RILEYGROUP

TECHNICAL MEMORANDUM

Date: June 4, 2019

To: Mr. Steve Levan
2441 Horse Shoe Canyon Road
Los Angeles, California

From: Jerry Sawetz/Audrey Heisey
The Riley Group, Inc.

Subject: **Supplemental Subsurface Investigation Summary**
901 Madison Street
Seattle, Washington 98104
RGI Project No. 2014-113F

INTRODUCTION

The Riley Group Inc, (RGI) is pleased to present this Technical Memorandum summarizing Supplemental Subsurface Investigation (SSI) activities recently completed on the property located at 901 Madison Street in Seattle, Washington (hereafter referred to as the Property). The layout of the Property and SSI sample locations are depicted on Figure 1.

The Property consists of King County tax parcel 1979200285 and is currently owned by Levan Boise Real Estate Holdings, LLC. The northeastern half of the Property is currently occupied George's Delicatessen and Quarter Lounge. A vacant former restaurant is present on the southwestern half of the Property. Historical records indicate that the Property was occupied by dry cleaning facilities in the location of the former restaurant and the southwestern portion of the Quarter Lounge. RGI understands that Mr. Steve Levan (hereafter referred to as the Client) intends to sell the Property and that the Property will be redeveloped as a multi-use residential building in the future.

The purpose of this memorandum is to summarize the results of recently completed SSI soil and groundwater sampling activities conducted on the Property in order to further characterize the extent of PCE impacted soil on the Property and assess groundwater quality. Note that a comprehensive Remedial Investigation (RI) Report will be prepared for the Property after the building demolition is completed and additional subsurface investigation is completed. The RI Report will summarize the SSI and future subsurface investigation activities in further detail.

The work described below was performed in general accordance with the *Revised Supplemental Subsurface Investigation Work Plan* dated April 12, 2019 by RGI. Authorization to proceed with this work was granted by the Client.

BACKGROUND

The following documents describe previous environmental investigations and/or planned work conducted on the Property by RGI and others:

- *Revised Supplemental Subsurface Investigation Work Plan* (SSI Work Plan) dated April 12, 2019 by RGI.
- *Additional Subsurface Investigation Report* dated April 7, 2019 by RGI.
- *Document Review Memorandum* dated July 3, 2014 by RGI
- *Limited Phase II Environmental Site Assessment* dated December 8, 2009 by Hart Crowser.

Previous investigations performed by RGI and others identified the presence of tetrachloroethene (PCE) in soil on the southeastern portion of the Property (behind George's Delicatessen and beneath the Quarter Lounge) at concentrations exceeding the Model Toxics Control Act (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses. Previous sample locations and select analytical data are depicted on Figure 1. Tables 1 and 2 summarize all previous soil and groundwater analytical data. The reader is directed to refer to the previous reports in their entirety for details pertaining to previous environmental investigations and the history of the Property.

SUPPLEMENTAL SUBSURFACE INVESTIGATION

The following sections summarize SSI activities conducted on the Property in April and May of 2019. Figure 1 depicts the most recent SSI soil and groundwater sample locations and summarizes select analytical data. Boring logs summarizing subsurface conditions are included in Attachment A.

Utility Locating & Concrete Coring

At least 48 hours prior to commencing with the SSI, RGI contacted One-Call to locate known public underground utilities on the Property. Public underground utilities located included electric, natural gas, telecommunications, water, sewer, and cable. In addition, RGI reviewed available sanitary sewer cards and retained the services of Applied Professional Services (APS), private utility locator, to locate privately owned utilities.

APS was also retained to locate the main sewer line and side sewers situated beneath the Property using push rods/sondes and push cameras.

After utility and sewer locating was completed, the Client retained the services of Mr. Ken Hovde to core eleven 4-inch concrete cores in test probe locations. Concrete situated in the location of MW1 was broken out with a jackhammer.

April 25, 2019 Subsurface Investigation (SSI Work Plan Phase 1)

On April 25, 2019, RGI retained the services of Cascade Drilling Inc, (Cascade) to advance one boring on the southeast portion of the Property using standard hollow stem auger drilling (HSA) drilling techniques. Boring MW1 was advanced to approximately 76.5 feet below ground surface (bgs) and completed as groundwater monitoring well MW1. The surface elevation at MW1 is approximately 4.5 feet below the grade at George's Delicatessen and Quarter Lounge. Groundwater was encountered at approximately 64 feet bgs during drilling and well screen was placed from 60 to 75 feet bgs to allow for the groundwater to intersect the well screen during seasonal fluctuation in the water table elevation.

Soil was screened for the presence of volatile organic compounds (VOCs) during drilling using photoionization detector (PID) that measures VOCs in parts per billion volume (ppbv). Field screening did not indicate the presence of contamination in boring MW1 and eight soil samples were submitted to the laboratory for analysis of halogenated volatile organic compounds (HVOCs) from MW1. Subsurface conditions in MW1 consisted of sand with varying amounts of silt and gravel to the maximum depth of exploration of 76.5 feet bgs. Monitoring well construction details and subsurface conditions pertaining to MW1 are summarized in the boring logs included in Attachment A.

Monitoring well MW1 was developed after installation on April 25, 2019. One groundwater sample was collected from MW1 using standard Environmental Protection Agency (EPA) low flow sampling techniques on April 30, 2019 and submitted to the laboratory for analysis of HVOCs. The depth to groundwater in MW1 was recorded at 62 feet below the top of well casing (TOC) prior to sampling.

April 29, 2019 Subsurface Investigation (SSI Work Plan Phases 2 and 4)

On April 30, 2019, RGI retained the services of Standard Probe to advance a total of nine test probes (P7 through P13, P15 and P16) on the Property. Test probes P7, P8, P15, and P16 were advanced using a track-mounted direct push probe rig on the southwestern half of the Property (inside the former restaurant and the alley adjacent to the southeast) to depths ranging from 8.5 to 20 feet bgs. Test probes P9 through P13 were advanced using a limited access direct push drilling techniques on the northeastern half of the Property (inside George's Delicatessen and Quarter Lounge and adjacent to the southeast of each location) to depths ranging from 2.5 to 11 feet bgs. It was not possible to utilize HSA or track mounted direct push drilling technologies on the northeastern portion of the Property due to access limitations.

Field screening did not indicate the presence of soil contamination in any of the test probe locations and 20 soil samples were submitted to the laboratory for analysis of HVOCs. On the southwestern half of the Property (beneath the former restaurant), subsurface conditions consisted of sand with varying amounts of silt and gravel to the maximum depth of exploration of 20 feet bgs. On the northeastern half of the Property (beneath George's Delicatessen and Quarter Lounge), shallow soils consisted of sand with varying amounts of silt. Beneath this sand layer, a dense glacial till layer was consistently encountered between approximately 1 to 7 feet bgs. Refusal was encountered during drilling in all test probe locations on the northeastern half of the Property except for P12, which was terminated at 11 feet bgs due to the amount of time it required to advance the test probe in the dense subsurface conditions.

May 20, 2019 Subsurface Investigation (SSI Work Plan Phase 3)

On May 20, 2019, RGI retained the services of Standard Probe to advance test probes P9A (inside George's Delicatessen) and P14 (near the property boundary to the southeast) to depths of 7 and 15 feet bgs, respectively. Test probes were advanced using limited access direct push drilling techniques.

Field screening did not indicate the presence of soil contamination in either test probe location and six soil samples were submitted to the laboratory for analysis of HVOCs. Beneath George's Delicatessen, fill was present beneath the concrete slab beyond which a dense glacial till layer was encountered between approximately 0.5 to drilling refusal at 7 feet bgs. Near the southeastern Property boundary, subsurface conditions consisted of sand with varying amounts of silt to drilling refusal at approximately 15 feet bgs. Wood debris was encountered at approximately 11 feet bgs.

ANALYTICAL DATA

A total of 34 soil samples and one groundwater sample were submitted to Friedman & Bruya, Inc. of Seattle, Washington for analysis of HVOCs using EPA Method 8260C.

Copies of final laboratory analytical reports are included in Attachment B.

Soil Analytical Results

Soil analytical results pertaining to the SSI and previous investigations and applicable Model Toxics Control Act (MTCA) soil cleanup levels are summarized in Table 1.

A total of 34 soil samples were submitted to the laboratory for analysis from the 11 test probe locations (P7 through P16) and one groundwater monitoring well location (MW1). No contaminants of potential concern (COPCs) were detected in soil at concentrations exceeding compound-specific laboratory detection limits in any of the 34 soil sample locations.

Groundwater Analytical Results

Groundwater analytical results pertaining to the SSI and previous investigations and applicable MTCA groundwater cleanup levels are summarized in Table 2.

One groundwater sample was submitted to the laboratory for analysis from groundwater monitoring well MW1. No COPCs were detected in groundwater at concentrations exceeding compound-specific laboratory detection limits.

ESTIMATED EXTENT OF CONTAMINTION

The estimated lateral extent of PCE-impacted soil, based on data obtained during the SSI and previous investigations, is displayed on Figure 1.

PCE-impacted soil appears to be confined to an isolated area encompassing approximately 560 square feet on the southeastern portion of the Property (beneath the deli, lounge, and breezeway area behind the deli). PCE-impacted soil does not appear to extend off-Property to the southeast.

The vertical extent of PCE-impacted soil has not been defined since only limited access drilling technology can be used on this portion of the Property while the building is in place due to access limitations. Given the presence of the dense glacial till layer beneath the location of PCE-impacted soil, RGI does not anticipate the vertical extent of contamination to be greater than 20 feet bgs in this location. However, in order to define the vertical extent of PCE-impacted soil in this location, it would be necessary to perform additional subsurface investigation using hollow stem auger drilling technology after the demolition of the building.

RGI has submitted the Cleanup Plan Summary with Revised Remediation Cost Estimate dated June 4, 2019 to the Client under separate cover. This document presents estimated costs for tasks associated with the cleanup of PCE-impacted soil on the Property in conjunction with the future redevelopment of the Property.

Groundwater is present at approximately 62 feet bgs and is not impacted with PCE in an inferred down-gradient location relative to the location of PCE-impacted soil. In addition, the vertical separation between PCE-impacted soil and groundwater is anticipated to be greater than 40 feet and a very dense glacial till layer is present between groundwater and PCE-impacted soil, which would limit the vertical migration of PCE-impacted soil to groundwater. Therefore, groundwater contamination does not appear to be a concern for the Property.

CONCLUSIONS & RECOMMENDATIONS

Based on the SSI findings, RGI concludes the following:

- Soil impacted with PCE at concentrations exceeding applicable MTCA soil cleanup levels is present on the southeastern portion of the Property beneath George's Delicatessen and Quarter Lounge, and the adjacent breezeway to the southeast. The lateral extent of PCE-impacted soil is anticipated to be approximately 560 square feet and appears to be confined within the Property boundaries.
- A dense glacial till layer is situated beneath the northeastern half of the Property where PCE-impacted soil is present. This dense glacial till layer is anticipated to limit the vertical migration of PCE impacted soil. Therefore, RGI anticipates that the vertical extent of PCE-impacted soil does not extend greater than 20 feet bgs in this location. However, in order to define the vertical extent of PCE-impacted soil in this location, it would be necessary to perform additional subsurface investigation using hollow stem auger drilling technology after the demolition of the building.
- Groundwater is present at approximately 62 feet bgs and is not impacted with PCE in an inferred down-gradient location relative to the location of PCE-impacted soil. In addition, the vertical separation between PCE-impacted soil and groundwater is anticipated to be greater than 40 feet and a very dense glacial till layer is present between groundwater and PCE-impacted soil, which would limit the vertical migration of PCE-impacted soil to groundwater. Therefore, groundwater contamination does not appear to be a concern for the Property.
- Subsurface investigation on the Property has been completed to the fullest extent possible given the current access limitations with the building in place. No further subsurface investigation is recommended until after the building is demolished and hollow stem auger drilling technology can be utilized to drill through the dense glacial till and define the vertical extent of PCE-impacted soil.

In addition, RGI recommends the following:

- Enroll the Property into the Ecology Voluntary Cleanup Program (VCP).
- After the building is demolished, perform a subsurface investigation utilizing hollow stem auger drilling technology with the objective of defining the vertical extent of PCE-impacted soil. Utilize data obtained during this investigation to request a Contained-in determination from Ecology, which will allow for PCE-impacted soil to be disposed of as non-hazardous at significantly less cost.
- Complete all the pre-remediation MTCA required reporting under the VCP. This includes preparation of a Remedial Investigation/Feasibility Study Report in accordance with WAC 173-340-350 and a Cleanup Action Plan in accordance with WAC 173-340-380.
- Decommission groundwater monitoring well(s) prior to redevelopment.
- Perform a remedial excavation to remove all PCE-impacted soil from the Property in conjunction with redevelopment of the Property and dispose of contaminated soil in accordance with applicable regulations. Document all remediation activities in a Remedial Action Report and submit the report to Ecology under the VCP.

- Enter all required data into the Ecology Electronic Information Management (EIM) database and request that Ecology grant a No Further Action determination for the Property.

Please do not hesitate to contact us at 425-415-0551 with any questions regarding this Technical Memorandum.

Attachments: *Figure 1, Supplemental Subsurface Investigation Locations with Estimated Extent of Contaminated Soil*

Table 1, Summary of Soil Analytical Laboratory Results
Table 2, Summary of Groundwater Analytical Laboratory Results

Attachment A, Boring Logs
Attachment B, Laboratory Analytical Reports

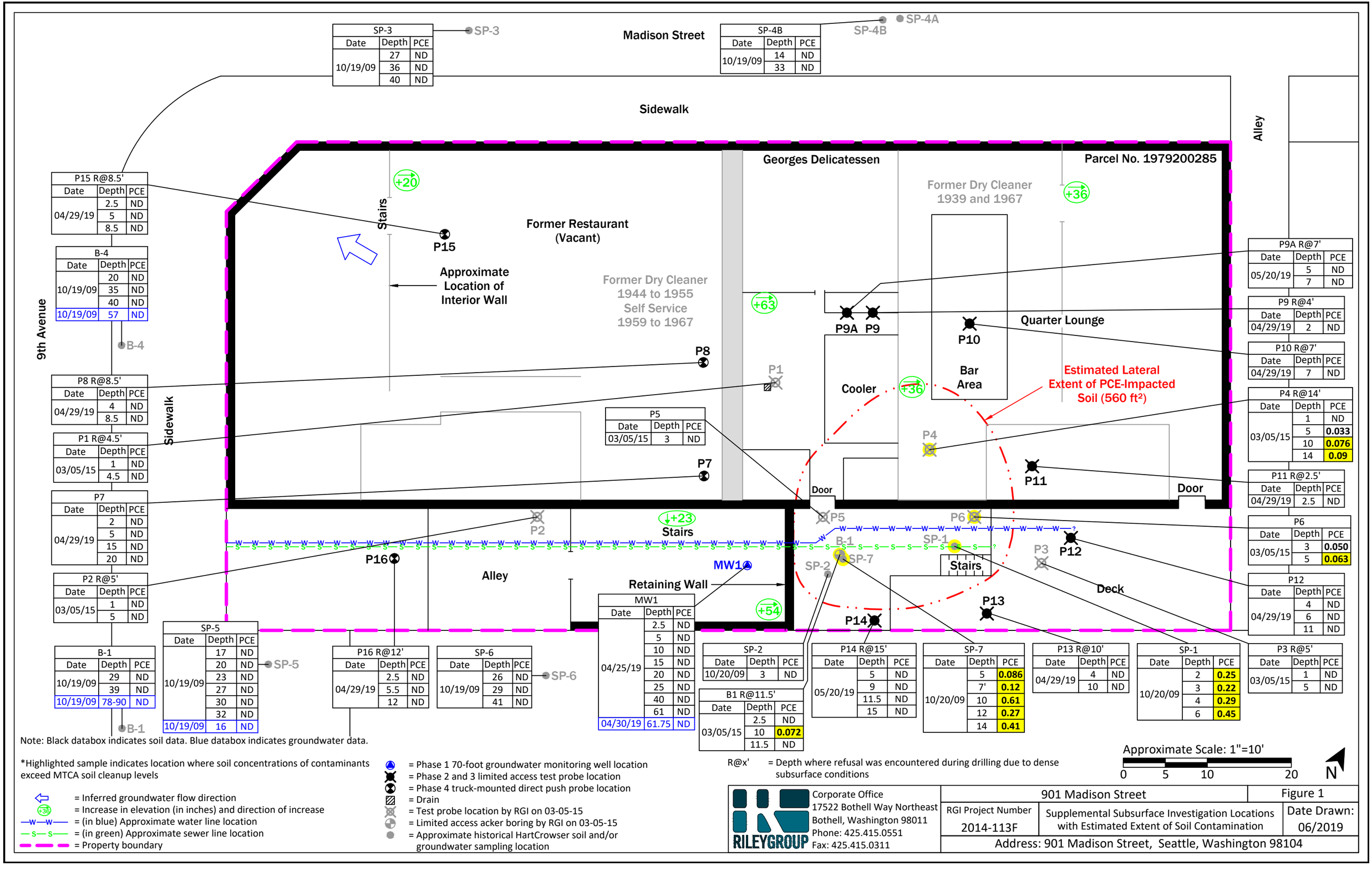
SP-3
Date | Depth | PCE
10/19/09 | 27 | ND
36 | ND
40 | ND
SP-3
Madison Street
SP-4B
Date | Depth | PCE
10/19/09 | 14 | ND
33 | ND
SP-4B
SP-4A
Sidewalk
Alley
Georges Delicatessen
Parcel No. 1979200285
Former Dry Cleaner
1939 and 1967
+36
+20
Stairs
Former Restaurant
(Vacant)
P15
Approximate
Location of
Interior Wall
Former Dry Cleaner
1944 to 1955
Self Service
1959 to 1967
+63
P9A R@7'
Date | Depth | PCE
05/20/19 | 5 | ND
7 | ND
P9 R@4'
Date | Depth | PCE
04/29/19 | 2 | ND
P10 R@7'
Date | Depth | PCE
04/29/19 | 7 | ND
P4 R@14'
Date | Depth | PCE
03/05/15 | 1 | ND
5 | 0.033
10 | 0.076
14 | 0.09
P9A
P9
P10
Bar
Area
Quarter Lounge
Cooler
+36
Estimated Lateral
Extent of PCE-Impacted
Soil (560 ft²)
P15 R@8.5'
Date | Depth | PCE
04/29/19 | 2.5 | ND
5 | ND
8.5 | ND
B-4
Date | Depth | PCE
10/19/09 | 20 | ND
35 | ND
40 | ND
10/19/09 | 57 | ND
B-4
9th Avenue
P8
P1
P8 R@8.5'
Date | Depth | PCE
04/29/19 | 4 | ND
8.5 | ND
P1 R@4.5'
Date | Depth | PCE
03/05/15 | 1 | ND
4.5 | ND
Sidewalk
P5
Date | Depth | PCE
03/05/15 | 3 | ND
P4
P7
P11
Door
Door
P7
Date | Depth | PCE
04/29/19 | 2 | ND
5 | ND
15 | ND
20 | ND
P11 R@2.5'
Date | Depth | PCE
04/29/19 | 2.5 | ND
P2
+23
Stairs
P5
P6
P6
Date | Depth | PCE
03/05/15 | 3 | 0.050
5 | 0.063
B-1
SP-1
P3
P12
P16
Alley
MW1
Retaining Wall
SP-2
SP-7
Stairs
Deck
P2 R@5'
Date | Depth | PCE
03/05/15 | 1 | ND
5 | ND
P12
Date | Depth | PCE
04/29/19 | 4 | ND
6 | ND
11 | ND
P13
P14
+54
B-1
Date | Depth | PCE
10/19/09 | 29 | ND
39 | ND
10/19/09 | 78-90 | ND
B-1
SP-5
Date | Depth | PCE
10/19/09 | 17 | ND
20 | ND
23 | ND
27 | ND
30 | ND
32 | ND
10/19/09 | 16 | ND
SP-5
P16 R@12'
Date | Depth | PCE
04/29/19 | 2.5 | ND
5.5 | ND
12 | ND
SP-6
Date | Depth | PCE
10/19/09 | 26 | ND
29 | ND
41 | ND
SP-6
MW1
Date | Depth | PCE
04/25/19 | 2.5 | ND
5 | ND
10 | ND
15 | ND
20 | ND
25 | ND
40 | ND
61 | ND
04/30/19 | 61.75 | ND
SP-2
Date | Depth | PCE
10/20/09 | 3 | ND
B1 R@11.5'
Date | Depth | PCE
03/05/15 | 2.5 | ND
10 | 0.072
11.5 | ND
P14 R@15'
Date | Depth | PCE
05/20/19 | 5 | ND
9 | ND
11.5 | ND
15 | ND
SP-7
Date | Depth | PCE
10/20/09 | 5 | 0.086
7' | 0.12
10 | 0.61
12 | 0.27
14 | 0.41
P13 R@10'
Date | Depth | PCE
04/29/19 | 4 | ND
10 | ND
SP-1
Date | Depth | PCE
10/20/09 | 2 | 0.25
3 | 0.22
4 | 0.29
6 | 0.45
P3 R@5'
Date | Depth | PCE
03/05/15 | 1 | ND
5 | ND
Note: Black databox indicates soil data. Blue databox indicates groundwater data.
*Highlighted sample indicates location where soil concentrations of contaminants exceed MTCA soil cleanup levels
= Inferred groundwater flow direction
+36 = Increase in elevation (in inches) and direction of increase
= (in blue) Approximate water line location
= (in green) Approximate sewer line location
= Property boundary
= Phase 1 70-foot groundwater monitoring well location
= Phase 2 and 3 limited access test probe location
= Phase 4 truck-mounted direct push probe location
= Drain
= Test probe location by RGI on 03-05-15
= Limited access acker boring by RGI on 03-05-15
= Approximate historical HartCrowser soil and/or groundwater sampling location
R@x' = Depth where refusal was encountered during drilling due to dense subsurface conditions
Approximate Scale: 1"=10'
0 5 10 20
N
RILEYGROUP
Corporate Office
17522 Bothell Way Northeast
Bothell, Washington 98011
Phone: 425.415.0551
Fax: 425.415.0311
901 Madison Street
Figure 1
RGI Project Number
2014-113F
Supplemental Subsurface Investigation Locations with Estimated Extent of Soil Contamination
Date Drawn:
06/2019
Address: 901 Madison Street, Seattle, Washington 98104

Table 1. Summary of Soil Sample Analytical Laboratory Results
901 Madison Street
901 Madison Street, Seattle, Washington 98104
The Riley Group, Inc. Project No. 2014-113F

Sample Number	Sample Depth	Sample Date	Stoddard Solvent	PCE	TCE	cis-1,2-DCE	Trans-1,2-DCE	VC	1,1-DCE	Other HVOCs
RGI 2019 Supplemental Subsurface Investigation (On-Property)										
P7-2.0	2	04/29/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P7-5.0	5	04/29/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P7-10	10	04/29/19	----	----	----	----	----	----	----	----
P7-15	15	04/29/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P7-20	20	04/29/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P8-0.5	0.5	04/29/19	----	----	----	----	----	----	----	----
P8-2.0	2	04/29/19	----	----	----	----	----	----	----	----
P8-4.0	4	04/29/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P8-7.0	7	04/29/19	----	----	----	----	----	----	----	----
P8-8.5	8.5	04/29/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P9-0.5	0.5	04/29/19	----	----	----	----	----	----	----	----
P9-2.0	2	04/29/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P9A-1.5	1.5	05/20/19	----	----	----	----	----	----	----	----
P9A-3.0	3	05/20/19	----	----	----	----	----	----	----	----
P9A-4.0	4	05/20/19	----	----	----	----	----	----	----	----
P9A-5.0	5	05/20/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P9A-6.0	6	05/20/19	----	----	----	----	----	----	----	----
P9A-7.0	7	05/20/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P10-1.5	1.5	04/29/19	----	----	----	----	----	----	----	----
P10-5.0	5	04/29/19	----	----	----	----	----	----	----	----
P10-7.0	7	04/29/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P11-0.5	0.5	04/29/19	----	----	----	----	----	----	----	----
P11-2.5	2.5	04/29/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P12-2.0	2	04/29/19	----	----	----	----	----	----	----	----
P12-4.0	4	04/29/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P12-6.0	6	04/29/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P12-11	11	04/29/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P13-1.0	1	04/29/19	----	----	----	----	----	----	----	----
P13-4.0	4	04/29/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P13-10	10	04/29/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P14-3.0	3	05/20/19	----	----	----	----	----	----	----	----
P14-5.0	5	05/20/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P14-7.0	7	05/20/19	----	----	----	----	----	----	----	----
P14-9.0	9	05/20/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P14-11.5	11.5	05/20/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P14-13	13	05/20/19	----	----	----	----	----	----	----	----
P14-15	15	05/20/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P15-2.5	2.5	04/29/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P15-5	5	04/29/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P15-8.5	8.5	04/29/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P16-2.5	2.5	04/29/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P16-5.5	5.5	04/29/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P16-9.0	9	04/29/19	----	----	----	----	----	----	----	----
P16-12	12	04/29/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
MW1-2.5	2.5	04/25/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
MW1-5	5	04/25/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
MW1-10	10	04/25/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
MW1-15	15	04/25/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
MW1-20	20	04/25/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses			**100**	**0.05**	**0.03**	**----**	**----**	**----**	**----**	**Analyte Specific**
MTCA Method B Soil Cleanup Levels for Unrestricted Land Uses[1]			**----**	**----**	**----**	**0.078**	**0.518**	**0.05[2]**	**0.05[2]**	**----**

Table 1. Summary of Soil Sample Analytical Laboratory Results
901 Madison Street
901 Madison Street, Seattle, Washington 98104
The Riley Group, Inc. Project No. 2014-113F

Sample Number	Sample Depth	Sample Date	Stoddard Solvent	PCE	TCE	cis-1,2-DCE	Trans-1,2-DCE	VC	1,1-DCE	Other HVOCs
MW1-25	25	04/25/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
MW1-30	30	04/25/19	----	----	----	----	----	----	----	----
MW1-35	35	04/25/19	----	----	----	----	----	----	----	----
MW1-40	40	04/25/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
MW1-45	45	04/25/19	----	----	----	----	----	----	----	----
MW1-50	50	04/25/19	----	----	----	----	----	----	----	----
MW1-55	55	04/25/19	----	----	----	----	----	----	----	----
MW1-61	61	04/25/19	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
MW1-65	65	04/25/19	----	----	----	----	----	----	----	----
MW1-70	70	04/25/19	----	----	----	----	----	----	----	----
MW1-75	75	04/25/19	----	----	----	----	----	----	----	----
RGI 2015 Additional Subsurface Investigation (On-Property)										
B1-2.5	2.5	03/05/15	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
B1-5	5	03/05/15	----	----	----	----	----	----	----	----
B1-10	10	03/05/15	----	**0.072**	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
B1-11.5	11.5	03/05/15	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P1-1	1	03/05/15	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P1-4.5	4.5	03/05/15	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P2-1	1	03/05/15	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P2-3	3	03/05/15	----	----	----	----	----	----	----	----
P2-5	5	03/05/15	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P3-1	1	03/05/15	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P3-5	5	03/05/15	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P4-1	1	03/05/15	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P4-5	5	03/05/15	----	**0.033**	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P4-10	10	03/05/15	----	**0.076**	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P4-14	14	03/05/15	----	**0.09**	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P5-1.5	1.5	03/05/15	----	----	----	----	----	----	----	----
P5-3	3	03/05/15	----	ND<0.025	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P6-3	3	03/05/15	----	**0.050**	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
P6-4	4	03/05/15	----	----	----	----	----	----	----	----
P6-5	5	03/05/15	----	**0.063**	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
Hart Crowser 2009 Limited Phase II Environmental Site Assessment (On-Property)										
SP1-S2	2	10/20/09	ND<5	**0.25 J**	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
SP1-S3	3	10/20/09	----	**0.22**	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
SP1-S4	4	10/20/09	----	**0.29**	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
SP1-S5	6	10/20/09	----	**0.45**	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
SP2-S2	2	10/20/09	ND<5	ND<0.050	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
SP7-S2	5	10/20/09	----	**0.086**	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
SP7-S3	7	10/20/09	----	**0.12**	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
SP7-S4	10	10/20/09	----	**0.61**	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
SP7-S5	12	10/20/09	----	**0.27**	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
SP7-S6	14	10/20/09	----	**0.41**	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
Hart Crowser 2009 Limited Phase II Environmental Site Assessment (Off-Property)										
SP3-S11	27	10/19/09	ND<5	ND<0.050	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
SP3-S15	36	10/19/09	ND<5	ND<0.050	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
SP3-S17	40	10/19/09	----	ND<0.050	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
SP4B-S6	14	10/19/09	ND<5	ND<0.050	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
SP4B-S12	33	10/19/09	ND<5	ND<0.050	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
SP5-S5	17	10/19/09	ND<5	ND<0.050	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses			**100**	**0.05**	**0.03**	----	----	----	----	**Analyte Specific**
MTCA Method B Soil Cleanup Levels for Unrestricted Land Uses[1]			----	----	----	**0.078**	**0.518**	**0.05[2]**	**0.05[2]**	----

Table 1. Summary of Soil Sample Analytical Laboratory Results
901 Madison Street
901 Madison Street, Seattle, Washington 98104
The Riley Group, Inc. Project No. 2014-113F

Sample Number	Sample Depth	Sample Date	Stoddard Solvent	PCE	TCE	cis-1,2-DCE	Trans-1,2-DCE	VC	1,1-DCE	Other HVOCs
SP5-S6	20	10/19/09	----	ND<0.050	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
SP5-S7	23	10/19/09	----	ND<0.050	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
SP5-S8	27	10/19/09	ND<5	ND<0.050	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
SP5-S9	32	10/19/09	----	ND<0.050	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
SP5-S10	10	10/19/09	----	ND<0.050	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
SP6-S8	26	10/19/09	ND<5	ND<0.050	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
SP6-S9	29	10/19/09	----	ND<0.050	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
SP6-S13	41	10/19/09	ND<5	ND<0.050	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
B1-S6	29	10/19/09	ND<5	ND<0.050	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
B1-S8	39	10/19/09	ND<5	ND<0.050	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
B4-S4	20	10/19/09	ND<5	ND<0.050	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
B4-S7	35	10/19/09	ND<5	ND<0.050	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
B4-S8	40	10/19/09	----	ND<0.050	ND<0.02	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND
MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses			**100**	**0.05**	**0.03**	**----**	**----**	**----**	**----**	**Analyte Specific**
MTCA Method B Soil Cleanup Levels for Unrestricted Land Uses[1]			**----**	**----**	**----**	**0.078**	**0.518**	**0.05[2]**	**0.05[2]**	**----**

Notes:

All results and detection limits are given in milligrams per kilogram (mg/kg); equivalent to parts per million (ppm).

Sample Depth = Soil sample depth interval in feet below ground surface (bgs). Figure 1 depicts how ground surface elevation varies across the Property.

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

ND = Not detected at a concentration above the laboratory analytical detection limit.

---- = Not analyzed or not applicable.

J = Laboratory report indicated estimate with low bias.

Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses (WAC 173-340-900, Table 740-1). MTCA Method B Soil Cleanup Levels from Ecology's Cleanup Level and Risk Calculation (CLARC) database dated May 20, 2019.

[1] MTCA Method A Cleanup Level was not available. Therefore, the MTCA Method B Cleanup Level protective of groundwater at 13°C is referenced.

[2] The cleanup level is lower that the practical quantitation limit (PQL). Therefore, the cleanup level defaults to the PQL per WAC 173-340-700 (5)(a).

Bold results indicate concentrations above laboratory detection limits.

Bold and yellow highlighted results indicate concentrations (if any) that exceed MTCA Method A or B Soil Cleanup Levels.

Table 2. Summary of Groundwater Sample Analytical Laboratory Results
901 Madison Street
901 Madison Street, Seattle, Washington 98104
The Riley Group, Inc. Project No. 2014-113F

Sample Number	Depth to Groundwater (in Feet)	Sample Date	PCE	TCE	cis-1,2-DCE	Trans-1,2-DCE	VC	1,1-DCE	Other HVOCs	Other VOCs
RGI 2019 On-Property Groundwater Monitoring Well Sample										
MW1	62	04/30/19	ND<1	ND<1	ND<1	ND<1	ND<0.2	ND<1	ND	----
Hart Crowser 2009 Off-Property Groundwater Grab Samples										
B1	78-96	10/20/09	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<0.2	ND<1.0	----	ND
SP-5	18-28	10/20/09	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<0.2	ND<1.0	----	ND
B4	57	10/20/09	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<0.2	ND<1.0	----	ND
MTCA Method A Groundwater Cleanup Levels for Unrestricted Land Uses			**5**	**5**	**----**	**----**	**0.2**	**----**	**Analyte Specific**	**Analyte Specific**
Applicable or Relevant and Appropriate Requirements (ARARs)[1]			**5**	**5**	**70**	**100**	**----**	**400**	**----**	**----**

Notes:

All results and detection limits are given in micrograms per liter (µg/L); equivalent to parts per billion (ppb).

Sample Depth = Groundwater depth recorded in feet below ground surface (bgs) for grab samples and feet below top of casing for groundwater monitoring well.

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

ND = Not detected at a concentration above the laboratory detection limit.

---- = Not analyzed or not applicable.

Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method A Cleanup Levels for Ground Water (WAC 173-340-900, Table 720-1). MTCA Method B Standard Formula Values for Ground Water from Ecology's Cleanup Level and Risk Calculation (CLARC) database dated May 20, 2019.

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.

[1] No MTCA Method A Cleanup Level has been established. Therefore, the Federal and State ARAR is referenced.

Bold results indicate concentrations above laboratory detection limits.

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

Project Name: **901 Madison** Project Number: **2014-113F** Client: **Steve Levan**	Test Probe/Well No.: **MW1** **Sheet 1 of 3**

Date(s) Drilled: **04/25/19**	Logged By: **LC**	Surface Conditions: **Concrete**
Drilling Method(s): **Hollow Stem Auger**	Drill Bit Size/Type: **4.5" Diameter**	Total Depth of Borehole: **76.5 feet bgs**
Drill Rig Type: **CME 75**	Drilling Contractor: **Cascade**	Approximate Surface Elevation (feet amsl): **n/a**
Groundwater Level: **62'**	Sampling Method(s): **SPT**	Hammer Data : **300 lbs, 30" drop**
Borehole Backfill: **Monitoring Well**	Location: **901 Madison Street, Seattle, Washington 98104**	

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (percent)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
	0						Concrete		Concrete		Concrete 0 - 2
							SM		Light brown/gray, silty SAND with some gravel and brick debris, medium dense to dense, dry to damp		
							SM		Light brown/gray, fine to coarse, silty SAND, no odor		Bentonite chips and slurry 2 - 58
			MW1-2.5	53	0.0						
	5		MW1-5	77/12"	0.0						
	10		MW1-10	78/12"	0.0				Becomes moist		
	15		MW1-15	70	0.0		SM		Medium to coarse, silty SAND with some gravel, medium dense to dense, damp, no odor		
	20		MW1-20	82/12"	0.0				Becomes moist		

Project Name: **901 Madison**

Project Number: **2014-113F**

Client: **Steve Levan**

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Test Probe/Well No.: **MW1**

Sheet 2 of 3

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (percent)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
	25		MW1-25	50/6"	0.0				Silt content increases, less gravel		
	30		MW1-30	50/6"	0.0				Becomes damp		
	35		MW1-35	50/6"	0.0						
	40		MW1-40	60	0.0		SP-SM		Fine to medium, SAND with trace to some silt and trace gravel, medium dense to dense, damp, no odor		
	45		MW1-45	50/6"	0.0				Becomes moist, less gravel content		
	50		MW1-50	34	0.0				Becomes gray mottled, some inclusions of organics/black silt, damp to moist		

Project Name: **901 Madison**

Project Number: **2014-113F**

Client: **Steve Levan**

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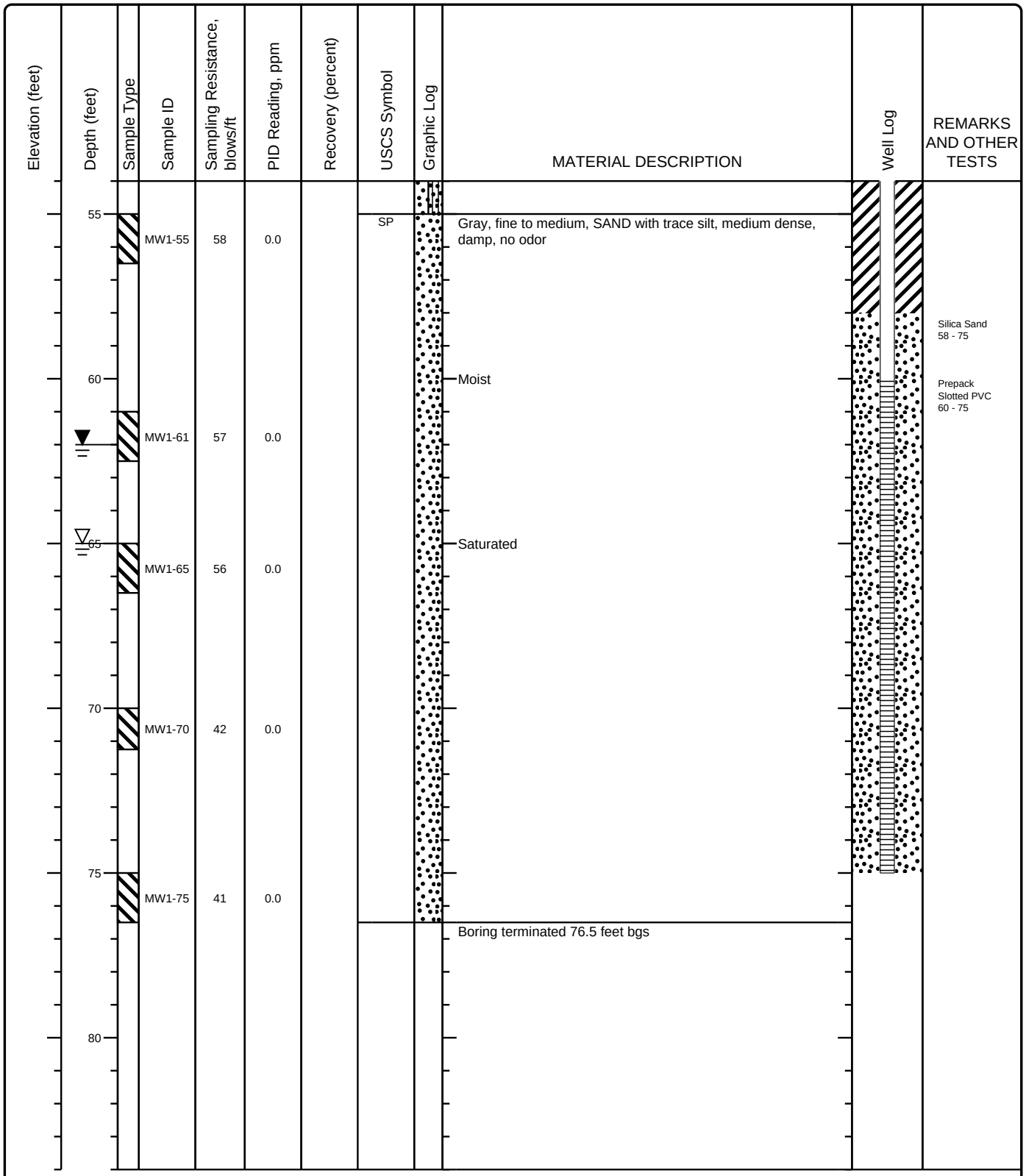
Test Probe/Well No.: **MW1**

Sheet 3 of 3



The Riley Group, Inc.
17522 Bothell Way NE, Bothell, WA 98011

Project Name: **901 Madison**

Project Number: **2014-113F**

Client: **Steve Levan**

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Boring Log Key

Sheet 1 of 1

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (percent)	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 (percent): Percent Recovery
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)


Poorly graded SAND with Silt (SP-SM)

TYPICAL SAMPLER GRAPHIC SYMBOLS


Auger sampler


Bulk Sample


3-inch-OD California w/ brass rings


CME Sampler


Grab Sample


2.5-inch-OD Modified California w/ brass liners


Pitcher Sample


2-inch-OD unlined split spoon (SPT)


Shelby Tube (Thin-walled, fixed head)

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: **901 Madison Street**
Project Number: **2014-113F**
Client: **Steve Levan**

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Test Probe No.: P7

Sheet 1 of 1

Date(s) Drilled: **04/29/19**	Logged By: **LC**	Surface Conditions: **Concrete**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type:	Total Depth of Borehole: **20 feet bgs**
Drill Rig Type: **S4LT**	Drilling Contractor: **Standard Probe**	Approximate Surface Elevation: **n/a**
Groundwater Level: **Not encountered**	Sampling Method(s): **Continuous**	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **901 Madison Street, Seattle, Washington 98104**	

PID Reading, ppm	Sample ID	Sample Type	Recovery (percent)	GW Depth	Depth (feet)	MATERIAL DESCRIPTION
					0	Concrete
0.0	P7-2.0		95%			Light brown/gray, fine to medium, silty SAND with some gravel, dense, damp to moist, no odor
0.0	P7-5.0		95%		5	Damp
			95%			Moist, medium to coarse
			95%			
			95%			Becomes damp
0.0	P7-10		95%		10	
			95%			
			95%			
			95%			
0.0	P7-15		95%		15	
			95%			
			95%			
			95%			
0.0	P7-20				20	Test probe terminated 20 feet bgs

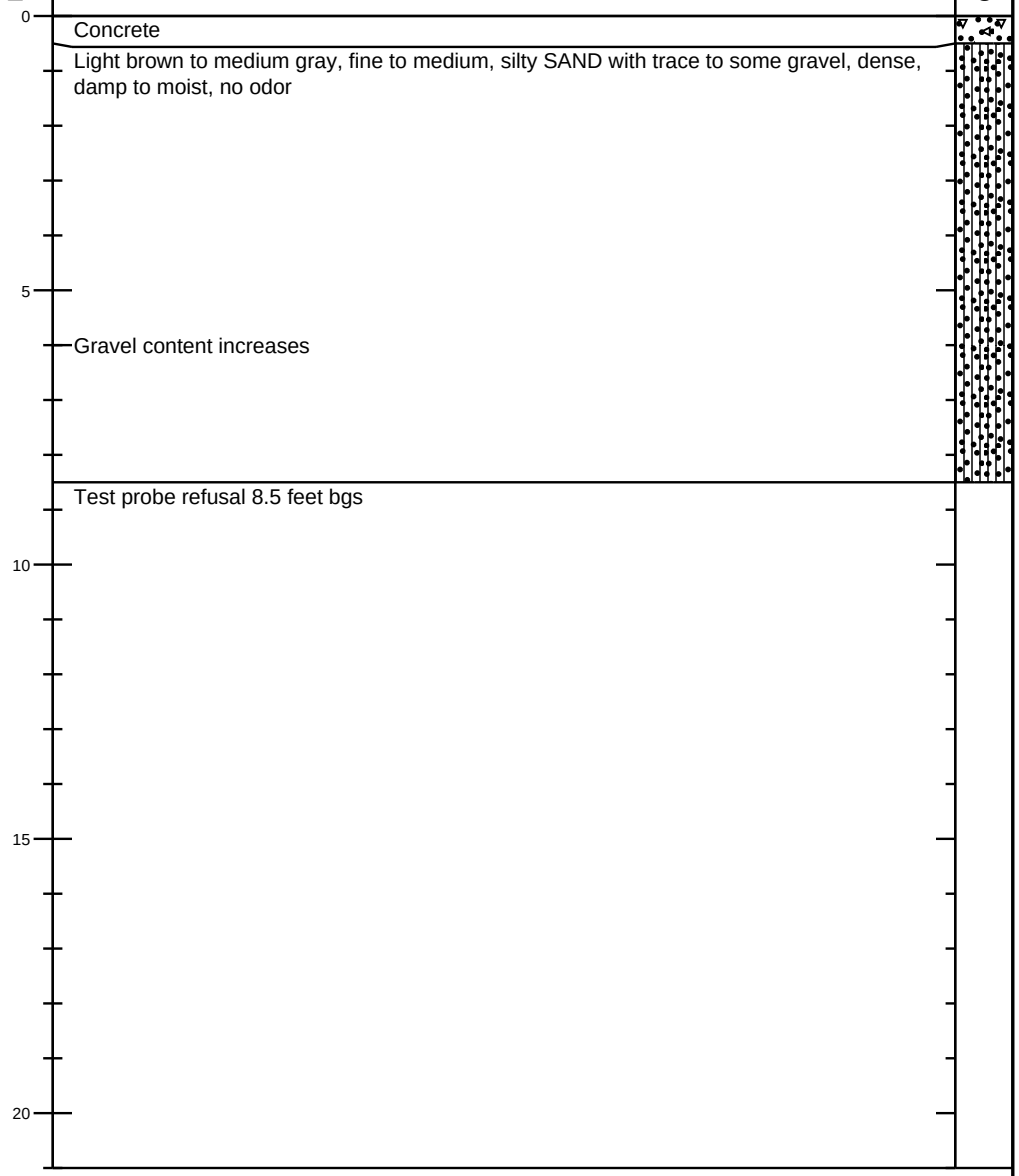
Graphic Log

The Riley Group, Inc.
17522 Bothell Way NE, Bothell, WA 98011

Project Name: **901 Madison Street**	Test Probe No.: **P8**
Project Number: **2014-113F**	**Sheet 1 of 1**
Client: **Steve Levan**	

Date(s) Drilled: **04/29/19**	Logged By: **LC**	Surface Conditions: **Concrete**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type:	Total Depth of Borehole: **8.5 feet bgs**
Drill Rig Type: **S4LT**	Drilling Contractor: **Standard Probe**	Approximate Surface Elevation: **n/a**
Groundwater Level: **Not encountered**	Sampling Method(s): **Continuous**	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **901 Madison Street, Seattle, Washington 98104**	

PID Reading, ppm	Sample ID	Recovery (percent)
0.0	P8-0.5	
0.0	P8-2.0	90%
0.0	P8-4.0	
		90%
0.0	P8-7.0	100%
0.0	P8-8.5	100%



The Riley Group, Inc.
17522 Bothell Way NE, Bothell, WA 98011

Project Name: **901 Madison Street**	Test Probe No.: **P9**
Project Number: **2014-113F**	**Sheet 1 of 1**
Client: **Steve Levan**	

Date(s) Drilled: **04/29/19**	Logged By: **LC**	Surface Conditions: **Concrete**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type:	Total Depth of Borehole: **4 feet bgs**
Drill Rig Type: **Jack Hammer**	Drilling Contractor: **Standard Probe**	Approximate Surface Elevation: **n/a**
Groundwater Level: **Not encountered**	Sampling Method(s): **Continuous**	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **901 Madison Street, Seattle, Washington 98104**	

PID Reading, ppm	Sample ID	Sample Type	Recovery (percent)	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
0.0	P9-0.5		50%		0	Concrete	
0.0	P9-2.0		100%			Light to medium gray, fine to coarse, silty SAND with trace to some gravel and organics, dense to very dense and increasing density with depth, damp, no odor	
						Test probe refusal 4 feet bgs	
					5		
					10		
					15		
					20		

The Riley Group, Inc.
17522 Bothell Way NE, Bothell, WA 98011

Project Name: **901 Madison Street**
Project Number: **2014-113F**
Client: **Steve Levan**

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Test Probe No.: **P9A**

Sheet 1 of 1

Date(s) Drilled: **05/20/19**	Logged By: **LC**	Surface Conditions: **Concrete**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type:	Total Depth of Borehole: **7 feet bgs**
Drill Rig Type: **Jack Hammer**	Drilling Contractor: **Standard Probe**	Approximate Surface Elevation: **n/a**
Groundwater Level: **Not encountered**	Sampling Method(s): **Continuous**	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **901 Madison Street, Seattle, Washington 98104**	

PID Reading, ppm	Sample ID	Sample Type	Recovery (percent)	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
					0	Concrete	
						Dark gray, silty SAND with trace gravel and debris, dense, damp, no odor	
140	P9A-1.5					Light to medium gray, fint to medium, silty SAND with trace to some gravel, dense to very dense and increasing density with depth, dry to damp, no odor	
187	P9A-3.0						
143	P9A-4.0					Very dense	
138	P9A-5.0				5		
161	P9A-6.0						
164	P9A-7.0					Test probe refusal 7 feet bgs	
					10		
					15		
					20		

The Riley Group, Inc.
17522 Bothell Way NE, Bothell, WA 98011

Project Name: **901 Madison Street**
Project Number: **2014-113F**
Client: **Steve Levan**

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Test Probe No.: **P10**

Sheet 1 of 1

Date(s) Drilled: **04/29/19**	Logged By: **LC**	Surface Conditions: **Concrete**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type:	Total Depth of Borehole: **7 feet bgs**
Drill Rig Type: **Jack Hammer**	Drilling Contractor: **Standard Probe**	Approximate Surface Elevation: **n/a**
Groundwater Level: **Not encountered**	Sampling Method(s): **Continuous**	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **901 Madison Street, Seattle, Washington 98104**	

PID Reading, ppm	Sample ID	Sample Type	Recovery (percent)	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
					0	Concrete	
0.0	P10-1.5		80%			Light to medium gray, fine to medium, silty SAND with trace to some gravel, very dense and increasing density with depth, damp, no odor	
			100%				
			80%				
0.0	P10-5.0		80%		5		
			80%				
0.0	P10-7.0		80%			Test probe refusal 7 feet bgs	
					10		
					15		
					20		

The Riley Group, Inc.
17522 Bothell Way NE, Bothell, WA 98011

Project Name: **901 Madison Street**	Test Probe No.: **P11**
Project Number: **2014-113F**	**Sheet 1 of 1**
Client: **Steve Levan**	

RILEYGROUP

Date(s) Drilled: **04/29/19**	Logged By: **LC**	Surface Conditions: **Concrete**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type:	Total Depth of Borehole: **2.5 feet bgs**
Drill Rig Type: **Jack Hammer**	Drilling Contractor: **Standard Probe**	Approximate Surface Elevation: **n/a**
Groundwater Level: **Not encountered**	Sampling Method(s): **Continuous**	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **901 Madison Street, Seattle, Washington 98104**	

PID Reading, ppm	Sample ID	Sample Type	Recovery (percent)	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
0.0	P11-0.5		90%		0	Concrete	
						Light to medium gray, fine to medium, silty SAND with trace to some gravel, very dense and increasing density with depth, damp, no odor	
0.0	P11-2.5		100%				
						Test probe refusal 2.5 feet bgs	
					5		
					10		
					15		
					20		

The Riley Group, Inc.
17522 Bothell Way NE, Bothell, WA 98011

Project Name: **901 Madison Street** Project Number: **2014-113F** Client: **Steve Levan**	RILEYGROUP Test Probe No.: **P12** **Sheet 1 of 1**

Date(s) Drilled: **04/29/19**	Logged By: **LC**	Surface Conditions: **Concrete**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type:	Total Depth of Borehole: **11 feet bgs**
Drill Rig Type: **Jack Hammer**	Drilling Contractor: **Standard Probe**	Approximate Surface Elevation: **n/a**
Groundwater Level: **Not encountered**	Sampling Method(s): **Continuous**	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **901 Madison Street, Seattle, Washington 98104**	

PID Reading, ppm	Sample ID	Sample Type	Recovery (percent)	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
					0	Concrete	
			80%			Light brown, fine, silty SAND with trace gravel, very dense and increasing density with depth, damp, no odor	
0.0	P12-2.0						
			80%				
0.0	P12-4.0						
			80%		5		
0.0	P12-6.0		80%				
			80%				
			80%				
			80%				
			80%			Increase in gravel size	
			80%		10		
0.0	P12-11					Test probe terminated 11 feet bgs	
					15		
					20		

The Riley Group, Inc.
17522 Bothell Way NE, Bothell, WA 98011

Project Name: **901 Madison Street**	Test Probe No.: **P13**
Project Number: **2014-113F**	**Sheet 1 of 1**
Client: **Steve Levan**	

Date(s) Drilled: **04/29/19**	Logged By: **LC**	Surface Conditions: **Concrete**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type:	Total Depth of Borehole: **10 feet bgs**
Drill Rig Type: **Jack Hammer**	Drilling Contractor: **Standard Probe**	Approximate Surface Elevation: **n/a**
Groundwater Level: **Not encountered**	Sampling Method(s): **Continuous**	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **901 Madison Street, Seattle, Washington 98104**	

PID Reading, ppm	Sample ID	Sample Type	Recovery (percent)	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
					0	Concrete	
0.0	P13-1.0		80%			Light brown to medium gray, fine to medium, silty SAND with trace to some gravel, medium dense, moist, no odor	
			80%			Fine to coarse	
0.0	P13-4.0				5		
			30%				
			80%			Light gray, medium to coarse, SAND with trace to some silt and trace gravel, no odor	
0.0	P13-10				10	Test probe refusal 10 feet bgs	
					15		
					20		

The Riley Group, Inc.
17522 Bothell Way NE, Bothell, WA 98011

Project Name: **901 Madison Street** Project Number: **2014-113F** Client: **Steve Levan**	RILEYGROUP Test Probe No.: **P14** **Sheet 1 of 1**

Date(s) Drilled: **05/20/19**	Logged By: **LC**	Surface Conditions: **Concrete**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type:	Total Depth of Borehole: **15 feet bgs**
Drill Rig Type: **Jack Hammer**	Drilling Contractor: **Standard Probe**	Approximate Surface Elevation: **n/a**
Groundwater Level: **Not encountered**	Sampling Method(s): **Continuous**	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **901 Madison Street, Seattle, Washington 98104**	

PID Reading, ppm	Sample ID	Sample Type	Recovery (percent)	GW Depth	Depth (feet)	MATERIAL DESCRIPTION
					0	Concrete
						Light brown to medium gray, medium to coarse, silty SAND with some gravel, medium dense, damp to moist, no odor
			50%			
96	P14-3.0					
138	P14-5.0		66%		5	
						Becomes hard
151	P14-7.0					
264	P14-9.0		50%			
					10	Moist to wet with an increase in gravel content, slight odor
285	P14-11.5		50%			Contains wood debris, no odor
296	P14-13		50%			
268	P14-15		50%		15	Test probe refusal 15 feet bgs
					20	

Graphic Log

The Riley Group, Inc.
17522 Bothell Way NE, Bothell, WA 98011

Project Name: **901 Madison Street**	Test Probe No.: **P15**
Project Number: **2014-113F**	**Sheet 1 of 1**
Client: **Steve Levan**	

Date(s) Drilled: **04/29/19**	Logged By: **LC**	Surface Conditions: **Concrete**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type:	Total Depth of Borehole: **8.5 feet bgs**
Drill Rig Type: **S4LT**	Drilling Contractor: **Standard Probe**	Approximate Surface Elevation: **n/a**
Groundwater Level: **Not encountered**	Sampling Method(s): **Continuous**	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **901 Madison Street, Seattle, Washington 98104**	

PID Reading, ppm	Sample ID	Sample Type	Recovery (percent)	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
					0	Concrete	
			95%			Light brown/gray, fine to medium, silty SAND with trace to some gravel, dense, damp, no odor	
0.0	P15-2.5						
			95%				
0.0	P15-5.0				5		
			95%				
			95%				
			95%				
0.0	P15-8.5					Test probe refusal 8.5 feet bgs	
					10		
					15		
					20		

The Riley Group, Inc.
17522 Bothell Way NE, Bothell, WA 98011

Project Name: **901 Madison Street** Project Number: **2014-113F** Client: **Steve Levan**	RILEYGROUP Test Probe No.: **P16** **Sheet 1 of 1**

Date(s) Drilled: **04/29/19**	Logged By: **LC**	Surface Conditions: **Concrete**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type:	Total Depth of Borehole: **12 feet bgs**
Drill Rig Type: **S4LT**	Drilling Contractor: **Standard Probe**	Approximate Surface Elevation: **n/a**
Groundwater Level: **Not encountered**	Sampling Method(s): **Continuous**	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **901 Madison Street, Seattle, Washington 98104**	

PID Reading, ppm	Sample ID	Sample Type	Recovery (percent)	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
					0	Concrete	
						Light brown, fine to medium, silty SAND with some gravel, medium dense, damp, no odor	
0.0	P16-2.5		95%				
			95%		5		
0.0	P16-5.5					Becomes damp to moist	
			95%				
			95%				
0.0	P16-9.0				10		
			95%				
			95%				
0.0	P16-12					Test probe refusal 12 feet bgs	
					15		
					20		

The Riley Group, Inc.
17522 Bothell Way NE, Bothell, WA 98011

Project Name: **901 Madison Street**

Project Number: **2014-113F**

Client: **Steve Levan**

Boring Log Key

Sheet 1 of 1

PID Reading, ppm	Sample ID	Sample Type	Recovery (percent)	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
1	2	3	4	5	6	7	8

COLUMN DESCRIPTIONS

1. PID Reading, ppm: The reading from a photo-ionization detector, in parts per million.
2. Sample ID: Sample identification number.
3. Sample Type: Type of soil sample collected at the depth interval shown.
4. Recovery (percent): Percent Recovery
5. GW Depth: Groundwater depth in feet below the ground surface.
6. Depth (feet): Depth in feet below the ground surface.
7. MATERIAL DESCRIPTION: Description of material encountered. May include consistency, moisture, color, and other descriptive text.
8. Graphic Log: Graphic depiction of the subsurface material encountered.

FIELD AND LABORATORY TEST ABBREVIATIONS

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

MATERIAL GRAPHIC SYMBOLS


Portland Cement Concrete


Silty SAND (SM)


Poorly graded SAND with Silt (SP-SM)

TYPICAL SAMPLER GRAPHIC SYMBOLS


Auger sampler


Bulk Sample


3-inch-OD California w/ brass rings


CME Sampler


Grab Sample


2.5-inch-OD Modified California w/ brass liners


Pitcher Sample


2-inch-OD unlined split spoon (SPT)


Shelby Tube (Thin-walled, fixed head)

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.

The Riley Group, Inc.
17522 Bothell Way NE, Bothell, WA 98011

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
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May 3, 2019

Jerry Sawetz, Project Manager
The Riley Group, Inc.
17522 Bothell Way NE
Bothell, WA 98011

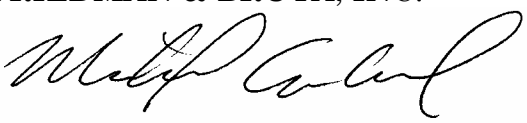
Dear Mr Sawetz:

Included are the results from the testing of material submitted on April 25, 2019 from the 901 Madison 2014-113F, F&BI 904516 project. There are 12 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
TRG0503R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 25, 2019 by Friedman & Bruya, Inc. from the The Riley Group 901 Madison 2014-113F, F&BI 904516 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	The Riley Group
904516 -01	MW1-2.5
904516 -02	MW1-5
904516 -03	MW1-10
904516 -04	MW1-15
904516 -05	MW1-20
904516 -06	MW1-25
904516 -07	MW1-30
904516 -08	MW1-35
904516 -09	MW1-40
904516 -10	MW1-45
904516 -11	MW1-50
904516 -12	MW1-55
904516 -13	MW1-61
904516 -14	MW1-65
904516 -15	MW1-70
904516 -16	MW1-75

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW1-2.5	Client:	The Riley Group
Date Received:	04/25/19	Project:	901 Madison 2014-113F
Date Extracted:	04/29/19	Lab ID:	904516-01
Date Analyzed:	04/29/19	Data File:	042926.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	62	142
Toluene-d8	98	55	145
4-Bromofluorobenzene	102	65	139

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW1-5	Client:	The Riley Group
Date Received:	04/25/19	Project:	901 Madison 2014-113F
Date Extracted:	04/29/19	Lab ID:	904516-02
Date Analyzed:	04/29/19	Data File:	042927.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	62	142
Toluene-d8	98	55	145
4-Bromofluorobenzene	101	65	139

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW1-10	Client:	The Riley Group
Date Received:	04/25/19	Project:	901 Madison 2014-113F
Date Extracted:	04/29/19	Lab ID:	904516-03
Date Analyzed:	04/29/19	Data File:	042928.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	98	55	145
4-Bromofluorobenzene	102	65	139

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW1-15	Client:	The Riley Group
Date Received:	04/25/19	Project:	901 Madison 2014-113F
Date Extracted:	04/29/19	Lab ID:	904516-04
Date Analyzed:	04/29/19	Data File:	042929.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	98	55	145
4-Bromofluorobenzene	100	65	139

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW1-20	Client:	The Riley Group
Date Received:	04/25/19	Project:	901 Madison 2014-113F
Date Extracted:	04/29/19	Lab ID:	904516-05
Date Analyzed:	04/29/19	Data File:	042930.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	62	142
Toluene-d8	97	55	145
4-Bromofluorobenzene	101	65	139

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW1-25	Client:	The Riley Group
Date Received:	04/25/19	Project:	901 Madison 2014-113F
Date Extracted:	04/29/19	Lab ID:	904516-06
Date Analyzed:	04/29/19	Data File:	042931.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	96	55	145
4-Bromofluorobenzene	100	65	139

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW1-40	Client:	The Riley Group
Date Received:	04/25/19	Project:	901 Madison 2014-113F
Date Extracted:	04/29/19	Lab ID:	904516-09
Date Analyzed:	04/29/19	Data File:	042932.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	98	55	145
4-Bromofluorobenzene	101	65	139

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW1-61	Client:	The Riley Group
Date Received:	04/25/19	Project:	901 Madison 2014-113F
Date Extracted:	04/29/19	Lab ID:	904516-13
Date Analyzed:	04/29/19	Data File:	042933.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	62	142
Toluene-d8	98	55	145
4-Bromofluorobenzene	100	65	139

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	The Riley Group
Date Received:	Not Applicable	Project:	901 Madison 2014-113F
Date Extracted:	04/29/19	Lab ID:	09-922 mb
Date Analyzed:	04/29/19	Data File:	042908.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	98	55	145
4-Bromofluorobenzene	100	65	139

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Date of Report: 05/03/19
Date Received: 04/25/19
Project: 901 Madison 2014-113F, F&BI 904516

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 904539-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	82	72	10-138	13
Chloroethane	mg/kg (ppm)	2.5	<0.5	84	76	10-176	10
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	114	105	10-160	8
Methylene chloride	mg/kg (ppm)	2.5	<0.5	118	106	10-156	11
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	117	107	14-137	9
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	112	105	19-140	6
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	105	98	25-135	7
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	94	101	12-160	7
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	108	101	10-156	7
Trichloroethene	mg/kg (ppm)	2.5	<0.02	95	100	21-139	5
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	92	97	20-133	5

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Vinyl chloride	mg/kg (ppm)	2.5	91	22-139
Chloroethane	mg/kg (ppm)	2.5	91	10-163
1,1-Dichloroethene	mg/kg (ppm)	2.5	94	47-128
Methylene chloride	mg/kg (ppm)	2.5	100	42-132
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	99	67-127
1,1-Dichloroethane	mg/kg (ppm)	2.5	98	68-115
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	100	72-113
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	96	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	98	62-131
Trichloroethene	mg/kg (ppm)	2.5	98	64-117
Tetrachloroethene	mg/kg (ppm)	2.5	93	72-114

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

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

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

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

904516

Jerry will follow up w/ Analyses

SAMPLE CHAIN OF CUSTODY

Page # 1 of 2

Report To Jerry Sanetz
Company RGI
Address 17522 Bothell Way NE
City, State, ZIP Bothell, WA, 98011
Phone 425 415 0551 Email jsanetz@riley-group.com

SAMPLERS (signature) [signature] ME 04-25-19
PROJECT NAME 901 Madison
PO # 2-014-1BF
REMARKS
INVOICE TO

TURNAROUND TIME
☒ Standard Turnaround VS4
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Archive Samples
☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	HVOCs				Notes
MW1-2.5	01A-D	4/25/19	8:00	Soil	4								X				X-per LC
MW1-5	02		8:10										X				4/26/19
MW1-10	03		8:20										X				ME
MW1-15	04		8:30										X				
MW1-20	05		8:40										X				
MW1-25	06		8:50										X				
MW1-30	07		9:00														
MW1-35	08		9:10														
MW1-40	09		9:20										X				Samples received at 0 °C
MW1-45	10		9:30														

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Logan Chinn	RGI	4/25/19	13:00
Received by: [signature]	Kitty Tam	FEDEX	4/25/19	13:00
Relinquished by:				
Received by: [signature]	DOVO	FEDEX	4-25-19	13:30

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

904516

SAMPLE CHAIN OF CUSTODY

Jerry will follow up w/ Analyses

Report To Jerry Sawetz
Company RGT
Address page 1
City, State, ZIP
Phone Email: Sawetz@rileg-group.com

SAMPLERS (signature) ME 04-25-19
PROJECT NAME: 901 Madison
PO #: 2014-113F
REMARKS
INVOICE TO

TURNAROUND TIME
☐ Standard Turnaround V84
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Archive Samples
☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	HVOCs				Notes
MW1-50	11 A-D	4/25/19	9:40	Soil	4												
MW1-55	12		9:50														
~~MW1-60~~ MW1-61	13		10:00										X				
MW1-65	14		10:10														
MW1-70	15		10:20														
MW1-75	16		10:30														

Samples received at 0 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Logan Chinn	RGT	4/25/19	13:00
Received by:	Ping Yam	FBBI	4/25/19	13:06
Relinquished by:				
Received by:	DO VO	FBBI	4-25-19	13:30

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
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(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

May 7, 2019

Jerry Sawetz, Project Manager
The Riley Group, Inc.
17522 Bothell Way NE
Bothell, WA 98011

Dear Mr Sawetz:

Included are the results from the testing of material submitted on April 30, 2019 from the 901 Madison 2014-113F, F&BI 904581 project. There are 27 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
TRG0507R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 30, 2019 by Friedman & Bruya, Inc. from the The Riley Group 901 Madison 2014-113F, F&BI 904581 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	The Riley Group
904581 -01	P7-2.0
904581 -02	P7-5.0
904581 -03	P7-10
904581 -04	P7-15
904581 -05	P7-20
904581 -06	P8-0.5
904581 -07	P8-2.0
904581 -08	P8-4.0
904581 -09	P8-7.0
904581 -10	P8-8.5
904581 -11	P9-0.5
904581 -12	P9-2.0
904581 -13	P10-1.5
904581 -14	P10-5.0
904581 -15	P10-7.0
904581 -16	P11-0.5
904581 -17	P11-2.5
904581 -18	P12-2.0
904581 -19	P12-4.0
904581 -20	P12-6.0
904581 -21	P12-11
904581 -22	P13-1.0
904581 -23	P13-4.0
904581 -24	P13-10
904581 -25	P15-2.5
904581 -26	P15-5
904581 -27	P15-8.5
904581 -28	P16-2.5
904581 -29	P16-5.5
904581 -30	P16-9.0
904581 -31	P16-12
904581 -32	MW1

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P7-2.0	Client:	The Riley Group
Date Received:	04/30/19	Project:	901 Madison 2014-113F
Date Extracted:	05/03/19	Lab ID:	904581-01
Date Analyzed:	05/03/19	Data File:	050334.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	103	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P7-5.0	Client:	The Riley Group
Date Received:	04/30/19	Project:	901 Madison 2014-113F
Date Extracted:	05/03/19	Lab ID:	904581-02
Date Analyzed:	05/03/19	Data File:	050335.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	97	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P7-15	Client:	The Riley Group
Date Received:	04/30/19	Project:	901 Madison 2014-113F
Date Extracted:	05/03/19	Lab ID:	904581-04
Date Analyzed:	05/03/19	Data File:	050336.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	97	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P7-20	Client:	The Riley Group
Date Received:	04/30/19	Project:	901 Madison 2014-113F
Date Extracted:	05/03/19	Lab ID:	904581-05
Date Analyzed:	05/03/19	Data File:	050337.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	102	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P8-4.0	Client:	The Riley Group
Date Received:	04/30/19	Project:	901 Madison 2014-113F
Date Extracted:	05/03/19	Lab ID:	904581-08
Date Analyzed:	05/03/19	Data File:	050338.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	101	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P8-8.5	Client:	The Riley Group
Date Received:	04/30/19	Project:	901 Madison 2014-113F
Date Extracted:	05/03/19	Lab ID:	904581-10
Date Analyzed:	05/03/19	Data File:	050339.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	99	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P9-2.0	Client:	The Riley Group
Date Received:	04/30/19	Project:	901 Madison 2014-113F
Date Extracted:	05/03/19	Lab ID:	904581-12
Date Analyzed:	05/03/19	Data File:	050340.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	93	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P10-7.0	Client:	The Riley Group
Date Received:	04/30/19	Project:	901 Madison 2014-113F
Date Extracted:	05/03/19	Lab ID:	904581-15
Date Analyzed:	05/03/19	Data File:	050341.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	102	50	150
4-Bromofluorobenzene	102	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P11-2.5	Client:	The Riley Group
Date Received:	04/30/19	Project:	901 Madison 2014-113F
Date Extracted:	05/03/19	Lab ID:	904581-17
Date Analyzed:	05/03/19	Data File:	050342.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	97	50	150
4-Bromofluorobenzene	93	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P12-4.0	Client:	The Riley Group
Date Received:	04/30/19	Project:	901 Madison 2014-113F
Date Extracted:	05/03/19	Lab ID:	904581-19
Date Analyzed:	05/03/19	Data File:	050343.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	93	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P12-6.0	Client:	The Riley Group
Date Received:	04/30/19	Project:	901 Madison 2014-113F
Date Extracted:	05/03/19	Lab ID:	904581-20
Date Analyzed:	05/03/19	Data File:	050344.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	101	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P12-11	Client:	The Riley Group
Date Received:	04/30/19	Project:	901 Madison 2014-113F
Date Extracted:	05/03/19	Lab ID:	904581-21
Date Analyzed:	05/03/19	Data File:	050345.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P13-4.0	Client:	The Riley Group
Date Received:	04/30/19	Project:	901 Madison 2014-113F
Date Extracted:	05/03/19	Lab ID:	904581-23
Date Analyzed:	05/03/19	Data File:	050346.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P13-10	Client:	The Riley Group
Date Received:	04/30/19	Project:	901 Madison 2014-113F
Date Extracted:	05/03/19	Lab ID:	904581-24
Date Analyzed:	05/03/19	Data File:	050347.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	96	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P15-2.5	Client:	The Riley Group
Date Received:	04/30/19	Project:	901 Madison 2014-113F
Date Extracted:	05/03/19	Lab ID:	904581-25
Date Analyzed:	05/03/19	Data File:	050348.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	97	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P15-5	Client:	The Riley Group
Date Received:	04/30/19	Project:	901 Madison 2014-113F
Date Extracted:	05/03/19	Lab ID:	904581-26
Date Analyzed:	05/03/19	Data File:	050349.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	99	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P15-8.5	Client:	The Riley Group
Date Received:	04/30/19	Project:	901 Madison 2014-113F
Date Extracted:	05/03/19	Lab ID:	904581-27
Date Analyzed:	05/03/19	Data File:	050350.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P16-2.5	Client:	The Riley Group
Date Received:	04/30/19	Project:	901 Madison 2014-113F
Date Extracted:	05/03/19	Lab ID:	904581-28
Date Analyzed:	05/03/19	Data File:	050351.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	99	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P16-5.5	Client:	The Riley Group
Date Received:	04/30/19	Project:	901 Madison 2014-113F
Date Extracted:	05/03/19	Lab ID:	904581-29
Date Analyzed:	05/03/19	Data File:	050352.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P16-12	Client:	The Riley Group
Date Received:	04/30/19	Project:	901 Madison 2014-113F
Date Extracted:	05/03/19	Lab ID:	904581-31
Date Analyzed:	05/03/19	Data File:	050353.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	103	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	The Riley Group
Date Received:	Not Applicable	Project:	901 Madison 2014-113F
Date Extracted:	05/03/19	Lab ID:	09-932 mb
Date Analyzed:	05/03/19	Data File:	050314.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	93	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW1	Client:	The Riley Group
Date Received:	04/30/19	Project:	901 Madison 2014-113F
Date Extracted:	05/01/19	Lab ID:	904581-32
Date Analyzed:	05/01/19	Data File:	050128.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	97	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	The Riley Group
Date Received:	Not Applicable	Project:	901 Madison 2014-113F
Date Extracted:	05/01/19	Lab ID:	09-0927 mb
Date Analyzed:	05/01/19	Data File:	050107.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	99	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 05/07/19
Date Received: 04/30/19
Project: 901 Madison 2014-113F, F&BI 904581

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 904581-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	48	10-91
Chloroethane	mg/kg (ppm)	2.5	<0.5	59	10-101
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	66	22-107
Methylene chloride	mg/kg (ppm)	2.5	<0.5	73	14-128
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	75	13-112
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	81	23-115
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	86	25-120
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	84	22-124
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	83	27-112
Trichloroethene	mg/kg (ppm)	2.5	<0.02	86	30-112
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	85	25-114

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	71	72	42-107	1
Chloroethane	mg/kg (ppm)	2.5	79	78	47-115	1
1,1-Dichloroethene	mg/kg (ppm)	2.5	84	87	65-110	4
Methylene chloride	mg/kg (ppm)	2.5	80	81	50-127	1
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	90	90	71-113	0
1,1-Dichloroethane	mg/kg (ppm)	2.5	92	93	74-109	1
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	97	95	73-110	2
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	93	92	73-111	1
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	96	97	72-116	1
Trichloroethene	mg/kg (ppm)	2.5	95	94	72-107	1
Tetrachloroethene	mg/kg (ppm)	2.5	96	94	73-111	2

Date of Report: 05/07/19
Date Received: 04/30/19
Project: 901 Madison 2014-113F, F&BI 904581

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 904594-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	118	36-166
Chloroethane	ug/L (ppb)	50	<1	97	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	132	60-136
Methylene chloride	ug/L (ppb)	50	<5	113	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	122	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	115	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	104	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	100	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	111	60-146
Trichloroethene	ug/L (ppb)	50	<1	101	66-135
Tetrachloroethene	ug/L (ppb)	50	<1	97	10-226

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	94	94	50-154	0
Chloroethane	ug/L (ppb)	50	91	94	58-146	3
1,1-Dichloroethene	ug/L (ppb)	50	96	97	67-136	1
Methylene chloride	ug/L (ppb)	50	89	88	39-148	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	99	98	68-128	1
1,1-Dichloroethane	ug/L (ppb)	50	96	96	79-121	0
cis-1,2-Dichloroethene	ug/L (ppb)	50	104	104	80-123	0
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	92	92	73-132	0
1,1,1-Trichloroethane	ug/L (ppb)	50	101	101	83-130	0
Trichloroethene	ug/L (ppb)	50	99	98	80-120	1
Tetrachloroethene	ug/L (ppb)	50	104	102	76-121	2

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

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

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

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

904581

SAMPLE CHAIN OF CUSTODY

Jerry will Email Analyses COS/

Report To Jerry Sawetz

Company RGI

Address 17522 Bothell Way NE

City, State, ZIP Bothell, WA, 98011

Phone 425-415-0551 Email jsawetz@riley-group.com

SAMPLERS (signature) [signature] ME 04-30-19

PROJECT NAME 901 Madison

PO # 204-113R

REMARKS

INVOICE TO

Page # 1 of 4

TURNAROUND TIME VW2/ VS4

☐ Standard Turnaround

☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Dispose after 30 days

☐ Archive Samples

☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	HVOCs				Notes
						ANALYSES REQUESTED											X-per LC 4/30/19
P7-2.0	01 A-D	4/29/19	8:40	Soil	4								X				ME
P7-5.0	02		8:50										X				
P7-10	03		9:00														
P7-15	04		9:20										X				
P7-20	05		9:30										X				
P8-0.5	06		7:20														
P8-2.0	07		7:30														
P8-4.0	08		7:40										X				
P8-7.0	09		7:50														
P8-8.5	10	↓	8:20	↓	↓								X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Logan Chinn	RGI	4/30/19	12:00
Received by: [signature]	Liz Webber-Boyce	FRB1	4/30/19	1200
Relinquished by:				
Received by:		Samples received at 4 °C		

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

SAMPLE CHAIN OF CUSTODY

904581 ME 04-30-19

Page # 2 of 4 (05/ VW2/ VS 4)

Report To

Company

Address Page 1

City, State, ZIP

Phone Email

SAMPLERS (signature)

PROJECT NAME	PO #
901 Madison	2014-113F
REMARKS	INVOICE TO

TURNAROUND TIME
- ☐ Standard Turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	HVOCs				Notes
P9-0.5	11 A-D	4/29/19	7:00	Soil	4												
P9-2.0	12	↓	7:10	↓	↓								X				
P10-1.5	13	↓	10:20	↓	↓												
P10-5.0	14	↓	10:30	↓	↓												
P10-7.0	15	↓	11:10	↓	↓								X				
P11-0.5	16	↓	9:40	↓	↓												
P11-2.5	17	↓	9:50	↓	↓								X				
P12-2.0	18	↓	8:00	↓	↓												
P12-4.0	19	↓	8:10	↓	↓								X				
P12-6.0	20	↓	8:30	↓	↓								X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Logan Chinn	RGI	4/30/19	12:00
Received by: [signature]	Liz Webber-Bruya	F?BI	4/30/19	1200
Relinquished by:				
Received by:				

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

SAMPLE CHAIN OF CUSTODY

904581

ME 04-30-19

Page # 3 of 4 COCs

Report To _____

Company _____ page 1

Address _____

City, State, ZIP _____

Phone _____ Email _____

SAMPLERS (signature)	
PROJECT NAME: 901 Madison	PO #: 2014-113F
REMARKS	INVOICE TO

TURNAROUND TIME: VW 7 / VS 4

☐ Standard Turnaround

☐ RUSH _____

Rush charges authorized by: _____

SAMPLE DISPOSAL

☐ Dispose after 30 days

☐ Archive Samples

☐ Other _____

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	HVOCs				Notes
P12-11	21 A-D	4/29/19	9:10	Soil	4								X				
P13-1.0	22		11:40														
P13-4.0	23		11:50										X				
P13-10	24		12:00										X				
P15-2.5	25		10:00										X				
P15-5	26		10:10										X				
P15-8.5	27		10:40										X				
P16-2.5	28		10:50										X				
P16-5.5	29		11:00										X				
P16-9.0	30		11:20														

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Logan China	RGI	4/30/19	12:00
Received by:	Liz Webber-Braya	FBI	4/30/19	1200
Relinquished by:				
Received by:				

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

SAMPLE CHAIN OF CUSTODY

904581

ME 04-30-19

Page # 4 of 4 (COS/VW24)

Report To

Company Page 1

Address

City, State, ZIP

Phone Email

SAMPLERS (signature)	
PROJECT NAME: 901 Madison	PO #: 2014-137F
REMARKS	INVOICE TO

TURNAROUND TIME
- ☐ Standard Turnaround
- ☐ RUSH
- Rush charges authorized by:

USA

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	HVOCs				Notes
P16-~~9~~12	31A-D	4/29/19	11:30	soil	4								X				P16-12
MW1	32A-H	4/30/19	10:00	water	8								X				6 voa, 2amber(sg) Preserved unpreserved

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Logan Chinn	RGI	4/30/19	12:00
Received by:	Liz Webber-Bruya	FB1	4/30/19	1200
Relinquished by:				
Received by:				

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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May 29, 2019

Jerry Sawetz, Project Manager
The Riley Group, Inc.
17522 Bothell Way NE
Bothell, WA 98011

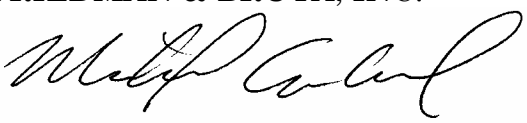
Dear Mr Sawetz:

Included are the results from the testing of material submitted on May 20, 2019 from the 9th&Madison 2014-113F, F&BI 905413 project. There are 10 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
TRG0529R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on May 20, 2019 by Friedman & Bruya, Inc. from the The Riley Group 9th&Madison 2014-113F, F&BI 905413 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	The Riley Group
905413 -01	P14-3.0
905413 -02	P14-5.0
905413 -03	P14-7.0
905413 -04	P14-9.0
905413 -05	P14-11.5
905413 -06	P14-13
905413 -07	P14-15
905413 -08	P9A-1.5
905413 -09	P9A-3.0
905413 -10	P9A-4.0
905413 -11	P9A-5.0
905413 -12	P9A-6.0
905413 -13	P9A-7.0

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P14-5.0	Client:	The Riley Group
Date Received:	05/20/19	Project:	9th&Madison 2014-113F
Date Extracted:	05/24/19	Lab ID:	905413-02
Date Analyzed:	05/24/19	Data File:	052428.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	97	55	145
4-Bromofluorobenzene	99	65	139

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P14-9.0	Client:	The Riley Group
Date Received:	05/20/19	Project:	9th&Madison 2014-113F
Date Extracted:	05/24/19	Lab ID:	905413-04
Date Analyzed:	05/24/19	Data File:	052429.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	96	55	145
4-Bromofluorobenzene	97	65	139

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P14-11.5	Client:	The Riley Group
Date Received:	05/20/19	Project:	9th&Madison 2014-113F
Date Extracted:	05/24/19	Lab ID:	905413-05
Date Analyzed:	05/24/19	Data File:	052430.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	97	55	145
4-Bromofluorobenzene	98	65	139

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P14-15	Client:	The Riley Group
Date Received:	05/20/19	Project:	9th&Madison 2014-113F
Date Extracted:	05/24/19	Lab ID:	905413-07
Date Analyzed:	05/24/19	Data File:	052431.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	97	55	145
4-Bromofluorobenzene	99	65	139

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P9A-5.0	Client:	The Riley Group
Date Received:	05/20/19	Project:	9th&Madison 2014-113F
Date Extracted:	05/24/19	Lab ID:	905413-11
Date Analyzed:	05/24/19	Data File:	052432.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	97	55	145
4-Bromofluorobenzene	98	65	139

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P9A-7.0	Client:	The Riley Group
Date Received:	05/20/19	Project:	9th&Madison 2014-113F
Date Extracted:	05/24/19	Lab ID:	905413-13
Date Analyzed:	05/24/19	Data File:	052433.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	98	55	145
4-Bromofluorobenzene	99	65	139

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	The Riley Group
Date Received:	Not Applicable	Project:	9th&Madison 2014-113F
Date Extracted:	05/24/19	Lab ID:	09-1144 mb
Date Analyzed:	05/24/19	Data File:	052408.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	62	142
Toluene-d8	96	55	145
4-Bromofluorobenzene	99	65	139

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Date of Report: 05/29/19
Date Received: 05/20/19
Project: 9th&Madison 2014-113F, F&BI 905413

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 905270-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	56	55	10-138	2
Chloroethane	mg/kg (ppm)	2.5	<0.5	61	60	10-176	2
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	72	71	10-160	1
Methylene chloride	mg/kg (ppm)	2.5	<0.5	69	76	10-156	10
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	76	74	14-137	3
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	79	79	19-140	0
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	82	81	25-135	1
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	76	75	12-160	1
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	82	82	10-156	0
Trichloroethene	mg/kg (ppm)	2.5	<0.02	78	77	21-139	1
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	87	86	20-133	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Vinyl chloride	mg/kg (ppm)	2.5	78	22-139
Chloroethane	mg/kg (ppm)	2.5	79	10-163
1,1-Dichloroethene	mg/kg (ppm)	2.5	90	47-128
Methylene chloride	mg/kg (ppm)	2.5	96	42-132
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	91	67-127
1,1-Dichloroethane	mg/kg (ppm)	2.5	92	68-115
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	95	72-113
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	82	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	95	62-131
Trichloroethene	mg/kg (ppm)	2.5	86	64-117
Tetrachloroethene	mg/kg (ppm)	2.5	97	72-114

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

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

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

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

905413

SAMPLE CHAIN OF CUSTODY

ME 05/20/19

Page # 1 of 2 EQ1 JS4

Report To Jerry Sawetz

Company Riley Group Inc

Address 17522 Bothell Way NE

City, State, ZIP Bothell WA

Phone 425-415-0551 Email jsawetz@riley-grp.com

SAMPLERS (*signature*)

PROJECT NAME: 9th & Madison

PO #: 2014-113 R

REMARKS: ~~Jerry will follow up with analyses selection~~

INVOICE TO

TURNAROUND TIME
- ☑ Standard Turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	cVOCs				Notes (X - per JS/LC 5/20/19 ME)
P14-3.0	01 A-D	5/20/19	7:00	Soil	4												5035
P14-5.0	02		7:10										X				
P14-7.0	03		7:20														
P14-9.0	04		7:30										X				
P14-11.5	05		7:40										X				
P14-13	06		7:50														
P14-15	07		8:00										X				
P9A-1.5	08		9:00														
P9A-3.0	09 A-E		9:05		5												5035, 4oz jar
P9A-4.0	10		9:10		5												

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Logan Chinn	RGI	5/20/19	11:15
Received by:	Nhan Phan	FEBI	5/20/19	1115
Relinquished by:				
Received by:		Samples received at 2 °C		

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

905413

SAMPLE CHAIN OF CUSTODY

ME 05/20/19

Page # 2 of 2

E021

Report To Jerry Saveta

Company Riley Group Inc

Address 17522 Bothell Way NE

City, State, ZIP Bothell WA

Phone 425-415-0551 Email jsaveta@riley-group.com

SAMPLERS (*signature*)

PROJECT NAME: 9th & Madison

PO #: 2019-113F

REMARKS

INVOICE TO

TURNAROUND TIME VS4

☐ Standard Turnaround

☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Dispose after 30 days

☐ Archive Samples

☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	CVOCs				Notes
						ANALYSES REQUESTED											
P9A-5.0	11 A-D	5/20/19	9:20	Soil	4								X				5035
P9A-6.0	12	↓	9:30	↓	↓												↓
P9A-7.0	13	↓	9:40	↓	↓								X				↓

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Logan Chinn	RGI	5/20/19	11:15
Received by:	Nhan Phan	FEBI	5/20/19	1115
Relinquished by:				
Received by:				

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