CLEANUP ACTION WORK PLAN

PREPARED BY:

THE RILEY GROUP, INC.
17522 BOTHELL WAY NORTHEAST
BOTHELL, WASHINGTON 98011

PREPARED FOR:

MR. PUI LEUNG
ROYSTONE ON QUEEN ANNE LLC
606 MAYNARD AVENUE SOUTH #104
SEATTLE, WASHINGTON 98104

RGI PROJECT NO. 2017-015E

CLEANUP ACTION WORK PLAN

PROPOSED ROYSTONE ON QUEEN ANNE REDEVELOPMENT
631 QUEEN ANNE AVENUE NORTH
SEATTLE, WASHINGTON 98109

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

www.riley-group.com

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1 INTRODUCTION

The Riley Group, Inc. (RGI) is pleased to present this Cleanup Action Work Plan (Work Plan) pertaining to the property located at 631 Queen Anne Avenue North in Seattle, Washington (herein referred to as the Property). The general location of the Property is depicted on Figure 1.

The Property is owned by Roystone on Queen Anne LLC (hereafter referred to as the Client) and the Property is identified by King County tax parcel number 38789900425 (Parcel 0425) and occupies approximately 11,070 square feet.

This Work Plan pertains specifically to the Property, which is part of a larger Site. A petroleum release associated with one or more of the former gasoline service stations located on the Property has been confirmed and well documented. Groundwater flow direction beneath the Property and adjoining properties has consistently been to the west and southwest. As a result of this groundwater flow direction, the contamination from the Property had migrated beneath the south, southwest, and west-adjoining properties. In addition, existing data confirms that the up-gradient, off-site, properties (former dry cleaners and Unocal gasoline service station), located across West Roy Street, have not adversely affected soil and/or groundwater underlying the Property (see Figure 2).

The Site was previously enrolled by Chevron in the Washington State Department of Ecology (Ecology) Voluntary Cleanup Program (VCP) and identified as the Texaco Downstream No. 211577 Site. The Site was terminated from the VCP by Ecology in 2015. The Client, with RGI's support, is currently in the process of re-enrolling the Property into the VCP and the Property is anticipated to be accepted into the VCP in January of 2019. The locations of the Property and the Site is displayed on the attached Figure 2.

RGI understands that the Client, or the Client's legal counsel, is working with Chevron on a cost recovery agreement with Chevron where Chevron remains the responsible party for environmental impacts pertaining to the Property. Under this agreement, the Client has agreed to remediate impacts associated with the Property only. RGI understands from the Client that Chevron is responsible for any environmental impacts remaining outside the Property boundaries when, and after, the Property-Specific cleanup action is complete.

RGI understands that the Client intends to remediate all contaminated soil and groundwater (above cleanup levels) on the Property in conjunction with the lot-line to lot-line redevelopment of the Property. The redevelopment consists of demolishing the existing building and constructing a mixed use, multi-story building with one level of underground parking. The one level underground parking garage will require excavations of up to approximately 13 to 14 feet below ground surface (bgs) or Elevation 134'. The maximum depth of soil contamination at most portions of the Property is 24 feet bgs, requiring remedial excavations to approximately 122'. However, other areas of the Property may require limited remedial excavations to depths greater the 24 feet bgs. Contamination is not anticipated to extend greater than 31 feet bgs (or elevation 115') at any portion of the Property, which corresponds with the maximum depth of the Lawton Clay layer that underlies the Property. Note here also, that following the completion of the remedial excavation and associated groundwater (perched) dewatering, the excavation will be backfilled to approximate Elevation 134' and the one level underground parking garage will be constructed. The proposed depth to bottom of shoring is conservative and meant to be deep enough to allow for the remedial excavation of all contaminated soil within the Property containing concentrations of contaminants above the applicable cleanup levels).

2 PROJECT OBJECTIVES

This Work Plan is meant to: (1) Provide the Property background; (2) Summarize the results of previous environmental investigations; (3) Present the Conceptual Site Model (CSM) for the Property (4) Select cleanup levels and present the selected cleanup action for the Property; and (5) Describe the cleanup action and provide details for implementing the selected cleanup action on the Property.

The scope of work proposed in this Work Plan is intended to meet the substantive requirements of the Ecology Model Toxics Control Act (MTCA) Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC.

The ultimate goal of the successful implementation and execution of this Work Plan is to bring soil and groundwater on the Property into compliance with MTCA regulations and qualify the Property for a Property-Specific No Further Action (NFA) determination from Ecology under the VCP.

3 PROPERTY AND VICINITY USE

The Property is currently occupied by the vacant Manhattan Express convenience store and was previously occupied by various gasoline service stations from approximately 1927 to 1993.

Typical property use in the Property vicinity is a mixture of residential and commercial properties. Current and pertinent former uses of adjoining properties are summarized as follows:

North: West Roy Street beyond which retail stores and a restaurant. A dry cleaner previously operated in this location. Based on available data, the off-Property dry cleaners has not adversely affected the Property.

East: Queen Anne Ave North beyond which a parking lot (former Unocal service station) and condominiums (former Paramount dry cleaning facility) are situated. Data obtained from previous subsurface investigations indicate that these east-adjoining properties have not adversely affected the Property.

Southeast Marqueen Hotel and retail stores.

South: Former Lindberg Apartments & retail stores (currently the Bungalow).

Southwest: Monterey Apartments.

West: Delroy Apartments.

As previously stated, the southeast, south, southwest, and west-adjoining properties have been adversely affected by the Property (former gasoline service stations) and/or other potential off-site sources.

4 PROPERTY HISTORY

The following sections present the historical ownership of the Property, history of business operations, and history of underground storage tanks (USTs) on the Property. The locations of pertinent historical features including the known former service stations, USTs, pump islands, are other related underground improvements are depicted on Figure 3. Note that numerous environmental investigations have been conducted on the Property. These investigations are summarized in Section 5 (Property Characterization).

4.1 OWNERSHIP HISTORY

In 1927, the Property was owned by James Estate and leased the Property to the California Petroleum Corporation (CalPet). Calpet opened the first gasoline service station on the Property and subsequently

subleased the business to other operators. The Texaco Corporation (Texaco) acquired CalPet in 1929 and entered into a sublease.

In 1954, Texaco purchased the Property and demolished the first generation service station and constructed a new service station on the southern portion of the Property. In 1967, Texaco remodeled the service station. Texaco owned the Property through 1977 at which time the Property was purchased by the Arnolds Family Estate (Arnolds). Arnolds continued to operate as a Texaco-branded gasoline service station. Arnolds sold the Property to John Hee Yoo in 1989, but the sales agreement was rescinded in 1993 and ownership of the Property was transferred back to Arnolds in 1993. At that time, the gasoline service station was decommissioned by Arnolds and began operating as a convenience store/deli. The Property operated as a convenience store from 1993 to 2018.

Arnolds owned the Property through 2017 at which time the Property was sold to Roystone on Queen Anne, LLC (current Property owner). The Property parking lot is currently utilized for paid parking and operated by Republic Parking.

4.2 PROPERTY HISTORY

The history of the Property, UST systems, and related underground improvements is summarized below and illustrated on the attached Figure 3.

The Property was depicted on historical Sanborn maps as being occupied by stores and dwellings from at least 1893 to 1969. In the 1917 map, the Property was depicted as vacant.

In 1927, CalPet opened a gasoline service station consisting of two 550-gallon USTs (USTs 1 and 2), which were reportedly constructed of concrete and installed beneath the sidewalk adjacent to Queen Anne Avenue North near the northeast corner of the Property. These USTs were reportedly abandoned in-place in sometime prior to 1934. Eight 50-gallon lube oil USTs were reportedly installed on both sides of the building on the central portion of the Property (four on the north side of the building and four on the south side of the building). However, the exact locations of these lube oil USTs were not provided in previous reports. In 1934, two 4,000-gallon USTs (USTs 5A and 6A) were installed on the eastern portion of the Property. Sometime prior to 1934, Texaco installed one 550-gallon UST and one 1,000-gallon UST (USTs 3 and 4) on the north-central and southwestern portions of the Property, respectively.

From 1927 to 1954, the southern portion of the Property was historically occupied by a service station, which included a wash rack, hoists, grease pits, and a lube service bay. A tire shop, tailor shop/Acme Cleaners, and an accessory store occupied this portion of the Property at that time. Archived assessor records indicated that the southeastern portion of the Property was historically occupied by the Acme Cleaners in 1927 (a possible dry cleaning facility). This area of the Property was occupied by a tailor shop and possibly Acme Cleaners, in 1934. It is unknown if the Acme Cleaners was in fact a dry cleaners, or how long the Acme Cleaners operated on the Property, but does not appear to be more than nine years. A service station building was present on the central portion of the Property from approximately 1927 to 1954.

In 1954, Texaco purchased the Property and the service station on the central portion of the Property was demolished and a new service station was constructed on the southern portion of the Property at that time. It is suspected that the eight 50-gallon lube oil USTs associated with the former service station were removed. A dispenser island was installed on the northern portion of the Property and a 4,000-gallon UST (UST 7A) was installed to the west of UST 5A.

Texaco remodeled the station in 1967 and two 10,000-gallon USTs (USTs 8 and 9) were installed on the western portion of the Property. Canopies were also installed on the north-central and east-central portions of the Property. In 1971, one 6,000-gallon UST (UST 10) was installed when Texaco introduced leaded gasoline.

In 1978, apparent petroleum hydrocarbon odors were detected at the southwest-adjoining Monterey Apartments, which initiated a series of environmental investigations and remedial actions at the Property and off-Property. Previous environmental investigations conducted on the Property are summarized in Section 5. Previous environmental investigations completed on- the off-Property are discussed by others under various reports (see Appendix A – List of Previous Reports).

In 1982, Arnolds replaced UST 7A with a 6,000-gallon UST (UST 7B) and USTs 5A and 6A were replaced with two 8,000-gallon USTs (5B and 6B), which were intended to store diesel fuel. The eastern dispensers and lube service bay were removed in 1986 and replaced by restrooms and a deli.

In 1993, seven USTs (USTs 3, 4, 5B, 7B, 8, 9, and 10) were reportedly removed from the Property and the Property began operating as a convenience store/deli until 2018.

Based on information reported in previous reports by others, the possibility for several USTs to be currently present on the Property does exist. The concrete USTs 1 and 2 (beneath the sidewalk adjacent to Queen Anne Avenue North) were reported as abandoned in-place and there is no record of the removal of these USTs. UST 6B (on the eastern portion of the Property) was also reported as abandoned in-place. However, UST 6B is situated in the 1993 UST excavation area and groundwater monitoring well MW13 was installed in that location. There was no mention of drilling through the UST on the borelog for MW13. The eight 50-gallon USTs surrounding the former service station on the central portion of the Property were suspected to be removed during demolition of the service station in 1954, but no official record of their removal exists. Therefore, one or more of the above-mention USTs could be present, and/or encountered during construction, and is taken into consideration as part of this Work Plan.

5 PROPERTY CHARACTERIZATION

The nature and extent of soil and groundwater contamination on the Property and Site has been well defined as presented in numerous reports listed in Appendix A. The Work Plan was developed based on information provided in these previous reports, including RGI's review of the following key reports as it pertains to the Property:

- *Supplemental Subsurface Investigation Report* (SSI Report) dated December 26, 2017 by The Riley Group (RGI).
- *Groundwater Monitoring Report 2nd Quarter 2017* dated April 19, 2017 by RGI.
- *Second Semi-annual Groundwater Monitoring Report* dated March 26, 2014 by Liedos.
- *Limited Subsurface Investigation Report* (LSI) dated July 10, 2012 by Sound Earth Strategies (SES).
- *Final Remedial Investigation and Site Summary Report* (RI) dated August 20, 2007 by SAIC.
- *Conceptual Site Model, Risk Assessment, and Supplemental Investigation Proposal* dated August 21, 2002 by Delta Environmental Consultants (Delta).

Summaries of the above-referenced reports are provided below. The summaries below include only information considered relevant to the Property, which includes investigation/remedial action work conducted on the Property or in close proximity to the Property boundaries. Additionally, numerous groundwater monitoring events took place on the Property from 1986 to 2017. Therefore, routine groundwater monitoring activities are not summarized below.

For additional details, the reader should refer to the original documents in their entirety and the complete list of previous reports provided in Appendix A – List of Previous Reports.

The locations of historical features and sample locations are depicted on Figures 3 to 5. All soil and groundwater analytical data pertaining to the Property, as reported by RGI and others, are summarized in Tables 1 and 2, respectively.

5.1 CITY OF SEATTLE FIRE DEPARTMENT 1978

During a Seattle Fire Department investigation of apparent petroleum hydrocarbon odor complaints at the southeast adjoining Monterey Apartments building, light non-aqueous phase liquid (LNAPL), determined to be gasoline, was identified in a basement sump reportedly connected to the building footing draining system. This finding initiated investigation of the Property as a potential source of this contamination.

5.2 GEOENGINEERS 1986

In 1986, Geoengineers conducted a subsurface investigation at the Property and Site at the request of Ecology. Groundwater monitoring wells MW6 and MW9 were installed on the Property and MW10 was installed off-Property, and up-gradient, in close proximity to the northeast corner of the Property. No contamination was identified at MW10. Evidence of petroleum hydrocarbon contamination was observed in wells MW6 and MW9 located within the Property. In addition, approximately two feet of LNAPL was observed in MW6. Groundwater flow direction across the Property was determined to be to the west-southwest.

5.3 ECOLOGY 1989 SUMMARY OF INVESTIGATIONS

In 1989, Ecology prepared a summary of previous investigations. Ecology noted problems with the installation of MW10 in 1986 and indicated that initial installation attempts encountered and punctured what was described as a concrete tank. A strong gasoline odor was noted after breaking through the concrete. Ecology thought the tanks may be related to the 1927 USTs (USTs 1 and 2) that were reported as abandoned in-place. It should be noted that groundwater concentrations of contaminants have been below MTCA cleanup levels for the past 16 years.

Ecology indicated that in 1986, during work on the adjoining Monterey Apartments property, recovery well RW2 was installed. RW2 is situated off-Property, but very close to the southwest corner of the Property. The well was reportedly inactivated due to its ineffectiveness at removing LNAPL.

5.4 ECOLOGY & ENVIRONMENT SEPTEMBER 1990

During an investigation of the Site, Ecology and Environment (E&E) conducted a soil gas survey which included collecting soil vapor samples SG01 and SG05 near the western and southern Property boundaries, respectively. These locations were reported to have the highest BTEX soil gas concentrations reported in the survey. However, no soil gas analytical data was provided in the reports reviewed by RGI.

E&E also collected and analyzed a sample of LNAPL from MW6. Analytical results indicated that the LNAPL consisted of relatively non-degraded gasoline with approximately 20% diesel #2. It was also indicated that LNAPL was observed in well RW2.

5.5 ECOLOGY & ENVIRONMENT 1991

During the first phase of a Remedial Investigation of the Site, E&E concluded that the point source for the petroleum hydrocarbon vapors present on Monterey Apartments property was the Property and that these vapors would persist indefinitely unless the source contamination located beneath the Property was reduced or removed.

E&E collected groundwater samples throughout the Site, which included Property wells MW6 and MW9 and off-Property wells RW2 and MW10. Analytical results indicated widespread petroleum hydrocarbon

groundwater contamination was present that extended from the Property to the west beyond 1st Avenue west. E&E estimated approximately 4,800 gallons of LNAPL were present beneath the Property.

E&E advanced 25 soil gas probes across the Site including soil gas probe 19 on the southeastern portion of the Property and soil gas probes 21 and 22 on the northwestern portion of the Property. Analytical results indicated that BTEX and TPH soil vapor impacts from beneath the Property may have extended as far as 2nd Avenue West. No actual soil vapor analytical data was provided in the reports as obtained and reviewed by RGI.

5.6 SAIC/GLACIER FIELD NOTES 1993

In 1993, UST closure activities were conducted on the Property. However, no report documenting this work was encountered. Information found in field notes/maps obtained from the appendices of previous reports indicated that significant soil contamination was encountered at the eastern dispenser island. A hand drawn map of the excavation area displayed 11 soil sample locations throughout the excavations area (PIT-1 through PIT-11). The notes also indicated that a significant amount of petroleum contaminated soil (PCS) was encountered in the UST excavations and that this contaminated soil was used to backfill the excavation. In other words, it appears that the excavated contaminated soils was not transported off-Property for proper disposal.

The notes also indicated that a soil vapor extraction (SVE) and groundwater recovery systems were installed with a spray aeration vacuum extraction (SAVE) treatment system was installed and operated on the Property and the southwest-adjoining Monterrey Apartments property. The SAVE system was also connected to horizontal extraction piping situated 8 to 10 feet deep in the former UST excavation area.

SAIC reportedly installed vapor extraction well VP9 on the northwest portion of the Property sometime between 1993 and 1996.

5.7 GROUNDWATER TECHNOLOGIES, INC. 1996

In April 1996, Groundwater Technologies, Inc. replaced the SAVE system with a catalytic oxidizer in conjunction with the installation of vapor extraction wells. The system reportedly operated intermittently between September 1996 and December 1997, when the system was shut down. No remediation system as-built drawings or other reports relating to the operation and maintenance of this system were available.

5.8 ECOLOGY MAY 1998

Between October 1995 and November 1997, Ecology periodically sampled groundwater at the Site. Wells sampled on, or close to, the Property included MW6, MW9, MW10, and RW2. Ecology noted that the LNAPL thickness in well MW6 averaged from one foot to a maximum thickness of three feet.

5.9 FARALLON CONSULTING, DECEMBER 1999 TO JULY 2001 GROUNDWATER MONITORING

In December 1999 and June 2000, Farallon Consulting sampled wells MW9, MW10, and VP9 and installed absorbent socks in wells MW6 and RW2. The absorbent socks were reportedly changed on a monthly basis.

5.10 DELTA, SEPTEMBER 2002

In September of 2002, Delta installed direct push probes DP1 to DP7 and hollow stem auger borings DB2 (completed as well MW13) and DB3 on the Property. All wells were developed and surveyed and soil and groundwater samples were submitted for analyses.

5.11 SAIC 2003 SVE SYSTEM UPGRADE

In 2003, SAIC modified the non-operational SVE system primarily to create a negative pressure in soils beneath the southwest-adjoining Monterrey Apartments property. The system did remove a limited amount of soil vapor. In 2005, the system was shut down.

Chevron enrolled the Site into the VCP in 2003 and a Dual Phase Extraction (DPE) system was designed to extract groundwater and soil vapors beneath the Property and the south-adjoining Monterrey Apartments Property. Contaminants removed from the subsurface were treated on the Property by thermal oxidation and carbon filtration. Treated groundwater was presumably discharged on the Property to the sanitary sewer.

5.12 SAIC (MARCH 2004 –SEPTEMBER 2006)

In March of 2004, SAIC advanced soil boring SP1 on the west-central portion of the Property and soil samples were submitted for analyses.

In October of 2004, SAIC installed well MW24 off-Property in close proximity to the western Property boundary. The well was developed and surveyed and soil and groundwater samples were submitted for analyses.

In October 2005, SAIC initiated the installation of the DPE system, which included installing extraction wells DPE-5, DPE-6, and DPE-7 on the Property. All three wells were developed and surveyed and soil and groundwater samples were submitted for analyses. Pneumatic groundwater extraction pumps were installed in all three wells. The full system, which was designed to remediate the Property and the south-adjoining Monterrey Apartments property, began operation in November 2007. The system was shut down on April 2, 2008 after reportedly removing approximately 45,000 pounds of hydrocarbon mass.

5.13 SOUND EARTH STRATEGIES LIMITED SUBSURFACE INVESTIGATION (2012)

In 2012, SES conducted a Limited Subsurface Investigation (LSI) and advanced nine test probes (P01 through P09) across the Property. Soil samples were submitted to the laboratory for analyses from each location.

Soil analytical data obtained from the LSI indicated that soil containing concentrations of petroleum related COCs exceeding applicable MTCA soil cleanup levels was present beneath two thirds of the Property. SES concluded that the thickness of petroleum contaminated soil extended from five feet thick on the eastern portion of the Property to 15 feet thick on the western portion of the Property.

SES also performed a Ground Penetrating Radar (GPR) Survey on the Property in an attempt to identify locations of remediation piping. However, the results of the GPR survey were inconclusive.

5.14 RGI SUPPLEMENTAL SUBSURFACE INVESTIGATION 2017

In 2017, RGI conducted a Supplemental Subsurface Investigation (SSI) and advanced eight test probes (P1, P2, P3 and SSI-P1 through SSI P5) throughout the Property and installed groundwater monitoring wells off-Property to the north (SSI-W2) and east (SSI-W1). Soil and groundwater samples were submitted to the laboratory for analyses.

Soil and groundwater analytical data obtained from the SSI indicated that soil and/or groundwater contamination likely extended off-Property to the north and east beneath the sidewalks along West Roy Street and Queen Anne Avenue North. Groundwater analytical data indicated that groundwater impacts did not extend beyond the northernmost and easternmost portions of the sidewalks where wells SSI-W1 and SSI-W2 were installed.

6 TERRESTRIAL ECOLOGICAL EVALUATION (TEE) RESULTS

WAC 174-340-7490 indicates that a Terrestrial Ecological Evaluation (TEE) must be performed at any site where there has been a release of a hazardous substance to soil. MTCA regulations require that one of the following actions be taken:

- Document a TEE exclusion using criteria in WAC 173-340-7491;
- Conduct a simplified TEE as set forth in WAC 173-340-7492; or
- Conduct a site-specific TEE as set forth in WAC 173-340-7493.

RGI evaluated the Property using the criteria described in WAC 173-340-7490(1) and determined that the Property qualifies for a TEE exclusion based on the future land use of the Property as a multi-use residential building. The redevelopment of the Property is tentatively scheduled to commence mid-2019. It is anticipated that all contaminated soil and groundwater with concentrations above the applicable cleanup levels will be removed from within the Property boundary as part of the cleanup during redevelopment. However, if it is necessary to leave any contaminated soil in place after redevelopment, such soils would be situated at a minimum of 15 feet bgs. Additionally, once redevelopment is completed, the entire Property will be largely covered by the building and/or concrete.

No further evaluation of ecological impacts is required under MTCA.

7 CONCEPTUAL SITE MODEL

A Conceptual Site Model (CSM) identifies sources of contamination, affected media, current and future land uses, known or potential exposure pathways and potential receptors that could be exposed to contamination. The CSM provides the basis for evaluating and selecting cleanup alternatives.

This section discusses the CSM developed for the Property based on data obtained from previous subsurface investigation findings by RGI and others.

7.1 KNOWN AND SUSPECTED SOURCES OF CONTAMINATION

As previously described in Section 4 and displayed on Figure 3, the Property was previously occupied by several different configurations of gasoline service stations from 1927 to 1993. These service stations were situated in different locations throughout the Property and historically contained up to 23 USTs, pump islands, hoists, and grease pits. The sources of petroleum contaminated soil and groundwater observed on the Property are suspected to be the result of releases of petroleum products from USTs, other portions of the fuel systems, and/or other service station related underground improvements (i.e., wash racks and hoists).

Based on data obtained from recent subsurface investigations, petroleum contaminated soil extends from approximately 5 feet (or less) to 24 feet bgs across a large portion of the Property. As previously discussed, the petroleum hydrocarbon contamination extends off-Property to the west-southwest. There are isolated areas beneath the southwestern portion of the Property where soil impacts may extend to depths between 24 and 31 feet bgs. Petroleum contaminated soil may also extend, to a much lesser degree, off-Property beneath the sidewalks to the north and east of the Property. In many locations, the maximum depth of soil contamination corresponds to the depth of the clayey silt layer which is present at approximately 17 feet bgs beneath the eastern portion of the Property and 31 feet bgs beneath the western portion of the Property.

Groundwater flow direction across the Property has consistently been determined to be to the west-southwest. Petroleum contaminated groundwater is also present beneath most of the Property and extends off-Property to the west and southwest. Petroleum contaminated groundwater may also extend

off-Property, to a much lesser degree, limited to just beneath the sidewalks to the north and east of the Property.

LNAPL was historically detected on the Property in wells MW6, MW9, RW4, DPE5, and DPE7. However, LNAPL is currently not present on the Property and the last time LNAPL was observed on the Property was in 2008. The in-situ cleanup effort performed by others appears to have been effective in reducing the occurrence of LNAPL.

Dissolved lead was historically detected in groundwater on the western portion of the Property (MW6) at concentrations exceeding the MTCA cleanup level. The source of this lead is suspected to be associated releases of leaded gasoline on the Property. Lead has not been detected in groundwater on the Property at a concentration above the MTCA cleanup level since 1997.

Dissolved arsenic was historically detected in groundwater at a concentration of 6.1 micrograms/Liter (µg/L) in well MW6 in 2002. This concentration slightly exceeded the MTCA cleanup level of 5 µg/L and may be attributed to background arsenic groundwater concentrations in the region. No source of arsenic contamination has been identified on the Property and is not considered a contaminant of concern

Archived assessor records indicate that the tailor shop/Acme Cleaners (potentially including dry cleaning) was present on the southeastern portion of the Property in 1927. However, no releases to soil and/or groundwater have been identified from this potential dry cleaning facility. Chlorinated solvents have never been detected in soil or groundwater on the Property at concentrations exceeding applicable MTCA cleanup levels.

Potential off-site sources of contamination included the following properties:

- Gasoline service station (former Unocal service station) located northeast, and up-gradient of the Property (across the intersection of Queen Avenue North and West Roy Street).
- A former dry cleaning facility located north, and up-gradient of the Property (across West Roy Street).
- A former Paramount Cleaners located approximately one block east-northeast of the Property (across the intersection of Queen Anne Avenue North and West Roy Street).

Releases of chlorinated solvents and/or petroleum hydrocarbons were historically documented on one or more of these properties. However, recent soil and groundwater analytical data obtained from the Property indicates that the Property has not been impacted by releases from these properties.

7.2 CURRENT AND FUTURE LAND USES

The Property is situated in the lower Queen Anne area, which includes commercial and residential areas. The Property is specifically zoned as a SM-UP-85 by Seattle Department of Construction and Inspections (SDCI). The Property is surrounded by apartment complexes, restaurants, and retail businesses.

The Property and existing building is currently vacant and the parking lot is utilized as a paid parking lot operated by Republic Parking. The exterior portions of the Property outside the vacant building are asphalt paved. The current plan is to redevelop the Property as a multi-use residential building with one level of underground parking. This construction is anticipated to begin mid-2019.

7.3 CONTAMINANTS OF CONCERN AND AFFECTED MEDIA

The identified contaminants of concern (COCs) that have been observed on the Property at concentrations exceeding applicable MTCA cleanup levels for a given media consist of the following:

- COCs in soil: Gasoline-, diesel-, and oil-range TPH, BTEX (benzene, toluene, ethylbenzene, xylenes), and naphthalene.

- COCs in groundwater: Gasoline- and diesel-range TPH, BTEX, and lead.
- Potential COCs in soil vapor and air: Gasoline- and diesel-range TPH, BTEX, and naphthalene.

The selected cleanup levels for COCs are presented in Section 9.1.1.

7.4 EXPOSURE PATHWAYS & RECEPTORS

As described in Section 6, the Property qualifies for a TEE exclusion due to the fact that any potential contaminated soil remaining on the Property after redevelopment would be situated at a minimum of 15 feet bgs. Additionally, any contaminated soils would be covered by the building and/or concrete. Additionally, there are no surface water bodies in close proximity to the Property. Therefore, evaluation of surface water and ecological receptors is not applicable to the Property and therefore not discussed in this section.

Mitigating the potential human health risk associated with the potential COCs in the affected media at the Property will be the primary objective of the selected cleanup action alternative. The exposure pathways that are applicable to the Property include soil, groundwater, and the vapor intrusion pathway and these are discussed further in the following sections.

7.4.1 SOIL PATHWAY

The exposure pathways for soil include direct contact, soil leaching-to-groundwater, and soil vapor migrating into overlying structures.

Human health exposure pathways via direct soil contact include dermal contact and/or ingestion/inhalation of contaminated soil and dust. The point of compliance is defined as throughout the Property from the ground surface to 15 feet bgs. During redevelopment of the Property, the potential for constructions workers to come in contact with soil containing petroleum related compounds at concentrations above MTCA cleanup levels is high. In order to address this concern, all workers handling contaminated soil during redevelopment shall be HAZWOPER trained and follow established safety protocols under the direction of their Health & Safety Officer. The goal of the cleanup action will be to remove all contaminated soil containing concentrations of contaminants above the applicable cleanup levels from within the Property boundaries. However, if it is necessary to leave contaminated soil in-place for any reason, no contaminated soil shall be situated at depths above 15 feet bgs after redevelopment.

The leaching pathway (protection of groundwater) concerns contaminated soil impacting groundwater and potential ingestion of contaminated water via drinking water. The point of compliance for the leaching pathway is defined as throughout the soil profile within the Property boundaries. During the cleanup action, confirmation soil samples will be collected and submitted to the laboratory for analyses. Data obtained from these soil samples will be evaluated with cleanup levels established in Section 9 in order to demonstrate that soil concentrations of contaminants are protective of groundwater.

The soil to soil vapor pathway concerns volatile contaminants partitioning from soil to soil vapor and migrating into structures above and causing a potential threat to human health via inhalation of indoor air contaminants. The standard point of compliance pertaining to soil vapor is defined as throughout the Property from the uppermost groundwater saturated zone. During and/or after the cleanup action, RGI may collect soil vapor and/or indoor air samples to verify that indoor air is protected in accordance with MTCA.

Section 12 (Cleanup Action Plan) describes the process for the characterization, handling, and disposal/treatment of contaminated soils encountered during redevelopment of the Property.

7.4.2 GROUNDWATER PATHWAY

The exposure pathways for groundwater include the direct contact, groundwater-to-soil vapor resulting in migration of vapors into overlying buildings and subsequent inhalation of contaminated air, and ingestion via drinking water.

Shallow perched groundwater has historically been encountered on the Property between approximately 10 and 24 feet bgs. Groundwater beneath a large portion of the Property is contaminated with petroleum related compounds. The standard point of compliance for groundwater is defined as throughout the Property from the uppermost portion of the saturated zone to the maximum depth that impacted groundwater could be encountered. Considering that all COCs for the Property have a lower density than water, and shallow groundwater is located above the hard impervious clayey silt, groundwater contamination is not anticipated to extend far beneath the observed water bearing zone. Additionally, shallow groundwater beneath the Property is not currently used for drinking water and it is highly unlikely that it would be used for drinking water in the future.

The direct contact pathway exposure risk primarily relates to construction workers coming into contact with contaminated groundwater during the proposed redevelopment of the Property including excavations to depth up to 31 feet bgs. . Therefore, contaminated groundwater is anticipated to be encountered during the cleanup action. All workers that have the potential to come into contact with contaminated groundwater during redevelopment will be HAZWOPER trained and follow established safety protocols under the direction of the appropriate Health and Safety Officer(s).

There are no drinking water wells located on, or in the vicinity of the Property. Based on the current land uses, it is highly unlikely that the shallow, low yield, perched water bearing zone would be used for drinking water in the foreseeable future. Additionally, in a previous email communication from Ecology to Texaco in 2004, Ecology stated that “Drinking water should not be considered the highest beneficial use for this Site”.

During the cleanup action, all contaminated soil will be removed from the Property and contaminated groundwater will be dewatered and disposed of off-Property (see Section 12.5 for more discussion).

Groundwater monitoring wells will be installed during and/or after the cleanup action to monitor the effectiveness of the remediation and determine if groundwater concentrations of COCs are in compliance with MTCA (see Section 13.1 for more discussion)..

Section 12 (Cleanup Action Plan) describes the process for characterization, handling, and disposal of any contaminated groundwater encountered during construction.

7.4.3 SOIL VAPOR PATHWAY

The soil vapor/air pathway includes workers coming directly in contact with contaminated vapors during construction and vapors from contaminated soil and/or groundwater migrating into the Property building.

During redevelopment of the Property, the potential for constructions workers to be exposed to petroleum contaminated soil and/or groundwater and come in contact with petroleum contaminated vapors does exist. In order to address this concern, all workers involved with the cleanup action shall be HAZWOPER trained and follow established safety protocols under the direction of a Health & Safety Officer. This will include having a respirator on-Property if necessary. Air monitoring will be conducted in accordance with the Health & Safety plan and workers will be notified if concentrations of contaminants in air reach unsafe levels and appropriate action would be taken at that time to protect the safety of the workers.

Soil vapor impacts have not been thoroughly investigated on the Property during previous investigations by others. However, based on the concentrations of contaminants, depth of petroleum contamination,

and the known rapid rate of attenuation of these compounds as they move through the vadose zone, the current risk for vapor intrusion in the Property building after the cleanup is completed is considered low.

Regarding future use, the goal of the cleanup action will be to remove all contaminated soil from within the Property boundaries. However, if it is necessary to leave contaminated soil in place for any reason, no contaminated soil shall be situated at depths above 15 feet bgs after redevelopment. Given that the future Property building will have a high air exchange rate associated with the parking garage, vapor intrusion likely would not be a concern for the Property after the completed cleanup.

In addition, RGI understands that a vapor barrier will be installed beneath the concrete slab, and outside of the underground parking garage walls, to mitigate any potential vapor intrusion into the building.

RGI will evaluate the vapor intrusion pathway further if it is deemed necessary.

8 PROPERTY GEOLOGY & HYDROGEOLOGY

In general, the soils underlying the Property consist of silty sands to depths of approximately 6 feet to 8 feet bgs, underlain by sand to depths of 17 to 31 feet bgs. The depth to the bottom of the sand horizon is shallower beneath the eastern portion of the Property (approximately 17 feet bgs) and deepens to the west (up to 31 feet bgs beneath the western portion of the Property). Underlying the sand is a hard to very hard, relatively impervious, clayey silt (Lawton Clay). A cross section depicting subsurface conditions along the northern Property boundary is displayed on Figure 6.

In general, the unconfined, perched shallow water bearing zone is present across the Property and is typically found perched above the Lawton Clay. Depth to this water bearing zone beneath the eastern portion of the Property seasonally ranges from approximately 10 feet bgs to 13.5 feet bgs. Depth to this water bearing zone beneath the western portion of the Property seasonally ranges from approximately 18 feet bgs to 24 feet bgs. The groundwater flow direction has consistently been towards the west-southwest.

According to the RI report prepared by others for the Property (dated August 2007), a deeper aquifer is reportedly separated by the shallow water bearing zone by more than 100 feet of the Lawton Clay or other fine-grained soils.

9 PROPERTY CLEANUP REQUIREMENTS

The MTCA regulation (chapter 173-340 WAC) governs site cleanups and defines a two-step approach for establishing cleanup requirements for individual sites:

- Establishing Cleanup Standards
- Selecting Cleanup Actions.

9.1 CLEANUP STANDARDS

The two primary standards pertaining to the cleanup action at the Property include:

- Cleanup Levels –The concentration at which a particular hazardous substance does not threaten human health and the environment.
- Point of Compliance- Designates the location on the Property where the cleanup levels must be met.

9.1.1 CLEANUP LEVELS

The MTCA regulation provides three options for establishing generic and site-specific cleanup levels for soil and groundwater. Method A cleanup levels have been adopted for specific purposes and are intended to provide conservative cleanup levels for sites undergoing routine site characterization or cleanup actions

or those sites with relatively few hazardous substances. Method B and C cleanup levels are set using a site risk assessment, which focus on the use of "reasonable maximum exposure" assumptions based on site-specific characteristics and toxicity of the COCs.

The following cleanup levels have been selected for soil, groundwater, and air on the Property. Note surface water cleanup levels are not applicable to this project as no water bodies are situated in close proximity to the Property.

For this project, the MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses were selected for compounds detected in soil at concentrations above laboratory detection limits. MTCA Method A soil cleanup levels have been established for all COCs on the Property listed in the table below.

For groundwater, the MTCA Method A Cleanup Levels for Groundwater were selected for compounds detected in groundwater at concentrations above laboratory detection limits. MTCA Method A groundwater cleanup levels have been established for all COCs on the Property listed in the table below. If contaminants are encountered in groundwater during the cleanup action that do not have an established MTCA Method A groundwater cleanup level, the Applicable and Relevant or Appropriate Requirement (ARAR) will be referenced per WAC 173-340-700[5][a].

For air, The MTCA Method B Indoor Air Cleanup Levels were selected for demonstrating compliance after the cleanup completed. Additionally, the Vapor Intrusion Method B soil vapor screening levels established by Ecology may also be used for evaluating soil vapor COCs.

These soil and groundwater cleanup levels are considered protective of direct contact and drinking water. The MTCA Method A soil and groundwater cleanup levels for compounds that have been detected at concentrations above laboratory detection limits on the Property are summarized below.

Contaminant	Media	Method A Soil Cleanup Level	Media	Method A Groundwater Cleanup Level	Media	Method B Indoor Air Cleanup Level
Gasoline-range TPH	soil	30 mg/kg	Groundwater	800 µg/L	Air	NVE
Diesel-range TPH	soil	2,000 mg/kg	Groundwater	500 µg/L	Air	NVE
Oil-range TPH	soil	2,000 mg/kg	Groundwater	500 µg/L	NA	NA
Benzene	soil	0.03 mg/kg	Groundwater	5 µg/L	Air	0.321 µg/m^3
Toluene	soil	7 mg/kg	Groundwater	1,000 µg/L	Air	2,290 µg/m^3
Ethylbenzene	soil	6 mg/kg	Groundwater	700 µg/L	Air	457 µg/m^3
Xylenes	soil	9 mg/kg	Groundwater	1,000 µg/L	Air	45.7 µg/m^3
Naphthalenes	soil	5 mg/kg	Groundwater	160 µg/L	Air	0.0735 µg/m^3
Tetrachloroethene	soil	0.05 mg/kg	Groundwater	5 µg/L	Air	9.62 µg/m^3
Trichloroethene	soil	0.03 mg/kg	Groundwater	5 µg/L	Air	0.37 µg/m^3
Lead	soil	250 mg/kg	Groundwater	15 µg/L	NA	NA
Arsenic	soil	20 mg/kg	Groundwater	5 µg/L	NA	NA

mg/kg = milligrams/kilogram
µg/L = micrograms/liter
µg/m^3 = micrograms/cubic meter
NA = Not applicable

NVE = No MTCA Method B Indoor Air Cleanup Levels have been established for gasoline- and diesel-range TPH. However, Indoor Air Cleanup Levels have been established for select aromatic and aliphatic hydrocarbon fractions.

9.1.2 POINTS OF COMPLIANCE

The regulatory requirements for establishing the "point of compliance" are described in WAC 173-340-720 through 173-340-360. The point of compliance is defined as the location within a particular medium where cleanup levels must be met. The points of compliance consists of a "standard" and "conditional" points of compliance. The standard point of compliance is generally defined as throughout the site indicating that the cleanup levels must be met at the standard point of compliance for each media (soil, groundwater, surface water, and air). Groundwater points of compliance for the Property-specific cleanup will include the post-cleanup installation of groundwater monitoring wells along the Property's downgradient property boundary (see Section 13.1 for more discussion). On certain sites, a conditional point of compliance is granted. However, the conditional point of compliance is not applicable to the Property.

As previously indicated, this cleanup action pertains only to the Property and not the entire Site, which extends beyond the Property boundaries. The portion of the Site outside the Property boundaries is the responsibility of a separate entity. Therefore, when discussing the point of compliance, the term "Property" is used in place of "Site" and Property refers to all areas within the Property boundaries.

The selected point of compliance for soil is throughout the Property (based on protection of groundwater).

The selected point of compliance for groundwater is throughout the Property from the uppermost level of the saturated zone extending vertically to the lowest depth, which could potentially be impacted by COCs at the Property.

The selected point of compliance for air is in ambient air throughout the Property.

9.2 CLEANUP ACTIONS

9.2.1 OVERVIEW

Cleanup actions can be divided into the following two main headings: in-situ and ex-situ remedial activities. Using available data, characteristics, and current and future land use, the remedial options are evaluated based on the following criteria: effectiveness, implementability, cost, anticipated time of completion and compliance with applicable laws and standards.

In-situ remedial technologies include groundwater pump and treat, air sparge, vapor extraction, chemical oxidation, bioremediation or combination or variation thereof. These in-situ technologies are effective in remediating VOC or petroleum hydrocarbon affected media. However, these technologies are reserved for projects where remedial excavation is not a valid or practical option. Since the Property will be excavated as part of the planned redevelopment, which includes installation of a one level underground parking garage, in-situ technologies are not evaluated further.

Ex-situ remedial technologies generally include soil excavation. Contaminated soil is either stockpiled on-Property and remediated above ground (e.g., land farmed); or are excavated and transported off-Property to a permitted disposal/treatment facility.

Remedial soil excavation (coupled with groundwater dewatering) is considered an effective approach for remediating contaminated properties undergoing redevelopment and is considered the appropriate cleanup action alternative for the Property.

9.2.2 SOIL REMEDIATION

The selected cleanup action for soil at the Property is direct excavation with off-Property disposal. This method was selected due to the fact that it is highly effective, permanent, has a short restoration timeframe and will limit interference with redevelopment activities. This method is also the most readily practicable and cost effective method and will ensure compliance with cleanup standards throughout the Property.

Advantages of this option include immediate and permanent source removal and off-Property disposal and/or treatment. The removal of contaminated soils situated between approximately 5 and 24 feet bgs from the Property will also have a positive effect on remediating petroleum contaminated groundwater known to be present beneath the Property. Some contaminated soil may be encountered at depths less than 5 feet bgs, and deeper than 24 feet bgs at various locations of the Property.

The removal of potential USTs, hoists and other service station features in conjunction with the remedial excavation of accessible contaminated soils and dewatering of encountered contaminated groundwater is considered and retained as the most appropriate cleanup action for the Property.

This cleanup action will result in a short restoration timeframe that will coincide with the construction of the building tentatively scheduled for mid-2019.

9.2.3 GROUNDWATER REMEDIATION

The selected cleanup action for remediating groundwater on the Property is direct excavation of contaminated soil described in Section 9.2.2 followed by dewatering of contaminated water in excavations with subsequent excavation water sampling and off-Property disposal of contaminated water. This method was selected due to the fact that it is the most practicable and cost effective and will have limited interference with redevelopment activities. This option will also provide long term effectiveness and attainment of cleanup standards. Groundwater remediation is discussed further in Section 12.

10 CONCEPTUAL SHORING SYSTEM AND LOCATION

Soldier piles with wood lagging and tiebacks was selected for temporary shoring (shoring Option 1 as outlined in RGI's *Geotechnical Engineering Report*, dated February 20, 2017). RGI also recommended installing Miradrain 6000 (or equivalent), including vapor membrane behind the wood lagging or shotcrete wall and perimeter foundation drains, as appropriate, and as designed by Client's building envelope subcontractor.

Based on subsequent conversations with the Client and design team, one level of underground parking, from lot-line to lot-line will be constructed. Soldier piles with wood lagging and tiebacks were selected for the project and the shoring walls will be installed along all property lines (RGI is not aware of any building or easement setbacks from any Property line).

The bottom of shoring will be designed to intersect the Lawton Clay layer that underlies the Property and corresponds to the estimated maximum depth of soil contamination. The bottom of shoring will be situated at elevation 115' along the southern portion of the eastern Property boundary, the southern Property boundary, and the western Property boundary, which will allow for remedial excavations of up to approximately 31 feet bgs in these locations. The bottom of shoring will be situated at elevation 122' along the northern Property boundary and the northern portion of the eastern Property boundary, which will allow for remedial excavations of up to approximately 26 feet bgs in these locations. The estimated shoring locations and estimated bottom of shoring elevations are displayed on Figure 7.

11 POTENTIAL USTS AND FORMER UNDERGROUND IMPROVEMENTS

RGI's recommended scope of work regarding former USTs and/or other related underground improvements associated with the various gasoline service stations are as follows:

- During demolition of the existing building on the Property, RGI shall oversee the removal of its concrete slab. This area was previously utilized as a service garage and underground improvements (USTs, hoists, wash racks, and oil/water separators) may be present beneath the slab.
- RGI personnel will be on-Property at all times to oversee and document the decommissioning and removal of any encountered USTs, hoists, and/or other underground improvements related to the former gasoline service stations; and to perform the necessary sampling and analyses, which is required by Ecology and/or necessary to document whether or not a release from these abandoned improvements have occurred. For any USTs encountered, the GC, or RGI (if requested to do so), will retain an International Council Code (ICC) certified UST decommissioning contractor to properly inert, decommission, remove, and properly transport and dispose of the UST and/or other related improvement. All UST removal and demolition work be will approved by a marine chemist and the City of Seattle Fire Department. If USTs are filled with a cement slurry, concrete, and/or sand, each UST will need to be cut open and cleaned in-place prior to being removed and transported off-Property. Note that USTs 1, 2, and 6B (see Figure 3) were reported in previous reports as having been abandoned in-place. Therefore, the potential for one or more of these USTs to be encountered during redevelopment does exist.
- RGI's ICC certified UST Site Assessor will perform the required UST Site Assessment services and/or other sampling, analyses, and reporting associated with the removal of USTs and/or other encountered underground improvements. Discovery of unknown underground improvements during redevelopment will likely require sampling, analysis, and/or waste profiling for disposal purposes.
- If USTs, hoists, or other underground improvements are encountered during redevelopment, they should be emptied prior to off-Property transport and placed on plastic sheeting and additionally covered with plastic sheeting to prevent contaminating underlying soils. All UST/hoist decommissioning documentation such as fire marshal permits, hot works permits, pump and rinse certificates, and disposal certificates shall be provided to RGI and will be included in the appendices of the final Cleanup Action Report that will be submitted to Ecology.

12 CLEANUP ACTION PLAN

Previous investigations conducted on the Property have identified contaminated soil and groundwater beneath most portions of the Property outside of the existing building. No impacts have been identified beneath the building, however, the vertical depth of these investigations were very limited due to logistics involving drilling inside the building.

The cleanup action will consist of properly decommissioning and removing any potential fuel system components and other former and potential improvements related to the gasoline service station(s) located on the Property and the removal of contaminated soil and groundwater from the Property.

The proposed scope of work to implement the recommended cleanup action is presented below.

12.1 PRE-CLEANUP ACTION ACTIVITIES

The following activities will be performed prior to commencing with the cleanup action:

1. Enroll the Property into the Ecology VCP. The VCP application for the Property (which also includes the Site, as requested by Ecology) has been has been submitted to Ecology and is currently awaiting their acceptance. RGI anticipates the Property will be accepted into the VCP in December of 2018 or January of 2019.
2. Obtain the King County Metro permit and City of Seattle Side Sewer Permit for the temporary discharge of contaminated groundwater encountered and/or generated during excavation dewatering to the on-site sanitary sewer.
3. Conduct a geophysical survey along the northern portion of the eastern property boundary in an effort to determine if UST1, UST2, and/or UST6B remain in place. Note: The geophysical survey will be performed by an actual geophysicist and not a utility locator.
4. Contractor and subcontractor prepare a Site Health and Safety Plan (SHSP).
5. Install a *Notice of Intent* sign on the Property that briefly states the Cleanup Action Plan and provides contact information. This Notice of Intent also partially satisfies one of the Cost Recovery requirements set forth by Ecology. RGI recommends that the Client's legal counsel opine as to what other notifications may be required in order to fully support any cost recovery effort.
6. Profile contaminated soil and water on the Property and obtain the necessary waste manifests and clearances from the permitted landfill disposal or treatment facilities, which will be required for disposal of contaminated soil and/or water. The generator (the Client) is required to sign the waste profile paperwork.
7. Abandon all existing groundwater monitoring wells on the Property in accordance with Ecology's Minimum Standards for Construction and Maintenance of Wells (WAC 173-360). Note: Groundwater monitoring (resource protection) wells damaged during construction, without being first properly decommissioned, are subject to fines and penalties from Ecology.
8. Hold one or more meetings with the Client (or Client's representative), General Contractor, excavation subcontractor, and any other potentially relevant parties to review the components of this Work Plan and develop a strategy for implementation of the cleanup action in conjunction with construction activities.
9. Oversee the removal of the slab associated with the existing building situated on the southern portion of the Property. This building was previously utilized for automobile repair and underground improvements may be present beneath the slab. Note that immediately following building demolition, additional drilling in this uninvestigated area could be performed in order to define the nature and extent of contamination in the area (if any).
10. Direct test pitting activities and collect and analyze soil samples to define the vertical and lateral extent of soil impacts in all locations of the Property where contamination is present. It is likely that multiple rounds of test pitting and sampling will be conducted during the course of redevelopment to define the extent of planned remedial excavations at greater depths. This data will allow RGI to plan accordingly with the general contractor and minimize any delays in construction activities. As requested by the Client, the nature and extent of any contaminated soils beneath the existing building will be evaluated using test pits and not drilling and sampling (as previously recommended by RGI).

12.2 CONTAMINATED SOIL REMEDIATION & HANDLING

This section outlines the plan to excavate known petroleum contaminated soils and the procedure for inspecting other soils encountered or exposed during the Property cleanup effort.. The estimated location where contaminated soil is anticipated to be encountered beneath the Property is displayed on Figure 4.

RGI personnel should be on-Property at all times that excavation of contaminated soil is taking place and when excavation is occurring in locations where contamination is suspected to be present. This is necessary to oversee and properly segregate, load, stockpile soils ("clean" versus "contaminated") and to better document the cleanup action. RGI will also perform the necessary sampling, analyses, reporting, and direct contractors as needed regarding the handling and disposal of contaminated soil.

Whenever possible, we recommend that cleanup action activities be completed (to the maximum extent possible) prior to commencing with other mass soil excavation activities associated with general Property grading, shoring installation, and/or during excavations for the one level underground parking garage. However, RGI does realize that it will be necessary to perform a majority of the cleanup in conjunction with the Property redevelopment.

The general contractor and/or their earthwork subcontractor will excavate and segregate Property soils under the direction of RGIs environmental professionals. One or two RGI environmental professionals will be present at all times during excavation of contaminated soils (two person staff will be needed when high volumes of contaminated soils are being removed, or when different areas of the Property are being cleaned up at the same time).

All contaminated soil shall be removed from areas within the Property boundaries. It is currently estimated that remedial excavations will extend to an average depth of approximately 24 feet bgs. However, this may vary based on observations during redevelopment. In regards to the eastern portion of the Property, the maximum depth of contaminated soil appears to correlate to the depth of the clayey slit layer which has low permeability and serves as a confining layer. The depth to the clay layer varies from approximately 17 feet bgs on the east side of the Property to approximately 31 feet on the west side of the Property. RGI will coordinate remedial excavation activities with the general contractor and/or other parties. In areas of the Property where soil contamination extends to greater depths, the remedial excavation of one area may take place in multiple phases during each successive lift of redevelopment. This strategy will minimize any interference or delays with construction activities.

During remedial excavations, and due to logistics associated with soil management, it may be necessary to stockpile contaminated soil on the Property. All contaminated soil should be segregated, and kept segregated from clean soil until it is loaded for off-Property for transport and disposal. The use of plastic sheeting, beneath and over, the contaminated soil is necessary. This is particularly important during wet weather and required to prevent inadvertently contaminating underlying soils and/or prevent spreading of contamination due to rain.

Depending on the depth of excavation in a given area, it may necessary to maintain a 1:1 slope, or a slope deemed appropriate by the geotechnical engineer-on-record. This would likely be a concern in areas where contamination extends beyond the depth of the redevelopment subgrade or deeper excavations dewatering purposes (discussed further in Section 12.5). Areas where localized excavations require excavation beneath the redevelopment subgrade of approximately elevation 134' (approximately 13 to 14 feet bgs) will require backfilling in order to reach the desired subgrade for construction. Material used for backfilling would be specified by the geotechnical engineer-on-record.

During drilling associated with the installation of shoring walls along the Property boundaries, it is likely that petroleum contaminated soil cuttings requiring special handling will be encountered. RGI will be on-Property to oversee drilling at Property boundaries where contaminated soil is suspected to be present. RGI will also assist with handling and disposal of any contaminated soil encountered.

During the cleanup action soil, groundwater, and excavation water samples will be submitted to a fixed-base and/or mobile analytical laboratory for analyses of COCs. The purpose of these samples will be to direct cleanup actions, plan strategically, demonstrate compliance with MTCA regulations, and/or profile waste for disposal.

Best management practices (BMPs) will be followed which will prevent soil and turbid storm water run-off from leaving the Property. BMPs will include removing loose soil from trucks and other vehicles leaving the Property, street sweeping, silt fences, straw bales, wash stations (if needed), etc. These activities will be managed by the GC.

Specific protocols for the cleanup action at the Property are discussed further in the following sections.

12.3 SOIL SEGREGATION

The categories of contaminated soil, and their permitted end uses, anticipated to be encountered during the cleanup action are described below along with the methodology for segregating soil.

12.3.1 PETROLEUM CONTAMINATED SOIL (PCS) CATEGORIES

The four categories of soil are defined in Table 12.1 of Ecology's *Guidance for the Remediation of Petroleum Contaminated Soils* (Ecology PCS Guidance), revised in June 2016, and are summarized as follows:

1) **Category 1 –** Any soil that is not affected by any releases of contaminants or soils that do not contain any concentrations contaminants above the compound-specific analytical laboratory detection limits. Category 1 soils can be re-used anywhere.

2) **Category 2 –** Any soils that contain concentrations ranges of petroleum related COCs published in the Ecology PCS Guidance. The Category 2 concentration ranges for Property COCs are as follows gasoline-range TPH (5-30 mg/kg), diesel-range TPH (25- 200 mg/kg), oil-range TPH (100-200 mg/kg), benzene (0.005-0.03 mg/kg), toluene (0.005-7 mg/kg), ethylbenzene (0.005-6 mg/kg), xylenes (0.015-9 mg/kg), naphthalenes (0.05-5 mg/kg), and lead (17-50 mg/kg). Category 2 soils are suitable for re-use as fill above the water table.

   Note: a Category 2 soil may have a petroleum-like odor, and therefore may have concentrations of petroleum hydrocarbons below the analytical detection limits. In addition, Category 2 soils may or may not exhibit obvious petroleum odors or give a positive water sheen test.

3) **Category 3/4** - soil known or suspected to contain concentrations of petroleum-related COCs exceeding the maximum Category 2 concentrations published Ecology PCS Guidance. Category 3/4 soils contain concentrations of COCs higher than those allowed under the Category 2 classification. The re-use category for these soils is typically for asphalt manufacturing and road construction.

Based on soil analytical data obtained from the Property to date, and as stated above, RGI anticipates the majority of PCS removed from the Property will be classified as Category 3/4 soils. The known concentration ranges for Property COCs such as gasoline-range-TPH and benzene make it unlikely that a large volumes of these soils classified as Category 2 will be encountered during redevelopment. RGI anticipates that the majority soil segregating on the Property will be distinguishing Category 1 (essentially "clean" soils) from Category 3/4 soils. However, if encountered, soils will be removed as Category 2 soils when it is deemed cost-effective to do so.

12.3.2 POTENTIAL NON-PETROLEUM CONTAMINATED SOIL

RGI currently anticipates that all contaminated soil associated with the cleanup action will consist of routine petroleum hydrocarbon-related soil contamination. However, if non-petroleum soil contamination is encountered, or is suspected by RGI, beneath the building or in other locations on the Property, additional sampling, analyses, and waste profiling will be performed.

If compounds related to dry cleaning such as tetrachloroethene (PCE), trichloroethene (TCE), and/or other hazardous substances are encountered, the soil may need to be disposed of as an F-listed hazardous waste

or disposed of under a Contained-in determination with Ecology. Coordinating disposal for such soils can result in delays relating to Ecology approval and/or the disposal facility accepting the waste. Therefore, the excavation contractor should be prepared for possible delays including temporary stockpiling on-Property. . All stockpiled contaminated soil (regardless of the nature of the contamination) must be placed on plastic sheeting and covered with plastic sheeting to avoid spreading of contamination as a result of rain or other means.

12.3.3 SOIL SEGREGATION METHODOLOGY

During soil excavation, and as directed by the Client, RGI's environmental professional(s) will segregate soils using one or more of the following criteria:

1. **Existing Soil Quality Data.** For example, if existing soil quality data indicates that soil in a particular area of the Property classifies as a Category 3/4 PCS, it will be excavated, loaded, and transported off-Property as a Category 3/4 soil unless field screening data suggests otherwise. Alternatively, unknown soils may be stockpiled on plastic sheeting, sampled, and tested prior to making a determination.
2. **Field Screening Data.** Field screening methods will include a portable gas analyzer equipped with a photoionization detector (PID), to qualitatively estimate total VOCs and water sheen tests for longer chain petroleum hydrocarbons (diesel- and oil-range TPH).
3. **On-Property Analytical Laboratory.** An on-Property mobile analytical laboratory may be utilized for this project to assist with determining concentrations of contaminants encountered and with verifying clean soils (i.e., soils that do not contain concentrations of contaminants above laboratory method detection limits).
4. **Off-Property Laboratory Analytical.** An off-Property analytical laboratory will be used for interim and confirmation soil sampling analyses.
5. **LNAPL** – Based on current Property data, no LNAPL is suspected to be present on the Property. However, if LNAPL is observed in soil, the soil will be designated as a Class 3/4 soil. *Note: if LNAPL is present, LNAPL removal may be necessary before soil is loaded and transported off-Property.*

The objective during cleanup action is to minimize the handling and stockpiling clean soil and contaminated soils. All excavated soil will be categorized, based on field observations and/or laboratory analytical data, and transported off-Property to the appropriate facility.

Based on available data, Property soils contain petroleum hydrocarbons (as gasoline-, diesel-, and oil-range TPH), BTEX, and naphthalenes. These soils are designated as PCS Category 2/3/4 soils and can be either stockpiled on-Property and/or directly loaded into trucks and transported to nearby transfer stations (i.e., Waste Management located in Seattle, Washington). Segregated category 2 soils could be transported to other licensed and permitted disposal/treatment facilities (i.e., Cadman located in Everett, Washington).

RGI will record the number of each truck loaded and time leaving the Property in the field log book and waste disposal documentation will be included in the Cleanup Action Report

As requested by the Client, or determined appropriate in the field, soil will be segregated during excavation into either Category 1, Category 2, or Category 3/4. The decision on where to dispose of contaminated soils will be based on COC concentrations, transportation costs, and costs associated with any additional handling of soils required to do so.

Alternatively, or as requested by the Client, all PCS may be transported and disposed of off-Property as a Category 3/4 PCS. This strategy may be cost effective when double handling of PCS and/or excessive

stockpiling would be necessary to segregate PCS and may also reduce analytical costs associated with distinguishing Category 2 PCS from Category 3/4 PCS.

Once all PCS has been removed from the remedial excavation, confirmation soil samples will be collected from the limits of the remedial excavation and submitted to the laboratory for analyses. The purpose of confirmation soil sample is to demonstrate that soils at the limits of the remedial excavation are in compliance with MTCA regulations. The soil sampling strategy is discussed further in Section 12.4.

12.4 INTERIM AND CONFIRMATION SOIL SAMPLING

During (interim) and following the completion of the cleanup process (confirmation), RGI's environmental professional will collect soil samples at various locations throughout the Property.

Analytical results for each interim and confirmation sample will be used to confirm the soil quality within the excavation area and at the limits of the excavation. Soil samples will be collected along the excavation/shoring walls, prior to the placement of wood lagging, to also document in-situ soil quality at the Property boundaries in areas where remedial excavation extends to the Property boundaries. The location and depth of each sample will be based on subsurface soil conditions, field screening results, and/or professional judgment.

Soil confirmation samples collected from remedial excavation sidewall limits (for example, behind the shoring walls along all four sides of the Property) will be as follows:

- One discrete soil sample very 10 linear and vertical feet of sidewall (a maximum of 129 soil samples).

Soil confirmation samples collected the bottom floor of the excavation will be as follows:

- One discrete soil sample every 100 square feet of bottom of excavation (a maximum of 114 soil samples).

All confirmation samples will be analyzed (at a minimum) for gasoline- diesel, and oil-range TPH and BTEX. Note that this soil sampling strategy and analyses complies with the agreement between the Client and Chevron and also complies with MTCA regulations.

Soil samples will be collected using standard decontamination procedures including disposable latex gloves, stainless-steel spoons, and Alconox wash prior to sampling events. Samples will be collected either directly from the backhoe bucket or by using stainless steel spoons or trowels and placed in preconditioned sterilized-glass jars provided by the project, Ecology-accredited, third-party analytical laboratory. All soil samples analyzed for volatile compounds will be collected using EPA Method 5035A.

All samples will either be stored in an iced cooler at approximately 4^{o} C while at the Property and during transportation to the fixed-base analytical laboratory or submitted directly to the mobile analytical laboratory located on the Property. A chain of custody form will accompany each cooler containing laboratory samples under standard sample chain of custody protocols.

12.5 PROPERTY GROUNDWATER DEWATERING

12.5.1 CONSTRUCTION DEWATERING

Available data indicates that contaminated shallow groundwater will be encountered as shallow as approximately 10 feet bgs during the cleanup action.

The GC, following, and/or in conjunction with the soil remedial excavation effort, will properly manage, pump, contain, store, and discharge contaminated groundwater encountered during construction. The dewatering design and related activity will be outlined in a forthcoming dewatering plan by RGI. The dewatering plan will outline anticipated volume or groundwater withdrawal, the required dewatering

system and/or pumps, number of dewatering points, sampling and testing requirements for discharge, permit requirements, and other pertinent information.

The dewatering effort during construction and its relative long term duration, be it by conventional trench and sump pumps or temporary dewatering wells, will substantially reduce groundwater concentrations beneath the Property, and any residual dissolved phase contaminants in relatively isolated and limited shallow groundwater located up-gradient (north and east) of the Property.

12.5.2 ADDITIONAL GROUNDWATER REMEDIATION

During the cleanup action, RGI may direct additional groundwater remediation in areas of the Property where contaminated groundwater is observed, or suspected, to be present. In this event, RGI will direct the contractor to excavate trenches to a depth of a few feet below the level groundwater and dewater the location by utilizing pumps to transfer potentially contaminated water into settlement tanks for temporary storage. Excavation water samples will be collected and submitted to the laboratory for analyses in order to determine concentrations of COCs in groundwater. Sampling and analyses may be repeated several times at the direction of the RGI environmental professional. Data obtained will be used to determine if groundwater remediation is effective and/or to select groundwater monitoring well locations for post-cleanup, on Property, future groundwater compliance monitoring.

In the unlikely event that relatively high concentrations of the COCs in groundwater remain, RGI will evaluate, prepare a plan, and implement the Client and/or Ecology approved plan, to remediate these areas post-construction.

12.6 SAMPLE LABELING & DOCUMENTATION

All soil, groundwater, and/or excavation water samples collected during the cleanup action will be labeled appropriately. Sample information will be written on a label affixed to the outside of the sample container. Samples will be given a mnemonic designation associated with the sample type, location, and depth. For example, soil sample A1-25B would indicate a soil sample collected at the intersection of shoring “A” and shoring “1” grid-lines, at a depth of 25 feet bgs and classified as a bottom sample. In addition, samples locations will be recorded in latitude, longitude and elevation using a hand-held GPS device. All actual sample locations and depths will be recorded in feet relative to a fixed reference point.

A field logbook will be maintained to document all pertinent activities during the cleanup action. Soil and groundwater sampling notes will be recorded in the field logbook for one or more of the following:

- Sample identification
- Sample location
- Date and time of sample collection
- Sample depth
- Identity of samplers
- Sampling methods and devices used
- PID readings, sheen testing results, and olfactory and visual observations
- Purge volumes and devices used (groundwater sampling only)
- Depth to groundwater and pH, temperature, and conductivity readings (groundwater sampling only)
- Relative moisture content (dry, moist, wet, saturated) of the soil sample
- Soil type (e.g., silt, sand, gravel, etc.)
- Any other information considered relevant by the RGI professional

In addition, strict Chain-of-Custody protocols will be adhered to for all samples. A complete Chain-of-Custody will be returned with laboratory reports upon completion of analysis. Copy(s) of the Chain-of-Custody forms will be included in the final Cleanup Action Report.

12.7 LABORATORY ANALYSES

Based on the current data, it is anticipated that soil, groundwater, and/or excavation water samples will be submitted to either a mobile or fixed-base laboratory and analyzed for one or more of the following:

- Diesel-range TPH by Northwest Test Method NWTPH-Dx.
- Gasoline-range TPH by Northwest Test Method NWTPH-Gx.
- BTEX by EPA Method 8021B
- Carcinogenic polycyclic aromatic hydrocarbons (cPAHs) by EPA Method 8270 Select Ion Monitoring (SIM).
- Volatile organic compounds (VOCs) by EPA Method 8260C.
- Total and dissolved lead by EPA Method 200.8.

If previously unknown contaminated media are identified, additional analyses may be required.

12.8 PROJECT COMMUNICATION

Daily Field Reports (DFRs) prepared by RGI's field environmental professional will be submitted to the General Contractor's superintendent for each day RGI is on-site. Jerry Sawetz, Senior Environmental Scientist will be the Senior Project Manager for this project and Paul Riley, LG, LHG will be the Principal-In-Charge.

12.9 PROPERTY-SPECIFIC HEALTH & SAFETY PLAN

A standalone Property-specific Health & Safety Plan (H&S Plan) will be prepared maintained on-Property at all times. The H&S Plan will include descriptions of known Property hazards, identify appropriate personal protection equipment (PPE), describes decontamination procedures and presents a contingency plan for emergencies.

12.10 PROPERTY CLOSURE AND REPORTING

Following remedial excavations, sampling, and review of all laboratory data, RGI will prepare a final Remedial Action Report (RA Report). The RA Report will present our findings, conclusions, and recommendations. The report will include, but is not necessarily limited to, the following:

- Project Description, Purpose, and Background
- Cleanup Action Methodologies
- Laboratory Analyses
- UST and Other Underground Improvement Decommissioning and Removal
- Soil and Groundwater Remediation and Sampling
- Estimated locations of any remaining soil and/or groundwater contamination
- Contaminated Groundwater Treatment/Disposal (if any)
- Confirmation Sampling and Analysis
- Compliance with Cleanup Standards;
- Property Restoration and Future Land Use
- Evaluation of Vapor Intrusion Pathway
- Soil and Groundwater Disposal
- Groundwater Monitoring Well Installation, Development, and Sampling
- Conclusions and Recommendations

The RA Report will include tables, figures, cross sections, analytical laboratory reports, and waste disposal documentation. Draft reports will be distributed to Client and/or Clients representative(s) for review and comment prior to submitting the Reports to Ecology.

13 POST-CLEANUP ACTIVITIES

13.1 GROUNDWATER MONITORING WELL INSTALLATION

Once remedial excavations are completed, RGI will install an estimated three to six groundwater monitoring wells on the Property during construction of the one level underground parking garage (and before the ground level PT deck is installed). This procedure typically entails picking the drill rig using the overhead crane to transfer the drill rig into the excavation. The purpose of these wells will be to obtain post-remediation and quarterly groundwater monitoring data to confirm whether or not groundwater is in compliance with MTCA regulations

Given the bathtub construction associated with the construction of the parking garage (at least on the eastern portion of the Property), groundwater monitoring wells may be installed at the time the vapor barrier is installed. In locations where the well casing intersects the vapor barrier, non-VOC containing material will be used to create an air tight seal between the well casing and the vapor barrier.

After well construction, sonotube will be placed around each well which will allow for the foundation and concrete slab to be poured concrete around each well. Wells will also need to be protected as construction of the garage is completed. RGI requests that the Client retain their licensed surveyor to record each groundwater monitoring well location (in plan view) and top of well casing (TOC) elevation.

The locations of these wells will be based on the findings of the cleanup action and the installation of these wells will be coordinated with onsite construction personnel. All groundwater monitoring wells will be constructed with a screened interval designed to intersect the saturated/unsaturated interface and flush mount monuments which will match the existing grade of the parking garage floor after construction is completed. All wells will be developed and surveyed after installation.

In addition, groundwater monitoring wells will be sampled and groundwater samples will be submitted to the laboratory for analyses of COCs.

13.2 VAPOR INTRUSION ASSESSMENT

RGI does not anticipate vapor intrusion being a concern for the Property after redevelopment. However, if soil and/or groundwater containing concentrations of volatile contaminants is left in-place after the cleanup action is completed, it may be necessary to demonstrate to Ecology that vapor intrusion is not a concern for the Property. Therefore, a vapor intrusion assessment may be recommended based on the evaluation of existing data at the time, or as mandated by Ecology as part of their agency review and/or site closure.

13.3 OTHER POST-CLEANUP ACTIVITIES

Other post-cleanup activities include, but are not necessarily limited to:

- Entering all data into the Ecology Electronic Information Management (EIM) database,
- Providing Ecology with requested information,
- Frequent correspondence with Client and Ecology (during Ecology's review of the cleanup action and other previous reports)
- Assisting the Client with obtaining the Property-Specific NFA determination
- Conducting a Feasibility Study/Disproportionate Cost Analysis (FS/DCA)
- Preparation of an Environmental Covenant (if necessary).

If we may provide you with any additional information or clarification of this work, please contact the undersigned at (425) 415-0551.

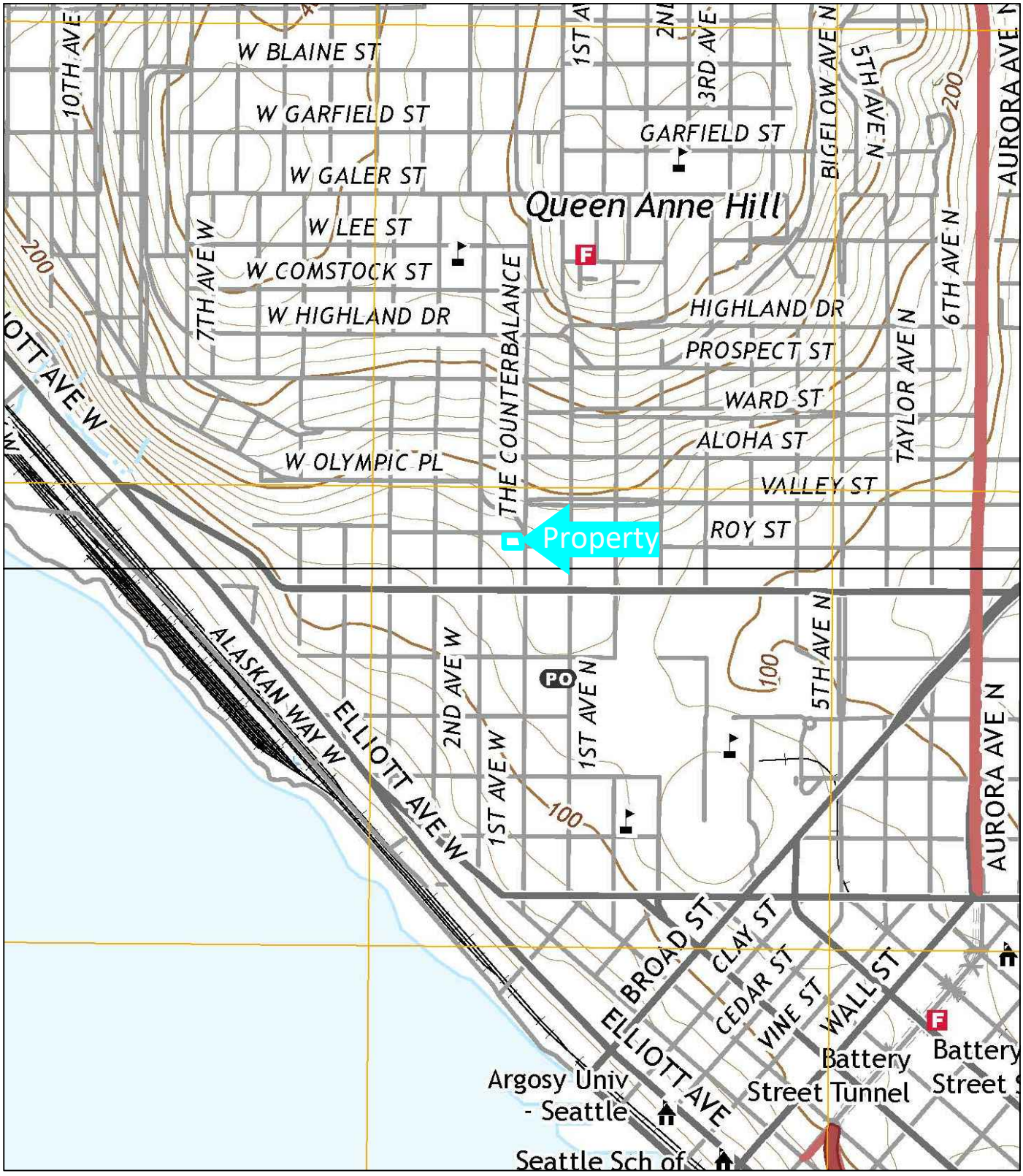
Sincerely,

THE RILEY GROUP, INC.

FOR:
Jerry Sawetz
Senior Environmental Scientist

Paul D. Riley, LG, LHG
Principal

Distribution: *Mr. Pui Leung, Roystone on Queen Anne, LLC (electronic PDF)*
Ms. Sonia Fernández, Washington State Department of Ecology Northwest Reginal Office (electronic PDF and one hard copy)



USGS, 2017, Seattle North, Washington
USGS, 2017, Seattle South, Washington
7.5-Minute Quadrangle

Approximate Scale: 1"=1000'

0 500 1000 2000

N

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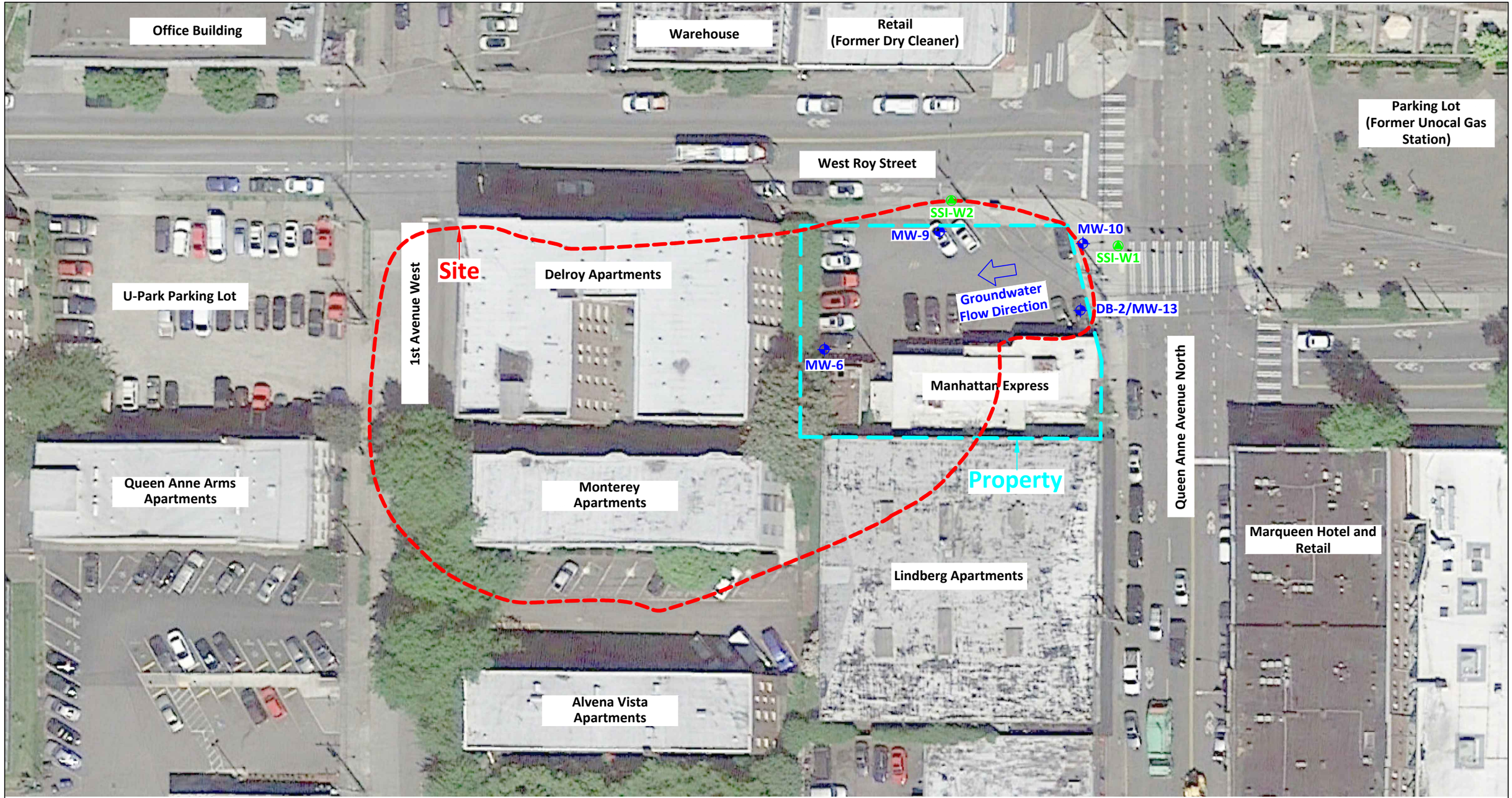
Corporate Office
17522 Bothell Way Northeast
Bothell, Washington 98011
Phone: 425.415.0551
Fax: 425.415.0311

Roystone on Queen Anne		Figure 1
RGI Project Number 2017-015E	Property Vicinity Map	Date Drawn: 12/2018
Address: 631 Queen Anne Avenue North, Seattle, Washington 98109		



= Existing groundwater monitoring well by RGI, December 2017

= Existing groundwater monitoring well by others

= Estimated extent of Site based on soil data obtained from the Final Remedial Investigation and Site Summary Report dated August 20, 2007 by SAIC and groundwater data obtained from the 2013 Groundwater Monitoring Report dated March 26, 2014 by Leidos and RGI groundwater data obtained in 2018

= Property boundary

Note: Other existing remediation wells located on the Property and wells off-Property are not shown here. See Figure 4 for additional remediation wells located on the Property.

Approximate Scale: 1"=40'

0 20 40 80

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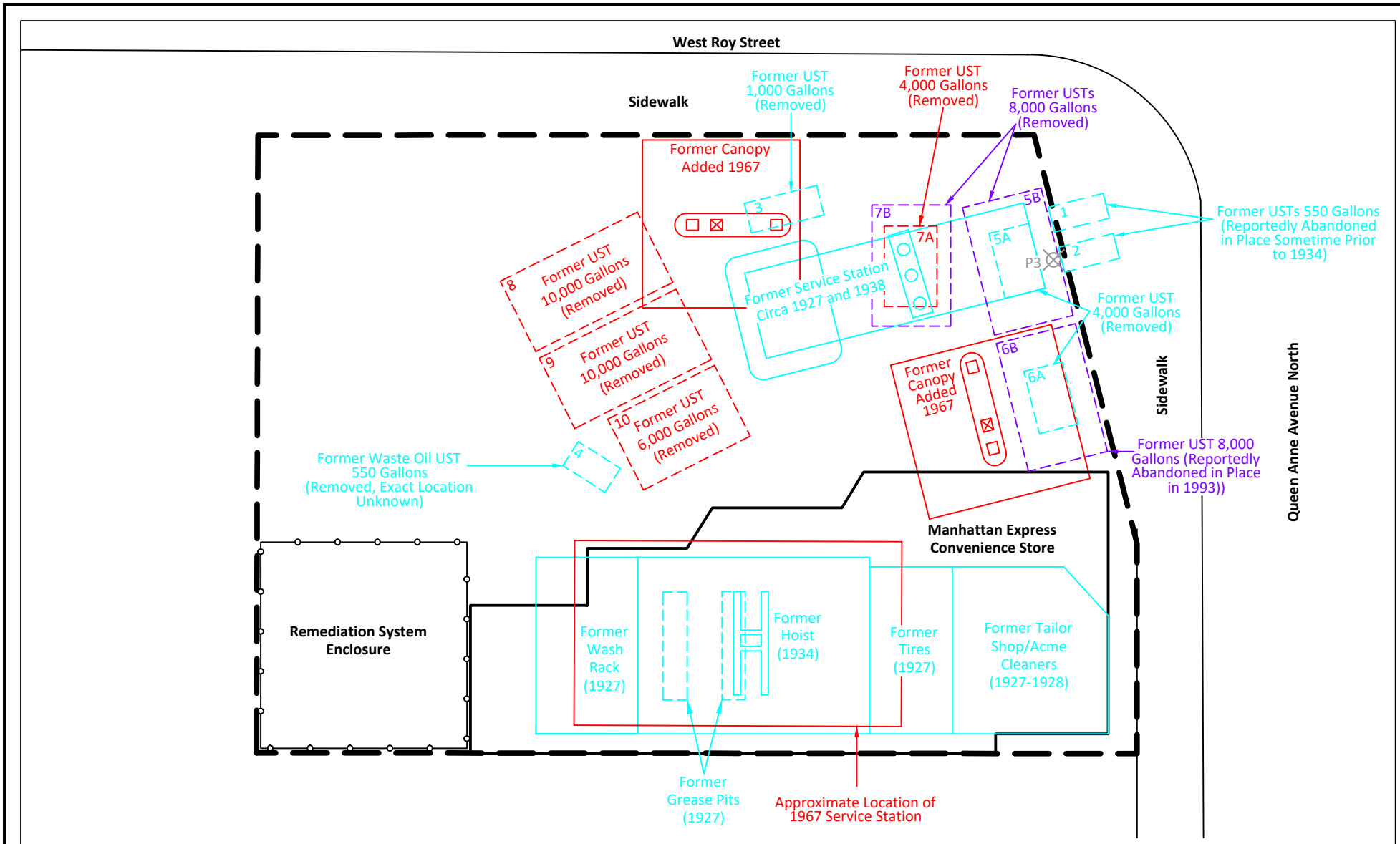
Roystone on Queen Anne		Figure 2
RGI Project Number 2017-015E	Site and Property Representation Map	Date Drawn: 12/2018
Address: 631 Queen Anne Avenue North, Seattle, Washington 98109		



= (in cyan) Features of 1927 and 1938 stations
= (in red) Features of 1954, 1967, and 1971 stations
= (in purple) USTs installed in 1982
= (in black) Layout of property after 1993 UST excavation

Approximate Scale: 1"=20'

0 10 20 40

N

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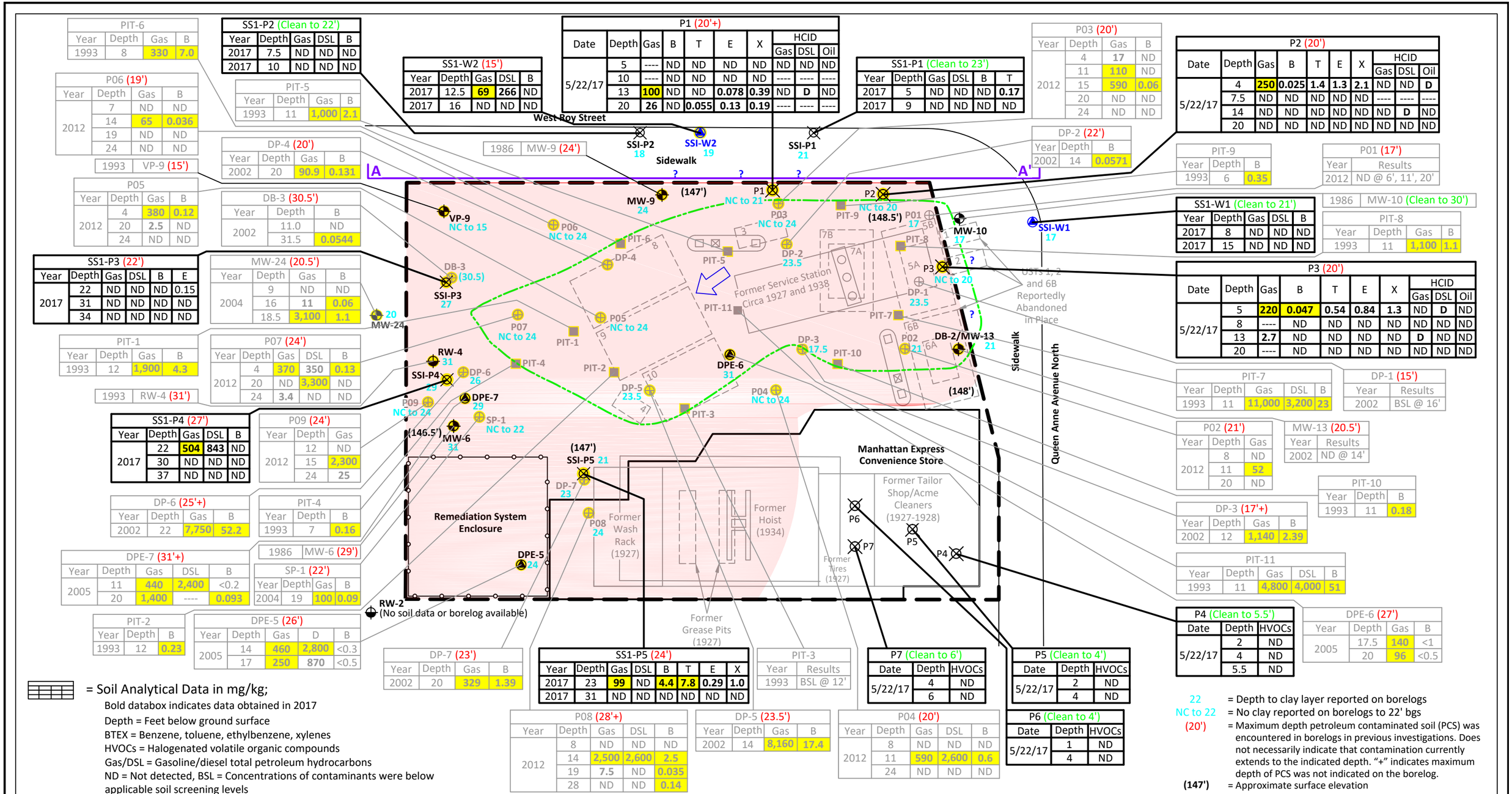
Roystone on Queen Anne		Figure 3
RGI Project Number 2017-015E	Historical Property Features	Date Drawn: 12/2018
Address: 631 Queen Anne Avenue North, Seattle, Washington 98109		



PIT-6			
Year	Depth	Gas	B
1993	8	330	7.0

SS1-P2 (Clean to 22')				
Year	Depth	Gas	DSL	B
2017	7.5	ND	ND	ND
2017	10	ND	ND	ND

SS1-W2 (15')				
Year	Depth	Gas	DSL	B
2017	12.5	69	266	ND
2017	16	ND	ND	ND

P1 (20'+)									
Date	Depth	Gas	B	T	E	X	HCID		
							Gas	DSL	Oil
5/22/17	5	----	ND	ND	ND	ND	ND	ND	ND
	10	----	ND	ND	ND	ND	----	----	----
	13	100	ND	ND	0.078	0.39	ND	D	ND
	20	26	ND	0.055	0.13	0.19	----	----	----

SS1-P1 (Clean to 23')					
Year	Depth	Gas	DSL	B	T
2017	5	ND	ND	ND	0.17
2017	9	ND	ND	ND	ND

P03 (20')			
Year	Depth	Gas	B
2012	4	17	ND
	11	110	ND
	15	590	0.06
	20	ND	ND
	24	ND	ND

P2 (20')									
Date	Depth	Gas	B	T	E	X	HCID		
							Gas	DSL	Oil
5/22/17	4	250	0.025	1.4	1.3	2.1	ND	ND	D
	7.5	ND	ND	ND	ND	ND	----	----	----
	14	ND	ND	ND	ND	ND	ND	D	ND
	20	ND	ND	ND	ND	ND	ND	ND	ND

P06 (19')			
Year	Depth	Gas	B
2012	7	ND	ND
	14	65	0.036
	19	ND	ND
	24	ND	ND

PIT-5			
Year	Depth	Gas	B
1993	11	1,000	2.1

DP-4 (20')			
Year	Depth	Gas	B
2002	20	90.9	0.131

1993	VP-9 (15')

P05			
Year	Depth	Gas	B
2012	4	380	0.12
	20	2.5	ND
	24	ND	ND

DB-3 (30.5')		
Year	Depth	B
2002	11.0	ND
	31.5	0.0544

1986	MW-9 (24')

DP-2 (22')		
Year	Depth	B
2002	14	0.0571

PIT-9		
Year	Depth	B
1993	6	0.35

P01 (17')	
Year	Results
2012	ND @ 6', 11', 20'

SS1-W1 (Clean to 21')				
Year	Depth	Gas	DSL	B
2017	8	ND	ND	ND
2017	15	ND	ND	ND

1986	MW-10 (Clean to 30')

PIT-8			
Year	Depth	Gas	B
1993	11	1,100	1.1

SS1-P3 (22')					
Year	Depth	Gas	DSL	B	E
2017	22	ND	ND	ND	0.15
	31	ND	ND	ND	ND
	34	ND	ND	ND	ND

MW-24 (20.5')			
Year	Depth	Gas	B
2004	9	ND	ND
	16	11	0.06
	18.5	3,100	1.1

P3 (20')									
Date	Depth	Gas	B	T	E	X	HCID		
							Gas	DSL	Oil
5/22/17	5	220	0.047	0.54	0.84	1.3	ND	D	ND
	8	----	ND	ND	ND	ND	ND	ND	ND
	13	2.7	ND	ND	ND	ND	D	ND	ND
	20	----	ND	ND	ND	ND	ND	ND	ND

PIT-1			
Year	Depth	Gas	B
1993	12	1,900	4.3

P07 (24')				
Year	Depth	Gas	DSL	B
2012	4	370	350	0.13
	20	ND	3,300	ND
	24	3.4	ND	ND

PIT-7				
Year	Depth	Gas	DSL	B
1993	11	11,000	3,200	23

DP-1 (15')	
Year	Results
2002	BSL @ 16'

1993	RW-4 (31')

P02 (21')		
Year	Depth	Gas
2012	8	ND
	11	52
	20	ND

MW-13 (20.5')	
Year	Results
2002	ND @ 14'

SS1-P4 (27')				
Year	Depth	Gas	DSL	B
2017	22	504	843	ND
	30	ND	ND	ND
	37	ND	ND	ND

P09 (24')		
Year	Depth	Gas
2012	12	ND
	15	2,300
	24	25

PIT-10		
Year	Depth	B
1993	11	0.18

DP-6 (25'+)			
Year	Depth	Gas	B
2002	22	7,750	52.2

PIT-4		
Year	Depth	B
1993	7	0.16

DP-3 (17'+)			
Year	Depth	Gas	B
2002	12	1,140	2.39

PIT-11				
Year	Depth	Gas	DSL	B
1993	11	4,800	4,000	51

DPE-7 (31'+)				
Year	Depth	Gas	DSL	B
2005	11	440	2,400	<0.2
	20	1,400	----	0.093

1986	MW-6 (29')

SP-1 (22')			
Year	Depth	Gas	B
2004	19	100	0.09

P4 (Clean to 5.5')		
Date	Depth	HVOCs
5/22/17	2	ND
	4	ND
	5.5	ND

DPE-6 (27')			
Year	Depth	Gas	B
2005	17.5	140	<1
	20	96	<0.5

PIT-2		
Year	Depth	B
1993	12	0.23

DPE-5 (26')				
Year	Depth	Gas	D	B
2005	14	460	2,800	<0.3
	17	250	870	<0.5

DP-7 (23')			
Year	Depth	Gas	B
2002	20	329	1.39

SS1-P5 (24')							
Year	Depth	Gas	DSL	B	T	E	X
2017	23	99	ND	4.4	7.8	0.29	1.0
2017	31	ND	ND	ND	ND	ND	ND

PIT-3	
Year	Results
1993	BSL @ 12'

P7 (Clean to 6')		
Date	Depth	HVOCs
5/22/17	4	ND
	6	ND

P5 (Clean to 4')		
Date	Depth	HVOCs
5/22/17	2	ND
	4	ND

P6 (Clean to 4')		
Date	Depth	HVOCs
5/22/17	1	ND
	4	ND

P08 (28'+)				
Year	Depth	Gas	DSL	B
2012	8	ND	ND	ND
	14	2,500	2,600	2.5
	19	7.5	ND	0.035
	28	ND	ND	0.14

DP-5 (23.5')			
Year	Depth	Gas	B
2002	14	8,160	17.4

P04 (20')				
Year	Depth	Gas	DSL	B
2012	8	ND	ND	ND
	11	590	2,600	0.6
	24	ND	ND	ND

= Soil Analytical Data in mg/kg;
Bold databox indicates data obtained in 2017
Depth = Feet below ground surface
BTEX = Benzene, toluene, ethylbenzene, xylenes
HVOCs = Halogenated volatile organic compounds
Gas/DSL = Gasoline/diesel total petroleum hydrocarbons
ND = Not detected, BSL = Concentrations of contaminants were below applicable soil screening levels
Bold and yellow highlight indicates concentrations above MTCA soil screening levels. Highlighted symbol indicates location that contains, or is suspected to contain, concentrations of COCs above soil MTCA Cleanup levels.

22 = Depth to clay layer reported on borelogs
NC to 22 = No clay reported on borelogs to 22' bgs
(20') = Maximum depth petroleum contaminated soil (PCS) was encountered in borelogs in previous investigations. Does not necessarily indicate that contamination currently extends to the indicated depth. "+" indicates maximum depth of PCS was not indicated on the borelog.
(147') = Approximate surface elevation

= Cross section A-A'
= Fence
= Approximate location of 1993 UST excavation boundary
= Property boundary

= Estimated location of remedial excavation of contaminated soil at depths ranging from 5' to approximately 27' bgs
P4 = RGI test probe location, P1 - P7 drilled May 2017 and SSI-P1 - SSI-P5 drilled December 2017
SSI-W1 = Existing groundwater monitoring well location. SSI-W1 and SSI-W2 installed by RGI in December 2017
MW-14 = Monitoring well by others
DPE-5 = Extraction well by others
RW-4 = Recovery well by others
DB,SP&DP = Soil boring by others
P09 = Soil boring (Sound Earth 2012)
Pit-1 = 1993 UST excavation sample

Approximate Scale: 1"=20'
0 10 20 40
N

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

Roystone on Queen Anne		Figure 4
RGI Project Number 2017-015E	Summary of Select Historical Soil Analytical Results	Date Drawn: 12/2018
Address: 631 Queen Anne Avenue North, Seattle, Washington 98109		

MW-9													
Date	LNAPL	Gas	DSL	Oil	DSL*	Oil*	B	T	E	X	cPAHs	HVOCs	VOCs
11/13/18	----	ND	**440x**	ND	**140**	ND	ND	ND	ND	ND	ND	----	ND
08/15/17	ND	----	**1,500x**	**490x**	----	----	----	----	----	----	----	----	----
04/06/17	ND	**480**	----	----	----	----	ND	**2.2**	**1.8**	**3.4**	----	ND	----
03/1991	**0.17**	----	----	----	----	----	----	----	----	----	----	----	----

SSI-P2 (Grab Sample)					
Date	LNAPL	Gas	DSL	Oil	BTEX
12/02/17	ND	ND	ND	ND	ND

SSI-W2					
Date	LNAPL	Gas	DSL	Oil	BTEX
11/13/18	----	ND	ND	ND	ND
12/06/17	ND	ND	ND	ND	ND

P1-W (Grab Sample)								
Date	LNAPL	Gas	DSL	Oil	B	T	E	X
05/22/17	ND	**7,100**	**110,000ve**	**3,800x**	ND	**12**	**5.4**	**27**

SSI-P1 (Grab Sample)					
Date	LNAPL	Gas	DSL	Oil	BTEX
12/02/17	ND	ND	ND	ND	ND

VP-9					
Date	LNAPL	Gas	DSL	Oil	BTEX
11/13/18	----	ND	ND	ND	ND
01/2005	ND	**100**	ND	ND	ND

P2-W (Grab Sample)									
Date	LNAPL	Gas	DSL	Oil	B	T	E	X	
05/22/17	ND	ND	ND	ND	ND	ND	ND	ND	

RW-4	LNAPL Last observed 07/2004

SSI-W1					
Date	LNAPL	Gas	DSL	Oil	BTEX
11/13/18	----	ND	ND	ND	ND
12/06/17	ND	ND	ND	ND	ND

MW-24							
Date	LNAPL	Gas	DSL	Oil	B	PCE	TCE
01/2005	ND	ND	ND	ND	ND	ND	ND

MW-10											
Date	LNAPL	Gas	DSL	Oil	B	T	E	X	PCE	TCE	HVOCs
11/13/18	----	ND	ND	ND	ND	ND	ND	ND	----	----	----
04/06/17	ND	ND	----	----	ND	ND	ND	ND	ND	ND	ND
11/13/13	ND	ND	ND	ND	ND	----	----	----	----	----	----

DPE-7													
Date	LNAPL	Gas	DSL	Oil	DSL*	Oil*	B	Naph	cPAHs	PCE	TCE	HVOCs	Pb
11/13/18	----	**700**	**4,100x**	**850x**	**430x**	ND	**3.3**	**1.3**	ND	----	----	----	ND
04/06/17	ND	----	----	----	----	----	----	----	----	ND	ND	ND	----
11/03/08	**0.01**	----	----	----	----	----	----	----	----	----	----	----	----
04/2008	ND	ND	**6,100**	ND	----	----	**7**	----	----	----	----	----	----

P3-W (Grab Sample)								
Date	LNAPL	Gas	DSL	Oil	B	T	E	X
05/22/17	ND	**1,200**	**1,400**	ND	ND	**9.7**	**8.2**	**19**

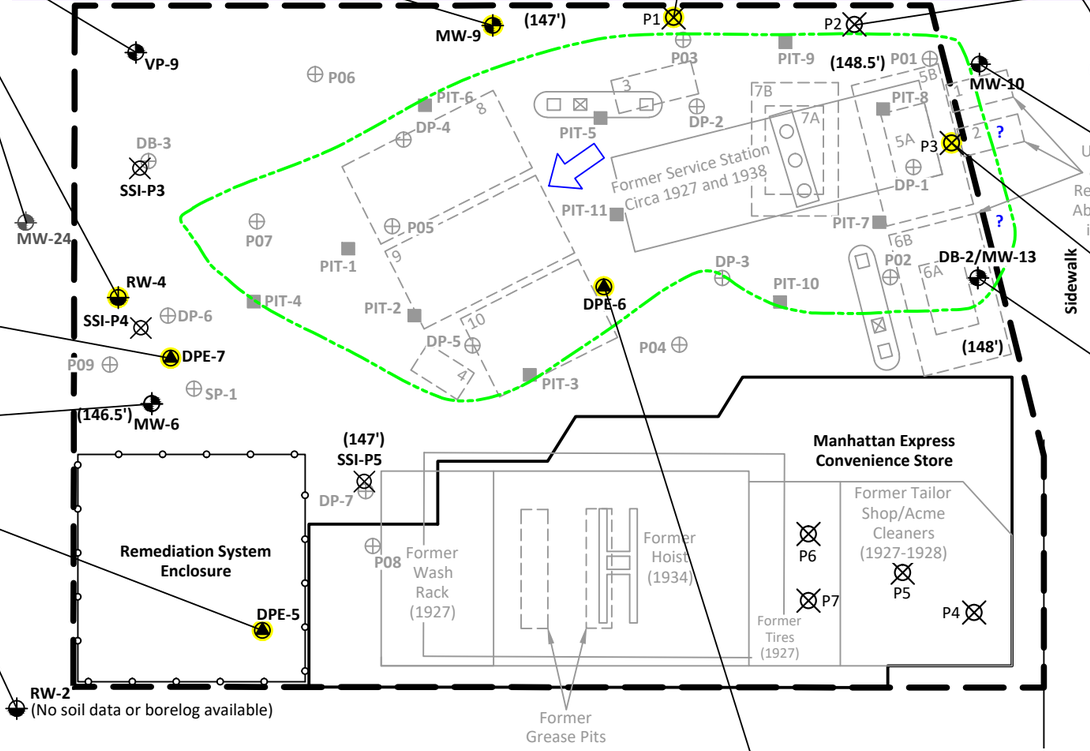
MW-6													
Date	LNAPL	Gas	DSL	Oil	DSL*	Oil*	B	T	E	X	cPAHs	VOCs	
11/13/18	----	**110**	**1,000x**	ND	**570x**	ND	**0.89**	ND	ND	ND	ND	BSL	
11/13/13	ND	**94**	**340**	ND	----	----	**3**	ND	**0.6**	**0.5**	----	----	
04/2004	**0.02**	----	----	----	----	----	----	----	----	----	----	----	

MW-13									
Date	LNAPL	Gas	DSL	Oil	B	T	E	X	HVOCs
08/15/17	ND	----	**60x**	ND	----	----	----	----	----
04/06/17	ND	ND	----	----	ND	ND	ND	ND	ND

DPE-5										
Date	LNAPL	Gas	DSL	Oil	DSL*	Oil*	B	PCE	TCE	HVOCs	Pb
11/13/18	----	ND	**1,300x**	**420x**	**99**	ND	**1.6**	----	----	----	**1.37**
04/07/17	ND	----	----	----	----	----	----	ND	ND	ND	----
11/13/13	ND	**5,400**	**150**	ND	----	----	**44**	----	----	----	----
01/2006	**0.05**	----	----	----	----	----	----	----	----	----	----

RW-2								
Date	LNAPL	Gas	DSL	Oil	B	T	E	X
11/13/13	ND	ND	ND	ND	**2**	ND	ND	ND
03/1991	**0.08**	----	----	----	**19,000**	**46,000**	**2,500**	**120,000**

DPE-6												
Date	LNAPL	Gas	DSL	Oil	DSL*	Oil*	B	PCE	TCE	HVOCs	VOCs	Pb
11/13/18	----	ND	**3,300x**	**610x**	**180**	ND	ND	ND	ND	----	ND	ND
04/06/17	ND	----	----	----	----	----	----	ND	ND	ND	----	----
11/13/13	ND	**140**	**1,100**	ND	----	----	**7**	----	----	----	----	----



= Groundwater Analytical Data in micrograms per liter (ug/L);

LNAPL = Light non-aqueous phase liquid. If LNAPL was historically detected in the well, the most recent date LNAPL was detected is displayed along with the thickness of LNAPL observed in feet. ND indicates LNAPL was not observed.
Gas/DSL/Oil = Gasoline/diesel/oil total petroleum hydrocarbons. An asterisk (*) indicates the sample was analyzed using silica gel cleanup.
BTEX = Benzene, toluene, ethylbenzene, xylenes
Naph = Napthalenes, cPAHs = Carcinogenic polycyclic aromatic hydrocarbons
PCE, TCE, HVOCs, VOCs = Tetrachloroethene, trichloroethene, halogenated volatile organic compounds, volatile organic compounds
Pb = Dissolved lead
x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.
ND = Not detected, ---- = Not sampled or not applicable
Bold and yellow highlight (if any) indicates concentrations above MTCA Groundwater cleanup levels.
BSL = Either not detected at a concentration above the laboratory detection limit or detected at a concentration below the groundwater screening level

Note: This figure includes the most recent groundwater results, not all historical data is shown here. See Table 2 for a summary of all groundwater data pertaining to the Property.

(147') = Approximate surface elevation

P4 = RGI test probe location, P1 - P7 drilled May 2017 and SSI-P1 - SSI-P5 drilled December 2017
SSI-W1 = Existing groundwater monitoring well location. SSI-W1 and SSI-W2 installed by RGI in December 2017
MW-14 = Monitoring well by others
DPE-5 = Extraction well by others
RW-4 = Recovery well by others
DB,SP&DP = Soil boring by others
P09 = Soil boring (Sound Earth 2012)
Pit-1 = 1993 UST excavation sample

= Cross section A - A'
= Groundwater flow direction
= Approximate location of 1993 UST excavation boundary
= Property boundary

Approximate Scale: 1"=20'
0 10 20 40
N

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Fax: 425.415.0311

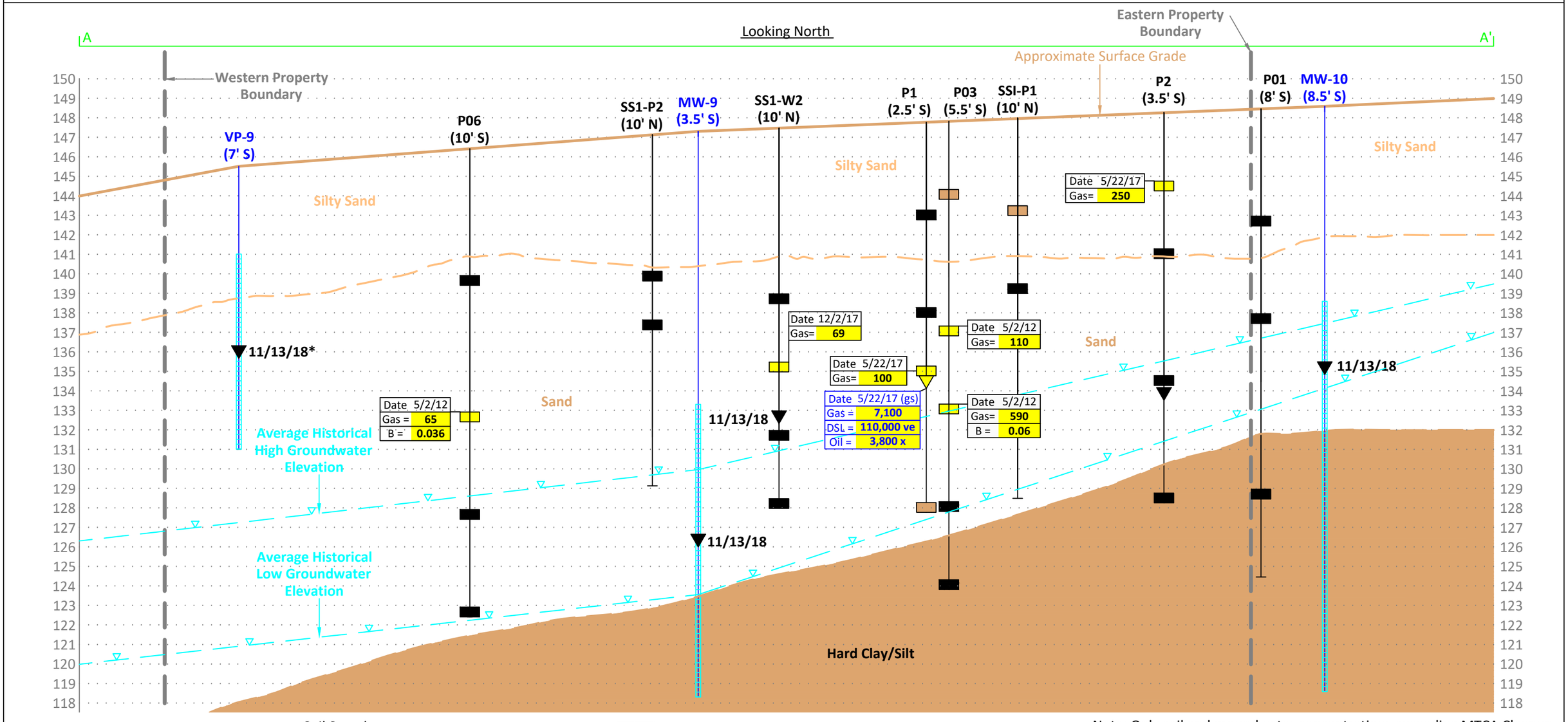
Roystone on Queen Anne | Figure 5

RGI Project Number: 2017-015E

Summary of Select Groundwater Analytical Data with Historical LNAPL Results

Date Drawn: 12/2018

Address: 631 Queen Anne Avenue North, Seattle, Washington 98109



Soil Samples

= Concentration above cleanup level
= Concentration below cleanup level
= No contaminants of potential concern (COPCs) detected

Groundwater Samples

= Concentration above cleanup level
= Concentration below cleanup level
= No contaminants of potential concern (COPCs) detected

= Soil Analytical Data in mg/kg (in black data box);
Groundwater Analytical Data in ug/L (in blue data box);
B = Benzene
Gas/DSL/Oil = Gasoline/diesel/oil total petroleum hydrocarbons
(gs) = Indicates groundwater grab sample

= Average high/low groundwater elevation for entire Property
= Property line

= Screened interval

Approximate Scale:
Horizontal: 1" = 10'
Vertical: 1" = 5'
Vertical Exaggeration: 2x

5 2.5 0 — 0 5 10 20

Note: Only soil and groundwater concentrations exceeding MTCA Cleanup Levels are displayed. See Tables 1 and 2 for a complete list of samples and concentrations.

Only highest and lowest groundwater elevations are displayed.

*Groundwater elevation appears anomalous and is not consistent with groundwater elevation data obtained from other Property wells.

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Bothell, Washington 98011
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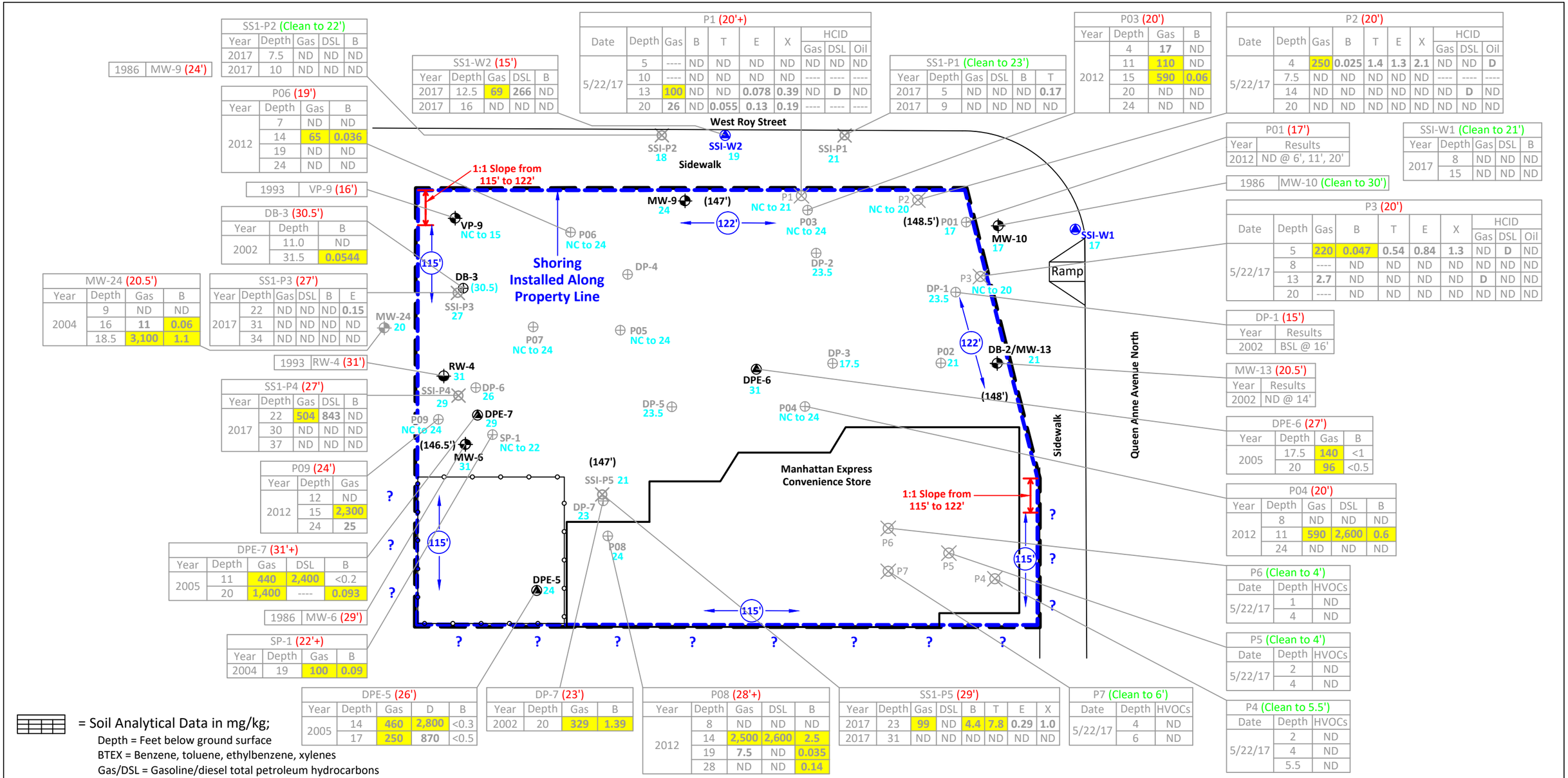
Fax: 425.415.0311

Roystone on Queen Anne		Figure 6
RGI Project Number 2017-015E	Cross Section A - A'	Date Drawn: 12/2018
Address: 631 Queen Anne Avenue North, Seattle, Washington 98109		



SS1-P2 (Clean to 22')				
Year	Depth	Gas	DSL	B
2017	7.5	ND	ND	ND
2017	10	ND	ND	ND

1986	MW-9 (24')

P06 (19')			
Year	Depth	Gas	B
2012	7	ND	ND
	14	65	0.036
	19	ND	ND
	24	ND	ND

1993	VP-9 (16')

DB-3 (30.5')		
Year	Depth	B
2002	11.0	ND
	31.5	0.0544

MW-24 (20.5')			
Year	Depth	Gas	B
2004	9	ND	ND
	16	11	0.06
	18.5	3,100	1.1

SS1-P3 (27')					
Year	Depth	Gas	DSL	B	E
2017	22	ND	ND	ND	0.15
	31	ND	ND	ND	ND
	34	ND	ND	ND	ND

1993	RW-4 (31')

SS1-P4 (27')				
Year	Depth	Gas	DSL	B
2017	22	504	843	ND
	30	ND	ND	ND
	37	ND	ND	ND

P09 (24')		
Year	Depth	Gas
2012	12	ND
	15	2,300
	24	25

DPE-7 (31'+)				
Year	Depth	Gas	DSL	B
2005	11	440	2,400	<0.2
	20	1,400	----	0.093

1986	MW-6 (29')

SP-1 (22'+)			
Year	Depth	Gas	B
2004	19	100	0.09

SS1-W2 (15')				
Year	Depth	Gas	DSL	B
2017	12.5	69	266	ND
2017	16	ND	ND	ND

P1 (20'+)									
Date	Depth	Gas	B	T	E	X	HCID		
							Gas	DSL	Oil
5/22/17	5	----	ND	ND	ND	ND	ND	ND	ND
	10	----	ND	ND	ND	ND	----	----	----
	13	100	ND	ND	0.078	0.39	ND	D	ND
	20	26	ND	0.055	0.13	0.19	----	----	----

SS1-P1 (Clean to 23')					
Year	Depth	Gas	DSL	B	T
2017	5	ND	ND	ND	0.17
2017	9	ND	ND	ND	ND

P03 (20')			
Year	Depth	Gas	B
2012	4	17	ND
	11	110	ND
	15	590	0.06
	20	ND	ND
	24	ND	ND

P2 (20')									
Date	Depth	Gas	B	T	E	X	HCID		
							Gas	DSL	Oil
5/22/17	4	250	0.025	1.4	1.3	2.1	ND	ND	D
	7.5	ND	ND	ND	ND	ND	----	----	----
	14	ND	ND	ND	ND	ND	ND	D	ND
	20	ND	ND	ND	ND	ND	ND	ND	ND

P01 (17')	
Year	Results
2012	ND @ 6', 11', 20'

SSI-W1 (Clean to 21')				
Year	Depth	Gas	DSL	B
2017	8	ND	ND	ND
	15	ND	ND	ND

1986	MW-10 (Clean to 30')

P3 (20')									
Date	Depth	Gas	B	T	E	X	HCID		
							Gas	DSL	Oil
5/22/17	5	220	0.047	0.54	0.84	1.3	ND	D	ND
	8	----	ND	ND	ND	ND	ND	ND	ND
	13	2.7	ND	ND	ND	ND	D	ND	ND
	20	----	ND	ND	ND	ND	ND	ND	ND

DP-1 (15')	
Year	Results
2002	BSL @ 16'

MW-13 (20.5')	
Year	Results
2002	ND @ 14'

DPE-6 (27')			
Year	Depth	Gas	B
2005	17.5	140	<1
	20	96	<0.5

P04 (20')				
Year	Depth	Gas	DSL	B
2012	8	ND	ND	ND
	11	590	2,600	0.6
	24	ND	ND	ND

P6 (Clean to 4')		
Date	Depth	HVOCs
5/22/17	1	ND
	4	ND

P5 (Clean to 4')		
Date	Depth	HVOCs
5/22/17	2	ND
	4	ND

P4 (Clean to 5.5')		
Date	Depth	HVOCs
5/22/17	2	ND
	4	ND
	5.5	ND

DPE-5 (26')				
Year	Depth	Gas	D	B
2005	14	460	2,800	<0.3
	17	250	870	<0.5

DP-7 (23')			
Year	Depth	Gas	B
2002	20	329	1.39

P08 (28'+)				
Year	Depth	Gas	DSL	B
2012	8	ND	ND	ND
	14	2,500	2,600	2.5
	19	7.5	ND	0.035
	28	ND	ND	0.14

SS1-P5 (29')							
Year	Depth	Gas	DSL	B	T	E	X
2017	23	99	ND	4.4	7.8	0.29	1.0
2017	31	ND	ND	ND	ND	ND	ND

P7 (Clean to 6')		
Date	Depth	HVOCs
5/22/17	4	ND
	6	ND

= Soil Analytical Data in mg/kg;
Depth = Feet below ground surface
BTEX = Benzene, toluene, ethylbenzene, xylenes
Gas/DSL = Gasoline/diesel total petroleum hydrocarbons
ND = Not detected
BSL = Concentrations of contaminants were below applicable soil screening levels
Bold and yellow highlight indicates concentrations above MTCA soil screening levels.

= Well (monitoring, extraction, or recovery) by RGI and others
= Soil boring by RGI and others
? = Area of the property where no information pertaining to the depth to the clay layer or the maximum depth of soil contamination was available
= Fence
= Property boundary

Notes:
1. As discussed, the estimated shoring depths are provided for planning and preliminary design and not intended to be used for final design or construction.
2. Depth of shoring was estimated based on a review of information obtained from available borelogs and analytical data. Not all areas of the Property were investigated.

(20') = Estimated maximum depth of petroleum impacted soil based on available data. "+" indicates maximum vertical extent of contamination was not determined.

(147') = Approximate surface elevation
(115) = Bottom of shoring elevation (in feet)
22 = Depth to clay layer reported on borelogs (in feet)
NC to 22 = No clay encountered to indicated depth (in feet)

Approximate Scale: 1"=20'
0 10 20 40
N

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

Roystone on Queen Anne | Figure 7

RGI Project Number	Estimated Depth to Lawton Clay and Proposed Bottom of Shoring Elevations	Date Drawn:
2017-015E		12/2018

Address: 631 Queen Anne Avenue North, Seattle, Washington 98109

Table 1, Page 1 of 6. Summary of Soil Sample Analytical Laboratory Results for the Property
Roystone on Queen Anne
631 Queen Anne Avenue North, Seattle, Washington 98109
The Riley Group, Inc. Project No. 2017-015E

Sample Number	Sample Depth	Sample Date	Gasoline TPH	BTEX				Diesel TPH	Oil TPH	HCID			Naph.	cPAHs	MTBE	EDB	EDC	Other VOCs[4]	Pb	Other Metals
				B	T	E	X			Gasoline	Diesel	Oil								
RGI Supplemental Subsurface Investigation (December 2017)																				
SS1-P1-5	5	12/02/17	ND<10	ND<0.02	**0.17**	ND<0.05	ND<0.15	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
SS1-P1-9	9	12/02/17	ND<10	ND<0.02	ND<0.10	ND<0.05	ND<0.15	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
SS1-P1-14	14	12/02/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P1-17	17	12/02/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P1-19	19	12/02/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P1-19.5	19.5	12/02/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P2-7.5	7.5	12/03/17	ND<10	ND<0.02	ND<0.10	ND<0.05	ND<0.15	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
SS1-P2-10	10	12/03/17	ND<10	ND<0.02	ND<0.10	ND<0.05	ND<0.15	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
SS1-P2-15	15	12/03/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P2-15.5	15.5	12/03/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P2-18	18	12/03/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P3-5	5	12/04/17	----	----	`	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P3-10	10	12/04/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P3-12	12	12/04/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P3-17	17	12/04/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P3-22	22	12/04/17	ND<10	ND<0.02	ND<0.10	**0.15**	ND<0.15	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
SS1-P3-27	27	12/04/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P3-31	31	12/04/17	ND<10	ND<0.02	ND<0.10	ND<0.05	ND<0.15	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
SS1-P3-34	34	12/04/17	ND<10	ND<0.02	ND<0.10	ND<0.05	ND<0.15	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
SS1-P3-35	35	12/04/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P4-5	5	12/04/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P4-7	7	12/04/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P4-7.5	7.5	12/04/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P4-10	10	12/04/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P4-11	11	12/04/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P4-14	14	12/04/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P4-17	17	12/04/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P4-18	18	12/04/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P4-19	19	12/04/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P4-22	22	12/04/17	**504**	ND<0.02	ND<0.10	ND<0.05	ND<0.15	**843**	ND<250	----	----	----	----	----	----	----	----	----	----	----
SS1-P4-27	27	12/04/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses			**100/30[1]**	**0.03**	**7**	**6**	**9**	**2,000**		**100/30[1]**	**2,000**		**5**	**0.1[3]**	**0.1**	**0.005**	**NVE**	**Analyte Specific**	**250**	**Analyte Specific**
MTCA Method B Soil Cleanup Levels for Unrestricted Land Uses[2]			**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**0.0231**	**Analyte Specific**	**---**	**Analyte Specific**

Table 1, Page 2 of 6. Summary of Soil Sample Analytical Laboratory Results for the Property
Roystone on Queen Anne
631 Queen Anne Avenue North, Seattle, Washington 98109
The Riley Group, Inc. Project No. 2017-015E

Sample Number	Sample Depth	Sample Date	Gasoline TPH	BTEX				Diesel TPH	Oil TPH	HCID			Naph.	cPAHs	MTBE	EDB	EDC	Other VOCs[4]	Pb	Other Metals
				B	T	E	X			Gasoline	Diesel	Heavy								
SS1-P4-30	30	12/04/17	ND<10	ND<0.02	ND<0.10	ND<0.05	ND<0.15	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
SS1-P4-35	35	12/04/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P4-37	37	12/04/17	ND<10	ND<0.02	ND<0.10	ND<0.05	ND<0.15	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
SS1-P5-8	8	12/04/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P5-12.5	12.5	12/04/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P5-17	17	12/04/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P5-20	20	12/04/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P5-23	23	12/04/17	**99**	**4.4**	**7.8**	**0.29**	**1.0**	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
SS1-P5-28	28	12/04/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P5-31	31	12/04/17	ND<10	ND<0.02	ND<0.10	ND<0.05	ND<0.15	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
SS1-W1-8	8	12/02/17	ND<10	ND<0.02	ND<0.10	ND<0.05	ND<0.15	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
SS1-W1-15	15	12/02/17	ND<10	ND<0.02	ND<0.10	ND<0.05	ND<0.15	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
SS1-W1-18	18	12/02/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-W1-21	21	12/02/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-W2-9	9	12/02/17	ND<10	ND<0.02	ND<0.10	ND<0.05	ND<0.15	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
SS1-W2-12.5	12.5	12/02/17	**69**	ND<0.02	**0.12**	**0.56**	**0.84**	**266**	ND<250	----	----	----	----	----	----	----	----	----	----	----
SS1-W2-16	16	12/02/17	ND<10	ND<0.02	ND<0.10	ND<0.05	ND<0.15	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
SS1-W2-19.5	19.5	12/02/17	ND<10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
RGI Subsurface Investigation (May 2017)																				
P1-5	5	05/22/17	----	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	ND<20	ND<50	ND<250	----	----	----	----	----	----	----	----
P1-10	10	05/22/17	----	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	----	----	----	----	----	----	----	----	----	----	----
P1-13	13	05/22/17	**100**	ND<0.02	ND<0.02	**0.078**	**0.39**	----	----	ND<20	**D>50**	ND<250	----	----	----	----	----	----	----	----
P1-20	20	05/22/17	**26**	ND<0.02	**0.055**	**0.13**	**0.19**	----	----	----	----	----	----	----	----	----	----	----	----	----
P2-4	4	05/22/17	**250**	**0.025**	**1.4**	**1.3**	**2.1**	----	----	ND<20	ND<50	**D>250**	----	----	----	----	----	----	----	----
P2-7.5	7.5	05/22/17	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	----	----	----	----	----	----	----	----	----	----	----
P2-14	14	05/22/17	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	ND<20	ND<50	ND<250	----	----	----	----	----	----	----	----
P2-17	17	05/22/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
P2-20	20	05/22/17	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	ND<20	ND<50	ND<250	----	----	----	----	----	----	----	----
P3-5	5	05/22/17	**220**	**0.047**	**0.54**	**0.84**	**1.3**	----	----	ND<20	**D>50**	ND<250	----	----	----	----	----	----	----	----
P3-8	8	05/22/17	----	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	ND<20	ND<50	ND<250	----	----	----	----	----	----	----	----
P3-13	13	05/22/17	**2.7**	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	**D>20**	ND<50	ND<250	----	----	----	----	----	----	----	----
P3-20	20	05/22/17	----	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	ND<20	ND<50	ND<250	----	----	----	----	----	----	----	----
MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses			**100/30[1]**	**0.03**	**7**	**6**	**9**	**2,000**		**100/30[1]**	**2,000**		**5**	**0.1[3]**	**0.1**	**0.005**	**NVE**	**Analyte Specific**	**250**	**Analyte Specific**
MTCA Method B Soil Cleanup Levels for Unrestricted Land Uses[2]			---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.0231**	**Analyte Specific**	---	**Analyte Specific**

Table 1, Page 3 of 6. Summary of Soil Sample Analytical Laboratory Results for the Property
Roystone on Queen Anne
631 Queen Anne Avenue North, Seattle, Washington 98109
The Riley Group, Inc. Project No. 2017-015E

Sample Number	Sample Depth	Sample Date	Gasoline TPH	BTEX				Diesel TPH	Oil TPH	HCID			Naph.	cPAHs	MTBE	EDB	EDC	Other VOCs[4]	Pb	Other Metals
				B	T	E	X			Gasoline	Diesel	Oil								
P4-2	2	05/22/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	ND	----	----
P4-4	4	05/22/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	ND	----	----
P4-5.5	5.5	05/22/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	ND	----	----
P5-2	2	05/22/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	ND	----	----
P5-4	4	05/22/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	ND	----	----
P6-1	1	05/22/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	ND	----	----
P6-4	4	05/22/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	ND	----	----
P7-2	2	05/22/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	ND	----	----
P7-4	4	05/22/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	ND	----	----
P7-6	6	05/22/17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	ND	----	----
Sound Earth Strategies Limited Subsurface Investigation (May 2012)																				
P01-04	4	05/02/12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
P01-06	6	05/02/12	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
P01-11	11	05/02/12	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
P01-14	14	05/02/12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
P01-20	20	05/02/12	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
P01-24	24	05/02/12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
P02-04	4	05/02/12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
P02-08	8	05/02/12	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
P02-11	11	05/02/12	**52**	ND<0.02	**0.18**	**0.37**	**0.53**	**120**	ND<250	----	----	----	----	----	----	----	----	----	----	----
P02-16	16	05/02/12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
P02-20	20	05/02/12	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
P02-24	24	05/02/12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
P03-04	4	05/02/12	**17**	ND<0.02	ND<0.02	ND<0.02	ND<0.06	**67 x**	ND<250	----	----	----	----	----	----	----	----	----	----	----
P03-08	8	05/02/12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
P03-11	11	05/02/12	**110**	ND<0.02	ND<0.02	**0.026**	**0.090**	**1,800**	ND<250	----	----	----	----	----	----	----	----	----	----	----
P03-15	15	05/02/12	**590**	**0.06**	**0.82**	**2.3**	**8.6**	**1,500**	ND<250	----	----	----	----	----	----	----	----	----	----	----
P03-20	20	05/02/12	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
P03-24	24	05/02/12	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
P04-04	4	05/02/12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
P04-08	8	05/02/12	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
P04-11	11	05/02/12	**590**	**0.60**	**1.8**	**2.0**	**4.6**	**2,600**	ND<250	----	----	----	----	----	----	----	----	----	----	----
MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses			**100/30[1]**	**0.03**	**7**	**6**	**9**	**2,000**		**100/30[1]**	**2,000**		**5**	**0.1[3]**	**0.1**	**0.005**	**NVE**	**Analyte Specific**	**250**	**Analyte Specific**
MTCA Method B Soil Cleanup Levels for Unrestricted Land Uses[2]			---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.0231**	**Analyte Specific**	---	**Analyte Specific**

Table 1, Page 4 of 6. Summary of Soil Sample Analytical Laboratory Results for the Property
Roystone on Queen Anne
631 Queen Anne Avenue North, Seattle, Washington 98109
The Riley Group, Inc. Project No. 2017-015E

Sample Number	Sample Depth	Sample Date	Gasoline TPH	BTEX				Diesel TPH	Oil TPH	HCID			Naph.	cPAHs	MTBE	EDB	EDC	Other VOCs[4]	Pb	Other Metals
				B	T	E	X			Gasoline	Diesel	Oil								
P04-15	15	05/02/12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
P04-20	20	05/02/12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
P04-24	24	05/02/12	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
P05-04	4	05/02/12	**380**	**0.12**	**0.82**	**3.1**	**3.1**	**530**	**360**	----	----	----	----	----	----	----	----	----	----	----
P05-08	8	05/02/12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
P05-11	11	05/02/12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
P05-15	15	05/02/12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
P05-20	20	05/02/12	**2.5**	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
P05-24	24	05/02/12	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
P06-04	4	05/02/12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
P06-07	7	05/02/12	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
P06-11	11	05/02/12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
P06-14	14	05/02/12	**65**	**0.036**	**0.22**	**0.64**	**1.5**	**1,000 x**	ND<250	----	----	----	----	----	----	----	----	----	----	----
P06-19	19	05/02/12	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
P06-24	24	05/02/12	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
P07-04	4	05/02/12	**370**	**0.13**	**0.77**	**3.0**	**2.7**	**350**	ND<250	----	----	----	----	----	----	----	----	----	----	----
P07-08	8	05/02/12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
P07-11	11	05/02/12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
P07-14	14	05/02/12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
P07-20	20	05/02/12	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	**3,300**	ND<250	----	----	----	----	----	----	----	----	----	----	----
P07-24	24	05/02/12	**3.4**	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
P08-08	8	05/02/12	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
P08-11	11	05/02/12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
P08-14	14	05/02/12	**2,500**	**2.5**	**6.4**	**26**	**160**	**2,600**	ND<250	----	----	----	----	----	----	----	----	----	----	----
P08-16	16	05/02/12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
P08-19	19	05/02/12	**7.5**	**0.035**	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
P08-28	28	05/02/12	ND<2	**0.14**	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
P09-03	3	05/02/12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
P09-08	8	05/02/12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
P09-12	12	05/02/12	ND<2	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
P09-15	15	05/02/12	**2,300**	ND<0.02j	**18**	**16**	**27**	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----
P09-20	20	05/02/12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
P09-24	24	05/02/12	**25**	ND<0.02	ND<0.02	ND<0.02	ND<0.06	**210**	ND<250	----	----	----	----	----	----	----	----	----	----	----
MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses			**100/30[1]**	**0.03**	**7**	**6**	**9**	**2,000**		**100/30[1]**	**2,000**		**5**	**0.1[3]**	**0.1**	**0.005**	**----**	**Analyte Specific**	**250**	**Analyte Specific**
MTCA Method B Soil Cleanup Levels for Unrestricted Land Uses[2]			**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**11**	**Analyte Specific**	**---**	**Analyte Specific**

Table 1, Page 5 of 6. Summary of Soil Sample Analytical Laboratory Results for the Property
Roystone on Queen Anne
631 Queen Anne Avenue North, Seattle, Washington 98109
The Riley Group, Inc. Project No. 2017-015E

Sample Number	Sample Depth	Sample Date	Gasoline TPH	BTEX				Diesel TPH	Oil TPH	HCID			Naph.	cPAHs	MTBE	EDB	EDC	Other VOCs[4]	Pb	Other Metals
				B	T	E	X			Gasoline	Diesel	Oil								
SAIC Subsurface Investigation (October 2005).																				
DPE-5-14	14	10/31/05	**460**	ND<0.3	ND<0.3	**5.3**	ND<1.5	**2,800**	ND<200	----	----	----	----	----	----	----	----	----	----	----
DPE-5-17	17	10/31/05	**250**	ND<0.5	ND<1.0	**4.8**	**24**	**870**	ND<100	----	----	----	----	----	----	----	----	----	----	----
DPE-6-17.5	17.5	10/17/05	**140**	ND<1.0	**1.8**	**2.4**	**13**	**420**	ND<50	----	----	----	----	----	----	----	----	----	----	----
DPE-6-20	20	10/17/05	**96**	ND<0.5	**0.5**	**0.4**	**2.1**	**360**	ND<50	----	----	----	----	----	----	----	----	----	----	----
DPE-7-11	11	10/21/05	**440**	ND<0.2	**0.5**	**1.6**	**6**	**2,000**	ND<120	----	----	----	----	----	----	----	----	----	----	----
DPE-7-20	20	10/21/05	**1,400**	**0.093**	**0.771**	**9.9**	**16**	----	----	----	----	----	----	ND	ND<0.022	----	ND<0.043	----	----	----
SAIC Subsurface Investigation (2004)																				
SB-24/MW24-9	9	10/05/04	ND<1.0	ND<0.0005	ND<0.001	ND<0.001	ND<0.001	ND<3.0	ND<10	----	----	----	----	----	ND<0.0005	----	----	----	----	----
SB-24/MW24-16	16	10/05/04	**11**	**0.060**	**0.082**	**0.077**	**0.41**	**6.3**	ND<10	----	----	----	----	----	ND<0.0005	----	----	----	----	----
SB-24/MW24-18.5	18.5	10/05/04	**3,100**	**1.1**	**11**	**6.0**	**40**	**64**	ND<10	----	----	----	----	----	ND<0.062	----	----	----	----	----
SP-1	1	03/12/04	**100**	**0.09**	**0.3**	**0.6**	**3.6**	**88**	ND<10	----	----	----	----	----	----	----	----	----	----	----
SAIC Subsurface Investigation (September 2002)																				
DP-1-16	16	09/18/02	ND<5.00	**0.004**	ND<0.0500	**0.0568**	**0.121**	ND<10	ND<25.0	----	----	----	ND<0.005	ND	ND<0.00100	ND<0.00500	ND<0.00200	----	**1.92**	BSL
DP-2-14	14	09/18/02	ND<5.00	**0.0571**	ND<0.0500	ND<0.0500	ND<0.100	ND<10	ND<25.0	----	----	----	ND<0.1	ND	ND<0.00100	ND<0.00500	ND<0.100	----	**2.39**	BSL
DP-2-20	20	09/20/02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	**1.85**	----
DP-3-12	12	09/20/02	**1,140**	**2.39**	**2.01**	**10.3**	**20.3**	**1,060**	ND<25.0	----	----	----	ND<0.1	ND	ND<0.00100	ND<0.00500	ND<0.100	----	**4.15**	BSL
DP-4-18	18	09/20/02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	**3.36**	----
DP-4-20	20	09/20/02	**90.9**	**0.131**	**0.248**	**0.851**	**3.34**	**18.4**	ND<25.0	----	----	----	**0.421**	ND	ND<0.00100	ND<0.00500	ND<0.100	----	**1.78**	BSL
DP-5-14	14	09/20/02	**8,160**	**17.4**	**98.2**	**97.2**	**569**	**1,200**	ND<25.0	----	----	----	**13.7**	ND	ND<0.00100	ND<0.00500	ND<0.100	----	**3.53**	----
DP-6-14	14	09/20/02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	**5.13**	----
DP-6-22	22	09/20/02	**7,750**	**52.2**	**448**	**112**	**629**	**88.7**	ND<25.0	----	----	----	**42.7**	ND	ND<0.0100	ND<0.0500	ND<1.00	----	**4.74**	BSL
DP-7-10	10	09/20/02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	**5.40**	----
DP-7-20	20	09/20/02	**329**	**1.39**	**9.49**	**4.83**	**27.9**	**788**	ND<25.0	----	----	----	**2.88**	ND	ND<0.00100	ND<0.00500	ND<0.100	----	**9.48**	BSL
DB-2/MW13	14	09/24/02	ND<5.00	ND<0.030	ND<0.0500	ND<0.0500	ND<0.100	ND<10	ND<25.0	----	----	----	ND<0.005	ND	----	----	----	----	**2.61**	BSL
DB-2/MW13	16.5	09/24/02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	**2.56**	----
DB-3-11.0	11	09/26/02	**8.3**	ND<0.030	ND<0.050	**0.0602**	**0.176**	**10.5**	ND<25.0	----	----	----	ND<0.05	ND	----	----	----	----	**6.89**	BSL
DB-3-31.5	31.5	09/26/02	**5.74**	**0.0544**	**0.309**	**0.160**	**0.840**	ND<10	ND<25.0	----	----	----	----	----	----	----	----	----	**6.46**	----
SAIC/Glaceir UST Excavation (1993)																				
PIT-1	12	1993	**1,900**	**4.3**	**8.1**	**24**	**130**	**270**	----	----	----	----	----	----	----	----	----	----	----	----
PIT-2	12	1993	**3.3**	**0.23**	ND	**0.030**	**0.12**	**34**	----	----	----	----	----	----	----	----	----	----	----	----
PIT-3	5	1993	**19**	ND	**0.11**	**0.11**	**0.70**	**36**	----	----	----	----	----	----	----	----	----	----	----	----
MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses			**100/30[1]**	**0.03**	**7**	**6**	**9**	**2,000**		**100/30[1]**	**2,000**		**5**	**0.1[3]**	**0.1**	**0.005**	**NVE**	**Analyte Specific**	**250**	**Analyte Specific**
MTCA Method B Soil Cleanup Levels for Unrestricted Land Uses[2]			---	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.0231**	**Analyte Specific**	---	**Analyte Specific**

Table 1, Page 6 of 6. Summary of Soil Sample Analytical Laboratory Results for the Property
Roystone on Queen Anne
631 Queen Anne Avenue North, Seattle, Washington 98109
The Riley Group, Inc. Project No. 2017-015DE

Sample Number	Sample Depth	Sample Date	Gasoline TPH	BTEX				Diesel TPH	Oil TPH	HCID			Naph.	cPAHs	MTBE	EDB	EDC	Other VOCs[4]	Pb	Other Metals
				B	T	E	X			Gasoline	Diesel	Oil								
PIT-4	7	1993	**25**	**0.16**	**0.13**	**0.09**	**0.79**	**47**	----	----	----	----	----	----	----	----	----	----	----	----
PIT-5	11	1993	**1,000**	**2.1**	**2**	**8.2**	**62**	**610**	----	----	----	----	----	----	----	----	----	----	----	----
PIT-6	8	1993	**330**	**7**	**4**	**5.1**	**22**	**45**	----	----	----	----	----	----	----	----	----	----	----	----
PIT-7	11	1993	**11,000**	**23**	**16**	**80**	**240**	**3,200**	----	----	----	----	----	----	----	----	----	----	----	----
PIT-8	11	1993	**1,100**	**1.1**	ND	**1.7**	**4.7**	**600**	----	----	----	----	----	----	----	----	----	----	----	----
PIT-9	6	1993	**17**	**0.35**	**0.12**	**0.16**	**0.72**	**67**	----	----	----	----	----	----	----	----	----	----	----	----
PIT-10	----	1993	**4.4**	**0.18**	ND	**0.1**	**0.42**	**34**	----	----	----	----	----	----	----	----	----	----	----	----
PIT-11	6	1993	**4,800**	**51**	**16**	**65**	**190**	**4,000**	----	----	----	----	----	----	----	----	----	----	----	----
MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses			**100/30[1]**	**0.03**	**7**	**6**	**9**	**2,000**		**100/30[1]**	**2,000**		**5**	**0.1[3]**	**0.1**	**0.005**	**NVE**	**Analyte Specific**	**250**	**Analyte Specific**
MTCA Method B Soil Cleanup Levels for Unrestricted Land Uses[2]			**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**0.0231**	**Analyte Specific**	**---**	**Analyte Specific**

Notes:

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

Sample Depth = Soil sample depth interval in feet below ground surface (bgs).

Gasoline TPH (total petroleum hydrocarbons) determined using Northwest Test Method NWTPH Gx.

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

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

Gasoline, Diesel, and Oil HCID (hydrocarbon identification) determined using Northwest Test Method NWTPH-HCID.

Naph. (naphthalene) determined using EPA Methods 8260 or 8270.

cPAHs (carcinogenic polycyclic aromatic hydrocarbons) determined using EPA Method 8270.

MTBE (methyl tert-butyl ether), EDB (1,2-Dibromoethane), EDC (1,2-Dichloroethane), and other VOCs (volatile organic compounds) determined using EPA Test Method 8260.

Pb (lead) and other metals determined using EPA 6000/7000 Series Methods.

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

j = The result is below normal detection limits. The value reported is an estimate.

ND = Not detected above noted analytical detection limit.

NVE = No value established.

---- = Not analyzed or not applicable.

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 Screening Levels from Ecology's Cleanup Level and Risk Calculation (CLARC) database on December 15, 2017.

[1] The higher cleanup level is allowed if no benzene is detected in the sample and the total of toluene, ethylbenzene and xylenes is less than 1% of the gasoline mixture.

[2] No MTCA Method A Cleanup Level has been established. Therefore, the MTCA Method B 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] Other VOCs does not include petroleum-related VOCs that were not assessed independently due to the fact that they are factored into the MTCA Method A TPH Cleanup Levels.

Bold results indicated concentrations above laboratory detection limits.

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

Table 2, Page 1 of 6. Summary of Groundwater Analytical Laboratory Results for the Property
Roystone on Queen Anne
631 Queen Anne Avenue North, Seattle, Washington 98109
The Riley Group, Inc. Project No. 2017-015E

Sample Number	Sample Date	TOC Elevation (ft)	Depth to Water Below Well TOC (ft)	LNAPL Thickness (ft)	Groundwater Elevation (ft)	Gasoline TPH	BTEX				Diesel TPH	Oil TPH	Diesel TPH	Oil TPH	Naph.	cPAHs	MTBE	EDB	EDC	PCE	TCE	cis-1,2-DCE	Other VOCs[7]	Total Pb	Dissolved Pb	Dissolved As	Other Metals
							B	T	E	X	without silica gel		with silica gel														
Groundwater Monitoring Wells																											
MW6	**Screened Interval 15-29 feet bgs, 2-Inch Diameter Casing**																										
MW6	11/13/18	146.05	20.70	0.00	125.35	**110**	**0.89**	ND<1	ND<1	ND<3	**1,000 x**	ND<250	**570 x**	ND<250	ND<0.8	ND	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND	----	----	----	----
	11/11-13/13[3]	146.05	19.87	0.00	126.18	**97**	**3**	ND<0.5	**0.6**	**0.5**	**340**	ND<70	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	05/20-22/13[3]	146.05	18.47	0.00	127.58	**280**	**5**	ND<0.5	**0.5**	**0.6**	**600**	ND<71	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	11/12-14/12[3]	146.05	19.74	0.00	126.31	**370**	**9**	**1**	**2**	**3**	**1,600**	**190**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	05/07-08/12[3]	146.05	18.50	0.00	127.55	**250**	**1**	ND<0.5	ND<0.5	ND<0.5	**540**	ND<70	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	05/10-12/11[3]	146.05	18.32	0.00	127.73	**600**	**12**	**0.7**	**1**	**0.9**	**12,000**	**1,500**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	01/17-20/11[3]	146.05	18.24	0.00	127.81	**130**	**4**	ND<0.5	ND<0.5	ND<0.5	**12,000**	**4,600**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/19-22/10[3]	146.05	18.83	0.00	127.22	**650**	**24**	**0.9**	**0.6**	**1**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	10/12-15/09[3]	146.05	20.28	0.00	125.77	**1,200**	**16**	**1**	**0.5**	**2**	**5,100**	ND<660	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/13-16/09[3]	146.05	20.18	0.00	125.87	**1,100**	**31**	**0.8**	**2**	**3**	**26,000**	**3,000**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	11/10/08[3]	146.05	20.93	0.00	125.12	ND<50.0	**0.6**	ND<0.5	ND<0.5	ND<0.5	**3,200**	ND<660	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/28-05/01/08	146.05	22.28	0.00	123.77	**360**	**3**	**0.7**	**5**	**3**	**8,600**	**1,200**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	08/09/06	113.32[6]	25.85	0.00	87.47	**15,000**	**1,900**	**1,000**	**590**	**1,700**	**14,000**	ND<2,300	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/18-21/05	113.32[6]	20.31	0.00	93.01	**3,600**	**1,000**	**120**	**110**	**360**	**7,700**	ND<1,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	01/24-31/05	113.32[6]	20.38	0.00	92.94	**5,600**	**220**	**60**	**110**	**310**	**11,000**	ND<480	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	10/28-11/01/04	113.32[6]	20.93	0.00	92.39	**24,000**	**8,600**	**2,800**	**690**	**3,100**	**9,200**	ND<96	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	7/15-16/04	113.32[6]	20.48	0.00	92.84	**46,600**	**9,610**	**3,190**	**758**	**3,060**	**3,800**	ND<500	----	----	----	----	----	----	----	----	----	----	----	----	**1.69**	----	----
	4/29-30/04	113.32[6]	20.22	**0.02**	93.12	Not sampled due to the presence of LNAPL																					
	10/01-02/03	113.32[6]	23.07	**0.03**	90.27	Not sampled due to the presence of LNAPL																					
	06/30-07/01/03	113.32[6]	21.41	**0.03**	91.93	Not sampled due to the presence of LNAPL																					
	4/23-24/03	113.32[6]	20.91	**0.03**	92.43	Not sampled due to the presence of LNAPL																					
	01/21/03	113.32[6]	21.74	**0.03**	91.60	Not sampled due to the presence of LNAPL																					
	10/17-18/02	113.32[6]	20.69	**0.05**	92.67	Not sampled due to the presence of LNAPL																					
	07/24/02	113.32[6]	19.76	0.00	93.56	**31,000**	**8,900**	**1,600**	**820**	**4,200**	**29,000**	ND<10,000	----	----	----	----	----	----	----	----	----	----	----	----	**5.1**	----	----
	01/1997	113.38[6]	----	----	----	**54,000**	**7,290**	**12,400**	**2,340**	**19,800**	----	----	----	----	----	----	----	----	----	ND<1,000	ND<1,000	ND<1,000	----	----	**61.9**	----	----
	10/1995	113.38[6]	----	----	----	**62,000**	**12,000**	**13,800**	**920**	**5,690**	----	----	----	----	----	----	----	----	----	**1.6**	**2.3**	**2.9**	----	----	**33.3**	----	----
	07/07/93	113.38[6]	22.30	**1.60**	92.36	Not sampled due to the presence of LNAPL																					
	03/26-28/91	113.38[6]	21.22	**0.67**	92.70	----	**25,000**	**29,000**	**2,500**	**19,000**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	09/1990	113.38[6]	21.95	**0.81**	92.08	Not sampled due to the presence of LNAPL																					
	11/03/86	113.71[6]	24.29	**2.26**	91.23	Not sampled due to the presence of LNAPL																					
MW9	**Screened Interval 14-29 feet bgs, 2-Inch Diameter Casing**																										
MW9	11/13/18	147.18	21.17	0.00	126.01	ND<100	ND<1	ND<1	ND<1	ND<3	**440 x**	ND<250	**140**	ND<250	ND<0.4	ND	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND	----	----	----	----
	08/15/17	147.18	19.63	0.00	127.55	----	----	----	----	----	**1,500 x**	**490 x**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/06/17	147.18	17.93	0.00	129.25	**480**	ND<1	**2.2**	**1.8**	**3.4**	----	----	----	----	----	----	----	----	----	ND<1	ND<1	ND<1	ND	----	----	----	----
	11/11-13/13	147.18	20.21	0.00	126.97	**180**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	**400**	ND<71	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	05/20-22/13	147.18	18.19	0.00	128.99	**240**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	**1,400**	ND<68	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	11/12-14/12	147.18	20.09	0.00	127.09	**190**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	**2,700**	**150**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	05/07-08/12	147.18	18.88	0.00	128.30	**230**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	**1,500**	ND<67	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	05/10-12/11	147.18	18.68	0.00	128.50	**160**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	**2,200**	**260**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	01/17-20/11	147.18	18.65	0.00	128.53	**280**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	**6,400**	**1,400**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/19-22/10	147.18	19.04	0.00	128.14	**130**	**1**	ND<0.5	ND<0.5	ND<0.5	**1,200**	**190**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	10/12-15/09	147.18	20.67	0.00	126.51	**83**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	**960**	ND<66	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/13-16/09	147.18	24.60	0.00	122.58	**160**	**0.7**	ND<0.5	ND<0.5	ND<0.5	**1,100**	**69**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	11/10/08	147.18	21.29	0.00	125.89	**130**	**0.5**	ND<0.5	ND<0.5	ND<0.5	**2,000**	**97**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	12/04-05/07	147.18	23.15	0.00	124.03	ND<50.0	ND<0.5	ND<0.5	ND<0.5	ND<1.5	**2,200**	**280**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MTCA Method A Cleanup Levels for Ground Water						**800/1,000[1]**	**5**	**1,000**	**700**	**1,000**	**500**	**500**	**500**	**500**	**160**	**0.1**	**20**	**0.01**	**5**	**5**	**5**	**NVE**	**Analyte Specific**	**15**	**15**	**5**	**Analyte Specific**
Applicable or Relevant and Appropriate Requirements (ARARs)[2]						**----**	**5**	**1,000**	**700**	**10,000**	**----**	**----**	**----**	**----**	**----**	**----**	**----**	**0.05**	**5**	**5**	**5**	**70**	**Analyte Specific**	**15**	**15**	**10**	**Analyte Specific**

Table 2, Page 2 of 6. Summary of Groundwater Analytical Laboratory Results for the Property
Roystone on Queen Anne
631 Queen Anne Avenue North, Seattle, Washington 98109
The Riley Group, Inc. Project No. 2017-015E

Sample Number	Sample Date	TOC Elevation (ft)	Depth to Water Below Well TOC (ft)	LNAPL Thickness (ft)	Groundwater Elevation (ft)	Gasoline TPH	BTEX				Diesel TPH	Oil TPH	Diesel TPH	Oil TPH	Naph.	cPAHs	MTBE	EDB	EDC	PCE	TCE	cis-1,2-DCE	Other VOCs[7]	Total Pb	Dissolved Pb	Dissolved As	Other Metals
							B	T	E	X	without silica gel		with silica gel														
MW9	08/09/06	147.18	22.80	0.00	124.38	**450**	**66**	**1.9**	**0.8**	**47**	**2,700**	ND<540	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/18-21/05	147.18	20.59	0.00	126.59	**480**	**1.4**	ND<1.0	**5.7**	**3.1**	**14,000**	ND<630	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	01/24-31/05	147.18	20.66	0.00	126.52	**730**	**1.7**	ND<1.0	**2.7**	ND<6.0	**140,000**	ND<5,300	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	10/28-11/01/04	147.18	21.22	0.00	125.96	**300**	**1.4**	**0.5**	**1.9**	ND<3.0	**3,900**	**420**	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	7/15-16/04	147.18	20.71	0.00	126.47	**9,540**	**3.84**	**10.4**	**25.9**	**31.6**	**2,540**	ND<500	----	----	----	----	----	----	----	----	----	----	----	**2.54**	----	----
	4/29-30/04	147.18	20.38	0.00	126.80	**1,200**	**2**	**1.2**	**10**	**7.8**	**92,000**	ND<5,000	----	----	----	----	----	----	----	----	----	----	----	**4.8**	----	----
	1/21-23/04	147.18	20.36	0.00	126.82	**2,300**	**7.2**	**2.4**	**45**	**19**	**100,000**	ND<5,100	----	----	----	----	----	----	----	----	----	----	----	**5.5**	----	----
	10/1-02/03	147.18	21.26	0.00	125.92	**3,500**	**110**	**30**	**100**	ND<100	**33,000**	ND<5,000	----	----	----	----	----	----	----	----	----	----	----	**3.9**	----	----
	4/23-24/03	147.18	20.04	0.00	127.14	**6,760**	**388**	**15.9**	**277**	**105**	**3,680**	ND<500	----	----	----	----	----	----	----	----	----	----	----	**1.31**	----	----
	10/17-18/02	147.18	20.88	0.00	126.30	**6,380**	**493**	**13.0**	**230**	**107**	**43,600**	**671**[4]	----	----	----	----	----	----	----	----	----	----	----	**2.66**	----	----
	06/14/00	147.18	----	----	----	**4,740**	**786**	**26.0**	**274**	**156**	**6,070**	ND<500	----	----	----	----	----	----	----	----	----	----	----	**7.86**	**1.59**	----
	12/15/99	147.18	----	----	----	**4,460**	**831**	**22.4**	**274**	**138**	**8,510**	ND<500	----	----	----	----	----	----	----	----	----	----	----	**15**	**1.03**	----
	11/1997	147.18	----	----	----	**5,000**	**2,010**	**80**	**334**	**400**	----	----	----	----	----	----	----	----	----	ND<1	ND<1	ND<1	----	**3.3**	----	----
	07/1997	147.18	----	----	----	**2,200 J**	**2,680**	**127**	**460**	**620 J**	----	----	----	----	----	----	----	----	----	ND<200	ND<200	ND<200	----	**8.6 j**	----	----
	04/1997	147.18	----	----	----	**9,100**	**2,980**	**173**	**413**	**674**	----	----	----	----	----	----	----	----	----	ND<1	ND<1	ND<1	----	**6.8**	----	----
	01/01/97	147.18	----	----	----	**4,400**	**2,600**	**53**	**310**	**285**	----	----	----	----	----	----	----	----	----	----	----	----	----	**4.6 P**	----	----
	10/01/95	147.18	----	----	----	**3,400**	**3,520**	**70 J**	ND<200	**312 J**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	03/26-28/91	114.65[6]	20.44	**0.17**	94.18	----	**1,600**	**2,900**	**250**	**3,100**	----	----	----	----	----	----	----	----	----	ND<250	ND<250	----	----	**1.03**	----	----
MW13	**Screened Interval 10-20 feet bgs, 2-Inch Diameter Casing**																									
	11/13/18	147.88	----	----	Dry well																					
MW13	08/15/17	147.88	18.04	----	129.84	----	**----**	**----**	**----**	**----**	**60 x**	ND<250	----	----	----	----	----	----	----	**----**	**----**	**----**	**----**	----	----	----
	04/06/17	147.88	16.26	----	131.62	ND<100	ND<1	ND<1	ND<1	ND<3	**----**	----	----	----	----	----	----	----	----	ND<1	ND<1	ND<1	ND	----	----	----
	2002-2013	147.88	----	0.00	Not Sampled																					
RW4	**Screened Interval 17-32 feet bgs, 8-Inch Diameter Casing**																									
	10/18/06	110.82[6]	23.64	0.00	87.18	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
RW4 (Product Recovery Well)	07/15-16/04	110.82[6]	18.20	**0.22**	92.84	Not sampled due to the presence of LNAPL																				
	01/21/03	110.82[6]	17.88	0.00	92.94	**689**	**0.991**	ND<0.500	**2.37**	**7.03**	**2,830**	ND<500	----	----	----	----	----	----	----	----	----	----	----	ND<1.00	----	----
	10/17-18/02	110.82[6]	19.29	0.00	91.53	**3,160**	**59.8**	**2.50**	**40.4**	**15.6**	**8,930**	**939**	**----**	**----**	----	----	----	----	----	----	----	----	----	**1.23**	----	----
	07/24/02	110.82[6]	18.30	0.00	92.52	**990**	**62**	**1.3**	**32**	**7.0**	**15,000**	ND<2,000	----	----	**5.0**	**----**	ND<2	----	ND<2	ND<1	ND<1	ND<1	----	----	**3.3**	**6.1**	----
	07/07/93	110.82[6]	21.65	0.00	89.17	**14,000**	**6,500**	**2,800**	**370**	**2,000**	----	----	----	----	----	----	----	----	----	----	----	----	----	**45**	----	----	----
DPE5	**Screened Interval 14-24 feet bgs, 4-Inch Diameter Casing**																									
	11/21/18	113.81[6]	17.28	0.00	96.53	ND<100	**1.6**	ND<1	ND<1	ND<3	**1,300 x**	**420 x**	**99**	ND<250	ND<1	----	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND	----	**1.37**	----	----
	04/06/17	113.81[6]	13.37	0.00	100.44	----	----	----	----	----	----	----	----	----	----	----	----	----	----	ND<1	ND<1	ND<1	ND	----	----	----	----
	11/11-13/13	113.81[6]	16.68	0.00	97.14	**5,400**	**44**	**20**	**690**	**290**	**150**	ND<72	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	05/20-22/13	113.81[6]	16.65	0.00	97.17	**5,700**	**41**	**22**	**620**	**550**	**120**	ND<67	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	11/12-14/12	113.81[6]	15.35	0.00	98.47	**580**	**5**	**2**	**56**	**46**	**260**	ND<72	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	05/07-08/12	113.81[6]	14.08	0.00	99.74	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<29	ND<67	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
DPE 5 (Dual Phase Extraction Well)	05/10-12/11	113.81[6]	16.16	0.00	97.66	**520**	**18**	**4**	**30**	**63**	**1,900**	**270**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	01/17-20/11	113.81[6]	13.99	0.00	99.83	ND<50	ND<0.5	ND<0.5	**2**	**1**	**540**	**230**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/19-22/10	113.81[6]	15.92	0.00	97.90	**78**	**2**	ND<0.5	ND<0.5	**0.5**	**530**	**95**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	10/12-15/09	113.81[6]	18.60	0.00	95.22	**490**	**22**	**2**	**19**	**10**	**25,000**	ND<1,400	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/13-16/09	113.81[6]	14.63	0.00	99.19	**110**	**2**	ND<0.5	**1**	**3**	**690**	**83**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	11/03/08	113.82[6]	22.45	0.00	91.37	**460**	**77**	**7**	**4**	**17**	**12,000**	ND<3,500	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/29-29/08[3]	113.82[6]	18.93	0.00	94.89	ND<250	**32**	**4**	**3**	**22**	**11,000**	ND<2,500	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	12/04-06/07	113.81[6]	23.72	0.00	90.09	**180**	**0.6**	**0.5**	**0.6**	**4.3**	**4,000**	ND<470	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/17-19/07	113.81[6]	23.78	0.00	90.03	**200**	**17**	**2.6**	**1.6**	**11**	**4,600**	ND<470	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/17/06	113.81[6]	----	----	----	**19,000**	**1,100**	**1,400**	**160**	**2,900**	**4,800**	ND<190	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MTCA Method A Cleanup Levels for Ground Water						**800/1,000**[1]	**5**	**1,000**	**700**	**1,000**	**500**	**500**	**500**	**500**	**160**	**0.1**	**20**	**0.01**	**5**	**5**	**5**	**NVE**	**Analyte Specific**	**15**	**15**	**5**	**Analyte Specific**
Applicable or Relevant and Appropriate Requirements (ARARs)[2]						----	**5**	**1,000**	**700**	**10,000**	----	----	----	----	----	----	----	**0.05**	**5**	**5**	**5**	**70**	**Analyte Specific**	**15**	**15**	**10**	**Analyte Specific**

Table 2, Page 3 of 6. Summary of Groundwater Analytical Laboratory Results for the Property
Roystone on Queen Anne
631 Queen Anne Avenue North, Seattle, Washington 98109
The Riley Group, Inc. Project No. 2017-015E

Sample Number	Sample Date	TOC Elevation (ft)	Depth to Water Below Well TOC (ft)	LNAPL Thickness (ft)	Groundwater Elevation (ft)	Gasoline TPH	BTEX				Diesel TPH without silica gel	Oil TPH without silica gel	Diesel TPH with silica gel	Oil TPH with silica gel	Naph.	cPAHs	MTBE	EDB	EDC	PCE	TCE	cis-1,2-DCE	Other VOCs[7]	Total Pb	Dissolved Pb	Dissolved As	Other Metals
							B	T	E	X																	
DPE 5	01/23/06	113.81[6]	16.75	**0.05**	96.61	Not sampled due to the presence of LNAPL																					
	11/28/05	----	----	----	----	**36,000**					**5,300**	ND<1,000	----	----	----	----	ND<0.5	----	ND<0.5	ND<0.8	ND<1	ND<0.8	----	----	----	----	----
DPE6	**Screened Interval 15.5-30.5 feet bgs, 4-Inch Diameter Casing**																										
DPE 6 (Dual Phase Extraction Well)	11/13/18	113.32[6]	20.93	0.00	92.39	ND<100	ND<1	**1.1**	ND<1	ND<3	**3,300 x**	**610 x**	**180**	ND<250	ND<1	----	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND	----	ND<2	----	----
	04/06/17	113.32[6]	17.75	0.00	95.57	----	----	----	----	----	----	----	----	----	----	----	----	----	----	ND<1	ND<1	ND<1	ND	----	----	----	----
	11/11-13/13	114.14[6]	20.04	0.00	94.10	**140**	**7**	ND<0.5	ND<0.5	ND<0.5	**1,100**	ND<70	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	05/20-22/13	114.14[6]	18.62	0.00	95.52	**570**	**3**	**2**	**2**	**8**	**170**	ND<71	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	11/12-14/12	114.14[6]	19.90	0.00	94.24	**220**	**4**	ND<0.5	ND<0.5	**1**	**94**	ND<71	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	05/07-08/12	114.14[6]	18.80	0.00	95.43	**360**	**9**	**1**	**1**	**4**	**1,000**	ND<66	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	05/10-12/11	114.14[6]	18.44	0.00	95.70	**510**	**16**	**2**	**5**	**14**	**8,300**	**1,300**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	01/17-20/11	114.14[6]	18.61	0.00	95.53	**520**	**42**	**2**	**4**	**6**	**16,000**	**27,000**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/19-22/10	114.14[6]	19.02	0.00	95.12	**680**	**44**	**3**	**13**	**13**	**10,000**	**2,000**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	10/12-15/09	114.14[6]	20.51	0.00	93.63	**490**	**18**	**3**	**8**	**9**	**3,600**	ND<680	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/13-16/09	114.14[6]	20.60	0.00	93.54	**900**	**100**	**6**	**16**	**24**	**16,000**	**880**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	11/04/08	114.14[6]	21.30	0.00	92.84	**870**	**16**	**12**	**7**	**63**	**11,000**	ND<1,300	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/28-29/08[3]	114.14[6]	22.81	0.00	91.33	**460**	**1**	**6**	**2**	**32**	**8,500**	ND<480	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	12/04-05/07	113.32[6]	28.51	0.00	84.81	**160**	ND<2.0	**0.6**	ND<2.0	**3.8**	**1,100**	ND<190	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/17/07	113.32[6]	29.83	0.00	83.49	**5,400**	**27**	**39**	**35**	**350**	**110,000**	ND<9,300	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/17/06	113.32[6]	----	0.00	----	**38,000**	**3,000**	**5,400**	**690**	**4,900**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	11/28/05	----	----	----	----	**280**	----	----	----	----	**170**	ND<100	----	----	----	----	ND<0.5	----	ND<0.5	ND<0.8	ND<1	**8**	----	----	----	----	----
DPE7	**Screened Interval 11-29 feet bgs, 4-Inch Diameter Casing**																										
DPE 7 (Dual Phase Extraction Well)	11/13/18	113.15[6]	20.52	0.00	92.63	**700**	**3.3**	**8.1**	**2.3**	**30**	**4,100 x**	**850 x**	**430 x**	ND<250	**1.3**	ND	----	----	----	----	----	----	----	----	ND<2	----	----
	04/06/17	113.15[6]	17.28	0.00	95.87	----	----	----	----	----	----	----	----	----	----	----	----	----	----	ND<1	ND<1	ND<1	ND	----	----	----	----
	11/03/08	113.15[6]	20.96	**0.01**	92.18	Not sampled due to the presence of LNAPL																					
	04/28-29/08	113.15[6]	22.26	0.00	90.87	ND<250	**7**	**2**	**2**	**6**	**6,300**	ND<980	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	12/04-05/07	113.15[6]	27.52	0.00	85.63	**760**	**44**	**1.7**	**28**	**15**	**120,000**	ND<9,900	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/17/07	113.15[6]	27.00	0.00	86.15	**3,800**	**78**	**40**	**97**	**180**	**22,000**	ND<4,700	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/17/06	113.15[6]	----	----	----	**29,000**	**4,500**	**1,800**	**470**	**4,200**	**8,600**	ND<500	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	11/28/05	----	----	----	----	**17,000**	----	----	----	----	**6,200**	ND<1,000	----	----	----	----	ND<0.5	----	ND<0.5	ND<0.8	ND<1	ND<0.8	----	----	----	----	----
VP9	**Screened Interval 4.5-14.5 feet bgs, 2-Inch Diameter Casing**																										
VP9 (Soil Vapor Extraction Well)	11/13/18	145.22	9.54	0.00	135.68	ND<100	ND<1	ND<1	ND<1	ND<3	ND<250	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	01/24-31/05	145.22	10.30	0.00	134.92	**100**	ND<0.5	ND<0.5	ND<0.5	ND<1.5	ND<250	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	10/28-11/01/04	145.22	9.82	0.00	135.40	**610**	ND<0.5	ND<0.5	ND<0.5	ND<1.5	ND<800	ND<1,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	7/15-16/04	145.22	11.15	0.00	134.07	**1,270**	**1.67**	**0.699**	**2.79**	**5.77**	**259**	ND<500	----	----	----	----	----	----	----	----	----	----	----	----	ND<1.00	----	----
	4/29-30/04	145.22	9.58	0.00	135.64	**750**	**0.8**	ND<0.500	**13**	ND<1.5	**1,500**	ND<1,000	----	----	----	----	----	----	----	----	----	----	----	----	ND<0.99	----	----
	10/01-02/03	145.22	11.72	0.00	133.50	**1,600**	**5.3**	**1.4**	**2.3**	ND<10	**5,400**	**1,300**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	6/30-07/01/03	145.22	9.74	0.00	135.48	**681**	**1.22**	**0.735**	**5.07**	**3.28**	ND<250	ND<500	----	----	----	----	----	----	----	----	----	----	----	----	ND<1.00	----	----
	4/23-24/03	145.22	8.28	0.00	136.94	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<1.00	ND<250	ND<500	----	----	----	----	----	----	----	----	----	----	----	----	ND<1.00	----	----
	10/17-18/02	145.22	11.90	0.00	133.32	**1,910**	**11.3**	**2.62**	**8.86**	**14.7**	**13,200**	**786[4]**	----	----	----	----	----	----	----	----	----	----	----	----	ND<1.00	----	----
	06/14/00	145.22	----	----	----	**474**	**4.97**	ND<1.30	**55.6**	**4.48**	**1,420**	ND<1,130	----	----	----	----	----	----	----	----	----	----	----	**15.2**	ND<1.00	----	----
	12/15/99	145.22	----	----	----	**118**	ND<0.500	ND<0.500	ND<0.500	ND<1.00	ND<250	ND<500	----	----	----	----	----	----	----	----	----	----	----	**5.72**	ND<1.00	----	----
Off-Property Wells Situated in Close Proximity to Property Boundary																											
SS1-W1	**Screened Interval 10-20 feet bgs, 1.5-Inch Diameter Casing**																										
SS1-W1	11/13/18	148.83	11.92	----	136.91	ND<100	ND<1	ND<1	ND<1	ND<3	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	12/06/17	148.83	10.75	----	138.08	ND<100	ND<1.0	ND<2.0	ND<1.0	ND<3.0	ND<200	ND<400	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MTCA Method A Cleanup Levels for Ground Water						**800/1,000[1]**	**5**	**1,000**	**700**	**1,000**	**500**	**500**	**500**	**500**	**160**	**0.1**	**20**	**0.01**	**5**	**5**	**5**	**NVE**	**Analyte Specific**	**15**	**15**	**5**	**Analyte Specific**
Applicable or Relevant and Appropriate Requirements (ARARs)[2]						**----**	**5**	**1,000**	**700**	**10,000**	**----**	**----**	**----**	**----**	**----**	**----**	**----**	**0.05**	**5**	**5**	**5**	**70**	**Analyte Specific**	**15**	**15**	**10**	**Analyte Specific**

Table 2, Page 4 of 6. Summary of Groundwater Analytical Laboratory Results for the Property
Roystone on Queen Anne
631 Queen Anne Avenue North, Seattle, Washington 98109
The Riley Group, Inc. Project No. 2017-015E

Sample Number	Sample Date	TOC Elevation (ft)	Depth to Water Below Well TOC (ft)	LNAPL Thickness (ft)	Groundwater Elevation (ft)	Gasoline TPH	BTEX				Diesel TPH	Oil TPH	Diesel TPH	Oil TPH	Naph.	cPAHs	MTBE	EDB	EDC	PCE	TCE	cis-1,2-DCE	Other VOCs[7]	Total Pb	Dissolved Pb	Dissolved As	Other Metals
							B	T	E	X	without silica gel		with silica gel														
SS1-W2	**Screened Interval 12-22 feet bgs, 1.5-Inch Diameter Casing**																										
SS1-W2	11/13/18	146.93	14.54	----	132.39	ND<100	ND<1	ND<1	ND<1	ND<3	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	12/06/17	146.93	13.65	----	133.28	ND<100	ND<1.0	ND<2.0	ND<1.0	ND<3.0	ND<200	ND<400	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW10	**Screened Interval 10-30 feet bgs, 2-Inch Diameter Casing**																										
MW10	11/13/18	148.16	13.33	0.00	134.83	ND<100	ND<1	ND<1	ND<1	ND<3	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/06/17	148.16	11.43	0.00	136.73	ND<100	ND<1	ND<1	ND<1	ND<3	----	----	----	----	----	----	----	----	----	ND<1	ND<1	ND<1	ND	----	----	----	----
	11/11-13/13	148.16	12.54	0.00	135.62	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<31	ND<73	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	05/20-22/13	148.16	12.35	0.00	135.81	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<29	ND<68	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	11/12-14/12	148.16	12.28	0.00	135.88	**180**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<30	**230**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	05/07-08/12	148.16	11.92	0.00	136.24	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<30	ND<70	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	05/10-12/11	148.16	12.02	0.00	136.14	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<30	ND<69	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	01/17-20/11	148.16	10.62	0.00	137.54	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<59[19]	**250[5]**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/19-22/10	148.16	11.93	0.00	136.23	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<31	ND<73	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	10/12-15/09	148.16	12.23	0.00	135.93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<29	ND<67	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/13-16/09	148.16	12.11	0.00	136.05	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<29	ND<67	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	11/10/08	148.16	12.66	0.00	135.50	ND<50	**0.7**	ND<0.5	ND<0.5	ND<0.5	ND<30	ND<69	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/28-05/01/08	148.16	12.71[5]	0.00	135.45	ND<50	**0.8**	ND<0.5	ND<0.5	ND<0.5	ND<77	ND<97	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	12/04-05/07	148.16	14.33	0.00	133.83	**150**	**2.0**	ND<2.0	**0.9**	ND<5.0	ND<78	ND<98	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/17-19/07	148.16	13.05	0.00	135.11	**100**	**1.4**	ND<0.5	ND<0.5	ND<1.5	ND<75	ND<94	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	01/24-31/05	148.16	12.36	0.00	135.80	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.5	ND<250	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	10/21-11/01/04	148.16	13.31	0.00	134.85	**210**	**4.1**	ND<0.5	**1.2**	**2.1**	ND<82	ND<00	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	07/15-16/04	148.16	13.44	0.00	134.72	**362**	**2.75**	ND<0.500	**0.549**	**3.45**	ND<250	ND<500	----	----	----	----	----	----	----	----	----	----	----	----	ND<1.00	----	----
	04/29-30/04	148.16	13.23	0.00	134.93	ND<50	1.5	ND<0.5	ND<0.5	ND<1.5	ND<250	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	ND<0.99	----	----
	01/21-23/04	148.16	11.99	0.00	136.17	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.5	ND<250	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	ND<1.2	----	----
	10/01-02/03	148.16	13.68	0.00	134.48	**190**	**2.6**	ND<0.5	**0.5**	ND<3.0	ND<250	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	ND<1.2	----	----
	06/30-07/01/03	148.16	12.91	0.00	135.25	**255**	**2.01**	ND<0.500	**0.535**	**2.53**	ND<250	ND<500	----	----	----	----	----	----	----	----	----	----	----	----	ND<1.00	----	----
	04/23-24/03	148.16	11.76	0.00	136.40	ND<50.0	ND<0.500	ND<0.500	ND<0.500	ND<1.00	----	----	----	----	----	----	----	----	----	----	----	----	----	----	ND<1.00	----	----
	01/21/03	148.16	12.46	0.00	135.70	**416**	**3.44**	**0.55**	**0.519**	**3.24**	ND<250	ND<500	----	----	----	----	----	----	----	----	----	----	----	----	ND<1.00	----	----
	10/17-18/02	148.16	13.59	0.00	134.57	**490**	**3.42**	ND<0.500	**1.34**	**5.00**	**667**	ND<500	----	----	----	----	----	----	----	----	----	----	----	----	ND<1.00	----	----
	7/24/02[3]	148.16	13.14	0.00	135.02	**240**	**2.5**	ND<0.500	ND<1.0	ND<1.5	**320**	**600**	----	----	ND<2	----	ND<2	----	ND<2	ND<1	ND<1	**15**	----	----	**1.3**	**4.1**	----
	06/14/00	148.16	----	----	----	**99.2**	**1.56**	ND	ND	ND	ND<250	ND<500	----	----	----	----	----	----	----	----	----	----	----	ND	ND	----	----
	12/15/99	148.16	----	----	----	**618**	**7.02**	ND<0.910	ND<0.850	ND<4.22	**353**	ND<500	----	----	----	----	----	----	----	----	----	----	----	ND<1	ND<1.00	----	----
	11/1997	148.16	----	----	----	**1,000**	**4.2**	**2**	**4.8**	**2.2 J**	----	----	----	----	----	----	----	----	----	----	----	----	----	**4.9**	----	----	----
	07/1997	148.16	----	----	----	**1,100**	**10**	**2.1**	**2.4**	**4.34 J**	----	----	----	----	----	----	----	----	----	----	----	----	----	**1.2 j**	----	----	----
	04/1997	148.16	----	----	----	**420**	**5.1**	**1**	ND<1	**2.0 J**	----	----	----	----	----	----	----	----	----	----	----	----	----	ND<1	----	----	----
	01/1997	148.16	----	----	----	**180**	**1.5**	ND<1	ND<1	ND<2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	10/1995	148.16	----	----	----	**780**	**1.8**	**2.9**	**0.82 J**	**5.6**	----	----	----	----	----	----	----	----	----	ND<1	**0.7**	ND<1	----	ND<1	----	----	----
	07/07/93	115.75[6]	13.81	0.00	101.94	**380**	**13**	ND<5.0	**11**	**24**	----	----	----	----	----	----	----	----	----	----	----	----	----	**8**	----	----	----
	03/26-28/91[3]	115.75[6]	13.14	0.00	102.61	----	ND<5	ND<5	ND<5	ND<5	----	----	----	----	----	----	----	ND<0.01	ND<5	ND<5.0	ND<5.0	----	----	----	**12 j**	**21**	BSL
MW24	**Screened Interval 4.2-14.2 feet bgs, 0.75-Inch Diameter Casing**																										
MW24	01/24-31/05	107.95[6]	5.58	0.00	102.37	ND<50	ND<0.5	**0.6**	ND<0.5	**1.6**	ND<250	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW24	10/26-27/04	107.95[6]	----	----	----	**500**	----	----	----	----	ND<800	ND<1,000	----	----	----	----	ND<0.5	ND<0.5	ND<0.5	ND<0.8	ND<1	ND<0.8	----	----	----	----	----
RW2	**Screened Interval Unknown, 8-Inch Diameter Casing**																										
RW2 (Product Recovery Well)	11/11-13/13	106.63[6]	14.36	0.00	92.27	ND<50	**2**	ND<0.5	ND<0.5	ND<0.5	ND<31	ND<73	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	5/20-22/13	106.63[6]	12.57	0.00	94.06	ND<50	**1**	ND<0.5	ND<0.5	ND<0.5	ND<30	ND<69	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	11/12-14/12	106.63[6]	13.50	0.00	93.13	**87**	**5**	ND<0.5	ND<0.5	**0.9**	ND<29	ND<67	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	05/07-08/12	106.63[6]	11.40	0.00	95.23	ND<50	ND<0.5	ND<0.5	**2**	**3**	ND<30	ND<69	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	05/10-12/11	106.63[6]	11.96	0.00	94.67	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	**230**	**91**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	01/17-20/11	106.63[6]	9.70	0.00	96.93	**150**	ND<0.5	ND<0.5	**8**	**16**	**270**	**190**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MTCA Method A Cleanup Levels for Ground Water						**800/1,000[1]**	**5**	**1,000**	**700**	**1,000**	**500**	**500**	**500**	**500**	**160**	**0.1**	**20**	**0.01**	**5**	**5**	**5**	**NVE**	**Analyte Specific**	**15**	**15**	**5**	**Analyte Specific**
Applicable or Relevant and Appropriate Requirements (ARARs)[2]						**----**	**5**	**1,000**	**700**	**10,000**	**----**	**----**	**----**	**----**	**----**	**----**	**----**	**0.05**	**5**	**5**	**5**	**70**	**Analyte Specific**	**15**	**15**	**10**	**Analyte Specific**

Table 2, Page 5 of 6. Summary of Groundwater Analytical Laboratory Results for the Property
Roystone on Queen Anne
631 Queen Anne Avenue North, Seattle, Washington 98109
The Riley Group, Inc. Project No. 2017-015E

Sample Number	Sample Date	TOC Elevation (ft)	Depth to Water Below Well TOC (ft)	LNAPL Thickness (ft)	Groundwater Elevation (ft)	Gasoline TPH	BTEX				Diesel TPH	Oil TPH	Diesel TPH	Oil TPH	Naph.	cPAHs	MTBE	EDB	EDC	PCE	TCE	cis-1,2-DCE	Other VOCs[7]	Total Pb	Dissolved Pb	Dissolved As	Other Metals
							B	T	E	X	without silica gel		with silica gel														
RW2 (Product Recovery Well)	04/19-22/10	106.63[6]	12.56	0.00	94.07	160	9	0.7	ND<0.5	ND<0.5	430	240	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	10/12-15/09	106.63[6]	14.75	0.00	91.88	1,100	35	4	7	11	4,300	ND<680	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	4/13-16/09	106.63[6]	13.80	0.00	92.83	340	21	0.9	1	1	840	ND<65	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	11/04/08	106.63[6]	15.66	0.00	90.97	890	82	9	14	6	1,000	ND<66	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/28-29/08	106.63[6]	15.84	0.00	90.79	190	12	1	0.9	2	890	ND<95	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	12/04-06/07	106.63[6]	15.21	0.00	91.42	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.5	400	ND<100	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/17-18/07	106.63[6]	17.12	0.00	89.51	650	54	12	10	35	15,000	ND<1,900	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	04/18-21/05	106.63[6]	9.18	0.00	97.45	130	0.8	ND<0.5	2.3	6.1	260	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	01/24-31/05	106.63[6]	11.57	0.00	95.06	94	ND<0.5	ND<0.5	ND<2.0	2.5	ND<250	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	10/28-11/01/04	106.63[6]	14.68	0.00	91.95	26,000	410	63	470	950	280,000	ND<40,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	07/15-16/04	106.63[6]	14.41	0.00	92.22	634	25.7	2.39	6.18	3.55	ND<250	ND<500	----	----	----	----	----	----	----	----	----	----	----	----	ND<1.00	----	----
	04/29-30/04	106.63[6]	13.31	0.00	93.32	81	11	0.9	2.0	1.9	270	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	ND<0.99	----	----
	01/21-23/04	106.63[6]	10.22	0.00	96.41	53	1.2	0.7	1.3	8.9	ND<250	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	ND<1.2	----	----
	10/01-02/03	106.63[6]	15.05	0.00	91.58	2,300	75	7.3	29	33	1,400	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	4.9	----	----
	06/30-07/01/03	106.63[6]	13.72	0.00	92.91	2,380	53.5	8.72	39.8	43.2	505	ND<500	----	----	----	----	----	----	----	----	----	----	----	----	1.43	----	----
	04/23-24/03	106.63[6]	10.30	0.00	96.33	55.7	ND<0.500	ND<0.500	0.642	2.64	ND<250	ND<500	----	----	----	----	----	----	----	----	----	----	----	----	ND<1.00	----	----
	01/21/03	106.63[6]	10.61	0.00	96.02	126	33.5	0.859	1.28	4.11	ND<250	ND<500	----	----	----	----	----	----	----	----	----	----	----	----	ND<1.00	----	----
	10/17-18/02	106.63[6]	14.44	0.00	92.19	1,380	90.5	8.05	29.2	31.5	988	ND<500	----	----	----	----	----	----	----	----	----	----	----	----	2.23	----	----
	11/1997	104.54[6]	----	----	----	4,400	3,140	1,200	338	2,265	----	----	----	----	----	----	----	----	----	ND<1	ND<1	ND<1	----	----	15.4	----	----
	07/1997	104.54[6]	----	----	----	24,000	4,230	2,490	398	2,732	----	----	----	----	----	----	----	----	----	ND<25	ND<25	ND<50	----	----	47.2	----	----
	04/1997	104.54[6]	----	----	----	11,000	189	243	99	743	----	----	----	----	----	----	----	----	----	ND<1	ND<1	ND<1	----	----	18.2	----	----
	01/1997	104.54[6]	----	----	----	390	31	14	6	49	----	----	----	----	----	----	----	----	----	ND<1	ND<1	ND<1	----	----	11	----	----
	3/26-28/91	104.54[6]	10.21	0.08	94.39	----	19,000	46,000	2,500	120,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	09/1990	104.54[6]	12.72	0.04	91.85	Not sampled due to the presence of LNAPL																					
Groundwater Grab Samples																											
P1-W	05/22/17	----	13.00	----	----	7,100	ND<5	12	5.4	27	110,000ve	3,800 x	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
P2-W	05/22/17	----	14.00	----	----	ND<100	ND<1	ND<1	ND<1	ND<3	ND<60	ND<300	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
P3-W	05/22/17	----	13.00	----	----	1,200	ND<5	9.7	8.2	19	1,400	ND<300	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Off Property Groundwater Grab Samples																											
SS1-P1	12/02/17	----	----	----	----	ND<100	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<200	ND<400	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SS1-P2	12/02/17	----	----	----	----	ND<100	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND<200	ND<400	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MTCA Method A Cleanup Levels for Ground Water						**800/1,000[1]**	**5**	**1,000**	**700**	**1,000**	**500**	**500**	**500**	**500**	**160**	**0.1**	**20**	**0.01**	**5**	**5**	**5**	**NVE**	**Analyte Specific**	**15**	**15**	**5**	**Analyte Specific**
Applicable or Relevant and Appropriate Requirements (ARARs)[2]						**----**	**5**	**1,000**	**700**	**10,000**	**----**	**----**	**----**	**----**	**----**	**----**	**----**	**0.05**	**5**	**5**	**5**	**70**	**Analyte Specific**	**15**	**15**	**10**	**Analyte Specific**

Notes:
Samples collected in 2017 by RGI field staff using a peristaltic pump under low-flow conditions. Groundwater samples collected prior to 2017 were obtained by others.
Unless otherwise noted, all analytical results are given in micrograms per liter (ug/L), equivalent to parts per billion (ppb).
TOC = Top of casing
Gasoline-range TPH (total petroleum hydrocarbons) determined using Northwest Test Method NWTPH-Gx.
Diesel- and Oil-range TPH (total petroleum hydrocarbons) determined using Northwest Test Method NWTPH-Dx.
BTEX (benzene, toluene, ethylbenzene, and xylenes) determined using EPA Test Method 8021B.
Naph. (naphthalene), MTBE (methyl tert-butyl ethere), EDB (1,2-dibromoethane), EDC (1,2-dichloroethane), PCE (tetrachloroethene), TCE (trichloroethene), cis-1,2-DCE (cis-1,2-dichloroethene), and other VOCs (volatile organic compounds) determined using EPA Test Method 8260.
LNAPL = Light non-aqueous phase liquid.
Pb (lead), As (arsenic) and other metals determined using EPA 6000/7000 Series Methods.
ve = The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.
j = The analyte was positively identified. The reported value is an estimate.
P = The analyte was detected above the instrument detection limit, but below the established minimum quantitation limit.
ND = Not detected above the noted analytical detection limit.

Table 2, Page 6 of 6. Summary of Groundwater Analytical Laboratory Results for the Property
Roystone on Queen Anne
631 Queen Anne Avenue North, Seattle, Washington 98109
The Riley Group, Inc. Project No. 2017-015E

Notes continued:
NVE = No value established
---- = Not analyzed or not applicable.
Silica gel = Samle extract passed through a silica gel column prior to analysis. The silica gel column removes naturally occuring biogenic material that can interfere with TPH results when present.
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). Federal and State ARARs obtained from Ecology's Cleanup Level and Risk Calculation (CLARC) database.
ARAR = Applicable or Relevant and Appropriate Requirement. ARARs for the Property are the Federal and State Primary Maximum Contaminant Levels (MCLs) as established under the Environmental Protection Agency (EPA) National Primary Drinking Water Regulations.
[1] The higher cleanup level is applicable if no benzene is detected in groundwater.
[2] No MTCA Method A Cleanup Level has been established. Therefore, the Federal and State ARAR is referenced.
[3] Indicates a duplicate sample was collected. The highest concentration for each analyte was reported.
[4] Laboratory report indicates heavy range organics are due to hydrocarbons primarily in the diesel range.
[5] The reporting limits were raised due to interference in the sample matrix.
[6] Top of casing elevation and groundwater elevation based on arbitrary datum. Not actual elevations.
[7] Only VOCs not factored into the MTCA Method A TPH cleanup levels are reported.
[8] Top of casing elevations for wells MW6, MW9, MW13, VP9, SSI-W1, SSI-W2, and MW10 were surveyed using actual elevation data in December 2018. Reports prepared prior to this time present top of casing elevations based on arbitrary datum.
Bold results indicated concentrations above laboratory detection limits or LNAPL detected in well.
Bold and yellow highlighted results indicate concentrations (if any) that exceed the applicable groundwater screening level.

APPENDIX A PREVIOUS REPORTS

The Site was previously enrolled in the VCP and identified as "Texaco Downstream #211577" (VCP No. 211577). Based on RGI's review of the Final Remedial Investigation & Site Summary Report dated August 20, 2007 by SAIC, the following reports are anticipated to be present in the Ecology file for the Texaco Downstream #211577:

1) SAIC, 2007. Final Remedial Investigation and Site Summary Report, August 20.
2) Delta Environmental Consultants (Delta), 2002. *Conceptual Site Model, Risk Assessment, and Supplemental Investigation Proposal, Former Texaco Station No. 211577, 631 Queen Anne Avenue North, Seattle, Washington*, August 21.
3) Delta, 2003. *Agency Draft, Remedial Investigation Report, Former Texaco Service Station No.211577, 631 Queen Anne Avenue North, Seattle, Washington,* March 3.
4) Ecology & Environment (E&E), 1990. *Monterey Apartments Site - Soil-Gas Pilot Study Summary,* September 11.
5) E&E, 1991. *Monterey Apartments Site, Phase 1 Remedial Investigation Work Plan.* January 14.
6) E&E, 1991. *Phase 1 Remedial Investigation Sampling and Analysis Plan,* March 4.
7) E&E, 1991. *Trip Report, Manhattan Express Tank Integrity Testing – Monterey Apartments Phase I Remedial Investigation*, April 23.
8) E&E, 1991. *Final Phase 1 Remedial Investigation,* May 15.
9) E&E, 1991. *Phase 1 Remedial Investigation Report, Monterey Apartments, Seattle Washington,* August.
10) Farallon Consulting (Farallon), 2000. *December 1999 Groundwater Sampling Analytical Results, Queen Anne Texaco, Seattle, Washington*, January 11.
11) Farallon, 2000. *Scope of Work, Queen Anne Texaco, Seattle, Washington.* February 8.
12) Farallon, 2000. *Pilot Test Summary Report, Queen Anne Texaco, Seattle, Washington,* July 19.
13) Farallon 2000. *December 1999 and June 2000 Groundwater Summary Report, Queen Anne Texaco, Seattle, Washington,* July 21.
14) Farallon, 2000. *Draft Work Plan, Additional Site Investigation, Queen Anne Texaco, Seattle, Washington*, November 30.
15) Farallon, 2001. *Draft Work Plan, Site Investigation, Queen Anne Texaco, Seattle, Washington,* January.
16) Science Applications International Corporation (SAIC), 1993. *Baseline Groundwater Monitoring Report, Monterey Apartments.*
17) SAIC, 1993. *Work Assignment #60 – Monterey Apartments, Seattle Task II - Construction Oversight Weekly Report, 17-21 May 1993,* May 23.
18) SAIC, 1993. *Work Assignment #60 - Monterey Apartments, Seattle Task II - Construction Oversight Weekly Report, 24-28 May 1993,* June 7.
19) SAIC, 1993. *Work Assignment #60 – Monterey Apartments, Seattle Task II - Construction Oversight Weekly Report, 1-4 June 1993,* June 17.
20) SAIC, 1993. *Work Assignment #60 – Monterey Apartments, Seattle Task II - Construction Oversight Weekly Report, 14-18 June 1993,* June 22.
21) SAIC, 1993. *Work Assignment #60 – Monterey Apartments, Seattle Task II - Construction*

Oversight Weekly Report, 21-25 June 1993, June 30.
22) SAIC, 1993. Work Assignment #60 - Monterey Apartments, Seattle Task II - Construction
23) Oversight Weekly Report, 28-30 June 1993, July 8.
24) SAIC, 2006a. Remediation System Startup and First Quarter 2006 Operations Report, Former Texaco Service Station No. 211577, 631 Queen Anne Avenue North, Seattle, Washington, May 19.
25) SAIC, 2006b. DPE Remediation System, Second Quarter 2006 Operations Report, Former Texaco Service Station No. 211577, 631 Queen Anne Avenue North, Seattle, Washington, August 30.
26) SAIC, 2007a. DPE Remediation System, Third Quarter 2006 Operations Report, Former Texaco Service Station No. 211577, 631 Queen Anne Avenue North, Seattle, Washington, January 8.
27) SAIC, 2007b. DPE Remediation System, Fourth Quarter 2006 Operations Report, Former
28) Texaco Service Station No. 211577, 631 Queen Anne Avenue North, Seattle, Washington, March 8.
29) Texaco Inc., September 2000, Background Investigation Report.
30) Washington State Department of Ecology (WDOE), 1989. Monterey Apartments, Internal
31) Report, March
32) WDOE, 1989. Request for Proposal to Provide Technical Services at the Monterey Apartments, Queen Anne District, March 17.
33) WDOE Letter, 1991. Re: Underground Storage Tank (UST) Compliance Schedule, July 8.
34) WDOE, 1998. Monterey Apartments Ground Water Monitoring, October 1995 – November, 1997, May.

Project Name: **Arnold's/Former Texaco Service Station No. 211577**	Test Probe/Well No.: **SSI-W1**
Project Number: **2017-015D**	**Sheet 1 of 1**
Client: **Vibrant Cities**	

RILEYGROUP

Date(s) Drilled: **12/02/17**	Logged By: **LC**	Surface Conditions: **Concrete**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type: **3.25" Diameter**	Total Depth of Borehole: **21 feet bgs**
Drill Rig Type: **Geoprobe**	Drilling Contractor: **RGI**	Approximate Surface Elevation (feet amsl): **115'**
Groundwater Level: **10.75' on 12/06/17**	Sampling Method(s): **Continuous**	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **631 Queen Anne Avenue North,Seattle, Washington 98109**	

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
	0						Concrete		Concrete		Concrete 0 - 1
							SM		Brown, silty SAND to SAND with some silt, medium dense, damp (fill)		Blank 1.5" PVC 0 - 10
											Bentonite 1 - 3
							ML		Gray, SILT with trace sand and gravel, stiff, damp		
	5										
			SS1-W1-6		0.0	50%					
							SP-SM		Light brown to blue-gray, SAND with some silt and trace gravel to silty SAND with some gravel, dense, moist to wet, hydrocarbon odor		
	10	▼									Prepack Slotted 1.5" PVC 10 - 20
	15		SS1-W1-15		0.1	95%					
			SSW-W1-18		0.0	90%	CL		Light brown to blue-gray, silty CLAY with some gravel and trace sand, very stiff, damp		
	20								No gravel or sand		
			SS1-W1-21		0.0	100%					
									Boring terminated 21 feet bgs		

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

Project Name: **Arnold's/Former Texaco Service Station No. 211577**	Test Probe/Well No.: **SSI-W2**
Project Number: **2017-015D**	**Sheet 1 of 1**
Client: **Vibrant Cities**	RILEYGROUP

Date(s) Drilled: **12/02/17**	Logged By: **LC**	Surface Conditions: **Concrete**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type: **3.25" Diameter**	Total Depth of Borehole: **22 feet bgs**
Drill Rig Type: **Geoprobe**	Drilling Contractor: **RGI**	Approximate Surface Elevation (feet amsl): **114'**
Groundwater Level: **13.65' on 12/06/17**	Sampling Method(s): **Continuous**	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **631 Queen Anne Avenue North,Seattle, Washington 98109**	

Elevation (feet)	Depth (feet)	Sample Type	Sample ID	Sampling Resistance, blows/ft	PID Reading, ppm	Recovery (%)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
	0						Concrete		Concrete		Concrete 0 - 1
							SM		Brown, silty SAND to SAND with some silt, medium dense, damp (fill)		Blank 1.5" PVC 0 - 12
											Bentonite 1 - 3
							ML		Black to brown, sandy SILT with trace gravel, very stiff, damp		
	5										
							SM		Light brown to gray, SAND with some silt, soft to medium dense, wet, hydrocarbon odor		
			SS1-W2-9		0.0	70%			Trace gravel and silt 8' - 10'		
	10										
			SS1-W2-12.5		51.8	100%	ML		Sandy SILT and CLAY, stiff		Prepack Slotted 1.5" PVC 12 - 22
							SM		Light brown to gray, SAND with some silt, soft to medium dense, wet, hydrocarbon odor		
	15		SSW-W2-16		0.0	100%			Trace silt		
									Silty with trace gravel		
			SS1-W2-19.5		0.0	100%	CL		Light brown to gray, silty CLAY with trace sand, very stiff, wet		
	20										
									Boring terminated 22 feet bgs		

Project Name: **Arnold's/Former Texaco Service Station No. 211577**
Project Number: **2017-015D**
Client: **Vibrant Cities**

RILEYGROUP

Test Probe No.: SSI-P1

Sheet 1 of 1

Date(s) Drilled: **12/02/17**	Logged By: **LC**	Surface Conditions: **Concrete**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type: **3.25" Diameter**	Total Depth of Borehole: **23 feet bgs**
Drill Rig Type: **Geoprobe**	Drilling Contractor: **RGI**	Approximate Surface Elevation: **114.5'**
Groundwater Level: **12.37' on 12/3**	Sampling Method(s): **Continuous**	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **631 Queen Anne Avenue North, Seattle, Washington 98109**	

PID Reading, ppm	Sample ID	Sample Type	% Recovery	GW Depth	Depth (feet)	MATERIAL DESCRIPTION
					0	Concrete
						Light brown to gray, silty SAND with trace gravel, medium dense, damp to moist
						Light brown to gray, sandy SILT with trace gravel, medium dense, damp to moist
0.0	SSI-P1-5		60%		5	Light brown to gray, SILT with trace gravel, medium dense, damp to moist
0.0	SSI-P1-9		60%		10	Less gravel
0.0	SSI-P1-14		100%	▼		Light brown to gray, SAND with trace to some silt, medium dense, wet
1.0	SSI-P1-17		66%		15	
0.0	SSI-P1-19		100%			Silty sand
0.0	SSI-P1-19.5		100%		20	Gray, silty CLAY, very stiff, damp
						Boring terminated 23 feet bgs
					25	

Graphic Log

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Project Name: **Arnold's/Former Texaco Service Station No. 211577**
Project Number: **2017-015D**
Client: **Vibrant Cities**

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Test Probe No.: SSI-P2

Sheet 1 of 1

Date(s) Drilled: **12/02/17**	Logged By: **LC**	Surface Conditions: **Concrete**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type: **3.25" Diameter**	Total Depth of Borehole: **22 feet bgs**
Drill Rig Type: **Geoprobe**	Drilling Contractor: **RGI**	Approximate Surface Elevation: **114**
Groundwater Level: **19.17' on 12/2**	Sampling Method(s): **Continuous**	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **631 Queen Anne Avenue North, Seattle, Washington 98109**	

PID Reading, ppm	Sample ID	Sample Type	% Recovery	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
					0	Concrete	
						Light brown to gray, silty SAND with trace gravel and some silt, medium dense, damp, hydrocarbon odor	
					5		
0.0	SSI-P2-7.5		50%				
						Light brown to gray, gravelly SAND with some silt, medium dense, damp	
0.0	SSI-P2-10		75%		10	Wet, loose	
0.0	SSI-P2-15		100%		15	Light brown/black, medium to coarse SAND, medium dense, wet, hydrocarbon odor	
0.0	SSI-P2-15.5		100%			Light brown, SILT with trace sand, very stiff, damp, hydrocarbon odor	
0.0	SSI-P2-18		100%			Gray, silty CLAY, very stiff, damp	
				▽	20		
						Boring terminated 22 feet bgs	
					25		

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Project Name: **Arnold's/Former Texaco Service Station No. 211577**
Project Number: **2017-015D**
Client: **Vibrant Cities**

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Test Probe No.: SSI-P3

Sheet 1 of 2

Date(s) Drilled: **12/04/17**	Logged By: **LC**	Surface Conditions: **Asphalt**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type: **3.25" Diameter**	Total Depth of Borehole: **35 feet bgs**
Drill Rig Type: **Geoprobe**	Drilling Contractor: **RGI**	Approximate Surface Elevation: **113.5'**
Groundwater Level: **Not measured**	Sampling Method(s): **Continuous**	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **631 Queen Anne Avenue North, Seattle, Washington 98109**	

PID Reading, ppm	Sample ID	Sample Type	% Recovery	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
					0	Asphalt	
						Fill	
						Light brown to gray, silty SAND to sandy SILT with some gravel, dense, damp, hydrocarbon odor	
0.1	SSI-P3-5		60%		5	Light brown to gray, silty SAND to SAND with trace silt and gravel, dense, damp, hydrocarbon odor	
0.1	SSI-P3-10		80%		10		
2.3	SSI-P3-12		100%			Light brown to gray, SAND with trace silt and gravel, soft, wet, hydrocarbon odor	
0.1	SSI-P3-17		100%		15		
						Less gravel	
					20	Some gravel	
69.7	SSI-P3-22		90%			Slight sheen potentially related to groundwater contamination	
					25		

Project Name: **Arnold's/Former Texaco Service Station No. 211577**
Project Number: **2017-015D**
Client: **Vibrant Cities**

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Test Probe No.: SSI-P3

Sheet 2 of 2

PID Reading, ppm	Sample ID	Sample Type	% Recovery	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
0.1	SSI-P3-27		100%		25		
						Gray, CLAY with trace sand, stiff, damp	
					30		
0.1	SSI-P3-31		100%			Very stiff, no odor	
0.1	SSI-P3-34		100%				
0.1	SSI-P3-35		100%		35	Refusal at 35 feet bgs	
					40		
					45		
					50		
					55		
					60		

Project Name: **Arnold's/Former Texaco Service Station No. 211577**
Project Number: **2017-015D**
Client: **Vibrant Cities**

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Test Probe No.: SSI-P4

Sheet 1 of 2

Date(s) Drilled: **12/04/17**	Logged By: **LC**	Surface Conditions: **Asphalt**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type: **3.25" Diameter**	Total Depth of Borehole: **37 feet bgs**
Drill Rig Type: **Geoprobe**	Drilling Contractor: **RGI**	Approximate Surface Elevation: **113'**
Groundwater Level: **Not measured**	Sampling Method(s): **Continuous**	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **631 Queen Anne Avenue North, Seattle, Washington 98109**	

PID Reading, ppm	Sample ID	Sample Type	% Recovery	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
					0	Asphalt	
						Light to medium brown/black, sandy SILT, medium stiff, damp, hydrocarbon odor	
						SAND	
						Light to medium brown/black, sandy SILT, medium stiff, damp, hydrocarbon odor	
0.0	SSI-P4-5		60%		5	Light brown to black, silty SAND, medium dense, damp, odor	
						Gravelly, asphaltic lens	
0.0	SSI-P4-7		100%			Light brown to black, silty SAND, medium dense, damp, odor	
0.0	SSI-P4-7.5		66%			Light brown to brick red to black, sandy SILT, medium stiff, damp to moist	
						Light brown, SAND with some silt and trace sand, medium dense, damp, odor	
0.0	SSI-P4-10		66%		10	Light brown to gray, sandy SILT to silty SAND with trace gravel, medium stiff, dense, no odor	
0.0	SSI-P4-11		50%				
3.4	SSI-P4-14		100%			Light brown to dark gray, SAND with trace to some silt, loose to medium dense, wet, hydrocarbon odor	
					15	Trace gravel	
19	SSI-P4-17		100%				
0.2	SSI-P4-18		100%			Strong sheen 18' to 23' bgs. Hydrocarbon odor to 28' bgs	
17.5	SSI-P4-19		100%		20		
27.4	SSI-P4-22		100%		25		

Project Name: **Arnold's/Former Texaco Service Station No. 211577**
Project Number: **2017-015D**
Client: **Vibrant Cities**

RILEYGROUP

Test Probe No.: SSI-P4

Sheet 2 of 2

PID Reading, ppm	Sample ID	Sample Type	% Recovery	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
0.1	SSI-P4-27		100%		25		
						Light brown, sandy SILT, medium stiff, damp, slight hydrocarbon odor	
0.1	SSI-P4-30		100%		30	Gray, CLAY with trace to no sand, very stiff, damp, no odor	
0.1	SSI-P4-35		100%		35		
0.1	SSI-P4-37		100%			Refusal at 37 feet bgs	
					40		
					45		
					50		
					55		
					60		

Project Name: **Arnold's/Former Texaco Service Station No. 211577**
Project Number: **2017-015D**
Client: **Vibrant Cities**

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Test Probe No.: SSI-P5

Sheet 1 of 2

Date(s) Drilled: **12/04/17**	Logged By: **LC**	Surface Conditions: **Asphalt**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type: **3.25" Diameter**	Total Depth of Borehole: **31 feet bgs**
Drill Rig Type: **Geoprobe**	Drilling Contractor: **RGI**	Approximate Surface Elevation: **113'**
Groundwater Level: **Not encountered**	Sampling Method(s): **Continuous**	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **631 Queen Anne Avenue North, Seattle, Washington 98109**	

PID Reading, ppm	Sample ID	Sample Type	% Recovery	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
					0	Asphalt	
						Light to medium brown/gray to black, silty SAND with some gravel, medium dense, damp (fill)	
0.1	SSI-P5-8		50%		5		
815	SSI-P5-12.5		95%		10	Light brown to gray, medium SAND with trace silt and gravel, medium dense, moist, strong hydrocarbon odor, strong sheen 10' to 20' bgs	
195	SSI-P5-17		100%		15	Loose, damp	
145	SSI-P5-20		100%		20		
5.2	SSI-P5-23		100%			Gray, CLAY, very stiff, damp, no odor	
					25		

Project Name: **Arnold's/Former Texaco Service Station No. 211577**
Project Number: **2017-015D**
Client: **Vibrant Cities**

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Test Probe No.: **SSI-P5**
Sheet 2 of 2

PID Reading, ppm	Sample ID	Sample Type	% Recovery	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
					25	Gray, CLAY, very stiff, damp, no odor	
0.2	SSI-P5-28		100%				
					30		
0.1	SSI-P5-31					Refusal at 31 feet bgs	
					35		
					40		
					45		
					50		
					55		
					60		

Project Name: **Arnold's/Former Texaco Service Station No. 211577**
Project Number: **2017-015C**
Client: **Vibrant Cities**

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Test Probe No.: P1

Sheet 1 of 1

Date(s) Drilled: **05/22/17**	Logged By: **SL**	Surface Conditions: **Asphalt**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type: **2" Probe**	Total Depth of Borehole: **20 feet bgs**
Drill Rig Type: **Truck-Mounted**	Drilling Contractor: **Holocene**	Approximate Surface Elevation: **114'**
Groundwater Level: **13' bgs**	Sampling Method(s): **Continuous**	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **631 Queen Anne Avenue North, Seattle, Washington 98109**	

PID Reading, ppm	Sample ID	Sample Type	% Recovery	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
					0	Asphalt	
			75			Grayish brown, silty SAND, dense, moist, no odor, no sheen	
0.051	P1-5				5		
			80				
0.029	P1-10				10		
31	P1-13		70	▽		Gray, silty SAND, dense, wet, strong odor, sheen	
					15		
			70				
33	P1-20				20	Boring terminated 20 feet bgs	
					25		

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Project Name: **Arnold's/Former Texaco Service Station No. 211577**
Project Number: **2017-015C**
Client: **Vibrant Cities**

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Test Probe No.: P2

Sheet 1 of 1

Date(s) Drilled: **05/22/17**	Logged By: **SL**	Surface Conditions: **Asphalt**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type: **2" Probe**	Total Depth of Borehole: **20 feet bgs**
Drill Rig Type: **Truck-Mounted**	Drilling Contractor: **Holocene**	Approximate Surface Elevation: **114.5'**
Groundwater Level: **14' bgs**	Sampling Method(s): **Continuous**	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **631 Queen Anne Avenue North, Seattle, Washington 98109**	

PID Reading, ppm	Sample ID	Sample Type	% Recovery	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
					0	Asphalt	
			70			Grayish brown, silty SAND, dense, moist, strong odor, slight sheen	
42	P2-4						
			85		5		
41	P2-7.5						
						Compact density fill (CDF) or concrete	
						Brown, silty SAND, dense, moist, slight odor, slight sheen	
			75		10		
25	P2-14			▽			
						Gray, silty SAND, dense, moist, strong odor, sheen	
0.021	P2-17		90		15		
0.031	P2-20				20	Boring terminated 20 feet bgs	
					25		

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Project Name: **Arnold's/Former Texaco Service Station No. 211577**
Project Number: **2017-015C**
Client: **Vibrant Cities**

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Test Probe No.: P3

Sheet 1 of 1

Date(s) Drilled: **05/22/17**	Logged By: **SL**	Surface Conditions: **Asphalt**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type: **2" Probe**	Total Depth of Borehole: **20 feet bgs**
Drill Rig Type: **Truck-Mounted**	Drilling Contractor: **Holocene**	Approximate Surface Elevation: **114'**
Groundwater Level: **13' bgs**	Sampling Method(s): **Continuous**	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **631 Queen Anne Avenue North, Seattle, Washington 98109**	

PID Reading, ppm	Sample ID	Sample Type	% Recovery	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
					0	Asphalt	
			60			Brown, silty SAND, medium dense, moist, no odor, no sheen	
7.032	P3-5				5	Gray, silty SAND, medium dense, moist, strong odor, slight sheen	
			85				
0.15	P3-8					Brown, silty SAND, moist, no odor, no sheen	
					10		
			75				
30	P3-13			▽		Gray, silty SAND, medium dense, odor, slight sheen	
						Wet	
					15		
						No odor	
			90				
25	P3-20				20	Boring terminated 20 feet bgs	
					25		

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Project Name: **Arnold's/Former Texaco Service Station No. 211577**
Project Number: **2017-015C**
Client: **Vibrant Cities**

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Test Probe No.: P4

Sheet 1 of 1

Date(s) Drilled: **05/22/17**	Logged By: **SL**	Surface Conditions: **Concrete**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type: **2" Probe**	Total Depth of Borehole: **5.5 feet bgs**
Drill Rig Type: **Track-Mounted, Limited Access**	Drilling Contractor: **Holocene**	Approximate Surface Elevation: **114'**
Groundwater Level: **Not Encountered**	Sampling Method(s): **Continuous**	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **631 Queen Anne Avenue North, Seattle, Washington 98109**	

PID Reading, ppm	Sample ID	Sample Type	% Recovery	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
					0	Concrete	
			80			Light brown, silty SAND, medium dense, moist, no odor, no sheen	
0.013	P4-2						
			80				
0.01	P4-4						
			70		5		
0.01	P4-5.5					Boring refusal at 5.5 feet bgs	
					10		
					15		
					20		
					25		

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Project Name: **Arnold's/Former Texaco Service Station No. 211577**
Project Number: **2017-015C**
Client: **Vibrant Cities**

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Test Probe No.: P5

Sheet 1 of 1

Date(s) Drilled: **05/22/17**	Logged By: **SL**	Surface Conditions: **Concrete**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type: **2" Probe**	Total Depth of Borehole: **6 feet bgs**
Drill Rig Type: **Track-Mounted, Limited Access**	Drilling Contractor: **Holocene**	Approximate Surface Elevation: **114'**
Groundwater Level: **Not Encountered**	Sampling Method(s): **Continuous**	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **631 Queen Anne Avenue North, Seattle, Washington 98109**	

PID Reading, ppm	Sample ID	Sample Type	% Recovery	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
					0	Concrete	
			80			Light brown, silty SAND, dense, moist, no odor, no sheen	
0.013	P5-2						
			45				
0.011	P5-4						
			0		5		
						Boring refusal at 6 feet bgs	
					10		
					15		
					20		
					25		

Project Name: **Arnold's/Former Texaco Service Station No. 211577**
Project Number: **2017-015C**
Client: **Vibrant Cities**

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Test Probe No.: P6

Sheet 1 of 1

Date(s) Drilled: **05/22/17**	Logged By: **SL**	Surface Conditions: **Concrete**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type: **2" Probe**	Total Depth of Borehole: **4 feet bgs**
Drill Rig Type: **Track-Mounted, Limited Access**	Drilling Contractor: **Holocene**	Approximate Surface Elevation: **114'**
Groundwater Level: **Not Encountered**	Sampling Method(s): **Continuous**	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **631 Queen Anne Avenue North, Seattle, Washington 98109**	

PID Reading, ppm	Sample ID	Sample Type	% Recovery	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
					0	Concrete	
0.021	P6-1		80			Light brown, silty SAND with gravel, dense, moist, no odor, no sheen	
0.017	P6-4		75			Boring refusal at 4 feet bgs	
					5		
					10		
					15		
					20		
					25		

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Project Name: **Arnold's/Former Texaco Service Station No. 211577**
Project Number: **2017-015C**
Client: **Vibrant Cities**

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Test Probe No.: P7

Sheet 1 of 1

Date(s) Drilled: **05/22/17**	Logged By: **SL**	Surface Conditions: **Concrete**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type: **2" Probe**	Total Depth of Borehole: **6 feet bgs**
Drill Rig Type: **Track-Mounted, Limited Access**	Drilling Contractor: **Holocene**	Approximate Surface Elevation: **114'**
Groundwater Level: **Not Encountered**	Sampling Method(s): **Continuous**	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **631 Queen Anne Avenue North, Seattle, Washington 98109**	

PID Reading, ppm	Sample ID	Sample Type	% Recovery	GW Depth	Depth (feet)	MATERIAL DESCRIPTION	Graphic Log
					0	Concrete	
			80			Light brown, silty SAND, dense, moist, no odor, no sheen	
0.009	P7-2						
			75				
0.010	P7-4				5		
			70				
0.011	P7-6					Boring refusal at 6 feet bgs	
					10		
					15		
					20		
					25		

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Project Name: **Arnold's/Former Texaco Service Station No. 211577**
Project Number: **2017-015D**
Client: **Vibrant Cities**

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Boring Log Key

Sheet 1 of 1

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

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

FIELD AND LABORATORY TEST ABBREVIATIONS

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

MATERIAL GRAPHIC SYMBOLS

- Asphaltic Concrete (AC)
- Lean CLAY, CLAY w/SAND, SANDY CLAY (CL)
- Portland Cement Concrete
- AF
- Poorly graded GRAVEL (GP)
- SILT, SILT w/SAND, SANDY SILT (ML)
- Silty SAND (SM)
- Silty SAND to Sandy SILT (SM-ML)
- Poorly graded SAND (SP)
- Poorly graded SAND with Silt (SP-SM)

TYPICAL SAMPLER GRAPHIC SYMBOLS

- Auger sampler
- Bulk Sample
- 3-inch-OD California w/ brass rings
- CME Sampler
- Grab Sample
- 2.5-inch-OD Modified California w/ brass liners
- Pitcher Sample
- 2-inch-OD unlined split spoon (SPT)
- Shelby Tube (Thin-walled, fixed head)

OTHER GRAPHIC SYMBOLS

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

GENERAL NOTES

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

Project Name: **Arnold's/Former Texaco Service Station No. 211577**
Project Number: **2017-015C**
Client: **Vibrant Cities**

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Boring Log Key

Sheet 1 of 1

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

1. PID Reading, ppm: The reading from a photo-ionization detector, in parts per million.
2. Sample ID: Sample identification number.
3. Sample Type: Type of soil sample collected at the depth interval shown,
4. % Recovery: % Recoverysquare foot.
5. GW Depth: Groundwater depth in feet below the ground surface.
6. Depth (feet): Depth in feet below the ground surface.
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SA: Sieve analysis (percent passing No. 200 Sieve)
UC: Unconfined compressive strength test, Qu, in ksf
WA: Wash sieve (percent passing No. 200 Sieve)

MATERIAL GRAPHIC SYMBOLS

Asphaltic Concrete (AC)

Portland Cement Concrete

Silty SAND (SM)

TYPICAL SAMPLER GRAPHIC SYMBOLS

Auger sampler

Bulk Sample

3-inch-OD California w/ brass rings

CME Sampler

Grab Sample

2.5-inch-OD Modified California w/ brass liners

Pitcher Sample

2-inch-OD unlined split spoon (SPT)

Shelby Tube (Thin-walled, fixed head)

OTHER GRAPHIC SYMBOLS

Water level (at time of drilling, ATD)

Water level (after waiting)

Minor change in material properties within a stratum

Inferred/gradational contact between strata

Queried contact between strata

GENERAL NOTES

1: Soil classifications are based on the Unified Soil Classification System. Descriptions and stratum lines are interpretive, and actual lithologic changes may be gradual. Field descriptions may have been modified to reflect results of lab tests.
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SoundEarth Strategies

Project:	Arnold's Property
Project Number:	0320-001
Logged by:	RAH
Date Started:	5/2/12
Surface Conditions:	Asphalt
Well Location N/S:	3.6' S of MW10
Well Location E/W:	4.2' W of MW10
Reviewed by:	RKB
Date Completed:	5/2/12

BORING LOG | P01

Site Address: 631 Queen Anne Avenue North, Seattle, Washington

Water Depth At Time of Drilling: 11 feet bgs
Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
0						SP		**Asphalt at surface.**	
			80	1.0				**Damp to moist, medium to fine SAND with silt and gravel, light brown, no hydrocarbon odor (10-80-10).**	
				1.1	P01-04				
5						SM		**Damp, dense, silty SAND with gravel, dark brown, no hydrocarbon odor (20-70-10).**	
			80	3.8	P01-06				
				1.9		SP		**Moist, dense, medium to fine SAND with silt and gravel, brown, no hydrocarbon odor (10-85-5).**	
10			70	4.3					
				11.1	P01-11			**Wet, dense, medium to fine SAND with silt and gravel, reddish-brown, no hydrocarbon odor (10-85-5).**	
			100	44	P01-14			**Wet, dense, medium to fine SAND with silt, brownish gray to gray, slight to moderate hydrocarbon odor (5-95-0).**	
15									

Drilling Co./Driller:	ESN/Don		
Drilling Equipment:	Direct Push		
Sampler Type:	--		
Hammer Type/Weight:	--	lbs	
Total Boring Depth:	24	feet bgs	
Total Well Depth:	--	feet bgs	
State Well ID No.:	--		

Well/Auger Diameter:	--/2	inches
Well Screened Interval:	--	feet bgs
Screen Slot Size:	--	inches
Filter Pack Used:	--	
Surface Seal:	Asphalt	
Annular Seal:	Bentonite	
Monument Type:	--	

Notes/Comments:

SoundEarth Strategies

Project:	Arnold's Property
Project Number:	0320-001
Logged by:	RAH
Date Started:	5/2/12
Surface Conditions:	Asphalt
Well Location N/S:	3.6' S of MW10
Well Location E/W:	4.2' W of MW10
Reviewed by:	RKB
Date Completed:	5/2/12

BORING LOG | P01

Site Address: 631 Queen Anne Avenue North, Seattle, Washington

Water Depth At Time of Drilling: 11 feet bgs
Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
15				3.8					
				2.1		ML		**Damp, dense, SILT with fine sand, brown, no hydrocarbon odor (60-40-0).**	
			100						
20				2.1	P01-20				
				1.0				**Damp, dense, SILT with fine sand, gray, no hydrocarbon odor (60-40-0).**	
			100						
				1.0	P01-24				
								Boring terminated at 24' bgs.	
25									
30									

Drilling Co./Driller:	ESN/Don		**Well/Auger Diameter:**	--/2	inches	**Notes/Comments:**
Drilling Equipment:	Direct Push		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	--		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	24	feet bgs	**Surface Seal:**	Asphalt		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project:	Arnold's Property
Project Number:	0320-001
Logged by:	RAH
Date Started:	5/2/12
Surface Conditions:	Asphalt
Well Location N/S:	0' S of MW13
Well Location E/W:	11.5' W of MW13
Reviewed by:	RKB
Date Completed:	5/2/12

BORING LOG | P02

Site Address: 631 Queen Anne Avenue North, Seattle, Washington

Water Depth At Time of Drilling: 11 feet bgs
Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
0						SM		**Asphalt at surface.**	
			80	1.0				**Damp, dense, silty SAND with gravel, brown, no hydrocarbon odor (20-75-5).**	
				1.3	P02-04			**Moist, dense, silty SAND with gravel, brown, no hydrocarbon odor (20-75-5).**	
5			80	1.0					
				0.8	P02-08	SP		**Moist, dense, medium to fine SAND with silt and gravel, brown, no hydrocarbon odor (10-85-5).**	
				2.4					
10			90						
				24.7	P02-11			**Wet, dense, medium to fine SAND with silt and gravel, brown, moderate hydrocarbon odor (10-85-5).**	
				4.3					
			100						
15									

Drilling Co./Driller:	ESN/Don		**Well/Auger Diameter:**	--/2	inches	**Notes/Comments:**
Drilling Equipment:	Direct Push		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	--		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	24	feet bgs	**Surface Seal:**	Asphalt		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project:	Arnold's Property
Project Number:	0320-001
Logged by:	RAH
Date Started:	5/2/12
Surface Conditions:	Asphalt
Well Location N/S:	0' S of MW13
Well Location E/W:	11.5' W of MW13
Reviewed by:	RKB
Date Completed:	5/2/12

BORING LOG | P02

Site Address: 631 Queen Anne Avenue North, Seattle, Washington

Water Depth At Time of Drilling: 11 feet bgs
Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
15				4.3	P02-16				
				1.9					
			--						
20				2.4	P02-20				
				1.0		ML		**Damp, dense, SILT with fine sand, gray, no hydrocarbon odor (60-40-0).**	
			--						
				0.5	P02-24				
								Boring terminated at 24' bgs.	
25									
30									

Drilling Co./Driller:	ESN/Don		**Well/Auger Diameter:**	--/2	inches	**Notes/Comments:**
Drilling Equipment:	Direct Push		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	--		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	24	feet bgs	**Surface Seal:**	Asphalt		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project:	Arnold's Property
Project Number:	0320-001
Logged by:	RAH
Date Started:	5/2/12
Surface Conditions:	Asphalt
Well Location N/S:	2.0' S of MW09
Well Location E/W:	75.2' E of MW09
Reviewed by:	RKB
Date Completed:	5/2/12

BORING LOG | P03

Site Address: 631 Queen Anne Avenue North, Seattle, Washington

Water Depth At Time of Drilling: 11 feet bgs
Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
0						SM		**Asphalt at surface.**	
			80	1.9				**Damp, dense, silty SAND with gravel, brown, no hydrocarbon odor (20-70-10).**	
				34.5	P03-04			**Damp, dense, silty SAND with gravel, dark brown, moderate hydrocarbon odor (20-75-5).**	
5									
			80	4.9				**Damp, dense, silty SAND with gravel, brown, no hydrocarbon odor (20-70-10).**	
				2.9	P03-08	SP		**Moist, dense, medium to fine SAND with silt and gravel, brown, no hydrocarbon odor (5-90-5).**	
				4.6					
10			100						
				100.2	P03-11			**Wet, dense, medium to fine SAND with silt and gravel, gray to brownish gray, moderate to strong hydrocarbon odor (5-90-5).**	
				23.6					
			100						
15									

Drilling Co./Driller:	ESN/Don		**Well/Auger Diameter:**	--/2	inches	**Notes/Comments:**
Drilling Equipment:	Direct Push		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	--		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	24	feet bgs	**Surface Seal:**	Asphalt		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project:	Arnold's Property
Project Number:	0320-001
Logged by:	RAH
Date Started:	5/2/12
Surface Conditions:	Asphalt
Well Location N/S:	2.0' S of MW09
Well Location E/W:	75.2' E of MW09
Reviewed by:	RKB
Date Completed:	5/2/12

BORING LOG | P03

Site Address: 631 Queen Anne Avenue North, Seattle, Washington

Water Depth At Time of Drilling: 11 feet bgs
Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
15				203.5	P03-15				
						ML		**Damp, dense, SILT with fine sand, dark brown, no hydrocarbon odor (60-40-0).**	
				648		SP		**Wet, dense, medium to fine SAND with silt and gravel, gray, strong hydrocarbon odor (10-80-10).**	
			100						
								Wet, dense, medium to fine SAND with silt and gravel, gray, no hydrocarbon odor (10-80-10).	
20				4.0	P03-20			**Wet, dense, medium to fine SAND with silt and gravel, brown, no hydrocarbon odor (10-80-10).**	
				4.0					
			--						
				2.7	P03-24				
								Boring terminated at 24' bgs.	
25									
30									

Drilling Co./Driller:	ESN/Don		**Well/Auger Diameter:**	--/2	inches	**Notes/Comments:**
Drilling Equipment:	Direct Push		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	--		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	24	feet bgs	**Surface Seal:**	Asphalt		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project:	Arnold's Property
Project Number:	0320-001
Logged by:	RAH
Date Started:	5/2/12
Surface Conditions:	Asphalt
Well Location N/S:	7.6' S of DPE-G
Well Location E/W:	10.0' E of DPE-C
Reviewed by:	RKB
Date Completed:	5/2/12

BORING LOG | P04

Site Address: 631 Queen Anne Avenue North, Seattle, Washington

Water Depth At Time of Drilling: 11 feet bgs
Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
0						SM		**Asphalt at surface.**	
			90	1.0				**Damp, dense, silty SAND with gravel, light brown, no hydrocarbon odor (20-70-10).**	
				1.9	P04-04			**Damp, dense, silty SAND with gravel, light brown, no hydrocarbon odor (20-75-5).**	
5			90	2.1					
				3.8	P04-08			**Damp, dense, silty SAND with gravel, light brown, no hydrocarbon odor (20-70-10).**	
				4.6		SP		**Moist, dense, medium to fine SAND with silt and gravel, grayish-brown, no hydrocarbon odor (10-80-10).**	
10			--						
				567	P04-11			**Wet, dense, medium to fine SAND with silt and gravel, gray, strong hydrocarbon odor (10-80-10).**	
			--						
15									

Drilling Co./Driller:	ESN/Don		**Well/Auger Diameter:**	--/2	inches	**Notes/Comments:**
Drilling Equipment:	Direct Push		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	--		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	24	feet bgs	**Surface Seal:**	Asphalt		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project:	Arnold's Property
Project Number:	0320-001
Logged by:	RAH
Date Started:	5/2/12
Surface Conditions:	Asphalt
Well Location N/S:	7.6' S of DPE-G
Well Location E/W:	10.0' E of DPE-C
Reviewed by:	RKB
Date Completed:	5/2/12

BORING LOG | P04

Site Address: 631 Queen Anne Avenue North, Seattle, Washington

Water Depth At Time of Drilling: 11 feet bgs
Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
15				76.2	P04-15			**Wet, dense, medium to fine SAND with silt and gravel, brownish-gray, slight hydrocarbon odor (5-85-10).**	
				63.2					
			100						
								Wet, dense, medium to fine SAND with silt and gravel, brown, no hydrocarbon odor (5-95-0).	
20				9.5	P04-20				
				3.9					
				2.4	P04-24				
								Boring terminated at 24' bgs.	
25									
30									

Drilling Co./Driller:	ESN/Don		**Well/Auger Diameter:**	--/2	inches	**Notes/Comments:**
Drilling Equipment:	Direct Push		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	--		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	24	feet bgs	**Surface Seal:**	Asphalt		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project:	Arnold's Property
Project Number:	0320-001
Logged by:	RAH
Date Started:	5/2/12
Surface Conditions:	Asphalt
Well Location N/S:	8' N of DPE-6
Well Location E/W:	27.8' W of DPE-6
Reviewed by:	RKB
Date Completed:	5/2/12

BORING LOG | P05

Site Address: 631 Queen Anne Avenue North, Seattle, Washington

Water Depth At Time of Drilling: 11 feet bgs
Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
0			100	1.6		SP		**Asphalt at surface.** **Damp, dense, medium to fine SAND with gravel and silt, light brown, no hydrocarbon odor (10-80-10).**	
5			80	29.1	P05-04	SM		**Damp, dense, silty SAND with gravel, dark brown, moderate hydrocarbon odor (20-75-5).**	
				30.0				**Damp, dense, silty SAND with gravel, dark brown, brick fragments and fill debris towards bottom, no hydrocarbon odor (20-70-10).**	
				2.4	P05-08				
10			--	6.0					
				6.2	P05-11	SP		**Wet, dense, medium to fine SAND with silt and gravel, dark brown to dark gray, slight hydrocarbon odor (10-85-5).**	
				10.3				**Wet, dense, medium to fine SAND with silt, dark brown to dark gray, slight hydrocarbon odor (10-90-0).**	
15			--						

Drilling Co./Driller:	ESN/Don		**Well/Auger Diameter:**	--/2	inches	**Notes/Comments:**
Drilling Equipment:	Direct Push		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	--		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	24	feet bgs	**Surface Seal:**	Asphalt		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project:	Arnold's Property
Project Number:	0320-001
Logged by:	RAH
Date Started:	5/2/12
Surface Conditions:	Asphalt
Well Location N/S:	8' N of DPE-6
Well Location E/W:	27.8' W of DPE-6
Reviewed by:	RKB
Date Completed:	5/2/12

BORING LOG | P05

Site Address: 631 Queen Anne Avenue North, Seattle, Washington

Water Depth At Time of Drilling: 11 feet bgs
Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
15				12.5	P05-15			**Wet, dense, medium to fine SAND with silt, brown, no hydrocarbon odor (5-95-0).**	
				12.5				**Moist, dense, medium to fine SAND with gravel and silt, brown, no hydrocarbon odor (10-80-10).**	
			--						
								Wet, dense, medium to fine SAND, dark gray, strong hydrocarbon odor (5-95-0).	
20				827	P05-20				
								Wet, dense, medium to fine SAND with silt, grayish-brown, slight hydrocarbon odor (5-95-0).	
			100	46.8					
								Wet, dense, medium to fine SAND with silt, brown, no hydrocarbon odor (5-95-0).	
				3.5	P05-24				
								Boring terminated at 24' bgs.	
25									
30									

Drilling Co./Driller:	ESN/Don		**Well/Auger Diameter:**	--/2	inches	**Notes/Comments:**
Drilling Equipment:	Direct Push		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	--		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	24	feet bgs	**Surface Seal:**	Asphalt		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project:	Arnold's Property
Project Number:	0320-001
Logged by:	RAH
Date Started:	5/2/12
Surface Conditions:	Asphalt
Well Location N/S:	6.6' S of MW09
Well Location E/W:	23.3' W of MW09
Reviewed by:	RKB
Date Completed:	5/2/12

BORING LOG | P06

Site Address: 631 Queen Anne Avenue North, Seattle, Washington

Water Depth At Time of Drilling: 11 feet bgs
Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
0			90	1.0		SM		**Asphalt at surface.** **Damp, dense, silty SAND with gravel and brick fragments, light brown, no hydrocarbon odor (20-70-10).**	
5				1.0	P06-04	ML		**Damp, dense SILT with gravel and fine sand, dark brown, no hydrocarbon odor (40-50-10).**	
			--	1.0		SP		**Damp, dense, medium to fine SAND, light brown, no hydrocarbon odor (5-95-0).**	
				0.8	P06-07	ML		**Damp, dense, SILT with fine sand and wood fragments, dark brown, no hydrocarbon odor (40-50-10).**	
10			--	4.3		SP		**Moist, dense, medium to fine SAND with silt, brown, no hydrocarbon odor (5-95-0).**	
				74.3	P06-11			**Wet, dense, medium to fine SAND with silt brownish grey, slight hydrocarbon odor (10-80-10).**	
15			--	116	P06-14				

Drilling Co./Driller:	ESN/Don		**Well/Auger Diameter:**	--/2	inches	**Notes/Comments:**
Drilling Equipment:	Direct Push		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	--		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	24	feet bgs	**Surface Seal:**	Asphalt		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project:	Arnold's Property
Project Number:	0320-001
Logged by:	RAH
Date Started:	5/2/12
Surface Conditions:	Asphalt
Well Location N/S:	6.6' S of MW09
Well Location E/W:	23.3' W of MW09
Reviewed by:	RKB
Date Completed:	5/2/12

BORING LOG | P06

Site Address: 631 Queen Anne Avenue North
Seattle, Washington

Water Depth At Time of Drilling: 11 feet bgs
Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
15				28.7				**Wet, dense, medium to fine SAND with gravel and silt, brownish gray to gray, slight to moderate hydrocarbon odor (10-80-10).**	
			--						
				PID inoperable	P06-19				
20								**Wet, dense, medium SAND with silt and gravel, gray, no hydrocarbon odor (5-90-5).**	
			--						
				PID inoperable	P06-24				
25								**Boring terminated at 24' bgs.**	
30									

Drilling Co./Driller:	ESN/Don		**Well/Auger Diameter:**	-/2	inches	**Notes/Comments:**
Drilling Equipment:	Direct Push		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	--		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	24	feet bgs	**Surface Seal:**	Asphalt		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project:	Arnold's Property
Project Number:	0320-001
Logged by:	RAH
Date Started:	5/2/12
Surface Conditions:	Asphalt
Well Location N/S:	26' S of MW09
Well Location E/W:	31' W of MW09
Reviewed by:	RKB
Date Completed:	5/2/12

BORING LOG | P07

Site Address: 631 Queen Anne Avenue North, Seattle, Washington

Water Depth At Time of Drilling: 11 feet bgs
Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
0						SM		**Asphalt at surface.**	
			90					**Damp, dense, silty SAND with gravel, light brown, no hydrocarbon odor (20-70-10).**	
				PID Inoperable	P07-04			**Damp, dense, silty SAND with gravel, dark brown, slight hydrocarbon odor (20-75-5).**	
5			90						
				PID Inoperable	P07-08			**Damp, dense, silty SAND with gravel and asphalt debris, dark brown, strong hydrocarbon odor (20-75-5).**	
								Damp, dense, silty SAND with gravel, dark brown, slight hydrocarbon odor (20-75-5).	
10			80			SP		**Wet, dense, medium to fine SAND with silt, dark gray, slight hydrocarbon odor (5-95-0).**	
				PID Inoperable	P07-11				
								Wet, dense, medium to fine SAND, dark gray, strong hydrocarbon odor (5-95-0).	
			100	315	P07-14				
15									

Drilling Co./Driller:	ESN/Don		**Well/Auger Diameter:**	--/2	inches	**Notes/Comments:**
Drilling Equipment:	Direct Push		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	--		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	24	feet bgs	**Surface Seal:**	Asphalt		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project:	Arnold's Property
Project Number:	0320-001
Logged by:	RAH
Date Started:	5/2/12
Surface Conditions:	Asphalt
Well Location N/S:	26' S of MW09
Well Location E/W:	31' W of MW09
Reviewed by:	RKB
Date Completed:	5/2/12

BORING LOG | P07

Site Address: 631 Queen Anne Avenue North, Seattle, Washington

Water Depth At Time of Drilling: 11 feet bgs
Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
15				326				**Wet, dense, medium to fine SAND, reddish-brown, slight hydrocarbon odor (5-95-0).**	
				7.2					
			--					**Silt lens.**	
								Wet, dense, medium to fine SAND, dark gray, strong hydrocarbon odor (5-95-0).	
20				476	P07-20				
			--	285					
				4.2	P07-24			**Wet, dense, medium to fine SAND, gray, slight hydrocarbon odor (5-95-0).**	
								Boring terminated at 24' bgs.	
25									
30									

Drilling Co./Driller:	ESN/Don		**Well/Auger Diameter:**	-/2	inches	**Notes/Comments:**
Drilling Equipment:	Direct Push		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	--		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	24	feet bgs	**Surface Seal:**	Asphalt		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project:	Arnold's Property
Project Number:	0320-001
Logged by:	RAH
Date Started:	5/2/12
Surface Conditions:	Asphalt
Well Location N/S:	4.4' S of NW corner of ramp
Well Location E/W:	4.8' W of NW corner of ramp
Reviewed by:	RKB
Date Completed:	5/2/12

BORING LOG | P08

Site Address: 631 Queen Anne Avenue North, Seattle, Washington

Water Depth At Time of Drilling: 11 feet bgs
Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
0			--			Blank		**Asphalt at surface.** **Rotten log.**	
5			50						
				0.2	P08-08	SM		**Damp, loose, silty SAND with gravel, dark brown, no hydrocarbon odor (20-75-5).** **Moist, dense, silty SAND with gravel, dark brown, no hydrocarbon odor (20-75-5).**	
10			80	0.3		SP		**Wet, dense, medium to fine SAND with silt, brownish-gray, no hydrocarbon odor (5-95-0).**	
				3.7	P08-11				
			75	662	P08-14			**Wet, medium to fine SAND with silt, gray, strong hydrocarbon hydrocarbon odor (5-95-0).**	
15									

Drilling Co./Driller:	ESN/Don		**Well/Auger Diameter:**	--/2	inches	**Notes/Comments:**
Drilling Equipment:	Direct Push		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	--		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	28	feet bgs	**Surface Seal:**	Asphalt		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project:	Arnold's Property
Project Number:	0320-001
Logged by:	RAH
Date Started:	5/2/12
Surface Conditions:	Asphalt
Well Location N/S:	4.4' S of NW corner of ramp
Well Location E/W:	4.8' W of NW corner of ramp
Reviewed by:	RKB
Date Completed:	5/2/12

BORING LOG | P08

Site Address: 631 Queen Anne Avenue North, Seattle, Washington

Water Depth At Time of Drilling: 11 feet bgs
Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
15				36.0	P08-16			**Wet, dense, medium to fine SAND, gray, no hydrocarbon odor (5-95-0).**	
				237				**Moist, dense, medium to fine SAND, brown, strong hydrocarbon odor (5-95-0).**	
			90						
				298	P08-19				
20								**Wet, dense, medium to fine SAND, brown, strong hydrocarbon odor (5-95-0).**	
			--	277					
				30.1		ML		**Damp, dense, SILT with fine sand, brown, moderate hydrocarbon odor (60-40-0).**	
25			--	7.0				**Damp, dense, SILT with fine sand, gray, no hydrocarbon odor (70-30-0).**	
				2.4	P08-28				
								Boring terminated at 28' bgs.	
30									

Drilling Co./Driller:	ESN/Don		**Well/Auger Diameter:**	-/2	inches	**Notes/Comments:**
Drilling Equipment:	Direct Push		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	--		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	28	feet bgs	**Surface Seal:**	Asphalt		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project:	Arnold's Property
Project Number:	0320-001
Logged by:	RAH
Date Started:	5/2/12
Surface Conditions:	Asphalt
Well Location N/S:	0' N of DPE-7
Well Location E/W:	8.7' W of DPE-7
Reviewed by:	RKB
Date Completed:	5/2/12

BORING LOG | P09

Site Address: 631 Queen Anne Avenue North, Seattle, Washington

Water Depth At Time of Drilling: 12 feet bgs
Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
0						SM		**Asphalt at surface.** **Damp, loose, silty SAND with gravel, dark brown, no hydrocarbon odor (20-75-5).**	
			90	0.9		SP		**Damp, loose, medium to fine SAND with silt, light brown, no hydrocarbon odor (5-95-0).**	
5			100	0.8	P09-03	SM		**Damp, loose, silty SAND with gravel, dark brown, no hydrocarbon odor (20-75-5).**	
				1.5	P09-08				
10			--	1.6		SP		**Moist, dense, medium to fine SAND with silt, light brown, no hydrocarbon odor (5-95-0).**	
				6.5	P09-12			**Wet, dense, medium to fine SAND with silt, light brown, no hydrocarbon odor (5-95-0).**	
				16					
15			--						

Drilling Co./Driller:	ESN/Don		**Well/Auger Diameter:**	--/2	inches	**Notes/Comments:**
Drilling Equipment:	Direct Push		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	--		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	24	feet bgs	**Surface Seal:**	Asphalt		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project:	Arnold's Property
Project Number:	0320-001
Logged by:	RAH
Date Started:	5/2/12
Surface Conditions:	Asphalt
Well Location N/S:	0' N of DPE-7
Well Location E/W:	8.7' W of DPE-7
Reviewed by:	RKB
Date Completed:	5/2/12

BORING LOG | P09

Site Address: 631 Queen Anne Avenue North, Seattle, Washington

Water Depth At Time of Drilling: 12 feet bgs
Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
15				177	P09-15			**Wet, dense, medium to fine SAND, dark gray, strong hydrocarbon odor (5-95-0).**	
								Wet, dense, medium to fine SAND, brown.	
				2.3					
			90						
								Wet, dense, medium to fine SAND with silt, gray, moderate hydrocarbon odor (5-95-0).	
20				42.3	P09-20				
				4.7				**Wet, dense, medium to fine SAND with silt, light gray to gray, no hydrocarbon odor (5-95-0).**	
				4.4	P09-24				
								Boring terminated at 24' bgs.	
25									
30									

Drilling Co./Driller:	ESN/Don		**Well/Auger Diameter:**	--/2	inches	**Notes/Comments:**
Drilling Equipment:	Direct Push		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	--		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	24	feet bgs	**Surface Seal:**	Asphalt		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

BORING LOG Page 1 of 3

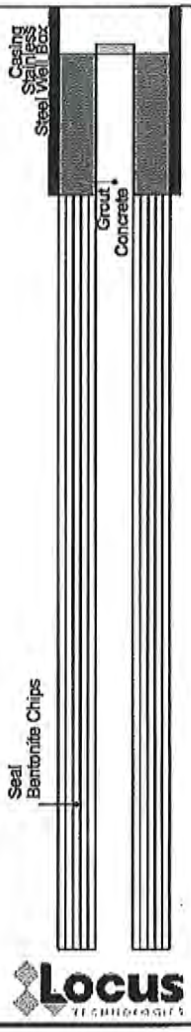
From Science to Solutions™

Well No: DPE-5
Chevron Site No: 211577
Site Location: 631 QUEEN ANNE AVE N SEATTLE WA
Date: 10/26/2005 - 10/31/2005

Well Diameter: 4 in	Driller: Cascade Drilling, Inc.	Total Depth: 28.0 Ft
Well Depth: 28 Ft	Drilling Method: Sonic Drilling	GW Depth: 18.0 Ft
Well Screen: 14-24 Ft 10 Slot	Consultant: SAIC	
Filter Pack: 16/30 Colorado Snd	Well Casing: Sch 40 PVC Elevation (TOC): 146.68 Ft	

Recov.	Depth Ft	Moist.	Blow Cnt	PPM	Soil Code	Soil Pattern	Soil Description
	0						Concrete and Asphalt. Airknife to 10 feet bgs.
		Moist			SW		Brown, very dense, fine to coarse SAND with silt and gravel.
	5						
		Moist			SP		Brown, dense, fine to medium SAND.
	10						

Well Construction



Locus

BORING LOG

From Science to Solutions™

Well No: DPE-5
Chevron Site No: 211577
Site Location: 631 QUEEN ANNE AVE N SEATTLE WA
Date: 10/26/2005 - 10/31/2005

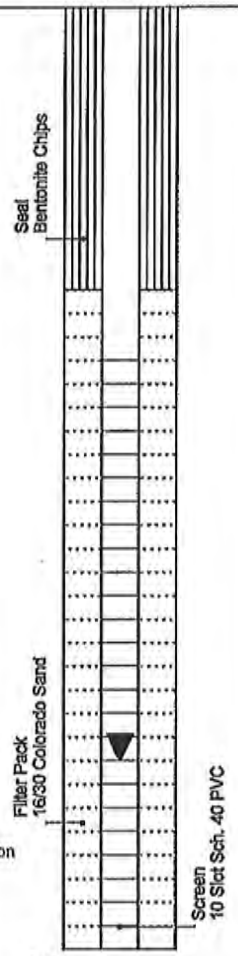
Well Diameter: 4 In
Well Depth: 28 Ft
Well Screen: 14-24 Ft 10 Slot
Filter Pack: 16/30 Colorado Snd

Driller: Cascade Drilling, Inc.
Drilling Method: Sonic Drilling
Consultant: SAIC
Well Casing: Sch 40 PVC
Elevation (TOC): 146.68 Ft

Total Depth: 28.0 Ft
GW Depth: 18.0 Ft

Recov.	Depth Ft	Moist.	Blow Cnt	PPM	Soil Code	Soil Pattern	Soil Description
	10	Moist		45.1	SW		Brown to gray, dense, fine to coarse SAND with 10% gravel and 5% silt; no odor; no sheen.
		Moist		86.9			Same as above; moderate odor; strong sheen.
		Moist		215	SP		Gray, fine to medium SAND with 10% silt and no gravel; strong odor; moderate sheen.
	15	Moist		1908			
		Moist		2073			Gray, fine to medium SAND, no gravel, no silt; strong odor; moderate sheen.
		Wet		2214	SM-SP		Gray, fine to medium SAND with two 2-inch silt layers interbedded; no gravel; strong odor; moderate sheen.
		Moist		2806	ML		Brown, reddish, sandy silt with 15% fine to medium sand and 5% gravel; dropstones and iron oxidation present; slight HC odor; slight sheen. (TILL?)
		Moist		1656			
	20			1165	SP		

Well Construction



Locus Technologies

BORING LOG

From Science to Solutions™

Well No: DPE-5
Chevron Site No: 211577
Site Location: 631 QUEEN ANNE AVE N SEATTLE WA
Date: 10/26/2005 - 10/31/2005

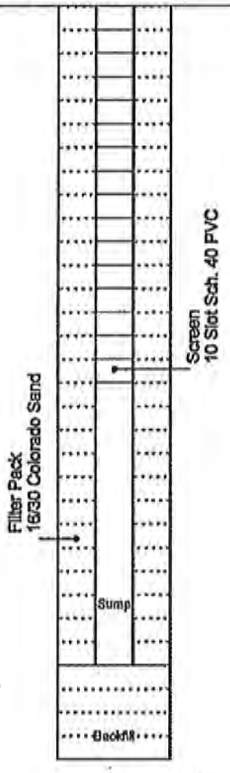
Well Diameter: 4 in
Well Depth: 28 Ft
Well Screen: 14-24 Ft 10 Slot
Filter Pack: 16/30 Colorado Snd

Driller: Cascade Drilling, Inc.
Drilling Method: Sonic Drilling
Consultant: SAIC
Well Casing: Sch 40 PVC Elevation (TOC): 146.68 Ft

Total Depth: 28.0 Ft
GW Depth: 18.0 Ft

Recov.	Depth Ft	Moist.	Blow Cnt	PPM	Soil Code	Soil Pattern	Soil Description
	20	Moist		1569	SP		Gray, fine to coarse SAND with 5% silt and 10% gravel; moderate HC odor; moderate sheen.
		Wet		1412	ML		Gray, fine sandy SILT with 15% SAND; moderate HC odor; strong sheen.
		Wet		2107	SP-SM		Brown to slightly gray, fine to coarse SAND with 15% gravel and 10% silt; strong HC odor; strong sheen.
				782			
				852			
				176			
	25						
		Dry		217	ML/CL		Gray, SILT with moderate plasticity and 10% gravel in upper 1.5 feet; no odor; no sheen.
				29			
				31.8			
				40.0			
	28.0						

Well Construction



Locus Technologies

BORING LOG

From Science to Solutions™

Well No: DPE-6
Chevron Site No: 211577
Site Location: 631 Queen Anne Ave N, Seattle, WA
Date: 10/17/2005

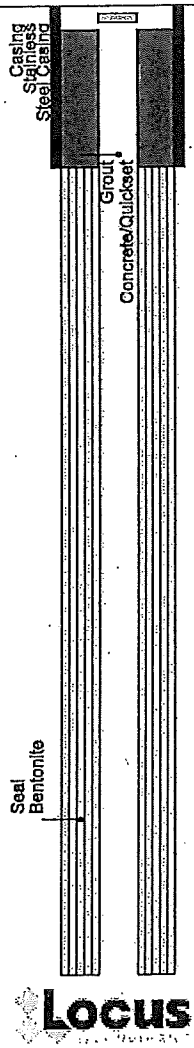
Well Diameter: 4 inches
Well Depth: 33.5 ft
Well Screen: 15.5-30.5 ft 10-Slot
Filter Pack: 16/30 Colorado Snd

Driller: Cascade Drilling, Inc.
Method: AirPercussion, Hollow Stem
Consultant: Gabriel Cisneros (SAIC, Bothell)
Well Casing: Sch 40 PVC Elevation (TOC): 146.19 msl

Total Depth: 33.5 Ft
GW Depth: 19.5 Ft

Recov.	Depth Ft	Moist.	Blow Cnt	OVM	Soil Code	Soil Pattern	Soil Description
	0	Moist			SW		Asphalt top 2-inches. Airknifed to 8 feet bgs. FILL: Brown, silty, gravelly SAND with chunks of concrete.
	5	Moist			SP-SM		Gray to brown, silty, fine to medium SAND with a silt layer at 8.25 feet and organics, no gravel; no odor; no sheen.
		Moist	8/13/16				Brown, fine to coarse SAND with thin interbeds of silt; less than 5% silt in sand beds, no gravel; slight odor; moderate sheen.
	10	Moist	15/50				Brown to gray, fine to medium, SAND interbedded with thin, organic, gray silt layers; no gravel and less than 5% silt in sandy layers; slight odor; moderate sheen in sandy layers.
		Moist					
	12						

Well Construction



Locus

BORING LOG

From Science to Solutions™

Well No: DPE-6
Chevron Site No: 211577
Site Location: 631 Queen Anne Ave N, Seattle, WA
Date: 10/17/2005

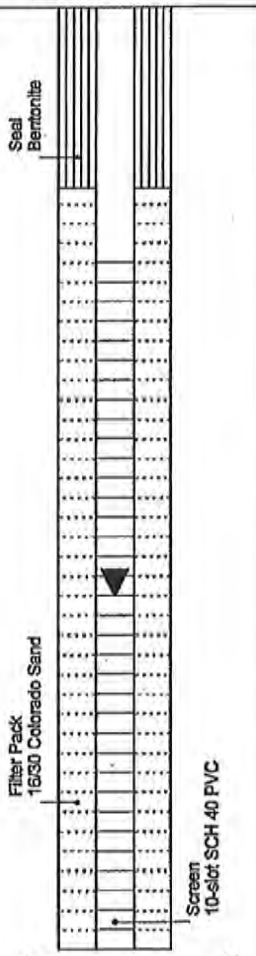
Well Diameter: 4 Inches
Well Depth: 33.5 ft
Well Screen: 15.5-30.5 ft 10-Slot
Filter Pack: 16/30 Colorado Snd

Driller: Cascade Drilling, Inc.
Method: AirPercussion, Hollow Stem
Consultant: Gabriel Cisneros (SAIC, Bothell)
Well Casing: Sch 40 PVC Elevation (TOC): 146.19 msl

Total Depth: 33.5 Ft
GW Depth: 19.5 Ft

Recov	Depth Ft	Moist.	Blow Cnt	OVM	Soil Code	Soil Pattern	Soil Description
	12	Moist					Same as above; moderate odor; moderate sheen.
			50				Same as above.
	15	Moist			SP-SM		Same as above; Brown to gray, fine to medium SAND with a 2-inch silt layer at top and 1-inch silt layer at bottom; 10% silt in sand layers; HC odor; moderate sheen.
		Moist	50				Same as above.
		Moist					Same as above; moderate HC odor; moderate sheen.
			16/50		SP		Orangish brown; fine to medium SAND; no silt; no gravel; no odor; no sheen.
	20	Moist			SP-SM		Gray, silty, fine to medium SAND with 30% silt and an organic silt layer at top; strong HC odor; moderate sheen.
			13/32/50		SP		Gray, fine to medium SAND with 5% silt; moderate HC odor; moderate sheen.
		Moist			SM		Gray, fine, silty SAND with 30% silt; moderate odor; no sheen.
		Wet					Same as above.
		Wet	50		SP		Orangish brown, fine to coarse SAND with 5% silt; no gravel; slight HC odor; slight sheen.
	24						

Well Construction



Locus Technologies

BORING LOG

SAIC® From Science to Solutions™

Well No: DPE-6
Chevron Site No: 211577
Site Location: 631 Queen Anne Ave N, Seattle, WA
Date: 10/17/2005

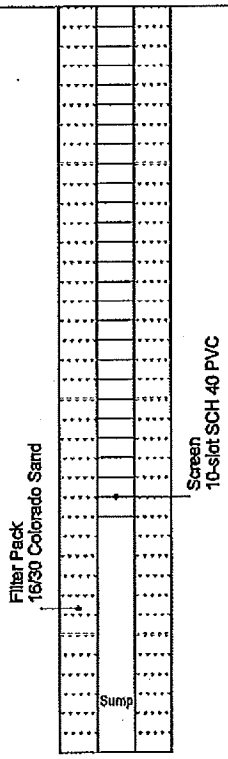
Well Diameter: 4 inches
Well Depth: 33.5 ft
Well Screen: 15.5-30.5 ft 10-Slot
Filter Pack: 16/30 Colorado Snd

Driller: Cascade Drilling, Inc.
Method: AirPercussion, Hollow Stem
Consultant: Gabriel Cisneros (SAIC, Bothell)
Well Casing: Sch 40 PVC Elevation (TOC): 146.19 msl

Total Depth: 33.5 Ft
GW Depth: 19.5 Ft

Recov.	Depth Ft	Moist.	Blow Cnt	OVM	Soil Code	Soil Pattern	Soil Description
	24	Wet			SP		
	25	Sat	50				Same as above; no odor; no sheen.
		Sat.	50				Gray, fine to medium SAND; no silt; no gravel; no odor; no sheen.
	30	Sat.					Same as above; no odor; no sheen.
		Moist	13/22/37		ML/CL		Gray, hard, SILT with low plasticity; no odor; no sheen.

Well Construction



Locus Technologies

BORING LOG

Page 1 of 4

From Science to Solutions™

Well No: DPE-7
Chevron Site No: 211577
Site Location: 631 Queen Anne N, Seattle, WA
Date: 10/17/2005 - 10/21/2005

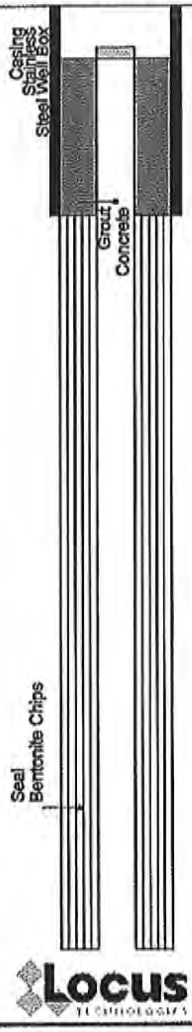
Well Diameter: 4 Inches
Well Depth: 32 ft
Well Screen: 11-29 ft 10-Slot
Filter Pack: 16/30 Colorado Snd

Driller: Cascade Drilling, Inc.
Method: AirPercussion, Hollow Stem
Consultant: Gabriel Cisneros (SAIC, Bothell)
Well Casing: Sch 40 PVC Elevation (TOC): 146.02 msl

Total Depth: 33.5 Ft
GW Depth: 23.0 Ft

Recov.	Depth Ft	Moist.	Blow Cnt	OVM	Soil Code	Soil Pattern	Soil Description
	0	Moist			SW		Asphalt top 2-inchesSilty, gravelly, fine to coarse SAND with blocks of concrete and large rocks; (FILL). Airknifed down to 8 feet bgs.
	5				SM		Silty, hard SAND (Till?)
		Moist	3/4/8	7.5			Gray, dark brown, silty fine-grained SAND with 13% silt and large angular clasts of silt; no odor; no sheen.
	9						

Well Construction



Locus Technologies

BORING LOG

From Science to Solutions™

Well No: DPE-7
Chevron Site No: 211577
Site Location: 631 Queen Anne N, Seattle, WA
Date: 10/17/2005 - 10/21/2005

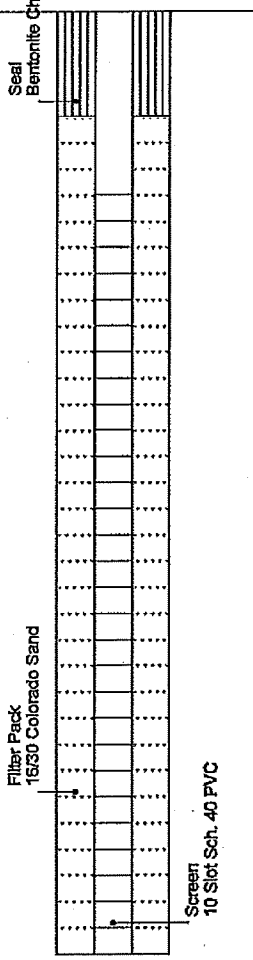
Well Diameter: 4 inches
Well Depth: 32 ft
Well Screen: 11-29 ft 10-Slot
Filter Pack: 16/30 Colorado Snd

Driller: Cascade Drilling, Inc.
Method: AirPercussion, Hollow Stem
Consultant: Gabriel Cisneros (SAIC, Bothell)
Well Casing: Sch 40 PVC Elevation (TOC): 146.02 msl

Total Depth: 33.5 Ft
GW Depth: 23.0 Ft

Recov	Depth Ft	Moist.	Blow Cnt	OVM	Soil Code	Soil Pattern	Soil Description
	9	Moist	3/4/8	7.5	SM		Gray, dark brown, silty fine-grained SAND with 13% silt and large angular clasts of silt; no odor; no sheen.
	10		5/8	8.3			
		Moist	11	722	SP		Gray to dark gray, fine to medium SAND with 5% silt, no gravel; strong HC odor; moderate sheen.
		Moist	8/11	182			Light brown, fine to medium SAND with no silt and no gravel; slight odor; slight sheen.
		Moist	11	16.7	SM		Light brown to gray, silty fine SAND with 20% silt and no gravel; slight HC odor; slight sheen.
	15	Moist	2/11	573	SM-SP		Light gray to brown, fine to medium SAND with 10% silt, no gravel; moderate HC odor; slight sheen.
		Moist	16	17.6			Same as above but with 5% silt and a 2-inch thick silt/clay layer interbedded within fine SAND; slight HC odor; slight sheen.
		Wet	14/14	231	SP		Brown, fine to coarse SAND with no silt and no gravel; slight odor; moderate sheen.
	18						

Well Construction



Locus TECHNOLOGIES

BORING LOG

From Science to Solutions™

Well No: DPE-7
Chevron Site No: 211577
Site Location: 631 Queen Anne N, Seattle, WA
Date: 10/17/2005 - 10/21/2005

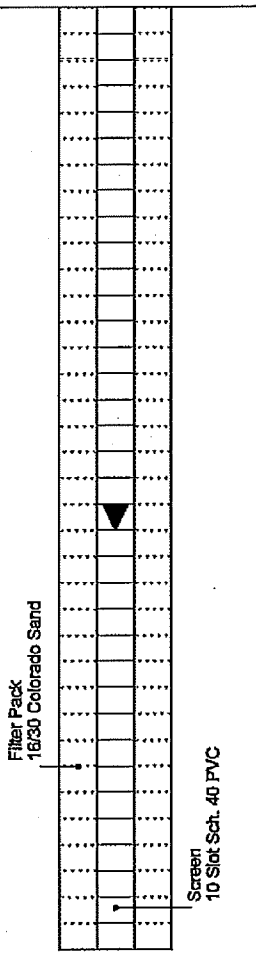
Well Diameter: 4 inches
Well Depth: 32 ft
Well Screen: 11-29 ft 10-Slot
Filter Pack: 16/30 Colorado Snd

Driller: Cascade Drilling, Inc.
Method: AirPercussion, Hollow Stem
Consultant: Gabriel Cisneros (SAIC, Bothell)
Well Casing: Sch 40 PVC Elevation (TOC): 146.02 msl

Total Depth: 33.5 Ft
GW Depth: 23.0 Ft

Recov.	Depth Ft	Moist.	Blow Cnt	OVM	Soil Code	Soil Pattern	Soil Description
	18	Wet	14/14	231	SP		Brown, fine to coarse SAND with no silt and no gravel; slight odor; moderate sheen.
		Wet					Gray, fine medium SAND with 5% silt; no gravel; slight odor; moderate sheen.
	20		12/16	17			
		Wet	22	580			Same as above but with a 2-inch silt layer interbedded within the sand at 20.5' bgs; strong HC odor; strong sheen.
			13/18	527			
			18	630			
		Wet			ML		Gray, stiff SILT with moderate plasticity; moderate HC odor; strong sheen.
	25	Sat.	22/50	590	SP		Gray, fine to medium SAND with no silt and no gravel; strong HC odor; moderate to heavy sheen.
	27						

Well Construction



Locus Technologies

BORING LOG

From Science to Solutions™

Well No: DPE-7
Chevron Site No: 211577
Site Location: 631 Queen Anne N, Seattle, WA
Date: 10/17/2005 - 10/21/2005

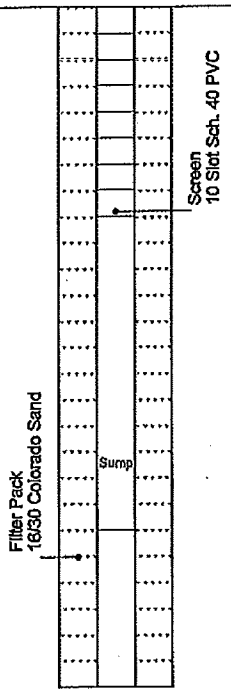
Well Diameter: 4 inches
Well Depth: 32 ft
Well Screen: 11-29 ft 10-Slot
Filter Pack: 16/30 Colorado Snd

Driller: Cascade Drilling, Inc.
Method: AirPercussion, Hollow Stem
Consultant: Gabriel Cisneros (SAIC, Bothell)
Well Casing: Sch 40 PVC Elevation (TOC): 146.02 msl

Total Depth: 33.5 Ft
GW Depth: 23.0 Ft

Recov	Depth Ft	Moist.	Blow Cnt	OVM	Soil Code	Soil Pattern	Soil Description
	27						
		Sat.	10/30	450	SP		Gray, fine to coarse SAND with no silt and 5% gravel; moderate HC odor; no sheen.
			48	384			
	30						
			7/9	402			
		Moist	11	15.8	ML/CL		Gray, clayey SILT with moderate to high plasticity; slight odor; very slight sheen at bottom.

Well Construction



Locus Technologies

BORING LOG

From Science to Solutions™

Well No: DPE-6
Chevron Site No: 211577
Site Location: 631 Queen Anne Ave N, Seattle, WA
Date: 10/17/2005

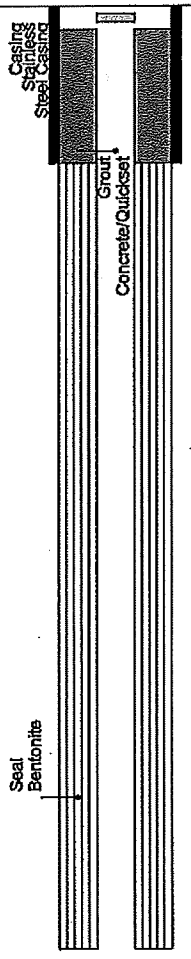
Well Diameter: 4 inches
Well Depth: 33.5 ft
Well Screen: 15.5-30.5 ft 10-Slot
Filter Pack: 16/30 Colorado Snd

Driller: Cascade Drilling, Inc.
Method: AirPercussion, Hollow Stem
Consultant: Gabriel Cisneros (SAIC, Bothell)
Well Casing: Sch 40 PVC Elevation (TOC): 146.19 msl

Total Depth: 33.5 Ft
GW Depth: 19.5 Ft

Recov.	Depth Ft	Moist.	Blow Cnt	OVM	Soil Code	Soil Pattern	Soil Description
	0	Moist			SW		Asphalt top 2-Inches. Airknifed to 8 feet bgs. FILL: Brown, silty, gravelly SAND with chunks of concrete.
	5	Moist	8/13/16		SP-SM		Gray to brown, silty, fine to medium SAND with a silt layer at 8.25 feet and organics, no gravel; no odor; no sheen.
		Moist					Brown, fine to coarse SAND with thin interbeds of silt; less than 5% silt in sand beds, no gravel; slight odor; moderate sheen.
	10	Moist	15/50				Brown to gray, fine to medium, SAND interbedded with thin, organic, gray silt layers; no gravel and less than 5% silt in sandy layers; slight odor; moderate sheen in sandy layers.
		Moist					
	12						

Well Construction



Locus

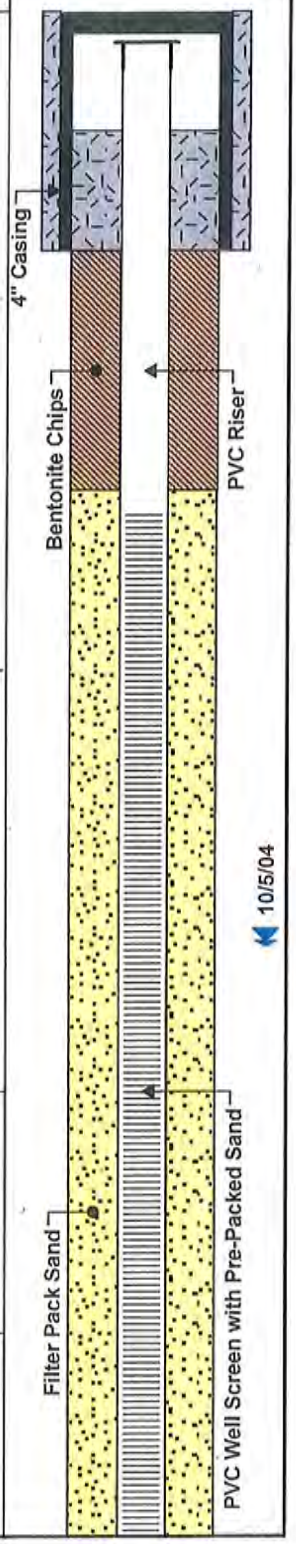
BORING/MONITORING WELL LOG: SB-24/MW-24

SITE No: 211577
LOCATION: 631 Queen Ave, Seattle
CLIENT: Chevron
DATE: 10/5/04
LOGGED BY: G. Cisneros

DRILLER: Cascade
DRILL METHOD: Limited-Access Geoprobe
SAMPLE METHOD: Geoprobe
HOLE DIAMETER: 2"
HOLE DEPTH: 20.5

WELL DIAMETER: 0.75"
SCREEN INTERVAL: 4.2-14.2
WELL CASING: Sch. 40 PVC
FILTER PACK: 10/20 Colorado Sand
TOC ELEVATION: 107.95'

MOISTURE	PID (ppm)	DEPTH	DESCRIPTION
		0	Ground Surface
			Airknifed to 8' Layer of bricks at 6-inches. Gravelly SAND
Moist	0.4	4	**SAND (SW)** Dark brown, gravelly SAND with 15-20% gravel and 5% silt; no odor; no sheen.
Moist	0.0	6	**SAND (SP)** Dark brown, fine to medium SAND with 5% gravel; no odor; no sheen.
Wet	5.5	8	**8-9' SAND (SP)** Brown to light gray, fine to medium SAND; no silt; no gravel; no odor; no sheen.
Sat	1.5	9	**9-10' SAND (SP-SM)** Light brown, very dense, fine to medium SAND with silt layers interbedded (15-20% silt); no odor; no sheen.
Sat	7.1	10	**10-11' SAND (SP-SM)** Same as above; no odor; no sheen.
Wet	1.0	11	**11-12' Silty SAND (SM)** Light brown, very dense, fine to medium SAND with 25% silt and 15% gravel; slight odor, no sheen.
Moist	8.9	12	**12-13' Silty SAND (SM)** Same as above; slight odor; no sheen.



BORING/MONITORING WELL LOG: SB-24/MW-24

SITE No: 211577
LOCATION: 631 Queen Ave, Seattle
CLIENT: Chevron
DATE: 10/5/04
LOGGED BY: G. Cisneros

DRILLER: Cascade
DRILL METHOD: Limited-Access Geoprobe
SAMPLE METHOD: Geoprobe
HOLE DIAMETER: 2"
HOLE DEPTH: 20.5

WELL DIAMETER: 0.75"
SCREEN INTERVAL: 4.2-14.2
WELL CASING: Sch. 40 PVC
FILTER PACK: 10/20 Colorado Sand
TOC ELEVATION: 107.95'

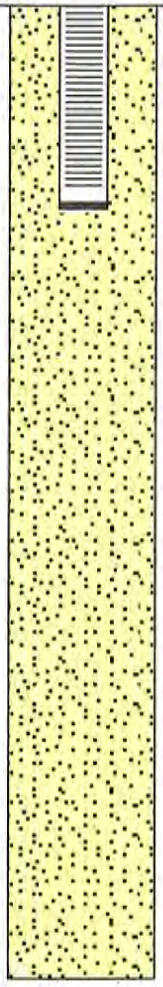
MOISTURE	PID (ppm)	DEPTH	DESCRIPTION
Moist	14.8	13	**13-14' Silty SAND (SM)** Same as above; slight odor; no sheen.
Moist	16.4	14	**14-15' SAND (SP-SM)** Brown to gray, very dense, fine to medium SAND with 2-inch silty SAND layers; slight odor; no sheen.
Moist	6.9	15	**15-16' SAND (SP-SM)** Same as above; no odor; no sheen.
Wet	205.8	16	**16-17' SAND (SP-SM)** Gray, fine to medium SAND with a 1-inch silty sand layer at 16.5 feet; strong odor; moderate sheen.
Moist	>4506	17	**17-18' SAND (SP)** Same as above; strong odor; moderate sheen.
Moist	>4506	18	**18-19.5' SAND (SP)** Gray, dense, medium to coarse SAND; no silt; no gravel; strong odor; moderate sheen.
Moist	177.8	19	
Moist	48.3	20	**19.5-20' Silty SAND (SM)** Gray to brown, very dense SAND with 15% silt, no gravel; moderate odor; slight sheen.
Moist	11.8		**20-20.5' Clayey SILT (ML-CL)** Very hard, clayey SILT with moderate plasticity; slight odor; no sheen.
		21	
		22	
		23	
		24	
		25	

GRAPHIC LOG

SAMPLE INTERVAL

Sloughed Sand

WELL COMPLETION DETAILS



An Employee Owned Company

BORING LOG: SP-1

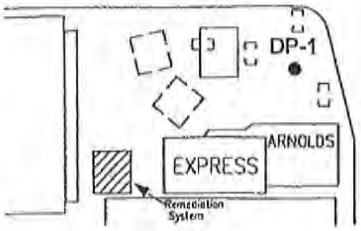
SHEET 1 of 1

SITE No: 211577
LOCATION: 631 Queen Anne Ave, Seattle
CLIENT: Chevron/Texaco
DATE: 3/12/04
LOGGED BY: GC

DRILLER: Cascade
DRILL METHOD: Geoprobe
SAMPLE METHOD: Split-Spoon with Liner
HOLE DIAMETER: 2"
HOLE DEPTH: 22'

MOISTURE	PID (ppm)	DEPTH	GRAPHIC LOG	SAMPLE INTERVAL	DESCRIPTION
		0			Ground Surface
		1			Airknifed to 8' Asphalt from 0-3"
		2			
		3			
		4			
		5			SAND (SM) Dark brown, very dense, well-graded, gravelly, silty, SAND.
		6			
		7			
		8			SAND (SM) Dark brown, well-graded, very dense, medium to coarse sand with 15% gravel and 15% silt; slight hydrocarbon odor; no sheen.
Dry to Moist	0	9			
	0	10			
	0	11			SAND and SILT (SM) Dark gray to black SAND with thin silt layers; hydrocarbon odor; no sheen.
Moist	1553	12			
	1674	13			SAND (SP) Brownish gray to dark gray, poorly graded, very dense SAND with <5% silt.
	1569	14			
	>4040	15			
	850.2	16			
	>4040	17			SAND (SP) Brownish gray, poorly graded, very dense SAND; increasing silt content with depth.
Moist to Wet	238.0	18			
	1.4	19			Groundwater at 19.5'
Wet to Sat	2928	20			SAND (SP-SM) Same as above; more silty with depth; HC odor; no sheen.
Sat	>4040	21			Silty SAND (SM) Brownish gray, well-graded, very dense, fine to medium silty SAND.
	>4040	22			

WELL/BORING LOCATION MAP



Delta Environmental Consultants, Inc.

WELL/BORING: DP-1

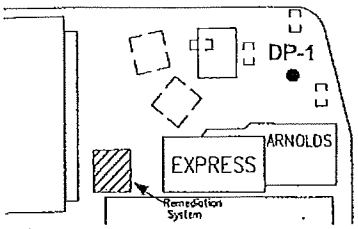
INSTALLATION DATE: 9/18/02	DRILLING METHOD: Geo Probe
PROJECT: TW21577	SAMPLING METHOD: Sleeve
CLIENT: Chevron 21-1577	BORING DIAMETER: 1 "
LOCATION: 631 Queen Anne Ave No.	BORING DEPTH: 24'
CITY: Seattle	WELL CASING: NA
STATE: WA	WELL SCREEN: NA
DRILLER: Cascade	SAND PACK: NA

CASING ELEVATION	
SURVEY DATE:	
DTW:	

DESCRIPTION/LOGGED BY: SHAWN MADISON

WELL/BORING COMPLETION	FIRST	STABILIZED	MOISTURE	PID (ppm)	DEPTH (FEET)	USCS SYMBOL	DESCRIPTION
Asphalt / Bentonite					1	SM	SILTY SAND: grayish brown; 20% fines; fine to medium sand; 15% gravel; no odor.
			DP	2.7	2		
					3		
			DP	59.0	4	SM	SILTY SAND: brownish gray; 10% fines; fine to medium sand; 25% gravel; odor.
					5		
			DP	23.0	6		SILTY SAND: dark gray; 15% fines; medium to coarse sand; 10% gravel; odor.
					7		
			DP	11.0	8		Same as above.
					9		
			DP	14.5	10	SP	SAND: gray; <5% fines; fine sand; no odor.
	▽				11		
			WT	33.3	12		Same as above with odor.
					13		
			DP	0	14	SP	SAND: grayish brown; medium to coarse sand; no odor.
					15		
			DP	70.1	16		Same as above.
	▽				17		
			WT	0	18	SM	SILTY SAND: grayish brown; 15% fines; fine to medium sand; no odor.
					19		
			WT	5.7	20		SILTY SAND: gray; 20% fines; fine to medium sand; 30% gravel; no odor.
					21		
			WT	1.2	22	SM	Same as above.

WELL/BORING LOCATION MAP



Delta Environmental Consultants, Inc.

WELL/BORING: DP-1

INSTALLATION DATE: 9/18/02	DRILLING METHOD: Geo Probe
PROJECT: TW21577	SAMPLING METHOD: Sleeve
CLIENT: Chevron 21-1577	BORING DIAMETER: 1 "
LOCATION: 631 Queen Anne Ave No.	BORING DEPTH: 24'
CITY: Seattle	WELL CASING: NA
STATE: WA	WELL SCREEN: NA
DRILLER: Cascade	SAND PACK: NA

CASING ELEVATION	
SURVEY DATE:	
DTW:	

DESCRIPTION/LOGGED BY: SHAWN MADISON

WELL/BORING COMPLETION	FIRST ▽	STABILIZED ▼	MOISTURE	PID (ppm)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	USCS SYMBOL	GRAPHIC	DESCRIPTION
Bentonite			WT	0.6	23			SM		SILTY SAND: gray; 20% fines; fine to medium sand; 30% gravel; no odor.
			DP		24			CL		CLAY: gray; medium plasticity; stiff; no odor.
					25					
					26					
					27					
					28					
					29					
					30					
					31					
					32					
					33					
					34					
					35					
					36					
					37					
					38					
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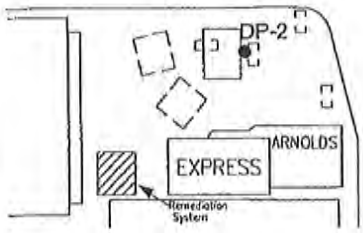
					41					
					42					
					43					
					44					
					45					

WELL/BORING LOCATION MAP



Delta Environmental Consultants, Inc.

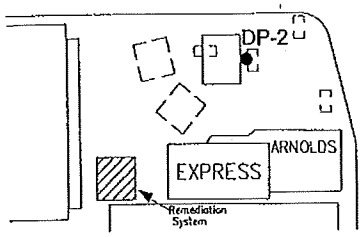
WELL/BORING: DP-2

INSTALLATION DATE: 9/18/02	DRILLING METHOD: Geo Probe
PROJECT: TW21577	SAMPLING METHOD: Sleeve
CLIENT: Chevron 21-1577	BORING DIAMETER: 1 "
LOCATION: 631 Queen Anne Ave No.	BORING DEPTH: 24'
CITY: Seattle	WELL CASING: NA
STATE: WA	WELL SCREEN: NA
DRILLER: Cascade	SAND PACK: NA

CASING ELEVATION
SURVEY DATE:
DTW:

WELL/BORING COMPLETION	FIRST ▽	STABILIZED ▼	MOISTURE	PID (ppm)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	USCS SYMBOL	GRAPHIC	DESCRIPTION/LOGGED BY: SHAWN MADISON
Asphalt					1			SM		
			DP	0	2					SILTY SAND: grayish brown; 20% fines; fine to medium sand 30% gravel; no odor.
					3					
			DP	0	4					Same as above with odor.
					5					
			DP	672	6					SILTY SAND: dark gray; 20% fines; fine to medium sand; 10% gravel; odor.
					7					
			DP	238	8					Same as above but very dark gray.
					9			SM		
Bentonite			DP	1340	10					Same as above but dark greenish gray; 2% wood debris.
					11					
			DP	1875	12					SILTY SAND: dark gray; 10% fines; fine to medium sand; 10% gravel; odor; minimal recovery. * See Page 2 of well log for note.
					13					
			DP	2000	14					Same as above; minimal recovery * See Page 2 of well log for note.
					15					
			DP	5.3	16					SILTY SAND: dark gray; 10% fines; medium to coarse sand; 5% gravel; odor.
					17					
			DP	7.1	18			SP		SAND: brown; medium sand; odor.
					19					
	▽		DP	10.2	20					Same as above.
					21					
			WT	21.7	22			SP		SAND: grayish brown; fine to medium sand; no odor.

WELL/BORING LOCATION MAP



Delta Environmental Consultants, Inc.

WELL/BORING: DP-2

INSTALLATION DATE: 9/18/02	DRILLING METHOD: Geo Probe
PROJECT: TW21577	SAMPLING METHOD: Sleeve
CLIENT: Chevron 21-1577	BORING DIAMETER: 1 "
LOCATION: 631 Queen Anne Ave No.	BORING DEPTH: 24'
CITY: Seattle	WELL CASING: NA
STATE: WA	WELL SCREEN: NA
DRILLER: Cascade	SAND PACK: NA

CASING ELEVATION	
SURVEY DATE:	
DTW:	

DESCRIPTION/LOGGED BY: SHAWN MADISON

WELL/BORING COMPLETION	FIRST ▽	STABILIZED ▼	MOISTURE	PID (ppm)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	USCS SYMBOL	GRAPHIC
Bentonite			WT		23			SP	
								CL	
			DP	0	24				
					25				
					26				
					27				
					28				
					29				
					30				
					31				
					32				
					33				
					34				
					35				
					36				
					37				
					38				
					39				
					40				
					41				
					42				
					43				
					44				
					45				

SAND: grayish brown; fine to medium sand; no odor.

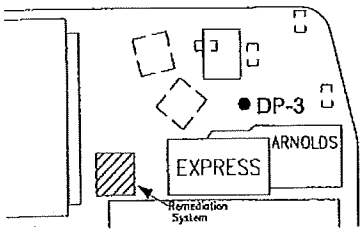
CLAY: yellowish brown; medium plasticity; stiff; no odor.

* Redrilled 1 foot north to get recovery for the 12 and 14 foot intervals.

10'-12' SILTY SAND: dark gray; 10% fines; fine to medium sand; 10% gravel; odor; P.I.D. reading 2000.

12'-14' SILTY SAND: dark gray; 10% fines; fine to medium sand; 10% gravel; odor; P.I.D. reading 2000.

WELL/BORING LOCATION MAP



Delta Environmental Consultants, Inc.

WELL/BORING: DP-3

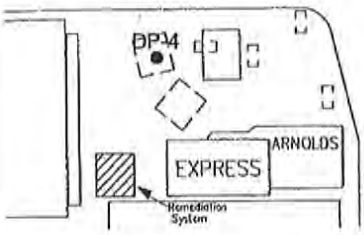
INSTALLATION DATE: 9/20/02	DRILLING METHOD: Geo Probe
PROJECT: TW21577	SAMPLING METHOD: Sleeve
CLIENT: Chevron 21-1577	BORING DIAMETER: 1 "
LOCATION: 631 Queen Anne Ave No.	BORING DEPTH: 18'
CITY: Seattle	WELL CASING: NA
STATE: WA	WELL SCREEN: NA
DRILLER: Cascade	SAND PACK: NA

CASING ELEVATION	
SURVEY DATE:	
DTW:	

DESCRIPTION/LOGGED BY: SHAWN MADISON

WELL/BORING COMPLETION	FIRST ▽	STABILIZED ▼	MOISTURE	PID (ppm)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	USCS SYMBOL	GRAPHIC	DESCRIPTION
Asphalt					1			SM		SILTY SAND: brown; 30% fines; very fine to fine sand; no odor.
				0	2					Same as above with construction debris; no odor.
					3					Same as above.
				0	4					
					5					
				0	6					Same as above without construction debris.
					7					
Bentonite				0	8					Same as above with 2% wood debris; very dark brown with color.
					9			SM		
				48.3	10					SILTY SAND: dark brownish gray; 10% fines; fine sand; 5% gravel; odor.
	▽				11					
			WT	2000	12					@11.5' SILT: dark gray; fines; 25% very fine to fine sand; stiff; odor.
					13					
			WT	2000	14					
					15					
			WT	1557	16					@15.5' SILTY SAND: dark gray; 15% fines; fine sand; odor.
					17					
			DP	146	18			CL		@17.5' CLAY: reddish brown with gray streaks; medium plasticity; stiff; odor.
					19					
					20					
					21					
					22					

WELL/BORING LOCATION MAP



Delta Environmental Consultants, Inc.

WELL/BORING: DP-4

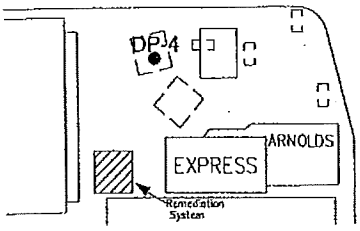
INSTALLATION DATE: 9/20/02	DRILLING METHOD: Geo Probe
PROJECT: TW21577	SAMPLING METHOD: Sleeve
CLIENT: Chevron 21-1577	BORING DIAMETER: 1 "
LOCATION: 631 Queen Anne Ave No.	BORING DEPTH: 28'
CITY: Seattle	WELL CASING: NA
STATE: WA	WELL SCREEN: NA
DRILLER: Cascade	SAND PACK: NA

CASING ELEVATION:
SURVEY DATE:
DTW:

DESCRIPTION/LOGGED BY: SHAWN MADISON

WELL/BORING COMPLETION	FIRST	STABILIZED	MOISTURE	PID (ppm)	DEPTH (FEET)	USCS SYMBOL	DESCRIPTION
Asphalt					1	SM	
			DRY	0	2		SILTY SAND: gray; 30% fines; fine sand; 10% gravel; no odor.
					3		
			DP	801	4		Same as above with light odor.
					5		
			DP	49.4	6		SILTY SAND: dark gray; 10% fines; fine to medium sand; light odor.
					7		
			DP	0	8		Same as above with 5% gravel.
Bentonite					9	SM	
			DP	0	10		Same as above with 15% gravel.
					11		
			DP	8.3	12		SILTY SAND: very dark gray; 10% fines; medium to coarse sand; light odor; encountered PVC well screen at 12 feet.
					13		
			DP	174	14		SAND: dark gray to brown; fine to medium sand; no odor.
					15		15 to 15.5' SILTY SAND: 30% fine; fine to medium sand; no odor.
			DP	219	16		@15.5' SAND: brownish gray; <5% fines; fine to medium sand; 15% coarse sand; no odor.
					17		
			DP	58.4	18	SP	
	▽				19		SAND: gray; fine sand; odor.
			WT	2000	20		
					21		
				21.7	22		Same sand grades to medium sand; odor.

WELL/BORING LOCATION MAP



Delta Environmental Consultants, Inc.

WELL/BORING: DP-4

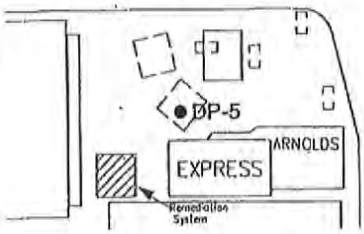
INSTALLATION DATE: 9/20/02	DRILLING METHOD: Geo Probe
PROJECT: TW21577	SAMPLING METHOD: Sleeve
CLIENT: Chevron 21-1577	BORING DIAMETER: 1 "
LOCATION: 631 Queen Anne Ave No.	BORING DEPTH: 28'
CITY: Seattle	WELL CASING: NA
STATE: WA	WELL SCREEN: NA
DRILLER: Cascade	SAND PACK: NA

CASING ELEVATION	
SURVEY DATE:	
DTW:	

DESCRIPTION/LOGGED BY: SHAWN MADISON

WELL/BORING COMPLETION	FIRST ▽	STABILIZED ▼	MOISTURE	PID (ppm)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	USCS SYMBOL	GRAPHIC	DESCRIPTION
Bentonite			WT	1	23–24			SP		SAND: brownish gray; <5% fines; medium to coarse sand; odor.
			DP	0	25–26					
					26			CL		@26.25' CLAY: reddish brown with gray molting; medium plasticity; stiff; no odor.
			WT	0	27–28			SP		@27.0" SAND: gray; coarse sand; no odor.
					29–45					

WELL/BORING LOCATION MAP



Delta Environmental Consultants, Inc.

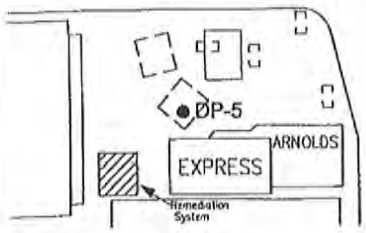
WELL/BORING: DP-5

INSTALLATION DATE: 9/20/02	DRILLING METHOD: Geo Probe
PROJECT: TW21577	SAMPLING METHOD: Sleeve
CLIENT: Chevron 21-1577	BORING DIAMETER: 1 "
LOCATION: 631 Queen Anne Ave No.	BORING DEPTH: 24'
CITY: Seattle	WELL CASING: NA
STATE: WA	WELL SCREEN: NA
DRILLER: Cascade	SAND PACK: NA

CASING ELEVATION:
SURVEY DATE:
DTW:

WELL/BORING COMPLETION	FIRST	STABILIZED	MOISTURE	PID (ppm)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	USCS SYMBOL	GRAPHIC	DESCRIPTION/LOGGED BY: SHAWN MADISON
Asphalt					1			SM		
			DP	0	2					SILTY SAND: brown; 15% fines; fine to medium sand; no odor.
					3					
			DP	77.0	4					Same as above grades to grayish brown.
					5					
			DP	77.4	6					Same as above; gray to dark gray; construction debris (Brick); no odor.
					7					
			DP	8.0	8					Same as above with construction debris (Asphalt); no odor.
Bentonite					9			SM		
			DP	0	10					Same as above with Asphalt and wood debris.
					11					
			DP	166	12					SILTY SAND: dark gray; 15% fines; fine sand; odor.
	▽				13					
			WT	2000	14					Same as above; 30% fines; odor.
					15					
			WT	2000	16					SILTY SAND: gray to brownish gray; 20% fines; very fine to fine sand; odor.
					17					
			WT	1345	18			SP		
					19					SAND: brownish gray; <5% fines; fine to medium sand; odor.
			WT	2000	20					Same as above.
					21					
			WT	1162	22					Same as above.

WELL/BORING LOCATION MAP



Delta Environmental Consultants, Inc.

WELL/BORING: DP-5

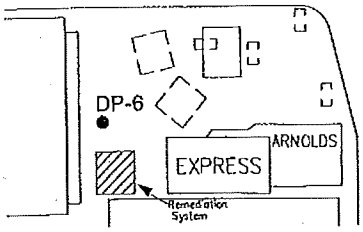
INSTALLATION DATE: 9/20/02	DRILLING METHOD: Geo Probe
PROJECT: TW21577	SAMPLING METHOD: Sleeve
CLIENT: Chevron 21-1577	BORING DIAMETER: 1 "
LOCATION: 631 Queen Anne Ave No.	BORING DEPTH: 24'
CITY: Seattle	WELL CASING: NA
STATE: WA	WELL SCREEN: NA
DRILLER: Cascade	SAND PACK: NA

CASING ELEVATION	
SURVEY DATE:	
DTW:	

DESCRIPTION/LOGGED BY: SHAWN MADISON

WELL/BORING COMPLETION	FIRST ▽	STABILIZED ▼	MOISTURE	PID (ppm)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	USCS SYMBOL	GRAPHIC	DESCRIPTION
Bentonite			WT		23			SP		SAND: brownish gray; <5% fines; fine to medium sand; coarse sand; odor.
			DP	3.1	24			CL		@23.5' CLAY: brown; medium plasticity; stiff; no odor.
					25					
					26					
					27					
					28					
					29					
					30					
					31					
					32					
					33					
					34					
					35					
					36					
					37					
					38					
					39					
					40					
					41					
					42					
					43					
					44					
					45					

WELL/BORING LOCATION MAP



Delta Environmental Consultants, Inc.

WELL/BORING: DP-6

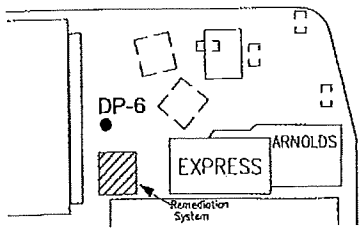
INSTALLATION DATE: 9/20/02	DRILLING METHOD: Geo Probe
PROJECT: TW21577	SAMPLING METHOD: Sleeve
CLIENT: Chevron 21-1577	BORING DIAMETER: 1 "
LOCATION: 631 Queen Anne Ave No.	BORING DEPTH: 26'
CITY: Seattle	WELL CASING: NA
STATE: WA	WELL SCREEN: NA
DRILLER: Cascade	SAND PACK: NA

CASING ELEVATION	
SURVEY DATE:	
DTW:	

DESCRIPTION/LOGGED BY: SHAWN MADISON

WELL/BORING COMPLETION	FIRST ▽	STABILIZED ▼	MOISTURE	PID (ppm)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	USCS SYMBOL	GRAPHIC	DESCRIPTION
Asphalt / Bentonite					1			SM		SILTY SAND: brownish gray; 40% fines; fine to medium sand; 10% gravel; 5% construction debris (Brick); no odor.
			DP	0	2					
					3					SILTY SAND: dark brownish gray; 25% fines; fine sand; 10% medium sand; no odor.
			DP	0	4					
					5					@5.5' SILTY SAND: very dark gray; 15% fines; medium to coarse sand; no odor.
			DP	0	6					
					7					@7.5' CLAY: very dark gray; medium plasticity; 10% very fine to fine sand; no odor.
			DP	7.4	8					
					9			SM		@9.0' SILTY SAND: 15% fines; 40% fine sand; medium to coarse and; no odor; minimal recovery.
			DP	6.9	10					
					11					Same as above.
	▽		DP	67.4	12					Minimal Recovery
					13					
			WT	231	14			SP		SAND: grayish brown; <5% fines; very fine to fine sand; odor.
					15					
			WT	72	16					Same as above.
					17					
			WT	4.2	18					@17.5' SAND: grayish brown; <5% fines; 30% medium sand; coarse sand; odor.
					19			CL		19.25' to 19.5' CLAY: yellowish brown; stiff; sand stringers; very fine sand; odor.
			WT	341	20			SM		@19.5' SILTY SAND: brownish gray; 30% fines; very fine to fine sand; odor.
					21					
			WT	2000	22					Same as above.

WELL/BORING LOCATION MAP



Delta Environmental Consultants, Inc.

WELL/BORING: DP-6

INSTALLATION DATE: 9/20/02	DRILLING METHOD: Geo Probe
PROJECT: TW21577	SAMPLING METHOD: Sleeve
CLIENT: Chevron 21-1577	BORING DIAMETER: 1 "
LOCATION: 631 Queen Anne Ave No.	BORING DEPTH: 26'
CITY: Seattle	WELL CASING: NA
STATE: WA	WELL SCREEN: NA
DRILLER: Cascade	SAND PACK: NA

CASING ELEVATION	
SURVEY DATE:	
DTW:	

DESCRIPTION/LOGGED BY: SHAWN MADISON

WELL/BORING COMPLETION	FIRST ▽	STABILIZED ▼	MOISTURE	PID (ppm)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	USCS SYMBOL	GRAPHIC	DESCRIPTION
Bentonite					23			SM		SILTY SAND: brownish gray; 30% fines; very fine to fine sand; odor.
			WT	2000	24			SP		SAND: brownish gray; <5% fines; very fine to fine sand; odor.
					25					
			DP	33.4	26			CL		@25.4' CLAY: brownish yellow; medium plasticity; stiff; odor.
					27					
					28					
					29					
					30					
					31					
					32					
					33					
					34					
					35					
					36					
					37					
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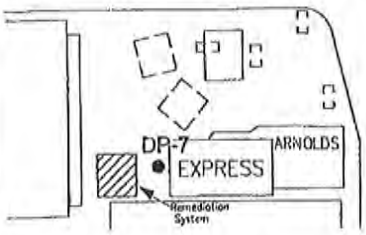
					42					
					43					
					44					
					45					

WELL/BORING LOCATION MAP



Delta Environmental Consultants, Inc.

WELL/BORING: DP-7

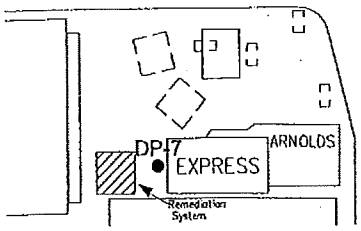
INSTALLATION DATE: 9/20/02	DRILLING METHOD: Geo Probe
PROJECT: TW21577	SAMPLING METHOD: Sleeve
CLIENT: Chevron 21-1577	BORING DIAMETER: 1 "
LOCATION: 631 Queen Anne Ave No.	BORING DEPTH: 24'
CITY: Seattle	WELL CASING: NA
STATE: WA	WELL SCREEN: NA
DRILLER: Cascade	SAND PACK: NA

CASING ELEVATION	
SURVEY DATE:	
DTW:	

DESCRIPTION/LOGGED BY: SHAWN MADISON

WELL/BORING COMPLETION	FIRST	STABILIZED	MOISTURE	PID (ppm)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	USCS SYMBOL	GRAPHIC	DESCRIPTION
Asphalt					1			SM		SILTY SAND: brown; 20% fines; fine to medium sand; 10% gravel; no odor.
			DRY	0	2					
					3					Same but brown to dark brown with construction debris (Brick); no odor.
			DP	0	4					
					5					
			DP	0	6					SILTY SAND: brownish gray; 10% fines; fine to medium sand; no odor.
					7					@7.5' SILTY SAND: dark brown; 35% fines; fine to medium sand; 10% coarse sand; no odor.
			DP	0	8					
Bentonite	▽				9			SM		@9.5' Grades to brown in color; odor.
			WT	110	10					@10.5' grades to gray; 10% fines; odor.
					11					
			WT	193	12					
					13			SP		SAND; gray; fine sand; odor.
			WT	307	14					
					15					
			WT	126	16					SAND: brownish gray; fine sand; odor.
					17					SAND: brownish gray; fine to medium sand; odor.
			WT	355	18					
					19					
			WT	2000	20					@20' Grades to very fine sand.
					21					
			WT	2000	22					@22' Grades to fine to medium sand; odor.

WELL/BORING LOCATION MAP



Delta Environmental Consultants, Inc.

WELL/BORING: DP-7

INSTALLATION DATE: 9/20/02	DRILLING METHOD: Geo Probe
PROJECT: TW21577	SAMPLING METHOD: Sleeve
CLIENT: Chevron 21-1577	BORING DIAMETER: 1 "
LOCATION: 631 Queen Anne Ave No.	BORING DEPTH: 24'
CITY: Seattle	WELL CASING: NA
STATE: WA	WELL SCREEN: NA
DRILLER: Cascade	SAND PACK: NA

CASING ELEVATION	
SURVEY DATE:	
DTW:	

DESCRIPTION/LOGGED BY: SHAWN MADISON

WELL/BORING COMPLETION	FIRST ▽	STABILIZED ▼	MOISTURE	PID (ppm)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	USCS SYMBOL	GRAPHIC	DESCRIPTION
Bentonite			DP	18.2	23			CL		@23' CLAY: yellowish brown with gray streaks; medium plasticity; stiff; no odor.
					24					
					25					
					26					
					27					
					28					
					29					
					30					
					31					
					32					
					33					
					34					
					35					
					36					
					37					
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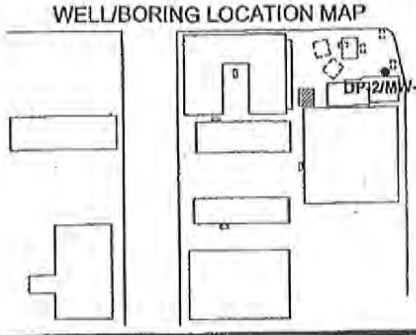
					44					
					45					

WELL/BORING LOCATION MAP



Delta Environmental Consultants, Inc.

WELL/BORING: DB-2
MW-13

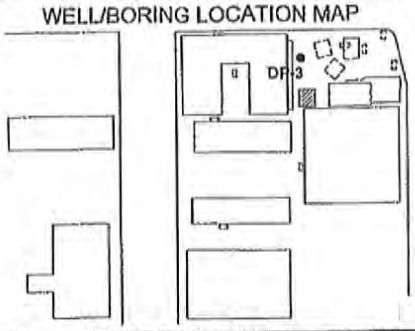
INSTALLATION DATE: 9/24/02	DRILLING METHOD: Hollow Stem Auger
PROJECT: TW21577	SAMPLING METHOD: DM Split Spoon
CLIENT: Chevron 21-1577	BORING DIAMETER: 8 "
LOCATION: 631 Queen Anne Ave No.	BORING DEPTH: 21.5'
CITY: Seattle	WELL CASING: SCH 40 PVC 2"
STATE: WA	WELL SCREEN: 10-20' (0.010")
DRILLER: Cascade	SAND PACK: 7-21.5' (2 X12)

CASING ELEVATION	114.80
SURVEY DATE:	9/26/02
DTW:	19.0

DESCRIPTION/LOGGED BY: MATT MILLER

WELL/BORING COMPLETION	FIRST	STABILIZED	MOISTURE	PID (ppm)	DENSITY BLOWS / 6"	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	USCS SYMBOL	GRAPHIC	DESCRIPTION
Concrete						0					Asphalt/concrete surface
Bentonite						1			SP		SAND: brown to gray; trace to 5% fines;
						2					
						3					
						4					
						5					
						6					
						7					
						8					
						9			SM		
					15	10					
					25						
					27	11					@11.5' No recovery.
						12					
			DP	277	21	13					SILTY SAND: dark gray; 5% fines; fine sand; thin interbedded clay lense (<0.5"); very dense; strong hydrocarbon odor; sheen.
					50-5"	14					
Sand						15					
	▽		WT	68	11	16					@16.5'; as above; iron oxide staining; trace to 10% gravel; very dense.
					21						
					30	17					
			MST	14	50-6"	18					
		▼				19					
						20					
			DP	11	19				CL		CLAY: dark gray; low plasticity; very hard; no hydrocarbon odor.
					29	21					
					50						
						22					

WELL/BORING LOCATION MAP



Delta Environmental Consultants, Inc.

WELL/BORING: DB-3

INSTALLATION DATE: 9/26/02	DRILLING METHOD: Hollow Stem Auger
PROJECT: TW21577	SAMPLING METHOD: DM Split Spoon
CLIENT: Chevron 21-1577	BORING DIAMETER: 8 "
LOCATION: 631 Queen Anne Ave No.	BORING DEPTH: 31.5'
CITY: Seattle	WELL CASING: NA
STATE: WA	WELL SCREEN: NA
DRILLER: Cascade	SAND PACK: NA

CASING ELEVATION	
SURVEY DATE:	
DTW:	

WELL/BORING COMPLETION	FIRST ▽	STABILIZED ▼	MOISTURE	PID (ppm)	DENSITY BLOWS / 6"	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	USCS SYMBOL	GRAPHIC	DESCRIPTION/LOGGED BY: MATT MILLER
Backfilled with Bentonite			WT	89	50 50	23			SM		SILTY SAND: very dark gray; 10% fines; fine to coarse sand; trace gravel; very dense; hydrocarbon odor.
						24					
						25					
						26					
						27					
						28					
						29					
						30					
			WT	33	14 15 19	31			CL		CLAY: dark gray; low plasticity; hard; no hydrocarbon odor.
						32					
						33					
						34					
						35					
						36					
						37					
						38					
						39					
						40					
						41					
						42					
						43					
						44					

First Page missing from report

5-17-93

Changed 6/10/93 ~~VP-8~~ VP9

1300 Move Rig a/ VP-1. Load up supplies

1315 Move Rig To ~~VP-8.~~ → Changed to VP-9 on 6/10/93 Set up & plumb Rig. Doug Pearman back on site Excavating crew on lunch

1324 Begin Drilling, break up asphalt

Surface sample - ~2-5" asphalt
Sand & gravel - fill
loose
10YR 3/3

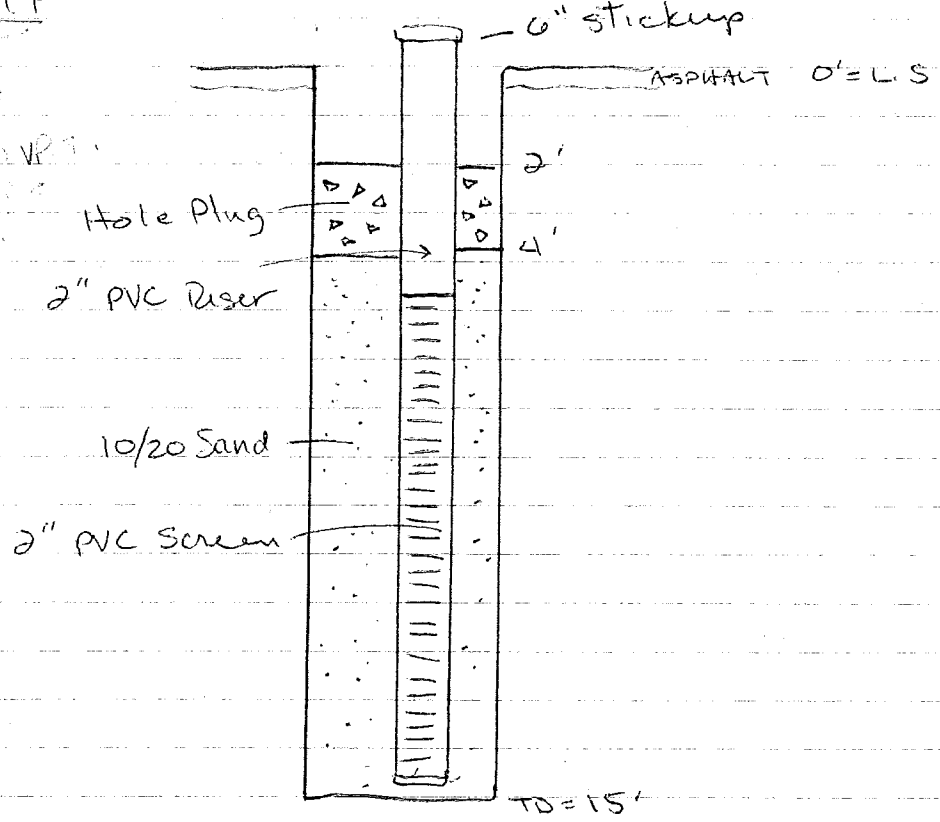
Gravelly to 2.5'

1335 Sample @ 2.5'
BC = 3/1/1
10YR 4/1
Med - coarse SAND w/ Gravel FILL
some brick fragments
1" gravels
Dry, loose
SW-SP

1342 Sample @ 7.5'
BC = 5/6/7
5Y 4/1
SAND - med w/ little silt
moist to sl-wet, loose
SP-SW/SM

5-17-93

As-Built
VP-8
VP-9
the yellow VP-9
[illegible]
Schedule



1445 Drillers decanning augers.

1530 Signed dailys.
Drillers off site for the day

GES securing site

1535 Pouring dry ice down the UST

1350 Ecology folks off-site for the day

5-25-93 RW-4

1615

1530 Begin Drilling, break asphalt

1540 Sample @ 5'
BC = 35/21/16
color = 10YR 7/1
dry
rubble, fill, concrete
GM

Gravel (rock) @ 4'

1622

Grab from cuttings @ 7'
high organic, soft, molds, clayey silt & fine Sand
2.5Y 2/0 Sl. moist
OL org. & fuel smell

1555 Sample @ 10'
BC 5/3/5
5Y 4/1
Sand fine-coarse w/ sub gravel & some silt
V. moist
loose H2S pid = 264 ppm
SP-SM

- Collected the last samples from the pit #9, 10, 11.
- Pump the last of H2O out of RW-1
- Last VES tree going in

4

1615 Sample @ 12.5
BC 3/4/4
5Y 4/2 (12.5-13.5') to 5Y 4/1 (13.5-14')
fine to Med Sand w/ Silt
(rock) grades to more silt @ 13.5-14' (finer sand)
V moist, ~~loose~~ compact
SP-SM
no water yet

1622 Sample @ 15'
BC 2/4/10
(15-16') → (5Y 4/1 to 5Y 4/3) w/ 2.5Y 5/6 intermixed w/ 16-17'
y silt / fine Sand
Fine Sand SAND w/ a 2" Silt layer at 16'
↳ gray w/ iron streaks
V. moist to wet above silt layer
compact to loose
SP-SM

ravel

Sample @ 17.5
2.5Y 5/6 (17.5-18')
5Y 5/3 (18-19')

Med SAND (17.5-18') grades to fine Sand 18-19'
Gravel at top of sample 17-17.5 thicker

Sl. moist compact to loose
str. HC odor

SP

5-25-93

1645 Sample @ 20'
BC 1/5/8
PID on sample = 1200 ppm !

ML dense, silt layer @ 20-20.5', soft
2.5Y 5/3
SM fine sand w/ silt 20.5-21.5'
5Y 5/2

1700 Augers at 22'. Shut down Rig. Secure site.

1745

Glacier securing/covering pit

label, pack up & transfer. Pit samples to Rig. in Glacier's apart./office.

Chung-Pi: since RW-1 seems to be recovering, he really would like RW-4 moved north ~ 10' feet also so to have both wells recovering, spread out a bit

Will continue to sample this hole looking for that confining clayer

1725 Tried telephoning D. Pearman at Bothell office to update - not in

5-24-93 RW-4

weather: p. cloudy 60°, hi 70°
geologists V. Metcalfe
drillers: Charles, Tom

0715 leave home for Site

0750 Arrive at Site

Pack up Samples for lab Pick-up

0845 Drillers arrive
(RW-4) *
SWL - 20.3' BLS

0850 Sample @ 22.5'
BC = 2/5/5
5Y 5/2
wet
strong HC odor
SAND - fine-med w/ little silt
PID = 770 ppm

0905 Sample @ 25'
BC = 3/5/9 PID = 270-300 ppm

Same as above
w/ some gravel (26-26.5')
slightly coarser sand

0915

0925

1005

1020

5-26-93

0915 Sample @ 27.5' wet
PID = 95 ppm
change at 28' from same as above to a fine SAND (5Y 4/3) w/ silt
trace silt at tip of shoe.
iron streak at tip

0925 Sample @ 30'
BC: 1/2/3 wet
silt/clay at 31'
dense, molds
SAND (30-31') fine-med w/ silt

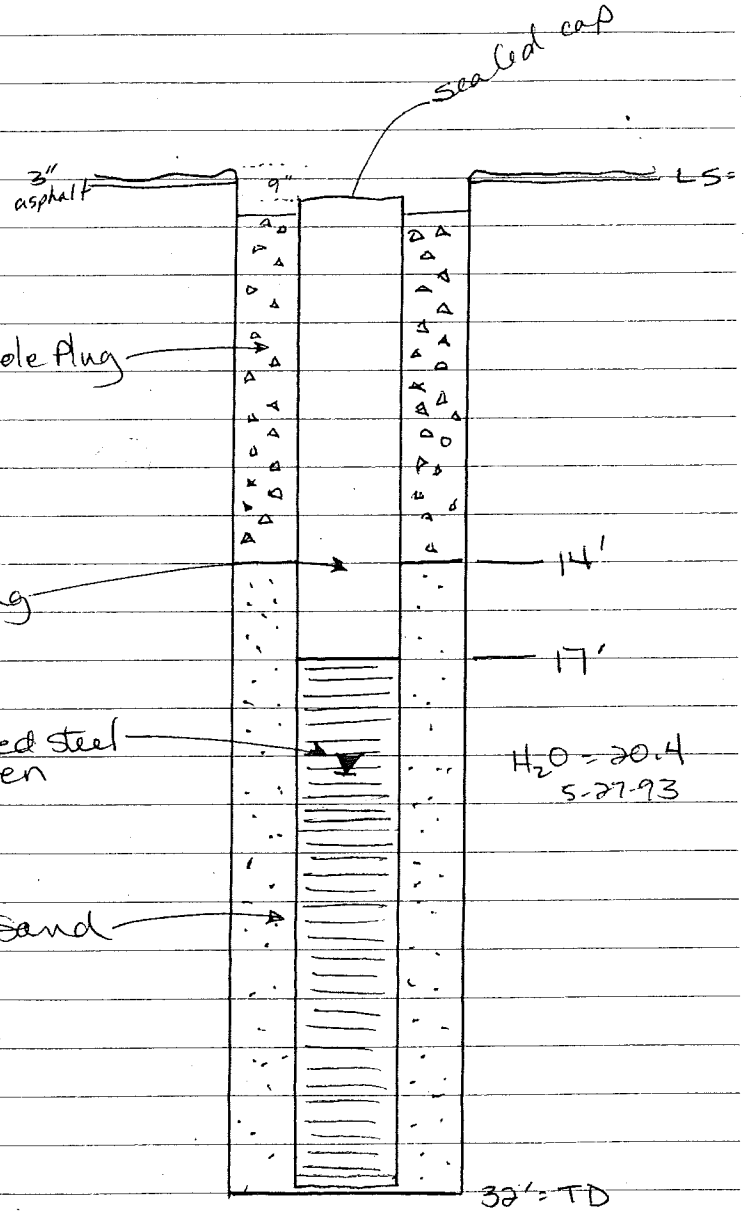
~~Plug~~ Bit is in the auger - try & retrieve

1005 going to set the well here. TD = 32'
Screen from 17-32'.

1020 Start getting things together to weld screen

As-built

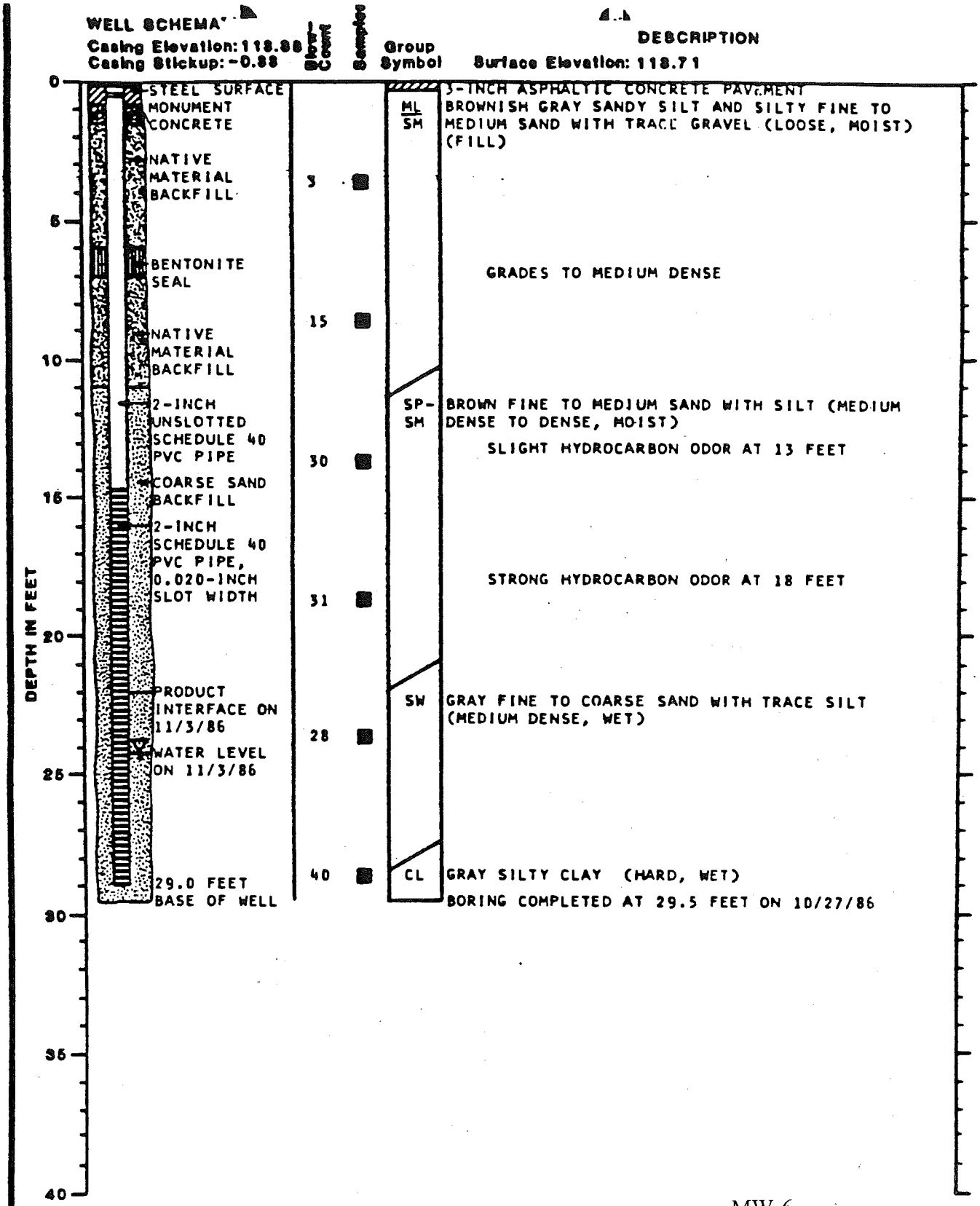
RW-4



1630 Clean up Site. Lower Mast.

Mom Rig -to Dcon

DRAFT



504-04 JAM:DMP 11-13-86

MW-6

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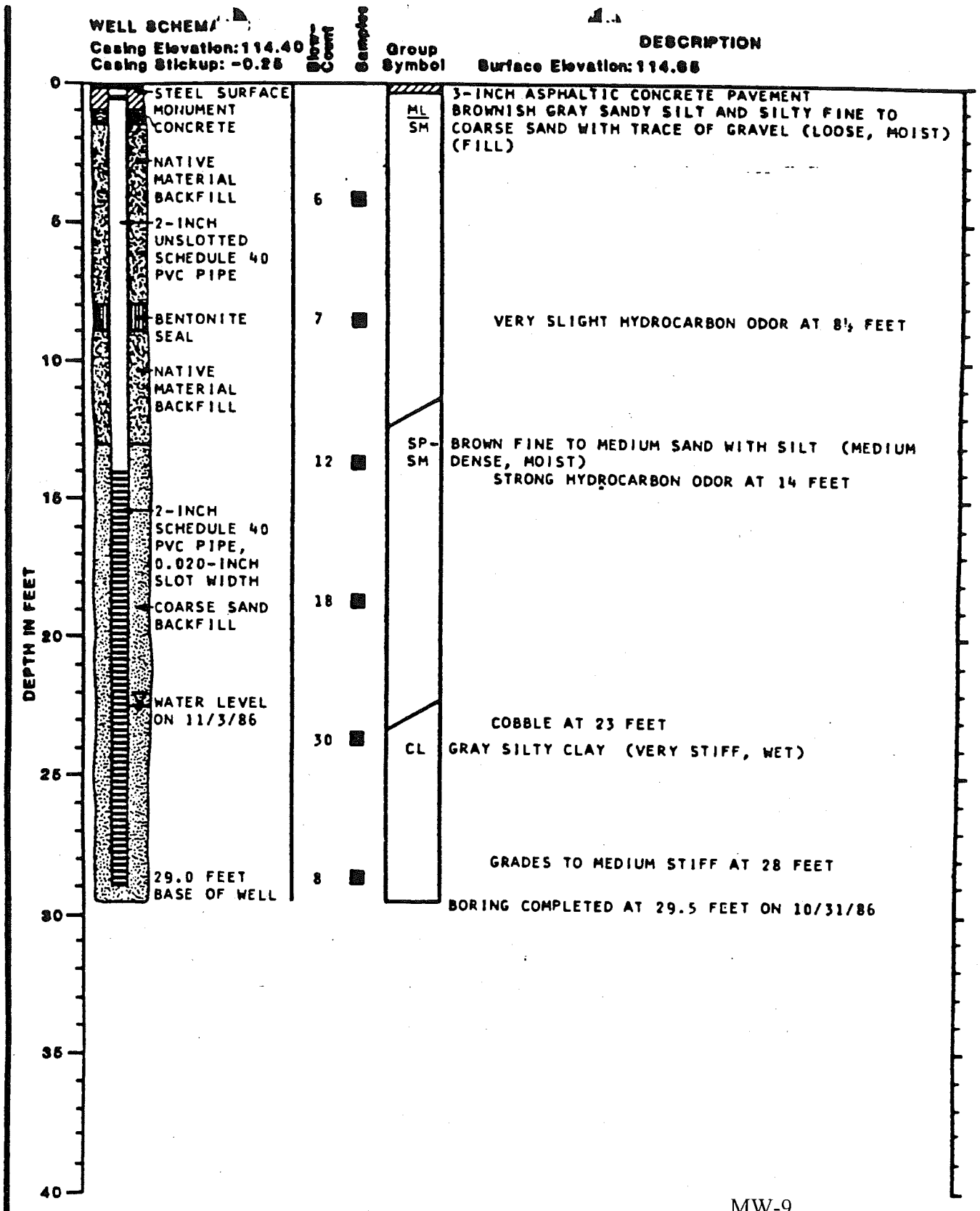
LOG OF MONITOR WELL

FIGURE 7

DRAFT



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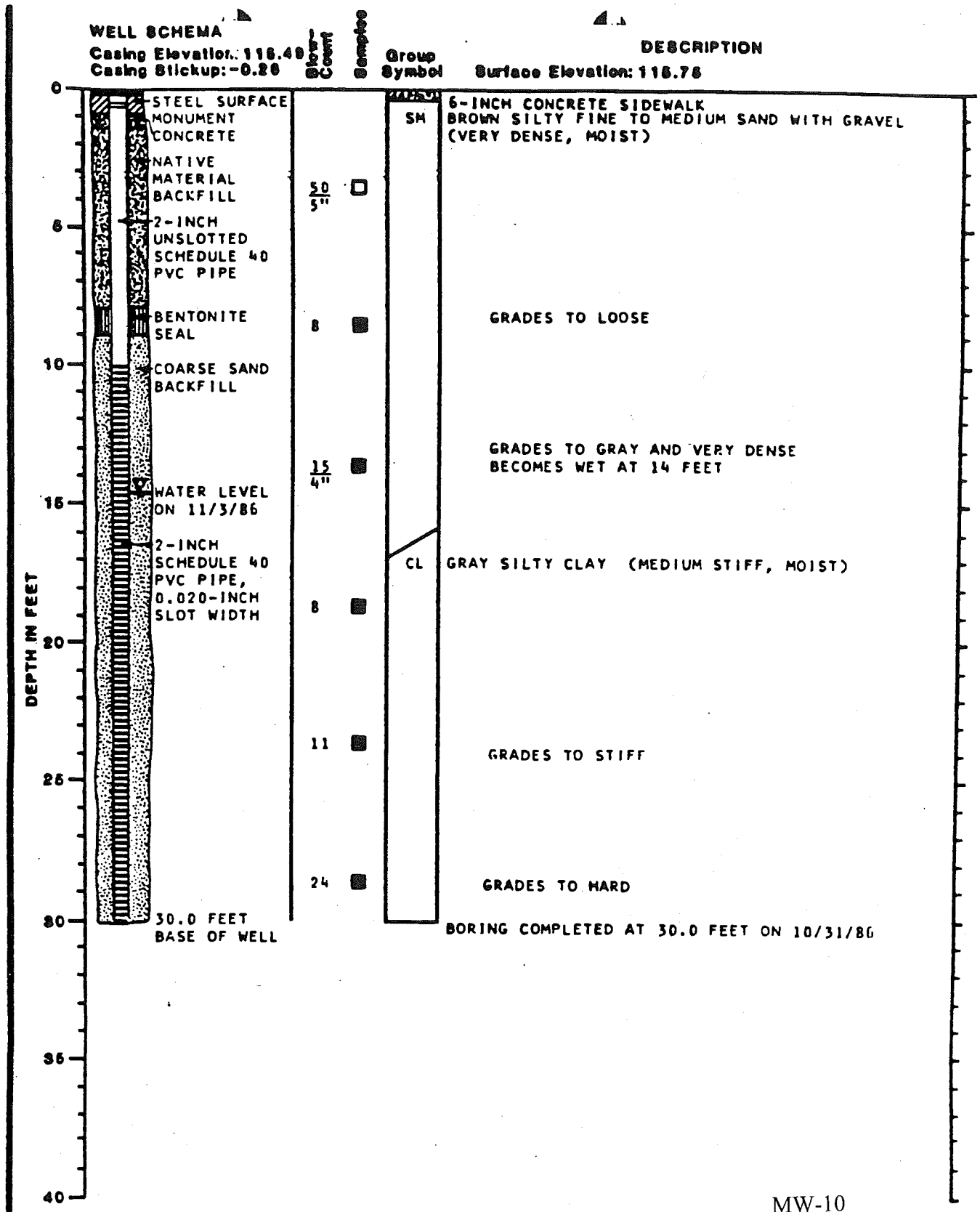
MW-9

GeoEngineers Incorporated

LOG OF MONITOR WELL

FIGURE 10

DRAFT



SG4-04 JAM:DMP 11-13-86

GeoEngineers Incorporated

LOG OF MONITOR WELL

FIGURE 11