>					<b>&lt;5</b>	<b>&lt;0.005</b>	<b>&lt;0.005</b>	<b>&lt;0.005</b>	<b>&lt;0.015</b>	<b>&lt;25</b>	<b>&lt;25</b>	----	----	<b>&lt;17</b>
<b>Category 2 Soil Ranges<sup>5</sup></b>					<b>5 to 30</b>	<b>0.005 to 0.03</b>	<b>0.005 to 6</b>	<b>0.005 to 7</b>	<b>0.015 to 9</b>	<b>25 to 200</b>	<b>25 to 200<sup>7</sup></b>	----	----	<b>17 to 50</b>
<b>Category 3 Soil Ranges<sup>5</sup></b>					<b>30 to 100</b>	<b>0.03 or less</b>	<b>6 or less</b>	<b>7 or less</b>	<b>9 or less</b>	<b>200 to 500</b>	<b>200 to 500</b>	----	----	<b>50 to 220</b>
<b>Category 4 Soil Ranges<sup>5</sup></b>					<b>&gt;100</b>	<b>----<sup>5</sup></b>	<b>&gt;6</b>	<b>&gt;7</b>	<b>&gt;9</b>	<b>&gt;500</b>	<b>&gt;500</b>	----	----	<b>----<sup>2</sup></b>

Notes:

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). The grade of the surface immediately east of Area 7 was referenced.

Gasoline-range TPH (total petroleum hydrocarbons) determined using Ecology Test Method NWTPH Gx.

BTEX (benzene, toluene, ethylbenzene, and xylenes) determined using EPA Test Method 8021B or 8260C.

Diesel- and Oil- Range TPH (total petroleum hydrocarbons) determined using Ecology Test Method NWTPH Dx.

VOCs (volatile organic compounds) determined using EPA Test Method 8260C.

Total lead determined using EPA Method 200.8.

ND = Not detected at noted analytical detection limit.

NVE = No value established.

---- = Not analyzed or not applicable.

<sup>1</sup> 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.

<sup>2</sup> It is not necessary to evaluate these compounds for screening level exceedances due to the fact that they are factored into the TPH screening level calculations.

\* Soil was excavated as part of routine mass excavation activities and was not disposed of as contaminated soil.

Ecology Model Toxics Control Act Method A Soil Cleanup Levels for Unrestricted Land Uses (WAC 173-340-900, Table 740-1).

**Bold** results indicated concentrations above laboratory detection limits.

**Bold and yellow highlighted** results indicate concentrations (if any) that exceed MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses.

**Bold and brown highlighted** sample indicates concentrations (if any) that deem soil a Category 2 petroleum contaminated soil.

**Bold and green highlighted** sample indicates concentrations (if any) that deem soil a Category 3 petroleum contaminated soil.

**Bold and blue highlighted** sample indicates concentrations (if any) that deem soil a Category 4 petroleum contaminated soil.

**Table 9. Summary of Current and Historical Groundwater Analytical Data**  
**Main Street Apartments Development**  
**10505 Main Street, Bellevue, Washington 98004**  
**The Riley Group, Inc. Project No. 2012-107B**

Sample Number	Sample Date	TOC Elevation (feet)	Depth to Water (feet)	Groundwater Elevation (feet)	Gas TPH	BTEX				Diesel TPH	Oil TPH	Diesel TPH	Oil TPH	Total Naphthalenes <sup>2</sup>	PCE	1,1,1-TCA	2-Butanone	Acetone	Bromo-dichloro-methane	Chloroform	Other VOCs
						B	T	E	X	w/out silica gel	with silica gel										
B1A, Screened from approximate elevation of 57' to 47', Total well length 50'																					
UST1-B1A-W	09/03/13	~97	43.5	~53.5	360	6.9	28	6.1	44	5,200 x	1,000 x	420	ND<300	2.3	ND<1	ND<1	ND<10	ND<10	ND<1	ND<1	ND
RW1, Screened from approximate elevation of 56.2' to 41.2', Total well length 35.5'																					
RW1	11/13/13	~76.7	27.57*	~49.1	ND<100	ND<0.35	14	ND<1	ND<2	190 x	ND<250	----	----	ND<1	ND<1	ND<1	1,100	770	ND<1	13	ND
RW2, Screened from approximate elevation of 56.3' to 41.3', Total well length 37.3'																					
RW2	11/13/13	~78.6	30.68*	~47.9	ND<100	ND<0.35	3.7	ND<1	ND<2	180 x	ND<250	----	----	ND<1	ND<1	ND<1	170	110	1.2	26	ND
<b>Historical Monitoring Well Data</b>																					
MW3, Screened from approximate elevation of 52.41' to 37.41', Total well length 60'																					
MW-3	06/11/13	97.41	43.44	53.97	ND<100	ND<1	ND<1	ND<1	ND<3	----	----	ND<50	ND<250	----	----	----	----	----	----	----	----
MW-3	05/22/13	97.41	43.1	54.31	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-3	05/14/12	97.41	50.51	46.90	----	----	----	----	----	----	----	----	----	ND<0.20	0.40	----	----	ND<0.20	0.24	ND	
MW4, Screened from approximate elevation of 55.29' to 45.29', Total well length 53'																					
MW4	06/11/13	98.29	42.06	56.23	800	17	62	15	90	----	----	220 x	ND<250	----	----	----	----	----	----	----	----
MW4	05/22/13	98.29	43.51	54.78	340	6	25	5.7	39	7,900 x	1,300 x	190	ND<250	----	ND<1	ND<1	----	----	----	----	ND
Groundwater Screening Levels	MTCA Method A Cleanup Levels for Ground Water				800/1,000 <sup>1</sup>	5	1,000	700	1,000	500	500	500	500	160	5	200	----	----	----	----	Analyte Specific
	MTCA Method B Cleanup Levels for Ground Water				----	0.8 <sup>4</sup>	----	----	----	----	----	----	----	----	----	16,000 <sup>5</sup>	4,800 <sup>5</sup>	7,200 <sup>5</sup>	7.1 <sup>4,6</sup>	80 <sup>5</sup>	Analyte Specific
	ARAR State and Federal Primary Maximum Contaminant Level (MCL)				----	5	1,000	700	10,000	----	----	----	----	----	5	200	----	----	80	80	Analyte Specific

Samples collected by RGI field staff using a submersible 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).

Gasoline-range TPH (total petroleum hydrocarbons) determined used Northwest Test Method NWTPH-Gx.

BTEX (benzene, toluene, ethylbenzene and xylenes) determined using EPA Test Method 8021B or 8260C.

Diesel and Oil-Range TPH determined used Northwest Test Method NWTPH-Dx with and without silica gel cleanup.

Silica gel = Sample extract is passed through a silica gel column prior to analysis. The silica gel column removes natural occurring biogenic material that can interfere with the TPH result when present.

PCE (tetrachloroethene) determined using EPA Test Method 8260B.

VOCs (volatile organic compounds) determined using EPA Test Method 8260B.

ND = Not detected above noted analytical detection limit.

NVE = No value established.

TOC = Top of casing. Depth to water measurements were obtained from TOC (in feet).

---- = Not analyzed or not applicable.

x = According to the analytical chemist, the sample chromatographic pattern does not resemble the fuel standard used for quantification.

\* Depth to water measurements obtained on December 23, 2013.

<sup>1</sup> 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.



**Table 9. Summary of Groundwater Sample Analytical Laboratory Results**

**Main Street Apartments Development**

**10505 Main Street, Bellevue, Washington 98004**

**The Riley Group, Inc. Project No. 2012-107B**

<sup>2</sup> Analyzed using EPA Test Method 8260C. Naphthalenes are factored into the TPH screening level calculation but are evaluated separately due to the fact that some mixtures of TPH may contain amounts of naphthalenes that did not match the assumptions used in the TPH calculations.

<sup>3</sup> It is not necessary to evaluate these compounds for screening level exceedances due to the fact that they are factored into the TPH screening level calculations.

<sup>4</sup> The carcinogenic MTCA Method B Cleanup Level was referenced.

<sup>5</sup> The non-carcinogenic MTCA Method B Cleanup Level was referenced

<sup>6</sup> RGI evaluated the cancer risk for the ARAR which was determined to be greater than  $10^{-5}$ . Therefore, the correct screening level in this case is 10x the Method B value of 0.71 or 7.1 ug/L. Ecology Model Toxics Control Act Method A or B Cleanup Levels for Ground Water (WAC 173-340-900, Table 720-1 and CLARC database).

ARAR = Applicable or Relevant and Appropriate Requirement. ARARs for the Property are the Federal and State Primary Maximum Contaminant Levels (MCLs) as established under the Environmental Protection Agency (EPA) National Primary Drinking Water Regulations. ARARs are referenced in Ecology's CLARC database.

**Bold** results indicated concentrations above laboratory detection limits.

**Bold and yellow highlighted** results indicate concentrations (if any) that exceed the applicable groundwater screening level.

**Table 10. Summary of Contaminated Soil Removed From Areas 1 Through 7**

**Main Street Apartments Development  
10505 Main Street, Bellevue, Washington 98004  
The Riley Group, Inc. Project No. 2012-107B**

Location	Dates (2013) <sup>1</sup>	Category 2 Soil Removed (Tons) <sup>2</sup>	Category 3/4 Soil Removed (Tons) <sup>3</sup>	PCE-Impacted Contained-In Soil (Tons) <sup>4</sup>	Soil Removed for MTCA Compliance (Tons) <sup>5</sup>	Soil Removed Soley for Support of Redevelopment (Tons) <sup>6</sup>	Total Tons Removed
<b>Area 1</b>	Aug. 20-22	265	0	0	0	265	<b>265</b>
<b>Area 2</b>	Sep. 11	0	0	7	7	0	<b>7</b>
<b>Area 3</b>	Phase I	0	0	38	---	---	38
	Phase II	112	109	0	---	---	221
	Phase III	86	166	0	---	---	252
	Phase IV	147	137	0	---	---	284
	Phase V	0	88	0	---	---	88
Total (Phases I - V)	Sep. 11 through Oct. 28	345	500	38	538	345	<b>883</b>
<b>Area 4</b>	Aug. 27 & 29	0	41	0	26	15	<b>41</b>
<b>Area 5</b>	Aug. 29 & 30	0	103	0	103	0	<b>103</b>
<b>Area 6</b>	Sep. 18 & 19	13	0	49	49	13	<b>62</b>
<b>Area 7</b>	Oct. 14	0	73	0	73	0	<b>73</b>
<b>TOTAL</b>		<b>623</b>	<b>717</b>	<b>94</b>	<b>796</b>	<b>638</b>	<b>1434</b>

Notes:

- 1) Dates remedial excavations were performed. Not necessarily the date soil was removed from the Property as on some occasions contaminated soil was stockpiled on the Property and removed at a later date.
- 2) Category 2 soil consisted of soil containing PCE at concentrations below the MTCA Method A Soil Cleanup Level and petroleum contaminated soil (PCS) containing concentrations of contaminants of concern (COCs) that fell within the ranges indicated for Category 2 soil in Ecology's Guidance For Remediation of Petroleum Impacted Soil (See Appendix X). All Category 2 soil was disposed of at the CEMEX Facility in Everett, WA.
- 3) Category 3 and 4 soil consisted of PCS containing concentrations of COCs that fell within the ranges indicated for Category 3 and 4 soil in Ecology's Guidance For Remediation of Petroleum Impacted Soil. All Category 3 and 4 soil was disposed of at the CEMEX facility in Everett, WA.
- 4) PCE-Impacted Contained-In soil containing PCE concentrations ranging from 0.05 milligrams/kilogram (mg/kg) to 0.36 mg/kg was managed under a Contained-In determination from Ecology (See Section 4.1). All Contained-In soils were transported to the Republic Services transfer station in Seattle for disposal at the Roosevelt Regional Landfill in Roosevelt, Washington (a Subtitle D landfill).
- 5) The estimated amount of soil removed that contained concentrations of COCs exceeding MTCA Method A Soil Cleanup Levels. It was necessary to remove these soils for compliance under MTCA.
- 6) The estimated amount of soil removed that contained concentrations of COCs below MTCA Method A Soil Cleanup Levels. These soils were removed soley for redevelopment support and not for compliance under MTCA. Since it is not possible to determine the exact point which soil concentrations drop to below MTCA Method A Soil Cleanup Levels, the amount of tons is a conservative estimate.

**Table 11. Summary of Vapor Intrusion Assessment of Groundwater Data**  
**Main Street Apartments Development**  
**10505 Main Street, Bellevue, Washington**  
**The Riley Group, Inc. Project No. 2012-107J**

Sample Number	Sample Date	Sample Depth (feet bgs)	BTEX & VOCs												
			B	Predicted Indoor Air Concentration of Benzene <sup>6</sup>	T	E	X	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	Naphthalenes	Methyl Ethyl Ketone	Cumene	1,1,1-TCA	Bromo dichloro methane	Chloro form
UST1-B1A-W	09/03/13	~43	<b>6.9</b>	0.027	<b>25</b>	<b>6.4</b>	<b>33.8</b>	<b>10</b>	<b>2.3</b>	<b>2.3</b>	ND	<b>1.7</b>	ND	ND	ND
RW1	11/13/13	~48	ND	---	<b>14</b>	ND	ND	---	---	ND	<b>1,100</b>	ND	ND	ND	<b>13<sup>4</sup></b>
RW2	11/13/13	~50	ND	---	<b>3.7</b>	ND	ND	---	---	ND	<b>170</b>	ND	ND	<b>1.2<sup>4</sup></b>	<b>26<sup>4</sup></b>
MW-3	5/14/12 & 6/11/13 <sup>5</sup>	~43	ND	---	ND	ND	ND	---	---	---	---	---	<b>0.40</b>	ND	<b>0.24</b>
MW-4	5/22/13 & 6/11/2013 <sup>5</sup>	~42	<b>17</b>	0.067	62	15	90	---	---	---	---	---	ND	---	---
<b>Ecology Routine Groundwater Screening Level Protective of Indoor Air (micrograms/liter)</b>			<b>2.4</b>	---	<b>15,735<sup>3</sup></b>	<b>2,800</b>	<b>310</b>	<b>28<sup>3</sup></b>	<b>25</b>	<b>170</b>	<b>1,773,323<sup>3</sup></b>	<b>720</b>	<b>5,543<sup>3</sup></b>	<b>0.09</b>	<b>1.2</b>
<b>MTCA Method B Indoor Air Cleanup Levels (micrograms/cubic meter)</b>			<b>0.32<sup>1</sup></b>		<b>2,300<sup>2</sup></b>	<b>460</b>	<b>46</b>	<b>3.2<sup>2</sup></b>	<b>2.7</b>	<b>1.4</b>	<b>2,300<sup>2</sup></b>	<b>180</b>	<b>2,300<sup>2</sup></b>	<b>0.0033<sup>1</sup></b>	<b>0.11<sup>1</sup></b>

All analytical results are given in micrograms per liter (ug/L). MTCA Method B Indoor Air Cleanup Levels and predicted indoor air concentrations are given in micrograms per cubic meter (ug/m<sup>3</sup>).

When more than one sampling event applied, the highest detected groundwater concentrations between both sampling events are displayed.

BTEX (benzene, toluene, ethylbenzene, total xylenes) determined using EPA Method 8260C or 8021B

Volatile organic compounds (VOCs) determined using EPA Method 8260C

Cumene= Isobutylene, TCA = trichloroethane

ND = Not detected above the laboratory detection limit.

Bold and blue highlighted results indicate that the detected concentration exceeded the applicable groundwater screening level considered protective of indoor air

"-" = Not applicable.

<sup>1</sup> Indicates the carcinogenic screening level was referenced. For all other results, no carcinogenic screening level has been established the the non-carcinogenic screening level was referenced.

<sup>2</sup> The MTCA Method B Indoor Air Cleanup Level has been revised since preparation of the Ecology's Draft Guidance For Evaluating Vapor Intrusion In Washington State. The current values referenced were obtained from Ecology's Cleanup Levels and Risk Calculations (CLARC) database.

<sup>3</sup> The groundwater screening level protective of indoor air was calculated based on the revised MTCA Method B Indoor Air Cleanup Level obtained from CLARC.

<sup>4</sup> Although the detected concentration exceeds the Ecology Routine Groundwater Screening Level considered protective of indoor air, it is not necessary to perform risk assessment on bromochloromethane and chloroform due to the fact that they are byproducts of chlorine associated with chlorinated water supplied to the Property.

<sup>5</sup> The highest detected groundwater concentration between both sampling events is displayed for the purpose of evaluating vapor intrusion.

<sup>6</sup> The EPA online Johnson & Ettinger Model (JEM) calculator was utilized to predict the highest indoor air concentration based on the highest observed groundwater concentration. A very conservative air exchange rate of 1.5 was used to represent the future parking garage.

Ecology Routine Screening Level = Ecology's groundwater screening level protective of indoor air per Ecology's draft Guidance for Evaluating Soil Vapor Intrusion in Washington State (DRAFT October 2009).

# ***Appendix B***

**B. Worksheet for Calculating Potable Ground Water Cleanup Levels  
(Method B only) WAC 173-340-720**

1. Enter Site Information

Date: 6/24/2016  
 Site Name: Main Street Development Project  
 Sample info: Groundwater sample: RW-1

2. Enter Ground Water Concentration Measured

Notes for Data Entry

Chemical of Concern or EC Group	Measured GW Conc ug/L	GW Cleanup Level ug/L	Current Condition			Adjusted Condition			Pass or Fail?
			HQ	RISK	Pass or Fail?	GW Conc being tested ug/L	HQ	RISK	
			unitless	unitless		ug/L	unitless	unitless	
<b>Petroleum EC Fraction</b>									
AL_EC >5-6	25		1.84E-03			1.25E+04	9.19E-01		
AL_EC >6-8	25		1.84E-03			1.25E+04	9.19E-01		
AL_EC >8-10	25		1.04E-01			1.25E+04	5.21E+01		
AL_EC >10-12	25		1.04E-01			1.25E+04	5.21E+01		
AL_EC >12-16	130		2.71E-01			6.50E+04	1.35E+02		
AL_EC >16-21	230		7.19E-03			1.15E+05	3.59E+00		
AL_EC >21-34	82		2.56E-03			4.10E+04	1.28E+00		
AR_EC >8-10	22		2.75E-02			1.10E+04	1.38E+01		
AR_EC >10-12	26		1.63E-01			1.30E+04	8.13E+01		
AR_EC >12-16	26		3.25E-02			1.30E+04	1.63E+01		
AR_EC >16-21	27		5.63E-02			1.35E+04	2.81E+01		
AR_EC >21-34	27		4.22E-02			1.35E+04	2.11E+01		
Benzene	1	5	3.13E-02	1.26E-06		5.00E+02	1.56E+01	6.29E-04	Fail
Toluene	1	1000	1.56E-03			5.00E+02	7.81E-01		
Ethylbenzene	1	700	1.25E-03			5.00E+02	6.25E-01		
Total Xylenes	2	1000	1.25E-03			1.00E+03	6.25E-01		
Naphthalene	0.01	160	6.25E-05			5.00E+00	3.13E-02		
1-Methyl Naphthalene	0.01		2.50E-05			5.00E+00	1.25E-02		
2-Methyl Naphthalene	0.01		3.13E-04			5.00E+00	1.56E-01		
n-Hexane	0								
MTBE	0	20							
Ethylene Dibromide (EDB)	0	0.01							
1,2 Dichloroethane (EDC)	0	5							
Benzo(a)anthracene	0	for			for				for
Benzo(b)fluoranthene	0	all			all				all
Benzo(k)fluoranthene	0	cPAHs			cPAHs				cPAHs
Benzo(a)pyrene	0	Risk =							
Chrysene	0	1E-05							
Dibenz(a,h)anthracene	0				Σ Risk =				Σ Risk =
Indeno(1,2,3-cd)pyrene	0				0.00E+00				0.00E+00
<b>Sum</b>	<b>675.03</b>		<b>8.49E-01</b>	<b>1.26E-06</b>		<b>3.38E+05</b>	<b>4.25E+02</b>	<b>6.29E-04</b>	<b>Fail</b>

TEST CURRENT CONDITION
Measured TPH GW Conc, ug/L = 675.03 HI = 8.492E-01 RISK = 1.257E-06
Pass or Fail? Pass
<b>Please check WAC 246-290-310!</b>

CALCULATE PROTECTIVE CONDITION				
This tool allows the user to calculate a protective TPH ground water concentration based on various ground water quality criteria. The Workbook uses the same composition ratio as for the measured data.				
<b>Calculate Protective TPH GW Conc</b>				
Selected Criterion: HI = 1				
Most Stringent? YES				
Protective TPH GW Conc, ug/L = 794.86 HI = 1.00E+00 RISK = 1.48E-06				
SUMMARY OF PROTECTIVE GW CONCENTRATIONS				
Protective GW TPH Conc, ug/L			794.86	
Most Stringent Criterion			HI = 1	
Ground Water Criteria	Most Stringent?	GW TPH, ug/L	RISK @	HI @
HI = 1	YES	7.95E+02	1.48E-06	1.00E+00
Total Risk = 1E-5	NO	5.37E+03	1.00E-05	6.76E+00
Total Risk = 1E-6	YES	5.37E+02	1.00E-06	6.76E-01
Benzene MCL = 5 ug/L	NO	3.38E+03	6.29E-06	4.25E+00
MTBE = 20 ug/L	NA	NA	NA	NA
Risk of cPAHs = 1E-5	NA	NA	NA	NA
Toluene = 1000 ug/L	NO	6.75E+05	1.26E-03	8.49E+02
Ethylbenzene = 700 ug/L	NO	4.73E+05	8.80E-04	5.94E+02
Total Xylenes = 1000 ug/L	NO	3.38E+05	6.29E-04	4.25E+02

TEST ADJUSTED CONDITION
This tool allows the user to test whether a particular TPH soil concentration is protective of human health. The Workbook uses the same composition ratio as for the measured data.
<b>Test Adjusted TPH GW Conc</b>
Tested TPH GW Conc, ug/L = HI = RISK =
Pass or Fail?

**B. Worksheet for Calculating Potable Ground Water Cleanup Levels  
(Method B only) WAC 173-340-720**

1. Enter Site Information

Date: 1/4/2017  
 Site Name: Main Street Development Project  
 Sample info: Groundwater sample: RW-1

Notes for Data Entry

2. Enter Ground Water Concentration Measured

Chemical of Concern or EC Group	Measured GW Conc ug/L	GW Cleanup Level ug/L	Current Condition			Adjusted Condition			Pass or Fail?
			HQ	RISK	Pass or Fail?	GW Conc being tested ug/L	HQ	RISK	
			unitless	unitless		ug/L	unitless	unitless	
<i>Petroleum EC Fraction</i>									
AL_EC >5-6	25		1.84E-03			1.25E+04	9.19E-01		
AL_EC >6-8	25		1.84E-03			1.25E+04	9.19E-01		
AL_EC >8-10	25		1.04E-01			1.25E+04	5.21E+01		
AL_EC >10-12	25		1.04E-01			1.25E+04	5.21E+01		
AL_EC >12-16	74		1.54E-01			3.70E+04	7.71E+01		
AL_EC >16-21	170		5.31E-03			8.50E+04	2.66E+00		
AL_EC >21-34	25		7.81E-04			1.25E+04	3.91E-01		
AR_EC >8-10	25		3.13E-02			1.25E+04	1.56E+01		
AR_EC >10-12	25		1.56E-01			1.25E+04	7.81E+01		
AR_EC >12-16	25		3.13E-02			1.25E+04	1.56E+01		
AR_EC >16-21	25		5.21E-02			1.25E+04	2.60E+01		
AR_EC >21-34	140		2.19E-01			7.00E+04	1.09E+02		
Benzene	1	5	3.13E-02	1.26E-06		5.00E+02	1.56E+01	6.29E-04	Fail
Toluene	1	1000	1.56E-03			5.00E+02	7.81E-01		
Ethylbenzene	1	700	1.25E-03			5.00E+02	6.25E-01		
Total Xylenes	2	1000	1.25E-03			1.00E+03	6.25E-01		
Naphthalene	0	160							
1-Methyl Naphthalene	0								
2-Methyl Naphthalene	0								
n-Hexane	0								
MTBE	0	20							
Ethylene Dibromide (EDB)	0	0.01							
1,2 Dichloroethane (EDC)	0	5							
Benzo(a)anthracene	0	for			for				for
Benzo(b)fluoranthene	0	all			all				all
Benzo(k)fluoranthene	0	cPAHs			cPAHs				cPAHs
Benzo(a)pyrene	0	Risk =							
Chrysene	0	1E-05							
Dibenz(a,h)anthracene	0				Σ Risk=				Σ Risk=
Indeno(1,2,3-cd)pyrene	0				0.00E+00				0.00E+00
<b>Sum</b>	<b>614</b>		8.97E-01	1.26E-06		3.07E+05	4.49E+02	6.29E-04	Fail

TEST CURRENT CONDITION	
Measured TPH GW Conc, ug/L =	614
HI =	8.972E-01
RISK =	1.257E-06
Pass or Fail?	Pass
<i>Please check WAC 246-290-310!</i>	

CALCULATE PROTECTIVE CONDITION				
This tool allows the user to calculate a protective TPH ground water concentration based on various ground water quality criteria. The Workbook uses the same composition ratio as for the measured data.				
<b>Calculate Protective TPH GW Conc</b>				
Selected Criterion: HI = 1				
Most Stringent? YES				
Protective TPH GW Conc, ug/L = 684.38				
HI = 1.00E+00				
RISK = 1.40E-06				
SUMMARY OF PROTECTIVE GW CONCENTRATIONS				
Protective GW TPH Conc, ug/L			684.38	
Most Stringent Criterion			HI = 1	
Ground Water Criteria	Most Stringent?	GW TPH, ug/L	RISK @	HI @
HI = 1	YES	6.84E+02	1.40E-06	1.00E+00
Total Risk = 1E-5	NO	4.88E+03	1.00E-05	7.14E+00
Total Risk = 1E-6	YES	4.88E+02	1.00E-06	7.14E-01
Benzene MCL = 5 ug/L	NO	3.07E+03	6.29E-06	4.49E+00
MTBE = 20 ug/L	NA	NA	NA	NA
Risk of cPAHs = 1E-5	NA	NA	NA	NA
Toluene = 1000 ug/L	NO	6.14E+05	1.26E-03	8.97E+02
Ethylbenzene = 700 ug/L	NO	4.30E+05	8.80E-04	6.28E+02
Total Xylenes = 1000 ug/L	NO	3.07E+05	6.29E-04	4.49E+02

TEST ADJUSTED CONDITION	
This tool allows the user to test whether a particular TPH soil concentration is protective of human health. The Workbook uses the same composition ratio as for the measured data.	
<b>Test Adjusted TPH GW Conc</b>	
Tested TPH GW Conc, ug/L=	
HI=	
RISK=	
<b>Pass or Fail?</b>	

# ***Appendix C***

Project Name: **Main Street Bellevue**

Project Number: **2012-107L**

Client: **Alamo Manhattan**



Test Probe/Well No.: **MW6**

Sheet 1 of 2

Date(s) Drilled: <b>08/24/16</b>	Logged By: <b>SL</b>	Surface Conditions: <b>Concrete</b>
Drilling Method(s): <b>Hollow Stem Auger</b>	Drill Bit Size/Type: <b>5"</b>	Total Depth of Borehole: <b>40 feet bgs</b>
Drill Rig Type: <b>Limited Access Track-Mounted</b>	Drilling Contractor: <b>Cascade Drilling</b>	Approximate Surface Elevation (feet amsl): <b>79</b>
Groundwater Elevation: <b>49.95 on 8/29/16</b>	Sampling Method(s): <b>SPT</b>	Hammer Data: <b>140lb, 30" drop</b>
Borehole Backfill: <b>Monitoring Well</b>	Location: <b>10575 Main Street, Bellevue, Washington 98004</b>	

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
79	0						Concrete SP		Concrete Light brown, medium SAND, dense, moist		Concrete 0 - 1
											Bentonite 1 - 23
											Blank 2" PVC 0 - 25
74	5										
69	10										
64	15										
				50/ 6"	0.5		SP		Light brown, medium SAND, very dense, moist		
59	20										



Project Name: **Main Street Bellevue**

Project Number: **2012-107L**

Client: **Alamo Manhattan**



Test Probe/Well No.: **MW6**

Sheet 2 of 2

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
59	20			50/5"			SP		Light brown, medium SAND, very dense, moist		
				50/6"	0.7		SM		Light brown, silty SAND with gravel, very dense, moist		Silica Sand 23 - 40
54	25			78/11"	1.0		SM		Light brown silty SAND, very dense, moist grading to wet		Prepack Slotted PVC 25 - 40
				78/11"	0.9						
49	30			76/12"	1.1						
44	35										
39	40								Boring terminated at 40 feet below parking garage floor slab		
34	45										
29	50										

Project Name: **Main Street Bellevue**

Project Number: **2012-107L**

Client: **Alamo Manhattan**



**Boring Log Key**

**Sheet 1 of 1**

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
1	2	3	4	5	6	7	8	9	10	11	12

**COLUMN DESCRIPTIONS**

- 1** Elevation (feet): Elevation (MSL, feet).
- 2** Depth (feet): Depth in feet below the ground surface.
- 3** Sample Type: Type of soil sample collected at the depth interval shown.
- 4** Sample ID: Sample identification number.
- 5** 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.
- 6** PID Reading, ppm: The reading from a photo-ionization detector, in parts per million.
- 7** Recovery (%): Core Recovery Percentage is determined based on a ratio of the length of core sample recovered compared to the cored interval length.
- 8** USCS Symbol: USCS symbol of the subsurface material.
- 9** Graphic Log: Graphic depiction of the subsurface material encountered.
- 10** MATERIAL DESCRIPTION: Description of material encountered. May include consistency, moisture, color, and other descriptive text.
- 11** Well Log: Graphical representation of well installed upon completion of drilling and sampling.
- 12** REMARKS AND OTHER TESTS: Comments and observations regarding drilling or sampling made by driller or field personnel.

**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**

- Bentonite
- Portland Cement Concrete
- Silty SAND (SM)
- Poorly graded SAND (SP)

**TYPICAL SAMPLER GRAPHIC SYMBOLS**

- Auger sampler
- Bulk Sample
- 3-inch-OD California w/ brass rings
- CME Sampler
- Continuous
- Grab Sample
- 2.5-inch-OD Modified California w/ brass liners
- Pitcher Sample

**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.

Project Name: **Main Street Apartments Development**

Project Number: **2012-107K**

Client: **Alamo Manhattan**



Boring/Well No.: **MW5**

Sheet 1 of 2

Date(s) Drilled: <b>12/11/14</b>	Logged By: <b>SL</b>	Surface Conditions: <b>Asphalt 6"</b>
Drilling Method(s): <b>Hollow Stem Auger</b>	Drill Bit Size/Type: <b>4" Inner Diameter</b>	Total Depth of Borehole: <b>66.5 feet bgs</b>
Drill Rig Type: <b>Truck-Mounted</b>	Drilling Contractor: <b>Holocene</b>	Approximate Surface Elevation (feet amsl): <b>101.44</b>
Groundwater Level and Date Measured: <b>51.59' on 12/12/14</b>	Sampling Method(s): <b>SPT</b>	Hammer Data : <b>140 lb, 30 in drop, auto trip</b>
Borehole Backfill: <b>Monitoring Well</b>		Location: <b>East side of 105th Avenue Southeast</b>

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
101.44	0						Asphalt SP		Asphalt Light brown, fine to medium SAND, based on observations of soil cuttings		Asphalt 0 - 3.5" Concrete 3.5 - 6" Blank 2" PVC 0 - 50 0.5 - 48' Bentonite
96.44	5										
91.44	10										
86.44	15										
81.44	20										
76.44	25										
71.44	30										
66.44	35										

Project Name: **Main Street Apartments Development**

Project Number: **2012-107K**

Client: **Alamo Manhattan**



Boring/Well No.: **MW5**

Sheet 2 of 2

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
66.44	35						SP		Light brown, fine to medium SAND, based on observations of soil cuttings		
61.44	40										
56.44	45										
51.44	50			42	0.3						Silica Sand 48 - 65' 2" Well Screen 50 - 65'
46.44	55			69	0.1		SM		Light brown, silty, medium SAND, moist to wet, no odor, no sheen		
41.44	60			31	0.2		ML		Light brown, sandy SILT, moist to wet, no odor, no sheen		
36.44	65			49	0.2						
31.44	70								Boring terminated at 66.5 feet bgs		
26.44	75										

Project Name: **Main Street Apartments Development**

Project Number: **2012-107K**

Client: **Alamo Manhattan**



Boring Log Key

Sheet 1 of 1

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
1	2	3	4	5	6	7	8	9	10	11	12

**COLUMN DESCRIPTIONS**

- 1** Elevation (feet): Elevation (MSL, feet).
- 2** Depth (feet): Depth in feet below the ground surface.
- 3** Sample Type: Type of soil sample collected at the depth interval shown.
- 4** Sample ID: Sample identification number.
- 5** 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.
- 6** PID Reading, ppm: The reading from a photo-ionization detector, in parts per million.
- 7** Recovery (%): Core Recovery Percentage is determined based on a ratio of the length of core sample recovered compared to the cored interval length.
- 8** USCS Symbol: USCS symbol of the subsurface material.
- 9** Graphic Log: Graphic depiction of the subsurface material encountered.
- 10** MATERIAL DESCRIPTION: Description of material encountered. May include consistency, moisture, color, and other descriptive text.
- 11** Well Log: Graphical representation of well installed upon completion of drilling and sampling.
- 12** REMARKS AND OTHER TESTS: Comments and observations regarding drilling or sampling made by driller or field personnel.

**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**

- Asphaltic Concrete (AC)
- Bentonite
- Portland Cement Concrete
- SILT, SILT w/SAND, SANDY SILT (ML)
- Silty SAND (SM)
- Poorly graded SAND (SP)

**TYPICAL SAMPLER GRAPHIC SYMBOLS**

- Auger sampler
- Bulk Sample
- 3-inch-OD California w/ brass rings
- CME Sampler
- Continuous
- Grab Sample
- 2.5-inch-OD Modified California w/ brass liners
- Pitcher Sample

**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.



Project Name: **Main Street Apartments Development**

Project Number: **2012-107J**

Client: **Alamo Manhattan**



Boring/Well No.: **RW1**

Sheet 2 of 2

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
46.7	30						SP		SAND		0.02-inch Slotted PVC 20.5 - 35.5
							ML		Drilling technology did not allow for standard soil logging procedures. General descriptions are given based on soil that was blown out of the borehole during drilling.		
41.7	35								SILT		
									Boring terminated at 41.2' amsl.		
36.7	40										
31.7	45										
26.7	50										
21.7	55										
16.7	60										
11.7	65										

Project Name: **Main Street Apartments Development**

Project Number: **2012-107J**

Client: **Alamo Manhattan**



Boring/Well No.: **RW2**

Sheet 1 of 2

Date(s) Drilled: <b>11/04/13</b>	Logged By: <b>SL</b>	Surface Conditions: <b>Soil</b>
Drilling Method(s): <b>ODEX</b>	Drill Bit Size/Type: <b>8" Diameter</b>	Total Depth of Borehole: <b>37.3 feet bgs</b>
Drill Rig Type: <b>Track-Mounted</b>	Drilling Contractor: <b>Kulchin Drilling</b>	Approximate Surface Elevation (feet amsl): <b>78.6</b>
Groundwater Level and Date Measured: <b>47.9 feet amsl on 12/23/13</b>	Sampling Method(s):	Hammer Data : <b>140 lb, 30 in drop, auto trip</b>
Borehole Backfill: <b>Monitoring Well</b>	Location: <b>10505 Main Street, Bellevue, Washington 98004</b>	

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
78.6	0						SP		SAND  Drilling technology did not allow for standard soil logging procedures. General descriptions are given based on soil that was blown out of the borehole during drilling.		Concrete 0 - 1  Blank 2" PVC 0 - 22.3  Bentonite Slurry 1 - 18.3
73.6	5										
68.6	10										
63.6	15										
58.6	20										Cement Grout 18.3 - 20.3  20/40 Sand 20.3 - 37.3
53.6	25										
48.6	30										



Project Name: **Main Street Apartments Development**

Project Number: **2012-107J**

Client: **Alamo Manhattan**



Boring/Well No.: **RW2**

Sheet 2 of 2

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
48.6	30						SP		SAND		0.02-inch Slotted PVC 22.3 - 37.3
							ML		Drilling technology did not allow for standard soil logging procedures. General descriptions are given based on soil that was blown out of the borehole during drilling.		
43.6	35										
									Boring terminated at 41.3' amsl.		
38.6	40										
33.6	45										
28.6	50										
23.6	55										
18.6	60										
13.6	65										

Project Name: **Main Street Apartments Development**

Project Number: **2012-107J**

Client: **Alamo Manhattan**



Boring Log Key

Sheet 1 of 1

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
1	2	3	4	5	6	7	8	9	10	11	12

**COLUMN DESCRIPTIONS**

- 1** Elevation (feet): Elevation (MSL, feet).
- 2** Depth (feet): Depth in feet below the ground surface.
- 3** Sample Type: Type of soil sample collected at the depth interval shown.
- 4** Sample ID: Sample identification number.
- 5** 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.
- 6** PID Reading, ppm: The reading from a photo-ionization detector, in parts per million.
- 7** Recovery (%): Core Recovery Percentage is determined based on a ratio of the length of core sample recovered compared to the cored interval length.
- 8** USCS Symbol: USCS symbol of the subsurface material.
- 9** Graphic Log: Graphic depiction of the subsurface material encountered.
- 10** MATERIAL DESCRIPTION: Description of material encountered. May include consistency, moisture, color, and other descriptive text.
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- 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**

- Bentonite
- Portland Cement Concrete
- SILT, SILT w/SAND, SANDY SILT (ML)
- Poorly graded SAND (SP)

**TYPICAL SAMPLER GRAPHIC SYMBOLS**

- Auger sampler
- Bulk Sample
- 3-inch-OD California w/ brass rings
- CME Sampler
- Continuous Core
- Grab Sample
- 2.5-inch-OD Modified California w/ brass liners
- Pitcher Sample

**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.

Project Name: **Proposed Main Street Redevelopment**

Project Number: **2012-107B**

Client: **Alamo Manhattan**



Boring/Well No.: **MW4**

Sheet 1 of 2

Date(s) Drilled: <b>05/21/13</b>	Logged By: <b>RNS</b>	Surface Conditions: <b>Asphalt</b>
Drilling Method(s): <b>Hollow Stem Auger</b>	Drill Bit Size/Type: <b>2" Diameter</b>	Total Depth of Borehole: <b>53 feet bgs</b>
Drill Rig Type: <b>Truck Mounted</b>	Drilling Contractor: <b>Holocene Drilling Inc.</b>	Approximate Surface Elevation: <b>99</b>
Groundwater Level and Date Measured: <b>43.51 ft bgs on 05/22/13</b>	Sampling Method(s): <b>SPT</b>	Hammer Data : <b>140 lb, 30 in drop, auto trip</b>
Borehole Backfill: <b>Monitoring Well</b>	Location: <b>10505 to 10525 Main Street, Bellevue, Washington 98004</b>	

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
99	0				0.0		Asphalt GP SP		2" ASPHALT 3" crushed GRAVEL Brown, fine, poorly-graded SAND with some silt, moist, no sheen		Concrete 0 - 1  Blank 2" PVC 1 - 43  Bentonite 1 - 41
94	5		MW4-6	39	0.0						
89	10		MW4-11	59	0.0		SP		Gray, fine, poorly-graded SAND with some silt, moist, no sheen		
84	15		MW4-16	69	0.0						
79	20		MW4-21	78	0.0						
74	25										

Project Name: **Proposed Main Street Redevelopment**

Project Number: **2012-107B**

Client: **Alamo Manhattan**



Boring/Well No.: **MW4**

Sheet 2 of 2

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
74	25		MW4-26	74	0.0		SP		Gray, fine, poorly-graded SAND with some silt, moist, no sheen		
69	30		MW4-31	90/12"	0.0				Slightly moist		
64	35		MW4-36	68	0.6				Petroleum odor, oily sheen		
59	40		MW4-41	61	0.7		ML		Brown SILT with sand, moist, trace sheen		
54	45		MW4-46	45	0.0		SP		Fine SAND, petroleum odor, moderate to heavy sheen		Colorado Silica Sand 10/20 41 - 53
49	50		MW4-51	67	0.1		SP		Brown, fine, poorly-graded SAND with some silt, wet, no odor, no sheen		Prepack Slotted 2" PVC 43 - 53
44	55						SM		Brown, very fine, poorly-graded, SILTY SAND, wet, no odor, no sheen		
39	60								Boring terminated at 53 feet bgs		

Project Name: **Proposed Main Street Redevelopment**

Project Number: **2012-107B**

Client: **Alamo Manhattan**



**Boring Log Key**

**Sheet 1 of 1**

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
1	2	3	4	5	6	7	8	9	10	11	12

**COLUMN DESCRIPTIONS**

- 1** Elevation (feet): Elevation (MSL, feet).
- 2** Depth (feet): Depth in feet below the ground surface.
- 3** Sample Type: Type of soil sample collected at the depth interval shown.
- 4** Sample ID: Sample identification number.
- 5** 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.
- 6** PID Reading, ppm: The reading from a photo-ionization detector, in parts per million.
- 7** Recovery (%): Core Recovery Percentage is determined based on a ratio of the length of core sample recovered compared to the cored interval length.
- 8** USCS Symbol: USCS symbol of the subsurface material.
- 9** Graphic Log: Graphic depiction of the subsurface material encountered.
- 10** MATERIAL DESCRIPTION: Description of material encountered. May include consistency, moisture, color, and other descriptive text.
- 11** Well Log: Graphical representation of well installed upon completion of drilling and sampling.
- 12** REMARKS AND OTHER TESTS: Comments and observations regarding drilling or sampling made by driller or field personnel.

**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**

- Asphaltic Concrete (AC)
- Bentonite
- Portland Cement Concrete
- Poorly graded GRAVEL (GP)
- SILT, SILT w/SAND, SANDY SILT (ML)
- Silty SAND (SM)
- Poorly graded SAND (SP)

**TYPICAL SAMPLER GRAPHIC SYMBOLS**

- Auger sampler
- Bulk Sample
- 3-inch-OD California w/ brass rings
- CME Sampler
- Continuous Core
- Grab Sample
- 2.5-inch-OD Modified California w/ brass liners
- Pitcher Sample

**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.

**Project Name: Aaron Brothers Retail Property**

**Project Number: 2012-107B**

**Client: Alamo Manhattan**



**Boring/Well No.: MW-3**

**Sheet 1 of 3**

Date(s) Drilled: <b>05/11/12</b>	Logged By: <b>SL</b>	Surface Conditions: <b>Soil</b>
Drilling Method(s): <b>Hollow Stem Auger</b>	Drill Bit Size/Type: <b>4.25" Inner Diameter</b>	Total Depth of Borehole: <b>60 feet bgs</b>
Drill Rig Type: <b>Truck Mounted</b>	Drilling Contractor: <b>EDI</b>	Approximate Surface Elevation: <b>n/a</b>
Groundwater Level and Date Measured: <b>50.51'</b>	Sampling Method(s): <b>SPT</b>	Hammer Data : <b>140 lb, 36 in drop</b>
Borehole Backfill: <b>Monitoring Well</b>	Location: <b>10505, 10509, and 10525 Main Street, Bellevue, Washington 98004</b>	

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
0	0										
	3.4		MW-3-4	15	0.2		SP		Light brown, fine SAND with ~1.5" diameter gravel, dense, moist, no sheen		
	8.8		MW-3-8	20	0.1		SP		Light brown, fine SAND, dense, moist, no sheen		
	13.2		MW-3-14	28	0.0		SP		Light brown, fine SAND, dense, moist, no sheen		
	18.6		MW-3-18	34	0.0		SP		Light brown, fine SAND, dense, moist, no sheen		
	20										Bentonite 1 - 43

Project Name: Aaron Brothers Retail Property

Project Number: 2012-107B

Client: Alamo Manhattan



Boring/Well No.: MW-3

Sheet 2 of 3

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
20											
			MW-3-23	41	0.0		SP		Light brown, fine SAND, dense, moist, no sheen		
	25		MW-3-29	57	0.0		SP		Light brown, fine SAND, dense, moist, no sheen		
	30		MW-3-33	47	0.0		SP		Light brown, fine SAND, dense, moist, no sheen		
	35		MW-3-39	26	0.0		ML		Light brown, sandy SILT, dense, moist, no sheen		
	40		MW-3-43	27	0.0		ML		Light brown, sandy SILT, dense, moist		
	45		MW-3-49	55	0.0		SM		Brown, SILTY SAND, dense, moist, no sheen		
	50		MW-3-54	32	0.0		ML		Light brown, sandy SILT, dense, wet, no sheen		
	55										

Silica Sand  
43 - 60  
Prepack  
Slotted PVC  
45 - 60

Project Name: Aaron Brothers Retail Property

Project Number: 2012-107B

Client: Alamo Manhattan



Boring/Well No.: MW-3

Sheet 3 of 3

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
	55										
	60								Terminated at 60 feet bgs		
	65										
	70										
	75										
	80										
	85										
	90										



**Project Name: Aaron Brothers Retail Property**

**Project Number: 2012-107B**

**Client: Alamo Manhattan**



**Boring Log Key**

**Sheet 1 of 1**

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
1	2	3	4	5	6	7	8	9	10	11	12

**COLUMN DESCRIPTIONS**

- 1** Elevation (feet): Elevation (MSL, feet).
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- 3** Sample Type: Type of soil sample collected at the depth interval shown.
- 4** Sample ID: Sample identification number.
- 5** 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.
- 6** PID Reading, ppm: The reading from a photo-ionization detector, in parts per million.
- 7** Recovery (%): Core Recovery Percentage is determined based on a ratio of the length of core sample recovered compared to the cored interval length.
- 8** USCS Symbol: USCS symbol of the subsurface material.
- 9** Graphic Log: Graphic depiction of the subsurface material encountered.
- 10** MATERIAL DESCRIPTION: Description of material encountered. May include consistency, moisture, color, and other descriptive text.
- 11** Well Log: Graphical representation of well installed upon completion of drilling and sampling.
- 12** REMARKS AND OTHER TESTS: Comments and observations regarding drilling or sampling made by driller or field personnel.









**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**

-  Bentonite chips
-  Portland Cement Concrete
-  SILT, SILT w/SAND, SANDY SILT (ML)
-  Silty SAND (SM)
-  Poorly graded SAND (SP)

**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.
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Project Name: **Main Street Bellevue**

Project Number: **2012-107C**

Client: **Alamo Manhattan**



Boring No.: **B-1**

Sheet 1 of 2

Date(s) Drilled: <b>7/3/2012</b>	Logged By: <b>EW</b>	Surface Conditions: <b>Asphalt</b>
Drilling Method(s): <b>HSA</b>	Drill Bit Size/Type: <b>4" Diameter</b>	Total Depth of Borehole: <b>36.42 feet bgs</b>
Drill Rig Type: <b>Rubber Track Drill Rig</b>	Drilling Contractor: <b>Borettec</b>	Approximate Surface Elevation: <b>93</b>
Groundwater Level and Date Measured: <b>Not Encountered ATD</b>	Sampling Method(s): <b>SPT</b>	Hammer Data : <b>140 lb, 30 in drop, rope and cathead</b>
Borehole Backfill: <b>Bentonite Chips</b>	Location: <b>SEC Main Street and 105th Avenue SE, Bellevue, Washington</b>	

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Moisture (%)
93	0					Asphalt		4" Asphalt	
						Fill		6" crushed rock	
						SM		Brown silty SAND, medium dense, moist	
88	5			30		SM		Tan silty fine SAND, medium dense to dense, moist Trace iron oxide staining	11.6
83	10			50				Becomes dense to very dense 22.1% fines	8.0
78	15			50/5"		SP-SM		Tan SAND with some silt, very dense, moist	6.4
73	20			50/4"					5.6
68	25			50/4"					5.7
63	30								

Project Name: **Main Street Bellevue**

Project Number: **2012-107C**

Client: **Alamo Manhattan**



Boring No.: **B-1**

Sheet 2 of 2

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Moisture (%)
63	30			50/4"		SP-SM		Tand SAND with some silt, very dense, moist	5.1
58	35			90/11"				Becomes wet Light groundwater seepage at 36'	20.3
53	40							Boring terminated at 36' 5".	
48	45								
43	50								
38	55								
33	60								
28	65								

Project Name: **Main Street Bellevue**

Project Number: **2012-107C**

Client: **Alamo Manhattan**



Boring No.: **B-2**

Sheet 1 of 2

Date(s) Drilled: <b>7/3/2012</b>	Logged By: <b>EW</b>	Surface Conditions: <b>Asphalt</b>
Drilling Method(s): <b>Hollow Stem Auger</b>	Drill Bit Size/Type: <b>4" Diameter</b>	Total Depth of Borehole: <b>36.5 feet bgs</b>
Drill Rig Type: <b>Rubber Track Drill Rig</b>	Drilling Contractor: <b>Borettec</b>	Approximate Surface Elevation: <b>99</b>
Groundwater Level and Date Measured: <b>Not Encountered ATD</b>	Sampling Method(s): <b>SPT</b>	Hammer Data : <b>140 lb, 30 in drop, rope and cathead</b>
Borehole Backfill: <b>Bentonite Chips</b>	Location: <b>SEC Main Street and 105th Avenue SE, Bellevue, Washington</b>	

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Moisture (%)
99	0					Asphalt Fill SM		2" asphalt 6" crushed rock	
								Tan silty fine SAND, very dense, moist	
94	5			55					8.2
89	10			92/12"				Contains 2" bed of sandy silt	10.5
84	15			50/3"					7.7
79	20			50/3"				18.2% fines	7.2
74	25			55		ML		Tan SILT with trace sand, hard, moist Contains 1" sand bed at 25.5' Trace iron oxide staining, becomes wet Light groundwater seepage at 26.5'	25.4
69	30								

Project Name: **Main Street Bellevue**

Project Number: **2012-107C**

Client: **Alamo Manhattan**



Boring No.: **B-2**

Sheet 2 of 2

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Moisture (%)
69	30			56				<p>Becomes moist to wet, trace iron oxide staining</p> <p>Contains occasional 1/2" to 1" silty sand interbeds</p>	20.6
64	35			25				<p>Becomes very stiff, trace iron oxide staining</p> <p>Contains 1/4" sand interbed</p>	25.8
59	40							Boring terminated at 36.5'	
54	45								
49	50								
44	55								
39	60								
34	65								

Project Name: **Main Street Bellevue**

Project Number: **2012-107C**

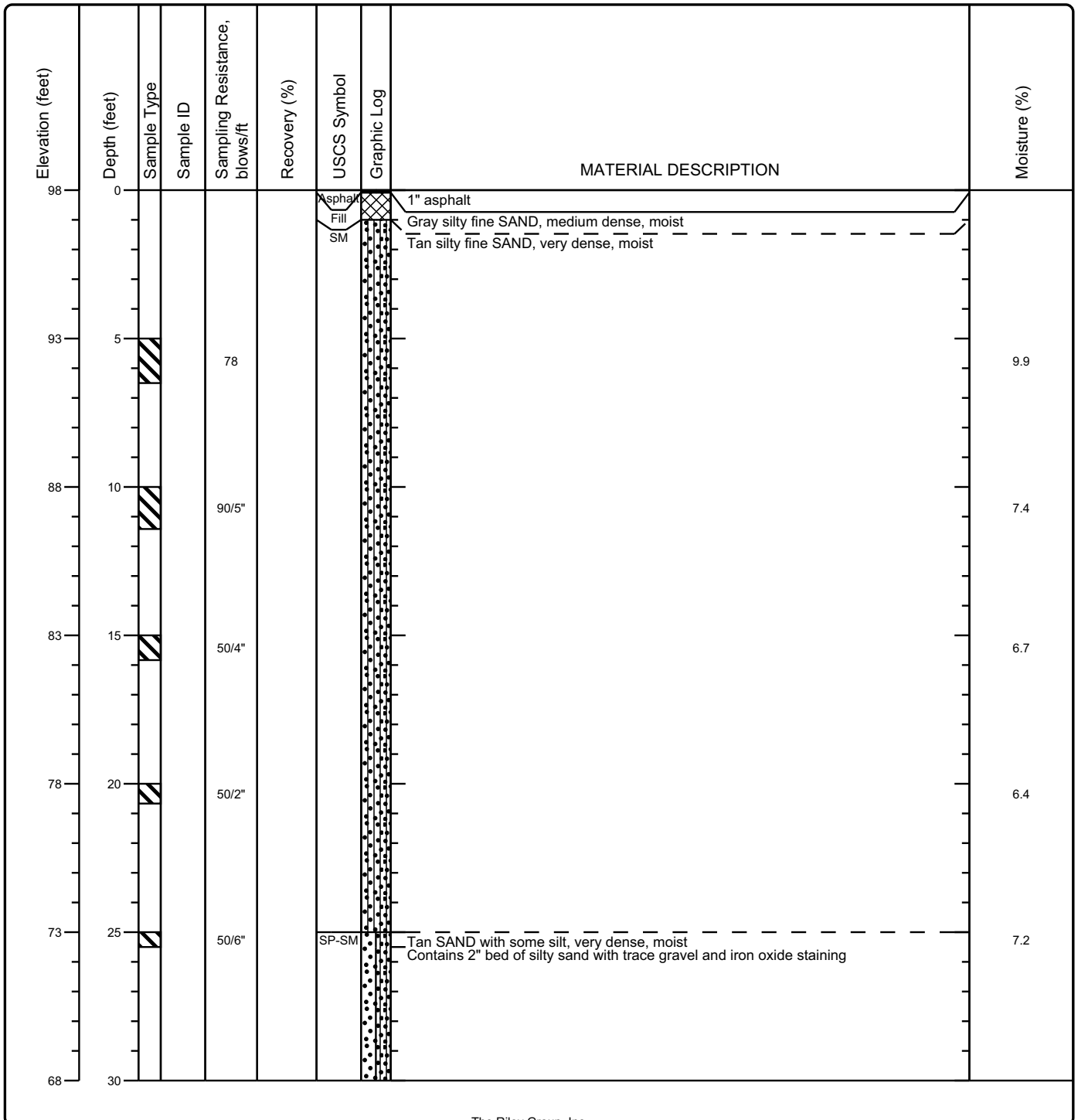
Client: **Alamo Manhattan**



Boring No.: **B-3**

Sheet 1 of 2

Date(s) Drilled: <b>7/3/2012</b>	Logged By: <b>EW</b>	Surface Conditions: <b>Asphalt</b>
Drilling Method(s): <b>Hollow Stem Auger</b>	Drill Bit Size/Type: <b>4" Diameter</b>	Total Depth of Borehole: <b>46.5 feet bgs</b>
Drill Rig Type: <b>Rubber Track Drill Rig</b>	Drilling Contractor: <b>Boretac</b>	Approximate Surface Elevation: <b>98</b>
Groundwater Level and Date Measured: <b>Not Encountered ATD</b>	Sampling Method(s): <b>SPT</b>	Hammer Data : <b>140 lb, 30 in drop, rope and cathead</b>
Borehole Backfill: <b>Bentonite Chips</b>	Location: <b>SEC Main Street and 105th Avenue SE, Bellevue, Washington</b>	



Project Name: **Main Street Bellevue**

Project Number: **2012-107C**

Client: **Alamo Manhattan**



Boring No.: **B-3**

Sheet 2 of 2

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Moisture (%)
68	30			50/2"		SP-SM		Tan SAND with some silt, very dense, moist	6.1
63	35			95/11"		ML		Tan SILT with trace sand, hard, moist Contains 1" sand interbeds with some silt and trace gravel	19.1
58	40			71/9"				Iron oxide staining, becomes wet Light groundwater seepage at 41' 85.7% fines	26.6
53	45			67				Contains trace gravel, thin bands of iron oxide staining	21.1
48	50							Boring terminated at 46.5'.	
43	55								
38	60								
33	65								

Project Name: **Main Street Bellevue**

Project Number: **2012-107C**

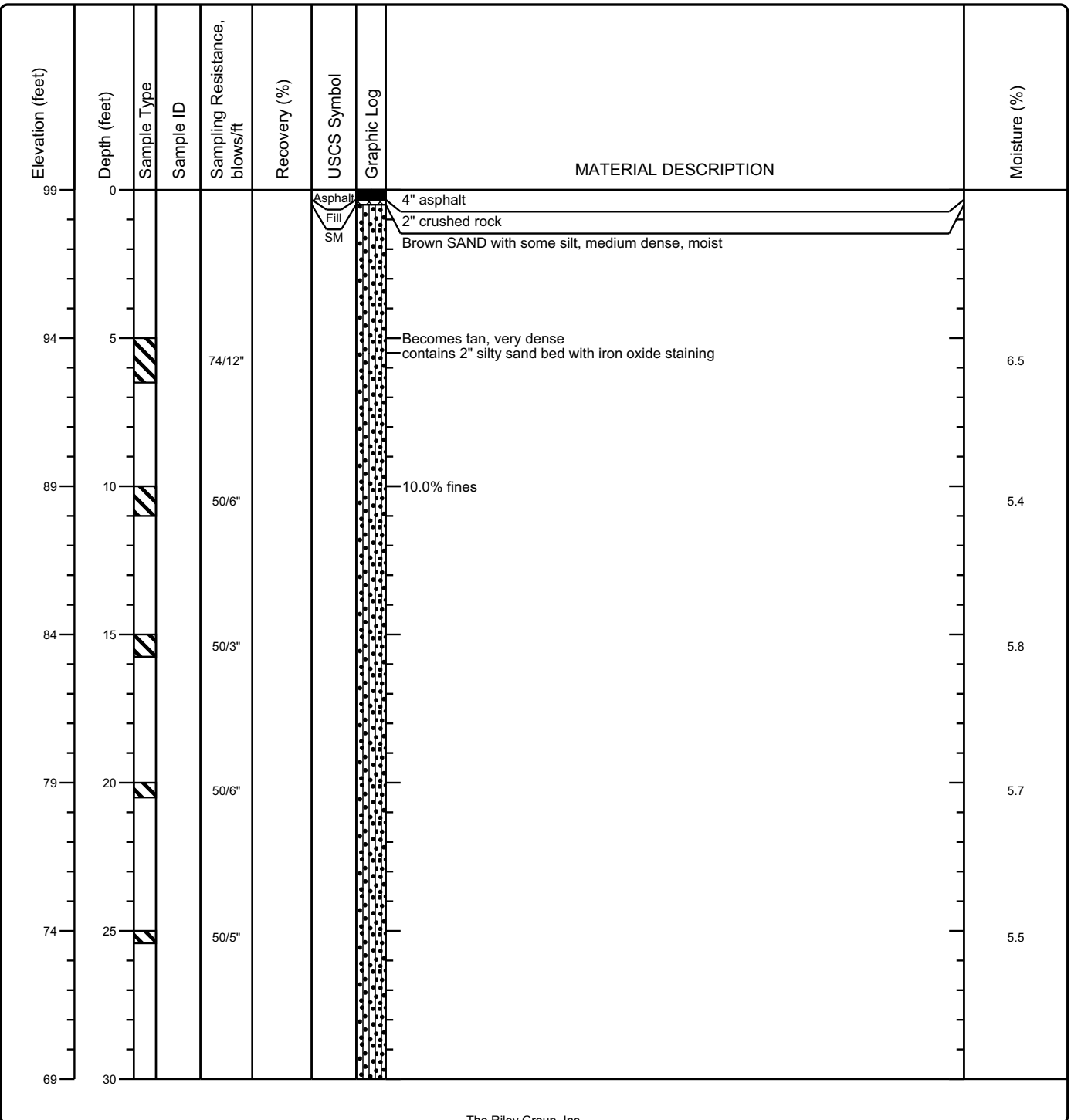
Client: **Alamo Manhattan**



Boring No.: **B-4**

Sheet 1 of 2

Date(s) Drilled: <b>7/3/2012</b>	Logged By: <b>EW</b>	Surface Conditions: <b>Asphalt</b>
Drilling Method(s): <b>Hollow Stem Auger</b>	Drill Bit Size/Type: <b>4" Diameter</b>	Total Depth of Borehole: <b>45.92 feet bgs</b>
Drill Rig Type: <b>Rubber Track Drill Rig</b>	Drilling Contractor: <b>Boretac</b>	Approximate Surface Elevation: <b>99</b>
Groundwater Level and Date Measured: <b>Not Encountered ATD</b>	Sampling Method(s): <b>SPT</b>	Hammer Data : <b>140 lb, 30 in drop, rope and cathead</b>
Borehole Backfill: <b>Bentonite Chips</b>	Location: <b>SEC Main Street and 105th Avenue SE, Bellevue, Washington</b>	





Project Name: **Main Street Bellevue**

Project Number: **2012-107C**

Client: **Alamo Manhattan**



Boring No.: **B-4**

Sheet 2 of 2

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Moisture (%)
69	30			49		ML		Tan SILT with trace sand, hard, moist to wet Trace iron oxide staining, 86.5% fines Contains occasional 1/4" to 1/2" interbeds of silty sand	23.1
64	35			79				Trace iron oxide staining Contains 2" sand bed with light groundwater seepage at 36'	26.1
59	40			52				Trace iron oxide staining	24.1
54	45			50/5"				Becomes blueish gray Contains 4" sand bed with light groundwater seepage, iron oxide staining at 45.5' Boring terminated at 45' 11".	22.8
49	50								
44	55								
39	60								
34	65								



# ***Appendix D***



# ***Appendix E***



January 16, 2017

Mr. Jerry Sawetz  
The Riley Group, Inc.  
17522 Bothell Way NE, Suite A  
Bothell, WA 98011

Dear Mr. Sawetz,

On January 5th, 3 samples were received by our laboratory and assigned our laboratory project number EV17010018. The project was identified as your 2012-107L. 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



**CERTIFICATE OF ANALYSIS**

CLIENT: The Riley Group, Inc.  
 17522 Bothell Way NE, Suite A  
 Bothell, WA 98011

CLIENT CONTACT: Jerry Sawetz  
 CLIENT PROJECT: 2012-107L  
 CLIENT SAMPLE ID: MW 6

DATE: 1/16/2017  
 ALS JOB#: EV17010018  
 ALS SAMPLE#: EV17010018-01  
 DATE RECEIVED: 01/05/2017  
 COLLECTION DATE: 1/4/2017 10:45:00 AM  
 WDOE ACCREDITATION: C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	01/05/2017	PAB
C5-C6 Aliphatics	NWVPH	U	50	1	UG/L	01/09/2017	PAB
>C6-C8 Aliphatics	NWVPH	U	50	1	UG/L	01/09/2017	PAB
>C8-C10 Aliphatics	NWVPH	U	50	1	UG/L	01/09/2017	PAB
>C8-C10 Aromatics	NWVPH	U	50	1	UG/L	01/09/2017	PAB
Hexane	NWVPH	U	2.0	1	UG/L	01/09/2017	PAB
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	01/05/2017	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	01/05/2017	EBS
>C8-C10 Aliphatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
>C10-C12 Aliphatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
>C12-C16 Aliphatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
>C16-C21 Aliphatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
>C21-C34 Aliphatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
>C8-C10 Aromatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
>C10-C12 Aromatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
>C12-C16 Aromatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
>C16-C21 Aromatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
>C21-C34 Aromatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	01/06/2017	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	01/06/2017	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC

SURROGATE	METHOD	%REC	ANALYSIS	ANALYSIS
			DATE	BY
TFT	NWTPH-GX	95.7	01/05/2017	PAB
TFT - Aliphatic	NWVPH	86.7	01/09/2017	PAB
TFT - Aromatic	NWVPH	81.1	01/09/2017	PAB
TFT - Hexane	NWVPH	87.6	01/09/2017	PAB
C25	NWTPH-DX	94.4	01/05/2017	EBS
C25	NWEPH	91.0	01/06/2017	EBS
p-Terphenyl	NWEPH	81.0	01/06/2017	EBS

**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	The Riley Group, Inc. 17522 Bothell Way NE, Suite A Bothell, WA 98011	<b>DATE:</b>	1/16/2017
<b>CLIENT CONTACT:</b>	Jerry Sawetz	<b>ALS JOB#:</b>	EV17010018
<b>CLIENT PROJECT:</b>	2012-107L	<b>ALS SAMPLE#:</b>	EV17010018-01
<b>CLIENT SAMPLE ID</b>	MW 6	<b>DATE RECEIVED:</b>	01/05/2017
		<b>COLLECTION DATE:</b>	1/4/2017 10:45:00 AM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

<b>SURROGATE</b>	<b>METHOD</b>	<b>%REC</b>	<b>ANALYSIS DATE</b>	<b>ANALYSIS BY</b>
1,2-Dichloroethane-d4	EPA-8260	<b>103</b>	01/06/2017	DLC
Toluene-d8	EPA-8260	<b>97.5</b>	01/06/2017	DLC

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



**CERTIFICATE OF ANALYSIS**

CLIENT: The Riley Group, Inc.  
 17522 Bothell Way NE, Suite A  
 Bothell, WA 98011

CLIENT CONTACT: Jerry Sawetz  
 CLIENT PROJECT: 2012-107L  
 CLIENT SAMPLE ID: RW 1

DATE: 1/16/2017  
 ALS JOB#: EV17010018  
 ALS SAMPLE#: EV17010018-02  
 DATE RECEIVED: 01/05/2017  
 COLLECTION DATE: 1/4/2017 2:50:00 PM  
 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	01/05/2017	PAB
C5-C6 Aliphatics	NWVPH	U	50	1	UG/L	01/09/2017	PAB
>C6-C8 Aliphatics	NWVPH	U	50	1	UG/L	01/09/2017	PAB
>C8-C10 Aliphatics	NWVPH	U	50	1	UG/L	01/09/2017	PAB
>C8-C10 Aromatics	NWVPH	U	50	1	UG/L	01/09/2017	PAB
Hexane	NWVPH	U	2.0	1	UG/L	01/09/2017	PAB
TPH-Diesel Range	NWTPH-DX	1200 *	130	1	UG/L	01/05/2017	EBS
TPH-Oil Range	NWTPH-DX	280	250	1	UG/L	01/05/2017	EBS
>C8-C10 Aliphatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
>C10-C12 Aliphatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
>C12-C16 Aliphatics	NWEPH	74	50	1	UG/L	01/06/2017	EBS
>C16-C21 Aliphatics	NWEPH	170	50	1	UG/L	01/06/2017	EBS
>C21-C34 Aliphatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
>C8-C10 Aromatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
>C10-C12 Aromatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
>C12-C16 Aromatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
>C16-C21 Aromatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
>C21-C34 Aromatics	NWEPH	140	50	1	UG/L	01/06/2017	EBS
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	01/06/2017	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	01/06/2017	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	96.8	01/05/2017	PAB
TFT - Aliphatic	NWVPH	98.8	01/09/2017	PAB
TFT - Aromatic	NWVPH	97.2	01/09/2017	PAB
TFT - Hexane	NWVPH	98.4	01/09/2017	PAB
C25	NWTPH-DX	118	01/05/2017	EBS
C25	NWEPH	89.0	01/06/2017	EBS
p-Terphenyl	NWEPH	77.0	01/06/2017	EBS





CERTIFICATE OF ANALYSIS

CLIENT: The Riley Group, Inc. DATE: 1/16/2017  
17522 Bothell Way NE, Suite A ALS JOB#: EV17010018  
Bothell, WA 98011 ALS SAMPLE#: EV17010018-02  
CLIENT CONTACT: Jerry Sawetz DATE RECEIVED: 01/05/2017  
CLIENT PROJECT: 2012-107L COLLECTION DATE: 1/4/2017 2:50:00 PM  
CLIENT SAMPLE ID RW 1 WDOE ACCREDITATION: C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS	
			DATE	BY
1,2-Dichloroethane-d4	EPA-8260	109	01/06/2017	DLC
Toluene-d8	EPA-8260	101	01/06/2017	DLC

U - Analyte analyzed for but not detected at level above reporting limit.  
Chromatogram indicates that it is likely that sample contains a diesel range product that is likely biased high due to biogenic interference.



**CERTIFICATE OF ANALYSIS**

CLIENT: The Riley Group, Inc.  
 17522 Bothell Way NE, Suite A  
 Bothell, WA 98011

CLIENT CONTACT: Jerry Sawetz  
 CLIENT PROJECT: 2012-107L  
 CLIENT SAMPLE ID: RW 2

DATE: 1/16/2017  
 ALS JOB#: EV17010018  
 ALS SAMPLE#: EV17010018-03  
 DATE RECEIVED: 01/05/2017  
 COLLECTION DATE: 1/4/2017 1:45:00 PM  
 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	01/05/2017	PAB
C5-C6 Aliphatics	NWVPH	U	50	1	UG/L	01/09/2017	PAB
>C6-C8 Aliphatics	NWVPH	U	50	1	UG/L	01/09/2017	PAB
>C8-C10 Aliphatics	NWVPH	U	50	1	UG/L	01/09/2017	PAB
>C8-C10 Aromatics	NWVPH	U	50	1	UG/L	01/09/2017	PAB
Hexane	NWVPH	U	2.0	1	UG/L	01/09/2017	PAB
TPH-Diesel Range	NWTPH-DX	330 *	130	1	UG/L	01/05/2017	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	01/05/2017	EBS
>C8-C10 Aliphatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
>C10-C12 Aliphatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
>C12-C16 Aliphatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
>C16-C21 Aliphatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
>C21-C34 Aliphatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
>C8-C10 Aromatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
>C10-C12 Aromatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
>C12-C16 Aromatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
>C16-C21 Aromatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
>C21-C34 Aromatics	NWEPH	U	50	1	UG/L	01/06/2017	EBS
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	01/06/2017	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	01/06/2017	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	01/06/2017	DLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	97.1	01/05/2017	PAB
TFT - Aliphatic	NWVPH	94.6	01/09/2017	PAB
TFT - Aromatic	NWVPH	96.0	01/09/2017	PAB
TFT - Hexane	NWVPH	96.1	01/09/2017	PAB
C25	NWTPH-DX	98.9	01/05/2017	EBS
C25	NWEPH	99.0	01/06/2017	EBS
p-Terphenyl	NWEPH	84.0	01/06/2017	EBS

**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	The Riley Group, Inc. 17522 Bothell Way NE, Suite A Bothell, WA 98011	<b>DATE:</b>	1/16/2017
<b>CLIENT CONTACT:</b>	Jerry Sawetz	<b>ALS JOB#:</b>	EV17010018
<b>CLIENT PROJECT:</b>	2012-107L	<b>ALS SAMPLE#:</b>	EV17010018-03
<b>CLIENT SAMPLE ID</b>	RW 2	<b>DATE RECEIVED:</b>	01/05/2017
		<b>COLLECTION DATE:</b>	1/4/2017 1:45:00 PM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

<b>SURROGATE</b>	<b>METHOD</b>	<b>%REC</b>	<b>ANALYSIS DATE</b>	<b>ANALYSIS BY</b>
1,2-Dichloroethane-d4	EPA-8260	<b>104</b>	01/06/2017	DLC
Toluene-d8	EPA-8260	<b>102</b>	01/06/2017	DLC

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

Chromatogram indicates that it is likely that sample contains a diesel range product that is likely biased high due to biogenic interference.



**CERTIFICATE OF ANALYSIS**

CLIENT: The Riley Group, Inc.  
 17522 Bothell Way NE, Suite A  
 Bothell, WA 98011

CLIENT CONTACT: Jerry Sawetz  
 CLIENT PROJECT: 2012-107L

DATE: 1/16/2017  
 ALS SDG#: EV17010018  
 WDOE ACCREDITATION: C601

**LABORATORY BLANK RESULTS**

**MBG-122916W - Batch 111196 - Water by NWTPH-GX**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	UG/L	50	12/29/2016	PAB

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

**MBLK-R287994 - Batch R287994 - Water by NWVPH**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
C5-C6 Aliphatics	NWVPH	U	UG/L	50	01/09/2017	PAB
>C6-C8 Aliphatics	NWVPH	U	UG/L	50	01/09/2017	PAB
>C8-C10 Aliphatics	NWVPH	U	UG/L	50	01/09/2017	PAB
>C8-C10 Aromatics	NWVPH	U	UG/L	50	01/09/2017	PAB
Hexane	NWVPH	U	UG/L	2.0	01/09/2017	PAB

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

**MB-010417W - Batch 111286 - Water by NWTPH-DX**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	UG/L	130	01/04/2017	EBS
TPH-Oil Range	NWTPH-DX	U	UG/L	250	01/04/2017	EBS

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

**MBLK-287815 - Batch R287815 - Water by NWEPH**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
>C8-C10 Aliphatics	NWEPH	U	UG/L	50	01/06/2017	EBS
>C10-C12 Aliphatics	NWEPH	U	UG/L	50	01/06/2017	EBS
>C12-C16 Aliphatics	NWEPH	U	UG/L	50	01/06/2017	EBS
>C16-C21 Aliphatics	NWEPH	U	UG/L	50	01/06/2017	EBS
>C21-C34 Aliphatics	NWEPH	U	UG/L	50	01/06/2017	EBS
>C8-C10 Aromatics	NWEPH	U	UG/L	50	01/06/2017	EBS
>C10-C12 Aromatics	NWEPH	U	UG/L	50	01/06/2017	EBS
>C12-C16 Aromatics	NWEPH	U	UG/L	50	01/06/2017	EBS
>C16-C21 Aromatics	NWEPH	U	UG/L	50	01/06/2017	EBS
>C21-C34 Aromatics	NWEPH	U	UG/L	50	01/06/2017	EBS

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



**CERTIFICATE OF ANALYSIS**

CLIENT:	The Riley Group, Inc. 17522 Bothell Way NE, Suite A Bothell, WA 98011	DATE:	1/16/2017
CLIENT CONTACT:	Jerry Sawetz	ALS SDG#:	EV17010018
CLIENT PROJECT:	2012-107L	WDOE ACCREDITATION:	C601

**LABORATORY BLANK RESULTS**

**MB-010517W - Batch 111254 - Water by EPA-8260**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING	ANALYSIS	ANALYSIS
				LIMITS	DATE	BY
Vinyl Chloride	EPA-8260	U	UG/L	0.20	01/05/2017	DLC
1,1-Dichloroethene	EPA-8260	U	UG/L	2.0	01/05/2017	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	UG/L	2.0	01/05/2017	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	UG/L	2.0	01/05/2017	DLC
Benzene	EPA-8260	U	UG/L	2.0	01/05/2017	DLC
Trichloroethene	EPA-8260	U	UG/L	2.0	01/05/2017	DLC
Toluene	EPA-8260	U	UG/L	2.0	01/05/2017	DLC
Tetrachloroethylene	EPA-8260	U	UG/L	2.0	01/05/2017	DLC
Ethylbenzene	EPA-8260	U	UG/L	2.0	01/05/2017	DLC
m,p-Xylene	EPA-8260	U	UG/L	4.0	01/05/2017	DLC
o-Xylene	EPA-8260	U	UG/L	2.0	01/05/2017	DLC

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



**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	The Riley Group, Inc. 17522 Bothell Way NE, Suite A Bothell, WA 98011	<b>DATE:</b>	1/16/2017
<b>CLIENT CONTACT:</b>	Jerry Sawetz	<b>ALS SDG#:</b>	EV17010018
<b>CLIENT PROJECT:</b>	2012-107L	<b>WDOE ACCREDITATION:</b>	C601

**LABORATORY CONTROL SAMPLE RESULTS**

**ALS Test Batch ID: 111196 - Water by NWTPH-GX**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
TPH-Volatile Range - BS	NWTPH-GX	95.0			66.5	122.7	12/29/2016	PAB
TPH-Volatile Range - BSD	NWTPH-GX	99.7	5		66.5	122.7	12/29/2016	PAB

**ALS Test Batch ID: R287994 - Water by NWVPH**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
C5-C6 Aliphatics - BS	NWVPH	83.0			70	130	01/09/2017	PAB
C5-C6 Aliphatics - BSD	NWVPH	86.5	4		70	130	01/09/2017	PAB
>C6-C8 Aliphatics - BS	NWVPH	94.8			70	130	01/09/2017	PAB
>C6-C8 Aliphatics - BSD	NWVPH	100	6		70	130	01/09/2017	PAB
>C8-C10 Aliphatics - BS	NWVPH	93.6			70	130	01/09/2017	PAB
>C8-C10 Aliphatics - BSD	NWVPH	100	7		70	130	01/09/2017	PAB
>C8-C10 Aromatics - BS	NWVPH	90.8			70	130	01/09/2017	PAB
>C8-C10 Aromatics - BSD	NWVPH	96.5	6		70	130	01/09/2017	PAB
Hexane - BS	NWVPH	84.0			70	130	01/09/2017	PAB
Hexane - BSD	NWVPH	87.8	4		70	130	01/09/2017	PAB

**ALS Test Batch ID: 111286 - Water by NWTPH-DX**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
TPH-Diesel Range - BS	NWTPH-DX	93.2			67	125.2	01/04/2017	EBS
TPH-Diesel Range - BSD	NWTPH-DX	98.8	6		67	125.2	01/04/2017	EBS

**ALS Test Batch ID: R287815 - Water by NWEPH**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
>C8-C10 Aliphatics - BS	NWEPH	99.0			70	130	01/06/2017	EBS
>C8-C10 Aliphatics - BSD	NWEPH	111	11		70	130	01/06/2017	EBS
>C10-C12 Aliphatics - BS	NWEPH	105			70	130	01/06/2017	EBS
>C10-C12 Aliphatics - BSD	NWEPH	115	9		70	130	01/06/2017	EBS
>C12-C16 Aliphatics - BS	NWEPH	109			70	130	01/06/2017	EBS
>C12-C16 Aliphatics - BSD	NWEPH	116	6		70	130	01/06/2017	EBS
>C16-C21 Aliphatics - BS	NWEPH	112			70	130	01/06/2017	EBS
>C16-C21 Aliphatics - BSD	NWEPH	116	4		70	130	01/06/2017	EBS
>C21-C34 Aliphatics - BS	NWEPH	114			70	130	01/06/2017	EBS
>C21-C34 Aliphatics - BSD	NWEPH	104	9		70	130	01/06/2017	EBS
>C8-C10 Aromatics - BS	NWEPH	83.0			70	130	01/06/2017	EBS
>C8-C10 Aromatics - BSD	NWEPH	91.0	9		70	130	01/06/2017	EBS
>C10-C12 Aromatics - BS	NWEPH	88.0			70	130	01/06/2017	EBS



**CERTIFICATE OF ANALYSIS**

CLIENT: The Riley Group, Inc.  
17522 Bothell Way NE, Suite A  
Bothell, WA 98011

DATE: 1/16/2017  
ALS SDG#: EV17010018  
WDOE ACCREDITATION: C601

CLIENT CONTACT: Jerry Sawetz  
CLIENT PROJECT: 2012-107L

**LABORATORY CONTROL SAMPLE RESULTS**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
>C10-C12 Aromatics - BSD	NWEPH	93.0	6		70	130	01/06/2017	EBS
>C12-C16 Aromatics - BS	NWEPH	92.0			70	130	01/06/2017	EBS
>C12-C16 Aromatics - BSD	NWEPH	96.0	4		70	130	01/06/2017	EBS
>C16-C21 Aromatics - BS	NWEPH	91.0			70	130	01/06/2017	EBS
>C16-C21 Aromatics - BSD	NWEPH	96.0	5		70	130	01/06/2017	EBS
>C21-C34 Aromatics - BS	NWEPH	81.0			70	130	01/06/2017	EBS
>C21-C34 Aromatics - BSD	NWEPH	85.0	5		70	130	01/06/2017	EBS

**ALS Test Batch ID: 111254 - Water by EPA-8260**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
1,1-Dichloroethene - BS	EPA-8260	109			72.5	136	01/05/2017	DLC
1,1-Dichloroethene - BSD	EPA-8260	111	1		72.5	136	01/05/2017	DLC
Benzene - BS	EPA-8260	112			74.7	143	01/05/2017	DLC
Benzene - BSD	EPA-8260	111	1		74.7	143	01/05/2017	DLC
Trichloroethene - BS	EPA-8260	113			74.4	141	01/05/2017	DLC
Trichloroethene - BSD	EPA-8260	113	0		74.4	141	01/05/2017	DLC
Toluene - BS	EPA-8260	114			71.7	139	01/05/2017	DLC
Toluene - BSD	EPA-8260	114	0		71.7	139	01/05/2017	DLC

APPROVED BY

Laboratory Director







January 16, 2017

Mr. Jerry Sawetz  
The Riley Group, Inc.  
17522 Bothell Way NE, Suite A  
Bothell, WA 98011

Dear Mr. Sawetz,

On October 31st, 3 samples were received by our laboratory and assigned our laboratory project number EV16100227. The project was identified as your 2012-107L. 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



**CERTIFICATE OF ANALYSIS**

CLIENT: The Riley Group, Inc.  
 17522 Bothell Way NE, Suite A  
 Bothell, WA 98011

CLIENT CONTACT: Jerry Sawetz  
 CLIENT PROJECT: 2012-107L  
 CLIENT SAMPLE ID: MW-6

DATE: 1/16/2017  
 ALS JOB#: EV16100227  
 ALS SAMPLE#: EV16100227-01  
 DATE RECEIVED: 10/31/2016  
 COLLECTION DATE: 10/28/2016 11:15:00 AM  
 WDOE ACCREDITATION: C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	10/31/2016	PAB
C5-C6 Aliphatics	NWVPH	U	50	1	UG/L	11/02/2016	PAB
>C6-C8 Aliphatics	NWVPH	U	50	1	UG/L	11/02/2016	PAB
>C8-C10 Aliphatics	NWVPH	U	50	1	UG/L	11/02/2016	PAB
>C8-C10 Aromatics	NWVPH	U	50	1	UG/L	11/02/2016	PAB
Hexane	NWVPH	U	2.0	1	UG/L	11/02/2016	PAB
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	11/02/2016	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	11/02/2016	EBS
>C8-C10 Aliphatics	NWEPH	U	50	1	UG/L	11/04/2016	EBS
>C10-C12 Aliphatics	NWEPH	U	50	1	UG/L	11/04/2016	EBS
>C12-C16 Aliphatics	NWEPH	U	50	1	UG/L	11/04/2016	EBS
>C16-C21 Aliphatics	NWEPH	U	50	1	UG/L	11/04/2016	EBS
>C21-C34 Aliphatics	NWEPH	U	50	1	UG/L	11/04/2016	EBS
>C8-C10 Aromatics	NWEPH	U	50	1	UG/L	11/03/2016	EBS
>C10-C12 Aromatics	NWEPH	U	50	1	UG/L	11/03/2016	EBS
>C12-C16 Aromatics	NWEPH	U	50	1	UG/L	11/03/2016	EBS
>C16-C21 Aromatics	NWEPH	U	50	1	UG/L	11/03/2016	EBS
>C21-C34 Aromatics	NWEPH	U	50	1	UG/L	11/03/2016	EBS
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	10/31/2016	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	10/31/2016	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC

SURROGATE	METHOD	%REC	ANALYSIS	ANALYSIS
			DATE	BY
TFT	NWTPH-GX	88.0	10/31/2016	PAB
TFT - Aliphatic	NWVPH	95.0	11/02/2016	PAB
TFT - Aromatic	NWVPH	108	11/02/2016	PAB
TFT - Hexane	NWVPH	97.0	11/02/2016	PAB
C25	NWTPH-DX	85.9	11/02/2016	EBS
C25	NWEPH	91.0	11/04/2016	EBS
p-Terphenyl	NWEPH	83.0	11/03/2016	EBS

**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	The Riley Group, Inc. 17522 Bothell Way NE, Suite A Bothell, WA 98011	<b>DATE:</b>	1/16/2017
<b>CLIENT CONTACT:</b>	Jerry Sawetz	<b>ALS JOB#:</b>	EV16100227
<b>CLIENT PROJECT:</b>	2012-107L	<b>ALS SAMPLE#:</b>	EV16100227-01
<b>CLIENT SAMPLE ID</b>	MW-6	<b>DATE RECEIVED:</b>	10/31/2016
		<b>COLLECTION DATE:</b>	10/28/2016 11:15:00 AM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

<b>SURROGATE</b>	<b>METHOD</b>	<b>%REC</b>	<b>ANALYSIS DATE</b>	<b>ANALYSIS BY</b>
1,2-Dichloroethane-d4	EPA-8260	111	10/31/2016	DLC
Toluene-d8	EPA-8260	102	10/31/2016	DLC

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



**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	The Riley Group, Inc. 17522 Bothell Way NE, Suite A Bothell, WA 98011	<b>DATE:</b>	1/16/2017
<b>CLIENT CONTACT:</b>	Jerry Sawetz	<b>ALS JOB#:</b>	EV16100227
<b>CLIENT PROJECT:</b>	2012-107L	<b>ALS SAMPLE#:</b>	EV16100227-02
<b>CLIENT SAMPLE ID</b>	RW-1	<b>DATE RECEIVED:</b>	10/31/2016
		<b>COLLECTION DATE:</b>	10/28/2016 12:30:00 PM
		<b>WDOE ACCREDITATION:</b>	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	10/31/2016	PAB
C5-C6 Aliphatics	NWVPH	U	50	1	UG/L	11/02/2016	PAB
>C6-C8 Aliphatics	NWVPH	U	50	1	UG/L	11/02/2016	PAB
>C8-C10 Aliphatics	NWVPH	U	50	1	UG/L	11/02/2016	PAB
>C8-C10 Aromatics	NWVPH	U	50	1	UG/L	11/02/2016	PAB
Hexane	NWVPH	U	2.0	1	UG/L	11/02/2016	PAB
TPH-Diesel Range	NWTPH-DX	470 *	130	1	UG/L	11/02/2016	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	11/02/2016	EBS
>C8-C10 Aliphatics	NWEPH	U	50	1	UG/L	11/04/2016	EBS
>C10-C12 Aliphatics	NWEPH	U	50	1	UG/L	11/04/2016	EBS
>C12-C16 Aliphatics	NWEPH	U	50	1	UG/L	11/04/2016	EBS
>C16-C21 Aliphatics	NWEPH	U	50	1	UG/L	11/04/2016	EBS
>C21-C34 Aliphatics	NWEPH	U	50	1	UG/L	11/04/2016	EBS
>C8-C10 Aromatics	NWEPH	U	50	1	UG/L	11/03/2016	EBS
>C10-C12 Aromatics	NWEPH	U	50	1	UG/L	11/03/2016	EBS
>C12-C16 Aromatics	NWEPH	U	50	1	UG/L	11/03/2016	EBS
>C16-C21 Aromatics	NWEPH	U	50	1	UG/L	11/03/2016	EBS
>C21-C34 Aromatics	NWEPH	U	50	1	UG/L	11/03/2016	EBS
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	10/31/2016	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	10/31/2016	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	92.1	10/31/2016	PAB
TFT - Aliphatic	NWVPH	95.0	11/02/2016	PAB
TFT - Aromatic	NWVPH	107	11/02/2016	PAB
TFT - Hexane	NWVPH	95.0	11/02/2016	PAB
C25	NWTPH-DX	87.7	11/02/2016	EBS
C25	NWEPH	96.0	11/04/2016	EBS
p-Terphenyl	NWEPH	75.0	11/03/2016	EBS



CERTIFICATE OF ANALYSIS

CLIENT: The Riley Group, Inc. DATE: 1/16/2017  
17522 Bothell Way NE, Suite A ALS JOB#: EV16100227  
Bothell, WA 98011 ALS SAMPLE#: EV16100227-02  
CLIENT CONTACT: Jerry Sawetz DATE RECEIVED: 10/31/2016  
CLIENT PROJECT: 2012-107L COLLECTION DATE: 10/28/2016 12:30:00 PM  
CLIENT SAMPLE ID RW-1 WDOE ACCREDITATION: C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS	
			DATE	BY
1,2-Dichloroethane-d4	EPA-8260	107	10/31/2016	DLC
Toluene-d8	EPA-8260	91.2	10/31/2016	DLC

U - Analyte analyzed for but not detected at level above reporting limit.  
Chromatogram indicates that it is likely that sample contains a diesel range product that is likely biased high due to biogenic interference.



**CERTIFICATE OF ANALYSIS**

CLIENT: The Riley Group, Inc.  
 17522 Bothell Way NE, Suite A  
 Bothell, WA 98011

CLIENT CONTACT: Jerry Sawetz  
 CLIENT PROJECT: 2012-107L  
 CLIENT SAMPLE ID: RW-2

DATE: 1/16/2017  
 ALS JOB#: EV16100227  
 ALS SAMPLE#: EV16100227-03  
 DATE RECEIVED: 10/31/2016  
 COLLECTION DATE: 10/28/2016 1:25:00 PM  
 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	10/31/2016	PAB
C5-C6 Aliphatics	NWVPH	U	50	1	UG/L	11/02/2016	PAB
>C6-C8 Aliphatics	NWVPH	U	50	1	UG/L	11/02/2016	PAB
>C8-C10 Aliphatics	NWVPH	U	50	1	UG/L	11/02/2016	PAB
>C8-C10 Aromatics	NWVPH	U	50	1	UG/L	11/02/2016	PAB
Hexane	NWVPH	U	2.0	1	UG/L	11/02/2016	PAB
TPH-Diesel Range	NWTPH-DX	400 *	130	1	UG/L	11/02/2016	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	11/02/2016	EBS
>C8-C10 Aliphatics	NWEPH	U	50	1	UG/L	11/04/2016	EBS
>C10-C12 Aliphatics	NWEPH	U	50	1	UG/L	11/04/2016	EBS
>C12-C16 Aliphatics	NWEPH	U	50	1	UG/L	11/04/2016	EBS
>C16-C21 Aliphatics	NWEPH	U	50	1	UG/L	11/04/2016	EBS
>C21-C34 Aliphatics	NWEPH	U	50	1	UG/L	11/04/2016	EBS
>C8-C10 Aromatics	NWEPH	U	50	1	UG/L	11/03/2016	EBS
>C10-C12 Aromatics	NWEPH	U	50	1	UG/L	11/03/2016	EBS
>C12-C16 Aromatics	NWEPH	U	50	1	UG/L	11/03/2016	EBS
>C16-C21 Aromatics	NWEPH	U	50	1	UG/L	11/03/2016	EBS
>C21-C34 Aromatics	NWEPH	U	50	1	UG/L	11/03/2016	EBS
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	10/31/2016	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	10/31/2016	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	10/31/2016	DLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	97.2	10/31/2016	PAB
TFT - Aliphatic	NWVPH	95.0	11/02/2016	PAB
TFT - Aromatic	NWVPH	109	11/02/2016	PAB
TFT - Hexane	NWVPH	98.0	11/02/2016	PAB
C25	NWTPH-DX	111	11/02/2016	EBS
C25	NWEPH	89.0	11/04/2016	EBS
p-Terphenyl	NWEPH	73.0	11/03/2016	EBS



CERTIFICATE OF ANALYSIS

CLIENT: The Riley Group, Inc. DATE: 1/16/2017  
17522 Bothell Way NE, Suite A ALS JOB#: EV16100227  
Bothell, WA 98011 ALS SAMPLE#: EV16100227-03  
CLIENT CONTACT: Jerry Sawetz DATE RECEIVED: 10/31/2016  
CLIENT PROJECT: 2012-107L COLLECTION DATE: 10/28/2016 1:25:00 PM  
CLIENT SAMPLE ID RW-2 WDOE ACCREDITATION: C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS	ANALYSIS
			DATE	BY
1,2-Dichloroethane-d4	EPA-8260	120	10/31/2016	DLC
Toluene-d8	EPA-8260	103	10/31/2016	DLC

U - Analyte analyzed for but not detected at level above reporting limit.  
Chromatogram indicates that it is likely that sample contains a diesel range product that is likely biased high due to biogenic interference.



**CERTIFICATE OF ANALYSIS**

CLIENT:	The Riley Group, Inc. 17522 Bothell Way NE, Suite A Bothell, WA 98011	DATE:	1/16/2017
CLIENT CONTACT:	Jerry Sawetz	ALS SDG#:	EV16100227
CLIENT PROJECT:	2012-107L	WDOE ACCREDITATION:	C601

**LABORATORY BLANK RESULTS**

**MBG-102516W - Batch 109237 - Water by NWTPH-GX**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	UG/L	50	10/25/2016	PAB

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

**MBLK-284318 - Batch R284318 - Water by NWVPH**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
C5-C6 Aliphatics	NWVPH	U	UG/L	50	11/02/2016	PAB
>C6-C8 Aliphatics	NWVPH	U	UG/L	50	11/02/2016	PAB
>C8-C10 Aliphatics	NWVPH	U	UG/L	50	11/02/2016	PAB
>C8-C10 Aromatics	NWVPH	U	UG/L	50	11/02/2016	PAB
Hexane	NWVPH	U	UG/L	2.0	11/02/2016	PAB

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

**MB-103116W - Batch 109438 - Water by NWTPH-DX**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	UG/L	130	10/31/2016	EBS
TPH-Oil Range	NWTPH-DX	U	UG/L	250	10/31/2016	EBS

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

**MBLK-284324 - Batch R284324 - Water by NWEPH**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
>C8-C10 Aliphatics	NWEPH	U	UG/L	50	11/04/2016	EBS
>C10-C12 Aliphatics	NWEPH	U	UG/L	50	11/04/2016	EBS
>C12-C16 Aliphatics	NWEPH	U	UG/L	50	11/04/2016	EBS
>C16-C21 Aliphatics	NWEPH	U	UG/L	50	11/04/2016	EBS
>C21-C34 Aliphatics	NWEPH	U	UG/L	50	11/04/2016	EBS

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

**MBLK-284325 - Batch R284325 - Water by NWEPH**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
>C8-C10 Aromatics	NWEPH	U	UG/L	50	11/03/2016	EBS
>C10-C12 Aromatics	NWEPH	U	UG/L	50	11/03/2016	EBS
>C12-C16 Aromatics	NWEPH	U	UG/L	50	11/03/2016	EBS
>C16-C21 Aromatics	NWEPH	U	UG/L	50	11/03/2016	EBS
>C21-C34 Aromatics	NWEPH	U	UG/L	50	11/03/2016	EBS





**CERTIFICATE OF ANALYSIS**

CLIENT: The Riley Group, Inc.  
 17522 Bothell Way NE, Suite A  
 Bothell, WA 98011

DATE: 1/16/2017  
 ALS SDG#: EV16100227  
 WDOE ACCREDITATION: C601

CLIENT CONTACT: Jerry Sawetz  
 CLIENT PROJECT: 2012-107L

**LABORATORY BLANK RESULTS**

**MBLK-284325 - Batch R284325 - Water by NWEPH**

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

**MB-103116W - Batch 109449 - Water by EPA-8260**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Vinyl Chloride	EPA-8260	U	UG/L	0.20	10/31/2016	DLC
1,1-Dichloroethene	EPA-8260	U	UG/L	2.0	10/31/2016	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	UG/L	2.0	10/31/2016	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	UG/L	2.0	10/31/2016	DLC
Benzene	EPA-8260	U	UG/L	2.0	10/31/2016	DLC
Trichloroethene	EPA-8260	U	UG/L	2.0	10/31/2016	DLC
Toluene	EPA-8260	U	UG/L	2.0	10/31/2016	DLC
Tetrachloroethylene	EPA-8260	U	UG/L	2.0	10/31/2016	DLC
Ethylbenzene	EPA-8260	U	UG/L	2.0	10/31/2016	DLC
m,p-Xylene	EPA-8260	U	UG/L	4.0	10/31/2016	DLC
o-Xylene	EPA-8260	U	UG/L	2.0	10/31/2016	DLC

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



**CERTIFICATE OF ANALYSIS**

CLIENT: The Riley Group, Inc.  
 17522 Bothell Way NE, Suite A  
 Bothell, WA 98011

CLIENT CONTACT: Jerry Sawetz  
 CLIENT PROJECT: 2012-107L

DATE: 1/16/2017  
 ALS SDG#: EV16100227  
 WDOE ACCREDITATION: C601

**LABORATORY CONTROL SAMPLE RESULTS**

**ALS Test Batch ID: 109237 - Water by NWTPH-GX**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
TPH-Volatile Range - BS	NWTPH-GX	85.0			66.5	122.7	10/25/2016	PAB
TPH-Volatile Range - BSD	NWTPH-GX	84.1	1		66.5	122.7	10/25/2016	PAB

**ALS Test Batch ID: R284318 - Water by NWVPH**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
C5-C6 Aliphatics - BS	NWVPH	93.0			70	130	11/02/2016	PAB
C5-C6 Aliphatics - BSD	NWVPH	93.0	0		70	130	11/02/2016	PAB
>C6-C8 Aliphatics - BS	NWVPH	105			70	130	11/02/2016	PAB
>C6-C8 Aliphatics - BSD	NWVPH	102	3		70	130	11/02/2016	PAB
>C8-C10 Aliphatics - BS	NWVPH	109			70	130	11/02/2016	PAB
>C8-C10 Aliphatics - BSD	NWVPH	105	4		70	130	11/02/2016	PAB
>C8-C10 Aromatics - BS	NWVPH	107			70	130	11/02/2016	PAB
>C8-C10 Aromatics - BSD	NWVPH	109	2		70	130	11/02/2016	PAB
Hexane - BS	NWVPH	92.0			70	130	11/02/2016	PAB
Hexane - BSD	NWVPH	94.0	2		70	130	11/02/2016	PAB

**ALS Test Batch ID: 109438 - Water by NWTPH-DX**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
TPH-Diesel Range - BS	NWTPH-DX	93.7			67	125.2	10/31/2016	EBS
TPH-Diesel Range - BSD	NWTPH-DX	93.2	1		67	125.2	10/31/2016	EBS

**ALS Test Batch ID: R284324 - Water by NWEPH**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
>C8-C10 Aliphatics - BS	NWEPH	83.0			70	130	11/04/2016	EBS
>C8-C10 Aliphatics - BSD	NWEPH	93.0	11		70	130	11/04/2016	EBS
>C10-C12 Aliphatics - BS	NWEPH	91.0			70	130	11/04/2016	EBS
>C10-C12 Aliphatics - BSD	NWEPH	101	10		70	130	11/04/2016	EBS
>C12-C16 Aliphatics - BS	NWEPH	99.0			70	130	11/04/2016	EBS
>C12-C16 Aliphatics - BSD	NWEPH	110	11		70	130	11/04/2016	EBS
>C16-C21 Aliphatics - BS	NWEPH	103			70	130	11/04/2016	EBS
>C16-C21 Aliphatics - BSD	NWEPH	114	10		70	130	11/04/2016	EBS
>C21-C34 Aliphatics - BS	NWEPH	110			70	130	11/04/2016	EBS
>C21-C34 Aliphatics - BSD	NWEPH	123	11		70	130	11/04/2016	EBS



**CERTIFICATE OF ANALYSIS**

CLIENT: The Riley Group, Inc.  
 17522 Bothell Way NE, Suite A  
 Bothell, WA 98011

CLIENT CONTACT: Jerry Sawetz  
 CLIENT PROJECT: 2012-107L

DATE: 1/16/2017  
 ALS SDG#: EV16100227  
 WDOE ACCREDITATION: C601

**LABORATORY CONTROL SAMPLE RESULTS**

**ALS Test Batch ID: R284325 - Water by NWEPH**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
>C8-C10 Aromatics - BS	NWEPH	74.0			70	130	11/03/2016	EBS
>C8-C10 Aromatics - BSD	NWEPH	82.0	10		70	130	11/03/2016	EBS
>C10-C12 Aromatics - BS	NWEPH	78.0			70	130	11/03/2016	EBS
>C10-C12 Aromatics - BSD	NWEPH	95.0	20		70	130	11/03/2016	EBS
>C12-C16 Aromatics - BS	NWEPH	82.0			70	130	11/03/2016	EBS
>C12-C16 Aromatics - BSD	NWEPH	104	24		70	130	11/03/2016	EBS
>C16-C21 Aromatics - BS	NWEPH	82.0			70	130	11/03/2016	EBS
>C16-C21 Aromatics - BSD	NWEPH	105	25		70	130	11/03/2016	EBS
>C21-C34 Aromatics - BS	NWEPH	74.0			70	130	11/03/2016	EBS
>C21-C34 Aromatics - BSD	NWEPH	95.0	25		70	130	11/03/2016	EBS

**ALS Test Batch ID: 109449 - Water by EPA-8260**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
1,1-Dichloroethene - BS	EPA-8260	104			72.5	136	10/31/2016	DLC
1,1-Dichloroethene - BSD	EPA-8260	99.3	4		72.5	136	10/31/2016	DLC
Benzene - BS	EPA-8260	109			74.7	143	10/31/2016	DLC
Benzene - BSD	EPA-8260	105	4		74.7	143	10/31/2016	DLC
Trichloroethene - BS	EPA-8260	117			74.4	141	10/31/2016	DLC
Trichloroethene - BSD	EPA-8260	113	4		74.4	141	10/31/2016	DLC
Toluene - BS	EPA-8260	109			71.7	139	10/31/2016	DLC
Toluene - BSD	EPA-8260	106	3		71.7	139	10/31/2016	DLC

APPROVED BY

Laboratory Director



**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)

22 EV16100227

Date 10/28/16 Page 1 Of 1

PROJECT ID: 2012-107L					ANALYSIS REQUESTED												OTHER (Specify)		
REPORT TO COMPANY: The Riley Group					NWTPH-HCID NWTPH-DX NWTPH-GX BTEX by EPA 8021 <input type="checkbox"/> BTEX by EPA 8260 <input type="checkbox"/> MTBE by EPA 8021 <input type="checkbox"/> MTBE by EPA 8260 <input type="checkbox"/> Halogenated Volatiles by EPA 8260 Volatile Organic Compounds by EPA 8260 (select) 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 <input type="checkbox"/> Pesticides by EPA 8081 <input type="checkbox"/> Metals-MTCA-5 <input type="checkbox"/> RCRA-8 <input type="checkbox"/> Pri Pol <input type="checkbox"/> TAL <input type="checkbox"/> Metals Other (Specify) TCLP-Metals <input type="checkbox"/> VOA <input type="checkbox"/> Semi-Vol <input type="checkbox"/> Pest <input type="checkbox"/> Herbs <input type="checkbox"/> EPH <input checked="" type="checkbox"/> VPH <input checked="" type="checkbox"/>														
PROJECT MANAGER: Jerry Sawetz																			
ADDRESS: 17522 Bothell Way NE Bothell WA 98011																			
PHONE: (425) 415-0551 FAX: (425) 415-0311																			
P.O. #: E-MAIL: JSAWETZ@riley-group.com																			
INVOICE TO COMPANY:																			
ATTENTION:																			
ADDRESS:																			
SAMPLE I.D.																			
DATE																			
TIME																			
TYPE																			
LAB#																			
1. MW-6					X X		X										8		
2. RW-1					X X		X										8		
3. RW-2					X X		X										8		
4.																			
5.																			
6.																			
7.																			
8.																			
9.																			
10.																			

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):  
 1. Relinquished By: Amelia C. Gates, RGT, 10/31/16, 11:50  
 Received By: Kate Melnick / ALS / 10.31.16 / 11:50  
 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



September 9, 2016

Mr. Jerry Sawetz  
The Riley Group, Inc.  
17522 Bothell Way NE, Suite A  
Bothell, WA 98011

Dear Mr. Sawetz,

On August 31st, 4 samples were received by our laboratory and assigned our laboratory project number EV16080179. The project was identified as your 2012-107L. 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



**CERTIFICATE OF ANALYSIS**

CLIENT: The Riley Group, Inc.  
 17522 Bothell Way NE, Suite A  
 Bothell, WA 98011

CLIENT CONTACT: Jerry Sawetz  
 CLIENT PROJECT: 2012-107L  
 CLIENT SAMPLE ID: MW-5

DATE: 9/9/2016  
 ALS JOB#: EV16080179  
 ALS SAMPLE#: EV16080179-01  
 DATE RECEIVED: 08/31/2016  
 COLLECTION DATE: 8/29/2016 1:54:00 PM  
 WDOE ACCREDITATION: C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	08/31/2016	PAB
C5-C6 Aliphatics	NWVPH	U	50	1	UG/L	09/01/2016	PAB
>C6-C8 Aliphatics	NWVPH	U	50	1	UG/L	09/01/2016	PAB
>C8-C10 Aliphatics	NWVPH	U	50	1	UG/L	09/01/2016	PAB
>C8-C10 Aromatics	NWVPH	U	50	1	UG/L	09/01/2016	PAB
Hexane	NWVPH	U	2.0	1	UG/L	09/01/2016	PAB
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	09/01/2016	DLC
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	09/01/2016	DLC
>C10-C12 Aliphatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C12-C16 Aliphatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C16-C21 Aliphatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C21-C34 Aliphatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C10-C12 Aromatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C12-C16 Aromatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C16-C21 Aromatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C21-C34 Aromatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	09/02/2016	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	09/02/2016	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC

SURROGATE	METHOD	%REC	ANALYSIS	ANALYSIS
			DATE	BY
TFT	NWTPH-GX	93.1	08/31/2016	PAB
TFT - Aliphatic	NWVPH	80.0	09/01/2016	PAB
TFT - Aromatic	NWVPH	84.1	09/01/2016	PAB
TFT - Hexane	NWVPH	79.9	09/01/2016	PAB
C25	NWTPH-DX	96.2	09/01/2016	DLC
C25	NWEPH	93.8	09/08/2016	DLC
p-Terphenyl	NWEPH	73.0	09/08/2016	DLC
1,2-Dichloroethane-d4	EPA-8260	113	09/02/2016	DLC
Toluene-d8	EPA-8260	92.7	09/02/2016	DLC



CERTIFICATE OF ANALYSIS

CLIENT: The Riley Group, Inc. DATE: 9/9/2016  
17522 Bothell Way NE, Suite A ALS JOB#: EV16080179  
Bothell, WA 98011 ALS SAMPLE#: EV16080179-01  
CLIENT CONTACT: Jerry Sawetz DATE RECEIVED: 08/31/2016  
CLIENT PROJECT: 2012-107L COLLECTION DATE: 8/29/2016 1:54:00 PM  
CLIENT SAMPLE ID MW-5 WDOE ACCREDITATION: C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
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U - Analyte analyzed for but not detected at level above reporting limit.



**CERTIFICATE OF ANALYSIS**

CLIENT: The Riley Group, Inc.  
 17522 Bothell Way NE, Suite A  
 Bothell, WA 98011

CLIENT CONTACT: Jerry Sawetz  
 CLIENT PROJECT: 2012-107L  
 CLIENT SAMPLE ID MW-6

DATE: 9/9/2016  
 ALS JOB#: EV16080179  
 ALS SAMPLE#: EV16080179-02  
 DATE RECEIVED: 08/31/2016  
 COLLECTION DATE: 8/29/2016 2:46:00 PM  
 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	08/31/2016	PAB
C5-C6 Aliphatics	NWVPH	U	50	1	UG/L	09/01/2016	PAB
>C6-C8 Aliphatics	NWVPH	U	50	1	UG/L	09/01/2016	PAB
>C8-C10 Aliphatics	NWVPH	U	50	1	UG/L	09/01/2016	PAB
>C8-C10 Aromatics	NWVPH	U	50	1	UG/L	09/01/2016	PAB
Hexane	NWVPH	U	2.0	1	UG/L	09/01/2016	PAB
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	09/01/2016	DLC
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	09/01/2016	DLC
>C10-C12 Aliphatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C12-C16 Aliphatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C16-C21 Aliphatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C21-C34 Aliphatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C10-C12 Aromatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C12-C16 Aromatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C16-C21 Aromatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C21-C34 Aromatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	09/02/2016	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	09/02/2016	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	97.6	08/31/2016	PAB
TFT - Aliphatic	NWVPH	76.0	09/01/2016	PAB
TFT - Aromatic	NWVPH	83.5	09/01/2016	PAB
TFT - Hexane	NWVPH	79.2	09/01/2016	PAB
C25	NWTPH-DX	97.9	09/01/2016	DLC
C25	NWEPH	96.0	09/08/2016	DLC
p-Terphenyl	NWEPH	78.9	09/08/2016	DLC
1,2-Dichloroethane-d4	EPA-8260	105	09/02/2016	DLC
Toluene-d8	EPA-8260	98.8	09/02/2016	DLC





CERTIFICATE OF ANALYSIS

CLIENT:	The Riley Group, Inc. 17522 Bothell Way NE, Suite A Bothell, WA 98011	DATE:	9/9/2016
CLIENT CONTACT:	Jerry Sawetz	ALS JOB#:	EV16080179
CLIENT PROJECT:	2012-107L	ALS SAMPLE#:	EV16080179-02
CLIENT SAMPLE ID	MW-6	DATE RECEIVED:	08/31/2016
		COLLECTION DATE:	8/29/2016 2:46:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

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



**CERTIFICATE OF ANALYSIS**

CLIENT: The Riley Group, Inc.  
 17522 Bothell Way NE, Suite A  
 Bothell, WA 98011

CLIENT CONTACT: Jerry Sawetz  
 CLIENT PROJECT: 2012-107L  
 CLIENT SAMPLE ID: RW-2

DATE: 9/9/2016  
 ALS JOB#: EV16080179  
 ALS SAMPLE#: EV16080179-03  
 DATE RECEIVED: 08/31/2016  
 COLLECTION DATE: 8/30/2016 3:30:00 PM  
 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	08/31/2016	PAB
C5-C6 Aliphatics	NWVPH	U	50	1	UG/L	09/01/2016	PAB
>C6-C8 Aliphatics	NWVPH	U	50	1	UG/L	09/01/2016	PAB
>C8-C10 Aliphatics	NWVPH	U	50	1	UG/L	09/01/2016	PAB
>C8-C10 Aromatics	NWVPH	U	50	1	UG/L	09/01/2016	PAB
Hexane	NWVPH	U	2.0	1	UG/L	09/01/2016	PAB
TPH-Diesel Range	NWTPH-DX	500 *	130	1	UG/L	09/01/2016	DLC
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	09/01/2016	DLC
>C10-C12 Aliphatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C12-C16 Aliphatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C16-C21 Aliphatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C21-C34 Aliphatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C10-C12 Aromatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C12-C16 Aromatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C16-C21 Aromatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C21-C34 Aromatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	09/02/2016	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	09/02/2016	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	90.8	08/31/2016	PAB
TFT - Aliphatic	NWVPH	75.6	09/01/2016	PAB
TFT - Aromatic	NWVPH	80.8	09/01/2016	PAB
TFT - Hexane	NWVPH	80.0	09/01/2016	PAB
C25	NWTPH-DX	101	09/01/2016	DLC
C25	NWEPH	93.1	09/08/2016	DLC
p-Terphenyl	NWEPH	80.9	09/08/2016	DLC
1,2-Dichloroethane-d4	EPA-8260	109	09/02/2016	DLC
Toluene-d8	EPA-8260	98.6	09/02/2016	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	The Riley Group, Inc. 17522 Bothell Way NE, Suite A Bothell, WA 98011	DATE:	9/9/2016
CLIENT CONTACT:	Jerry Sawetz	ALS JOB#:	EV16080179
CLIENT PROJECT:	2012-107L	ALS SAMPLE#:	EV16080179-03
CLIENT SAMPLE ID	RW-2	DATE RECEIVED:	08/31/2016
		COLLECTION DATE:	8/30/2016 3:30:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

U - Analyte analyzed for but not detected at level above reporting limit.  
Chromatogram indicates that it is likely that sample contains a diesel range product that is likely biased high due to biogenic interference.



**CERTIFICATE OF ANALYSIS**

CLIENT: The Riley Group, Inc.  
 17522 Bothell Way NE, Suite A  
 Bothell, WA 98011

CLIENT CONTACT: Jerry Sawetz  
 CLIENT PROJECT: 2012-107L  
 CLIENT SAMPLE ID: RW-1

DATE: 9/9/2016  
 ALS JOB#: EV16080179  
 ALS SAMPLE#: EV16080179-04  
 DATE RECEIVED: 08/31/2016  
 COLLECTION DATE: 8/30/2016 4:06:00 PM  
 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	08/31/2016	PAB
C5-C6 Aliphatics	NWVPH	U	50	1	UG/L	09/01/2016	PAB
>C6-C8 Aliphatics	NWVPH	U	50	1	UG/L	09/01/2016	PAB
>C8-C10 Aliphatics	NWVPH	U	50	1	UG/L	09/01/2016	PAB
>C8-C10 Aromatics	NWVPH	U	50	1	UG/L	09/01/2016	PAB
Hexane	NWVPH	U	2.0	1	UG/L	09/01/2016	PAB
TPH-Diesel Range	NWTPH-DX	<b>700 *</b>	130	1	UG/L	09/01/2016	DLC
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	09/01/2016	DLC
>C10-C12 Aliphatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C12-C16 Aliphatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C16-C21 Aliphatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C21-C34 Aliphatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C10-C12 Aromatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C12-C16 Aromatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C16-C21 Aromatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
>C21-C34 Aromatics	NWEPH	U	50	1	UG/L	09/08/2016	DLC
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	09/02/2016	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	09/02/2016	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	09/02/2016	DLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	<b>92.2</b>	08/31/2016	PAB
TFT - Aliphatic	NWVPH	<b>79.3</b>	09/01/2016	PAB
TFT - Aromatic	NWVPH	<b>85.8</b>	09/01/2016	PAB
TFT - Hexane	NWVPH	<b>82.3</b>	09/01/2016	PAB
C25	NWTPH-DX	<b>78.3</b>	09/01/2016	DLC
C25	NWEPH	<b>74.2</b>	09/08/2016	DLC
p-Terphenyl	NWEPH	<b>80.7</b>	09/08/2016	DLC
1,2-Dichloroethane-d4	EPA-8260	<b>114</b>	09/02/2016	DLC
Toluene-d8	EPA-8260	<b>97.7</b>	09/02/2016	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	The Riley Group, Inc. 17522 Bothell Way NE, Suite A Bothell, WA 98011	DATE:	9/9/2016
CLIENT CONTACT:	Jerry Sawetz	ALS JOB#:	EV16080179
CLIENT PROJECT:	2012-107L	ALS SAMPLE#:	EV16080179-04
CLIENT SAMPLE ID	RW-1	DATE RECEIVED:	08/31/2016
		COLLECTION DATE:	8/30/2016 4:06:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

U - Analyte analyzed for but not detected at level above reporting limit.  
Chromatogram indicates that it is likely that sample contains a diesel range product that is likely biased high due to biogenic interference.



**CERTIFICATE OF ANALYSIS**

CLIENT:	The Riley Group, Inc. 17522 Bothell Way NE, Suite A Bothell, WA 98011	DATE:	9/9/2016
CLIENT CONTACT:	Jerry Sawetz	ALS SDG#:	EV16080179
CLIENT PROJECT:	2012-107L	WDOE ACCREDITATION:	C601

**LABORATORY BLANK RESULTS**

**MBG-082916W2 - Batch 107568 - Water by NWTPH-GX**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	UG/L	50	08/29/2016	PAB

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

**MBLK-281118 - Batch R281118 - Water by NWVPH**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
C5-C6 Aliphatics	NWVPH	U	UG/L	50	09/01/2016	PAB
>C6-C8 Aliphatics	NWVPH	U	UG/L	50	09/01/2016	PAB
>C8-C10 Aliphatics	NWVPH	U	UG/L	50	09/01/2016	PAB
>C8-C10 Aromatics	NWVPH	U	UG/L	50	09/01/2016	PAB
Hexane	NWVPH	U	UG/L	2.0	09/01/2016	PAB

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

**MB-083116W - Batch 107629 - Water by NWTPH-DX**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	UG/L	130	08/31/2016	DLC
TPH-Oil Range	NWTPH-DX	U	UG/L	250	08/31/2016	DLC

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

**MBLK-281119 - Batch R281119 - Water by NWEPH**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
>C10-C12 Aliphatics	NWEPH	U	UG/L	50	09/08/2016	DLC
>C12-C16 Aliphatics	NWEPH	U	UG/L	50	09/08/2016	DLC
>C16-C21 Aliphatics	NWEPH	U	UG/L	50	09/08/2016	DLC
>C21-C34 Aliphatics	NWEPH	U	UG/L	50	09/08/2016	DLC
>C10-C12 Aromatics	NWEPH	U	UG/L	50	09/08/2016	DLC
>C12-C16 Aromatics	NWEPH	U	UG/L	50	09/08/2016	DLC
>C16-C21 Aromatics	NWEPH	U	UG/L	50	09/08/2016	DLC
>C21-C34 Aromatics	NWEPH	U	UG/L	50	09/08/2016	DLC

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

**MB-090216W - Batch 107708 - Water by EPA-8260**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Vinyl Chloride	EPA-8260	U	UG/L	0.20	09/02/2016	DLC
1,1-Dichloroethene	EPA-8260	U	UG/L	2.0	09/02/2016	DLC



CERTIFICATE OF ANALYSIS

CLIENT: The Riley Group, Inc.  
17522 Bothell Way NE, Suite A  
Bothell, WA 98011

DATE: 9/9/2016  
ALS SDG#: EV16080179  
WDOE ACCREDITATION: C601

CLIENT CONTACT: Jerry Sawetz  
CLIENT PROJECT: 2012-107L

LABORATORY BLANK RESULTS

**MB-090216W - Batch 107708 - Water by EPA-8260**

Trans-1,2-Dichloroethene	EPA-8260	U	UG/L	2.0	09/02/2016	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	UG/L	2.0	09/02/2016	DLC
Benzene	EPA-8260	U	UG/L	2.0	09/02/2016	DLC
Trichloroethene	EPA-8260	U	UG/L	2.0	09/02/2016	DLC
Toluene	EPA-8260	U	UG/L	2.0	09/02/2016	DLC
Tetrachloroethylene	EPA-8260	U	UG/L	2.0	09/02/2016	DLC
Ethylbenzene	EPA-8260	U	UG/L	2.0	09/02/2016	DLC
m,p-Xylene	EPA-8260	U	UG/L	4.0	09/02/2016	DLC
o-Xylene	EPA-8260	U	UG/L	2.0	09/02/2016	DLC

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



**CERTIFICATE OF ANALYSIS**

CLIENT: The Riley Group, Inc.  
 17522 Bothell Way NE, Suite A  
 Bothell, WA 98011

CLIENT CONTACT: Jerry Sawetz  
 CLIENT PROJECT: 2012-107L

DATE: 9/9/2016  
 ALS SDG#: EV16080179  
 WDOE ACCREDITATION: C601

**LABORATORY CONTROL SAMPLE RESULTS**

**ALS Test Batch ID: 107568 - Water by NWTPH-GX**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
TPH-Volatile Range - BS	NWTPH-GX	97.1			66.5	122.7	08/29/2016	PAB
TPH-Volatile Range - BSD	NWTPH-GX	95.5	2		66.5	122.7	08/29/2016	PAB

**ALS Test Batch ID: R281118 - Water by NWVPH**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
C5-C6 Aliphatics - BS	NWVPH	93.1			70	130	09/01/2016	PAB
C5-C6 Aliphatics - BSD	NWVPH	92.1	1		70	130	09/01/2016	PAB
>C6-C8 Aliphatics - BS	NWVPH	102			70	130	09/01/2016	PAB
>C6-C8 Aliphatics - BSD	NWVPH	100	1		70	130	09/01/2016	PAB
>C8-C10 Aliphatics - BS	NWVPH	104			70	130	09/01/2016	PAB
>C8-C10 Aliphatics - BSD	NWVPH	104	1		70	130	09/01/2016	PAB
>C8-C10 Aromatics - BS	NWVPH	98.9			70	130	09/01/2016	PAB
>C8-C10 Aromatics - BSD	NWVPH	100	1		70	130	09/01/2016	PAB
Hexane - BS	NWVPH	94.3			70	130	09/01/2016	PAB
Hexane - BSD	NWVPH	94.6	0		70	130	09/01/2016	PAB

**ALS Test Batch ID: 107629 - Water by NWTPH-DX**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
TPH-Diesel Range - BS	NWTPH-DX	94.2			67	125.2	08/31/2016	DLC
TPH-Diesel Range - BSD	NWTPH-DX	98.2	4		67	125.2	08/31/2016	DLC

**ALS Test Batch ID: R281119 - Water by NWEPH**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
>C10-C12 Aliphatics - BS	NWEPH	79.5			70	130	09/08/2016	DLC
>C10-C12 Aliphatics - BSD	NWEPH	87.1	9		70	130	09/08/2016	DLC
>C12-C16 Aliphatics - BS	NWEPH	90.1			70	130	09/08/2016	DLC
>C12-C16 Aliphatics - BSD	NWEPH	95.8	6		70	130	09/08/2016	DLC
>C16-C21 Aliphatics - BS	NWEPH	90.9			70	130	09/08/2016	DLC
>C16-C21 Aliphatics - BSD	NWEPH	96.5	6		70	130	09/08/2016	DLC
>C21-C34 Aliphatics - BS	NWEPH	73.8			70	130	09/08/2016	DLC
>C21-C34 Aliphatics - BSD	NWEPH	82.2	11		70	130	09/08/2016	DLC
>C10-C12 Aromatics - BS	NWEPH	77.0			70	130	09/08/2016	DLC
>C10-C12 Aromatics - BSD	NWEPH	76.7	0		70	130	09/08/2016	DLC
>C12-C16 Aromatics - BS	NWEPH	79.5			70	130	09/08/2016	DLC
>C12-C16 Aromatics - BSD	NWEPH	80.7	2		70	130	09/08/2016	DLC
>C16-C21 Aromatics - BS	NWEPH	80.4			70	130	09/08/2016	DLC





**CERTIFICATE OF ANALYSIS**

CLIENT: The Riley Group, Inc.  
 17522 Bothell Way NE, Suite A  
 Bothell, WA 98011

DATE: 9/9/2016  
 ALS SDG#: EV16080179  
 WDOE ACCREDITATION: C601

CLIENT CONTACT: Jerry Sawetz  
 CLIENT PROJECT: 2012-107L

**LABORATORY CONTROL SAMPLE RESULTS**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
>C16-C21 Aromatics - BSD	NWEPH	82.0	2		70	130	09/08/2016	DLC
>C21-C34 Aromatics - BS	NWEPH	70.9			70	130	09/08/2016	DLC
>C21-C34 Aromatics - BSD	NWEPH	73.0	3		70	130	09/08/2016	DLC

**ALS Test Batch ID: 107708 - Water by EPA-8260**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
1,1-Dichloroethene - BS	EPA-8260	116			72.5	136	09/02/2016	DLC
1,1-Dichloroethene - BSD	EPA-8260	120	3		72.5	136	09/02/2016	DLC
Benzene - BS	EPA-8260	108			74.7	143	09/02/2016	DLC
Benzene - BSD	EPA-8260	115	6		74.7	143	09/02/2016	DLC
Trichloroethene - BS	EPA-8260	106			74.4	141	09/02/2016	DLC
Trichloroethene - BSD	EPA-8260	112	5		74.4	141	09/02/2016	DLC
Toluene - BS	EPA-8260	95.3			71.7	139	09/02/2016	DLC
Toluene - BSD	EPA-8260	101	5		71.7	139	09/02/2016	DLC

APPROVED BY

Laboratory Director





July 7, 2016

Mr. Jerry Sawetz  
The Riley Group, Inc.  
17522 Bothell Way NE, Suite A  
Bothell, WA 98011

Dear Mr. Sawetz,

On June 27th, 2 samples were received by our laboratory and assigned our laboratory project number EV16060187. The project was identified as your None Given. 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



**CERTIFICATE OF ANALYSIS**

CLIENT: The Riley Group, Inc.  
 17522 Bothell Way NE, Suite A  
 Bothell, WA 98011

CLIENT CONTACT: Jerry Sawetz  
 CLIENT PROJECT: None Given  
 CLIENT SAMPLE ID: RW-1

DATE: 7/7/2016  
 ALS JOB#: EV16060187  
 ALS SAMPLE#: EV16060187-01  
 DATE RECEIVED: 06/27/2016  
 COLLECTION DATE: 6/24/2016 12:12:00 PM  
 WDOE ACCREDITATION: C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
C5-C6 Aliphatics	NWVPH	U	50	1	UG/L	07/06/2016	PAB
>C6-C8 Aliphatics	NWVPH	U	50	1	UG/L	07/06/2016	PAB
>C8-C10 Aliphatics	NWVPH	U	50	1	UG/L	07/06/2016	PAB
>C8-C10 Aromatics	NWVPH	U	50	1	UG/L	07/06/2016	PAB
Hexane	NWVPH	U	2.0	1	UG/L	07/06/2016	PAB
>C10-C12 Aliphatics	NWEPH	U	53	1	UG/L	06/29/2016	EBS
>C12-C16 Aliphatics	NWEPH	130	53	1	UG/L	06/29/2016	EBS
>C16-C21 Aliphatics	NWEPH	230	53	1	UG/L	06/29/2016	EBS
>C21-C34 Aliphatics	NWEPH	82	53	1	UG/L	06/29/2016	EBS
>C10-C12 Aromatics	NWEPH	U	53	1	UG/L	06/29/2016	EBS
>C12-C16 Aromatics	NWEPH	U	53	1	UG/L	06/29/2016	EBS
>C16-C21 Aromatics	NWEPH	U	53	1	UG/L	06/29/2016	EBS
>C21-C34 Aromatics	NWEPH	U	53	1	UG/L	06/29/2016	EBS
Benzene	EPA-8260	U	2.0	1	UG/L	07/05/2016	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	07/05/2016	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	07/05/2016	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	07/05/2016	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	07/05/2016	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	07/05/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	07/05/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	07/05/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	07/05/2016	GAP
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	07/05/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	07/05/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	07/05/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	07/05/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	07/05/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	07/05/2016	GAP

SURROGATE	METHOD	%REC	ANALYSIS	ANALYSIS
			DATE	BY
TFT - Aliphatic	NWVPH	102	07/06/2016	PAB
TFT - Aromatic	NWVPH	113	07/06/2016	PAB
TFT - Hexane	NWVPH	105	07/06/2016	PAB
C25	NWEPH	103	06/29/2016	EBS
p-Terphenyl	NWEPH	89.2	06/29/2016	EBS
Toluene-d8	EPA-8260	99.3	07/05/2016	DLC
Terphenyl-d14	EPA-8270 SIM	111	07/05/2016	GAP



CERTIFICATE OF ANALYSIS

CLIENT:	The Riley Group, Inc. 17522 Bothell Way NE, Suite A Bothell, WA 98011	DATE:	7/7/2016
CLIENT CONTACT:	Jerry Sawetz	ALS JOB#:	EV16060187
CLIENT PROJECT:	None Given	ALS SAMPLE#:	EV16060187-01
CLIENT SAMPLE ID	RW-1	DATE RECEIVED:	06/27/2016
		COLLECTION DATE:	6/24/2016 12:12:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

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



**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	The Riley Group, Inc. 17522 Bothell Way NE, Suite A Bothell, WA 98011	<b>DATE:</b>	7/7/2016
<b>CLIENT CONTACT:</b>	Jerry Sawetz	<b>ALS JOB#:</b>	EV16060187
<b>CLIENT PROJECT:</b>	None Given	<b>ALS SAMPLE#:</b>	EV16060187-02
<b>CLIENT SAMPLE ID</b>	RW-2	<b>DATE RECEIVED:</b>	06/27/2016
		<b>COLLECTION DATE:</b>	6/24/2016 11:05:00 AM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
C5-C6 Aliphatics	NWVPH	U	50	1	UG/L	07/06/2016	PAB
>C6-C8 Aliphatics	NWVPH	U	50	1	UG/L	07/06/2016	PAB
>C8-C10 Aliphatics	NWVPH	U	50	1	UG/L	07/06/2016	PAB
>C8-C10 Aromatics	NWVPH	U	50	1	UG/L	07/06/2016	PAB
Hexane	NWVPH	U	2.0	1	UG/L	07/06/2016	PAB
>C10-C12 Aliphatics	NWEPH	U	58	1	UG/L	06/29/2016	EBS
>C12-C16 Aliphatics	NWEPH	U	58	1	UG/L	06/29/2016	EBS
>C16-C21 Aliphatics	NWEPH	U	58	1	UG/L	06/29/2016	EBS
>C21-C34 Aliphatics	NWEPH	U	58	1	UG/L	06/29/2016	EBS
>C10-C12 Aromatics	NWEPH	U	58	1	UG/L	06/29/2016	EBS
>C12-C16 Aromatics	NWEPH	U	58	1	UG/L	06/29/2016	EBS
>C16-C21 Aromatics	NWEPH	U	58	1	UG/L	06/29/2016	EBS
>C21-C34 Aromatics	NWEPH	U	58	1	UG/L	06/29/2016	EBS
Benzene	EPA-8260	U	2.0	1	UG/L	07/01/2016	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	07/01/2016	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	07/01/2016	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	07/01/2016	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	07/01/2016	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	07/05/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	07/05/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	07/05/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	07/05/2016	GAP
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	07/05/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	07/05/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	07/05/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	07/05/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	07/05/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	07/05/2016	GAP

SURROGATE	METHOD	%REC	ANALYSIS	ANALYSIS
			DATE	BY
TFT - Aliphatic	NWVPH	98.2	07/06/2016	PAB
TFT - Aromatic	NWVPH	108	07/06/2016	PAB
TFT - Hexane	NWVPH	99.6	07/06/2016	PAB
C25	NWEPH	104	06/29/2016	EBS
p-Terphenyl	NWEPH	69.7	06/29/2016	EBS
Toluene-d8	EPA-8260	96.3	07/01/2016	DLC
Terphenyl-d14	EPA-8270 SIM	58.3	07/05/2016	GAP

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



**CERTIFICATE OF ANALYSIS**

CLIENT: The Riley Group, Inc.  
 17522 Bothell Way NE, Suite A  
 Bothell, WA 98011

CLIENT CONTACT: Jerry Sawetz  
 CLIENT PROJECT: None Given

DATE: 7/7/2016  
 ALS SDG#: EV16060187  
 WDOE ACCREDITATION: C601

**LABORATORY BLANK RESULTS**

**MBLK-277678 - Batch R277678 - Water by NWVPH**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
C5-C6 Aliphatics	NWVPH	U	UG/L	50	07/06/2016	PAB
>C6-C8 Aliphatics	NWVPH	U	UG/L	50	07/06/2016	PAB
>C8-C10 Aliphatics	NWVPH	U	UG/L	50	07/06/2016	PAB
>C8-C10 Aromatics	NWVPH	U	UG/L	50	07/06/2016	PAB
Hexane	NWVPH	U	UG/L	2.0	07/06/2016	PAB

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

**MBLK-277685 - Batch R277685 - Water by NWEPH**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
>C10-C12 Aliphatics	NWEPH	U	UG/L	53	06/29/2016	EBS
>C12-C16 Aliphatics	NWEPH	U	UG/L	53	06/29/2016	EBS
>C16-C21 Aliphatics	NWEPH	U	UG/L	53	06/29/2016	EBS
>C21-C34 Aliphatics	NWEPH	U	UG/L	53	06/29/2016	EBS
>C10-C12 Aromatics	NWEPH	U	UG/L	53	06/29/2016	EBS
>C12-C16 Aromatics	NWEPH	U	UG/L	53	06/29/2016	EBS
>C16-C21 Aromatics	NWEPH	U	UG/L	53	06/29/2016	EBS
>C21-C34 Aromatics	NWEPH	U	UG/L	53	06/29/2016	EBS

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

**MB-062916W - Batch 105821 - Water by EPA-8260**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
1,1-Dichloroethene	EPA-8260	U	UG/L	2.0	06/29/2016	DLC
Benzene	EPA-8260	U	UG/L	2.0	06/29/2016	DLC
Toluene	EPA-8260	U	UG/L	2.0	06/29/2016	DLC
Ethylbenzene	EPA-8260	U	UG/L	2.0	06/29/2016	DLC
m,p-Xylene	EPA-8260	U	UG/L	4.0	06/29/2016	DLC
o-Xylene	EPA-8260	U	UG/L	2.0	06/29/2016	DLC

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

**MB-062816W2 - Batch 105964 - Water by EPA-8270 SIM**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Naphthalene	EPA-8270 SIM	U	UG/L	0.020	07/05/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	U	UG/L	0.020	07/05/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	U	UG/L	0.020	07/05/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	U	UG/L	0.020	07/05/2016	GAP



CERTIFICATE OF ANALYSIS

CLIENT: The Riley Group, Inc.
17522 Bothell Way NE, Suite A
Bothell, WA 98011

DATE: 7/7/2016
ALS SDG#: EV16060187
WDOE ACCREDITATION: C601

CLIENT CONTACT: Jerry Sawetz
CLIENT PROJECT: None Given

LABORATORY BLANK RESULTS

MB-062816W2 - Batch 105964 - Water by EPA-8270 SIM

Table with 8 columns: Analyte Name, Method, Result, Unit, Concentration, Date, and Status. Rows include Chrysene, Benzo[B]Fluoranthene, Benzo[K]Fluoranthene, Benzo[A]Pyrene, Indeno[1,2,3-Cd]Pyrene, Dibenz[A,H]Anthracene, and Benzo[G,H,I]Perylene.

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





**CERTIFICATE OF ANALYSIS**

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 Bothell, WA 98011

CLIENT CONTACT: Jerry Sawetz  
 CLIENT PROJECT: None Given

DATE: 7/7/2016  
 ALS SDG#: EV16060187  
 WDOE ACCREDITATION: C601

**LABORATORY CONTROL SAMPLE RESULTS**

**ALS Test Batch ID: R277678 - Water by NWVPH**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
C5-C6 Aliphatics - BS	NWVPH	101			70	130	07/06/2016	PAB
C5-C6 Aliphatics - BSD	NWVPH	99.4	1		70	130	07/06/2016	PAB
>C6-C8 Aliphatics - BS	NWVPH	101			70	130	07/06/2016	PAB
>C6-C8 Aliphatics - BSD	NWVPH	101	1		70	130	07/06/2016	PAB
>C8-C10 Aliphatics - BS	NWVPH	101			70	130	07/06/2016	PAB
>C8-C10 Aliphatics - BSD	NWVPH	104	3		70	130	07/06/2016	PAB
>C8-C10 Aromatics - BS	NWVPH	104			70	130	07/06/2016	PAB
>C8-C10 Aromatics - BSD	NWVPH	108	4		70	130	07/06/2016	PAB
Hexane - BS	NWVPH	103			70	130	07/06/2016	PAB
Hexane - BSD	NWVPH	102	1		70	130	07/06/2016	PAB

**ALS Test Batch ID: R277685 - Water by NWEPH**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
>C10-C12 Aliphatics - BS	NWEPH	85.3			70	130	06/29/2016	EBS
>C10-C12 Aliphatics - BSD	NWEPH	93.6	9		70	130	06/29/2016	EBS
>C12-C16 Aliphatics - BS	NWEPH	96.8			70	130	06/29/2016	EBS
>C12-C16 Aliphatics - BSD	NWEPH	98.1	1		70	130	06/29/2016	EBS
>C16-C21 Aliphatics - BS	NWEPH	101			70	130	06/29/2016	EBS
>C16-C21 Aliphatics - BSD	NWEPH	102	1		70	130	06/29/2016	EBS
>C21-C34 Aliphatics - BS	NWEPH	108			70	130	06/29/2016	EBS
>C21-C34 Aliphatics - BSD	NWEPH	111	2		70	130	06/29/2016	EBS
>C10-C12 Aromatics - BS	NWEPH	109			70	130	06/29/2016	EBS
>C10-C12 Aromatics - BSD	NWEPH	116	6		70	130	06/29/2016	EBS
>C12-C16 Aromatics - BS	NWEPH	114			70	130	06/29/2016	EBS
>C12-C16 Aromatics - BSD	NWEPH	123	8		70	130	06/29/2016	EBS
>C16-C21 Aromatics - BS	NWEPH	119			70	130	06/29/2016	EBS
>C16-C21 Aromatics - BSD	NWEPH	129	8		70	130	06/29/2016	EBS
>C21-C34 Aromatics - BS	NWEPH	120			70	130	06/29/2016	EBS
>C21-C34 Aromatics - BSD	NWEPH	129	8		70	130	06/29/2016	EBS

**ALS Test Batch ID: 105821 - Water by EPA-8260**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
1,1-Dichloroethene - BS	EPA-8260	93.4			72.5	136	06/29/2016	DLC
1,1-Dichloroethene - BSD	EPA-8260	92.9	1		72.5	136	06/29/2016	DLC
Benzene - BS	EPA-8260	99.1			74.7	143	06/29/2016	DLC
Benzene - BSD	EPA-8260	94.0	5		74.7	143	06/29/2016	DLC
Toluene - BS	EPA-8260	95.3			71.7	139	06/29/2016	DLC



**CERTIFICATE OF ANALYSIS**

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DATE: 7/7/2016  
 ALS SDG#: EV16060187  
 WDOE ACCREDITATION: C601

CLIENT CONTACT: Jerry Sawetz  
 CLIENT PROJECT: None Given

**LABORATORY CONTROL SAMPLE RESULTS**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Toluene - BSD	EPA-8260	92.4	3		71.7	139	06/29/2016	DLC

**ALS Test Batch ID: 105964 - Water by EPA-8270 SIM**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Naphthalene - BS	EPA-8270 SIM	63.6			36	118	07/05/2016	GAP
Naphthalene - BSD	EPA-8270 SIM	76.6	19		36	118	07/05/2016	GAP
Benzo[G,H,I]Perylene - BS	EPA-8270 SIM	56.6			43	140	07/05/2016	GAP
Benzo[G,H,I]Perylene - BSD	EPA-8270 SIM	66.4	16		43	140	07/05/2016	GAP

APPROVED BY

Laboratory Director

