Former Olympia Dry Cleaners Site

Remedial Action Completion Report

Prepared for

Washington State Department of Ecology
Steve Teel
P.O. Box 47600
Olympia, Washington
98505

November 2015

DRAFT

FLOYD | SNIDER
strategy ▪ science ▪ engineering
Two Union Square • 601 Union Street • Suite 600
Seattle, Washington 98101 • tel: 206.292.2078

LIMITATIONS

This report has been prepared for the exclusive use of the Estate of Katherine Burleson and GLG, LLC. It has been prepared following the described methods and information available at the time of the work. No other party should rely of this report for any purpose other than that originally intended, unless Floyd|Snider agrees in advance to such reliance in writing. The information contained herein should not be utilized for any purpose or project except the one originally intended. Under no circumstances shall this document be altered, updated, or revised without written authorization of Floyd|Snider.

Table of Contents

List of Tables

List of Figures

List of Appendices

List of Acronyms and Abbreviations

Acronym/ Abbreviation	Definition
bgs	Below ground surface
BMP	Best Management Practice
CAP	Cleanup Action Plan
CDF	Controlled-density fill
CMP	Compliance Monitoring Plan
COC	Chemical of concern
CVOC	Chlorinated volatile organic compounds
DCE	Dichloroethene
Ecology	Washington State Department of Ecology
HASP	Health and Safety Plan
LOTT	LOTT Clean Water Alliance
mg/kg	Milligrams per kilogram
MTCA	Model Toxics Control Act
PanGeo	PanGeo, Inc.
PCE	Tetrachloroethene
PID	Photoionization detector
PPE	Personal protective equipment
ppm	Parts per million
ppmv	Parts per million by volume
PVC	Polyvinyl chloride
QAPP	Quality Assurance Project Plan
RACR	Remedial Action Completion Report
RAWP	Remedial Action Work Plan
ROW	Right-of-way
SAP	Sampling and Analysis Plan
Saybr	Saybr Contractors, Inc.
Site	Former Olympia Dry Cleaners Site
SPCC	Spill Prevention Control and Counter Measure Plan
SWMP	Stormwater Management Plan
TCE	Trichloroethene
TESC	Temporary Erosion and Sediment Control
UDP	Unanticipated Discovery Plan
WAC	Washington Administrative Code

1.0 Introduction

This Remedial Action Completion Report (RACR) was prepared to provide details regarding construction and as-built documentation for the remedial actions that were completed at the Former Olympia Dry Cleaners Site (Site) between July 20 and September 11, 2015. Limited soil excavation and associated restoration activities were completed by Saybr Contractors, Inc. (Saybr) of Tacoma, Washington, under Floyd|Snider oversight.

The Site is located at 606 Union Avenue Southeast in Olympia, Washington (refer to Figure 1.1) and is owned by the Estate of Katherine Burleson and GJG, LLC. The remedial actions consisted of source removal via excavation to remove tetrachloroethene- (PCE) and trichloroethene- (TCE) contaminated soil that resulted from former dry cleaning operations at the Site. The remedial actions were completed in general accordance with the Washington State Department of Ecology's (Ecology's) October 29, 2014, Cleanup Action Plan (CAP; Ecology 2014a) for the Site, and consistent with Washington Administrative Code (WAC) 173-340, the Model Toxics Control Act (MTCA) Cleanup Regulation. Remedial actions were also conducted consistent with the Ecology-approved Remedial Action Work Plan (RAWP) Floyd|Snider 2015a) dated April 15, 2015, and associated RAWP Addendum (Floyd|Snider 2015b) dated June 22, 2015.

The remedial action and associated compliance monitoring and reporting are being conducted under Consent Decree No. 14-2-02104-3, which was executed November 5, 2014 (Ecology 2014b). The cleanup objective of the remedial action was to remove the majority of known and reasonably accessible residual source mass soil via excavation to eliminate the direct contact pathway and to significantly reduce the source of groundwater contamination at the Site. The cleanup objectives were substantially met with the completion of the soil excavation at the Site.

1.1 GENERAL SITE DESCRIPTION

The Former Olympia Dry Cleaners property is located at 606 Union Avenue Southeast in Olympia, Washington at the intersection of Union Avenue Southeast and Cherry Street Southeast (refer to Figure 1.1). The property is currently in operation as Howard's Prestige Cleaners, which provides eco-friendly dry cleaning, stain removal, and tailoring services. Improvements to this property include a one-story, slab-on-grade building (2,584 square feet in area) and asphalt-paved areas, which serve as parking, along the west and south perimeters. An unpaved alley (the North Alley), approximately 6 feet in width, borders the north side of the Former Olympia Dry Cleaners Building, and is located between the Former Olympia Dry Cleaner's Building and the adjacent (to the north) Cherry Street Q-Tip Trust Building.

According the MTCA, the Site is defined by the lateral and vertical extent of contamination that came to lie as a result of former dry cleaning operations. Based on the extent of contamination, the Site includes a portion of the Former Olympia Dry Cleaners Property, a portion of the property located adjacent to the north (the Cherry Street Q-Tip Trust Property), and a portion of the Cherry Street Southeast right-of-way (ROW). Refer to Figure 1.2 for pertinent site features.

1.2 CHEMICALS OF CONCERN

The chemicals of concern (COCs) for the Site are the chemical compounds associated with former dry cleaning activities that were detected in soil, groundwater, and surface water (i.e., the Seep) at concentrations exceeding the applicable MTCA cleanup levels. Indoor air is also a media of concern for the Site due to elevated soil vapor (soil gas) sample results from beneath the slab of the dry cleaners building (sub-slab sample). Prior testing of indoor air at the Cherry Street Q-Tip Trust Building did not indicate impacts to indoor air from site releases.

The following are COCs identified for each media of concern for the Site: PCE, TCE, *cis*-1,2-dichloroethene (DCE), *trans*-1,2-DCE, 1,1-DCE, and vinyl chloride. The suspected source of PCE and its degradation compounds (TCE, *cis*-1,2-DCE, and vinyl chloride) are associated with release of solvent to site soils from former dry cleaning operations.

1.3 CLEANUP LEVELS

Cleanup levels for the Site are presented in Table 1.1. Two factors control designation of appropriate cleanup standards for specific sites: specification of cleanup levels (the chemical concentrations that are protective of human health and the environment) for each COC in each impacted media; and identification of the point of compliance (the location on the Site where the cleanup levels must be attained).

Table 1.1 is from the CAP and identifies the site-specific numerical cleanup levels, based on the applicable cleanup levels by media for each specific COC identified in Section 1.2.

Table 1.1
Cleanup Levels[a]

Chemical	Soil	Groundwater	Surface Water (Seep)	Indoor Air-Residential[b]	Indoor Air-Commercial[c]
PCE	0.05 mg/kg	5 µg/L	3.3 µg/L[d]	9.6 µg/m^3	32 µg/m^3
TCE	0.03 mg/kg	5 µg/L	30 µg/L[d]	0.37 µg/m^3	2 µg/m^3
cis-1,2-DCE	0.03 mg/kg[e]	16 µg/L[f]	NA	NA	NA
trans-1,2-DCE	0.043 mg/kg[e]	100 µg/L[g]	10,000 µg/L[d]	27 µg/m^3	60 µg/m^3
1,1-DCE	0.03 mg/kg[e]	7 µg/L[g]	3.2 µg/L[h]	91 µg/m^3	670 µg/m^3
Vinyl Chloride	0.03 mg/kg[e]	0.2 µg/L	2.4 µg/L[d]	0.28 µg/m^3	0.9 µg/m^3

Notes:

a Cleanup levels are MTCA Method A unless otherwise noted. Values taken from a query of Ecology's CLARC website on January 10, 2014 and CLARC Guidance documents for TCE, PCE, *cis*- and *trans*-1,2-DCE, 1,1-DCE, and vinyl chloride.
b MTCA Standard Method B Indoor Air Cleanup Level.
c MTCA Modified Method B to account for current commercial land use. Refer to Appendix A of the CAP.
d Surface Water ARAR – Human Health, Marine, Clean Water Act.
e MTCA Method B calculated value for protection of the soil-to-groundwater pathway (adjusted up to the soil PQL as appropriate).
f MTCA Method B non-carcinogen Standard Formula Value.
g Ground Water ARAR – State and Federal Maximum Contaminant Level.
h Surface Water ARAR – Human Health, Marine, National Toxics Rule.

Abbreviations:

ARAR Applicable or Relevant and Appropriate Requirements
CLARC Cleanup Levels and Risk Calculation
µg/L Micrograms per liter
µg/m^3 Micrograms per cubic meter
mg/kg Milligram per kilogram
NA Not applicable or no cleanup level has been established
PQL Practical quantitation limit

2.0 Pre-Construction Planning, Permitting, and Access

The remedial action was completed in general accordance with the RAWP and RAWP Addendum, which included the necessary details on how the remedial action was to be performed. There were no significant deviations from the plan.

2.1 PROJECT PLANS

Prior to implementing the soil excavation activities, detailed project plans were prepared, which were included as appendices to the RAWP. These project plans were followed during construction and included a site-specific Health and Safety Plan (HASP), a Sampling and Analysis Plan (SAP) and Quality Assurance Project Plan (QAPP), a Spill Prevention Control and Countermeasure (SPCC) Plan, a Temporary Erosion and Sediment Control (TESC) and Stormwater Management Plan (SWMP), and an Unanticipated Discovery Plan (UDP).

2.2 PERMITTING

Local permits were required for the implementation of the remedial actions at the Site. Copies of permits that were obtained for construction are included in Appendix A.

Discharge of treated construction dewatering water (from the seep, topographical low) was done under the current discharge authorization permit for the Site that was obtained from the LOTT Clean Water Alliance (LOTT). The permit was initially issued for discharge of the seep water that has been collected and treated since 2007 and requires treatment and testing prior to batch discharge. Refer to Section 3.4 for additional details.

Prior to excavating in the Cherry Street Southeast ROW, grading and street permits were obtained from the City of Olympia on July 2, 2015. The City of Olympia also requires additional bonding and insurance requirements for contractors performing work in the street ROW. A portion of Cherry Street Southeast was blocked during construction; therefore, a traffic control plan was also submitted to the City of Olympia for approval as part of the grading permit application.

2.3 UTILITY LOCATE

Utilities within or immediately adjacent to the excavation areas were identified as part of the project planning. The call-before-you-dig one-call underground utility locate center was notified in advance of all ground disturbing activities, including pre-characterization soil borings and excavation. Saybr also provided notice to the utility locate center prior to beginning excavation.

In addition, a private utility locate was completed by Applied Professional Services, Inc. (APS) on September 24, 2014, to verify the locations of the utilities in the excavation areas. Floyd|Snider marked out the limits of the excavation areas and confirmed that there was a natural gas line, a water line, and a storm drain catch basin and line that traverse through the excavation areas. Utility relocation is discussed in Section 3.2.

2.4 OFF-SITE ACCESS

Remedial action work included the removal of soil on the Cherry Street Q-Tip Trust property, which required an access agreement from the Cherry Street Q-Tip Trust. The front handicap entrance to this building was also disturbed and blocked during excavation; however, an alternate rear handicap entrance was available for use during construction. A water line serving the Cherry Street Q-Tip Trust Building crossed through the excavation area. This line was temporarily relocated during construction. The access agreement was negotiated by the attorneys for both the Estate of Katherine Burleson and GJG, LLC (the owner) and the Cherry Street Q-Tip Trust, and was executed on July 1, 2015.

2.5 MONITORING WELL DECOMMISSIONING AND ABANDONMENT

In accordance with the RAWP, existing monitoring wells MW-08, MW-10, MW-12, and MW-15 were decommissioned by a licensed well driller (ESN Northwest, Inc.) on April 21, 2015, prior to initiating excavation in the main and secondary excavation areas. These monitoring wells are not necessary for long-term monitoring and were, therefore, not replaced after excavation activities were complete. Additionally, monitoring wells MW-1, MW-3, MW-4, and MW-7 were not needed for long-term compliance monitoring and were decommissioned at the same time. Refer to Figure 1.2 for the decommissioned and current well locations.

2.6 GEOTECHNICAL EVALUATION

Due to the close proximity of the proposed main excavation area to the adjacent Q-Tip Trust Building, along with complications associated with artesian water in the area, Floyd|Snider requested that PanGeo, Inc. (PanGeo) provide geotechnical recommendations for excavation means and methods in order to be protective of the adjacent building (as part of obtaining off-site access). Based on review of building construction plans and a site visit, Mr. Paul Grant, PE, of PanGeo recommended that the main excavation area should not extend deeper than 12 feet below ground surface (bgs) and should stay a minimum of 2 feet away from the Cherry Street Q-Tip Trust Building to avoid potential complications with the building foundation/footings. Mr. Grant recommended that a geotechnical engineer provide oversight during excavation adjacent to the building and that a minimum of one to two trucks of controlled-density fill (CDF) are on-site and with workers on standby should the need arise for immediate backfill. He also recommended that the CDF be composed of a high strength CalPortland 1420 mix, and that the open trench excavation method include smaller cells no longer than 8 to 10 feet. These primary considerations and other pertinent geotechnical recommendations were followed during excavation, as further discussed in Section 3.0.

2.7 PRE-EXCAVATION SOIL CHARACTERIZATION

In accordance with the RAWP, Floyd|Snider collected pre-excavation soil characterization samples in April and again in May 2015. These new data were collected to facilitate soil disposal profiling, to refine the depth of excavation, and to facilitate Ecology's contained-in determination. Based on the results of the pre-characterization soil data for the Site COCs, along

with the geotechnical assessment, the proposed lateral excavation limits were slightly refined from what was described in the RAWP; however, due to geotechnical concerns, a maximum depth of 12 feet bgs was maintained, even though low-level PCE concentrations were present at concentrations greater than the cleanup levels at a depth of 12 feet bgs.

2.8 CONTAINED-IN DETERMINATION

In accordance with Ecology's contained-in policy, a determination can be made by Ecology that an environmental media (i.e., soil) that contains a hazardous waste may no longer be considered hazardous if the hazardous substances are present in environmental media at concentrations less than risk-based levels. Excavated soil was classified and disposed of as either solid waste or hazardous waste, depending on the in-place concentration. Ecology approved the disposal of most of the excavated PCE-containing soil as solid waste via a contained-in request that was submitted to Ecology on June 12, 2015, and Ecology's subsequent contained-in determination dated July 14, 2015 (a copy is included in Appendix A). Based on pre-characterization data collected prior to excavation, two small areas were identified that contained PCE at concentrations greater than the Land Ban (Land Disposal Restriction) standard of 60 mg/kg, which is considered hazardous waste, and were not part of the contained-in determination.

3.0 Removal Action Construction Activities

The remedial action involved the excavation of almost all known and accessible soil contamination from the Site using slot trenches where needed to help provide the necessary shoring. Excavation was completed in two separate areas: the main excavation area, which extended into the City of Olympia public ROW and into the alley between the two buildings very close to the building footprints, and the secondary excavation area, which has a smaller footprint and vertical extent (refer to Figure 1.2). Following removal of soil to the design depth in the main excavation area, the slot trenches were backfilled with CDF, which both stabilized the excavation and formed a low-permeability barrier to upwelling groundwater flow. The use of slot trenches and CDF was not necessary for the shallower secondary excavation area.

Remediation construction and site restoration activities occurred between July 27 and September 11, 2015. Geotechnical oversight was provided by Mr. Grant, PE, of PanGeo during excavation adjacent to the Cherry Street Q-Tip Trust Building on August 6 and August 12, 2015, and during restoration on August 24, 2015.

3.1 ARTESIAN WELL OPERATION

The artesian supply well located on the west side of the Former Olympia Dry Cleaners Building was run continuously during excavation at its maximum capacity starting 1 week prior to excavation in an attempt to lower the artesian pressure to minimize groundwater infiltration into the main excavation. The well water was piped along the curb line of Cherry Street Southeast and discharged into a catch basin at the north end of the street. Permission to discharge this water was obtained by the City of Olympia Public Works and Water Resources Department prior to construction. The supply well was operated almost continuously during construction and was shut off after the completion of backfilling on August 18, 2015.

3.2 UTILITY RELOCATION

A natural gas main owned by Puget Sound Energy and a water line that services the Cherry Street Q-Tip Trust Building were both located within the main excavation area and were re-routed prior to beginning the excavation work. The gas main serviced the boiler located in the mechanical room at the northeast corner of the Former Olympia Dry Cleaners Building. Utility line relocation was completed between July 28 and July 31, 2015. A new gas meter was installed on the west side of the Former Olympia Dry Cleaners Building and connected to the new gas line running along the building exterior. The new gas service line was inspected by a City of Olympia inspector prior to restoring gas service and re-lighting the dry cleaner's boiler.

As required by Ecology, the excavated trench soils were hauled off-site for disposal along with the contaminated excavation soils in order to clear the main excavation area. Approximately 40 tons of trench soil were excavated and hauled off-site. The final alignments of the re-routed gas line and the water service line are shown on Figure 1.2. Photographs of utility relocation work are presented in Appendix B.

3.3 DESCRIPTION OF REMOVAL ACTION

The excavation work was performed in two primary areas, including the main excavation area on the northwest portion of the Former Olympia Dry Cleaners property extending to the southwest corner of the Cherry Street Q-Tip Trust property, and the secondary shallow excavation near the northeast corner of the Former Olympia Dry Cleaners Building. In addition, the main excavation area was extended into the alley area between the two buildings. CDF was selected for backfill for the main excavation area (including the alley) in order to limit the migration of groundwater from southeast to northwest through potential residual soil contamination and eliminate the need for shoring between previously excavated cells. Floyd|Snider provided excavation oversight and documentation, field screened soil during excavation with a photoionization detector (PID) to assist with delineation, where appropriate, and collected confirmation soil samples in accordance with the RAWP and RAWP Addendum. The total amount of excavated soil from the main excavation and alley areas was approximately 512 tons, and the total amount of soil excavated from the secondary excavation area was approximately 24 tons. Photographs taken to document remedial action activities are included in Appendix B.

3.3.1 Main Excavation Area

The main excavation area was located near the northwest corner of the Former Olympia Dry Cleaners property. This is the same area where excavation occurred as part of the 2006 interim remedial action.

Soil removal in the main excavation area was accomplished via slot trenching to depths of 10 to 12 feet bgs, based on the pre-excavation soil characterization data detailed in the RAWP Addendum. The slot trenches, or cells, were excavated using a 6-foot-wide by 10-foot-long by 8-foot-tall trench box that provided the necessary shoring. The bottom depths were measured relative to the surrounding ground surface. After excavation of soil within the trench box was complete to the target depth, the area was backfilled with CDF to within 2 to 4 feet of the ground surface as the trench box was withdrawn. The CDF was delivered via chute from a delivery truck, or a pump truck when filling trenches farther from the roadway. The extents and depths of the main excavation area cells are shown on Figure 3.1.

Excavation of soil from the main excavation area was completed between August 8 and August 18, 2015. The cells in the main excavation area (as shown on Figure 3.1) were sequenced as follows:

- Cell 1: This cell was aligned parallel the southern edge of the main excavation area and was excavated first in order to create a CDF barrier between the artesian well to the southeast and the main excavation area. It was excavated to a total depth of 12 feet bgs using a trench box.
- Cell 2: This cell was excavated without the use of a trench box under geotechnical oversight. The majority of Cell 2 was excavated to a depth of 12 feet bgs; however, its

western sidewall experienced significant sloughing and caving, which minimized the depth in the northwest corner to 7 feet bgs.

- Cell 3: This cell was excavated to 12 feet bgs at the interior of the main excavation area and 10 feet bgs along the Cherry Street Southeast roadway, using a trench box.
- Cell 4: This cell was excavated prior to excavation of Cell 5 in order to provide shoring for that open excavation. Excavation of Cell 4 was completed using a trench box, but was terminated at 10 feet bgs rather than the target of 12 feet bgs due to safety concerns and excavator instability while reaching for soil at depth.
- Cell 5: This cell was excavated without the use of a trench box under geotechnical oversight. The base of this cell was composed of very soft soil, and the total depth of this cell was 14 feet bgs rather than the target of 12 feet.
- Cell 6: This cell was excavated using a trench box. Similarly to Cell 4, placement of the excavator on unstable backfill did not allow excavation beyond 10 feet bgs, and an approximately 1-foot strip along the eastern side of the trench box was only able to be excavated to 9 feet bgs.
- Cell 7: This cell was excavated to a depth of 12 feet bgs using a trench box.
- Cell 8: This cell was excavated to a depth of 12 feet bgs in the excavation interior and 10 feet bgs along the Cherry Street Southeast roadway without the use of a trench box. Shoring for Cell 8 was provided by the CDF backfill of the previously completed cells.

3.3.2 Main Excavation Area – Alley Extension

The alley portion of the main excavation area included the accessible soils in the 6.5-foot-wide area between the elevated concrete pad adjacent to the Former Olympia Dry Cleaners Building and the Cherry Street Q-Tip Trust Building. This area was identified in the RAWP Addendum after pre-excavation soil boring data identified a PCE hot spot approximately 5 feet east of the previously planned limits of the main excavation area. Soils from the alley area were removed as part of the main excavation, under geotechnical oversight.

Due to the space constraints posed by the narrow alley area, excavation was completed with a mini-excavator. This equipment had a maximum reach of 10 feet, 4 inches; therefore, the maximum excavation depth in the alley area was 10 feet bgs. The narrow width of the alley also precluded the use of a trench box for shoring, so the soils were removed via open trenching with a CDF truck on standby for immediate backfill due to geotechnical considerations.

The alley excavation was completed in two approximately 6-foot by 7-foot cells, as shown on Figure 3.1. Alley Cell 1 to the east was excavated to a depth of 10 feet and included the segregation of an approximately 3-foot by 3-foot area of hazardous waste soils. A portion of both Alley Cell 1 and Alley Cell 2 west of the hazardous waste area was segregated and stockpiled per the contained-in determination to confirm that the soil quality met the contained-in

requirements for disposal. During the excavation of Alley Cell 2 (A2 on Figure 3.1), located between Alley Cell 1 and Cell 2, hard soils were encountered at 9 feet bgs that could not be removed by the mini-excavator; therefore, the target depth of 10 feet could not be achieved in this cell. A water-filled corrugated drain pipe was encountered at approximately 1 foot bgs in the alley excavation area; this same pipe was also encountered in the secondary excavation area, as described in Section 3.3.3.

3.3.3 Secondary Excavation Area

The secondary excavation area was located near the northeast corner of the Former Olympia Dry Cleaners Building. Excavation at this location was undertaken to address an area of historical PCE concentrations in soil that exceeded the MTCA Method A cleanup level, along with a small localized hot spot identified during pre-characterization soil boring testing (refer to Figure 3.2).

The secondary excavation was completed on July 27, 2015. The contaminated soil was removed to the planned extents specified in the RAWP Addendum, except for a small portion of the southwest corner where the gas line to the dry cleaner's boiler, which was still operational at the time of excavation, crossed through the excavation. The secondary excavation depth was 6 feet bgs uniformly throughout the excavation area. The extents of the secondary excavation area are shown on Figure 3.2.

During excavation, a 4-inch-diameter corrugated drain line was encountered at approximately 1.5 feet bgs. When the segment of drain pipe within the secondary excavation area was removed, it was found to be full of standing water, which was released to the excavation upon breakage.

3.4 DEWATERING

Groundwater intrusion was encountered during excavation of both the utility trench and the main and alley areas. This resulted in the need for occasional dewatering of the trenches. The northern portion of the utility trench was in a topographically low-lying area, and this portion of the trench was dewatered periodically using a sump pump in order to keep the trench dry for utility installation.

In the main excavation slot trenches, an electric submersible pump capable of pumping up to 20 gallons per minute was used to dewater within the trench box. A temporary sump was concurrently placed within an area of low lying pea gravel backfill that was encountered along the north side of the main excavation. Water that was displaced by the CDF during backfilling was captured in this low lying area. Per the geotechnical recommendation, the water content of the CDF mix was adjusted to compensate for the residual water present during backfilling.

At the recommendation of the geotechnical engineer, the open trench excavations in the main and alley excavation areas were not dewatered because the water pressure inside the trench was necessary to help to stabilize the sidewalls against caving.

Dewatering water was pumped to a 20,000-gallon settling tank to remove particulates, then transferred to the existing 6,500-gallon and two 3,000-gallon polyethylene tanks for treatment via permanganate. During one significant rain event, water that fell on the main excavation area was also pumped to the settling tank to be handled with dewatering water because it had come into contact with potentially contaminated soils.

After treatment, water samples were collected for chlorinated volatile organic compounds (CVOC) analysis. Treated water was batch discharged to the sanitary sewer under the existing LOTT discharge authorization (refer to Appendix A) via a manhole in Cherry Street Southeast approximately 100 feet northwest of the Site. Approximately 15,000 gallons of dewatering water were collected, treated, and discharged as part of remedial actions. Laboratory analytical data and Discharge Monitoring Reports are provided in Appendix C.

3.5 GEOTECHNICAL OVERSIGHT DURING EXCAVATION

Mr. Paul Grant, PE, of PanGeo provided geotechnical oversight during the excavation of Alley Cell 1 and Cell 2 on August 6 and Alley Cell 2 and Cell 5 on August 12, 2015. These excavation areas were in close proximity to building foundations. The excavation of all cells abutting the Cherry Street Q-Tip Trust Building were completed to Mr. Grant's satisfaction and were immediately backfilled with CDF. The geotechnical engineer's recommendations letter and excavation oversight reports are provided in Appendix D.

3.6 POST-EXCAVATION CONFIRMATION SOIL SAMPLE COLLECTION

Post-excavation confirmation soil samples were collected immediately following excavation and prior to backfilling. These data, along with prior 2015 Geoprobe data from soil depths that were not excavated, document contaminant conditions in soil remaining at the Site. Confirmation sample locations are shown on Figures 3.1 (main excavation area, including the alley) and 3.2 (secondary excavation area). A summary of laboratory analytical data is presented in Table 3.1. Copies of full laboratory reports and data validation reports are included in Appendix E.

3.7 POST-EXCAVATION CONFIRMATION SAMPLE RESULTS

The remedial action removed almost all of the known and reasonably accessible residual CVOC-contaminated source soil from the Site. Laboratory results from confirmation samples collected in the main excavation area (including the alley) and the secondary excavation area demonstrate that the excavation substantially removed the mass of PCE-contaminated source soils, including two localized areas of hazardous waste. Sample analytical results for all excavation confirmation samples (including the appropriate pre-characterization soil boring samples) are presented in Table 3.1 and full laboratory analytical reports and data validation reports are provided in Appendix E. Sample results for the main/alley and secondary excavation areas, including results for pre-excavation characterization samples that were used to define the limits of excavation, are presented in Figures 3.1 and 3.2.

3.7.1 Main Excavation Area

In the main excavation area, residual concentrations of PCE greater than the cleanup level were detected mostly along the northern and western extents of the excavation. The maximum residual concentration, 0.53 mg/kg, was detected at a depth of 10 feet at the base of Cell 6. PCE was not detected in base and sidewall samples from the southern and central portions of the excavation including Cells 1, 3, and 7 (including the pre-excavation characterization samples). PCE was also not detected in the eastern sidewalls adjacent to the Former Olympia Dry Cleaners and Cherry Street Q-Tip Trust Buildings.

Limited detections of other COCs at concentrations only slightly exceeding their cleanup levels were also present in main excavation pre-characterization borings and excavation confirmation samples. These included *cis*-1,2-DCE and TCE in the shallower sidewall samples along the north side of the excavation (M-PCSB-06-5' and M-PCSB-07-5'), as well as TCE in base samples at Cells 2 and 6. The remaining site COCs (1,1-DCE, *trans*-1,2-DCE, and vinyl chloride) were less than their cleanup levels in all main excavation samples.

3.7.2 Main Excavation Area –Alley Extension

The main excavation area was extended into the alley based on pre-characterization hot spot data. The lateral extent and the depth of excavation were limited by the reach of the mini-excavator and presence of surrounding buildings. PCE was detected at concentrations greater than cleanup levels in all confirmation samples; base and sidewall confirmation sample PCE concentrations ranged from 0.094 to 0.55 mg/kg. TCE also exceeded the cleanup level in all alley excavation samples except the south sidewall in Alley Cell 1. Additionally, *cis*-1,2-DCE slightly exceeded the cleanup level in the north sidewall sample from Alley Cell 2. The remaining site COCs (1,1-DCE, *trans*-1,2-DCE and vinyl chloride) were not detected or detected at concentrations less than their cleanup levels in all alley excavation samples.

3.7.3 Secondary Excavation Area

In the secondary excavation area, the pre-excavation and excavation confirmation samples demonstrated that residual PCE concentration are less than cleanup levels along the east, south, and west sidewalls. The sample collected from the northeast extent of the excavation, along the southern edge of the parking lot of the adjacent Cherry Street Q-Tip Trust Building, contained PCE at a concentration slightly greater than the cleanup level at 0.094 mg/kg. The remaining Site COCs (1,1-DCE, *cis*-1,2-DCE, trans-1,2-DCE, TCE, and vinyl chloride) were not detected or detected at concentrations less than their cleanup levels in all secondary excavation area samples.

3.8 HANDLING AND DISPOSAL OF EXCAVATED SOIL

Contaminated soil was pre-characterized for proper off-site disposal as described in the RAWP Addendum. Excavated soils were transported to the Roosevelt Regional Landfill for disposal under a contained-in determination issued by Ecology on July 14, 2015, or were disposed of as hazardous waste as described below.

Although the RAWP specified direct loading of excavated soil into 20-foot intermodal containers on skids (i.e., roll-off bins), only a limited number of "half-high" intermodal bins (necessary due to equipment and space limitations) were available; therefore, excavated soils were either direct loaded or temporarily stockpiled if bins were not immediately available. Soils from the main/alley excavation area were stockpiled inside the excavation footprint, either on un-excavated areas or on sheeting placed over cured CDF backfill. The entire CDF surface was also scraped and the resultant residue was hauled off-site with the remaining soil after excavation and backfill was complete. Soils from the secondary excavation area were temporarily stockpiled on the east side of the property. All soil stockpiles were managed in accordance with the best management practices (BMPs) outlined in the RAWP.

Intermodal bins were lined with polyethylene sheeting before loading and loads were covered with polyethylene prior to transport. Free liquid was generally not present in the excavated soils and drying agents were not necessary for acceptance by the landfill. Erosion and sedimentation control BMPs for the truck loading area were implemented as specified in the RAWP.

3.8.1 Hazardous Waste Segregation and Soil Management

The pre-excavation Geoprobe samples in March and April of 2015 identified two well-defined, small, localized hot spot areas that contained PCE at concentrations greater than the Land Ban (Land Disposal Restriction) standard of 60 mg/kg, hence this material had to be disposed of as hazardous waste.

The first area of hazardous waste-level soil was discovered in the secondary excavation area where field screening evidence of significant contamination was observed between 2.5 and 3.5 feet bgs in a localized area during pre-characterization soil sampling. Therefore, a 3-foot-by-3-foot area was segregated at depths between 2 and 4 feet bgs (refer to Figure 3.2) and placed in a lined roll-off bin designated for hazardous waste. Soil from this area generally had moderate PID readings during excavation (between 10 and 20 parts per million by volume [ppmv]) but was carefully removed in 1-foot lifts and segregated into the designated hazardous waste roll-off container.

The second hot spot area was in the alley; this area was deeper and required segregation between 7 and 9 feet bgs (refer to Figure 3.1). Per the requirements of the contained-in determination, soils located immediately west of the hazardous waste area (and at the same approximate depth) required segregation and testing prior to disposal. Field screening was also used in this area to assist in soil segregation. Soils that had PID readings and odors indicative of potentially hazardous concentrations of PCE (i.e., PID readings greater than 20 ppmv or strong odors) were segregated directly into the hazardous waste roll-off container. Soils with moderately elevated PID readings (less than 20 ppmv) were stockpiled for subsequent testing. Laboratory analysis of the segregated soils with moderate indications of contamination did not detect hazardous waste concentrations of PCE or TCE and these soils were subsequently approved by Ecology for contained-in disposal.

Additionally, during excavation of main excavation Cell 8, soils with elevated PID readings (greater than 100 ppmv) and strong odors were encountered in the vicinity of the residual PCE hot spot along Cherry Street Southeast that was documented during the 2006 interim action. These soils were also segregated and placed in the hazardous waste roll-off container.

3.8.2 Off-Site Disposal of Contained-In Soil

Soils that were determined to be non-hazardous were hauled to the Roosevelt Regional Landfill for disposal under a contained-in determination. A total of approximately 576.8 tons of contained-in soil were hauled off-site for disposal in this manner. The trucking bills of lading and landfill disposal tickets are included in Appendix F.

3.8.3 Off-Site Soil Disposal of Hazardous Waste

After all excavation was complete, the hazardous waste roll-off container was covered for transport and disposed as hazardous waste at Chemical Waste Management of the Northwest in Arlington, Oregon, a Subtitle C landfill. A total of 5.95 tons of hazardous soil were hauled to Chemical Waste Management for treatment and disposal. The hazardous waste manifest and landfill disposal ticket are included in Appendix F.

3.8.4 Miscellaneous Solid Waste Management

All miscellaneous solid waste, such as personal protective equipment (PPE), disposable sampling equipment, and general construction waste were containerized or bagged in heavy-duty plastic bags, and disposed of as municipal solid waste. Asphalt was sent off-site for recycling.

3.9 FRENCH DRAIN INSTALLATION

As described in the RAWP, installation of a French drain in the groundwater seep area was planned as a precautionary measure to capture the seep if it re-emerged after excavation and backfilling. The final French drain layout and construction were determined in the field after the completion of excavation, in coordination with Ecology.

The French drain consists of a 9-foot length of 4-inch-diameter perforated polyvinyl chloride (PVC) pipe installed under the Cherry Street Southeast sidewalk and Cherry Street Q-Tip Trust Building wheelchair ramp to the north of the excavation. The minimum depth of the sloped perforated pipe was 14 inches below the sidewalk surface, increasing to 16.25 inches. The pipe was wrapped with a geotextile fabric and backfilled with approximately 6 inches of high permeability drainage rock, which was then covered with geotextile fabric. Up to 4 inches of crushed rock were added to bring the French drain trench up to the level of the surrounding ground surface prior to pouring of the ramp concrete. The perforated drain pipe was sloped to the east at a 2 percent grade and connected to a 4-inch-diameter solid PVC conveyance pipe, also sloped at a 2 percent grade. At the southern end of the PVC conveyance pipe was an access standpipe, which was cut off below grade. A locking compression cap and flush-mounted protective monument were installed to allow access for future capture and treatment of the

seeps if necessary. The French drain alignment, with cross-section details, is provided on Figure 3.3; photographs of the French drain are presented in Appendix B.

3.10 HEALTH AND SAFETY, INSPECTIONS, AND DECONTAMINATION PROCEDURES

The work was conducted in accordance with a site-specific HASP provided in the RAWP. The required Level D PPE for all site personnel included steel toe boots, safety glasses or goggles, and protective gloves to limit exposure to contaminated media. During excavation, ambient air quality was evaluated with continuous PID monitoring in the downwind direction from the excavation.

The handling of contaminated soil was conducted within a fenced work area to restrict public access into the work zone. BMPs, including sweeping equipment tires/treads and covering the ground surface with polyethylene sheeting, were used to prevent tracking of materials out of the work area. The work area and equipment were secured overnight, and temporary stockpiles were covered with sheeting at the end of each work day.

Weekly visual inspections of all equipment were also completed in accordance with the SPCC provided in the RAWP. A single hydraulic oil line break on the excavator, which occurred within the main excavation area, was contained and reported to Ecology per the procedures outlined in the SPCC.

After contaminated materials handling was completed, the equipment, including the trench box, excavators and hand tools, was decontaminated on the CDF pad in the main excavation area. Soil debris was first removed by sweeping or shoveling and hauled off-site for disposal. The equipment was then washed, and wash water was collected and transferred to the dewatering water holding tank for settling and treatment.

Subsequent to the final discharge of treated dewatering water, the dewatering tanks were cleaned by PRS Group, Inc. using a pressure washer and vacuum truck. The wash water was hauled off-site for treatment and disposal.

3.11 SITE RESTORATION

Following excavation, the properties were restored to their original grades with Type 17 gravel borrow, then repaved or covered with topsoil and landscaped. The sidewalk and portion of Cherry Street Southeast ROW pavement were restored in accordance with the City of Olympia permit requirements (in conjunction with the City of Olympia inspector) and the Olympia Engineering Design and Development Standards Manual (City of Olympia 2014) requirements listed in Chapter 4 (Transportation) Sections 4B.175 (Pavement Restoration) and 4C (Sidewalks and Curbs). A low retaining wall was added in the steeply sloped main excavation area between the Former Olympia Dry cleaners building concrete pad and the adjacent Cherry Street Southeast sidewalk elevation. Drainage rock was also added above the CDF in the alley area, which was sloped to the west to enhance drainage between the two buildings.

The City of Olympia mechanical permit inspection for the new gas line along the building was completed on July 28, 2015. The City of Olympia Engineering Permit final inspection, including restoration of the sidewalk and ROW and final property grading, was completed on August 26, 2015. The gas main and meter installation were permitted separately by Puget Sound Energy. Permit close-out documents are presented in Appendix A.

4.0 Post-Excavation Compliance Monitoring and Reporting

In accordance with the Consent Decree, a Draft Compliance Monitoring Plan (CMP), which includes a long-term groundwater monitoring plan and vapor intrusion monitoring plan, was submitted to Ecology on September 30, 2015, for review and approval. This plan will be finalized and implemented upon Ecology approval.

The long-term groundwater monitoring plan includes quarterly groundwater monitoring for the first year following the remedial action, monitoring for the presence of seeps during each groundwater sampling event, and the sampling of any re-emergent seeps. Depending on the results, a request may be made to reduce the monitoring frequency to semi-annual after the first year, and eventually to annual in a monitoring network that includes five downgradient wells (MW-6, MW-11, MW-14, MW-09, and MW-13). These compliance wells are shown on Figure 1.2.

The vapor intrusion monitoring plan describes how sub-slab vapor samples will be collected from the Former Olympia Dry Cleaners Building. Procedures for indoor and ambient air sample collection are also included, if deemed necessary. The CMP also includes contingency actions should the monitoring results for indoor air indicate an exceedance of the cleanup levels or Short-Term Exposure Limits. The nature of any follow-on contingency actions at the Site will depend on the magnitude of the exceedance, and may include physical modification to ventilation systems, sealing of floors and foundation cracks, or installation of a passive or active building or sub-slab ventilation system.

Groundwater data reports and indoor air monitoring reports will be submitted after each monitoring event in accordance with the CMP. Consistent with the requirements of WAC 173-340-420, Ecology will review the remedial action every 5 years to ensure protection of human health and the environment, as described in the CAP.

5.0 References

City of Olympia. 2014. *2014 Olympia Engineering Design and Development Standards*. Code Publishing Company, Seattle, Washington. 16 December.

Washington State Department of Ecology (Ecology). 2014a. *Former Olympia Dry Cleaners Site Cleanup Action Plan*. Olympia Dry Cleaners Site, 606 Union Ave SE, Olympia, Washington. FS ID: 1446. Cleanup Site ID: 4722. 29 October.

_____. 2014b. *Consent Decree No. 14-2-02104-3, State of Washington Department of Ecology v. the Estate of Katherine Burleson and GJG, LLC*. State of Washington, Thurston County Superior Court. 5 November.

Floyd|Snider. 2015a. *Former Olympia Dry Cleaners Site Remedial Action Work Plan.* Prepared for Washington State Department of Ecology. 15 April.

_____. 2015b. *Remedial Action Work Plan Addendum*. Memorandum to Steve Teel, Washington State Department of Ecology, from Lynn Grochala and Tom Colligan, Floyd|Snider. 22 June.

Former Olympia Dry Cleaners Site

Remedial Action Completion Report

Tables

DRAFT

Table 3.1
Post-Excavation Soil Conditions

Location			Main Excavation Area[1]															
			Main Cell 1	Main Cell 2	Main Cell 3	Main Cell 4			Main Cell 5		Main Cell 6			Main Cell 7			Main Cell 8	
Sample ID			M-Cell1-B-11W-12'	M-Cell2-B-5W-12'	M-PCSB-05 (12')	M-Cell4-B-6N-10'	M-PCSB-06-5'	M-PCSB-06-10'	M-Cell5-B-4S-14'	M-Cell5-S-4S-8'	M-Cell6-B-7S-10'	M-PCSB-07-5'	M-PCSB-07-10'	M-Cell7-B-12W-12'	M-PCSB-01-8'-10'	M-PCSB-01-10'-12'	M-Cell8-B-17W-12'	M-Cell8-B-17W-12'-D	M-PCSB-04-12'
Sample Date			8/5/2015	08/06/201	5/19/2015	08/11/201	5/19/2015	5/19/2015	8/12/2015	08/12/201	8/13/2015	5/19/2015	5/19/2015	8/17/2015	4/21/2015	4/21/2015	8/18/2015	8/18/2015	5/19/2015
Sample Depth (ft bgs)			12	12	12	10	5	10	14	8	10	5	10	12	8-10	10/12/2015	12	12	12
Chemicals of Concern	**CULs[2]**	**Units**																	
Volatile Organic Compounds by USEPA 8260C																			
1,1-Dichloroethene	0.03	mg/kg	0.0276 U	0.0265 U	--	0.0285 U	--	--	0.028 U	0.0256 U	0.0246 U	--	--	0.0253 U	0.061 U	0.073 U	0.024 U	0.0265 U	--
cis -1,2-Dichloroethene	0.03	mg/kg	0.0276 U	0.0265 U	0.024 U	0.0285 U	**0.09**	0.037 U	0.028 U	0.0256 U	0.0298	**0.033**	0.028 U	0.0253 U	0.025 U	0.029 U	0.0292	**0.0333**	0.030 U
trans -1,2-Dichloroethene	0.043	mg/kg	0.0276 U	0.0265 U	0.024 U	0.0285 U	0.02 U	0.037 U	0.028 U	0.0256 U	0.0246 U	0.028 U	0.028 U	0.0253 U	0.025 U	0.029 U	0.024 U	0.0265 U	0.030 U
Tetrachloroethene	0.05	mg/kg	0.0276 U	**0.0742**	**0.087**	**0.236**	**0.18**	**0.199**	**0.129**	0.0256 U	**0.532**	0.028 U	0.028 U	0.0253 U	0.025 U	0.029 U	**0.219**	**0.177**	**0.165**
Trichloroethene	0.03	mg/kg	0.0276 U	**0.0311**	0.024 U	0.0285 U	**0.10**	0.037 U	0.028 U	0.0256 U	**0.0322**	0.028 U	0.028 U	0.0253 U	0.025 U	0.029 U	0.024 U	0.0265 U	0.030 U
Vinyl chloride	0.03	mg/kg	0.00276 U	0.00265 U	0.002 U	0.0029 U	0.002 U	0.004 U	0.003 U	0.00256 U	0.00246 U	0.024	0.003 U	0.00253 U	0.002 U	0.003 U	0.0024 U	0.00265 U	0.003 U

Location			Secondary Excavation Area[1]									Alley Excavation Area[1]				
			Sec-S-E	Sec-S-N	Sec-S-NE	Sec-PCSB-02-8'	Sec-PCSB-03	Sec-PCSB-04		Sec-PCSB-05		Alley1-B	Alley1-S-N	Alley1-S-S	Alley2-B	Alley2-S-N
Sample ID			Sec-S-E-4.5'	Sec-S-N-4'	Sec-S-NE-3'	Sec-PCSB-02-8'	Sec-PCSB-03-5'	Sec-PCSB-04-3'	Sec-PCSB-04-5'	Sec-PCSB-05-3'	Sec-PCSB-05-5'	Alley1-B-10'	Alley1-S-N-8'	Alley1-S-S-8'	Alley2-B-9'	Alley2-S-N-6'
Sample Date			7/27/2015	7/27/2015	7/27/2015	5/19/2015	5/19/2015	5/19/2015	5/19/2015	5/19/2015	5/19/2015	8/6/2015	8/6/2015	8/6/2015	8/12/2015	8/12/2015
Sample Depth (ft bgs)			4.5	4	3	8	5	3	5	3	5	10	8	8	9	6
Chemicals of Concern	**CULs[2]**	**Units**														
Volatile Organic Compounds by USEPA 8260C																
1,1-Dichloroethene	0.03	mg/kg	0.0243 U	0.0271 U	0.0321 U	--	--	--	--	--	--	0.0326 U	0.0319 U	0.0238 U	0.0245 U	0.0351 U
cis -1,2-Dichloroethene	0.03	mg/kg	0.0243 U	0.0271 U	0.0321 U	0.035 U	0.030 U	0.028 U	0.021 U	0.025 U	0.022 U	0.0326 U	0.0319 U	0.0238 U	0.0262	**0.0703**
trans -1,2-Dichloroethene	0.043	mg/kg	0.0243 U	0.0271 U	0.0321 U	0.035 U	0.030 U	0.028 U	0.021 U	0.025 U	0.022 U	0.0326 U	0.0319 U	0.0238 U	0.0245 U	0.0351 U
Tetrachloroethene	0.05	mg/kg	0.0285	0.0318	**0.0939**	0.035 U	0.030 U	0.028 U	0.021 U	0.025 U	0.022 U	**0.419**	**0.36**	**0.222**	**0.403**	**0.546**
Trichloroethene	0.03	mg/kg	0.0243 U	0.0271 U	0.0321 U	0.035 U	0.030 U	0.028 U	0.021 U	0.025 U	0.022 U	**0.107**	**0.0995**	0.0238 U	**0.0386**	**0.0939**
Vinyl chloride	0.03	mg/kg	0.00243 U	0.00271 U	0.0128	0.004 U	0.018	0.003 U	0.014	0.011	0.002 U	0.00326 U	0.00319 U	0.00238 U	0.00245 U	0.0255

Notes:

-- Not analyzed or not applicable.

BOLD Indicates analyte was detected and exceeds CUL.

1 Pre-characterization borings and excavation confirmation samples collected in May/June 2015 used to document post-excavation conditions are shown.

2 CULs for the Site were specified by Ecology in the Cleanup Action Plan dated October 29, 2014.

Abbreviations:

CUL Cleanup level

Ecology Washington State Department of Ecology

ft bgs Feet below ground surface

mg/kg Milligrams per kilogram

MTCA Model Toxics Control Act

Site Former Olympia Dry Cleaners Site

Qualifier:

U Analyte was not detected at the given reporting limit.

Former Olympia Dry Cleaners Site

Remedial Action Completion Report

Figures

DRAFT

FLOYD | SNIDER
strategy • science • engineering

Remedial Action Completion Report
Former Olympia Dry Cleaners Site
Olympia, Washington

Figure 1.1
Site Vicinity Map

I:\GIS\Projects\GTH-Olympia_Dry_Cleaners\MXD\CCR\Figure 1.1 Vicinity Map.mxd
11/6/2015

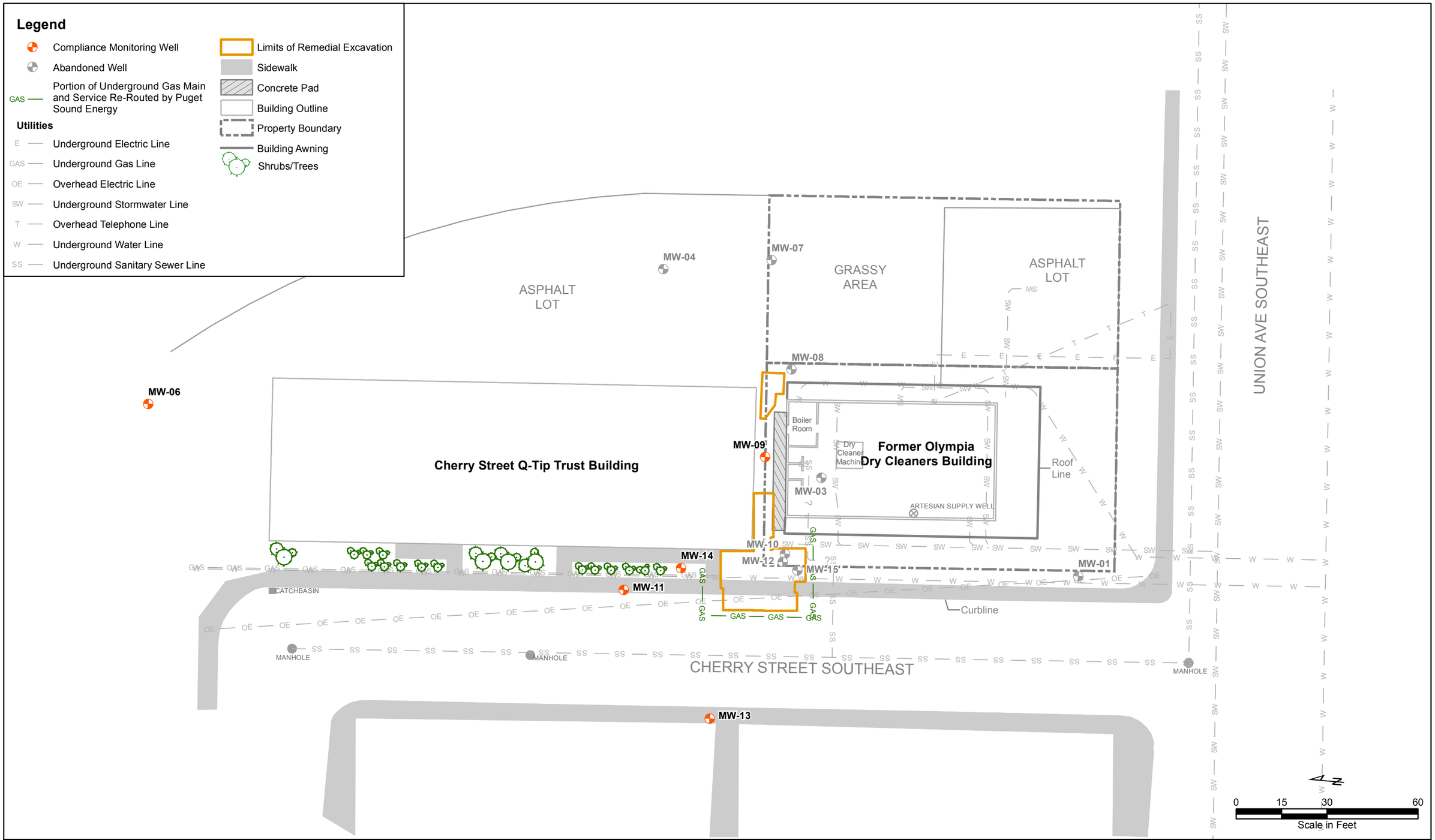
Legend

- Compliance Monitoring Well
- Abandoned Well
- GAS — Portion of Underground Gas Main and Service Re-Routed by Puget Sound Energy

Utilities

- E — Underground Electric Line
- GAS — Underground Gas Line
- OE — Overhead Electric Line
- SW — Underground Stormwater Line
- T — Overhead Telephone Line
- W — Underground Water Line
- SS — Underground Sanitary Sewer Line

- Limits of Remedial Excavation
- Sidewalk
- Concrete Pad
- Building Outline
- Property Boundary
- Building Awning
- Shrubs/Trees



FLOYD | SNIDER
strategy ▪ science ▪ engineering

Remedial Action Completion Report
Former Olympia Dry Cleaners Site
Olympia, Washington

Figure 1.2
Site Features

I:\GIS\Projects\GTH-Olympia_Dry_Cleaners\MXD\CCR\Figure 1.2 Site Features.mxd
11/16/2015

Legend

Samples Documenting Post-Excavation Soil Conditions

- Excavation Confirmation Sample Location
- Pre-Characterization Soil Boring April 2015
- Pre-Characterization Soil Boring May 2015
- (1) Excavation Cell and Number

Cell Depth (ft bgs)

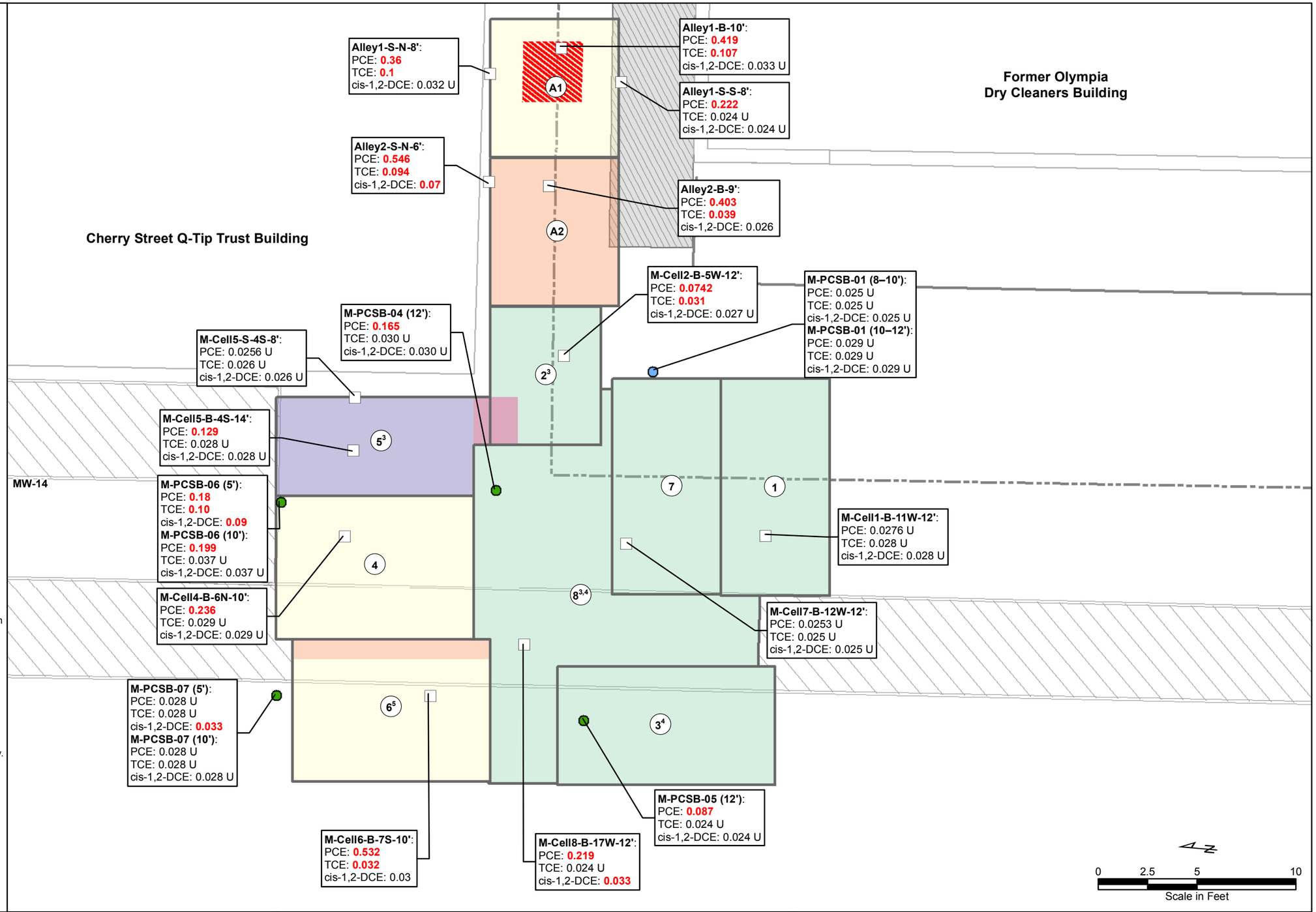
- 7
- 9
- 10
- 12
- 14
- Sidewalk
- Concrete Pad
- Building Outline
- Property Boundary
- Localized Hot Spot[1]

Sample ID Depth in (ft bgs)
Analyte: Result[2]

Notes:
1. Segregated soil from 7 to 9 ft bgs for disposal as hazardous waste or stockpiling and testing.
2. Only the COCs that were present in post-excavation compliance samples at concentrations greater than the cleanup levels are presented on this figure. Refer to Table 3.1 for a summary of all site COCs. **Red, bold** text indicated analyte was detected and exceeds site cleanup levels.
3. Limited soil remained between cells 2, 5, and 8 due to CDF overflow while backfilling cell 2.
4. Excavation to 12 ft bgs in interior of main excavation area and 10 ft bgs at western edge per RAWP Addendum.
5. A small strip (~1 foot wide) was excavated to only 9 feet bgs due to limited excavator accessibility.

Abbreviations:
CDF = Controlled Density Fill
cis-1,2-DCE = cis-1,2-Dichlorethene
COC = Contaminant of concern
ft bgs = Feet below ground surface
PCE = Tetrachloroethene
RAWP = Remedial Action Work Plan
TCE = Trichloroethene

Qualifier:
U The result was not detected at the given reporting limit.



FLOYD | SNIDER
strategy ▪ science ▪ engineering

Remedial Action Completion Report
Former Olympia Dry Cleaners Site
Olympia, Washington

Figure 3.1
Main and Alley Excavation Detail and Confirmation Sample Locations

I:\GIS\Projects\GTH-Olympia_Dry_Cleaners\MXD\CCR\Figure 3.1 Confirmation Sample Locations.mxd
11/20/2015

Legend

Samples Documenting Post-Excavation Soil Conditions

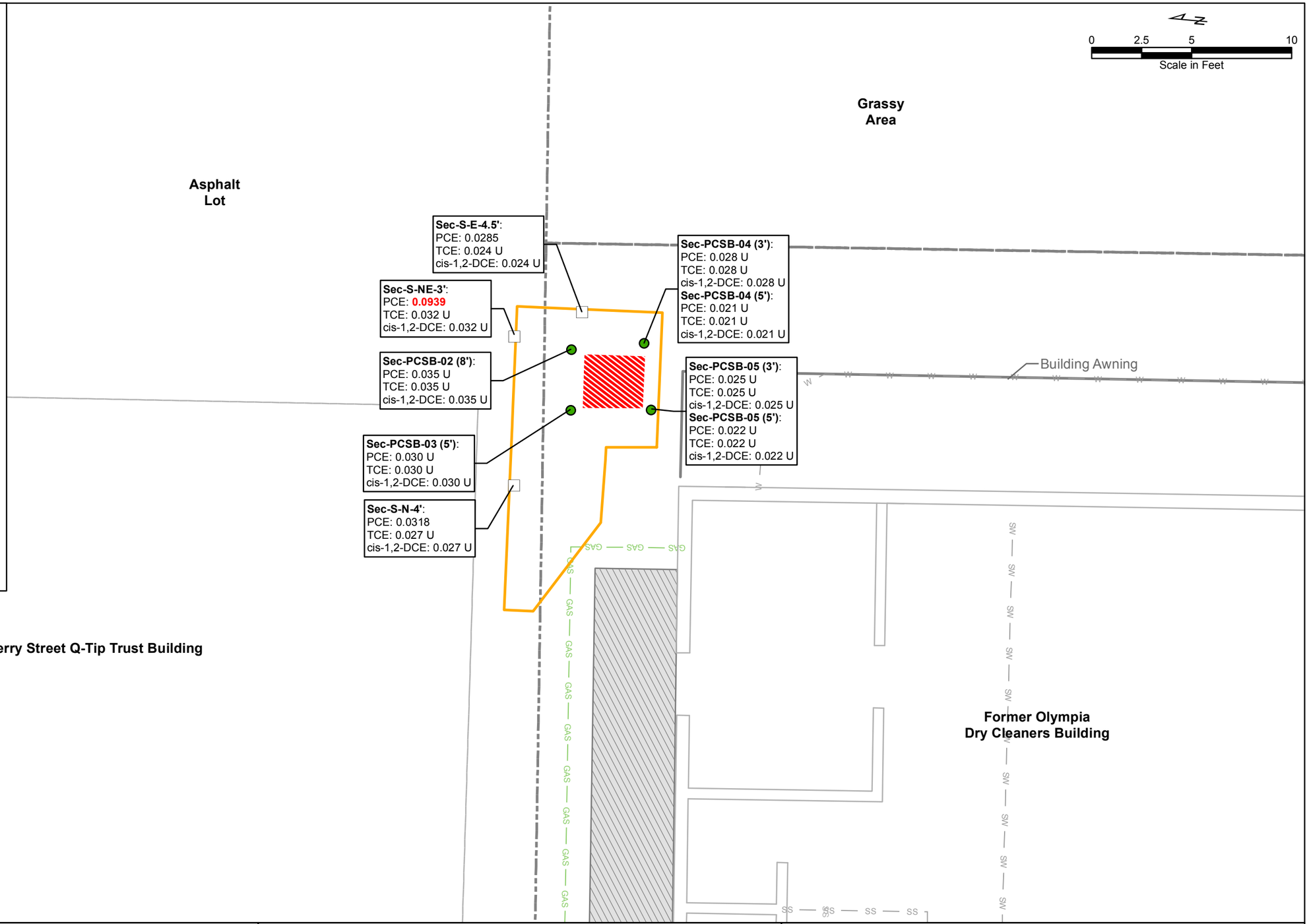
- Excavation Confirmation Sample Location
- Pre-Characterization Soil Boring May 2015
- GAS — Portion of Gas Main and Service Decommissioned Post-Excavation
- SW — Underground Stormwater Line
- W — Underground Water Line
- SS — Underground Sanitary Sewer Line
- Localized Hot Spotl[1]
- Concrete Pad
- Building Outline
- Property Boundary
- Limits of Remedial Excavation[2]

Sample ID Depth in (ft bgs)
Analyte: Result[3]

Notes:
1. Segregated soil from 2 to 4 ft bgs for disposal as hazardous waste.
2. Secondary excavation depth is 6 feet in all areas.
3. Refer to Table 3.1 for a summary of all site COCs. **Red, bold** text indicated analyte was detected and exceeds site cleanup levels.

Abbreviations:
cis-1,2-DCE = cis-1,2-Dichlorethene
COC = Contaminant of concern
ft bgs = Feet below ground surface
PCE = Tetrachloroethene
TCE = Trichloroethene

Qualifier:
U The result was not detected at the given reporting limit.

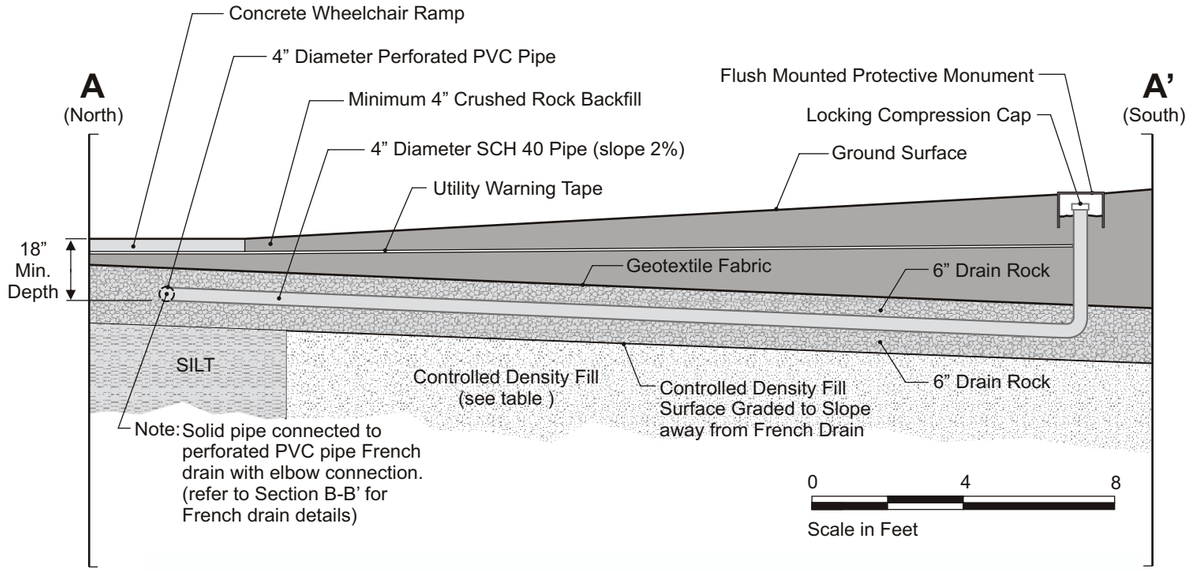


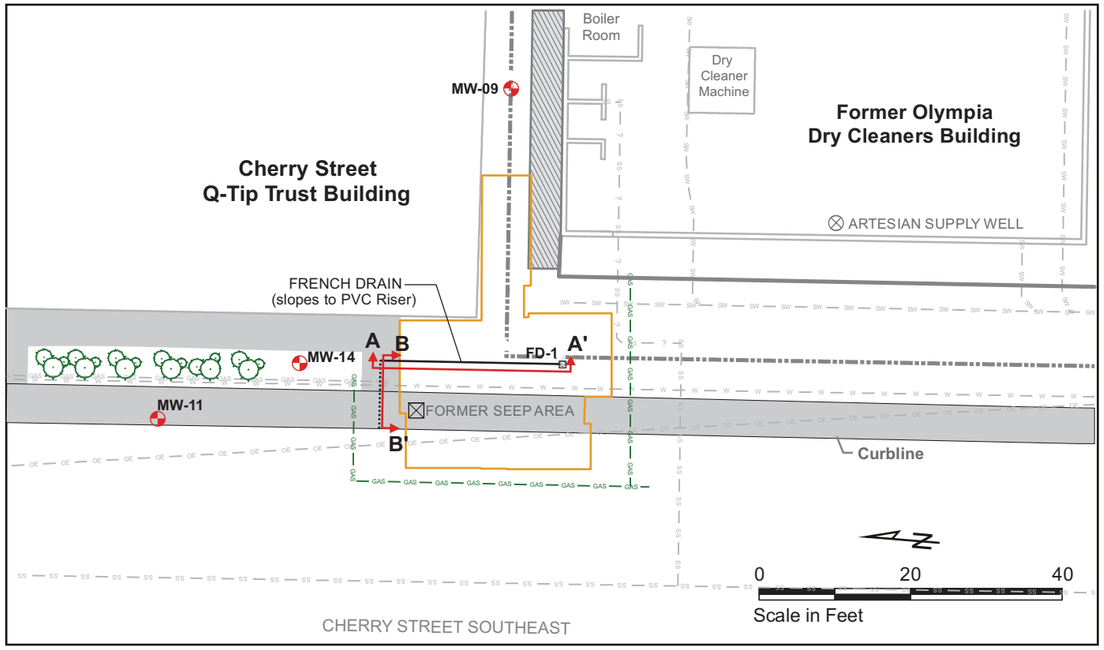
FLOYD | SNIDER
strategy ▪ science ▪ engineering

Remedial Action Completion Report
Former Olympia Dry Cleaners Site
Olympia, Washington

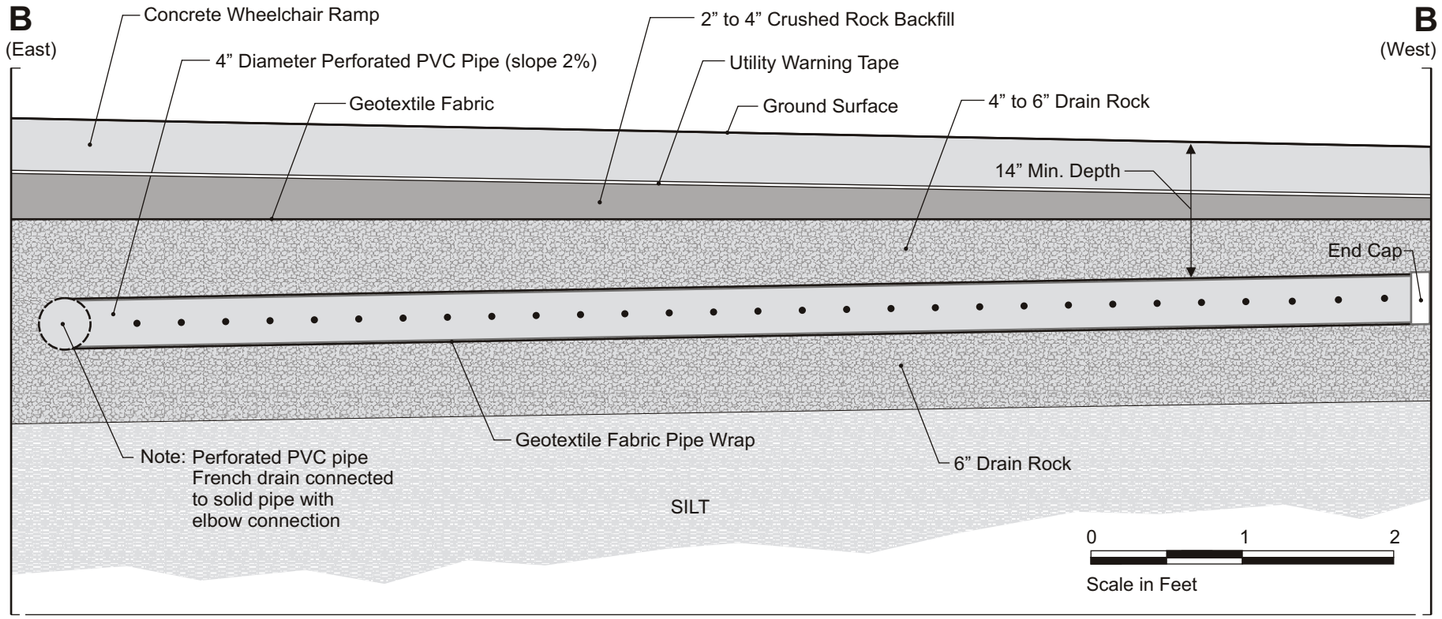
Figure 3.2
Secondary Excavation Detail and Confirmation Sample Results

I:\GIS\Projects\GTH-Olympia_Dry_Cleaners\MXD\CCR\Figure 3.2 Secondary Excavation Detail and Confirmation Sample Results.mxd
11/23/2015





Cross Section Locations



Controlled Density Fill	
MATERIAL	QUANTITY/CUBIC YARD
Portland Cement Type I-II	145 pounds
Fly Ash Class F	400 pounds
Mineral Aggregate	WSDOT Class 2 BLD_SAND
Water	375 pounds (maximum)
Air Entrainment Agent	Daravair 1000 0.1 - 25 ounces

Notes:
1. Final elevation measurements provided by contractor; final limits were measured relative to building features and were not surveyed.
2. Crushed rock backfill compacted by vibratory compactor, or by hand tamping in areas where compactor could damage adjacent structures or utilities.

FLOYD | SNIDER
strategy ▪ science ▪ engineering

Remedial Action Completion Report
Former Olympia Dry Cleaners Site
Olympia, Washington

Figure 3.3
French Drain As-Built Detail

G:Project\Clients\Floyd Snider\Former Olympia Dry Cleaners\Figure 3.4

Former Olympia Dry Cleaners Site

Remedial Action Completion Report

Appendix A
Permits and Approvals

DRAFT

LOTT Alliance
Cleaning and restoring water for our community

COPY

March 5, 2007

Mr. Frank Burleson
1115 Bigelow Street NE
Olympia, WA 98506

RECEIVED
MAR 08 2007

Dear Mr. Burleson:

SUBJECT: Former Olympia Dry Cleaners, 606 East Union Avenue, Olympia, WA Discharge Authorization Letter

The LOTT Alliance has been contacted on your behalf by Sound Environmental Strategies (see attached correspondence) requesting authorization to discharge to the sanitary sewer treated groundwater resulting from remediation activity at your former Olympia Dry Cleaners site located at 606 East Union Avenue, Olympia, Washington. After reviewing information from Sound Environmental Strategies and the Department of Ecology (attached), LOTT is granting the request, contingent upon the following conditions:

1. No discharges are authorized unless a proper outlet to the sanitary sewer is utilized that has been positively identified. No discharges to the stormwater-only collection system are authorized.
2. All groundwater to be discharged shall be contained in the storage tank on-site, treated, and tested prior to discharging to the sanitary sewer (batch discharge).
3. No discharge is authorized unless laboratory analyses of the treated groundwater contained in the tank indicate non-detectable amounts of volatile organic compounds, including tetrachloroethene (PCE) and all its degradation by-products, using EPA Method 8260B.
4. The addition of potassium permanganate to the groundwater for treatment shall be minimized to avoid analytical interference and excess color being discharged.
5. A monthly report shall be submitted to LOTT by the fifteenth of the following month that includes the laboratory analyses and total gallons for the batches discharged that month. Monthly sewer charges will be assessed and billed to you.

If you have any questions or require more information regarding this discharge authorization letter, you may contact me at (360) 528-5708.

Sincerely,

Ken Butti

KEN BUTTI
Environmental Compliance Supervisor

kdb
cc: Tikva Breuer, City of Olympia
Steve Teel, P.E., Department of Ecology
David Buser, L.G., Sound Environmental Strategies
Gerald Tousley, Thurston County Environmental Health

Attachment

Work must commence within 180 days from the date of issuance and/or must have a valid inspection at least every 180 days or this permit will expire by limitation.

Community Planning & Development Department

Application Number	15-00002035 Ledright	Date	7/02/15
Property Address	606 UNION AVE SE		
Land ID Number	16445		
Tax Parcel Number . .	78204000800		
Tenant nbr, name	GRADING-300 CY		
Application type description	SITE- GRADING (FILL AND/OR EXCAV)		
Subdivision Name	SWAN'S ADDITION		
Property Use			
Property Zoning	DOWNTOWN BUSINESS		
Application valuation	0		

Owner	Contractor
GJG LLC	SAYBR CONTRACTORS INC
331 E BALD EAGLE DR	3852 S 66TH ST
SHELTON WA 98584	TACOMA WA 984092408
(360) 943-4182	(253) 531-2144

Permit	A GRADING PERMIT/EROSION CNTRL		
Additional desc . .			
Phone Access Code .	1366632 plntt		
Permit Fee	253.00	Plan Check Fee . .	164.45
Issue Date	7/02/15	Valuation	0
Expiration Date . .	12/29/15		

Qty	Unit Charge	Per		Extension
			BASE FEE	250.00
300.00	.0100	CY	GRADING	3.00

Permit	STREET PERMIT		
Additional desc . .			
Phone Access Code .	1366624 plntt		
Permit Fee	792.00	Plan Check Fee . .	.00
Issue Date	7/02/15	Valuation	0

Qty	Unit Charge	Per		Extension
1.00	562.0000	PER	PRMT/INSP-OBSTRUCT W/TRFC CNTR	562.00

— CONTRACTOR —

CONTRACTOR AFFIDAVIT

I certify that I am a currently registered contractor in the State of Washington and the City of Olympia.
I am aware of the ordinance requirements regulating the work for which the permit is issued and all work will be done in conformance therewith.

Firm _____

By _____ Date _____

— OWNER —

I hereby certify that I am owner of the property for which this permit is issued, and that all work done will be in conformance with City of Olympia ordinances and as noted on this permit.

X _____ _____
SIGNATURE DATE

— CONTRACTOR VERIFICATION — WATER —

(Note: Water billing charges commence on date of instalation of meter and all deposits will be adjusted to actual cost.)

APPLICANT _____ Date _____

CONTRACTOR'S LICENSE VERIFICATION

1. I certify that I have verified the Contractor/Subcontractor listed on this permit had a valid State of Washington contractor's license at time of permit issuance.

CITY STAFF _____

Regular inspections must be scheduled 24 hours in advance.
Final inspections must be scheduled 72 hours in advance.
ONLINE INSPECTION REQUESTS AND INQUIRY 360 753 4444 x 3001
WWW.CI.OLYMPIA.WA.US/CITYSERVICES/PERMIT/

CPDFORM01X

Work must commence within 180 days from the date of issuance and/or must have a valid inspection at least every 180 days or this permit will expire by limitation.

Community Planning & Development Department

Application Number . . . . . 15-00002035 Date 7/02/15

Qty	Unit Charge	Per		Extension
20.00	2.3000	LF	PRMT/INSP CURB AND/OR WALK	46.00
1.00	184.0000	EA	PRMT/INSP ROW EXCAV/RESTORATIO	184.00

Special Notes and Comments
Private water line not to be re-located into City Right of Way. Replace asphalt and concrete per City standards.
Closures are not to occur during Lakefair (July 15-19th.

Fee summary	Charged	Paid	Credited	Due
Permit Fee Total	1045.00	.00	.00	1045.00
Plan Check Total	164.45	.00	.00	164.45
Grand Total	1209.45	.00	.00	1209.45

CONTRACTOR

CONTRACTOR AFFIDAVIT

I certify that I am a currently registered contractor in the State of Washington and the City of Olympia.
I am aware of the ordinance requirements regulating the work for which the permit is issued and all work will be done in conformance therewith.

Firm _____

By _____ Date _____

OWNER

I hereby certify that I am owner of the property for which this permit is issued, and that all work done will be in conformance with City of Olympia ordinances and as noted on this permit.

X _____ SIGNATURE _____ DATE

CONTRACTOR VERIFICATION—WATER

(Note: Water billing charges commence on date of instalation of meter and all deposits will be adjusted to actual cost.)

APPLICANT _____ Date _____

CONTRACTOR'S LICENSE VERIFICATION

1. I ceritify that I have verified the Contractor/Subcontractor listed on this permit had a valid State of Washington contractor's license at time of permit issuance.

CITY STAFF _____

Regular inspections must be scheduled 24 hours in advance.
Final inspections must be scheduled 72 hours in advance.
ONLINE INSPECTION REQUESTS AND INQUIRY 360 753 4444 x 3001
WWW.CI.OLYMPIA.WA.US/CITYSERVICES/PERMIT/

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300
711 for Washington Relay Service • Persons with a speech disability can call (877) 833-8641

July 14, 2015

Mr. Gary Burleson
331 East Bald Eagle Drive
Shelton, WA 98584

Re: Contained-in Determination for Contaminated Soils from Former Olympia Dry Cleaner Site in Olympia, Washington (Ecology Facility ID No. 1446)

Reference: Letter Report from Tom Colligan and Lynn Grochala, Floyd/Snider, to Samuel Iwenofu, dated June 12, 2015
Email Message from Lynn Grochala, Floyd/Snider, to Charles Hoffman, with revised Figure 1 on July 8, 2015

Dear Mr. Burleson:

The Washington State Department of Ecology (Ecology) received a request from your consultant, Floyd/Snider, for a contained-in determination for approximately 500 tons of soil that will be excavated from the former Olympia Dry Cleaner property located at 606 Union Avenue Southeast in Olympia, Washington.

Floyd/Snider submitted analytical data for the subject contaminated soils to determine if soil contaminated with listed dangerous waste constituents (F002) may be exempt from management as dangerous wastes per the "Contained-In Policy". Ecology understands that the contaminated soils subject to the contained-in request do not designate under federal characteristics (WAC 173-303-090) or state-only criteria (WAC 173-303-100) and will be disposed of in a Subtitle D landfill. Ecology also understands that two areas of the proposed excavation, identified on Figure1, are not a part of the contained-in request and will be disposed of as hazardous waste in a Subtitle C landfill. In addition, soils in the vicinity of sample locations "Alley-SB-02" and "Alley-SB-03" will be sampled and tested at a later date and may be part of a separate contained-in request.

Based on the information received and reviewed, Ecology determined the soils are contaminated with F002 listed dangerous waste constituents at concentrations that do not warrant management as dangerous wastes with the exception of the soils discussed in the preceding paragraph, and Ecology will not required disposal of these soils as listed dangerous wastes at a RCRA permitted dangerous waste treatment, storage, and disposal (TSD) facility, provided that all of the following conditions are implemented (again,

with the exception of the soils discussed in the preceding paragraph). This contained-in determination applies only to the contaminated soils and does not apply to contaminated water.

You or your consultant, Floyd/Snider, shall:

- Ensure that no standing water is present within each container holding the contaminated soils. All water must be removed to the maximum extent possible from each container and managed as F002 dangerous waste
- Directly deliver the soils to a solid waste landfill permitted under WAC 173-351 in Washington State, such as Roosevelt Regional Landfill in Klickitat County or a landfill permitted under RCRA Subtitle D outside the state of Washington, such as Columbia Ridge Landfill in Arlington, Oregon. The container can be sent to the rail loading area, but contaminated soils shall not be offloaded from containers to the ground at the transfer facility. Do not consolidate these contaminated soils with other soils that do no pertain to this contained-in determination
- Dispose of the contaminated soils at a permitted solid waste landfill by September 30, 2015. This contained-in determination letter is no longer valid after September 30, 2015, and the contaminated soils must be managed as dangerous wastes after this date
- Notify Ecology before disposal of the soil if the amount exceeds the amount approved by this letter. Ecology needs assurance that additional soil qualifies for this contained-in determination
- Provide copies of all signed solid waste landfill receipts or a certificate of disposal issued by the receiving landfill for these contaminated soils to Ecology, attention of Charles Hoffman, within 15 days or your receipt. This is an important verification step for you and your consultation for this Ecology decision to be valid
- Take measures to prevent unauthorized contact with these soils at all times
- Plastic line the delivery truck and cover all loads if delivered by truck
- During transport, take adequate measure to prevent spill and dispersion due to wind erosion
- Provide instructions to the landfill operator that these soils are not to be used for daily, intermediate, or final cover
- Provide copies of all soil analytical data to the landfill operator upon request, and
- Do not send these contaminated soils to any incinerator, thermal desorption unit, or recycling facility unless that facility is a RCRA subtitle C permitted dangerous waste TSD facility.

Ecology issued this determination based on the information provided and reviewed to date. This written decision only applies the approximately 500 tons of soil described in the June 12, 2015, letter by Floyd/Snider and the July 8, 2015, email message from Floyd/Snider and does not apply to any other areas or other media. Any date used for this contained-in determination is intended for use in determining the proper disposal of the soils according to the Washington State Dangerous Waste Regulation, Chapter 132-303 WAC, and Ecology's Contained-in Policy.

This letter is not an Ecology approval for dangerous waste designation process or disposal of soils that may be generated in the future or already excavated. In addition to the approximately 500 tons of soils, the Floyd/Snider discusses two other defined areas that contain tetrachloroethylene

concentrations greater than 60 mg/kg. The letter states that these soils will be excavated and placed in a separate roll-off container for disposal at a Subtitle C landfill and that these soils are not part of the contained-in request. This soil must be managed as F002 dangerous waste. You or Floyd/Snider shall dispose of this soil by September 30, 2015, and provide a copy of the manifest signed by the final receiving RCRA Subtitle C treatment or disposal facility to Ecology, attention of Charles Hoffman, within 15 days of your receipt.

This letter is not a No Further Action (NFA) letter and not written approval for any cleanup action plant that you have submitted. Instead, this letter only address the procedures for disposal of contaminated soils according to the Washington State Dangerous Was Regulation (Chapter 173-303 WAC). Regulatory decisions regarding the cleanup action, applicable soil and groundwater cleanup level, and any other cleanup issues must comply with the requirements under Model Toxics Control Act (Chapter 173-340 WAC).

Local agencies may have the authority to impose additional requirements on this waste stream.

If you fail to comply with the terms of this letter, Ecology may issue an administrative order and/or penalty as provided by the Revised Code of Washington, Sections 70.105.080 and/or .095 (Hazardous Waste Management Act).

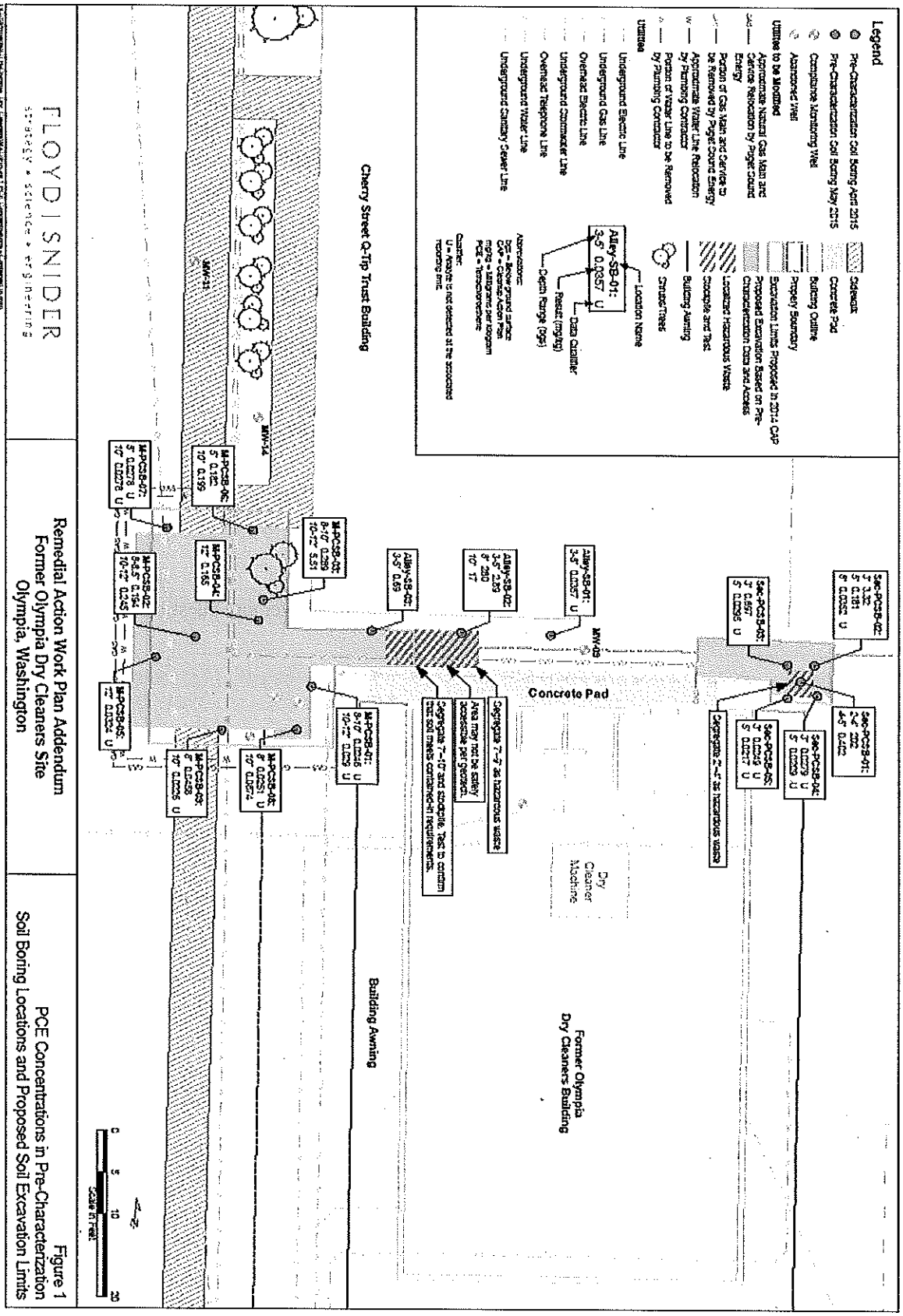
Please contact me at (360) 407-6344 or chof461@ecy.wa.gov if I can answer any questions or provided additional information.

Sincerely,

Charles P. Hoffman, P.E.
Environmental Engineer
Hazardous Waste and Toxics Reduction Program
Southwest Regional Office

Enclosure: Figure 1

Cc: Lynn Grochala, Floyd/Snider
Tom Colligan, Floyd/Snider
Gerald Tousley, Thurston County Health Department
Steve Teel, Ecology/SWRO
Dean Yasuda, Ecology/NWRO
Byung Maeng, Ecology/NWRO
Mindy Collins, Ecology/BFO
Lisa Brown, Ecology/ERO
Greg Caron, Ecology/CRO
Dale Meyers, Ecology/TCP



FLOYD | SNIDER
strategy • science • engineering

Remedial Action Work Plan Addendum
Former Olympia Dry Cleaners Site
Olympia, Washington

Figure 1
PCE Concentrations in Pre-Characterization Soil Boring Locations and Proposed Soil Excavation Limits

CITY OF OLYMPIA

ENGINEERING PERMIT

PAT 3220197
SIDEWALK INSPECTION #

File No. ____________

Permit No. 15 - 2035

Job Address 606 Union Ave SE

Owner ____________ Phone No. ____________

Contractor [illegible] Sabyr Contractors Phone No. ____________

	Work Description	Approval Date	Insp. By
	Sanitary Sewer System		
	Water System		
	Storm Sewer System		
	Street/Alley Grades		
X	Sidewalk/Curb	8/26/15	PB
	Driveway		
	Street Lighting		
	Paving		
X	Clearing/Grading/Erosion		
	STEP System		
	Private Utility		
	Street Closure(s)		
	Traffic Control Plan		
	Tree Removal		
	Tree Protection		
X	R/W Excavation		
X	R/W Obstruction	Effective Date(s):	

Inspector: Pat Boysen

Phone No.: 360 753 8274

THIS CARD MUST BE POSTED IN A VISIBLE PLACE ON THE JOB SITE.

This permit will expire ____________ after ______ day(s) per Section 3.080 & OMC 12.24.100.

J. King 7/2/15

Issued By Date

Final Inspection By Date

Street Pin# 13666024 grading P.n # 13666632

Permit & Inspection Services

Community Planning & Development
601 4th Avenue - PO Box 1967
Olympia WA 98507-1967
Phone: 360.753.8314
Fax: 360.753.8087
cpdinfo@ci.olympia.wa.us
www.olympiawa.gov

Olympia

MECHANICAL PERMIT

PERMIT # 15 2035 DATE July 30.15

ADDRESS 606 Union ave SE

OWNER [illegible]

CONTRACTOR Ridgecreek Plumbing

JOB DESCRIPTION Relocate meter

ROUGH-IN ____________ GAS PIPING 7-28-15 VLL 30 psi FINAL ____________

REQUEST INSPECTIONS AT LEAST 24 HOURS IN ADVANCE OF TIME NEEDED

INSPECTIONS - olympiawa.gov/buildingpermits

PIN # 1375666

Former Olympia Dry Cleaners Site

Remedial Action Completion Report

Appendix B
Photographs

DRAFT

Photograph 1. Corrugated Drain Pipe in Secondary Excavation Area

Photograph 2. Gas Line in Secondary Excavation Area

Photograph 3. Completed Secondary Excavation

Photograph 4. Backfill Placement in Secondary Excavation Area

Photograph 5. Stockpiled Secondary Excavation Soil

Photograph 6. Work Area Security Fencing and Preparation for Trench Soil Stockpiling

Photograph 7. Utility Trench Area in Cherry Street Southeast Roadway

Photograph 8. Exposed Gas and Water Line North of Main Excavation Area and Groundwater Intrusion

Photograph 9. Stockpiled Utility Trench Excavation Soil

Photograph 10. Artesian Groundwater at North End of Utility Trench

Photograph 11. Sand Backfill in Utility Trench

Photograph 12. Installation of New Gas Meter

Photograph 13. Loading of Secondary Excavation Soil to Intermodal Bin

Photograph 14. Setting Trench Box for Main Excavation

Photograph 15. Direct Loading Soil to Intermodal Bin

Photograph 16. Excavation Cell within Trench Box

Photograph 17. Typical Final Depth of Main Excavation Cell and Groundwater Intrusion

Photograph 18. Delivery of Controlled-Density Fill (CDF) Backfill via Truck Chute

Photograph 19. Construction of Temporary Dewatering Sump North of Main Excavation Area and Dewatering Pumps

Photograph 20. Open Trench Alley Excavation

Photo 21. Final Depth of Alley Excavation Cell 1

Photograph 22. Delivery of CDF Backfill via Pump Truck

Photograph 23. Stockpiled Main Excavation Soil on Cured CDF Backfill

Photograph 24. Main Excavation Cell Backfilled with CDF and Stockpiled Main Excavation Soil

Photograph 25. Unstable Gravel Backfill in Previously Excavated Area

Photograph 26. Open Trench Excavation Along Cherry Street Q-Tip Trust Building

Photograph 27. Final Main Excavation Between Cured CDF Cells

Photograph 28. Transfer of Soil to Hazardous Waste Bin

Photograph 29. View of 20,000-Gallon Settling Tank and Three Dewatering Water Treatment Tanks

Photograph 30. Transfer of Dewatering Water from Settling Tank to Treatment Tank

Photograph 31. Groundwater Seep After Final Main Excavation Backfill (Prior to Restoration)

Photograph 32. Installation of Perforated Pipe French Drain North of Main Excavation Area

Photograph 33. French Drain and Conveyance Pipe to Sampling Access Standpipe

Photograph 34. Restored Cherry Street Southeast Asphalt Pavement and Cherry Street Q-Tip Trust Building Landscaping and Wheelchair Ramp

Photograph 35. Retaining Wall and Landscape at Former Olympia Dry Cleaners Building

Photograph 36. Restored Cherry Street Southeast Sidewalk

Former Olympia Dry Cleaners Site

Remedial Action Completion Report

Appendix C
Dewatering Water Sample Analytical Data and Discharge Monitoring Reports

DRAFT

ADESA Environmental Investigations

August 31, 2015

Mr. Ken Butti
LOTT Alliance
500 Adams Street NE
Olympia, WA 98501

Re: August 19, 2015 Discharge Report: Former Olympia Dry Cleaners
606 E. Union Avenue
Olympia, WA

Dear Mr. Butti,

In accordance with the Discharge Authorization Letter issued by LOTT to Mr. Frank Burleson, dated March 5, 2007, ADESA is submitting this discharge report for the former Olympia Dry Cleaners site. A copy of the Discharge Authorization Letter is included as Attachment A.

Floyd Snider (601 Union Street Suite 600, Seattle, WA) performed one (1) discharge event on August 19, 2015. Approximately 5,550 gallons of water were discharged following chemical treatment of collected water in an on-site storage tank. The treatment approach involved the application of potassium permanganate ($KMnO_4$) applied to collected water as a chemical oxidant. Efforts were made to minimize the amount of $KMnO_4$ used and yet ensure that an adequate volume was added to achieve levels of tetrachloroethene and its degradation by-products below the laboratories detection limits.

A copy of the laboratory analytical report representative of the discharged water is included as Attachment B. Following receipt of analytical results for the confirmation sample, the treated water was discharged directly into the manhole on Cherry Street, located approximately 100 feet northwest of the Subject Property. This manhole was previously identified by Mr. Vince McGowan, City of Olympia, as an appropriate sanitary sewer discharge point.

If you have questions or require additional information, you may contact me at (360) 701-8797.

ADESA Environmental Investigations

William W. Rutherford, MES
Senior Project Manager

Attachments: Attachment A, Discharge Authorization Letter
Attachment B, Laboratory Analytical Report
CC: Gary Burleson
CC: Steve Teel, Ecology

PO Box 1009 • Tenino, WA • 98589
Phone: 360-701-8797 • Fax: 360-264-2028 • Email: wrutherford@adesa-wa.com

ATTACHMENT A
Discharge Authorization Letter

PO Box 1009 • Tenino, WA • 98589
Phone: 360-701-8797 • Fax: 360-264-2028 • Email: wrutherford@adesa-wa.com

LOTT Alliance
Cleaning and restoring water for our community

COPY

March 5, 2007

Mr. Frank Burleson
1115 Bigelow Street NE
Olympia, WA 98506

RECEIVED
MAR 08 2007

Dear Mr. Burleson:

SUBJECT: Former Olympia Dry Cleaners, 606 East Union Avenue, Olympia, WA
Discharge Authorization Letter

The LOTT Alliance has been contacted on your behalf by Sound Environmental Strategies (see attached correspondence) requesting authorization to discharge to the sanitary sewer treated groundwater resulting from remediation activity at your former Olympia Dry Cleaners site located at 606 East Union Avenue, Olympia, Washington. After reviewing information from Sound Environmental Strategies and the Department of Ecology (attached), LOTT is granting the request, contingent upon the following conditions:

1. No discharges are authorized unless a proper outlet to the sanitary sewer is utilized that has been positively identified. No discharges to the stormwater-only collection system are authorized.
2. All groundwater to be discharged shall be contained in the storage tank on-site, treated, and tested prior to discharging to the sanitary sewer (batch discharge).
3. No discharge is authorized unless laboratory analyses of the treated groundwater contained in the tank indicate non-detectable amounts of volatile organic compounds, including tetrachloroethene (PCE) and all its degradation by-products, using EPA Method 8260B.
4. The addition of potassium permanganate to the groundwater for treatment shall be minimized to avoid analytical interference and excess color being discharged.
5. A monthly report shall be submitted to LOTT by the fifteenth of the following month that includes the laboratory analyses and total gallons for the batches discharged that month. Monthly sewer charges will be assessed and billed to you.

If you have any questions or require more information regarding this discharge authorization letter, you may contact me at (360) 528-5708.

Sincerely,

KEN BUTTI
Environmental Compliance Supervisor

kdb
cc: Tikva Breuer, City of Olympia
Steve Teel, P.E., Department of Ecology
David Buser, L.G., Sound Environmental Strategies
Gerald Tousley, Thurston County Environmental Health

Attachment

111 Market St. NE, Ste. 250, Olympia, WA 98501

ATTACHMENT B
Laboratory Analytical Report

PO Box 1009 • Tenino, WA • 98589
Phone: 360-701-8797 • Fax: 360-264-2028 • Email: wrutherford@adesa-wa.com

Analytical Report

WO#: **1508161**
Date Reported: **8/18/2015**

Client: Floyd | Snider
Project: GTH-Olympia task 6
Lab ID: 1508161-001
Client Sample ID: **DW-081415**

Collection Date: 8/14/2015 2:30:00 PM
Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: R24250		Analyst: EM
Vinyl chloride	ND	10.0		µg/L	1	8/18/2015 1:07:00 AM
1,1-Dichloroethene	ND	10.0		µg/L	1	8/18/2015 1:07:00 AM
trans-1,2-Dichloroethene	ND	10.0		µg/L	1	8/18/2015 1:07:00 AM
cis-1,2-Dichloroethene	ND	10.0		µg/L	1	8/18/2015 1:07:00 AM
Trichloroethene (TCE)	ND	10.0		µg/L	1	8/18/2015 1:07:00 AM
Tetrachloroethene (PCE)	ND	10.0		µg/L	1	8/18/2015 1:07:00 AM
Surr: Dibromofluoromethane	90.6	45.4-152		%REC	1	8/18/2015 1:07:00 AM
Surr: Toluene-d8	91.6	40.1-139		%REC	1	8/18/2015 1:07:00 AM
Surr: 1-Bromo-4-fluorobenzene	100	64.2-128		%REC	1	8/18/2015 1:07:00 AM

SAMPLE CHAIN OF CUSTODY

Page # 1 of 1

Send Report To: tom colligan; Lynn Grochala
Company: Floyd | Snider
Address: 601 union St, Ste 600
City, State, ZIP: Seattle, WA 98101
Phone # 206-292-2078 Fax #

SAMPLERS (signature):
PROJECT NAME/NO.: 6TH - Olympic task 6
PO#:
REMARKS:

TURNAROUND TIME
☐ Standard (2 Weeks)
☒ RUSH 24 hour
Rush charges authorized by:

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270	HFS	Notes
DW-081415		8/14/15	1430	water	3				X			*cVOCs: PCE, TCE, cis-+ trans-1,2DCE, 1,1-DCE, vinyl chloride

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Kristin Andersen	Floyd/Snider	8/16/15	1835
Received by:	Samantha Beerman	FAI	08/17/15	8:53AM
Relinquished by:				
Received by:				

FORMS\COC\COC.DOC

ADESA Environmental Investigations

September 22, 2015

Mr. Ken Butti
LOTT Alliance
500 Adams Street NE
Olympia, WA 98501

Re: September 11, 2015 Discharge Report: Former Olympia Dry Cleaners
606 E. Union Avenue
Olympia, WA

Dear Mr. Butti,

In accordance with the Discharge Authorization Letter issued by LOTT to Mr. Frank Burleson, dated March 5, 2007, ADESA is submitting this discharge report for the former Olympia Dry Cleaners site. A copy of the Discharge Authorization Letter is included as Attachment A.

Floyd Snider (601 Union Street Suite 600, Seattle, WA) performed one (1) discharge event on September 11, 2015. Approximately 6,000 gallons of water were discharged following chemical treatment of collected water in an on-site storage tank. The treatment approach involved the application of potassium permanganate ($KMnO_4$) applied to collected water as a chemical oxidant. Efforts were made to minimize the amount of $KMnO_4$ used and yet ensure that an adequate volume was added to achieve levels of tetrachloroethene and its degradation by-products below the laboratories detection limits.

A copy of the laboratory analytical report representative of the discharged water is included as Attachment B. Following receipt of analytical results for the confirmation sample, the treated water was discharged directly into the manhole on Cherry Street, located approximately 100 feet northwest of the Subject Property. This manhole was previously identified by Mr. Vince McGowan, City of Olympia, as an appropriate sanitary sewer discharge point.

If you have questions or require additional information, you may contact me at (360) 701-8797.

ADESA Environmental Investigations

William W. Rutherford, MES
Senior Project Manager

Attachments: Attachment A, Discharge Authorization Letter
Attachment B, Laboratory Analytical Report
CC: Gary Burleson
CC: Steve Teel, Ecology

PO Box 1009 • Tenino, WA • 98589
Phone: 360-701-8797 • Fax: 360-264-2028 • Email: wrutherford@adesa-wa.com

ATTACHMENT A
Discharge Authorization Letter

PO Box 1009 • Tenino, WA • 98589
Phone: 360-701-8797 • Fax: 360-264-2028 • Email: wrutherford@adesa-wa.com

LOTT Alliance
Cleaning and restoring water for our community

COPY

March 5, 2007

Mr. Frank Burleson
1115 Bigelow Street NE
Olympia, WA 98506

RECEIVED
MAR 08 2007

Dear Mr. Burleson:

SUBJECT: Former Olympia Dry Cleaners, 606 East Union Avenue, Olympia, WA
Discharge Authorization Letter

The LOTT Alliance has been contacted on your behalf by Sound Environmental Strategies (see attached correspondence) requesting authorization to discharge to the sanitary sewer treated groundwater resulting from remediation activity at your former Olympia Dry Cleaners site located at 606 East Union Avenue, Olympia, Washington. After reviewing information from Sound Environmental Strategies and the Department of Ecology (attached), LOTT is granting the request, contingent upon the following conditions:

1. No discharges are authorized unless a proper outlet to the sanitary sewer is utilized that has been positively identified. No discharges to the stormwater-only collection system are authorized.
2. All groundwater to be discharged shall be contained in the storage tank on-site, treated, and tested prior to discharging to the sanitary sewer (batch discharge).
3. No discharge is authorized unless laboratory analyses of the treated groundwater contained in the tank indicate non-detectable amounts of volatile organic compounds, including tetrachloroethene (PCE) and all its degradation by-products, using EPA Method 8260B.
4. The addition of potassium permanganate to the groundwater for treatment shall be minimized to avoid analytical interference and excess color being discharged.
5. A monthly report shall be submitted to LOTT by the fifteenth of the following month that includes the laboratory analyses and total gallons for the batches discharged that month. Monthly sewer charges will be assessed and billed to you.

If you have any questions or require more information regarding this discharge authorization letter, you may contact me at (360) 528-5708.

Sincerely,

KEN BUTTI
Environmental Compliance Supervisor

kdb
cc: Tikva Breuer, City of Olympia
Steve Teel, P.E., Department of Ecology
David Buser, L.G., Sound Environmental Strategies
Gerald Tousley, Thurston County Environmental Health

Attachment

111 Market St. NE, Ste. 250, Olympia, WA 98501

ATTACHMENT B
Laboratory Analytical Report

PO Box 1009 • Tenino, WA • 98589
Phone: 360-701-8797 • Fax: 360-264-2028 • Email: wrutherford@adesa-wa.com

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Floyd | Snider
Tom Colligan
601 Union St., Suite 600
Seattle, WA 98101

RE: GTH - Olympia t.6
Lab ID: 1509030

September 08, 2015

Attention Tom Colligan:

Fremont Analytical, Inc. received 1 sample(s) on 9/1/2015 for the analyses presented in the following report.

Volatile Organic Compounds by EPA Method 8260

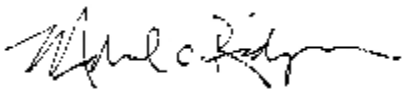
This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,



Mike Ridgeway
President

Date: *09/08/2015*

CLIENT: Floyd | Snider
Project: GTH - Olympia t.6
Lab Order: 1509030

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1509030-001	DW-082815-B	09/01/2015 2:45 PM	09/01/2015 6:42 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1509030**
Date: **9/8/2015**

CLIENT: Floyd | Snider
Project: GTH - Olympia t.6

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below LOQ
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

WO#: **1509030**
Date Reported: **9/8/2015**

Client: Floyd | Snider
Project: GTH - Olympia t.6
Lab ID: 1509030-001
Client Sample ID: **DW-082815-B**

Collection Date: 9/1/2015 2:45:00 PM
Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: R24728		Analyst: BC
Vinyl chloride	ND	10.0		µg/L	1	9/5/2015 4:03:00 AM
1,1-Dichloroethene	ND	10.0		µg/L	1	9/5/2015 4:03:00 AM
trans-1,2-Dichloroethene	ND	10.0		µg/L	1	9/5/2015 4:03:00 AM
cis-1,2-Dichloroethene	ND	10.0		µg/L	1	9/5/2015 4:03:00 AM
Trichloroethene (TCE)	ND	10.0		µg/L	1	9/5/2015 4:03:00 AM
Tetrachloroethene (PCE)	ND	10.0		µg/L	1	9/5/2015 4:03:00 AM
Surr: Dibromofluoromethane	97.9	45.4-152		%REC	1	9/5/2015 4:03:00 AM
Surr: Toluene-d8	95.1	40.1-139		%REC	1	9/5/2015 4:03:00 AM
Surr: 1-Bromo-4-fluorobenzene	99.1	64.2-128		%REC	1	9/5/2015 4:03:00 AM

Work Order: 1509030
CLIENT: Floyd | Snider
Project: GTH - Olympia t.6

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID: **LCS-R24728**	SampType: **LCS**			Units: **µg/L**		Prep Date: **9/5/2015**		RunNo: **24728**			
Client ID: **LCSW**	Batch ID: **R24728**					Analysis Date: **9/5/2015**		SeqNo: **466039**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	22.4	0.200	20.00	0	112	53.6	139				
1,1-Dichloroethene	21.7	1.00	20.00	0	109	65.6	136				
trans-1,2-Dichloroethene	20.7	1.00	20.00	0	103	71.7	129				
cis-1,2-Dichloroethene	21.6	1.00	20.00	0	108	71.1	130				
Trichloroethene (TCE)	21.3	0.500	20.00	0	106	65.2	136				
Tetrachloroethene (PCE)	21.3	1.00	20.00	0	107	47.5	147				
Surr: Dibromofluoromethane	25.2		25.00		101	45.4	152				
Surr: Toluene-d8	24.6		25.00		98.6	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.9		25.00		99.6	64.2	128				

Sample ID: **MB-R24728**	SampType: **MBLK**			Units: **µg/L**		Prep Date: **9/5/2015**		RunNo: **24728**			
Client ID: **MBLKW**	Batch ID: **R24728**					Analysis Date: **9/5/2015**		SeqNo: **466040**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.200									
1,1-Dichloroethene	ND	1.00									
trans-1,2-Dichloroethene	ND	1.00									
cis-1,2-Dichloroethene	ND	1.00									
Trichloroethene (TCE)	ND	0.500									
Tetrachloroethene (PCE)	ND	1.00									
Surr: Dibromofluoromethane	23.7		25.00		94.9	45.4	152				
Surr: Toluene-d8	25.5		25.00		102	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.6		25.00		94.5	64.2	128				

Sample ID: **1509063-002ADUP**	SampType: **DUP**			Units: **µg/L**		Prep Date: **9/5/2015**		RunNo: **24728**			
Client ID: **BATCH**	Batch ID: **R24728**					Analysis Date: **9/5/2015**		SeqNo: **466033**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.200						0		30	
1,1-Dichloroethene	ND	1.00						0		30	

Work Order: 1509030
CLIENT: Floyd | Snider
Project: GTH - Olympia t.6

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID: **1509063-002ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **9/5/2015** RunNo: **24728**
Client ID: **BATCH** Batch ID: **R24728** Analysis Date: **9/5/2015** SeqNo: **466033**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,2-Dichloroethene	ND	1.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Surr: Dibromofluoromethane	24.9		25.00		99.6	45.4	152		0		
Surr: Toluene-d8	24.8		25.00		99.2	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.0		25.00		96.1	64.2	128		0		

Sample ID: **1509063-003AMS** SampType: **MS** Units: **µg/L** Prep Date: **9/5/2015** RunNo: **24728**
Client ID: **BATCH** Batch ID: **R24728** Analysis Date: **9/5/2015** SeqNo: **466035**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	22.7	0.200	20.00	0	113	58.1	158				
1,1-Dichloroethene	22.1	1.00	20.00	0	111	63	141				
trans-1,2-Dichloroethene	21.9	1.00	20.00	0	110	63.5	138				
cis-1,2-Dichloroethene	22.5	1.00	20.00	0	113	67.1	123				
Trichloroethene (TCE)	22.0	0.500	20.00	0	110	60.4	134				
Tetrachloroethene (PCE)	21.6	1.00	20.00	0	108	50.3	133				
Surr: Dibromofluoromethane	25.3		25.00		101	45.4	152				
Surr: Toluene-d8	24.8		25.00		99.3	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	25.4		25.00		102	64.2	128				

Sample Log-In Check List

Client Name:	**FS**	Work Order Number:	**1509030**
Logged by:	**Clare Griggs**	Date Received:	**9/1/2015 6:42:00 PM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Coolers are present?	Yes ☐	No ☑	NA ☐
	Sample received straight from field			
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Required ☑
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >0°C to 10.0°C *	Yes ☑	No ☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☑	NA ☐
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

19. Additional remarks:

Samples received with ice.

Item Information

Item #	Temp ºC
Sample	7.5

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Fremont Analytical

Chain of Custody Record

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Laboratory Project No (internal): 1509030

Date: 9/1/15

Page: 1 of: 1

Client: Floyd | Snider
Address: 601 Union St, Ste 600
City, State, Zip: Seattle, WA 98101
Telephone: 206-292-0078 Fax:

Project Name: GTH - Olympia t. 6
Project No:
Collected by:
Location:
Report To (PM): See file
PM Email:

*Matrix Codes: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	cVOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T)	Dissolved (D)	Anions (IC)***	EDB (8011)	Comments
1	DW-082815-B	9/1/15	1445	W	X														* cVOCs: PCE, TCE, cis- + trans-1,2-DCE, 1,1-DCE, vinyl chloride
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

**Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Sample Disposal: ☐ Return to Client ☐ Disposal by Lab (A fee may be assessed if samples are retained after 30 days.)

Turn-around times for samples received after 4:00pm will begin on the following business day.

Special Remarks: sample results by Tuesday 9/8

Relinquished	Date/Time	Received	Date/Time
x	9/1/15 1842	x	09/01/2015 6:42pm
Relinquished	Date/Time	Received	Date/Time
x		x	

TAT → SameDay^ NextDay^ 2 Day 3 Day STD

^Please coordinate with the lab in advance

Distribution: White - Lab, Yellow - File, Pink - Originator

Former Olympia Dry Cleaners Site

Remedial Action Completion Report

Appendix D
Geotechnical Oversight Report

DRAFT

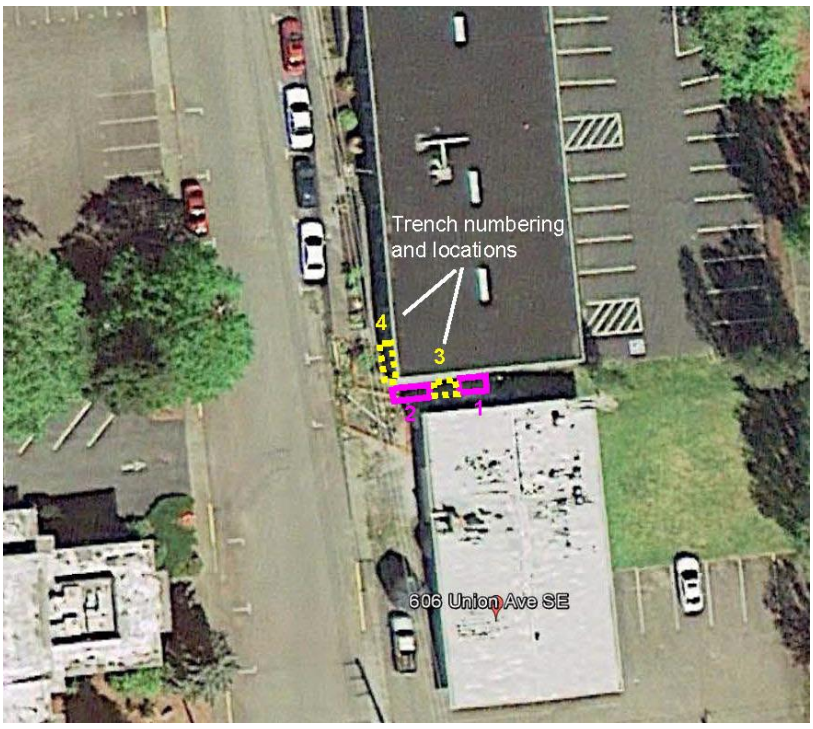
PanGEO INCORPORATED
Geotechnical and Earthquake Engineering Consultants

3213 Eastlake Avenue East Suite B
Seattle, WA 98102-7127
Tel: (206) 262-0370 Fax: (206) 262-0374

	Project No. 12-099-400	**Page No.** 1 of 3
	Report No. 1	**Date** August 13, 2015
Project Name Olympia Cleaners	**Location or Address** 606 Union Ave SE, Olympia, WA	
Client Floyd Snider	**Permit No.**	**Weather** Sunny – 80's
General Contractor/ Superintendent Saybr Construction - Bruce	**Subcontractor**:	**PanGEO Field Reps.** Paul Grant

This report summarizes my observations on August 6th and 12th, 2015, of the trench excavations and backfill adjacent to the foundations of the existing building at 1000 Cherry Street. The excavations were accomplished as part of an environmental cleanup of contaminated that extended to depths of 10 to 12 feet below the existing ground surface. Because the contaminant plume extended beneath the 1000 Cherry Street building, the objective of the cleanup was to excavate as close as possible to the building without undermining the structure. A representative of PanGEO was present during the soil removal adjacent to the building to provide guidance on the maximum trench length and depth that could be safely accomplished. Steve Teel with the Washington State Department of Ecology was on site both days that excavation was accomplished adjacent to the 1000 Cherry Street Building.

Trenches



A total of 4 trenches were excavated adjacent to the 1000 Cherry Street Building. The approximate locations of the trenches and referencing numbering for the trenches are illustrated below. Trenches 1 and 2 were excavated on August 6, 2015 and trenches 3 and 4 were excavated on August 12, 2015. Trenches in the "alley" between the two buildings were centered between the perimeter footing of the 1000 Cherry Street Building and the elevated loading dock of the 606 Union Ave SE Building. All trenches had target excavation depths of 10 to 12 feet below the existing ground surface. Because of the narrow 6 foot wide space between the 1000 Cherry Street building and the 606 Union Ave SE loading dock a Takeuchi TB240 mini excavator with a 30-inch wide bucket was used for these restricted excavations. This excavator had a maximum reach of about 10 feet. The remaining 2 trenches were excavated with a John Deere 130G tracked excavator, also equipped with a 30 inch wide bucket. Both machines used smooth blade buckets.

Approximate surface dimensions, maximum depth, and estimated volumes of the trenches are as follows:

Trench	Length (ft.)	Width (ft.)	Max. Depth (ft.)	Volume (cy.)
1	8	6	10	12
2	8	6	10	10
3	6	6	9	8
4	11	4	14	22

Subsurface Conditions

Similar subsurface conditions were encountered in all trenches, consisting of:

0-7' Fill – Soft to medium stiff, brown silt with concrete slabs and occasional gravel and wood debris, wet

>7' Native – Medium stiff to stiff, gray-brown silt, wet

Outside of the alley, trenches 2 and 4, at the corner of the 1000 Cherry Street building encountered clean gravel fill that was placed during a prior cleanup of the site.

Construction Observations

All trenches were cut vertically to the maximum depth, which occur in the midpoint of the trench length with the ends of the trench being somewhat higher. During the excavation, the sidewalls in the fill typically experienced slabbing or caving that widened the trench above the contact with the native silt. In most instances, the slabbing did not result in any settlement at the ground surface. However, in Trench 1, which was open to a depth of about 5 feet for about 1 hour while waiting for a concrete truck, the sidewalls of the trench started to squeeze and move laterally, which resulted in about 1 inch of local ground settlement beneath a 2 foot section of the footing of the 1000 Cherry Street building. When the CDF was placed in the trench, the surface of the CDF extended above the top of the footing and the fluid CDF was worked so that it would flow into the gap between the base of the footing and the underlying fill. Approximately one week after CDF was placed in this trench I reviewed the exposed portion of the footing stem wall and did not observe any cracks that might be related to the temporary loss of support.

Trench 2 encountered clean gravel at the west end of the trench that extended about 6 feet below the ground surface. While the trench excavation reached the target depth of 10 feet, immediately upon completion of the excavation gravel at the west end and southwest corner of the excavation caved into the trench to a depth of about 4 feet at the west end and could not be clean out without risking a greater amount of caving. Consequently, the trench was backfilled with CDF with the inclusion of clean gravel at the west end. Trench 2 was also backfilled with CDF to a level above the top of the footing of the 1000 Cherry Street building.

Trench 3 along the west side of the 1000 Cherry Street Building abuts Trench 1 on the east and 2 on the west. Excavation of trench 3, which was scheduled for 11:00, was delayed to about 14:00 because of pump truck availability. The excavation encountered clayey silt fill with concrete debris overlying native soils at a depth of about 6 to 7 feet. The ends of the trench were in contact with the CDF in Trenches 1 and 2 within the fill soil. However, below the fill, the excavator was not able to undercut the CDF in Trenches 1 and 3

because of operational restrictions of the equipment. Consequently, a narrow vertical wedge of native material remained below a depth of about 6 feet in trench 3 and the adjacent CDF filled trenches to the east and west. The maximum depth of the excavation was limited to about 9 feet, which was also based equipment restrictions of operating within the restricted length of the trench. Confirmation samples were taken at the base of the excavation as well as the sidewall. Approximately 6 to 12 inches of water accumulated at the base of the trench and CDF was placed at the bottom of the trench using a tremie pipe to displace the water. CDF placement continued to a level above the top of the footing of the 1000 Cherry Street Building.

Trench 4 along the west side of the 1000 Cherry Street Building abuts the end of Trench 2 which experienced caving of gravel at the west end of the trench. Trench 4 reached a maximum depth of about 14 feet in the middle of the trench and about 13 feet at the ends of the trench. At the south end of the trench, the gravels that intruded into Trench 2 were encountered and these materials caved into the deeper excavation of Trench 4 and partially undermined the west end of the CDF in Trench 2. The running gravel was removed from Trench 4 and the undermined void (about 3 cy) was subsequently filled with CDF during the backfilling of Trench 4.

In all 4 trenches, the CDF was placed using a line pump where the end of the hose was placed on the bottom of the trench through any water that accumulated in the trench during the excavation (i.e. tremmie placement). In all instances, there was less than 2 feet of standing water in the trenches at the time of tremmie placement of the CDF.

Conclusions

1. All trench excavations reached their target depths.
2. The CDF placement in all trenches is typically contiguous in the upper 6 feet where fill soils were encountered but because of constraints of construction equipment, narrow vertical wedges may be present in the native stiff soils between the CDF in adjacent trenches.
3. While some slabbing did occur in the trench sidewalls, the slabbing did not undermine the footings of the 1000 Cherry Street Building.
4. Any voids that we locally observed beneath the footing of the 1000 Cherry Street building were filled with CDF from the trench backfill.
5. In all instances, CDF placement extended above the top of the footings for the 1000 Cherry Street Building, restoring vertical and lateral support to the foundations
6. During construction, I did not observe any new cracks develop in the foundations of the 1000 Cherry Street Building.
7. The CDF filled trenches abutting the 1000 Cherry Street building are continuous to at least a depth of 6 feet and, as such, should provide a barrier to groundwater migrations.

Attachments: Annotated photos

Signed: W. Paul Grant

"Alley" between Buildings
View East
5/19/15 11:35


Clean Gravel backfill underlying much of the site from a previous environmental cleanup
P7438
BAKER
5/19/15 11:16


1000 Cherry St. Bldg.
Top of Footing 6" below grade (plans show 3'-6"
Footing cast over concrete debris/slab
Existing crack in stem wall ~1/16"
Planned maximum easterly extend of trench
Trench 1 Alley East
View North
8/6/15 10:42


Concrete
Slab
Trench 1 Alley East
View North
8/6/15 13:30
Bottom of Trench @ 10'


Trench 1 Alley East
View North
8/6/15 13:54
Bottom of Trench @ 10'


Squeezing sidewall resulted in ~1" settlement beneath 2' long section of footing
Trench 1 Alley East
View North
8/6/15 13:54

Trench 1 Alley East
View North
5/6/15 14:47

CDF Filled Trench
CDF extended above
top of footing and
penetrated gap
beneath footing


Pre-existing
foundation crack
north of trench
excavation
Trench 1 Alley East
View North
5/12/15 12:11


Trench
Backfilling
with CDF
Trench 2 Alley West
View West
8/6/15 15:41

Trench 3 Alley West
View West
8/12/15 14:05

Trench 3 located between Trench 2 (west) and Trench 1 (east)


Trench 3 Alley West
View West
8/12/15 14:42
Trench being
backfilled with
Tremmied CDF

Trench 4 Building West
View South
8/12/15 15:11

Trench 4 Bldg. West
View South
8/12/15 15:17

Trench backfilled with CDF Gravel caving into the trench on the south undercut Trench 2 at the corner of the building creating an overhang that was filled with ~3 cy of CDF

Trench 4 Bldg. West
View South
8/12/15 16:12

PanGEO INCORPORATED
Geotechnical and Earthquake Engineering Consultants

3213 Eastlake Avenue East Suite B
Seattle, WA 98102-7127
Tel: (206) 262-0370 Fax: (206) 262-0374

	Project No. 12-099-400	**Page No.** 1 of 3
	Report No. 2	**Date** August 24, 2015
Project Name Olympia Cleaners	**Location or Address** 606 Union Ave SE, Olympia, WA	
Client Floyd Snider	**Permit No.**	**Weather** Sunny – 70's
General Contractor/ Superintendent Saybr Construction - Bruce	**Subcontractor**:	**PanGEO Field Reps.** Paul Grant

At the request of Ms. Lynn Grochala with Floyd Snider, I visited the site today to discuss site restoration items, including the installation of trench drain and drainage issues for the 606 Union Street building related to sags in the below grade drain line at the SW corner of the building. The following summarizes my observations.

Trench Drain

The ground surface on the south side of the remediation area appeared dry with no evidence of seepage. The ground surface at the northern limit of the remediation, at the north edge of the CDF zone, was wet and experiencing seepage that continued to the ground surface and subsequently flowed along the curb line to the north. Seepage was very slow at an estimated rate of about 1 to 2 gallons per hour. After on-site discussions and concurrence with Mr. Steve Teel with the Washington State Department of Ecology, it was agreed to install the trench drain in an east-west orientation beneath the City sidewalk starting at the curb line and running easterly a distance of about 6 to 8 feet then making a right angle beneath or on the south side of the replacement section of the sidewalk to the 1000 Cherry Street building. The trench drain would terminate at the 90 degree bend and then enter a tightline running to the south. With the concurrence of Mr. Teel, it was agreed that the base of the trench drain would be about 12 to 18 inches below the finished grade of the sidewalk and would thereby intercept seepage observed at the ground surface at the north edge of the remediated area. Mr. Teel also concurred with the planned 1to 2 percent slope of the tightline to the south. The tightline would end just short of the gas service lines to the 606 Cherry Ave. building.

606 Union Ave. Building Roof Drains

The two roof drains at the north end of the 606 Union Ave. Building flow into a tightline at the NW corner of the building and this tightline then flows south to a side sewer line that leads to the City sanitary sewer. During the remediation, the southerly flowing tightline at the northwest corner of the building was exposed and found to be lower that the tie in point to the side sewer, such that water would only flow under a surcharge of about 2 feet of head. Rather than rebuilding the line to address the grade issue, it was decided to rebuild the roof gutters on the east and west sides of the building to flow to the center of the building and then be picked up with existing downspouts with the proper grade.

1000 Cherry Street Building Foundations

Since my last visit, the hairline crack in the foundation wall at the easternmost extent of the trench excavation appeared unchanged since my last site visit. However, during today's visit, I observed another hairline crack (less than 1 mm opening) on the foundation wall at location of about 9 feet east of the SW corner of the building. The crack had no apparent vertical offset or rotation movement. This crack should have no significant effect on the performance of the building.

FIELD REPORT

8/24/15 Hairline Crack

Signed: W. Paul Grant

Former Olympia Dry Cleaners Site

Remedial Action Completion Report

Appendix E
Confirmation Sample Laboratory Analytical Data

DRAFT

FLOYD | SNIDER
strategy ▪ science ▪ engineering

Two Union Square
601 Union Street, Suite 600
Seattle, WA 98101
tel: 206.292.2078 fax: 206.682.7867

Tier I Data Validation Summary

Prepared by: Chell Black

Date: August 31, 2015

Project No: GTH-Olympia Dry Cleaners

Sample Event(s): Excavation Confirmation Sampling

Sample Delivery Group(s): FA1507291, FA1508064, FA1508149, and FA1508236

Sample Media: Soil

A Compliance Screening, Tier 1 data quality review was performed on volatile organic compound data resulting from laboratory analysis by USEPA Method 8260C. The analytical data were validated in accordance with the USEPA National Functional Guidelines for Superfund Organic Methods Data Review (2014). The conventional parameter of percent moisture was also analyzed; however it does not have data quality compliance requirements and is not included in this review.

A total of 17 soil samples and one trip blank were submitted in four sample delivery groups, FA1507291, FA1508064, FA1508149, and FA1508236, to Fremont Analytical of Seattle, Washington, for chemical analysis. For all sample delivery groups, the analytical holding times were met and the method blanks had no detections. The surrogate, matrix spike and laboratory control sample recoveries and sample/sample duplicate relative percent differences all met USEPA requirements.

No qualifiers were added to the analytical results based on the data quality review. Data are determined to be of acceptable quality for use as reported by the lab.

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Floyd | Snider
Tom Colligan
601 Union St., Suite 600
Seattle, WA 98101

RE: Olympia Dry Cleaner
Lab ID: 1507291

July 31, 2015

Attention Tom Colligan:

Fremont Analytical, Inc. received 4 sample(s) on 7/28/2015 for the analyses presented in the following report.

Sample Moisture (Percent Moisture)
Volatile Organic Compounds by EPA Method 8260

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway
President

CC:
Lynn Grochala

Date: *07/31/2015*

CLIENT: Floyd | Snider
Project: Olympia Dry Cleaner
Lab Order: 1507291

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1507291-001	Sec-S-N-4'	07/27/2015 1:35 PM	07/28/2015 3:00 PM
1507291-002	Sec-S-NE-3'	07/27/2015 1:50 PM	07/28/2015 3:00 PM
1507291-003	Sec-S-E-4.5'	07/27/2015 2:00 PM	07/28/2015 3:00 PM
1507291-004	Trip Blank	07/22/2015 5:30 PM	07/28/2015 3:00 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1507291**
Date: **7/31/2015**

CLIENT: Floyd | Snider
Project: Olympia Dry Cleaner

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below LOQ
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

WO#: **1507291**
Date Reported: **7/31/2015**

Client: Floyd | Snider
Collection Date: 7/27/2015 1:35:00 PM
Project: Olympia Dry Cleaner
Lab ID: 1507291-001
Matrix:
Client Sample ID: **Sec-S-N-4'**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: 11466		Analyst: BC
Vinyl chloride	ND	0.00271		mg/Kg-dry	1	7/31/2015 1:41:00 AM
1,1-Dichloroethene	ND	0.0271		mg/Kg-dry	1	7/31/2015 1:41:00 AM
trans-1,2-Dichloroethene	ND	0.0271		mg/Kg-dry	1	7/31/2015 1:41:00 AM
cis-1,2-Dichloroethene	ND	0.0271		mg/Kg-dry	1	7/31/2015 1:41:00 AM
Trichloroethene (TCE)	ND	0.0271		mg/Kg-dry	1	7/31/2015 1:41:00 AM
Tetrachloroethene (PCE)	0.0318	0.0271		mg/Kg-dry	1	7/31/2015 1:41:00 AM
Surr: Dibromofluoromethane	110	63.7-129		%REC	1	7/31/2015 1:41:00 AM
Surr: Toluene-d8	105	64.3-131		%REC	1	7/31/2015 1:41:00 AM
Surr: 1-Bromo-4-fluorobenzene	98.7	63.1-141		%REC	1	7/31/2015 1:41:00 AM
Sample Moisture (Percent Moisture)				Batch ID: R23882		Analyst: SL
Percent Moisture	22.2	0.500		wt%	1	7/29/2015 2:34:33 PM

Analytical Report

WO#: **1507291**
Date Reported: **7/31/2015**

Client: Floyd | Snider
Collection Date: 7/27/2015 1:50:00 PM
Project: Olympia Dry Cleaner
Lab ID: 1507291-002
Matrix:
Client Sample ID: **Sec-S-NE-3'**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: 11466		Analyst: BC
Vinyl chloride	0.0128	0.00321		mg/Kg-dry	1	7/31/2015 2:09:00 AM
1,1-Dichloroethene	ND	0.0321		mg/Kg-dry	1	7/31/2015 2:09:00 AM
trans-1,2-Dichloroethene	ND	0.0321		mg/Kg-dry	1	7/31/2015 2:09:00 AM
cis-1,2-Dichloroethene	ND	0.0321		mg/Kg-dry	1	7/31/2015 2:09:00 AM
Trichloroethene (TCE)	ND	0.0321		mg/Kg-dry	1	7/31/2015 2:09:00 AM
Tetrachloroethene (PCE)	0.0939	0.0321		mg/Kg-dry	1	7/31/2015 2:09:00 AM
Surr: Dibromofluoromethane	120	63.7-129		%REC	1	7/31/2015 2:09:00 AM
Surr: Toluene-d8	103	64.3-131		%REC	1	7/31/2015 2:09:00 AM
Surr: 1-Bromo-4-fluorobenzene	97.8	63.1-141		%REC	1	7/31/2015 2:09:00 AM
Sample Moisture (Percent Moisture)				Batch ID: R23882		Analyst: SL
Percent Moisture	26.1	0.500		wt%	1	7/29/2015 2:34:33 PM

Analytical Report

WO#: **1507291**
Date Reported: **7/31/2015**

Client: Floyd | Snider
Collection Date: 7/27/2015 2:00:00 PM
Project: Olympia Dry Cleaner
Lab ID: 1507291-003
Matrix:
Client Sample ID: **Sec-S-E-4.5'**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: 11466		Analyst: BC
Vinyl chloride	ND	0.00243		mg/Kg-dry	1	7/31/2015 2:37:00 AM
1,1-Dichloroethene	ND	0.0243		mg/Kg-dry	1	7/31/2015 2:37:00 AM
trans-1,2-Dichloroethene	ND	0.0243		mg/Kg-dry	1	7/31/2015 2:37:00 AM
cis-1,2-Dichloroethene	ND	0.0243		mg/Kg-dry	1	7/31/2015 2:37:00 AM
Trichloroethene (TCE)	ND	0.0243		mg/Kg-dry	1	7/31/2015 2:37:00 AM
Tetrachloroethene (PCE)	0.0285	0.0243		mg/Kg-dry	1	7/31/2015 2:37:00 AM
Surr: Dibromofluoromethane	119	63.7-129		%REC	1	7/31/2015 2:37:00 AM
Surr: Toluene-d8	102	64.3-131		%REC	1	7/31/2015 2:37:00 AM
Surr: 1-Bromo-4-fluorobenzene	99.5	63.1-141		%REC	1	7/31/2015 2:37:00 AM
Sample Moisture (Percent Moisture)				Batch ID: R23882		Analyst: SL
Percent Moisture	25.1	0.500		wt%	1	7/29/2015 2:34:33 PM

Work Order: 1507291
CLIENT: Floyd | Snider
Project: Olympia Dry Cleaner

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID **1507312-001BDUP**	SampType: **DUP**	Units: **mg/Kg-dry**	Prep Date: **7/30/2015**	RunNo: **23921**
Client ID: **BATCH**	Batch ID: **11466**		Analysis Date: **7/30/2015**	SeqNo: **453045**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.00211						0		30	
1,1-Dichloroethene	ND	0.0527						0		30	
trans-1,2-Dichloroethene	ND	0.0211						0		30	
cis-1,2-Dichloroethene	ND	0.0211						0		30	
Trichloroethene (TCE)	ND	0.0211						0		30	
Tetrachloroethene (PCE)	ND	0.0211						0		30	
Surr: Dibromofluoromethane	1.50		1.318		114	63.7	129		0		
Surr: Toluene-d8	1.35		1.318		103	64.3	131		0		
Surr: 1-Bromo-4-fluorobenzene	1.31		1.318		99.2	63.1	141		0		

Sample ID **1507312-003BMS**	SampType: **MS**	Units: **mg/Kg-dry**	Prep Date: **7/30/2015**	RunNo: **23921**
Client ID: **BATCH**	Batch ID: **11466**		Analysis Date: **7/30/2015**	SeqNo: **453047**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	1.23	0.00209	1.044	0	117	51.2	146				
1,1-Dichloroethene	1.02	0.0522	1.044	0	97.4	61.9	141				
trans-1,2-Dichloroethene	1.06	0.0209	1.044	0	101	52	136				
cis-1,2-Dichloroethene	1.02	0.0209	1.044	0	97.5	58.6	136				
Trichloroethene (TCE)	0.968	0.0209	1.044	0	92.7	68.6	132				
Tetrachloroethene (PCE)	1.02	0.0209	1.044	0	97.8	35.6	158				
Surr: Dibromofluoromethane	1.72		1.306		131	63.7	129				S
Surr: Toluene-d8	1.33		1.306		102	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.33		1.306		102	63.1	141				

NOTES:
S - Outlying surrogate recovery observed. Parent sample recovered within range.

Sample ID **LCS-11466**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **7/30/2015**	RunNo: **23921**
Client ID: **LCSS**	Batch ID: **11466**		Analysis Date: **7/30/2015**	SeqNo: **453055**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	1.12	0.00200	1.000	0	112	56.1	130				

Work Order: 1507291
CLIENT: Floyd | Snider
Project: Olympia Dry Cleaner

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID **LCS-11466** SampType: **LCS** Units: **mg/Kg** Prep Date: **7/30/2015** RunNo: **23921**
Client ID: **LCSS** Batch ID: **11466** Analysis Date: **7/30/2015** SeqNo: **453055**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	0.912	0.0500	1.000	0	91.2	49.7	142				
trans-1,2-Dichloroethene	0.956	0.0200	1.000	0	95.6	68	130				
cis-1,2-Dichloroethene	0.983	0.0200	1.000	0	98.3	71.3	135				
Trichloroethene (TCE)	0.977	0.0200	1.000	0	97.7	65.5	137				
Tetrachloroethene (PCE)	0.971	0.0200	1.000	0	97.1	52.7	150				
Surr: Dibromofluoromethane	1.58		1.250		126	63.7	129				
Surr: Toluene-d8	1.29		1.250		103	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.25		1.250		100	63.1	141				

Sample ID **MB-11466** SampType: **MBLK** Units: **mg/Kg** Prep Date: **7/30/2015** RunNo: **23921**
Client ID: **MBLKS** Batch ID: **11466** Analysis Date: **7/30/2015** SeqNo: **453056**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.00200									
1,1-Dichloroethene	ND	0.0500									
trans-1,2-Dichloroethene	ND	0.0200									
cis-1,2-Dichloroethene	ND	0.0200									
Trichloroethene (TCE)	ND	0.0200									
Tetrachloroethene (PCE)	ND	0.0200									
Surr: Dibromofluoromethane	1.37		1.250		110	63.7	129				
Surr: Toluene-d8	1.28		1.250		102	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.20		1.250		96.3	63.1	141				

Date: *7/31/2015*

Work Order: 1507291
CLIENT: Floyd | Snider
Project: Olympia Dry Cleaner

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID **1506060-001ADUP**	SampType: **DUP**			Units: **wt%**		Prep Date: **7/29/2015**		RunNo: **23882**		
Client ID: **BATCH**	Batch ID: **R23882**					Analysis Date: **7/29/2015**		SeqNo: **452384**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	9.87	0.500						10.28	4.14	20	

Sample ID **1507300-002BDUP**	SampType: **DUP**			Units: **wt%**		Prep Date: **7/29/2015**		RunNo: **23882**		
Client ID: **BATCH**	Batch ID: **R23882**					Analysis Date: **7/29/2015**		SeqNo: **452404**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	12.0	0.500						13.19	9.41	20	

Sample Log-In Check List

Client Name:	**FS**	Work Order Number:	**1507291**
Logged by:	**Mike Ridgeway**	Date Received:	**7/28/2015 3:00:00 PM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Courier		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☑	Not Required ☐
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >0°C to 10.0°C *	Yes ☑	No ☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler	1.7
Sample	1.6
Temp blank	2.9

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Fremont Analytical

Chain of Custody Record

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Laboratory Project No (internal): 1507291

Date: 7/27/15 Page: 1 of: 1

Client: Floyd | Snider
Address: 601 Union St Ste 600
City, State, Zip: Seattle, WA 98104
Tel: 206-552-4241 Fax:

Project Name: Olympia Dry Cleaner
Project No: GTH-Olympia F. 6 Collected by: K. Anderson
Location: Olympia, WA
Reports To (PM): Tom Colligan + Lynn Grochala
Email: tom-colligan@floydsnider.com lynn.grochala@floydsnider.com

*Matrix Codes: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, WW = Waste Water, SW = Storm Water

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	CVOC (EPA 8260) *	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SEMI VOL (EPA 8270)	PAH (EPA 8270 - SIM)	PCBs (EPA 8082)	Metals** (6020 / 200.8)	Total (T) / Dissolved (D)	Anions (IC)***	EDB (8011)	Comments/Depth
1	Sec-S-N-4'	7/27/15	1335	S	X													* CVOCs: PCE; TCE; cis- + trans-1,2 DCE; 1,1-DCE; vinyl chloride
2	Sec-S-NE-3'	7/27/15	1350	S	X													
3	Sec-S-E-4.5'	7/27/15	1400	S	X													
4																		
5																		
6																		
7																		
8																		
9																		
10																		

**Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Sample Disposal: ☐ Return to Client ☒ Disposal by Lab (A fee may be assessed if samples are retained after 30 days.)

Turn-around times for samples received after 4:00pm will begin on the following business day.

Special Remarks:

	Relinquished	Date/Time	Received	Date/Time
x		7/28/15 8:45	Scot Z9	7-28-15 3PM
x	Scot Z9	7-28-15 3PM		

TAT -> SameDay^ NextDay^ 2 Day 3 Day STD
^Please coordinate with the lab in advance

Distribution: White - Lab, Yellow - File, Pink - Originator

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Floyd | Snider
Tom Colligan
601 Union St., Suite 600
Seattle, WA 98101

RE: GTH-Olympia t-6
Lab ID: 1508064

August 12, 2015

Attention Tom Colligan:

Fremont Analytical, Inc. received 6 sample(s) on 8/7/2015 for the analyses presented in the following report.

Sample Moisture (Percent Moisture)
Volatile Organic Compounds by EPA Method 8260

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway
President

CC:
Lynn Grochala

Date: *08/12/2015*

CLIENT: Floyd | Snider
Project: GTH-Olympia t-6
Lab Order: 1508064

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1508064-001	M-SS1-Cell1-11W-12'	08/05/2015 12:20 PM	08/07/2015 11:10 AM
1508064-002	Alley-B-10'	08/06/2015 1:35 PM	08/07/2015 11:10 AM
1508064-003	Alley-S-N-8'	08/06/2015 1:55 PM	08/07/2015 11:10 AM
1508064-004	Alley-S-S-8'	08/06/2015 2:00 PM	08/07/2015 11:10 AM
1508064-005	M-Cell2-5W-12'	08/06/2015 3:40 PM	08/07/2015 11:10 AM
1508064-006	Alley-Stockpile-01	08/06/2015 4:15 PM	08/07/2015 11:10 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1508064**
Date: **8/12/2015**

CLIENT: Floyd | Snider
Project: GTH-Olympia t-6

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below LOQ
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

WO#: **1508064**
Date Reported: **8/12/2015**

Client: Floyd | Snider
Collection Date: 8/5/2015 12:20:00 PM
Project: GTH-Olympia t-6
Lab ID: 1508064-001
Matrix: Soil
Client Sample ID: **M-SS1-Cell1-11W-12'**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: 11545		Analyst: BC
Vinyl chloride	ND	0.00276		mg/Kg-dry	1	8/8/2015 3:02:00 AM
1,1-Dichloroethene	ND	0.0276		mg/Kg-dry	1	8/8/2015 3:02:00 AM
trans-1,2-Dichloroethene	ND	0.0276		mg/Kg-dry	1	8/8/2015 3:02:00 AM
cis-1,2-Dichloroethene	ND	0.0276		mg/Kg-dry	1	8/8/2015 3:02:00 AM
Trichloroethene (TCE)	ND	0.0276		mg/Kg-dry	1	8/8/2015 3:02:00 AM
Tetrachloroethene (PCE)	ND	0.0276		mg/Kg-dry	1	8/8/2015 3:02:00 AM
Surr: Dibromofluoromethane	104	63.7-129		%REC	1	8/8/2015 3:02:00 AM
Surr: Toluene-d8	108	64.3-131		%REC	1	8/8/2015 3:02:00 AM
Surr: 1-Bromo-4-fluorobenzene	97.3	63.1-141		%REC	1	8/8/2015 3:02:00 AM
Sample Moisture (Percent Moisture)				Batch ID: R24154		Analyst: SL
Percent Moisture	30.3	0.500		wt%	1	8/12/2015 11:01:55 AM

Analytical Report

WO#: **1508064**
Date Reported: **8/12/2015**

Client: Floyd | Snider
Collection Date: 8/6/2015 1:35:00 PM
Project: GTH-Olympia t-6
Lab ID: 1508064-002
Matrix: Soil
Client Sample ID: **Alley-B-10'**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: 11545		Analyst: BC
Vinyl chloride	ND	0.00326		mg/Kg-dry	1	8/8/2015 7:42:00 AM
1,1-Dichloroethene	ND	0.0326		mg/Kg-dry	1	8/8/2015 7:42:00 AM
trans-1,2-Dichloroethene	ND	0.0326		mg/Kg-dry	1	8/8/2015 7:42:00 AM
cis-1,2-Dichloroethene	ND	0.0326		mg/Kg-dry	1	8/8/2015 7:42:00 AM
Trichloroethene (TCE)	0.107	0.0326		mg/Kg-dry	1	8/8/2015 7:42:00 AM
Tetrachloroethene (PCE)	0.419	0.0326		mg/Kg-dry	1	8/8/2015 7:42:00 AM
Surr: Dibromofluoromethane	105	63.7-129		%REC	1	8/8/2015 7:42:00 AM
Surr: Toluene-d8	109	64.3-131		%REC	1	8/8/2015 7:42:00 AM
Surr: 1-Bromo-4-fluorobenzene	95.5	63.1-141		%REC	1	8/8/2015 7:42:00 AM
Sample Moisture (Percent Moisture)				Batch ID: R24154		Analyst: SL
Percent Moisture	24.2	0.500		wt%	1	8/12/2015 11:01:55 AM

Analytical Report

WO#: **1508064**
Date Reported: **8/12/2015**

Client: Floyd | Snider
Collection Date: 8/6/2015 1:55:00 PM
Project: GTH-Olympia t-6
Lab ID: 1508064-003
Matrix: Soil
Client Sample ID: **Alley-S-N-8'**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: 11545		Analyst: BC
Vinyl chloride	ND	0.00319		mg/Kg-dry	1	8/8/2015 5:21:00 AM
1,1-Dichloroethene	ND	0.0319		mg/Kg-dry	1	8/8/2015 5:21:00 AM
trans-1,2-Dichloroethene	ND	0.0319		mg/Kg-dry	1	8/8/2015 5:21:00 AM
cis-1,2-Dichloroethene	ND	0.0319		mg/Kg-dry	1	8/8/2015 5:21:00 AM
Trichloroethene (TCE)	0.0995	0.0319		mg/Kg-dry	1	8/8/2015 5:21:00 AM
Tetrachloroethene (PCE)	0.360	0.0319		mg/Kg-dry	1	8/8/2015 5:21:00 AM
Surr: Dibromofluoromethane	102	63.7-129		%REC	1	8/8/2015 5:21:00 AM
Surr: Toluene-d8	105	64.3-131		%REC	1	8/8/2015 5:21:00 AM
Surr: 1-Bromo-4-fluorobenzene	95.9	63.1-141		%REC	1	8/8/2015 5:21:00 AM
Sample Moisture (Percent Moisture)				Batch ID: R24154		Analyst: SL
Percent Moisture	28.3	0.500		wt%	1	8/12/2015 11:01:55 AM

Analytical Report

WO#: **1508064**
Date Reported: **8/12/2015**

Client: Floyd | Snider
Collection Date: 8/6/2015 2:00:00 PM
Project: GTH-Olympia t-6
Lab ID: 1508064-004
Matrix: Soil
Client Sample ID: **Alley-S-S-8'**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: 11545		Analyst: BC
Vinyl chloride	ND	0.00238		mg/Kg-dry	1	8/8/2015 5:49:00 AM
1,1-Dichloroethene	ND	0.0238		mg/Kg-dry	1	8/8/2015 5:49:00 AM
trans-1,2-Dichloroethene	ND	0.0238		mg/Kg-dry	1	8/8/2015 5:49:00 AM
cis-1,2-Dichloroethene	ND	0.0238		mg/Kg-dry	1	8/8/2015 5:49:00 AM
Trichloroethene (TCE)	ND	0.0238		mg/Kg-dry	1	8/8/2015 5:49:00 AM
Tetrachloroethene (PCE)	0.222	0.0238		mg/Kg-dry	1	8/8/2015 5:49:00 AM
Surr: Dibromofluoromethane	103	63.7-129		%REC	1	8/8/2015 5:49:00 AM
Surr: Toluene-d8	106	64.3-131		%REC	1	8/8/2015 5:49:00 AM
Surr: 1-Bromo-4-fluorobenzene	93.8	63.1-141		%REC	1	8/8/2015 5:49:00 AM
Sample Moisture (Percent Moisture)				Batch ID: R24154		Analyst: SL
Percent Moisture	27.2	0.500		wt%	1	8/12/2015 11:01:55 AM

Analytical Report

WO#: **1508064**
Date Reported: **8/12/2015**

Client: Floyd | Snider
Collection Date: 8/6/2015 3:40:00 PM
Project: GTH-Olympia t-6
Lab ID: 1508064-005
Matrix: Soil
Client Sample ID: **M-Cell2-5W-12'**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: 11545		Analyst: BC
Vinyl chloride	ND	0.00265		mg/Kg-dry	1	8/8/2015 6:17:00 AM
1,1-Dichloroethene	ND	0.0265		mg/Kg-dry	1	8/8/2015 6:17:00 AM
trans-1,2-Dichloroethene	ND	0.0265		mg/Kg-dry	1	8/8/2015 6:17:00 AM
cis-1,2-Dichloroethene	ND	0.0265		mg/Kg-dry	1	8/8/2015 6:17:00 AM
Trichloroethene (TCE)	0.0311	0.0265		mg/Kg-dry	1	8/8/2015 6:17:00 AM
Tetrachloroethene (PCE)	0.0742	0.0265		mg/Kg-dry	1	8/8/2015 6:17:00 AM
Surr: Dibromofluoromethane	104	63.7-129		%REC	1	8/8/2015 6:17:00 AM
Surr: Toluene-d8	104	64.3-131		%REC	1	8/8/2015 6:17:00 AM
Surr: 1-Bromo-4-fluorobenzene	97.2	63.1-141		%REC	1	8/8/2015 6:17:00 AM
Sample Moisture (Percent Moisture)				Batch ID: R24154		Analyst: SL
Percent Moisture	24.9	0.500		wt%	1	8/12/2015 11:01:55 AM

Analytical Report

WO#: **1508064**
Date Reported: **8/12/2015**

Client: Floyd | Snider
Collection Date: 8/6/2015 4:15:00 PM
Project: GTH-Olympia t-6
Lab ID: 1508064-006
Matrix: Soil
Client Sample ID: **Alley-Stockpile-01**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: 11545		Analyst: BC
Vinyl chloride	0.146	0.00381		mg/Kg-dry	1	8/8/2015 6:46:00 AM
1,1-Dichloroethene	ND	0.0381		mg/Kg-dry	1	8/8/2015 6:46:00 AM
trans-1,2-Dichloroethene	ND	0.0381		mg/Kg-dry	1	8/8/2015 6:46:00 AM
cis-1,2-Dichloroethene	0.342	0.0381		mg/Kg-dry	1	8/8/2015 6:46:00 AM
Trichloroethene (TCE)	0.388	0.0381		mg/Kg-dry	1	8/8/2015 6:46:00 AM
Tetrachloroethene (PCE)	4.56	0.381	D	mg/Kg-dry	10	8/10/2015 1:43:00 PM
Surr: Dibromofluoromethane	106	63.7-129		%REC	1	8/8/2015 6:46:00 AM
Surr: Toluene-d8	104	64.3-131		%REC	1	8/8/2015 6:46:00 AM
Surr: 1-Bromo-4-fluorobenzene	95.6	63.1-141		%REC	1	8/8/2015 6:46:00 AM
Sample Moisture (Percent Moisture)				Batch ID: R24100		Analyst: SB
Percent Moisture	29.5	0.500		wt%	1	8/10/2015 11:23:27 AM

Work Order: 1508064
CLIENT: Floyd | Snider
Project: GTH-Olympia t-6

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID **LCS-11545** SampType: **LCS** Units: **mg/Kg** Prep Date: **8/7/2015** RunNo: **24097**
Client ID: **LCSS** Batch ID: **11545** Analysis Date: **8/7/2015** SeqNo: **456424**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	0.936	0.00200	1.000	0	93.6	56.1	130				
1,1-Dichloroethene	1.07	0.0500	1.000	0	107	49.7	142				
trans-1,2-Dichloroethene	1.02	0.0200	1.000	0	102	68	130				
cis-1,2-Dichloroethene	0.980	0.0200	1.000	0	98.0	71.3	135				
Trichloroethene (TCE)	1.04	0.0200	1.000	0	104	65.5	137				
Tetrachloroethene (PCE)	1.01	0.0200	1.000	0	101	52.7	150				
Surr: Dibromofluoromethane	1.24		1.250		98.8	63.7	129				
Surr: Toluene-d8	1.26		1.250		101	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.23		1.250		98.6	63.1	141				

Sample ID **MB-11545** SampType: **MBLK** Units: **mg/Kg** Prep Date: **8/7/2015** RunNo: **24097**
Client ID: **MBLKS** Batch ID: **11545** Analysis Date: **8/8/2015** SeqNo: **456425**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.00200									
1,1-Dichloroethene	ND	0.0500									
trans-1,2-Dichloroethene	ND	0.0200									
cis-1,2-Dichloroethene	ND	0.0200									
Trichloroethene (TCE)	ND	0.0200									
Tetrachloroethene (PCE)	ND	0.0200									
Surr: Dibromofluoromethane	1.29		1.250		103	63.7	129				
Surr: Toluene-d8	1.32		1.250		106	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.22		1.250		97.8	63.1	141				

Sample ID **1508062-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **8/7/2015** RunNo: **24097**
Client ID: **BATCH** Batch ID: **11545** Analysis Date: **8/8/2015** SeqNo: **456409**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.00205						0		30	
1,1-Dichloroethene	ND	0.0513						0		30	

Work Order: 1508064
CLIENT: Floyd | Snider
Project: GTH-Olympia t-6

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID **1508062-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **8/7/2015** RunNo: **24097**
Client ID: **BATCH** Batch ID: **11545** Analysis Date: **8/8/2015** SeqNo: **456409**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,2-Dichloroethene	ND	0.0205						0		30	
cis-1,2-Dichloroethene	ND	0.0205						0		30	
Trichloroethene (TCE)	ND	0.0205						0		30	
Tetrachloroethene (PCE)	ND	0.0205						0		30	
Surr: Dibromofluoromethane	1.31		1.282		102	63.7	129		0		
Surr: Toluene-d8	1.37		1.282		107	64.3	131		0		
Surr: 1-Bromo-4-fluorobenzene	1.27		1.282		99.0	63.1	141		0		

Sample ID **1508064-001BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **8/7/2015** RunNo: **24097**
Client ID: **M-SS1-Cell1-11W-12'** Batch ID: **11545** Analysis Date: **8/8/2015** SeqNo: **456411**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	1.42	0.00276	1.380	0	103	51.2	146				
1,1-Dichloroethene	1.79	0.0690	1.380	0	130	61.9	141				
trans-1,2-Dichloroethene	1.49	0.0276	1.380	0	108	52	136				
cis-1,2-Dichloroethene	1.38	0.0276	1.380	0	99.8	58.6	136				
Trichloroethene (TCE)	1.57	0.0276	1.380	0	114	68.6	132				
Tetrachloroethene (PCE)	1.45	0.0276	1.380	0	105	35.6	158				
Surr: Dibromofluoromethane	1.79		1.726		104	63.7	129				
Surr: Toluene-d8	1.80		1.726		104	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.77		1.726		103	63.1	141				

Sample ID **CCV-C-11545** SampType: **CCV** Units: **µg/L** Prep Date: **8/10/2015** RunNo: **24097**
Client ID: **CCV** Batch ID: **11545** Analysis Date: **8/10/2015** SeqNo: **456552**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tetrachloroethene (PCE)	19.9	0.0200	20.00	0	99.4	80	120				
Surr: Dibromofluoromethane	23.8		25.00		95.3	63.7	129				
Surr: Toluene-d8	24.3		25.00		97.2	62.4	141				
Surr: 1-Bromo-4-fluorobenzene	24.6		25.00		98.2	63.1	141				

Work Order: 1508064
CLIENT: Floyd | Snider
Project: GTH-Olympia t-6

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID **CCV-C-11545** SampType: **CCV** Units: **µg/L** Prep Date: **8/10/2015** RunNo: **24097**
Client ID: **CCV** Batch ID: **11545** Analysis Date: **8/10/2015** SeqNo: **456552**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Work Order: 1508064
CLIENT: Floyd | Snider
Project: GTH-Olympia t-6

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID **1508064-006ADUP** SampType: **DUP** Units: **wt%** Prep Date: **8/10/2015** RunNo: **24100**
Client ID: **Alley-Stockpile-01** Batch ID: **R24100** Analysis Date: **8/10/2015** SeqNo: **456446**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	30.8	0.500						29.45	4.47	20	

Sample ID **1508064-001ADUP** SampType: **DUP** Units: **wt%** Prep Date: **8/12/2015** RunNo: **24154**
Client ID: **M-SS1-Cell1-11W-12'** Batch ID: **R24154** Analysis Date: **8/12/2015** SeqNo: **457204**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	27.6	0.500						30.28	9.10	20	

Sample ID **1508064-002ADUP** SampType: **DUP** Units: **wt%** Prep Date: **8/12/2015** RunNo: **24154**
Client ID: **Alley-B-10'** Batch ID: **R24154** Analysis Date: **8/12/2015** SeqNo: **457206**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	25.3	0.500						24.25	4.13	20	

Sample Log-In Check List

Client Name:	**FS**	Work Order Number:	**1508064**
Logged by:	**Clare Griggs**	Date Received:	**8/7/2015 11:10:00 AM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Required ☑
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >0°C to 10.0°C *	Yes ☑	No ☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler	6.1
Sample	8.8

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Fremont Analytical

Chain of Custody Record

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Laboratory Project No (internal): 1508064

Date: 8/6/2015 Page: 1 of: 1

Client: Floyd|Snider
Address: 601 Union St, Ste 600
City, State, Zip: Seattle, WA 98101
Tel: 206-292-2078 Fax:

Project Name: GTH - Olympia F-6
Project No: TL TL
Location: Olympia, WA
Collected by: K. Anderson
Reports To (PM): tom colligan + lynn grochala
Email: tom.colligan@floydsnider.com, lynn.grochala@floydsnider.com

*Matrix Codes: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, WW = Waste Water, SW = Storm Water

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOC (EPA 8260) *	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SEMI VOL (EPA 8270)	PAH (EPA 8270 - SIM)	PCBs (EPA 8082)	Metals** (6020 / 200.8)	Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	Comments/Depth
1	M-S1-Cell1-11W-12'	8/5/15	1220	S	X													A cVOC: PCE, TCE, cis-+ trans-1,2-DCE, 1,1-DCE, vinyl chloride
2	Alley-B-10'	8/6/15	1335		X													
3	Alley-S-N-8'		1355		X													
4	Alley-S-S-8'		1400		X													
5	M-Cell2-SW-12'		1540		X													
6	Alley-Stockpile-01		1615		X													RUSH (24-hour) *
7																		
8																		
9																		
10																		

**Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Turn-around times for samples received after 4:00pm will begin on the following business day.

Special Remarks: Std turnaround for all samples except Alley-Stockpile

Sample Disposal: ☐ Return to Client ☐ Disposal by Lab (A fee may be assessed if samples are retained after 30 days.)

	Relinquished	Date/Time	Received	Date/Time
1	[signature]	8/7/15 0930	[signature] Bill K for	8/7/15 10:45
2	[signature] Bill K for	8/7/15 11:10	[signature]	8/07/15 11:10

TAT -> SameDay^ NextDay^ 2 Day 3 Day STD
^Please coordinate with the lab in advance

* TCLP if PCE > 17 ppm, call to confirm (Lynn Grochala)

Distribution: White - Lab, Yellow - File, Pink - Originator

www.fremontanalytical.com

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Floyd | Snider
Tom Colligan
601 Union St., Suite 600
Seattle, WA 98101

RE: GTH - Olympia
Lab ID: 1508149

August 20, 2015

Attention Tom Colligan:

Fremont Analytical, Inc. received 6 sample(s) on 8/14/2015 for the analyses presented in the following report.

Sample Moisture (Percent Moisture)
Volatile Organic Compounds by EPA Method 8260

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway
President

CC:
Lynn Grochala

Date: *08/20/2015*

CLIENT: Floyd | Snider
Project: GTH - Olympia
Lab Order: 1508149

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1508149-001	M-Cell4-B-6N-10'	08/11/2015 12:40 PM	08/14/2015 4:03 PM
1508149-002	Alley2-B-9'	08/12/2015 2:45 PM	08/14/2015 4:03 PM
1508149-003	Alley2-S-N-6'	08/12/2015 2:50 PM	08/14/2015 4:03 PM
1508149-004	M-Cell 5-B-45-14'	08/12/2015 3:15 PM	08/14/2015 4:03 PM
1508149-005	M-Cell 5-S-45-8'	08/12/2015 3:20 PM	08/14/2015 4:03 PM
1508149-006	M-Cell 6-B-7S-10'	08/13/2015 12:50 PM	08/14/2015 4:03 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1508149**
Date: **8/20/2015**

CLIENT: Floyd | Snider
Project: GTH - Olympia

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below LOQ
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

WO#: **1508149**
Date Reported: **8/20/2015**

Client: Floyd | Snider
Project: GTH - Olympia
Lab ID: 1508149-001
Client Sample ID: **M-Cell4-B-6N-10'**

Collection Date: 8/11/2015 12:40:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: 11605		Analyst: BC
Vinyl chloride	ND	0.00285		mg/Kg-dry	1	8/18/2015 11:24:00 PM
1,1-Dichloroethene	ND	0.0285		mg/Kg-dry	1	8/18/2015 4:20:00 AM
trans-1,2-Dichloroethene	ND	0.0285		mg/Kg-dry	1	8/18/2015 4:20:00 AM
cis-1,2-Dichloroethene	ND	0.0285		mg/Kg-dry	1	8/18/2015 4:20:00 AM
Trichloroethene (TCE)	ND	0.0285		mg/Kg-dry	1	8/18/2015 4:20:00 AM
Tetrachloroethene (PCE)	0.236	0.0285		mg/Kg-dry	1	8/18/2015 4:20:00 AM
Surr: Dibromofluoromethane	76.7	63.7-129		%REC	1	8/18/2015 4:20:00 AM
Surr: Toluene-d8	82.4	64.3-131		%REC	1	8/18/2015 4:20:00 AM
Surr: 1-Bromo-4-fluorobenzene	89.5	63.1-141		%REC	1	8/18/2015 4:20:00 AM
Sample Moisture (Percent Moisture)				Batch ID: R24219		Analyst: SL
Percent Moisture	26.4	0.500		wt%	1	8/17/2015 10:27:58 AM

Analytical Report

WO#: **1508149**
Date Reported: **8/20/2015**

Client: Floyd | Snider
Project: GTH - Olympia
Lab ID: 1508149-002
Client Sample ID: **Alley2-B-9'**

Collection Date: 8/12/2015 2:45:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: 11605		Analyst: BC
Vinyl chloride	ND	0.00245		mg/Kg-dry	1	8/18/2015 11:52:00 PM
1,1-Dichloroethene	ND	0.0245		mg/Kg-dry	1	8/18/2015 4:49:00 AM
trans-1,2-Dichloroethene	ND	0.0245		mg/Kg-dry	1	8/18/2015 4:49:00 AM
cis-1,2-Dichloroethene	0.0262	0.0245		mg/Kg-dry	1	8/18/2015 4:49:00 AM
Trichloroethene (TCE)	0.0386	0.0245		mg/Kg-dry	1	8/18/2015 4:49:00 AM
Tetrachloroethene (PCE)	0.403	0.0245		mg/Kg-dry	1	8/18/2015 4:49:00 AM
Surr: Dibromofluoromethane	77.0	63.7-129		%REC	1	8/18/2015 4:49:00 AM
Surr: Toluene-d8	82.3	64.3-131		%REC	1	8/18/2015 4:49:00 AM
Surr: 1-Bromo-4-fluorobenzene	89.1	63.1-141		%REC	1	8/18/2015 4:49:00 AM
Sample Moisture (Percent Moisture)				Batch ID: R24219		Analyst: SL
Percent Moisture	30.3	0.500		wt%	1	8/17/2015 10:27:58 AM

Analytical Report

WO#: **1508149**
Date Reported: **8/20/2015**

Client: Floyd | Snider
Project: GTH - Olympia
Lab ID: 1508149-003
Client Sample ID: **Alley2-S-N-6'**

Collection Date: 8/12/2015 2:50:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: 11605		Analyst: BC
Vinyl chloride	0.0255	0.00351		mg/Kg-dry	1	8/19/2015 12:21:00 AM
1,1-Dichloroethene	ND	0.0351		mg/Kg-dry	1	8/18/2015 5:17:00 AM
trans-1,2-Dichloroethene	ND	0.0351		mg/Kg-dry	1	8/18/2015 5:17:00 AM
cis-1,2-Dichloroethene	0.0703	0.0351		mg/Kg-dry	1	8/18/2015 5:17:00 AM
Trichloroethene (TCE)	0.0939	0.0351		mg/Kg-dry	1	8/18/2015 5:17:00 AM
Tetrachloroethene (PCE)	0.546	0.0351		mg/Kg-dry	1	8/18/2015 5:17:00 AM
Surr: Dibromofluoromethane	76.6	63.7-129		%REC	1	8/18/2015 5:17:00 AM
Surr: Toluene-d8	83.3	64.3-131		%REC	1	8/18/2015 5:17:00 AM
Surr: 1-Bromo-4-fluorobenzene	91.1	63.1-141		%REC	1	8/18/2015 5:17:00 AM
Sample Moisture (Percent Moisture)				Batch ID: R24219		Analyst: SL
Percent Moisture	31.7	0.500		wt%	1	8/17/2015 10:27:58 AM

Analytical Report

WO#: **1508149**
Date Reported: **8/20/2015**

Client: Floyd | Snider
Project: GTH - Olympia
Lab ID: 1508149-004
Client Sample ID: **M-Cell 5-B-45-14'**

Collection Date: 8/12/2015 3:15:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: 11605		Analyst: BC
Vinyl chloride	ND	0.00281		mg/Kg-dry	1	8/19/2015 12:49:00 AM
1,1-Dichloroethene	ND	0.0281		mg/Kg-dry	1	8/18/2015 5:46:00 AM
trans-1,2-Dichloroethene	ND	0.0281		mg/Kg-dry	1	8/18/2015 5:46:00 AM
cis-1,2-Dichloroethene	ND	0.0281		mg/Kg-dry	1	8/18/2015 5:46:00 AM
Trichloroethene (TCE)	ND	0.0281		mg/Kg-dry	1	8/18/2015 5:46:00 AM
Tetrachloroethene (PCE)	0.129	0.0281		mg/Kg-dry	1	8/18/2015 5:46:00 AM
Surr: Dibromofluoromethane	75.4	63.7-129		%REC	1	8/18/2015 5:46:00 AM
Surr: Toluene-d8	84.3	64.3-131		%REC	1	8/18/2015 5:46:00 AM
Surr: 1-Bromo-4-fluorobenzene	90.2	63.1-141		%REC	1	8/18/2015 5:46:00 AM
Sample Moisture (Percent Moisture)				Batch ID: R24219		Analyst: SL
Percent Moisture	24.3	0.500		wt%	1	8/17/2015 10:27:58 AM

Analytical Report

WO#: **1508149**
Date Reported: **8/20/2015**

Client: Floyd | Snider
Project: GTH - Olympia
Lab ID: 1508149-005
Client Sample ID: **M-Cell 5-S-45-8'**

Collection Date: 8/12/2015 3:20:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: 11605		Analyst: BC
Vinyl chloride	ND	0.00256		mg/Kg-dry	1	8/19/2015 1:17:00 AM
1,1-Dichloroethene	ND	0.0256		mg/Kg-dry	1	8/18/2015 6:14:00 AM
trans-1,2-Dichloroethene	ND	0.0256		mg/Kg-dry	1	8/18/2015 6:14:00 AM
cis-1,2-Dichloroethene	ND	0.0256		mg/Kg-dry	1	8/18/2015 6:14:00 AM
Trichloroethene (TCE)	ND	0.0256		mg/Kg-dry	1	8/18/2015 6:14:00 AM
Tetrachloroethene (PCE)	ND	0.0256		mg/Kg-dry	1	8/18/2015 6:14:00 AM
Surr: Dibromofluoromethane	75.4	63.7-129		%REC	1	8/18/2015 6:14:00 AM
Surr: Toluene-d8	83.0	64.3-131		%REC	1	8/18/2015 6:14:00 AM
Surr: 1-Bromo-4-fluorobenzene	90.3	63.1-141		%REC	1	8/18/2015 6:14:00 AM
Sample Moisture (Percent Moisture)				Batch ID: R24219		Analyst: SL
Percent Moisture	29.6	0.500		wt%	1	8/17/2015 10:27:58 AM

Analytical Report

WO#: **1508149**
Date Reported: **8/20/2015**

Client: Floyd | Snider
Project: GTH - Olympia
Lab ID: 1508149-006
Client Sample ID: **M-Cell 6-B-7S-10'**

Collection Date: 8/13/2015 12:50:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: 11605		Analyst: BC
Vinyl chloride	ND	0.00246		mg/Kg-dry	1	8/19/2015 1:45:00 AM
1,1-Dichloroethene	ND	0.0246		mg/Kg-dry	1	8/18/2015 6:42:00 AM
trans-1,2-Dichloroethene	ND	0.0246		mg/Kg-dry	1	8/18/2015 6:42:00 AM
cis-1,2-Dichloroethene	0.0298	0.0246		mg/Kg-dry	1	8/18/2015 6:42:00 AM
Trichloroethene (TCE)	0.0322	0.0246		mg/Kg-dry	1	8/18/2015 6:42:00 AM
Tetrachloroethene (PCE)	0.532	0.0246		mg/Kg-dry	1	8/18/2015 6:42:00 AM
Surr: Dibromofluoromethane	76.4	63.7-129		%REC	1	8/18/2015 6:42:00 AM
Surr: Toluene-d8	83.5	64.3-131		%REC	1	8/18/2015 6:42:00 AM
Surr: 1-Bromo-4-fluorobenzene	88.6	63.1-141		%REC	1	8/18/2015 6:42:00 AM
Sample Moisture (Percent Moisture)				Batch ID: R24219		Analyst: SL
Percent Moisture	26.4	0.500		wt%	1	8/17/2015 10:27:58 AM

Work Order: 1508149
CLIENT: Floyd | Snider
Project: GTH - Olympia

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID: **LCS-11605**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **8/17/2015**		RunNo: **24244**			
Client ID: **LCSS**	Batch ID: **11605**					Analysis Date: **8/17/2015**		SeqNo: **459102**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	0.788	0.00200	1.000	0	78.8	56.1	130				
1,1-Dichloroethene	0.823	0.0500	1.000	0	82.3	49.7	142				
trans-1,2-Dichloroethene	0.786	0.0200	1.000	0	78.6	68	130				
cis-1,2-Dichloroethene	0.775	0.0200	1.000	0	77.5	71.3	135				
Trichloroethene (TCE)	0.792	0.0200	1.000	0	79.2	65.5	137				
Tetrachloroethene (PCE)	0.917	0.0200	1.000	0	91.7	52.7	150				
Surr: Dibromofluoromethane	1.06		1.250		84.5	63.7	129				
Surr: Toluene-d8	1.04		1.250		83.5	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.15		1.250		91.6	63.1	141				

Sample ID: **MB-11605**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **8/17/2015**		RunNo: **24244**			
Client ID: **MBLKS**	Batch ID: **11605**					Analysis Date: **8/17/2015**		SeqNo: **459103**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.00200									
1,1-Dichloroethene	ND	0.0500									
trans-1,2-Dichloroethene	ND	0.0200									
cis-1,2-Dichloroethene	ND	0.0200									
Trichloroethene (TCE)	ND	0.0200									
Tetrachloroethene (PCE)	ND	0.0200									
Surr: Dibromofluoromethane	0.927		1.250		74.2	63.7	129				
Surr: Toluene-d8	1.05		1.250		83.9	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.12		1.250		89.9	63.1	141				

Sample ID: **1508169-001BDUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **8/17/2015**		RunNo: **24244**			
Client ID: **BATCH**	Batch ID: **11605**					Analysis Date: **8/17/2015**		SeqNo: **459088**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.00239						0		30	
1,1-Dichloroethene	ND	0.0599						0		30	

Work Order: 1508149
CLIENT: Floyd | Snider
Project: GTH - Olympia

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID: **1508169-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **8/17/2015** RunNo: **24244**
Client ID: **BATCH** Batch ID: **11605** Analysis Date: **8/17/2015** SeqNo: **459088**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,2-Dichloroethene	ND	0.0239						0		30	
cis-1,2-Dichloroethene	ND	0.0239						0		30	
Trichloroethene (TCE)	ND	0.0239						0		30	
Tetrachloroethene (PCE)	0.379	0.0239						0.3656	3.64	30	
Surr: Dibromofluoromethane	1.14		1.496		76.0	63.7	129		0		
Surr: Toluene-d8	1.24		1.496		82.9	64.3	131		0		
Surr: 1-Bromo-4-fluorobenzene	1.38		1.496		92.1	63.1	141		0		

Sample ID: **1508170-004BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **8/17/2015** RunNo: **24244**
Client ID: **BATCH** Batch ID: **11605** Analysis Date: **8/18/2015** SeqNo: **459094**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	1.13	0.00271	1.354	0.003702	83.1	51.2	146				
1,1-Dichloroethene	1.17	0.0677	1.354	0	86.6	61.9	141				
trans-1,2-Dichloroethene	1.05	0.0271	1.354	0	77.7	52	136				
cis-1,2-Dichloroethene	1.04	0.0271	1.354	0	76.9	58.6	136				
Trichloroethene (TCE)	1.82	0.0271	1.354	0	134	68.6	132				S
Tetrachloroethene (PCE)	1.18	0.0271	1.354	0	86.9	35.6	158				
Surr: Dibromofluoromethane	1.42		1.692		84.0	63.7	129				
Surr: Toluene-d8	1.41		1.692		83.6	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.57		1.692		92.8	63.1	141				

NOTES:
S - Outlying QC recoveries were observed. The method is in control as indicated by the LCS.

Sample ID: **CCV-E-11605** SampType: **CCV** Units: **µg/L** Prep Date: **8/18/2015** RunNo: **24244**
Client ID: **CCV** Batch ID: **R24244** Analysis Date: **8/18/2015** SeqNo: **459878**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	16.4	0.00200	20.00	0	82.0	80	120				
Surr: Dibromofluoromethane	21.1		25.00		84.3	63.7	129				
Surr: Toluene-d8	21.7		25.00		86.9	62.4	141				

Work Order: 1508149
CLIENT: Floyd | Snider
Project: GTH - Olympia

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID: **CCV-E-11605** SampType: **CCV** Units: **µg/L** Prep Date: **8/18/2015** RunNo: **24244**
Client ID: **CCV** Batch ID: **R24244** Analysis Date: **8/18/2015** SeqNo: **459878**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 1-Bromo-4-fluorobenzene	25.8		25.00		103	63.1	141				

Work Order: 1508149
CLIENT: Floyd | Snider
Project: GTH - Olympia

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID: **1508131-001ADUP** SampType: **DUP** Units: **wt%** Prep Date: **8/17/2015** RunNo: **24219**
Client ID: **BATCH** Batch ID: **R24219** Analysis Date: **8/17/2015** SeqNo: **458550**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	18.3	0.500						20.02	8.70	20	

Sample ID: **1508131-002ADUP** SampType: **DUP** Units: **wt%** Prep Date: **8/17/2015** RunNo: **24219**
Client ID: **BATCH** Batch ID: **R24219** Analysis Date: **8/17/2015** SeqNo: **458552**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	16.1	0.500						15.35	5.00	20	

Sample Log-In Check List

Client Name:	**FS**	Work Order Number:	**1508149**
Logged by:	**Erica Silva**	Date Received:	**8/14/2015 4:03:00 PM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Courier		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Required ☑
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >0°C to 10.0°C *	Yes ☐	No ☑	NA ☐

Samples received at appropriate temperature

8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	11.2
Sample	9.0

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Fremont Analytical

Chain of Custody Record

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Laboratory Project No (internal): 1508149

Date: 8/13/15

Page: 1 of: 1

Client: Floyd | Snider
Address: 601 Union St, Ste 600
City, State, Zip: Seattle, WA 98101
Tel: 206-292-2078 Fax:

Project Name: GTH - Olympia
Project No: task 6
Location: Olympia, WA
Reports To (PM): tom colligan + lynn grochala
Email: tom.colligan@floydsnider.com; lynn.grochala@floydsnider.com
Collected by: K. Anderson

*Matrix Codes: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, WW = Waste Water, SW = Strom Water

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	cVOC (EPA 8260) ★	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SEMI VOL (EPA 8270)	PAH (EPA 8270 - SIM)	PCBs (EPA 8082)	Metals** (6020 / 200.8)	Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	Comments/Depth
1	M-Cell 4-B-6N-10'	8/11/15	1240	S	X													
2	Alley 2-B-9'	8/12/15	1445		X													
3	Alley 2-S-N-6'	8/12/15	1450		X													
4	M-Cell 5-B-45-14'	8/12/15	1515		X													
5	M-Cell 5-S-45-8'	8/12/15	1530		X													
6	M-Cell 6-B-75-10'	8/13/15	1250		X													
7																		
8																		
9																		
10																		

★ cVOCs: PCE; TCE; cis + trans-1,2 DCE; 1,1-DCE; vinyl chloride

**Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Sample Disposal: ☐ Return to Client ☐ Disposal by Lab (A fee may be assessed if samples are retained after 30 days.)

Turn-around times for samples received after 4:00pm will begin on the following business day.

Special Remarks:

Relinquished	Date/Time	Received	Date/Time
x	8/13/15 1700		
Relinquished	Date/Time	Received	Date/Time
x		x	8/14/15 1603

TAT -> SameDay^ NextDay^ 2 Day 3 Day STD

^Please coordinate with the lab in advance

Distribution: White - Lab, Yellow - File, Pink - Originator

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Floyd | Snider
Tom Colligan
601 Union St., Suite 600
Seattle, WA 98101

RE: GTH - Olympia
Lab ID: 1508236

August 26, 2015

Attention Tom Colligan:

Fremont Analytical, Inc. received 3 sample(s) on 8/20/2015 for the analyses presented in the following report.

Sample Moisture (Percent Moisture)
Volatile Organic Compounds by EPA Method 8260

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway
President

CC:
Lynn Grochala

Date: *08/26/2015*

CLIENT: Floyd | Snider
Project: GTH - Olympia
Lab Order: 1508236

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1508236-001	M-6117-B-12W-12'	08/17/2015 12:00 PM	08/20/2015 3:20 PM
1508236-002	M-6118-B-17W-12'	08/18/2015 2:40 PM	08/20/2015 3:20 PM
1508236-003	M-6118-B-17W-12'-D	08/18/2015 2:50 PM	08/20/2015 3:20 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1508236**
Date: **8/26/2015**

CLIENT: Floyd | Snider
Project: GTH - Olympia

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below LOQ
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

WO#: **1508236**
Date Reported: **8/26/2015**

Client: Floyd | Snider
Collection Date: 8/17/2015 12:00:00 PM
Project: GTH - Olympia
Lab ID: 1508236-001
Matrix: Soil
Client Sample ID: **M-6117-B-12W-12'**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: 11664		Analyst: BC
Vinyl chloride	ND	0.00253		mg/Kg-dry	1	8/21/2015 8:03:00 PM
1,1-Dichloroethene	ND	0.0253		mg/Kg-dry	1	8/21/2015 8:03:00 PM
trans-1,2-Dichloroethene	ND	0.0253		mg/Kg-dry	1	8/21/2015 8:03:00 PM
cis-1,2-Dichloroethene	ND	0.0253		mg/Kg-dry	1	8/21/2015 8:03:00 PM
Trichloroethene (TCE)	ND	0.0253		mg/Kg-dry	1	8/21/2015 8:03:00 PM
Tetrachloroethene (PCE)	ND	0.0253		mg/Kg-dry	1	8/21/2015 8:03:00 PM
Surr: Dibromofluoromethane	97.5	63.7-129		%REC	1	8/21/2015 8:03:00 PM
Surr: Toluene-d8	102	64.3-131		%REC	1	8/21/2015 8:03:00 PM
Surr: 1-Bromo-4-fluorobenzene	101	63.1-141		%REC	1	8/21/2015 8:03:00 PM
Sample Moisture (Percent Moisture)				Batch ID: R24419		Analyst: SB
Percent Moisture	26.2	0.500		wt%	1	8/21/2015 10:50:43 AM

Analytical Report

WO#: **1508236**
Date Reported: **8/26/2015**

Client: Floyd | Snider
Collection Date: 8/18/2015 2:40:00 PM
Project: GTH - Olympia
Lab ID: 1508236-002
Matrix: Soil
Client Sample ID: **M-6118-B-17W-12'**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: 11664		Analyst: BC
Vinyl chloride	ND	0.00240		mg/Kg-dry	1	8/21/2015 8:31:00 PM
1,1-Dichloroethene	ND	0.0240		mg/Kg-dry	1	8/21/2015 8:31:00 PM
trans-1,2-Dichloroethene	ND	0.0240		mg/Kg-dry	1	8/21/2015 8:31:00 PM
cis-1,2-Dichloroethene	0.0292	0.0240		mg/Kg-dry	1	8/21/2015 8:31:00 PM
Trichloroethene (TCE)	ND	0.0240		mg/Kg-dry	1	8/21/2015 8:31:00 PM
Tetrachloroethene (PCE)	0.219	0.0240		mg/Kg-dry	1	8/21/2015 8:31:00 PM
Surr: Dibromofluoromethane	95.8	63.7-129		%REC	1	8/21/2015 8:31:00 PM
Surr: Toluene-d8	102	64.3-131		%REC	1	8/21/2015 8:31:00 PM
Surr: 1-Bromo-4-fluorobenzene	101	63.1-141		%REC	1	8/21/2015 8:31:00 PM
Sample Moisture (Percent Moisture)				Batch ID: R24419		Analyst: SB
Percent Moisture	27.0	0.500		wt%	1	8/21/2015 10:50:43 AM

Analytical Report

WO#: **1508236**
Date Reported: **8/26/2015**

Client: Floyd | Snider
Collection Date: 8/18/2015 2:50:00 PM
Project: GTH - Olympia
Lab ID: 1508236-003
Matrix: Soil
Client Sample ID: **M-6118-B-17W-12'-D**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: 11664		Analyst: BC
Vinyl chloride	ND	0.00265		mg/Kg-dry	1	8/21/2015 9:00:00 PM
1,1-Dichloroethene	ND	0.0265		mg/Kg-dry	1	8/21/2015 9:00:00 PM
trans-1,2-Dichloroethene	ND	0.0265		mg/Kg-dry	1	8/21/2015 9:00:00 PM
cis-1,2-Dichloroethene	0.0333	0.0265		mg/Kg-dry	1	8/21/2015 9:00:00 PM
Trichloroethene (TCE)	ND	0.0265		mg/Kg-dry	1	8/21/2015 9:00:00 PM
Tetrachloroethene (PCE)	0.177	0.0265		mg/Kg-dry	1	8/21/2015 9:00:00 PM
Surr: Dibromofluoromethane	95.3	63.7-129		%REC	1	8/21/2015 9:00:00 PM
Surr: Toluene-d8	102	64.3-131		%REC	1	8/21/2015 9:00:00 PM
Surr: 1-Bromo-4-fluorobenzene	99.4	63.1-141		%REC	1	8/21/2015 9:00:00 PM
Sample Moisture (Percent Moisture)				Batch ID: R24419		Analyst: SB
Percent Moisture	27.6	0.500		wt%	1	8/21/2015 10:50:43 AM

Work Order: 1508236
CLIENT: Floyd | Snider
Project: GTH - Olympia

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID **LCS-11664**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **8/21/2015**	RunNo: **24430**
Client ID: **LCSS**	Batch ID: **11664**		Analysis Date: **8/21/2015**	SeqNo: **460985**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	1.23	0.00200	1.000	0	123	56.1	130				
1,1-Dichloroethene	1.07	0.0500	1.000	0	107	49.7	142				
trans-1,2-Dichloroethene	1.05	0.0200	1.000	0	105	68	130				
cis-1,2-Dichloroethene	1.05	0.0200	1.000	0	105	71.3	135				
Trichloroethene (TCE)	1.06	0.0200	1.000	0	106	65.5	137				
Tetrachloroethene (PCE)	1.00	0.0200	1.000	0	100	52.7	150				
Surr: Dibromofluoromethane	1.34		1.250		107	63.7	129				
Surr: Toluene-d8	1.30		1.250		104	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.27		1.250		102	63.1	141				

Sample ID **MB-11664**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **8/21/2015**	RunNo: **24430**
Client ID: **MBLKS**	Batch ID: **11664**		Analysis Date: **8/21/2015**	SeqNo: **460986**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.00200									
1,1-Dichloroethene	ND	0.0500									
trans-1,2-Dichloroethene	ND	0.0200									
cis-1,2-Dichloroethene	ND	0.0200									
Trichloroethene (TCE)	ND	0.0200									
Tetrachloroethene (PCE)	ND	0.0200									
Surr: Dibromofluoromethane	1.28		1.250		102	63.7	129				
Surr: Toluene-d8	1.25		1.250		99.8	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.26		1.250		100	63.1	141				

Sample ID **1508238-001BDUP**	SampType: **DUP**	Units: **mg/Kg-dry**	Prep Date: **8/21/2015**	RunNo: **24430**
Client ID: **BATCH**	Batch ID: **11664**		Analysis Date: **8/21/2015**	SeqNo: **460982**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.00379						0		30	
1,1-Dichloroethene	ND	0.0948						0		30	

Work Order: 1508236
CLIENT: Floyd | Snider
Project: GTH - Olympia

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID **1508238-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **8/21/2015** RunNo: **24430**
Client ID: **BATCH** Batch ID: **11664** Analysis Date: **8/21/2015** SeqNo: **460982**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,2-Dichloroethene	ND	0.0379						0		30	
cis-1,2-Dichloroethene	ND	0.0379						0		30	
Trichloroethene (TCE)	ND	0.0379						0		30	
Tetrachloroethene (PCE)	ND	0.0379						0		30	
Surr: Dibromofluoromethane	2.31		2.371		97.5	63.7	129		0		
Surr: Toluene-d8	2.45		2.371		103	64.3	131		0		
Surr: 1-Bromo-4-fluorobenzene	2.38		2.371		100	63.1	141		0		

Sample ID **1508238-002BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **8/21/2015** RunNo: **24430**
Client ID: **BATCH** Batch ID: **11664** Analysis Date: **8/21/2015** SeqNo: **460995**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	2.65	0.00387	1.935	0	137	51.2	146				
1,1-Dichloroethene	2.35	0.0967	1.935	0	121	61.9	141				
trans-1,2-Dichloroethene	2.25	0.0387	1.935	0	116	52	136				
cis-1,2-Dichloroethene	2.12	0.0387	1.935	0	110	58.6	136				
Trichloroethene (TCE)	2.54	0.0387	1.935	0	131	68.6	132				
Tetrachloroethene (PCE)	2.12	0.0387	1.935	0.05157	107	35.6	158				
Surr: Dibromofluoromethane	2.54		2.419		105	63.7	129				
Surr: Toluene-d8	2.50		2.419		103	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	2.51		2.419		104	63.1	141				

Date: *8/26/2015*

Work Order: 1508236
CLIENT: Floyd | Snider
Project: GTH - Olympia

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID **1508236-003ADUP** SampType: **DUP** Units: **wt%** Prep Date: **8/21/2015** RunNo: **24419**
Client ID: **M-6118-B-17W-12'-D** Batch ID: **R24419** Analysis Date: **8/21/2015** SeqNo: **460803**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	28.4	0.500						27.63	2.86	20	

Sample Log-In Check List

Client Name:	**FS**	Work Order Number:	**1508236**
Logged by:	**Erica Silva**	Date Received:	**8/20/2015 3:20:00 PM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Courier		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Required ☑
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >0°C to 10.0°C *	Yes ☑	No ☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler	5.9
Sample	5.9
Temp Blank	6.0

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Fremont Analytical

Chain of Custody Record

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Laboratory Project No (internal): 1508236

Date: 8/20/15

Page: 1 of: 1

Client: Floyd | Snider
Address: 601 Union St., Ste 600
City, State, Zip: Seattle, WA 98101
Telephone: 206-292-2078 Fax:

Project Name: GTH - Olympia
Project No: task 6
Location: Olympia, WA
Report To (PM): tom colligan + Lynn Grochala
PM Email: tom.colligan@floydsnider.com, lynn.grochala@floydsnider.com

Collected by: K. Anderson

*Matrix Codes: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	cVOCs (EPA 8260 / 624) *	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T)	Dissolved (D)	Anions (IC)***	EDB (8011)	Comments
1	M-Gll7-B-12W-12'	8/17/15	1200	S	X														* cVOCs: PCE, TCE, cis + trans-1,2-DCE, 1,1-DCE, vinyl chloride
2	M-Gll8-B-17W-12'	8/18/15	1490	S	X														
3	M-Gll8-B-17W-12'-D	8/18/15	1450	S	X														
4																			
5																			
6																			
7																			
8																			
9																			
10																			

**Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Turn-around times for samples received after 4:00pm will begin on the following business day.

Special Remarks:

Sample Disposal: ☐ Return to Client ☐ Disposal by Lab (A fee may be assessed if samples are retained after 30 days.)

Relinquished	Date/Time	Received	Date/Time
x	8/20/15 1450	x Bulk	8/20/15 1450
x Bulk	8/20/15 15:20	x	8/20/15 1520

TAT → SameDay^ NextDay^ 2 Day 3 Day STD

^Please coordinate with the lab in advance

Distribution: White - Lab, Yellow - File, Pink - Originator

www.fremontanalytical.com

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Floyd | Snider
Tom Colligan
601 Union St., Suite 600
Seattle, WA 98101

RE: GTH - Olympia
Lab ID: 1508236

August 26, 2015

Attention Tom Colligan:

Fremont Analytical, Inc. received 3 sample(s) on 8/20/2015 for the analyses presented in the following report.

Sample Moisture (Percent Moisture)
Volatile Organic Compounds by EPA Method 8260

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway
President

CC:
Lynn Grochala

Date: *08/28/2015*

CLIENT: Floyd | Snider
Project: GTH - Olympia
Lab Order: 1508236

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1508236-001	M-Cell7-B-12W-12'	08/17/2015 12:00 PM	08/20/2015 3:20 PM
1508236-002	M-Cell8-B-17W-12'	08/18/2015 2:40 PM	08/20/2015 3:20 PM
1508236-003	M-Cell8-B-17W-12'-D	08/18/2015 2:50 PM	08/20/2015 3:20 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1508236**
Date: **8/26/2015**

CLIENT: Floyd | Snider
Project: GTH - Olympia

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below LOQ
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

WO#: **1508236**
Date Reported: **8/26/2015**

Client: Floyd | Snider
Collection Date: 8/17/2015 12:00:00 PM
Project: GTH - Olympia
Lab ID: 1508236-001
Matrix: Soil
Client Sample ID: **M-Cell7-B-12W-12'**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: 11664		Analyst: BC
Vinyl chloride	ND	0.00253		mg/Kg-dry	1	8/21/2015 8:03:00 PM
1,1-Dichloroethene	ND	0.0253		mg/Kg-dry	1	8/21/2015 8:03:00 PM
trans-1,2-Dichloroethene	ND	0.0253		mg/Kg-dry	1	8/21/2015 8:03:00 PM
cis-1,2-Dichloroethene	ND	0.0253		mg/Kg-dry	1	8/21/2015 8:03:00 PM
Trichloroethene (TCE)	ND	0.0253		mg/Kg-dry	1	8/21/2015 8:03:00 PM
Tetrachloroethene (PCE)	ND	0.0253		mg/Kg-dry	1	8/21/2015 8:03:00 PM
Surr: Dibromofluoromethane	97.5	63.7-129		%REC	1	8/21/2015 8:03:00 PM
Surr: Toluene-d8	102	64.3-131		%REC	1	8/21/2015 8:03:00 PM
Surr: 1-Bromo-4-fluorobenzene	101	63.1-141		%REC	1	8/21/2015 8:03:00 PM
Sample Moisture (Percent Moisture)				Batch ID: R24419		Analyst: SB
Percent Moisture	26.2	0.500		wt%	1	8/21/2015 10:50:43 AM

Analytical Report

WO#: **1508236**
Date Reported: **8/26/2015**

Client: Floyd | Snider
Collection Date: 8/18/2015 2:40:00 PM
Project: GTH - Olympia
Lab ID: 1508236-002
Matrix: Soil
Client Sample ID: **M-Cell8-B-17W-12'**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: 11664		Analyst: BC
Vinyl chloride	ND	0.00240		mg/Kg-dry	1	8/21/2015 8:31:00 PM
1,1-Dichloroethene	ND	0.0240		mg/Kg-dry	1	8/21/2015 8:31:00 PM
trans-1,2-Dichloroethene	ND	0.0240		mg/Kg-dry	1	8/21/2015 8:31:00 PM
cis-1,2-Dichloroethene	0.0292	0.0240		mg/Kg-dry	1	8/21/2015 8:31:00 PM
Trichloroethene (TCE)	ND	0.0240		mg/Kg-dry	1	8/21/2015 8:31:00 PM
Tetrachloroethene (PCE)	0.219	0.0240		mg/Kg-dry	1	8/21/2015 8:31:00 PM
Surr: Dibromofluoromethane	95.8	63.7-129		%REC	1	8/21/2015 8:31:00 PM
Surr: Toluene-d8	102	64.3-131		%REC	1	8/21/2015 8:31:00 PM
Surr: 1-Bromo-4-fluorobenzene	101	63.1-141		%REC	1	8/21/2015 8:31:00 PM
Sample Moisture (Percent Moisture)				Batch ID: R24419		Analyst: SB
Percent Moisture	27.0	0.500		wt%	1	8/21/2015 10:50:43 AM

Analytical Report

WO#: **1508236**
Date Reported: **8/26/2015**

Client: Floyd | Snider
Collection Date: 8/18/2015 2:50:00 PM
Project: GTH - Olympia
Lab ID: 1508236-003
Matrix: Soil
Client Sample ID: **M-Cell8-B-17W-12'-D**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: 11664		Analyst: BC
Vinyl chloride	ND	0.00265		mg/Kg-dry	1	8/21/2015 9:00:00 PM
1,1-Dichloroethene	ND	0.0265		mg/Kg-dry	1	8/21/2015 9:00:00 PM
trans-1,2-Dichloroethene	ND	0.0265		mg/Kg-dry	1	8/21/2015 9:00:00 PM
cis-1,2-Dichloroethene	0.0333	0.0265		mg/Kg-dry	1	8/21/2015 9:00:00 PM
Trichloroethene (TCE)	ND	0.0265		mg/Kg-dry	1	8/21/2015 9:00:00 PM
Tetrachloroethene (PCE)	0.177	0.0265		mg/Kg-dry	1	8/21/2015 9:00:00 PM
Surr: Dibromofluoromethane	95.3	63.7-129		%REC	1	8/21/2015 9:00:00 PM
Surr: Toluene-d8	102	64.3-131		%REC	1	8/21/2015 9:00:00 PM
Surr: 1-Bromo-4-fluorobenzene	99.4	63.1-141		%REC	1	8/21/2015 9:00:00 PM
Sample Moisture (Percent Moisture)				Batch ID: R24419		Analyst: SB
Percent Moisture	27.6	0.500		wt%	1	8/21/2015 10:50:43 AM

Work Order: 1508236
CLIENT: Floyd | Snider
Project: GTH - Olympia

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID **LCS-11664**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **8/21/2015**	RunNo: **24430**
Client ID: **LCSS**	Batch ID: **11664**		Analysis Date: **8/21/2015**	SeqNo: **460985**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	1.23	0.00200	1.000	0	123	56.1	130				
1,1-Dichloroethene	1.07	0.0500	1.000	0	107	49.7	142				
trans-1,2-Dichloroethene	1.05	0.0200	1.000	0	105	68	130				
cis-1,2-Dichloroethene	1.05	0.0200	1.000	0	105	71.3	135				
Trichloroethene (TCE)	1.06	0.0200	1.000	0	106	65.5	137				
Tetrachloroethene (PCE)	1.00	0.0200	1.000	0	100	52.7	150				
Surr: Dibromofluoromethane	1.34		1.250		107	63.7	129				
Surr: Toluene-d8	1.30		1.250		104	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.27		1.250		102	63.1	141				

Sample ID **MB-11664**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **8/21/2015**	RunNo: **24430**
Client ID: **MBLKS**	Batch ID: **11664**		Analysis Date: **8/21/2015**	SeqNo: **460986**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.00200									
1,1-Dichloroethene	ND	0.0500									
trans-1,2-Dichloroethene	ND	0.0200									
cis-1,2-Dichloroethene	ND	0.0200									
Trichloroethene (TCE)	ND	0.0200									
Tetrachloroethene (PCE)	ND	0.0200									
Surr: Dibromofluoromethane	1.28		1.250		102	63.7	129				
Surr: Toluene-d8	1.25		1.250		99.8	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.26		1.250		100	63.1	141				

Sample ID **1508238-001BDUP**	SampType: **DUP**	Units: **mg/Kg-dry**	Prep Date: **8/21/2015**	RunNo: **24430**
Client ID: **BATCH**	Batch ID: **11664**		Analysis Date: **8/21/2015**	SeqNo: **460982**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.00379						0		30	
1,1-Dichloroethene	ND	0.0948						0		30	

Work Order: 1508236
CLIENT: Floyd | Snider
Project: GTH - Olympia

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID **1508238-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **8/21/2015** RunNo: **24430**
Client ID: **BATCH** Batch ID: **11664** Analysis Date: **8/21/2015** SeqNo: **460982**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,2-Dichloroethene	ND	0.0379						0		30	
cis-1,2-Dichloroethene	ND	0.0379						0		30	
Trichloroethene (TCE)	ND	0.0379						0		30	
Tetrachloroethene (PCE)	ND	0.0379						0		30	
Surr: Dibromofluoromethane	2.31		2.371		97.5	63.7	129		0		
Surr: Toluene-d8	2.45		2.371		103	64.3	131		0		
Surr: 1-Bromo-4-fluorobenzene	2.38		2.371		100	63.1	141		0		

Sample ID **1508238-002BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **8/21/2015** RunNo: **24430**
Client ID: **BATCH** Batch ID: **11664** Analysis Date: **8/21/2015** SeqNo: **460995**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	2.65	0.00387	1.935	0	137	51.2	146				
1,1-Dichloroethene	2.35	0.0967	1.935	0	121	61.9	141				
trans-1,2-Dichloroethene	2.25	0.0387	1.935	0	116	52	136				
cis-1,2-Dichloroethene	2.12	0.0387	1.935	0	110	58.6	136				
Trichloroethene (TCE)	2.54	0.0387	1.935	0	131	68.6	132				
Tetrachloroethene (PCE)	2.12	0.0387	1.935	0.05157	107	35.6	158				
Surr: Dibromofluoromethane	2.54		2.419		105	63.7	129				
Surr: Toluene-d8	2.50		2.419		103	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	2.51		2.419		104	63.1	141				

Date: *8/26/2015*

Work Order: 1508236
CLIENT: Floyd | Snider
Project: GTH - Olympia

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID **1508236-003ADUP** SampType: **DUP** Units: **wt%** Prep Date: **8/21/2015** RunNo: **24419**
Client ID: **M-Cell8-B-17W-12'-D** Batch ID: **R24419** Analysis Date: **8/21/2015** SeqNo: **460803**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	28.4	0.500						27.63	2.86	20	

Sample Log-In Check List

Client Name:	**FS**	Work Order Number:	**1508236**
Logged by:	**Erica Silva**	Date Received:	**8/20/2015 3:20:00 PM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Courier		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Required ☑
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >0°C to 10.0°C *	Yes ☑	No ☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler	5.9
Sample	5.9
Temp Blank	6.0

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Fremont Analytical

Chain of Custody Record

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Laboratory Project No (internal): 1508236

Date: 8/20/15

Page: 1 of: 1

Client: Floyd | Snider
Address: 601 Union St., Ste 600
City, State, Zip: Seattle, WA 98101
Telephone: 206-292-2078 Fax:

Project Name: GTH - Olympia
Project No: task 6
Location: Olympia, WA
Report To (PM): tom colligan + Lynn Grochala
PM Email: tom.colligan@floydsnider.com, lynn.grochala@floydsnider.com

Collected by: K. Anderson

*Matrix Codes: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	cVOCs (EPA 8260 / 624) *	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T)	Dissolved (D)	Anions (IC)***	EDB (8011)	Comments
1	M-Gll7-B-12W-12'	8/17/15	1200	S	X														* cVOCs: PCE, TCE, cis + trans-1,2-DCE, 1,1-DCE, vinyl chloride
2	M-Gll8-B-17W-12'	8/18/15	1490	S	X														
3	M-Gll8-B-17W-12'-D	8/18/15	1450	S	X														
4																			
5																			
6																			
7																			
8																			
9																			
10																			

**Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Turn-around times for samples received after 4:00pm will begin on the following business day.

Special Remarks:

Sample Disposal: ☐ Return to Client ☐ Disposal by Lab (A fee may be assessed if samples are retained after 30 days.)

Relinquished	Date/Time	Received	Date/Time
x	8/20/15 1450	x Bulk	8/20/15 1450
x Bulk	8/20/15 15:20	x	8/20/15 1520

TAT → SameDay^ NextDay^ 2 Day 3 Day STD

^Please coordinate with the lab in advance

Distribution: White - Lab, Yellow - File, Pink - Originator

www.fremontanalytical.com

Former Olympia Dry Cleaners Site

Remedial Action Completion Report

Appendix F
Waste Disposal Documentation

DRAFT

Certification No. LW.15185
Billing Acct. No 333376
Product Code 67

BILL OF LADING

CONTAINED IN SOIL

REGIONAL DISPOSAL COMPANY
54 S. Dawson Street
Seattle, WA 98134
Telephone: (206) 332-7700 / Fax: (206) 332-7600

This Bill of Lading augments the Master Service Agreement ("Agreement") entered into by Gary Burleson (Generator/Agent) and Regional Disposal Company ("RDC") on 7/23/15 (date). The terms herein are made a part of the Agreement. In the event of conflict between this Bill of Lading and the Agreement, the terms of the Agreement prevail.

RDC hereby authorizes the Wastes ("Waste") described in Certification No. LW.15185 signed by Generator/Agent on 7/23/15 (date), for disposal at Roosevelt Regional Landfill. Contractor shall present a copy of this Bill of Lading with each shipment delivered.

Location of Waste: 6006 Union Ave. SE, Olympia

Method of Shipment: RDC - Lemay

Additional Fees (e.g., laboratory fees, transportation fees, special handling fees, etc. If none, so state):

PERFORMANCE DATE

FOR RDC TRANSPORTATION: Generator shall make the Waste available for shipment no later than _____ (date). RDC shall transport the Waste no later than _____ (date), unless RDC notifies the Generator in writing that Waste transport shall be suspended or canceled due to RDC's exercise of its right to inspect or analyze the Waste (as provided in the Agreement).

FOR GENERATOR TRANSPORTATION: Agent shall begin delivery of the Waste at [*check one*]:

☒ Roosevelt Regional Landfill. ☐ Seattle Transfer Station located at Third and Lander.

Waste delivery shall begin no later than 7/23/15 (date), and shall complete delivery of the Waste no later than 4/28/16 (date), unless RDC notifies Generator/Agent in writing to suspend or cancel the waste delivery due to RDC's exercise of its right to inspect or analyze the Waste (As provided in the Agreement).

GENERATOR / AGENT	**REGIONAL DISPOSAL COMPANY**
Gary Burleson Personal Rep for the Estate of Katherine E. Burleson and Manager of GTG LLC Signature	Signature
Gary Burleson Personal Rep. for the Estate of Katherine E. Burleson and manager for GTG LLC Printed Name and Title	Printed Name and Title
7/27/15 Date	Date

SITE	
	Centralia, WA WA , CA --

CUSTOMER
690213 Olympia Dry Cleaners/Estate of Katherine Burleson and GJG LLC 331 E Bald Eagle Dr LW-15185

SITE	TICKET #	CELL
11	18875	231231

WEIGHMASTER	
VICKY R.	
DATE/TIME IN	**DATE/TIME OUT**
08-06-2015 6:43 am	08-6-2015 7:07 am
VEHICLE	**CONTAINER**
0353	TOLU452466
REFERENCE	
	INVOICE
BILL OF LADING	
DTTX427347	

SCALE IN	GROSS WEIGHT	60,540	NET TONS	7.17
SCALE OUT	TARE WEIGHT	46,200	NET WEIGHT	14,340

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
12.50	YD	TRACKING QTY				
7.17	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (07/12)

SIGNATURE _____

SITE	
	Centralia, WA WA , CA --

CUSTOMER
690213 Olympia Dry Cleaners/Estate of Katherine Burleson and GJG LLC 331 E Bald Eagle Dr LW-15185

SITE	TICKET #	CELL
11	18882	231230

WEIGHMASTER
VICKY R.

DATE/TIME IN	DATE/TIME OUT
08-06-2015 6:52 am	08-6-2015 7:15 am

VEHICLE	CONTAINER
0329	RBDU201128

REFERENCE
INVOICE

BILL OF LADING
BNSF231061

SCALE IN	GROSS WEIGHT	63,360	NET TONS	7.53
SCALE OUT	TARE WEIGHT	48,300	NET WEIGHT	15,060

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
12.50	YD	TRACKING QTY				
7.53	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (07/12)

SIGNATURE _____

SITE
Centralia, WA
WA
, CA --

CUSTOMER
690213
Olympia Dry Cleaners/Estate of
Katherine Burleson and GJG LLC
331 E Bald Eagle Dr
LW-15185

SITE	TICKET #	CELL
11	18912	231232

WEIGHMASTER
VICKY R.

DATE/TIME IN	DATE/TIME OUT
08-06-2015 7:40 am	08-6-2015 8:01 am

VEHICLE	CONTAINER
0353	TOLU467490

REFERENCE INVOICE

BILL OF LADING BNSF231061

SCALE IN	GROSS WEIGHT	63,960	NET TONS	8.88	
SCALE OUT	TARE WEIGHT	46,200	NET WEIGHT	17,760	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
12.50	YD	TRACKING QTY				
8.88	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (07/12)

SIGNATURE _____

SITE	
	Centralia, WA WA , CA --

CUSTOMER
690213 Olympia Dry Cleaners/Estate of Katherine Burleson and GJG LLC 331 E Bald Eagle Dr LW-15185

SITE	TICKET #	CELL
11	19004	231172

WEIGHMASTER	
Janice F.	

DATE/TIME IN	DATE/TIME OUT
08-08-2015 7:47 am	08-8-2015 8:10 am

VEHICLE	CONTAINER
7328	GCE0430222

REFERENCE	
	INVOICE

BILL OF LADING
BNSF231011

SCALE IN	GROSS WEIGHT	67,700	NET TONS	10.70	
SCALE OUT	TARE WEIGHT	46,300	NET WEIGHT	21,400	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
1.25	YD	TRACKING QTY				
10.70	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (07/12)

SIGNATURE _____

SITE	
	Centralia, WA WA , CA --

CUSTOMER
690213 Olympia Dry Cleaners/Estate of Katherine Burleson and GJG LLC 331 E Bald Eagle Dr LW-15185

SITE	TICKET #	CELL
11	19005	231171

WEIGHMASTER	
Janice F.	

DATE/TIME IN	DATE/TIME OUT
08-08-2015 8:22 am	08-8-2015 8:44 am

VEHICLE	CONTAINER
0353	TOLU454140

REFERENCE	
	INVOICE

BILL OF LADING
BNSF231011

SCALE IN	GROSS WEIGHT	64,440	NET TONS	8.62
SCALE OUT	TARE WEIGHT	47,200	NET WEIGHT	17,240

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
12.50	YD	TRACKING QTY				
8.62	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (07/12)

SIGNATURE _____

SITE	
	Centralia, WA WA , CA --

CUSTOMER
690213 Olympia Dry Cleaners/Estate of Katherine Burleson and GJG LLC 331 E Bald Eagle Dr LW-15185

SITE	TICKET #	CELL
11	19157	203877

WEIGHMASTER	
Gail H.	
DATE/TIME IN	**DATE/TIME OUT**
08-12-2015 12:25 pm	08-12-2015 12:48 pm
VEHICLE	**CONTAINER**
6811	GCEU440196
REFERENCE	INVOICE
BILL OF LADING	DTIX620130

SCALE IN	GROSS WEIGHT	60,820	NET TONS	8.45
SCALE OUT	TARE WEIGHT	43,920	NET WEIGHT	16,900

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
25.00	YD	TRACKING QTY				
8.45	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (07/12)

SIGNATURE _____

SITE	
	Centralia, WA WA , CA --

CUSTOMER
690213 Olympia Dry Cleaners/Estate of Katherine Burleson and GJG LLC 331 E Bald Eagle Dr LW-15185

SITE	TICKET #	CELL
11	19158	231234

WEIGHMASTER
Gail H.

DATE/TIME IN	DATE/TIME OUT
08-12-2015 12:29 pm	08-12-2015 12:54 pm

VEHICLE	CONTAINER
0330	TOLU458710

REFERENCE
INVOICE

BILL OF LADING
DTTX645836

SCALE IN	GROSS WEIGHT	68,420	NET TONS	11.34	
SCALE OUT	TARE WEIGHT	45,740	NET WEIGHT	22,680	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
25.00	YD	TRACKING QTY				
11.34	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (07/12)

SIGNATURE _____

SITE	
	Centralia, WA WA , CA --

CUSTOMER
690213 Olympia Dry Cleaners/Estate of Katherine Burleson and GJG LLC 331 E Bald Eagle Dr LW-15185

SITE	TICKET #	CELL
11	19161	203876

WEIGHMASTER	
Gail H.	
DATE/TIME IN	**DATE/TIME OUT**
08-12-2015 12:30 pm	08-12-2015 12:59 pm
VEHICLE	**CONTAINER**
7329	TOLU443546
REFERENCE	INVOICE
BILL OF LADING	DTTX645836

SCALE IN	GROSS WEIGHT	68,980	NET TONS	12.32	
SCALE OUT	TARE WEIGHT	44,340	NET WEIGHT	24,640	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
1.25	YD	TRACKING QTY				
12.32	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (07/12)

SIGNATURE _____

SITE	
	Centralia, WA WA , CA --

CUSTOMER
690213 Olympia Dry Cleaners/Estate of Katherine Burleson and GJG LLC 331 E Bald Eagle Dr LW-15185

SITE	TICKET #	CELL
11	19003	231233

WEIGHMASTER	
Janice F.	

DATE/TIME IN	DATE/TIME OUT
08-08-2015 7:15 am	08-8-2015 7:39 am

VEHICLE	CONTAINER
0353	TPHU252115

REFERENCE	
	INVOICE

BILL OF LADING
DTTX27019

MANUAL IN	GROSS WEIGHT	72,460	NET TONS	12.60
SCALE OUT	TARE WEIGHT	47,260	NET WEIGHT	25,200

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
1.25	YD	TRACKING QTY				
12.60	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (07/12)

SIGNATURE _____

SITE
Roosevelt Landfill
500 Roosevelt Grade Rd
Roosevelt Wa, 99356

CUSTOMER
690213
Olympia Dry Cleaners/Estate of
Katherine Burleson and GJG LLC
331 E Bald Eagle Dr
LW-15185

SITE	TICKET #	CELL
3A	337927	248201

WEIGHMASTER Janice F.

DATE/TIME IN	DATE/TIME OUT
08-08-2015 11:58 am	08-8-2015 12:35 pm

VEHICLE	CONTAINER
7331	AWSU200048

REFERENCE INVOICE

BILL OF LADING BNSF231056 08/06/2015 0

SCALE IN	GROSS WEIGHT	80,280	NET TONS	16.65
SCALE OUT	TARE WEIGHT	46,980	NET WEIGHT	33,300

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
28.00	YD	TRACKING QTY				
16.65	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

SIGNATURE _____

RS-F042UPR (07/12)

SITE	
	Centralia, WA WA , CA --

CUSTOMER
690213 Olympia Dry Cleaners/Estate of Katherine Burleson and GJG LLC 331 E Bald Eagle Dr LW-15185

SITE	TICKET #	CELL
11	19155	231197

WEIGHMASTER
Gail H.

DATE/TIME IN	DATE/TIME OUT
08-12-2015 12:13 pm	08-12-2015 12:44 pm

VEHICLE	CONTAINER
1454	NVRU300028

REFERENCE
INVOICE

BILL OF LADING
BNSF230123

SCALE IN	GROSS WEIGHT	97,060	NET TONS	25.43	
SCALE OUT	TARE WEIGHT	46,200	NET WEIGHT	50,860	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
25.00	YD	TRACKING QTY				
25.43	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (07/12)

SIGNATURE _____

SITE	
	Centralia, WA WA , CA --

CUSTOMER
690213 Olympia Dry Cleaners/Estate of Katherine Burleson and GJG LLC 331 E Bald Eagle Dr LW-15185

SITE	TICKET #	CELL
11	19156	229319

WEIGHMASTER	
Gail H.	
DATE/TIME IN	**DATE/TIME OUT**
08-12-2015 12:38 pm	08-12-2015 12:46 pm
VEHICLE	**CONTAINER**
0331	AWSU200014
REFERENCE	INVOICE
BILL OF LADING	BNSF230123

MANUAL IN	GROSS WEIGHT	88,120	NET TONS	19.87	
SCALE OUT	TARE WEIGHT	48,380	NET WEIGHT	39,740	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
12.50	YD	TRACKING QTY				
19.87	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (07/12)

SIGNATURE _____

SITE	
	Centralia, WA WA , CA --

CUSTOMER
690213 Olympia Dry Cleaners/Estate of Katherine Burleson and GJG LLC 331 E Bald Eagle Dr LW-15185

SITE	TICKET #	CELL
11	19159	231272

WEIGHMASTER
Gail H.

DATE/TIME IN	DATE/TIME OUT
08-12-2015 12:42 pm	08-12-2015 12:56 pm

VEHICLE	CONTAINER
7331	AWSU200053

REFERENCE
INVOICE

BILL OF LADING
DT1X27265

MANUAL IN	GROSS WEIGHT	97,720	NET TONS	24.96	
SCALE OUT	TARE WEIGHT	47,800	NET WEIGHT	49,920	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
12.50	YD	TRACKING QTY				
24.96	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (07/12)

SIGNATURE _____

SITE	
	Centralia, WA WA , CA --

CUSTOMER
690213 Olympia Dry Cleaners/Estate of Katherine Burleson and GJG LLC 331 E Bald Eagle Dr LW-15185

SITE	TICKET #	CELL
11	19160	231210

WEIGHMASTER	
Gail H.	
DATE/TIME IN	**DATE/TIME OUT**
08-12-2015 12:40 pm	08-12-2015 12:57 pm
VEHICLE	**CONTAINER**
7330	AWSU200028
REFERENCE	INVOICE
BILL OF LADING	DITX27265

MANUAL IN	GROSS WEIGHT	107,680	NET TONS	30.21	
SCALE OUT	TARE WEIGHT	47,260	NET WEIGHT	60,420	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
12.50	YD	TRACKING QTY				
30.21	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (07/12)

SIGNATURE _____

SITE
Centralia, WA
WA
, CA --

CUSTOMER
690213
Olympia Dry Cleaners/Estate of
Katherine Burleson and GJG LLC
331 E Bald Eagle Dr
LW-15185

SITE	TICKET #	CELL
11	19203	231279

WEIGHMASTER Gail H.

DATE/TIME IN	DATE/TIME OUT
08-13-2015 7:27 am	08-13-2015 7:55 am

VEHICLE	CONTAINER
0353	AWSU200062

REFERENCE INVOICE

BILL OF LADING BNSF231045

SCALE IN	GROSS WEIGHT 94,140	NET TONS 23.14		
SCALE OUT	TARE WEIGHT 47,860	NET WEIGHT 46,280		INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
25.00	YD	TRACKING QTY				
23.14	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (07/12)

SIGNATURE _____

SITE	
	Centralia, WA WA , CA --

CUSTOMER
690213 Olympia Dry Cleaners/Estate of Katherine Burleson and GJG LLC 331 E Bald Eagle Dr LW-15185

SITE	TICKET #	CELL
11	19204	231133

WEIGHMASTER	
Gail H.	
DATE/TIME IN	**DATE/TIME OUT**
08-13-2015 7:36 am	08-13-2015 7:59 am
VEHICLE	**CONTAINER**
3450	AWSU200049
REFERENCE	INVOICE
BILL OF LADING	
BNSF231045	

SCALE IN	GROSS WEIGHT	96,440	NET TONS	24.61
SCALE OUT	TARE WEIGHT	47,220	NET WEIGHT	49,220

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
25.00	YD	TRACKING QTY				
24.61	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (07/12)

SIGNATURE _____

SITE	Centralia, WA WA , CA --

CUSTOMER
690213 Olympia Dry Cleaners/Estate of Katherine Burleson and GJG LLC 331 E Bald Eagle Dr LW-15185

SITE	TICKET #	CELL
11	19282	231135

WEIGHMASTER	
Janice F.	
DATE/TIME IN	DATE/TIME OUT
08-15-2015 10:34 am	08-15-2015 11:08 am
VEHICLE	CONTAINER
3450	AWSU200056
REFERENCE	INVOICE
BILL OF LADING	91TX270064

SCALE IN	GROSS WEIGHT	89,380	NET TONS	20.72	
SCALE OUT	TARE WEIGHT	47,940	NET WEIGHT	41,440	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
25.00	YD	TRACKING QTY				
20.72	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (07/12)

SIGNATURE _____

SITE	
	Centralia, WA WA , CA --

CUSTOMER
690213 Olympia Dry Cleaners/Estate of Katherine Burleson and GJG LLC 331 E Bald Eagle Dr LW-15185

SITE	TICKET #	CELL
11	19283	231136

WEIGHMASTER	
Janice F.	
DATE/TIME IN	**DATE/TIME OUT**
08-15-2015 10:41 am	08-15-2015 11:08 am
VEHICLE	**CONTAINER**
8648	AWSU200077
REFERENCE	INVOICE
BILL OF LADING	UTIX27395

SCALE IN	GROSS WEIGHT	93,520	NET TONS	23.35	
SCALE OUT	TARE WEIGHT	46,820	NET WEIGHT	46,700	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
25.00	YD	TRACKING QTY				
23.35	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (07/12)

SIGNATURE _____

SITE
Roosevelt Landfill
500 Roosevelt Grade Rd
Roosevelt Wa, 99356

CUSTOMER
690213
Olympia Dry Cleaners/Estate of
Katherine Burleson and GJG LLC
331 E Bald Eagle Dr
LW-15185

SITE	TICKET #	CELL
3A	338403	248203

WEIGHMASTER: Janice F.

DATE/TIME IN	DATE/TIME OUT
08-15-2015 10:32 am	08-15-2015 11:05 am

VEHICLE	CONTAINER
0330	AWSU200064

REFERENCE: INVOICE

BILL OF LADING: BNSF231113 08/12/2015

SCALE IN	GROSS WEIGHT	80,640	NET TONS	16.89	
SCALE OUT	TARE WEIGHT	46,860	NET WEIGHT	33,780	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
28.00	YD	TRACKING QTY				
16.89	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (07/12)

SIGNATURE _____

TE
Centralia, WA
WA
, CA --

STOMER
690213
Olympia Dry Cleaners/Estate of
Katherine Burleson and GJG LLC
331 E Bald Eagle Dr
LW-15185

SITE	TICKET #	CELL
11	19299	231284

WEIGHMASTER: Gail H.

DATE/TIME IN	DATE/TIME OUT
08-17-2015 6:39 am	08-17-2015 7:08 am

VEHICLE	CONTAINER
0353	AWSU200008

REFERENCE: INVOICE

BILL OF LADING: BNSF231045

SCALE IN	GROSS WEIGHT	102,860	NET TONS	27.46	
SCALE OUT	TARE WEIGHT	47,940	NET WEIGHT	54,920	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
25.00	YD	TRACKING QTY				
27.46	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT

TENDERED

CHANGE

CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

TE
Centralia, WA
WA
, CA --

STOMER
690213
Olympia Dry Cleaners/Estate of
Katherine Burleson and GJG LLC
331 E Bald Eagle Dr
LW-15185

SITE	TICKET #	CELL
11	19301	231149

WEIGHMASTER: Gail H.

DATE/TIME IN	DATE/TIME OUT
08-17-2015 6:39 am	08-17-2015 7:09 am

VEHICLE	CONTAINER
7328	AWSU200062

REFERENCE: INVOICE

BILL OF LADING: DTTX427710

SCALE IN	GROSS WEIGHT	110,240	NET TONS	31.76	
SCALE OUT	TARE WEIGHT	46,720	NET WEIGHT	63,520	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
25.00	YD	TRACKING QTY				
31.76	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

ITE
Roosevelt Landfill
500 Roosevelt Grade Rd
Roosevelt Wa, 99356

USTOMER
690213
Olympia Dry Cleaners/Estate of
Katherine Burleson and GJG LLC
331 E Bald Eagle Dr
LW-15185

SITE	TICKET #	CELL
7A	267829	

WEIGHMASTER: Gail H.

DATE/TIME IN	DATE/TIME OUT
08-18-2015 12:10 pm	08-18-2015 12:36 pm

VEHICLE	CONTAINER
2784	AWS0200023

REFERENCE: INVOICE

BILL OF LADING: BNSF230028 08/14/2015 0

SCALE IN	GROSS WEIGHT	76,520	NET TONS	18.32
SCALE OUT	TARE WEIGHT	39,880	NET WEIGHT	36,640

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
28.00	YD	TRACKING QTY				
18.32	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT

TENDERED

CHANGE

CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

TE

Centralia, WA
WA
, CA --

ISTOMER
690213
Olympia Dry Cleaners/Estate of
Katherine Burleson and GJG LLC
331 E Bald Eagle Dr
LW-15185

SITE	TICKET #	CELL
11	19351	231151

WEIGHMASTER: Gail H.

DATE/TIME IN	DATE/TIME OUT
08-19-2015 6:21 am	08-19-2015 6:59 am

VEHICLE	CONTAINER
7328	AWSU200001

REFERENCE: INVOICE

BILL OF LADING: BNSF230118

SCALE IN	GROSS WEIGHT	100,220	NET TONS	26.69	
SCALE OUT	TARE WEIGHT	46,840	NET WEIGHT	53,380	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
25.00	YD	TRACKING QTY				
26.69	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT

TENDERED

CHANGE

CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

TE
Centralia, WA
WA
, CA --

STOMER
690213
Olympia Dry Cleaners/Estate of
Katherine Burleson and GJG LLC
331 E Bald Eagle Dr
LW-15185

SITE	TICKET #	CELL
11	19353	231152

WEIGHMASTER: Gail H.

DATE/TIME IN	DATE/TIME OUT
08-19-2015 6:24 am	08-19-2015 7:00 am

VEHICLE	CONTAINER
3450	AWSU200077

REFERENCE: INVOICE

BILL OF LADING: DTFX427710

SCALE IN	GROSS WEIGHT	98,100	NET TONS	25.30	
SCALE OUT	TARE WEIGHT	47,500	NET WEIGHT	50,600	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
25.00	YD	TRACKING QTY				
25.30	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

TE

Centralia, WA
WA
, CA --

USTOMER

690213
Olympia Dry Cleaners/Estate of
Katherine Burleson and GJG LLC
331 E Bald Eagle Dr
LW-15185

SITE	TICKET #	CELL
11	19354	231153

WEIGHMASTER: Gail H.

DATE/TIME IN	DATE/TIME OUT
08-19-2015 6:28 am	08-19-2015 7:00 am

VEHICLE	CONTAINER
0331	AWSU200062

REFERENCE: INVOICE

BILL OF LADING: DTTX427710

SCALE IN	GROSS WEIGHT	101,360	NET TONS	26.86
SCALE OUT	TARE WEIGHT	47,640	NET WEIGHT	53,720

INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
25.00	YD	TRACKING QTY				
26.86	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT

TENDERED

CHANGE

CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

Roosevelt Landfill
500 Roosevelt Grade Rd
Roosevelt Wa, 99356

CUSTOMER
690213
Olympia Dry Cleaners/Estate of
Katherine Burleson and GJG LLC
331 E Bald Eagle Dr
LW-15185

SITE	TICKET #	CELL
7A	267858	

WEIGHMASTER: Gail H.

DATE/TIME IN	DATE/TIME OUT
08-19-2015 1:04 pm	08-19-2015 1:36 pm

VEHICLE	CONTAINER
2786	AWSU200049

REFERENCE: INVOICE

BILL OF LADING: BNSF230075 08/17/2015

SCALE IN	GROSS WEIGHT	83,240	NET TONS	21.70	
SCALE OUT	TARE WEIGHT	39,840	NET WEIGHT	43,400	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
28.00	YD	TRACKING QTY				
21.70	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

TE
Centralia, WA
WA
, CA --

USTOMER
690213
Olympia Dry Cleaners/Estate of
Katherine Burleson and GJG LLC
331 E Bald Eagle Dr
LW-15185

SITE	TICKET #	CELL
11	19491	231156

WEIGHMASTER: Janice F.

DATE/TIME IN	DATE/TIME OUT
08-22-2015 9:10 am	08-22-2015 9:39 am

VEHICLE	CONTAINER
0329	AWSU200043

REFERENCE: INVOICE

BILL OF LADING: BNSF231061

SCALE IN	GROSS WEIGHT	110,040	NET TONS	31.16	
SCALE OUT	TARE WEIGHT	47,720	NET WEIGHT	62,320	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
25.00	YD	TRACKING QTY				
31.16	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT

TENDERED

CHANGE

CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

ITE
Centralia, WA
WA
, CA --

USTOMER
690213
Olympia Dry Cleaners/Estate of
Katherine Burleson and GJG LLC
331 E Bald Eagle Dr
LW-15185

SITE	TICKET #	CELL
11	19492	231158

WEIGHMASTER: Janice F.

DATE/TIME IN	DATE/TIME OUT
08-22-2015 9:13 am	08-22-2015 9:40 am

VEHICLE	CONTAINER
3450	AWSU200023

REFERENCE: INVOICE

BILL OF LADING: DTRX620616

SCALE IN	GROSS WEIGHT	108,060	NET TONS	30.58	
SCALE OUT	TARE WEIGHT	46,900	NET WEIGHT	61,160	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
25.00	YD	TRACKING QTY				
30.58	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT

TENDERED

CHANGE

CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

TE
Centralia, WA
WA
, CA --

STOMER
690213
Olympia Dry Cleaners/Estate of
Katherine Burleson and GJG LLC
331 E Bald Eagle Dr
LW-15185

SITE	TICKET #	CELL
11	19493	231154

WEIGHMASTER: Janice F.

DATE/TIME IN	DATE/TIME OUT
08-22-2015 10:07 am	08-22-2015 10:38 am

VEHICLE	CONTAINER
0329	AWSU200008

REFERENCE: INVOICE

BILL OF LADING: DTIX620616

SCALE IN	GROSS WEIGHT	95,120	NET TONS	23.58	
SCALE OUT	TARE WEIGHT	47,960	NET WEIGHT	47,160	INBOUND

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
25.00	YD	TRACKING QTY				
23.58	TN	Contained in Contaminated S Olympia				
1.00		CONTAINER/CHASIS RENTAL				

NET AMOUNT

TENDERED

CHANGE

CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

Detail Customer Activity Report

January 01, 2015 to August 31, 2015

Specific Customer: 690213

690213- Olympia Dry Cleaners/Estate of

Ticket Date	Facility & Ticket Number	Contract	Truck #	Container	Material	Material Rate		Billing Quantity		Material Total	Tax Total	Total
08/06/2015	I 11 18875	LW15185A	0353	TOLU452466	Contained in Contaminate	45.00	F	7.17	TN	$322.65	$11.62	$334.27
08/06/2015	I 11 18875	LW15185A	0353	TOLU452466	Load Charge	350.00	F	1.00	LD	$350.00	$12.60	$362.60
08/06/2015	I 11 18882	LW15185A	0329	RBDU201128	Contained in Contaminate	45.00	F	7.53	TN	$338.85	$12.20	$351.05
08/06/2015	I 11 18882	LW15185A	0329	RBDU201128	Load Charge	350.00	F	1.00	LD	$350.00	$12.60	$362.60
08/06/2015	I 11 18912	LW15185A	0353	TOLU467490	Contained in Contaminate	45.00	F	8.88	TN	$399.60	$14.39	$413.99
08/06/2015	I 11 18912	LW15185A	0353	TOLU467490	Load Charge	350.00	F	1.00	LD	$350.00	$12.60	$362.60
08/08/2015	I 11 19003	LW-15185	0353	TPHU252115	Contained in Contaminate	94.44	S	12.60	TN	$1,190.00	$42.84	$1,232.84
08/08/2015	I 11 19004	LW15185A	7328	GCEU430222	Contained in Contaminate	45.00	F	10.70	TN	$481.50	$17.33	$498.83
08/08/2015	I 11 19004	LW15185A	7328	GCEU430222	Load Charge	350.00	F	1.00	LD	$350.00	$12.60	$362.60
08/08/2015	I 11 19005	LW15185A	0353	TOLU454140	Contained in Contaminate	45.00	F	8.62	TN	$387.90	$13.96	$401.86
08/08/2015	I 11 19005	LW15185A	0353	TOLU454140	Load Charge	350.00	F	1.00	LD	$350.00	$12.60	$362.60
08/12/2015	I 11 19155	LW-15185	1454	NVRU300028	Contained in Contaminate	47.61	S	25.43	TN	$1,210.64	$43.58	$1,254.22
08/12/2015	I 11 19156	LW-15185	0331	AWSU200014	Contained in Contaminate	59.89	S	19.87	TN	$1,190.00	$42.84	$1,232.84
08/12/2015	I 11 19157	LW15185A	6811	GCEU440196	Contained in Contaminate	45.00	F	8.45	TN	$380.25	$13.69	$393.94
08/12/2015	I 11 19157	LW15185A	6811	GCEU440196	Load Charge	350.00	F	1.00	LD	$350.00	$12.60	$362.60
08/12/2015	I 11 19158	LW15185A	0330	TOLU458710	Contained in Contaminate	45.00	F	11.34	TN	$510.30	$18.37	$528.67
08/12/2015	I 11 19158	LW15185A	0330	TOLU458710	Load Charge	350.00	F	1.00	LD	$350.00	$12.60	$362.60
08/12/2015	I 11 19159	LW-15185	7331	AWSU200053	Contained in Contaminate	47.68	S	24.96	TN	$1,190.00	$42.84	$1,232.84
08/12/2015	I 11 19160	LW-15185	7330	AWSU200028	Contained in Contaminate	47.67	S	30.21	TN	$1,440.08	$51.84	$1,491.92
08/12/2015	I 11 19161	LW15185A	7329	TOLU443546	Contained in Contaminate	45.00	F	12.32	TN	$554.40	$19.96	$574.36
08/12/2015	I 11 19161	LW15185A	7329	TOLU443546	Load Charge	350.00	F	1.00	LD	$350.00	$12.60	$362.60
08/13/2015	I 11 19203	LW-15185	0353	AWSU200062	Contained in Contaminate	51.43	S	23.14	TN	$1,190.00	$42.84	$1,232.84
08/13/2015	I 11 19204	LW-15185	3450	AWSU200049	Contained in Contaminate	48.35	S	24.61	TN	$1,190.00	$42.84	$1,232.84
08/15/2015	I 11 19282	LW-15185	3450	AWSU200056	Contained in Contaminate	57.43	S	20.72	TN	$1,190.00	$42.84	$1,232.84
08/15/2015	I 11 19283	LW-15185	8648	AWSU200077	Contained in Contaminate	50.96	S	23.35	TN	$1,190.00	$42.84	$1,232.84
08/17/2015	I 11 19299	LW-15185	0353	AWSU200008	Contained in Contaminate	47.64	S	27.46	TN	$1,308.08	$47.09	$1,355.17
08/17/2015	I 11 19301	LW-15185	7328	AWSU200062	Contained in Contaminate	47.69	S	31.76	TN	$1,514.18	$54.52	$1,569.00
08/19/2015	I 11 19351	LW-15185	7328	AWSU200001	Contained in Contaminate	47.63	S	26.69	TN	$1,271.12	$45.76	$1,316.88
08/19/2015	I 11 19353	LW-15185	3450	AWSU200077	Contained in Contaminate	47.60	S	25.30	TN	$1,204.40	$43.36	$1,247.76
08/19/2015	I 11 19354	LW-15185	0331	AWSU200062	Contained in Contaminate	47.63	S	26.86	TN	$1,279.28	$46.05	$1,325.33
08/22/2015	I 11 19491	LW-15185	0329	AWSU200043	Contained in Contaminate	47.68	S	31.16	TN	$1,485.68	$53.48	$1,539.16
08/22/2015	I 11 19492	LW-15185	3450	AWSU200023	Contained in Contaminate	47.67	S	30.58	TN	$1,457.84	$52.48	$1,510.32
08/22/2015	I 11 19493	LW-15185	0329	AWSU200008	Contained in Contaminate	50.47	S	23.58	TN	$1,190.00	$42.84	$1,232.84
08/08/2015	I 3A 337927	LW-15185	7331	AWSU200048	Contained in Contaminate	71.47	S	16.65	TN	$1,190.00	$42.84	$1,232.84
08/15/2015	I 3A 338403	LW-15185	0330	AWSU200064	Contained in Contaminate	70.46	S	16.89	TN	$1,190.00	$42.84	$1,232.84
08/18/2015	I 7A 267829	LW-15185	2784	AWSU200023	Contained in Contaminate	64.96	S	18.32	TN	$1,190.00	$42.84	$1,232.84
08/19/2015	I 7A 267858	LW-15185	2786	AWSU200049	Contained in Contaminate	54.84	S	21.70	TN	$1,190.00	$42.84	$1,232.84

Tickets Reported: 29 Items Reported: 37

Customer Totals: $32,627.05 $1,174.56 $33,801.61

Material Summary	Weight Inbound	Weight Outbound	Volume Inbound	Volume Outbound	Count Inbound	Count Outbound	Billing Quantity	Material Total	Tax Total	Total
67 - Contained in Conta	576.85	0.00 TN	578.25	0.00 YD	0.00	0.00	576.85 TN	$29,827.05	1,073.76	30,900.81
LC - Load Charge	0.00	0.00 TN	0.00	0.00 YD	8.00	0.00	8.00 LD	$2,800.00	$100.80	$2,900.80

Cash Totals:
Invoice Totals: $32,627.05 $1,174.56 $33,801.61
Report Totals: $32,627.05 $1,174.56 $33,801.61

Tickets Reported: 29 Items Reported: 37

442276

CWMI

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
N/A	1	(800)424-9300	013472976 JJK

5. Generator's Name and Mailing Address

ESTATE OF KATHERINE BURLESON
306 UNION AVENUE SE
OLYMPIA WA 98501

Generator's Site Address (if different than mailing address)

Generator's Phone: (360)485-0351

6. Transporter 1 Company Name: R TRANSPORT — U.S. EPA ID Number: WAH000028338

7. Transporter 2 Company Name: UNION PACIFIC RAILROAD — U.S. EPA ID Number: NED001792910

8. Designated Facility Name and Site Address — U.S. EPA ID Number: ORD089452353

CHEMICAL WASTE MANAGEMENT, INC.
17629 CEDAR SPRINGS LANE
ARLINGTON OR 97812-9709

Facility's Phone: (503)454-2643

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077,HAZARDOUS WASTE,SOLID,N.O.S,9,III (F002,GRAVEL FILL,SILT,SAND)	001	CM	11900 ~~20000~~	P	F002
	2.			~~[illegible]~~ 8-28-15		
	3.					
	4.					

14. Special Handling Instructions and Additional Information

1. PROFILE OR325972; F002, GRAVEL FILL, SILT AND SAND; ERG # 171; RQ=10LBS
CONTAINER # WMXU 8770 11900P

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: the Estate of Katherine Burleson [illegible] Gary P. Burleson personal rep. for the Estate [illegible] — Signature: Gary P. Burleson personal rep. for the Estate of Katherine Burleson [illegible] — Month 08 Day 19 Year 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: PETE VANDERENDE — Signature: P Vanderende — Month 08 Day 19 Year 15
Transporter 2 Printed/Typed Name: — Signature: — Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☑ Quantity ☑ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Quantity changed per Gary Burleson Gary Burleson [illegible] 8-28-15
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H132			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Bobbi Jo Vaughn — Signature: Bobbi Jo Vaughn — Month 8 Day 26 Year 15

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

442276

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator ID Number: N/A

22. Page: 2/2

23. Manifest Tracking Number: 013472976 JJK

24. Generator's Name: Estate of Katherine Burleson

25. Transporter 3 Company Name: CRLRC — U.S. EPA ID Number: ORD987173457

26. Transporter ____ Company Name — U.S. EPA ID Number:

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes		

GENERATOR

32. Special Handling Instructions and Additional Information

OR325972 WMXU 8770

TRANSPORTER

33. Transporter 3 Acknowledgment of Receipt of Materials

Printed/Typed Name: Bonnie Shaw — Signature: B Shaw — Month: 8 — Day: 21 — Year: 15

34. Transporter ____ Acknowledgment of Receipt of Materials

Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

EPA Form 8700-22A (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

442276

CHEMICAL WASTE MANAGEMENT, INC.
17629 CEDAR SPRINGS LANE
ARLINGTON, OR 97812
SPECIAL BILLING WORKSHEET

Bill To: ☐ Generator ☐ Transporter ☐ Other ________

Generator: Estate of Katherine
Date: 8/26/15
Authorized By: (Customer Name & Title) ________

Manifest Number: 013472976JJK
Profile #: OR325970
BIF #

Brief Description (i.e., late load, excavation, transporter waiting, etc.): Absorbents needed added for new disposal

Man-hours (1 hr. minimum)

Manager	____	hrs. @ $90.00=	____
Laborer	____	hrs. @ $45.00=	____
Mechanic	____	hrs. @ $60.00=	____
Clerk	____	hrs. @ $35.00=	____
Customer Service	____	hrs. @ $30.00=	____
Receiving Technician	____	hrs. @ $45.00=	____
First Responder	____	hrs. @ $60.00=	____
		Sub-Total	

Equipment

Excavator	____	hr. @ $100.00=	____
Scraper	____	hrs. @ $220.00=	____
Grader	____	hrs. @ $150.00=	____
Backhoe	____	hrs. @ $125.00=	____
Truck (i.e. roll-off)	____	hrs. @ $70.00=	____
Forklift	____	hrs. @ $60.00=	____
Pickup truck	____	hrs. @ $60.00=	____
Loader	____	hrs. @ $150.00=	____
Dozer	____	hrs. @ $180.00=	____
Taylor	____	hrs @ $180.00=	____
Vacuum Truck	____	hrs @150.00=	____
		Sub-Total	

Administrative Costs

Mailing & Overnight Fees	____	$25.00 ea Package	____
Copies of Invoices	____	$25.00 ea Invoice	____
Tonnage Reports	____	$10.00 ea Report	____
Records Search	____	hrs. @ $30.00=	____
PCB/Asbestos Search	____	hrs. @ $30.00=	____
Rejected Load	____	Manifest @ $100.00=	____
Hazardous Manifest	____	$5.00 ea Manifest	____
NON HAZ Manifest	____	$2.00 ea NON HAZ	____
Priority Approval (48 hr.)	____	$250.00 ea	____
Rush Approval (24 hr.)	____	$500.00 ea	____
		Sub-Total	

Lab Costs

3rd Party analytical	____	Cost + 25%	____
Cyanide (distillation)	____	@ $100.00=	____
Volatiles (8260) by GC/Ms	____	@ $250.00=	____
Semi Volatiles (8270) by GC/Ms	____	@ $300.00=	____
PCBs	____	@ $150.00=	____
TCLP Metals	____	@ $150.00=	____
TCLP Volatiles	____	@ $300.00=	____
STLC Metals	____	@ $200.00=	____
Mercury	____	@ $150.00=	____
Flash Point	____	@ $50.00=	____
% Moisture	____	@ $25.00=	____
		Sub-Total	

Landfill

Bin Top Absorption per contract or $250.00/load	____	Loads @ $250.00/load=	____
	____	>300 gallons x $0.90 gal	____
Minimum Charge Bulk Load	____	$200.00 per load	____
Digest (<1 hr)	____	@ $125.00=	____
		Sub-Total	

BSU

Storage of Discrepant drums > 10 days	____	days @ $1.00/day=	____
Incidental Liquids in drums	____	drums @ $145.00/drum=	____
Liq/VS Solid Drum	____	$100.00 per drum	____
		Sub-Total	

FSU

Transfer and Store	____	Loads @ $250.00/load=	____
Washout FSU	____	31 gal or contracted rate	____
Free liquid (Bulk)	____	Loads @ $500.00/load=	____
		Sub-Total	

Transportation

Scheduled / Unscheduled		S / U	____
Demurrage	____	hrs. @	____
		Sub-Total	

Materials

Absorbent	1.5	Cost + 30% 505.00	758.00
Overpack (95 G Poly)	____	Cost + 20%	____
Overpack (85 G Steel)	____	Cost + 20%	____
Drum (55 G and Less)	____	Cost + 20%	____
Tilwell	____	Cost + 20%	____
Soil for Cover	____	cy @ $12.00/cy=	____
Soil to Fill in Tanks	____	cy @ $30.00/cy=	____
Bin Parts & Materials	____	@ cost plus 30%=	____
		Sub-Total	758.00

MISC.

Minimum Unscheduled Call-out	____	@ $8500.00/day=	____
Crane less than 20T	____	hrs. @ $250=	____
Crane greater than 20T	____	@ cost plus 30%=	____
		Sub-Total	

Totals: 758.00
(Plus all applicable taxes)

Completed By: Sue McAhren Date: 8-27-15

Approved By:
Customer: ________ Date: ________

WM: ________ Date: ________

Chemical Waste Management
Of The Northwest
17629 Cedar Springs Lane
Arlington, Oregon 97812
541-454-2643
EPA I.D.# ORD089452353

LOAD NO. _____

MANIFEST DOC. NO. _____

INBOUND
T/D: 14:09:04 2015-08-26
ID: 442276 TRK ID: 8770
58040 lb G

OUTBOUND
T/D: 14:28:47 2015-08-26
ID: 442276 TRK ID: 8770
58040 lb G
46140 lb FT
11900 lb N

NET 5.95 TONS

GENERATOR _____

303-ARLINGTON OR

Arr.Date	Manifest	Profile	RCV Gross Weight	RCV Tare Weight	RCV Net Weight	Net Tons	Gen. Name
8/24/2015	013472976JJK	OR325972	58040	46140	11900	5.95	Estate of Katherine Burleson and GJG, LLC