



UNDERGROUND STORAGE TANK CLOSURE & SUPPLEMENTAL INVESTIGATION REPORT

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1 INTRODUCTION

The Riley Group, Inc. (RGI) is pleased to present this Underground Storage Tank Closure and Supplemental Investigation (UST/SI) Report documenting the in-place closure of two underground storage tanks (USTs) and associated investigations performed in the sub-basement of the Publix Renovation Project located at 504 5th Avenue South in Seattle, Washington (herein referred to as the Property).

The approximately 2,100 square foot sub-basement where the USTs are situated and investigations were performed is referred to as the Area of Investigation (AOI). The AOI is situated at approximately elevation 19', or ~27' below the grade of 5th Avenue South. The terms "sub-basement" and "AOI" refer to the same area of the Property. The general location of the AOI is depicted on Figure 1 and the location of the AOI relative to the Property is depicted on Figure 2.

The AOI is situated on the southern portion of King County Tax Assessor parcel numbers 5247801655 (Parcel 1655), which is owned by The Publix Owner, LLC (hereafter referred to as the Client). At the time of the UST/SI, the Property was undergoing renovations as a The Publix multi-use residential building.

The scope of work pertaining to this project was developed based on discussions with the Client, Spectrum Development representatives and Client's legal counsel (HCMP). The purpose of this UST/SI is to demonstrate that the USTs were decommissioned in accordance with applicable UST regulations and that no further action is necessary regarding underground storage tank regulations (WAC 173-360). This UST/SI is not intended to assess any environmental impacts associated with sources other than the USTs referenced herein.

It should be noted that RGI is also conducting an ongoing Site Characterization (SC) in accordance with MTCA, which includes investigations of areas outside of the AOI. These activities will be documented in the future under a separate cover.

Additionally, the UST Site Assessment and associated soil and groundwater sampling were performed prior to UST decommissioning and documented in the *Task 1A – Pre-UST Decommissioning Services & UST Site Assessment Report*, dated April 20, 2016 by RGI (RGI Project No. 2014-011G). The data obtained during this investigation is presented in its entirety in this stand alone UST/SI report.

The activities documented in this UST/SI Report comply with the Washington State Department of Ecology (Ecology) *Guidelines for Site Checks and Site Assessments for USTs* (revised, April 2003) and applicable UST regulations (WAC 173-360) and MTCA regulations (WAC 173-340).

2 PROJECT BACKGROUND

The following section describes the history of the portion of the Property where the AOI is situated and summarizes previous investigation activities. This discussion focuses on the AOI portion of the Property.

2.1 PROPERTY HISTORY

Pertinent historical features pertaining to the AOI and USTs are depicted on Figure 2. Some discussion of the parcel situated to the south of the AOI (5247801665 [Parcel 1665]) is included as the USTs are suspected to be connected to historical operations on this parcel.

2.1.1 AREA OF INVESTIGATION

The AOI is situated on the southern portion of Parcel 1655 and consisted of tidal flats until it was filled in the early 1800's. The first known development of the AOI was in 1893 when railroad tracks were



depicted above the southwestern portion of the AOI and a portion of a Chinese laundry building was depicted at the northern portion of the AOI on historical Sanborn Fire Insurance (SFI) maps.

In the 1916 SFI map, the AOI was part of the Rainier Heat & Power Company (RHPC) steam heating plant and the roof of the plant was indicated to be situated 10 feet below street level on the map. Historical records indicate that RHPC historically owned Parcels 1655 and 1665. Appendix A displays the AOI location superimposed on the 1904, 1916, and 1950 SFI maps.

Historical tax assessor records indicate that the Publix Hotel building was constructed in 1927 and that the building had a 4,380 square foot basement. However, there was no mention of a sub-basement in the assessor records. The Publix Hotel and stores historically occupied the space above the AOI from 1927 forward. The hotel was vacated in 2004 and the retail stores were vacated in 2013.

Historical assessor records indicated that the heat source for the hotel building was central steam provided by RHPC steam heating plant, situated adjacent to the south on Parcel 1665 and discussed in Section 2.1.2.

No documentation pertaining to the USTs was encountered during the UST/SI or previous investigations (the abandoned USTs were encountered during recent renovations to the building and utility improvements). However, based on the observations made during UST closure, evaluation of historical resources, and analytical data, these USTs appear to have been used in connection with the RHPC steam heating plant, which began operation in 1901 and ceased operations sometime prior to 1975.

The USTs also appear to have been installed prior to 1920 (prior to construction of the hotel building in 1927) due to the riveted construction of the USTs observed during UST closure, (riveted USTs were common during that time period). Parcel 1655 was also historically owned by RHPC.

Boilers associated with the RHPC steam heating plant were depicted on historical maps on the property situated adjacent to the south of the AOI and no USTs were ever identified in connection with these boilers during previous investigations.

The overlay map of the AOI location superimposed on the 1904, 1916, and 1950 SFI maps appears to indicate that the AOI was part of the RHPC steam heating plant. The maps further indicates that the roof of the steam heating plant was 10 feet below street level, which would make it reasonable to conclude that the floor of the plant could have been approximately the same grade as the floor of the AOI. For these reasons, RGI concludes that these USTs, encountered during building renovations, were most likely used in connection with the RHPC steam heating plant.

2.1.2 PARCEL 1655

The development of Parcel 1665 (south of the AOI) was first observed on historical maps in 1893 when vacant buildings were present on the eastern portion of this parcel. The first generation RHPC steam heating plant was constructed in 1901 according to historical assessor records, and the plant was visible on the northeastern portion of this parcel and adjacent to the south of the AOI in the 1904 SFI map. Several different configurations of boilers (or “Dutch” ovens) were depicted on the northern portion of this parcel on historical maps through 1950. Three boilers were depicted in 1904, four in 1916, and five in 1950. The configuration of the five boilers presented on the 1950 historical map is displayed on Figure 2.

Any USTs or aboveground storage tanks (ASTs) associated with these boilers were not depicted on the SFI maps.

According to historical assessor records, the first generation RHPC steam heating plant was demolished in 1951. A second generation steam heating plant was constructed in 1955 on the southwest portion of the parcel. This steam heating plant was demolished sometime around 1977 or 1978.

2.2 PREVIOUS INVESTIGATIONS

The following environmental reports pertain to the AOI:

- *Task 1A – Pre-UST Decommissioning Services & UST Site Assessment Report*, (Task 1A Report) dated April 20, 2016 by RGI (RGI Project No. 2014-011G).
- *Subsurface Soil Vapor Investigation Report* (SVI Report), dated March 20, 2014 by RGI. This report also included investigation outside of the AOI (RGI Project No. 2014-011).

A brief summary of significant findings from these investigations is provided below. The reader is directed to refer to the aforementioned reports in their entirety for further details about these investigations. Analytical data for soil, groundwater, LNAPL, and soil vapor samples analyzed during previous investigations conducted within the AOI are summarized in Tables 1 through 4 and displayed graphically on Figures 3 and 4.

2.2.1 RGI SOIL VAPOR INVESTIGATION (2014)

RGI completed a Soil Vapor Investigation (SVI) on the Property in 2014, which included installing a soil vapor probe in the southeastern portion of the AOI (SV3) and collecting a soil vapor sample for analyses of contaminants of potential concern (COPCs). It should be noted that this report also documents work performed in five other areas of the Property situated outside of the AOI.

Based on the results of the SVI, RGI concluded that concentrations of contaminants observed in soil vapor did not pose an unacceptable health risk and no further vapor intrusion assessment was necessary. Soil vapor analytical data pertaining to SV3 is summarized in Table 4 and this data was used to perform the Preliminary Vapor Intrusion Assessment discussed in Section 8 below.

2.2.2 INITIAL ASSESSMENT

During renovations of the Property in late 2015, the General Contractor (Marpac), encountered a thick black oil-like substance that had accumulated in a cavity in the dirt sub-basement floor of the AOI.

The Client retained RGI to assess the oil like substance. RGI collected and submitted a sample of this substance to the laboratory for analyses of COPCs. Analytical results obtained from the sample indicated that a mixture of diesel-range total petroleum hydrocarbons (TPH) and Bunker C oil were present in the sample.

RGI was subsequently retained by the Client to perform several additional tasks associated with identifying and remediating the source of the Bunker C/diesel oil observed in the AOI and preparing to decommission the USTs in accordance with applicable regulations. These tasks included, but were not limited to, the following:

- Conducting geophysical surveys in the AOI and sidewalk adjacent to 5th Avenue South to identify UST and/or piping configurations.
- Directing the removal of approximately 4 cubic yards of non-hazardous construction debris (wood, concrete, plastic, pipes, etc.) from the surface of the AOI.
- Directing soil excavation in the AOI using hand tools in order to determine the approximate size and orientation of the USTs and obtain samples of the contents of the USTs.
- Assessing soil in the western portion of the AOI where a wall was being constructed, which

closed off the entrance to the existing tunnel that ran beneath 5th Avenue South.

- Re-routing a stormwater drain line entering the northeastern portion of the AOI to a catch basin situated at surface grade east of the Property.
- Performed a UST Site Assessment in accordance with Ecology's *Guidelines for Site Checks and Site Assessments for USTs* in order to determine if a release had occurred from the UST system.

The results of the above-mentioned tasks identified the presence of two approximately 8,500-gallon USTs containing Bunker C fuel. The top of the USTs were determined to be approximately 4 to 5 feet below the grade of the AOI at approximately elevation 14'. Approximately two thirds of the USTs were situated in groundwater, which was present at approximately elevation 11'.

The UST Site Assessment was conducted in January of 2016 prior to the decommissioning of the USTs and consisted of advancing four test probes (P1, P3, P4, and P5) in the vicinity of the USTs.

Conclusions drawn based on the results of this UST Site Assessment included, but were not limited to, the following:

- The results of the UST Site Assessment soil and groundwater sampling indicated that a release of Bunker C oil had occurred from the UST system.
- Soil surrounding the USTs was impacted with diesel- and oil-range TPH, cPAHs, and lead at concentrations exceeding MTCA Method A Soil Cleanup Levels.
- Groundwater was present at approximately 2 feet below the top of the USTs or approximately elevation 11' and was impacted with diesel- and oil-range TPH, cPAHs, and lead (total) at concentrations above the MTCA Method A Cleanup Levels For Groundwater. Since groundwater grab samples are not considered representative of groundwater quality, groundwater monitoring wells were later installed to more accurately assess groundwater impacts.
- Apparent LNAPL was observed in soil and groundwater grab samples collected from test probes P3 and P4 and in the southeastern corner of the AOI.
- Oil-range TPH was detected in soil at concentrations exceeding MTCA Method A Soil Cleanup Levels in the southeastern portion of the AOI.
- Lead was detected in soil at a concentration exceeding the MTCA Method A Soil Cleanup Level in a shallow soil sample obtained from the western portion of the AOI. The origin of the lead was unknown, but was suspected to be related to the historic fill soils underlying the Property and adjoining properties.
- Water entering the AOI from a 12-inch stormwater line was rerouted to a catch basin in the parking lot to the east. This action appeared sufficient to mitigate any further water from accumulating above the top of the USTs.
- It did not appear that active groundwater dewatering would be required to decommission the USTs in-place. However, it was determined that the USTs should be braced during UST decommissioning activities to counteract any potential buoyancy effect that groundwater may have had on the USTs once the contents were removed.

Based on these findings, RGI recommended the following:

- Decommission the USTs in accordance with applicable UST regulations (WAC 173-360).
- Perform a Site Characterization at the AOI in accordance with MTCA regulations.
- Submit the UST Site Assessment report to Ms. Gale Garbush of Ecology by April 21, 2016. The

UST Site Assessment report was subsequently submitted to Ecology on April 21, 2016.

3 SCOPE OF SERVICES

The scope of services performed in connection with the UST/SI consisted of, but was not necessarily limited to, the following tasks:

- Performed UST Site Assessment services associated with the decommissioning of the two USTs.
- Filed a 30 Day Notice for UST decommissioning with Ecology as required by WAC 173-360-200 and obtained a permit from the Seattle Fire Department (SFD) prior to proceeding with the decommissioning.
- Established waste profiles necessary for the disposal of UST contents and excavation water removed from the AOI during UST decommissioning. This included collecting and analyzing a sample of the contents of UST2.
- Directed the installation of bracing above UST1 and UST2 per the structural engineer's plan to counteract any potential buoyancy effect that groundwater may have had on the USTs once the contents were removed.
- Directed the decommissioning (pumping, triple rinsing, sludge removal, and inerting) of two 8,500-gallon USTs and backfilling of the USTs with controlled density fill (CDF). This included removal and disposal of approximately 23,500-gallons of oil and oil/water rinse water.
- Performed public and private utility locating in an attempt to identify the locations of buried utilities in the project area.
- Cored concrete in areas where it was necessary to run vacuum truck hose and/or other lines from the AOI to the surface at 5th Avenue South.
- Installed four groundwater monitoring/remediation wells (MW1 through MW4) in the AOI using a vacuum truck to excavate soil in well locations and a licensed driller to install the wells.
- Installed two groundwater monitoring wells in the AOI (MW1A and MW9) using limited access direct push probe drilling techniques.
- Collected and analyzed soil samples obtained from borings associated with groundwater monitoring well installations and from the southeast corner of the AOI. Soil samples were analyzed for COPCs deemed appropriate for a given area.
- Collected and analyzed groundwater samples obtained from groundwater monitoring wells for analysis of COPCs. Groundwater monitoring wells were sampled on multiple occasions.
- Compared soil and groundwater analytical results to soil and groundwater screening levels that are compliant with MTCA regulations.
- Retained the services of a licensed surveyor to survey the elevations at the north side of the top of the PVC casing and ground surface for all groundwater monitoring wells.
- Obtained depth to groundwater data from all groundwater monitoring wells (including wells outside the boundary of the AOI) and utilized this data to generate groundwater elevations contours and determine groundwater flow direction and hydraulic gradient across the Property.
- Inspected wells for the presence of LNAPL and recorded LNAPL thickness (when present).
- Directed the restoration of the AOI after UST decommissioning was completed.

- Directed the installation of two 8-inch sleeves extending from the AOI to the surface at the east side of Parcel 1655. These sleeves were installed in order to provide access to the sub-basement in the event that additional work was performed.
- Conducted a preliminary vapor intrusion assessment using soil vapor data obtained from the AOI by RGI during a 2014 soil vapor investigation. This data was assessed in accordance with significant changes to vapor intrusion regulations, which occurred in 2015.
- Prepared this UST/SI Report presenting our observations, findings and conclusions.

4 REGULATORY ANALYSIS

All activities associated with the decommissioning of the USTs were performed in accordance with applicable UST regulations (WAC 173-360). The SI activities conducted in the AOI as a result of the UST investigation were performed in accordance with MTCA (WAC 173-340) and discussed further in the following sections.

4.1 MTCA CLEANUP REGULATION

In Washington State, the Model Toxics Control Act (MTCA, RCW 70.105D), mandates that site cleanups protect human health and the environment. The MTCA Cleanup Regulation (WAC 173-340) defines the approach for establishing cleanup requirements for individual sites, including the establishment of cleanup standards and selection of cleanup actions.

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

4.2 SOIL SCREENING LEVELS

Soil analytical data obtained from soil samples analyzed during this project and previous investigations indicate that the MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses are sufficient for determining whether or not soil within the AOI is in compliance with MTCA regulations.

No MTCA Method A Soil Cleanup Levels have been established for barium, selenium, and silver. Therefore, the MTCA Method B standard formula values that are protective of groundwater at 13 degrees Celsius were referenced for these compounds.

The MTCA Method A and B soil cleanup levels, collectively referred to as soil screening levels herein, are summarized in Table 1.

4.3 GROUNDWATER SCREENING LEVELS

Groundwater analytical data obtained from groundwater samples analyzed during this project and previous investigations indicate that MTCA Method A Cleanup Levels for Groundwater, hereafter referred to as groundwater screening levels, are sufficient for determining if groundwater is in compliance with MTCA regulations. Groundwater screening levels are summarized in Table 2.

4.4 CPAH SCREENING LEVELS

cPAHs were analyzed in soil and groundwater and included benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene and ideno(1,2,3-cd)pyrene.

The toxicity equivalency factor (TEF) methodology was developed by the EPA to evaluate the toxicity and assess the risks of a mixture of structurally related chemicals with a common mechanism of action. A TEF is an estimate of the relative toxicity of a chemical mixture compared to a reference chemical. For cPAH mixtures, the reference chemical is benzo(a)pyrene. Therefore, for screening purposes, the calculated total cPAHs (TEF modified) is compared to the MTCA Method A table value for benzo(a)pyrene of 0.1 milligrams/kilogram (mg/kg) for soil and 0.1 micrograms/liter (µg/L) for groundwater.

4.5 HAZARDOUS WASTE SCREENING LEVELS

The Toxicity Characteristic Leaching Procedure (TCLP) is a procedure established by the EPA in order to determine the mobility of organic and inorganic waste in liquid, solid or multiple phase waste. TCLP analysis is performed on samples containing high concentrations of specified contaminants in order to determine if the waste is classified as a characteristic hazardous waste.

40 CFR 261.24 includes *Table 1: Maximum Concentration of Contaminants for the Toxicity Characteristic*, which identifies the threshold TCLP concentrations, which are used to identify whether or not a waste is classified as a characteristic hazardous waste.

Lead in soil was the only COPC encountered within the AOI that required TCLP analysis and subsequent hazardous waste screening. The TCLP analytical results along with the corresponding regulatory screening level for identifying characteristic hazardous waste is summarized in Table 1.

4.6 VAPOR INTRUSION SCREENING LEVELS

Vapor intrusion was assessed based on groundwater concentrations of COPCs obtained during the UST/SI and soil vapor concentrations of COPCs obtained from a 2014 soil vapor investigation.

Ecology has established screening levels for groundwater and soil vapor that are considered protective of MTCA Method B Indoor Air Cleanup Levels. These screening levels were used to determine if a groundwater or soil vapor concentrations represented a potential vapor intrusion concern for the Property. These screening levels were obtained from *Table B-1 Indoor Air Cleanup Levels, Groundwater Screening Levels, and Soil Gas Screening Levels* (Amended April 6 of 2015) of the *Draft Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action* (Draft Ecology VI Guidance) dated 2009 by Ecology. Groundwater and soil vapor screening levels protective of indoor air are summarized in Tables 2 and 4, respectively. This data was used to perform the Preliminary Vapor Intrusion Assessment in Section 8 below.

5 UST DECOMMISSIONING

This section describes work performed associated with the decommissioning the two 8,500-gallon Bunker C USTs.

5.1 PRE-UST DECOMMISSIONING SERVICES

It was necessary for RGI to perform several tasks in connection with the UST decommissioning, which are summarized below.

5.1.1 PERMITTING & NOTIFICATIONS

Prior to commencing with UST decommissioning, RGI's subcontractor (IO Environmental) obtained a permit (SFD ID#1384) from the SFD and filed the 30-Day Notice with Ecology as stipulated under WAC 173-360-200 and 173-360-385. The activities performed and discussed herein were consistent with all permitting requirements. Copies of UST decommissioning documentation are provided in Appendix F.

RGI also secured Permit No. 300567 with the Seattle Department of Transportation (SDOT), which reserved all parking on the east side of 5th Avenue South between South King Street and South Weller Street for RGI work vehicles required to complete the UST decommissioning.

5.1.2 UST BRACING

Since the bottom of the USTs were situated in groundwater, it was necessary to develop a plan to counteract any potential buoyancy force that could result from the emptying the USTs. The Client retained Coughlin Porter Lundeen (CPL) to prepare a plan for bracing the USTs. The configuration of the bracing is displayed on Figure 3 and a copy of the structural engineer's plan for bracing the USTs is included in Appendix D.

Between April 13 and 18, 2016, RGI directed the hand excavation of 4 to 5 feet of soil situated above the USTs in order to expose the top of the USTs. The USTs were oriented east/west. Overburden soils did not appear contaminated based on field observations. Soil was not excavated from the sides of the USTs to prevent any lateral movement of the USTs. Four pole shores were placed in a north/south orientation along the exposed portions of the east and west sides of each UST. The pole shores were placed between the top of the UST and the ceiling and each pole had an allowable load capacity of 17,000 lbs. The pole shores remained in place until the UST decommissioning was completed and the USTs had been backfilled with CDF.

5.1.3 UST MODIFICATIONS

On April 14, 2016, RGI retained the services of a Marine Chemist to determine if conditions were safe for torch cutting access ports in the top of each UST. These access ports were necessary for personnel to enter all areas of each UST and clean inside the USTs. The USTs were determined to be filled with product and torch cutting was therefore not considered acceptable method for cutting the USTs.

As authorized by the Marine Chemist, the subcontractor cut approximately 3' x 3' access ports on the top of each UST using an electric saw. The access ports for UST1 and UST2 were cut on April 14 and 18, respectively.

5.1.4 GEOPHYSICAL SURVEY

On July 18, 2016, RGI retained the services Philip H. Duoos, Geophysicist, to perform a geophysical survey to locate a suspected remote fill pipe located in the sidewalk situated west of the Property. The survey consisted of utilizing electromagnetic/ground penetrating radar (EM/GPR) instruments to determine the location of the suspected remote fill pipe.

The geophysical survey indicated that this pipe is likely a remote fill pipe that extends from the west side of the sidewalk adjacent to the east of 5th Avenue South then down to approximately elevation 15' where it extends east a few feet below the grade of the AOI and connects with UST2. The approximate location of the suspected remote fill pipe is displayed on Figures 3 through 7. A copy of the geophysical survey report is included in Appendix E.

5.2 UST DECOMMISSIONING

This section describes work performed directly related to the decommissioning and closure of the two 8,500-gallon USTs.

5.2.1 UST PUMPING AND CLEANING

Marine Vacuum Services, Inc. (Marvac), under subcontract to IO Environmental, provided the equipment necessary to pump product from the USTs, clean the USTs, and remove water used for cleaning. Product/water was pumped from the USTs through vacuum hose, which was run from the AOI through 12-inch diameter cores in the ceilings/floors of the building and out to vacuum trucks staged on the east side of 5th Avenue South. Concrete cores were also approved by the structural engineer from CPL.

Between April 15 and 21, 2016, approximately 17,000 gallons of product/water were removed from UST1 and UST2. During pumping activities product/water levels in the USTs were monitored. UST cleaning was performed between April 25 and May 9 and consisted of using soap in conjunction with a pressure washer to remove Bunker C and any accumulated sludge/sediment from the internal walls of the USTs. A total of approximately 6,500-gallons of oily water (in addition to the 17,000-gallons of product removed from the USTs) were generated during cleaning of the USTs, which was completed on May 9, 2016.

5.2.2 UST INSPECTION & OBSERVATIONS

The UST Site Assessment soil and groundwater grab sampling was performed in January 2016 and documented in the UST Site Assessment Report. Mr. Jerry Sawetz of RGI (Washington State Site Assessor No. 8149094) directed the UST Site Assessment activities.

During UST decommissioning activities, product/water levels were closely monitored in the USTs. The structural engineer indicated that soil surrounding the USTs was not to be excavated in order prevent lateral movement of the USTs. Therefore, the assessment of the USTs was based on observations of the exposed exterior portions of the USTs and of the inside of the USTs along with associated product/water level data. The assessment indicated the following:

- Each UST was estimated to be of rectangular shape and approximately 17 feet long by 10.5 feet wide and 7 feet high with an approximately 8,500-gallon capacity. The USTs were constructed with one quarter inch riveted steel and the interior of each UST contained three baffled chambers with internal bracing. No holes were observed in either of the USTs and product/water level measurements did not indicate any signs of leakage from the USTs.
- Product/water level measurements obtained from each UST during pumping and cleaning indicated that the USTs were connected. Marvac personnel that regularly entered the USTs to clean them indicated that a pipe was observed connecting the USTs (south side of UST1 and north side of UST2, see Figure 3).
- After both USTs had been emptied and cleaned, no groundwater was observed entering the USTs (via holes, riveted joints, etc.). The USTs were left open for two days prior to filling with controlled density fill (CDF).

On May 9, 2016, after the final cleaning of the USTs, each UST was inspected by the Marine Chemist and the SFD. The USTs were determined to be sufficiently cleaned, inert, and acceptable to backfill at that time. Copies of documentation pertaining to UST decommissioning are included in Appendix F.

5.2.3 UST CLOSURE & SUBBASEMENT RESTORATION

On May 11, 2016, both USTs were closed-in-place by filling each UST with CDF. A total of approximately 72 cubic yards of CDF were pumped into the two USTs.

After UST decommissioning activities were completed, the AOI restoration consisted of removing all equipment and UST bracing from the AOI then backfilling the UST excavation with CDF. Approximately 36 cubic yards of CDF was necessary to restore the original grade of the AOI above the USTs. This allowed for the general contractor to work safely in the AOI.

The Client indicated that concrete cores in floor/ceilings of the building required to run vacuum hose to 5th Avenue South would be restored to original condition by the general contractor.

5.2.4 WASTE DISPOSAL

A total of approximately 23,500-gallons of Bunker C product/water were removed during the course of UST decommissioning and cleaning. Of this amount, 17,000 gallons was initially pumped from both USTs and an additional 6,500-gallons was generated and removed during the cleaning of the USTs.

The product/water mix was pumped directly into a vacuum truck owned and operated by Marvac and disposed of in accordance with applicable regulations at the Marvac facility in Seattle, Washington. Documentation pertaining to disposal of the product/water is included in Appendix G.

6 SUPPLEMENTAL INVESTIGATION

From April through August of 2016, RGI performed subsurface investigations collectively referred to as the Supplemental Investigation (SI) to assess the extent of soil, groundwater, and LNAPL impacts identified in the AOI. This included installation and sampling of six groundwater monitoring wells in the AOI. Some of these activities were performed in conjunction with the UST Closure activities previously discussed. Details pertaining to these investigations are discussed below.

Groundwater monitoring well locations are depicted on Figure 2 through 6. Soil, groundwater, and LNAPL data are summarized in Tables 1 through 3 and depicted graphically on Figures 3, 4 and 5. Groundwater elevation contours generated from water levels obtained from wells situated within and outside of the AOI are presented on Figure 6. A cross section depicting subsurface conditions east-northeast to west-southwest across the AOI is presented on Figure 7. Borelogs describing subsurface conditions at wells installed during the SI and test probes associated with the January 2016 UST Site Assessment are included in Appendix B.

6.1 PRE-SUBSURFACE INVESTIGATION ACTIVITIES

Several activities were performed prior to subsurface investigations and are described below.

6.1.1 UTILITY LOCATING

At least 72 hours prior to commencing with any of the intrusive subsurface investigation, RGI contacted One-Call public locate service to locate known public and private underground utilities on the Site. In addition, RGI retained the services of a private utility locating service to determine if utilities were present in drilling locations MW1, 1A, MW2, MW3, MW4, and MW9.

6.1.2 CONCRETE CORING

RGI retained the services of a concrete corer to core concrete in the floors situated above the western portion of the subbasement in order to run vacuum truck hose and other lines from vehicles and equipment situated in the parking lane of 5th Avenue South to the subbasement.

6.1.3 ANCHOR INSTALLATION

It was necessary to install four anchors in the ceiling/floor situated above wells MW1 through MW4. The purpose of these anchors was to provide an anchor point to assist in maintaining vacuum hose in an upright position during vacuum excavation of soils necessary for installation of wells.

On March 31, 2016 and April 7, 2016, RGI retained the services of IO Environmental to install the four anchors in the locations of wells MW1 through MW4. Anchors were installed by drilling two ½ inch holes through the concrete slab and extending a length of steel cable through the holes. The cable ends were then secured with metal clamps and extended into the floor above to create an anchor. The anchors were removed after well installations were completed.

6.2 SUBSURFACE INVESTIGATIONS

Subsurface investigations were performed in several phases to install wells and determine the extent of soil, groundwater, and/or LNAPL impacts in the AOI. These investigations are discussed below.

6.2.1 STANDARD SOIL SAMPLING PROTOCOLS

During all subsurface investigations, soils were logged during drilling or vacuum excavation (to the extent possible). Soil conditions encountered were described using the Unified Soil Classification System (USCS).

Soil was field screened during drilling using visual and olfactory observations, a photoionization detector (PID), and/or sheen testing to assess for the potential presence of VOCs and/or petroleum hydrocarbons in soil.

All soil samples were collected in accordance with standard operating and decontamination procedures. Soil samples to be submitted to the laboratory for analyses of VOCs were collected using standard EPA Method 5035A sampling methodology. Samples were placed in preconditioned, sterilized containers provided by an Ecology accredited analytical laboratory. All test probe holes were abandoned using hydrated bentonite chips and patched to match existing grade (ready mix concrete, or asphalt patch). All drilling and sampling equipment was decontaminated using Alconox® soap and tap water between sample locations.

6.2.2 INSTALLATION OF WELLS MW1 THROUGH MW4 (APRIL 2016)

On April 6, 7, and 8, RGI retained the services of Lavelle Vac & Drainage, LLC (Lavelle) to vacuum excavate soil at the four well locations (MW1 through MW4). The wells were subsequently installed by RGI Drilling, Inc.

In order to install the wells, vacuum hose was run from a vacuum truck situated in the parking lane of 5th Avenue South through two sets of previously cored holes and into the sub-basement.

In locations MW1 through MW4 an approximately 12-inch diameter borehole was vacuum excavated to depths ranging from approximately 7 to 16 feet below the grade of the AOI, which corresponded to approximately elevations 12.5' to 6'. The depth at the shallow wells were limited due to wood and debris encountered.

Shallow soil samples were collected at approximately 2 feet below the grade of the subbasement in locations MW1, MW2, and MW4 during vacuum excavation. Field screening indicated the presence of petroleum hydrocarbon contamination in all three locations. A total of three soil samples were collected and submitted to the laboratory for analyses of COPCs.

In the location of well MW1, wood and concrete debris was encountered and prevented vacuum excavation to greater depths. A significant amount of wood debris was encountered in all four well

locations and a telescoping pole pruner was used to saw through wood in boreholes to the extent possible in order to allow for deeper vacuum excavation.

Wells MW1 through MW4 were installed with 3 to 5 feet of 4-inch 40 slot polyvinylchloride (PVC) well screen placed within and across the groundwater table, which was observed at approximately elevation 11'. Silica sand was placed around the well screen and extended up to 2 feet above the well screen above which hydrated bentonite was placed to the surface. PVC blank casing was placed above the well screen that extended above the subbasement grade. Top of casing elevations ranged from 19.05' to 23.12'.

On April 21, 2016, wells MW1 through MW4 were developed using a 4-inch surge block and a bailer to remove as much sediment as possible from the wells. A total of approximately 88 gallons of water were purged from the four wells. LNAPL was observed in purge water generated from wells MW2, MW3, and MW4. Only 3 gallons of water were purged from MW1 due to the fact that this well was installed at a depth corresponding to the top of the water bearing zone and quickly bailed dry.

6.2.3 INSTALLATION OF WELLS MW1A AND MW9 (MAY 2016)

On May 11 and 12, 2016, Standard Probe advanced two test probes, which were completed as groundwater monitoring wells MW1A and MW9 in the eastern and western portions of the AOI. MW1A was installed to replace MW1 due to the fact that this well could not be installed at the targeted depth due to the presence of debris.

Test probes were advanced using limited access direct push drilling techniques, which consisted of utilizing a jackhammer connected to an air compressor situated in the parking lane of 5th Avenue South.

Test probes were completed by advancing an approximately 2-inch diameter decontaminated 5-foot core barrel into the subsurface and retrieving a representative soil core. Soil samples were collected from inside acetate liners situated inside the core barrel and a new liner was used for each sample interval. Once the test probe had been advanced to the bottom of the 5-foot interval, or refusal, the core barrel was extracted and the acetate liner was removed for sample collection. During limited access direct push drilling, soil was sampled continuously and logged and field screened in accordance with the procedures described in Section 6.2.1.

Test probes MW1A and MW9 were advanced to approximately elevations 3.5' and 4', respectively. Field screening indicated the presence of petroleum hydrocarbon contamination in each test probe near the soil/water interface. A total of four soil samples were collected and submitted to the laboratory for analyses of COPCs.

MW1A and MW9 were installed with 10 feet of 1-inch diameter 10 slot PVC well screen. In each location, the well screen was placed to intersect the groundwater table. The test probe was advanced to the desired depth and rods were removed. The PVC well screen was then placed in the center of the test probe and silica sand was placed around the well screen and extended up to approximately 2 feet above the well screen, above which hydrated bentonite was placed up to approximately 1 foot below the surface. Wells were completed with an approximately one foot concrete surface seal and flush mount monuments.

On May 12, 2016, RGI developed wells MW1A and MW9 using a peristaltic pump. Water was purged from each well until the turbidity was reduced to the satisfaction of RGI personnel. Approximately 11 gallons of water were purged from each well. A non-measurable amount of LNAPL consisting of sheen and occasional globules of LNAPL was observed on purge water generated from MW9. This well is situated between UST2 and the southeastern corner of the sub-basement. A total of approximately 22 gallons of purge water was generated from these wells and temporarily stored in a 55-gallon drum.

6.3 POST SUBSURFACE INVESTIGATION ACTIVITIES

After completion of subsurface investigations, it was necessary to perform several tasks including groundwater monitoring well surveying and sampling, and disposal of investigation derived waste (IDW). Details pertaining to this work is described below.

6.3.1 GROUNDWATER MONITORING WELL SURVEYING

On May 11, 2016, the Client retained the services of licensed Washington State well surveyor from Bush, Roed, and Hitchings (BRH) to survey the horizontal position and vertical elevations at the north side of the PVC casing, the top of the well monuments and the ground surface elevation at wells MW2, MW3, and MW4. BRH also surveyed wells associated with investigations conducted outside of the AOI (MW5, MW6, MW7, MW8, and B4R).

BRH was retained on August 30, 2016 to survey the horizontal position and vertical elevations at the north side of the PVC casing, the top of the well monuments and the ground surface at wells MW1A and MW9. Wells MW7 and MW8, which are associated with the investigation outside of the AOI, were also surveyed at this time.

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

6.3.2 GROUNDWATER MONITORING WELL SAMPLING & MONITORING

After groundwater monitoring well installations, wells were sampled and monitored for LNAPL on several occasions. These activities are described below. All groundwater data is summarized in Table 2 and Figure 5. Figure 6 presents groundwater elevation contours generated from data obtained during the May 24, 2016 groundwater sampling event.

6.3.2.1 Standard Groundwater Sampling Protocols

Prior to groundwater sampling, the depth to groundwater in all wells was measured from the northernmost point of the top of the well casing using an electronic water level meter. Additionally, wells were inspected for the presence of LNAPL using an oil/water interface probe and/or bailers. Depth to water and LNAPL thickness measurements are summarized in Table 2.

After collection of groundwater levels and LNAPL data, each well was purged using a peristaltic pump or bladder pump and dedicated tubing. Measurements of pH, temperature, and/or conductivity were recorded during purging to ensure that water entering the well casing had stabilized prior to sample collection. Purging continued until either water quality parameters had stabilized or three wetted casing volumes were purged from the well. Purge water was temporary stored in 55-gallon drums.

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

Immediately after collection, samples were labeled and placed in an iced cooler pending submittal to the analytical laboratory.

6.3.2.2 Groundwater Sampling Events & Groundwater/LNAPL Removal

On April 22, 2016, RGI collected groundwater samples from wells MW1 through MW4. Groundwater elevation data and LNAPL data were obtained from wells prior to sampling. LNAPL was not observed in any of the wells during this sampling event. A total of four groundwater samples were collected and

submitted to the laboratory for analysis of COPCs during this sampling event.

From April 29 through May 4, 2016, RGI utilized a bladder pump and two peristaltic pumps to purge water continuously from wells MW2, MW3, and MW4 in an effort to properly develop each well and remove as much contaminated groundwater/LNAPL from the area surrounding the USTs. A total of approximately 1,400 gallons of contaminated groundwater/LNAPL were purged from around the perimeter of the USTs. No measurable LNAPL was observed on groundwater. Therefore, the LNAPL purging consisted primarily of groundwater containing a sheen and occasional globules of LNAPL. This groundwater/LNAPL was purged into the empty USTs, which were in the process of undergoing closure at the time. This groundwater water/LNAPL was pumped from the USTs and disposed of off-Property by Marvac on May 2 and May 4, 2016. Copies of waste disposal documentation are included in Appendix G.

On May 2 and 4, 2016, RGI collected samples from well MW2. A total of two groundwater samples were collected and submitted to the laboratory for analysis of COPCs.

On May 10, 2016 groundwater elevation and LNAPL data was obtained from wells MW1 through MW4. LNAPL was not detected in any of the wells.

On May 13, 2016, RGI collected samples from newly installed wells MW1A (intended to replace MW1) and MW9. RGI also collected groundwater elevation and LNAPL data from these wells and wells MW2, MW3 and MW4. The only well that contained LNAPL was newly installed well MW9. MW9 had a measured LNAPL thickness of 0.01'. Groundwater samples were collected from wells MW1A and MW9 and submitted to the laboratory for analysis of COPCs.

On May 24, 2016, RGI collected groundwater samples and obtained groundwater elevation and LNAPL data from all wells within the AOI except for MW1, which was replaced by MW1A. MW9 was the only well that contained product and had a measured LNAPL thickness of 0.02'. A total of six groundwater samples were collected from wells within the AOI and submitted to the laboratory for analysis of COPCs. RGI also utilized depth to groundwater data from wells within the AOI and outside the AOI (MW5, MW6, MW7, MW8, and B4R) to generate groundwater elevation contours pertaining to the AOI and surrounding area. Groundwater elevation data indicated that groundwater flow direction was generally to the west with an approximate hydraulic gradient of 0.1 ft/ft. Groundwater elevation contours generated from data obtained during this sampling event are presented on Figure 6. It should be noted that groundwater elevation data obtained on two other occasions during the investigation conducted outside of the AOI confirmed that groundwater flow direction was generally to the west across the Property.

6.3.3 INVESTIGATION DERIVED WASTE (IDW) DISPOSAL

Soil and groundwater generated during the SI and investigations conducted outside the AOI were stored in 55-gallon drums. Six 55-gallon drums of soil and nine 55-gallon drums of purge/decontamination water were properly labeled and staged on the Property.

On May 3, 2016, decontamination/purge water were drums were removed from the Property by Marvac and transported off-Property along with oil and water being pumped from the USTs during UST Closure activities. The six drums of soil cuttings were also removed at this time. All IDW was disposed of in accordance with applicable regulations.

Approximately 1,850 gallons of contaminated sludge consisting of contaminated soil and water removed during the vacuum excavation of well locations MW1 through MW4 were removed from the Property by Lavelle on April 6, 7, and 8, 2016. This waste was disposed of at the Marvac facility on April 8, 2016. Documentation pertaining to waste disposal is included in Appendix G.

7 ANALYTICAL LABORATORY ANALYSES

A total of eight soil samples, 13 groundwater samples, and one LNAPL sample of the contents of UST2 were submitted to Friedman & Bruya, Inc. (FBI), an Ecology-accredited, third-party analytical laboratory for one or more of the following analyses:

- Hydrocarbon Identification using Method NWTPH-HCID.
- Diesel- and oil-range TPH using Method NWTPH-Dx (with and without silica gel cleanup).
- Gasoline-range TPH using Method NWTPH-Gx.
- Benzene, toluene, ethylbenzene and xylenes (BTEX) using EPA Method 8021B.
- cPAHs and naphthalenes using Method 8270C Select Ion Monitoring (SIM).
- Polychlorinated biphenyls using EPA Method 8082.
- Total and dissolved lead (soil and groundwater) using EPA Method 200.8.

Soil, groundwater, and LNAPL analytical results are summarized in Tables 1, 2, and 3, respectively. Copies of final analytical laboratory reports pertaining to soil, groundwater, and LNAPL samples associated with the UST/SI are included in Appendix C.

7.1 SOIL ANALYTICAL LABORATORY ANALYTICAL RESULTS

During the SI, seven soil samples were collected and analyzed from locations within the AOI. Additionally, one soil sample was also collected from the void space underneath the exterior wall just outside the southeast corner of the AOI. The source of the soil impacts in that area is suspected to be outside of the AOI (not related to the two USTs closed in-place) and the analytical results are therefore discussed separately. Soil sample analytical results are summarized in Table 1 and displayed on Figure 3.

7.1.1 AOI

A total of seven soil samples were collected from locations above and below the water bearing zone and analyzed for COPCs in locations MW1/1A, MW2, MW4, and MW9 in the subbasement.

Diesel-range TPH was detected at concentrations of 2,100 mg/kg in MW1A and 40,000 mg/kg in MW9. These concentrations exceeded the applicable diesel-range TPH soil screening level of 2,000 mg/kg. Diesel-range TPH was also detected in four other locations, but at concentrations below applicable soil screening level.

Oil-range TPH was detected in three locations (MW1/MW1A, MW4, and MW9) at concentrations ranging from 2,200 mg/kg (in MW1A) to 47,000 mg/kg (in MW9). These concentrations exceeded the oil-range TPH soil screening level of 2,000 mg/kg. Oil-range TPH was also detected in the location of MW2, but at a concentration below the soil screening level.

Lead was detected in MW4 at a concentration of 864 mg/kg. This concentration exceeded the soil screening level of 250 mg/kg. Lead was also detected in the three other locations (MW1/MW1A, MW2, and MW9), but at concentrations below the soil screening level.

7.1.2 NEAR SOUTHEAST CORNER OF AOI

One soil sample SE-EX-3 was analyzed for COPCs from the void space beneath the exterior wall footing just outside the southeast corner of the AOI. Oil-range TPH was detected at a concentration of 44,000 mg/kg, which exceeded the applicable oil-range TPH soil screening level of 2,000 mg/kg. Diesel-range TPH was also detected with a flagged concentration of 22,000 mg/kg and lead was detected at a concentration below the soil screening level. The source of these impacts is suspected to be outside of

the AOI and not related to the two closed in-place USTs. This area is the subject of a separate investigation.

7.2 GROUNDWATER ANALYTICAL LABORATORY ANALYTICAL RESULTS

A total of 13 groundwater samples were analyzed for COPCs from groundwater monitoring wells MW1/1A, MW2, MW3, MW4, and MW9 in the AOI. Samples were collected from wells at varying frequencies on April 22, May 2, 4, 13, and 24, 2016.

Diesel-range TPH was detected at concentrations exceeding the groundwater screening level of 500 µg/L in wells MW2 (1,600 µg/L on April 22; 990 µg/L [flagged] on May 2; 970 µg/L on May 4, and 1,100 µg/L [flagged] on May 24), and MW9 (1,700 µg/L on May 13 and 5,800 µg/L [flagged] on May 24).

It should be noted that LNAPL was observed in MW9 at thicknesses of 0.01' and 0.02' on May 13 and 24, 2016, respectively. Since this well is situated between the USTs and southeast corner of the AOI (where impacts from the two areas appear to be comingled), groundwater samples were collected from MW9. These samples were submitted for analyses of COPCs in order to assess comingling of the two areas.

Diesel-range TPH was also detected in seven other groundwater samples from wells MW1/1A, MW3, and MW4, but at concentrations below the groundwater screening level.

Oil-range TPH was detected at concentrations exceeding the groundwater screening level of 500 µg/L in wells MW2 (650 µg/L [flagged] on April 22) and MW9, (1,700 µg/L on May 13 and 5,800 µg/L [flagged] on May 24). Oil-range TPH was not detected at a concentration above the laboratory detection limit in the remaining 10 groundwater samples obtained from wells MW1/1A, MW2, MW3, and MW4.

CPAHs were detected at TEF modified concentrations exceeding the groundwater screening level of 0.1 µg/L in MW9 (0.17 µg/L on May 13 and 0.62 µg/L on May 24). CPAHs were either not detected at a concentration above the laboratory detection limit or detected at concentrations below the groundwater screening level in the remaining 10 groundwater samples obtained from wells MW1/1A, MW2, and MW3, and MW4.

All other COPCs were either not detected at concentrations above the laboratory detection limits or detected at concentrations below the groundwater screening levels.

7.3 UST FREE PRODUCT ANALYTICAL LABORATORY ANALYTICAL RESULTS

One sample of free product was collected from inside UST2 and analyzed for COPCs in order to characterize the contents of UST2.

HCID analysis indicated that free product consisted of diesel- and oil-range TPH (Bunker C fuel) at concentrations greater than 50,000 mg/kg and 250,000 mg/kg, respectively.

CPAHs were also detected inside UST2 at a TEF modified concentration of 44.62 mg/kg.

All other COPCs were either not detected at concentrations above the laboratory detection limits or detected at concentrations below the applicable screening levels. It should be noted that the BTEX reporting limits were elevated to 200 mg/kg due to the presence of LNAPL. However, based on the analytical results obtained from soil and groundwater samples in the AOI during the UST/SI and previous investigations, BTEX is not considered a COPC for the Property and is not expected to be present.

8 PRELIMINARY VAPOR INTRUSION ASSESSMENT

Vapor intrusion is the migration of volatile hazardous substances in the gas phase from the subsurface to indoor air. MTCA regulations stipulate that subsurface soil and groundwater contaminant concentrations must be protective of indoor air. The following section presents RGI's evaluation of the vapor intrusion risk associated with the soil, groundwater, and/or LNAPL impacts encountered in the AOI of the Property.

8.1 VAPOR INTRUSION REGULATIONS

In 2009, Ecology published the *Draft Guidance For Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial* (Draft Ecology VI Guidance). The Ecology VI Guidance provides guidelines for evaluating the vapor intrusion pathway in Washington State and is consistent with MTCA rule requirements. Table B-1 of this document was revised with updated screening levels on April 6, 2015.

The Draft Ecology VI Guidance indicates that the vapor intrusion pathway must be evaluated when hazardous substances considered sufficiently volatile and toxic enough to cause a vapor intrusion concern are present in the subsurface and situated within 100 feet (vertically or laterally) of an existing or future building.

Additionally, WAC 173-340-740(3)(C)(III) stipulates that the soil to vapor pathway be evaluated for diesel-range organics whenever the TPH concentration is greater than 10,000 mg/kg. Soil containing diesel-range TPH at concentrations exceeding 10,000 mg/kg and LNAPL were identified in the AOI and groundwater containing concentrations of naphthalenes exceeding the groundwater screening level considered protective of indoor air by Ecology were observed in the AOI. Therefore, RGI evaluated the vapor intrusion risk associated with soil, groundwater, and LNAPL impacts identified on the Property.

As discussed in Section 2.2.1, RGI performed a soil vapor investigation on the Property in 2014, which was documented in the SVI Report. This investigation was performed prior to the discovery of the USTs in the AOI in 2015. Nonetheless, one soil vapor sample was collected from the AOI east of the USTs. Based on the results of that investigation, RGI concluded that vapor intrusion was not a concern for the Property at that time.

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

- *Updated Process for Initially Assessing the Potential for Petroleum Vapor Intrusion Implementation Memorandum No. 14* (2016 Ecology PVI Guidance Memorandum) dated March 31, 2016 by Ecology.
- *OSWER Technical Guide For Assessing and Mitigating the Vapor Intrusion Pathway From Subsurface Vapor Sources to Indoor Air* (2015 EPA VI Guidance) dated June 2015 by the U.S. Environmental Protection Agency (EPA).
- *Technical Guide For Assessing Petroleum Vapor Intrusion at Leaking Underground Storage Tank Sites* (2015 EPA PVI Guidance) dated June 2015 by the EPA.
- *Updated Table B-1 Indoor Air Cleanup Levels, Groundwater Screening Levels, and Soil Gas Screening Levels revised April 6, 2015 by Ecology*. Table B-1 was originally included in the Draft Ecology Draft VI Guidance dated 2009 by Ecology.

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

recent documents. The JEM was used to re-evaluate soil vapor concentrations in the 2014 soil vapor investigation. Therefore, it was necessary for RGI assess the 2014 soil vapor data without the use of the JEM model and in accordance with the revised vapor intrusion regulations.

RGI utilized data obtained from soil vapor sample location SV3 during the 2014 soil vapor investigation. The location of this sample is depicted on Figure 2 and analytical data pertaining to this sample is summarized in Table 4. The analytical laboratory report which contains the soil vapor analytical data for this sample is included in Appendix C.

8.2 IDENTIFICATION OF COMPOUNDS FOR VAPOR INTRUSION ASSESSMENT

8.2.1 COMPOUNDS IDENTIFIED IN SOIL

The Ecology VI Guidance does not provide a method for screening soil concentrations of contaminants in order to determine if the concentration represents a threat to indoor air. Therefore, RGI identified all the compounds detected in soil or suspected to be present that would be considered sufficiently volatile and toxic enough to cause a vapor intrusion concern. The following compounds were targeted for further vapor intrusion assessment:

- Petroleum hydrocarbon fractions (C5-8 aliphatics, C9-12 aliphatics, and C9-10 aromatics)
- BTEX and naphthalenes

8.2.2 COMPOUNDS IDENTIFIED IN GROUNDWATER

Table B-1 of the Ecology VI Guidance was amended in April of 2015 and provides revised groundwater screening levels that are considered protective of MTCA Method B Indoor Air Cleanup Levels. These screening levels are summarized in Table 2. RGI compared concentrations of all compounds detected in groundwater in the AOI to the appropriate VI groundwater screening levels. After evaluation of all detected compounds in groundwater, RGI determined that the following compounds required further vapor intrusion assessment:

- Petroleum hydrocarbon fractions (C5-8 aliphatics, C9-12 aliphatics, and C9-10 aromatics)
- Naphthalenes

8.3 PRELIMINARY VAPOR INTRUSION ASSESSMENT

RGI conducted this preliminary vapor intrusion assessment in order to determine if there was the potential for a vapor intrusion concern in the space situated directly above the AOI as a result of the known soil and groundwater contamination situated in the AOI. RGI understands the space above the AOI is used for laundry services, a restroom, and an exercise room. In order to conduct the vapor intrusion assessment, RGI utilized soil vapor data obtained in 2014 from soil vapor sample location SV3 (situated in the southeast portion of the AOI). The location of SV3 is depicted on Figure 3.

RGI assumed that soil vapor contaminant concentrations did not attenuate as soil vapor migrated upward from beneath the floor and through the open space to the concrete ceiling of the AOI. This concrete slab also represents the floor of the space above. Some attenuation would be anticipated to occur during this migration process. However, not including any attenuation at this stage ensured that the results of the assessment evaluating the potential for a vapor intrusion in the space situated above the AOI was conservative.

As indicated in Table 4, none of the soil vapor COPCs identified in Section 8.2 were detected at concentrations above stringent screening levels established by Ecology that are considered protective of indoor air. These screening levels were obtained from the Ecology Cleanup Level and Risk Assessment

Calculation (CLARC) database on August 10, 2017.

In addition, numerous other VOCs, which were not considered COPCs associated with the AOI, were analyzed for in SV3 during the 2014 soil vapor investigation and all of these compounds were also evaluated in accordance with the 2015 vapor intrusion regulations. None of the detected concentrations of these compounds were determined to represent a threat to indoor air.

Based on the results of this assessment, RGI does not consider the soil, groundwater and LNAPL contamination observed in the AOI to represent a threat to indoor air and no further vapor intrusion assessment is warranted at this time. This conclusion is consistent with the conclusions presented in the SVI Report.

9 DISCUSSION OF FINDINGS

RGI analyzed data obtained from the UST/SI, previous investigations, and historical resources to summarize subsurface conditions in the AOI and assess the nature and extent of soil, groundwater, and LNAPL impacts observed in the AOI. These findings are discussed in this section.

9.1 SUBSURFACE CONDITIONS

9.1.1 SOIL

Soil and groundwater conditions encountered during the UST/SI and are described below. Borelogs depicting subsurface conditions and groundwater monitoring well construction details for wells installed during the UST/SI and test probes drilled in January of 2016 are presented in Appendix B. A cross-section presenting subsurface conditions east-west across the AOI (A-A') is presented on Figure 7. Groundwater elevation data is summarized in Table 2.

Soil conditions encountered in the AOI consisted of fill soils. The fill soils are comprised of dark brown, gray, and black silt and sand and gravel with varying amounts of silt with bricks, concrete debris and wood (timbers) were encountered to the maximum depth of exploration of approximately 16' below the grade of the AOI (approximately elevation 6').

9.1.2 GROUNDWATER

Groundwater was consistently observed in borings and test probes completed in the AOI. The groundwater system underlying these areas consists of an unconfined aquifer. Groundwater was observed in the groundwater monitoring wells (MW1A, MW2, MW3, MW4 and MW9) at elevations between 9.60' and 11.13'.

Groundwater elevation contours generated from water level measurements obtained on May 24, 2016 are displayed on Figure 6. The groundwater flow direction across the Property is generally to the west with an approximate hydraulic gradient of 0.1 ft/ft.

9.2 NATURE AND EXTENT OF IMPACTS

The nature and extent of soil, groundwater, and/or LNAPL impacts encountered in the AOI are discussed below. Soil, groundwater, and LNAPL analytical data are summarized in Tables 1 to 3 and presented graphically on Figures 3, 4, and 5.

The oil-range TPH and cPAH soil and LNAPL impacts encountered at the southeast corner of the AOI are attributed to a source outside the AOI and these impacts are being investigated as part of a separate investigation. Therefore, these impacts are not included in the discussion below.

In this section, the term "impacted" is used to denote a soil, groundwater, or LNAPL concentration that

exceeds an applicable screening level.

9.2.1 SOIL

Diesel- and/or oil-range TPH impacted soils were encountered to the east and west of the USTs at elevations above and adjacent to the USTs and in the vicinity of the suspected remote fill pipe near the western Property boundary. These soil impacts are suspected to be the result of overfilling of USTs or UST piping leaks.

CPAH impacted soil was encountered in soil west of UST2 (P1) at approximately elevation 9', which is the only location where cPAHs were analyzed in soil in the AOI. Since cPAHs are present in groundwater, it is reasonable to conclude that cPAH impacted soil is present in other locations in the AOI.

CPAH impacted soil may be the result of overfilling or leaks from UST piping (associated with Bunker C) and/or the result of fill materials of unknown origin present beneath the AOI and surrounding area.

Lead impacted soil was encountered randomly in the AOI and is also suspected to be related to historical fill material of unknown origin beneath the AOI and surrounding area. Soil, groundwater, and LNAPL analytical data indicated that lead is not present at high concentrations in the petroleum mixtures associated with the USTs and the southeast corner of the AOI. Therefore, these lead impacts do not appear to be petroleum related. As with cPAHs, these lead impacts are expected to be distributed randomly throughout the fill.

The lateral extent of TPH and cPAH impacted soil related to the two Bunker C USTs has not been delineated and is anticipated to be present in the vicinity of the USTs and along the suspected remote fill pipe line. These impacts are not anticipated to extend very far vertically beneath the level of groundwater at approximately elevation 11'.

9.2.2 GROUNDWATER

The discussion below references groundwater data obtained from wells during the most recent groundwater sampling event conducted on May 24, 2016.

Diesel-range TPH impacted groundwater was observed in MW2, which is situated down-gradient and west of the USTs. These impacts are suspected to be the result of overfilling and/or leaking piping associated with the AOI USTs. These groundwater impacts appear to be confined to the immediate vicinity of the USTs. The extent of the contamination to the north, east, and west has been defined with data obtained from wells MW3, MW4, and MW1A, respectively. These groundwater impacts do not extend off-Property to the west and may extend south beneath the basement of the south-adjointing Parcel 1665. These diesel-range TPH impacts also appear to be comingled with the oil-range TPH impacts identified in the southeast corner of the AOI in the location of MW9. Since groundwater flow direction is to the west, diesel-range TPH impacts associated with the USTs would not be anticipated to extend very far to the east.

9.2.3 LNAPL

Limited amounts of non-measurable LNAPL were observed during drilling of test probe locations P3 and P4 and during installation and/or development of wells MW2, MW3, MW4, and MW9.

During the May 24, 2016 groundwater sampling event, MW9 was the only well that contained a measurable amount of LNAPL at a thickness of 0.02'. The LNAPL impacts observed in MW9 appear to be the result of comingling of impacts associated with the USTs and the impacts associated with the southeast corner of the AOI (from a potential upgradient source).

It should be noted that LNAPL does not typically spread uniformly throughout an area and is often found in clusters spread throughout an area. The scattered presence of LNAPL was observed during

installation of test probes and wells and associated well development. Additionally, Bunker C is not highly soluble and the low concentrations of TPH observed in wells surrounding the USTs does not necessarily indicate that LNAPL is not present in the subsurface. Therefore, it is likely that LNAPL remains in the AOI in the immediate vicinity of the USTs. Based on data obtained from the western portion of the AOI in the location of MW1/1A, LNAPL impacts do not extend off-Property to the west. The extent of LNAPL in other areas has not been defined. However these impacts are anticipated to be confined to the vicinity of the USTs.

10 CONCLUSIONS

Based on the results of this UST/SI, RGI concludes the following:

- Two 8,500-gallon Bunker C USTs were decommissioned and closed in-place in the AOI of the Property in accordance with applicable UST regulations (WAC 173-360). The USTs appeared to be in good physical condition and no signs of leakage from the USTs was observed. No further action is necessary regarding the closure of the USTs under WAC 173-360.
- A total of 23,500 gallons of Bunker C product/water mixture were removed from the USTs and disposed of off-Property in accordance with applicable regulations.
- No documentation pertaining to the USTs was found during previous investigations or the UST/SI. However, based on the RGI's evaluation of historical resources, observations made during UST closure and/or analytical data, RGI concludes that the USTs were likely used in connection with the RHPC steam heating plant, which began operation in 1901 and ceased operations sometime prior to 1975. Therefore, any releases associated with the USTs occurred prior to 1975 and likely before then.
- Soil in the AOI is impacted with diesel- and oil-range TPH, cPAHs, and lead at concentrations exceeding applicable soil screening levels in locations adjacent to the decommissioned USTs and near the suspected remote fill pipe location situated in the western portion of the AOI. These impacts are likely the result of overfilling of USTs and leaks in product piping. Soil impacts encountered east of UST2 appear to be comingled with the release identified in the southeast corner attributed to a source outside the AOI that is being investigated separately.
- The extent of soil impacts associated with the USTs has not been delineated, but soil impacts are suspected to be limited to the vicinity of the decommissioned USTs and along the suspected remote fill pipe location. It is likely that soil impacts associated with the suspected remote fill pipe extend off-Property to the west. Soil impacts would not be expected to extend vertically far beneath the level of groundwater at approximately elevation 11'.
- Groundwater in the AOI is impacted with diesel- and oil-range TPH and/or cPAHs at concentrations exceeding the applicable groundwater screening levels in locations west of the USTs and in the southeast corner of the AOI. The groundwater impacts observed west of the USTs appear to be associated with the USTs and likely related to overfilling of the USTs. The groundwater impacts in the southeast corner of the AOI appear to be comingled with a separate release outside of the AOI, which is being investigated separately.
- Groundwater impacts appear to be confined to the immediate vicinity of the USTs and the extent of impacts to the north, east, and west of the USTs has been defined. These groundwater impacts do not extend off-Property to the west, but may extend south beneath the basement of the south-adjointing Parcel 1665. Since groundwater flow direction is to the west, these impacts would not be anticipated to extend very far to the east beyond where impacts are comingled in

the southeast corner of the AOI.

- LNAPL was observed at non-measurable quantities in locations north, east, and west of the USTs during installation of wells and test probes and development of wells. However, LNAPL was not observed in any of the wells except for MW9 after well development. LNAPL was observed in the southeast corner of the AOI in well MW9 during the May 24, 2016 sampling event at a thickness of 0.02'. These LNAPL impacts appear to be the result of comingling of impacts associated with the USTs and the contamination from a different source in the southeast corner of the AOI.
- LNAPL does not extend off-Property to the west and the extent of LNAPL surrounding the USTs has not been defined. However, these impacts are anticipated to be confined to the immediate vicinity of the USTs. The low concentrations of TPH observed in groundwater in wells surrounding the USTs does not necessarily indicate that LNAPL is not present in the subsurface due to the fact that Bunker C fuel is not highly soluble.
- Soil impacted with lead and cPAHs, not related to releases associated with the USTs, are also likely present beneath the AOI and outside the AOI and distributed randomly. These soil impacts are suspected to be related to fill materials used to fill the area beneath the Property and surrounding areas in the late 1800's. These fill materials may also contribute to the concentrations of cPAHs located well beyond the footprint of the USTs. Characterizing the extent of these soil impacts was beyond the scope of this investigation.

11 LIMITATIONS

This report is the property of The Publix Owner, LLC and their authorized representatives and was prepared in a manner consistent with the level of skill and care ordinarily exercised by members of the profession currently practicing in the same locality and under similar conditions. This report is intended for specific application to the Property located at 504 5th Avenue South in Seattle, Washington. No other warranty, expressed or implied, is made.

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

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

Sincerely,

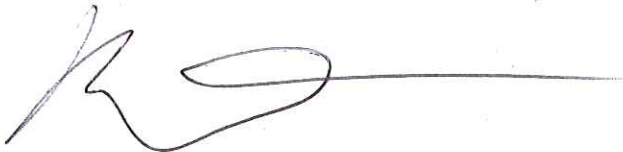
THE RILEY GROUP, INC.



Jerry Sawetz
Senior Environmental Scientist

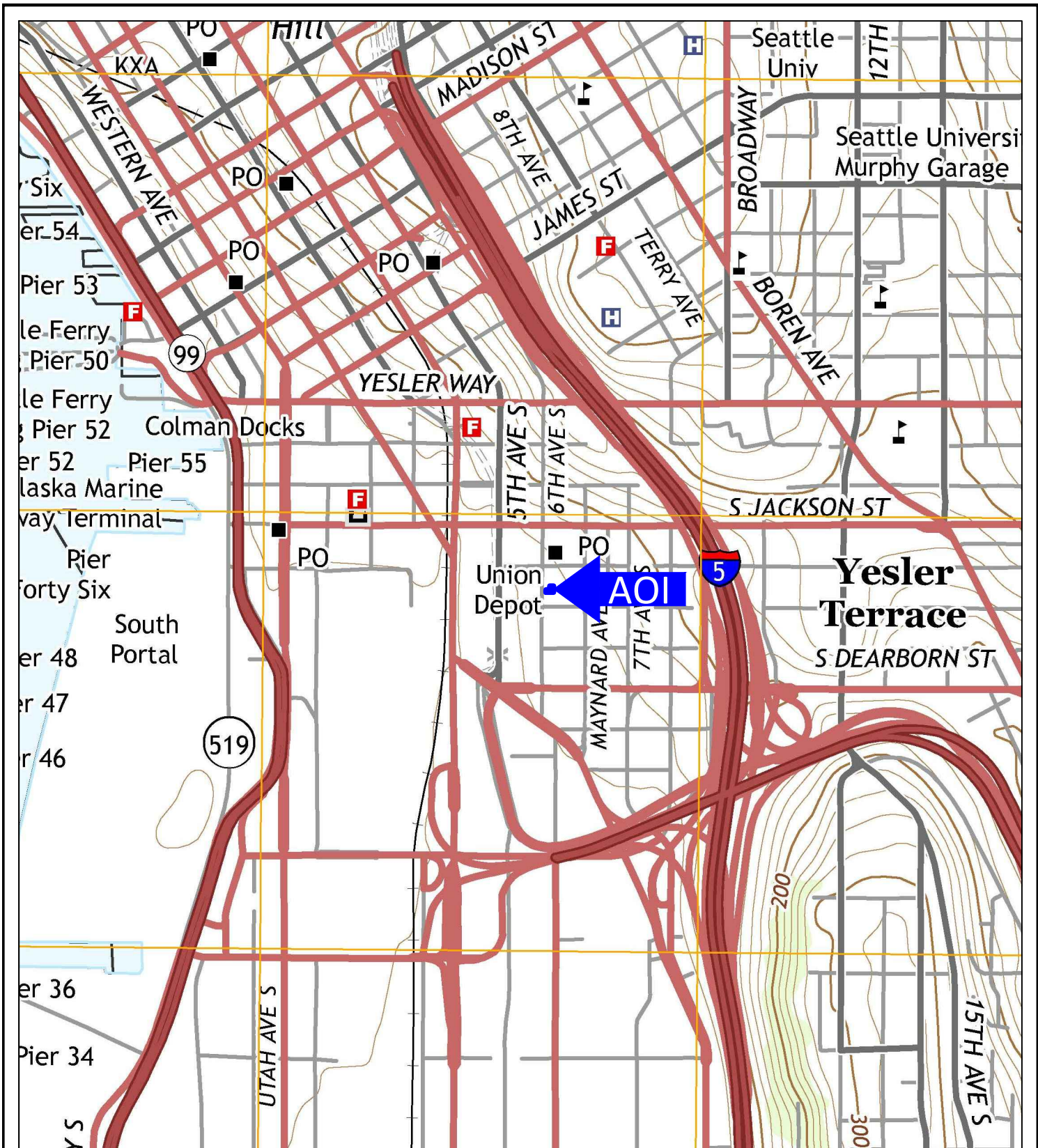


Paul D. Riley, LG, LHG
Principal Geologist



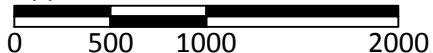
Dave Baumgarten, LHG
Senior Hydrogeologist

Figures



USGS, 2014, Seattle South, Washington
7.5-Minute Quadrangle

Approximate Scale: 1"=1000'



Corporate Office
17522 Bothell Way Northeast
Bothell, Washington 98011
Phone: 425.415.0551
Fax: 425.415.0311

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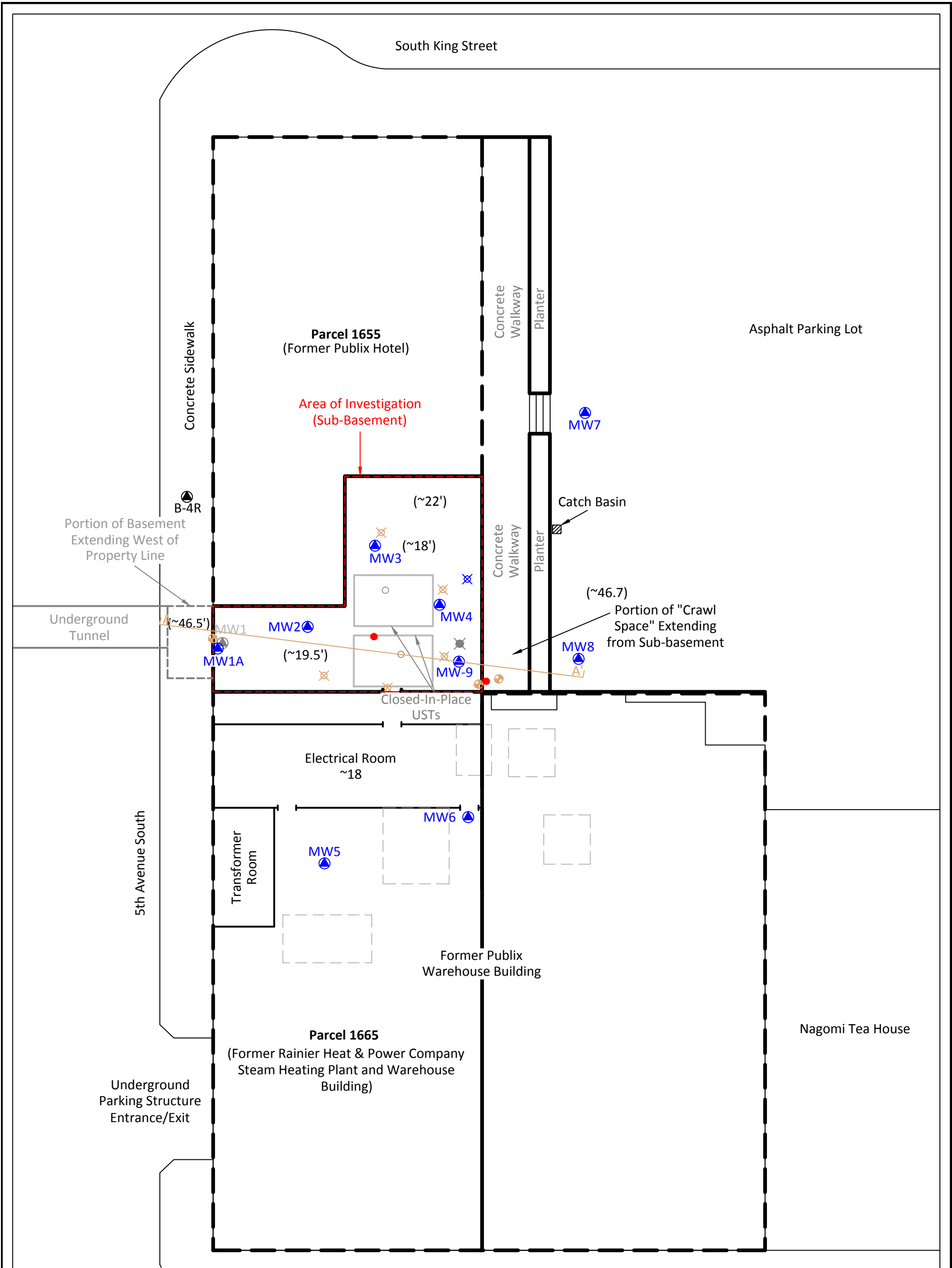
RGI Project Number
2014-011H

Area of Investigation Vicinity Map

Figure 1

Date Drawn:
08/2017

Address: 504 5th Avenue South, Seattle, Washington 98104



- IA A'1 = Cross section A - A'
- (~#) = Approximate elevation of building floor
- ⊕ (in brown) = Shallow soil sample location by RGI
- ⊗ (in brown) = Test probe soil sample location by RGI
- (in gray) = LNAPL sample collected by RGI to characterize UST contents
- (in red) = LNAPL sample collected by RGI
- ⊗ SV3 (in gray) = Soil vapor sample by RGI, February 2014
- ⊗ (in blue) = Excavation water sample location
- ⊗ (in black) = Monitoring well by others
- ⊗ (in blue) = Monitoring well installed by RGI, April and May 2016
- - - (in red) = Area of Investigation
- - - (in green) = Property boundary

South Weller Street

□ = Former dutch oven/ boiler location depicted on 1950 Sanborn Map (locations should be considered approximate)

Approximate Scale: 1"=20'



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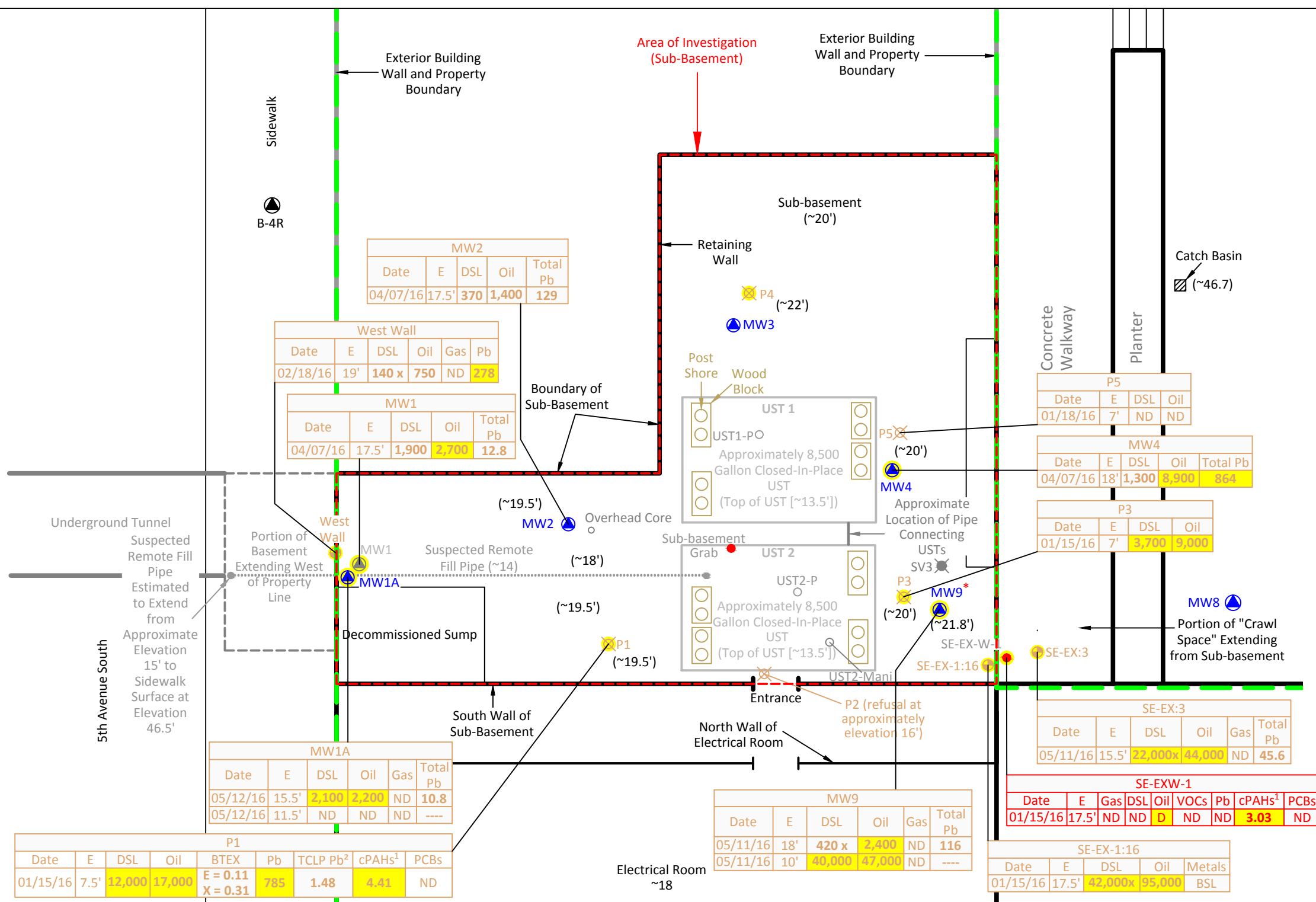
Figure 2

RGI Project Number
2014-011H

Area of Investigation Representation Map

Date Drawn:
08/2017

Address: 504 5th Avenue South, Seattle, Washington 98104

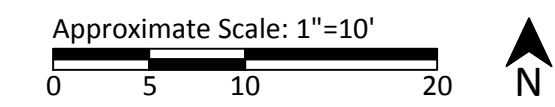


- = Shoring used to brace USTs to the ceiling in order to counteract any buoyancy effect during UST decommissioning and closure in place
- (~#) = Approximate elevation of building floor
- = (in brown) Shallow soil sample location by RGI
- = (in brown) UST Site Assessment soil and/or groundwater grab sample location, January 2016
- = (in gray) LNAPL sample collected by RGI to characterize UST contents
- = (in red) LNAPL sample collected by RGI
- = (in gray) Soil vapor sample by RGI, February 2014
- = (in red) Indicates LNAPL was present in well during May 24, 2016 groundwater sampling event
- = (in black) Monitoring well by others
- = (in blue) Monitoring well installed by RGI, April and May 2016
- = (in red) Area of Investigation
- = (in green) Property boundary

= Analytical results showing soil in mg/kg (brown);

E = Approximate elevation where soil sample was collected
 DSL/Oil = Diesel/oil total petroleum hydrocarbons (TPH)
 PCBs = Polychlorinated biphenyls
 BTEX = Benzene, toluene, ethylbenzene, xylenes
 Pb = Lead
 cPAHs = Carcinogenic polycyclic aromatic hydrocarbons
¹ = Concentrations determined using toxicity equivalency methodology per WAC 173-340-708(8)
² TCLP = Toxicity Characteristic Leaching Procedure, result given in milligrams/liter (mg/l)

ND = Not detected above laboratory method detection limit
 BSL = Detected at concentrations below screening levels
 Yellow highlight indicates soil concentration that exceeds MTCA cleanup levels



 Corporate Office 17522 Bothell Way Northeast Bothell, Washington 98011 Phone: 425.415.0551 Fax: 425.415.0311	Publix Renovation Project		Figure 3
	RGI Project Number 2014-011H	Area of Investigation with Soil Sample and LNAPL Analytical Data	Date Drawn: 08/2017
	Address: 504 5th Avenue South, Seattle, Washington 98104		

MW3									
Date	LNAPL	Gas	BTEX	DSL	Oil	Naph.	cPAHs*	Dissolved Lead	Total Lead
05/24/16	----	----	----	390 x	ND	ND	ND	----	----
04/22/16	----	ND	ND	470	ND	ND	0.03	ND	ND
04/21/16	Tr	----	----	----	----	----	----	----	----

MW2									
Date	LNAPL	Gas	BTEX	DSL	Oil	Naph.	cPAHs*	Dissolved Lead	Total Lead
05/24/16	----	----	----	1,100x	ND	8.5	----	----	----
05/04/16	----	----	----	970	ND	8.48	ND	----	----
05/02/16	----	----	----	990x	ND	----	----	----	----
04/22/16	----	ND	ND	1,600	650x	ND	0.06	ND	1.6
04/21/16	Tr	----	----	----	----	----	----	----	----

MW1									
Date	LNAPL	Gas	BTEX	DSL	Oil	Naph.	cPAHs	Dissolved Lead	Total Lead
04/22/16	----	ND	ND	400	ND	ND	ND	ND	ND

MW1A									
Date	LNAPL	Gas	BTEX	DSL	Oil	Naph.	cPAHs	Dissolved Lead	Total Lead
05/24/16	----	----	----	290 x	ND	16	ND	----	----
05/13/16	----	240	T = 2.3 X = 6.8	220 x	ND	17.6	ND	ND	ND

P4-W							
Date	LNAPL	BTEX	DSL	Oil	cPAHs*	PCBs	Total Lead
01/18/16	----	ND	160,000	150,000	1.97	ND	22.5

P5-W			
Date	LNAPL	DSL w/o Silica	Oil
01/18/16	----	21,000	30,000

NW-EX-W-1			
Date	LNAPL	DSL	Oil
01/15/16	----	80 x	ND

MW4									
Date	LNAPL	Gas	BTEX	DSL	Oil	Naph.	cPAHs	Dissolved Lead	Total Lead
05/24/16	----	----	----	340 x	ND	2.0	ND	----	----
04/22/16	----	ND	ND	390	ND	----	ND	ND	ND
04/21/16	Tr	----	----	----	----	ND	----	----	----

MW9									
Date	LNAPL	Gas	BTEX	DSL	Oil	Naph.	cPAHs*	Dissolved Lead	Total Lead
05/24/16	0.02	----	----	5,800x	9,500	0.33	0.61	----	----
05/13/16	0.01	ND	T = 1.2	1,700	2,100	0.53	0.17	ND	6.64

P3-W			
Date	LNAPL	DSL	Oil
01/15/16	----	91,000	120,000

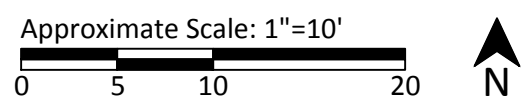
P1-W			
Date	LNAPL	DSL	Oil
01/18/16	----	4,200	7,200

- = Shoring used to brace USTs to the ceiling in order to counteract any buoyancy effect during UST decommissioning and closure in place
- (~#) = Approximate elevation of building floor
- = (in blue) Excavation water sample location by RGI
- = (in brown) Test probe soil and/or groundwater grab sample location. Groundwater grab samples are not considered representative of groundwater quality.
- * = (in red) Indicates that LNAPL was present in well during May 24, 2016 groundwater sampling event
- = (in blue) Monitoring well installed by RGI
- = (in black) Monitoring well by others
- = (in red) Area of investigation
- = (in green) Property boundary

= Groundwater and excavation water analytical results in ug/L (blue);

LNAPL = Light Non-Aqueous Phase Liquid. Indicates measured thickness (in feet).
 Tr = A non-measurable amount of LNAPL was observed
 Gas/DSL/Oil = Gasoline/diesel/oil total petroleum hydrocarbons (TPH)
 BTEX = Benzene, toluene, ethylbenzene, xylenes
 cVOCs = Chlorinated volatile organic compounds
 Naph. = Naphthalene
 cPAHs = Carcinogenic polycyclic aromatic hydrocarbons
 * = Concentrations determined using toxicity equivalency methodology per WAC 173-340-708(8)
 ND = Not detected above laboratory method detection limit
 ---- = Not analyzed, not applicable, or no LNAPL observed
 Yellow highlight indicates groundwater concentration that exceeds MTCA cleanup levels

Note: Groundwater monitoring well results for other wells not shown here.



	Corporate Office 17522 Bothell Way Northeast Bothell, Washington 98011 Phone: 425.415.0551 Fax: 425.415.0311		Publix Renovation Project		Figure 4
	RGI Project Number 2014-011H	Area of Investigation with Groundwater and Excavation Water Analytical Results		Date Drawn: 08/2017	
	Address: 504 5th Avenue South, Seattle, Washington 98104				

MW3									
Date	LNAPL	Gas	BTEX	DSL	Oil	Naph.	cPAHs*	Dissolved Lead	Total Lead
05/24/16	---	---	---	390 x	ND	ND	ND	---	---
04/22/16	---	ND	ND	470	ND	ND	0.03	ND	ND
04/21/16	Tr	---	---	---	---	---	---	---	---

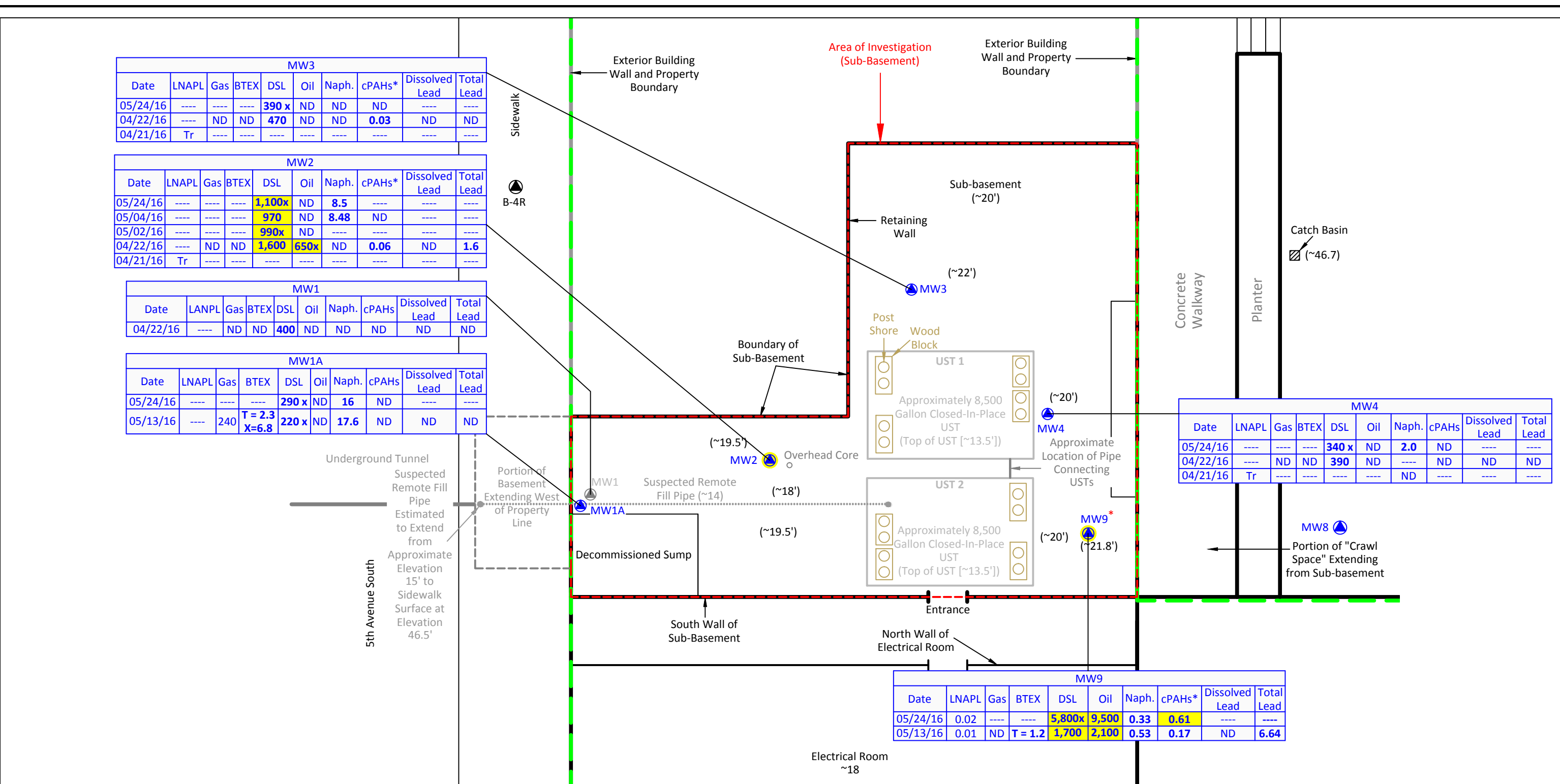
MW2									
Date	LNAPL	Gas	BTEX	DSL	Oil	Naph.	cPAHs*	Dissolved Lead	Total Lead
05/24/16	---	---	---	1,100x	ND	8.5	---	---	---
05/04/16	---	---	---	970	ND	8.48	ND	---	---
05/02/16	---	---	---	990x	ND	---	---	---	---
04/22/16	---	ND	ND	1,600	650x	ND	0.06	ND	1.6
04/21/16	Tr	---	---	---	---	---	---	---	---

MW1									
Date	LNAPL	Gas	BTEX	DSL	Oil	Naph.	cPAHs	Dissolved Lead	Total Lead
04/22/16	---	ND	ND	400	ND	ND	ND	ND	ND

MW1A									
Date	LNAPL	Gas	BTEX	DSL	Oil	Naph.	cPAHs	Dissolved Lead	Total Lead
05/24/16	---	---	---	290 x	ND	16	ND	---	---
05/13/16	---	240	T = 2.3 X = 6.8	220 x	ND	17.6	ND	ND	ND

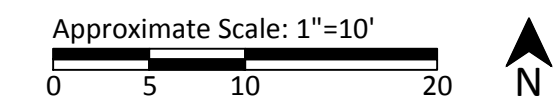
MW4									
Date	LNAPL	Gas	BTEX	DSL	Oil	Naph.	cPAHs	Dissolved Lead	Total Lead
05/24/16	---	---	---	340 x	ND	2.0	ND	---	---
04/22/16	---	ND	ND	390	ND	---	ND	ND	ND
04/21/16	Tr	---	---	---	---	---	---	---	---

MW9									
Date	LNAPL	Gas	BTEX	DSL	Oil	Naph.	cPAHs*	Dissolved Lead	Total Lead
05/24/16	0.02	---	---	5,800x	9,500	0.33	0.61	---	---
05/13/16	0.01	ND	T = 1.2	1,700	2,100	0.53	0.17	ND	6.64

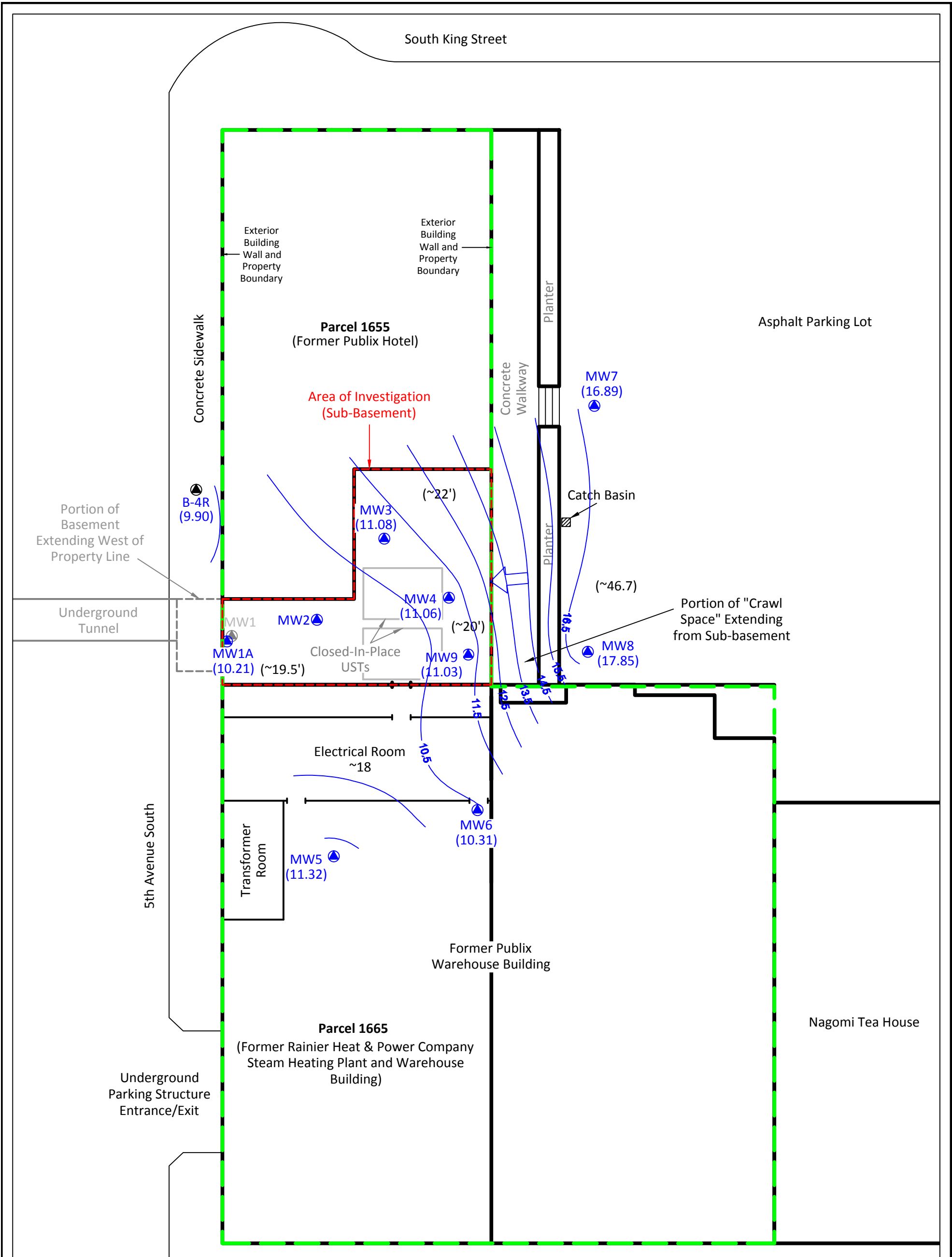


- = Shoring used to brace USTs to the ceiling in order to counteract any buoyancy effect during UST decommissioning and closure in place
 - = Groundwater monitoring well water analytical results in ug/L (blue);
 - = (in black) Monitoring well by others
 - = (in blue) Monitoring well installed by RGI
 - = (in red) Area of investigation
 - = (in green) Property boundary
 - = (in red) Indicates that LNAPL was present in well during May 24, 2016 groundwater sampling event
 - = (in blue) Monitoring well installed by RGI
 - = (in black) Monitoring well by others
 - = (in red) Area of investigation
 - = (in green) Property boundary
 - = (in blue) Monitoring well installed by RGI
 - = (in black) Monitoring well by others
 - = (in red) Area of investigation
 - = (in green) Property boundary
- LNAPL = Light Non-Aqueous Phase Liquid. Indicates measured thickness (in feet).
 Tr = A non-measurable amount of LNAPL was observed
 Gas/DSL/Oil = Gasoline/diesel/oil total petroleum hydrocarbons (TPH)
 BTEX = Benzene, toluene, ethylbenzene, xylenes
 cVOCs = Chlorinated volatile organic compounds
 Naph. = Naphthalene
 cPAHs = Carcinogenic polycyclic aromatic hydrocarbons
 * = Concentrations determined using toxicity equivalency methodology per WAC 173-340-708(8)
 ND = Not detected above laboratory method detection limit
 --- = Not analyzed, not applicable, or no LNAPL observed
 Yellow highlight indicates groundwater concentration that exceeds MTCA cleanup levels

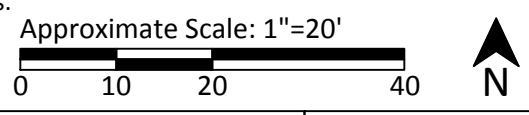
Note: Test probe groundwater grab sampling and other well sampling results not shown here.



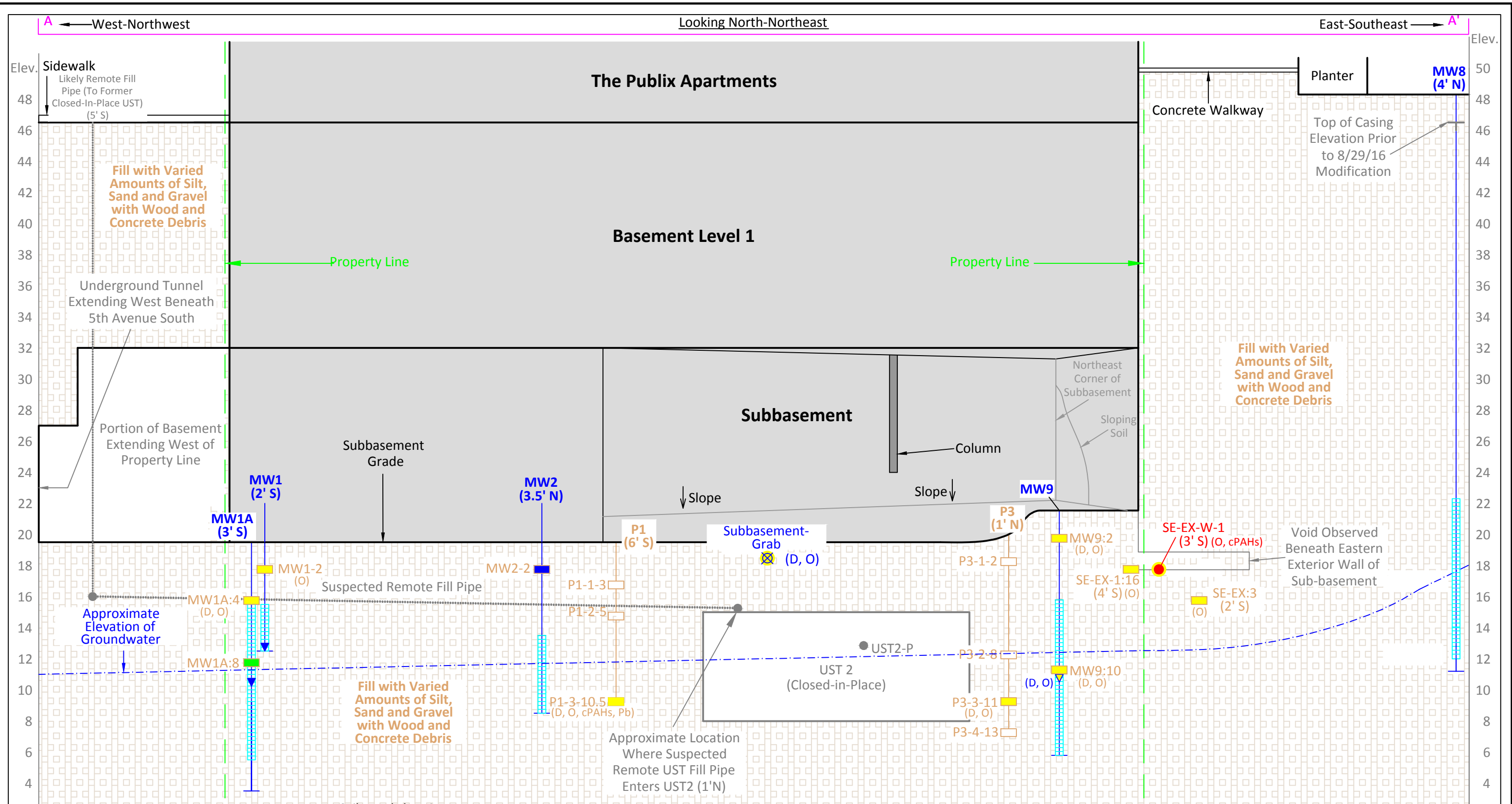
	Corporate Office		Publix Renovation Project		Figure 5	
	17522 Bothell Way Northeast		RGI Project Number	Area of Investigation with Groundwater		Date Drawn:
	Bothell, Washington 98011		2014-011H	Monitoring Well Analytical Results		08/2017
Phone: 425.415.0551		Address: 504 5th Avenue South, Seattle, Washington 98104				
Fax: 425.415.0311						



- (~#') = Approximate elevation of building floor
- = Monitoring well by others
- = Monitoring well installed by RGI
- (11.41) = Groundwater elevation. Groundwater elevations from wells B-4R, MW5, MW6, MW7, and MW8 were obtained from an investigation being conducted outside the area of investigation
- (in red) = Area of investigation
- (in green) = Property boundary
- 9.75 — = Groundwater contours generated using Surfer Software (based on Kriging method). Contours based on May 24, 2016 water level measurements from all wells associated with the Property.
- ← = Groundwater flow direction
- Note: Data from MW2 appeared anomalous and was not used for generating contours.

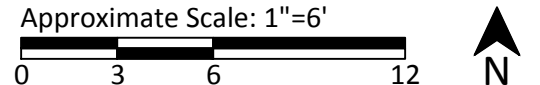


	Corporate Office 17522 Bothell Way Northeast Bothell, Washington 98011 Phone: 425.415.0551 Fax: 425.415.0311		Publix Renovation Project		Figure 6
	RGI Project Number 2014-011H	Area of Investigation with Groundwater Contours from May 24, 2016		Date Drawn: 08/2017	
	Address: 504 5th Avenue South, Seattle, Washington 98104				



- ⊗ = Excavation water sample
 - = Product sample
 - = Sample collected from inside UST prior to decommissioning
 - = Approximate groundwater level (5/24/16)
 - COPCs = Contaminants of potential concern
 - UST = Underground storage tank
 - (# N) = Approximate distance (in feet) and direction offset from cross section
-
- Soil sample location:**
- = Sample not analyzed
 - = No COPCs detected at concentrations above laboratory detection limits
 - = COPCs detected at concentrations below MTCA Method A cleanup levels
 - = COPCs detected at concentrations above MTCA Method A cleanup levels
- Groundwater sample obtained from groundwater monitoring well:**
- ▽ = Sample not analyzed
 - ▽ = No COPCs detected at concentrations above laboratory detection limits
 - ▽ = COPCs detected at concentrations below MTCA Method A cleanup levels
 - ▽ = COPCs detected at concentrations above MTCA Method A cleanup levels

Note: (D, O, cPAHs, Pb) = Indicates which COPCs exceed the MTCA Method A Cleanup Level in soil (brown), groundwater (blue), and LNAPL (red). D = Diesel, O = Oil, cPAH = carcinogenic Polycyclic Aromatic Hydrocarbons, Pb = Lead.



	Corporate Office 17522 Bothell Way Northeast Bothell, Washington 98011 Phone: 425.415.0551 Fax: 425.415.0311		Publix Renovation Project		Figure 7
	RGI Project Number 2014-011H		Cross Section A - A'		Date Drawn: 08/2017
	Address: 504 5th Avenue South, Seattle, Washington 98104				

Tables

Table 1, Page 2 of 2. Summary of Soil Analytical Laboratory Results

Publix Renovation Project

504 5th Avenue South, Seattle, Washington 98104

The Riley Group, Inc. Project No. 2014-011H

Notes continued:

ND = Not detected above noted analytical detection limit.

LNAPL = Light non-aqueous phase liquid.

---- = Not analyzed or not applicable.

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

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

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.

¹ The higher Cleanup level is allowed if no hexavalent chromium (CrVI) is present in the sample.

² No MTCA Method A Cleanup Level has been established. Therefore, the MTCA Method B Non-Carcinogenic Standard Formula Value Protective of Groundwater at 13°C is listed for reference.

³ The toxicity of the cPAH mixture is compared to the MTCA Method A Soil Cleanup Level for benzo(a)pyrene using the toxicity equivalency methodology described in WAC 173-340-708(8).

⁴ The Cleanup level is based on applicable federal law (40 CFR 761.61) and applies to the total value of PCBs.

⁵ Results and detection limits are given in milligrams per liter (mg/L); equivalent to parts per million (ppm). The threshold value for hazardous waste is 5.0 mg/L.

⁶ Regulatory level used to Identify hazardous waste in accordance with 40 CFR 268.48.

Bold results indicated 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, Page 1 of 2. Summary of Groundwater and Excavation Water Analytical Laboratory Results
Publix Renovation Project
504 5th Avenue South, Seattle, Washington 98104
The Riley Group, Inc. Project No. 2014-011H

Sample Number	Sample Date	Top of Casing Elevation (feet)	Depth to Water (bgs)	LNAPL Thickness (feet)	Elevation (feet)	Gas TPH	BTEX				w/o silica gel			w/silica gel			Naph.	cPAHs	PCBs	Dissolved Lead	Total Lead
							B	T	E	X	Diesel TPH	Oil TPH	Total Dx	Diesel TPH	Oil TPH	Total Dx					
Sub-basement (Parcel 1655) Monitoring Well Samples																					
MW1	04/22/16	---	6.83	---	----	ND<100	ND<1	ND<1	ND<1	ND<3	400	ND<250	---	ND<50	ND<250	----	ND<0.03	ND<0.03	---	ND<1	ND<1
MW1A	05/24/16	19.05	8.84	---	10.21	---	---	---	---	---	290 x	ND<250	---	270	ND<250	----	16 ⁵	ND<0.06	---	---	---
	05/13/16	19.05	8.85	---	10.2	240	ND<1	2.3	ND<1	6.8	220 x	ND<250	---	200 x	ND<250	----	17.6 ⁵	ND<0.06	---	ND<1	ND<1
MW2	05/24/16	21.61	10.54	---	11.07	---	---	---	---	---	1,100 x	ND<325	---	320	ND<325	----	8.5	ND<0.06	---	---	---
	05/13/16	21.61	10.54	---	11.07	---	---	---	---	---	---	---	---	---	---	----	---	---	---	---	---
	05/10/16	21.61	12.01	---	9.6	---	---	---	---	---	---	---	---	---	---	----	---	---	---	---	---
	05/04/16	21.61	---	---	---	---	---	---	---	---	970	ND<250	---	210	ND<250	----	8.48	ND<0.06	---	---	---
	05/02/16	21.61	---	---	---	---	---	---	---	---	990 x	ND<250	---	250	ND<250	----	---	---	---	---	---
	04/22/16	21.61	10.48	---	11.13	ND<100	ND<1	ND<1	ND<1	ND<3	1,600	650 x	---	530	460	990	ND<0.03	0.06	---	ND<1	1.60
	04/21/16	21.61	----	Tr	---	---	---	---	---	---	---	---	---	---	---	----	---	---	---	---	---
MW3	05/24/16	22.96	11.88	---	11.08	---	---	---	---	---	390 x	ND<300	---	220	ND<300	----	ND<0.06	ND<0.06	---	---	---
	05/13/16	22.96	11.89	---	11.07	---	---	---	---	---	---	---	---	---	---	----	---	---	---	---	---
	05/10/16	22.96	12.18	---	10.78	---	---	---	---	---	---	---	---	---	---	----	---	---	---	---	---
	04/22/16	22.96	11.84	---	11.12	ND<100	ND<1	ND<1	ND<1	ND<3	470	ND<250	---	170	ND<250	----	ND<0.03	0.03	---	ND<1	ND<1
	04/21/16	22.96	----	Tr	---	---	---	---	---	---	---	---	---	---	---	----	---	---	---	---	---
MW4	05/24/16	23.12	12.06	---	11.06	---	---	---	---	---	340 x	ND<300	---	140	ND<300	----	2.0	ND<0.06	---	---	---
	05/13/16	23.12	12.07	---	11.05	---	---	---	---	---	---	---	---	---	---	----	---	---	---	---	---
	05/10/16	23.12	12.01	----	11.11	---	---	---	---	---	---	---	---	---	---	----	---	---	---	---	---
	04/22/16	23.12	12.00	---	11.12	ND<100	ND<1	ND<1	ND<1	ND<3	390	ND<250	---	<50	<250	----	ND<0.03	ND<0.03	---	ND<1	ND<1
	04/21/16	23.12	----	Tr	---	---	---	---	---	---	---	---	---	---	---	----	---	---	---	---	---
MW9	05/24/16	21.46	10.43	0.02	11.03 ⁶	---	---	---	---	---	5,800 x	9,500	---	6,400 x	9,200	----	0.33	0.62	---	---	---
	05/13/16	21.46	10.39	0.01	11.07 ⁶	ND<100	ND<1	1.2	ND<1	ND<3	1,700	2,100	3,800	880	1,200	2,080	0.53	0.17	----	ND<1	6.64
Sub-basement (Parcel 1655) Groundwater Grab Samples																					
P1-W	01/18/16	----	6	----	----	---	---	---	---	---	4,200	7,200	11,400	---	---	---	---	---	---	---	---
P3-W	01/15/16	----	6	----	----	---	---	---	---	---	91,000	120,000	211,000	---	---	---	---	---	---	---	---
P4-W	01/18/16	----	8	----	----	---	ND<1	ND<1	ND<1	ND<3	160,000	150,000	310,000	---	---	---	---	1.97	ND<0.1	---	22.5
P5-W	01/18/16	----	7	----	----	---	---	---	---	---	21,000	30,000	51,000	---	---	---	---	---	---	---	---
Sub-basement (Parcel 1655) Excavation Water Samples																					
NE-EXW-1	01/15/16	----	----	----	Surface	---	---	---	---	---	80x	ND<250	----	---	---	---	---	---	---	---	---
Groundwater Screening Levels	MTCA Method A Cleanup Levels for Ground Water					800/1,000 ³	5	1,000	700	1,000	500	500	500	500	500	500	160	0.1 ¹	0.1 ²	15	15
Ecology Groundwater Screening Levels Considered Protective of Indoor Air ⁴						----	2.4	15,600	2,780	440	----	----	----	----	----	----	8.93	----	----	----	----

Table 2, Page 2 of 2. Summary of Groundwater and Excavation Water Analytical Laboratory Results

Publix Renovation Project

504 5th Avenue South, Seattle, Washington 98104

The Riley Group, Inc. Project No. 2014-011H

Notes:

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

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

Diesel and Oil TPH (total petroleum hydrocarbons) determined using Northwest Test Method NWTPH-Dx with and without silica gel cleanup.

PCBs (polychlorinated biphenyls) determined using EPA Test Method 8082A.

cPAHs (carcinogenic Polycyclic Aromatic Hydrocarbons) and Naph. (Naphthalenes) determined using EPA Method 8270 SIM.

Total and dissolved lead determined using EPA Method 200.8.

LNAPL = Light Non-aqueous Phase Liquid

ND = Not detected above the noted analytical detection limit.

---- = Not analyzed or not applicable.

Tr = Trace. A non-measurable amount of LNAPL (sheen) was observed in the groundwater monitoring well.

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

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).

¹The toxicity of the cPAH mixture is compared to the MTCA Method A Cleanup Level for Ground Water for benzo(a)pyrene using the toxicity equivalency methodology described in WAC 173-340-708(8).

²The groundwater screening level is based on a concentration derived using MTCA equation 720-2, adjusted for the practical quantitation limit. Based on the total value of PCB Aroclors.

³The higher cleanup level is applicable if no benzene is found in the groundwater.

⁴Washington State Department of Ecology Groundwater Screening Level considered protective of indoor air. Obtained from Ecology's *Guidance for Evaluating Soil Vapor Intrusion in Washington State Investigation and Remedial Action* dated October 2009 (Table B-1 amended April 6, 2015).

⁵Groundwater concentration exceeds Ecology screening level considered protective of indoor air.

⁶Groundwater elevation corrected to compensate for the presence of LNAPL.

Bold results indicated concentrations above laboratory detection limits.

Bold and yellow highlighted results indicate concentrations (if any) that exceed MTCA Method A Cleanup Levels for Ground Water.

Table 3. Summary of LNAPL Analytical Laboratory Results

Publix Renovation Project
504 5th Avenue South, Seattle, Washington 98104
The Riley Group, Inc. Project No. 2014-011H

Sample Number	Approximate Elevation	Sample Date	BTEX				HCID			Diesel TPH	Oil TPH	VOCs	cPAHs	PCBs	Total RCRA 8 Metals				
			B	T	E	X	Gasoline	Diesel	Heavy Oil						As	Cd	Total Cr	Pb	Hg
Sub-basement (Parcel 1655) Underground Storage Tank Contents																			
Subbasement-Grab	17.5	11/09/15	---	---	---	---	ND<2,000	D>5,000	D>25,000	170,000	110,000	---	---	ND<2	---	---	---	12.4	---
UST2-P (LNAPL)*	~14'	03/31/16	ND<200 ⁵	ND<200 ⁵	ND<200 ⁵	ND<600 ⁵	ND<20,000	D>50,000	D>250,000	---	---	---	44.62	ND<2	---	---	---	2.18	---
UST1-P (LNAPL)*	~14'	12/30/15	---	---	---	---	ND<2,000	D>5,000	D>25,000	---	---	---	---	ND<2	ND<2	ND<2.0	10.8	35.5	ND<2.0
UST2-mani (LNAPL)*	~15'	12/30/15	---	---	---	---	ND<2,000	D>5,000	D>25,000	---	---	---	---	ND<2	ND<10	ND<10	ND<50	ND<10	ND<10
Southeast Corner of Sub-basement (Parcel 1655) - LNAPL																			
SE-EXW-1	~17.5	01/15/16	---	---	---	---	ND<2,000	ND<5,000	D>25,000	---	---	ND ⁵	3.03	ND<2 ⁴	---	---	---	ND<1	---
MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses			0.03	7	6	9	100/30¹	2,000		2,000			0.1³	1.0⁴	20	2	2,000²/19	250	2

Notes:
 All results and detection limits are given in milligrams per kilogram (mg/kg); equivalent to parts per million (ppm) unless otherwise indicated.
 Approximate elevation = relative to the approximate elevation of 19.5' at the grade of the subbasement.
 cPAHs (carcinogenic Polynuclear Aromatic Hydrocarbons) determined using EPA Test Method 8270D SIM.
 PCBs (polychlorinated biphenyls) determined using EPA Test Method 8082A.
 Total RCRA 8 Metals (As = Arsenic, Cd = Cadmium, Cr = Chromium, Pb = Lead, Hg = Mercury) determined using EPA Method 200.8.
 D = Detected at concentration above the indicated concentration.
 ND = Not detected above noted analytical detection limit.
 LNAPL = Light non-aqueous phase liquid.
 ---- = Not analyzed or not applicable.
 LNAPL samples collected from inside USTs were analyzed to characterize UST contents for disposal and not for comparing to MTCA cleanup levels.
 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).
¹ The higher Cleanup level is allowed if no benzene is present in the sample.
² The higher Cleanup level is allowed if no hexavalent chromium (CrVI) is present in the sample.
³ The toxicity of the cPAH mixture is compared to the MTCA Method A Soil Cleanup Level for benzo(a)pyrene using the toxicity equivalency methodology described in WAC 173-340-708(8).
⁴ The Cleanup level is based on applicable federal law (40 CFR 761.61) and applies to the total value of PCBs.
⁵ VOC detection limits were elevated due to high concentrations of oil in the sample.
Bold results indicated concentrations above laboratory detection limits.
Bold and yellow highlighted results indicate concentrations (if any) that exceed MTCA Method A Soil Cleanup Levels.

Table 4. Summary of 2014 Soil Vapor Sample Analytical Laboratory Results

Publix Renovation Project

504 5th Avenue South, Seattle, Washington 98104

The Riley Group, Inc. Project No. 2014-011H

Sample Number	Sample Date	Approximate Elevation	TPHv Fractions			BTEX and VOCs						HVOCs								
			C ₅ - C ₈ aliphatics	C ₉ - C ₁₂ aliphatics	C ₉ - C ₁₀ aromatics	B	T	E	X	Naph.	1,2,4- Trimethyl benzene	PCE	TCE	VC	MEK	Bromo dichloro methane	Carbon disulfide	Chloro form	Chloro methane	Styrene
SV3 ¹	02/25/14	~17'	1,500	350	ND<100	9.8	63	9.4	39.2	ND<2.1	6.1	10	9.2	0.6	14	ND<2.7	4.9	1.1	5.5	2.3
Ecology Soil Vapor Screening Level²			90,000	4,700	6,000	10.7	76,200	15,200	1,520	2.45	107	321	12.3	9.33	76,200	2.25	10,700	3.62	1,370	15,200

Notes:

Unless otherwise noted, all analytical results are given in micrograms per cubic meter (ug/m³).

TPHv = (total petroleum hydrocarbons) C₅ to C₁₁ using EPA Method TO-15.

TPHv Fractions = Equivalent Carbon Ranges for aliphatics C₅ - C₈ and C₉ - C₁₅ and aromatics C₉ - C₁₀ determined using EPA Test Method TO-15/APH.

BTEX = Benzene, toluene, ethylbenzene, and total xylenes determined using EPA Test Method TO-15.

HVOCs = Halogenated volatile organics compounds determined using EPA Test Method TO-15.

PCE= tetrachloroethene, TCE = trichloroethene, VC = vinyl chloride.

Naph. = Naphthalenes

MEK = Methyl Ethyl Ketone

ND = Not detected above the laboratory detection limit.

---- = Not applicable.

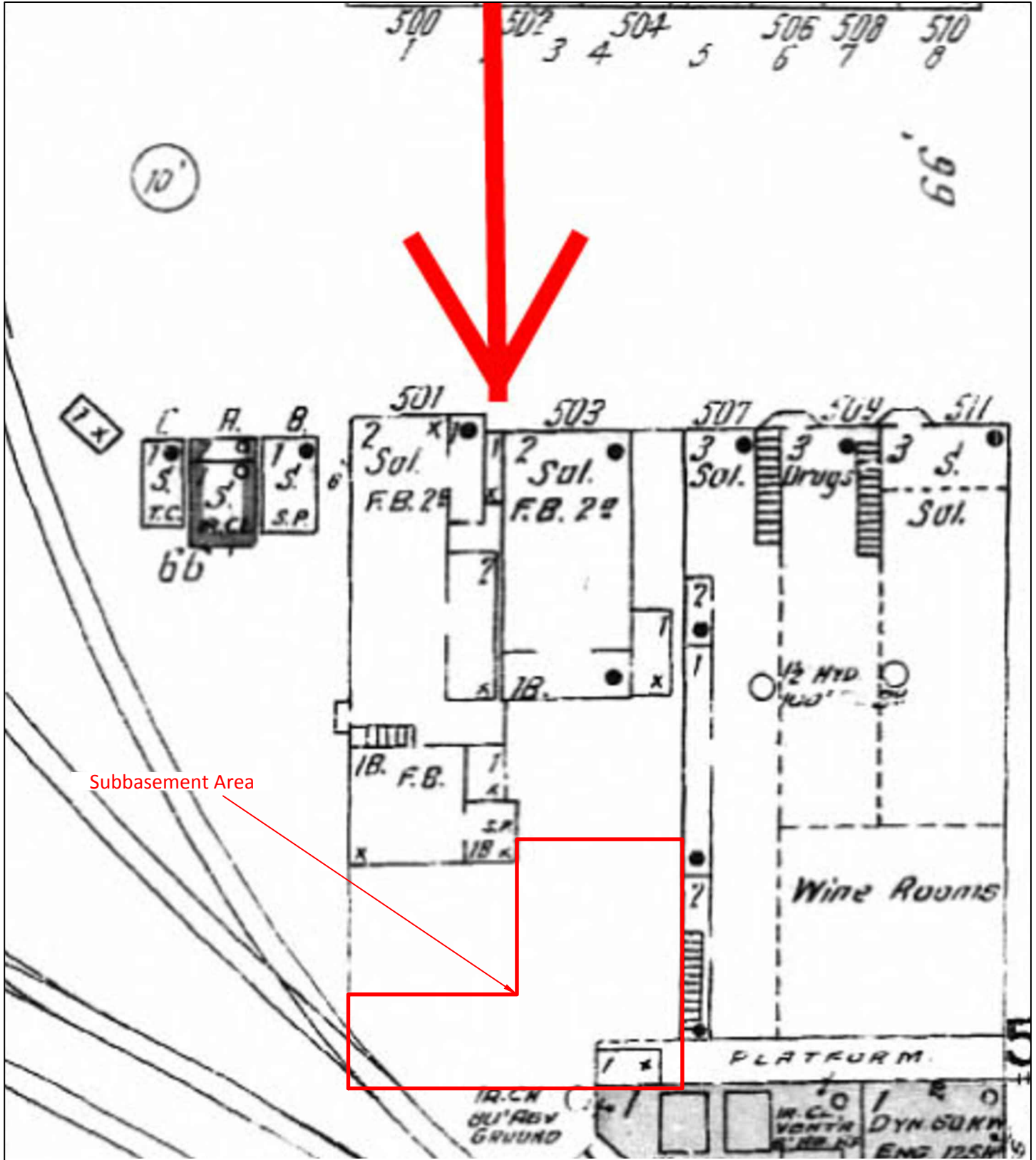
¹ Soil vapor sample collected in 2014 by RGI. Soil vapor analytical data obtained from the *Subsurface Soil Vapor Investigation Report* dated March 20, 2014 by RGI. The carcinogenic screening level was referenced when available. For all other results, no carcinogenic screening level has been established and the the non-carcinogenic screening level was referenced.

² Soil vapor screening level considered protective of MTCA Method B Indoor Air Cleanup Levels obtained from Table B-1 (Amended April of 2015) of the *Draft Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remediation (Ecology Draft VI Guidance)* dated 2009 by Ecology.

Bold results indicate concentrations above laboratory detection limits.

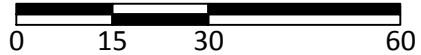
Bold and highlighted results indicate any detected soil vapor concentrations that could potentially represent a threat to indoor air.

Appendix A



Subbasement Area

Approximate Scale: 1"=30'



Corporate Office
17522 Bothell Way Northeast
Bothell, Washington 98011
Phone: 425.415.0551
Fax: 425.415.0311

Publix Renovation Project

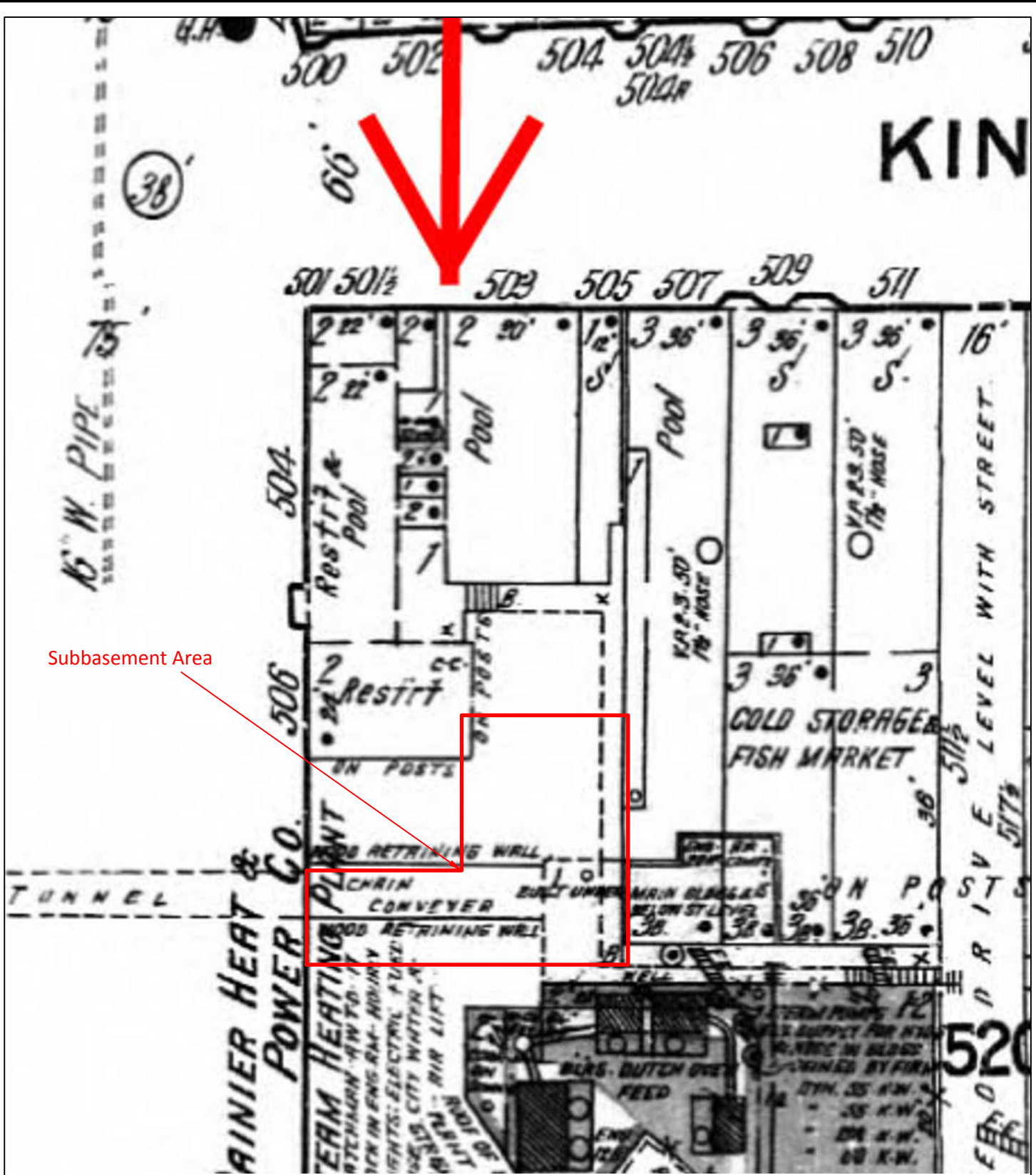
Figure A-1

RGI Project Number
2014-011H

1904 Sanborn Fire Insurance Map with
Subbasement Area

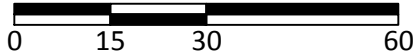
Date Drawn:
08/2017

Address: 504 5th Avenue South, Seattle, Washington 98104



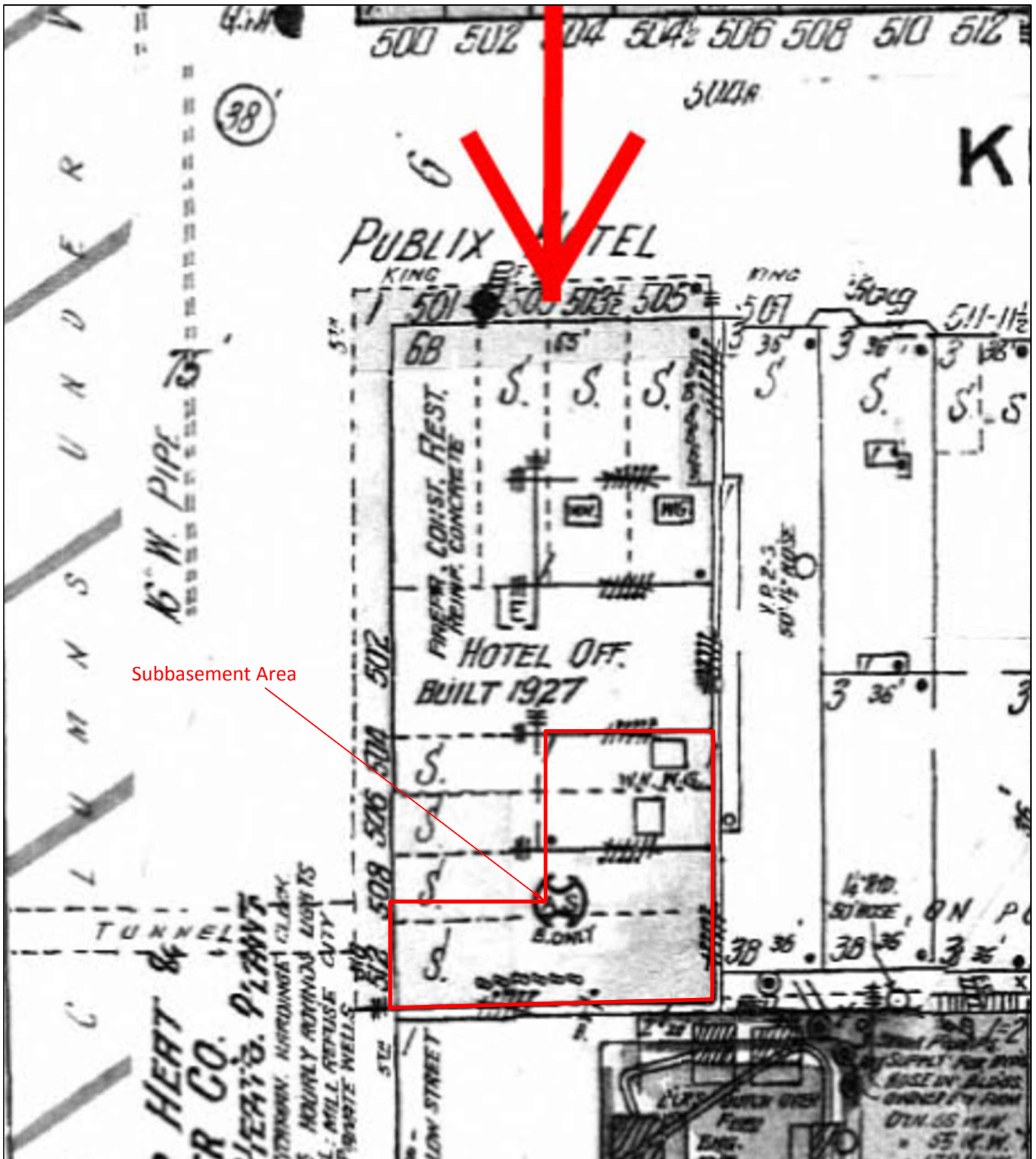
Subbasement Area

Approximate Scale: 1"=30'



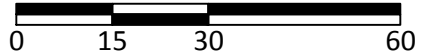
Corporate Office
 17522 Bothell Way Northeast
 Bothell, Washington 98011
 Phone: 425.415.0551
 Fax: 425.415.0311

Publix Renovation Project		Figure A-2
RGI Project Number 2014-011H	1916 Sanborn Fire Insurance Map with Subbasement Area	Date Drawn: 08/2017
Address: 504 5th Avenue South, Seattle, Washington 98104		



Subbasement Area

Approximate Scale: 1"=30'



Corporate Office
 17522 Bothell Way Northeast
 Bothell, Washington 98011
 Phone: 425.415.0551
 Fax: 425.415.0311

Publix Renovation Project		Figure A-3
RGI Project Number 2014-011H	1950 Sanborn Fire Insurance Map with Subbasement Area	Date Drawn: 08/2017
Address: 504 5th Avenue South, Seattle, Washington 98104		

Appendix B

Project Name: **Publix Renovation Project**

Project Number: **2014-011H**

Client: **The Publix Owners, LLC**



Test Probe No.: **P-1**

Sheet 1 of 1

Date(s) Drilled: 01/15/16	Logged By: DJB	Surface Conditions: Soil
Drilling Method(s): Direct Push	Drill Bit Size/Type: 1" Diameter	Total Depth of Borehole: 11 feet bgs
Drill Rig Type: Jack Hammer	Drilling Contractor: Standard Probe	Approximate Surface Elevation: 19.5 feet
Groundwater Elevation: ~13.5 feet on 1/18/16	Sampling Method(s): Continuous	Hammer Data : n/a
Borehole Backfill: Bentonite	Location: 504 5th Avenue South Seattle, Washington 98104	

PID Reading, ppm	Sample ID	Sample Type	% Recovery	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
0	P1-1-3				0	Fill- gray, silty, fine to coarse SAND with gravel	
0	P1-2-5				5	Gray, silty, fine to coarse SAND	
7.11	P1-3-10.5				10	Black, silty, fine to medium SAND with gravel, saturated, moderate sheen	
					11	Boring refusal at 11 feet bgs	

Project Name: **Publix Renovation Project**

Project Number: **2014-011H**

Client: **The Publix Owners, LLC**



Test Probe No.: **P-3**

Sheet 1 of 1

Date(s) Drilled: 01/15/16	Logged By: DJB	Surface Conditions: Soil
Drilling Method(s): Direct Push	Drill Bit Size/Type: 1" Diameter	Total Depth of Borehole: 13.5 feet bgs
Drill Rig Type: Jack Hammer	Drilling Contractor: Standard Probe	Approximate Surface Elevation: 20 feet
Groundwater Elevation: ~14 feet on 1/15/16	Sampling Method(s): Continuous	Hammer Data : n/a
Borehole Backfill: Bentonite	Location: 504 5th Avenue South Seattle, Washington 98104	

PID Reading, ppm	Sample ID	Sample Type	% Recovery	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
0	P3-1-2				0	Fill- black, silty SAND with gravel	
					5		
3.6	P3-2-8					Black SILT with sand, heavy sheen	
						Gray SILT with fine sand, heavy sheen	
3.7	P3-3-11				10	Gray SILT with fine sand and trace gravel, wet, moderate sheen	
5.2	P3-4-13					Gray SILT with fine sand, heavy sheen (free product on soil)	
						Boring refusal at 13.5 feet	
					15		
					20		

Project Name: **Publix Renovation Project**

Project Number: **2014-011H**

Client: **The Publix Owners, LLC**



Test Probe No.: **P-4**

Sheet 1 of 1

Date(s) Drilled: 01/15/16	Logged By: DJB	Surface Conditions: Soil
Drilling Method(s): Direct Push	Drill Bit Size/Type: 1" Diameter	Total Depth of Borehole: 16 feet bgs
Drill Rig Type: Jack Hammer	Drilling Contractor: Standard Probe	Approximate Surface Elevation: 22 feet
Groundwater Elevation: ~14 feet on 1/18/16	Sampling Method(s): Continuous	Hammer Data : n/a
Borehole Backfill: Bentonite	Location: 504 5th Avenue South Seattle, Washington 98104	

PID Reading, ppm	Sample ID	Sample Type	% Recovery	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
0	P4-1-6				0	Fill- black SILT with sand	
					5	Black, silty SAND	
					10	Gray, silty SAND with gravel	
47	P4-2-13				15	Black SAND with gravel, heavy sheen (LNAPL)	
44	P4-3-16				15	Heavy sheen	
					16	Boring refusal at 16 feet bgs	
					20		

Project Name: **Publix Renovation Project**

Project Number: **2014-011H**

Client: **The Publix Owners, LLC**



Test Probe No.: **P-5**

Sheet 1 of 1

Date(s) Drilled: 01/15/16	Logged By: DJB	Surface Conditions: Soil
Drilling Method(s): Direct Push	Drill Bit Size/Type: 1" Diameter	Total Depth of Borehole: 12 feet bgs
Drill Rig Type: Jack Hammer	Drilling Contractor: Standard Probe	Approximate Surface Elevation: 20 feet
Groundwater Elevation: ~13 feet on 1/18/16	Sampling Method(s): Continuous	Hammer Data : n/a
Borehole Backfill: Bentonite	Location: 504 5th Avenue South Seattle, Washington 98104	

PID Reading, ppm	Sample ID	Sample Type	% Recovery	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
0	P5-1-6				0	Fill- gray SILT with sand	
0	P5-2-12				12	Boring completed at 12 feet bgs	

Project Name: **Publix Renovation Project**

Project Number: **2014-011H**

Client: **The Publix Owners, LLC**

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

COLUMN DESCRIPTIONS

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

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

 SILT, SILT w/SAND, SANDY SILT (ML)








 Silty SAND (SM)

 Poorly graded SAND (SP)

TYPICAL SAMPLER GRAPHIC SYMBOLS

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

OTHER GRAPHIC SYMBOLS

- | | |
|---|--|
|  2-inch-OD unlined split spoon (SPT) |  Water level (at time of drilling, ATD) |
|  Shelby Tube (Thin-walled, fixed head) |  Water level (after waiting) |
| |  Minor change in material properties within a stratum |
| |  Inferred/gradational contact between strata |
| |  Queried contact between strata |

GENERAL NOTES

- 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.
- 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: **Publix Renovation Project**

Project Number: **2014-0111**

Client: **The Publix Owner, LLC**



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

Sheet 1 of 1

Date(s) Drilled: 4/8/16	Logged By: CM	Surface Conditions: Gravel and Sand Fill
Drilling Method(s): n/a	Drill Bit Size/Type: 12"	Total Depth of Borehole: 7 feet bgs
Drill Rig Type: Vacuum truck	Drilling Contractor: RGI	Approximate Surface Elevation (feet amsl): 19.5 feet
Groundwater Elevation: ~13 feet on 4/22/16	Sampling Method(s): Continuous	Hammer Data: n/a
Borehole Backfill: Monitoring Well	Location: 504 5th Avenue South, Seattle, Washington 98104	

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
19.5	0						ML		Fill- gray sandy SILT with some gravel, lots of wood and concrete debris, moist, dense to very dense		Bentonite 0 - 3
			MW1-2								Blank 4" PVC 0 - 4
											Silica Sand 3 - 7
14.5	5										40 Slot Screen 4 - 7
									Debris at bottom of hole prevented vacuum excavation beyond 7' bgs		
9.5	10										
4.5	15										
-0.5	20										

Project Name: **Publix Renovation Project**

Project Number: **2014-0111**

Client: **The Publix Owner, LLC**



Test Probe/Well No.: **MW1A**

Sheet 1 of 1

Date(s) Drilled: 5/12/16	Logged By: SL	Surface Conditions: Soil
Drilling Method(s): Direct Push	Drill Bit Size/Type: 2"	Total Depth of Borehole: 16 feet bgs
Drill Rig Type: Jack Hammer	Drilling Contractor: Standard Probe	Approximate Surface Elevation (feet amsl): 19.5 feet
Groundwater Elevation: 10.21 feet on 5/24/16	Sampling Method(s): Continuous	Hammer Data: n/a
Borehole Backfill: Monitoring Well	Location: 504 5th Avenue South, Seattle, Washington 98104	

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
19.5	0						ML		Fill- light gray sandy SILT, very stiff, moist, slight odor, slight sheen		Concrete 0 - 1 Blank 1.0" PVC 0 - 4 Bentonite 1 - 3 Silica Sand 3 - 14 10 Slot Screen 4 - 14
			MW1A:4		3.7						
			MW1A:8		15.3						
9.5	10						ML		Light gray sandy SILT, very stiff, wet, slight odor, slight sheen		
4.5	15								Boring terminated at 16' bgs		
-0.5	20										

Project Name: **Publix Renovation Project**

Project Number: **2014-0111**

Client: **The Publix Owner, LLC**



Test Probe/Well No.: **MW2**

Sheet 1 of 1

Date(s) Drilled: 4/8/16	Logged By: CM	Surface Conditions: Sand and Gravel Fill
Drilling Method(s): n/a	Drill Bit Size/Type: 12"	Total Depth of Borehole: 11 feet bgs
Drill Rig Type: Vacuum truck	Drilling Contractor: RGI	Approximate Surface Elevation (feet amsl): 19.5 feet
Groundwater Elevation: 11.07 feet on 5/24/16	Sampling Method(s): Continuous	Hammer Data: n/a
Borehole Backfill: Monitoring Well	Location: 504 5th Avenue South, Seattle, Washington 98104	

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
19.5	0						ML		Fill - gray sandy SILT with some gravel, lots of wood and concrete debris, moist, dense to very dense		Bentonite 0 - 5
			MW2-2								Blank 4"PVC 0 - 6
14.5	5										Silica Sand 5 - 11
											40 Slot Screen 6 - 11
9.5	10										
									Debris at bottom of hole prevented vacuum excavation beyond 11' bgs		
4.5	15										
-0.5	20										

Project Name: **Publix Renovation Project**

Project Number: **2014-0111**

Client: **The Publix Owner, LLC**



Test Probe/Well No.: **MW3**

Sheet 1 of 1

Date(s) Drilled: 4/8/16	Logged By: CM	Surface Conditions: Sand and Gravel Fill
Drilling Method(s): n/a	Drill Bit Size/Type: 12"	Total Depth of Borehole: 16 feet bgs
Drill Rig Type: Vacuum truck	Drilling Contractor: RGI	Approximate Surface Elevation (feet amsl): 15 feet
Groundwater Elevation: 11.88 feet on 5/24/16	Sampling Method(s): n/a	Hammer Data: n/a
Borehole Backfill: Monitoring Well	Location: 504 5th Avenue South, Seattle, Washington 98104	

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
15	0						ML		Fill - gray sandy SILT with some gravel, lots of wood and concrete debris, moist, dense to very dense		Bentonite 0 - 8
											Blank 4" PVC 0 - 9
10	5										Silica Sand 8 - 16
5	10										40 Slot Screen 9 - 14
0	15								Debris at bottom of hole prevented vacuum excavation beyond 15' bgs		
-5	20										

Project Name: **Publix Renovation Project**

Project Number: **2014-0111**

Client: **The Publix Owner, LLC**



Test Probe/Well No.: **MW4**

Sheet 1 of 1

Date(s) Drilled: 4/8/16	Logged By: CM	Surface Conditions: Sand and Gravel Fill
Drilling Method(s): n/a	Drill Bit Size/Type: 12"	Total Depth of Borehole: 11 feet bgs
Drill Rig Type: Vacuum truck	Drilling Contractor: RGI	Approximate Surface Elevation (feet amsl): 20 feet
Groundwater Elevation: 11.06 feet on 5/24/16	Sampling Method(s): Continuous	Hammer Data: n/a
Borehole Backfill: Monitoring Well	Location: 504 5th Avenue South, Seattle, Washington 98104	

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
20	0						ML		Fill - gray sandy SILT with some gravel, lots of wood and concrete debris, moist, dense to very dense		
			MW4-2								Bentonite 0 - 5 Blank 4" PVC 0 - 6
15	5										Silica Sand 5 - 11
10	10										40 Slot Screen 6 - 11
5	15								Debris at bottom of hole prevented vacuum excavation beyond 11' bgs		
0	20										

Project Name: **Publix Renovation Project**

Project Number: **2014-0111**

Client: **The Publix Owner, LLC**



Test Probe/Well No.: **MW9**

Sheet 1 of 1

Date(s) Drilled: 5/11/16	Logged By: SL	Surface Conditions: Soil
Drilling Method(s): Direct Push	Drill Bit Size/Type: 2"	Total Depth of Borehole: 16 feet bgs
Drill Rig Type: Jack Hammer	Drilling Contractor: Standard Probe	Approximate Surface Elevation (feet amsl): 22 feet
Groundwater Elevation: 11.03 feet on 5/24/16	Sampling Method(s): Continuous	Hammer Data: n/a
Borehole Backfill: Monitoring Well	Location: 504 5th Avenue South, Seattle, Washington 98104	

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
22	0						ML		Fill - light brown sandy SILT, very stiff, moist, slight odor, slight sheen		Concrete 0 - 1
			MW-9:2	1.6							Blank 1.0" PVC 0 - 6
											Bentonite 1 - 5
17	5				1.2				Brick fragments		
							ML		Black sandy SILT, very stiff, moist, strong odor, strong sheen		
12	10		MW-9:10	40.2							Silica Sand 5 - 16
											10 Slot Screen 6 - 16
							MH		Black sandy SILT, very stiff, wet, strong odor, strong sheen		
7	15								Boring terminated 16' bgs		
2	20										

Project Name: **Publix Renovation Project**

Project Number: **2014-0111**

Client: **The Publix Owner, LLC**



Boring Log Key

Sheet 1 of 1

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

COLUMN DESCRIPTIONS

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











FIELD AND LABORATORY TEST ABBREVIATIONS

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






MATERIAL GRAPHIC SYMBOLS

-  Bentonite chips
-  SILT, SILT w/SAND, SANDY SILT (ML)
-  Poorly graded SAND (SP)

TYPICAL SAMPLER GRAPHIC SYMBOLS

-  Auger sampler
-  Bulk Sample
-  3-inch-OD California w/ brass rings
-  CME Sampler
-  Continuous
-  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.

Appendix C



03 March 2014

Mr. Mike Noll
The Riley Group, Inc. (RGI)
17522 Bothell Way NE
Bothell, WA 98011



H&P Project: RG022614-12
Client Project: Uwajimaya Block 1 / Fifth Ave.

Dear Mr. Mike Noll:

Enclosed is the analytical report for the above referenced project. The data herein applies to samples as received by H&P Mobile Geochemistry, Inc. on 26-Feb-14 which were analyzed in accordance with the attached Chain of Custody record(s).

The results for all sample analyses and required QA/QC analyses are presented in the following sections and summarized in the documents:

- Sample Summary
- Case Narrative (if applicable)
- Sample Results
- Quality Control Summary
- Notes and Definitions / Appendix
- Chain of Custody

Unless otherwise noted, all analyses were performed and reviewed in compliance with our Quality Systems Manual and Standard Operating Procedures. This report shall not be reproduced, except in full, without the written approval of H&P Mobile Geochemistry, Inc.

We at H&P Mobile Geochemistry, Inc. sincerely appreciate the opportunity to provide analytical services to you on this project. If you have any questions or concerns regarding this analytical report, please contact me at your convenience at 760-804-9678.

Sincerely,

A handwritten signature in cursive script that reads 'Janis Villarreal'.

Janis Villarreal
Laboratory Director

H&P Mobile Geochemistry, Inc. operates under CA Environmental Lab Accreditation Program Numbers 2579, 2740, 2741, 2742, 2743, 2745 and 2754. National Environmental Laboratory Accreditation Conference (NELAC) Standards Lab #11845

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

Project: RG022614-12
Project Number: Uwajimaya Block 1 / Fifth Ave.
Project Manager: Mr. Mike Noll

Reported:
03-Mar-14 10:51

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SV-1	E402156-01	Vapor	25-Feb-14	26-Feb-14
SV-2	E402156-02	Vapor	25-Feb-14	26-Feb-14
SV-3	E402156-03	Vapor	25-Feb-14	26-Feb-14
SV-4	E402156-04	Vapor	25-Feb-14	26-Feb-14
SV-5	E402156-05	Vapor	25-Feb-14	26-Feb-14
SV-6	E402156-06	Vapor	25-Feb-14	26-Feb-14

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

Project: RG022614-12
Project Number: Uwajimaya Block 1 / Fifth Ave.
Project Manager: Mr. Mike Noll

Reported:
03-Mar-14 10:51

DETECTIONS SUMMARY

Sample ID: SV-1

Laboratory ID: E402156-01

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
Acetone	22	9.6		ug/m3	EPA TO-15	
2-Butanone (MEK)	4.8	4.8		ug/m3	EPA TO-15	
Benzene	1.7	1.3		ug/m3	EPA TO-15	
Toluene	25	6.1		ug/m3	EPA TO-15	
Ethylbenzene	6.4	3.5		ug/m3	EPA TO-15	
m,p-Xylene	25	3.5		ug/m3	EPA TO-15	
o-Xylene	8.8	3.5		ug/m3	EPA TO-15	
1,2,4-Trimethylbenzene	7.5	4.0		ug/m3	EPA TO-15	
TPHv (C5 - C8) aliphatic	350	200		ug/m3	MA APHm	
TPHv (C5 - C11)	520	200		ug/m3	EPA TO-15	
TPHv (C9 - C12) aliphatic	250	200		ug/m3	MA APHm	

Sample ID: SV-2

Laboratory ID: E402156-02

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
Acetone	14	4.8		ug/m3	EPA TO-15	
2-Butanone (MEK)	5.1	2.4		ug/m3	EPA TO-15	
Benzene	1.5	0.6		ug/m3	EPA TO-15	
Toluene	31	3.1		ug/m3	EPA TO-15	
Tetrachloroethene	2.8	2.8		ug/m3	EPA TO-15	
Ethylbenzene	6.5	1.8		ug/m3	EPA TO-15	
m,p-Xylene	23	1.8		ug/m3	EPA TO-15	
o-Xylene	7.7	1.8		ug/m3	EPA TO-15	
4-Ethyltoluene	2.2	2.0		ug/m3	EPA TO-15	
1,3,5-Trimethylbenzene	2.0	2.0		ug/m3	EPA TO-15	
1,2,4-Trimethylbenzene	5.9	2.0		ug/m3	EPA TO-15	
TPHv (C5 - C8) aliphatic	320	100		ug/m3	MA APHm	
TPHv (C5 - C11)	530	100		ug/m3	EPA TO-15	
TPHv (C9 - C12) aliphatic	260	100		ug/m3	MA APHm	

Sample ID: SV-3

Laboratory ID: E402156-03

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
Chloromethane	5.5	0.8		ug/m3	EPA TO-15	
Vinyl chloride	0.6	0.5		ug/m3	EPA TO-15	
Acetone	100	4.8		ug/m3	EPA TO-15	
Carbon disulfide	4.9	1.3		ug/m3	EPA TO-15	

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

Project: RG022614-12
Project Number: Uwajimaya Block 1 / Fifth Ave.
Project Manager: Mr. Mike Noll

Reported:
03-Mar-14 10:51

Sample ID: SV-3

Laboratory ID: E402156-03

Analyte	Reporting		Units	Method	Notes
	Result	Limit			
2-Butanone (MEK)	14	2.4	ug/m3	EPA TO-15	
cis-1,2-Dichloroethene	2.6	1.6	ug/m3	EPA TO-15	
Chloroform	1.1	1.0	ug/m3	EPA TO-15	
Benzene	9.8	0.6	ug/m3	EPA TO-15	
Trichloroethene	9.2	2.2	ug/m3	EPA TO-15	
Toluene	63	3.1	ug/m3	EPA TO-15	
Tetrachloroethene	10	2.8	ug/m3	EPA TO-15	
Ethylbenzene	9.4	1.8	ug/m3	EPA TO-15	
m,p-Xylene	30	1.8	ug/m3	EPA TO-15	
Styrene	2.3	1.7	ug/m3	EPA TO-15	
o-Xylene	9.2	1.8	ug/m3	EPA TO-15	
4-Ethyltoluene	2.4	2.0	ug/m3	EPA TO-15	
1,3,5-Trimethylbenzene	2.0	2.0	ug/m3	EPA TO-15	
1,2,4-Trimethylbenzene	6.1	2.0	ug/m3	EPA TO-15	
TPHv (C5 - C8) aliphatic	1500	100	ug/m3	MA APHm	
TPHv (C5 - C11)	1200	100	ug/m3	EPA TO-15	
TPHv (C9 - C12) aliphatic	350	100	ug/m3	MA APHm	

Sample ID: SV-4

Laboratory ID: E402156-04

Analyte	Reporting		Units	Method	Notes
	Result	Limit			
Acetone	28	4.8	ug/m3	EPA TO-15	
2-Butanone (MEK)	6.8	2.4	ug/m3	EPA TO-15	
Chloroform	3.4	1.0	ug/m3	EPA TO-15	
Benzene	7.6	0.6	ug/m3	EPA TO-15	
Toluene	51	3.1	ug/m3	EPA TO-15	
Ethylbenzene	11	1.8	ug/m3	EPA TO-15	
m,p-Xylene	25	1.8	ug/m3	EPA TO-15	
o-Xylene	8.9	1.8	ug/m3	EPA TO-15	
4-Ethyltoluene	2.8	2.0	ug/m3	EPA TO-15	
1,3,5-Trimethylbenzene	2.7	2.0	ug/m3	EPA TO-15	
1,2,4-Trimethylbenzene	7.7	2.0	ug/m3	EPA TO-15	
TPHv (C5 - C8) aliphatic	740	100	ug/m3	MA APHm	
TPHv (C5 - C11)	850	100	ug/m3	EPA TO-15	
TPHv (C9 - C12) aliphatic	250	100	ug/m3	MA APHm	

Sample ID: SV-5

Laboratory ID: E402156-05

Analyte	Reporting		Units	Method	Notes
	Result	Limit			

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

Project: RG022614-12
Project Number: Uwajimaya Block 1 / Fifth Ave.
Project Manager: Mr. Mike Noll

Reported:
03-Mar-14 10:51

Sample ID: SV-5

Laboratory ID: E402156-05

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
Acetone	35	4.8		ug/m3	EPA TO-15	
2-Butanone (MEK)	8.2	2.4		ug/m3	EPA TO-15	
Chloroform	63	1.0		ug/m3	EPA TO-15	
Benzene	11	0.6		ug/m3	EPA TO-15	
Trichloroethene	3.1	2.2		ug/m3	EPA TO-15	
Bromodichloromethane	6.1	2.7		ug/m3	EPA TO-15	
Toluene	54	3.1		ug/m3	EPA TO-15	
Ethylbenzene	9.0	1.8		ug/m3	EPA TO-15	
m,p-Xylene	31	1.8		ug/m3	EPA TO-15	
o-Xylene	11	1.8		ug/m3	EPA TO-15	
4-Ethyltoluene	2.6	2.0		ug/m3	EPA TO-15	
1,3,5-Trimethylbenzene	2.6	2.0		ug/m3	EPA TO-15	
1,2,4-Trimethylbenzene	7.5	2.0		ug/m3	EPA TO-15	
TPHv (C5 - C8) aliphatic	840	100		ug/m3	MA APHm	
TPHv (C5 - C11)	910	100		ug/m3	EPA TO-15	
TPHv (C9 - C12) aliphatic	220	100		ug/m3	MA APHm	

Sample ID: SV-6

Laboratory ID: E402156-06

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
Acetone	68	4.8		ug/m3	EPA TO-15	
Carbon disulfide	2.5	1.3		ug/m3	EPA TO-15	
2-Butanone (MEK)	8.3	2.4		ug/m3	EPA TO-15	
Chloroform	1.1	1.0		ug/m3	EPA TO-15	
Benzene	18	0.6		ug/m3	EPA TO-15	
Trichloroethene	2.4	2.2		ug/m3	EPA TO-15	
Toluene	86	3.1		ug/m3	EPA TO-15	
Tetrachloroethene	3.3	2.8		ug/m3	EPA TO-15	
Ethylbenzene	52	1.8		ug/m3	EPA TO-15	
m,p-Xylene	73	1.8		ug/m3	EPA TO-15	
o-Xylene	24	1.8		ug/m3	EPA TO-15	
4-Ethyltoluene	5.1	2.0		ug/m3	EPA TO-15	
1,3,5-Trimethylbenzene	5.3	2.0		ug/m3	EPA TO-15	
1,2,4-Trimethylbenzene	9.1	2.0		ug/m3	EPA TO-15	
TPHv (C5 - C8) aliphatic	930	100		ug/m3	MA APHm	
TPHv (C5 - C11)	1000	100		ug/m3	EPA TO-15	
TPHv (C9 - C12) aliphatic	250	100		ug/m3	MA APHm	

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

Project: RG022614-12
Project Number: Uwajimaya Block 1 / Fifth Ave.
Project Manager: Mr. Mike Noll

Reported:
03-Mar-14 10:51

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV-1 (E402156-01) Vapor Sampled: 25-Feb-14 Received: 26-Feb-14									
Dichlorodifluoromethane (F12)	ND	8.0	ug/m3	2	EB42803	28-Feb-14	28-Feb-14	EPA TO-15	
Chloromethane	ND	1.7	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	5.6	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	3.2	"	"	"	"	"	"	
Chloroethane	ND	2.1	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	4.5	"	"	"	"	"	"	
Acetone	22	9.6	"	"	"	"	"	"	
1,1-Dichloroethene	ND	3.2	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	12	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	6.2	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	2.8	"	"	"	"	"	"	
Carbon disulfide	ND	2.5	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	3.2	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	5.8	"	"	"	"	"	"	
1,1-Dichloroethane	ND	3.3	"	"	"	"	"	"	
2-Butanone (MEK)	4.8	4.8	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	3.2	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	6.8	"	"	"	"	"	"	
Chloroform	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	6.8	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	4.4	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	3.3	"	"	"	"	"	"	
Benzene	1.7	1.3	"	"	"	"	"	"	
Carbon tetrachloride	ND	2.6	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	6.8	"	"	"	"	"	"	
Trichloroethene	ND	4.4	"	"	"	"	"	"	
1,2-Dichloropropane	ND	3.7	"	"	"	"	"	"	
Bromodichloromethane	ND	5.4	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	3.7	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	6.6	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	3.7	"	"	"	"	"	"	
Toluene	25	6.1	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	4.4	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	6.6	"	"	"	"	"	"	
Dibromochloromethane	ND	6.9	"	"	"	"	"	"	
Tetrachloroethene	ND	5.5	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	6.2	"	"	"	"	"	"	

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

Project: RG022614-12
Project Number: Uwajimaya Block 1 / Fifth Ave.
Project Manager: Mr. Mike Noll

Reported:
03-Mar-14 10:51

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV-1 (E402156-01) Vapor Sampled: 25-Feb-14 Received: 26-Feb-14									
1,1,1,2-Tetrachloroethane	ND	5.6	ug/m3	2	EB42803	28-Feb-14	28-Feb-14	EPA TO-15	
Chlorobenzene	ND	3.7	"	"	"	"	"	"	
Ethylbenzene	6.4	3.5	"	"	"	"	"	"	
m,p-Xylene	25	3.5	"	"	"	"	"	"	
Styrene	ND	3.5	"	"	"	"	"	"	
o-Xylene	8.8	3.5	"	"	"	"	"	"	
Bromoform	ND	8.4	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.6	"	"	"	"	"	"	
4-Ethyltoluene	ND	4.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	4.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	7.5	4.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	4.9	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	4.9	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	4.9	"	"	"	"	"	"	
Naphthalene	ND	4.2	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	15	"	"	"	"	"	"	
Hexachlorobutadiene	ND	21	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		95.1 %		76-134	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		97.9 %		78-125	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		101 %		77-127	"	"	"	"	

SV-2 (E402156-02) Vapor Sampled: 25-Feb-14 Received: 26-Feb-14

Dichlorodifluoromethane (F12)	ND	4.0	ug/m3	1	EB42803	28-Feb-14	28-Feb-14	EPA TO-15	
Chloromethane	ND	0.8	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	2.8	"	"	"	"	"	"	
Vinyl chloride	ND	0.5	"	"	"	"	"	"	
Bromomethane	ND	1.6	"	"	"	"	"	"	
Chloroethane	ND	1.1	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	2.3	"	"	"	"	"	"	
Acetone	14	4.8	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.6	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	6.1	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	3.1	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	1.4	"	"	"	"	"	"	
Carbon disulfide	ND	1.3	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.6	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	2.9	"	"	"	"	"	"	

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Reported:
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Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV-2 (E402156-02) Vapor Sampled: 25-Feb-14 Received: 26-Feb-14									
1,1-Dichloroethane	ND	1.6	ug/m3	1	EB42803	28-Feb-14	28-Feb-14	EPA TO-15	
2-Butanone (MEK)	5.1	2.4	"	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	1.6	"	"	"	"	"	"	"
Diisopropyl ether (DIPE)	ND	3.4	"	"	"	"	"	"	"
Chloroform	ND	1.0	"	"	"	"	"	"	"
Ethyl tert-butyl ether (ETBE)	ND	3.4	"	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	2.2	"	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	1.6	"	"	"	"	"	"	"
Benzene	1.5	0.6	"	"	"	"	"	"	"
Carbon tetrachloride	ND	1.3	"	"	"	"	"	"	"
Tertiary-amyl methyl ether (TAME)	ND	3.4	"	"	"	"	"	"	"
Trichloroethene	ND	2.2	"	"	"	"	"	"	"
1,2-Dichloropropane	ND	1.9	"	"	"	"	"	"	"
Bromodichloromethane	ND	2.7	"	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	1.8	"	"	"	"	"	"	"
4-Methyl-2-pentanone (MIBK)	ND	3.3	"	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	1.8	"	"	"	"	"	"	"
Toluene	31	3.1	"	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	2.2	"	"	"	"	"	"	"
2-Hexanone (MBK)	ND	3.3	"	"	"	"	"	"	"
Dibromochloromethane	ND	3.5	"	"	"	"	"	"	"
Tetrachloroethene	2.8	2.8	"	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	3.1	"	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	2.8	"	"	"	"	"	"	"
Chlorobenzene	ND	1.9	"	"	"	"	"	"	"
Ethylbenzene	6.5	1.8	"	"	"	"	"	"	"
m,p-Xylene	23	1.8	"	"	"	"	"	"	"
Styrene	ND	1.7	"	"	"	"	"	"	"
o-Xylene	7.7	1.8	"	"	"	"	"	"	"
Bromoform	ND	4.2	"	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	2.8	"	"	"	"	"	"	"
4-Ethyltoluene	2.2	2.0	"	"	"	"	"	"	"
1,3,5-Trimethylbenzene	2.0	2.0	"	"	"	"	"	"	"
1,2,4-Trimethylbenzene	5.9	2.0	"	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	2.4	"	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	2.4	"	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	2.4	"	"	"	"	"	"	"
Naphthalene	ND	2.1	"	"	"	"	"	"	"

The Riley Group, Inc. (RGI)
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Project: RG022614-12
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Project Manager: Mr. Mike Noll

Reported:
03-Mar-14 10:51

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV-2 (E402156-02) Vapor Sampled: 25-Feb-14 Received: 26-Feb-14									
1,2,4-Trichlorobenzene	ND	7.5	ug/m3	1	EB42803	28-Feb-14	28-Feb-14	EPA TO-15	
Hexachlorobutadiene	ND	11	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		92.3 %	76-134		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98.4 %	78-125		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		101 %	77-127		"	"	"	"	
SV-3 (E402156-03) Vapor Sampled: 25-Feb-14 Received: 26-Feb-14									
Dichlorodifluoromethane (F12)	ND	4.0	ug/m3	1	EB42803	28-Feb-14	28-Feb-14	EPA TO-15	
Chloromethane	5.5	0.8	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	2.8	"	"	"	"	"	"	
Vinyl chloride	0.6	0.5	"	"	"	"	"	"	
Bromomethane	ND	1.6	"	"	"	"	"	"	
Chloroethane	ND	1.1	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	2.3	"	"	"	"	"	"	
Acetone	100	4.8	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.6	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	6.1	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	3.1	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	1.4	"	"	"	"	"	"	
Carbon disulfide	4.9	1.3	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.6	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	2.9	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.6	"	"	"	"	"	"	
2-Butanone (MEK)	14	2.4	"	"	"	"	"	"	
cis-1,2-Dichloroethene	2.6	1.6	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	3.4	"	"	"	"	"	"	
Chloroform	1.1	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	3.4	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.2	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.6	"	"	"	"	"	"	
Benzene	9.8	0.6	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.3	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	3.4	"	"	"	"	"	"	
Trichloroethene	9.2	2.2	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.9	"	"	"	"	"	"	
Bromodichloromethane	ND	2.7	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.8	"	"	"	"	"	"	

The Riley Group, Inc. (RGI)
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Reported:
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Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV-3 (E402156-03) Vapor Sampled: 25-Feb-14 Received: 26-Feb-14									
4-Methyl-2-pentanone (MIBK)	ND	3.3	ug/m3	1	EB42803	28-Feb-14	28-Feb-14	EPA TO-15	
trans-1,3-Dichloropropene	ND	1.8	"	"	"	"	"	"	
Toluene	63	3.1	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.2	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	3.3	"	"	"	"	"	"	
Dibromochloromethane	ND	3.5	"	"	"	"	"	"	
Tetrachloroethene	10	2.8	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	3.1	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.8	"	"	"	"	"	"	
Chlorobenzene	ND	1.9	"	"	"	"	"	"	
Ethylbenzene	9.4	1.8	"	"	"	"	"	"	
m,p-Xylene	30	1.8	"	"	"	"	"	"	
Styrene	2.3	1.7	"	"	"	"	"	"	
o-Xylene	9.2	1.8	"	"	"	"	"	"	
Bromoform	ND	4.2	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.8	"	"	"	"	"	"	
4-Ethyltoluene	2.4	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	2.0	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	6.1	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.4	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.4	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.4	"	"	"	"	"	"	
Naphthalene	ND	2.1	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	7.5	"	"	"	"	"	"	
Hexachlorobutadiene	ND	11	"	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	88.0 %	76-134	"	"	"	"	"	"	
Surrogate: Toluene-d8	99.2 %	78-125	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	97.2 %	77-127	"	"	"	"	"	"	

The Riley Group, Inc. (RGI)
17522 Bothell Way NE
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03-Mar-14 10:51

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV-4 (E402156-04) Vapor Sampled: 25-Feb-14 Received: 26-Feb-14									
Dichlorodifluoromethane (F12)	ND	4.0	ug/m3	1	EB42803	28-Feb-14	28-Feb-14	EPA TO-15	
Chloromethane	ND	0.8	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	2.8	"	"	"	"	"	"	
Vinyl chloride	ND	0.5	"	"	"	"	"	"	
Bromomethane	ND	1.6	"	"	"	"	"	"	
Chloroethane	ND	1.1	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	2.3	"	"	"	"	"	"	
Acetone	28	4.8	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.6	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	6.1	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	3.1	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	1.4	"	"	"	"	"	"	
Carbon disulfide	ND	1.3	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.6	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	2.9	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.6	"	"	"	"	"	"	
2-Butanone (MEK)	6.8	2.4	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.6	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	3.4	"	"	"	"	"	"	
Chloroform	3.4	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	3.4	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.2	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.6	"	"	"	"	"	"	
Benzene	7.6	0.6	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.3	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	3.4	"	"	"	"	"	"	
Trichloroethene	ND	2.2	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.9	"	"	"	"	"	"	
Bromodichloromethane	ND	2.7	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.8	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	3.3	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.8	"	"	"	"	"	"	
Toluene	51	3.1	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.2	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	3.3	"	"	"	"	"	"	
Dibromochloromethane	ND	3.5	"	"	"	"	"	"	
Tetrachloroethene	ND	2.8	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	3.1	"	"	"	"	"	"	

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Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV-4 (E402156-04) Vapor Sampled: 25-Feb-14 Received: 26-Feb-14									
1,1,1,2-Tetrachloroethane	ND	2.8	ug/m3	1	EB42803	28-Feb-14	28-Feb-14	EPA TO-15	
Chlorobenzene	ND	1.9	"	"	"	"	"	"	
Ethylbenzene	11	1.8	"	"	"	"	"	"	
m,p-Xylene	25	1.8	"	"	"	"	"	"	
Styrene	ND	1.7	"	"	"	"	"	"	
o-Xylene	8.9	1.8	"	"	"	"	"	"	
Bromoform	ND	4.2	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.8	"	"	"	"	"	"	
4-Ethyltoluene	2.8	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	2.7	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	7.7	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.4	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.4	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.4	"	"	"	"	"	"	
Naphthalene	ND	2.1	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	7.5	"	"	"	"	"	"	
Hexachlorobutadiene	ND	11	"	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 88.6 % 76-134 " " " "

Surrogate: Toluene-d8 99.4 % 78-125 " " " "

Surrogate: 4-Bromofluorobenzene 102 % 77-127 " " " "

SV-5 (E402156-05) Vapor Sampled: 25-Feb-14 Received: 26-Feb-14

Dichlorodifluoromethane (F12)	ND	4.0	ug/m3	1	EB42803	28-Feb-14	28-Feb-14	EPA TO-15	
Chloromethane	ND	0.8	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	2.8	"	"	"	"	"	"	
Vinyl chloride	ND	0.5	"	"	"	"	"	"	
Bromomethane	ND	1.6	"	"	"	"	"	"	
Chloroethane	ND	1.1	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	2.3	"	"	"	"	"	"	
Acetone	35	4.8	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.6	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	6.1	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	3.1	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	1.4	"	"	"	"	"	"	
Carbon disulfide	ND	1.3	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.6	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	2.9	"	"	"	"	"	"	

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H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV-5 (E402156-05) Vapor Sampled: 25-Feb-14 Received: 26-Feb-14									
1,1-Dichloroethane	ND	1.6	ug/m3	1	EB42803	28-Feb-14	28-Feb-14	EPA TO-15	
2-Butanone (MEK)	8.2	2.4	"	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	1.6	"	"	"	"	"	"	"
Diisopropyl ether (DIPE)	ND	3.4	"	"	"	"	"	"	"
Chloroform	63	1.0	"	"	"	"	"	"	"
Ethyl tert-butyl ether (ETBE)	ND	3.4	"	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	2.2	"	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	1.6	"	"	"	"	"	"	"
Benzene	11	0.6	"	"	"	"	"	"	"
Carbon tetrachloride	ND	1.3	"	"	"	"	"	"	"
Tertiary-amyl methyl ether (TAME)	ND	3.4	"	"	"	"	"	"	"
Trichloroethene	3.1	2.2	"	"	"	"	"	"	"
1,2-Dichloropropane	ND	1.9	"	"	"	"	"	"	"
Bromodichloromethane	6.1	2.7	"	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	1.8	"	"	"	"	"	"	"
4-Methyl-2-pentanone (MIBK)	ND	3.3	"	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	1.8	"	"	"	"	"	"	"
Toluene	54	3.1	"	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	2.2	"	"	"	"	"	"	"
2-Hexanone (MBK)	ND	3.3	"	"	"	"	"	"	"
Dibromochloromethane	ND	3.5	"	"	"	"	"	"	"
Tetrachloroethene	ND	2.8	"	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	3.1	"	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	2.8	"	"	"	"	"	"	"
Chlorobenzene	ND	1.9	"	"	"	"	"	"	"
Ethylbenzene	9.0	1.8	"	"	"	"	"	"	"
m,p-Xylene	31	1.8	"	"	"	"	"	"	"
Styrene	ND	1.7	"	"	"	"	"	"	"
o-Xylene	11	1.8	"	"	"	"	"	"	"
Bromoform	ND	4.2	"	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	2.8	"	"	"	"	"	"	"
4-Ethyltoluene	2.6	2.0	"	"	"	"	"	"	"
1,3,5-Trimethylbenzene	2.6	2.0	"	"	"	"	"	"	"
1,2,4-Trimethylbenzene	7.5	2.0	"	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	2.4	"	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	2.4	"	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	2.4	"	"	"	"	"	"	"
Naphthalene	ND	2.1	"	"	"	"	"	"	"

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

Project: RG022614-12
Project Number: Uwajimaya Block 1 / Fifth Ave.
Project Manager: Mr. Mike Noll

Reported:
03-Mar-14 10:51

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV-5 (E402156-05) Vapor Sampled: 25-Feb-14 Received: 26-Feb-14									
1,2,4-Trichlorobenzene	ND	7.5	ug/m3	1	EB42803	28-Feb-14	28-Feb-14	EPA TO-15	
Hexachlorobutadiene	ND	11	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		90.9 %	76-134		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		96.3 %	78-125		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		99.1 %	77-127		"	"	"	"	
SV-6 (E402156-06) Vapor Sampled: 25-Feb-14 Received: 26-Feb-14									
Dichlorodifluoromethane (F12)	ND	4.0	ug/m3	1	EB42803	28-Feb-14	28-Feb-14	EPA TO-15	
Chloromethane	ND	0.8	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	2.8	"	"	"	"	"	"	
Vinyl chloride	ND	0.5	"	"	"	"	"	"	
Bromomethane	ND	1.6	"	"	"	"	"	"	
Chloroethane	ND	1.1	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	2.3	"	"	"	"	"	"	
Acetone	68	4.8	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.6	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	6.1	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	3.1	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	1.4	"	"	"	"	"	"	
Carbon disulfide	2.5	1.3	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.6	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	2.9	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.6	"	"	"	"	"	"	
2-Butanone (MEK)	8.3	2.4	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.6	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	3.4	"	"	"	"	"	"	
Chloroform	1.1	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	3.4	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.2	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.6	"	"	"	"	"	"	
Benzene	18	0.6	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.3	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	3.4	"	"	"	"	"	"	
Trichloroethene	2.4	2.2	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.9	"	"	"	"	"	"	
Bromodichloromethane	ND	2.7	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.8	"	"	"	"	"	"	

The Riley Group, Inc. (RGI)
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Bothell, WA 98011

Project: RG022614-12
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Project Manager: Mr. Mike Noll

Reported:
03-Mar-14 10:51

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV-6 (E402156-06) Vapor Sampled: 25-Feb-14 Received: 26-Feb-14									
4-Methyl-2-pentanone (MIBK)	ND	3.3	ug/m3	1	EB42803	28-Feb-14	28-Feb-14	EPA TO-15	
trans-1,3-Dichloropropene	ND	1.8	"	"	"	"	"	"	
Toluene	86	3.1	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.2	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	3.3	"	"	"	"	"	"	
Dibromochloromethane	ND	3.5	"	"	"	"	"	"	
Tetrachloroethene	3.3	2.8	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	3.1	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.8	"	"	"	"	"	"	
Chlorobenzene	ND	1.9	"	"	"	"	"	"	
Ethylbenzene	52	1.8	"	"	"	"	"	"	
m,p-Xylene	73	1.8	"	"	"	"	"	"	
Styrene	ND	1.7	"	"	"	"	"	"	
o-Xylene	24	1.8	"	"	"	"	"	"	
Bromoform	ND	4.2	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.8	"	"	"	"	"	"	
4-Ethyltoluene	5.1	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	5.3	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	9.1	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.4	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.4	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.4	"	"	"	"	"	"	
Naphthalene	ND	2.1	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	7.5	"	"	"	"	"	"	
Hexachlorobutadiene	ND	11	"	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	88.6 %	76-134	"	"	"	"	"	"	
Surrogate: Toluene-d8	101 %	78-125	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	77-127	"	"	"	"	"	"	

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

Project: RG022614-12
Project Number: Uwajimaya Block 1 / Fifth Ave.
Project Manager: Mr. Mike Noll

Reported:
03-Mar-14 10:51

TPHv / APH on Vapors by EPA Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV-1 (E402156-01) Vapor Sampled: 25-Feb-14 Received: 26-Feb-14									
TPHv (C5 - C11)	520	200	ug/m3	2	EB42803	28-Feb-14	28-Feb-14	EPA TO-15	
TPHv (C5 - C8) aliphatic	350	200	"	"	"	"	"	MA APHm	
TPHv (C9 - C12) aliphatic	250	200	"	"	"	"	"	"	
TPHv (C9 - C10) aromatic	ND	200	"	"	"	"	"	"	
SV-2 (E402156-02) Vapor Sampled: 25-Feb-14 Received: 26-Feb-14									
TPHv (C5 - C11)	530	100	ug/m3	1	EB42803	28-Feb-14	28-Feb-14	EPA TO-15	
TPHv (C5 - C8) aliphatic	320	100	"	"	"	"	"	MA APHm	
TPHv (C9 - C12) aliphatic	260	100	"	"	"	"	"	"	
TPHv (C9 - C10) aromatic	ND	100	"	"	"	"	"	"	
SV-3 (E402156-03) Vapor Sampled: 25-Feb-14 Received: 26-Feb-14									
TPHv (C5 - C11)	1200	100	ug/m3	1	EB42803	28-Feb-14	28-Feb-14	EPA TO-15	
TPHv (C5 - C8) aliphatic	1500	100	"	"	"	"	"	MA APHm	
TPHv (C9 - C12) aliphatic	350	100	"	"	"	"	"	"	
TPHv (C9 - C10) aromatic	ND	100	"	"	"	"	"	"	
SV-4 (E402156-04) Vapor Sampled: 25-Feb-14 Received: 26-Feb-14									
TPHv (C5 - C11)	850	100	ug/m3	1	EB42803	28-Feb-14	28-Feb-14	EPA TO-15	
TPHv (C5 - C8) aliphatic	740	100	"	"	"	"	"	MA APHm	
TPHv (C9 - C12) aliphatic	250	100	"	"	"	"	"	"	
TPHv (C9 - C10) aromatic	ND	100	"	"	"	"	"	"	
SV-5 (E402156-05) Vapor Sampled: 25-Feb-14 Received: 26-Feb-14									
TPHv (C5 - C11)	910	100	ug/m3	1	EB42803	28-Feb-14	28-Feb-14	EPA TO-15	
TPHv (C5 - C8) aliphatic	840	100	"	"	"	"	"	MA APHm	
TPHv (C9 - C12) aliphatic	220	100	"	"	"	"	"	"	
TPHv (C9 - C10) aromatic	ND	100	"	"	"	"	"	"	

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

Project: RG022614-12
Project Number: Uwajimaya Block 1 / Fifth Ave.
Project Manager: Mr. Mike Noll

Reported:
03-Mar-14 10:51

TPHv / APH on Vapors by EPA Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV-6 (E402156-06) Vapor Sampled: 25-Feb-14 Received: 26-Feb-14									
TPHv (C5 - C11)	1000	100	ug/m3	1	EB42803	28-Feb-14	28-Feb-14	EPA TO-15	
TPHv (C5 - C8) aliphatic	930	100	"	"	"	"	"	MA APHm	
TPHv (C9 - C12) aliphatic	250	100	"	"	"	"	"	"	
TPHv (C9 - C10) aromatic	ND	100	"	"	"	"	"	"	

The Riley Group, Inc. (RGI)
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Project: RG022614-12
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Reported:
03-Mar-14 10:51

Volatile Organic Compounds by EPA TO-15 - Quality Control
H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EB42803 - TO-15

Prepared & Analyzed: 28-Feb-14

Blank (EB42803-BLK1)

Dichlorodifluoromethane (F12)	ND	4.0	ug/m3							
Chloromethane	ND	0.8	"							
Dichlorotetrafluoroethane (F114)	ND	2.8	"							
Vinyl chloride	ND	0.5	"							
Bromomethane	ND	1.6	"							
Chloroethane	ND	1.1	"							
Trichlorofluoromethane (F11)	ND	2.3	"							
Acetone	ND	4.8	"							
1,1-Dichloroethene	ND	1.6	"							
Tertiary-butyl alcohol (TBA)	ND	6.1	"							
1,1,2-Trichlorotrifluoroethane (F113)	ND	3.1	"							
Methylene chloride (Dichloromethane)	ND	1.4	"							
Carbon disulfide	ND	1.3	"							
trans-1,2-Dichloroethene	ND	1.6	"							
Methyl tertiary-butyl ether (MTBE)	ND	2.9	"							
1,1-Dichloroethane	ND	1.6	"							
2-Butanone (MEK)	ND	2.4	"							
cis-1,2-Dichloroethene	ND	1.6	"							
Diisopropyl ether (DIPE)	ND	3.4	"							
Chloroform	ND	1.0	"							
Ethyl tert-butyl ether (ETBE)	ND	3.4	"							
1,1,1-Trichloroethane	ND	2.2	"							
1,2-Dichloroethane (EDC)	ND	1.6	"							
Benzene	ND	0.6	"							
Carbon tetrachloride	ND	1.3	"							
Tertiary-amyl methyl ether (TAME)	ND	3.4	"							
Trichloroethene	ND	2.2	"							
1,2-Dichloropropane	ND	1.9	"							
Bromodichloromethane	ND	2.7	"							
cis-1,3-Dichloropropene	ND	1.8	"							
4-Methyl-2-pentanone (MIBK)	ND	3.3	"							
trans-1,3-Dichloropropene	ND	1.8	"							
Toluene	ND	3.1	"							
1,1,2-Trichloroethane	ND	2.2	"							

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Volatile Organic Compounds by EPA TO-15 - Quality Control
H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EB42803 - TO-15

Prepared & Analyzed: 28-Feb-14

Blank (EB42803-BLK1)

2-Hexanone (MBK)	ND	3.3	ug/m3							
Dibromochloromethane	ND	3.5	"							
Tetrachloroethene	ND	2.8	"							
1,2-Dibromoethane (EDB)	ND	3.1	"							
1,1,1,2-Tetrachloroethane	ND	2.8	"							
Chlorobenzene	ND	1.9	"							
Ethylbenzene	ND	1.8	"							
m,p-Xylene	ND	1.8	"							
Styrene	ND	1.7	"							
o-Xylene	ND	1.8	"							
Bromoform	ND	4.2	"							
1,1,1,2-Tetrachloroethane	ND	2.8	"							
4-Ethyltoluene	ND	2.0	"							
1,3,5-Trimethylbenzene	ND	2.0	"							
1,2,4-Trimethylbenzene	ND	2.0	"							
1,3-Dichlorobenzene	ND	2.4	"							
1,4-Dichlorobenzene	ND	2.4	"							
1,2-Dichlorobenzene	ND	2.4	"							
Naphthalene	ND	2.1	"							
1,2,4-Trichlorobenzene	ND	7.5	"							
Hexachlorobutadiene	ND	11	"							

Surrogate: 1,2-Dichloroethane-d4	197		"	214		92.1	76-134			
Surrogate: Toluene-d8	200		"	207		96.4	78-125			
Surrogate: 4-Bromofluorobenzene	357		"	364		97.8	77-127			

LCS (EB42803-BS1)

Prepared & Analyzed: 28-Feb-14

Dichlorodifluoromethane (F12)	7.7	4.0	ug/m3	10.1		76.7	70-130			
Vinyl chloride	3.8	0.5	"	5.20		73.7	70-130			
Chloroethane	4.3	1.1	"	5.36		80.9	70-130			
Trichlorofluoromethane (F11)	7.6	2.3	"	11.3		67.3	70-130			QL-1L
1,1-Dichloroethene	5.6	1.6	"	8.08		68.7	70-130			QL-1L
1,1,2-Trichlorotrifluoroethane (F113)	11.3	3.1	"	15.5		72.7	70-130			
Methylene chloride (Dichloromethane)	5.1	1.4	"	7.08		72.4	70-130			

The Riley Group, Inc. (RGI)
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Reported:
03-Mar-14 10:51

Volatile Organic Compounds by EPA TO-15 - Quality Control
H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EB42803 - TO-15

Prepared & Analyzed: 28-Feb-14										
LCS (EB42803-BS1)										
trans-1,2-Dichloroethene	5.4	1.6	ug/m3	8.08	66.7	70-130				QL-1L
1,1-Dichloroethane	6.0	1.6	"	8.24	72.7	70-130				
cis-1,2-Dichloroethene	6.0	1.6	"	8.00	75.0	70-130				
Chloroform	7.4	1.0	"	9.92	74.8	70-130				
1,1,1-Trichloroethane	8.4	2.2	"	11.1	75.4	70-130				
1,2-Dichloroethane (EDC)	6.3	1.6	"	8.24	76.0	70-130				
Benzene	5.2	0.6	"	6.48	80.3	70-130				
Carbon tetrachloride	10.0	1.3	"	12.8	78.4	70-130				
Trichloroethene	8.4	2.2	"	11.0	76.8	70-130				
Toluene	6.0	3.1	"	7.68	78.4	70-130				
1,1,2-Trichloroethane	8.7	2.2	"	11.1	78.2	70-130				
Tetrachloroethene	11.6	2.8	"	13.8	83.5	70-130				
1,1,1,2-Tetrachloroethane	11.4	2.8	"	14.0	81.3	70-130				
Ethylbenzene	8.1	1.8	"	8.84	91.1	70-130				
m,p-Xylene	15.7	1.8	"	17.7	88.7	70-130				
o-Xylene	7.8	1.8	"	8.84	87.8	70-130				
1,1,2,2-Tetrachloroethane	13.3	2.8	"	14.0	94.8	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	191		"	214	89.1	70-130				
<i>Surrogate: Toluene-d8</i>	201		"	207	97.1	70-130				
<i>Surrogate: 4-Bromofluorobenzene</i>	378		"	364	104	70-130				

Prepared & Analyzed: 28-Feb-14										
LCS Dup (EB42803-BS1)										
Dichlorodifluoromethane (F12)	8.2	4.0	ug/m3	10.1	81.6	70-130	6.17	25		
Vinyl chloride	3.8	0.5	"	5.20	72.5	70-130	1.64	25		
Chloroethane	4.3	1.1	"	5.36	80.2	70-130	0.806	25		
Trichlorofluoromethane (F11)	7.8	2.3	"	11.3	68.6	70-130	1.98	25		QL-1L
1,1-Dichloroethene	5.7	1.6	"	8.08	70.1	70-130	2.01	25		
1,1,2-Trichlorotrifluoroethane (F113)	11.5	3.1	"	15.5	74.2	70-130	2.03	25		
Methylene chloride (Dichloromethane)	5.1	1.4	"	7.08	72.5	70-130	0.138	25		
trans-1,2-Dichloroethene	5.4	1.6	"	8.08	67.4	70-130	1.04	25		QL-1L
1,1-Dichloroethane	6.1	1.6	"	8.24	74.3	70-130	2.24	25		
cis-1,2-Dichloroethene	6.1	1.6	"	8.00	76.8	70-130	2.45	25		
Chloroform	7.5	1.0	"	9.92	75.9	70-130	1.52	25		

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Reported:
03-Mar-14 10:51

Volatile Organic Compounds by EPA TO-15 - Quality Control
H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EB42803 - TO-15

LCS Dup (EB42803-BSD1)

Prepared & Analyzed: 28-Feb-14

1,1,1-Trichloroethane	8.7	2.2	ug/m3	11.1		77.9	70-130	3.24	25	
1,2-Dichloroethane (EDC)	6.2	1.6	"	8.24		75.6	70-130	0.526	25	
Benzene	5.3	0.6	"	6.48		81.9	70-130	1.91	25	
Carbon tetrachloride	10.4	1.3	"	12.8		81.1	70-130	3.44	25	
Trichloroethene	8.6	2.2	"	11.0		78.5	70-130	2.18	25	
Toluene	6.0	3.1	"	7.68		78.8	70-130	0.506	25	
1,1,2-Trichloroethane	8.8	2.2	"	11.1		78.7	70-130	0.696	25	
Tetrachloroethene	11.6	2.8	"	13.8		83.7	70-130	0.298	25	
1,1,1,2-Tetrachloroethane	11.4	2.8	"	14.0		81.8	70-130	0.549	25	
Ethylbenzene	8.0	1.8	"	8.84		90.2	70-130	0.933	25	
m,p-Xylene	15.7	1.8	"	17.7		88.6	70-130	0.112	25	
o-Xylene	7.7	1.8	"	8.84		87.0	70-130	0.911	25	
1,1,2,2-Tetrachloroethane	13.2	2.8	"	14.0		94.0	70-130	0.791	25	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	193		"	214		90.2	70-130			
<i>Surrogate: Toluene-d8</i>	202		"	207		97.4	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	368		"	364		101	70-130			

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

Project: RG022614-12
Project Number: Uwajimaya Block 1 / Fifth Ave.
Project Manager: Mr. Mike Noll

Reported:
03-Mar-14 10:51

TPHv / APH on Vapors by EPA Method TO-15 - Quality Control
H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch EB42803 - TO-15

Blank (EB42803-BLK1)

Prepared & Analyzed: 28-Feb-14

TPHv (C5 - C8) aliphatic	ND	100	ug/m3							
TPHv (C5 - C11)	ND	100	"							
TPHv (C9 - C12) aliphatic	ND	100	"							
TPHv (C9 - C10) aromatic	ND	100	"							

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

Project: RG022614-12
Project Number: Uwajimaya Block 1 / Fifth Ave.
Project Manager: Mr. Mike Noll

Reported:
03-Mar-14 10:51

Notes and Definitions

- QL-1L The LCS and/or LCSD recoveries fell below the established control specifications for this analyte. Any result for this compound is qualified and should be considered biased low.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

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

Project: RG022614-12
Project Number: Uwajimaya Block 1 / Fifth Ave.
Project Manager: Mr. Mike Noll

Reported:
03-Mar-14 10:51

Appendix

H&P Mobile Geochemistry, Inc. is approved as an Environmental Testing Laboratory (Certification # L11-175) in accordance with the DoD-ELAP program. H&P is approved by the State of Arizona under Certification Numbers AZM758 and AZ0779. H&P is approved as an Environmental Laboratory in conformance with the Environmental Laboratory Accreditation Program (CA) for the category of Volatile and Semi-Volatile Organic Chemistry of Hazardous Waste for the following methods:

Certificate# 2741, 2743, 2579, 2754 & 2740 approved for EPA 8260 and LUFT GC/MS
Certificate# 2742, 2745, & 2741 approved for LUFT
Certificate# 2745 & 2742 approved for EPA 418.1

H&P Mobile Geochemistry, Inc. is approved as an Environmental Laboratory in conformance with the National Environmental Accreditation Conference Standards for the category Environmental Analysis Air and Emissions for the following analytes and methods:

Hexachlorobutadiene by EPA TO-15 & TO-14A	1,3-Dichlorobenzene by EPA TO-15 & TO-14A
1,2,4-Trichlorobenzene by EPA TO-15 & TO-14A	Trichlorofluoromethane by EPA TO-14A
1,2-Dichlorobenzene by EPA TO-15 & TO-14A	Naphthalene by H&P SOP TO-15/GC-MS
Dichlorotetrafluoroethane by EPA TO-14A	1,2-Dibromoethane (EDB) by EPA TO-15 & TO-14A
1,4-Dichlorobenzene by EPA TO-15 & TO-14A	1,2-Dibromo-3-chloropropane by EPA TO-15
Benzene by EPA TO-15 & TO-14A	1,3-Butadiene by EPA TO-15
Chlorobenzene by EPA TO-15 & TO-14A	1,1,2-Trichlorotrifluoroethane by EPA TO-14A
Ethyl benzene by EPA TO-15 & TO-14A	Carbon disulfide by EPA TO-15
Styrene by EPA TO-15 & TO-14A	1,4-Dioxane by EPA TO-15
Toluene by EPA TO-15 & TO-14A	
Total Xylenes by EPA TO-15	
1,1,1-Trichloroethane by EPA TO-15 & TO-14A	
1,1,2,2-Tetrachloroethane by EPA TO-15 & TO-14A	
1,1,2-Trichloroethane by EPA TO-15 & TO-14A	
1,1-Dichloroethane by EPA TO-15 & TO-14A	
1,1-Dichloroethene by EPA TO-15 & TO-14A	
1,2-Dichloroethane by EPA TO-15 & TO-14A	
1,2-Dichloropropane by EPA TO-15 & TO-14A	
Benzyl Chloride by EPA TO-15 & TO-14A	
Bromoform by EPA TO-15	
Bromomethane by EPA TO-15 & TO-14A	
Carbon tetrachloride by EPA TO-15 & TO-14A	
Chloroethane by EPA TO-15 & TO-14A	
Chloroform by EPA TO-15 & TO-14A	
Chloromethane by EPA TO-15 & TO-14A	
cis-1,2-Dichloroethene by EPA TO-15 & TO-14A	
cis-1,3-Dichloropropene by EPA TO-15 & TO-14A	
Methylene chloride by EPA TO -15 & TO-14A	
Tetrachloroethane by EPA TO-15 & TO-14A	
trans-1,2-Dichloroethene by EPA TO-15	
trans-1,3-Dichloropropene by EPA TO-15 & TO-14A	
Trichloroethene by EPA TO-15 & TO-14A	
Vinyl chloride by EPA TO -15	
2-Butanone by EPA TO-15	
4-Methyl-2-Pentanone by EPA TO-15	
Hexane by EPA TO-15	
Methyl tert-butyl ether by EPA TO-15	
Vinyl acetate by EPA TO-15	

This certification applies to samples analyzed in summa canisters.

Lab Client and Project Information	
Lab Client/Consultant: <u>The Riley Group, Inc.</u>	Project Name / #: <u>Udayjima Block 1</u>
Lab Client Project Manager: <u>Mike Noll</u>	Project Location: <u>504 and 510 Fifth Ave S, Seattle, WA 98104</u>
Lab Client Address: <u>17522 Bothell Way NE Ste A</u>	Report E-Mail(s): <u>please email scanned image of COC to Mike Noll when received. mnoll@rileygroup.com</u>
Lab Client City, State, Zip: <u>Bothell, WA 98011</u>	Sampler Information: <u>Mike Gipson, Stafford Larson</u>
Phone Number: <u>425-415-0551</u>	Signature: <u>[Signature]</u>
	Date: <u>2-25-2014</u>
Reporting Requirements	Turnaround Time
<input checked="" type="checkbox"/> Standard Report <input type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/> Excel EDD <input type="checkbox"/> Other EDD: _____ <input type="checkbox"/> CA Geotracker Global ID: _____	<input type="checkbox"/> 5-7 day Std <input type="checkbox"/> 3-day Rush <input checked="" type="checkbox"/> 48-Hr Rush *
	<input type="checkbox"/> 24-Hr Rush <input type="checkbox"/> Mobile Lab <input type="checkbox"/> Other: _____

Sample Receipt (Lab Use Only)	
Date Rec'd: <u>2/26/14</u>	Control #: <u>140172.01</u>
H&P Project #: <u>R6022614-12</u>	Lab Work Order #: <u>E402-156</u>
Sample Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> See Notes Below	Receipt Gauge ID: <u>11176</u>
Outside Lab: _____	Temp: <u>PA</u>
Receipt Notes/Tracking #: <u>FEDEX #: 20973509103</u>	Lab PM Initials: <u>SN</u>

Additional Instructions to Laboratory: * DATA BY 5PM ON 2/28/14
 ** NOTE: ANALYTICAL BOXES MARKED BY SN BASED ON COC NOTES & PROJECT QUOTE - (SN)

Check if Project Analyte List is Attached
 Preferred VOC units (please choose one):
 µg/L µg/m³ ppbv ppmv

SAMPLE NAME	FIELD POINT NAME (if applicable)	DATE mm/dd/yyyy	TIME 24hr clock	SAMPLE TYPE Indoor Air (IA), Ambient Air (AA), Subst (SS), Soil Vapor (SV)	CONTAINER SIZE & TYPE 400mL/100L Summa or Tedlar or Tube	CONTAINER ID (#)	Lab use only: Receipt Vac
SV-1		2-25-14	13:20	SV	1LS	420	1.12
SV-2			14:05			423	.01
SV-3			13:10			409	.5
SV-4			14:30			416	.01
SV-5			15:10			193	.7
SV-6			15:20			171	.65
				sample time changes	Signed by		
		field staff - <u>[Signature]</u>			Mike Gipson		

Approved Requested by: <u>Mike Gipson</u>	Company: <u>R61</u>	Date: <u>2-25-2014</u>	Time: <u>5:00</u>
Approved Requested by: _____	Company: _____	Date: _____	Time: _____
Approved Requested by: _____	Company: _____	Date: _____	Time: _____

* Approval constitutes as evidence that the analysis and interpretation of data are based on the information provided by the client and are not intended to be used for any other purpose.

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
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

December 22, 2015

Kris Addis, Project Manager
The Riley Group, Inc.
17522 Bothell Way NE
Bothell, WA 98011

Dear Ms. Addis:

Included are the additional results from the testing of material submitted on November 9, 2015 from the Publix 2014-011, F&BI 511086 project. There are 8 pages included in this report.

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

c: David Baumgarten, Jerry Sawetz
TRG1222R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 9, 2015 by Friedman & Bruya, Inc. from the The Riley Group Publix 2014-011, F&BI 511086 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>The Riley Group</u>
511086 -01	Sub-basement grab
511086 -02	Sub-basement grab

The 200.8 lead matrix spike failed the acceptance criteria. The laboratory control sample passed the acceptance criteria, therefore the results were likely due to matrix effect.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Sub-basement grab	Client:	The Riley Group
Date Received:	11/09/15	Project:	Publix 2014-011, F&BI 511086
Date Extracted:	12/15/15	Lab ID:	511086-01
Date Analyzed:	12/15/15	Data File:	511086-01.047
Matrix:	Soil/Product	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	SP

Internal Standard:	% Recovery:	Lower	Upper
Holmium	99	Limit:	Limit:
		60	125

Analyte:	Concentration
	mg/kg (ppm)
Lead	12.4

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	The Riley Group
Date Received:	Not Applicable	Project:	Publix 2014-011, F&BI 511086
Date Extracted:	12/15/15	Lab ID:	I5-716 mb2
Date Analyzed:	12/15/15	Data File:	I5-716 mb2.046
Matrix:	Soil/Product	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	SP

Internal Standard:	% Recovery:	Lower	Upper
Holmium	95	Limit:	Limit:
		60	125

Analyte:	Concentration
	mg/kg (ppm)
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Sub-basement grab	Client:	The Riley Group
Date Received:	11/09/15	Project:	Publix 2014-011, F&BI 511086
Date Extracted:	12/18/15	Lab ID:	511086-01
Date Analyzed:	12/18/15	Data File:	08.D\ECD1A.CH
Matrix:	Product	Instrument:	GC7
Units:	mg/kg (ppm)	Operator:	MP

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	101	37	158

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<2
Aroclor 1232	<2
Aroclor 1016	<2
Aroclor 1242	<2
Aroclor 1248	<2
Aroclor 1254	<2
Aroclor 1260	<2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	The Riley Group
Date Received:	Not Applicable	Project:	Publix 2014-011, F&BI 511086
Date Extracted:	12/18/15	Lab ID:	05-2556 mb
Date Analyzed:	12/18/15	Data File:	06.D\ECD1A.C
Matrix:	Product	Instrument:	GC7
Units:	mg/kg (ppm)	Operator:	MP

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	115	37	158

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<2
Aroclor 1232	<2
Aroclor 1016	<2
Aroclor 1242	<2
Aroclor 1248	<2
Aroclor 1254	<2
Aroclor 1260	<2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/22/15

Date Received: 11/09/15

Project: Publix 2014-011, F&BI 511086

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF SOIL/PRODUCT SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 512090-11 x10 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	50	<10	69 vo	81	70-130	16

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	50	100	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/22/15

Date Received: 11/09/15

Project: Publix 2014-011, F&BI 511086

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF PRODUCT SAMPLES FOR
POLYCHLORINATED BIPHENYLS AS
AROCOR 1016/1260 BY EPA METHOD 8082A**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	100	114	119	60-151	4
Aroclor 1260	mg/kg (ppm)	100	114	120	53-144	5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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 compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. 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. Compounds in the sample matrix interfered with the quantitation of the analyte.

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.

511086

SAMPLE CHAIN OF CUSTODY

ME 11/9/15 802 1

Report To Kris Adis
 Company RG1
 Address 17522 Bothell Way NE Ste A
 City, State, ZIP Bothell WA 98011
 Phone 425-415-0551 Email Kadis@viley-group.com

SAMPLERS (signature) [Signature]
 PROJECT NAME Publix PO # 2014-011
 REMARKS _____ INVOICE TO _____

Page # _____
TURNAROUND TIME
 Standard (10 Business Days)
 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 containers	ANALYSES REQUESTED											Notes		
						NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	HFS	ACID-	PCBs	Lead					
Sub-basement grab	01A	11/9/15	10:45	product	2														* per KA
Sub-basement grab	02B	11/9/15	10:45	water	1														12/14/15 ms

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	<u>Nike Gipsom</u>	<u>RG1</u>	<u>11/9/15</u>	<u>11:30</u>
Received by: <u>[Signature]</u>	<u>Michael Edlich</u>	<u>FEBC</u>	<u>↓</u>	<u>↓</u>
Relinquished by:				
Received by:				

Samples received at 6 °C

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
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

March 15, 2016

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

Dear Mr. Sawetz:

Included is the amended report from the testing of material submitted on November 9, 2015 from the Publix, 2014-011, F&BI 511086 project. The product HCID reporting limits have been corrected.

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
c: David Baumgarten
TRG1111R.DOC

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
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

November 11, 2015

Kris Addis, Project Manager
The Riley Group, Inc.
17522 Bothell Way NE
Bothell, WA 98011

Dear Ms. Addis:

Included are the results from the testing of material submitted on November 9, 2015 from the Publix, 2014-011, F&BI 511086 project. There are 5 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
TRG1111R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 9, 2015 by Friedman & Bruya, Inc. from the The Riley Group Publix, 2014-011, F&BI 511086 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>The Riley Group</u>
511086 -01	Sub-basement grab
511086 -02	Sub-basement grab

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/11/15
Date Received: 11/09/15
Project: Publix, 2014-011, F&BI 511086
Date Extracted: 11/10/15
Date Analyzed: 11/10/15

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

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

<u>Sample ID</u> Laboratory ID	<u>Gasoline</u>	<u>Diesel</u>	<u>Heavy Oil</u>	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 56-165)
Sub-basement grab 511086-01 1/1,000	ND	D	D	ip
Method Blank 05-2283 MB	ND	ND	ND	79

ND - Material not detected at or above 2,000 mg/kg gas, 5,000 mg/kg diesel and 25,000 mg/kg heavy oil.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/11/15
Date Received: 11/09/15
Project: Publix, 2014-011, F&BI 511086
Date Extracted: 11/09/15
Date Analyzed: 11/09/15

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 47-140)
Sub-basement grab 511086-02 1/40	170,000	110,000	ip
Method Blank 05-2280 MB	<50	<250	77

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/11/15

Date Received: 11/09/15

Project: Publix, 2014-011, F&BI 511086

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	84	96	61-133	13

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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 compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. 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. Compounds in the sample matrix interfered with the quantitation of the analyte.

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.

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
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

January 13, 2016

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 December 31, 2015 from the Publix, 2014-091F, F&BI 512489 project. There are 11 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
TRG0113R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on December 31, 2015 by Friedman & Bruya, Inc. from the The Riley Group Publix, 2014-091F, F&BI 512489 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>The Riley Group</u>
512489 -01	UST1-W
512489 -02	UST1-P
512489 -03	UST2-mani
512489 -04	Corner pool

The 200.8 metals reporting limits for sample UST2-mani were raised due to insufficient sample volume.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/13/16
Date Received: 12/31/15
Project: Publix, 2014-091F, F&BI 512489
Date Extracted: 01/04/16
Date Analyzed: 01/04/16

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

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

<u>Sample ID</u> Laboratory ID	<u>Gasoline</u>	<u>Diesel</u>	<u>Heavy Oil</u>	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 53-144)
UST1-P 512489-02	ND	D	D	122
UST2-mani 512489-03	ND	D	D	122
Method Blank 06-029 MB	ND	ND	ND	115

ND - Material not detected at or above 2,000 mg/kg gas, 5,000 mg/kg diesel and 25,000 mg/kg heavy oil.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	UST1-P	Client:	The Riley Group
Date Received:	12/31/15	Project:	Publix, 2014-091F, F&BI 512489
Date Extracted:	01/05/16	Lab ID:	512489-02 x2
Date Analyzed:	01/05/16	Data File:	512489-02 x2.061
Matrix:	Soil/Product	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	125	60	125
Indium	93	60	125
Holmium	117	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<2
Cadmium	<2
Chromium	10.8
Lead	35.5
Mercury	<2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	UST2-mani	Client:	The Riley Group
Date Received:	12/31/15	Project:	Publix, 2014-091F, F&BI 512489
Date Extracted:	01/05/16	Lab ID:	512489-03 x10
Date Analyzed:	01/05/16	Data File:	512489-03 x10.062
Matrix:	Soil/Product	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	119	60	125
Indium	92	60	125
Holmium	115	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<10
Cadmium	<10
Chromium	<50
Lead	<10
Mercury	<10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	The Riley Group
Date Received:	NA	Project:	Publix, 2014-091F, F&BI 512489
Date Extracted:	01/05/16	Lab ID:	I6-08 mb
Date Analyzed:	01/05/16	Data File:	I6-08 mb.016
Matrix:	Soil/Product	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	98	60	125
Indium	89	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Cadmium	<1
Chromium	<5
Lead	<1
Mercury	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	UST1-P	Client:	The Riley Group
Date Received:	12/31/15	Project:	Publix, 2014-091F, F&BI 512489
Date Extracted:	01/04/16	Lab ID:	512489-02
Date Analyzed:	01/05/16	Data File:	27.D\ECD1A.CH
Matrix:	Product	Instrument:	GC7
Units:	mg/kg (ppm)	Operator:	mp

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	92	37	158

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<2
Aroclor 1232	<2
Aroclor 1016	<2
Aroclor 1242	<2
Aroclor 1248	<2
Aroclor 1254	<2
Aroclor 1260	<2
Aroclor 1262	<2
Aroclor 1268	<2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	UST2-mani	Client:	The Riley Group
Date Received:	12/31/15	Project:	Publix, 2014-091F, F&BI 512489
Date Extracted:	01/04/16	Lab ID:	512489-03
Date Analyzed:	01/05/16	Data File:	28.D\ECD1A.CH
Matrix:	Product	Instrument:	GC7
Units:	mg/kg (ppm)	Operator:	mp

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	94	37	158

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<2
Aroclor 1232	<2
Aroclor 1016	<2
Aroclor 1242	<2
Aroclor 1248	<2
Aroclor 1254	<2
Aroclor 1260	<2
Aroclor 1262	<2
Aroclor 1268	<2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	The Riley Group
Date Received:	Not Applicable	Project:	Publix, 2014-091F, F&BI 512489
Date Extracted:	01/04/16	Lab ID:	06-017 mb
Date Analyzed:	01/04/16	Data File:	22.D\ECD1A.CH
Matrix:	Product	Instrument:	GC7
Units:	mg/kg (ppm)	Operator:	mp

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	104	37	158

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<2
Aroclor 1232	<2
Aroclor 1016	<2
Aroclor 1242	<2
Aroclor 1248	<2
Aroclor 1254	<2
Aroclor 1260	<2
Aroclor 1262	<2
Aroclor 1268	<2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/13/16

Date Received: 12/31/15

Project: Publix, 2014-091F, F&BI 512489

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF SOIL/PRODUCT SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 601004-06 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	2.01	114	122	70-130	7
Cadmium	mg/kg (ppm)	10	<1	107	105	70-130	2
Chromium	mg/kg (ppm)	50	6.61	89	89	70-130	0
Lead	mg/kg (ppm)	50	2.97	89	91	70-130	2
Mercury	mg/kg (ppm)	10	<1	90	90	70-130	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	104	85-115
Cadmium	mg/kg (ppm)	10	102	85-115
Chromium	mg/kg (ppm)	50	102	85-115
Lead	mg/kg (ppm)	50	99	85-115
Mercury	mg/kg (ppm)	10	94	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/13/16

Date Received: 12/31/15

Project: Publix, 2014-091F, F&BI 512489

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF PRODUCT SAMPLES FOR
POLYCHLORINATED BIPHENYLS AS
AROCLOR 1016/1260 BY EPA METHOD 8082A**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	100	102	114	60-151	11
Aroclor 1260	mg/kg (ppm)	100	107	117	53-144	9

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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 compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. 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. Compounds in the sample matrix interfered with the quantitation of the analyte.

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.

512489

SAMPLE CHAIN OF CUSTODY

NE 12-31-15

E02

Send Report To Jerry Sawetz

Company RGI

Address 17522 Bothell Way NE Ste A

City, State, ZIP Bothell, WA 98011

Phone # 425-415-0551 Fax # 425-415-0311

SAMPLERS (signature) *[Signature]*

PROJECT NAME/NO. Publix # PO# 2014-091F

REMARKS *Please see it to Jerry Sawetz for...*

Page # 1 of 1

TURNAROUND TIME

Standard (2 Weeks)

RUSH

Rush charges authorized by _____

SAMPLE DISPOSAL

Dispose after 30 days

Return samples

Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED										Notes			
						TPH-Diescl	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	HCID	PCBs	Trace Metals					
UST 1-W	01	12/30/15	12:30	H ₂ O	1														
UST 1-P	02	↓	12:30	product	1							X	X	X					
UST 2-mani	03	↓	13:40	product	1							X	X	X					
carner pool	04	↓	14:30	product/H ₂ O	1														

Samples received at 3 °C

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044
 FORMS\COC\COC.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <i>[Signature]</i>	Mike Gipsan	RGI	12/31/15	8:30
Received by: <i>[Signature]</i>	Dan K...	F&B	12/31/15	12:15pm
Relinquished by: <i>[Signature]</i>				
Received by: <i>[Signature]</i>	HONG NGUYEN	F&B	12/31/15	13:05

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
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

January 22, 2016

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 January 18, 2016 from the Publix Hotel 2014-011F, F&BI 601188 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
TRG0122R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on January 18, 2016 by Friedman & Bruya, Inc. from the The Riley Group Publix Hotel 2014-011F, F&BI 601188 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>The Riley Group</u>
601188 -01	P1-1-3
601188 -02	P1-2-5
601188 -03	P1-3-10.5
601188 -04	P3-1-2
601188 -05	P3-2-8
601188 -06	P3-3-11
601188 -07	P3-4-13
601188 -08	P4-1-6
601188 -09	P4-2-13
601188 -10	P4-3-16
601188 -11	P3-W
601188 -12	P5-1-6
601188 -13	P5-2-12
601188 -14	P1-W
601188 -15	P4-W
601188 -16	P5-W

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/22/16
Date Received: 01/18/16
Project: Publix Hotel 2014-011F, F&BI 601188
Date Extracted: 01/19/16
Date Analyzed: 01/19/16

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

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 56-165)
P1-3-10.5 601188-03	12,000	17,000	100
P3-3-11 601188-06	3,700	9,000	89
P5-2-12 601188-13	<50	<250	85
Method Blank 06-097 MB2	<50	<250	91

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/22/16
Date Received: 01/18/16
Project: Publix Hotel 2014-011F, F&BI 601188
Date Extracted: 01/19/16
Date Analyzed: 01/19/16

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 51-134)
P3-W 601188-11 1/10	91,000	120,000	75
P1-W 601188-14 1/10	4,200	7,200	92
P4-W 601188-15 1/20	160,000	150,000	62
P5-W 601188-16 1/20	21,000	30,000	87
Method Blank 06-096 MB2	<50	<250	90

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/22/16

Date Received: 01/18/16

Project: Publix Hotel 2014-011F, F&BI 601188

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

Laboratory Code: 601179-01 (Matrix Spike) Silica Gel

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	4,800	131	130	63-146	1

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	104	79-144

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/22/16

Date Received: 01/18/16

Project: Publix Hotel 2014-011F, F&BI 601188

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	88	87	63-142	1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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 compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. 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. Compounds in the sample matrix interfered with the quantitation of the analyte.

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.

601180

1/18/16 A04/V3 M2

SAMPLE CHAIN OF CUSTODY

Send Report To JENNY SAWETZ
 Company RG I
 Address 17522 BOTHELL WAY
 City, State, ZIP BOTHELL WA
 Phone # 425-415-0551 Fax # _____

SAMPLERS (signature) [Signature]
 PROJECT NAME/NO. PVOLI1 IPTEL PO# _____
2014-011F
 REMARKS _____

Page # 1 of 2
 TURNAROUND TIME
 Standard (2 Weeks)
 RUSH
 Rush charges authorized by _____
 SAMPLE DISPOSAL
 Dispose after 30 days
 Return samples
 Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED										Notes			
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS								
P1-1-3	-01	1/15/16	1215	S	1														
P1-2-5	-02	}	1225	S	1														
P1-3-10.5	-03		1245	S	1	X													
P3-1-2	-04		120	S	1														
P3-2-8	-05		135	S	1														
P3-3-11	-06		145	S	1	X													
P3-4-13	-07		155	S	1														
P4-1-6	-08		325	S	1														
P4-2-13	-09		330	S	1														
P4-3-16	-10		340	S	1														

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044
 FORMS\COC\COC.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	ERIC L. WOODS	RG I	1/18/16	15:45
Received by: <u>[Signature]</u>	VINHA	FBI	1/18/16	15:45
Relinquished by:				
Received by:		Samples received at	5	°C

601188

SAMPLE CHAIN OF CUSTODY

1/18/16 A04 M3 MZ

Page # 2 of 2

Send Report To JENNY SALETZ
Company RGI
Address 17522 BOTHELL WA
City, State, ZIP BOTHELL WA
Phone # 425 415-2551 Fax #

SAMPLERS (signature)
PROJECT NAME/NO. PUBUX HOTEL 2014-011F
PO#
REMARKS

TURNAROUND TIME
Standard (2 Weeks)
RUSH
Rush charges authorized by
SAMPLE DISPOSAL
Dispose after 30 days
Return samples
Will call with instructions

Table with columns: Sample ID, Lab ID, Date Sampled, Time Sampled, Sample Type, # of containers, and ANALYSES REQUESTED (TPH-Diesel, TPH-Gasoline, BTEX by 8021B, VOCs by 8260, SVOCs by 8270, HFS). Rows include samples P3-W, P5-1-6, P5-2-12, P1-W, P4-W, P5-W.

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

Table with columns: SIGNATURE, PRINT NAME, COMPANY, DATE, TIME. Rows for Relinquished by (David R...), Received by (Vina), and Relinquished by. Includes note: Samples received at 5 °C.

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
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

May 24, 2016

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 13, 2016 from the 2014-011H, F&BI 605251 project. There are 10 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Janelle Finley
TRG0524R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 13, 2016 by Friedman & Bruya, Inc. from the The Riley Group 2014-011H, F&BI 605251 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>The Riley Group</u>
605251 -01	SE-Ex:3
605251 -02	MW9:2
605251 -03	MW9:10
605251 -04	MW1A:4
605251 -05	MW1A:8

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/24/16
Date Received: 05/13/16
Project: 2014-011H, F&BI 605251
Date Extracted: 05/17/16
Date Analyzed: 05/17/16

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

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

<u>Sample ID</u> Laboratory ID	<u>Gasoline</u>	<u>Diesel</u>	<u>Heavy Oil</u>	Surrogate (% Recovery) (Limit 53-144)
SE-Ex:3 605251-01	ND	D x	D	ip
MW9:2 605251-02	ND	D x	D	104
MW9:10 605251-03	ND	D	D	ip
MW1A:4 605251-04	ND	D	D	106
MW1A:8 605251-05	ND	ND	ND	106
Method Blank 06-989 MB2	ND	ND	ND	101

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/24/16
Date Received: 05/13/16
Project: 2014-011H, F&BI 605251
Date Extracted: 05/17/16
Date Analyzed: 05/17/16

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**

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

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 48-168)
SE-Ex:3 605251-01 1/10	22,000 x	44,000	86
MW9:2 605251-02	420 x	2,400	87
MW9:10 605251-03 1/10	40,000	47,000	ip
MW1A:4 605251-04	2,100	2,200	85
Method Blank 06-995 MB	<50	<250	91

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	SE-Ex:3	Client:	The Riley Group
Date Received:	05/13/16	Project:	2014-011H, F&BI 605251
Date Extracted:	05/19/16	Lab ID:	605251-01
Date Analyzed:	05/20/16	Data File:	605251-01.195
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Analyte:	Concentration mg/kg (ppm)
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Lead	45.6
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW9:2	Client:	The Riley Group
Date Received:	05/13/16	Project:	2014-011H, F&BI 605251
Date Extracted:	05/19/16	Lab ID:	605251-02
Date Analyzed:	05/20/16	Data File:	605251-02.196
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Analyte:	Concentration mg/kg (ppm)
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Lead	116
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW1A:4	Client:	The Riley Group
Date Received:	05/13/16	Project:	2014-011H, F&BI 605251
Date Extracted:	05/19/16	Lab ID:	605251-04
Date Analyzed:	05/20/16	Data File:	605251-04.197
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Analyte:	Concentration mg/kg (ppm)
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Lead	10.8
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	The Riley Group
Date Received:	NA	Project:	2014-011H, F&BI 605251
Date Extracted:	05/19/16	Lab ID:	I6-319 mb
Date Analyzed:	05/20/16	Data File:	I6-319 mb.015
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Analyte:	Concentration mg/kg (ppm)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/24/16

Date Received: 05/13/16

Project: 2014-011H, F&BI 605251

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

Laboratory Code: 605310-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	100	104	73-135	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	98	74-139

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/24/16

Date Received: 05/13/16

Project: 2014-011H, F&BI 605251

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 605071-12 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	50	61.4	95	100	70-130	5

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	50	106	85-115

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 compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. 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. Compounds in the sample matrix interfered with the quantitation of the analyte.

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.

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.

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(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

January 29, 2016

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

Dear Mr. Sawetz:

Included are the additional results from the testing of material submitted on January 15, 2016 from the 2014-011G, F&BI 601175 project. There are 13 pages included in this report.

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
TRG0129R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on January 15, 2016 by Friedman & Bruya, Inc. from the The Riley Group 2014-011G, F&BI 601175 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>The Riley Group</u>
601175 -01	NE-EXW-1
601175 -02	SE-EXW-1
601175 -03	SE-EX-1:16

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/29/16
Date Received: 01/15/16
Project: 2014-011G, F&BI 601175
Date Extracted: 01/26/16
Date Analyzed: 01/28/16

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

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 48-168)
SE-EX-1:16 601175-03 1/10	42,000 x	95,000	110
Method Blank 06-169 MB	<50	<250	90

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	SE-EXW-1	Client:	The Riley Group
Date Received:	01/15/16	Project:	2014-011G, F&BI 601175
Date Extracted:	01/21/16	Lab ID:	601175-02
Date Analyzed:	01/21/16	Data File:	601175-02.045
Matrix:	Soil/Product	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	The Riley Group
Date Received:	Not Applicable	Project:	2014-011G, F&BI 601175
Date Extracted:	01/21/16	Lab ID:	I6-44 mb
Date Analyzed:	01/21/16	Data File:	I6-44 mb.025
Matrix:	Soil/Product	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	SP

Internal Standard:	% Recovery:	Lower	Upper
Holmium	107	Limit:	Limit:
		60	125

Analyte:	Concentration
	mg/kg (ppm)
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SE-EXW-1	Client:	The Riley Group
Date Received:	01/15/16	Project:	2014-011G, F&BI 601175
Date Extracted:	01/21/16	Lab ID:	601175-02 1/750
Date Analyzed:	01/21/16	Data File:	012124.D
Matrix:	Soil/Product	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	94	31	163
Benzo(a)anthracene-d12	106	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<1.5
Acenaphthylene	<1.5
Acenaphthene	<1.5
Fluorene	14
Phenanthrene	85
Anthracene	<1.5
Fluoranthene	8.7
Pyrene	22
Benz(a)anthracene	4.4
Chrysene	11
Benzo(a)pyrene	2.1
Benzo(b)fluoranthene	<1.5
Benzo(k)fluoranthene	<1.5
Indeno(1,2,3-cd)pyrene	<1.5
Dibenz(a,h)anthracene	<1.5
Benzo(g,h,i)perylene	1.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	The Riley Group
Date Received:	Not Applicable	Project:	2014-011G, F&BI 601175
Date Extracted:	01/21/16	Lab ID:	06-120 mb 1/750
Date Analyzed:	01/21/16	Data File:	012121.D
Matrix:	Soil/Product	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	102	31	163
Benzo(a)anthracene-d12	93	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<1.5
Acenaphthylene	<1.5
Acenaphthene	<1.5
Fluorene	<1.5
Phenanthrene	<1.5
Anthracene	<1.5
Fluoranthene	<1.5
Pyrene	<1.5
Benz(a)anthracene	<1.5
Chrysene	<1.5
Benzo(a)pyrene	<1.5
Benzo(b)fluoranthene	<1.5
Benzo(k)fluoranthene	<1.5
Indeno(1,2,3-cd)pyrene	<1.5
Dibenz(a,h)anthracene	<1.5
Benzo(g,h,i)perylene	<1.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	SE-EXW-1	Client:	The Riley Group
Date Received:	01/15/16	Project:	2014-011G, F&BI 601175
Date Extracted:	01/21/16	Lab ID:	601175-02
Date Analyzed:	01/21/16	Data File:	15.D\ECD1A.CH
Matrix:	Product	Instrument:	GC7
Units:	mg/kg (ppm)	Operator:	mp

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	104	24	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<2
Aroclor 1232	<2
Aroclor 1016	<2
Aroclor 1242	<2
Aroclor 1248	<2
Aroclor 1254	<2
Aroclor 1260	<2
Aroclor 1262	<2
Aroclor 1268	<2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	The Riley Group
Date Received:	Not Applicable	Project:	2014-011G, F&BI 601175
Date Extracted:	01/21/16	Lab ID:	06-118 mb
Date Analyzed:	01/21/16	Data File:	14.D\ECD1A.CH
Matrix:	Product	Instrument:	GC7
Units:	mg/kg (ppm)	Operator:	mp

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	113	24	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<2
Aroclor 1232	<2
Aroclor 1016	<2
Aroclor 1242	<2
Aroclor 1248	<2
Aroclor 1254	<2
Aroclor 1260	<2
Aroclor 1262	<2
Aroclor 1268	<2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/29/16

Date Received: 01/15/16

Project: 2014-011G, F&BI 601175

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

Laboratory Code: 601297-01 (Matrix Spike) Silica Gel

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	113	125	73-135	10

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	112	74-139

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/29/16

Date Received: 01/15/16

Project: 2014-011G, F&BI 601175

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF SOIL/PRODUCT SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 601201-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	50	2.93	85	84	70-130	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	50	95	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/29/16

Date Received: 01/15/16

Project: 2014-011G, F&BI 601175

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL/PRODUCT
SAMPLES FOR PAHS BY EPA METHOD 8270D SIM**

Laboratory Code: 601175-02 1/750 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet wt)	Duplicate Result (Wet wt)	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	<1.5	<1.5	nm
Acenaphthylene	mg/kg (ppm)	<1.5	<1.5	nm
Acenaphthene	mg/kg (ppm)	<1.5	1.6	nm
Fluorene	mg/kg (ppm)	14	14	0
Phenanthrene	mg/kg (ppm)	85	89	5
Anthracene	mg/kg (ppm)	<1.5	<1.5	nm
Fluoranthene	mg/kg (ppm)	8.7	7.8	11
Pyrene	mg/kg (ppm)	22	22	0
Benz(a)anthracene	mg/kg (ppm)	4.4	1.6	93 a
Chrysene	mg/kg (ppm)	11	10	10
Benzo(b)fluoranthene	mg/kg (ppm)	1.9	2.7	35 a
Benzo(k)fluoranthene	mg/kg (ppm)	<1.5	<1.5	nm
Benzo(a)pyrene	mg/kg (ppm)	2.1	2.2	5
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	<1.5	1.5	nm
Dibenz(a,h)anthracene	mg/kg (ppm)	<1.5	<1.5	nm
Benzo(g,h,i)perylene	mg/kg (ppm)	1.5	<1.5	nm

Laboratory Code: Laboratory Control Sample 1/750

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	25	93	95	58-121	2
Acenaphthylene	mg/kg (ppm)	25	96	95	54-121	1
Acenaphthene	mg/kg (ppm)	25	94	95	54-123	1
Fluorene	mg/kg (ppm)	25	95	95	56-127	0
Phenanthrene	mg/kg (ppm)	25	96	93	55-122	3
Anthracene	mg/kg (ppm)	25	100	99	50-120	1
Fluoranthene	mg/kg (ppm)	25	97	96	54-129	1
Pyrene	mg/kg (ppm)	25	89	91	53-127	2
Benz(a)anthracene	mg/kg (ppm)	25	91	91	51-115	0
Chrysene	mg/kg (ppm)	25	95	96	55-129	1
Benzo(b)fluoranthene	mg/kg (ppm)	25	94	97	56-123	3
Benzo(k)fluoranthene	mg/kg (ppm)	25	92	91	54-131	1
Benzo(a)pyrene	mg/kg (ppm)	25	92	95	51-118	3
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	25	83	91	49-148	9
Dibenz(a,h)anthracene	mg/kg (ppm)	25	89	103	50-141	15
Benzo(g,h,i)perylene	mg/kg (ppm)	25	86	98	52-131	13

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/29/16

Date Received: 01/15/16

Project: 2014-011G, F&BI 601175

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF PRODUCT SAMPLES FOR
POLYCHLORINATED BIPHENYLS AS
AROCLOR 1016/1260 BY EPA METHOD 8082A**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	100	117	118	60-151	1
Aroclor 1260	mg/kg (ppm)	100	124	120	53-144	3

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 compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. 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. Compounds in the sample matrix interfered with the quantitation of the analyte.

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.

X = Data in report
SAMPLE CHAIN OF CUSTODY

ME 1/15/16 VS₁ / AO₂

601175

Send Report to Jerry Sawetz
 Company RGI
 Address 17582 Batnell Way NE
 City, State, ZIP Batnell, WA 98012
 Phone # 425-415-0551 Fax # _____

SAMPLERS (signature) <u>DB</u>	
PROJECT NAME/NO. <u>2014-011G</u>	PO#
REMARKS	

Page # 1 of 1

TURNAROUND TIME
 Standard (2 Weeks)
 RUSH 1-day results
 Rush charges authorized by Jerry Sawetz
1-15-16

SAMPLE DISPOSAL
 Dispose after 30 days
 Return samples
 Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED										Notes	
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	HClD	PCBs	Pb	PAHs		
NE-EXW-1	ORA-F	1/15/16	1030	Water	6	X											
SE-EXW-1	SRA-1	↓	1100	Water	5			X				X	0	0	0		Free phase prod
SE-EX-1:16	S3	↓	1110	Soil	1	X						X*					* per JS 1/15/16 MZ
																	0 per JS 2 days 1/19/16 MS

Samples received at 13 °C

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>Jerry Sawetz</u>	<u>Jerry Sawetz</u>	<u>RGI</u>	<u>1/15/16</u>	<u>15:14</u>
Received by: <u>Jerry</u>	<u>JERRY</u>	<u>FBI</u>	<u>1/15/16</u>	<u>16:14</u>
Relinquished by: _____				
Received by: _____				

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
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

February 2, 2016

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

Dear Mr. Sawetz:

Included are the additional results from the testing of material submitted on January 18, 2016 from the Publix Hotel 2014-011F, F&BI 601188 project. There are 28 pages included in this report.

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
TRG0202R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on January 18, 2016 by Friedman & Bruya, Inc. from the The Riley Group Publix Hotel 2014-011F, F&BI 601188 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>The Riley Group</u>
601188 -01	P1-1-3
601188 -02	P1-2-5
601188 -03	P1-3-10.5
601188 -04	P3-1-2
601188 -05	P3-2-8
601188 -06	P3-3-11
601188 -07	P3-4-13
601188 -08	P4-1-6
601188 -09	P4-2-13
601188 -10	P4-3-16
601188 -11	P3-W
601188 -12	P5-1-6
601188 -13	P5-2-12
601188 -14	P1-W
601188 -15	P4-W
601188 -16	P5-W

Sample P1-3-10.5 was not submitted in a 5035 sampling container. The data were flagged accordingly.

An 8270D internal standard failed the acceptance criteria for sample P1-3-10.5 due to matrix interferences. The data were flagged accordingly. The sample was diluted and reanalyzed.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/02/16
Date Received: 01/18/16
Project: Publix Hotel 2014-011F, F&BI 601188
Date Extracted: 01/22/16
Date Analyzed: 01/22/16

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

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
P1-3-10.5 pc 601188-03	<0.02	<0.02	0.11	0.31	86
Method Blank 06-109 MB	<0.02	<0.02	<0.02	<0.06	82

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/02/16
Date Received: 01/18/16
Project: Publix Hotel 2014-011F, F&BI 601188
Date Extracted: 01/22/16
Date Analyzed: 01/25/16

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

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Surrogate (% Recovery)</u> Limit (52-124)
P4-W 601188-15	<1	<1	<1	<3	96
Method Blank 06-108 MB	<1	<1	<1	<3	93

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	P1-3-10.5	Client:	The Riley Group
Date Received:	01/18/16	Project:	Publix Hotel 2014-011F, F&BI 601188
Date Extracted:	01/26/16	Lab ID:	601188-03
Date Analyzed:	01/27/16	Data File:	601188-03.024
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Lead	785
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	The Riley Group
Date Received:	Not Applicable	Project:	Publix Hotel 2014-011F, F&BI 601188
Date Extracted:	01/26/16	Lab ID:	I6-55 mb
Date Analyzed:	01/26/16	Data File:	I6-55 mb.037
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	P4-W	Client:	The Riley Group
Date Received:	01/18/16	Project:	Publix Hotel 2014-011F, F&BI 601188
Date Extracted:	01/25/16	Lab ID:	601188-15
Date Analyzed:	01/25/16	Data File:	601188-15.061
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	22.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	The Riley Group
Date Received:	Not Applicable	Project:	Publix Hotel 2014-011F, F&BI 601188
Date Extracted:	01/25/16	Lab ID:	I6-52 mb
Date Analyzed:	01/25/16	Data File:	I6-52 mb.032
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	P1-3-10.5	Client:	The Riley Group
Date Received:	01/18/16	Project:	Publix Hotel 2014-011F, F&BI 601188
Date Extracted:	01/25/16	Lab ID:	601188-03 1/250
Date Analyzed:	01/26/16	Data File:	012611.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	75 d	31	163
Benzo(a)anthracene-d12	181 d J	24	168

Compounds:	Concentration mg/kg (ppm)
Benz(a)anthracene	4.9 J
Chrysene	9.2 J
Benzo(a)pyrene	3.7 J
Benzo(b)fluoranthene	2.8 J
Benzo(k)fluoranthene	0.59 J
Indeno(1,2,3-cd)pyrene	1.2 J
Dibenz(a,h)anthracene	0.73 J

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	P1-3-10.5	Client:	The Riley Group
Date Received:	01/18/16	Project:	Publix Hotel 2014-011F, F&BI 601188
Date Extracted:	01/25/16	Lab ID:	601188-03 1/500
Date Analyzed:	01/27/16	Data File:	012704.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	65 d	31	163
Benzo(a)anthracene-d12	200 d	24	168

Compounds:	Concentration mg/kg (ppm)
Benz(a)anthracene	3.6
Chrysene	7.1
Benzo(a)pyrene	3.5
Benzo(b)fluoranthene	2.3
Benzo(k)fluoranthene	<1
Indeno(1,2,3-cd)pyrene	<1
Dibenz(a,h)anthracene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	The Riley Group
Date Received:	Not Applicable	Project:	Publix Hotel 2014-011F, F&BI 601188
Date Extracted:	01/25/16	Lab ID:	06-149 mb 1/5
Date Analyzed:	01/26/16	Data File:	012607.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	86	31	163
Benzo(a)anthracene-d12	95	24	168

Compounds:	Concentration mg/kg (ppm)
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	P4-W	Client:	The Riley Group
Date Received:	01/18/16	Project:	Publix Hotel 2014-011F, F&BI 601188
Date Extracted:	01/25/16	Lab ID:	601188-15 1/20
Date Analyzed:	01/26/16	Data File:	012610.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	124 d	31	160
Benzo(a)anthracene-d12	103 d	25	165

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	1.8
Chrysene	1.7
Benzo(a)pyrene	1.5
Benzo(b)fluoranthene	1.5
Benzo(k)fluoranthene	0.64
Indeno(1,2,3-cd)pyrene	<0.6
Dibenz(a,h)anthracene	<0.6

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	The Riley Group
Date Received:	Not Applicable	Project:	Publix Hotel 2014-011F, F&BI 601188
Date Extracted:	01/25/16	Lab ID:	06-144 mb
Date Analyzed:	01/26/16	Data File:	012608.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	94	31	160
Benzo(a)anthracene-d12	97	25	165

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	<0.03
Chrysene	<0.03
Benzo(a)pyrene	<0.03
Benzo(b)fluoranthene	<0.03
Benzo(k)fluoranthene	<0.03
Indeno(1,2,3-cd)pyrene	<0.03
Dibenz(a,h)anthracene	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	P1-3-10.5	Client:	The Riley Group
Date Received:	01/18/16	Project:	Publix Hotel 2014-011F, F&BI 601188
Date Extracted:	01/28/16	Lab ID:	601188-03
Date Analyzed:	01/29/16	Data File:	601188-03.019
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	1.48	5.0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	Method Blank	Client:	The Riley Group
Date Received:	Not Applicable	Project:	Publix Hotel 2014-011F, F&BI 601188
Date Extracted:	01/28/16	Lab ID:	I6-62 mb
Date Analyzed:	01/29/16	Data File:	I6-62 mb.017
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	P1-3-10.5	Client:	The Riley Group
Date Received:	01/18/16	Project:	Publix Hotel 2014-011F, F&BI 601188
Date Extracted:	01/27/16	Lab ID:	601188-03 1/5
Date Analyzed:	01/27/16	Data File:	21.D\ECD1A.CH
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	mp

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	109	24	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	The Riley Group
Date Received:	Not Applicable	Project:	Publix Hotel 2014-011F, F&BI 601188
Date Extracted:	01/27/16	Lab ID:	06-172 mb 1/5
Date Analyzed:	01/27/16	Data File:	20.D\ECD1A.CH
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	mp

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	96	24	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	P4-W	Client:	The Riley Group
Date Received:	01/18/16	Project:	Publix Hotel 2014-011F, F&BI 601188
Date Extracted:	01/27/16	Lab ID:	601188-15
Date Analyzed:	01/28/16	Data File:	07.D\ECD1A.CH
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	mp

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	69	24	127

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	The Riley Group
Date Received:	Not Applicable	Project:	Publix Hotel 2014-011F, F&BI 601188
Date Extracted:	01/27/16	Lab ID:	06-173 mb
Date Analyzed:	01/28/16	Data File:	06.D\ECD1A.CH
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	mp

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	65	24	127

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/02/16

Date Received: 01/18/16

Project: Publix Hotel 2014-011F, F&BI 601188

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

Laboratory Code: 601278-01 (Duplicate)

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	103	69-120
Toluene	mg/kg (ppm)	0.5	101	70-117
Ethylbenzene	mg/kg (ppm)	0.5	104	65-123
Xylenes	mg/kg (ppm)	1.5	102	66-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/02/16

Date Received: 01/18/16

Project: Publix Hotel 2014-011F, F&BI 601188

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

Laboratory Code: 601281-01 (Duplicate)

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	105	65-118
Toluene	ug/L (ppb)	50	103	72-122
Ethylbenzene	ug/L (ppb)	50	105	73-126
Xylenes	ug/L (ppb)	150	102	74-118

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/02/16

Date Received: 01/18/16

Project: Publix Hotel 2014-011F, F&BI 601188

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 601283-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	50	2.56	84	83	70-130	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	50	92	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/02/16

Date Received: 01/18/16

Project: Publix Hotel 2014-011F, F&BI 601188

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 601256-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	2.44	104	107	70-130	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	107	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/02/16

Date Received: 01/18/16

Project: Publix Hotel 2014-011F, F&BI 601188

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL
SAMPLES FOR PAHS BY EPA METHOD 8270D SIM**

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benz(a)anthracene	mg/kg (ppm)	0.17	88	92	51-115	4
Chrysene	mg/kg (ppm)	0.17	87	90	55-129	3
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	84	92	56-123	9
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	88	94	54-131	7
Benzo(a)pyrene	mg/kg (ppm)	0.17	78	81	51-118	4
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	84	79	49-148	6
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	86	80	50-141	7

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/02/16

Date Received: 01/18/16

Project: Publix Hotel 2014-011F, F&BI 601188

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR PAHS BY EPA METHOD 8270D SIM**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benz(a)anthracene	ug/L (ppb)	1	90	94	60-118	4
Chrysene	ug/L (ppb)	1	93	91	66-125	2
Benzo(b)fluoranthene	ug/L (ppb)	1	88	94	55-135	7
Benzo(k)fluoranthene	ug/L (ppb)	1	89	89	62-125	0
Benzo(a)pyrene	ug/L (ppb)	1	87	91	58-127	4
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	1	77	89	36-142	14
Dibenz(a,h)anthracene	ug/L (ppb)	1	60	72	37-133	18

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/02/16

Date Received: 01/18/16

Project: Publix Hotel 2014-011F, F&BI 601188

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF SOIL SAMPLES
FOR TCLP METALS USING
EPA METHOD 200.8 AND 40 CFR PART 261**

Laboratory Code: 601188-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/L (ppm)	1.0	1.48	92	94	70-130	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/L (ppm)	1.0	94	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/02/16

Date Received: 01/18/16

Project: Publix Hotel 2014-011F, F&BI 601188

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF SOIL SAMPLES FOR
POLYCHLORINATED BIPHENYLS AS
AROCLOR 1016/1260 BY EPA METHOD 8082A**

Laboratory Code: 601188-03 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Control Limits
Aroclor 1016	mg/kg (ppm)	0.8	<0.02	118	50-150
Aroclor 1260	mg/kg (ppm)	0.8	<0.02	129	50-150

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	0.8	97	97	55-130	0
Aroclor 1260	mg/kg (ppm)	0.8	109	107	58-133	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/02/16

Date Received: 01/18/16

Project: Publix Hotel 2014-011F, F&BI 601188

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES FOR
POLYCHLORINATED BIPHENYLS AS
AROCOR 1016/1260 BY EPA METHOD 8082A**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	ug/L (ppb)	2.5	82	86	37-136	5
Aroclor 1260	ug/L (ppb)	2.5	87	91	41-135	4

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 compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. 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. Compounds in the sample matrix interfered with the quantitation of the analyte.
- 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.

601188

SAMPLE CHAIN OF CUSTODY

1/18/16 10:41/13 MZ

Send Report To JENNY SARETZ
 Company RG I
 Address 17522 BOTTLE WAY
 City, State, ZIP BOTHELL WA
 Phone # 425-415-0551 Fax # _____

SAMPLERS (signature) [Signature]
 PROJECT NAME/NO. PV061X IPTEL PO# _____
2014-311F
 REMARKS _____

Page # 1 of 2
 TURNAROUND TIME
 Standard (2 Weeks)
 RUSH
 Rush charges authorized by _____
 SAMPLE DISPOSAL
 Dispose after 30 days
 Return samples
 Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED											Notes		
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Total Ph	CPAHs	PCBS	TCDF PA				
P1-1-3	-01	1/15/16	1215	S	1														
P1-2-5	-02	}	1225	S	1													Rush	
P1-3-10.5	-03		1245	S	1	X	X											JS 1/22/16	
P3-1-2	-04		120	S	1														JS 1/28/16
P3-2-8	-05		135	S	1														
P3-3-11	-06		145	S	1		X												
P3-4-13	-07		155	S	1														
P4-1-6	-08		325	S	1														
P4-2-13	-09		330	S	1														
P4-3-16	-10		340	S	1														

Friedman & Brya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044
 FORMS\COC\COC.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	ERIC L. WOODS	RG I	1/18/16	15:45
Received by: <u>[Signature]</u>	VINHA	FBI	1/18/16	15:45
Relinquished by:				
Received by:		Samples received at	<u>5</u>	

601188

SAMPLE CHAIN OF CUSTODY

1/15/16 104103 102

Page # 2 of 2

Send Report To JENNY SALETZ
 Company RCF
 Address 17502 BOTHELL WA
 City, State, ZIP BOTHELL WA
 Phone # 425 415 0551 Fax # _____

SAMPLERS (signature) _____
 PROJECT NAME/NO. PUBLIX HOTEL
2014-011F
 PO# _____
 REMARKS _____

TURNAROUND TIME
 Standard (2 Weeks)
 RUSH
 Rush charges authorized by _____
 SAMPLE DISPOSAL
 Dispose after 30 days
 Return samples
 Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED										Notes		
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Total Pb	CPAHs	PCBs				
P3-W	-11AF	1/15/16	245	W	6	X												
P5-1-6	-12	1/18/16	945	S	1													
P5-2-12	-13	1/18/16	1015	S	1	X												
P1-W	-14AF	1/18/16	730	W	6	X												
P4-W	-15AH	1/18/16	830	W	8	X												per JS 1/22/16
P5-W	-16AF	1/18/16	1100	W	6	X												Cancelled per JS 1/22/16

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: _____	DAVID K. HUGHES	RCF	1/18/16	15:45
Received by: _____	VINHA	FBI	1/18/16	15:45
Relinquished by: _____				
Received by: _____		Samples received at	5 °C	

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
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

April 8, 2016

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 1, 2016 from the Publix 2014-011H, F&BI 604024 project. There are 14 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
TRG0408R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 1, 2016 by Friedman & Bruya, Inc. from the The Riley Group Publix 2014-011H, F&BI 604024 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID
604024 -01

The Riley Group
UST2-P

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/08/16
Date Received: 04/01/16
Project: Publix 2014-011H, F&BI 604024
Date Extracted: 04/01/16
Date Analyzed: 04/01/16

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

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

<u>Sample ID</u> Laboratory ID	<u>Gasoline</u>	<u>Diesel</u>	<u>Heavy Oil</u>	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 53-144)
UST2-P 604024-01 1/1,000	ND	D	D	101
Method Blank 06-656 MB	ND	ND	ND	88

ND - Material not detected at or above 20,000 mg/kg gas, 50,000 mg/kg diesel and 250,000 mg/kg heavy oil.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/08/16
Date Received: 04/01/16
Project: Publix 2014-011H, F&BI 604024
Date Extracted: 04/01/16
Date Analyzed: 04/01/16

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

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
UST2-P 604024-01 1/10,000	<200	<200	<200	<600	82
Method Blank 06-612 MB	<200	<200	<200	<600	86

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	UST2-P	Client:	The Riley Group
Date Received:	04/01/16	Project:	Publix 2014-011H, F&BI 604024
Date Extracted:	04/04/16	Lab ID:	604024-01
Date Analyzed:	04/04/16	Data File:	604024-01.020
Matrix:	Soil/Product	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Analyte:	Concentration mg/kg (ppm)
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Lead	2.18
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	The Riley Group
Date Received:	NA	Project:	Publix 2014-011H, F&BI 604024
Date Extracted:	04/04/16	Lab ID:	I6-189 mb
Date Analyzed:	04/04/16	Data File:	I6-189 mb.014
Matrix:	Soil/Product	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	UST2-P	Client:	The Riley Group
Date Received:	04/01/16	Project:	Publix 2014-011H, F&BI 604024
Date Extracted:	04/04/16	Lab ID:	604024-01 1/7500
Date Analyzed:	04/04/16	Data File:	040416.D
Matrix:	Soil/Product	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	103 d	31	163
Benzo(a)anthracene-d12	114 d	24	168

Compounds:	Concentration mg/kg (ppm)
Benz(a)anthracene	60
Chrysene	87
Benzo(a)pyrene	34
Benzo(b)fluoranthene	15
Benzo(k)fluoranthene	<15
Indeno(1,2,3-cd)pyrene	<15
Dibenz(a,h)anthracene	<15

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	The Riley Group
Date Received:	Not Applicable	Project:	Publix 2014-011H, F&BI 604024
Date Extracted:	04/04/16	Lab ID:	06-657 mb 1/5
Date Analyzed:	04/04/16	Data File:	040404.D
Matrix:	Soil/Product	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	89	31	163
Benzo(a)anthracene-d12	90	24	168

Compounds:	Concentration mg/kg (ppm)
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	UST2-P	Client:	The Riley Group
Date Received:	04/01/16	Project:	Publix 2014-011H, F&BI 604024
Date Extracted:	04/05/16	Lab ID:	604024-01
Date Analyzed:	04/06/16	Data File:	14.D\ECD1A.CH
Matrix:	Product	Instrument:	GC7
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	82	37	158

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<2
Aroclor 1232	<2
Aroclor 1016	<2
Aroclor 1242	<2
Aroclor 1248	<2
Aroclor 1254	<2
Aroclor 1260	<2
Aroclor 1262	<2
Aroclor 1268	<2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	The Riley Group
Date Received:	NA	Project:	Publix 2014-011H, F&BI 604024
Date Extracted:	04/05/16	Lab ID:	06-666 mb
Date Analyzed:	04/06/16	Data File:	11.D\ECD1A.CH
Matrix:	Product	Instrument:	GC7
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	98	37	158

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<2
Aroclor 1232	<2
Aroclor 1016	<2
Aroclor 1242	<2
Aroclor 1248	<2
Aroclor 1254	<2
Aroclor 1260	<2
Aroclor 1262	<2
Aroclor 1268	<2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/08/16

Date Received: 04/01/16

Project: Publix 2014-011H, F&BI 604024

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

Laboratory Code: 603575-02 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<200	<200	nm
Toluene	mg/kg (ppm)	<200	<200	nm
Ethylbenzene	mg/kg (ppm)	<200	<200	nm
Xylenes	mg/kg (ppm)	<600	<600	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	81	69-120
Toluene	mg/kg (ppm)	0.5	91	70-117
Ethylbenzene	mg/kg (ppm)	0.5	93	65-123
Xylenes	mg/kg (ppm)	1.5	94	66-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/08/16

Date Received: 04/01/16

Project: Publix 2014-011H, F&BI 604024

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF SOIL/PRODUCT SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 604026-06 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	50	<1	103	104	70-130	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	50	102	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/08/16

Date Received: 04/01/16

Project: Publix 2014-011H, F&BI 604024

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL/PRODUCT
SAMPLES FOR PAHS BY EPA METHOD 8270D SIM**

Laboratory Code: 604023-02 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Benz(a)anthracene	mg/kg (ppm)	0.17	<0.01	87	87	23-144	0
Chrysene	mg/kg (ppm)	0.17	<0.01	90	90	32-149	0
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	<0.01	89	89	23-176	0
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.01	89	89	42-139	0
Benzo(a)pyrene	mg/kg (ppm)	0.17	<0.01	83	88	21-163	6
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	<0.01	95	90	23-170	5
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.01	91	89	31-146	2

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benz(a)anthracene	mg/kg (ppm)	0.17	88	51-115
Chrysene	mg/kg (ppm)	0.17	91	55-129
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	96	56-123
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	91	54-131
Benzo(a)pyrene	mg/kg (ppm)	0.17	85	51-118
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	91	49-148
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	90	50-141

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/08/16

Date Received: 04/01/16

Project: Publix 2014-011H, F&BI 604024

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF PRODUCT SAMPLES FOR
POLYCHLORINATED BIPHENYLS AS
AROCLOR 1016/1260 BY EPA METHOD 8082A**

Laboratory Code: 604024-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	<2	<2	nm
Aroclor 1260	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	100	96	98	60-151	2
Aroclor 1260	mg/kg (ppm)	100	120	120	53-144	0

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 compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. 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. Compounds in the sample matrix interfered with the quantitation of the analyte.

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.

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
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

April 21, 2017

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

Dear Mr. Sawetz:

Included is the amended report from the testing of material submitted on April 11, 2016 from the Publix Hotel 2014-011I, F&BI 604186 project. Per your request, only the samples requested were included in the report.

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
c: Janelle Finley
TRG0415R.DOC

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
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

April 15, 2016

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 11, 2016 from the Publix Hotel 2014-011I, F&BI 604186 project. There are 9 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Janelle Finley
TRG0415R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 11, 2016 by Friedman & Bruya, Inc. from the The Riley Group Publix Hotel 2014-011I, F&BI 604186 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>The Riley Group</u>
604186 -01	MW1-2
604186 -02	MW2-2
604186 -03	MW4-2

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/15/16

Date Received: 04/11/16

Project: Publix Hotel 2014-011I, F&BI 604186

Date Extracted: 04/12/16

Date Analyzed: 04/13/16

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 48-168)
MW1-2 604186-01	1,900	2,700	109
MW2-2 604186-02	370	1,400	117
MW4-2 604186-03	1,300	8,900	104
Method Blank 06-744 MB	<50	<250	106

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW1-2	Client:	The Riley Group
Date Received:	04/11/16	Project:	Publix Hotel 2014-011I, F&BI 604186
Date Extracted:	04/12/16	Lab ID:	604186-01
Date Analyzed:	04/12/16	Data File:	604186-01.016
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Lead	12.8
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW2-2	Client:	The Riley Group
Date Received:	04/11/16	Project:	Publix Hotel 2014-011I, F&BI 604186
Date Extracted:	04/12/16	Lab ID:	604186-02
Date Analyzed:	04/12/16	Data File:	604186-02.017
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Lead	129
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW4-2	Client:	The Riley Group
Date Received:	04/11/16	Project:	Publix Hotel 2014-011I, F&BI 604186
Date Extracted:	04/12/16	Lab ID:	604186-03
Date Analyzed:	04/12/16	Data File:	604186-03.018
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Lead	864
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	The Riley Group
Date Received:	NA	Project:	Publix Hotel 2014-011I, F&BI 604186
Date Extracted:	04/12/16	Lab ID:	I6-201 mb2
Date Analyzed:	04/12/16	Data File:	I6-201 mb2.015
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/15/16

Date Received: 04/11/16

Project: Publix Hotel 2014-011I, F&BI 604186

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

Laboratory Code: 604203-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	104	96	73-135	8

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	115	74-139

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/15/16

Date Received: 04/11/16

Project: Publix Hotel 2014-011I, F&BI 604186

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 604070-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	50	10.2	84	87	70-130	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	50	103	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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 compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. 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. Compounds in the sample matrix interfered with the quantitation of the analyte.

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.

604186 ✓

SAMPLE CHAIN OF CUSTODY

ME 04-11-16

BE3 / VS2
1 of 1

Send Report To JENNY SAWETZ
 Company RILEY GROUP
 Address 17522 BOJTBELL WY
 City, State, ZIP BOJTBELL WA
 Phone # 425 415-0557 Fax # _____

SAMPLERS (signature) [Signature]

PROJECT NAME/NO. PUBLICIX INTL
2014-011E

PO# _____

REMARKS _____

Page # _____ of _____

TURNAROUND TIME
 Standard (2 Weeks)
 RUSH HCLD 24 hour
 Rush charges authorized by DB

SAMPLE DISPOSAL
 Dispose after 30 days
 Return samples
 Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED										Notes
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Lead	HCLD			
mw 1-2 mw1-2	01	4/7/16	1:15	S	1	(X)							X			X-pe DB
mw 2-2	02	4/7/16	1:00	S	1	(X)							X			4/11/16
mw 4-2	03	4/7/16	1:30	S	1	(X)							X			MS
mw 5-2	04	4/7/16	12:00	S	5	(X)							X	X		(X)-per TS
mw 5-4	05	4/7/16	12:10	S	5	(X)							X	X		4/12/16
mw 5-7	06	4/7/16	1:10	S	5											MS
mw 5-10	07	4/7/16	1:30	S	5											
mw 6-4	08	4/6/16	12:40	S	5	(X)							X	X		
mw 6-8.5	09	4/6/16	1:20	S	5											Samples returned at 3 °C

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	P B BURGANTEN	RLEF	4/11/16	
Received by: <u>[Signature]</u>	Bill Gleason	FED EX	4/11/16	1:20
Relinquished by:				
Received by: <u>[Signature]</u>	DD W	FOBE	4-11-16	14:30

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
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

April 21, 2017

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

Dear Mr. Sawetz:

Included is the amended report from the testing of material submitted on April 22, 2016 from the 2014-011I, Publix, F&BI 604414 project. Per your request, only the samples requested were included in the report.

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
c: Janelle Finley
TRG0503R.DOC

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
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

May 3, 2016

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 22, 2016 from the 2014-011I, Publix, F&BI 604414 project. There are 26 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Janelle Finley
TRG0503R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 22, 2016 by Friedman & Bruya, Inc. from the The Riley Group 2014-011I, Publix, F&BI 604414 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>The Riley Group</u>
604414 -01	MW1
604414 -02	MW2
604414 -03	MW3
604414 -04	MW4

The 8270D SIM volume for sample MW1 was taken from the container sampled and submitted on April 25, 2016 under sample delivery group 604431.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/03/16
 Date Received: 04/22/16
 Project: 2014-011I, Publix, F&BI 604414
 Date Extracted: 04/27/16
 Date Analyzed: 04/27/16

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

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
MW1 604414-01	<1	<1	<1	<3	<100	86
MW2 604414-02	<1	<1	<1	<3	<100	84
MW3 604414-03	<1	<1	<1	<3	<100	84
MW4 604414-04	<1	<1	<1	<3	<100	81
Method Blank 06-827 MB	<1	<1	<1	<3	<100	73

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/03/16
Date Received: 04/22/16
Project: 2014-0111I, Publix, F&BI 604414
Date Extracted: 04/27/16
Date Analyzed: 04/27/16

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 51-134)
MW1 604414-01	400	<250	93
MW2 604414-02	1,600	650 x	103
MW3 604414-03	470	<250	91
MW4 604414-04	390	<250	89
Method Blank 06-844 MB	<50	<250	84

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/03/16
Date Received: 04/22/16
Project: 2014-011I Publix, F&BI 604414
Date Extracted: 04/27/16
Date Analyzed: 05/23/16

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

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 41-152)
MW1 604414-01	<50	<250	103
MW2 604414-02	530	460	97
MW3 604414-03	170	<250	96
MW4 604414-04	<50	<250	103
Method Blank 06-844 MB	<50	<250	103

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW1	Client:	The Riley Group
Date Received:	04/22/16	Project:	2014-011I, Publix, F&BI 604414
Date Extracted:	04/27/16	Lab ID:	604414-01
Date Analyzed:	04/27/16	Data File:	604414-01 rr.052
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW2	Client:	The Riley Group
Date Received:	04/22/16	Project:	2014-011I, Publix, F&BI 604414
Date Extracted:	04/27/16	Lab ID:	604414-02
Date Analyzed:	04/27/16	Data File:	604414-02 rr.053
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW3	Client:	The Riley Group
Date Received:	04/22/16	Project:	2014-011I, Publix, F&BI 604414
Date Extracted:	04/27/16	Lab ID:	604414-03
Date Analyzed:	04/27/16	Data File:	604414-03.039
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW4	Client:	The Riley Group
Date Received:	04/22/16	Project:	2014-011I, Publix, F&BI 604414
Date Extracted:	04/27/16	Lab ID:	604414-04
Date Analyzed:	04/27/16	Data File:	604414-04.041
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	The Riley Group
Date Received:	NA	Project:	2014-0111I, Publix, F&BI 604414
Date Extracted:	04/27/16	Lab ID:	I6-231 mb
Date Analyzed:	04/27/16	Data File:	I6-231 mb rr.046
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW1	Client:	The Riley Group
Date Received:	04/22/16	Project:	2014-011I, Publix, F&BI 604414
Date Extracted:	04/27/16	Lab ID:	604414-01
Date Analyzed:	04/27/16	Data File:	604414-01.065
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW2	Client:	The Riley Group
Date Received:	04/22/16	Project:	2014-011I, Publix, F&BI 604414
Date Extracted:	04/27/16	Lab ID:	604414-02
Date Analyzed:	04/27/16	Data File:	604414-02.059
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	1.60

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW3	Client:	The Riley Group
Date Received:	04/22/16	Project:	2014-011I, Publix, F&BI 604414
Date Extracted:	04/27/16	Lab ID:	604414-03
Date Analyzed:	04/27/16	Data File:	604414-03.066
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW4	Client:	The Riley Group
Date Received:	04/22/16	Project:	2014-011I, Publix, F&BI 604414
Date Extracted:	04/27/16	Lab ID:	604414-04
Date Analyzed:	04/27/16	Data File:	604414-04.067
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	The Riley Group
Date Received:	NA	Project:	2014-011I, Publix, F&BI 604414
Date Extracted:	04/27/16	Lab ID:	I6-230 mb
Date Analyzed:	04/27/16	Data File:	I6-230 mb.057
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW1	Client:	The Riley Group
Date Received:	04/22/16	Project:	2014-0111I, Publix, F&BI 604414
Date Extracted:	04/27/16	Lab ID:	604414-01
Date Analyzed:	04/28/16	Data File:	042805.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	105	31	160
Benzo(a)anthracene-d12	110	25	165

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.03
2-Methylnaphthalene	<0.03
1-Methylnaphthalene	<0.03
Benz(a)anthracene	<0.03
Chrysene	<0.03
Benzo(a)pyrene	<0.03
Benzo(b)fluoranthene	<0.03
Benzo(k)fluoranthene	<0.03
Indeno(1,2,3-cd)pyrene	<0.03
Dibenz(a,h)anthracene	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW2	Client:	The Riley Group
Date Received:	04/22/16	Project:	2014-011I, Publix, F&BI 604414
Date Extracted:	04/27/16	Lab ID:	604414-02
Date Analyzed:	04/28/16	Data File:	042815.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	109	31	160
Benzo(a)anthracene-d12	109	25	165

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.03
2-Methylnaphthalene	<0.03
1-Methylnaphthalene	<0.03
Benz(a)anthracene	0.054
Chrysene	0.10
Benzo(a)pyrene	0.041
Benzo(b)fluoranthene	0.049
Benzo(k)fluoranthene	<0.03
Indeno(1,2,3-cd)pyrene	<0.03
Dibenz(a,h)anthracene	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW3	Client:	The Riley Group
Date Received:	04/22/16	Project:	2014-0111I, Publix, F&BI 604414
Date Extracted:	04/27/16	Lab ID:	604414-03
Date Analyzed:	04/28/16	Data File:	042816.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	110	31	160
Benzo(a)anthracene-d12	115	25	165

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.03
2-Methylnaphthalene	<0.03
1-Methylnaphthalene	<0.03
Benz(a)anthracene	0.030
Chrysene	0.039
Benzo(a)pyrene	<0.03
Benzo(b)fluoranthene	0.031
Benzo(k)fluoranthene	<0.03
Indeno(1,2,3-cd)pyrene	<0.03
Dibenz(a,h)anthracene	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW4	Client:	The Riley Group
Date Received:	04/22/16	Project:	2014-011I, Publix, F&BI 604414
Date Extracted:	04/27/16	Lab ID:	604414-04
Date Analyzed:	04/28/16	Data File:	042808.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	106	31	160
Benzo(a)anthracene-d12	113	25	165

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.03
2-Methylnaphthalene	<0.03
1-Methylnaphthalene	<0.03
Benz(a)anthracene	<0.03
Chrysene	<0.03
Benzo(a)pyrene	<0.03
Benzo(b)fluoranthene	<0.03
Benzo(k)fluoranthene	<0.03
Indeno(1,2,3-cd)pyrene	<0.03
Dibenz(a,h)anthracene	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	The Riley Group
Date Received:	Not Applicable	Project:	2014-011I, Publix, F&BI 604414
Date Extracted:	04/27/16	Lab ID:	06-843 mb
Date Analyzed:	04/28/16	Data File:	042803.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	100	31	160
Benzo(a)anthracene-d12	108	25	165

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.03
2-Methylnaphthalene	<0.03
1-Methylnaphthalene	<0.03
Benz(a)anthracene	<0.03
Chrysene	<0.03
Benzo(a)pyrene	<0.03
Benzo(b)fluoranthene	<0.03
Benzo(k)fluoranthene	<0.03
Indeno(1,2,3-cd)pyrene	<0.03
Dibenz(a,h)anthracene	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/03/16

Date Received: 04/22/16

Project: 2014-0111I, Publix, F&BI 604414

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

Laboratory Code: 604414-01 (Duplicate)

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	94	65-118
Toluene	ug/L (ppb)	50	86	72-122
Ethylbenzene	ug/L (ppb)	50	89	73-126
Xylenes	ug/L (ppb)	150	87	74-118
Gasoline	ug/L (ppb)	1,000	96	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/03/16

Date Received: 04/22/16

Project: 2014-0111I, Publix, F&BI 604414

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	97	96	58-134	1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/03/16

Date Received: 04/22/16

Project: 2014-011I Publix, F&BI 604414

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

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	112	110	61-133	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/03/16

Date Received: 04/22/16

Project: 2014-0111I, Publix, F&BI 604414

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR DISSOLVED METALS USING EPA METHOD 200.8**

Laboratory Code: 604431-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	<1	85	85	70-130	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	103	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/03/16

Date Received: 04/22/16

Project: 2014-0111I, Publix, F&BI 604414

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 604414-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	1.60	83	84	70-130	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	103	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/03/16

Date Received: 04/22/16

Project: 2014-0111I, Publix, F&BI 604414

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR PAHS BY EPA METHOD 8270D SIM**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	1	92	94	67-116	2
2-Methylnaphthalene	ug/L (ppb)	1	92	94	63-122	2
1-Methylnaphthalene	ug/L (ppb)	1	91	93	65-122	2
Benz(a)anthracene	ug/L (ppb)	1	98	97	60-118	1
Chrysene	ug/L (ppb)	1	99	99	66-125	0
Benzo(b)fluoranthene	ug/L (ppb)	1	99	99	55-135	0
Benzo(k)fluoranthene	ug/L (ppb)	1	103	105	62-125	2
Benzo(a)pyrene	ug/L (ppb)	1	101	104	58-127	3
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	1	95	99	36-142	4
Dibenz(a,h)anthracene	ug/L (ppb)	1	88	97	37-133	10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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 compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. 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. Compounds in the sample matrix interfered with the quantitation of the analyte.

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.

609414 ✓

SAMPLE CHAIN OF CUSTODY

ME 04/23/16 (No)

05/15/16

Send Report To Jelly Savetz
 Company RGI
 Address 17522 BOTHELL WAY NE
 City, State, ZIP BOTHELL WA 98011
 Phone # 425-415-0551 Fax #

SAMPLERS (signature) [Signature]
 PROJECT NAME/NO. 2014-011I, PUBLIX PO#
 REMARKS ANALYSES REQUESTED WILL BE PROVIDED 4/25 BY JELLY SAVETZ

Page # 01 of 05
 TURNAROUNDTIME
 Standard (2 Weeks)
 RUSH 3-Day
 Rush charges authorized by
 SAMPLE DISPOSAL
 Dispose after 30 days
 Return samples
 Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED										Notes	
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCS by 8270	HFS	PAHs	PHS	PHS	PHS		PHS
MW1	CRAG	4/22	0900	H ₂ O	7	X	X	X				X	X	X			Will have ATR performed on 4/25
MW2	CRAG		0835		8	X	X	X				X	X	X			X = 4/26/16 JS
MW3	03		0925			X	X	X				X	X	X			as
MW4	04		0930			X	X	X				X	X	X			⊗ = 5/19/16 JS
MW5	05		1030			X	X	X				X	X	X			per JS as
MW6	06		1025			X	X	X				X	X	X			
MW7	07		1200			X	X	X				X	X	X			
MW8	08		0240			X	X	X				X	X	X			

Samples received at 16 °C

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044
 FORMS/COC/COC.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	<u>CHRISTOPHER FRENCH</u>	<u>RGI</u>	<u>4/22</u>	<u>1600</u>
Received by: <u>[Signature]</u>	<u>VINCE</u>	<u>FDYI</u>	<u>4/22</u>	<u>1635</u>
Relinquished by:				
Received by:				

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
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

May 5, 2016

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 2, 2016 from the 2014-011H, F&BI 605002 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
TRG0505R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 2, 2016 by Friedman & Bruya, Inc. from the The Riley Group 2014-011H, F&BI 605002 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID
605002 -01

The Riley Group
MW-2

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/05/16
Date Received: 05/02/16
Project: 2014-011H, F&BI 605002
Date Extracted: 05/02/16
Date Analyzed: 05/03/16

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

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 51-134)
MW-2 605002-01	250	<250	85
Method Blank 06-873 MB	<50	<250	95

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/05/16
Date Received: 05/02/16
Project: 2014-011H, F&BI 605002
Date Extracted: 05/02/16
Date Analyzed: 05/02/16

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 41-152)
MW-2 605002-01	990 x	<250	91
Method Blank 06-873 MB	<50	<250	102

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/05/16

Date Received: 05/02/16

Project: 2014-011H, F&BI 605002

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

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	98	105	58-134	7

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/05/16

Date Received: 05/02/16

Project: 2014-011H, F&BI 605002

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	93	101	63-142	8

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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 compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. 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. Compounds in the sample matrix interfered with the quantitation of the analyte.

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.

605002

SAMPLE CHAIN OF CUSTODY

ME 05/02/16

605

Report To Jerry Sawetz
 Company The Riley Group
 Address _____
 City, State, ZIP _____
 Phone _____ Email _____

SAMPLERS (signature) Stafford

PROJECT NAME 2014-011 BH PO # _____

REMARKS _____ INVOICE TO _____

Page # 1 of _____

TURNAROUND TIME
 Standard Turnaround
 RUSH 24 hr
 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	ANALYSES REQUESTED										Notes				
						TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	CRAT #105	Acrylonitrile	Control JS		Dr V/SG			
MMW-2	01A-C	5/2/16	7:15	H ₂ O	3		X							X						0 - per JS 5/2/16 ME

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>Stafford</u>	Stafford L	RGI	5/2/16	10:25
Received by: <u>Nhan Phan</u>	Nhan Phan	FEBI	5/2/16	1025
Relinquished by:				
Received by:				

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
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

May 11, 2016

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 4, 2016 from the 2014-0111 Publix, F&BI 605045 project. There are 7 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Janelle Finley
TRG0511R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 4, 2016 by Friedman & Bruya, Inc. from the The Riley Group 2014-011I Publix, F&BI 605045 project. Samples were logged in under the laboratory ID's listed below:

Laboratory ID
605045 -01

The Riley Group
MW2

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/11/16
Date Received: 05/04/16
Project: 2014-0111I Publix, F&BI 605045
Date Extracted: 05/05/16
Date Analyzed: 05/05/16

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₃)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 41-152)
MW2 605045-01	970	<250	86
Method Blank 06-883 MB2	<50	<250	92

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW2	Client:	The Riley Group
Date Received:	05/04/16	Project:	2014-011I Publix, F&BI 605045
Date Extracted:	05/05/16	Lab ID:	605045-01 1/2
Date Analyzed:	05/05/16	Data File:	050506.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	98	31	160
Benzo(a)anthracene-d12	94	25	165

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.06
2-Methylnaphthalene	0.18
1-Methylnaphthalene	8.3
Benz(a)anthracene	<0.06
Chrysene	<0.06
Benzo(a)pyrene	<0.06
Benzo(b)fluoranthene	<0.06
Benzo(k)fluoranthene	<0.06
Indeno(1,2,3-cd)pyrene	<0.06
Dibenz(a,h)anthracene	<0.06

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	The Riley Group
Date Received:	Not Applicable	Project:	2014-0111 Publix, F&BI 605045
Date Extracted:	05/05/16	Lab ID:	06-897 mb
Date Analyzed:	05/05/16	Data File:	050505.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	90	31	160
Benzo(a)anthracene-d12	92	25	165

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.03
2-Methylnaphthalene	<0.03
1-Methylnaphthalene	<0.03
Benz(a)anthracene	<0.03
Chrysene	<0.03
Benzo(a)pyrene	<0.03
Benzo(b)fluoranthene	<0.03
Benzo(k)fluoranthene	<0.03
Indeno(1,2,3-cd)pyrene	<0.03
Dibenz(a,h)anthracene	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/11/16

Date Received: 05/04/16

Project: 2014-0111I Publix, F&BI 605045

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	127	109	61-133	15

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/11/16

Date Received: 05/04/16

Project: 2014-0111I Publix, F&BI 605045

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR PAHS BY EPA METHOD 8270D SIM**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	1	90	90	67-116	0
2-Methylnaphthalene	ug/L (ppb)	1	88	88	63-122	0
1-Methylnaphthalene	ug/L (ppb)	1	88	87	65-122	1
Benz(a)anthracene	ug/L (ppb)	1	98	99	60-118	1
Chrysene	ug/L (ppb)	1	93	97	66-125	4
Benzo(b)fluoranthene	ug/L (ppb)	1	91	92	55-135	1
Benzo(k)fluoranthene	ug/L (ppb)	1	95	96	62-125	1
Benzo(a)pyrene	ug/L (ppb)	1	91	91	58-127	0
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	1	88	86	36-142	2
Dibenz(a,h)anthracene	ug/L (ppb)	1	89	85	37-133	5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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 compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. 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. Compounds in the sample matrix interfered with the quantitation of the analyte.
- 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.

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
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

May 25, 2016

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

Dear Mr. Sawetz:

Included are the additional results from the testing of material submitted on May 4, 2016 from the Publix, F&BI 605045 project. There are 4 pages included in this report.

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
c: Janelle Finley
TRG0525R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 4, 2016 by Friedman & Bruya, Inc. from the The Riley Group Publix, F&BI 605045 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>The Riley Group</u>
605045 -01	MW2

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/25/16
Date Received: 05/04/16
Project: Publix, F&BI 605045
Date Extracted: 05/05/16
Date Analyzed: 05/18/16

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

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 41-152)
MW2 605045-01	210	<250	81
Method Blank 06-883 MB2	<50	<250	93

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/25/16

Date Received: 05/04/16

Project: Publix, F&BI 605045

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

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	99	88	63-142	12

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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 compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. 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. Compounds in the sample matrix interfered with the quantitation of the analyte.

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.

605045

SAMPLE CHAIN OF CUSTODY

ME 5/4/16

CO3

Send Report To Jerry Sawetz
 Company RGT
 Address 17522 Bothell Way NE
 City, State, ZIP Bothell, WA 98011
 Phone # 425-415-0551 Fax # _____

SAMPLERS (signature) Jerry Sawetz For DB
 PROJECT NAME/NO. Publix PO# _____
 REMARKS _____

TURNAROUND TIME
 Standard (2 Weeks)
 RUSH must have results by
 Rush charges authorized by 1000
5/6
 SAMPLE DISPOSAL
 Dispose after 30 days
 Return samples
 Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED										Notes			
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	CPAHs w/aph	De V/S/G						
MW2	01AC	5/4/16	1145	W	3 500ml	X								X	*				* per JS 5/11/16 m2

Samples received at 2 °C

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044
 FORMS\COC\COC.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	<u>D. B. Am...</u>	<u>RGT</u>	<u>5-4</u>	<u>218</u>
Received by: <u>[Signature]</u>	<u>[Signature]</u>	<u>RGT</u>	<u>5/4</u>	<u>1600</u>
Relinquished by:				
Received by:				

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
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

May 24, 2016

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 16, 2016 from the Publix Task 3 Site Characterization PO 2014-011I, F&BI 605286 project. There are 20 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Janelle Finley
TRG0524R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 16, 2016 by Friedman & Bruya, Inc. from the The Riley Group Publix Task 3 Site Characterization PO 2014-011I, F&BI 605286 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>The Riley Group</u>
605286 -01	MW1A
605286 -02	MW9

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/24/16

Date Received: 05/16/16

Project: Publix Task 3 Site Characterization PO 2014-011I, F&BI 605286

Date Extracted: 05/17/16

Date Analyzed: 05/17/16

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

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
MW1A 605286-01	<1	2.3	<1	6.8	240	91
MW9 605286-02	<1	1.2	<1	<3	<100	96
Method Blank 06-950 MB	<1	<1	<1	<3	<100	92

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/24/16

Date Received: 05/16/16

Project: Publix Task 3 Site Characterization PO 2014-011I, F&BI 605286

Date Extracted: 05/17/16

Date Analyzed: 05/20/16

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

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 47-140)
MW1A 605286-01	200 x	<250	89
MW9 605286-02	880	1,200	86
Method Blank 06-994 MB	<50	<250	98

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/24/16

Date Received: 05/16/16

Project: Publix Task 3 Site Characterization PO 2014-011I, F&BI 605286

Date Extracted: 05/17/16

Date Analyzed: 05/17/16

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 41-152)
MW1A 605286-01	220 x	<250	100
MW9 605286-02	1,700	2,100	114
Method Blank 06-994 MB	<50	<250	98

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW1A	Client:	The Riley Group
Date Received:	05/16/16	Project:	Publix Task 3 Site Characterization
Date Extracted:	05/19/16	Lab ID:	605286-01
Date Analyzed:	05/19/16	Data File:	605286-01.053
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW9	Client:	The Riley Group
Date Received:	05/16/16	Project:	Publix Task 3 Site Characterization
Date Extracted:	05/19/16	Lab ID:	605286-02
Date Analyzed:	05/19/16	Data File:	605286-02.054
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
Lead	6.64

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	The Riley Group
Date Received:	NA	Project:	Publix Task 3 Site Characterization
Date Extracted:	05/19/16	Lab ID:	I6-317 mb
Date Analyzed:	05/19/16	Data File:	I6-317 mb.051
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
--------------------	-------------	--------------	--------------

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW1A	Client:	The Riley Group
Date Received:	05/16/16	Project:	Publix Task 3 Site Characterization
Date Extracted:	05/19/16	Lab ID:	605286-01
Date Analyzed:	05/19/16	Data File:	605286-01.046
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW9	Client:	The Riley Group
Date Received:	05/16/16	Project:	Publix Task 3 Site Characterization
Date Extracted:	05/19/16	Lab ID:	605286-02
Date Analyzed:	05/19/16	Data File:	605286-02.049
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	The Riley Group
Date Received:	NA	Project:	Publix Task 3 Site Characterization
Date Extracted:	05/19/16	Lab ID:	I6-318 mb
Date Analyzed:	05/19/16	Data File:	I6-318 mb.044
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW1A	Client:	The Riley Group
Date Received:	05/16/16	Project:	Publix Task 3 Site Characterization
Date Extracted:	05/17/16	Lab ID:	605286-01 1/2
Date Analyzed:	05/18/16	Data File:	051806.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	94	31	160
Benzo(a)anthracene-d12	92	25	165

Compounds:	Concentration ug/L (ppb)
Naphthalene	7.2
2-Methylnaphthalene	1.9
1-Methylnaphthalene	8.5
Benz(a)anthracene	<0.06
Chrysene	<0.06
Benzo(a)pyrene	<0.06
Benzo(b)fluoranthene	<0.06
Benzo(k)fluoranthene	<0.06
Indeno(1,2,3-cd)pyrene	<0.06
Dibenz(a,h)anthracene	<0.06

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW9	Client:	The Riley Group
Date Received:	05/16/16	Project:	Publix Task 3 Site Characterization
Date Extracted:	05/17/16	Lab ID:	605286-02 1/2
Date Analyzed:	05/18/16	Data File:	051809.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracen e-d10	96	31	160
Benzo(a)anthracene-d12	94	25	165

Compounds:	Concentration ug/L (ppb)
Naphthalene	0.24
2-Methylnaphthalene	<0.06
1-Methylnaphthalene	0.29
Benz(a)anthracene	0.13
Chrysene	0.21
Benzo(a)pyrene	0.13
Benzo(b)fluoranthene	0.13
Benzo(k)fluoranthene	<0.06
Indeno(1,2,3-cd)pyrene	0.063
Dibenz(a,h)anthracene	<0.06

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	The Riley Group
Date Received:	Not Applicable	Project:	Publix Task 3 Site Characterization
Date Extracted:	05/17/16	Lab ID:	06-985 mb2
Date Analyzed:	05/18/16	Data File:	051805.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	92	31	160
Benzo(a)anthracene-d12	88	25	165

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.03
2-Methylnaphthalene	<0.03
1-Methylnaphthalene	<0.03
Benz(a)anthracene	<0.03
Chrysene	<0.03
Benzo(a)pyrene	<0.03
Benzo(b)fluoranthene	<0.03
Benzo(k)fluoranthene	<0.03
Indeno(1,2,3-cd)pyrene	<0.03
Dibenz(a,h)anthracene	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/24/16

Date Received: 05/16/16

Project: Publix Task 3 Site Characterization PO 2014-011I, F&BI 605286

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

Laboratory Code: 605283-01 (Duplicate)

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	95	65-118
Toluene	ug/L (ppb)	50	96	72-122
Ethylbenzene	ug/L (ppb)	50	97	73-126
Xylenes	ug/L (ppb)	150	95	74-118
Gasoline	ug/L (ppb)	1,000	94	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/24/16

Date Received: 05/16/16

Project: Publix Task 3 Site Characterization PO 2014-011I, F&BI 605286

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

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	90	92	63-142	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/24/16

Date Received: 05/16/16

Project: Publix Task 3 Site Characterization PO 2014-011I, F&BI 605286

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	101	101	63-142	0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/24/16

Date Received: 05/16/16

Project: Publix Task 3 Site Characterization PO 2014-011I, F&BI 605286

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 605307-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	<1	105	98	70-130	7

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	92	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/24/16

Date Received: 05/16/16

Project: Publix Task 3 Site Characterization PO 2014-011I, F&BI 605286

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR DISSOLVED METALS USING EPA METHOD 200.8**

Laboratory Code: 605286-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	<1	67 vo	67 vo	70-130	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	91	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/24/16

Date Received: 05/16/16

Project: Publix Task 3 Site Characterization PO 2014-011I, F&BI 605286

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR PAHS BY EPA METHOD 8270D SIM**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	1	87	91	67-116	4
2-Methylnaphthalene	ug/L (ppb)	1	87	91	63-122	4
1-Methylnaphthalene	ug/L (ppb)	1	87	91	65-122	4
Benz(a)anthracene	ug/L (ppb)	1	90	93	60-118	3
Chrysene	ug/L (ppb)	1	90	96	66-125	6
Benzo(b)fluoranthene	ug/L (ppb)	1	83	90	55-135	8
Benzo(k)fluoranthene	ug/L (ppb)	1	90	91	62-125	1
Benzo(a)pyrene	ug/L (ppb)	1	83	87	58-127	5
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	1	75	83	36-142	10
Dibenz(a,h)anthracene	ug/L (ppb)	1	77	90	37-133	16

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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 compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. 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. Compounds in the sample matrix interfered with the quantitation of the analyte.

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.

SAMPLE CHAIN OF CUSTODY

ME 05/16/16 1st of 103 / AT3

Send Report To 605-386 Jerry Sawetz
 Company RG1
 Address 17522 Bothell Way NE, Ste A
 City, State, ZIP Bothell, WA 98011
 Phone # 425-415-0551 Fax # 425-415-0311

SAMPLERS (signature) [Signature]
 PROJECT NAME/NO. Publix Task 3 Site PO# 2014-0112
characterization
 REMARKS
jsawetz@riley-group.com

Page # 1 of 103

TURNAROUND TIME
 Standard (2 Weeks)
 RUSH
 Rush charges authorized by _____

SAMPLE DISPOSAL
 Dispose after 30 days
 Return samples
 Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED											Notes	
						TPH-Diesel/5.1/1.5	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Pyrene/fluoranthene	cPAHs	Naphthalenes	Total PL	Dissolved PL		
MW1A	01A	5/13/16	12:58	W	7	X	X	X						X	X	X	X	
MW9	02	5/13/16	13:56	W	7	X	X	X						X	X	X	X	

Samples received at: 4 °C

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	Mike Gipson	RG1	5/13/16	15:00
Received by: <u>[Signature]</u>	ENGH	FAB	5/13/16	15:00
Relinquished by:			5/16/16	
Received by:			5/17/16	

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
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

April 21, 2017

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

Dear Mr. Sawetz:

Included is the amended report from the testing of material submitted on May 25, 2016 from the 2014-011H, F&BI 605478 project. Per your request, only the samples requested were included in the report.

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
c: Janelle Finley
TRG0608R.DOC

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
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

June 8, 2016

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 25, 2016 from the 2014-011H, F&BI 605478 project. There are 13 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Janelle Finley
TRG0608R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 25, 2016 by Friedman & Bruya, Inc. from the The Riley Group 2014-011H, F&BI 605478 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>The Riley Group</u>
605478 -01	MW1A
605478 -02	MW2
605478 -03	MW3
605478 -04	MW4
605478 -10	MW9

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/08/16
Date Received: 05/25/16
Project: 2014-011H, F&BI 605478
Date Extracted: 05/26/16
Date Analyzed: 05/31/16

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

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 47-140)
MW1A 605478-01	270	<250	101
MW2 605478-02 1/1.3	320	<325	109
MW3 605478-03 1/1.2	220	<300	115
MW4 605478-04 1/1.2	140	<300	107
MW9 605478-10	6,400 x	9,200	90
Method Blank 06-1073 MB	<50	<250	109

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/08/16
Date Received: 05/25/16
Project: 2014-011H, F&BI 605478
Date Extracted: 05/26/16
Date Analyzed: 05/31/16

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 41-152)
MW1A 605478-01	290 x	<250	110
MW2 605478-02 1/1.3	1,100 x	<325	103
MW3 605478-03 1/1.2	390 x	<300	114
MW4 605478-04 1/1.2	340 x	<300	100
MW9 605478-10	5,800 x	9,500	117
Method Blank 06-1073 MB	<50	<250	114

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW1A	Client:	The Riley Group
Date Received:	05/25/16	Project:	2014-011H, F&BI 605478
Date Extracted:	05/26/16	Lab ID:	605478-01 1/2
Date Analyzed:	05/28/16	Data File:	052721.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	104	25	160
Benzo(a)anthracene-d12	107	36	162

Compounds:	Concentration ug/L (ppb)
Naphthalene	5.9
2-Methylnaphthalene	1.3
1-Methylnaphthalene	8.8
Benz(a)anthracene	<0.06
Chrysene	<0.06
Benzo(a)pyrene	<0.06
Benzo(b)fluoranthene	<0.06
Benzo(k)fluoranthene	<0.06
Indeno(1,2,3-cd)pyrene	<0.06
Dibenz(a,h)anthracene	<0.06

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW2	Client:	The Riley Group
Date Received:	05/25/16	Project:	2014-011H, F&BI 605478
Date Extracted:	05/26/16	Lab ID:	605478-02 1/2
Date Analyzed:	05/28/16	Data File:	052722.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	104	25	160
Benzo(a)anthracene-d12	114	36	162

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.06
2-Methylnaphthalene	<0.06
1-Methylnaphthalene	8.5
Benz(a)anthracene	<0.06
Chrysene	<0.06
Benzo(a)pyrene	<0.06
Benzo(b)fluoranthene	<0.06
Benzo(k)fluoranthene	<0.06
Indeno(1,2,3-cd)pyrene	<0.06
Dibenz(a,h)anthracene	<0.06

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW3	Client:	The Riley Group
Date Received:	05/25/16	Project:	2014-011H, F&BI 605478
Date Extracted:	05/26/16	Lab ID:	605478-03 1/2
Date Analyzed:	05/28/16	Data File:	052723.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	104	25	160
Benzo(a)anthracene-d12	116	36	162

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.06
2-Methylnaphthalene	<0.06
1-Methylnaphthalene	<0.06
Benz(a)anthracene	<0.06
Chrysene	<0.06
Benzo(a)pyrene	<0.06
Benzo(b)fluoranthene	<0.06
Benzo(k)fluoranthene	<0.06
Indeno(1,2,3-cd)pyrene	<0.06
Dibenz(a,h)anthracene	<0.06

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW4	Client:	The Riley Group
Date Received:	05/25/16	Project:	2014-011H, F&BI 605478
Date Extracted:	05/26/16	Lab ID:	605478-04 1/2
Date Analyzed:	05/28/16	Data File:	052724.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	104	25	160
Benzo(a)anthracene-d12	112	36	162

Compounds:	Concentration ug/L (ppb)
Naphthalene	0.33
2-Methylnaphthalene	0.067
1-Methylnaphthalene	1.6
Benz(a)anthracene	<0.06
Chrysene	<0.06
Benzo(a)pyrene	<0.06
Benzo(b)fluoranthene	<0.06
Benzo(k)fluoranthene	<0.06
Indeno(1,2,3-cd)pyrene	<0.06
Dibenz(a,h)anthracene	<0.06

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW9	Client:	The Riley Group
Date Received:	05/25/16	Project:	2014-011H, F&BI 605478
Date Extracted:	05/26/16	Lab ID:	605478-10 1/2
Date Analyzed:	05/28/16	Data File:	052736.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	99	38	162
Benzo(a)anthracene-d12	123	22	160

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.06
2-Methylnaphthalene	0.091
1-Methylnaphthalene	0.24
Benz(a)anthracene	0.68
Chrysene	0.87
Benzo(a)pyrene	0.45
Benzo(b)fluoranthene	0.45
Benzo(k)fluoranthene	0.14
Indeno(1,2,3-cd)pyrene	0.22
Dibenz(a,h)anthracene	0.078

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	The Riley Group
Date Received:	Not Applicable	Project:	2014-011H, F&BI 605478
Date Extracted:	05/26/16	Lab ID:	06-1072 mb
Date Analyzed:	05/27/16	Data File:	052720.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	100	25	160
Benzo(a)anthracene-d12	104	36	162

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.03
2-Methylnaphthalene	<0.03
1-Methylnaphthalene	<0.03
Benz(a)anthracene	<0.03
Chrysene	<0.03
Benzo(a)pyrene	<0.03
Benzo(b)fluoranthene	<0.03
Benzo(k)fluoranthene	<0.03
Indeno(1,2,3-cd)pyrene	<0.03
Dibenz(a,h)anthracene	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/08/16

Date Received: 05/25/16

Project: 2014-011H, F&BI 605478

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

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	116	114	61-133	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/08/16

Date Received: 05/25/16

Project: 2014-011H, F&BI 605478

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	100	102	63-142	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/08/16

Date Received: 05/25/16

Project: 2014-011H, F&BI 605478

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR PAHS BY EPA METHOD 8270D SIM**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	1	83	82	70-130	1
2-Methylnaphthalene	ug/L (ppb)	1	83	82	50-126	1
1-Methylnaphthalene	ug/L (ppb)	1	81	81	70-130	0
Benz(a)anthracene	ug/L (ppb)	1	93	93	70-130	0
Chrysene	ug/L (ppb)	1	91	91	70-130	0
Benzo(b)fluoranthene	ug/L (ppb)	1	90	94	59-130	4
Benzo(k)fluoranthene	ug/L (ppb)	1	93	91	65-120	2
Benzo(a)pyrene	ug/L (ppb)	1	86	87	60-125	1
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	1	90	93	42-135	3
Dibenz(a,h)anthracene	ug/L (ppb)	1	85	73	37-125	15

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 compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. 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. Compounds in the sample matrix interfered with the quantitation of the analyte.

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.

605478 ✓

SAMPLE CHAIN OF CUSTODY

ME 05/25/16 D04

Report To Jerry Sawetz
 Company The Riley Group
 Address 17522 Bothell way NE
 City, State, ZIP Bothell WA 98011
 Phone _____ Email _____

SAMPLERS (signature) Stafford
 PROJECT NAME 2014-0114 PO # _____
 REMARKS _____ INVOICE TO _____

Page # 1 of _____
 TURNAROUND TIME
 Standard Turnaround
 RUSH
 Rush charges authorized by: _____
 SAMPLE DISPOSAL
 Dispose after 30 days
 Archive Samples
 Other

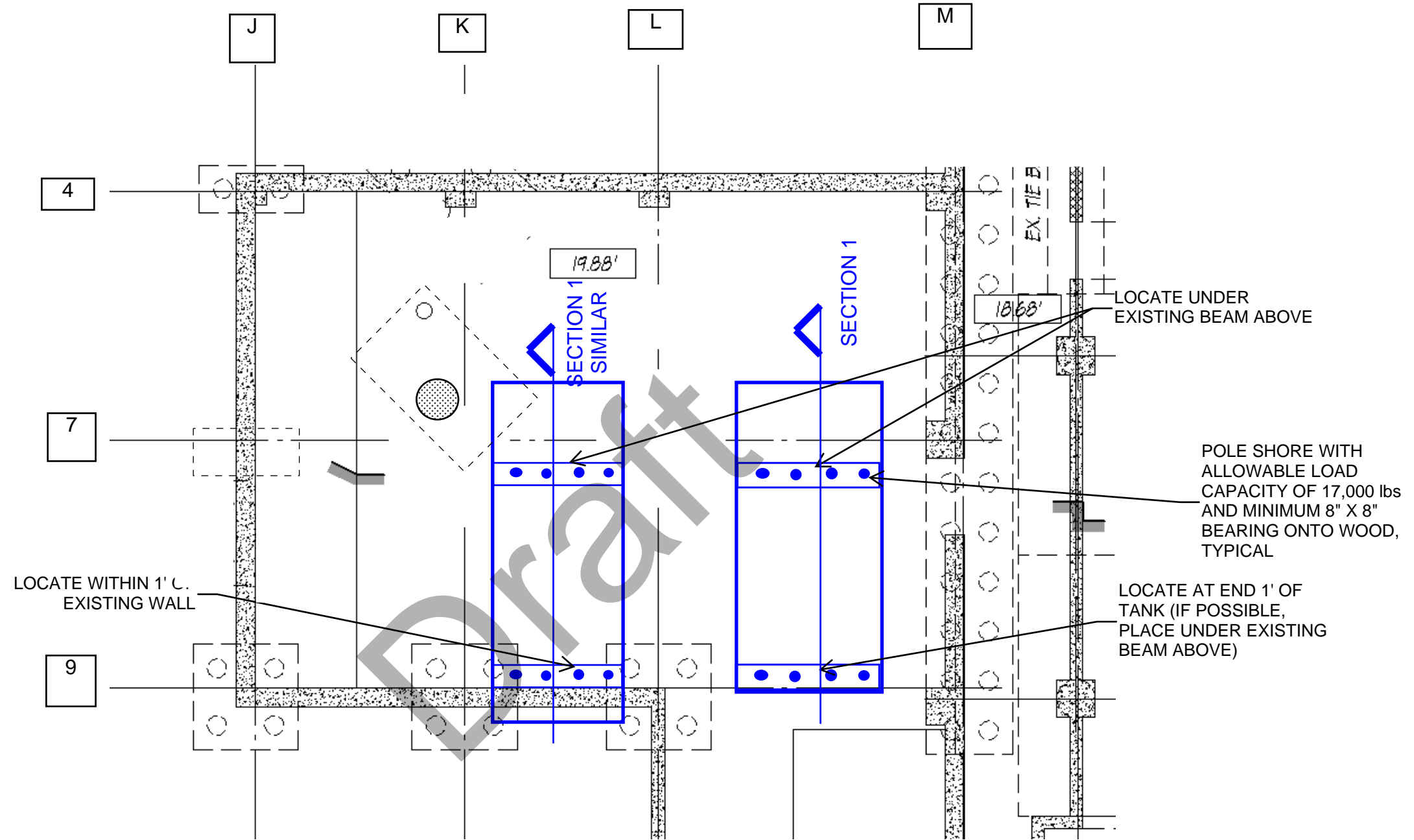
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED										Notes		
						TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	CPAHs &	Naphthalenes	8270 SIM			
MW 1A ^{Do not use}	01A-B	5/24/16	9:25	H₂O	2													
MW 2-W	02		10:30			X								X				
MW 3-W	03		11:00			X								X				
MW 4-W	04		11:30			X								X				
MW 5-W	05		11:04			X								X				
MW 6-W	06		0:40			X								X				
MW 7-W	07		9:05			X								X				
MW 8-W	08		8:55			X								X				
MW 9-W	09		12:02			X								X				
MW 9-W	10A-C		12:20		30	X								X				

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

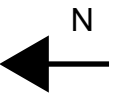
SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>Stafford</u>	Stafford Larsen	RGI	5/25/16	12:00
Received by: <u>[Signature]</u>	Frank Jones	FEB	5/25/16	12:35
Relinquished by: _____				
Received by: _____				

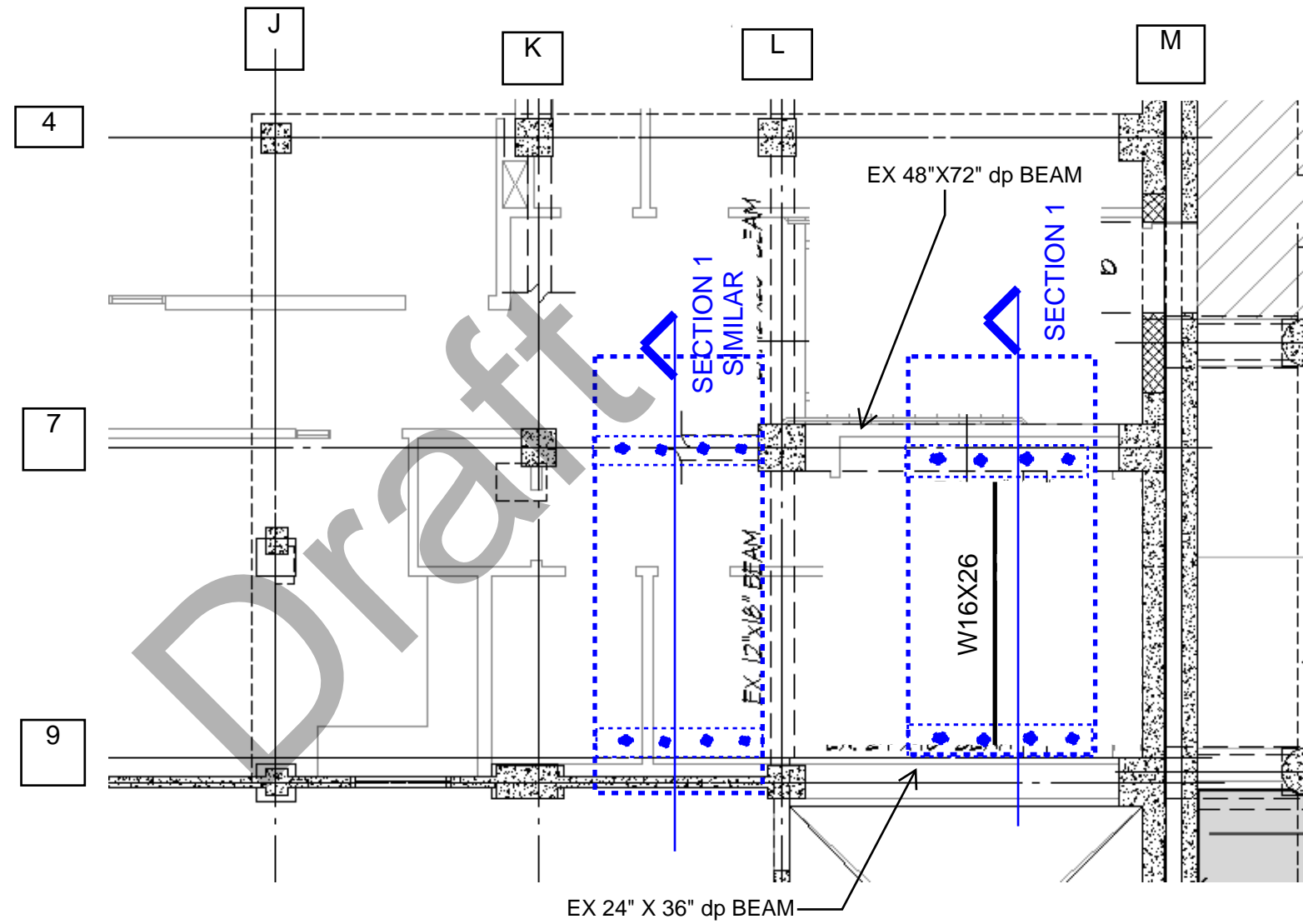
Samples received at 4 °C

Appendix D

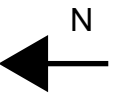


SUBBASEMENT PLAN

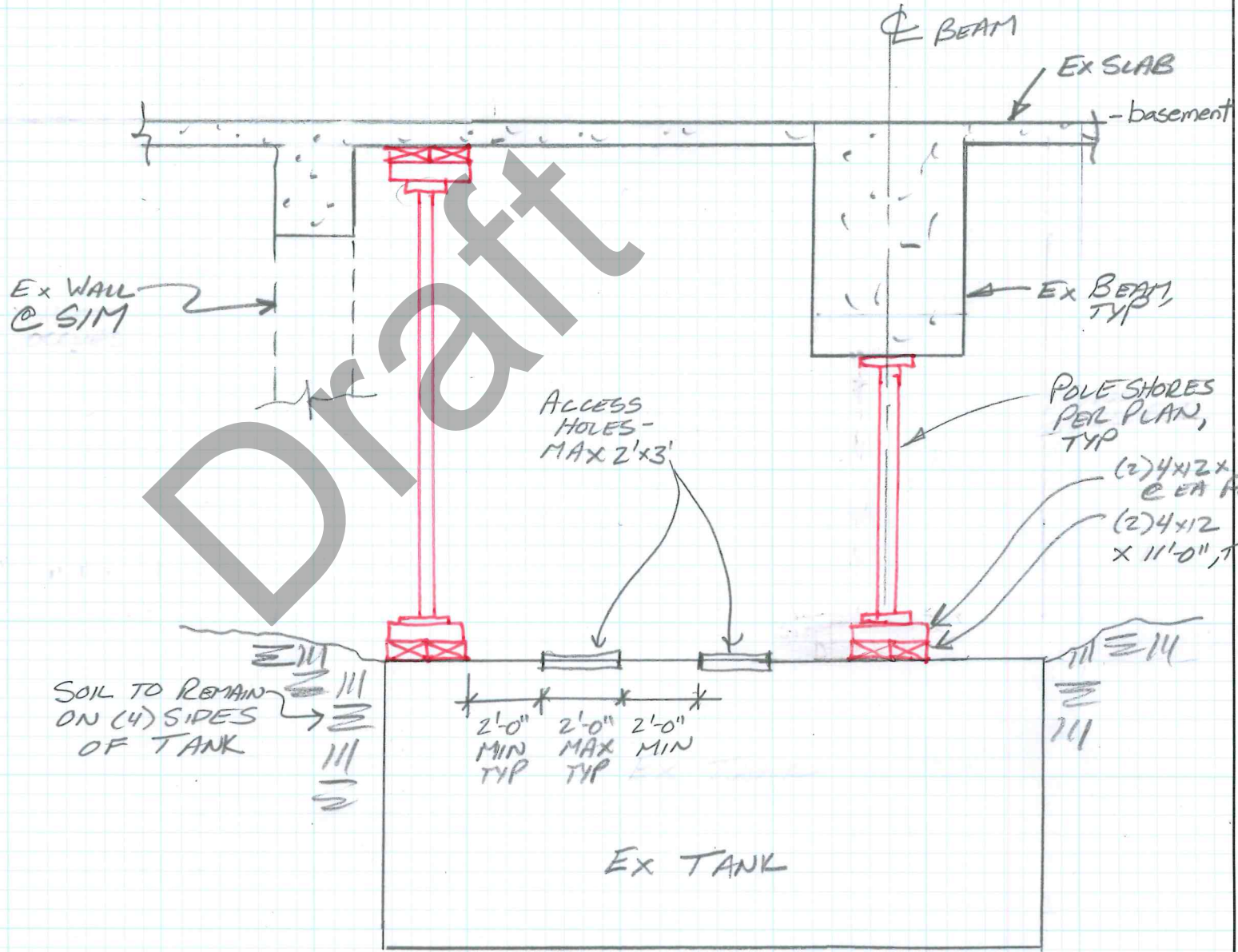




BASEMENT PLAN



Project: Publix--UST Decommissioning
Project No. _____
Client: Uwajimaya
Designed By: RHC
Checked By: _____
Date: 03-17-2016
Sheet _____ of _____



SECTION 1 (LOOKING NORTH)
NTS

801 SECOND AVENUE, SUITE 900 SEATTLE, WA 98104 / P 206.343.0460 / cplinc.com

Appendix E

July 20, 2016

Our Ref: 1228-16

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

REPORT: Pipe Locating Investigation
504 Fifth Avenue South
Seattle, Washington

Dear Mr. Sawetz:

Attached is the interpretation results map for the geophysical scanning that I performed at your site on Monday, July 18, 2016. The inside area is shown at the top of the figure, and the outside area is shown at the bottom of the figure. The probable fuel oil fill pipe was located using a RD utility locator. Ground Penetrating Radar (GPR) was also used, but was not successful in locating the pipe.

The inside area is located in the sub-basement of the building over a dirt floor. The probable fuel oil fill pipe is visible on the west wall of the basement. The probable fill pipe is interpreted to follow along the north edge of the sump pit wall and continues east towards the visible tank access cover. The depth to the top of the pipe is estimated to range from 3.7 to 4.0 feet deep. The pipe was located using a RD utility locator with the RD transmitter attached to the visible pipe.

The outside area is located to the west of the building along the east side of Fifth Avenue South. The scanning area was about 20 feet long (running north south) and extended from the building west into the street. The location of the probable fill pipe is shown below the concrete sidewalk and extends west, perpendicular to the building. There is a visible circular concrete patch (about 6 inches in diameter) in the sidewalk that may indicate the former fill port location. However, a strong RD locating signal was also detected that seems to show the pipe turning to the south on the west side of the chain link fence. This signal was not observed to the west of the parked vehicle. The presence of the chain link fence and the parked car made interpretation of the RD utility locator data difficult within about two feet of these features. In both the inside and outside areas, the probable fill pipe was marked on the ground with pink paint and yellow paint.

Ground Penetrating Radar (GPR) was used in both the inside and outside areas. The fill pipe was not observed in the GPR data at either area. In the outside area, a water line located to the south of the probable fill pipe was observed at a depth of about 3 feet. However, the water pipe provided a signal consistent with a fairly large diameter pipe. The smaller size of the probable fill pipe (about 4 inches in diameter) may have limited the ability of the GPR to detect it at 3 feet deep. Additionally, the concrete sidewalk in the vicinity of the fill pipe contains reinforcement bars, while the newer concrete over the water pipe does not. The presence of the bars will also adversely affect the GPR signal.

Although no geophysical method will detect all types of utilities under all conditions, these two geophysical methods provided a rapid and non-intrusive means of investigating the areas for the location of the probable fill pipe. Because of the numerous variables involved in geophysical investigations, only direct observations using test pits or other means can ultimately characterize the geophysical results.

It was a pleasure to have helped you with your project. Please feel free to contact me if you have any questions or comments regarding this information.

Sincerely,



Philip H. Duoos
Geophysical Consultant

DESCRIPTION OF METHODS

GROUND PENETRATING RADAR

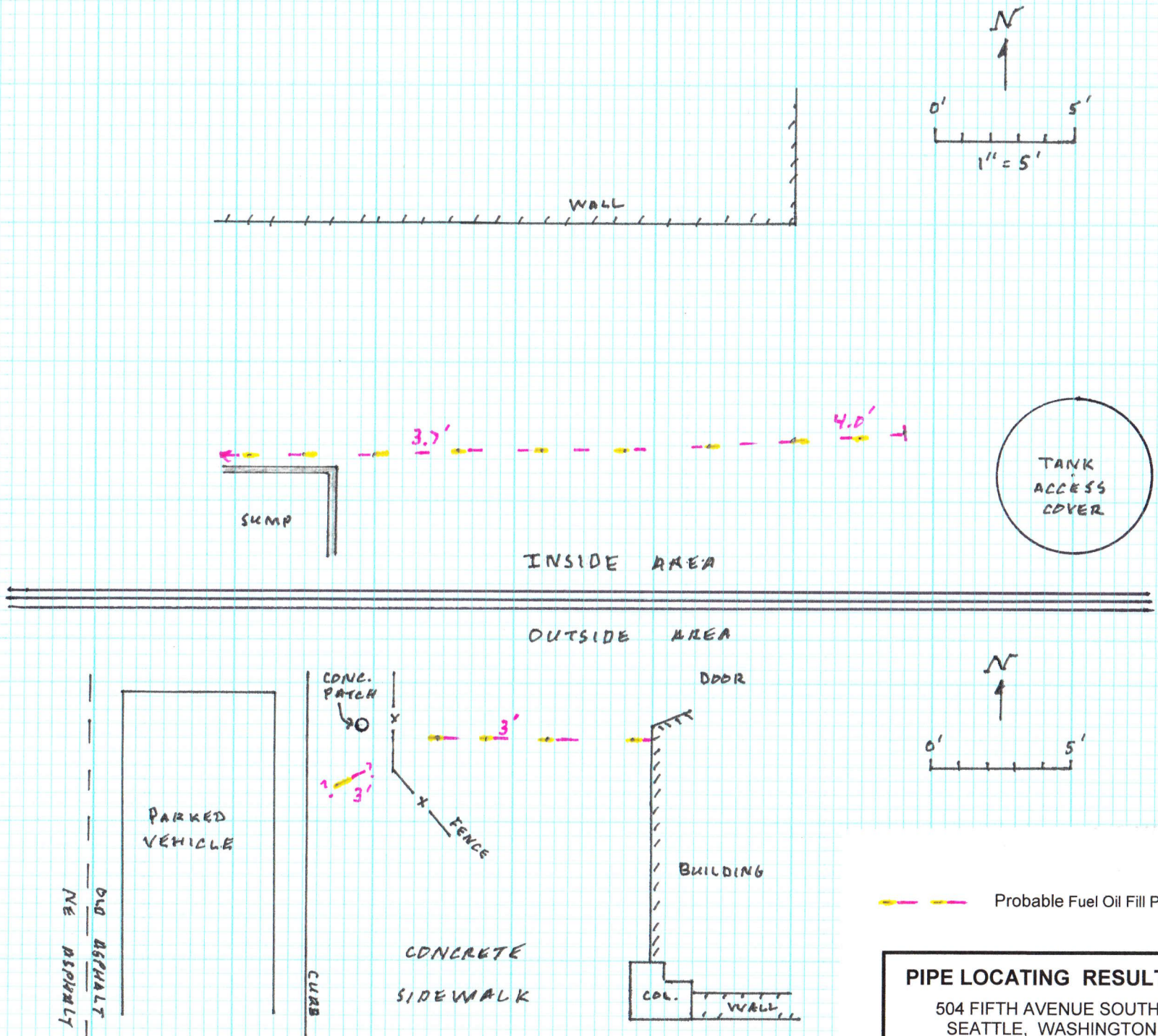
Some of the uses of GPR include locating buried utilities, tanks and drums, delineating boundaries of landfills and trenches, and defining voids and geologic stratigraphy. Although other techniques can also provide this information, GPR is less affected by cultural interferences such as overhead powerlines, buildings, and fences. GPR can also provide higher resolution of the target in many cases.

The antenna can either be moved manually by an operator or towed by a vehicle. Depths of exploration can vary widely, from less than a few feet in water-saturated clayey materials to hundreds of feet in glacial ice. A variety of antennas (ranging from 80 to 900 MHz) can be used depending on subsurface conditions and the objective of the survey. Resolution of shallow objects requires higher frequencies, while lower frequencies work better for deeper investigations.

Several factors can affect the effectiveness of the GPR method including reinforced concrete at the surface, the presence of highly conductive materials (such as clays and water), the size, depth, and physical property of the target and; in stratigraphic investigations, the conductivity contrast between stratigraphic units. The presence of numerous buried objects may mask objects and/or stratigraphy below them. The GPR method is most effective in areas with even terrain and free of heavy brush. Shallow, small diameter plastic pipes such as small irrigation lines may not be detected with the GPR.

RADIODETECTION UTILITY LOCATING

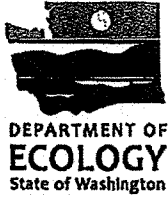
The Radiodetection RD-PDL is an electromagnetic instrument that is used to locate utilities (such as metal pipes, electrical conduit, and communication lines). A handheld receiver unit detects the presence of electromagnetic fields in the pipes. These fields may be caused by the 50/60 Hz energy in active powerlines, or can be induced by VLF radio frequency energy passing through the earth. Most metal utilities can be located using the VLF field that is induced by a world-wide system of communication transmitters. In cases where a valve, vent pipe, or other portion of the utility is accessible, a small transmitter can be used to enhance detectability. This portable transmitter can be connected directly onto or located near the pipe.



PIPE LOCATING RESULTS
504 FIFTH AVENUE SOUTH
SEATTLE, WASHINGTON
FIG. 1

Appendix F

mailed 1-8-2016



30-DAY NOTICE FOR UNDERGROUND STORAGE TANKS

UST ID #: _____

County: King

This form provides Ecology 30-days' advanced notice for the following projects, as required by Chapter 173-360 WAC.

Instructions are found on the back page.

Please the appropriate box: Intent to Install Intent to Close Change-in-Service

I. SITE INFORMATION	II. OWNER/OPERATOR INFORMATION	
Tag or UBI # (if applicable):	Owner/Operator Name: <u>Miye Moriguchi</u>	
UST ID # (if applicable):	Business Name: <u>The Publix One LLC</u>	
Site Name: <u>Publix Hotel</u>	Mailing Address: <u>4601 6th Ave S.</u>	
Site Address: <u>504 5th Ave S</u>	City: <u>Seattle</u>	State: <u>WA</u> Zip: <u>98108</u>
City: <u>Seattle</u>	Phone: <u>206-992-9402</u>	
Phone:	Email: <u>miyemoriguchi@uwajimaya.com</u>	

III. CERTIFIED SERVICE PROVIDER(S)

Check the appropriate boxes. If more than one service provider is required for this project, fill out both sections.

Note: Individuals performing UST services MUST be ICC-certified or have passed another qualifying exam approved by the Department of Ecology.

1) <input type="checkbox"/> Installer <input checked="" type="checkbox"/> Decommissioner <input type="checkbox"/> Site Assessor	
Company Name: <u>IO Environmental + Infrastructure, Inc.</u>	Certification Type: <u>ICC UST Decommissioning</u>
Service Provider Name: <u>Scot Overdich</u>	Cert. No.: <u>ICC 8178938</u> Exp. Date: <u>10/3/16</u>
Provider Phone: <u>425-417-5344</u>	Provider Email: <u>scoto@iosdu.com</u>
2) <input type="checkbox"/> Installer <input type="checkbox"/> Decommissioner <input checked="" type="checkbox"/> Site Assessor	
Company Name: <u>Riley Group, Inc.</u>	Certification Type: <u>WA SF Site Assessor</u>
Service Provider Name: <u>Jeremy Sawetz</u>	Cert. No.: <u>814094</u> Exp. Date:
Provider Phone: <u>425-415-0551</u>	Provider Email: <u>jsawetz@riley-group.com</u>

IV. TANK INFORMATION

TANK ID	SUBSTANCE STORED	TANK CAPACITY	DATE PROJECT IS EXPECTED TO BEGIN	COMMENTS
<u>tank 1</u>	<u>Bunker C</u>	<u>8500 GAL</u>	<u>2-10-16</u>	
<u>tank 2</u>	<u>Bunker C</u>	<u>8500 GAL</u>	<u>2-10-16</u>	

30-DAY NOTICE FOR UNDERGROUND STORAGE TANKS

GENERAL INSTRUCTIONS

Under WAC 173-360-200 and 173-360-385, owners and operators are required to notify Ecology at least 30 days prior to beginning underground storage tank (UST) installation, decommissioning, or change-in-service projects by mailing this notice to the address below. A separate form must be used for each activity. Once this form is received by Ecology, it is date-stamped and returned to the owner/operator listed on the form. Installation and decommissioning projects cannot begin within the first 30 days after the date stamped on this form unless the wait-period has been waived by an Ecology UST inspector. If a project cannot meet the deadlines described below, an additional 30-Day Notice must be submitted.

Department of Ecology
Underground Storage Tank Section
PO Box 47600
Olympia, WA 98504-7600

SITE AND OWNER/OPERATOR INFORMATION

Fill in the site and owner information completely so that any problems can be resolved quickly. The contact person listed on this form must confirm the exact date an installation and/or decommissioning project will begin at least three business days before proceeding.

TANK INSTALLATIONS

Installation projects must begin within 90 days of the date stamped on this notice. Complete the Tank Information section by assigning Tank ID numbers that have not previously been used at the facility. Once processed, this form also allows you to receive a one-time drop of product for UST system testing purposes only. The fuel drop is not required to occur within the 90-day period.

To receive additional deliveries, you must complete the Business License application and UST Addendum to obtain your facility compliance tag from Ecology. The registration information must be submitted to the Department of Revenue within 30 days of bringing the system into use in order to receive a Business License with the appropriate tank endorsement(s). Once your tank(s) store more than one inch of product, leak detection equipment and monitoring must be in place.

PERMANENT TANK CLOSURES

Decommissioning projects must be completed within 90 days after the date stamped on this notice. Complete the Tank Information section using Tank ID numbers listed on the Business License. Use the Comments box to include additional information, such as when product was removed so that no more than one inch of residue remains in the system.

Contact your local fire marshal and planning department prior to tank closure to find out if any additional permits are required by county or other local jurisdictions. Compliance with the State Environmental Policy Act (SEPA) Rules, Chapter 197-11 WAC, may be required.

A site assessment is required at the time of closure. Contamination found or suspected at the site must be reported to the appropriate Ecology regional office within 24 hours. If the contamination is confirmed, a site characterization report must be submitted to the regional office within 90 days; if contamination is not confirmed, a site assessment report must be submitted to the above address within 30 days.

The following are examples of tanks that are exempt from notification requirements.

- ❖ Farm or residential tanks, 1,100 gallons or less, used to store motor fuel for personal or farm use only.
The fuel must be used for farm purposes and cannot be for resale.
- ❖ Tanks used for storing heating oil that is used solely for the purpose of heating the premises.
- ❖ Tanks with a capacity of 110 gallons or less.
- ❖ Equipment or machinery tanks such as hydraulic lifts or electrical equipment tanks.
- ❖ Emergency overflow tanks, catch basins, or sumps.

If you need this document in a format for the visually impaired, call Toxics Cleanup Program at (360) 407-7170. Persons with hearing loss can call 711 for Washington Relay Service. Persons with speech disability, call (877) 833-6341.

George D Blair - Northwest Marine Chemist, Inc.
 P. O. Box 7084, Tacoma, WA 98406
 Office: 253-752-0149 Fax: 253-759-3523
 Email: gbcmc637@gmail.com

MARINE CHEMIST CERTIFICATE



Serial 637-00555
 Page 1 of 1

I O Environmental Survey Requested by	Publix Hotel Vessel Owner Agent	May 9, 2016 Date
Tank Farm Vessel	Underground Storage Tank Type of Vessel	501 S. 5th Ave. Specific Location of Vessel
Bunker Fuel (6-Oil) Last Three 3 Loadings	O ₂ , LEL, Visual, VOC Tests Performed	13:31 Time Survey Completed

Inspected Spaces:
 Group 1, 2-10,000 gal. UST's

Safety Designations:
ATMOSPHERE SAFE FOR WORKERS
SAFE FOR HOT WORK

Instructions

These tanks have been cleaned free of all flammable and combustible residues and is safe for filling with CDF for abandonment.

Test Results

	% O ₂	% LEL	VOC
Inspected spaces group 1	20.8%	0%	< .1 ppm

Limits of Detection

0.1 ppm VOC

In the event of physical or atmospheric changes affecting the STANDARD SAFETY DESIGNATIONS assigned to any of the above spaces, this certificate is voided; spaces not listed on the Certificate are not to be entered unless authorized on another Certificate and/or maintained in accordance with OSHA 29 CFR 1915; or if in any doubt, immediately stop all work and contact the undersigned Marine Chemist. Unless otherwise stated on the Certificate, all spaces and affected adjacent spaces are to be reinspected daily or more often as necessary by the competent person or the authority having jurisdiction as applicable in support of work prior to entry or commencement of work.

QUALIFICATIONS: Transfer of ballast, cargo, fuel or manipulation of valves or closure equipment tending to alter conditions in pipelines, tanks, or compartments subject to gas accumulation, unless specifically approved on this Certificate, requires inspection and a new Certificate for spaces so affected. All lines, vents, heating coils, valves, and similar enclosed appurtenances shall be considered "not safe" unless otherwise specifically designated. Movement of the vessel from its specific location voids the Certificate unless shifting of the vessel within the facility has been specifically authorized on this certificate.

STANDARD SAFETY DESIGNATIONS: (partial list, paraphrased from NFPA 306, Subsections 4.3.1 through 4.3.6)

ATMOSPHERE SAFE FOR WORKERS: In the compartment or space so designated (a) the oxygen content of the atmosphere shall be at least 19.5 percent and not greater than 22 percent by volume; (b) the concentration of flammable materials is below 10 percent of the lower explosive limit; (c) any toxic materials in the atmosphere associated with cargo, fuel, tank coatings, inerting mediums, or fumigants are within permissible concentrations at the time of the inspection.

NOT SAFE FOR WORKERS: In the compartment or space so designated, entry shall not be permitted.

ENTER WITH RESTRICTIONS: In the compartment or space so designated, entry for work is permitted only if conditions of proper protective equipment, or clothing, or time, or all of the aforementioned, as appropriate, are as specified.

SAFE FOR HOT WORK: In the compartment or space so designated (a) the oxygen content of the atmosphere is not greater than 22 percent by volume; (b) the concentration of flammable materials in the atmosphere is less than 10 percent of the lower explosive limit; (c) the residues, scale, or preservative coatings are cleaned sufficiently to prevent the spread of fire and are not capable of producing a higher concentration than permitted by (a) or (b); (d) all adjacent spaces, containing or having contained flammable or combustible materials shall be sufficiently cleaned of residues, scale, or preservative coatings to prevent the spread of fire; or they are inerted. Ship's fuel tanks, lube tanks, or engine room or fire room bilges, or other machinery spaces, are treated in accordance with the Marine Chemist's requirements.

SAFE FOR LIMITED HOT WORK: In the compartment or space so designated (a) portions of the space meet the requirements Safe for Hot Work and Partial Cleaning, as applicable, or (b) the space is inerted, adjacent spaces meet the requirements for Safe for Hot Work, and hot work is restricted to specific locations, (c) portions of the space shall meet the requirements for Safe for Hot Work, as applicable; and the nature or type of hot work shall be limited or restricted.

NOT SAFE FOR HOT WORK: In the compartment or space so designated, hot is not permitted.

CHEMISTS ENDORSEMENT. This is to certify that I have personally determined that all spaces in the foregoing list are in accordance with NFPA 306 Control of Gas Hazards on Vessels and have found the condition of each to be in accordance with its assigned designation.

"The undersigned acknowledges receipt of this Certificate under NFPA 306 and understands conditions and limitations under which it was issued, and the requirements for maintaining its validity."

This Certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

Authorized Representative

May 9, 2016
Date

I O Environmental
Company

Signed Marine Chemist

637
CMC No.



THE CITY OF SEATTLE
FIRE DEPARTMENT
Fire Marshal's Office
220 Third Ave South
Seattle, WA 98104-2608
(206) 386-1450

RECEIPT

5-259625

**THIS IS NOT A BILL
PLEASE DO NOT PAY**

When properly made out and signed this becomes a receipt for the amount and purposes as specified herein.

PAYOR: IO ENVIRONMENTAL & INFRASTRUCTURE INC (IOEI)
ADDRESS: 14734 NE 95 ST
REDMOND, WA 98052
ATTN: SCOTT OVERDICK

#040-039-08

DATE: 04/14/2016
AMOUNT: \$0.00
JOB SITE: 504 5 AV S
PAYMENT FOR: APPLICATION FEE
CCARD RECEIPT #: 00006684041416
INVOICE #:
PERMIT CODE(S): 7908
REMARK: PAID BY: JEFF KELLER (COMPANY CARD)
2840 ADAMS AV STE 301
SAN DIEGO, CA 92116
Phone: 425-417-5344

THIS IS NOT A PERMIT

Chief of the Fire Department

By TB

**PLEASE RETAIN THIS RECEIPT AND POST IT IN A VISIBLE LOCATION ON SITE UNTIL AN
ACTUAL FIRE DEPARTMENT PERMIT HAS BEEN ISSUED.**



TRIPLE RINSE CERTIFICATE

This document certifies that IO Environmental & Infrastructure Inc. performed a Triple Rinse of the Underground Storage Tank (UST) per Chapter 173-360 of the Revised Code of Washington (RCW) and International Code Council (ICC) and uniform Fire Code guidelines:

UST Name/Number: UST 2 SOUTH

Address: 504 5TH AVE S.

SEATTLE, WA

UST Size: 8500 GALLON

UST Contents: BUNKER OIL

Date of Triple Rinse: 5-9-16

I hereby certify the triple rinse described above:


Signature

Scott Overdick
Printed Name

8178938
ICC Lic. #



IO Environmental & Infrastructure Inc.
14734 NE 95th Street
Redmond, WA 98052
(425)-497-9896



ENVIRONMENTAL
& INFRASTRUCTURE INC.

TRIPLE RINSE CERTIFICATE

This document certifies that IO Environmental & Infrastructure Inc. performed a Triple Rinse of the Underground Storage Tank (UST) per Chapter 173-360 of the Revised Code of Washington (RCW) and International Code Council (ICC) and uniform Fire Code guidelines:

UST Name/Number: UST 1 NORTH

Address: 504 5TH AVE S.

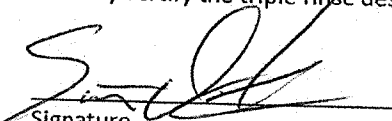
SEATTLE, WA

UST Size: 8500 GALLON

UST Contents: BUNKER OIL

Date of Triple Rinse: 5-9-16

I hereby certify the triple rinse described above:


Signature

Scott Overdick
Printed Name

8178938
ICC Lic. #



IO Environmental & Infrastructure Inc.
14734 NE 95th Street
Redmond, WA 98052
(425)-497-9896

Your
Seattle
Fire Department



APPLICATION FOR TEMPORARY PERMIT

Code 7908

Commercial Tank Removal/Decommissioning

Permit Fee: \$218.00

Date Issued: 5/9/2016

Tank(s) must be removed from site on the same day as permit is issued!

TO BE COMPLETED BY PERMIT APPLICANT

FIRM NAME	Fo Environmental		
MAILING ADDRESS	14734 W 25th Street	SUITE	
CITY	REDMOND	STATE	WA ZIP 98052
JOBSITE ADDRESS	504 5th Ave South, Seattle, WA		
CONTACT PERSON	Scott Overdick	PHONE NUMBER	(425) 417-5344
Number of Tank(s):	2	Tank Size(s):	12,000 gal <input type="checkbox"/> Aboveground tank
Product(s) Previously Contained:	Bunker C oil		<input checked="" type="checkbox"/> Underground tank
<input checked="" type="checkbox"/> Removal (Marine Chemist inspection and certificate required for all tanks regardless of size or contents)			
<input checked="" type="checkbox"/> Abandonment-in-Place (Marine Chemist certificate required for tanks previously containing Class I flammable liquids and/or unknowns)			
Hot work being conducted: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (If yes, a separate hot work permit is required)			

Permit applications may be submitted in person weekdays from 8:00 a.m. to 4:30 p.m., or mailed to:

Seattle Fire Department
Fire Marshal's Office - Permits
220 Third Ave S, 2nd Floor
Seattle, WA 98104-2608

To pay with a Visa or Master Card: Fax or email this application
THEN CALL US TO CONFIRM RECEIPT AND MAKE PAYMENT
Tel: (206) 386-1450 / Fax: (206) 386-1348
E-mail: permits@seattle.gov

Call 386-1450, at least 24 hours prior to needed inspection time to arrange for an appointment.
TANKS MAY BE REMOVED/DECOMMISSIONED ONLY AFTER FIRE DEPARTMENT INSPECTION
NO HOT WORK IS ALLOWED ON A TANK SYSTEM PRIOR TO ISSUANCE OF THIS FIRE DEPARTMENT PERMIT!

Permission is hereby granted to remove or decommission the tank(s) identified in this permit in accordance with the attached conditions, all noted special conditions, and all applicable provisions of the Seattle Fire Code, federal, state and local regulations. **THIS PERMIT IS NULL AND VOID IF PERMIT CONDITIONS ARE NOT ATTACHED**

Special permit conditions: Tank removal/decommissioning must be performed, or directly supervised, by an ICC certified individual (WAC 173-360-600)

FMO USE:	APPROVED BY:
Check No.: 6684041416	Inspector: JOE CRAWFORD SFD ID# 1384
Receipt No.: 5-259625	Name of Marine Chemist: GLEN BLAIR Certificate # 637
Application ID#: 104726	Date: 5/9/2016

Appendix G

This Memorandum

is an acknowledgment that a Bill of Lading has been issued and is not Original Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

Shipper No. 024628

Carrier No. _____

Date 04-15-16

Page 1 of 4

MARINE VACUUM SERVICE, INC

(Name of carrier) (SCAC)

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1.
 TO: MARINE VACUUM SERVICE INC
 Consignee
 Street 1516 S. GRAHAM ST
 City SEATTLE State WA Zip Code 98108

FROM: IO Environmental + INFRAS
 Shipper
 Street 500 5th AVE S
 City Seattle State WA Zip Code _____
 24 hr. Emergency Contact Tel. No. 800-540-7491

No. of Units & Container Type	HM	BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
<u>177</u>		<u>used oily water</u>	<u>2,200 gallons</u>			
		<u>070-032-08</u>				
		<u>1653</u>				

PLACARDS TENDERED: YES NO

Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____."
 (2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMF/C Item 172.
 (3) Commodities requiring special or additional care or attention in handling or stowage must be so marked and packaged as to ensure safe transportation. See Section 21(a) of Item 200, Bill of Lading, Freight Bills and Statements of Charges and Section 11(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labeled/placarded and are in all respects in proper condition for transport according to applicable international and national governmental regulations.
 Signature _____

REMIT C.O.D. TO: ADDRESS
COD Amt: \$ _____
 C.O.D. FEE: PREPAID COLLECT \$ _____
 TOTAL CHARGES \$ _____
 FREIGHT CHARGES: FREIGHT PREPAID Check box if charges except when box is open are to be collected

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.
 Signature _____

RECEIVED, subject to the classifications and tariffs in effect on the date of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and delivered as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.
 Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER
 PER [Signature]
 DATE 04-15-2016

CARRIER MARINE VACUUM SERVICE, INC.
 PER [Signature]
 DATE 04-15-2016

Permanent post-office address of shipper. STYLE F375-4 © 2012 LABELMASTER® (800) 621-5808 www.labelmaster.com

This Shipping Order

must be legibly filled in, in ink indelible Pencil, or in Carbon, and retained by the agent

Shipper No. 024629

Carrier No. _____

Date 04-18-16

Page 1 of 4

MARINE VACUUM SERVICE, INC

(Name of carrier) (SCAC)

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1.
 TO: MARINE VACUUM SERVICE INC
 Consignee
 Street 1516 S. GRAHAM ST
 City SEATTLE State WA Zip Code 98108

FROM: IO Environmental
 Shipper
 Street 500 5th AVE SOUTH
 City Seattle State WA Zip Code _____
 24 hr. Emergency Contact Tel. No. 800-540-7491

No. of Units & Container Type	HM	BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
<u>177</u>		<u>used oily water</u>	<u>4600 gallons</u>			

PLACARDS TENDERED: YES NO

Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____."
 (2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMF/C Item 172.
 (3) Commodities requiring special or additional care or attention in handling or stowage must be so marked and packaged as to ensure safe transportation. See Section 21(a) of Item 200, Bill of Lading, Freight Bills and Statements of Charges and Section 11(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.
 Signature _____

REMIT C.O.D. TO: ADDRESS
COD Amt: \$ _____
 C.O.D. FEE: PREPAID COLLECT \$ _____
 TOTAL CHARGES \$ _____
 FREIGHT CHARGES: FREIGHT PREPAID Check box if charges except when box is open are to be collected

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.
 Signature _____

RECEIVED, subject to the classifications and tariffs in effect on the date of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and delivered as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.
 Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER
 PER [Signature]
 DATE 04-18-2016

CARRIER MARINE VACUUM SERVICE, INC.
 PER [Signature]
 DATE 04-18-2016

Permanent post-office address of shipper. STYLE F375-4 © 2012 LABELMASTER® (800) 621-5808 www.labelmaster.com

This Shipping Order must be legibly filled in, in Ink Indelible Pencil, or in Carbon, and retained by the agent

Shipper No. 024630

Carrier No. _____

Page 1 of 4 (Name of carrier) MARINE VACUUM SERVICE, INC (SCAC) Date 04-19-16

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1.

TO: MARINE VACUUM SERVICE INC
 Consignee
 Street 1516 S. GRAHAM ST
 City SEATTLE State WA Zip Code 98108
 24 hr. Emergency Contact Tel. No. 800-540-7491

FROM: Shipper T.O. Environmental
 Street 500 5th Ave. South
 City Seattle State WA Zip Code _____
 24 hr. Emergency Contact Tel. No. _____

Vehicle Number #104

No. of Units & Container Type	HM	BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
1TT		1st loaded				
		used oily water	4600 gallons			
		2nd loaded. used oil	2,400 gallons			

PLACARDS TENDERED: YES NO

REMIT C.O.D. TO: ADDRESS _____

Signature _____

RECEIVED, subject to the classifications and terms in effect on the date of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages enclosed) marked, counted, and certified as indicated above which said carrier the said carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the prevailing classification on the date of shipment.

SHIPPER _____ CARRIER MARINE VACUUM SERVICE, INC
 PER _____ PER _____
 DATE 04-19-2016 DATE _____

Permanent post-office address of shipper. STYLE F375-4 © 2012 LABELMASTER® (800) 621-5808 www.labelmaster.com

This Memorandum is an acknowledgment that a Bill of Lading has been issued and is not Original Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

Shipper No. 024366

Carrier No. _____

Page 1 of 4 (Name of carrier) MARINE VACUUM SERVICE, INC (SCAC) Date 04-20-16

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1.

TO: MARINE VACUUM SERVICE INC
 Consignee
 Street 1516 S. GRAHAM ST
 City SEATTLE State WA Zip Code 98108
 24 hr. Emergency Contact Tel. No. 800-540-7491

FROM: Shipper T.O. Environmental
 Street 500 5th Ave South
 City Seattle State WA Zip Code _____
 24 hr. Emergency Contact Tel. No. _____

Vehicle Number #104

No. of Units & Container Type	HM	BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
1TT		used oil	2,400 gallons			
		040-039-08				
		1653				

PLACARDS TENDERED: YES NO

REMIT C.O.D. TO: ADDRESS _____

Signature _____

RECEIVED, subject to the classifications and terms in effect on the date of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages enclosed) marked, counted, and certified as indicated above which said carrier the said carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the prevailing classification on the date of shipment.

SHIPPER _____ CARRIER MARINE VACUUM SERVICE, INC
 PER _____ PER _____
 DATE 04-20-2016 DATE _____

Permanent post-office address of shipper. STYLE F375-4 © 2012 LABELMASTER® (800) 621-5808 www.labelmaster.com

This Memorandum

is an acknowledgment that a Bill of Lading has been issued and is not Original Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

Shipper No. 024361

Carrier No. _____

Page 1 of 4

MARINE VACUUM SERVICE, INC

Date 04-21-16

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1.
TO: MARINE VACUUM SERVICE INC
 1516 S. GRAHAM ST
 SEATTLE WA 98108

FROM: Shipper IO Environmental
 Street 500 5th Ave South
 City Seattle State WA Zip Code _____
 24 hr. Emergency Contact Tel. No. 800-540-7491

Route	No. of Units & Container Type	HM	BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
	1	HM	used oil →	700			

PLACARDS TENDERED: YES NO

REMIT C.O.D. TO: ADDRESS **COD** Amt: \$ _____

C.O.D. FEE: PREPAID COLLECT \$ _____

TOTAL CHARGES \$ _____

FREIGHT CHARGES: FREIGHT PREPAID COLLECT \$ _____

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and delivered as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination. If on its route, it declines to deliver to another carrier on the route to said destination, it is mutually agreed as to each carrier of it or any of said property over all or any portion of said route to destination and as to each party at any time interested in it or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

SHIPPER [Signature] CARRIER MARINE VACUUM SERVICE, INC. 3
 PER [Signature] PER [Signature]
 DATE 04-21-2016 DATE 04-21-2016

This Memorandum

is an acknowledgment that a Bill of Lading has been issued and is not Original Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

Shipper No. 023422

Carrier No. _____

Page 1 of 4

MARINE VACUUM SERVICE, INC

Date 4/25/16

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1.
TO: MARINE VACUUM SERVICE INC
 1516 S. GRAHAM ST
 SEATTLE WA 98108

FROM: Shipper IO Environmental
 Street 500 5th Ave
 City Seattle State WA Zip Code _____
 24 hr. Emergency Contact Tel. No. 800-540-7491

Route	No. of Units & Container Type	HM	BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
	1	HM	non-regulated by DOT use black oil drums	500			

PLACARDS TENDERED: YES NO

REMIT C.O.D. TO: ADDRESS **COD** Amt: \$ _____

C.O.D. FEE: PREPAID COLLECT \$ _____

TOTAL CHARGES \$ _____

FREIGHT CHARGES: FREIGHT PREPAID COLLECT \$ _____

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and delivered as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination. If on its route, it declines to deliver to another carrier on the route to said destination, it is mutually agreed as to each carrier of it or any of said property over all or any portion of said route to destination and as to each party at any time interested in it or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

SHIPPER [Signature] CARRIER MARINE VACUUM SERVICE, INC. 4
 PER [Signature] PER [Signature]
 DATE 4/25/16 DATE 4/25/16

This Memorandum

is an acknowledgment that a Bill of Lading has been issued and is not Original Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

Shipper No. 027495

Carrier No.

Date 4/26/16

Page 1 of 4

MARINE VACUUM SERVICE, INC

(Name of carrier) (SCAC)

TO: MARINE VACUUM SERVICE INC
FROM: Shipper 10 Environmental
Street 5th Ave
City Seattle State WA Zip Code 98108

24 hr. Emergency Contact Tel. No. 800-540-7491

Table with columns: No. of Units & Container Type, HM, BASIC DESCRIPTION, UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group, TOTAL QUANTITY, WEIGHT, RATE, CHARGES. Row 1: 111, Non-Regulated, DOT, Waste oily water, 1000 Gals.

PLACARDS TENDERED: YES NO
Note: (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property...

REMIT C.O.D. TO: ADDRESS
COD Amt: \$
C.O.D. FEE: PREPAID COLLECT
TOTAL CHARGES \$
FREIGHT CHARGES: FREIGHT PREPAID

SHIPPER
PER
DATE 4/26/16

CARRIER MARINE VACUUM SERVICE, INC.
PER
DATE 4/26/16

This Memorandum

is an acknowledgment that a Bill of Lading has been issued and is not Original Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

Shipper No. 027496

Carrier No.

Date 4/27/16

Page 1 of 4

MARINE VACUUM SERVICE, INC

(Name of carrier) (SCAC)

TO: MARINE VACUUM SERVICE INC
FROM: Shipper 10 Environmental
Street 5th Ave
City Seattle State WA Zip Code 98108

24 hr. Emergency Contact Tel. No. 800-540-7491

Table with columns: No. of Units & Container Type, HM, BASIC DESCRIPTION, UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group, TOTAL QUANTITY, WEIGHT, RATE, CHARGES. Row 1: 111, Non-Regulated, DOT, Waste oily water, 1200 Gals.

PLACARDS TENDERED: YES NO
Note: (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property...

REMIT C.O.D. TO: ADDRESS
COD Amt: \$
C.O.D. FEE: PREPAID COLLECT
TOTAL CHARGES \$
FREIGHT CHARGES: FREIGHT PREPAID

SHIPPER
PER
DATE 4/27/16

CARRIER MARINE VACUUM SERVICE, INC.
PER
DATE 4/27/16

This Shipping Order

must be legibly filled in, in ink indelible Pencil, or in Carbon, and retained by the agent

Shipper No. 027497

Carrier No. _____

Date 4/28/16

Page 1 of 4

MARINE VACUUM SERVICE, INC

(Name of carrier) (SCAC)

TO: **MARINE VACUUM SERVICE INC**
 Street **1516 S. GRAHAM ST**
 City **SEATTLE** State **WA** Zip Code **98108**

FROM: Shipper **10 ENVIRONMENTAL**
 Street _____
 City _____ State _____ Zip Code _____
 24 Hr. Emergency Contact Tel. No. **800-540-7491**

Route	No. of Units & Container Type	HM	BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
	111		Non-Regulated By DOT Waste oily water	1200 Gals			

PLACARDS TENDERED: YES NO

Note - (1) Where the rate is dependent on value, shippers are required to state specifically the agreed or declared value of the property, as follows: The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____.

(2) Where the applicable transportation treaty or regulation of the carrier's liability states a release or a value restriction by the shipper and the amount does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provision. See HMR § 172.

(3) Compensation, including special or additional care or attention in handling or stowage, must be in writing and acknowledged as to amount and transportation. See Section 214 of the Contract Terms and Conditions for a list of such items.

Signature: _____

SHIPPER [Signature] CARRIER **MARINE VACUUM SERVICE, INC.**

PER [Signature] PER [Signature]

DATE 4/28/16 DATE 4/28/16

This Shipping Order

must be legibly filled in, in ink indelible Pencil, or in Carbon, and retained by the agent

Shipper No. 027498

Carrier No. _____

Date 4/29/16

Page _____ of _____

MARINE VACUUM SERVICE, INC

(Name of carrier) (SCAC)

TO: **MARINE VACUUM SERVICE INC**
 Street **1516 S. GRAHAM ST**
 City **SEATTLE** State **WA** Zip Code **98108**

FROM: Shipper **10 ENVIR.**
 Street **5714 AVE**
 City **SEA** State _____ Zip Code _____
 24 Hr. Emergency Contact Tel. No. **800-540-7491**

Route	No. of Units & Container Type	HM	BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
	111		Non-Regulated By DOT Wash oily water	800 Gals			

PLACARDS TENDERED: YES NO

Note - (1) Where the rate is dependent on value, shippers are required to state specifically the agreed or declared value of the property, as follows: The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____.

(2) Where the applicable transportation treaty or regulation of the carrier's liability states a release or a value restriction by the shipper and the amount does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provision. See HMR § 172.

(3) Compensation, including special or additional care or attention in handling or stowage, must be in writing and acknowledged as to amount and transportation. See Section 214 of the Contract Terms and Conditions for a list of such items.

Signature: _____

SHIPPER [Signature] CARRIER **MARINE VACUUM SERVICE, INC.**

PER [Signature] PER [Signature]

DATE 4/29/16 DATE 4/29/16

This Memorandum

is an acknowledgment that a Bill of Lading has been issued and is not Original Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

Shipper No. 023380

Carrier No. _____

Page 1 of 4 MARINE VACUUM SERVICE, INC
(Name of carrier) (SCAC) Date 5/3/16

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1.
TO: MARINE VACUUM SERVICE INC
Consignee
Street 1516 S. GRAHAM ST
City SEATTLE State WA Zip Code 98108

FROM: Shipper IO ENVIRO
Street 5TH AVE
City _____ State _____ Zip Code _____
24 hr. Emergency Contact Tel. No. 800-540-7491

No. of Units & Container Type	HM	BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
IT		Non. Regulate U By DOT Wash oily water	800 GALS			

RECEIVED
5/3/16

PLACARDS TENDERED: YES NO

Note - (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____
(2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See IMPC Item 172.
(3) Commodities requiring special or additional care or attention in handling or stowage must be so marked and packaged as to ensure safe transportation. See Section 2(a) of Item 300, Bill of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labeled/stenciled, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.
Signature _____

REMIT C.O.D. TO: ADDRESS
COD Amt: \$ _____
C.O.D. FEE: PREPAID COLLECT \$ _____
TOTAL CHARGES \$ _____
FREIGHT CHARGES: PREPAID Collect Freight and other charges are to be collected

Accepted subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading. The property described above in apparent good order, except as noted (contents and condition of contents of packages unknown, marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to the usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to be:

SHIPPER _____
PER _____
DATE 5/3/16

CARRIER MARINE VACUUM SERVICE, INC
PER _____
DATE 5/3/16

This Shipping Order

must be legibly filled in, in ink indelible Fencil, or in Carbon, and retained by the agent

610-039-08
1636

Shipper No. 024767

Carrier No. _____

Page _____ of _____ MARINE VACUUM SERVICE, INC
(Name of carrier) (SCAC) Date 5 9 16

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1.
TO: MARINE VACUUM SERVICE INC
Consignee
Street 1516 S. GRAHAM ST
City SEATTLE State WA Zip Code 98108

FROM: Shipper IO ENVIRO
Street 500 5TH AVE
City Seattle State WA Zip Code _____
24 hr. Emergency Contact Tel. No. 800-540-7491

No. of Units & Container Type	HM	BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
JII		NON REGULATED By DOT WASTE WATER MUD / MUCK	900 2	600 600		

RECEIVED
5/3/16

PLACARDS TENDERED: YES NO

Note - (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____
(2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See IMPC Item 172.
(3) Commodities requiring special or additional care or attention in handling or stowage must be so marked and packaged as to ensure safe transportation. See Section 2(a) of Item 300, Bill of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labeled/stenciled, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.
Signature _____

REMIT C.O.D. TO: ADDRESS
COD Amt: \$ _____
C.O.D. FEE: PREPAID COLLECT \$ _____
TOTAL CHARGES \$ _____
FREIGHT CHARGES: PREPAID Collect Freight and other charges are to be collected

Accepted subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading. The property described above in apparent good order, except as noted (contents and condition of contents of packages unknown, marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to the usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to be:

SHIPPER _____
PER _____
DATE 5 9 16

CARRIER MARINE VACUUM SERVICE, INC
PER _____
DATE 5 9 16