UST System Removal Report 7-Eleven Store No. 25983 3541 Martin Way, Olympia, WA

Facility Site ID: 5465157 UST Site ID: 8613 LUST ID: 4716



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January 6, 2015

Sign-off Sheet

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Abbreviations

7-Eleven bgs BTEX COC CUL Ecology	7-Eleven, Inc. Below ground surface Benzene, toluene, ethyl benzene, and total xylenes Chain-of-Custody Cleanup Level Washington State Department of Ecology
EDB	1,2-Dibromoethane
EDC	1,2-Dichloroethane
EPA	Environmental Protection Agency
ERTS	Environmental Report Tracking System
GTI	Fluor Daniel-GTI
HASP	Health and Safety Plan
ID	Identification
LRLs	Laboratory Reporting Limits
LUST	Leaking Underground Storage Tank
mg/kg	Milligrams per kilograms
MRLs	Method Reporting Limits
MTBE	Methyl tertiary butyl ether
MTCA	Model Toxics Control Act
PCS	Petroleum Contaminated Soils
PID	Photoionization Detector
ppm	Parts Per Million
Qt	Vashon Till
Stantec	Stantec Consulting Services Inc.
SWPPP	Stormwater Pollution Prevention Plan
TPH-G	Total petroleum hydrocarbons as gasoline
UST	Underground Storage Tank
VCP	Voluntary Cleanup Program
VOC	Volatile Organic Compound
VPH	Volatile Petroleum Hydrocarbons



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1.0 INTRODUCTION

Stantec Consulting Services, Inc. (Stantec) was retained by 7-Eleven, Inc. (7-Eleven) to provide documentation of underground storage tank (UST) system removal at 7-Eleven Store Number 25983 (Subject Property or Site). The Subject Property is located at 3541 Martin Way, Olympia, Washington (*Figures 1 and 2*).

The work was conducted from October 6 through 21, 2014. UST site assessment and remedial excavation activities were conducted in accordance with the Washington State Department of Ecology (Ecology) document "Guidance for Site Checks and Site Assessments for Underground Storage Tanks" [Ecology, February 1991 (revised April 2003)]. Site assessment activities were performed by a certified Washington State Site Assessor (#8196039-U7) as required by Washington Administrative Code 173-360-610.

1.1 PURPOSE AND SCOPE OF WORK

Stantec supervised and observed the removal of three 12,000-gallon, single-wall fiberglass USTs; two dispensers; associated product piping; concrete dispenser island; canopy; and vent risers at the Subject Property. Stantec collected UST closure soil samples to assess subsurface conditions adjacent to and beneath the former USTs, fuel dispensers, and product piping. Stantec's scope of work consisted of the following tasks:

- Preparing a Site-specific Health and Safety Plan (HASP);
- Providing notification to Ecology 30 days prior to UST removal;
- Providing notification to 7-Eleven 10 business days in advance of construction activities;
- Supervising and documenting dispenser island, product piping, and UST decommissioning activities;
- Inspecting USTs, dispensers, and product piping upon removal;
- Collecting confirmation soil samples from the UST excavation, stockpile, and beneath the product lines and dispensers;
- Collecting confirmation soil samples from the dispenser area over-excavation;
- Logging subsurface conditions, field screening soil samples for organic vapors using a photoionization detector (PID), and submitting selected soil samples for laboratory analysis of benzene, toluene, ethyl benzene and total xylenes (collectively BTEX);



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> 1,2-dibromoethane (EDB); 1,2-dichloroethane (EDC); methyl tertiary butyl ether (MTBE); Naphthalene; total lead; and Total Petroleum Hydrocarbons characterized as Gasoline (TPH-G);

- Field screening and collecting samples from soil stockpiles;
- Removal and disposal of petroleum-contaminated soil (PCS);
- Preparing subgrade and placing asphalt to match existing; and,
- Preparing this report documenting UST removal activities and site restoration.

1.2 SUBJECT PROPERTY BACKGROUND

The Subject Property is an active 7-Eleven convenience store with former retail sales of gasoline. According to Ecology records, installation of the three 12,000-gallon, single-wall fiberglass USTs was completed in 1984. According to available records, diesel fuel has not been stored at the Subject Property in the past.

In June 1995, McCon Building and Petroleum Services, Inc. of Vancouver, Washington, conducted a product piping upgrade at the Site. During the upgrade activities, Fluor Daniel-GTI (GTI) personnel collected soil samples from the tank pit, dispenser area, and stockpiled soils. Concentrations of benzene and lead were not detected above respective project laboratory method reporting limits (MRLs) in the submitted soil samples. However, soil samples D-1 and D-2, which were collected from beneath the pump dispenser island, contained concentrations of TPH-G exceeding the Model Toxics Control Act (MTCA) Method A Cleanup Level (CUL). Furthermore, concentrations of toluene, ethyl benzene, and total xylenes were reported exceeding respective MTCA Method A CULs in soil sample D-2.

In September 1997, during an upgrade of the UST system, GTI conducted a limited site assessment that included soil sampling. Petroleum hydrocarbons were not reported exceeding respective MTCA Method A CULs in soil samples D-1, D-2, FP-1, and PL-1.

In June 1999, IT Corporation advanced four onsite soil borings in the area of the UST system. The soil borings were completed as groundwater monitoring wells MW-1, MW-2, MW-3, and MW-4. Soil analytical results derived from the investigation indicated that the concentrations of BTEX and TPH-G were not detected above MRLs in any of the submitted soil samples. Dissolved concentrations of TPH-G and benzene were reported above MTCA Method A CULs in source area monitoring well MW-4.

In June 2001, IT Corporation personnel installed one offsite monitoring well (MW-5) west of the property in the down-gradient direction. Benzene and TPH-G were not reported above respective MRLs or MTCA Method A CULs in the soil samples collected from MW-5. Dissolved



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concentrations of total xylenes were reported below the MTCA Method A CUL in the groundwater sample collected from monitoring well MW-5 in August 2001.

In May 2002, IT Corporation conducted an additional subsurface assessment to further define the extent of petroleum-impacted soil and groundwater beneath the Site. The direct-push investigation included advancing three soil boreholes to total depths ranging from approximately 20- to 30-feet below ground surface (bgs). One "grab" groundwater sample was collected from soil borehole GP-4, located northwest of the UST system. Concentrations of BTEX and TPH-G were reported above MTCA Method A CULs in the soil sample collected from borehole GP-1 at a depth of 15-feet bgs. Dissolved petroleum hydrocarbon concentrations were not reported exceeding MTCA method A CULs in the groundwater sample collected from the borehole GP-4, located northwest of the UST system.

In August 2009, Stantec advanced eight boreholes (SB-1 through SB-8) to depths ranging from approximately 16- to 32-feet bgs. Petroleum hydrocarbon constituents were detected exceeding MTCA CULs in the soil samples collected from boreholes SB-3, SB-4, and SB-5. Additionally, TPH-G and total xylenes were detected above MTCA Method A CULs in the groundwater sample collected from borehole SB-3.

Groundwater monitoring results from the most recent sampling event on September 23, 2014 confirm that, since 2007, dissolved petroleum hydrocarbons in onsite wells have attenuated to levels below MTCA Method A CULs. Following the September 2014 sampling event, monitoring wells MW-4 and MW-1 were abandoned by a licensed driller in preparation for UST removal activities.

1.3 **REGULATORY STATUS**

Stantec reviewed Ecology's electronic databases regarding the regulatory status of the Subject Property. As of October 2014, the Site was included in Ecology UST, Leaking Underground Storage Tank (LUST), and Voluntary Cleanup Program (VCP) lists. Ecology identification numbers (IDs) for the Site are summarized below.

Facility Number: 5465157 UST Site ID: 8613 Cleanup Site ID: 5366 LUST Release ID: 4716 Historic Release ID: 434495 VCP ID: SW1029 (Former)



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2.0 FACILITY DESCRIPTION

2.1 SITE LOCATION

The Subject Property is located at 3541 Martin Way, Olympia, Washington at the southwest corner of the intersection of Martin Way E and Lilly Road NE in an area of primarily commercial development (*Figure 2*). The property consists of three tax parcels (No. 99000990600, 99002058812, and 9900020100) with a combined area of approximately 150,000 square feet.

2.2 SITE DESCRIPTION

The Subject Property is an active 7-Eleven branded convenience store with former retail sales of gasoline. The former gasoline distribution system, installed in 1984, consisted of three 12,000-gallon, single-wall fiberglass USTs; two fuel dispensers covered by a canopy; and associated underground piping. Following UST system removal, the 7-Eleven store will continue to operate as a convenience store.

The 7-Eleven store occupies the southeastern-most portion of a multi-unit commercial development (connected structures) that extends north to south along the eastern boundary of the Site. The fuel canopy, dispenser islands, and USTs were previously located directly north of the 7-Eleven store (*Figure 2*).

The Subject Property and adjacent areas are paved with asphalt and concrete. A storm water catch basin is located in the southeast corner of the 7-Eleven parking area (approximately 60 feet north of the former location of the USTs). The topography of the Subject Property generally slopes toward this catch basin. An additional catch basin, located in the southeast corner of the canopy area, was removed during UST removal activities. Landscaped areas with local vegetation are located along the northern and eastern margins of the Subject Property and throughout the parking lot.

2.3 SURROUNDING LAND USE

The Subject Property is located in the Sunshine Plaza bordered to the north by Martin Way. Lilly Road borders the Site to the east and is followed by commercial businesses. Park Manor Strip Mall is situated to the north of the Site, across Northwest Avenue. The Site is bordered to the south by a private residential property. The Site is bordered to the west by an International House of Pancakes[®] restaurant parking lot (*Figure 2*).



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2.4 REGIONAL SETTING AND GEOLOGY SURROUNDING LAND USE

2.4.1 Regional Setting

The Subject Property is located at approximately 200-feet above mean sea level. The local topography is characterized by gentle hills with a relatively flat plain that increases to the west toward the Olympic Mountains, which are located approximately six miles west of the Site. Woodward Creek, located approximately 1,000 feet to the west, is the closest surface water body to the Subject Property. Woodard Creek ultimately discharges to Woodard Bay and the Puget Sound waterway, which lies approximately two miles north of the Site.

The Site is located on a composite of artificial fill and glacial outwash alluvial deposits. The glacial deposits are Vashon Till (Qt), a member of the Pleistocene Vashon Drift sediments, deposited during the latest episode of glaciation in the Puget Sound region. The Qt varies in thickness from a few feet to 150-feet thick. It is comprised of gravelly, sandy silt to silty sand with varied quantities of clay, cobbles, and boulders. Local lenses of sand and gravel containing pockets of perched groundwater are common. Generally, permeability of these types of sediments is extremely low, except in the sand and gravel lenses.

The soils encountered beneath the Site during excavation operations were identified as gravely sand overlaying poorly graded gravel with silty layer between approximately 15- to 16-feet bgs. Saturated soils were encountered at 26-feet bgs.



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3.0 FIELD ACTIVITIES

3.1 GROUNDWATER MONITORING AND SAMPLING ACTIVITIES

In accordance with Section 5.3 of "Guidance for Site Checks and Site Assessments for Underground Storage Tanks," groundwater samples must be collected during a site assessment when existing monitoring wells are already located on the Site. Monitoring wells were selected to allow for the collection of representative groundwater samples to assess current groundwater conditions. This report presents un-submitted second and third quarter 2015 groundwater data from all five on-Site wells.

3.1.1 Groundwater Flow Direction and Gradient

The second quarter 2014 and third quarter 2014 groundwater monitoring and sampling events were conducted at the Site on April 8, 2014 and September 23, 2014. The approximate depth to groundwater encountered during the third quarter event ranged from approximately 26.65-feet below top of casing (TOC) in monitoring well MW-5 to 25.81-feet below TOC in monitoring well MW-3. During each monitoring and sampling event, the groundwater flow direction was generally to the west with an average hydraulic gradient of approximately 0.011 vertical feet per horizontal foot (ft/ft) on April 8, 2014 and 0.005 ft/ft on September 23, 2014. A groundwater contour map and a rose diagram representing the historical groundwater flow direction are also included on *Figure 4*.

3.1.2 Groundwater Analytical Methods

Groundwater samples were collected from four monitoring wells (MW-1, MW-2, MW-3, MW-4, and MW-5) on April 8, 2014 and September 23, 2014, respectively. Groundwater was purged using a bailer and collected directly into uniquely identified, laboratory-prepared sample containers. The sample containers were immediately placed into an iced cooler pending transport to the analytical laboratory. Environmental Protection Agency (EPA) recommended protocols for sample management, including chain-of-custody documentation, were observed during sampling activities. Stantec's purging and sampling procedures and groundwater monitoring and sampling field data sheets are included in *Appendix A*. All groundwater samples collected during the both sampling events were submitted to Fremont Analytical, Inc. (Fremont) for analysis of BTEX by Method 8260 and TPH-G by Ecology Method Northwest Total Petroleum Hydrocarbons as Gasoline (NWTPH-Gx). Laboratory analytical results are provided in *Appendix B*.



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3.1.3 Groundwater Analytical Results

Laboratory results from samples collected from all on-Site monitoring wells from both second and third quarters 2014 indicated that dissolved concentrations of TPH-G and BTEX were below MTCA Method A CULs. Furthermore, there has not been a detection of dissolved petroleum hydrocarbon constituents above MTCA Method A CULs from any on-Site well since 2007. Groundwater analytical results are presented in *Table 1* and shown on *Figure 5*.

3.2 MONITORING WELL DECOMMISSIONING ACTIVITIES

On September 2, 2014, Stantec contracted and supervised as Environmental Service Network Northwest (ESN Northwest) of Olympia, Washington decommissioned wells MW-1and MW-4 by backfilling with bentonite chips in accordance with Ecology Abandonment Procedures (WAC 332-17-310). The wells were decommissioned because of their anticipated close proximity to the excavation boundaries. ESN Northwest well logs documenting the well decommissioning are provided in **Appendix B**.

3.3 UST REMOVAL ACTIVITIES

Stantec contracted Saybr Construction, Inc. (Saybr) of Tacoma, Washington to remove the three 12,000-gallon, single-wall fiberglass USTs and ancillary equipment at the Subject Property. Stantec obtained City permits (*Appendix C*) for removal of the UST system and canopy demolition and submitted a construction storm water pollution prevention plan (SWPPP) to the City of Olympia before initiating UST system removal activities. Stantec also submitted a 30-day Notice of UST closure to Ecology on August 25, 2014 (*Appendix D*). The USTs were emptied by 7-Eleven. The Northwest Utility Notification Center (1-800-454-5555) and Applied Professional Services were contacted to determine the presence and location of underground utilities. Prior to excavation activities, electrical service to the dispenser island and USTs was isolated and removed by a 7-Eleven contracted certified electrician.

Stantec prepared a HASP before implementing on-Site work. The HASP identified potential physical and chemical hazards associated with the proposed field activities and established personal protection standards and mandatory safety practices. The HASP also included information on suspected chemical compounds to be encountered, a list of monitoring equipment, the required protective clothing and equipment, a map and directions to the nearest hospital, and a list of emergency telephone numbers. The HASP was kept on-Site and available at all times during the field activities. Stantec personnel and all subcontractors working at the Subject Property were required to review, sign, and comply with the provisions set forth in the HASP.

On-site activities began on October 6, 2014, with the installation of the perimeter fence and removal of the canopy over the dispenser island. Following removal of the canopy structure,



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concrete surrounding the dispenser island and asphalt covering the UST basin were removed. The storm water catch basin located to the southeast of the excavation area was covered with a temporary geotextile filter to prevent soil and sediment from entering the storm water system during construction activities per the SWPPP.

On October 7, 2014, the USTs were rendered inert by a certified marine chemist. The remaining fuel product was pumped, and the USTs were triple-rinsed. Approximately 1,200 gallons of rinstate water and 100 gallons of sludge were removed from the two USTs by Marine Vacuum, Inc. of Seattle, Washington, and transported to a permitted hazardous waste treatment and disposal facility. Waste disposal documentation is provided in *Appendix E*.

Testing with a portable multi-gas detector equipped with a lower-explosive limit meter confirmed that the organic vapor levels in the USTs were safe prior to their removal.

On October 8, 2014, Stantec observed removal of the three 12,000-gallon, single-walled fiberglass USTs at the Subject Property. The western UST was removed first and staged beside the excavation for inspection. Upon exposure and visual inspection, the UST appeared to be in overall good condition and no apparent failures were observed. The fiberglass UST was then crushed with the excavator, and the fiberglass fragments were loaded into a waste disposal unit. The middle and eastern USTs could not be removed in one piece. The inside of each tank was visually inspected before each was crushed in-place. Fiberglass fragments were individually removed and placed in the disposal unit.

A copy of the certificate of disposal from Saybr is included in **Appendix E**. The Ecology Underground Storage Tank Site Check/Site Assessment Checklist is included in **Appendix D**.

3.4 FIELD SCREENING

Field screening consisted of visual observations of potential hydrocarbon impacts and headspace analysis for volatile organic compound (VOC) vapors. Overburden material removed from the UST and dispenser island excavation was screened for organic vapors with a MiniRae, Inc., Organic Vapor Meter PID. A sample of the soil matrix was placed in a re-sealable plastic bag and allowed to equilibrate for approximately 10 minutes. The probe of the PID was used to pierce the plastic and extended into the headspace above the soil surface. The highest vapor reading obtained during the next 60 seconds was then recorded. Prior to use, the PID was calibrated to a known concentration of isobutylene, in accordance with the manufacturer's specifications.

A hydrocarbon odor was encountered in soils removed from below the dispenser islands. PID readings of these soils indicated VOC readings of approximately 2,176 parts per million (ppm) at its highest. From this area, contaminated soil from approximately 15- to 25-feet bgs was removed and sampled as it was excavated from beneath the UST basin and westward towards



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MW-5. The soil was stockpiled separately on visqueen in accordance with the Site's SWPPP. A discussion of remedial excavation is presented in **Section 4.0**.

3.5 SOIL SAMPLING ACTIVITIES

During excavation activities, Stantec personnel collected soil samples from beneath each UST, the four excavation sidewalls, beneath the dispenser island and product lines, and canopy footing in accordance with published EPA and Ecology guidelines. Additional samples were taken at the furthest boundaries of the excavation during the remedial excavation activities. Maximum depth of the excavation was 26-feet bgs. Sampling was conducted at locations associated with noticeable petroleum odors and elevated headspace vapor PID concentration measurements. Samples taken from the sidewalls and base of the excavation for field screening purposes were collected on an approximate 10-foot by 10-foot horizontal grid when possible. Soil samples from the UST excavation were collected from the excavator bucket due to safety concerns.

During UST Site Assessment activities, Stantec personnel collected soil samples from the four sidewalls of the UST basin: West Wall@8', East Wall@10', North Wall@9', and South Wall@10'; the base of each UST: West Tank@13', Mid Tank@13', East Tank@12'; beneath each dispenser: DIW@5' and DIE@5'; and the product line corridor between the UST and dispenser area: PL@3'. Stantec also collected three samples from the excavated UST overburden clean soil stockpile: CSP-1, CSP-2, and CSP-3. Additional confirmation soil samples were collected as part of the remedial excavation performed in the dispenser island area, the UST basin area, and the area west of the UST basin. Six soil samples were taken from the separately staged contaminated stockpile: DSP-1 through DSP-6. The remedial excavation activities are discussed in **Section 4.0**.

Soil samples submitted for laboratory analysis were collected in accordance with EPA Method 5035A – using a syringe-type sampler to obtain approximately five grams of soil from the desired sample location. The samples were then placed directly into pre-weighed, methanol preserved 40-milliliter vials (supplied by the analytical laboratory). Additional soil was collected by hand and placed directly into clean 4-ounce glass jars. A clean, disposable glove was used for each sample. Care was taken to obtain representative soil samples and to place the soils directly and quickly into the sample container to minimize loss of volatile constituents. Each jar was completely filled to minimize headspace and sealed with a Teflon[™] lined screw cap. Each sample was then uniquely labeled (i.e., soil sample name with depth type of analysis, date, and time of sampling), and placed on ice in a cooler.

3.6 SUBSURFACE CONDITIONS

During UST removal activities, Stantec encountered approximately three to four inches of asphalt underlain by sand and gravel mixtures with one small (roughly one foot in thickness) silt and sand



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layer at approximately 15-feet bgs. The sand and gravel mixtures extended from the base of the asphalt to the maximum depth (26-feet bgs) excavated during the UST system removal.

During UST closure activities, groundwater was encountered at 25-feet bgs. The water level did not interfere with soil sampling during the UST Site Assessment or backfilling the excavation. A small perched zone of groundwater was encountered in the area to the west of the UST basin, below the landscaping peninsula which formerly separated the UST basin from additional parking to the west. This perched zone was located above a lens of silty sand located at approximately 16-feet bgs. During the 2009 subsurface assessment, the perched zone was sampled by using a temporary well; and the sampled groundwater was found to be contaminated. Because MW-5, located approximately 10 feet to the west remains clean, this perched zone is believed to be the cause for localized PCS in that area. The PCS does not appear to extend further west beyond several feet.

3.7 SOIL ANALYTICAL METHODS

A total of 48 soil samples were collected during the UST system removal and remedial excavation activities. Samples were delivered under chain-of-custody to Fremont for analysis of TPH-G by Method NWTPH-Gx, BTEX by EPA Method 8260B, and total lead by EPA Method 6020. Soil samples North Wall@16', North Wall@18', and South Wall@18' were submitted to ESN Northwest on same-day turnaround-time due to elevated PID readings, the presence of hydrocarbon odor, and proximity to the limits of the excavation to the north.

Selected samples exhibiting the highest PID readings were submitted for additional analysis of EDB, EDC and MTBE by EPA Method 8260C, Naphthalene by EPA Method 8270 SIM, and Volatile Petroleum Hydrocarbons (VPH) by EPA Method NWVPH. Method B Cleanup Levels will be developed in a future report.

Analytical results for soil samples from the UST closure activities are summarized in **Table 2A and 2B** and presented on **Figure 3**. Complete laboratory results and chain-of-custody documentation are included in **Appendix B**. Soil analytical results and soil disposal are discussed in **Section 4.0**.



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4.0 REMEDIAL ACTIONS AND CONFIRMATION SAMPLING

4.1 REMEDIAL EXCAVATION

Subsequent to the UST removal activities, soil located below the former dispenser island, UST basin, and adjacent areas were excavated to remove the horizontal and vertical extent of PCS. Soil impacts were first identified beneath the dispenser island at a depth of approximately 15-feet bgs. Excavated soil was screened periodically and stockpiled on visqueen (separately from the clean overburden stockpile) pending receipt of analytical results prior to disposal.

Impacted soil from an approximately 15 feet by 15 feet area surrounding the dispenser island was initially removed to a depth of 15-feet bgs and stockpiled. The soil from the base and sidewalls was screened and visually inspected for petroleum impacts and confirmation samples were collected. Based on the elevated PID readings, petroleum odor and discoloration, additional soil was removed from the base and sidewalls of the excavation.

The excavation was extended to a depth of 26-feet bgs and widened to approximately 30 feet by 30 feet. An additional round of confirmation samples was collected from the sidewalls at depths of between 16- and 24-feet bgs and from the base at 26-feet bgs. Based on field screenings, the excavation was extended to the east, south, and west. The excavation was extended to the north until proximity to a utility corridor prevented further excavation in that area.

During excavation of the dispenser area, the former UST basin area was used as a safety platform and embankment (at approximately 13-feet bgs) for the excavator to remove soil and samples from the deepest areas of the dispenser area excavation. Following remedial excavation activities in this area, clean soil was used as backfill to approximately 15-feet bgs. This area was then used as a platform for the excavator during remedial excavation of the former UST basin.

The former UST basin was cleared of PCS from approximate depths of 16- to 24-feet bgs. In the former UST basin, PCS was removed as far north and south as safety constraints would allow. This area of the excavation extended laterally approximately 40 feet by 40 feet. Upon completion of this section, clean overburden was used to backfill the excavation to approximately 16-feet bgs. This area was then used as a platform for the excavator to continue excavating toward the west.

The western excavation extended to depths between approximately 17- to 23-feet bgs until clean confirmation samples were taken at vertical extents. Lateral presences of PCS extending to the north, west, and south remain non-delineated. Directly north of this area, a utility pole



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created safety concerns which limited excavation in that direction. This section has an approximate perimeter of 100 feet.

Once excavation was completed, and all areas were backfilled with clean stockpiled soil to approximately 16-feet bgs, Saybr began importing clean fill material, which was compacted in sections until ground level was reached.

4.2 SOIL ANALYTICAL RESULTS

4.2.1 UST Assessment Area

Within the UST assessment area, several soil samples exhibited analytical concentrations exceeding respective MTCA Method A CULs. The following soil samples collected from the UST excavation were reported above laboratory reporting limits (LRLs) or method reporting limits (MRLs):

for TPH-G: West-Tank@13', East-Wall@17', North Wall@16', and South Wall@18'.

All reported concentrations of BTEX and total lead in soil samples were below respective minimum reporting limits.

The three wall samples (East-Wall@17', North Wall@16', and South Wall@18') that remain onsite as excavation limits to both the north and south were chose based on wall stability and Site safety concerns. Excavation proximity to a corridor of utilities bordering the north edge of Site prevented further excavation to the north.

A confirmation sample reported below LRLs or MRLs was taken at the bottom of this excavation area (CSS-8@25') after removal of PCS from the former UST basin area.

4.2.2 Dispenser Assessment Area

Following removal of the concrete footing of the former canopy, petroleum odors and elevated PID readings were observed in the soil located below and adjacent to the former dispensers at depths of approximately 15- feet bgs to 24- feet bgs. The following soil samples contained analytical concentrations reported above respective MTCA Method A CULs:

for TPH-G: DI@20', SS-1@20', SS-3@15', and SS-4@18'

All reported concentrations of BTEX and total lead in soil samples for this area were below respective MRLs. The PCS from which the soil sample SS-3@15' was collected remains onsite.

Confirmation samples reported below LRLs or MRLs were taken at the bottom of this excavation area, along the eastern wall, southern wall, and northeastern corner.



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4.2.3 Western Excavation Area

Several soil samples, collected within the area to the west of the former UST basin, exhibited analytical concentrations exceeding respective MTCA Method A CULs. The following soil samples collected from the Western Assessment Area were reported above LRLs or MRLs:

for TPH-G: SB-3@16', and CSS-6@18'

All reported concentrations of BTEX and total lead in soil samples in this area were below respective MRLs. The two samples remain onsite.

Confirmation samples (CSS-7@23', CSS-9@15', CSS-10@16', and SB-3@17'), taken at the bottom of this excavation area, were reported below LRLs or MRLs. The PCS from which the two soil samples SB-3@16' and CSS-6@18' were collected remains onsite.

North and south excavation limits were determined based on wall stability and Site safety concerns. Excavation proximity to a utility pole directly north of this area prevented further excavation in that direction.

4.3 SOIL DISPOSAL

Soil with elevated PID readings or olfactory indications of petroleum contamination was stockpiled separately on visqueen, and six samples (DSP-1 through DSP-6) were collected before final disposal. Approximately 1,393 tons of PCS was removed from the site, of which, approximately 236 tons were transported to Regional Disposal Intermodal in Seattle and disposed of at the Rabanco/Allied Waste Landfill in Roosevelt, WA. The remaining 1,157 tons of PCS was transported to the Cowlitz County Landfill (formerly Weyerhaeuser) in Castle Rock, WA. The Waste Management waste profile and soil disposal tickets are included in **Appendix E**.

4.4 CONFIRMATION SOIL SAMPLING

Confirmation sampling indicates that the most heavily impacted PCS was removed during the remedial excavation. Excavation to the north of the Site was limited due to underground utilities and safety concerns at the Site.

The area with the highest TPH-G concentrations was the Western Excavation Area.

Stantec observed that the soil approximately one to four feet directly beneath the three USTs was clean. Each of the three USTs were observed prior to destruction. No damage was observed. The product line was also observed to be in good condition and no contamination was found.



Remedial Actions and Confirmation Sampling January 6, 2015

A total of 23 confirmation soil samples were collected during the remedial excavation. Analytical results for the remedial excavation soil samples are summarized in **Table 2a**. The table indicates which areas were excavated and which samples represent final limit samples of material remaining in place following the remedial excavation. The lateral extent of the excavation is illustrated in **Figure 3**.

The source of contamination is believed to be the release near the dispenser island, reported in 1995. The approximate water table location is at 25-feet bgs and has a generally westward flow gradient. This evidence suggests that the contamination plume traveled directly downward from its source area until it reached groundwater, where it migrated westward beneath the UST basin area. Confirmation soil samples collected along the outer boundary of the PCS indicate that the surrounding soil has naturally attenuated below MTCA Method A CULs.

As discussed briefly in **Section 3.4**, the Western Excavation Area contains a small perched zone of groundwater directly below the landscaping peninsula that divides the former UST area from additional parking to the west. In this area, samples from the SB-3 location have been affected and contain PCS at the approximate depth of the observed perch zone (16-feet bgs). The perched zone consists of a lens of silty sand containing saturated soils above, but not below. Because MW-5, located approximately 10 feet to the west, remains clean, this perched zone is believed to be the cause of localized PCS in that area. This will be discussed further in a subsequent Cleanup Action Report.

4.5 CONFIRMATION SOIL ANALYTICAL RESULTS

Of the 23 confirmation samples representing the final limits of the excavation, five have TPH-G concentrations above the Method A CUL of 30 milligrams per kilogram (mg/kg). Samples South Wall@ 18', CSS-6@18', CSS-7@23', CSS-9@16', and CSS-10@16' were submitted for additional analyses including VPH, EDB, EDC, Naphthalenes, and MTBE to calculate a Site-specific MTCA Method B CUL for the Site. Results of the VPH analysis and calculation of the Method B CUL are pending and will be reported in a subsequent Cleanup Action Report. Complete laboratory results and chain-of-custody documentation are included in **Appendix B**.

4.6 SUBJECT PROPERTY RESTORATION

The UST and dispenser island areas were backfilled with clean overburden and imported fill material following collection of all confirmation soil samples. Soil excavated from the former UST area was determined to be clean by laboratory analysis and used as backfill in the base at the UST basin. Type 17 fill was placed over the clean overburden. The backfill material was replaced in lifts and compacted using a backhoe. To confirm proper soil compaction, periodic geotechnical testing was conducted in all areas by Materials Testing and Consulting, Inc. of Olympia, Washington. Compaction test reports are included in **Appendix F**.



Remedial Actions and Confirmation Sampling January 6, 2015

The excavations were backfilled with Type 17 fill to approximately eight inches bgs and top dressed with a four-inch layer of 5/8 inch crushed rock in preparation for repaving with asphalt. All areas were re-paved with a four-inch thick layer of asphalt on October 21, 2014. Pavement striping is to be conducted by Facilities Maintenance following the completion of the project. The perimeter fence was removed from the site on October 22, 2014.



SUMMARY AND CONCLUSIONS January 6, 2015

5.0 SUMMARY AND CONCLUSIONS

Three 12,000-gallon, single-wall fiberglass USTs; associated product piping; concrete dispenser island; and canopy were closed by removal at the Subject Property from October 6 through October 21, 2014. Based on field observations and analytical data, Stantec concludes the following:

- Upon visual inspection, the USTs and the fiberglass product lines appeared to be in good condition with no apparent failures observed;
- Elevated PID readings and petroleum odor were observed in the area beneath the site at depths of approximately 15-feet bgs to 25-feet bgs;
- A total of approximately 1,393 tons of PCS was removed from the Subject Property and transported off-Site for disposal at the Rabanco/Allied Waste Landfill in Roosevelt, WA, and the Cowlitz County Landfill (formerly Weyerhaeuser) in Castle Rock, WA;
- Groundwater was encountered during remedial excavation activities at an approximate depth of 25-feet bgs. A small perched zone was encountered to the west of the UST basin at approximately 16-feet bgs, and is believed to be the cause of PCS located in that area. Analytical results from all five groundwater monitoring wells were reported below Method A CULs and have been for over seven years;
- With the exception of a detected concentration of TPH-G (14 mg/kg) in five of the confirmation soil samples, all of the other confirmation soil samples collected from the former UST assessment area had no detectable concentrations of TPH-G, BTEX, or total lead; and,
- The excavated area was backfilled with clean, imported 1.5-inch minus fill material. The fill was compacted to meet ASTM D1557 standards and the excavated area was resurfaced to match existing asphalt, including curbing and a speed bump that was partially destroyed during UST removal activities.

Based on the results of this investigation, Stantec plans to submit a future Cleanup Action Report that will include a site closure argument based upon an established Site-specific Method B CUL for TPH-G and will formally request a No Further Action determination for the Subject Property.



REFERENCES January 6, 2015

6.0 **REFERENCES**

Underground Storage Tank (UST) and Leaking Underground Storage Tank (LUST) Lists, available from: <u>https://fortress.wa.gov/ecy/tcpwebreporting/reports.aspx</u> [Accessed August 13, 2014].

Washington State Department of Ecology. February 1991. (Revised April, 2003). *Guidance for Site Checks and Site Assessments for Underground Storage Tanks*. Department of Ecology Underground Storage Tank Program.

Stantec Consulting Services, Inc. 2013. 7-Eleven Store No. 25983 Annual 2013 Groundwater Monitoring Report. June 7.

Stantec Consulting Services, Inc. 2009. Additional Subsurface Investigation Report, 7-Eleven Facility No. 25983. December 16.



TABLES UST SYSTEM REMOVAL REPORT 7-ELEVEN STORE NO. 25983

January 6, 2015



Well ID (TOC)	Sample Date	MtBE	Benzene	Toluene	Ethyl- benzene	Total Xylenes	TPH-G	EDC	EDB	Total Lead	Depth To Groundwater	Groundwater Elevation (feet)
MW-1	07/08/99										26.00	172.33
198.33	07/15/99		< 0.3	< 0.3	< 0.5	<0.6	<100			<5	26.02	172.31
170100	03/14/00		< 0.3	< 0.3	< 0.5	< 0.6	<100				25.38	172.95
	06/27/00		< 0.5	< 0.5	< 0.5	<1.0	<100				25.97	172.36
	09/25/00		< 0.5	2.90	0.56	2.8	100				26.52	171.81
	11/13/00		< 0.5	< 0.5	<0.5	<1.5	<100				26.30	172.03
	02/14/01		< 0.5	< 0.5	0.56 ^a	<1.0	<100				26.09	172.24
	06/07/01		< 0.5	< 0.5	< 0.5	<1.0	<100				26.13	172.20
	08/01/01		<0.5	<0.5	<0.5	<1.0	<50				26.29	172.04
	11/15/01		<0.5	<0.5	<0.5	<1.0	<100				26.36	171.97
	03/25/02		<0.5	<1.0	<1.0	<3.0	<100				25.34	172.99
	06/21/02											
	09/23/02		<0.5	<1.0	<1.0	1.01	<100				26.20	172.13
	12/10/02										26.37	171.96
	04/02/03		<1.0	<1.0	<1.0	<2.0	<100				25.41	172.92
	06/11/03										26.05	172.28
	09/15/03		<1.0	<1.0	<1.0	<2.0	<100				27.34	170.99
	12/04/03										25.51	172.82
	03/04/04		<1.0	<1.0	<1.0	<2.0	<100				26.64	171.69
	05/10/04										27.02	171.31
	08/11/04		<1.0	<1.0	<1.0	<2.0	<100				27.27	171.06
	11/17/04										27.16	171.17
	02/21/05		<1.0	<1.0	<1.0	<2.0	<100				26.94	171.39
	05/16/05										28.96	169.37
	08/19/05										27.03	171.30
	10/26/05										27.16	171.17
	01/26/06		<1.0	<1.0	<1.0	<2.0	<100				25.79	172.54
	05/11/06		<1.0	<1.0	<1.0	<2.0	<100					
	07/26/06											
	11/09/06										24.18	174.15
	04/11/07										25.36	172.97
	08/27/07										26.15	172.18
	02/06/08										26.35	171.98
	08/18/08										25.05	173.28
	11/12/08										24.28	174.05
	02/05/09		<1.0	<1.0	<1.0	<2.0	<100				25.56	172.77
	01/12/10		<1.0	<1.0	<1.0	<2.0	<100				25.30	173.03
	02/14/11		<0.5	<0.5	<0.5	<0.5	<250				25.48	172.85
	02/09/12		<0.50	<0.50	<0.50	<0.50	<250				25.23	173.10
	01/18/13		< 0.50	< 0.50	< 0.50	< 0.50	<250				24.51	173.82
	04/08/14	<1.00	<1.00	<1.00	<1.00	<2.00	<50.0	<1.00	< 0.00922	1.77	25.25	173.08
	09/23/14	<1.00	<1.00	<1.00	<1.00	<2.00	<50.0				26.14	172.19
ITCA Method	A Cleanup Level	20	5	1,000	700	1,000	800/1,000 ^b	5	0.01	15		

Well ID (TOC)	Sample Date	MtBE	Benzene	Toluene	Ethyl- benzene	Total Xylenes	TPH-G	EDC	EDB	Total Lead	Depth To Groundwater	Groundwater Elevation (feet)
MW-2	07/08/99										25.89	172.42
198.31	07/15/99		< 0.3	< 0.3	<0.5	44	725			<5	26.00	172.31
	03/14/00		< 0.3	< 0.3	0.78	1.12	104				25.34	172.97
	06/27/00		< 0.5	<0.5	<0.5	<1.0	<100				25.94	172.37
	09/25/00		< 0.5	2.70	0.58	2.3	<100				26.33	171.98
	11/13/00		<0.5	<0.5	<0.5	2.2	<100				26.32	171.99
	02/14/01		< 0.5	<0.5	0.58 ^a	<1.0	<100			-	26.33	171.98
	06/07/01		< 0.5	<0.5	<0.5	<1.0	<100				26.21	172.10
	08/01/01		< 0.5	<0.5	<0.5	<1.0	<50				26.37	171.94
	11/15/01		<0.5	5.7 ^a	12 ^a	43 ^a	1,900				26.50	171.81
	03/25/02		< 0.5	<1.0	<1.0	1.66	<100				25.29	173.02
	06/21/02											
	09/23/02		0.317	<1.0	<1.0	1.01	<100				26.25	172.06
	12/10/02										26.41	171.90
	04/02/03		<1.0	<1.0	<1.0	<2.0	<100				25.40	172.91
	06/11/03										26.05	172.26
	09/15/03		<1.0	<1.0	<1.0	<1.0	<100				27.40	170.91
	12/04/03										25.51	172.80
	03/04/04		<1.0	<1.0	<1.0	<2.0	<100				26.64	171.67
	05/10/04										27.05	171.26
	08/11/04		<1.0	<1.0	<1.0	<2.0	<100				27.34	170.97
	11/17/04										27.23	171.08
	02/21/05		<1.0	<1.0	<1.0	<2.0	<100				26.95	171.36
	05/17/05										29.21	169.10
	08/19/05										28.91	169.40
	10/26/05										29.68	168.63
	01/26/06		<1.0	<1.0	<1.0	<2.0	<100				25.72	172.59
	05/11/06										25.90	172.41
	07/26/06											
	11/09/06										22.96	175.35
	04/11/07										23.35	174.96
	08/27/07										26.22	172.09
	02/06/08										26.38	171.93
	08/18/08										25.12	173.19
	11/12/08										23.06	175.25
	02/05/09		<1.0	<1.0	<1.0	<2.0	<100				24.98	173.33
	01/12/10		<1.0	<1.0	<1.0	<2.0	<100				25.23	173.08
	02/14/11		< 0.5	< 0.5	< 0.5	< 0.5	<250				25.45	172.86
	02/09/12		< 0.50	< 0.50	< 0.50	< 0.50	<250				25.18	173.13
	01/18/13		< 0.50	< 0.50	< 0.50	< 0.50	<250				25.13	173.18
	04/08/14	<1.00	<1.00	<1.00	<1.00	< 2.00	<50.0	<1.00	< 0.00932	13.2	25.25	173.06
	09/23/14	<1.00	<1.00	<1.00	<1.00	<2.00	<50.0				26.18	172.13
MTCA Method	A Cleanup Level	20	5	1,000	700	1,000	800/1,000 ^b	5	0.01	15		

(TOC) D MW-3 07/ 198.19 07/ 198.19 03/ 06/ 09/ 11/ 02/ 06/ 09/ 11/ 02/ 06/ 08/ 11/ 03/ 06/ 08/ 11/ 03/ 06/ 09/ 12/ 03/ 06/ 09/ 12/ 03/ 05/ 05/ 05/ 08/ 11/ 02/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 05/	Sample Date											Groundwater
MW-3 07/ 198.19 07/ 198.19 07/ 03/ 06/ 09/ 11/ 02/ 06/ 08/ 11/ 03/ 06/ 08/ 11/ 03/ 06/ 09/ 12/ 04/ 06/ 09/ 12/ 03/ 05/ 08/ 11/ 02/ 03/ 05/ 08/ 11/ 02/ 05/ 08/ 11/ 02/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 01/ 05/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/	Data				Ethyl-	Total				Total	Depth To	Elevation
198.19 07/ 03/ 06/ 09/ 11/ 02/ 06/ 08/ 11/ 03/ 06/ 08/ 11/ 03/ 06/ 08/ 11/ 03/ 06/ 09/ 12/ 04/ 06/ 09/ 12/ 04/ 06/ 09/ 12/ 04/ 06/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 05/ 07/ 01/ 05/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/	Date	MtBE	Benzene	Toluene	benzene	Xylenes	TPH-G	EDC	EDB	Lead	Groundwater	(feet)
03/ 06/ 09/ 11/ 02/ 06/ 08/ 11/ 03/ 06/ 08/ 11/ 03/ 06/ 09/ 12/ 04/ 06/ 09/ 12/ 03/ 05/ 08/ 11/ 02/ 05/ 07/ 01/ 05/ 07/ 01/ 05/ 07/ 01/ 05/ 07/ 01/ 04/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/	07/08/99										25.60	172.59
06/ 09/ 11/ 02/ 06/ 08/ 11/ 03/ 06/ 09/ 12/ 04/ 06/ 09/ 12/ 04/ 06/ 09/ 12/ 03/ 05/ 08/ 11/ 02/ 05/ 07/ 11/ 05/ 07/ 01/ 05/ 07/ 01/ 05/ 07/ 01/ 04/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/	07/15/99		< 0.3	< 0.3	<0.5	<0.6	<100			<5	26.10	172.09
09/ 11/ 02/ 06/ 08/ 11/ 03/ 06/ 09/ 12/ 04/ 06/ 09/ 12/ 03/ 05/ 08/ 11/ 02/ 03/ 05/ 08/ 11/ 02/ 05/ 07/ 11/ 04/ 05/ 07/ 01/ 05/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/	03/14/00		< 0.3	< 0.3	<0.5	<0.6	<100				24.89	173.30
11/ 02/ 06/ 08/ 11/ 03/ 06/ 09/ 12/ 04/ 06/ 09/ 12/ 04/ 05/ 08/ 11/ 02/ 05/ 08/ 11/ 05/ 08/ 11/ 02/ 05/ 08/ 11/ 02/ 05/ 08/ 01/ 05/ 08/ 01/ 05/ 08/ 01/ 05/ 08/ 09/ 09/ 09/ 09/ 09/ 09/ 09/ 09	06/27/00		< 0.5	<0.5	<0.5	<1.0	<100				25.56	172.63
02/ 06/ 08/ 11/ 03/ 06/ 09/ 12/ 04/ 06/ 09/ 12/ 03/ 05/ 08/ 11/ 02/ 05/ 08/ 11/ 02/ 05/ 05/ 08/ 11/ 02/ 05/ 08/ 10/ 01/ 05/ 07/ 11/ 02/ 05/ 08/ 01/ 01/ 01/ 05/ 07/ 01/ 01/ 01/ 01/ 01/ 01/ 01/ 01/ 01/ 01	09/25/00		<0.5	2.10	<0.5	1.7	<100				25.98	172.21
06/ 08/ 11/ 03/ 06/ 09/ 12/ 04/ 06/ 09/ 12/ 04/ 06/ 09/ 12/ 03/ 05/ 08/ 11/ 02/ 05/ 07/ 11/ 05/ 07/ 11/ 04/ 08/ 02/ 05/ 07/ 01/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/	11/13/00		<0.5	<0.5	<0.5	<1.5	<100				25.94	172.25
08/ 11/ 03/ 06/ 09/ 12/ 04/ 06/ 09/ 12/ 03/ 05/ 08/ 11/ 02/ 05/ 05/ 08/ 11/ 02/ 05/ 05/ 05/ 05/ 07/ 11/ 01/ 05/ 07/ 01/ 05/ 07/ 01/ 04/ 08/ 02/ 01/ 01/ 01/ 01/ 01/ 01/ 01/ 01/ 01/ 01	02/14/01		<0.5	<0.5	<0.57 ^a	<1.0	<100				26.15	172.04
11/ 03/ 06/ 09/ 12/ 04/ 06/ 09/ 12/ 03/ 05/ 08/ 11/ 02/ 05/ 08/ 10/ 01/ 05/ 07/ 11/ 05/ 07/ 11/ 04/ 05/ 07/ 01/ 08/ 02/ 08/ 02/ 01/	06/07/01		< 0.5	<0.5	<0.5	<1.0	<100				25.87	172.32
03/ 06/ 09/ 12/ 04/ 06/ 09/ 12/ 03/ 05/ 08/ 11/ 02/ 05/ 08/ 10/ 01/ 01/ 01/ 01/ 01/ 01/ 05/ 07/ 11/ 04/ 08/ 02/ 08/ 02/ 01/	08/01/01		< 0.5	<0.5	<0.5	<1.0	<50				26.01	172.18
06/ 09/ 12/ 04/ 06/ 09/ 12/ 03/ 05/ 08/ 11/ 02/ 05/ 08/ 10/ 01/ 05/ 07/ 11/ 05/ 07/ 01/ 05/ 07/ 01/ 05/ 07/ 01/ 04/ 08/ 02/ 01/	11/15/01		< 0.5	<0.5	<0.5	<1.0	<100				26.20	171.99
09/ 12/ 04/ 06/ 09/ 12/ 03/ 05/ 08/ 11/ 02/ 05/ 08/ 10/ 01/ 05/ 07/ 11/ 04/ 08/ 02/ 05/ 07/ 01/ 04/ 08/ 02/ 05/ 07/ 01/ 05/ 07/ 01/ 05/ 08/ 01/ 02/ 05/ 08/ 02/ 05/ 08/ 02/ 05/ 08/ 02/ 05/ 08/ 02/ 05/ 08/ 02/ 05/ 08/ 02/ 05/ 08/ 05/ 08/ 05/ 08/ 05/ 08/ 05/ 08/ 05/ 08/ 05/ 08/ 05/ 08/ 05/ 08/ 05/ 08/ 05/ 08/ 05/ 08/ 05/ 08/ 05/ 08/ 05/ 08/ 05/ 08/ 05/ 08/ 05/ 08/ 00/ 05/ 08/ 00/ 05/ 08/ 00/ 05/ 08/ 00/ 05/ 08/ 00/ 05/ 08/ 00/ 05/ 08/ 00/ 05/ 08/ 00/ 00/ 05/ 08/ 00/ 00/ 05/ 08/ 00/ 00/ 05/ 00/ 00/ 00/ 05/ 00/ 00	03/25/02		< 0.5	<1.0	<1.0	<3.0	<100				23.89	174.30
12/ 04/ 06/ 09/ 12/ 03/ 05/ 08/ 11/ 02/ 05/ 08/ 10/ 01/ 05/ 07/ 11/ 05/ 07/ 11/ 04/ 08/ 02/ 08/ 02/ 01/	06/21/02		< 0.5	<1.0	<1.0	<3.0	<100				25.59	172.60
04/ 06/ 09/ 12/ 03/ 05/ 08/ 11/ 02/ 05/ 08/ 10/ 01/ 05/ 07/ 11/ 04/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 01/	09/23/02		0.299	<1.0	<1.0	<1.0	<100				25.88	172.31
04/ 06/ 09/ 12/ 03/ 05/ 08/ 11/ 02/ 05/ 08/ 10/ 01/ 05/ 07/ 11/ 04/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 01/	12/10/02		< 0.5	<1.0	<1.0	<3.0	<100				26.00	172.19
09/ 12/ 03/ 05/ 08/ 11/ 02/ 05/ 08/ 10/ 01/ 01/ 05/ 07/ 11/ 04/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 05/ 08/ 01/ 05/ 08/ 01/ 05/ 08/ 08/ 02/ 05/ 08/ 08/ 08/ 08/ 08/ 08/ 08/ 08	04/02/03		<1.0	<1.0	<1.0	<2.0	<100				25.98	172.21
09/ 12/ 03/ 05/ 08/ 11/ 02/ 05/ 08/ 10/ 01/ 01/ 05/ 07/ 11/ 04/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 08/ 02/ 05/ 08/ 01/ 05/ 08/ 01/ 05/ 08/ 08/ 02/ 05/ 08/ 08/ 08/ 08/ 08/ 08/ 08/ 08	06/11/03		<1.0	<1.0	<1.0	<2.0	<100				25.68	172.51
12/ 03/ 05/ 08/ 11/ 02/ 05/ 08/ 10/ 01/ 05/ 07/ 11/ 04/ 08/ 02/ 08/ 02/ 08/ 02/	09/15/03		<1.0	<1.0	<1.0	<2.0	<100				27.05	171.14
03/ 05/ 08/ 11/ 02/ 05/ 08/ 10/ 01/ 05/ 07/ 11/ 04/ 08/ 02/ 08/ 02/ 08/ 02/	12/04/03										25.09	173.10
05/ 08/ 11/ 02/ 05/ 08/ 10/ 01/ 05/ 07/ 11/ 04/ 08/ 02/ 08/ 02/ 08/ 02/	03/04/04		<1.0	<1.0	<1.0	<2.0	<100				26.23	171.96
08/ 11/ 02/ 05/ 08/ 10/ 01/ 05/ 07/ 11/ 04/ 08/ 02/ 08/ 02/ 08/ 02/	05/10/04										26.68	171.51
11/ 02/ 05/ 08/ 10/ 01/ 05/ 07/ 11/ 04/ 08/ 02/ 08/ 02/ 08/ 02/	08/11/04		<1.0	<1.0	<1.0	<2.0	<100				26.97	171.22
02/ 05/ 08/ 10/ 01/ 05/ 07/ 11/ 04/ 08/ 02/ 08/ 02/ 08/ 02/	11/17/04										26.84	171.35
05/ 08/ 10/ 01/ 05/ 07/ 11/ 04/ 08/ 02/ 08/ 02/ 08/ 02/ 01/	02/21/05		<1.0	<1.0	<1.0	<2.0	<100				26.61	171.58
08/ 10/ 01/ 05/ 07/ 11/ 04/ 08/ 02/ 08/ 02/ 08/ 02/ 01/	05/17/05										28.46	169.73
10/ 01/ 05/ 07/ 11/ 04/ 08/ 02/ 08/ 02/ 08/ 02/ 01/	08/19/05										27.68	170.51
01/ 05/ 07/ 11/ 04/ 08/ 02/ 08/ 02/ 08/ 02/ 01/	10/26/05										24.68	173.51
05/ 07/ 11/ 04/ 08/ 02/ 08/ 02/ 08/ 02/	01/26/06		<1.0	<1.0	<1.0	<2.0	<100				25.27	172.92
07/ 11/ 04/ 08/ 02/ 08/ 02/ 01/	05/11/06										25.40	172.79
11/ 04/ 08/ 02/ 08/ 02/ 01/	07/26/06											
04/ 08/ 02/ 08/ 02/ 01/	11/09/06										21.14	177.05
08/ 02/ 08/ 02/ 01/	04/11/07										24.92	173.27
02/ 08/ 02/ 01/	08/27/07										25.83	172.36
08/ 02/ 01/	02/06/08											
02/ 01/	08/18/08										24.73	173.46
01/	02/05/09		<1.0	<1.0	<1.0	<2.0	<100				25.14	173.05
	01/12/10		1.0	\$1.0		to access			1			
	02/14/11					to access						
	02/09/12					to access						
	01/18/13					to access	-					
	04/08/14	<1.00	<1.00	<1.00	<1.00	< 2.00	<50.0	<1.00	<0.00969	6.10		
	09/23/14	<1.00	<1.00	<1.00	<1.00	<2.00	<50.0	< 1.00	<0.00909		25.81	172.38
09/	07/23/14	< 1.00	×1.00	<1.00	<1.00	×2.00	< 30.0				23.01	172.30
TCA Method A Clea	Cleanup Level	20	5	1,000	700	1,000	800/1,000 ^b	5	0.01	15		

Well ID	Sample				Ethyl-	Total				Total	Depth To	Groundwater Elevation
(TOC)	Date	MtBE	Benzene	Toluene	benzene	Xylenes	TPH-G	EDC	EDB	Lead	Groundwater	(feet)
MW-4	07/08/99										26.12	172.43
198.55	07/15/99		<30	5,150	<50	23,900	90,800			<5	26.10	172.45
	03/14/00		<30	1,870	3,030	27,500	67,000				25.41	173.14
	06/27/00		100	2,500	3,400	27,000	91,000				26.81	171.74
	09/25/00		10,000	4,800	4,200	4,200	68,000				26.70	171.85
	11/13/00		<120	780	1,800	17,000	70,000				26.77	171.78
	02/14/01		<120	660	1,300 ^a	21,000	99,000				25.74	172.81
	06/07/01		<25	97	360	4,800	23,000				26.34	172.21
	08/01/01		20.5	329	300	12,100	39,900				26.53	172.02
	11/15/01		<10	97 ^a	350 ^a	4.700 ^a	30,000				27.37	171.18
	03/25/02		1.7	74.8	143	1,489	34,100				25.45	173.10
	06/21/02		< 0.5	5.28	349	1,867	22,600				26.54	172.01
	09/23/02		1.0	7.97	77.3	438	6,090				26.65	171.90
	12/10/02		<5.0	7.38	225.0	1,788	14,500				26.67	171.88
	04/02/03		7.7	7.9	350	1,950	30,000				26.44	172.11
	06/11/03		5.9	6.5	160	580	7,600				26.54	172.01
	09/15/03		<5.0	<5.0	76.0	460	5,800				27.67	170.88
	12/04/03		4.9	2.1	140	332	5,200				26.41	172.14
	03/04/04		4.5	3.2	75	259	3,800				27.11	171.44
	05/10/04		1.6	<1.0	24	100	2,300				27.65	170.90
	08/11/04		1.7	<1.0	10	38	1,100				27.76	170.79
	11/17/04		5.3	15	580	4,500	43,000				27.12	171.43
	02/21/05		3.8	1.8	93	630	16,000				27.61	170.94
	05/17/05		2.2	<1.0	49	190	6,600				27.51	171.04
	08/19/05		1,100	580	1,600	5,330	30,000				29.99	168.56
	10/26/05		<1.0	<1.0	<1.0	<2.0	<100				26.10	172.45
	01/26/06		1.9	<1.0	120	139	3,400				26.65	171.90
	05/11/06		<1.0	<1.0	75	37	2,400				27.40	171.15
	07/26/06		350	2,900	750	2,740	24,000				28.56	169.99
	11/09/06		170	<4.0	91	55	3,300				26.68	171.87
	04/11/07		<4.0	<4.0	59	50	3,100				26.11	172.44
	08/27/07		<1.0	<1.0	<1.0	<2.0	<100				27.05	171.50
	02/06/08		<1.0	<1.0	6.9	<2.0	160				26.28	172.27
	08/18/08		<1.0	<1.0	<1.0	<2.0	<100				26.95	171.60
	11/12/08		<1.0	<1.0	<1.0	<2.0	<100				26.78	171.77
	02/05/09	<0.20	<1.0	<1.0	<1.0	<2.0	<100	<0.20	<0.0095		26.28	172.27
	01/12/10		<1.0	<1.0	<1.0	<2.0	<100				24.95	173.60
	02/14/11		<0.5	<0.5	<0.5	<0.5	<250				26.13	172.42
	02/09/12		<0.50	<0.50	<0.50	<0.50	<250				25.79	172.76
	01/18/13		<0.50	<0.50	<0.50	<0.50	<250				24.32	174.23
	04/08/14	<1.00	<1.00	<1.00	<1.00	<2.00	<50.0	<1.00	< 0.00952	6.48	26.95	171.60
	09/23/14	<1.00	<1.00	<1.00	<1.00	<2.00	<50.0				26.62	171.93
MTCA Method	A Cleanup Level	20	5	1,000	700	1,000	800/1,000 ^b	5	0.01	15		



3541 Martin Way East, Olympia, Washington All results in micrograms per liter (μ g/L), except where noted.

Well ID	Sample				Ethyl-	Total				Total	Depth To	Groundwater Elevation
(TOC)	Date	MtBE	Benzene	Toluene	benzene	Xylenes	TPH-G	EDC	EDB	Lead	Groundwater	(feet)
MW-5	06/07/01		< 0.5	<0.5	2.1	26	950				26.48	171.88
198.36	08/01/01		1.4	<0.5	3.0	4.3	899				26.76	171.60
	11/15/01		< 0.5	<0.5	6.5 ^a	20 ^a	1,500				27.08	171.28
	03/25/02		< 0.5	<1.0	0.6	1.6	188				26.10	172.26
	06/21/02		< 0.5	<1.0	<1.0	<3.0	<100				26.59	171.77
	09/23/02		0.304	<1.0	<1.0	1.6	<100				26.65	171.71
	12/10/02		< 0.5	<1.0	<1.0	<3.0	<100				26.70	171.66
	04/02/03		<1.0	<1.0	<1.0	<2.0	<100				26.24	172.12
	06/11/03		<1.0	<1.0	<1.0	<2.0	<100				26.70	171.66
	09/15/03		<1.0	<1.0	<1.0	<2.0	<100				27.67	170.69
	12/04/03		<1.0	<1.0	<1.0	<2.0	<100				26.32	172.04
	03/04/04		<1.0	<1.0	<1.0	<2.0	<100				27.48	170.88
	05/10/04		<1.0	<1.0	<1.0	<2.0	<100				27.58	170.78
	08/11/04		<1.0	<1.0	<1.0	<2.0	<100				27.71	170.65
	11/17/04		<1.0	<1.0	<1.0	<2.0	<100				27.68	170.68
	02/21/05		<1.0	<1.0	<1.0	<2.0	<100				27.31	171.05
	05/17/05		<1.0	<1.0	<1.0	<2.0	<100				31.26	167.10
	08/19/05		<1.0	<1.0	<1.0	<2.0	<100				28.46	169.90
	10/26/05		7.50	<1.0	<1.0	1.1	410				24.25	174.11
	01/26/06		<1.0	<1.0	<1.0	<2.0	<100				26.55	171.81
	05/11/06		<1.0	<1.0	<1.0	<2.0	<100				26.60	171.76
	07/26/06		<1.0	<1.0	<1.0	<2.0	<100				31.68	166.68
	11/09/06										22.90	175.46
	04/11/07		<1.0	<1.0	<1.0	<2.0	<100				26.17	172.19
	08/27/07		<1.0	<1.0	<1.0	<2.0	<100				26.70	171.66
	02/06/08		<1.0	<1.0	<1.0	<2.0	<100				26.12	172.24
	08/18/08		<1.0	<1.0	<1.0	<2.0	<100				25.65	172.71
	11/12/08		<1.0	<1.0	<1.0	<2.0	<100				26.65	171.71
	02/05/09		<1.0	<1.0	<1.0	<2.0	<100				26.37	171.99
	01/12/10		<1.0	<1.0	<1.0	<2.0	<100				24.90	173.46
	02/14/11		<0.5	<0.5	<0.5	<0.5	<250				26.25	172.11
	02/09/12		<0.50	<0.50	<0.50	<0.50	<250				26.00	172.36
	01/18/13		<0.50	0.60	<0.50	<0.50	<250				26.00	172.36
	04/08/14	<1.00	<1.00	<1.00	<1.00	<2.00	<50.0	<1.00	< 0.00962	2.51	26.05	172.31
	09/23/14	<1.00	<1.00	<1.00	<1.00	<2.00	<50.0				26.65	171.71
MTCA Method	A Cleanup Level	20	5	1,000	700	1,000	800/1,000 ^b	5	0.01	15		

Explanation of Abbreviations:

= top of casing elevation TOC

MtBE = methyl tertiary butyl ether

TPH-G = total petroleum hydrocarbons as gasoline

= 1,2-Dichloroethane EDC

EDB = 1,2-Dibromoethane

- = not sampled, not measured, or not available ---
- < = less than the reporting limit

MTCA = Model Toxics Control Act

Notes:

^a Method blank contamination

 $^{\rm b}$ The TPH-G cleanup level is reduced from 1,000 μ g/L to 800 μ g/L if benzene is present in the sample

Bold values exceed the MTCA Method A Cleanup Level



		Soil A		Results - 7-Eleven 3541 M	ABLE 2A TPH-G, BTEX Store No. 2 artin Way E a, Washingi	ast	tal Lead					
		All c	oncentrati			er kilogram (i	mg/kg).					
							BTEX Corr	pounds				
Sample	Sample	Depth	USCS	PID	Date		(mg/			TPH-G	MtBE	Total Lead
Туре	Name	(feet bgs)	0303	(ppm)	Sampled	Benzene	Toluene	Ethyl	Total	(mg/Kg)	(mg/Kg)	(mg/Kg)
1995 Product Piping Upgrade	- Fluor Daniel GTI							Benzene	Xylenes			
	D-1				06/21/95	<0.05	< 0.05	< 0.05	0.56	140		<10
Dispenser Area Samples	D-2				06/21/95	<0.40	16	11	120	1,400		<10
Tank Area Samples	T-1				06/21/95	<0.05	<0.05	< 0.05	<0.10	<1.0		<10
	T-2				06/21/95	<0.05	<0.05	< 0.05	<0.10	<1.0		<10
997 Limited Site Assessment					00/04/07	0.05	0.000.4	0.05	0.000	407		10.1
Dispenser Area Samples	D-1 ^a				09/24/97	< 0.05	0.0934	< 0.05	0.289	10.7		18.4
Fill Dort Sampla	D-2 ^a FP-1				09/24/97 09/24/97	<10.0 <0.05	188 0.223	60.4	1,060 0.242	11,100 5.63		<10 <10
Fill Port Sample Product Line Sample	PL-1				09/24/97	<0.05	0.223	< 0.05	<0.1	<5.0		13.7
999 Well Install - IT Corporat					0//27/7/	10.00	0.0021	10.00	×0.1	\$3.0		13.1
		12.5-15.5	GM	0.0	06/07/99	<0.05	< 0.05	< 0.05	<0.10	<10	< 0.05	31.7
	MW-1	24.5-27.5	SM	0.0	06/07/99	<0.05	< 0.05	< 0.05	<0.10	<10	< 0.05	15.3
Г	MW-2	11.5-14.5	SP	0.0	06/07/99	< 0.05	< 0.05	< 0.05	<0.10	<10	< 0.05	16.7
Soil Boring Samples		26.5-29.5	SP-GP	0.0	06/07/99	< 0.05	< 0.05	< 0.05	< 0.10	<10	< 0.05	17.8
5 1	MW-3	11.5-14.5	SM	0.0	06/07/99	< 0.05	< 0.05	< 0.05	< 0.10	<10	<0.05 <0.05	28.7 15.2
		26.5-29.5 6.5-9.5	GP ML	0.0	06/07/99	<0.05 <0.05	<0.05 <0.05	<0.05 <0.05	<0.10 <0.10	<10 <10	< 0.05	43.3
	MW-4	11.5-14.5	SM		06/07/99	< 0.05	< 0.05	< 0.05	0.117	<10	< 0.05	29
001 Well Install - IT Corporat	ion											
Soil Poring Samples	MW-5	15	GM	113	04/26/01	< 0.005	< 0.005	< 0.005	<0.015	<1.0		
Soil Boring Samples	C-VVIVI	25	GP	27	04/26/01	< 0.005	< 0.005	< 0.005	0.0097	<1.0		
2002 Subsurface Assessment	- IT Corporation											
	GP-1	13-15	GW	442	05/23/02	0.55	1.23	17.2	148	2,230		
		15-18	GW	730	05/23/02	0.192	0.15	0.342	1.789	236		
		12-16 16-20	GW GP	190 0.0	05/23/02 05/23/02	<0.0213 <0.0214	0.01	<0.0425 0.0084	0.067	<4.25 <4.28		
Soil Boring Samples	GP-4	24-28	SP	10	05/23/02	<0.0214	<0.01	<0.0084	0.067	<4.28		
con boning campios		28-32	GP	8.0	05/23/02	< 0.0261	< 0.0522	< 0.0522	0.057	<5.22		
		16-20	SP	0.0	05/23/02	< 0.0213	0.03	0.0087	0.047	<4.26		
	GP-5	24-28	SP	0.0	05/23/02	< 0.0206	<0.0413	< 0.0413	0.1238	<4.13		
		28-32	SP	0.0	05/23/02	<0.0219	<0.0437	< 0.0437	0.052	<4.37		
009 Subsurface Assessment	- Stantec		1					1	1	1	1	
	SB-1	15-15.5	ML	0.0	08/19/09	< 0.020	< 0.045	< 0.045	<0.090	<4.5		
	SB-2	24-25 5-5.5	GP	0.0	08/20/09	< 0.020	< 0.049	< 0.049	< 0.098	<4.9		
l –	JD-2	5-5.5	SM SM	0.0	08/18/09 08/18/09	<0.020 <0.020	<0.069 <0.073	<0.069 <0.073	<0.138 <0.146	<6.9 <7.3		
	or -	10-10.5	GP	0.0	08/19/09	< 0.020	< 0.073	< 0.073	<0.140	< 6.4		
	SB-3	16-16.5	GW	760	08/19/09	1.3	0.15	5.1	29.8	980	<0.10	<5.6
		25-26	GP	0.0	08/20/09	<0.020	< 0.044	0.048	0.291	6.6		
	SB-4	14-15	GP	0.0	08/20/09	0.080	<0.11	0.49	0.79	140		
		24-25	GP	0.0	08/20/09	< 0.020	< 0.054	< 0.054	< 0.108	<5.4		
	SB-5	9-10	SM SM	0.0 40	08/21/09	< 0.020	< 0.056	< 0.056	<0.112	< 5.6	 <0.099	
Soil Boring Samples	5-90	14-15 24-25	GP	40 0.0	08/21/09 08/21/09	0.33 <0.020	0.41 <0.049	3.5 <0.049	24.2 <0.098	530 <4.9	<0.099	<5.6
2011 Bonnig Barripios	65 <i>(</i>	14-15	ML	0.0	08/21/09	< 0.020	< 0.049	< 0.049	< 0.098	<4.9		
	SB-6	19-20	GP	0.0	08/21/09	< 0.020	<0.062	< 0.062	<0.124	<6.2		
		5-5.5	ML	0.0	08/18/09	<0.020	<0.055	< 0.055	<0.110	<5.5		
	SB-7	14-15	GP	0.0	08/21/09	<0.020	<0.054	< 0.054	<0.108	<5.4		
		24-25	GP	0.0	08/21/09	<0.020	< 0.062	< 0.062	<0.124	<6.2		
	CD 0	5-5.5	ML	0.0	08/18/09	< 0.020	< 0.067	< 0.067	<0.134	< 6.7		
	SB-8	15-16 24-25	ML GP	0.0	08/21/09 08/21/09	<0.020 <0.020	<0.063 <0.048	<0.063 <0.048	<0.126 <0.096	<6.3 <4.8		
-		24-25	GP GW	834	08/21/09	<0.020 0.039	< 0.048	<0.048	<0.096 3.01	<4.8 92		
	SB-3 FD	26	GP	0.0	08/20/09	< 0.020	<0.050	< 0.061	0.094	<6.1		
	SB-5 FD	15	SM	40	08/21/09	0.54	0.49	4.4	33.6	640		

		Soil A	nalytical	Results - 7-Eleven 3541 M	ABLE 2A TPH-G, BTEX Store No. 2 artin Way E	5983 ast	tal Lead					
					a, Washingt							
		All co	oncentrati	ons are in	milligrams pe	er kilogram (′mg/kg).					
							BTEX Con	npounds				Total
Sample	Sample	Depth	USCS	PID	Date		(mg/	′Kg)		TPH-G	MtBE	Lead
Туре	Name	(feet bgs)	0303	(ppm)	Sampled	Benzene	Toluene	Ethyl Benzene	Total Xylenes	(mg/Kg)	(mg/Kg)	Lead (mg/Kg)
2014 UST Removal - Stantec												
	CSP-1			7	10/07/14	<.0.0135	<0.0135	< 0.0203	< 0.0270	<3.38		9.75
	CSP-2			0	10/08/14	< 0.0139	< 0.0139	< 0.0208	< 0.0278	<3.46		9.73
	CSP-3			0	10/09/14	< 0.0137	< 0.0137	< 0.0205	< 0.0274	<3.42		6.61
Г	DSP-1			1,874	10/09/14	< 0.0133	< 0.0133	< 0.0199	0.0542	20.1		2.89
Stockpile Samples	DSP-2			1,546	10/09/14	< 0.0134	< 0.0134	< 0.0202	< 0.0268	5.36		2.22
	DSP-3			2,426	10/09/14	< 0.0160	< 0.0160	< 0.0240	0.153	24.2		2.20
	DSP-4			2,130	10/15/14	< 0.0121	<0.0121	0.160	1.178	46.4		2.25
	DSP-5			1,647	10/16/14	< 0.0117	0.0225	1.28	8.59	330		2.10
	DSP-6			1,866	10/16/14	<0.0111	0.260	5.31	40.4	934		2.09
	WEST TANK@13'	13'		794	10/08/14	< 0.0124	< 0.0124	0.0799	0.542	98.6		3.10
Below Tank Samples	MID TANK@13'	13'		7	10/08/14	< 0.0138	< 0.0138	< 0.0207	< 0.0276	<3.45		3.35
Г	EAST TANK@12'	12'		0	10/08/14	< 0.0150	<0.0150	< 0.0226	< 0.0300	<3.76		2.66
	WEST WALL@8'	8'		1	10/08/14	< 0.0172	< 0.0172	< 0.0258	< 0.0344	<4.30		3.27
Г	EAST WALL@10'	10'		3	10/08/14	< 0.0124	< 0.0124	< 0.0186	< 0.0248	<3.10		1.55
Г	EAST WALL@17'	17'		2,285	10/14/14	< 0.0108	4.07	6.38	40.9	517		2.40
Г	EAST WALL@26'	26'		3	10/14/14	< 0.0112	0.0152	< 0.0169	0.0219	<2.81		2.19
Side Wall Semples	NORTH WALL@9'	9'		0	10/09/14	< 0.0148	< 0.0148	< 0.0221	< 0.0296	<3.69		2.16
Side Wall Samples	NORTH WALL@16'	16'		250	10/15/14	< 0.02	< 0.05	< 0.05	<0.15	63		<5.0
F	NORTH WALL@18'	18'		448	10/15/14	< 0.02	< 0.05	< 0.05	<0.15	24		
F	NORTH WALL@24'	24'		2	10/15/14	< 0.0107	<0.0107	< 0.0161	0.0214	<2.68		2.21
	SOUTH WALL@10'	10'		1	10/15/14	< 0.0130	< 0.0130	<0.195	< 0.026	<3.25		7.01
F	SOUTH WALL@18'	18'		1,389	10/15/14	< 0.02	< 0.05	0.09	1.8	280	< 0.05	<5.0
Product Line Sample	PL@3'	3'		0	10/09/14	< 0.0138	< 0.0138	< 0.0207	< 0.0276	<3.45		1.60
	DIW@5'	5'		0	10/09/14	< 0.0142	< 0.0142	< 0.0213	< 0.0284	<3.54		4.67
Dispenser Island Semples	DIE@5'	5'		1	10/09/14	< 0.0131	<0.0131	< 0.0196	< 0.0262	<3.27		1.88
Dispenser Island Samples	DI@20'	20'		2,176	10/09/14	< 0.0150	0.0467	0.586	5.68	270		2.53
F	DI@26'	26'		0	10/09/14	< 0.0240	< 0.0240	< 0.0361	0.0562	<6.01		2.88
	CSS-1@17'	17'		5	10/10/14	< 0.0130	< 0.0130	< 0.0195	< 0.0260	<3.25		2.02
F	CSS-2@20'	20'		5	10/10/14	< 0.0164	< 0.0164	< 0.0246	< 0.0328	<4.10		2.29
F	CSS-3@17'	17'		2	10/13/14	< 0.0122	< 0.0122	< 0.0182	< 0.0244	<3.04		1.76
F	CSS-3@22'	22'		2	10/13/14	< 0.0105	< 0.0105	< 0.0158	< 0.0210	<2.63		1.62
F	CSS-4@18'	18'		3	10/13/14	< 0.0120	< 0.0120	< 0.0180	< 0.0240	<3.00		2.44
F	CSS-4@25'	25'		4	10/13/14	< 0.0129	< 0.0129	< 0.0193	< 0.0258	<3.22		2.55
F	CSS-5@18'	18'		0	10/13/14	< 0.0140	< 0.0140	< 0.0210	< 0.0280	<3.49		2.53
F	CSS-5@24'	24'		0	10/13/14	< 0.0127	< 0.0127	< 0.0190	< 0.0254	<3.17		2.82
F	CSS-6@18'	18		1,752	10/16/14	< 0.0104	< 0.0104	0.0452	0.3304	84.2	< 0.0260	1.80
F	CSS-7@23'	23'		30	10/16/14	< 0.0127	< 0.0127	< 0.0190	< 0.0254	<3.17	< 0.0317	2.00
	CSS-8@25'	25'		12	10/16/14	< 0.0113	< 0.0113	< 0.0170	< 0.0226	<2.83		2.00
Excavation Samples	CSS-9@16'	16'		4	10/16/14	< 0.0113	< 0.0113	< 0.0169	0.0531	<2.81	<0.0281	2.03
F	CSS-10@16'	16'		0	10/16/14	< 0.0128	0.0382	< 0.0192	0.0304	<3.20	< 0.316	3.03
	SS-1@20'	20'		2,440	10/10/14	< 0.0147	0.0247	0.0690	0.507	48.7		3.22
F	SS-1@25'	25'		1	10/10/14	< 0.0128	< 0.0128	< 0.0192	< 0.0256	<3.20		1.95
	SS-2@17'	17'		970	10/10/14	< 0.0144	< 0.0144	< 0.0216	< 0.0288	8.80		2.04
F	SS-3@15'	15'		1,904	10/10/14	< 0.0141	< 0.0141	0.146	0.660	86.9		2.13
	SS-4@18'	18'		2,022	10/10/14	< 0.0147	< 0.0147	< 0.0220	0.1933	85.7		2.29
	SS-4@23'	23'		4	10/10/14	< 0.0129	< 0.0129	< 0.0194	< 0.0258	<3.23		2.64
F	SB-3@16'	16'		1,750	10/16/14	< 0.0112	< 0.0112	0.451	4.02	756		2.04
F	SB-3@17'	17'		141	10/16/14	<0.0127	< 0.0127	< 0.0190	< 0.0254	<3.16		2.16
MTCA Method A Cleanup Le	evels					0.03	7	6	9	30 ^b	0.01	250

Explanation of Abbrev	
TPH-G	= total petroleum hydrocarbons in the gasoline range
MtBE	= methyl tertiary butyl ether
bgs	= below ground surface
USCS	= Unified Soil Classification System
PID	= photoionization detector
ppm	= parts per million
BTEX	= benzene, toluene, ethyl benzene, and total xylenes
mg/Kg	= milligrams per kilogram or approximately ppm
MtBE	= methyl tertiary butyl ether
MTCA	= Model Toxics Control Act
Notes:	
а	= D-1 and D-2 samples were collected during the September 24, 1997 investigation and are separate samples from D-1 and D-2
b	= gasoline mixtures without benzene and where the total of the other BTEX constituents are less than 1% of the gasoline mixture have a cleanup level of 100 mg/Kg; all other mixtures are 30 mg/Kg = samples removed from Site during 2014 excavation
bold	= analytical result exceeds the specified MTCA Method A Cleanup Level



TABLE 2B Soil Analytical Results - Naphthalene, VPH, EDB, and EDC Former 7-Eleven Store No. 25983 3541 Martin Way East Olympia, Washington All concentrations are in milligrams per kilogram (mg/kg).

Sample Location			Naphthalenes*	r		Vo	latile Petro	oleum Hydr	ocarbons	(mg/Kg)			
and Depth	Date		(mg/Kg)		Aliphatic					Aromatic	EDB	EDC	
(feet bgs)	Sampled	Naphthalene	2-Methyl Naphthalene	1-Methyl Naphthalene	C5-C6	C6-C8	C8-C10	C10-C12	C8-C10	C10-C12	C12-C13	(mg/Kg)	(mg/Kg)
2009 Subsurface A	ssessment -	Stantec											
SB-3@16'	08/19/09	0.11	0.43	0.18	<9.8	25	<9.8	14	31	27	<9.8	<0.10	<0.10
SB-5@15'	08/21/09											<0.099	<0.099
2014 UST Removal	- Stantec						-						
South Wall @ 18'	10/15/14	0.02	0.22	0.12	<5.0	6.3	6.0	<5.0	26	64	48	<0.01	< 0.05
CSS-6 @ 18'	10/16/14	< 0.0533	<0.0533	< 0.0533	<1.18	1.88	1.70	9.87	8.28	44.4	24.1	< 0.00260	<0.0156
CSS-7 @ 23'	10/16/14	< 0.0530	< 0.0530	< 0.0530	<1.59	<1.59	<1.59	<1.59	<1.59	<1.59	<1.59	<0.0317	< 0.0190
CSS-9 @ 16'	10/16/14	<0.0521	<0.0521	<0.0521	<1.12	<1.12	<1.12	<1.12	<1.12	1.67	1.32	<0.00281	<0.0169
CSS-10 @ 16'	10/16/14	< 0.0564	<0.0564	<0.0564	<1.26	<1.26	<1.26	<1.26	<1.26	<1.26	<1.26	<0.00320	<0.0192
MTCA Method A Cle	anup Levels	5											

Explanation of Abbreviations

VPH = volatile petroleum hydrocarbons

EDB = 1,2-Dibromoethane

EDC = 1,2-Dichloroethane

bgs = below ground surface

mg/Kg = milligrams per kilogram or approximately ppm

MTCA = Model Toxics Control Act

* = Naphthalenes by EPA Method 8270

= Sample has been removed from site

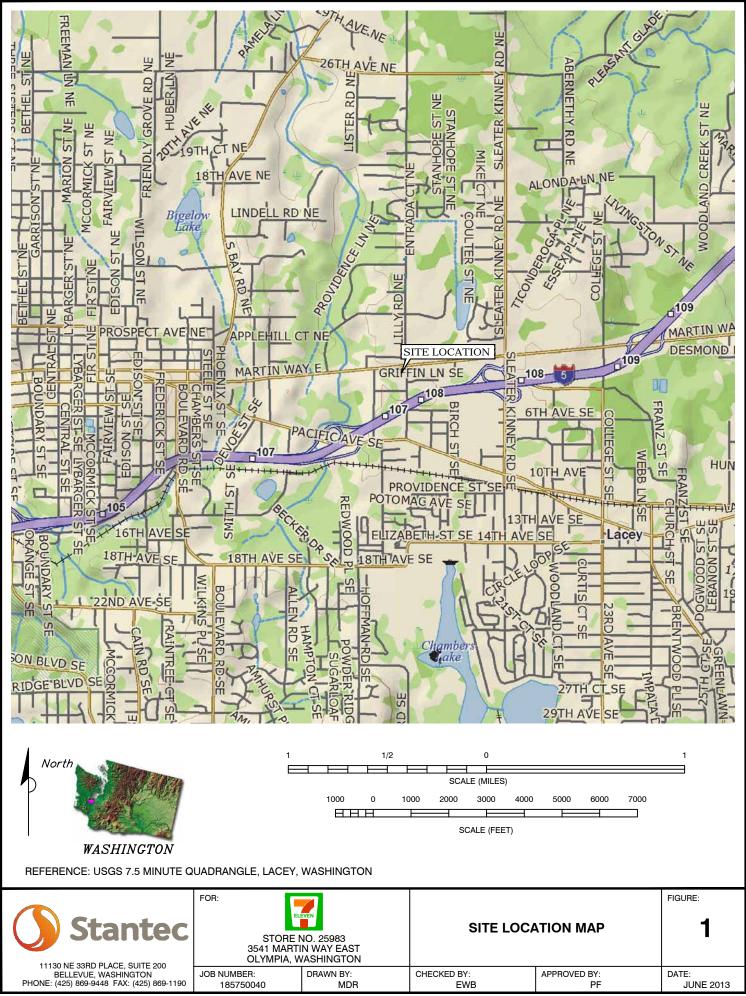
bold = analytical result exceeds the specified MTCA Method A Cleanup Level



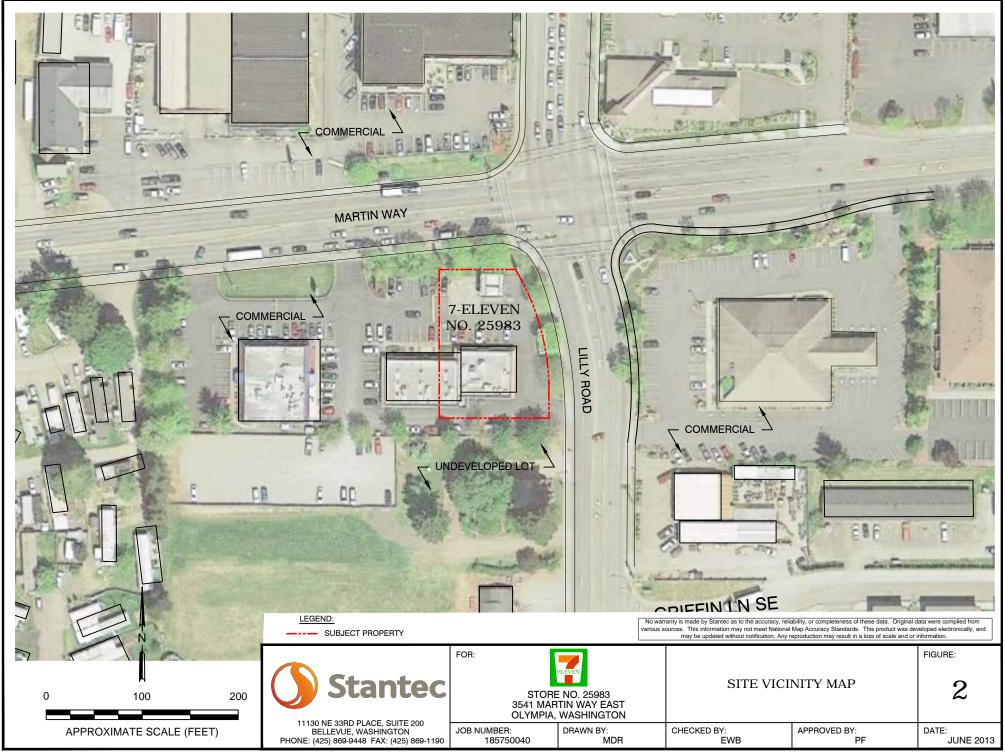
FIGURES UST SYSTEM REMOVAL REPORT 7-ELEVEN STORE NO. 25983

January 6, 2015

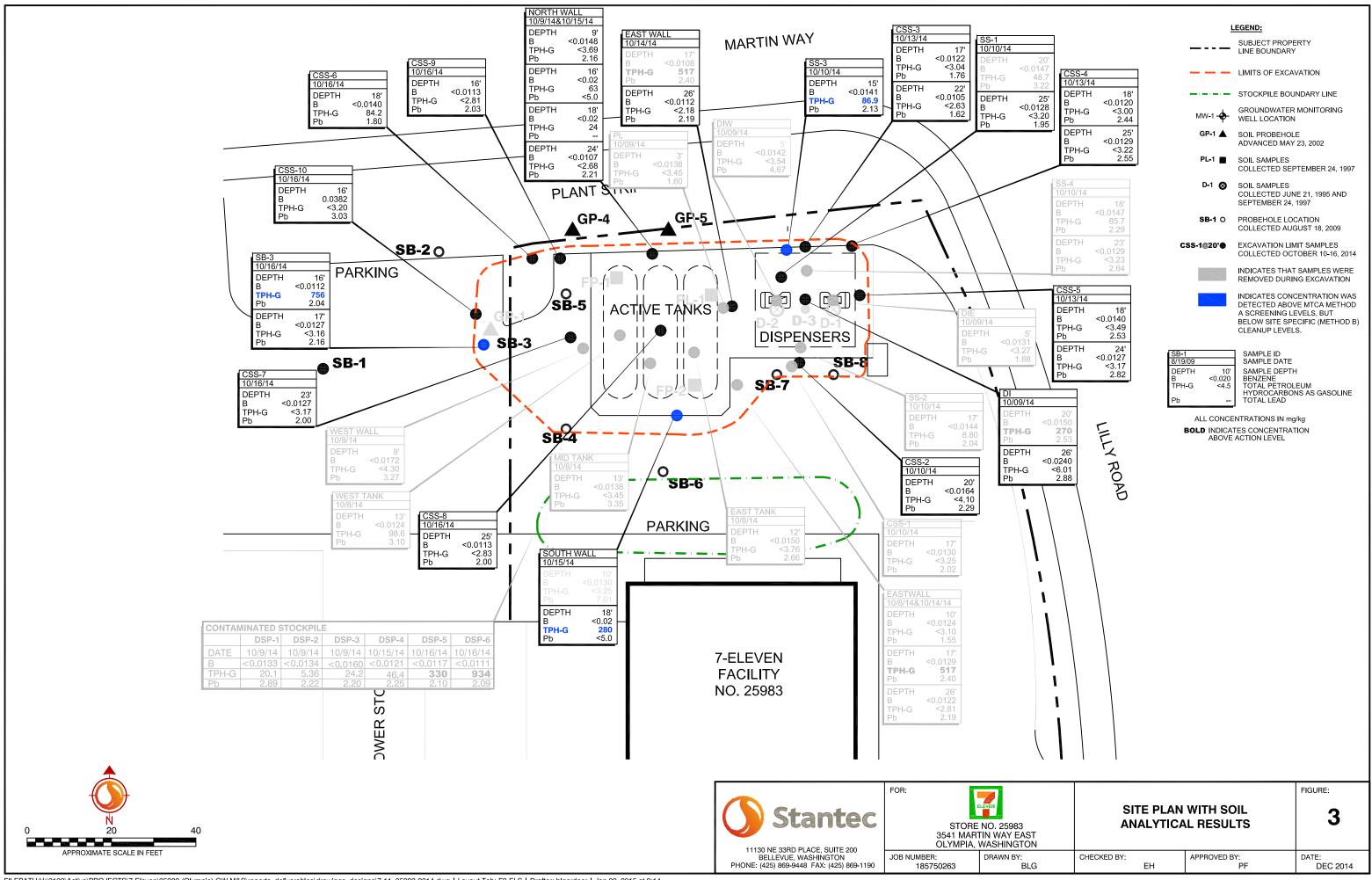




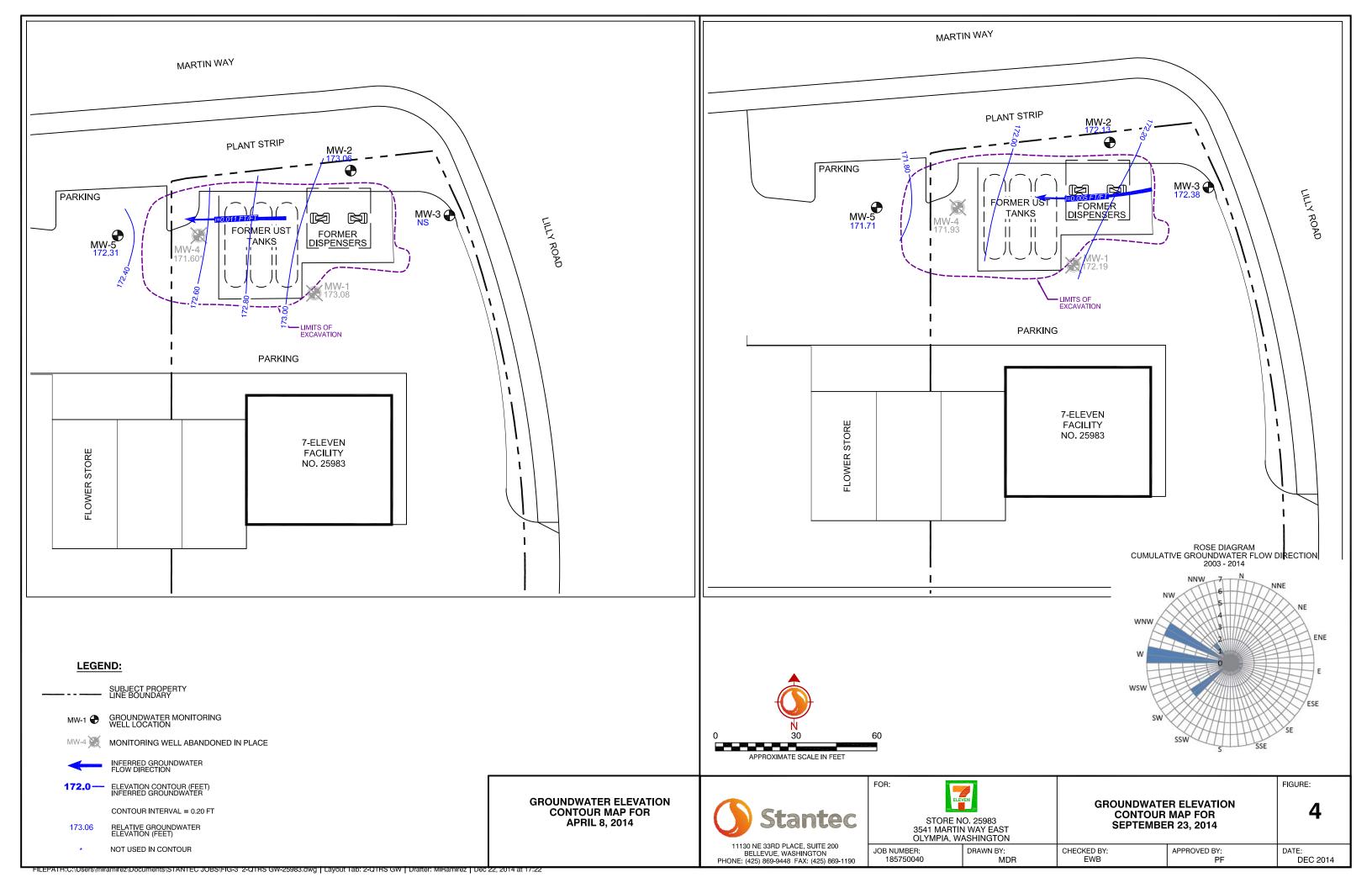
FILEPATH:M:_00 OTHER OFFICES\01-REDMOND\7-11\25983\FIG-1 SITE LOC.dwg | Layout Tab: Layout1 | Drafter: MiRamirez | Jul 21, 2014 at 14:41

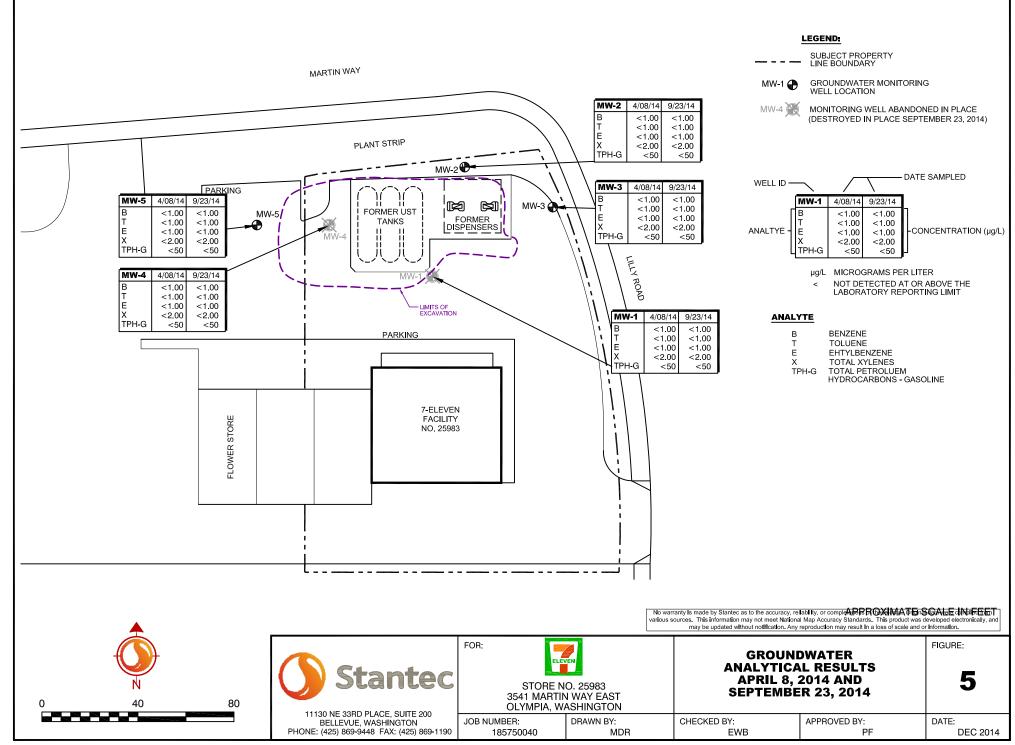


FILEPATH: M:_00 OTHER OFFICES\01-REDMOND\7-II\25983\7-II_25983-2012.dwg modified by MIRAMIREZ on Dec 09, 2014 - 17:19



FILEPATH:V:/2123\Active\PROJECTS\7-Eleven\25983 (Olympia) GW M&S\reports_deliverables\drawings_designs\7-11_25983-2014.dwg | Layout Tab: F3-ELS | Drafter: blgardner | Jan 09, 2015 at 8:14





FILEPATH: M:_00 OTHER OFFICES\01-REDMOND\7-II\25983\FIG-3 AND 4 2014 2ND AND 3TH QTR.Dwg modified by MIRAMIREZ ON DEC 22, 2014 - 17:35

APPENDIX A STANTEC GROUNDWATER MONITORING PROCEDURES AND SECOND AND THIRD QUARTER 2014 FIELD NOTES UST SYSTEM REMOVAL REPORT 7-ELEVEN STORE NO. 25983

January 6, 2015



	WORK RF	QUEST FORM	FIEVEN
Stantec	WORKINE	402011014	
JOB NAME:	7-Eleven 25983	JOB NUMBER:	185750040
SITE ADDRESS:	3541 Martin Way	START DATE:	Tuesday, April 08, 2014
	Olympia, Wa Emily Harper	PREPARED BY:	Emily Harper
NO	TE:	REVIEWED BY:	Paul Fairbairn
ORK DESCRIPTION:			
 Review HASP, conduct Gauge all site wells follo Low-flow purge and san Take a drum for purge v Take an inventory of all 	in with Station Manager and of Health and Safety briefing and owing gauging order on Sampl nple wells following the sampli water. Store purge water in dru waste drums generated by St e office prior to leaving the site	d perform Site Walk to det ling Request Form. ing order provided. ums onsite, make sure the antec at the site, and mark	y are labeled properly and secured.
bb Numbers: Il Groundwater Sampling 85750040.300.0700			
contacts Information:	- 0#: (405) 200 4046	206) 260 9292	
ontacts Information: Paul Fairbairn in Stante	ec Office : (425) 298-1016 or (206) 369-8383	
Paul Fairbairn in Stante		206) 369-8383	
ontacts Information: Paul Fairbairn in Stante 7-Eleven Environmenta		206) 369-8383	
Paul Fairbairn in Stante 7-Eleven Environmenta	l Manager: Jose Rios		ED
Paul Fairbairn in Stante 7-Eleven Environmenta	l Manager: Jose Rios	EQUIPMENT NEEDI	ED
Paul Fairbairn in Stante 7-Eleven Environmenta NALYTICAL REQUIREME NWTPH-Gx	l Manager: Jose Rios	EQUIPMENT NEEDI	∃D:
Paul Fairbairn in Stante 7-Eleven Environmenta NALYTICAL REQUIREME NWTPH-Gx BTEX 8260	l Manager: Jose Rios	EQUIPMENT NEEDI H&S plan Safety Equipment	ED:
Paul Fairbairn in Stante 7-Eleven Environmenta NALYTICAL REQUIREME NWTPH-Gx	l Manager: Jose Rios	EQUIPMENT NEEDI H&S plan Safety Equipment Delineators	
Paul Fairbairn in Stante 7-Eleven Environmenta NALYTICAL REQUIREME NWTPH-Gx BTEX 8260	l Manager: Jose Rios	EQUIPMENT NEEDI H&S plan Safety Equipment Delineators Mini cooler for product	sample
Paul Fairbairn in Stante 7-Eleven Environmenta NALYTICAL REQUIREME NWTPH-Gx BTEX 8260	l Manager: Jose Rios	H&S plan Safety Equipment Delineators Mini cooler for product Low-Flow Purging/Sar	t sample npling Equipment
Paul Fairbairn in Stante 7-Eleven Environmenta NALYTICAL REQUIREME NWTPH-Gx BTEX 8260	l Manager: Jose Rios	EQUIPMENT NEED H&S plan Safety Equipment Delineators Mini cooler for product Low-Flow Purging/Sar Oil/Water Interface Pro	t sample npling Equipment obe
Paul Fairbairn in Stante 7-Eleven Environmenta NALYTICAL REQUIREME NWTPH-Gx BTEX 8260	l Manager: Jose Rios	EQUIPMENT NEED H&S plan Safety Equipment Delineators Mini cooler for product Low-Flow Purging/Sar Oil/Water Interface Pri Disposable bailers/ Ro	t sample npling Equipment obe ope
Paul Fairbairn in Stante 7-Eleven Environmenta NALYTICAL REQUIREME NWTPH-Gx BTEX 8260	l Manager: Jose Rios	EQUIPMENT NEEDI H&S plan Safety Equipment Delineators Mini cooler for product Low-Flow Purging/Sar Oil/Water Interface Pr Disposable bailers/ Ro Peristaltic Pump & Tul	t sample npling Equipment obe ope
Paul Fairbairn in Stante 7-Eleven Environmenta NALYTICAL REQUIREME NWTPH-Gx BTEX 8260	l Manager: Jose Rios	EQUIPMENT NEED H&S plan Safety Equipment Delineators Mini cooler for product Low-Flow Purging/Sar Oil/Water Interface Pri Disposable bailers/ Ro	t sample npling Equipment obe ope
Paul Fairbairn in Stante 7-Eleven Environmenta NALYTICAL REQUIREME NWTPH-Gx BTEX 8260	l Manager: Jose Rios	EQUIPMENT NEEDI H&S plan Safety Equipment Delineators Mini cooler for product Low-Flow Purging/Sar Oil/Water Interface Pr Disposable bailers/ Ro Peristaltic Pump & Tul	t sample npling Equipment obe ope
Paul Fairbairn in Stante 7-Eleven Environmenta NALYTICAL REQUIREME NWTPH-Gx BTEX 8260	l Manager: Jose Rios	EQUIPMENT NEEDI H&S plan Safety Equipment Delineators Mini cooler for product Low-Flow Purging/Sar Oil/Water Interface Pr Disposable bailers/ Ro Peristaltic Pump & Tul	t sample npling Equipment obe ope
Paul Fairbairn in Stante 7-Eleven Environmenta NALYTICAL REQUIREME NWTPH-Gx BTEX 8260	l Manager: Jose Rios	EQUIPMENT NEEDI H&S plan Safety Equipment Delineators Mini cooler for product Low-Flow Purging/Sar Oil/Water Interface Pr Disposable bailers/ Ro Peristaltic Pump & Tul	t sample npling Equipment obe ope

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Stantec					1st QUARTER 2014 SAMPLING REQUEST	G REQUE	ST				5.
7-Eleven Service	7-Eleven Service Station No. 25983 located at 3541 Martin Way; Olympia, WA	3 located	at 3541 Martin W	ay; Olyn	npia, WA						
Project No.	Task				Project Manager	Date		Lab:		Client Contact:	
185750040	300.0700				Paul Fairbairn	04/08/14		Fremont		Jose Rios	
											Π
Well	Gaug.	Gaug.	Samp.	Samp.	Analyses	Well	Top of	Casing	Depth of Pump intake	Comments	
Number	Freq.	Order	Freq.	Order		Depth	Screen	Dia.	(ft bTOC)		
MW-1	Annual	5	Annual	5	NWTPHG, BTEX 8260, EDB, EDC, MTBE, Total Lead						
MW-2	Annual	4	Annual	4	NWTPHG, BTEX 8260, EDB, EDC, MTBE, Total Lead						
MW-3	Annual	-	Annual	-	NWTPHG, BTEX 8260, EDB, EDC, MTBE, Total Lead						
MW-4	Annual	2	Annual	2	NWTPHG, BTEX 8260, EDB, EDC, MTBE, Total Lead						
MW-5	Annual	ო	Annual	<i>с</i> о	NWTPHG, BTEX 8260, EDB, EDC, MTBE, Total Lead						
					Notes:						
	*Revie	w and sig	*Review and sign HASP prior to arriving on site.	to arrivi	ing on site. Check in with station manager and Stantec Project Manager Paul Fairbaim: Cell: 206 369 8383; Office: 425 298 1016	oject Manager	Paul F	airbairn: (Cell: 206 369 8	383; Office: 425 298 1016	
					* Implement Stantec low flow purging and sampling procedures.	ampling proce	dures.				
					*All wells will be sampled for NWTPH-Gx, BTEX 8260	3x, BTEX 826	0				Τ
	*The	e wells an	e now historica	Illy clea	*The wells are now historically clean, if product or sheen is found, use Stop Work Authority and contact the 7-Eleven Project Manager Paul Fairbairn immediately.	nd contact the	7-Eleve	an Projec	t Manager Pau	l Fairbairn immediately.	
				*	*Please gauge all selected wells first and proceed to sample all wells unless otherwise noted.	e all wells unk	sss othe	rwise not	ted.		
			*Store	water i	*Store water in drum on-site. Label drum with contents with a Non Hazardous Waste Drum label and note in the field log	rdous Waste	Drum la	bel and n	note in the field	log	Τ
	No.	wells gau	No. wells gauged without sampling:	mpling:		1		Total we	Total wells sampled: _		
			Gallons Purged:	urged:							٦

Stantec		TE VISITATION R Service Station No	EPORT o. 25983 - Olympia, WA	ELEVEN
Name(s) Emily Ha	arper Date:	04/08/14	Time of Arrival Call-In:	40
Arrival Time: 7:40	Departure Time:	·	Time of Departure Call-In:	
			Who did you call?	Paul Fairbairn
		DRUM INVENTOR	Y	
WATER	۰ ب	CARBON	TOTAL OPEN TOP	0
<u> </u>		EMPTY	TOTAL BUNG TOP	_)
		loft onsite tod	3	
	HE	ALTH AND SAFETY ASS		
PE	<u> </u>		sik authority	
1RATTIC deliv		propre		
HASP + hospital	(A. LOTO []	poper it	٨	
Firektingthe	-	pinch p	2.(//)	
		ĸ	4	
	DESCRIP	TION OF ACTIVITIES ON	SITE AND NOTES	
7:40 APRIVE ON	ISTRES toxt new f	Hos Review	(see Hosp for ESN to	ailante)
Contradiction and the second sec	2, talk to co			
3:00 site w	alk, diamine	Hurz, locate da	mayed will (ML-3	+MV.4)
8:10 xt up	docon 2 samp	try O'egorell	0	
8:25 Brain's	garging rells	0 0		
9:00 Reposa	molice wells			
9:15 ESN (N	loel) onsite for	vell repair - Sto	2 none for Hostailga	te to go over scope }
11:20 ESN 0	rfs.tc-neww	ill box cenent to	set on Mu-3	0 -
	- cl glied			
	d sampling, be	pincleanip	A	
13.00 call pa	M & deputiste	(will picky	delimitations on ma	1 D CATELAR
he	xtreek lott 41	intor setting a	onarte on mu-3)	
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				9111

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Stan	tec				Stanted OGIC DAT					ELEVEN	7
Ga	uge Date:	April 8, 2014				Proje	ect Name:	7-Eleven	#25983		
Field Te	echnician:	Emily Harper				Project	t Number:	1857	250040		
	DTW = Depth t DTB = Depth to Flow throug	o Free Product (FP or NAi o Groundwater Below TO o Bottom of Well Casing I gh cell calibrated Y_ ked for product and		rA	mencemen	t of bailing) or purging) the wells	Y_ N_		
WELL OR LOCATION	WELL SCREEN DEPTH	PROPOSED INTAKE RANGE (feet below TOC)	ТІМЕ	MEASUF DTP (feet)	REMENTS DTW (feet)	DTB (feet)	PURGE? (Y/N)	SHEEN? (Y/N)	SAMPLE?	COMMENTS / PROB CALIBRATION	E
MW-1			8:45	<i>(</i>	25.25	35.91	V	N	Ŷ	hell by dog	a-d
MW-2			9:00		25.25		1 V	N	Ý	J.	~
MW-3					-	-	Ý	N	Ý	hnison xi ot	1
MW-4			8:25	·	26.95	32.66	Y	N	V	To be repaired	1
MW-5			8:40			34.08	V	N	Ń		- Uni +6
											- Ja
											-
											1
											1
											1
									·		1
]

TA			antec			ELEVEN
	NN	ATER SAMPLE	FIELD DATA S	HEET		
Stantec PROJECT #:	185750040	PURGED 8	SAMPLED BY:		WELL & SAMP	LE ID:
CLIENT NAME:		En	nily Harper		MW-S	
	3541 Mart	in Way; Olympia, W	4		/	
DATE PUR	GED & SAMPLED	START (2400hr)	9:10	END	(2400hr)	
Tuesday,	April 08, 2014	SAMPLE TIME (240	00hr) 9:20		LOW-FLOW US	ED NO
SAMPLE TYPE:	Groundwater x	Surface Water	Treatm	nent Effluent	Other	
CASING DIAMETE Casing Volume: (lit		3" 4"	(2.45)			
DEPTH TO BOTTO	OM (feet) =	8 (8.03)(0.0	04)*2 =	10.29 Litu	S
DEPTH TO WATE	$R (feet) = 2(n \cdot O)$	5	. J (,-			
WATER COLUMN	HEIGHT (feet) = <u>8.(</u>	23		ACTUAL PU	RGE (L) =	Litus
\sim		FIELD ME	ASUREMENTS			
DATE 4/8/2014	TIME VOLUME (2409hr) (L)	TEMP. (degrees F)	CONDUCTIVITY (µS/cm)	pH (units)	COLOR (visual)	O.R.P.
	$ \rightarrow $					
1						
			\leq			
					\geq	\leq
Calculated Varia	ance of Final Three Samples Acceptable Variance Limits		≤ 3%	≤ 0.1		≤ 10%
DEPTH TO PUF			SAMPLE D	DTW:	-	
OTY OF SAMPLE	VESSELS & PRESERVATI	VE		ANALY	/SES:	
GTT OF OAIIT EE	6 HCL VOA's per well		1	NWTF		
	1 250 mL poly HNO3			BTEX	8260	
				EDB, EDC		
				Total		
	PURGING EQUIPMENT:			SAMPLING E	QUIPMENT:	
Cole	e-Palmer Peristaltic Pump/Ba	ailer		YS	il	
Flow Through Cell	Disconnected Prior to Samp	le Collection?:	YES	NO		
WELL PAD CO	NDITION: 6000		WELL CASING C		5000	
WELL VAULT CO	NDITION: 600	SE	AL PRESENT?:	BC BC	DLTS PRESENT?:	3/3
WELL IN	regrity: Car	V				<u>ــــــــــــــــــــــــــــــــــــ</u>
REMARKS:					/	
SIGNATURE:	CAN	-				Page of \$
	-1/					1
	0					

1 Alexandre	Stantec WATER SAMPLE FIELD DATA S	
Stantec		
PROJECT #: 185750040	- PURGED & SAMPLED BY:	WELL & SAMPLE ID:
CLIENT NAME: 7-Eleven	Emily Harper	<u>Mw -1</u>
.OCATION: 3541 M	Martin Way; Olympia, WA	-
DATE PURGED & SAMPLED	START (2400hr) 9:50	END (2400hr)
Tuesday, April 08, 2014	SAMPLE TIME (2400hr)	S LOW-FLOW USED NO
SAMPLE TYPE: Groundwater	x Surface Water Treatm	nent Effluent Other
CASING DIAMETER: 2" 2	3" 4"	
Casing Volume: (liters per foot) (0.6		N(a) = akt + 2 + (1k) + (1k)
DEPTH TO BOTTOM (feet) = 35.0	(10,66)(0,60	A)(2) - \$ 13.64 L
DEPTH TO WATER (feet) = 25		12)
VATER COLUMN HEIGHT (feet) =) (0.66	ACTUAL PURGE (L) = $13 L_{-}$
	FIELD MEASUREMENTS	
DATE TIME VOLUME		pH COLOR O.R.P.
4/8/2014 (2400hr) (L)	(degrees F) (µS/cm)	(units) (visual)
	<u></u>	
	<u> </u>	······································
		\sim — —
		$\equiv \sum \equiv$
Calculated Variance of Final Three Sam		
Acceptable Variance Li	mits: <u>≤ 10%</u> <u>≤ 3%</u>	<u>≤0.1</u> <u>≤40%</u>
DEPTH TO PURGE INTAKE DURING P	URGE: SAMPLE D	TW:
TY OF SAMPLE VESSELS & PRESERV	ATIVE:	ANALYSES:
6 HCL VOA's per well		NWTPH-g
1 250 mL poly HNO3		BTEX 8260
	·	EDB, EDC, MTBE
PURGING EQUIPMEN		SAMPLING EQUIPMENT:
Cole-Palmer Peristaltic Pump		YSI
		131
Now Through Cell Disconnected Prior to Sa	ample Collection?: YES	NO —
		CONDITION: CODD
WELL PAD CONDITION: OK	WELL CASING C	- GOOV
WELL PAD CONDITION:	WELL CASING C	
WELL PAD CONDITION:	WELL CASING C	BOLTS PRESENT?: 3/3
		BOLTS PRESENT?: <u>3/3</u> LOCK#: N/A
	SEAL PRESENT?: WELL TAG:	
	SEAL PRESENT?:	
	well TAG: MA	
	well TAG: MA	

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	tantec
	E FIELD DATA SHEET
Stantec PROJECT #:	& SAMPLED BY: WELL & SAMPLE ID:
CLIENT NAME: 7-Eleven E	mily Harper MW - 4
LOCATION: 3541 Martin Way; Olympia, V	VA
DATE PURGED & SAMPLED START (2400hr) Tuesday, April 08, 2014 SAMPLE TIME (2400hr) SAMPLE TYPE: Groundwater x Surface Water	400hr) (0:40 LOW-FLOW USED NO
CASING DIAMETER: 2" 3" Casing Volume: (liters per foot) 2" (1.44)	4" (2.45)
DEPTH TO BOTTOM (feet) = 32.66 DEPTH TO WATER (feet) = 26.95 WATER COLUMN HEIGHT (feet) = 5.71	(5.71) (0.64)(2) = 7.30 litus Actual Purge (L) = <u>8 L</u>
FIELD MI	EASUREMENTS
DATE TIME VOLUME TEMP. 4/8/2014 (2400hr) (L) (degrees F)	CONDUCTIVITY pH COLOR O.R.P. (μS/cm) (units) (visual)
Calculated Variance of Final Three Samples: Acceptable Variance Limits: ≤ 10% DEPTH TO PURGE INTAKE DURING PURGE:	≤ 3% ≤ 0.1 ≤ 10% SAMPLE DTW:
QTY OF SAMPLE VESSELS & PRESERVATIVE:	ANALYSES:
6 HCL VOA's per well	NWTPH-g
1 250 mL poly HNO3	EDB, EDC, MTBE
	Total Lead
PURGING EQUIPMENT:	SAMPLING EQUIPMENT:
Cole-Palmer Peristaltic Pump/Bailer	YSI
Flow Through Cell Disconnected Prior to Sample Collection?:	YESNO
WELL PAD CONDITION: OLC	WELL CASING CONDITION:
WELL VAULT CONDITION: OK (need small peps)	EAL PRESENT?: $\frac{3/3}{3}$ BOLTS PRESENT?: $\frac{3}{3}$
WELL INTEGRITY: OLC ('')	
REMARKS: hell bring repaired to Noy.	top ~8" of PVC pipe 1005e.
SIGNATURE:	Page 3 of 5

Stante	
WATER SAMPLE FIEL	LD DATA SHEET
PROJECT #: 185750040 PURGED & SAM	
CLIENT NAME: 7-Eleven Emily Ha	arper MW-2
LOCATION: 3541 Martin Way; Olympia, WA	
DATE PURGED & SAMPLED START (2400hr) Tuesday, April 08, 2014 SAMPLE TIME (2400hr) SAMPLE TYPE: Groundwater x Surface Water	OO END (2400hr) I I · 3O LOW-FLOW USED NO Treatment Effluent Other
CASING DIAMETER: $2^{"}$ ${(0.64)}$ $3^{"}$ ${(1.44)}$ $4^{"}$ ${(2.4)}$	5)
DEPTH TO BOTTOM (feet) = 35.29 DEPTH TO WATER (feet) = 15.25 WATER COLUMN HEIGHT (feet) = 10.04	0,04)(2,45)(2) = 49.19 ACTUAL PURGE (L) = 31 L
FIELD MEASUR	EMENTS
DATE TIME VOLUME TEMP. CON 4/8/2014 (2409hr) (L) (degrees F)	DUCTIVITY pH COLOR O.R.P. (µS/cm) (units) (visual)
Calculated Variance of Final Three Samples:	
Acceptable Variance Limits:	≤ 3% ≤ 0.1 ≤ 10%
	SAMPLE DTW:
QTY OF SAMPLE VESSELS & PRESERVATIVE:	ANALYSES:
6 HCL VOA's per well 1 250 mL poly HNO3	NWTPH-g BTEX 8260
	EDB, EDC, MTBE
	Total Lead
PURGING EQUIPMENT:	SAMPLING EQUIPMENT:
Cole-Palmer Peristaltic Pump/Bailer	YSI
Flow Through Cell Disconnected Prior to Sample Collection?: Y	ES NO
WELL PAD CONDITION: 6 00/2 W	ELL CASING CONDITION: 6 20 D
WELL VAULT CONDITION: 6000 SEAL PR	RESENT ?: 45 BOLTS PRESENT ?: 3/3
WELL INTEGRITY: 6000 WELL	
REMARKS:	
SIGNATURE:	Page 4 of 5

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16			Intec	JCET	EL
Stantec	V	VATER SAMPLE	FIELD DATA SI	+	
PROJECT #:	185750040	PURGED 8	SAMPLED BY:		& SAMPLE ID:
CLIENT NAME:	7-Eleven	En	nily Harper	M~	3
	3541 Mar	tin Way: Olympia, W/	A		
DATE PU	JRGED & SAMPLED	START (2400hr)	11:35	END (2400hr)	
Tuesda	ay, April 08, 2014	SAMPLE TIME (240	12:00	DLOW-F	
SAMPLE TYPE:	Groundwater x	Surface Water	Treatm		Other
CASING DIAME Casing Volume:		3" 4"	(2.45)	0	
DEPTH TO BOT	00	(k 3	२, २८)(०.७५)	(2) = 13.15	
WATER COLUN	/IN HEIGHT (feet) = 10.2	8		ACTUAL PURGE (L)	= 14.5 1
		FIELD ME	ASUREMENTS	Ĩ	
DATE 4/8/2014	TIME VOLUME (2400hr) (L)	TEMP. (degrees F)	CONDUCTIVITY (µS/cm)	1	LOR O.R.I sual)
				\leq	
Calculated Va	ariance of Final Three Sample				
A 102	Acceptable Variance Limit	ts: ≤10%	≤ 3%	≤ 0.1	≤ 10
DEPTH TO P	URGE INTAKE DURING PUR	RGE:	SAMPLE D	TW:	
OTY OF SAMPI	LE VESSELS & PRESERVAT			ANALYSES:	
	6 HCL VOA's per well			NWTPH-g	
	1 250 mL poly HNO3			BTEX 8260	
		-		EDB, EDC, MTBE Total Lead	
		 T	-	SAMPLING EQUIPME	NT
C	PURGING EQUIPMENT: ole-Palmer Peristaltic Pump/B	Bailer		SAMPLING EQUIPME YSI	INT.
	ell Disconnected Prior to Sam	ple Collection?:	YES	NO	
WELL PAD C	CONDITION: NEW		WELL CASING C		D
		SE	AL PRESENT ?:	BOLTS PR	ESENT ?: 2/2
WELL VAULT C			VELL TAG: N/	LOCK#:	NA
	INTEGRITY: GOOD	V			
		aired to rep	1 .	SN hell g	ange data r

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DAILY PRODUCTION HEALTH AND SAFETY BRIEFING LOG

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1.1

Date: 4/8/14	Start 7	Time: 9:60 (an (ESN)
Scope of Work: WELL REP AIR	R.		~ J
Issues Discussed:			
1. PPE	6. N	(ASI)	
2. TRAFAIC		ist aid kit fi	r(P6t:
3. DELINEATION		bspital direction	
4. WASTE REMOVAL	9. p	ispurtook for	Job
5. STOP WORK AUCHORITY	10. p	roper lifting te	chryus
	Atten	dees	
Print Name and Company	Signa	iture	Second Meeting (Initial)
Neel Knapf ESN-NW Enly HARPER Stater	NG	6	
GNIY HARPER States	274		
	-0		
Meeting Conducted by:		Signature:	
Name (Site Health and Safety C	oordinator):	Signature:	

Stante	C WORK REC	QUEST FORM	
JOB NAME:	7-Eleven 19648	JOB NUMBER:	185750013
SITE ADDRESS:	3209 Northwest Avenue	START DATE:	Friday, September 05, 2014
PREPARED FOR:	Bellingham, WA Emily Harper	PREPARED BY:	Emily Harper
N	OTE:	REVIEWED BY:	Paul Fairbairn
WORK DESCRIPTION:			
1. Review H&S Plan.			
2. Arrive onsite and chec	k in with Station Manager and c t Health and Safety briefing and	ontact Paul Fairbairn.	etermine any traffic flow
4 Gauge all site wells fo	llowing gauging order on Sampli	ing Request Form.	etermine any traine now.
5. Low-flow purge and sa	ample wells following the sampling	ng order provided.	
6. Take a drum for purge	water. Store purge water in dru	ms onsite, make sure th	ey are labeled properly and sec
Take an inventory of a	Il waste drums generated by Sta	antec at the site, and ma	ark locations on site plan.
8. Call Paul Fairbairn in 1	the office prior to leaving the site	9.	
Job Numbers:			
All Groundwater			
185750013.3	00.0700		
*			
,			
Contacts Information:		3	
Contacts Information:	ntec Office : (425) 869-9448 x14	3	
Contacts Information:		3	
Contacts Information: Paul Fairbairn in Star	ntec Office : (425) 869-9448 x14	3	
Contacts Information: Paul Fairbairn in Star 7-Eleven Environmen	ntec Office : (425) 869-9448 x14 tal Managi Jose Rios		
Contacts Information: Paul Fairbairn in Star	ntec Office : (425) 869-9448 x14 tal Managi Jose Rios	3 EQUIPMENT NEED	ED:
Contacts Information: Paul Fairbairn in Star 7-Eleven Environmen	ntec Office : (425) 869-9448 x14 tal Managi Jose Rios	EQUIPMENT NEED	ED:
Contacts Information: Paul Fairbairn in Star 7-Eleven Environmen ANALYTICAL REQUIREN NWTPH-Gx	ntec Office : (425) 869-9448 x14 tal Managi Jose Rios	EQUIPMENT NEED	ED:
Contacts Information: Paul Fairbairn in Star 7-Eleven Environmen ANALYTICAL REQUIREN NWTPH-Gx BTEX 8260	ntec Office : (425) 869-9448 x14 tal Managi Jose Rios	EQUIPMENT NEEL H&S plan Safety Equipment)ED:
Contacts Information: Paul Fairbairn in Star 7-Eleven Environmen ANALYTICAL REQUIREN NWTPH-Gx	ntec Office : (425) 869-9448 x14 tal Managi Jose Rios	EQUIPMENT NEED H&S plan Safety Equipment Delineators	
Contacts Information: Paul Fairbairn in Star 7-Eleven Environmen ANALYTICAL REQUIREN NWTPH-Gx BTEX 8260	ntec Office : (425) 869-9448 x14 tal Managi Jose Rios	EQUIPMENT NEED H&S plan Safety Equipment Delineators Mini cooler for produc	ct sample
Contacts Information: Paul Fairbairn in Star 7-Eleven Environmen ANALYTICAL REQUIREN NWTPH-Gx BTEX 8260	ntec Office : (425) 869-9448 x14 tal Managi Jose Rios	EQUIPMENT NEEL H&S plan Safety Equipment Delineators Mini cooler for produc Low-Flow Purging/Sa	ct sample impling Equipment
Contacts Information: Paul Fairbairn in Star 7-Eleven Environmen ANALYTICAL REQUIREN NWTPH-Gx BTEX 8260	ntec Office : (425) 869-9448 x14 tal Managi Jose Rios	H&S plan Safety Equipment Delineators Mini cooler for produc Low-Flow Purging/Sa Oil/Water Interface P	ct sample impling Equipment robe
Contacts Information: Paul Fairbairn in Star 7-Eleven Environmen ANALYTICAL REQUIREN NWTPH-Gx BTEX 8260	ntec Office : (425) 869-9448 x14 tal Managi Jose Rios	EQUIPMENT NEED H&S plan Safety Equipment Delineators Mini cooler for produc Low-Flow Purging/Sa Oil/Water Interface P Disposable bailers/ F	ct sample mpling Equipment robe lope
Contacts Information: Paul Fairbairn in Star 7-Eleven Environmen ANALYTICAL REQUIREN NWTPH-Gx BTEX 8260	ntec Office : (425) 869-9448 x14 tal Managi Jose Rios	EQUIPMENT NEED H&S plan Safety Equipment Delineators Mini cooler for produc Low-Flow Purging/Sa Oil/Water Interface P Disposable bailers/ F Peristaltic Pump & Tu	ct sample mpling Equipment robe lope
Contacts Information: Paul Fairbairn in Star 7-Eleven Environmen ANALYTICAL REQUIREN NWTPH-Gx BTEX 8260	ntec Office : (425) 869-9448 x14 tal Managi Jose Rios	EQUIPMENT NEED H&S plan Safety Equipment Delineators Mini cooler for produc Low-Flow Purging/Sa Oil/Water Interface P Disposable bailers/ F	ct sample mpling Equipment robe lope
Contacts Information: Paul Fairbairn in Star 7-Eleven Environmen ANALYTICAL REQUIREN NWTPH-Gx BTEX 8260	ntec Office : (425) 869-9448 x14 tal Managi Jose Rios	EQUIPMENT NEED H&S plan Safety Equipment Delineators Mini cooler for produc Low-Flow Purging/Sa Oil/Water Interface P Disposable bailers/ F Peristaltic Pump & Tu	ct sample mpling Equipment robe lope
Contacts Information: Paul Fairbairn in Star 7-Eleven Environmen ANALYTICAL REQUIREN NWTPH-Gx BTEX 8260	ntec Office : (425) 869-9448 x14 tal Managi Jose Rios	EQUIPMENT NEED H&S plan Safety Equipment Delineators Mini cooler for produc Low-Flow Purging/Sa Oil/Water Interface P Disposable bailers/ F Peristaltic Pump & Tu	ct sample mpling Equipment robe lope
Contacts Information: Paul Fairbairn in Star 7-Eleven Environmen ANALYTICAL REQUIREN NWTPH-Gx BTEX 8260	ntec Office : (425) 869-9448 x14 tal Managi Jose Rios	EQUIPMENT NEED H&S plan Safety Equipment Delineators Mini cooler for produc Low-Flow Purging/Sa Oil/Water Interface P Disposable bailers/ F Peristaltic Pump & Tu	ct sample mpling Equipment robe lope

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🕔 Stantec	ntec				3Q14 SAMPLING REQUEST	IEST				BENE	
Eleven Service \$	Station No. 196	348 located	at 3209 Northwe	st Avenu	7-Eleven Service Station No. 19648 located at 3209 Northwest Avenue; Bellingham, WA						Т
	-				and the second second	C Sate		- te -		Client Contact:	
185750013	300.0700	_			Project manager Paul Fairbairn			Fremont		Jose Rios	Т
Well	Gaug.	Gaug.	Well	Samp.	Analyses	Well	Top of	Casing	Depth of Pump intake	Comments	1
Number	Freq.	Order	Number	Order		Depth	Screen	Dia.	(ft bTOC)		Т
MW-1		1			BTEX, NWTPH+g (8260), Total Lead						П
MW-2		2			BTEX, NWTPH-g (8260), Total Lead						
MW-3		<i>м</i>			BTEX, NWTPH-g (8260), Total Lead						
MW-4		4			BTEX, NWTPH-g (8260), Total Lead						
		-									
					Notes:						
	*Revie	ew and sig	*Review and sign HASP prior to arriving on site.	o arrivir	5	ect Manage	or Paul Fa	airbairn: (Cell: 206 369 83	83; Office: (425) 298-1016	
					* Implement Stantec low flow purging and sampling procedures.	mpling proc	cedures.				Π
	F	he wells at	re now historic:	ally clea	*The wells are now historically clean, if product or sheen is found, use Stop Work Authority and contact the 7-Eleven Project Manager Paul Fairbaim immediately.	d contact th	le 7-Elev	en Projet	ct Manager Paul	Fairbaim immediately.	П
					*Please gauge all selected wells first and proceed to sample all wells unless otherwise noted.	ali wells ur	less oth	erwise no	oted.		
			*Store	e water i	*Store water in drum on-site. Label drum with contents with a Non Hazardous Waste Drum label and note in the field log	-dous Wast	e Drum l	abel and	note in the field	log	Т
	Q	. wells gar	No. wells gauged without sampling:	ampling		1		Total w	Total wells sampled:		
			Gallons Purged:	Purged							٦

9/4/2014

Arrival Time: 7:00 Departure Time: 13:15 Time of Departure Call-In: 12:45 Who did you call? Paul Faithaim DRUM INVENTORY WATER O CARBON TOTAL OPEN TOP O SOL O EMPTY TOTAL OPEN TOP O HEALTH AND SAFETY ASSESSMENT TRACK to delice on total STAID HEALTH AND SAFETY ASSESSMENT TRACK to delice on total STAID HASE to hosp, districtions DESCRIPTION OF ACTIVITIES ONSITE AND NOTES FOO ARRIVE ONSITE, toxt poul HIS of the Construction of the Hits cover With HIS of the Construction of the Hits cover With HIS of ASADDAN MW-1 11:30 ARANDON MW-2 2:35 WORP UP, talk to manager 2:45 Call poul 3:15 depart stle	ame(s) Emily Harper	Date: 9/5/14	Time of Arrival Call-In:	f: 00
DRUM INVENTORY	rrival Time: 7:00	eparture Time: 13 15	Time of Departure Call-In: 12:	45
Description of activities onsite and notes O ARRIVE ONSITE, txt part CO ARRIVE ONSTERNER CO ARRIVE ON MW-1 CO ARRIVE ON MW-2 CO ARR			Who did you call?	Paul Fairbairn
SOL DEMPTY TOTAL BUNG TOP D No NEWRS MASTE HEALTH AND SAFETY ASSESSMENT TENTHIC & deliveration (154 ALD) HULINGTIM Head SITES GIRT EXT. PPE SDP HORIC AUTH. REPORTEDIN HASPET MASP districtions DESCRIPTION OF ACTIVITIES ONSITE AND NOTES OO ARRIVE ONSITE, text pad NS talk to manager "DS stay do an 2 eff. "DS stay do an 2 eff. "DS stay do an 2 eff. "DS stay wells NO CAMPLE ONSITE. HTS CURRIEN 20 ABANDON MW-2 20 ABANDON MW-2 20 ABANDON MW-3 215 Call pay 315 depart stle			RY	~
No and state HEALTH AND SAFETY ASSESSMENT TRACTIC & delicion for (194 ALD Hildraction about stress FIRE EXT. PPE SDP Logic RUTH. Reported is Description of activities onsite and notes OO ARRIVE ONSITE, text pail IS talk to manager IS talk to manager IS gauge cells IS ABANDON MW-2 LOO ABANDON MW-2 LOO ABANDON MW-2 LOO ABANDON MW-2 LOO ABANDON MW-2 IS depart stle IS depart stle	WATER		TOTAL OPEN TOP	0
HEALTH AND SAFETY ASSESSMENT TRACTION What STREES FIRE EXT. PPE SDP WORK AUTH. Propertools HASP & hosp. directions DESCRIPTION OF ACTIVITIES ONSITE AND NOTES OD SARRINE ONSTE, trat pail IS talk to manger "Dosely dean * eff. "Dosely dean * eff. "Dosely dean * eff. "Dosels H& S OVERMEN "Do Sample wells "Do ABANDON MW-1 "YS ABANDON MW-2 "DO ABANDON MW-2 "S Call pail "YS Call pail "YS Call pail			TOTAL BUNG TOP	_0
Tenffic to deliveration 1st Alt Hydration wheat stres ERE EST. PDE SDP HORICAUTH. PDE SDP HORICAUTH. PDE SDP HORICAUTH. PDE SDP HORICAUTH. PDE SDP HORICAUTH. PDE SDP HORICAUTH. PDE STRESS OF AUTHORIZAUTHER PDE STRESS OF AUTHORIZAUTHER PDE STRESS OF AUTHORIZAUTHER PDE STRESS PDE STR		No anno onsite		
All A contraction of activities onsite and notes PAC STOP HORE AUTH. Properties and notes DESCRIPTION OF ACTIVITIES ONSITE AND NOTES DESCRIPTION OF ACTIVITIES ONSITE AND NOTES DESCRIPTION OF ACTIVITIES ONSITE AND NOTES DO ARRIVE ONSITE, text paul IS talk to manager ID Set up about negle. IS Secure onsite H+S averyiew IS ABANDON MW-2 IS ABANDON MW-2 IS Call paul IS talk to manager IS Call paul IS depent site		3-1	SESSMENT	
PPE SDP LOCK AUTH. Progressis HASP & hosp. directions DESCRIPTION OF ACTIVITIES ONSITE AND NOTES OO ARRIVE ONSITE, trxt pail IS talk to manager "Doset up de walte IS talk to manager "Doset up de walte IS conside at ege. "Doset up de walte IS Consider H & S OVERVIEW "Do ABANDON MW-2 "DO ABANDON MW-2 "DO ARANDON MU-2 "DO	TRAFFIC & delireation		AID	
Propertools HASP & hosp directions DESCRIPTION OF ACTIVITIES ONSITE AND NOTES OO ARRIVE ONSITE, text pail IS talk to manager I Destry down + eff. I	HURAraction + heat st			
HASP + hosp directions DESCRIPTION OF ACTIVITIES ONSITE AND NOTES OO ARRIVE ONSITE, text pail IS talk to manager ID set up down + exp. IS gruge -ells IO Sample wells IS ABANDON MW-1 IS ABANDON MW-2 ISO ABANDON MW-2 ISO ABANDON MW-2 ISO WRAP UP, talk to manager IS depart site	PPE	SDI	PHORICAUTH.	
DESCRIPTION OF ACTIVITIES ONSITE AND NOTES OO ARRIVE ONSITE, tixt pad IS talk to manager Description of activities onsite and notes Description of activities on activities	· · · · · · · · · · · · · · · · · · ·			
OO ARRIVE ONSITE, text pail IS talk to manager :30 set up down t eye :35 gruge -ells IO Sample wells :20 Honcene onste H to greatien :30 ABANDON MW-1 :45 ABANDON MW-2 :00 ARANDON MW-3 2:30 WRAP UP, talk to manager :45 Call pail 3:15 depart site (M	HASP + hosp. direction	<u>ns</u>		
00 ARRIVE ONSITE, text part 15 tark to minoger 130 set up down t ege 135 grusse - eils 100 sample wells 120 Horene onsite. H to so overview 130 ABANDON MW-1 145 ARANDON MW-2 130 DRANDON MW-2 130 DRANDON MW-3 2:30 WRP UP, talk to manager 145 tail part 15 depart site (14)				
15 taikto mange 30 set p devon t egg 35 gruge - ells 00 sample wells 20 Hohzene onsate H to overview 30 ABANDON MW-1 :45 ABANDON MW-2 :00 ABANDON MW-3 :30 WREP UP, talk to manger :45 Kall part :15 depart site 	OD ADDINE OWNE IN			
120 set up down + exp. 135 grung - ells 100 Sample wells 120 Hobsene onstre H+S overview 130 ABANDON MW-1 145 ABANDON MW-2 130 WRP UP, talk to manager 145 Coll payl 15 depart site 14				
135 gruge ells 100 Sample wells 120 Hobsene onate H+>5 OVERVIEW 130 ABANDON MW-1 145 ABANDON MW-2 100 ABANDON MW-3 2.30 WRP UP, talk to manager 145 Coll part 15 depart site (14)				
00 Sample wells 120 Hobsene onate H+S overview 30 ABANDON MW-1 145 ABANDON MW-2 200 ABANDON MW-3 2:30 WRAP UP, talk to manager 145 Coll paul 3:15 depart site AA				
120 Hobiene onste H+5 overview 30 ABANDON MW-1 145 ABANDON MW-2 100 ABANDON MW-3 230 WRAP UP, talk to manager 145 Call paul 315 depart site (14				
30 ABANDON MW-1 45 ABANDON MW-2 30 ABANDON MW-3 230 WRP UP, talk to manager 45 Kall paul 315 depart site AA		1.1		
:45 ABANDON MW-Z :00 ABANDON MW-3 2:30 WRAP UP, talkto manager :45 Call parl 3:15 depart site (1)	C			
:00 ABANDON MW-3 2:30 WRAP UP, talk to manager :45 Call paul 3:15 depart site (14)				
2:30 WRAP UP, talkto manager 145 call part 3:15 depart site W	SN 23748			
:45 Call part 3:15 depart site (1)	and a stand and a stand and the stand of the			
Alt	2:30 WRAP UP, talkt	s manager		
Alt	95 Call paul	0		
	1.15 depart site	Notestantine 11 million		
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	Stant	ec			Stanted	CA SHEET				ELEVEN
Ga	uge Date:	09/05/14		8		Proje	ect Name:	7-Eleve	n #19648	
Field Te	echnician:	Emily Harper				Project	Number:	1857	50013	
	DTW = Depth t DTB = Depth to Flow throug	o Free Product (FP or NAF o Groundwater Below TO o Bottom of Well Casing E gh cell calibrated Y_ ked for product and		-	mencemen	t of bailing	ı or purging	the wells	<u>ү () </u>	
WELL OR LOCATION	WELL SCREEN DEPTH	PROPOSED INTAKE RANGE (feet below TOC)	TIME	MEASUF DTP (feet)	CEMENTS	DTB (feet)	PURGE? (Y/N)	SHEEN? (Y/N)	SAMPLE? (Y/N)	COMMENTS / PROBE CALIBRATION
MW-1			7:35		9.23	12.93	V	N	N	
MW-2			7.40		956	12.89	Ŷ	N	N	
MW-3			1:45		9.40	12.05	\vee	N	Ń	
MW-4			4:50		9.22	12.26	Ý	N	N	
									3	

N Stantec	Stantec
WATER SAMPL	E FIELD DATA SHEET
PROJECT #:185750013 PURGED BY:	Emily Harper WELL I.D.: MW - 2
CLIENT NAME: 7-Eleven SAMPLED BY:	Emily Harper
LOCATION: 19648 located at 3209 Northwest Avenue; B	Sellingham, WA
DATE PURGED 9/5/2014 START (2400hr)	<u> </u>
DATE SAMPLED9/5/2014 SAMPLE TIME ((2400hr) 8:30 LOW-FLOW USED
SAMPLE TYPE: Groundwater x Surface Wa	
CASING DIAMETER: 2" 4" (0.6)	6" (1.46) ⁽¹⁾
DEPTH TO BOTTOM (feet) = 12-89	
DEPTH TO WATER (feet) =9.56	
WATER COLUMN HEIGHT (feet) = <u>3.33</u>	ACTUAL PURGE (L) = 200
FIELD N	MEASUREMENTS
DATE TIME VOLUME TEMP.	CONDUCTIVITY pH COLOR O.R.P.
$\frac{9/5/14}{Q_{11}} \qquad \frac{(2400hr)}{Q_{11}} \qquad \frac{(L)}{Q_{11}} \qquad \frac{(degrees C)}{(X_{11}/(2))}$	$\frac{1}{2.050} \frac{(\text{units})}{7.54} \frac{(\text{visual})}{7.62} \frac{(100.1)}{(100.1)}$
<u>8:15</u> 0.12 18.71	$\frac{2000}{1.909}$ $\frac{1.31}{7.40}$ (18 $\frac{100.1}{73.1}$
8:21 1.25 18.81	1806 7.44 CUL 87.5
V 8:24 1.75 18.90	1.693 7.41 CUL 87.2
Calculated Variance of Final Three Samples:	
Acceptable Variance Limits: ≤ 10%	<u>≤ 3%</u> <u>≤ 0.1</u> <u>≤ 10%</u>
DEPTH TO PURGE INTAKE DURING PURGE: 11.0	SAMPLE DTW:
QTY OF SAMPLE VESSELS & PRESERVATIVE:	ANALYSES:
3-HCL VOA'S PER WELL	NWTPH-g
250 mL poly w/ nitric acid	BTEX-g
PURGING EQUIPMENT:	SAMPLING EQUIPMENT:
Geopump	YSI
Flow Through Cell Disconnected Prior to Sample Collection?:	YES X NO
WELL PAD CONDITION: 6000	WELL CASING CONDITION: 600
	SEAL PRESENT ?: BOLTS PRESENT ?:2
WELL INTEGRITY: (の))	
REMARKS: Well to be abandoned to	T C
CLUMING. CHI LO LAR GRANILIO EDI	
SIGNATURE:	Page / of U

Stantec	Stan			
	WATER SAMPLE FI	ELD DATA SH	IEET	ELEVEN
PROJECT #: 185750013	PURGED BY:	Emily Harper	WELL I.D.:	1-3
CLIENT NAME: 7-Eleven	SAMPLED BY:	Emily Harper		/
OCATION: 19648 located at 3209 No	orthwest Avenue; Belling	gham, WA		
DATE PURGED 9/5/2014	START (2400hr)	3:35		
DATE SAMPLED 9/5/2014	SAMPLE TIME (2400)	nr) 9:00	C LOW-FLOW	USED US
	x Surface Water	Treatme	ent Effluent Other	
CASING DIAMETER: 2" Casing Volume: (liters per foot) (0.16	<u> </u>	1.46		
	15		2	
DEPTH TO WATER (feet) = 9 34(
WATER COLUMN HEIGHT (feet) = 1.6			ACTUAL PURGE (L) =	
	FIELD MEAS	UREMENTS		
DATE TIME VOLUME	TEMP. C	ONDUCTIVITY	pH COLOR	0.R.P.
<u>9/5/14</u> (2400hr) (L)	(degrees C)	ms/cm	(units) (visual)	102 6
$\frac{2:47}{8:50}$ 0.25	14.200	5115+	$\frac{C.89}{C.85}$ $\frac{CIR}{CIR}$	104.5
$\frac{8.50}{9.53}$ (.25	<u> </u>	3.306	$\frac{6.03}{6.82}$ $\frac{100}{100}$	11.4
8:56 1.75	19.56	3.368	6.86 CIR	112.3
				-
				< <u> </u>
141 781 1			X	AI
				700
Calculated Variance of Final Three Samp		4.00/		≲ 10%
Acceptable Variance Lir		≤ 3%	≤ 0.1	
DEPTH TO PURGE INTAKE DURING PU	URGE: 12.0 ft	SAMPLE D1	rw:	-
QTY OF SAMPLE VESSELS & PRESERVA		b	ANALYSES:	
3-HCL VOA'S PER WEL		0	NWTPH-g	
250 mL poly w/ nitric aci	d	5 .	BTEX-g Total Lead	
			Total Lead	
PURGING EQUIPMENT			SAMPLING EQUIPMENT:	
Geopump			YSI	
Flow Through Cell Disconnected Prior to Sa	mple Collection?:	YES 👌	NO	
WELL PAD CONDITION: GON		WELL CASING CO		
	<u> </u>	,		ala
WELL VAULT CONDITION: 600	SEAL		BOLTS PRESEN	т?: 2/2
	WE	LL TAG: <u>V x</u>	LOCK#:	V/A
WELL INTEGRITY: 600				
	bandowed todo	Υ		
		Υ		Page Z of

Stantec		antec		ELEVEN
June	WATER SAMPLE	FIELD DATA S	HEET	
PROJECT #: 185750013	PURGED BY:	Emily Harper	WELL I.D.:	Nr-1
CLIENT NAME: 7-Eleven	SAMPLED BY:	Emily Harper	÷	
LOCATION: 19648 located at 3209 No	orthwest Avenue; Bel	llingham, WA		
DATE PURGED 9/5/2014	START (2400hr)	9:10		
DATE SAMPLED 9/5/2014	SAMPLE TIME (24	400hr) $9^{\circ}3^{\circ}$	LOW-F	FLOW USED
SAMPLE TYPE: Groundwater	x Surface Wate	er Treatm	nent Effluent	Other
CASING DIAMETER: 2" Casing Volume: (liters per foot) (0.16		5" (")		
DEPTH TO BOTTOM (feet) = 12.9	3			
DEPTH TO WATER (feet) = $\frac{q_2 2^2}{2}$				
WATER COLUMN HEIGHT (feet) = 3.7			ACTUAL PURGE (L)	= 2.15L
		EASUREMENTS		
DATE TIME VOLUME		CONDUCTIVITY		LOR O.R.P.
<u>9/5/14 (2400hr) (L)</u>	(degrees C) 10.41	MS/cm	$\frac{(\text{units})}{(2\pi)^2}$	visual)
9:18 0.13	$-\frac{10.92}{20.01}$	3743		R 109.7
9:21 1.25	20.39	3.631	Carloz CU	2 (02.6
9:24 1.75	20.33	3,579	G.64 CL	<u>P</u> <u>99.2</u>
4	-			
	-	·		
· · ·				
Calculated Variance of Final Three Sam	bles:			
Acceptable Variance Lin		≤ 3%	≤ 0.1	<u>≤ 10%</u>
DEPTH TO PURGE INTAKE DURING P	JRGE:	SAMPLE D	DTW:	
QTY OF SAMPLE VESSELS & PRESERVA			ANALYSES:	
3-HCL VOA'S PER WEL			NWTPH-g	
250 mL poly w/ nitric aci	d		BTEX-g	i
	Ŧ		Total Lead	
PURGING EQUIPMENT	7:		SAMPLING EQUIPME	ENT:
Geopump		S	YSI	K
Flow Through Cell Disconnected Prior to Sa	mple Collection?:	YES &	NO	
WELL PAD CONDITION: 600		WELL CASING	 CONDITION: <u>പ്രത്</u> ദി)
WELL VAULT CONDITION:	S	EAL PRESENT?:	BOLTS PF	RESENT ?: 2/2
WELL INTEGRITY: 600		WELL TAG:	LOCK#	
REMARKS: <u>Well to be</u>	abandored	today		-
)		
SIGNATURE:	7			Page 3 of 4

Stantec Sta	antec
WATER SAMPLE	FIELD DATA SHEET
PROJECT #: 185750013 PURGED BY: CLIENT NAME: 7-Eleven SAMPLED BY: LOCATION: 19648 located at 3209 Northwest Avenue; Bell	Emily Harper WELL I.D.: MW-Y Emily Harper lingham, WA
DATE PURGED 9/5/2014 START (2400hr) DATE SAMPLED 9/5/2014 SAMPLE TIME (24 SAMPLE TYPE: Groundwater x Surface Wate	Treatment Effluent Other
CASING DIAMETER: 2" 4" 6 Casing Volume: (liters per foot) (0.16)	
DEPTH TO BOTTOM (feet) = 12.26 DEPTH TO WATER (feet) = 9.22 WATER COLUMN HEIGHT (feet) = 3.09	ACTUAL PURGE (L) = 2.00
FIELD ME	ASUREMENTS
DATE TIME VOLUME TEMP. 9/5/14 (2400hr) (L) (degrees C) 9:46 0.25 $0.889:46$ 0.25 0.25 $0.889:52$ 1.25 $19.069:55$ 0.75 $19.0619.0619.0619.05Calculated Variance of Final Three Samples:Acceptable Variance Limits: \leq 10\%$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
DEPTH TO PURGE INTAKE DURING PURGE: 12.0	SAMPLE DTW:
QTY OF SAMPLE VESSELS & PRESERVATIVE: 3-HCL VOA'S PER WELL 250 mL poly w/ nitric acid	ANALYSES: NWTPH-g BTEX-g Total Lead
PURGING EQUIPMENT: Geopump	SAMPLING EQUIPMENT: YSI
Flow Through Cell Disconnected Prior to Sample Collection?:	YES X NO
WELL PAD CONDITION: 600	WELL CASING CONDITION: A COL
	EAL PRESENT?: $\frac{1}{2}$ BOLTS PRESENT?: $\frac{1}{2}$ WELL TAG: $\frac{1}{2}$ LOCK#: $\frac{1}{2}$
REMARKS:	
$\sim n$	Page 4 of 4
SIGNATURE:	Page / of 7

11412 62nd Avenue East, Puyallup, WA 98373 Tel: (253) 848-6500 Fax: (253) 848-6515 info@holocenedrillinginc.com



DAILY DRILLING LOG

JOB INFORMATION **CLIENT INFORMATION** TIME COMMENTS DATE: TO: FROM: **DESCRIPTION:** CLIENT: tantel 9.30 11.15 MODE PROJECT: 1115 11.45 Wells Detumm Son LOCATION: noh gm 145 De Mobe RIG: AUGER/CASING SIZE: PPE LEVEL: **DRILLING FOOTAGE** QTY. (LF): QTY. (LF): **DESCRIPTION: DESCRIPTION:** HSA UNDER: HSA OVER: **ROTARY:** CORING HQ/NQ: ODEX: CASING ADV .: EXTRA SPT's: SHELBY TUBES: WELL INFORMATION B#: FROM: TO: WELL DP.: TAG#: **DRILLING TIME DESCRIPTION:** REG. OT: DESCRIPTION: REG.: OT: **DESCRIPTION:** REG.: OT: STANDBY: CASING: TRAVEL: MOVING: WELL DEVELOPMENT: OTHER: DECON: WELL ABANDONMENT: **OTHER: INSTALL:** ADDITIONAL MAN: OTHER: MATERIALS DESCRIPTION: QTY .: **DESCRIPTION:** OTY .: DESCRIPTION: DESCRIPTION: QTY .: OTY .: OTHER: SHELBY TUBE: WELL SIZE: ATV GATOR: **BENTONITE CHIPS:** WELL TYPE: AIR COMPRESSOR: OTHER: QUIK-GEL: CASING: CORE BOX: OTHER: QUIK- GROUT: SCREEN: **DECON TRAILER:** OTHER: 10/20 SAND: SLOPE CASING: **EROSION CONTROL:** OTHER: **OTHER SAND:** CAPS/PLUGS: **GENERATOR:** OTHER: **REDIMIX:** MONUMENT FLUSH: OTHER: OTHER: CEMENT: **MONUMENT STAND-UP:** PERISTALIC PUMP: OTHER: EZ STREET: **BOLLARDS: PISTON SAMPLER:** OTHER: JET SET: DRUMS FOR DISPOSAL: PPE: OTHER: PEA GRAVEL: **DRUMS LEFT ONSITE:** VISQUEEN: OTHER: CLIENT APPROVALS (Ensures Client's figures agree with Holocene Drilling, Inc. figures) **OVERTIME APPROVAL:** DRILLER'S ASSISTANT: **CLIENT SIGNATURE:** DRILLER'S ASSISTANT: Thank you for choosing Holocene Drilling, Inc. LEAD DRILLER SIGNATURE: We appreciate your business today! www.holocenedrillinginc.com **DIRECT PUSH HOLLOW STEM AUGER MUD ROTARY** AIR/ODEX ROCK CORING DEWATERING

Chain of Custody Record	Anternal: at at a the second s	Commerts/Depth		g Mn Mo Na M Papers Sr Sn Ti Ti U V Zn	Special Remarits:	HEAS TAT -> Next Day 2 Day 3 Day STD
*	9/5/14 14-14 14-14-14-14 14-14-14-14	63-C-12-12-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2		and involved and all As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg	Fluoride s are retained after	Received Date Time 961
Fremont	* 45	- E	MW-4 (0:00 L		*Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants Lin **Aniona (Circle): Nitrate Nitrite Chloride Sulfate Bron sumole Disposal:	A 9/5/14 13:45 Date/Time

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Distribution: White - Lab, Vellow - File, Pinit - Originator

STANTEC MONITORING WELL PURGING AND SAMPLING PROCEDURES

Monitoring well purging and sampling was conducted using U.S. Environmental Protection Agency (EPA) approved low-flow sampling techniques.

Purging Procedures

- A. Using a decontaminated instrument (i.e., tape measure, continuity meter, or interface probe) measure the depth to groundwater in reference to the measuring point at the top of the casing. Measure the total depth of the well to calculate the height and volume of water in the borehole.
- B. Based on previously obtained data, if a monitoring well is suspected of containing liquid-phase hydrocarbon (LPH) concentrations, lower a transparent bailer into the well to evaluate the presence of a LPH sheen on the water table.
- C. Decontaminate the purge pump and/or PVC bailers by scrubbing in Alconox detergent solution, followed by a tap water rinse and then a deionized water rinse.
- D. Purge, by low-flow pumping (less than 0.5 liters per minute) for approximately five minutes. If low-flow purging is not possible and bailing is used to purge the well, then a minimum of three well volumes will be removed. If the well goes dry, the procedure listed in step E2 (below) should be followed. Parameters should be measured after each ½-casing volume is removed.
- E. Conduct field measurements (i.e., pH, specific conductivity, temperature, and oxidation-reduction potential) note clarity, color, turbidity, and odor of purge water, and measure depth to groundwater.
 - 1. If the well has not been purged dry, continue to pump and conduct field measurements (including depth to water) again every five minutes during purging.
 - a) If the first through third series of measurements vary by less than 10 percent, the well has been adequately purged. Allow the well to recover to 80 percent of its static condition and begin the sampling procedure.
 - b) If the measurements vary by 10 percent or greater, repeat Step E1 above.
 - c) If a minimum of three parameters cannot be measured during purging, remove three well volumes prior to sampling.
 - 2. If the well has been purged dry, measure the water level and allow the well to recharge to 80 percent, or for two hours, whichever occurs first. Calculate the percent recovery, and begin the sampling procedure.

Sampling Procedures

- Use the pump to collect the groundwater sample.
- Transfer the groundwater sample into the appropriate container(s). Where applicable, some containers are completely filled to achieve zero headspace. Label the samples according to location and date of collection.
- Enter the samples into Chain-of-Custody and preserve on ice until delivery to the analytical laboratory. Complete the Well Development or Purging/Sampling Log to be stored in the project file.

When requested by the client, collect a bailer rinse blank of deionized water to check decontamination procedure. In addition, trip blanks prepared by the laboratory and kept with the samples may be included to check for cross contamination of samples within the cooler. Additional and/or alternate QA/QC samples can be collected and analyzed upon client request.

APPENDIX B LABORATORY REPORTS AND CHAIN-OF-CUSTORY DOCUMENTATION UST SYSTEM REMOVAL REPORT 7-ELEVEN STORE NO. 25983

January 6, 2015



Diagon print	sion and return to	o the Department	of Ecology
RESOURCE PROTECTION W	FIL REPORT	CURRENT N	otice of Intent No. <u>AE29055</u>
(SUBMIT ONE WELL REPORT PER WELL	INSTALLED)		Type of Well ("x in box)
(SUBMIT ONE WELL REPORT FER (1222) Construction/Decommission ("x" in box)			Resource Protection
			Geotech Soil Boring
57 D	7.	Property Owner 7Elev	ven Inc #25983
ODICINAL INSTALLATION Notice of Intent IVU	mber:	City Address 3541 Ma	artin Way E
<u>R044114</u>		City Olympia	County Thurston
Consulting Firm Unique Ecology Well IDTag NoAER -	026	$U_{\rm restion} NE1/4-1/4 S$	<u>SE</u> 1/4 Sec <u>18</u> Twn <u>18</u> R <u>01</u>
Unique Ecology Well IDTag No	0.50	EWM C or WWM	$\overline{\mathbf{X}}$
THE REPORT OF THE CATION	I constructed and/or		Lat Deg Min Sec
WELL CONSTRUCTION CERTIFICATION accept responsibility for construction of this well, and its co Washington well construction standards. Materials used ar	id the information	Lat/Long (s, t, r	
Washington well construction standards. Materials are reported above are true to my best knowledge and belief.	•	still REQUIRED)	Long DegMinSec
Taninge	:	Tax Parcel No. <u>99000</u>	<u>1990600</u>
⊠ Driller ☐ Engineer ☐ Hanted Name (Print Last, First Name) <u>Peterson, Trevor</u>		Cased or Uncased Di	ameter 2 Static Level
Name (Print Last, First Name) <u>receiver</u> <u>Horse</u> Driller/Engineer /Trainee Signature Driller or Trainee License No. <u>3008</u>		Work/Decommission	1 Start Date 10/6/14
	- -		Completed Date 10/6/14
If trainee, licensed driller's Signature and L	icense Number:	Work/Decommission	
11 trainee, neensed drame a g			· · ·
	Well	Data	Formation Description
Construction Design			
	MONUMENT TY		FORMATION NOT OBSERVED - WELL
	flush mou	ur_	WAS DECOMMISSIONED
	•	Ω	
	REMOVED MONU	MENT: CES/NO	REMOVED MONUMENT: YES / NO
		:	
			WELL WAS CHIPPED/GROUTED IN
			PLACE
	PVC BLANK:		ALL CASING WAS REMOVED AND
			BACKFILLED BOTTOM UP
	SCREEN:		
			х.
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	WELL DEPTH:	.16	
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tereseted.	SCALE: 1"=	PAGE OF	Feelogy is an Equal Opportunity Employ

er Ecology is an Equal Opportur nty

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	, sign and return to	o the Department	of Ecology
		CURRENT N	otice of Intent No. AE29055
RESOURCE PROTECTION W			
SUBMIT ONE WELL REPORT PER WELL	L INSTALLED)		Type of Well ("x in box)
Construction/Decommission ("x" in box)			Resource Protection Geotech Soil Boring
Construction			
Decommission	imher.	Property Owner <u>7Eler</u>	ven Inc #25983
ORIGINAL INSTALLATION Notice of Intent Nu		Site Address 3541 M	artin Way E
R D 44114		City Olympia	County Thurston
Consulting Firm Unique Ecology Well IDTag No	020	City Olympia	<u>SE</u> 1/4 Sec <u>18</u> Twn <u>18</u> R <u>01</u>
Unique Ecology Well IDTag No	837		
TO TOTION CEPTIFICATION	I constructed and/or	EWM 🗌 or WWM	X
		Lat/Long (s, t, r	Lat Deg MinSec
and the stand construction standards. Materials about a	nd the information	still REQUIRED)	Long DegMinSec
reported above are true to my best knowledge and belief.			0990600
Driller 🖸 Engineer 🗋 Traince		Tax Parcel No. <u>99000</u>	1990000
Moriller Chargeneer Chargeneer Chargeneer Name Name (Print Last, First Name) Peterson, Trevor Driller/Engineer /Trainee Signature		Cased or Uncased D	iameter <u>2</u> Static Level
Driller or Trainee License No. 3008	· ·	Work/Decommission	1 Start Date 10/6/14
		Work/Decommissio	a Completed Date 10/6/14
If trainee, licensed driller's Signature and L	icense Number:	WOIN DOCOMINISON	
	Well	Data	Formation Description
Construction Design	and the second		
	MONUMENT TYP		FORMATION NOT OBSERVED - WELL
	flush mou	unt_	WAS DECOMMISSIONED
		<u> </u>	
	REMOVED MONUM	MENT: MES/NO	
	REMOVED MONOI		REMOVED MONUMENT: YES / NO
			-
			WELL WAS CHIPPED/GROUTED IN
			PLACE
	PVC BLANK:		□ ALL CASING WAS REMOVED AND
			BACKFILLED BOTTOM UP
	SCREEN:		
	WELL DEPTH:	36	
	WELL DEPIH:		
		DIOF 7 OF 7	
	SCALE: 1"=	PAGE 2 OF 2	- Ecology is an Equal Opportunity Employ

/er Ecology is an Equal Oppo nty Empi

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October 16, 2014

Paul Fairbairn Stantec Consulting Corp. 11130 NE 33rd Place, Suite 200 Bellevue, WA 98004

Dear Mr. Fairbairn:

Please find enclosed the analytical data report for the 7-Eleven #25983 Project in Olympia, Washington. Soil samples were analyzed for Gasoline by NWTPH-Gx and BTEX by Method 8260 on October 15, 2014.

The results of the analyses are summarized in the attached tables. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed for your records.

ESN Northwest appreciates the opportunity to have provided services to ESA Assoc. for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

michael a Korner

Michael A. Korosec President

Stantec Consulting PROJECT 25983 UST REMOVAL 2014 Olympia, Washington

ESN Northwest 1210 Eastside Street SE Suite 200 Olympia, WA 98501 (360) 459-4670 (360) 459-3432 Fax lab@esnnw.com

Analysis of Gasoline Range Organics & BTEX in Soil by Method NWTPH-Gx/8260

Sample	Date	Date	Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline Range Organics	Surrogate
Number	Prepared	Analyzed	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	Recovery (%)
Method Blank	10/15/2014	10/15/2014	nd	nd	nd	nd	nd	118
LCS	10/15/2014	10/15/2014	84%	91%	%68	94%	111%	105
CSD	10/15/2014	10/15/2014	78%	85%	85%	%06	I	103
OUTHWALL@18	10/15/2014	10/15/2014	nd	nd	0.09	1.8	280	115
NORTHWALL@18'	10/15/2014	10/15/2014	nd	nd	nd	nd	24	116
Reporting Limits			0.02	0.05				
"" Indicates not tested for component. "nd" Indicates not detected at the listed detection limits. "int" Indicates that interference prevents determination.	or component.				0.05	0.15	10	÷
LCSD SOUTHWALL@18' NORTHWALL@18' Reporting Limits "" Indicates not tested fo "nd" Indicates not detected "int" Indicates that interfer	10/15/2014 10/15/2014 10/15/2014 10/15/2014 or component.	10/15/2014 10/15/2014 10/15/2014 10/15/2014	78% nd nd 0.02	85% nd 0.05	85% nd	90% 1.8	280 24	103 115 116

Olympia, Washington 98501	1210 Eastside Street SE, Suite 200		RELINQUISHED BY (Signature)	- Inni		RELINQUISHED BY (Signature)	18.	17.	16.	15.	14.	13.	12.	11.	10.	9,	8,	7.	6.	5.	4.	3. North wall Ele	2.	1. Scoto puall C	Sample Number	CLIENT PROJECT	PHONE: 3.06	ADDRESS:	CLIENT: 7	ESN I
98501	SE, Suite 200		ignature)			ignature)								A.								8 10'	}	131 81	er Depth	#:1857	\$69-833	Bellend	Stante	Environnental Services Network
			DATE/TIME	10-02	17-10	DATE/TIME																11:5 3:11	Ar. 41	INS BUT	Sample Time Type	50040	3	2 4	C Cno	oik
				114	10																	1404		340001	le Container	PROJEC	FAX:	A)	Buttos	
			RECEIVED BY (Signature)	Comment -	And-	RECEIVED BY (Signature)																X		1	TPH-HCID	PROJECT MANAGER:			Server S	
Fa)	Phor		1		fr. 10	D																M			6	R: Rout to				
Fax: 360-459-3432	Phone: 360-459-4670		DATE/TIME		12-14	DATE/TIME																			Particion of	a webarrow				
2	70	NOTES:	SEALS INTACT? Y	CHAIN OF CUSIODI SEALS 1/11/14A	TOTAL NUMBER	the second																			10 10 10 10 10 10 10 10 10 10 10 10 10 1	COLLECTOR:	LOCATION:	PROJE	DATE:	
				OUT SEALS F/IN	OF CONTAINERS	SAMPLE RECEIPT					•													_	TSBESTOS		ON:	PROJECT NAME:	10-19	CH
				ANI	NIA SS	TOT																			Seco suite	NI Hon	Olym	7-Eleph	· Ict	AIN-OF
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E-Mail:	Website:	ound Time: 24 H	Fairbarrie	いち	P Diy T	LABORATORY NOTES:							*								c	2448		0 = 135 9	NOTES	COLLECTION:	EN A		1 OF	ODY R
E-Mail: infe@esnnw.com	Website: www.esnnw.com	4	EStr. or. LA		E																				Total Number of Containers Laboratory Note Number	ON: 1015-R			/	CHAIN-OF-CUSTODY RECORD

N.



October 22, 2014

Paul Fairbairn Stantec Consulting Corp. 11130 NE 33rd Place, Suite 200 Bellevue, WA 98004

Dear Mr. Fairbairn:

Please find enclosed the analytical data report for the 25983 UST RemovalProject in Olympia, Washington. One soil sample was analyzed for Gasoline by NWTPH-Gx, BTEX by Method 8260, and Pb by Method 6020 on October 15, 2014.

The results of the analyses are summarized in the attached tables. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed for your records.

ESN Northwest appreciates the opportunity to have provided services to ESA Assoc. for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

midweld for one

Michael A. Korosec President

Stantec Consulting PROJECT 25983 UST REMOVAL 2014 Olympia, Washington

ESN Northwest 1210 Eastside Street SE Suite 200 Olympia, WA 98501 (360) 459-4670 (360) 459-3432 Fax lab@esnnw.com

Analysis of Gasoline Range Organics & BTEX in Soil by Method NWTPH-Gx/8260

Sample	Date	Date	Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline Range Organics	Surrogate
Number	Prepared	Analyzed	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	Recovery (%
Method Blank	10/15/2014	10/15/2014	nd	nd	nd	nd	nd	118
LCS	10/15/2014	10/15/2014	84%	91%	89%	94%	111%	105
LCSD	10/15/2014	10/15/2014	78%	85%	85%	%06	I	103
NORTHWALL@16'	10/15/2014	10/15/2014	nd	nd	nd	nd	63	115
Reporting Limits			0.02	0.05	0.05	0.15	10	
"" Indicates not tested for component. "nd" Indicates not detected at the listed detection limits. "int" Indicates that interference prevents determination.	for component. led at the listed det ference prevents de	ection limits. stermination.						
ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Bromoflurorbenzene) & LCS: 65% TO 135%	/ERY LIMITS FO			1				
		R SURROGAT	E (Bromotiuro	roenzene) & L	,CS : 65% TO 135%			

Stantec Consulting PROJECT 25983 UST REMOVAL 2014 Olympia, Washington

ESN Northwest 1210 Eastside Street SE Suite 200 Olympia, WA 98501 (360) 459-4670 (360) 459-3432 Fax lab@esnnw.com

Analysis of Total Lead in Soil by Method 6020A/3050B

Sample	Date	Date	Lead (Pb)
Number	Prepared	Analyzed	(mg/kg)
Method Blank	10/15/2014	10/16/2014	nd
NORTHWALL@16'	10/15/2014	10/16/2014	nd
Reporting Limit			5.0

"nd" Indicates not detected at listed detection limits.

QA/QC Data - Analysis of Total Metals in Soil by Method 6020A/3050B

Sample Number:	QC Batch						
		Matrix Spike		Matr	ix Spike Du	plicate	RPD
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	(%)
Lead (Pb)	98.5	86.2	87.5	87.7	81.0	92.4	5.39
	Labora	atory Control S	Sample				
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)				
Lead (Pb)	100	86.1	86.1	3			

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 80%-120% ACCEPTABLE RPD IS 35%

1210 Eastside Street SE, Suite 200 Olympia, Washington 98501			RELINQUISHED BY (Signature) DATE/TIME	11. 41-00 - 2010		RELINQUISMED BY (Signature) DATE/TIME	18.	17.	16.	15.	14.	13.	12.	11.	10.	9.	<u>\$</u>	7.	6.	5.	4.	3	2.	5' 110' 1200 S	Sample Number Depth Time Type Ty	CLIENT PROJECT #: PRC	PHONE: 425-869-9448 ×143 FAX:	ADDRESS: 130 NE 33,1 PI	CLIENT: STANTEL CONSULTING	NORTHWEST, INC. Services Network
Phone: 360-459-4670 Fax: 360-459-3432	NO	RE	RECEIVED BY (Signature) DATE/TIME SE	LANNER WHEA WID "	VI 10 12-11	RECEIVED BY (Signature) DATE/TIME																		SX IIII	Container 737 751 751 751 551 551 551 551 555 555 55	UNARRAIR		SH 200		
	ITES:	RECEIVED GOOD COND./COLD	SEALS INTACT? Y/N/NA	CHAIN OF CUSTODY SEALS Y/N/NA	TOTAL NUMBER OF CONTAINERS	SAMPLE RECEIPT																		X		0	LOCATION: OLYMPIA, WA	PROJECT NAME: 15983 US	DATE: 10/15/14 PAGE	CHAIN-OF-CL
Website: www.esnnw.com E-Mail: infาะจัดรากพ.com	Turn Around Time: 24 MR 48 HR 5 DAY	CAME DAY			2	LABORATORY NOTES:																		150 mm 3	Total Number of Containers Laboratory Note Number	COLLECTION: 10/15/14		T REMOVAL 2014	GE / OF	CHAIN-OF-CUSTODY RECORD

1 5



November 5, 2014

Paul Fairbairn Stantec Consulting Corp. 11130 NE 33rd Place, Suite 200 Bellevue, WA 98004

Dear Mr. Fairbairn:

Please find enclosed the analytical data report for the 25983 UST Removal Project in Olympia, Washington. One soil sample was analyzed for EDB/EDC/MTBE by Method 8260, Pb by Method 6020, Napththalene by Method 8270, and VPH by NWVPH on October 15 - 31, 2014.

The results of the analyses are summarized in the attached tables. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed for your records.

ESN Northwest appreciates the opportunity to have provided services to ESA Assoc. for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Michaela Koraec

Michael A. Korosec President

Stantec Consulting PROJECT 25983 UST REMOVAL 2014 Olympia, Washington

ESN Northwest 1210 Eastside Street SE Suite 200 Olympia, WA 98501 (360) 459-4670 (360) 459-3432 Fax lab@esnnw.com

Analysis of Volatile Organic Compounds in Soil by Method 8260C/5035

	RL	MB	LCS	LCSD	SOUTHWALL@18'
Date extracted		10/15/14	10/15/14	10/15/14	10/15/14
Date analyzed	(mg/Kg)	10/15/14	10/15/14	10/15/14	10/15/14
% Moisture	_				11%
Methyl-t-butyl ether (MTBE)	0.05	nd	113%	110%	nd
1,2-Dichloroethane (EDC)	0.05	nd	89%	84%	nd
1,2-Dibromoethane (EDB)	0.01	nd	88%	84%	nd
Surrogate recoveries					
Dibromofluoromethane		94%	97%	98%	100%
Toluene-d8		110%	100%	101%	111%
4-Bromofluorobenzene		118%	105%	103%	115%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits Acceptable Recovery limits: 65% TO 135% Acceptable RPD limit: 35%

Stantec Consulting PROJECT MYRTLE STREET SITE PROJECT #185750299 Hoquaim, Washington ESN Northwest 1210 Eastside Street SE Suite 200 Olympia, WA 98501 (360) 459-4670 (360) 459-3432 Fax lab@esnnw.com

Analysis of Polynuclear Aromatic Hydrocarbons in Soil by Method 8270 Analytical Results MTH BLK LCS South Wall @18' Date extracted 10/21/14 10/21/14 10/21/14 Reporting Date analyzed Limits 10/21/14 10/21/14 10/21/14 Moisture, % (mg/kg) 11% Naphthalene 0.02 125% 0.02 nd 2-Methylnaphthalene 0.02 nd 124% 0.22 1-Methylnaphthalene 0.02 nd 0.12 ns **Total Carcinogens** nd Surrogate recoveries: 2-Fluorobiphenyl 105% 102% 113% p-Terphenyl-d14 115% 110% 120%

Data Qualifiers and Analytical Comments

* - Carcinogenic Analyte

nd - not detected at listed reporting limits ns - not spiked Results reported on dry-weight basis Acceptable Recovery limits: 50% TO 150% Acceptable RPD limit: 35%

ESN NORTHWEST CHEMISTRY LABORATORY

Stantec Consulting PROJECT 25983 UST REMOVAL 2014 Olympia, Washington ESN Northwest 1210 Eastside Street SE Suite 200 Olympia, WA 98501 (360) 459-4670 (360) 459-3432 Fax lab@esnnw.com

Analysis of Total Lead in Soil by Method 6020A/3050B

Sample	Date	Date	Lead (Pb)
Number	Prepared	Analyzed	(mg/kg)
Method Blank	10/22/2014	10/24/2014	nd
SOUTHWALL@18'	10/22/2014	10/24/2014	nd
Reporting Limit			5.0

"nd" Indicates not detected at listed detection limits.

QA/QC Data - Analysis of Total Metals in Soil by Method 6020A/3050B

Sample Number: (QC Batch										
0		Matrix Spike	•	Matr	Matrix Spike Duplicate						
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	(%)				
Lead (Pb)	88.9	92.1	104	92.6	96.7	104	0.80				
	Labora	atory Control	Sample	-) -:							
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	<u>.</u>							
Lead (Pb)	100	96.3	96.3								

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 80%-120% ACCEPTABLE RPD IS 35%



October 31, 2014

Mr. Steve Loague ESN 1210 Eastside St SE, Suite 200 Olympia, WA 98501

Dear Mr. Loague,

On October 21st, 1 sample was received by our laboratory and assigned our laboratory project number EV14100125. The project was identified as your Proj #25983 / Proj Name: UST Removal 2014. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Basin

Rick Bagan Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100. Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626 ALS Laboratory Group A Campbell Brothers Limited Company

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		GENTIFICATE	CARGE AND			NAMES OF STREET, STREE	- 201 (Balls 2023)		
CLIENT:	ESN			DATE:	10/31/2	2014			
	1210 Eastside St S			ALS JOB#:	EV14100125				
	Olympia, WA 9850	/1	-	ALS SAMPLE#:	EV14100125-01				
CLIENT CONTACT: CLIENT PROJECT:	Steve Loague			ATE RECEIVED:	10/21/2				
OLIENT FROJECT	2014	Name: UST Removal	COL	LECTION DATE:	10/15/2	2014 2:20:0	00 PM		
CLIENT SAMPLE ID	South Wall @ 18"		WDOE AG	CCREDITATION:	C601				
		SAMPLE DAT	A RESULTS	and an and the second		NA NUMBER	HE . THEY S	200	
			REPORTING	DILUTION			ANALYSIS	-	
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY		
C5-C6 Aliphatics	NWVPH	U	5.0	1	MG/KG	10/27/2014	DLC		
>C6-C8 Aliphatics	NWVPH	6.3	5.0	1	MG/KG	10/27/2014	DLC		
>C8-C10 Aliphatics	NWVPH	6.0	5.0	1	MG/KG	10/27/2014	DLC		
>C10-C12 Aliphatics	NWVPH	U	5.0	1	MG/KG	10/27/2014	DLC		
>C8-C10 Aromatics	NWVPH	26	5.0	1	MG/KG	10/27/2014	DLC		
>C10-C12 Aromatics	NWVPH	64	5.0	1	MG/KG	10/27/2014	DLC		
>C12-C13 Aromatics	NWVPH	48	5.0	1	MG/KG	10/27/2014	DLC		
Hexane	NWVPH	0.88	0.20	1	MG/KG	10/27/2014	DLC		
						ANALYSIS		ş	
SURROGATE	METHOD	%REC				DATE	BY		
TFT - Aliphatic	NWVPH	108				10/27/2014	DLC		
TFT - Aromatic	NWVPH	119				10/27/2014	DLC		
TFT - Hexane	NWVPH	112				10/27/2014	DLC		

CERTIFICATE OF ANALYSIS

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

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CLIENT: CLIENT CONTACT: CLIENT PROJECT:	ESN 1210 Eastside St SE, Suite 200 Olympia, WA 98501 Steve Loague Proj #25983 / Proj Name: UST Removal 2014	DATE: ALS SDG#: WDOE ACCREDITATION:	10/31/2014 EV14100125 C601
	LABORATORY B	LANK RESULTS	

atch R244002 - Soll by NWVPH

			REPORTING	DILUTION		ANALYSIS A	NALYSIS	
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY	
C5-C6 Aliphatics	NWVPH	U	5.0	1	MG/KG	10/27/2014	DLC	a a
>C6-C8 Aliphatics	NWVPH	υ	5.0	1	MG/KG	10/27/2014	DLC	ŭ.
>C8-C10 Aliphatics	NWVPH	U	5.0	1	MG/KG	10/27/2014	DLC	3
>C10-C12 Aliphatics	NWVPH	U	5.0	1	MG/KG	10/27/2014	DLC	
>C8-C10 Aromatics	NWVPH	U	5.0	1	MG/KG	10/27/2014	DLC	1
>C10-C12 Aromatics	NWVPH	U	5.0	1	MG/KG	10/27/2014	DLC	1
>C12-C13 Aromatics	NWVPH	U	5.0	1	MG/KG	10/27/2014	DLC	8
Hexane	NWVPH	U	0.20	1	MG/KG	10/27/2014	DLC	:
								-

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

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	CERTIFICATE	OF ANALYSIS	
CLIENT: CLIENT CONTACT:	ESN 1210 Eastside St SE, Suite 200 Olympia, WA 98501 Steve Loague	DATE: ALS SDG#: WDOE ACCREDITATION:	10/31/2014 EV14100125 C601
CLIENT PROJECT:	Proj #25983 / Proj Name: UST Removal 2014		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: R244002 - Soil by NWVPH

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
C5-C6 Aliphatics - BS	NWVPH	90.5			10/27/2014	DLC
C5-C6 Aliphatics - BSD	NWVPH	110	19		10/27/2014	DLC
>C6-C8 Aliphatics - BS	NWVPH	95.6			10/27/2014	DLC
>C6-C8 Aliphatics - BSD	NWVPH	111	15		10/27/2014	DLC
>C8-C10 Aliphatics - BS	NWVPH	84.3			10/27/2014	DLC
>C8-C10 Aliphatics - BSD	NWVPH	95.9	13		10/27/2014	DLC
>C10-C12 Aliphatics - BS	NWVPH	82.2			10/27/2014	DLC
>C10-C12 Aliphatics - BSD	NWVPH	96.0	16		10/27/2014	DLC
>C8-C10 Aromatics - BS	NWVPH	95.3			10/27/2014	DLC
>C8-C10 Aromatics - BSD	NWVPH	98.0	3		10/27/2014	DLC
>C10-C12 Aromatics - BS	NWVPH	90.6			10/27/2014	DLC
>C10-C12 Aromatics - BSD	NWVPH	102	12		10/27/2014	DLC
>C12-C13 Aromatics - BS	NWVPH	89.2			10/27/2014	
>C12-C13 Aromatics - BSD	NWVPH	119	28			DLC
Hexane - BS	NWVPH	103	20		10/27/2014	DLC
Hexane - BSD	NWVPH		10		10/27/2014	DLC
		125	19		10/27/2014	DLC

APPROVED BY

Laboratory Director

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Jennifer Arnold

From: Sent: To: Cc: Subject: Fairbairn, Paul [Paul.Fairbairn@stantec.com] Friday, October 17, 2014 4:07 PM Jennifer Arnold Harper, Emily RE: 25983 UST

Jennifer,

Thanks

Paul Fairbairn Project Manager Stantec 11130 NE 33rd Place, Suite 200, Bellevue WA 98004-1465 Phone: (425) 289-7343 Cell: (206) 369-8383 Fax: (425) 869-1190 Paul.Fairbairn@stantec.com

stantec.com

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Please consider the environment before printing this email.

----Original Message-----From: Jennifer Arnold [mailto:Lab@ESNNW.Com] Sent: Friday, October 17, 2014 4:02 PM To: Fairbairn, Paul Cc: Harper, Emily Subject: 25983 UST

Paul,

Here are the results for the sample submitted on the 15th.

Thanks

ESN Northwest Chemistry Laboratory 1210 Eastside St. SE Ste 200 Olympia, WA 98501 PH: 360-459-4670 FX: 360-459-3432 EM: <u>lab@esnnw.com</u>

PAGE / OF		n 25983	Olympia WA	•	NOTES	P10=1389		245 th = 010)														LABORATORY NOTES:	Same By TAT	Email to	pair. Farbairne SALAC.C.	Turn Around Time: 24 HR 48 HR 5 DAY	Website: www.esnnw.com E-Mail: info@esnnw.com	
	DATE: 10-15-14	PROJECT NAME: 2-EMEN 25983	LOCATION: O/Y	OR: Emily	00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																		SAMPLE RECEIPT	TOTAL NUMBER OF CONTAINERS CHAIN OF CLISTODY SEALS V/N/NA	SEALS INTACT? Y/N/NA	RECEIVED GOOD COND./COLD	NOTES:	0	
				Fairbairn	02120200000000000000000000000000000000	ÍÍÍ																	DATE/TIME	1 200	ų		ž	Phone: 360-459-4670 Fax: 360-459-3432	
	Spruce S			PROJECT MANAGER: Raul	22 22 22 22 22 22 22 22 22 22 22 22 22	X		$\gamma \gamma$															RECEIVED V (Signatury)	まえた	ED BV (Signature)				
	Sentiss no	6	FAX:	PROJECT			1	pan															RECEIV	14	RECEIVED BY				
	Con	AN, 9	a -	040	Sample Time Type		14:30	115 9:11														_	DATE/TIME	51-01	DATE/TIME				
	2 tan IC	Belfowl	-8383	85750	Depth	+ 181	14	1, 11																				200	
Tar		ADDRESS: <u><u><u></u><u></u><u><u></u><u></u><u></u><u><u></u><u></u><u></u><u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u></u></u></u></u>	PHONE: 206-369-8383	CLIENT PROJECT #:/ 85750040	Sample Number			3. Aoth wall P18 10	4.	5.	6.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	RELINQUISHED BY (Signature)	la l	REZINQUISHED BY (Signature)			1210 Eastside Street SF, Suite 200 Olympia, Washington 98501	,



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

Stantec Consulting Corporation Paul Fairbairn 11130 NE 33rd PI, Suite 200 Bellevue, WA 98004

RE: 1Q14 GWM 25983 Lab ID: 1404090

April 17, 2014

Attention Paul Fairbairn:

Fremont Analytical, Inc. received 5 sample(s) on 4/10/2014 for the analyses presented in the following report.

1,2-Dibromoethane (EDB) by EPA Method 8011 Gasoline by NWTPH-Gx Total Metals by EPA Method 200.8 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,

MGR

Michael Dee Sr. Chemist / Principal



CLIENT: Project: Lab Order:	Stantec Consulting Corporation 1Q14 GWM 25983 1404090	Work Order S	Sample Summary
Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1404090-001	MW-1	04/08/2014 10:15 AM	04/10/2014 9:00 AM
1404090-002	MW-2	04/08/2014 11:30 AM	04/10/2014 9:00 AM
1404090-003	MW-3	04/08/2014 12:00 PM	04/10/2014 9:00 AM
1404090-004	MW-4	04/08/2014 10:40 AM	04/10/2014 9:00 AM
1404090-005	MW-5	04/08/2014 9:20 AM	04/10/2014 9:00 AM



Case Narrative

WO#: **1404090** Date: **4/17/2014**

CLIENT:Stantec Consulting CorporationProject:1Q14 GWM 25983

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.



WO#: 1404090 Date Reported: 4/17/2014

Client: Stantec Consulting Corporat Project: 1Q14 GWM 25983	ion			Collection	Dat	e: 4/8/2014 10:15:00 AM
Lab ID: 1404090-001 Client Sample ID: MW-1				Matrix: W	'ater	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
1,2-Dibromoethane (EDB) by EPA I	Method 801	<u>1</u>		Batc	h ID:	7136 Analyst: PH
1,2-Dibromoethane (EDB)	ND	0.00922		µg/L	1	4/12/2014 12:37:00 AM
Gasoline by NWTPH-Gx				Batc	h ID:	R13620 Analyst: EM
Gasoline	ND	50.0		µg/L	1	4/14/2014 2:32:00 AM
Surr: 4-Bromofluorobenzene	101	65-135		%REC	1	4/14/2014 2:32:00 AM
Surr: Toluene-d8	98.1	65-135		%REC	1	4/14/2014 2:32:00 AM
Volatile Organic Compounds by EF	PA Method	<u>8260</u>		Batc	h ID:	R13621 Analyst: EM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	4/14/2014 2:32:00 AM
EDC	ND	1.00		µg/L	1	4/14/2014 2:32:00 AM
Benzene	ND	1.00		µg/L	1	4/14/2014 2:32:00 AM
Toluene	ND	1.00		µg/L	1	4/14/2014 2:32:00 AM
Ethylbenzene	ND	1.00		µg/L	1	4/14/2014 2:32:00 AM
m,p-Xylene	ND	1.00		µg/L	1	4/14/2014 2:32:00 AM
o-Xylene	ND	1.00		µg/L	1	4/14/2014 2:32:00 AM
Surr: Dibromofluoromethane	101	61.7-130		%REC	1	4/14/2014 2:32:00 AM
Surr: Toluene-d8	98.5	62.1-129		%REC	1	4/14/2014 2:32:00 AM
Surr: 1-Bromo-4-fluorobenzene	101	66.8-124		%REC	1	4/14/2014 2:32:00 AM
Total Metals by EPA Method 200.8				Batc	h ID:	7122 Analyst: MC
Lead	1.77	1.00		µg/L	1	4/11/2014 5:34:16 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for pre
	J	Analyte detected below quantitation limits	ND	Not detected at the F

RL Reporting Limit

- ed
- reparation or analysis exceeded
- **Reporting Limit**

S Spike recovery outside accepted recovery limits



WO#: **1404090** Date Reported: **4/17/2014**

Client: Stantec Consulting Corporat Project: 1Q14 GWM 25983	ion			Collection	Date:	4/8/2014 11:30:00 AM
Lab ID: 1404090-002 Client Sample ID: MW-2				Matrix: W	ater	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
1,2-Dibromoethane (EDB) by EPA	Nethod 801	<u>1</u>		Batc	h ID: 7′	136 Analyst: PH
1,2-Dibromoethane (EDB)	ND	0.00932		μg/L	1	4/12/2014 12:48:00 AM
Gasoline by NWTPH-Gx				Batcl	h ID: R	13620 Analyst: EM
Gasoline	ND	50.0		µg/L	1	4/14/2014 3:01:00 AM
Surr: 4-Bromofluorobenzene	98.0	65-135		%REC	1	4/14/2014 3:01:00 AM
Surr: Toluene-d8	99.4	65-135		%REC	1	4/14/2014 3:01:00 AM
Volatile Organic Compounds by EF	PA Method	<u>8260</u>		Batcl	h ID: R	13621 Analyst: EM
Methyl tert-butyl ether (MTBE)	ND	1.00		μg/L	1	4/14/2014 3:01:00 AM
1,2-Dichloroethane	ND	1.00		µg/L	1	4/14/2014 3:01:00 AM
Benzene	ND	1.00		µg/L	1	4/14/2014 3:01:00 AM
Toluene	ND	1.00		µg/L	1	4/14/2014 3:01:00 AM
Ethylbenzene	ND	1.00		µg/L	1	4/14/2014 3:01:00 AM
m,p-Xylene	ND	1.00		µg/L	1	4/14/2014 3:01:00 AM
o-Xylene	ND	1.00		µg/L	1	4/14/2014 3:01:00 AM
Surr: Dibromofluoromethane	102	61.7-130		%REC	1	4/14/2014 3:01:00 AM
Surr: Toluene-d8	101	62.1-129		%REC	1	4/14/2014 3:01:00 AM
Surr: 1-Bromo-4-fluorobenzene	99.7	66.8-124		%REC	1	4/14/2014 3:01:00 AM
Total Metals by EPA Method 200.8				Batcl	h ID: 7′	122 Analyst: MC
Lead	13.2	1.00		µg/L	1	4/11/2014 5:46:21 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution
	Е	Value above quantitation range	Н	Holding
		A 1 1 1 1 1 1 1 1 1 1		

J Analyte detected below quantitation limits

RL Reporting Limit

- D Dilution was required
- H Holding times for preparation or analysis exceeded

ND Not detected at the Reporting Limit

S Spike recovery outside accepted recovery limits



WO#: 1404090 Date Reported: 4/17/2014

Client: Stantec Consulting Corporat Project: 1Q14 GWM 25983	ion			Collection	Date	: 4/8/2014 12:00:00 PM
Lab ID: 1404090-003 Client Sample ID: MW-3				Matrix: W	ater	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
1,2-Dibromoethane (EDB) by EPA	Method 801	<u>1</u>		Batc	h ID:	7136 Analyst: PH
1,2-Dibromoethane (EDB)	ND	0.00969		µg/L	1	4/12/2014 12:53:00 AM
Gasoline by NWTPH-Gx				Batcl	h ID: I	R13620 Analyst: EM
Gasoline	ND	50.0		µg/L	1	4/14/2014 3:31:00 AM
Surr: 4-Bromofluorobenzene	102	65-135		%REC	1	4/14/2014 3:31:00 AM
Surr: Toluene-d8	99.5	65-135		%REC	1	4/14/2014 3:31:00 AM
Volatile Organic Compounds by EF	PA Method	<u>8260</u>		Batc	h ID: I	R13621 Analyst: EM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	4/14/2014 3:31:00 AM
1,2-Dichloroethane	ND	1.00		µg/L	1	4/14/2014 3:31:00 AM
Benzene	ND	1.00		µg/L	1	4/14/2014 3:31:00 AM
Toluene	ND	1.00		µg/L	1	4/14/2014 3:31:00 AM
Ethylbenzene	ND	1.00		µg/L	1	4/14/2014 3:31:00 AM
m,p-Xylene	ND	1.00		µg/L	1	4/14/2014 3:31:00 AM
o-Xylene	ND	1.00		µg/L	1	4/14/2014 3:31:00 AM
Surr: Dibromofluoromethane	99.1	61.7-130		%REC	1	4/14/2014 3:31:00 AM
Surr: Toluene-d8	100	62.1-129		%REC	1	4/14/2014 3:31:00 AM
Surr: 1-Bromo-4-fluorobenzene	101	66.8-124		%REC	1	4/14/2014 3:31:00 AM
Total Metals by EPA Method 200.8				Batcl	h ID: 1	7122 Analyst: MC
Lead	6.10	1.00		µg/L	1	4/11/2014 5:58:27 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution w
	Е	Value above quantitation range	Н	Holding ti
	1	Analyta datacted below quantitation limits		Not dotoo

Analyte detected below quantitation limits J

RL Reporting Limit

- was required
- times for preparation or analysis exceeded

ND Not detected at the Reporting Limit

S Spike recovery outside accepted recovery limits



WO#: 1404090 Date Reported: 4/17/2014

Client: Stantec Consulting Corporat Project: 1Q14 GWM 25983	ion			Collection	Date	e: 4/8/2014 10:40:00 AM
Lab ID: 1404090-004 Client Sample ID: MW-4				Matrix: W	ater	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
1,2-Dibromoethane (EDB) by EPA	Method 801	<u>1</u>		Batc	h ID:	7136 Analyst: PH
1,2-Dibromoethane (EDB)	ND	0.00952		µg/L	1	4/12/2014 12:59:00 AM
Gasoline by NWTPH-Gx				Batc	h ID:	R13620 Analyst: EM
Gasoline	ND	50.0		µg/L	1	4/14/2014 4:01:00 AM
Surr: 4-Bromofluorobenzene	102	65-135		%REC	1	4/14/2014 4:01:00 AM
Surr: Toluene-d8	99.5	65-135		%REC	1	4/14/2014 4:01:00 AM
Volatile Organic Compounds by EF	PA Method	<u>8260</u>		Batc	h ID:	R13621 Analyst: EM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	4/14/2014 4:01:00 AM
1,2-Dichloroethane	ND	1.00		µg/L	1	4/14/2014 4:01:00 AM
Benzene	ND	1.00		µg/L	1	4/14/2014 4:01:00 AM
Toluene	ND	1.00		µg/L	1	4/14/2014 4:01:00 AM
Ethylbenzene	ND	1.00		µg/L	1	4/14/2014 4:01:00 AM
m,p-Xylene	ND	1.00		µg/L	1	4/14/2014 4:01:00 AM
o-Xylene	ND	1.00		µg/L	1	4/14/2014 4:01:00 AM
Surr: Dibromofluoromethane	102	61.7-130		%REC	1	4/14/2014 4:01:00 AM
Surr: Toluene-d8	99.8	62.1-129		%REC	1	4/14/2014 4:01:00 AM
Surr: 1-Bromo-4-fluorobenzene	102	66.8-124		%REC	1	4/14/2014 4:01:00 AM
Total Metals by EPA Method 200.8				Batc	h ID:	7122 Analyst: MC
Lead	6.48	1.00		µg/L	1	4/11/2014 6:10:33 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting

RL Reporting Limit

on or analysis exceeded

ng Limit

S Spike recovery outside accepted recovery limits



WO#: **1404090** Date Reported: **4/17/2014**

Client: Stantec Consulting Corporat Project: 1Q14 GWM 25983	ion			Collection	Dat	e: 4/8/2014 9:20:00 AM
Lab ID: 1404090-005 Client Sample ID: MW-5				Matrix: W	ater	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
1,2-Dibromoethane (EDB) by EPA M	Method 801	<u>1</u>		Batc	h ID:	7136 Analyst: PH
1,2-Dibromoethane (EDB)	ND	0.00962		µg/L	1	4/12/2014 1:10:00 AM
Gasoline by NWTPH-Gx				Batcl	h ID:	R13620 Analyst: EM
Gasoline	ND	50.0		µg/L	1	4/14/2014 4:30:00 AM
Surr: 4-Bromofluorobenzene Surr: Toluene-d8	102 99.9	65-135 65-135		%REC %REC	1 1	4/14/2014 4:30:00 AM 4/14/2014 4:30:00 AM
Volatile Organic Compounds by EF	A Method	<u>8260</u>		Batc	h ID:	R13621 Analyst: EM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	4/14/2014 4:30:00 AM
1,2-Dichloroethane	ND	1.00		μg/L	1	4/14/2014 4:30:00 AM
Benzene	ND	1.00		μg/L	1	4/14/2014 4:30:00 AM
Toluene	ND	1.00		µg/L	1	4/14/2014 4:30:00 AM
Ethylbenzene	ND	1.00		μg/L	1	4/14/2014 4:30:00 AM
m,p-Xylene	ND	1.00		μg/L	1	4/14/2014 4:30:00 AM
o-Xylene	ND	1.00		µg/L	1	4/14/2014 4:30:00 AM
Surr: Dibromofluoromethane	101	61.7-130		%REC	1	4/14/2014 4:30:00 AM
Surr: Toluene-d8	101	62.1-129		%REC	1	4/14/2014 4:30:00 AM
Surr: 1-Bromo-4-fluorobenzene	101	66.8-124		%REC	1	4/14/2014 4:30:00 AM
Total Metals by EPA Method 200.8				Batcl	h ID:	7122 Analyst: MC
Lead	2.51	1.00		µg/L	1	4/11/2014 6:22:38 AM

Qualifiers:	В	Analyte detected in the associated Method Blank
	Е	Value above quantitation range

J Analyte detected below quantitation limits

RL Reporting Limit

- D Dilution was required
- H Holding times for preparation or analysis exceeded
- ND Not detected at the Reporting Limit

S Spike recovery outside accepted recovery limits



Work Order:1404090CLIENT:Stantec CoProject:1Q14 GWN	onsulting Corporation M 25983						•	SUMMARY REP als by EPA Method	-
Sample ID: MB-7122	SampType: MBLK			Units: µg/L		Prep Date: 4/		RunNo: 13540	
Client ID: MBLKW	Batch ID: 7122					Analysis Date: 4/	11/2014	SeqNo: 273292	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit High	Limit RPD Ref Val	%RPD RPDLimit	Qual
Lead	ND	1.00							
Sample ID: LCS-7122	SampType: LCS			Units: µg/L		Prep Date: 4/	/10/2014	RunNo: 13540	
Client ID: LCSW	Batch ID: 7122					Analysis Date: 4/	11/2014	SeqNo: 273293	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit High	Limit RPD Ref Val	%RPD RPDLimit	Qual
Lead	42.6	1.00	50.00	0	85.2	85	115		
Sample ID: 1404079-001ADUP	SampType: DUP			Units: µg/L		Prep Date: 4/	/10/2014	RunNo: 13540	
Client ID: BATCH	Batch ID: 7122					Analysis Date: 4/	11/2014	SeqNo: 273297	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit High	Limit RPD Ref Val	%RPD RPDLimit	Qual
Lead	4.00	1.00					3.961	0.955 30	
Sample ID: 1404079-001AMS	SampType: MS			Units: µg/L		Prep Date: 4/	/10/2014	RunNo: 13540	
Client ID: BATCH	Batch ID: 7122					Analysis Date: 4/	11/2014	SeqNo: 273298	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit High	Limit RPD Ref Val	%RPD RPDLimit	Qual
Lead	211	1.00	250.0	3.961	82.9	70	130		
Sample ID: 1404079-001AMSD	SampType: MSD			Units: µg/L		Prep Date: 4/	/10/2014	RunNo: 13540	
Client ID: BATCH	Batch ID: 7122					Analysis Date: 4/	11/2014	SeqNo: 273299	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit High	Limit RPD Ref Val	%RPD RPDLimit	Qual
Lead	199	1.00	250.0	3.961	78.0	70	130 211.1	5.90 30	
	the associated Method Blank reparation or analysis exceeded oted recovery limits			as required tected below quantitation I Limit	mits	E ND S	Value above quantitation ra Not detected at the Report Spike recovery outside acc	ting Limit	



Work Order: CLIENT: Project:	1404090 Stantec Con 1Q14 GWM	•	poration					1,2-	Dibrom	QC S oethane (E	SUMMAI DB) by EP		
Sample ID: MB-713	36	SampType	MBLK			Units: µg/L		Prep Dat	ie: 4/11/20)14	RunNo: 13	564	
Client ID: MBLKV	V	Batch ID:	7136					Analysis Dat	e: 4/12/20	014	SeqNo: 273	3866	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane ((EDB)		ND	0.0100									
Sample ID: LCS-71	36	SampType	LCS			Units: µg/L		Prep Dat	e: 4/11/2 (014	RunNo: 13	564	
Client ID: LCSW		Batch ID:	7136					Analysis Dat	e: 4/12/20	014	SeqNo: 273	3867	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane ((EDB)		1.04	0.0100	1.000	0	104	60	140				
Sample ID: 140409	0-001BDUP	SampType	DUP			Units: µg/L		Prep Dat	ie: 4/11/2 0)14	RunNo: 13	564	
Client ID: MW-1		Batch ID:	7136					Analysis Dat	e: 4/12/20	014	SeqNo: 273	3869	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane ((EDB)		ND	0.00941						0		30	
Sample ID: 140409	0-004BMS	SampType	MS			Units: µg/L		Prep Dat	ie: 4/11/20)14	RunNo: 13	564	
Client ID: MW-4		Batch ID:	7136					Analysis Dat	e: 4/12/20)14	SeqNo: 27:	3873	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane ((EDB)		0.957	0.00942	0.9423	0	102	60	140				

Qualifiers:

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

- D Dilution was required
- J Analyte detected below quantitation limits
- RL Reporting Limit

- E Value above quantitation range
- ND Not detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

CLIENT:	1404090 Stantec Cor 1Q14 GWM	-	rporation							QC S	SUMMAI Gasoline		
Sample ID: 1404091	1-009ADUP	SampType	DUP			Units: µg/L		Prep Date	e: 4/14/20 °	14	RunNo: 136	520	
Client ID: BATCH		Batch ID:	R13620					Analysis Date	e: 4/14/20 °	14	SeqNo: 275	6025	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			ND	50.0						0		30	
Surr: Toluene-d8			50.5		50.00		101	65	135		0	0	
Surr: 4-Bromofluor	robenzene		48.9		50.00		97.8	65	135		0	0	
Sample ID: LCS-R1	3620	SampType	LCS			Units: µg/L		Prep Date	e: 4/13/20 °	14	RunNo: 136	620	
Client ID: LCSW		Batch ID:	R13620					Analysis Date	e: 4/13/20 °	14	SeqNo: 27	6028	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			473	50.0	500.0	0	94.5	65	135				
Surr: Toluene-d8			50.5		50.00		101	65	135				
Surr: 4-Bromofluor	robenzene		49.9		50.00		99.8	65	135				
Sample ID: MB-R13	3620	SampType	BLK			Units: µg/L		Prep Date	e: 4/13/20 °	14	RunNo: 136	520	
Client ID: MBLKW	v	Batch ID:	R13620					Analysis Date	e: 4/13/20 °	14	SeqNo: 275	6029	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			ND	50.0									
Surr: Toluene-d8			50.4		50.00		101	65	135				
Surr: 4-Bromofluor	robenzene		50.8		50.00		102	65	135				

Qualifiers:

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

- D Dilution was required
- J Analyte detected below quantitation limits
- RL Reporting Limit

- E Value above quantitation range
- ND Not detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits





Work Order: 1404090

Project:

CLIENT: Stantec Consulting Corporation

1Q14 GWM 25983

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID: 1404091-009ADUP	SampType: DUP			Units: µg/L		Prep Da	ite: 4/14/20)14	RunNo: 136	621	
Client ID: BATCH	Batch ID: R13621					Analysis Da	te: 4/14/20)14	SeqNo: 275	5049	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,2-Dichloroethane	ND	0.500						0		30	
Benzene	ND	0.500						0		30	
Toluene	ND	0.500						0		30	
Ethylbenzene	ND	0.500						0		30	
m,p-Xylene	ND	0.500						0		30	
o-Xylene	ND	0.500						0		30	
Surr: Dibromofluoromethane	49.9		50.00		99.8	61.7	130		0		
Surr: Toluene-d8	49.9		50.00		99.9	62.1	129		0		
Surr: 1-Bromo-4-fluorobenzene	49.6		50.00		99.1	66.8	124		0		

Sample ID: 1404092-001AMS Client ID: BATCH	SampType: MS Batch ID: R13621			Units: µg/L	Prep Date: 4/14/2014 Analysis Date: 4/14/2014				RunNo: 13621 SegNo: 275051			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit		RPD Ref Val	%RPD	RPDLimit	Qual	
Methyl tert-butyl ether (MTBE)	19.9	1.00	20.00	0	99.3	60.9	132					
1,2-Dichloroethane	21.2	0.500	20.00	0	106	63.4	137					
Benzene	20.4	0.500	20.00	0	102	65.4	138					
Toluene	20.4	0.500	20.00	0	102	64	139					
Ethylbenzene	19.7	0.500	20.00	0	98.4	64.5	136					
m,p-Xylene	39.1	0.500	40.00	0	97.7	63.3	135					
o-Xylene	19.4	0.500	20.00	0	96.9	65.4	134					
Surr: Dibromofluoromethane	49.2		50.00		98.4	61.7	130					
Surr: Toluene-d8	50.8		50.00		102	62.1	129					
Surr: 1-Bromo-4-fluorobenzene	52.4		50.00		105	66.8	124					

Qualifiers: B

н

R

Analyte detected in the associated Method Blank

RPD outside accepted recovery limits

Holding times for preparation or analysis exceeded

- D Dilution was required
- J Analyte detected below quantitation limits
 - RL Reporting Limit

- E Value above quantitation range
- ND Not detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits



1404090

Work Order:

Project:

CLIENT: Stantec Consulting Corporation

1Q14 GWM 25983

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

	120900											
Sample ID: LCS-R13621	SampType:	LCS			Units: µg/L		Prep Dat	e: 4/13/20	14	RunNo: 136	521	
Client ID: LCSW	Batch ID:	R13621					Analysis Dat	e: 4/13/20	14	SeqNo: 275	6057	
Analyte	F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Methyl tert-butyl ether (MTBE)		20.7	1.00	20.00	0	104	67.7	131				
1,2-Dichloroethane		22.0	0.500	20.00	0	110	70	129				
Benzene		21.3	0.500	20.00	0	107	76	123				
Toluene		21.1	0.500	20.00	0	105	71.5	130				
Ethylbenzene		20.4	0.500	20.00	0	102	72	130				
m,p-Xylene		40.3	0.500	40.00	0	101	73	131				
o-Xylene		20.0	0.500	20.00	0	100	72.1	131				
Surr: Dibromofluoromethane		50.5		50.00		101	61.7	130				
Surr: Toluene-d8		51.1		50.00		102	62.1	129				
Surr: 1-Bromo-4-fluorobenzene		50.6		50.00		101	66.8	124				
Sample ID: MB-R13621	SampType:	MBLK			Units: µg/L		Prep Dat	e: 4/13/20	14	RunNo: 136	621	
Client ID: MBLKW	Batch ID:	R13621					Analysis Dat	e: 4/13/20	14	SeqNo: 275	6058	
Analyte	F	Result	RL							%RPD	RPDLimit	Qua
				SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RED Rei Vai	70KFD		
vietnyi tert-butyi ether (MIBE)		ND	1.00	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RFD Rei Vai	70RFD		
, , , , , , , , , , , , , , , , , , ,				SPK value	SPK Ref Val	%REC	LowLimit	HighLimit		%RFD		
1,2-Dichloroethane		ND	1.00	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit		%RFD		
1,2-Dichloroethane Benzene		ND ND	1.00 0.500	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit		%RFU		
1,2-Dichloroethane Benzene Toluene		ND ND ND	1.00 0.500 0.500	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit		%RFD		
1,2-Dichloroethane Benzene Toluene Ethylbenzene m,p-Xylene		ND ND ND ND	1.00 0.500 0.500 0.500	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit		20KPU		
1,2-Dichloroethane Benzene Toluene Ethylbenzene m,p-Xylene		ND ND ND ND ND	1.00 0.500 0.500 0.500 0.500	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit		20KF U		
Methyl tert-butyl ether (MTBE) 1,2-Dichloroethane Benzene Toluene Ethylbenzene m,p-Xylene o-Xylene Surr: Dibromofluoromethane		ND ND ND ND ND ND	1.00 0.500 0.500 0.500 0.500 0.500	50.00	SPK Ref Val	%REC 104	LowLimit	HighLimit 130		20KF U		
1,2-Dichloroethane Benzene Toluene Ethylbenzene m,p-Xylene o-Xylene		ND ND ND ND ND ND ND	1.00 0.500 0.500 0.500 0.500 0.500		SPK Ref Val					20KF U		

Qualifiers: B An

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R

Analyte detected in the associated Method Blank

RPD outside accepted recovery limits

Holding times for preparation or analysis exceeded

- D Dilution was required
- J Analyte detected below quantitation limits
- RL Reporting Limit

- E Value above quantitation range
- ND Not detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits



Sample Log-In Check List

С	lient Name:	STANTEC	Work O	rder Number:	1404090	0
Lo	ogged by:	Chelsea Ward	Date Re	ceived:	4/10/20 ⁻	14 9:00:00 AM
Cha	ain of Cust	ody				
1.	Is Chain of Cu	ustody complete?	Yes	\checkmark	No 🗌	Not Present
2.	How was the	sample delivered?	<u>Clier</u>	<u>it</u>		
Log	ı In					
-	Coolers are p	resent?	Yes		No 🗌	
0.						
4.	Shipping cont	tainer/cooler in good condition?	Yes	\checkmark	No 🗌	
5.	Custody seals	s intact on shipping container/cooler?	Yes		No 🗌	Not Required 🗹
6.	Was an attem	npt made to cool the samples?	Yes	\checkmark	No 🗌	
7.	Were all coole	ers received at a temperature of >0°C to 10.0°C	Yes	\checkmark	No 🗌	
8.	Sample(s) in	proper container(s)?	Yes		No 🗌	
9.	Sufficient san	nple volume for indicated test(s)?	Yes	\checkmark	No 🗌	
10.	Are samples	properly preserved?	Yes	\checkmark	No 🗌	
11.	Was preserva	ative added to bottles?	Yes		No 🗹	NA 🗌
12	Is the headsp	ace in the VOA vials?	Yes		No 🔽	
		es containers arrive in good condition(unbroken)?	Yes	\checkmark	No 🗌	
14.	Does paperwo	ork match bottle labels?	Yes	\checkmark	No 🗌	
15	Are matrices	correctly identified on Chain of Custody?	Yes	\checkmark	No 🗌	
		at analyses were requested?	Yes	\checkmark	No 🗌	
17.	Were all holdi	ing times able to be met?	Yes	\checkmark	No 🗌	
Sne	cial Handl	ing (if applicable)				
-		tified of all discrepancies with this order?	Yes		No 🗌	NA 🗹
-	Person I		:			
	By Who	·	⊧ ⊡ eMa	il 🗌 Phone	e 🗌 Fax	In Person
	Regardi					
	Client In	istructions:				
19.	Regardi	ng:	eMa		e ∐ Fax	In Person

Item Information

Item #	Temp °C	Condition			
Cooler	6.8	Good			
Sample	7.7	Good			

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TAT -> SameDay^ NextDay^ 2 Day 3 Day STD Please coordinate with the lab in advance	Date/Time		Received		Date/Time		Relimquished
	HIDIU 9:00	0,-1	x A O	Sla	Date/Time 4/1/1/14	L.	Relinquished
		Disposal by Lab (A fee may be assessed it samples are retained after 30 days.)	may be assessed if sample	Disposal by Lab (A fee	Return to Client	۵	Sample Disposal:
Special Remarks:	Nitrate+Nitrite	Fluoride	de O-Phosphate	Sulfate Bromide	Nitrite Chloride	Nitrate	***Anions (Circle):
Na NIPDSb Se Sr Sn Ti TI U V Zn	Co Cr Cu Fe Hg K Mg Mn Mo	Al As B Ba Be Ca Cd	Individual: Ag	Priority Pollutants TAL	RCRA-8	Circle): MTCA-5	**Metals Analysis (Circle):
							10
							9
							8
							7
	•						6
	RXX R			4	1 920	5	5 MW-
	ROX Q		,X	1040	01	2	" MW-U
	ARA R			8 I	1200	6	3 Mrs-
	892		×.	1130	1 11	2	2 MW-
	N			S HLO	5101 hi Pala	-	1 MM-1
Comments/Depth	1.101 101 101 101 101 101 101 101 101 10	Ling to the second seco	23 107 200 24 107 200 200 200 200 200 200 200 200 200 200	Sample Sample Time (Matrix)*	Sample Sa Date T		Sample Name
W = Waste Water	ing Water, GW = Gr	= Solid, W = Water, DW	SD = Sediment, SL	P = Product, S = Soil	us, B = Bulk, O = Other,	hir, AQ = Aqueor	*Matrix Codes: A =
· 185750040	Email: PAUL PAREARU OSANTU Project No:			Fax:	FAIRBAIRN	PAVL	Reports To (PM):
	EMILY HARPER		rel: 425-869-9448x)43	1	5	Believe	City, State, Zip
	DUMMPIA WA	Project Name: Location:		R 100	MELL JE 33A & A	STAT	Client: Address:
et i	Page:	h//3/	Date: 4/8		Tel: 206-352-3790 Fax: 206-352-7178	×.	3600 Fremont Ave N. Seattle, WA 98103
14n4n90	Information Bradact No (internal).	-	_	7.8	12551414141414		
Chain of Custody Record	Ch Ch			~	emon	T O	
	2			8			



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

Stantec Consulting Corporation Paul Fairbairn 11130 NE 33rd PI, Suite 200 Bellevue, WA 98004

RE: 3Q14 GWM 25983 Lab ID: 1409246

September 30, 2014

Attention Paul Fairbairn:

Fremont Analytical, Inc. received 5 sample(s) on 9/23/2014 for the analyses presented in the following report.

Gasoline by NWTPH-Gx

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,

Mul c. Rody

Mike Ridgeway President



CLIENT: Project: Lab Order:	Stantec Consulting Corporation 3Q14 GWM 25983 1409246	Work Order Sample Summ				
Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received			
1409246-001	MW-1	09/23/2014 12:00 AM	09/23/2014 12:58 PM			
1409246-002	MW-2	09/23/2014 12:00 AM	09/23/2014 12:58 PM			
1409246-003	MW-3	09/23/2014 12:00 AM	09/23/2014 12:58 PM			
1409246-004	MW-4	09/23/2014 12:00 AM	09/23/2014 12:58 PM			
1409246-005	MW-5	09/23/2014 12:00 AM	09/23/2014 12:58 PM			



Case Narrative

WO#: **1409246** Date: **9/30/2014**

CLIENT:Stantec Consulting CorporationProject:3Q14 GWM 25983

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.



WO#: **1409246** Date Reported: **9/30/2014**

Client: Stantec Consulting Corpora Project: 3Q14 GWM 25983	Collection Date: 9/23/2014					
Lab ID: 1409246-001 Client Sample ID: MW-1				Matrix: G	round	water
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batc	h ID: F	R17075 Analyst: BC
Gasoline	ND	50.0		µg/L	1	9/26/2014 9:26:00 PM
Surr: 4-Bromofluorobenzene	98.2	65-135		%REC	1	9/26/2014 9:26:00 PM
Surr: Toluene-d8	96.7	65-135		%REC	1	9/26/2014 9:26:00 PM
Volatile Organic Compounds by E	PA Method	<u>8260</u>		Batc	h ID: F	R17071 Analyst: BC
Benzene	ND	1.00		µg/L	1	9/26/2014 9:26:00 PM
Toluene	ND	1.00		µg/L	1	9/26/2014 9:26:00 PM
Ethylbenzene	ND	1.00		µg/L	1	9/26/2014 9:26:00 PM
m,p-Xylene	ND	1.00		µg/L	1	9/26/2014 9:26:00 PM
o-Xylene	ND	1.00		µg/L	1	9/26/2014 9:26:00 PM
Surr: Dibromofluoromethane	97.3	61.7-130		%REC	1	9/26/2014 9:26:00 PM
Surr: Toluene-d8	101	40.1-139		%REC	1	9/26/2014 9:26:00 PM
Surr: 1-Bromo-4-fluorobenzene	101	68.2-127		%REC	1	9/26/2014 9:26:00 PM

Qualifiers:

В

Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

RL Reporting Limit

- D Dilution was required
- H Holding times for preparation or analysis exceeded

ND Not detected at the Reporting Limit

S Spike recovery outside accepted recovery limits



WO#: **1409246** Date Reported: **9/30/2014**

Client: Stantec Consulting Corpo Project: 3Q14 GWM 25983		Collection Date: 9/23/2014					
Lab ID: 1409246-002				Matrix: G	round	water	
Client Sample ID: MW-2							
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	
Gasoline by NWTPH-Gx				Bato	h ID: I	R17075 Analyst: BC	
Gasoline	ND	50.0		µg/L	1	9/26/2014 10:22:00 PM	
Surr: 4-Bromofluorobenzene	98.5	65-135		%REC	1	9/26/2014 10:22:00 PM	
Surr: Toluene-d8	96.9	65-135		%REC	1	9/26/2014 10:22:00 PM	
Volatile Organic Compounds by	EPA Method	<u>8260</u>		Bato	h ID: I	R17071 Analyst: BC	
Benzene	ND	1.00		μg/L	1	9/26/2014 10:22:00 PM	
Toluene	ND	1.00		µg/L	1	9/26/2014 10:22:00 PM	
Ethylbenzene	ND	1.00		µg/L	1	9/26/2014 10:22:00 PM	
m,p-Xylene	ND	1.00		µg/L	1	9/26/2014 10:22:00 PM	
o-Xylene	ND	1.00		µg/L	1	9/26/2014 10:22:00 PM	
Surr: Dibromofluoromethane	94.4	61.7-130		%REC	1	9/26/2014 10:22:00 PM	
Surr: Toluene-d8	96.8	40.1-139		%REC	1	9/26/2014 10:22:00 PM	
Surr: 1-Bromo-4-fluorobenzene	101	68.2-127		%REC	1	9/26/2014 10:22:00 PM	

Qualifiers:

В

- E Value above quantitation range
- J Analyte detected below quantitation limits
- RL Reporting Limit

- D Dilution was required
- H Holding times for preparation or analysis exceeded
- ND Not detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits



WO#: **1409246** Date Reported: **9/30/2014**

Client: Stantec Consulting Corpor Project: 3Q14 GWM 25983		Collection Date: 9/23/2014					
Lab ID: 1409246-003				Matrix: G	round	lwater	
Client Sample ID: MW-3							
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	
Gasoline by NWTPH-Gx				Batc	h ID: I	R17075 Analyst: BC	
Gasoline	ND	50.0		µg/L	1	9/27/2014 12:12:00 AM	
Surr: 4-Bromofluorobenzene	97.5	65-135		%REC	1	9/27/2014 12:12:00 AM	
Surr: Toluene-d8	96.6	65-135		%REC	1	9/27/2014 12:12:00 AM	
Volatile Organic Compounds by	EPA Method	<u>8260</u>		Batc	h ID: I	R17071 Analyst: BC	
Benzene	ND	1.00		µg/L	1	9/27/2014 12:12:00 AM	
Toluene	ND	1.00		µg/L	1	9/27/2014 12:12:00 AM	
Ethylbenzene	ND	1.00		µg/L	1	9/27/2014 12:12:00 AM	
m,p-Xylene	ND	1.00		µg/L	1	9/27/2014 12:12:00 AM	
o-Xylene	ND	1.00		µg/L	1	9/27/2014 12:12:00 AM	
Surr: Dibromofluoromethane	98.3	61.7-130		%REC	1	9/27/2014 12:12:00 AM	
Surr: Toluene-d8	99.0	40.1-139		%REC	1	9/27/2014 12:12:00 AM	
Surr: 1-Bromo-4-fluorobenzene	100	68.2-127		%REC	1	9/27/2014 12:12:00 AM	

Qualifiers:

В

- E Value above quantitation range
- J Analyte detected below quantitation limits
- RL Reporting Limit

- D Dilution was required
- H Holding times for preparation or analysis exceeded
- ND Not detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits



WO#: **1409246** Date Reported: **9/30/2014**

Client: Stantec Consulting Corpo		Collection Date: 9/23/2014					
Project: 3Q14 GWM 25983 Lab ID: 1409246-004				Matrix: G	round	water	
Client Sample ID: MW-4 Analyses	Result	RL	Qual	Units	DF	Date Analyzed	
Gasoline by NWTPH-Gx				Batc	h ID: F	R17075 Analyst: BC	
Gasoline	ND	50.0		μg/L	1	9/27/2014 12:40:00 AM	
Surr: 4-Bromofluorobenzene	96.6	65-135		%REC	1	9/27/2014 12:40:00 AM	
Surr: Toluene-d8	95.7	65-135		%REC	1	9/27/2014 12:40:00 AM	
Volatile Organic Compounds by	EPA Method	<u>8260</u>		Bato	h ID: F	R17071 Analyst: BC	
Benzene	ND	1.00		µg/L	1	9/27/2014 12:40:00 AM	
Toluene	ND	1.00		µg/L	1	9/27/2014 12:40:00 AM	
Ethylbenzene	ND	1.00		µg/L	1	9/27/2014 12:40:00 AM	
m,p-Xylene	ND	1.00		µg/L	1	9/27/2014 12:40:00 AM	
o-Xylene	ND	1.00		µg/L	1	9/27/2014 12:40:00 AM	
Surr: Dibromofluoromethane	96.7	61.7-130		%REC	1	9/27/2014 12:40:00 AM	
Surr: Toluene-d8	98.3	40.1-139		%REC	1	9/27/2014 12:40:00 AM	
Surr: 1-Bromo-4-fluorobenzene	99.6	68.2-127		%REC	1	9/27/2014 12:40:00 AM	

Qualifiers:

В

- E Value above quantitation range
- J Analyte detected below quantitation limits
- RL Reporting Limit

- D Dilution was required
- H Holding times for preparation or analysis exceeded
- ND Not detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits



WO#: **1409246** Date Reported: **9/30/2014**

Client: Stantec Consulting Corpora Project: 3Q14 GWM 25983		Collection Date: 9/23/2014					
Lab ID: 1409246-005				Matrix: G	round	water	
Client Sample ID: MW-5							
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	
Gasoline by NWTPH-Gx				Batc	h ID: F	R17075 Analyst: BC	
Gasoline	ND	50.0		μg/L	1	9/27/2014 1:08:00 AM	
Surr: 4-Bromofluorobenzene	96.4	65-135		%REC	1	9/27/2014 1:08:00 AM	
Surr: Toluene-d8	98.4	65-135		%REC	1	9/27/2014 1:08:00 AM	
Volatile Organic Compounds by E	PA Method	<u>8260</u>		Batc	h ID: F	R17071 Analyst: BC	
Benzene	ND	1.00		μg/L	1	9/27/2014 1:08:00 AM	
Toluene	ND	1.00		µg/L	1	9/27/2014 1:08:00 AM	
Ethylbenzene	ND	1.00		µg/L	1	9/27/2014 1:08:00 AM	
m,p-Xylene	ND	1.00		µg/L	1	9/27/2014 1:08:00 AM	
o-Xylene	ND	1.00		µg/L	1	9/27/2014 1:08:00 AM	
Surr: Dibromofluoromethane	95.3	61.7-130		%REC	1	9/27/2014 1:08:00 AM	
Surr: Toluene-d8	101	40.1-139		%REC	1	9/27/2014 1:08:00 AM	
Surr: 1-Bromo-4-fluorobenzene	99.3	68.2-127		%REC	1	9/27/2014 1:08:00 AM	

В

- E Value above quantitation range
- J Analyte detected below quantitation limits
- RL Reporting Limit

- D Dilution was required
- H Holding times for preparation or analysis exceeded
- ND Not detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Work Order: 1409246								QC	SUMMA	RY REF	PORT
CLIENT: Stantec Co Project: 3Q14 GWN	nsulting Corporation A 25983								Gasoline	by NWT	PH-Gx
Sample ID: 1409239-009ADUP	SampType: DUP			Units: µg/L		Prep Da	te: 9/27/20)14	RunNo: 17	075	
Client ID: BATCH	Batch ID: R17075					Analysis Dat	te: 9/27/20)14	SeqNo: 342	2083	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	50.0						0		30	
Surr: Toluene-d8	48.2		50.00		96.4	65	135		0	0	
Surr: 4-Bromofluorobenzene	52.9		50.00		106	65	135		0	0	
Sample ID: 1409246-001ADUP	SampType: DUP			Units: µg/L		Prep Da	te: 9/26/20)14	RunNo: 17)75	
Client ID: MW-1	Batch ID: R17075					Analysis Dat	te: 9/26/20)14	SeqNo: 342	2085	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	50.0						0		30	
Surr: Toluene-d8	48.8		50.00		97.7	65	135		0	0	
Surr: 4-Bromofluorobenzene	49.6		50.00		99.2	65	135		0	0	
Sample ID: LCS-R17075	SampType: LCS			Units: µg/L		Prep Da	te: 9/26/20)14	RunNo: 17	075	
Client ID: LCSW	Batch ID: R17075					Analysis Dat	te: 9/26/20	014	SeqNo: 342	2095	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	587	50.0	500.0	0	117	65	135				
Surr: Toluene-d8	48.3		50.00		96.6	65	135				
Surr: 4-Bromofluorobenzene	48.8		50.00		97.6	65	135				
Sample ID: MB-R17075	SampType: MBLK			Units: µg/L		Prep Da	te: 9/26/20)14	RunNo: 17	075	
Client ID: MBLKW	Batch ID: R17075					Analysis Dat	te: 9/26/20)14	SeqNo: 342	2096	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	50.0									
Surr: Toluene-d8	48.6		50.00		97.1	65	135				
Surr: 4-Bromofluorobenzene	48.8		50.00		97.6	65	135				
Qualifiers: B Analyte detected in	the associated Method Blank		D Dilution wa	as required			E Valu	e above quantitation	range		
H Holding times for p	reparation or analysis exceeded		J Analyte de	tected below quantitation	limits		ND Not o	detected at the Report	rting Limit		
R RPD outside accep	oted recovery limits		RL Reporting	Limit			S Spike	e recovery outside ac	cepted recovery limi	ts	





Work Order:	1409246							00.5	SUMMAF		ORT
CLIENT:	Stantec Consult	ting Corporation									-
Project:	3Q14 GWM 259	983							Gasoline	by NWT	PH-Gx
Sample ID: MB-R	17075 S	ampType: MBLK			Units: µg/L		Prep Date: 9/26/2014		RunNo: 170	75	
Client ID: MBLK	KW B	atch ID: R17075					Analysis Date: 9/26/2014		SeqNo: 342	096	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPI	Ref Val	%RPD	RPDLimit	Qual

Qualifiers: B Analyte of

Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

- D Dilution was required
- J Analyte detected below quantitation limits
- RL Reporting Limit

- E Value above quantitation range
- ND Not detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits



Work Order: 1409246

Project:

CLIENT: Stantec Consulting Corporation

3Q14 GWM 25983

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID: 1409239-009ADUP	SampType: DUP			Units: µg/L		Prep Da	te: 9/27/20	014	RunNo: 170	071	
Client ID: BATCH	Batch ID: R17071					Analysis Da	te: 9/27/20)14	SeqNo: 341	958	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Surr: Dibromofluoromethane	53.6		50.00		107	61.7	130		0		
Surr: Toluene-d8	50.1		50.00		100	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	54.6		50.00		109	68.2	127		0		

Sample ID: 1409246-001ADUP	SampType: DUP			Units: µg/L		Prep Date	9/26/2014		RunNo: 170	071	
Client ID: MW-1	Batch ID: R17071					Analysis Date	9/26/2014		SeqNo: 341	1960	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit R	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Surr: Dibromofluoromethane	49.4		50.00		98.7	61.7	130		0		
Surr: Toluene-d8	50.4		50.00		101	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	51.1		50.00		102	68.2	127		0		
Sample ID: 1409246-002AMS	SampType: MS			Units: µg/L		Prep Date	9/26/2014		RunNo: 170)71	
Client ID: MW-2	Batch ID: R17071					Analysis Date	9/26/2014		SeqNo: 341	1962	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit R	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.2	1.00	20.00	0	106	65.4	138				
Toluene	19.4	1.00	20.00	0	96.8	64	139				
Qualifiers: B Analyte detected in	the associated Method Blank		D Dilution wa	is required			E Value ab	oove quantitation ra	nge		
H Holding times for p	reparation or analysis exceeded		J Analyte de	tected below quantitation l	imits		ND Not dete	cted at the Reporti	ng Limit		
R RPD outside accep	oted recovery limits		RL Reporting	Limit			S Spike red	covery outside acce	epted recovery limit	ts	

QC SUMMARY REPORT



Stantec Consulting Corporation 3Q14 GWM 25983 Project:

1409246

Work Order:

CLIENT:

Volatile Organic Compounds by EPA Method 8260

Sample ID: 1409246-002AMS	SampType: MS			Units: µg/L		Prep Dat	e: 9/26/20	14	RunNo: 170	071	
Client ID: MW-2	Batch ID: R17071					Analysis Dat	e: 9/26/20	14	SeqNo: 34	1962	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	22.2	1.00	20.00	0	111	64.5	136				
m,p-Xylene	43.5	1.00	40.00	0	109	63.3	135				
o-Xylene	21.1	1.00	20.00	0	106	65.4	134				
Surr: Dibromofluoromethane	50.3		50.00		101	61.7	130				
Surr: Toluene-d8	50.0		50.00		99.9	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	52.1		50.00		104	68.2	127				
Sample ID: LCS-R17071	SampType: LCS			Units: µg/L		Prep Dat	e: 9/26/20	14	RunNo: 17)71	

	Samprype. LCS					т тер Ба	ie. 9/20/201	-	Runno. 170		
Client ID: LCSW	Batch ID: R17071					Analysis Da	te: 9/26/201	4	SeqNo: 341	1970	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Benzene	19.5	1.00	20.00	0	97.6	73.1	126				
Toluene	20.2	1.00	20.00	0	101	61.3	145				
Ethylbenzene	21.9	1.00	20.00	0	109	72	130				
m,p-Xylene	43.4	1.00	40.00	0	108	73	131				
o-Xylene	21.5	1.00	20.00	0	108	72.1	131				
Surr: Dibromofluoromethane	48.0		50.00		96.1	61.7	130				
Surr: Toluene-d8	49.4		50.00		98.9	40.1	139				
Surr: 1-Bromo-4-fluorobenzen	ne 50.7		50.00		101	68.2	127				
Sample ID: MB-R17071	SampType: MBLK			Units: µg/L		Prep Da	te: 9/26/201	4	RunNo: 170	071	
Sample ID: MB-R17071 Client ID: MBLKW	SampType: MBLK Batch ID: R17071			Units: µg/L		•	te: 9/26/201 te: 9/26/201		RunNo: 170 SeqNo: 34 1		
Client ID: MBLKW		RL	SPK value	Units: µg/L SPK Ref Val	%REC	Analysis Da	te: 9/26/201				Qua
Client ID: MBLKW Analyte	Batch ID: R17071	RL 1.00	SPK value		%REC	Analysis Da	te: 9/26/201	4	SeqNo: 341	1971	Qua
•	Batch ID: R17071 Result		SPK value		%REC	Analysis Da	te: 9/26/201	4	SeqNo: 341	1971	Qua
Client ID: MBLKW Analyte Benzene	Batch ID: R17071 Result ND	1.00	SPK value		%REC	Analysis Da	te: 9/26/201	4	SeqNo: 341	1971	Qua
Client ID: MBLKW Analyte Benzene Toluene	Batch ID: R17071 Result ND ND	1.00 1.00	SPK value		%REC	Analysis Da	te: 9/26/201	4	SeqNo: 341	1971	Qua
Client ID: MBLKW Analyte Benzene Toluene Ethylbenzene m,p-Xylene	Batch ID: R17071 Result ND ND ND	1.00 1.00 1.00	SPK value	SPK Ref Val	%REC	Analysis Da	te: 9/26/201 HighLimit	4	SeqNo: 34 1 %RPD	1971	Qua
Client ID: MBLKW Analyte Benzene Toluene Ethylbenzene m,p-Xylene Qualifiers: B Analyte detecte	Batch ID: R17071 Result ND ND ND ND ND	1.00 1.00 1.00	D Dilution wa	SPK Ref Val		Analysis Da	te: 9/26/201 HighLimit E Value a	4 RPD Ref Val	SeqNo: 341 %RPD	1971	Qua



Work Order: 1409246

CLIENT: Stantec Consulting Corporation

Project: 3Q14 GWM 25983

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID: MB-R17071	SampType: MBLK			Units: µg/L		Prep Da	te: 9/26/20	14	RunNo: 170)71	
Client ID: MBLKW	Batch ID: R17071					Analysis Da	te: 9/26/20	14	SeqNo: 341	971	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	ND	1.00									
Surr: Dibromofluoromethane	48.2		50.00		96.5	61.7	130				
Surr: Toluene-d8	49.2		50.00		98.5	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	50.3		50.00		101	68.2	127				

Qualifiers: B

- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

- D Dilution was required
- J Analyte detected below quantitation limits
- RL Reporting Limit

- E Value above quantitation range
- ND Not detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits



Sample Log-In Check List

С	lient Name:	STANTEC	Work O	rder Number:	1409246	6	
L	ogged by:	Clare Griggs	Date Re	ceived:	9/23/20 ⁻	14 12:58:00 PM	
Cha	ain of Cust	ody					
1.	Is Chain of Cu	ustody complete?	Yes	\checkmark	No 🗌	Not Present	
2.	How was the	sample delivered?	Clier	<u>nt</u>			
Log	ı In						
-	Coolers are p	resent?	Yes	\checkmark	No 🗌		
-							
4.	Shipping cont	ainer/cooler in good condition?	Yes	\checkmark	No 🗌	_	
5.	Custody seals	intact on shipping container/cooler?	Yes		No 🗌	Not Required 🗹	
6.	Was an atterr	apt made to cool the samples?	Yes		No 🗌		
7.	Were all coole	ers received at a temperature of >0°C to 10.0°C	Yes		No 🗌		
8.	Sample(s) in	proper container(s)?	Yes		No 🗌		
9.	Sufficient sam	nple volume for indicated test(s)?	Yes	\checkmark	No 🗌		
10.	Are samples p	properly preserved?	Yes	\checkmark	No 🗌		
11.	Was preserva	tive added to bottles?	Yes		No 🔽	NA 🗌	
12	Is the headsp	ace in the VOA vials?	Yes		No 🗹		
		es containers arrive in good condition(unbroken)?	Yes	\checkmark	No 🗌		
14.	Does paperwo	ork match bottle labels?	Yes	\checkmark	No 🗌		
15	Are matrices	correctly identified on Chain of Custody?	Yes	\checkmark	No 🗌		
		t analyses were requested?	Yes		No 🗌		
		ing times able to be met?	Yes		No 🗌		
Sne	cial Handl	ing (if applicable)					
-		tified of all discrepancies with this order?	Yes		No 🗌	NA 🗸	
	Person I]
	By Who		eMa	il 🗌 Phone	e 🗌 Fax	In Person	
	Regardi						
	_	structions:					
19	Additional ren	narks:					

Item Information

Item #	Temp °C	Condition
Cooler	7.7	Good
Sample	9.2	Good

-
25
2
2
2
<
24
2
10
100
- 25
8
×.
-
200
100
-
21
1
- <u>-</u>
-
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3600 Fremont Ave. N. Seattle, WA 98103 T: (206) 352-3790 F: (206) 352-7178 info@fremontanalytical.com

Stantec Consulting Corporation Paul Fairbairn 11130 NE 33rd PI, Suite 200 Bellevue, WA 98004

RE: 25983 UST Removal 2014 Lab ID: 1410069

October 13, 2014

Attention Paul Fairbairn:

Fremont Analytical, Inc. received 8 sample(s) on 10/9/2014 for the analyses presented in the following report.

Gasoline by NWTPH-Gx Sample Moisture (Percent Moisture) Total Metals by EPA Method 6020 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,

Mphl c. Foly

Mike Ridgeway President



CLIENT: Project: Lab Order:	Stantec Consulting Corporation 25983 UST Removal 2014 1410069	Work Order \$	Sample Summary
Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1410069-001	CSP-1	10/07/2014 11:00 AM	10/09/2014 12:44 PM
1410069-002	CSP-2	10/08/2014 10:00 AM	10/09/2014 12:44 PM
1410069-003	CSP-3	10/09/2014 8:00 AM	10/09/2014 12:44 PM
1410069-004	WEST TANK@13'	10/08/2014 11:45 AM	10/09/2014 12:44 PM
1410069-005	MID TANK@13'	10/08/2014 1:30 PM	10/09/2014 12:44 PM
1410069-006	EAST TANK@12'	10/08/2014 3:00 PM	10/09/2014 12:44 PM
1410069-007	WEST WALL@8'	10/08/2014 12:00 PM	10/09/2014 12:44 PM
1410069-008	EAST WALL@10'	10/08/2014 2:15 PM	10/09/2014 12:44 PM



Case Narrative

Date: 10/13/2014

CLIENT:Stantec Consulting CorporationProject:25983 UST Removal 2014

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.



Client: Stantec Consulting Corporati Project: 25983 UST Removal 2014	on			Collection	Date: 10	/7/2014 11:00:00 AM
Lab ID: 1410069-001 Client Sample ID: CSP-1				Matrix: Sc	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	n ID: 8950	Analyst: BC
Gasoline	ND	3.38		mg/Kg-dry	1	10/9/2014 10:03:00 PM
Surr: 4-Bromofluorobenzene	99.0	65-135		%REC	1	10/9/2014 10:03:00 PM
Surr: Toluene-d8	101	65-135		%REC	1	10/9/2014 10:03:00 PM
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batch	h ID: 8950	Analyst: BC
Benzene	ND	0.0135		mg/Kg-dry	1	10/9/2014 10:03:00 PM
Toluene	ND	0.0135		mg/Kg-dry	1	10/9/2014 10:03:00 PM
Ethylbenzene	ND	0.0203		mg/Kg-dry	1	10/9/2014 10:03:00 PM
m,p-Xylene	ND	0.0135		mg/Kg-dry	1	10/9/2014 10:03:00 PM
o-Xylene	ND	0.0135		mg/Kg-dry	1	10/9/2014 10:03:00 PM
Surr: Dibromofluoromethane	79.5	63.7-129		%REC	1	10/9/2014 10:03:00 PM
Surr: Toluene-d8	100	64.3-131		%REC	1	10/9/2014 10:03:00 PM
Surr: 1-Bromo-4-fluorobenzene	99.9	63.1-141		%REC	1	10/9/2014 10:03:00 PM
Total Metals by EPA Method 6020				Batch	h ID: 8972	Analyst: TN
Lead	9.75	0.180		mg/Kg-dry	1	10/9/2014 5:43:19 PM
Sample Moisture (Percent Moisture)			Batch	n ID: R172	94 Analyst: TK
Percent Moisture	11.2			wt%	1	10/9/2014 9:18:14 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Client: Stantec Consulting Corporati Project: 25983 UST Removal 2014	on			Collection	Date: 10	/8/2014 10:00:00 AM
Lab ID: 1410069-002 Client Sample ID: CSP-2				Matrix: So	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	n ID: 8950	Analyst: BC
Gasoline	ND	3.46		mg/Kg-dry	1	10/9/2014 10:32:00 PM
Surr: 4-Bromofluorobenzene	98.0	65-135		%REC	1	10/9/2014 10:32:00 PM
Surr: Toluene-d8	101	65-135		%REC	1	10/9/2014 10:32:00 PM
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batch	n ID: 8950	Analyst: BC
Benzene	ND	0.0139		mg/Kg-dry	1	10/9/2014 10:32:00 PM
Toluene	ND	0.0139		mg/Kg-dry	1	10/9/2014 10:32:00 PM
Ethylbenzene	ND	0.0208		mg/Kg-dry	1	10/9/2014 10:32:00 PM
m,p-Xylene	ND	0.0139		mg/Kg-dry	1	10/9/2014 10:32:00 PM
o-Xylene	ND	0.0139		mg/Kg-dry	1	10/9/2014 10:32:00 PM
Surr: Dibromofluoromethane	82.3	63.7-129		%REC	1	10/9/2014 10:32:00 PM
Surr: Toluene-d8	99.7	64.3-131		%REC	1	10/9/2014 10:32:00 PM
Surr: 1-Bromo-4-fluorobenzene	98.9	63.1-141		%REC	1	10/9/2014 10:32:00 PM
Total Metals by EPA Method 6020				Batch	n ID: 8972	Analyst: TN
Lead	9.73	0.165		mg/Kg-dry	1	10/9/2014 6:10:45 PM
Sample Moisture (Percent Moisture)			Batch	n ID: R172	94 Analyst: TK
Percent Moisture	10.4			wt%	1	10/9/2014 9:18:14 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Client: Stantec Consulting Corporati Project: 25983 UST Removal 2014	on			Collection	Date: 10	/9/2014 8:00:00 AM
Lab ID: 1410069-003 Client Sample ID: CSP-3				Matrix: So	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	n ID: 8950	Analyst: BC
Gasoline	ND	3.42		mg/Kg-dry	1	10/9/2014 11:01:00 PM
Surr: 4-Bromofluorobenzene	98.0	65-135		%REC	1	10/9/2014 11:01:00 PM
Surr: Toluene-d8	101	65-135		%REC	1	10/9/2014 11:01:00 PM
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batch	ו ID: 8950	Analyst: BC
Benzene	ND	0.0137		mg/Kg-dry	1	10/9/2014 11:01:00 PM
Toluene	ND	0.0137		mg/Kg-dry	1	10/9/2014 11:01:00 PM
Ethylbenzene	ND	0.0205		mg/Kg-dry	1	10/9/2014 11:01:00 PM
m,p-Xylene	ND	0.0137		mg/Kg-dry	1	10/9/2014 11:01:00 PM
o-Xylene	ND	0.0137		mg/Kg-dry	1	10/9/2014 11:01:00 PM
Surr: Dibromofluoromethane	109	63.7-129		%REC	1	10/9/2014 11:01:00 PM
Surr: Toluene-d8	101	64.3-131		%REC	1	10/9/2014 11:01:00 PM
Surr: 1-Bromo-4-fluorobenzene	98.8	63.1-141		%REC	1	10/9/2014 11:01:00 PM
Total Metals by EPA Method 6020				Batch	n ID: 8972	Analyst: TN
Lead	6.61	0.167		mg/Kg-dry	1	10/9/2014 6:14:10 PM
Sample Moisture (Percent Moisture)			Batch	ו ID: R172	94 Analyst: TK
Percent Moisture	7.10			wt%	1	10/9/2014 9:18:14 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Client: Stantec Consulting Corporation Project: 25983 UST Removal 2014	on			Collection	Date: 10	/8/2014 11:45:00 AM
Lab ID: 1410069-004 Client Sample ID: WEST TANK@13'				Matrix: So	vil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	ו ID: 8950	Analyst: BC
Gasoline	98.6	31.0	D	mg/Kg-dry	10	10/10/2014 4:29:00 PM
Surr: 4-Bromofluorobenzene	97.5	65-135		%REC	1	10/9/2014 11:30:00 PM
Surr: Toluene-d8	103	65-135		%REC	1	10/9/2014 11:30:00 PM
Volatile Organic Compounds by EP	A Method	8260		Batch	n ID: 8950	Analyst: BC
Benzene	ND	0.0124		mg/Kg-dry	1	10/9/2014 11:30:00 PM
Toluene	ND	0.0124		mg/Kg-dry	1	10/9/2014 11:30:00 PM
Ethylbenzene	0.0799	0.0186		mg/Kg-dry	1	10/9/2014 11:30:00 PM
m,p-Xylene	0.422	0.0124		mg/Kg-dry	1	10/9/2014 11:30:00 PM
o-Xylene	0.120	0.0124		mg/Kg-dry	1	10/9/2014 11:30:00 PM
Surr: Dibromofluoromethane	104	63.7-129		%REC	1	10/9/2014 11:30:00 PM
Surr: Toluene-d8	101	64.3-131		%REC	1	10/9/2014 11:30:00 PM
Surr: 1-Bromo-4-fluorobenzene	98.1	63.1-141		%REC	1	10/9/2014 11:30:00 PM
Total Metals by EPA Method 6020				Batch	ו ID: 8972	Analyst: TN
Lead	3.10	0.174		mg/Kg-dry	1	10/9/2014 6:17:36 PM
Sample Moisture (Percent Moisture)	2			Batch	ו ID: R172	94 Analyst: TK
Percent Moisture	9.00			wt%	1	10/9/2014 9:18:14 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Client: Stantec Consulting Corporati Project: 25983 UST Removal 2014	on			Collection	Date: 10	/8/2014 1:30:00 PM
Lab ID: 1410069-005 Client Sample ID: MID TANK@13'				Matrix: So	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	ו ID: 8950	Analyst: BC
Gasoline	ND	3.45		mg/Kg-dry	1	10/9/2014 11:59:00 PM
Surr: 4-Bromofluorobenzene	100	65-135		%REC	1	10/9/2014 11:59:00 PM
Surr: Toluene-d8	101	65-135		%REC	1	10/9/2014 11:59:00 PM
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batch	n ID: 8950	Analyst: BC
Benzene	ND	0.0138		mg/Kg-dry	1	10/9/2014 11:59:00 PM
Toluene	ND	0.0138		mg/Kg-dry	1	10/9/2014 11:59:00 PM
Ethylbenzene	ND	0.0207		mg/Kg-dry	1	10/9/2014 11:59:00 PM
m,p-Xylene	ND	0.0138		mg/Kg-dry	1	10/9/2014 11:59:00 PM
o-Xylene	ND	0.0138		mg/Kg-dry	1	10/9/2014 11:59:00 PM
Surr: Dibromofluoromethane	83.9	63.7-129		%REC	1	10/9/2014 11:59:00 PM
Surr: Toluene-d8	101	64.3-131		%REC	1	10/9/2014 11:59:00 PM
Surr: 1-Bromo-4-fluorobenzene	101	63.1-141		%REC	1	10/9/2014 11:59:00 PM
Total Metals by EPA Method 6020				Batch	ו ID: 8972	Analyst: TN
Lead	3.35	0.177		mg/Kg-dry	1	10/9/2014 6:21:01 PM
Sample Moisture (Percent Moisture)			Batch	ו ID: R172	94 Analyst: TK
Percent Moisture	11.3			wt%	1	10/9/2014 9:18:14 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



WO#: 1410069 Date Reported: 10/13/2014

Client: Stantec Consulting Corporation Project: 25983 UST Removal 2014	on			Collection	Date: 10,	/8/2014 3:00:00 PM
Lab ID: 1410069-006 Client Sample ID: EAST TANK@12'				Matrix: So	il	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	ו ID: 8950	Analyst: BC
Gasoline	ND	3.76		mg/Kg-dry	1	10/10/2014 12:28:00 AM
Surr: 4-Bromofluorobenzene	97.8	65-135		%REC	1	10/10/2014 12:28:00 AM
Surr: Toluene-d8	101	65-135		%REC	1	10/10/2014 12:28:00 AM
Volatile Organic Compounds by EP.	A Method	<u>8260</u>		Batch	ו ID: 8950	Analyst: BC
Benzene	ND	0.0150		mg/Kg-dry	1	10/10/2014 12:28:00 AM
Toluene	ND	0.0150		mg/Kg-dry	1	10/10/2014 12:28:00 AM
Ethylbenzene	ND	0.0226		mg/Kg-dry	1	10/10/2014 12:28:00 AM
m,p-Xylene	ND	0.0150		mg/Kg-dry	1	10/10/2014 12:28:00 AM
o-Xylene	ND	0.0150		mg/Kg-dry	1	10/10/2014 12:28:00 AM
Surr: Dibromofluoromethane	107	63.7-129		%REC	1	10/10/2014 12:28:00 AM
Surr: Toluene-d8	102	64.3-131		%REC	1	10/10/2014 12:28:00 AM
Surr: 1-Bromo-4-fluorobenzene	98.7	63.1-141		%REC	1	10/10/2014 12:28:00 AM
Total Metals by EPA Method 6020				Batch	n ID: 8972	Analyst: TN
Lead	2.66	0.177		mg/Kg-dry	1	10/9/2014 6:24:26 PM
Sample Moisture (Percent Moisture))			Batch	ו ID: R172	94 Analyst: TK
Percent Moisture	8.88			wt%	1	10/9/2014 9:18:14 AM

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Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Client: Stantec Consulting Corporati Project: 25983 UST Removal 2014	on			Collection	Date: 10	/8/2014 12:00:00 PM
Lab ID: 1410069-007 Client Sample ID: WEST WALL@8'				Matrix: Sc	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	n ID: 8950	Analyst: BC
Gasoline	ND	4.30		mg/Kg-dry	1	10/10/2014 12:57:00 AM
Surr: 4-Bromofluorobenzene	98.3	65-135		%REC	1	10/10/2014 12:57:00 AM
Surr: Toluene-d8	100	65-135		%REC	1	10/10/2014 12:57:00 AM
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batch	n ID: 8950	Analyst: BC
Benzene	ND	0.0172		mg/Kg-dry	1	10/10/2014 12:57:00 AM
Toluene	ND	0.0172		mg/Kg-dry	1	10/10/2014 12:57:00 AM
Ethylbenzene	ND	0.0258		mg/Kg-dry	1	10/10/2014 12:57:00 AM
m,p-Xylene	ND	0.0172		mg/Kg-dry	1	10/10/2014 12:57:00 AM
o-Xylene	ND	0.0172		mg/Kg-dry	1	10/10/2014 12:57:00 AM
Surr: Dibromofluoromethane	89.1	63.7-129		%REC	1	10/10/2014 12:57:00 AM
Surr: Toluene-d8	102	64.3-131		%REC	1	10/10/2014 12:57:00 AM
Surr: 1-Bromo-4-fluorobenzene	99.2	63.1-141		%REC	1	10/10/2014 12:57:00 AM
Total Metals by EPA Method 6020				Batch	n ID: 8972	Analyst: TN
Lead	3.27	0.171		mg/Kg-dry	1	10/9/2014 6:27:52 PM
Sample Moisture (Percent Moisture)			Batch	n ID: R172	94 Analyst: TK
Percent Moisture	10.1			wt%	1	10/9/2014 9:18:14 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



WO#: 1410069 Date Reported: 10/13/2014

Client: Stantec Consulting Corporation Project: 25983 UST Removal 2014	on			Collection	Date: 10	/8/2014 2:15:00 PM
Lab ID: 1410069-008 Client Sample ID: EAST WALL@10'				Matrix: So	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	n ID: 8950	Analyst: BC
Gasoline	ND	3.10		mg/Kg-dry	1	10/10/2014 1:26:00 AM
Surr: 4-Bromofluorobenzene	97.0	65-135		%REC	1	10/10/2014 1:26:00 AM
Surr: Toluene-d8	102	65-135		%REC	1	10/10/2014 1:26:00 AM
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batch	n ID: 8950	Analyst: BC
Benzene	ND	0.0124		mg/Kg-dry	1	10/10/2014 1:26:00 AM
Toluene	ND	0.0124		mg/Kg-dry	1	10/10/2014 1:26:00 AM
Ethylbenzene	ND	0.0186		mg/Kg-dry	1	10/10/2014 1:26:00 AM
m,p-Xylene	ND	0.0124		mg/Kg-dry	1	10/10/2014 1:26:00 AM
o-Xylene	ND	0.0124		mg/Kg-dry	1	10/10/2014 1:26:00 AM
Surr: Dibromofluoromethane	89.2	63.7-129		%REC	1	10/10/2014 1:26:00 AM
Surr: Toluene-d8	99.9	64.3-131		%REC	1	10/10/2014 1:26:00 AM
Surr: 1-Bromo-4-fluorobenzene	98.0	63.1-141		%REC	1	10/10/2014 1:26:00 AM
Total Metals by EPA Method 6020				Batch	n ID: 8972	Analyst: TN
Lead	1.55	0.157		mg/Kg-dry	1	10/9/2014 6:31:17 PM
Sample Moisture (Percent Moisture))			Batch	า ID: R172	94 Analyst: TK
Percent Moisture	3.47			wt%	1	10/9/2014 9:18:14 AM

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Analytical

Qualifiers: Analyte detected in the associated Method Blank В D Dilution was required Е Value above quantitation range н Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits ND Not detected at the Reporting Limit RL Reporting Limit S Spike recovery outside accepted recovery limits



Work Order: CLIENT: Project:	1410069 Stantec Cor 25983 UST	-	•							• - ·	SUMMAI tals by EP		-
Sample ID: MB-89	172	SampType	: MBLK			Units: mg/K	g	Prep Date	e: 10/9/20 1	14	RunNo: 173	12	
Client ID: MBLK	S	Batch ID:	8972					Analysis Date	e: 10/9/20 1	14	SeqNo: 346	208	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			ND	0.200									
Sample ID: LCS-8	972	SampType	LCS			Units: mg/K	g	Prep Date	e: 10/9/20 1	14	RunNo: 173	12	
Client ID: LCSS		Batch ID:	8972					Analysis Date	e: 10/9/20 1	14	SeqNo: 346	209	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			194	0.200	189.0	0	103	74.6	125.4				
Sample ID: 14100	69-001ADUP	SampType	: DUP			Units: mg/K	g-dry	Prep Date	e: 10/9/20 1	14	RunNo: 173	12	
Client ID: CSP-1		Batch ID:	8972					Analysis Date	e: 10/9/20 1	14	SeqNo: 346	211	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			12.7	0.176						9.753	26.1	30	
Sample ID: 14100	69-001AMS	SampType	: MS			Units: mg/K	g-dry	Prep Date	e: 10/9/20 1	14	RunNo: 173	12	
Client ID: CSP-1		Batch ID:	8972					Analysis Date	e: 10/9/201	14	SeqNo: 346	213	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			34.2	0.171	21.33	9.753	115	75	125				
Sample ID: 14100	69-001AMSD	SampType	: MSD			Units: mg/K	g-dry	Prep Date	e: 10/9/20 1	14	RunNo: 173	12	
Client ID: CSP-1		Batch ID:	8972					Analysis Date	e: 10/9/20 1	14	SeqNo: 346	216	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			32.6	0.173	21.66	9.753	106	75	125	34.21	4.79	30	
Qualifiers: B H R	Analyte detected in t Holding times for pre RPD outside accepte	eparation or analys			D Dilution wa J Analyte de RL Reporting I	ected below quantitation	ı limits		ND Not de	above quantitation ra etected at the Report recovery outside acc	ng Limit	5	

		ONU alytical				
Work Order:	1410069					
CLIENT:	Stantec Co	nsulting Corporation				
Project:	25983 UST	Removal 2014				
Sample ID: LCS-R	17335	SampType: LCS			Units: mg/K	g
Client ID: LCSS		Batch ID: 8950				
Analyte		Result	RL	SPK value	SPK Ref Val	%REC
Gasoline		25.1	5.00	25.00	0	101

(STN AF/D)

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID: LCS-R17335	SampType: LCS			Units: mg/Kg		Prep Dat	e: 10/9/201	14	RunNo: 173	35	
Client ID: LCSS	Batch ID: 8950					Analysis Dat	e: 10/9/201	14	SeqNo: 346	617	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	25.1	5.00	25.00	0	101	65	135				
Surr: Toluene-d8	2.52		2.500		101	65	135				
Surr: 4-Bromofluorobenzene	2.51		2.500		100	65	135				
Sample ID: MB-R17335	SampType: MBLK			Units: mg/Kg		Prep Dat	e: 10/9/20 1	14	RunNo: 173	35	
Client ID: MBLKS	Batch ID: 8950					Analysis Dat	e: 10/9/201	14	SeqNo: 346	618	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	5.00									
Surr: Toluene-d8	2.53		2.500		101	65	135				
Surr: 4-Bromofluorobenzene	2.47		2.500		98.8	65	135				
Sample ID: 1410039-021BDUP	SampType: DUP			Units: mg/Kg-	lry	Prep Dat	e: 10/7/20 1	14	RunNo: 173	35	
Client ID: BATCH	Batch ID: 8950					Analysis Dat	e: 10/10/20	014	SeqNo: 346	619	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	2.44						0		30	
Surr: Toluene-d8	1.22		1.222		100	65	135		0		
Surr: 4-Bromofluorobenzene	1.22		1.222		100	65	135		0		

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

- D Dilution was required
- J Analyte detected below quantitation limits
- RL Reporting Limit

E Value above quantitation range

- ND Not detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits



QC SUMMARY REPORT

CLIENT:Stantec Consulting CorporationProject:25983 UST Removal 2014

1410069

Work Order:

Г

Volatile Organic Compounds by EPA Method 8260

Sample ID: 1410039-022BMS	SampType: MS			Units: mg/k	Prep Date: 10/7/2014			RunNo: 173	321		
Client ID: BATCH	Batch ID: 8950					Analysis Dat	te: 10/10/2	014	SeqNo: 346	372	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.415	0.00800	0.4001	0	104	63.5	133				
Toluene	0.385	0.00800	0.4001	0.01257	93.0	63.4	132				
Ethylbenzene	0.422	0.0120	0.4001	0.002598	105	54.5	134				
m,p-Xylene	0.829	0.00800	0.8001	0.01837	101	53.1	132				
o-Xylene	0.432	0.00800	0.4001	0.004995	107	53.3	139				
Surr: Dibromofluoromethane	0.927		1.000		92.6	63.7	129				
Surr: Toluene-d8	1.00		1.000		100	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.05		1.000		104	63.1	141				

Sample ID: L	CS-8950	SampType: LCS			Units: mg/Kg	3	Prep Da	te: 10/7/201	14	RunNo: 173	21	
Client ID: L	CSS	Batch ID: 8950)				Analysis Da	te: 10/9/201	14	SeqNo: 346	392	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		1.01	0.0200	1.000	0	101	64.3	133				
Toluene		0.922	0.0200	1.000	0	92.2	67.3	138				
Ethylbenzene		1.01	0.0300	1.000	0	101	74	129				
m,p-Xylene		1.96	0.0200	2.000	0	98.1	79.8	128				
o-Xylene		1.03	0.0200	1.000	0	103	72.7	124				
Surr: Dibror	mofluoromethane	2.50		2.500		99.8	63.7	129				
Surr: Tolue	ne-d8	2.51		2.500		100	64.3	131				
Surr: 1-Bro	mo-4-fluorobenzene	e 2.57		2.500		103	63.1	141				
Sample ID: M	IB-8950	SampType: MBL	.К		Units: mg/Kg)	Prep Da	te: 10/7/201	14	RunNo: 173	21	
Client ID: M	IBLKS	Batch ID: 8950)				Analysis Da	te: 10/9/201	14	SeqNo: 346	393	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		ND	0.0200									
Toluene		ND	0.0200									
Qualifiers:	B Analyte detected	d in the associated Method Blan	k	D Dilution wa	is required			E Value	above quantitation ra	inge		
	H Holding times for	r preparation or analysis exceed	led	J Analyte de	tected below quantitation	limits		ND Not de	etected at the Reporting	ng Limit		
	R RPD outside ac	cepted recovery limits		RL Reporting I	Limit			S Spike	recovery outside acce	epted recovery limits	6	



OC SUMMARY REPORT

SEALON	Fremont
	[Analytical]

Work Order: 1410069

CLIENT: Stante	c Consulting Co	rporatior	า									OR
	UST Removal 2	•					Volatil	e Organi	ic Compoui	nds by EP	A Metho	d 826
Sample ID: MB-8950	SampType	: MBLK			Units: mg/	٢g	Prep Dat	te: 10/7/20	14	RunNo: 173	321	
Client ID: MBLKS	Batch ID:	8950					Analysis Dat	te: 10/9/20	14	SeqNo: 346	393	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene		ND	0.0300									
m,p-Xylene		ND	0.0200									
o-Xylene		ND	0.0200									
Surr: Dibromofluoromethar	ne	2.36		2.500		94.4	63.7	129				
Surr: Toluene-d8		2.50		2.500		100	64.3	131				
Surr: 1-Bromo-4-fluoroben	zene	2.50		2.500		99.8	63.1	141				
Sample ID: 1410039-021BD	UP SampType	: DUP			Units: mg/	Kg-dry	Prep Dat	te: 10/7/20	14	RunNo: 173	321	
Client ID: BATCH	Batch ID:	8950					Analysis Dat	te: 10/10/2	014	SeqNo: 346	6400	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		ND	0.00977						0		30	
Toluene		ND	0.00977						0		30	
Ethylbenzene		ND	0.0147						0		30	
m,p-Xylene		ND	0.00977						0		30	
o-Xylene		ND	0.00977						0		30	
Surr: Dibromofluoromethar	ne	1.13		1.222		92.9	63.7	129		0		
Surr: Dibromofluoromethar Surr: Toluene-d8	ne			1.222 1.222		92.9 102	63.7 64.3	129 131		0 0		

Qualifiers: B Analyte detected in th

- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

D Dilution was required

J Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not detected at the Reporting Limit

S Spike recovery outside accepted recovery limits



Sample Log-In Check List

Client Name: STANTEC			Work O	der Numb	er: 1410069	1410069				
Log	ged by:	Erica Silva	Date Re	ceived:	10/9/2014	4 12:44:00 PM				
Chair	n of Custo	ody								
1. Is	s Chain of Cu	ustody complete?	Yes	\checkmark	No 🗌	Not Present				
2. H	low was the s	sample delivered?	Clien	<u>t</u>						
Log l	'n									
	Coolers are pr	resent?	Yes	\checkmark	No 🗌					
1 9	binning cont	ainer/cooler in good condition?	Yes		No 🗌					
		ainer/cooler in good condition?			No 🗌	Not Required 🗹				
5. U	Jusiouy sedis	intact on shipping container/cooler?	Yes							
6. W	Vas an attem	pt made to cool the samples?	Yes	\checkmark	No 🗌	NA 🗌				
7. V	Vere all coole	ers received at a temperature of $>0^{\circ}$ C to 10.0° C	Yes		No 🗌					
8. S	Sample(s) in (proper container(s)?	Yes	\checkmark	No 🗌					
9. s	Sufficient sam	nple volume for indicated test(s)?	Yes		No 🗌					
10. A	vre samples p	properly preserved?	Yes	\checkmark	No 🗌					
11. ^W	Vas preserva	tive added to bottles?	Yes		No 🗹	NA 🗌				
12. ^{Is}	s the headsp	ace in the VOA vials?	Yes		No 🗌	NA 🗹				
13. D)id all sample	es containers arrive in good condition(unbroken)?	Yes	\checkmark	No 🗌					
14. ^D	oes paperwo	ork match bottle labels?	Yes		No 🗌					
15. ^A	vre matrices o	correctly identified on Chain of Custody?	Yes		No 🗌					
		t analyses were requested?	Yes	\checkmark	No 🗌					
17. ^v	Vere all holdi	ng times able to be met?	Yes	\checkmark	No 🗌					
<u>Spec</u>	ial Handl	ing (if applicable)								
		tified of all discrepancies with this order?	Yes		No 🗌	NA 🗹				
	Person N	Notified: Dat	te:							
	By Who	m: Via	: 🗌 eMa	il 🗌 Pho	one 🗌 Fax	In Person				
	Regardir	ng:								
	Client In	structions:								

Item Information

Item #	Temp °C	Condition
Cooler	9.6	Good
Sample	6.1	Good

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TAT -> SameDay NextDay 2 Day 3 Day STO Please coordinate with the lab in advance	Received Date/Time /	Relinguished 7 Date/Time R
	1 Mulas	10/9/14 11:00
	Disposal by Lab (A fee may be assessed if samples are retained after 30 days.)	Sample Disposal: Return to Client Disposal by Lab (A fee may be a
Special Remarks:	O.Phosphate Fluoride Nitrate+Ntrite	****Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide
NIPSS SE Sr Sn TI TI U V Zn	Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Min Mo Na Ni	**Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL In
		10
INAL C		
-		10/0 Julio
1 00%	×	10/2
O Pro		· EASTTANKO 12' 10/8 1500 1
T PAG		5 MID TANKO13' 10/8 1330 /
were het	X	" WESTTANKO13" 10/8 11:45 /
OPPM		5 CSP-3 10/9 8:00 S
Oppm	×	2CSP-2 10/8 10:00 1
T PRM	X	CSP-1 10/7 1100 SOIL
Comments/Depth		492
71 IL	2 1 2 1 2 1 2 1 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2	Sample
HH Ps Stundad	Creatics II	
	W = Drinking water, GW = Ground water,	manin vouce, n - nu, nu - nupervos, e - bur, v = vonet, r = rrounct, s = son, su =
	Email: PAUL FAIRBAILON @ SAMProject	AVLAQIRBALAN Fax:
	1.0	1
	OLYMPIA, WA	N
REMOVAL 2014	Project Name: 25983 UST	Client: STANTEL
of	10/9/14 Page: 1	3600 Fremont Ave N. Tel: 206-352-3790 Seattle, WA 98103 Fax: 206-352-7178 Date:
14100169	Tarling and Star Star Star Star Star Star Star	Analytical
Chain of Custody Record	Chai	Fremont



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

Stantec Consulting Corporation Paul Fairbairn 11130 NE 33rd PI, Suite 200 Bellevue, WA 98004

RE: 25983 UST Removal 2014 Lab ID: 1410089

October 13, 2014

Attention Paul Fairbairn:

Fremont Analytical, Inc. received 18 sample(s) on 10/10/2014 for the analyses presented in the following report.

Gasoline by NWTPH-Gx Sample Moisture (Percent Moisture) Total Metals by EPA Method 6020 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,

Mphl c. Foly

Mike Ridgeway President



CLIENT: Project: Lab Order:	Stantec Consulting Corporation 25983 UST Removal 2014 1410089	Sample Summary	
Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1410089-001	PL@3'	10/09/2014 11:00 AM	10/10/2014 4:30 PM
1410089-002	DSP-1	10/09/2014 4:00 PM	10/10/2014 4:30 PM
1410089-003	DSP-2	10/09/2014 4:10 PM	10/10/2014 4:30 PM
1410089-004	DSP-3	10/09/2014 4:20 PM	10/10/2014 4:30 PM
1410089-005	NORTH WALL@9'	10/09/2014 2:45 PM	10/10/2014 4:30 PM
1410089-006	DIW@5'	10/09/2014 10:30 AM	10/10/2014 4:30 PM
1410089-007	DIE@5'	10/09/2014 11:15 AM	10/10/2014 4:30 PM
1410089-008	DI@20'	10/09/2014 1:45 PM	10/10/2014 4:30 PM
1410089-009	DI@26'	10/09/2014 2:00 PM	10/10/2014 4:30 PM
1410089-010	CSS-1@17'	10/10/2014 10:15 AM	10/10/2014 4:30 PM
1410089-011	CSS-2@20'	10/10/2014 10:45 AM	10/10/2014 4:30 PM
1410089-012	SS-1@20'	10/10/2014 2:30 PM	10/10/2014 4:30 PM
1410089-013	SS-1@25'	10/10/2014 2:40 PM	10/10/2014 4:30 PM
1410089-014	SS-2@17'	10/10/2014 10:00 AM	10/10/2014 4:30 PM
1410089-015	SS-3@15'	10/10/2014 9:00 AM	10/10/2014 4:30 PM
1410089-016	SS-4@18'	10/10/2014 8:30 AM	10/10/2014 4:30 PM
1410089-017	SS-4@23'	10/10/2014 8:45 AM	10/10/2014 4:30 PM
1410089-018	Trip Blank	10/03/2014 4:15 PM	10/10/2014 4:30 PM



Case Narrative

Date: 10/13/2014

CLIENT:Stantec Consulting CorporationProject:25983 UST Removal 2014

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.



WO#: 1410089 Date Reported: 10/13/2014

					Da	ate Reported: 10/13/2014
Client: Stantec Consulting Corporation Project: 25983 UST Removal 2014	on			Collection	Date: 10)/9/2014 11:00:00 AM
Lab ID: 1410089-001				Matrix: So	vil	
Client Sample ID: PL@3'					///	
-			. .	••••		
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batcl	h ID: R173	350 Analyst: BC
Gasoline	ND	3.45		mg/Kg-dry	1	10/11/2014 8:50:00 AM
Surr: 4-Bromofluorobenzene	102	65-135		%REC	1	10/11/2014 8:50:00 AM
Surr: Toluene-d8	100	65-135		%REC	1	10/11/2014 8:50:00 AM
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batcl	h ID: 8990	Analyst: BC
Benzene	ND	0.0138		mg/Kg-dry	1	10/11/2014 8:50:00 AM
Toluene	ND	0.0138		mg/Kg-dry	1	10/11/2014 8:50:00 AM
Ethylbenzene	ND	0.0207		mg/Kg-dry	1	10/11/2014 8:50:00 AM
m,p-Xylene	ND	0.0138		mg/Kg-dry	1	10/11/2014 8:50:00 AM
o-Xylene	ND	0.0138		mg/Kg-dry	1	10/11/2014 8:50:00 AM
Surr: Dibromofluoromethane	107	63.7-129		%REC	1	10/11/2014 8:50:00 AM
Surr: Toluene-d8	102	64.3-131		%REC	1	10/11/2014 8:50:00 AM
Surr: 1-Bromo-4-fluorobenzene	99.7	63.1-141		%REC	1	10/11/2014 8:50:00 AM
Total Metals by EPA Method 6020				Batcl	h ID: 8992	2 Analyst: TN
Lead	1.60	0.155		mg/Kg-dry	1	10/13/2014 1:35:44 PM
Sample Moisture (Percent Moisture)			Batcl	h ID: R173	343 Analyst: KZ
Percent Moisture	3.02			wt%	1	10/13/2014 8:16:39 AM

GNAHA

Fremont

Analytical

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Client: Stantec Consulting Corporati Project: 25983 UST Removal 2014	ion			Collection	Date: 10	/9/2014 4:00:00 PM
Lab ID: 1410089-002 Client Sample ID: DSP-1				Matrix: Sc	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batcl	n ID: R173	350 Analyst: BC
Gasoline	20.1	3.31		mg/Kg-dry	1	10/11/2014 9:48:00 AM
Surr: 4-Bromofluorobenzene	101	65-135		%REC	1	10/11/2014 9:48:00 AM
Surr: Toluene-d8	101	65-135		%REC	1	10/11/2014 9:48:00 AM
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batch	n ID: 8990	Analyst: BC
Benzene	ND	0.0133		mg/Kg-dry	1	10/11/2014 9:48:00 AM
Toluene	ND	0.0133		mg/Kg-dry	1	10/11/2014 9:48:00 AM
Ethylbenzene	ND	0.0199		mg/Kg-dry	1	10/11/2014 9:48:00 AM
m,p-Xylene	0.0359	0.0133		mg/Kg-dry	1	10/11/2014 9:48:00 AM
o-Xylene	0.0183	0.0133		mg/Kg-dry	1	10/11/2014 9:48:00 AM
Surr: Dibromofluoromethane	109	63.7-129		%REC	1	10/11/2014 9:48:00 AM
Surr: Toluene-d8	99.3	64.3-131		%REC	1	10/11/2014 9:48:00 AM
Surr: 1-Bromo-4-fluorobenzene	98.2	63.1-141		%REC	1	10/11/2014 9:48:00 AM
Total Metals by EPA Method 6020				Batch	n ID: 8992	Analyst: TN
Lead	2.89	0.170		mg/Kg-dry	1	10/13/2014 1:56:17 PM
Sample Moisture (Percent Moisture)			Batch	n ID: R173	Analyst: KZ
Percent Moisture	9.37			wt%	1	10/13/2014 8:16:39 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Client: Stantec Consulting Corporati Project: 25983 UST Removal 2014	on			Collection	Date: 10	/9/2014 4:10:00 PM
Lab ID: 1410089-003 Client Sample ID: DSP-2				Matrix: So	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batcl	n ID: R173	50 Analyst: BC
Gasoline	5.36	3.36		mg/Kg-dry	1	10/11/2014 11:44:00 AM
Surr: 4-Bromofluorobenzene	101	65-135		%REC	1	10/11/2014 11:44:00 AM
Surr: Toluene-d8	100	65-135		%REC	1	10/11/2014 11:44:00 AM
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batcl	n ID: 8990	Analyst: BC
Benzene	ND	0.0134		mg/Kg-dry	1	10/11/2014 11:44:00 AM
Toluene	ND	0.0134		mg/Kg-dry	1	10/11/2014 11:44:00 AM
Ethylbenzene	ND	0.0202		mg/Kg-dry	1	10/11/2014 11:44:00 AM
m,p-Xylene	ND	0.0134		mg/Kg-dry	1	10/11/2014 11:44:00 AM
o-Xylene	ND	0.0134		mg/Kg-dry	1	10/11/2014 11:44:00 AM
Surr: Dibromofluoromethane	105	63.7-129		%REC	1	10/11/2014 11:44:00 AM
Surr: Toluene-d8	99.8	64.3-131		%REC	1	10/11/2014 11:44:00 AM
Surr: 1-Bromo-4-fluorobenzene	98.8	63.1-141		%REC	1	10/11/2014 11:44:00 AM
Total Metals by EPA Method 6020				Batcl	n ID: 8992	Analyst: TN
Lead	2.22	0.163		mg/Kg-dry	1	10/13/2014 1:59:42 PM
Sample Moisture (Percent Moisture)			Batcl	h ID: R173	43 Analyst: KZ
Percent Moisture	6.80			wt%	1	10/13/2014 8:16:39 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Client: Stantec Consulting Corporati Project: 25983 UST Removal 2014	ion			Collection	Date: 10	/9/2014 4:20:00 PM
Lab ID: 1410089-004 Client Sample ID: DSP-3				Matrix: Sc	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	ו ID: R173	50 Analyst: BC
Gasoline	24.2	3.99		mg/Kg-dry	1	10/11/2014 12:13:00 PM
Surr: 4-Bromofluorobenzene	100	65-135		%REC	1	10/11/2014 12:13:00 PM
Surr: Toluene-d8	101	65-135		%REC	1	10/11/2014 12:13:00 PM
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batch	n ID: 8990	Analyst: BC
Benzene	ND	0.0160		mg/Kg-dry	1	10/11/2014 12:13:00 PM
Toluene	ND	0.0160		mg/Kg-dry	1	10/11/2014 12:13:00 PM
Ethylbenzene	ND	0.0240		mg/Kg-dry	1	10/11/2014 12:13:00 PM
m,p-Xylene	0.112	0.0160		mg/Kg-dry	1	10/11/2014 12:13:00 PM
o-Xylene	0.0410	0.0160		mg/Kg-dry	1	10/11/2014 12:13:00 PM
Surr: Dibromofluoromethane	90.0	63.7-129		%REC	1	10/11/2014 12:13:00 PM
Surr: Toluene-d8	98.5	64.3-131		%REC	1	10/11/2014 12:13:00 PM
Surr: 1-Bromo-4-fluorobenzene	97.8	63.1-141		%REC	1	10/11/2014 12:13:00 PM
Total Metals by EPA Method 6020				Batch	n ID: 8992	Analyst: TN
Lead	2.20	0.165		mg/Kg-dry	1	10/13/2014 2:10:02 PM
Sample Moisture (Percent Moisture)			Batch	n ID: R173	43 Analyst: KZ
Percent Moisture	9.10			wt%	1	10/13/2014 8:16:39 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits
	RL	, ,		1 6



WO#: 1410089 Date Reported: 10/13/2014

Client: Stantec Consulting Corporati Project: 25983 UST Removal 2014	on			Collection	Date: 10	/9/2014 2:45:00 PM
Lab ID: 1410089-005 Client Sample ID: NORTH WALL@9'				Matrix: So	il	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	n ID: R173	50 Analyst: BC
Gasoline	ND	3.69		mg/Kg-dry	1	10/11/2014 12:42:00 PM
Surr: 4-Bromofluorobenzene	99.6	65-135		%REC	1	10/11/2014 12:42:00 PM
Surr: Toluene-d8	99.9	65-135		%REC	1	10/11/2014 12:42:00 PM
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batch	ו ID: 8990	Analyst: BC
Benzene	ND	0.0148		mg/Kg-dry	1	10/11/2014 12:42:00 PM
Toluene	ND	0.0148		mg/Kg-dry	1	10/11/2014 12:42:00 PM
Ethylbenzene	ND	0.0221		mg/Kg-dry	1	10/11/2014 12:42:00 PM
m,p-Xylene	ND	0.0148		mg/Kg-dry	1	10/11/2014 12:42:00 PM
o-Xylene	ND	0.0148		mg/Kg-dry	1	10/11/2014 12:42:00 PM
Surr: Dibromofluoromethane	97.1	63.7-129		%REC	1	10/11/2014 12:42:00 PM
Surr: Toluene-d8	99.2	64.3-131		%REC	1	10/11/2014 12:42:00 PM
Surr: 1-Bromo-4-fluorobenzene	97.6	63.1-141		%REC	1	10/11/2014 12:42:00 PM
Total Metals by EPA Method 6020				Batch	ו ID: 8992	Analyst: TN
Lead	2.16	0.160		mg/Kg-dry	1	10/13/2014 2:13:29 PM
Sample Moisture (Percent Moisture)			Batch	ו ID: R173	43 Analyst: KZ
Percent Moisture	3.64			wt%	1	10/13/2014 8:16:39 AM

emon

Analytical

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Client: Stantec Consulting Corporati Project: 25983 UST Removal 2014	on			Collection	Date: 10	/9/2014 10:30:00 AM
Lab ID: 1410089-006 Client Sample ID: DIW@5'				Matrix: So	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	n ID: R173	350 Analyst: BC
Gasoline	ND	3.54		mg/Kg-dry	1	10/11/2014 1:11:00 PM
Surr: 4-Bromofluorobenzene	98.1	65-135		%REC	1	10/11/2014 1:11:00 PM
Surr: Toluene-d8	101	65-135		%REC	1	10/11/2014 1:11:00 PM
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batch	n ID: 8990	Analyst: BC
Benzene	ND	0.0142		mg/Kg-dry	1	10/11/2014 1:11:00 PM
Toluene	ND	0.0142		mg/Kg-dry	1	10/11/2014 1:11:00 PM
Ethylbenzene	ND	0.0213		mg/Kg-dry	1	10/11/2014 1:11:00 PM
m,p-Xylene	ND	0.0142		mg/Kg-dry	1	10/11/2014 1:11:00 PM
o-Xylene	ND	0.0142		mg/Kg-dry	1	10/11/2014 1:11:00 PM
Surr: Dibromofluoromethane	107	63.7-129		%REC	1	10/11/2014 1:11:00 PM
Surr: Toluene-d8	100	64.3-131		%REC	1	10/11/2014 1:11:00 PM
Surr: 1-Bromo-4-fluorobenzene	96.1	63.1-141		%REC	1	10/11/2014 1:11:00 PM
Total Metals by EPA Method 6020				Batch	n ID: 8992	Analyst: TN
Lead	4.67	0.166		mg/Kg-dry	1	10/13/2014 2:16:54 PM
Sample Moisture (Percent Moisture)			Batch	n ID: R173	Analyst: KZ
Percent Moisture	5.78			wt%	1	10/13/2014 8:16:39 AM

Analyte detected in the associated Method Blank	D	Dilution was required
Value above quantitation range	Н	Holding times for preparation or analysis exceeded
Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
Reporting Limit	S	Spike recovery outside accepted recovery limits
	Value above quantitation range	Value above quantitation rangeHAnalyte detected below quantitation limitsND



Client: Stantec Consulting Corporati Project: 25983 UST Removal 2014	on			Collection	Date: 10)/9/2014 11:15:00 AM
Lab ID: 1410089-007 Client Sample ID: DIE@5'				Matrix: Sc	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	ו ID: R17	350 Analyst: BC
Gasoline	ND	3.27		mg/Kg-dry	1	10/11/2014 1:41:00 PM
Surr: 4-Bromofluorobenzene	99.1	65-135		%REC	1	10/11/2014 1:41:00 PM
Surr: Toluene-d8	101	65-135		%REC	1	10/11/2014 1:41:00 PM
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batch	n ID: 8990) Analyst: BC
Benzene	ND	0.0131		mg/Kg-dry	1	10/11/2014 1:41:00 PM
Toluene	ND	0.0131		mg/Kg-dry	1	10/11/2014 1:41:00 PM
Ethylbenzene	ND	0.0196		mg/Kg-dry	1	10/11/2014 1:41:00 PM
m,p-Xylene	ND	0.0131		mg/Kg-dry	1	10/11/2014 1:41:00 PM
o-Xylene	ND	0.0131		mg/Kg-dry	1	10/11/2014 1:41:00 PM
Surr: Dibromofluoromethane	111	63.7-129		%REC	1	10/11/2014 1:41:00 PM
Surr: Toluene-d8	99.5	64.3-131		%REC	1	10/11/2014 1:41:00 PM
Surr: 1-Bromo-4-fluorobenzene	97.1	63.1-141		%REC	1	10/11/2014 1:41:00 PM
Total Metals by EPA Method 6020				Batch	n ID: 8992	2 Analyst: TN
Lead	1.88	0.168		mg/Kg-dry	1	10/13/2014 2:20:19 PM
Sample Moisture (Percent Moisture)			Batch	n ID: R17	343 Analyst: KZ
Percent Moisture	2.15			wt%	1	10/13/2014 8:16:39 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Client: Stantec Consulting Corporation Project: 25983 UST Removal 2014				Collection Date: 10/9/2014 1:4			
Lab ID: 1410089-008 Client Sample ID: DI@20'				Matrix: Sc	bil		
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	
Gasoline by NWTPH-Gx				Batch	n ID: R173	50 Analyst: BC	
Gasoline	270	37.5	D	mg/Kg-dry	10	10/13/2014 3:20:00 PM	
Surr: 4-Bromofluorobenzene	103	65-135		%REC	1	10/11/2014 2:10:00 PM	
Surr: Toluene-d8	103	65-135		%REC	1	10/11/2014 2:10:00 PM	
Volatile Organic Compounds by EP	A Method	8260		Batch	h ID: 8990	Analyst: BC	
Benzene	ND	0.0150		mg/Kg-dry	1	10/11/2014 2:10:00 PM	
Toluene	0.0467	0.0150		mg/Kg-dry	1	10/11/2014 2:10:00 PM	
Ethylbenzene	0.586	0.0225		mg/Kg-dry	1	10/11/2014 2:10:00 PM	
m,p-Xylene	4.32	0.150	D	mg/Kg-dry	10	10/13/2014 3:20:00 PM	
o-Xylene	1.36	0.0150		mg/Kg-dry	1	10/11/2014 2:10:00 PM	
Surr: Dibromofluoromethane	99.5	63.7-129		%REC	1	10/11/2014 2:10:00 PM	
Surr: Toluene-d8	98.5	64.3-131		%REC	1	10/11/2014 2:10:00 PM	
Surr: 1-Bromo-4-fluorobenzene	101	63.1-141		%REC	1	10/11/2014 2:10:00 PM	
Total Metals by EPA Method 6020				Batch	n ID: 8992	Analyst: TN	
Lead	2.53	0.180		mg/Kg-dry	1	10/13/2014 2:23:45 PM	
Sample Moisture (Percent Moisture)			Batch	n ID: R173	43 Analyst: KZ	
Percent Moisture	9.47			wt%	1	10/13/2014 8:16:39 AM	

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Client: Stantec Consulting Corporati Project: 25983 UST Removal 2014	on			Collection	Date: 10)/9/2014 2:00:00 PM
Lab ID: 1410089-009 Client Sample ID: DI@26'				Matrix: So	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	n ID: R173	350 Analyst: BC
Gasoline	ND	6.01		mg/Kg-dry	1	10/11/2014 2:38:00 PM
Surr: 4-Bromofluorobenzene	100	65-135		%REC	1	10/11/2014 2:38:00 PM
Surr: Toluene-d8	100	65-135		%REC	1	10/11/2014 2:38:00 PM
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batch	n ID: 8990	Analyst: BC
Benzene	ND	0.0240		mg/Kg-dry	1	10/11/2014 2:38:00 PM
Toluene	ND	0.0240		mg/Kg-dry	1	10/11/2014 2:38:00 PM
Ethylbenzene	ND	0.0361		mg/Kg-dry	1	10/11/2014 2:38:00 PM
m,p-Xylene	0.0562	0.0240		mg/Kg-dry	1	10/11/2014 2:38:00 PM
o-Xylene	ND	0.0240		mg/Kg-dry	1	10/11/2014 2:38:00 PM
Surr: Dibromofluoromethane	109	63.7-129		%REC	1	10/11/2014 2:38:00 PM
Surr: Toluene-d8	101	64.3-131		%REC	1	10/11/2014 2:38:00 PM
Surr: 1-Bromo-4-fluorobenzene	98.2	63.1-141		%REC	1	10/11/2014 2:38:00 PM
Total Metals by EPA Method 6020				Batch	n ID: 8992	Analyst: TN
Lead	2.88	0.172		mg/Kg-dry	1	10/13/2014 2:27:10 PM
Sample Moisture (Percent Moisture)			Batch	n ID: R173	Analyst: KZ
Percent Moisture	8.28			wt%	1	10/13/2014 8:16:39 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Client: Stantec Consulting Corporat Project: 25983 UST Removal 2014	ion			Collection	Date: 1	0/10/2014 10:15:00 AM
Lab ID: 1410089-010 Client Sample ID: CSS-1@17'				Matrix: So	oil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	ו ID: R17	350 Analyst: BC
Gasoline	ND	3.25		mg/Kg-dry	1	10/11/2014 3:08:00 PM
Surr: 4-Bromofluorobenzene	99.5	65-135		%REC	1	10/11/2014 3:08:00 PM
Surr: Toluene-d8	101	65-135		%REC	1	10/11/2014 3:08:00 PM
Volatile Organic Compounds by EF	A Method	<u>8260</u>		Batch	n ID: 899	0 Analyst: BC
Benzene	ND	0.0130		mg/Kg-dry	1	10/11/2014 3:08:00 PM
Toluene	ND	0.0130		mg/Kg-dry	1	10/11/2014 3:08:00 PM
Ethylbenzene	ND	0.0195		mg/Kg-dry	1	10/11/2014 3:08:00 PM
m,p-Xylene	ND	0.0130		mg/Kg-dry	1	10/11/2014 3:08:00 PM
o-Xylene	ND	0.0130		mg/Kg-dry	1	10/11/2014 3:08:00 PM
Surr: Dibromofluoromethane	96.8	63.7-129		%REC	1	10/11/2014 3:08:00 PM
Surr: Toluene-d8	98.8	64.3-131		%REC	1	10/11/2014 3:08:00 PM
Surr: 1-Bromo-4-fluorobenzene	97.6	63.1-141		%REC	1	10/11/2014 3:08:00 PM
Total Metals by EPA Method 6020				Batch	n ID: 899	2 Analyst: TN
Lead	2.02	0.167		mg/Kg-dry	1	10/13/2014 2:30:35 PM
Sample Moisture (Percent Moisture	<u>e)</u>			Batch	ו ID: R17	343 Analyst: KZ
Percent Moisture	6.32			wt%	1	10/13/2014 8:16:39 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Client: Stantec Consulting Corporat Project: 25983 UST Removal 2014	ion			Collection	Date: 10	/10/2014 10:45:00 AM
Lab ID: 1410089-011 Client Sample ID: CSS-2@20'				Matrix: So	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batcl	h ID: R173	50 Analyst: BC
Gasoline	ND	4.10		mg/Kg-dry	1	10/11/2014 3:37:00 PM
Surr: 4-Bromofluorobenzene	100	65-135		%REC	1	10/11/2014 3:37:00 PM
Surr: Toluene-d8	100	65-135		%REC	1	10/11/2014 3:37:00 PM
Volatile Organic Compounds by EF	A Method	<u>8260</u>		Batcl	h ID: 8990	Analyst: BC
Benzene	ND	0.0164		mg/Kg-dry	1	10/11/2014 3:37:00 PM
Toluene	ND	0.0164		mg/Kg-dry	1	10/11/2014 3:37:00 PM
Ethylbenzene	ND	0.0246		mg/Kg-dry	1	10/11/2014 3:37:00 PM
m,p-Xylene	ND	0.0164		mg/Kg-dry	1	10/11/2014 3:37:00 PM
o-Xylene	ND	0.0164		mg/Kg-dry	1	10/11/2014 3:37:00 PM
Surr: Dibromofluoromethane	111	63.7-129		%REC	1	10/11/2014 3:37:00 PM
Surr: Toluene-d8	101	64.3-131		%REC	1	10/11/2014 3:37:00 PM
Surr: 1-Bromo-4-fluorobenzene	98.0	63.1-141		%REC	1	10/11/2014 3:37:00 PM
Total Metals by EPA Method 6020				Batcl	h ID: 8992	Analyst: TN
Lead	2.29	0.170		mg/Kg-dry	1	10/13/2014 2:34:01 PM
Sample Moisture (Percent Moisture)			Batcl	h ID: R173	43 Analyst: KZ
Percent Moisture	6.65			wt%	1	10/13/2014 8:16:39 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Client: Stantec Consulting Corporat Project: 25983 UST Removal 2014	ion			Collection	Date: 10	0/10/2014 2:30:00 PM
Lab ID: 1410089-012 Client Sample ID: SS-1@20'				Matrix: Sc	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	n ID: R173	350 Analyst: BC
Gasoline	48.7	3.67		mg/Kg-dry	1	10/11/2014 6:02:00 PM
Surr: 4-Bromofluorobenzene	102	65-135		%REC	1	10/11/2014 6:02:00 PM
Surr: Toluene-d8	102	65-135		%REC	1	10/11/2014 6:02:00 PM
Volatile Organic Compounds by EF	A Method	<u>8260</u>		Batch	n ID: 8990	Analyst: BC
Benzene	ND	0.0147		mg/Kg-dry	1	10/11/2014 6:02:00 PM
Toluene	0.0247	0.0147		mg/Kg-dry	1	10/11/2014 6:02:00 PM
Ethylbenzene	0.0690	0.0220		mg/Kg-dry	1	10/11/2014 6:02:00 PM
m,p-Xylene	0.376	0.0147		mg/Kg-dry	1	10/11/2014 6:02:00 PM
o-Xylene	0.131	0.0147		mg/Kg-dry	1	10/11/2014 6:02:00 PM
Surr: Dibromofluoromethane	98.9	63.7-129		%REC	1	10/11/2014 6:02:00 PM
Surr: Toluene-d8	101	64.3-131		%REC	1	10/11/2014 6:02:00 PM
Surr: 1-Bromo-4-fluorobenzene	99.1	63.1-141		%REC	1	10/11/2014 6:02:00 PM
Total Metals by EPA Method 6020				Batch	n ID: 8992	Analyst: TN
Lead	3.22	0.165		mg/Kg-dry	1	10/13/2014 2:37:26 PM
Sample Moisture (Percent Moisture)			Batch	n ID: R173	Analyst: KZ
Percent Moisture	6.94			wt%	1	10/13/2014 8:16:39 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Client: Stantec Consulting Corporati Project: 25983 UST Removal 2014	ion			Collection	Date: 10)/10/2014 2:40:00 PM
Lab ID: 1410089-013 Client Sample ID: SS-1@25'				Matrix: Sc	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	n ID: R173	350 Analyst: BC
Gasoline	ND	3.20		mg/Kg-dry	1	10/11/2014 6:31:00 PM
Surr: 4-Bromofluorobenzene	100	65-135		%REC	1	10/11/2014 6:31:00 PM
Surr: Toluene-d8	99.9	65-135		%REC	1	10/11/2014 6:31:00 PM
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batch	n ID: 8990	Analyst: BC
Benzene	ND	0.0128		mg/Kg-dry	1	10/11/2014 6:31:00 PM
Toluene	ND	0.0128		mg/Kg-dry	1	10/11/2014 6:31:00 PM
Ethylbenzene	ND	0.0192		mg/Kg-dry	1	10/11/2014 6:31:00 PM
m,p-Xylene	ND	0.0128		mg/Kg-dry	1	10/11/2014 6:31:00 PM
o-Xylene	ND	0.0128		mg/Kg-dry	1	10/11/2014 6:31:00 PM
Surr: Dibromofluoromethane	102	63.7-129		%REC	1	10/11/2014 6:31:00 PM
Surr: Toluene-d8	102	64.3-131		%REC	1	10/11/2014 6:31:00 PM
Surr: 1-Bromo-4-fluorobenzene	98.3	63.1-141		%REC	1	10/11/2014 6:31:00 PM
Total Metals by EPA Method 6020				Batch	n ID: 8992	Analyst: TN
Lead	1.95	0.163		mg/Kg-dry	1	10/13/2014 2:40:52 PM
Sample Moisture (Percent Moisture)			Batch	n ID: R173	Analyst: KZ
Percent Moisture	5.87			wt%	1	10/13/2014 8:16:39 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Client: Stantec Consulting Corporati Project: 25983 UST Removal 2014	on			Collection	Date: 10	0/10/2014 10:00:00 AM
Lab ID: 1410089-014 Client Sample ID: SS-2@17'				Matrix: Sc	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	h ID: R17	350 Analyst: BC
Gasoline	8.80	3.61		mg/Kg-dry	1	10/11/2014 7:00:00 PM
Surr: 4-Bromofluorobenzene	101	65-135		%REC	1	10/11/2014 7:00:00 PM
Surr: Toluene-d8	100	65-135		%REC	1	10/11/2014 7:00:00 PM
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batch	h ID: 8990) Analyst: BC
Benzene	ND	0.0144		mg/Kg-dry	1	10/11/2014 7:00:00 PM
Toluene	ND	0.0144		mg/Kg-dry	1	10/11/2014 7:00:00 PM
Ethylbenzene	ND	0.0216		mg/Kg-dry	1	10/11/2014 7:00:00 PM
m,p-Xylene	ND	0.0144		mg/Kg-dry	1	10/11/2014 7:00:00 PM
o-Xylene	ND	0.0144		mg/Kg-dry	1	10/11/2014 7:00:00 PM
Surr: Dibromofluoromethane	97.2	63.7-129		%REC	1	10/11/2014 7:00:00 PM
Surr: Toluene-d8	101	64.3-131		%REC	1	10/11/2014 7:00:00 PM
Surr: 1-Bromo-4-fluorobenzene	98.7	63.1-141		%REC	1	10/11/2014 7:00:00 PM
Total Metals by EPA Method 6020				Batch	h ID: 8992	2 Analyst: TN
Lead	2.04	0.168		mg/Kg-dry	1	10/13/2014 2:51:12 PM
Sample Moisture (Percent Moisture)			Batch	n ID: R17	343 Analyst: KZ
Percent Moisture	7.98			wt%	1	10/13/2014 8:16:39 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Client: Stantec Consulting Corporat Project: 25983 UST Removal 2014	tion Collection Date: 10/10/2014 9:00:00					0/10/2014 9:00:00 AM
Lab ID: 1410089-015 Client Sample ID: SS-3@15'				Matrix: Sc	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	n ID: R173	350 Analyst: BC
Gasoline	86.9	35.2	D	mg/Kg-dry	10	10/13/2014 3:49:00 PM
Surr: 4-Bromofluorobenzene	101	65-135		%REC	1	10/11/2014 7:29:00 PM
Surr: Toluene-d8	103	65-135		%REC	1	10/11/2014 7:29:00 PM
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batch	h ID: 8990) Analyst: BC
Benzene	ND	0.0141		mg/Kg-dry	1	10/11/2014 7:29:00 PM
Toluene	ND	0.0141		mg/Kg-dry	1	10/11/2014 7:29:00 PM
Ethylbenzene	0.146	0.0211		mg/Kg-dry	1	10/11/2014 7:29:00 PM
m,p-Xylene	0.391	0.0141		mg/Kg-dry	1	10/11/2014 7:29:00 PM
o-Xylene	0.269	0.0141		mg/Kg-dry	1	10/11/2014 7:29:00 PM
Surr: Dibromofluoromethane	109	63.7-129		%REC	1	10/11/2014 7:29:00 PM
Surr: Toluene-d8	100	64.3-131		%REC	1	10/11/2014 7:29:00 PM
Surr: 1-Bromo-4-fluorobenzene	99.3	63.1-141		%REC	1	10/11/2014 7:29:00 PM
Total Metals by EPA Method 6020				Batch	h ID: 8992	2 Analyst: TN
Lead	2.13	0.163		mg/Kg-dry	1	10/13/2014 2:54:37 PM
Sample Moisture (Percent Moisture	<u>.)</u>			Batch	n ID: R173	343 Analyst: KZ
Percent Moisture	9.67			wt%	1	10/13/2014 8:16:39 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



WO#: 1410089 Date Reported: 10/13/2014

Client: Stantec Consulting Corporat Project: 25983 UST Removal 2014	ion			Collection	Date: 10	/10/2014 8:30:00 AM
Lab ID: 1410089-016 Client Sample ID: SS-4@18'				Matrix: So	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	n ID: R173	350 Analyst: BC
Gasoline	85.7	36.7	D	mg/Kg-dry	10	10/13/2014 4:18:00 PM
Surr: 4-Bromofluorobenzene	102	65-135		%REC	1	10/11/2014 7:58:00 PM
Surr: Toluene-d8	104	65-135		%REC	1	10/11/2014 7:58:00 PM
Volatile Organic Compounds by EF	A Method	<u>8260</u>		Batch	h ID: 8990	Analyst: BC
Benzene	ND	0.0147		mg/Kg-dry	1	10/11/2014 7:58:00 PM
Toluene	ND	0.0147		mg/Kg-dry	1	10/11/2014 7:58:00 PM
Ethylbenzene	ND	0.0220		mg/Kg-dry	1	10/11/2014 7:58:00 PM
m,p-Xylene	0.150	0.0147		mg/Kg-dry	1	10/11/2014 7:58:00 PM
o-Xylene	0.0433	0.0147		mg/Kg-dry	1	10/11/2014 7:58:00 PM
Surr: Dibromofluoromethane	104	63.7-129		%REC	1	10/11/2014 7:58:00 PM
Surr: Toluene-d8	101	64.3-131		%REC	1	10/11/2014 7:58:00 PM
Surr: 1-Bromo-4-fluorobenzene	99.6	63.1-141		%REC	1	10/11/2014 7:58:00 PM
Total Metals by EPA Method 6020				Batch	h ID: 8992	Analyst: TN
Lead	2.29	0.165		mg/Kg-dry	1	10/13/2014 2:58:03 PM
Sample Moisture (Percent Moisture	<u>e)</u>			Batch	n ID: R173	Analyst: KZ
Percent Moisture	9.56			wt%	1	10/13/2014 8:16:39 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



WO#: 1410089 Date Reported: 10/13/2014

Client: Stantec Consulting Corporati Project: 25983 UST Removal 2014	on			Collection	Date: 10	/10/2014 8:45:00 AM
Lab ID: 1410089-017 Client Sample ID: SS-4@23'				Matrix: So	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	n ID: R173	350 Analyst: BC
Gasoline	ND	3.23		mg/Kg-dry	1	10/11/2014 8:27:00 PM
Surr: 4-Bromofluorobenzene	100	65-135		%REC	1	10/11/2014 8:27:00 PM
Surr: Toluene-d8	100	65-135		%REC	1	10/11/2014 8:27:00 PM
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batch	n ID: 8990	Analyst: BC
Benzene	ND	0.0129		mg/Kg-dry	1	10/11/2014 8:27:00 PM
Toluene	ND	0.0129		mg/Kg-dry	1	10/11/2014 8:27:00 PM
Ethylbenzene	ND	0.0194		mg/Kg-dry	1	10/11/2014 8:27:00 PM
m,p-Xylene	ND	0.0129		mg/Kg-dry	1	10/11/2014 8:27:00 PM
o-Xylene	ND	0.0129		mg/Kg-dry	1	10/11/2014 8:27:00 PM
Surr: Dibromofluoromethane	103	63.7-129		%REC	1	10/11/2014 8:27:00 PM
Surr: Toluene-d8	102	64.3-131		%REC	1	10/11/2014 8:27:00 PM
Surr: 1-Bromo-4-fluorobenzene	98.3	63.1-141		%REC	1	10/11/2014 8:27:00 PM
Total Metals by EPA Method 6020				Batch	n ID: 8992	Analyst: TN
Lead	2.64	0.162		mg/Kg-dry	1	10/13/2014 3:01:28 PM
Sample Moisture (Percent Moisture)			Batch	n ID: R173	Analyst: KZ
Percent Moisture	5.47			wt%	1	10/13/2014 8:16:39 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Work Order: CLIENT: Project:		nsulting Cor Removal 20	•								SUMMAI		
Sample ID: MB-89	92	SampType:	MBLK			Units: mg/	Kg	Prep Date	e: 10/13/2	014	RunNo: 173	59	
Client ID: MBLK	S	Batch ID:	8992					Analysis Date	e: 10/13/2	2014	SeqNo: 347	126	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			ND	0.200									
Sample ID: LCS-8	992	SampType:	LCS			Units: mg/	Kg	Prep Date	e: 10/13/2	2014	RunNo: 173	59	
Client ID: LCSS		Batch ID:	8992					Analysis Date	e: 10/13/2	2014	SeqNo: 347	127	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			203	0.200	189.0	0	107	74.6	125.4				
Sample ID: 14100	89-001ADUP	SampType:	DUP			Units: mg/	Kg-dry	Prep Date	e: 10/13/2	2014	RunNo: 173	359	
Client ID: PL@3		Batch ID:	8992					Analysis Date	e: 10/13/2	2014	SeqNo: 347	129	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			1.98	0.155						1.597	21.6	30	
Sample ID: 14100	89-001AMS	SampType:	MS			Units: mg/	Kg-dry	Prep Date	e: 10/13/2	2014	RunNo: 173	59	
Client ID: PL@3	•	Batch ID:	8992					Analysis Date	e: 10/13/2	2014	SeqNo: 347	/131	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			21.7	0.155	19.38	1.597	104	75	125				
Sample ID: 14100	89-001AMSD	SampType:	MSD			Units: mg/	Kg-dry	Prep Date	e: 10/13/2	2014	RunNo: 173	59	
Client ID: PL@3		Batch ID:	8992					Analysis Date	e: 10/13/2	2014	SeqNo: 347	/132	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			21.8	0.155	19.38	1.597	104	75	125	21.66	0.677	30	
Qualifiers: B H R		the associated Methoreparation or analysis ted recovery limits			D Dilution wa J Analyte det RL Reporting I	ected below quantitati	on limits		ND Not d	e above quantitation ra letected at the Report e recovery outside acc	ing Limit	s	

Work Order: 1410089								000	SUMMAI		רסרמ
CLIENT: Stantec C	onsulting Corporation										-
	T Removal 2014								Gasoline	by NWT	PH-G
Sample ID: 1410089-001BDUP	SampType: DUP			Units: mg/Kg-	dry	Prep Dat	e: 10/10/201	4	RunNo: 173	50	
Client ID: PL@3'	Batch ID: R17350					Analysis Dat	e: 10/11/201	4	SeqNo: 346	971	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit F	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	5.16						0		30	
Surr: Toluene-d8	2.60		2.578		101	65	135		0		
Surr: 4-Bromofluorobenzene	2.61		2.578		101	65	135		0		
Sample ID: LCS-R17350	SampType: LCS			Units: mg/Kg		Prep Dat	e: 10/11/201	4	RunNo: 173	50	
Client ID: LCSS	Batch ID: R17350					Analysis Dat	e: 10/11/201	4	SeqNo: 346	983	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit F	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	25.6	5.00	25.00	0	103	65	135				
Surr: Toluene-d8	2.52		2.500		101	65	135				
Surr: 4-Bromofluorobenzene	2.54		2.500		102	65	135				
Sample ID: MB-R17350	SampType: MBLK			Units: mg/Kg		Prep Dat	e: 10/11/201	4	RunNo: 173	50	
Client ID: MBLKS	Batch ID: R17350					Analysis Dat	e: 10/11/201	4	SeqNo: 346	984	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit F	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	5.00									
Surr: Toluene-d8	2.53		2.500		101	65	135				



Surr: 4-Bromofluorobenzene

B Analyte detected in the associated Method Blank

Fremont

H Holding times for preparation or analysis exceeded

2.51

R RPD outside accepted recovery limits

D Dilution was required

2.500

J Analyte detected below quantitation limits

100

65

135

RL Reporting Limit

- E Value above quantitation range
- ND Not detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits



Work Order: 1410089

Project:

CLIENT: Stantec Consulting Corporation

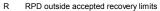
25983 UST Removal 2014

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID: 1410089-001BDUP	SampType: DUP			Units: mg/K	g-dry	Prep Dat	e: 10/10/2	014	RunNo: 173	60	
Client ID: PL@3'	Batch ID: 8990					Analysis Dat	e: 10/11/2	014	SeqNo: 347	168	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0138						0		30	
Toluene	ND	0.0138						0		30	
Ethylbenzene	ND	0.0207						0		30	
m,p-Xylene	ND	0.0138						0		30	
o-Xylene	ND	0.0138						0		30	
Surr: Dibromofluoromethane	1.87		1.723		109	63.7	129		0		
Surr: Toluene-d8	1.74		1.723		101	64.3	131		0		
Surr: 1-Bromo-4-fluorobenzene	1.70		1.723		99.0	63.1	141		0		

Sample ID: 1410089-002BMS	SampType: MS			Units: mg/K	g-dry	Prep Da	te: 10/10/2014	RunNo: 17360	
Client ID: DSP-1	Batch ID: 8990					Analysis Da	te: 10/11/2014	SeqNo: 347170	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD	Ref Val %RPD RPDLimit	Qual
Benzene	0.682	0.0133	0.6625	0	103	63.5	133		
Toluene	0.613	0.0133	0.6625	0	92.5	63.4	132		
Ethylbenzene	0.689	0.0199	0.6625	0.006284	103	54.5	134		
m,p-Xylene	1.39	0.0133	1.325	0.03593	102	53.1	132		
o-Xylene	0.700	0.0133	0.6625	0.01826	103	53.3	139		
Surr: Dibromofluoromethane	1.60		1.656		96.8	63.7	129		
Surr: Toluene-d8	1.64		1.656		99.0	64.3	131		
Surr: 1-Bromo-4-fluorobenzene	1.68		1.656		102	63.1	141		
Sample ID: LCS-8990	SampType: LCS			Units: mg/k	g	Prep Da	te: 10/10/2014	RunNo: 17360	
Client ID: LCSS	Batch ID: 8990					Analysis Da	te: 10/11/2014	SeqNo: 347179	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD	Ref Val %RPD RPDLimit	Qual
Benzene	0.945	0.0200	1.000	0	94.5	64.3	133		
Toluene	0.879	0.0200	1.000	0	87.9	67.3	138		
Qualifiers: B Analyte detected in t	the associated Method Blank		D Dilution wa	is required			E Value above q	uantitation range	
H Holding times for pre	eparation or analysis exceeded		J Analyte de	tected below quantitation	n limits		ND Not detected a	t the Reporting Limit	
B BBD outside accept	od rocovoru limito		DI Deporting I	imit				outside accented recovery limite	



RL Reporting Limit

S Spike recovery outside accepted recovery limits

Page 23 of 27

OC SUMMARY REPORT

SEALON	Fremont
	[Analytical]

Work Order: 1410089

	antec Consulting Co 983 UST Removal 2	•					Volatile	e Organ	ic Compou	nds by EP		
Sample ID: LCS-8990	SampType	e: LCS			Units: mg/Kg		Prep Dat	e: 10/10/2	014	RunNo: 173	60	
Client ID: LCSS	Batch ID:	8990					Analysis Dat	e: 10/11/2	014	SeqNo: 347	179	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene		0.951	0.0300	1.000	0	95.1	74	129				
m,p-Xylene		1.89	0.0200	2.000	0	94.6	79.8	128				
o-Xylene		0.954	0.0200	1.000	0	95.4	72.7	124				
Surr: Dibromofluorome	ethane	2.57		2.500		103	63.7	129				
Surr: Toluene-d8		2.54		2.500		102	64.3	131				
Surr: 1-Bromo-4-fluoro	obenzene	2.53		2.500		101	63.1	141				
Sample ID: MB-8990	SampType	e: MBLK			Units: mg/Kg		Prep Dat	e: 10/10/2	014	RunNo: 173	60	
Client ID: MBLKS	Batch ID:	8990					Analysis Dat	e: 10/11/2	014	SeqNo: 347	180	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		ND	0.0200									
Toluene		ND	0.0200									
Ethylbenzene		ND	0.0300									
m,p-Xylene		ND	0.0200									
o-Xylene		ND	0.0200									
Surr: Dibromofluorome	ethane	2.58		2.500		103	63.7	129				
Surr: Toluene-d8		2.48		2.500		99.1	64.3	131				

Qualifiers: B Analyte detected in the associated Method Blank

-
- H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

- D Dilution was required
- J Analyte detected below quantitation limits
- RL Reporting Limit

- E Value above quantitation range
- ND Not detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits



Sample Log-In Check List

Client Name:	STANTEC	Work Or	der Number:	1410089		
Logged by:	Erica Silva	Date Red	ceived:	10/10/20	14 4:30:00 PM	
Chain of Custo	dy					
1. Is Chain of Cus	stody complete?	Yes	\checkmark	No 🗌	Not Present	
2. How was the sa	ample delivered?	Clien	<u>t</u>			
Log In						
3. Coolers are pre	esent?	Yes	\checkmark	No 🗌		
4. Shipping conta	iner/cooler in good condition?	Yes		No 🗌		
5. Custody seals i	intact on shipping container/cooler?	Yes		No 🗌	Not Required	
6. Was an attemp	ot made to cool the samples?	Yes	\checkmark	No 🗌		
7. Were all cooler	s received at a temperature of $>0^{\circ}$ C to 10.0° C	Yes		No 🗌		
8. Sample(s) in p	roper container(s)?	Yes		No 🗌		
9. Sufficient samp	ble volume for indicated test(s)?	Yes	\checkmark	No 🗌		
10. Are samples pr	roperly preserved?	Yes	\checkmark	No 🗌		
11. Was preservati	ive added to bottles?	Yes		No 🗹	NA 🗌	
12. Is the headspa	ce in the VOA vials?	Yes		No 🗌	NA 🗹	
13. Did all samples	s containers arrive in good condition(unbroken)?	Yes		No 🗌		
14. Does paperwor	k match bottle labels?	Yes	\checkmark	No 🗌		
15. Are matrices co	prrectly identified on Chain of Custody?	Yes		No 🗌		
16. Is it clear what	analyses were requested?	Yes		No 🗌		
17. Were all holdin	g times able to be met?	Yes	\checkmark	No 🗌		
Special Handlir	ng (if applicable)					
18. Was client noti	fied of all discrepancies with this order?	Yes		No 🗌	NA 🗹	
Person N	otified: Date	e:				
By Whom	v: Via:	eMai	I 🗌 Phone	e 🗌 Fax	In Person	
Regarding	g:					
Client Ins	tructions:					

Item Information

Item #	Temp °C	Condition
Cooler	6.6	Good
Sample	8.4	Good

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TAT -> SameDay (vextDay) 2 Day 3 Day STD /Please coordinate with the lab in advance	Date/Timé *	Received /	Date/Time	Refinquisited Date	
	lu 16/10/14/ 16:30	* Kenn bu	14 16:30	x 10/10/1	
HOLO SALTING TOIL		Disposal by Lab (A fee may be assessed if samples are retained after 30 days.)		Sample Disposal: Return to Client	
Special Remarks:	Nitrate+Nitrite	de O-Phosphate Fluoride	Chloride Sulfate Bromide	*** Anions (Circle): Nitrate Nitrite	
Pb So Se Sr Sn Ti Ti U V Zn	Cd Co Cr Cu Fe Hg K Mg Mn	Individual: Ag Al As B Ba Be Ca	RCRA-8 Priority Pollutants TAL	Metals Analysis (Circle): MTCA-5	
S ppm	8		10/10/015 4	1, tiel- 550 "	
0 ppm		X	10/9 1400		
2176 ppm	0	X	10/9 1345	\$ VI@201	
1 ppm			10/9 11:15	, DIE@5'	
O APM			10/9 10:30	, DIMOSI	-
() ppm			2441 5/01	NORTH WALLOY'	
2426			10/9 1620	· DSP-3	h
1246			10/9 1610	3 DSP-2	145
h£81		××	1 0001 2/01	2 DSP-1	D.L
Oppon	X		71CS 00:11 6/01	1 PLO3'	L.
PPM / PID Reading	10000000000000000000000000000000000000	22 23 24 25 25 25 25 25 25 25 25 25 25	Sample Sample Type Date Time (Matrix)*	Sample Name	
Waste Water	W = Water, DW = Drinking Water, GW = Ground Water, WW = Waste Water	SD = Sediment, SL = Solid, W = Water, D	B = Buik, O = Other, P = Product, S = Soil,	*Matrix Codes: A = Air, AQ = Aqueous, B = E	
	Email: PAUL. FAIRDA WWD STA" Project No:	Email: PAUL	VCN Fax:	A: PAULFAIR	-
	EMILY WARDER	Collected by:	1000	e, Zip Bellene,	
104 4017	OLYMPIA, WA	Project Name: Location:	3310 PI SHEZOO	Address: 11/30 NE 3	
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р Р	Page:	hildly h	Tel: 206-352-3790	ķ	
410089	Indonations Operate Na (intermal).		4 nalytical		
Chain of Custody Record	Chai		ont		
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*Metals Analysis (Circle): MTCA-S RCRA-S Priority Pollulants **Anions (Circle): Nitrate Nitrite Chioride Sulfate **Anions (Circle): Nitrate **Anions (Circle): Nitrate Chioride Sulfate **Anions (Circle): Nitrate Chioride Sulfate **Anions (Circle): Nitrate Chioride Sulfate **Anions (Circle): Nitrate **Anions	55-1@25' 10/10 55-2@17' 10/10 55-3@15' 10/10 55-4@23' 10/10	$\frac{1001}{10}$	2-717
The Pollutants Int. Interview of Polyshafe Fluoride Nitrate+Mitrite Sulfate Bromide D-Phosphafe Fluoride Nitrate+Mitrite Disposal by Lab (A fee may be exceeded if semples are estained after 30 days.) Received Received Date/Time Received Date/Time X		444 444 444 444 444 444 444 444	Date: 10/10/14 Project Location
0/14/6		9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9     9 <td>Laborationy Project No lincernali: 410089 Page: 2 of: 2 Page: 2 Pa</td>	Laborationy Project No lincernali: 410089 Page: 2 of: 2 Page: 2 Pa



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

Stantec Consulting Corporation Paul Fairbairn 11130 NE 33rd PI, Suite 200 Bellevue, WA 98004

#### RE: 25983 Olympia UST Removal 2014 Lab ID: 1410164

October 22, 2014

#### **Attention Paul Fairbairn:**

Fremont Analytical, Inc. received 11 sample(s) on 10/16/2014 for the analyses presented in the following report.

Gasoline by NWTPH-Gx Sample Moisture (Percent Moisture) Total Metals by EPA Method 6020 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,

Mphl c. Foly

Mike Ridgeway President



CLIENT: Project: Lab Order:	Stantec Consulting Corporation 25983 Olympia UST Removal 2014 1410164	Work Order Sample Summary				
Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received			
1410164-001	DSP-4	10/15/2014 1:30 PM	10/16/2014 8:17 AM			
1410164-002	NORTH WALL@24'	10/15/2014 12:05 PM	10/16/2014 8:17 AM			
1410164-003	SOUTH WALL@10'	10/15/2014 2:15 PM	10/16/2014 8:17 AM			
1410164-004	EAST WALL@17'	10/14/2014 10:45 AM	10/16/2014 8:17 AM			
1410164-005	EAST WALL@26'	10/14/2014 11:25 AM	10/16/2014 8:17 AM			
1410164-006	CSS-3@17'	10/13/2014 10:50 AM	10/16/2014 8:17 AM			
1410164-007	CSS-3@22'	10/13/2014 11:00 AM	10/16/2014 8:17 AM			
1410164-008	CSS-4@18'	10/13/2014 9:30 AM	10/16/2014 8:17 AM			
1410164-009	CSS-4@25'	10/13/2014 9:45 AM	10/16/2014 8:17 AM			
1410164-010	CSS-5@18'	10/13/2014 12:15 PM	10/16/2014 8:17 AM			
1410164-011	CSS-5@24'	10/13/2014 12:20 PM	10/16/2014 8:17 AM			



**Case Narrative** 

WO#: **1410164** Date: **10/22/2014** 

CLIENT:Stantec Consulting CorporationProject:25983 Olympia UST Removal 2014

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.



<b>Client:</b> Stantec Consulting Corporati <b>Project:</b> 25983 Olympia UST Remova		Collection Date: 10/15/2014 1:30:00 PM				
Lab ID: 1410164-001 Client Sample ID: DSP-4				Matrix: So	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	n ID: R174	66 Analyst: BC
Gasoline	46.4	3.02		mg/Kg-dry	1	10/16/2014 6:55:00 PM
Surr: 4-Bromofluorobenzene	103	65-135		%REC	1	10/16/2014 6:55:00 PM
Surr: Toluene-d8	99.9	65-135		%REC	1	10/16/2014 6:55:00 PM
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batch	n ID: 9041	Analyst: BC
Benzene	ND	0.0121		mg/Kg-dry	1	10/16/2014 6:55:00 PM
Toluene	ND	0.0121		mg/Kg-dry	1	10/16/2014 6:55:00 PM
Ethylbenzene	0.160	0.0181		mg/Kg-dry	1	10/16/2014 6:55:00 PM
m,p-Xylene	0.901	0.0121		mg/Kg-dry	1	10/16/2014 6:55:00 PM
o-Xylene	0.277	0.0121		mg/Kg-dry	1	10/16/2014 6:55:00 PM
Surr: Dibromofluoromethane	110	63.7-129		%REC	1	10/16/2014 6:55:00 PM
Surr: Toluene-d8	102	64.3-131		%REC	1	10/16/2014 6:55:00 PM
Surr: 1-Bromo-4-fluorobenzene	100	63.1-141		%REC	1	10/16/2014 6:55:00 PM
Total Metals by EPA Method 6020				Batch	n ID: 9045	Analyst: TN
Lead	2.25	0.164		mg/Kg-dry	1	10/18/2014 6:01:46 PM
Sample Moisture (Percent Moisture	)			Batch	ו ID: R174	52 Analyst: KZ
Percent Moisture	8.19			wt%	1	10/16/2014 2:11:12 PM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



<b>Client:</b> Stantec Consulting Corporation <b>Project:</b> 25983 Olympia UST Remova		Collection	Date: 10	/15/2014 12:05:00 PM		
Lab ID: 1410164-002				Matrix: So	bil	
Client Sample ID: NORTH WALL@24 Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	ו ID: R174	66 Analyst: BC
Gasoline	ND	2.68		mg/Kg-dry	1	10/16/2014 7:24:00 PM
Surr: 4-Bromofluorobenzene	103	65-135		%REC	1	10/16/2014 7:24:00 PM
Surr: Toluene-d8	99.9	65-135		%REC	1	10/16/2014 7:24:00 PM
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batch	n ID: 9041	Analyst: BC
Benzene	ND	0.0107		mg/Kg-dry	1	10/16/2014 7:24:00 PM
Toluene	ND	0.0107		mg/Kg-dry	1	10/16/2014 7:24:00 PM
Ethylbenzene	ND	0.0161		mg/Kg-dry	1	10/16/2014 7:24:00 PM
m,p-Xylene	ND	0.0107		mg/Kg-dry	1	10/16/2014 7:24:00 PM
o-Xylene	ND	0.0107		mg/Kg-dry	1	10/16/2014 7:24:00 PM
Surr: Dibromofluoromethane	109	63.7-129		%REC	1	10/16/2014 7:24:00 PM
Surr: Toluene-d8	101	64.3-131		%REC	1	10/16/2014 7:24:00 PM
Surr: 1-Bromo-4-fluorobenzene	101	63.1-141		%REC	1	10/16/2014 7:24:00 PM
Total Metals by EPA Method 6020				Batch	n ID: 9045	Analyst: TN
Lead	2.21	0.162		mg/Kg-dry	1	10/18/2014 6:25:51 PM
Sample Moisture (Percent Moisture)	)			Batch	ו ID: R174	52 Analyst: KZ
Percent Moisture	5.77			wt%	1	10/16/2014 2:11:12 PM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



<b>Client:</b> Stantec Consulting Corporation <b>Project:</b> 25983 Olympia UST Remova		Collection	Date: 10	/15/2014 2:15:00 PM		
Lab ID: 1410164-003				Matrix: So	oil	
Client Sample ID: SOUTH WALL@10	,					
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	ו ID: R174	66 Analyst: BC
Gasoline	ND	3.25		mg/Kg-dry	1	10/16/2014 8:22:00 PM
Surr: 4-Bromofluorobenzene	101	65-135		%REC	1	10/16/2014 8:22:00 PM
Surr: Toluene-d8	99.6	65-135		%REC	1	10/16/2014 8:22:00 PM
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batch	n ID: 9041	Analyst: BC
Benzene	ND	0.0130		mg/Kg-dry	1	10/16/2014 8:22:00 PM
Toluene	ND	0.0130		mg/Kg-dry	1	10/16/2014 8:22:00 PM
Ethylbenzene	ND	0.0195		mg/Kg-dry	1	10/16/2014 8:22:00 PM
m,p-Xylene	ND	0.0130		mg/Kg-dry	1	10/16/2014 8:22:00 PM
o-Xylene	ND	0.0130		mg/Kg-dry	1	10/16/2014 8:22:00 PM
Surr: Dibromofluoromethane	101	63.7-129		%REC	1	10/16/2014 8:22:00 PM
Surr: Toluene-d8	100	64.3-131		%REC	1	10/16/2014 8:22:00 PM
Surr: 1-Bromo-4-fluorobenzene	99.0	63.1-141		%REC	1	10/16/2014 8:22:00 PM
Total Metals by EPA Method 6020				Batch	n ID: 9045	Analyst: TN
Lead	7.01	0.162		mg/Kg-dry	1	10/18/2014 6:36:13 PM
Sample Moisture (Percent Moisture)	)			Batch	ו ID: R174	52 Analyst: KZ
Percent Moisture	6.23			wt%	1	10/16/2014 2:11:12 PM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



<b>Client:</b> Stantec Consulting Corporati <b>Project:</b> 25983 Olympia UST Remova		Collection Date: 10/14/2014 10:45:00 AM					
Lab ID: 1410164-004 Client Sample ID: EAST WALL@17'				Matrix: So	oil		
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	
Gasoline by NWTPH-Gx				Batch	ו ID: R174	66 Analyst: BC	
Gasoline	517	53.9	D	mg/Kg-dry	20	10/17/2014 12:45:00 PM	
Surr: 4-Bromofluorobenzene	102	65-135		%REC	1	10/17/2014 4:33:00 AM	
Surr: Toluene-d8	101	65-135		%REC	1	10/17/2014 4:33:00 AM	
Volatile Organic Compounds by EPA Method 8260				Batch ID: 9041 Analyst: BC			
Benzene	ND	0.0108		mg/Kg-dry	1	10/17/2014 4:33:00 AM	
Toluene	4.07	0.216	D	mg/Kg-dry	20	10/17/2014 12:45:00 PM	
Ethylbenzene	6.38	0.323	D	mg/Kg-dry	20	10/17/2014 12:45:00 PM	
m,p-Xylene	29.2	0.216	D	mg/Kg-dry	20	10/17/2014 12:45:00 PM	
o-Xylene	11.7	0.216	D	mg/Kg-dry	20	10/17/2014 12:45:00 PM	
Surr: Dibromofluoromethane	106	63.7-129		%REC	1	10/17/2014 4:33:00 AM	
Surr: Toluene-d8	103	64.3-131		%REC	1	10/17/2014 4:33:00 AM	
Surr: 1-Bromo-4-fluorobenzene	98.7	63.1-141		%REC	1	10/17/2014 4:33:00 AM	
Total Metals by EPA Method 6020				Batch	ו ID: 9045	Analyst: TN	
Lead	2.40	0.168		mg/Kg-dry	1	10/18/2014 6:39:39 PM	
Sample Moisture (Percent Moisture	)			Batch	ו ID: R174	52 Analyst: KZ	
Percent Moisture	7.50			wt%	1	10/16/2014 2:11:12 PM	

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



<b>Client:</b> Stantec Consulting Corporati <b>Project:</b> 25983 Olympia UST Remova		Collection Date: 10/14/2014 11:25:00 AN				
Lab ID: 1410164-005 Client Sample ID: EAST WALL@26'		Matrix: Soil				
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	า ID: R174	66 Analyst: BC
Gasoline	ND	2.81		mg/Kg-dry	1	10/16/2014 10:17:00 PM
Surr: 4-Bromofluorobenzene	101	65-135		%REC	1	10/16/2014 10:17:00 PM
Surr: Toluene-d8	99.3	65-135		%REC	1	10/16/2014 10:17:00 PM
Volatile Organic Compounds by EPA Method 8260				Batch	ו ID: 9041	Analyst: BC
Benzene	ND	0.0112		mg/Kg-dry	1	10/16/2014 10:17:00 PM
Toluene	0.0152	0.0112		mg/Kg-dry	1	10/16/2014 10:17:00 PM
Ethylbenzene	ND	0.0169		mg/Kg-dry	1	10/16/2014 10:17:00 PM
m,p-Xylene	0.0219	0.0112		mg/Kg-dry	1	10/16/2014 10:17:00 PM
o-Xylene	ND	0.0112		mg/Kg-dry	1	10/16/2014 10:17:00 PM
Surr: Dibromofluoromethane	111	63.7-129		%REC	1	10/16/2014 10:17:00 PM
Surr: Toluene-d8	101	64.3-131		%REC	1	10/16/2014 10:17:00 PM
Surr: 1-Bromo-4-fluorobenzene	99.6	63.1-141		%REC	1	10/16/2014 10:17:00 PM
Total Metals by EPA Method 6020				Batch	n ID: 9045	Analyst: TN
Lead	2.19	0.159		mg/Kg-dry	1	10/18/2014 6:43:05 PM
Sample Moisture (Percent Moisture	)			Batch	ו ID: R174	52 Analyst: KZ
Percent Moisture	5.55			wt%	1	10/16/2014 2:11:12 PM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Client: Stantec Consulting Corporation Project: 25983 Olympia UST Removal 2014					Collection Date: 10/13/2014 10:50:00 AM			
Lab ID: 1410164-006				Matrix: So	bil			
Client Sample ID: CSS-3@17' Analyses	Result	RL	Qual	Units	DF	Date Analyzed		
Gasoline by NWTPH-Gx				Batch	n ID: R174	66 Analyst: BC		
Gasoline	ND	3.04		mg/Kg-dry	1	10/16/2014 10:46:00 PM		
Surr: 4-Bromofluorobenzene	100	65-135		%REC	1	10/16/2014 10:46:00 PM		
Surr: Toluene-d8	99.9	65-135		%REC	1	10/16/2014 10:46:00 PM		
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batch	n ID: 9041	Analyst: BC		
Benzene	ND	0.0122		mg/Kg-dry	1	10/16/2014 10:46:00 PM		
Toluene	ND	0.0122		mg/Kg-dry	1	10/16/2014 10:46:00 PM		
Ethylbenzene	ND	0.0182		mg/Kg-dry	1	10/16/2014 10:46:00 PM		
m,p-Xylene	ND	0.0122		mg/Kg-dry	1	10/16/2014 10:46:00 PM		
o-Xylene	ND	0.0122		mg/Kg-dry	1	10/16/2014 10:46:00 PM		
Surr: Dibromofluoromethane	105	63.7-129		%REC	1	10/16/2014 10:46:00 PM		
Surr: Toluene-d8	99.9	64.3-131		%REC	1	10/16/2014 10:46:00 PM		
Surr: 1-Bromo-4-fluorobenzene	98.2	63.1-141		%REC	1	10/16/2014 10:46:00 PM		
Total Metals by EPA Method 6020				Batch	n ID: 9045	Analyst: TN		
Lead	1.76	0.167		mg/Kg-dry	1	10/18/2014 6:46:31 PM		
Sample Moisture (Percent Moisture	)			Batch	า ID: R174	52 Analyst: KZ		
Percent Moisture	7.89			wt%	1	10/16/2014 2:11:12 PM		

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



<b>Client:</b> Stantec Consulting Corporat <b>Project:</b> 25983 Olympia UST Remov		Collection Date: 10/13/2014 11:00:00 AM				
Lab ID: 1410164-007 Client Sample ID: CSS-3@22'				Matrix: So	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	ו ID: R174	66 Analyst: BC
Gasoline	ND	2.63		mg/Kg-dry	1	10/16/2014 11:15:00 PM
Surr: 4-Bromofluorobenzene	102	65-135		%REC	1	10/16/2014 11:15:00 PM
Surr: Toluene-d8	99.9	65-135		%REC	1	10/16/2014 11:15:00 PM
Volatile Organic Compounds by EF	A Method	<u>8260</u>		Batch ID: 9041		Analyst: BC
Benzene	ND	0.0105		mg/Kg-dry	1	10/16/2014 11:15:00 PM
Toluene	ND	0.0105		mg/Kg-dry	1	10/16/2014 11:15:00 PM
Ethylbenzene	ND	0.0158		mg/Kg-dry	1	10/16/2014 11:15:00 PM
m,p-Xylene	ND	0.0105		mg/Kg-dry	1	10/16/2014 11:15:00 PM
o-Xylene	ND	0.0105		mg/Kg-dry	1	10/16/2014 11:15:00 PM
Surr: Dibromofluoromethane	91.2	63.7-129		%REC	1	10/16/2014 11:15:00 PM
Surr: Toluene-d8	98.1	64.3-131		%REC	1	10/16/2014 11:15:00 PM
Surr: 1-Bromo-4-fluorobenzene	99.7	63.1-141		%REC	1	10/16/2014 11:15:00 PM
Total Metals by EPA Method 6020				Batch	n ID: 9045	Analyst: TN
Lead	1.62	0.159		mg/Kg-dry	1	10/18/2014 6:49:57 PM
Sample Moisture (Percent Moisture				Batch	ו ID: R174	52 Analyst: KZ
Percent Moisture	4.81			wt%	1	10/16/2014 2:11:12 PM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



<b>Client:</b> Stantec Consulting Corporat <b>Project:</b> 25983 Olympia UST Remove		Collection Date: 10/13/2014 9:30:00 AM				
Lab ID: 1410164-008 Client Sample ID: CSS-4@18'				Matrix: So	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	n ID: R174	66 Analyst: BC
Gasoline	ND	3.00		mg/Kg-dry	1	10/16/2014 11:44:00 PM
Surr: 4-Bromofluorobenzene	101	65-135		%REC	1	10/16/2014 11:44:00 PM
Surr: Toluene-d8	99.6	65-135		%REC	1	10/16/2014 11:44:00 PM
Volatile Organic Compounds by EPA Method 8260				Batch	n ID: 9041	Analyst: BC
Benzene	ND	0.0120		mg/Kg-dry	1	10/16/2014 11:44:00 PM
Toluene	ND	0.0120		mg/Kg-dry	1	10/16/2014 11:44:00 PM
Ethylbenzene	ND	0.0180		mg/Kg-dry	1	10/16/2014 11:44:00 PM
m,p-Xylene	ND	0.0120		mg/Kg-dry	1	10/16/2014 11:44:00 PM
o-Xylene	ND	0.0120		mg/Kg-dry	1	10/16/2014 11:44:00 PM
Surr: Dibromofluoromethane	107	63.7-129		%REC	1	10/16/2014 11:44:00 PM
Surr: Toluene-d8	100	64.3-131		%REC	1	10/16/2014 11:44:00 PM
Surr: 1-Bromo-4-fluorobenzene	98.6	63.1-141		%REC	1	10/16/2014 11:44:00 PM
Total Metals by EPA Method 6020				Batch	n ID: 9045	Analyst: TN
Lead	2.44	0.164		mg/Kg-dry	1	10/18/2014 6:53:22 PM
Sample Moisture (Percent Moisture	)			Batch	n ID: R174	52 Analyst: KZ
Percent Moisture	5.43			wt%	1	10/16/2014 2:11:12 PM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



<b>Client:</b> Stantec Consulting Corporati <b>Project:</b> 25983 Olympia UST Remova		Collection Date: 10/13/2014 9:45:00 AM				
Lab ID: 1410164-009 Client Sample ID: CSS-4@25'				Matrix: So	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	ו ID: R174	66 Analyst: BC
Gasoline	ND	3.22		mg/Kg-dry	1	10/17/2014 12:13:00 AM
Surr: 4-Bromofluorobenzene	101	65-135		%REC	1	10/17/2014 12:13:00 AM
Surr: Toluene-d8	101	65-135		%REC	1	10/17/2014 12:13:00 AM
Volatile Organic Compounds by EPA Method 8260				Batch	n ID: 9041	Analyst: BC
Benzene	ND	0.0129		mg/Kg-dry	1	10/17/2014 12:13:00 AM
Toluene	ND	0.0129		mg/Kg-dry	1	10/17/2014 12:13:00 AM
Ethylbenzene	ND	0.0193		mg/Kg-dry	1	10/17/2014 12:13:00 AM
m,p-Xylene	ND	0.0129		mg/Kg-dry	1	10/17/2014 12:13:00 AM
o-Xylene	ND	0.0129		mg/Kg-dry	1	10/17/2014 12:13:00 AM
Surr: Dibromofluoromethane	109	63.7-129		%REC	1	10/17/2014 12:13:00 AM
Surr: Toluene-d8	100	64.3-131		%REC	1	10/17/2014 12:13:00 AM
Surr: 1-Bromo-4-fluorobenzene	99.2	63.1-141		%REC	1	10/17/2014 12:13:00 AM
Total Metals by EPA Method 6020				Batch	n ID: 9045	Analyst: TN
Lead	2.55	0.162		mg/Kg-dry	1	10/18/2014 6:56:48 PM
Sample Moisture (Percent Moisture	)			Batch	n ID: R174	52 Analyst: KZ
Percent Moisture	4.94			wt%	1	10/16/2014 2:11:12 PM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



<b>Client:</b> Stantec Consulting Corporati <b>Project:</b> 25983 Olympia UST Remova				Collection	Date: 10	/13/2014 12:15:00 PM
Lab ID: 1410164-010 Client Sample ID: CSS-5@18'	2014			Matrix: Sc	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	ו ID: R174	66 Analyst: BC
Gasoline	ND	3.49		mg/Kg-dry	1	10/17/2014 12:42:00 AM
Surr: 4-Bromofluorobenzene	100	65-135		%REC	1	10/17/2014 12:42:00 AM
Surr: Toluene-d8	101	65-135		%REC	1	10/17/2014 12:42:00 AM
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batch	n ID: 9041	Analyst: BC
Benzene	ND	0.0140		mg/Kg-dry	1	10/17/2014 12:42:00 AM
Toluene	ND	0.0140		mg/Kg-dry	1	10/17/2014 12:42:00 AM
Ethylbenzene	ND	0.0210		mg/Kg-dry	1	10/17/2014 12:42:00 AM
m,p-Xylene	ND	0.0140		mg/Kg-dry	1	10/17/2014 12:42:00 AM
o-Xylene	ND	0.0140		mg/Kg-dry	1	10/17/2014 12:42:00 AM
Surr: Dibromofluoromethane	106	63.7-129		%REC	1	10/17/2014 12:42:00 AM
Surr: Toluene-d8	99.1	64.3-131		%REC	1	10/17/2014 12:42:00 AM
Surr: 1-Bromo-4-fluorobenzene	97.9	63.1-141		%REC	1	10/17/2014 12:42:00 AM
Total Metals by EPA Method 6020				Batch	n ID: 9045	Analyst: TN
Lead	2.53	0.158		mg/Kg-dry	1	10/18/2014 7:00:14 PM
Sample Moisture (Percent Moisture	)			Batch	n ID: R174	52 Analyst: KZ
Percent Moisture	4.00			wt%	1	10/16/2014 2:11:12 PM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



<b>Client:</b> Stantec Consulting Corporati <b>Project:</b> 25983 Olympia UST Remova				Collection	<b>Date:</b> 10	/13/2014 12:20:00 PM
Lab ID: 1410164-011 Client Sample ID: CSS-5@24'				Matrix: Sc	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	h ID: R174	66 Analyst: BC
Gasoline	ND	3.17		mg/Kg-dry	1	10/17/2014 1:11:00 AM
Surr: 4-Bromofluorobenzene	102	65-135		%REC	1	10/17/2014 1:11:00 AM
Surr: Toluene-d8	101	65-135		%REC	1	10/17/2014 1:11:00 AM
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batch	h ID: 9041	Analyst: BC
Benzene	ND	0.0127		mg/Kg-dry	1	10/17/2014 1:11:00 AM
Toluene	ND	0.0127		mg/Kg-dry	1	10/17/2014 1:11:00 AM
Ethylbenzene	ND	0.0190		mg/Kg-dry	1	10/17/2014 1:11:00 AM
m,p-Xylene	ND	0.0127		mg/Kg-dry	1	10/17/2014 1:11:00 AM
o-Xylene	ND	0.0127		mg/Kg-dry	1	10/17/2014 1:11:00 AM
Surr: Dibromofluoromethane	112	63.7-129		%REC	1	10/17/2014 1:11:00 AM
Surr: Toluene-d8	100	64.3-131		%REC	1	10/17/2014 1:11:00 AM
Surr: 1-Bromo-4-fluorobenzene	99.4	63.1-141		%REC	1	10/17/2014 1:11:00 AM
Total Metals by EPA Method 6020				Batch	n ID: 9045	Analyst: TN
Lead	2.82	0.171		mg/Kg-dry	1	10/18/2014 7:03:40 PM
Sample Moisture (Percent Moisture	)			Batch	n ID: R174	52 Analyst: KZ
Percent Moisture	7.73			wt%	1	10/16/2014 2:11:12 PM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Work Order: CLIENT: Project:	1410164 Stantec Cor 25983 Olyn	-	•	014						• -	SUMMAI etals by EP		_
Sample ID: MB-90	945	SampType	: MBLK			Units: mg/K	g	Prep Date	e: <b>10/17/2</b>	014	RunNo: 174	80	
Client ID: MBLK	S	Batch ID:	9045					Analysis Date	e: 10/18/2	014	SeqNo: 348	991	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			ND	0.200									
Sample ID: LCS-9	045	SampType	E LCS			Units: mg/K	g	Prep Date	e: 10/17/2	014	RunNo: 174	80	
Client ID: LCSS		Batch ID:	9045					Analysis Date	e: 10/18/2	014	SeqNo: 348	992	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			204	0.200	189.0	0	108	74.6	125.4				
Sample ID: 14101	64-001ADUP	SampType	: DUP			Units: mg/K	g-dry	Prep Date	e: 10/17/2	014	RunNo: 174	80	
Client ID: DSP-4		Batch ID:	9045					Analysis Date	e: 10/18/2	014	SeqNo: 348	994	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			2.40	0.164						2.245	6.83	30	
Sample ID: 14101	64-001AMS	SampType	: MS			Units: mg/K	g-dry	Prep Date	e: 10/17/2	014	RunNo: 174	80	
Client ID: DSP-4		Batch ID:	9045					Analysis Date	e: 10/18/2	014	SeqNo: 348	997	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			23.4	0.164	20.47	2.245	104	75	125				
Sample ID: 14101	64-001AMSD	SampType	: MSD			Units: mg/K	g-dry	Prep Date	e: 10/17/2	014	RunNo: 174	80	
Client ID: DSP-4		Batch ID:	9045					Analysis Date	e: <b>10/18/2</b>	014	SeqNo: 348	998	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead			24.1	0.163	20.32	2.245	107	75	125	23.44	2.68	30	
Qualifiers: B H R	Analyte detected in Holding times for pr RPD outside accept	reparation or analys			D Dilution wa J Analyte de RL Reporting I	ected below quantitation	limits		ND Not de	e above quantitation ra etected at the Report recovery outside acc	ing Limit	5	



Work Order: CLIENT: Project:	1410164 Stantec Coi 25983 Olyn	•	•	14						QC	SUMMAI Gasoline		-
Sample ID: 1410	164-002BDUP	SampType	e: DUP			Units: mg/Kg-	dry	Prep Date	e: 10/16/2	2014	RunNo: 174	166	
Client ID: NOR	TH WALL@24'	Batch ID:	R17466					Analysis Date	e: 10/16/2	2014	SeqNo: 348	8778	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			ND	2.68						0		30	
Surr: Toluene-o	86		1.34		1.338		100	65	135		0		
Surr: 4-Bromof	luorobenzene		1.35		1.338		101	65	135		0		
Sample ID: LCS-	R17466	SampType	e: LCS			Units: mg/Kg		Prep Date	e: 10/16/2	2014	RunNo: 174	166	
Client ID: LCS	S	Batch ID:	R17466					Analysis Date	e: 10/16/2	2014	SeqNo: 348	3795	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			27.0	5.00	25.00	0	108	65	135				
Surr: Toluene-o	86		2.48		2.500		99.1	65	135				
Surr: 4-Bromof	luorobenzene		2.55		2.500		102	65	135				
Sample ID: MB-F	R17466	SampType	e: MBLK			Units: mg/Kg		Prep Date	e: 10/16/2	2014	RunNo: 174	166	
Client ID: MBL	KS	Batch ID:	R17466					Analysis Date	e: 10/16/2	2014	SeqNo: 348	8796	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			ND	5.00									
Surr: Toluene-o	86		2.49		2.500		99.8	65	135				
Surr: 4-Bromof	luorobenzene		2.54		2.500		102	65	135				
Sample ID: CCV	-R17466D	SampType	e: CCV			Units: mg/Kg		Prep Date	e: 10/17/2	2014	RunNo: 174	166	
Client ID: CCV		Batch ID:	R17466					Analysis Date	e: 10/17/2	2014	SeqNo: 348	3983	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			514	5.00	500.0	0	103	80	120				
Surr: Toluene-o	86		50.1		50.00		100	65	135				
Surr: 4-Bromof	luorobenzene		51.5		50.00		103	65	135				
Qualifiers: B	Analyte detected in	the associated Me	thod Blank		D Dilution wa	is required			E Valu	e above quantitation	range		
Н	<b>o</b> .		sis exceeded			tected below quantitation lin	nits			detected at the Report	-		
R	RPD outside accept	ed recovery limits			RL Reporting I	Limit			S Spik	e recovery outside ac	cepted recovery limit	S	F



Work Order:	1410164							OC SUMMA	RY REPORT
CLIENT:	Stantec Consulting	Corporation							
Project:	25983 Olympia UST	Removal 2014	ļ					Gasoline	e by NWTPH-Gx
Sample ID: CCV-F	R17466D SampT	ype: CCV			Units: mg/Kg		Prep Date: 10/17/2014	RunNo: 17	466
Client ID: CCV	Batch I	D: <b>R17466</b>					Analysis Date: 10/17/2014	SeqNo: 34	8983
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD	Ref Val %RPD	RPDLimit Qual

Qualifiers: B Analyte detected in the associated Method Blank

- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

- D Dilution was required
- J Analyte detected below quantitation limits
- RL Reporting Limit

- E Value above quantitation range
- ND Not detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits



Work Order: 1410164
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Project:

#### **CLIENT:** Stantec Consulting Corporation

### QC SUMMARY REPORT

25983 Olympia UST Removal 2014

### Volatile Organic Compounds by EPA Method 8260

Sample ID: 1410164-002BDUP	SampType: DUP			Units: mg/Kg	J-dry	Prep Dat	e: 10/16/2	014	RunNo: 174	79	
Client ID: NORTH WALL@24'	Batch ID: 9041					Analysis Dat	e: 10/16/2	014	SeqNo: 348	957	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0107						0		30	
Toluene	ND	0.0107						0		30	
Ethylbenzene	ND	0.0161						0		30	
m,p-Xylene	ND	0.0107						0		30	
o-Xylene	ND	0.0107						0		30	
Surr: Dibromofluoromethane	1.29		1.338		96.3	63.7	129		0		
Surr: Toluene-d8	1.34		1.338		100	64.3	131		0		
Surr: 1-Bromo-4-fluorobenzene	1.33		1.338		99.3	63.1	141		0		

Sample ID:	14101	64-003BMS	SampType	: MS			Units: mg/	Kg-dry	Prep Da	te: 10/16/2	014	RunNo: 17479			
Client ID:	SOUT	H WALL@10'	Batch ID:	9041					Analysis Da	te: 10/16/2	014	SeqNo: 348	959		
Analyte				Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene				0.667	0.0130	0.6506	0	103	63.5	133					
Toluene				0.664	0.0130	0.6506	0	102	63.4	132					
Ethylbenzer	ne			0.634	0.0195	0.6506	0	97.4	54.5	134					
m,p-Xylene				1.24	0.0130	1.301	0	95.1	53.1	132					
o-Xylene				0.634	0.0130	0.6506	0	97.4	53.3	139					
Surr: Dib	romoflu	oromethane		1.69		1.627		104	63.7	129					
Surr: Tol	uene-d8	3		1.62		1.627		99.8	64.3	131					
Surr: 1-B	sromo-4	-fluorobenzene		1.66		1.627		102	63.1	141					
Sample ID:	CCV-9	0041C	SampType	E CCV			Units: µg/l	-	Prep Da	te: 10/17/2	014	RunNo: 174	79		
Client ID:	ссу		Batch ID:	9041					Analysis Da	te: 10/17/2	014	SeqNo: 348	969		
Analyte				Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene				20.4	0.0200	20.00	0	102	80	120					
Toluene				20.0	0.0200	20.00	0	99.9	80	120					
Qualifiers:	Qualifiers: B Analyte detected in the associated Method Blank		thod Blank		D Dilution wa	s required		E Value above quantitation r			ange				
H Holding times for preparation or analysis exceeded			is exceeded		J Analyte det	ected below quantitati	on limits	ND Not detected at the Reporting Limit							
	R RPD outside accepted recovery limits					RL Reporting I	_imit	RL Reporting Limit				S Spike recovery outside accepted recovery limits			



	Consulting Corporation ympia UST Removal 2	014				Volatile	Organi	QC S ic Compou	SUMMAR nds by EP		_
Sample ID: CCV-9041C	SampType: CCV			Units: µg/L		Prep Date	: 10/17/20	014	RunNo: 174	79	
Client ID: CCV	Batch ID: 9041					Analysis Date	: 10/17/20	014	SeqNo: 348	969	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	19.5	0.0300	20.00	0	97.4	80	120				
m,p-Xylene	37.3	0.0200	40.00	0	93.2	80	120				
o-Xylene	19.4	0.0200	20.00	0	97.0	80	120				
Surr: Dibromofluoromethane	41.3		50.00		82.5	63.7	129				
Surr: Toluene-d8	49.9		50.00		99.8	61.4	128				
Surr: 1-Bromo-4-fluorobenzene	e 50.7		50.00		101	63.1	141				
Sample ID: LCS-9041	SampType: LCS			Units: mg/Kg		Prep Date	: <b>10/16/2</b>	014	RunNo: 174	79	
Client ID: LCSS	Batch ID: 9041					Analysis Date	: 10/16/20	014	SeqNo: 348	970	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.20	0.0200	1.000	0	120	64.3	133				
Toluene	1.03	0.0200	1.000	0	103	67.3	138				
Ethylbenzene	0.930	0.0300	1.000	0	93.0	74	129				
m,p-Xylene	1.83	0.0200	2.000	0	91.6	79.8	128				
o-Xylene	0.938	0.0200	1.000	0	93.8	72.7	124				
Surr: Dibromofluoromethane	2.64		2.500		105	63.7	129				
Surr: Toluene-d8	2.53		2.500		101	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	e 2.53		2.500		101	63.1	141				
Sample ID: MB-9041	SampType: MBLK			Units: mg/Kg		Prep Date	: 10/16/20	014	RunNo: 174	79	
Client ID: MBLKS	Batch ID: 9041					Analysis Date	: 10/16/20	014	SeqNo: 348	971	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0200									
Toluene	ND	0.0200									
Ethylbenzene	ND	0.0300									
m,p-Xylene	ND	0.0200									
Qualifiers: B Analyte detected	d in the associated Method Blank		D Dilution wa	s required			E Value	above quantitation ra	ange		
H Holding times for	J Analyte det	its ND Not detected at the Reporting Limit									
R RPD outside act	cepted recovery limits		RL Reporting L	₋imit			S Spike	recovery outside acc	cepted recovery limits	5	



#### Work Order: 1410164

**Project:** 

### CLIENT: Stantec Consulting Corporation

25983 Olympia UST Removal 2014

### QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID: MB-9041	SampType: <b>MBLK</b>			Units: mg/Kg		Prep Dat	te: 10/16/2	014	RunNo: 174	79	
Client ID: MBLKS	Batch ID: 9041					Analysis Dat	te: 10/16/2	014	SeqNo: 348	971	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	ND	0.0200									
Surr: Dibromofluoromethane	2.83		2.500		113	63.7	129				
Surr: Toluene-d8	2.55		2.500		102	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	2.48		2.500		99.4	63.1	141				

#### Qualifiers: B Analyte detected in the associated Method Blank

- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

- D Dilution was required
- J Analyte detected below quantitation limits
- RL Reporting Limit

- E Value above quantitation range
- ND Not detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits



### Sample Log-In Check List

Clien	nt Name:	STANTEC	Work Or	der Numbe	er: 1410164		
Logg	jed by:	Clare Griggs	Date Re	ceived:	10/16/201	4 8:17:00 AM	
Chain	of Custo	<u>ody</u>					
1. Is	Chain of Cu	istody complete?	Yes	$\checkmark$	No 🗌	Not Present	
2. Ho	ow was the s	sample delivered?	Clien	<u>t</u>			
Log In	<u>1</u>						
<b>3</b> . Co	oolers are pr	esent?	Yes	$\checkmark$	No 🗌		
4. Sh	hipping conta	ainer/cooler in good condition?	Yes		No 🗌		
5. Ci	ustody seals	intact on shipping container/cooler?	Yes		No 🗌	Not Required 🗹	
6. W	as an attem	pt made to cool the samples?	Yes		No 🗌		
7. W	ere all coole	ers received at a temperature of $>0^{\circ}$ C to $10.0^{\circ}$ C	Yes		No 🗌		
8. Sa	ample(s) in p	proper container(s)?	Yes	$\checkmark$	No 🗌		
9. Si	ufficient sam	ple volume for indicated test(s)?	Yes	$\checkmark$	No 🗌		
10. Ar	re samples p	properly preserved?	Yes	$\checkmark$	No 🗌		
11. W	as preserva	tive added to bottles?	Yes		No 🗹	NA 🗌	
12. ^{Is}	the headspa	ace in the VOA vials?	Yes		No 🗌	NA 🗹	
13. Di	id all sample	s containers arrive in good condition(unbroken)?	Yes	$\checkmark$	No 🗌		
14. Do	oes paperwo	ork match bottle labels?	Yes	✓	No 🗌		
15. ^{Ar}	re matrices o	correctly identified on Chain of Custody?	Yes	$\checkmark$	No 🗌		
16. ^{Is}	it clear what	t analyses were requested?	Yes	$\checkmark$	No 🗌		
17. W	ere all holdi	ng times able to be met?	Yes	$\checkmark$	No 🗌		
Specia	al Handli	ng (if applicable)					
18. W	as client not	tified of all discrepancies with this order?	Yes		No 🗌	NA 🗹	
	Person N	Notified: Da	ate:				
	By Whor	n: Via	a: 🗌 eMa	il 🗌 Pho	ne 🗌 Fax [	In Person	
	Regardir						
	Client Ins	structions:					

#### Item Information

Item #	Temp ⁰C	Condition
Cooler	2.6	Good
Sample	1.8	Good
Temp Blank	1.7	Good

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

Stantec Consulting Corporation Paul Fairbairn 11130 NE 33rd PI, Suite 200 Bellevue, WA 98004

#### RE: 25983 Olympia UST Removal 2014 Lab ID: 1410197

November 11, 2014

#### **Attention Paul Fairbairn:**

Fremont Analytical, Inc. received 10 sample(s) on 10/20/2014 for the analyses presented in the following report.

Gasoline by NWTPH-Gx Polyaromatic Hydrocarbons by EPA Method 8270 (SIM) Sample Moisture (Percent Moisture) Total Metals by EPA Method 6020 Volatile Organic Compounds by EPA Method 8260 Volatile Petroleum Hydrocarbons by NWVPH

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,

Mulchady ....

Mike Ridgeway President



CLIENT: Project: Lab Order:	Stantec Consulting Corporation 25983 Olympia UST Removal 2014 1410197	Work Order Sample Summary				
Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received			
1410197-001	DSP-5	10/16/2014 9:45 AM	10/20/2014 7:57 AM			
1410197-002	DSP-6	10/16/2014 10:00 AM	10/20/2014 7:57 AM			
1410197-003	CSS-6@18'	10/16/2014 10:15 AM	10/20/2014 7:57 AM			
1410197-004	CSS-7@23'	10/16/2014 10:45 AM	10/20/2014 7:57 AM			
1410197-005	CSS-8@25'	10/16/2014 1:15 PM	10/20/2014 7:57 AM			
1410197-006	CSS-9@16	10/16/2014 1:40 PM	10/20/2014 7:57 AM			
1410197-007	CSS-10@16'	10/16/2014 3:00 PM	10/20/2014 7:57 AM			
1410197-008	SB-3@16'	10/16/2014 3:55 PM	10/20/2014 7:57 AM			
1410197-009	SB-3@17'	10/16/2014 2:00 PM	10/20/2014 7:57 AM			
1410197-010	Trip Blank	10/01/2014 2:50 PM	10/20/2014 7:57 AM			



**Case Narrative** 

WO#: 1410197 Date: 11/11/2014

CLIENT:Stantec Consulting CorporationProject:25983 Olympia UST Removal 2014

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.



WO#: **1410197** Date Reported: **11/11/2014** 

<b>Client:</b> Stantec Consulting Corpora <b>Project:</b> 25983 Olympia UST Remov				Collection	Date: 10	0/16/2014 9:45:00 AM
Lab ID: 1410197-001 Client Sample ID: DSP-5				Matrix: Sc	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	ID: R17	531 Analyst: BC
Gasoline	330	29.3	D	mg/Kg-dry	10	10/23/2014 3:49:00 PM
Surr: 4-Bromofluorobenzene	104	65-135		%REC	1	10/21/2014 9:05:00 AM
Surr: Toluene-d8	102	65-135		%REC	1	10/21/2014 9:05:00 AM
Volatile Organic Compounds by E	PA Method	<u>8260</u>		Batch	ID: 9063	B Analyst: BC
Benzene	ND	0.0117		mg/Kg-dry	1	10/21/2014 9:05:00 AM
Toluene	0.0225	0.0117		mg/Kg-dry	1	10/21/2014 9:05:00 AM
Ethylbenzene	1.28	0.0176		mg/Kg-dry	1	10/21/2014 9:05:00 AM
m,p-Xylene	6.40	0.117	D	mg/Kg-dry	10	10/23/2014 3:49:00 PM
o-Xylene	2.19	0.117	D	mg/Kg-dry	10	10/23/2014 3:49:00 PM
Surr: Dibromofluoromethane	100	63.7-129		%REC	1	10/21/2014 9:05:00 AM
Surr: Toluene-d8	99.5	64.3-131		%REC	1	10/21/2014 9:05:00 AM
Surr: 1-Bromo-4-fluorobenzene	101	63.1-141		%REC	1	10/21/2014 9:05:00 AM
Total Metals by EPA Method 6020				Batch	ID: 9067	7 Analyst: TN
Lead	2.10	0.179		mg/Kg-dry	1	10/21/2014 7:04:28 PM
Sample Moisture (Percent Moistur	<u>e)</u>			Batch	ID: R17	519 Analyst: KZ
Percent Moisture	8.63			wt%	1	10/21/2014 8:13:27 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



WO#: **1410197** Date Reported: **11/11/2014** 

<b>Client:</b> Stantec Consulting Corporati <b>Project:</b> 25983 Olympia UST Remova		Collection Date: 10/16/2014 10:00:00 AM				
Lab ID: 1410197-002 Client Sample ID: DSP-6	ai 2014			Matrix: So	bil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	1D: R175	31 Analyst: BC
Gasoline	934	138	D	mg/Kg-dry	50	10/23/2014 4:47:00 PM
Surr: 4-Bromofluorobenzene	108	65-135		%REC	1	10/21/2014 10:03:00 AM
Surr: Toluene-d8	102	65-135		%REC	1	10/21/2014 10:03:00 AM
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batch	n ID: 9063	Analyst: BC
Benzene	ND	0.0111		mg/Kg-dry	1	10/21/2014 10:03:00 AM
Toluene	0.260	0.0111		mg/Kg-dry	1	10/21/2014 10:03:00 AM
Ethylbenzene	5.31	0.831	D	mg/Kg-dry	50	10/23/2014 4:47:00 PM
m,p-Xylene	29.6	0.554	D	mg/Kg-dry	50	10/23/2014 4:47:00 PM
o-Xylene	10.8	0.554	D	mg/Kg-dry	50	10/23/2014 4:47:00 PM
Surr: Dibromofluoromethane	89.8	63.7-129		%REC	1	10/21/2014 10:03:00 AM
Surr: Toluene-d8	98.3	64.3-131		%REC	1	10/21/2014 10:03:00 AM
Surr: 1-Bromo-4-fluorobenzene	104	63.1-141		%REC	1	10/21/2014 10:03:00 AM
Total Metals by EPA Method 6020				Batch	1D: 9067	Analyst: TN
Lead	2.09	0.179		mg/Kg-dry	1	10/21/2014 7:14:49 PM
Sample Moisture (Percent Moisture	)			Batch	1D: R175	519 Analyst: KZ
Percent Moisture	12.1			wt%	1	10/21/2014 8:13:27 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Client Sample ID: CSS-6@18' Analyses	<b>D</b> 1/					
	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by E	PA Method 8	270 (SIM)		Batch	ID: 9246	Analyst: NG
Naphthalene	ND	53.3	Н	µg/Kg-dry	1	11/10/2014 9:40:00 PM
2-Methylnaphthalene	ND	53.3	Н	µg/Kg-dry	1	11/10/2014 9:40:00 PM
1-Methylnaphthalene	ND	53.3	н	µg/Kg-dry	1	11/10/2014 9:40:00 PM
Surr: 2-Fluorobiphenyl	108	42.7-132	н	%REC	1	11/10/2014 9:40:00 PM
Surr: Terphenyl-d14 (surr)	115	48.8-157	Н	%REC	1	11/10/2014 9:40:00 PM
Gasoline by NWTPH-Gx				Batch	ID: R179	01 Analyst: BC
Gasoline	84.2	26.0	DH	mg/Kg-dry	10	11/8/2014 4:34:00 AM
Surr: 4-Bromofluorobenzene	103	65-135	н	%REC	1	11/6/2014 4:55:00 AM
Surr: Toluene-d8	101	65-135	Н	%REC	1	11/6/2014 4:55:00 AM
Volatile Organic Compounds by E	EPA Method	<u>8260</u>		Batch	ID: 9227	Analyst: BC
Methyl tert-butyl ether (MTBE)	ND	0.0260	н	mg/Kg-dry	1	11/6/2014 4:55:00 AM
1,2-Dichloroethane (EDC)	ND	0.0156	Н	mg/Kg-dry	1	11/6/2014 4:55:00 AM
Benzene	ND	0.0104	Н	mg/Kg-dry	1	11/6/2014 4:55:00 AM
Toluene	ND	0.0104	Н	mg/Kg-dry	1	11/6/2014 4:55:00 AM
1,2-Dibromoethane (EDB)	ND	0.00260	н	mg/Kg-dry	1	11/6/2014 4:55:00 AM
Ethylbenzene	0.0452	0.0156	н	mg/Kg-dry	1	11/6/2014 4:55:00 AM
m,p-Xylene	0.242	0.0104	Н	mg/Kg-dry	1	11/6/2014 4:55:00 AM
o-Xylene	0.0884	0.0104	Н	mg/Kg-dry	1	11/6/2014 4:55:00 AM
Hexane	0.118	0.0104	Н	mg/Kg-dry	1	11/6/2014 4:55:00 AM
Naphthalene	0.689	0.0156	Н	mg/Kg-dry	1	11/6/2014 4:55:00 AM
Surr: Dibromofluoromethane	90.8	63.7-129	Н	%REC	1	11/6/2014 4:55:00 AM
Surr: Toluene-d8	95.5	64.3-131	Н	%REC	1	11/6/2014 4:55:00 AM
Surr: 1-Bromo-4-fluorobenzene	100	63.1-141	Н	%REC	1	11/6/2014 4:55:00 AM
Volatile Petroleum Hydrocarbons	by NWVPH			Batch	ID: 9084	Analyst: EM
Aliphatic Hydrocarbon (C5-C6)	ND	1.18		mg/Kg-dry	1	10/23/2014 8:01:00 AM
Aliphatic Hydrocarbon (C6-C8)	1.88	1.18		mg/Kg-dry	1	10/23/2014 8:01:00 AM
Aliphatic Hydrocarbon (C8-C10)	1.70	1.18		mg/Kg-dry	1	10/23/2014 8:01:00 AM
Aliphatic Hydrocarbon (C10-C12)	9.87	1.18		mg/Kg-dry	1	10/23/2014 8:01:00 AM
Aromatic Hydrocarbon (C8-C10)	8.28	1.18		mg/Kg-dry	1	10/23/2014 8:01:00 AM
Qualifiers: B Analyte detected in the as	sociated Method	Blank	DI	Dilution was re	quired	
E Value above quantitation r	ange		ΗI	Holding times f	or preparation	on or analysis exceeded
J Analyte detected below qu	antitation limits		ND I	Not detected at	t the Reporti	ng Limit



WO#: **1410197** Date Reported: **11/11/2014** 

Client: Stantec Consulting Corpora				Collection	Date: 7	10/16/2014 10:15:00 AM
Project: 25983 Olympia UST Remov Lab ID: 1410197-003	al 2014			Matrix: So	bil	
Client Sample ID: CSS-6@18'						
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Petroleum Hydrocarbons I	by NWVPH			Batch	1D: 908	84 Analyst: EM
Aromatic Hydrocarbon (C10-C12)	44.4	11.8	D	mg/Kg-dry	10	10/23/2014 5:22:00 PM
Aromatic Hydrocarbon (C12-C13)	24.1	11.8	D	mg/Kg-dry	10	10/23/2014 5:22:00 PM
Surr: 1,4-Difluorobenzene	81.4	65-140		%REC	1	10/23/2014 8:01:00 AM
Surr: Bromofluorobenzene	95.1	65-140		%REC	1	10/23/2014 8:01:00 AM
Total Metals by EPA Method 6020				Batch	1D: 906	67 Analyst: TN
Lead	1.80	0.173		mg/Kg-dry	1	10/21/2014 7:18:15 PM
Sample Moisture (Percent Moisture	<u>e)</u>			Batch	ID: R1	7519 Analyst: KZ
Percent Moisture	8.40			wt%	1	10/21/2014 8:13:27 AM

Qualifiers: B	A
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Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

RL Reporting Limit

- D Dilution was required
- H Holding times for preparation or analysis exceeded

ND Not detected at the Reporting Limit



Project: 25983 Olympia UST Rem Lab ID: 1410197-004				Matrix: So	bil		
Client Sample ID: CSS-7@23' Analyses	Result	RL	Qual	Units	DF	Da	ate Analyzed
Polyaromatic Hydrocarbons by	EPA Method 8	270 (SIM)		Batch	n ID: 9	246	Analyst: NG
Naphthalene	ND	53.0	Н	µg/Kg-dry	1	11/1	0/2014 10:25:00 PN
2-Methylnaphthalene	ND	53.0	н	µg/Kg-dry	1	11/1	0/2014 10:25:00 PM
1-Methylnaphthalene	ND	53.0	н	µg/Kg-dry	1	11/1	0/2014 10:25:00 PM
Surr: 2-Fluorobiphenyl	109	42.7-132	н	%REC	1	11/1	0/2014 10:25:00 PM
Surr: Terphenyl-d14 (surr)	113	48.8-157	Н	%REC	1	11/1	0/2014 10:25:00 PM
Gasoline by NWTPH-Gx				Batch	ID: F	R17901	Analyst: BC
Gasoline	ND	3.17	Н	mg/Kg-dry	1	11/6	/2014 5:24:00 AM
Surr: 4-Bromofluorobenzene	102	65-135	н	%REC	1	11/6	/2014 5:24:00 AM
Surr: Toluene-d8	101	65-135	Н	%REC	1		/2014 5:24:00 AM
Volatile Organic Compounds by	EPA Method	<u>8260</u>		Batch	n ID: 9	227	Analyst: BC
Methyl tert-butyl ether (MTBE)	ND	0.0317	н	mg/Kg-dry	1	11/6	/2014 5:24:00 AM
1,2-Dichloroethane (EDC)	ND	0.0190	н	mg/Kg-dry	1	11/6	/2014 5:24:00 AM
Benzene	ND	0.0127	н	mg/Kg-dry	1	11/6	/2014 5:24:00 AM
Toluene	ND	0.0127	н	mg/Kg-dry	1	11/6	/2014 5:24:00 AM
1,2-Dibromoethane (EDB)	ND	0.00317	н	mg/Kg-dry	1	11/6	/2014 5:24:00 AM
Ethylbenzene	ND	0.0190	н	mg/Kg-dry	1	11/6	/2014 5:24:00 AM
m,p-Xylene	ND	0.0127	н	mg/Kg-dry	1	11/6	/2014 5:24:00 AM
o-Xylene	ND	0.0127	н	mg/Kg-dry	1	11/6	/2014 5:24:00 AM
Hexane	ND	0.0127	н	mg/Kg-dry	1	11/6	/2014 5:24:00 AM
Naphthalene	ND	0.0190	н	mg/Kg-dry	1	11/6	/2014 5:24:00 AM
Surr: Dibromofluoromethane	89.4	63.7-129	н	%REC	1	11/6	/2014 5:24:00 AM
Surr: Toluene-d8	97.0	64.3-131	н	%REC	1	11/6	/2014 5:24:00 AM
Surr: 1-Bromo-4-fluorobenzene	99.5	63.1-141	Н	%REC	1	11/6	/2014 5:24:00 AM
Volatile Petroleum Hydrocarbon	s by NWVPH			Batch	n ID: 9	084	Analyst: EM
Aliphatic Hydrocarbon (C5-C6)	ND	1.59		mg/Kg-dry	1	10/2	3/2014 9:08:00 AM
Aliphatic Hydrocarbon (C6-C8)	ND	1.59		mg/Kg-dry	1	10/2	3/2014 9:08:00 AM
Aliphatic Hydrocarbon (C8-C10)	ND	1.59		mg/Kg-dry	1	10/2	3/2014 9:08:00 AM
Aliphatic Hydrocarbon (C10-C12)	ND	1.59		mg/Kg-dry	1	10/2	3/2014 9:08:00 AM
Aromatic Hydrocarbon (C8-C10)	ND	1.59		mg/Kg-dry	1	10/2	3/2014 9:08:00 AM
Qualifiers: B Analyte detected in the a E Value above quantitation	range	Blank	<ul> <li>D Dilution was required</li> <li>H Holding times for preparation or analysis exceeded</li> </ul>				
J Analyte detected below of RL Reporting Limit	juanutation limits			Not detected at Spike recovery	с ше Ке	sporting LI	IIIL



WO#: 1410197 Date Reported: 11/11/2014

<b>Client:</b> Stantec Consulting Corporat <b>Project:</b> 25983 Olympia UST Remove				Collection	Dat	<b>e:</b> 10/16/2014 10:45:00 AM
Lab ID: 1410197-004				Matrix: So	oil	
Client Sample ID: CSS-7@23'						
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Petroleum Hydrocarbons b	<u>y NWVPH</u>			Batch	n ID:	9084 Analyst: EM
Aromatic Hydrocarbon (C10-C12)	ND	1.59		mg/Kg-dry	1	10/23/2014 9:08:00 AM
Aromatic Hydrocarbon (C12-C13)	ND	1.59		mg/Kg-dry	1	10/23/2014 9:08:00 AM
Surr: 1,4-Difluorobenzene	90.3	65-140		%REC	1	10/23/2014 9:08:00 AM
Surr: Bromofluorobenzene	92.1	65-140		%REC	1	10/23/2014 9:08:00 AM
Total Metals by EPA Method 6020				Batch	n ID:	9067 Analyst: TN
Lead	2.00	0.175		mg/Kg-dry	1	10/21/2014 7:21:41 PM
Sample Moisture (Percent Moisture	<u>e)</u>			Batch	n ID:	R17519 Analyst: KZ
Percent Moisture	7.79			wt%	1	10/21/2014 8:13:27 AM

Qua	lifiers:	В	Ana
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alyte detected in the associated Method Blank Value above quantitation range

Е

Analyte detected below quantitation limits J

RL Reporting Limit

- Dilution was required D
- Н Holding times for preparation or analysis exceeded

ND Not detected at the Reporting Limit



<b>Client:</b> Stantec Consulting Corporati <b>Project:</b> 25983 Olympia UST Remova		Collection Date: 10/16/2014 1:15:00 PM				
Lab ID: 1410197-005 Client Sample ID: CSS-8@25'	1 2014			Matrix: Sc	oil	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch	ID:	R17531 Analyst: BC
Gasoline	ND	2.83		mg/Kg-dry	1	10/23/2014 2:50:00 PM
Surr: 4-Bromofluorobenzene	104	65-135		%REC	1	10/21/2014 10:32:00 AM
Surr: Toluene-d8	103	65-135		%REC	1	10/21/2014 10:32:00 AM
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batch	ID:	9063 Analyst: BC
Benzene	ND	0.0113		mg/Kg-dry	1	10/21/2014 10:32:00 AM
Toluene	ND	0.0113		mg/Kg-dry	1	10/23/2014 2:50:00 PM
Ethylbenzene	ND	0.0170		mg/Kg-dry	1	10/23/2014 2:50:00 PM
m,p-Xylene	ND	0.0113		mg/Kg-dry	1	10/23/2014 2:50:00 PM
o-Xylene	ND	0.0113		mg/Kg-dry	1	10/23/2014 2:50:00 PM
Surr: Dibromofluoromethane	118	63.7-129		%REC	1	10/21/2014 10:32:00 AM
Surr: Toluene-d8	98.8	64.3-131		%REC	1	10/21/2014 10:32:00 AM
Surr: 1-Bromo-4-fluorobenzene	102	63.1-141		%REC	1	10/21/2014 10:32:00 AM
Total Metals by EPA Method 6020				Batch	ID:	9067 Analyst: TN
Lead	2.00	0.169		mg/Kg-dry	1	10/21/2014 7:25:07 PM
Sample Moisture (Percent Moisture	)			Batch	ID:	R17519 Analyst: KZ
Percent Moisture	6.58			wt%	1	10/21/2014 8:13:27 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Project: 25983 Olympia UST Rem ab ID: 1410197-006	ioval 2014			Matrix: So	bil		
Client Sample ID: CSS-9@16 Analyses	Result	RL	Qual	Units	DF	Date Analyzed	
Polyaromatic Hydrocarbons by	EPA Method 8	270 (SIM)		Batch	n ID: 9246	Analyst: NG	
Naphthalene	ND	52.1	Н	µg/Kg-dry	1	11/10/2014 11:10:00 PM	
2-Methylnaphthalene	ND	52.1	Н	µg/Kg-dry	1	11/10/2014 11:10:00 PM	
1-Methylnaphthalene	ND	52.1	Н	µg/Kg-dry	1	11/10/2014 11:10:00 PM	
Surr: 2-Fluorobiphenyl	95.8	42.7-132	Н	%REC	1	11/10/2014 11:10:00 PM	
Surr: Terphenyl-d14 (surr)	105	48.8-157	Н	%REC	1	11/10/2014 11:10:00 PM	
Gasoline by NWTPH-Gx				Batch	1D: R179	01 Analyst: BC	
Gasoline	ND	2.81	н	mg/Kg-dry	1	11/6/2014 6:22:00 AM	
Surr: 4-Bromofluorobenzene	102	65-135	н	%REC	1	11/6/2014 6:22:00 AM	
Surr: Toluene-d8	101	65-135	н	%REC	1	11/6/2014 6:22:00 AM	
Volatile Organic Compounds by	EPA Method	<u>8260</u>		Batch	n ID: 9227	Analyst: BC	
Methyl tert-butyl ether (MTBE)	ND	0.0281	н	mg/Kg-dry	1	11/6/2014 6:22:00 AM	
1,2-Dichloroethane (EDC)	ND	0.0169	н	mg/Kg-dry	1	11/6/2014 6:22:00 AM	
Benzene	ND	0.0113	н	mg/Kg-dry	1	11/6/2014 6:22:00 AM	
Toluene	ND	0.0113	н	mg/Kg-dry	1	11/6/2014 6:22:00 AM	
1,2-Dibromoethane (EDB)	ND	0.00281	н	mg/Kg-dry	1	11/6/2014 6:22:00 AM	
Ethylbenzene	ND	0.0169	н	mg/Kg-dry	1	11/6/2014 6:22:00 AM	
m,p-Xylene	0.0384	0.0113	н	mg/Kg-dry	1	11/6/2014 6:22:00 AM	
o-Xylene	0.0147	0.0113	н	mg/Kg-dry	1	11/6/2014 6:22:00 AM	
Hexane	ND	0.0113	н	mg/Kg-dry	1	11/6/2014 6:22:00 AM	
Naphthalene	0.0343	0.0169	Н	mg/Kg-dry	1	11/6/2014 6:22:00 AM	
Surr: Dibromofluoromethane	92.1	63.7-129	н	%REC	1	11/6/2014 6:22:00 AM	
Surr: Toluene-d8	98.8	64.3-131	Н	%REC	1	11/6/2014 6:22:00 AM	
Surr: 1-Bromo-4-fluorobenzene	99.1	63.1-141	Н	%REC	1	11/6/2014 6:22:00 AM	
Volatile Petroleum Hydrocarbon	<u>s by NWVPH</u>			Batch	ID: 9084	Analyst: EM	
Aliphatic Hydrocarbon (C5-C6)	ND	1.12		mg/Kg-dry	1	10/23/2014 2:58:00 AM	
Aliphatic Hydrocarbon (C6-C8)	ND	1.12		mg/Kg-dry	1	10/23/2014 2:58:00 AM	
Aliphatic Hydrocarbon (C8-C10)	ND	1.12		mg/Kg-dry	1	10/23/2014 2:58:00 AM	
Aliphatic Hydrocarbon (C10-C12)	ND	1.12		mg/Kg-dry	1	10/23/2014 2:58:00 AM	
Aromatic Hydrocarbon (C8-C10)	ND	1.12		mg/Kg-dry	1	10/23/2014 2:58:00 AM	
Qualifiers:       B       Analyte detected in the associated Method Blank         E       Value above quantitation range         J       Analyte detected below quantitation limits         RL       Reporting Limit				<ul> <li>D Dilution was required</li> <li>H Holding times for preparation or analysis exceeded</li> <li>ND Not detected at the Reporting Limit</li> <li>S Spike recovery outside accepted recovery limits</li> </ul>			



WO#: **1410197** Date Reported: **11/11/2014** 

<b>Client:</b> Stantec Consulting Corporat <b>Project:</b> 25983 Olympia UST Remov				Collection	Date	e: 10/16/2014 1:40:00 PM
Lab ID: 1410197-006	412014			Matrix: So	oil	
Client Sample ID: CSS-9@16						
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Petroleum Hydrocarbons b	y NWVPH			Batch	n ID: 🤉	9084 Analyst: EM
Aromatic Hydrocarbon (C10-C12)	1.67	1.12		mg/Kg-dry	1	10/23/2014 2:58:00 AM
Aromatic Hydrocarbon (C12-C13)	1.32	1.12		mg/Kg-dry	1	10/23/2014 2:58:00 AM
Surr: 1,4-Difluorobenzene	95.2	65-140		%REC	1	10/23/2014 2:58:00 AM
Surr: Bromofluorobenzene	93.3	65-140		%REC	1	10/23/2014 2:58:00 AM
Total Metals by EPA Method 6020				Batch	n ID: 9	9067 Analyst: TN
Lead	2.03	0.167		mg/Kg-dry	1	10/21/2014 7:28:33 PM
Sample Moisture (Percent Moisture	<u>e)</u>			Batch	n ID: I	R17519 Analyst: KZ
Percent Moisture	7.07			wt%	1	10/21/2014 8:13:27 AM

Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

RL Reporting Limit

- D Dilution was required
- H Holding times for preparation or analysis exceeded

ND Not detected at the Reporting Limit



Client: Stantec Consulting Corpo Project: 25983 Olympia UST Rem						(16/2014 3:00:00 PM
ab ID: 1410197-007	10val 2014					
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by	EPA Method 8	<u>270 (SIM)</u>		Batch	n ID: 9246	Analyst: NG
Naphthalene	ND	56.4	Н	µg/Kg-dry	1	11/10/2014 11:32:00 PM
2-Methylnaphthalene	ND	56.4	н	µg/Kg-dry	1	11/10/2014 11:32:00 PM
1-Methylnaphthalene	ND	56.4	н	µg/Kg-dry	1	11/10/2014 11:32:00 PM
Surr: 2-Fluorobiphenyl	98.2	42.7-132	н	%REC	1	11/10/2014 11:32:00 PM
Surr: Terphenyl-d14 (surr)	110	48.8-157	Н	%REC	1	11/10/2014 11:32:00 PM
Gasoline by NWTPH-Gx				Batch	n ID: R179	01 Analyst: BC
Gasoline	ND	3.20	н	mg/Kg-dry	1	11/6/2014 8:18:00 AM
Surr: 4-Bromofluorobenzene	102	65-135	н	%REC	1	11/6/2014 8:18:00 AM
Surr: Toluene-d8	101	65-135	Н	%REC	1	11/6/2014 8:18:00 AM
Volatile Organic Compounds by	EPA Method	<u>8260</u>		Batch	n ID: 9227	Analyst: BC
Methyl tert-butyl ether (MTBE)	ND	0.0320	н	mg/Kg-dry	1	11/6/2014 8:18:00 AM
1,2-Dichloroethane (EDC)	ND	0.0192	н	mg/Kg-dry	1	11/6/2014 8:18:00 AM
Benzene	ND	0.0128	н	mg/Kg-dry	1	11/6/2014 8:18:00 AM
Toluene	0.0382	0.0128	н	mg/Kg-dry	1	11/6/2014 8:18:00 AM
1,2-Dibromoethane (EDB)	ND	0.00320	н	mg/Kg-dry	1	11/6/2014 8:18:00 AM
Ethylbenzene	ND	0.0192	н	mg/Kg-dry	1	11/6/2014 8:18:00 AM
m,p-Xylene	0.0304	0.0128	н	mg/Kg-dry	1	11/6/2014 8:18:00 AM
o-Xylene	ND	0.0128	н	mg/Kg-dry	1	11/6/2014 8:18:00 AM
Hexane	ND	0.0128	н	mg/Kg-dry	1	11/6/2014 8:18:00 AM
Naphthalene	ND	0.0192	Н	mg/Kg-dry	1	11/6/2014 8:18:00 AM
Surr: Dibromofluoromethane	92.7	63.7-129	н	%REC	1	11/6/2014 8:18:00 AM
Surr: Toluene-d8	96.2	64.3-131	Н	%REC	1	11/6/2014 8:18:00 AM
Surr: 1-Bromo-4-fluorobenzene	99.6	63.1-141	Н	%REC	1	11/6/2014 8:18:00 AM
Volatile Petroleum Hydrocarbon	<u>s by NWVPH</u>			Batch	n ID: 9084	Analyst: EM
Aliphatic Hydrocarbon (C5-C6)	ND	1.26		mg/Kg-dry	1	10/23/2014 4:05:00 AM
Aliphatic Hydrocarbon (C6-C8)	ND	1.26		mg/Kg-dry	1	10/23/2014 4:05:00 AM
Aliphatic Hydrocarbon (C8-C10)	ND	1.26		mg/Kg-dry	1	10/23/2014 4:05:00 AM
Aliphatic Hydrocarbon (C10-C12)	ND	1.26		mg/Kg-dry	1	10/23/2014 4:05:00 AM
Aromatic Hydrocarbon (C8-C10)	ND	1.26		mg/Kg-dry	1	10/23/2014 4:05:00 AM
ualifiers: B Analyte detected in the a	ssociated Method	Blank	D	Dilution was re	quired	
E Value above quantitation	i range		Н	Holding times f	for preparation	on or analysis exceeded
J Analyte detected below of	quantitation limits		ND	Not detected a	t the Reporti	ng Limit
RL Reporting Limit						epted recovery limits



WO#: **1410197** Date Reported: **11/11/2014** 

<b>Client:</b> Stantec Consulting Corporat <b>Project:</b> 25983 Olympia UST Remov				Collection	Date	e: 10/16/2014 3:00:00 PM
Lab ID: 1410197-007	412014			Matrix: So	bil	
Client Sample ID: CSS-10@16'						
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Petroleum Hydrocarbons b	<u>y NWVPH</u>			Batch	ID:	9084 Analyst: EM
Aromatic Hydrocarbon (C10-C12)	ND	1.26		mg/Kg-dry	1	10/23/2014 4:05:00 AM
Aromatic Hydrocarbon (C12-C13)	ND	1.26		mg/Kg-dry	1	10/23/2014 4:05:00 AM
Surr: 1,4-Difluorobenzene	91.5	65-140		%REC	1	10/23/2014 4:05:00 AM
Surr: Bromofluorobenzene	93.7	65-140		%REC	1	10/23/2014 4:05:00 AM
Total Metals by EPA Method 6020				Batch	ID:	9067 Analyst: TN
Lead	3.03	0.178		mg/Kg-dry	1	10/21/2014 7:31:59 PM
Sample Moisture (Percent Moisture	<u>e)</u>			Batch	ID:	R17519 Analyst: KZ
Percent Moisture	12.0			wt%	1	10/21/2014 8:13:27 AM

Qualifiers:	В	Ana
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Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

RL Reporting Limit

- D Dilution was required
- H Holding times for preparation or analysis exceeded

ND Not detected at the Reporting Limit



<b>Client:</b> Stantec Consulting Corporati <b>Project:</b> 25983 Olympia UST Remova				Collection Date: 10/16/2014 3:55:00 PM							
Lab ID: 1410197-008 Client Sample ID: SB-3@16'	1 20 14			Matrix: So	bil						
Analyses	Result	RL	Qual	Units	DF	Date Analyzed					
Gasoline by NWTPH-Gx				Batch	ID: R175	31 Analyst: BC					
Gasoline	756	280	D	mg/Kg-dry	100	10/27/2014 11:53:00 AM					
Surr: 4-Bromofluorobenzene	110	65-135		%REC	1	10/21/2014 11:01:00 AM					
Surr: Toluene-d8	104	65-135		%REC	1	10/21/2014 11:01:00 AM					
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batch	ID: 9063	Analyst: BC					
Benzene	ND	0.0112		mg/Kg-dry	1	10/21/2014 11:01:00 AM					
Toluene	ND	0.0112		mg/Kg-dry	1	10/21/2014 11:01:00 AM					
Ethylbenzene	0.451	0.0168		mg/Kg-dry	1	10/21/2014 11:01:00 AM					
m,p-Xylene	3.15	0.112	D	mg/Kg-dry	10	10/23/2014 4:18:00 PM					
o-Xylene	0.870	0.0112		mg/Kg-dry	1	10/21/2014 11:01:00 AM					
Surr: Dibromofluoromethane	90.3	63.7-129		%REC	1	10/21/2014 11:01:00 AM					
Surr: Toluene-d8	99.9	64.3-131		%REC	1	10/21/2014 11:01:00 AM					
Surr: 1-Bromo-4-fluorobenzene	106	63.1-141		%REC	1	10/21/2014 11:01:00 AM					
Total Metals by EPA Method 6020				Batch	ID: 9067	Analyst: TN					
Lead	2.04	0.167		mg/Kg-dry	1	10/21/2014 7:35:25 PM					
Sample Moisture (Percent Moisture	)			Batch	ID: R175	19 Analyst: KZ					
Percent Moisture	10.1			wt%	1	10/21/2014 8:13:27 AM					

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



<b>Client:</b> Stantec Consulting Corporati <b>Project:</b> 25983 Olympia UST Remova				Collection	Dat	t <b>e:</b> 10/16/2014 2:00:00 PM
Lab ID: 1410197-009 Client Sample ID: SB-3@17'				Matrix: Sc	bil	
Analyses	Result	RL	Qual	Units Di		Date Analyzed
Gasoline by NWTPH-Gx				Batch	ID:	R17531 Analyst: BC
Gasoline	ND	3.16		mg/Kg-dry	1	10/23/2014 3:20:00 PM
Surr: 4-Bromofluorobenzene	104	65-135		%REC	1	10/21/2014 11:29:00 AM
Surr: Toluene-d8	102	65-135		%REC	1	10/21/2014 11:29:00 AM
Volatile Organic Compounds by EP	A Method	<u>8260</u>		Batch	ID:	9063 Analyst: BC
Benzene	ND	0.0127		mg/Kg-dry	1	10/21/2014 11:29:00 AM
Toluene	ND	0.0127		mg/Kg-dry	1	10/23/2014 3:20:00 PM
Ethylbenzene	ND	0.0190		mg/Kg-dry	1	10/23/2014 3:20:00 PM
m,p-Xylene	ND	0.0127		mg/Kg-dry	1	10/23/2014 3:20:00 PM
o-Xylene	ND	0.0127		mg/Kg-dry	1	10/23/2014 3:20:00 PM
Surr: Dibromofluoromethane	105	63.7-129		%REC	1	10/21/2014 11:29:00 AM
Surr: Toluene-d8	94.7	64.3-131		%REC	1	10/21/2014 11:29:00 AM
Surr: 1-Bromo-4-fluorobenzene	102	63.1-141		%REC	1	10/21/2014 11:29:00 AM
Total Metals by EPA Method 6020				Batch	ID:	9067 Analyst: TN
Lead	2.16	0.163		mg/Kg-dry	1	10/21/2014 7:38:51 PM
Sample Moisture (Percent Moisture	)			Batch	ID:	R17519 Analyst: KZ
Percent Moisture	9.99			wt%	1	10/21/2014 8:13:27 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	D	Dilution was required
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



CLIENT: S	410197 stantec Consulting Corporatior 5983 Olympia UST Removal 2								SUMMAI tals by EP		
Sample ID MB-9067	SampType: MBLK	-014		Units: mg/Kg		Prep Date:	10/21/2	2014	RunNo: 17	539	
Client ID: MBLKS	Batch ID: 9067					Analysis Date:	10/21/2	2014	SeqNo: 34	9984	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.200									
Sample ID LCS-9067	SampType: LCS			Units: mg/Kg		Prep Date:	10/21/2	2014	RunNo: 17	539	
Client ID: LCSS	Batch ID: 9067					Analysis Date:	10/21/2	2014	SeqNo: 34	9985	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	198	0.200	189.0	0	105	74.6	125.4				
Sample ID 1410196-	001ADUP SampType: DUP			Units: mg/Kg-	dry	Prep Date:	10/21/2	2014	RunNo: 17	539	
Client ID: BATCH	Batch ID: 9067					Analysis Date:	10/21/2	2014	SeqNo: 34	9987	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.04	0.173						3.273	21.0	30	
Sample ID 1410196-	001AMS SampType: MS			Units: mg/Kg-	dry	Prep Date:	10/21/2	2014	RunNo: 17	539	
Client ID: BATCH	Batch ID: 9067					Analysis Date:	10/21/2	2014	SeqNo: 349	9989	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	24.6	0.173	21.64	3.273	98.6	75	125				
Sample ID 1410196-	001AMSD SampType: MSD			Units: mg/Kg-	dry	Prep Date:	10/21/2	2014	RunNo: 17	539	
Client ID: BATCH	Batch ID: 9067					Analysis Date:	10/21/2	2014	SeqNo: 349	9992	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	25.2	0.173	21.64	3.273	101	75	125	24.61	2.27	30	
Qualifiers: B Ar	alyte detected in the associated Method Blank		D Dilution w	as required			E Valu	e above quantitation r	ange		
	olding times for preparation or analysis exceeded			etected below quantitation lir	nits	ND Not detected at the Reporting Limit					
R RF	PD outside accepted recovery limits		RL Reporting	Limit			S Spike	e recovery outside ac	cepted recovery lim	its	

	1410197 Stantec Con	sulting Corp	oration							QC S	SUMMA	RY REF	POR
		pia UST Re		14			Po	lyaromat	ic Hydro	ocarbons b	y EPA Met	hod 8270	) (SIN
Sample ID MB-9246	;	SampType:	MBLK			Units: µg/Kg		Prep Dat	ie: 11/7/20	)14	RunNo: 17	961	
Client ID: MBLKS		Batch ID:	9246					Analysis Dat	te: 11/10/2	2014	SeqNo: 35	8025	
Analyte		R	esult	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene			ND	50.0									
2-Methylnaphthalene			ND	50.0									
1-Methylnaphthalene			ND	50.0									
Surr: 2-Fluorobiphe	enyl		547		500.0		109	42.7	132				
Surr: Terphenyl-d1	4 (surr)		593		500.0		119	48.8	157				
Sample ID LCS-924	6	SampType:	LCS			Units: µg/Kg		Prep Dat	ie: 11/7/20	)14	RunNo: 17	961	
Client ID: LCSS		Batch ID:	9246					Analysis Dat	te: 11/10/2	2014	SeqNo: 35	8026	
Analyte		R	esult	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene			931	50.0	1,000	0	93.1	61.6	125				
2-Methylnaphthalene			975	50.0	1,000	0	97.5	58.2	129				
1-Methylnaphthalene			970	50.0	1,000	0	97.0	56.4	132				
Surr: 2-Fluorobiphe	enyl		528		500.0		106	42.7	132				
Surr: Terphenyl-d1	4 (surr)		558		500.0		112	48.8	157				
Sample ID 1410197-	-003ADUP	SampType:	DUP			Units: µg/Kg-	lry	Prep Dat	ie: 11/7/20	)14	RunNo: 17	961	
Client ID: CSS-6@	18'	Batch ID:	9246					Analysis Dat	te: 11/10/2	2014	SeqNo: 35	8028	
Analyte		R	esult	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene			ND	52.8						0		30	Н
2-Methylnaphthalene			ND	52.8						0		30	Н
1-Methylnaphthalene			ND	52.8						0		30	Н
Surr: 2-Fluorobiphe	enyl		560		527.7		106	42.7	132		0		Н
Surr: Terphenyl-d1	4 (surr)		569		527.7		108	48.8	157		0		Н

Qualifiers:

В

н

Analyte detected in the associated Method Blank

D Dilution was required

Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

J Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not detected at the Reporting Limit





#### Work Order: 1410197

Project:

#### CLIENT: Stantec Consulting Corporation

25983 Olympia UST Removal 2014

## QC SUMMARY REPORT

#### Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

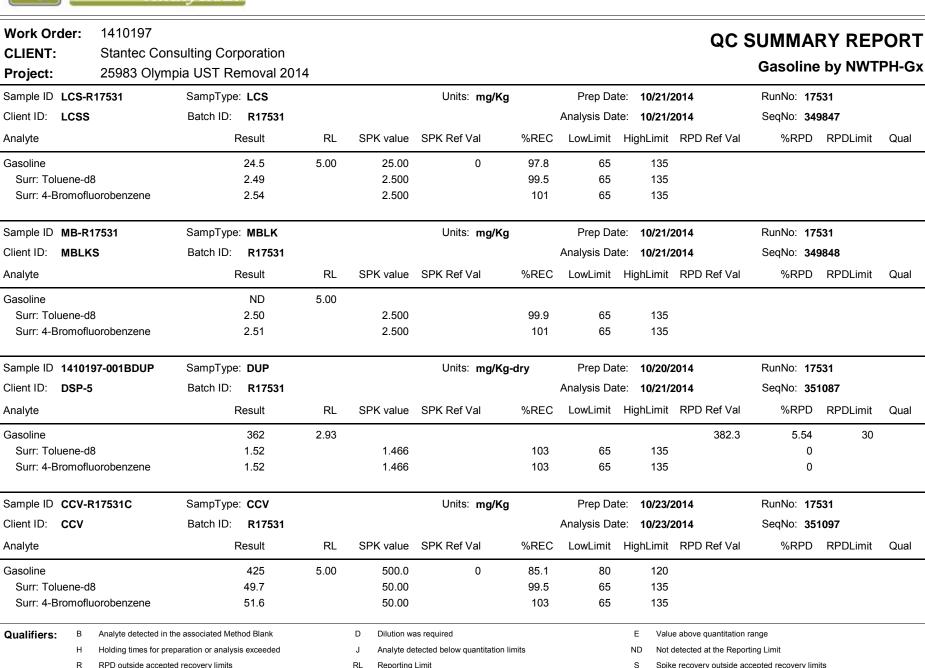
Sample ID 1410197-004AMS		Units: µg/Kg-dry			Prep Da	te: 11/7/20	014	RunNo: 179	961		
Client ID: CSS-7@23'	Batch ID: 9246	,				Analysis Date: 11/10/2014			SeqNo: 358037		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	962	52.2	1,044	0	92.2	42.9	138				Н
2-Methylnaphthalene	1,090	52.2	1,044	0	104	42.8	151				Н
1-Methylnaphthalene	1,090	52.2	1,044	0	104	41.6	148				Н
Surr: 2-Fluorobiphenyl	552		521.9		106	42.7	132				н
Surr: Terphenyl-d14 (surr)	576		521.9		110	48.8	157				н

Qualifiers: В Analyte detected in the associated Method Blank

- Holding times for preparation or analysis exceeded
- н
- R RPD outside accepted recovery limits

- D Dilution was required
- Analyte detected below quantitation limits J
- RL Reporting Limit

- Е Value above quantitation range
- ND Not detected at the Reporting Limit
- s Spike recovery outside accepted recovery limits



RPD outside accepted recovery limits

RL Reporting Limit





	nsulting Corporation npia UST Removal 2014	4						QC	SUMMA Gasoline		
Sample ID CCV-R17531C	SampType: CCV	+		Units: mg/Kg		Prep Da	te: 10/23/2	2014	RunNo: 17	531	
Client ID: CCV	Batch ID: <b>R17531</b>					Analysis Da			SeqNo: 35		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	-		RPD Ref Val	%RPD	RPDLimit	Qual
Sample ID CCV-R17531D	SampType: CCV			Units: mg/Kg		Prep Da	te: 10/27/2	2014	RunNo: 17	531	
Client ID: CCV	Batch ID: R17531					Analysis Da	te: 10/27/2	2014	SeqNo: 35	1371	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	485	5.00	500.0	0	97.0	80	120				
Surr: Toluene-d8	49.2		50.00		98.4	65	135				
Surr: 4-Bromofluorobenzene	51.1		50.00		102	65	135				
Sample ID LCS-R17901	SampType: LCS			Units: mg/Kg		Prep Da	te: 11/6/20	014	RunNo: 17	901	
Client ID: LCSS	Batch ID: R17901					Analysis Da	te: 11/6/20	014	SeqNo: 35	6815	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	21.8	5.00	25.00	0	87.1	65	135				
Surr: Toluene-d8	2.49		2.500		99.4	65	135				
Surr: 4-Bromofluorobenzene	2.53		2.500		101	65	135				
Sample ID MB-R17901	SampType: <b>MBLK</b>			Units: mg/Kg		Prep Da	te: 11/6/20	014	RunNo: 17	901	
Client ID: MBLKS	Batch ID: R17901					Analysis Da	te: 11/6/20	014	SeqNo: 35	6816	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	5.00									
Surr: Toluene-d8	2.44		2.500		97.6	65	135				
Surr: 4-Bromofluorobenzene	2.45		2.500		97.9	65	135				

Qualifiers: B

н

Analyte detected in the associated Method Blank

D Dilution was required

Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

J Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not detected at the Reporting Limit



Work Order:	1410197									00 9	SUMMAI		
CLIENT:	Stantec Cor	nsulting Co	rporation										
Project:	25983 Olym	npia UST R	emoval 201	4							Gasoline	by NWT	PH-Gx
Sample ID 141019	7-004BDUP	SampType	e: DUP			Units: mg/Kg-	dry	Prep Dat	e: 11/5/20	014	RunNo: 17	901	
Client ID: CSS-7@	@23'	Batch ID:	R17901					Analysis Dat	e: 11/6/20	014	SeqNo: 35	6857	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			ND	3.17						0		30	Н
Surr: Toluene-d8			1.59		1.583		100	65	135		0		Н
Surr: 4-Bromofluc	orobenzene		1.61		1.583		102	65	135		0		Н
Sample ID CCV-R1	17901C	SampType	e: CCV			Units: mg/Kg		Prep Dat	e: 11/8/20	014	RunNo: 179	901	
Client ID: CCV		Batch ID:	R17901					Analysis Dat	e: 11/8/20	014	SeqNo: 35	7678	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			426	5.00	500.0	0	85.2	80	120				
Surr: Toluene-d8			50.9		50.00		102	65	135				
Surr: 4-Bromofluc	orobenzene		52.1		50.00		104	65	135				

Qualifiers: B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

D Dilution was required

J Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not detected at the Reporting Limit



#### Work Order: 1410197

Project:

CLIENT: Stantec Consulting Corporation

## 25983 Olympia UST Removal 2014

## **QC SUMMARY REPORT**

### Volatile Organic Compounds by EPA Method 8260

Sample ID 1410202-001BMS	SampType: <b>MS</b>			Units: mg/k	g-dry	Prep Da	te: 10/20/2	2014	RunNo: 17	524		
Client ID: BATCH	Batch ID: 9063					Analysis Da	te: 10/21/2	2014	SeqNo: 34	o: <b>349664</b>		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	2.28	0.0453	2.264	0	101	63.5	133					
Toluene	2.25	0.0453	2.264	0.01985	98.6	63.4	132					
Ethylbenzene	2.16	0.0679	2.264	0	95.4	54.5	134					
m,p-Xylene	4.20	0.0453	4.528	0	92.8	53.1	132					
o-Xylene	2.13	0.0453	2.264	0	94.3	53.3	139					
Surr: Dibromofluoromethane	6.47		5.660		114	63.7	129					
Surr: Toluene-d8	5.70		5.660		101	64.3	131					
Surr: 1-Bromo-4-fluorobenzene	5.82		5.660		103	63.1	141					

Sample ID LCS-9063	SampType: LCS			Units: mg/Kg		Prep Date:	10/20/2014	RunNo: 17524	
Client ID: LCSS	Batch ID: 9063					Analysis Date:	10/21/2014	SeqNo: 349666	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit RPD Ref Val	%RPD RPDLimit	Qual
Benzene	0.939	0.0200	1.000	0	93.9	64.3	133		
Toluene	0.934	0.0200	1.000	0	93.4	67.3	138		
Ethylbenzene	0.899	0.0300	1.000	0	89.9	74	129		
m,p-Xylene	1.74	0.0200	2.000	0	87.0	79.8	128		
o-Xylene	0.897	0.0200	1.000	0	89.7	72.7	124		
Surr: Dibromofluoromethane	2.82		2.500		113	63.7	129		
Surr: Toluene-d8	2.52		2.500		101	64.3	131		
Surr: 1-Bromo-4-fluorobenzene	2.56		2.500		102	63.1	141		
Sample ID MB-9063	SampType: MBLK			Units: mg/Kg		Prep Date:	10/20/2014	RunNo: 17524	
Client ID: MBLKS	Batch ID: 9063					Analysis Date:	10/21/2014	SeqNo: 349667	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit RPD Ref Val	%RPD RPDLimit	Qual
Benzene	ND	0.0200							
Toluene	ND	0.0200							
Qualifiers: B Analyte detected in the	he associated Method Blank		D Dilution wa	as required			E Value above quantitation r	range	
H Holding times for pre	paration or analysis exceeded		J Analyte de	etected below quantitation lir	nits		ND Not detected at the Report	ting Limit	

R RPD outside accepted recovery limits

RL Reporting Limit

Work Order: CLIENT: Project:	1410197 Stantec Con 25983 Olymj	-	•	)14				Volatil	e Orgai	QC S	SUMMAF		
Sample ID MB-900		SampType				Units: mg/Kg	3	Prep Dat	te: 10/20	/2014	RunNo: 175	524	
Client ID: MBLKS		Batch ID:	9063			<b>.</b>	,	Analysis Dat			SeqNo: 349	9667	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	-		RPD Ref Val	•	RPDLimit	Qual
Ethylbenzene			ND	0.0300									
m,p-Xylene			ND	0.0200									
o-Xylene			ND	0.0200									
Surr: Dibromoflue	oromethane		2.62		2.500		105	63.7	129	1			
Surr: Toluene-d8			2.52		2.500		101	64.3	131				
Surr: 1-Bromo-4-	fluorobenzene		2.46		2.500		98.2	63.1	141				
Sample ID 141019	7-001BDUP	SampType	DUP			Units: mg/Kg	g-dry	Prep Dat	te: 10/20	/2014	RunNo: 175	524	
Client ID: DSP-5		Batch ID:	9063					Analysis Dat	te: 10/21	/2014	SeqNo: 350	0651	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene			ND	0.0117						0		30	
Toluene		0	.0211	0.0117						0.02250	6.38	30	
Ethylbenzene			1.18	0.0176						1.283	8.01	30	
m,p-Xylene			6.16	0.0117						6.552	6.13	30	
o-Xylene			2.27	0.0117						2.447	7.69	30	
Surr: Dibromoflue	oromethane		1.57		1.466		107	63.7	129	)	0		
Surr: Toluene-d8	ł		1.45		1.466		99.0	64.3	131		0		
Surr: 1-Bromo-4-	fluorobenzene		1.48		1.466		101	63.1	141		0		
Sample ID CCV-90	063B	SampType	CCV			Units: µg/L		Prep Dat	te: 10/23	/2014	RunNo: 175	524	
Client ID: CCV		Batch ID:	9063					Analysis Dat	te: 10/23	/2014	SeqNo: 351	365	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene			19.9	0.0200	20.00	0	99.5	80	120	1			
Ethylbenzene			19.3	0.0300	20.00	0	96.7	80	120	1			
m,p-Xylene			37.4	0.0200	40.00	0	93.4	80	120	1			
o-Xylene			19.1	0.0200	20.00	0	95.7	80	120	1			
Qualifiers: B	Analyte detected in th	ne associated Met	hod Blank		D Dilution wa	as required			E Val	ue above quantitation r	ange		
н	Holding times for pre	paration or analys	is exceeded		J Analyte de	etected below quantitation	limits		ND No	t detected at the Report	ing Limit		
R	RPD outside accepte	d recovery limits			RL Reporting	Limit			S Spi	ke recovery outside ac	cepted recovery limi	ts	



Work Order: 1410197								QCS	SUMMA	RY REF	<b>OR</b>
CLIENT: Stantec Con	sulting Corporation					Volotila	Organi	a Campau	nda hy ED	A Motho	പറാഗ
Project: 25983 Olym	pia UST Removal 2	014				volatile	e Organi	c Compou	nas by Er	A wetho	u 020
Sample ID CCV-9063B	SampType: <b>CCV</b>			Units: µg/L		Prep Date	e: 10/23/2	014	RunNo: 17	524	
Client ID: CCV	Batch ID: 9063					Analysis Date	e: 10/23/2	014	SeqNo: 35	1365	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	37.2		50.00		74.5	63.7	129				
Surr: Toluene-d8	50.0		50.00		100	61.4	128				
Surr: 1-Bromo-4-fluorobenzene	51.4		50.00		103	63.1	141				
Sample ID 1410197-004BDUP	SampType: DUP			Units: mg/l	Kg-dry	Prep Date	e: 11/5/20	14	RunNo: 179	919	
Client ID: CSS-7@23'	Batch ID: 9227					Analysis Date	e: 11/6/20	14	SeqNo: 357	7180	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.0317						0		30	Н
1,2-Dichloroethane (EDC)	ND	0.0190						0		30	Н
Benzene	ND	0.0127						0		30	Н
Toluene	ND	0.0127						0		30	Н
1,2-Dibromoethane (EDB)	ND	0.00317						0		30	Н
Ethylbenzene	ND	0.0190						0		30	Н
m,p-Xylene	ND	0.0127						0		30	н
o-Xylene	ND	0.0127						0		30	н
Hexane	ND	0.0127						0		30	Н
Naphthalene	ND	0.0190						0		30	Н
Surr: Dibromofluoromethane	1.42		1.583		89.5	63.7	129		0		Н
Surr: Toluene-d8	1.55		1.583		98.0	64.3	131		0		н
Surr: 1-Bromo-4-fluorobenzene	1.57		1.583		99.3	63.1	141		0		Н
Sample ID 1410197-006BMS	SampType: <b>MS</b>			Units: mg/l	Kg-dry	Prep Date	e: 11/5/20	14	RunNo: 179	919	
Client ID: CSS-9@16	Batch ID: 9227					Analysis Date	e: 11/6/20	14	SeqNo: 357	7182	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.553	0.0281	0.5626	0	98.3	54.4	132				Н
1,2-Dichloroethane (EDC)	0.625	0.0169	0.5626	0	111	51.3	139				Н
	he associated Method Blank paration or analysis exceeded ed recovery limits			as required etected below quantitation Limit	on limits		ND Not de	above quantitation r etected at the Report recovery outside acc	ing Limit	its	





#### Work Order: 1410197

CLIENT: Stantec Consulting Corporation

25983 Olympia UST Removal 2014

## QC SUMMARY REPORT

#### Volatile Organic Compounds by EPA Method 8260

Sample ID 1410197-006BMS	SampType: MS			Units: mg/k	(g-dry	Prep Da	te: 11/5/20	014	RunNo: 17	919	
Client ID: CSS-9@16	Batch ID: 9227					Analysis Da	te: 11/6/20	014	SeqNo: 35	7182	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.548	0.0113	0.5626	0	97.3	63.5	133				Н
Toluene	0.717	0.0113	0.5626	0.005249	127	63.4	132				Н
1,2-Dibromoethane (EDB)	0.547	0.00281	0.5626	0	97.3	50.4	136				Н
Ethylbenzene	0.608	0.0169	0.5626	0.007272	107	54.5	134				Н
m,p-Xylene	1.22	0.0113	1.125	0.03843	105	53.1	132				Н
o-Xylene	0.613	0.0113	0.5626	0.01472	106	53.3	139				Н
Hexane	0.595	0.0113	0.5626	0	106	43.3	118				Н
Naphthalene	0.646	0.0169	0.5626	0.03432	109	52.3	124				Н
Surr: Dibromofluoromethane	1.57		1.407		111	63.7	129				н
Surr: Toluene-d8	1.38		1.407		98.4	64.3	131				н
Surr: 1-Bromo-4-fluorobenzene	1.44		1.407		103	63.1	141				Н

NOTES:

Project:

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

Sample ID LCS-9227	SampType: LCS			Units: mg/Kg		Prep Da	te: 11/5/20	)14	RunNo: 17	919	
Client ID: LCSS	Batch ID: 9227					Analysis Da	te: 11/6/20	)14	SeqNo: 35	7206	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.974	0.0500	1.000	0	97.4	59.1	138				
1,2-Dichloroethane (EDC)	1.03	0.0300	1.000	0	103	61.9	136				
Benzene	0.881	0.0200	1.000	0	88.1	64.3	133				
Toluene	0.881	0.0200	1.000	0	88.1	67.3	138				
1,2-Dibromoethane (EDB)	0.925	0.00500	1.000	0	92.5	70	130				
Ethylbenzene	0.956	0.0300	1.000	0	95.6	74	129				
m,p-Xylene	1.80	0.0200	2.000	0	89.8	79.8	128				
o-Xylene	0.930	0.0200	1.000	0	93.0	72.7	124				
Hexane	0.792	0.0200	1.000	0	79.2	56.6	132				
Naphthalene	1.04	0.0300	1.000	0	104	62.3	134				
Surr: Dibromofluoromethane	2.62		2.500		105	63.7	129				

Qualifiers: B Analyte detected in the associated Method Blank

н

D Dilution was required

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

Holding times for preparation or analysis exceeded

RL Reporting Limit

E Value above quantitation range

ND Not detected at the Reporting Limit

Work Order: 14101	97							2.00	SUMMA	RY REF	<b>ORT</b>
CLIENT: Stante	ec Consulting Corpor	ation					-				
<b>Project:</b> 25983	Olympia UST Remo	oval 2014				Volatile	Organ	ic Compou	nds by EP	'A Metho	d 8260
Sample ID LCS-9227	SampType: L(	cs		Units: mg/Kg		Prep Date	e: 11/5/20	)14	RunNo: 179	<b>J</b> 19	
Client ID: LCSS	Batch ID: 92	227				Analysis Date	e: 11/6/20	14	SeqNo: 357	7206	
Analyte	Resi	ult RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Toluene-d8	2.3	33	2.500		93.3	64.3	131				
Surr: 1-Bromo-4-fluorobe	nzene 2.5	50	2.500		100	63.1	141				
Sample ID MB-9227	SampType: <b>M</b>	BLK		Units: mg/Kg		Prep Date	e: 11/5/20	)14	RunNo: 179	919	
Client ID: MBLKS	Batch ID: 92	227				Analysis Date	e: 11/6/20	14	SeqNo: 357	7207	
Analyte	Resu	ult RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTB	E) N	ID 0.0500									
1,2-Dichloroethane (EDC)	N	ID 0.0300									
Benzene	N	ID 0.0200									
Toluene	N	ID 0.0200									
1,2-Dibromoethane (EDB)	N	ID 0.00500									
Ethylbenzene	N	ID 0.0300									
m,p-Xylene	N	ID 0.0200									
o-Xylene	N	ID 0.0200									
Hexane	N	ID 0.0200									
Naphthalene	N	ID 0.0300									
Surr: Dibromofluorometha	ane 2.0	09	2.500		83.6	63.7	129				
Surr: Toluene-d8	2.2	28	2.500		91.2	64.3	131				
Surr: 1-Bromo-4-fluorobe	nzene 2.3	38	2.500		95.3	63.1	141				

Qualifiers:

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

D Dilution was required

J Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Fremont Analytical



#### **Work Order:** 1410197

Project:

**CLIENT:** Stantec Consulting Corporation

25983 Olympia UST Removal 2014

## QC SUMMARY REPORT

Volatile Petroleum Hydrocarbons by NWVPH

Sample ID 1410197-006BDUP	SampType: <b>DUP</b>			Units: mg/K	g-dry	Prep Dat	e: 10/22/2	2014	RunNo: 17	639	
Client ID: CSS-9@16	Batch ID: 9084					Analysis Dat	e: 10/23/2	2014	SeqNo: 35	1474	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	ND	1.12		0	0			0		25	
Aliphatic Hydrocarbon (C6-C8)	ND	1.12		0	0			0		25	
Aliphatic Hydrocarbon (C8-C10)	ND	1.12		0	0			0		25	
Aliphatic Hydrocarbon (C10-C12)	ND	1.12		0	0			0		25	
Aromatic Hydrocarbon (C8-C10)	ND	1.12		0	0			0		25	
Aromatic Hydrocarbon (C10-C12)	1.58	1.12		0	0			1.672	5.43	25	
Aromatic Hydrocarbon (C12-C13)	1.37	1.12		0	0			1.323	3.62	25	
Surr: 1,4-Difluorobenzene	1.24		1.397		88.6	65	140		0		
Surr: Bromofluorobenzene	1.27		1.397		91.0	65	140		0		

Sample ID 1410197-007BMS	SampType: <b>MS</b>			Units: mg/k	g-dry	Prep Da	te: 10/22/2	2014	RunNo: 170	639	
Client ID: CSS-10@16'	Batch ID: 9084					Analysis Da	te: 10/23/2	2014	SeqNo: 35	1476	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	18.1	1.26	18.97	0	95.2	70	130				
Aliphatic Hydrocarbon (C6-C8)	5.04	1.26	6.322	0	79.8	70	130				
Aliphatic Hydrocarbon (C8-C10)	5.75	1.26	6.322	0	91.0	70	130				
Aliphatic Hydrocarbon (C10-C12)	5.30	1.26	6.322	0	83.8	70	130				
Aromatic Hydrocarbon (C8-C10)	28.0	1.26	25.29	0	111	70	130				
Aromatic Hydrocarbon (C10-C12)	6.48	1.26	6.322	0	103	70	130				
Aromatic Hydrocarbon (C12-C13)	5.21	1.26	6.322	0	82.4	70	130				
Surr: 1,4-Difluorobenzene	1.37		1.580		86.8	65	140				
Surr: Bromofluorobenzene	1.58		1.580		100	65	140				

#### Qualifiers: B

Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

D Dilution was required

J Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not detected at the Reporting Limit



#### **Work Order:** 1410197

Project:

CLIENT: Stantec Consulting Corporation

25983 Olympia UST Removal 2014

## QC SUMMARY REPORT

Volatile Petroleum Hydrocarbons by NWVPH

Sample ID LCS-9084	SampType: LCS			Units: mg/Kg	I	Prep Dat	e: 10/22/2	2014	RunNo: 176	639	
Client ID: LCSS	Batch ID: 9084					Analysis Dat	e: 10/23/2	2014	SeqNo: 35	1485	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	29.2	2.00	30.00	0	97.4	70	130				
Aliphatic Hydrocarbon (C6-C8)	9.07	2.00	10.00	0	90.7	70	130				
Aliphatic Hydrocarbon (C8-C10)	8.56	2.00	10.00	0	85.6	70	130				
Aliphatic Hydrocarbon (C10-C12)	8.71	2.00	10.00	0	87.1	70	130				
Aromatic Hydrocarbon (C8-C10)	39.3	2.00	40.00	0	98.2	70	130				
Aromatic Hydrocarbon (C10-C12)	10.3	2.00	10.00	0	103	70	130				
Aromatic Hydrocarbon (C12-C13)	10.3	2.00	10.00	0	103	70	130				
Surr: 1,4-Difluorobenzene	2.22		2.500		88.8	65	140				
Surr: Bromofluorobenzene	2.38		2.500		95.1	65	140				

Sample ID MB-9084	SampType: MBLK			Units: mg/Kg		Prep Dat	e: <b>10/22/</b> 2	2014	RunNo: 176	339	
Client ID: MBLKS	Batch ID: 9084					Analysis Dat	e: <b>10/23/</b> 2	2014	SeqNo: 351	1486	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	ND	2.00		0	0						
Aliphatic Hydrocarbon (C6-C8)	ND	2.00		0	0						
Aliphatic Hydrocarbon (C8-C10)	ND	2.00		0	0						
Aliphatic Hydrocarbon (C10-C12)	ND	2.00		0	0						
Aromatic Hydrocarbon (C8-C10)	ND	2.00		0	0						
Aromatic Hydrocarbon (C10-C12)	ND	2.00		0	0						
Aromatic Hydrocarbon (C12-C13)	ND	2.00		0	0						
Surr: 1,4-Difluorobenzene	2.28		2.500		91.2	65	140				
Surr: Bromofluorobenzene	2.22		2.500		88.9	65	140				

#### Qualifiers:

В

Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

D Dilution was required

J Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not detected at the Reporting Limit



## Sample Log-In Check List

С	lient Name:	STANTEC	Work Order Num	ber: 1410197		
Lo	ogged by:	Erica Silva	Date Received:	10/20/201	4 7:57:00 AM	
Cha	in of Cust	ody				
1.	Is Chain of C	ustody complete?	Yes 🖌	No 🗌	Not Present	
2.	How was the	sample delivered?	<u>Client</u>			
Log	In					
	Coolers are p	present?	Yes 🖌	No 🗌		
0.						
4.	Shipping con	tainer/cooler in good condition?	Yes 🗹	No 🗌		
5.	Custody seal	s intact on shipping container/cooler?	Yes 🗌	No 🗌	Not Required V	
6.	Was an atten	npt made to cool the samples?	Yes 🗹	No 🗌		
7.	Were all cool	ers received at a temperature of >0°C to 10.0°C	Yes 🗹	No 🗌		
8.	Sample(s) in	proper container(s)?	Yes 🖌	No 🗌		
9.	Sufficient sar	nple volume for indicated test(s)?	Yes 🗹	No 🗌		
10.	Are samples	properly preserved?	Yes 🗹	No 🗌		
11.	Was preserva	ative added to bottles?	Yes	No 🔽	NA 🗌	
12.	Is the headsp	pace in the VOA vials?	Yes	No 🗌	NA 🔽	
13.	Did all sampl	es containers arrive in good condition(unbroken)?	Yes 🗹	No 🗌		
14.	Does paperw	ork match bottle labels?	Yes 🗹	No 🗌		
15.	Are matrices	correctly identified on Chain of Custody?	Yes 🔽	No 🗌		
16.	Is it clear what	at analyses were requested?	Yes 🗹	No 🗌		
17.	Were all hold	ling times able to be met?	Yes 🗹	No 🗌		
Spe	cial Handl	ing (if applicable)				
		otified of all discrepancies with this order?	Yes	No 🗌	NA 🗹	
	Person	Notified: Date				
	By Who	m: Via:	eMail 🗌 Ph	none 🗌 Fax	In Person	
	Regardi	ng:				
	Client Ir	nstructions:				
19.	Additional rer	narks:				

#### Item Information

Item #	Temp °C	Condition
Cooler	4.4	Good
Sample	3.8	Good

www.fremontanalytical.com

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

APlease coordinate with the lab in advance			×			X
TAT -> SameDay^ NextDay^ 2 Day 3 Day STD	Date/Time	0	Kecolved	ne .	Uate/Time	Cautinhuliav
1 CICIFIEL NV/N U/S/J	L 1920/14 7:57	in Gud	Ø	20/14 7c	Date/Time	Relinquished
A DATE ON A STORE		are retained after 30 days.)	Disposal by Lab (A fee may be assessed if samples are retained after 30 days.)		Return to Client	Sample Disposal:
Special Remarks:	Nitrate+Nitrite	Fluoride Nitra	Bromide O-Phosphate	Chloride Sulfate	Nitrate Nitrite	***Anions (Circle):
by sb Se Sr Sn Ti Ti U V Zn	Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb 3b Se Sr Sn	As B Ba Be Ca Cd	TAL Individual: Ag Al	4-8 Priority Pollutants	irde): MTCA-5 RCRA-8	**Metals Analysis (Circle):
						10
141	8		N N	1400V	, +10	· SB-3
0541			X	1553	016	· 28 - 2
0	X			500	0016	-055-1
64	X			1340	DIG	6655-9
12			X	1315	1015	5CSS-8
	X		×	1045	7023	ACSS-
1752 Find linit sample	X		X	5101	18100	- SSJ =
18666			X	0001	6	DSP-
44011	S			0/16 9:45 5	5	· OSP ·
PPM (Pit READING)	2444 2444 2444 2444 2444 2444 2444 244	5 5 5 5 5 5 5 5 5 5 5 5 5 5	Sample State	I a anna	10	Sample Name
Waste Water	ding Water, GW	SL = Solid, W = Water, DW =	S = Soil, SD = Sediment,	O = Other, P = Proc	AQ = Aqueous, B :	*Matrix Codes: A = Air,
Statt Project No: 185750263	FARSAIRNO Stat Project No:	Email: PAUL - F		PCA Fax:	PAULGAIREAU	Reports To (PM):
	EMILY HAAPER	Collected by:	425-86F-9448	hot	Belleve, WA	City, State, Zip
UST REMOVAL 2014	DLYMPIA	Project Name:		212 0 02 100	STANTER	Client:
of	Page:	14	Date: 10/16	52-3790 152-7178	ve N. Tel: 206-352-3790 103 Fax: 206-352-7178	3600 Fremont Ave N. Seattle, WA 98103
1410197	Internations Brokers Min (Internation			Amalytical	And	
Chain of Custody Record	Cha			ont	-remo	
				I		

APPENDIX C PERMITS UST SYSTEM REMOVAL REPORT 7-ELEVEN STORE NO. 25983

January 6, 2015



## **Permit & Inspection Services**

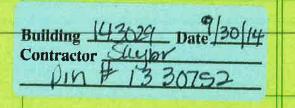


## **COMMERCIAL INSPECTION CARD**

Community Planning and Development 601 4th Ave E – PO Box 1967 Olympia WA 98507-1967 Phone: 360-753-8314 Fax: 360-753-8087 Email: <u>cpdinfo@ci.olympia.wa.us</u> Web: <u>www.olympiawa.gov</u>

Inspections: (360) 753-4444 Ext. 3001 - 24-hour Notice Required Final Inspections: (360) 753-8314 - 72-hour Notice Required Or go to Site Line Online at www.ci.olympia.wa.us/cityservices/permit/

Permit #: 14 - 3029								
Site Address: 3541	mart	in Wa	en E		功法的基本			
Project Name: 7-11			3					
			A REAL PROPERTY AND ADDRESS OF ADDRE					
Contractor: Suybr	Const		Phone #:		14 June 14			
Owner/Applicant:	Owner/Applicant:							
Inspection	Date	Inspector	Electrical	Date	Inspector			
Site Work			Rough-in					
Special Inspection	- 14 (contract)		Service	and and a state				
Concrete		- the sector of the	Low Voltage	Street MCASSIN Restaury				
Footings			Communications	Shire we share the second	Martin Statistics			
Stem Walls			Sign	iki ke-terin Pat	<b>Brenning State</b>			
CMU Walls			Insulation	while the state of				
Underslab Plumbing			Floor		La substance de			
Underslab Electrical			Walls					
Underslab Insulation			Ceiling/Roof	والارتبع الخنب مسبو أأسرى	State State State State			
Framing			Drywali					
Shear/Holdowns			Interior	The Color of the State	and the second second			
Exterior Framing			Exterior		international states			
Interior Framing			Firewalls		Commentary of the			
Roof Sheathing			Firestops	which is a strength of the	a subscriptures and the second			
Mechanical			Exterior	SUMMARY OF	LINE OF COMPANY			
Rough-in			Veneer/Eifs	AND REAL PROPERTY.	Sheet and s			
Gas Piping			Final Inspections					
Fire Dampers			Building		Contractor and the			
Plumbing			Plumbing	and the surface of	a subscription of			
Rough-in			Mechanical		STREET, STREET			
Suspended Ceiling	1.172.571.5		Electrical		1 - THE ACCESS			
Seismic struts/wires/lights			Planning	the strategic state				
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					and the second			



CITY OF OL ENGIN Job Address Job Address Owner Contractor	EERIN		File No. 14 - 3629         Permit No.         Permit No.          Phone No.          Phone No.
Work Description	Approval Date	Insp. By	
Sanitary Sewer System         Water System         Storm Sewer System         Street/Alley Grades         Sidewalk/Curb         Driveway         Street Lighting         Paving         Clearing/Grading/Erosion         STEP System         Private Utility         Street Closure(s)         Traffic Control Plan         Tree Removal         Tree Protection			Inspector: <u>Jost Baysen</u> Phone No.: <u>T53 8374</u> THIS CARD MUST BE POSTED IN A VISIBLE PLACE ON THE JOB SITE. This permit will expireafter day(s) per Section 3.080 & OMC 12.24.100. J. King Issued ByDate
R/W Excavation R/W Obstruction	Effective Date(s):		Final Inspection By Date

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Description: 7-Eleven UST R     File No. 14-273       Iness: 3541 Martin Way     Permit No. 14-3029       Iner: 7-Eleven     Issued By: Kevin Bossard       Inector: TBD     Date: 9/15/14	53-8348 OLYMPIA FIR FIRE PREVEN	OLYMPIA FIRE DEPARTMENT FIRE PREVENTION DIVISION FIRE PROTECTION SYSTEMS PERMIT
lartin Way	Description: 7-Eleven.UST R	File No. 14-273
	Sress: 3541 Martin Way	Permit No. 14-3029
	nen 7-Eleven	Issued By: Kevin Bossard
	Inactor: TBD	

Nd Job

Co 9

SPRINKLER SYSTEM	FIRE ALARM	EXTINGUISHING SYSTEM	OTHER SYSTEM
Plans Approved:	Plans Approved:	Plans Approved:	Other: UST R
UG Cover	Wining Insp:	Piping:	Plans Approved: 9/15/14
UG Piping:	(By Electrical Inspector)	Coverage:	Pre-Cover:
UG Hydro:	Coverage:	Final:	Final 10/9/14/01
UG Flush:	Final:		111
FDC Drain:			
System Hydro:			
Pipe/Brace/Cover:			
FA/Trip/Final:			
13D Flow Test:			
Tenting:			

# All Inspections require 48-hour notice All fire system final inspections are to be scheduled with the Fire Department Post this permit next to the building permit

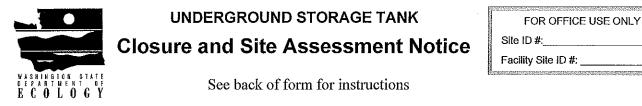
epartment rbradley@ci.olyn

kbossard@ci.olympia.wa.us rbradley@ci.olympia.wa.us

## APPENDIX D DEPARTMENT OF ECOLOGY UST NOTICES AND CHECKLIST UST SYSTEM REMOVAL REPORT 7-ELEVEN STORE NO. 25983

January 6, 2015





Please  $\checkmark$  the appropriate box(es)

Temporary Tank Closure Change-In-Service Permanent Tank Closure Site Check/Site Assessment

	Site Inforn	nation		Owner In	formation
Site ID Numbe			UST Ow	ner/Operator 7-Eleve	en, Inc.
•	Ecology if the tanks are	* .			,
Site/Business		nc. Store No. 25983 Street	Mailing /	Address P.O. Box 71	1 Street
Site Address	3540 Martin Way E				oneet
_			City/Ctat	- Dallas/TX	P.O. Box
City/State Oly				e Dallas/TX.	-1
Zip Code 985		phone ( <u>360)</u> 847-120	08Zip Code	10221 10	elephone (214) <u>415-0146</u>
Owners Signa	ature				
		Tank Closure/C	hange-In-Serv	vice Company	
	any Saybr Contrac	,	A A		1042854
Certified Supe	rvisor <u>Mickey McA</u>	loon	Decom	missioning Certification	on No
-	Signature	which I	0 Ch	Date	10/29/14
Address 3852					• • • • • • • • • • • • • • • • • • • •
Street		WA	P.O. Bo 98409		( ) 252 521 21/4
Tacc City	лпа	State	Zip Cod		one () <u>253-531-2144</u>
	Assessor <u>Emily Ha</u> 0 NE 33rd Place Si				
Street			P.O. Bo		
Belle City	vue	WA. State	98004 Zip Cod		one ( ⁴²⁵ ) <u>869-9448</u>
Chy		Olde	Zip Cou	e	<b>Contamination Present</b>
		Tank Informat	ion		at the Time of Closure
Tank ID REG	<b>Closure Date</b> 10/08/2014	Closure Method Removal	Tank Capacity 12,000	Substance Stored Unleaded Gasoline	⊠ □ □ Yes No Unknown
NOL	10/08/2014	Removal	12,000	Unleaded Gasoline	Check unknown if no obvious contamination was observed
SNL	10/08/2014	Removal	12,000	Unleaded Gasoline	and sample results have not yet been received from analytical lab.
		format contact the Tavia		260.407.7170 (unico) or 4	Yes No Yes No If contamination is present, has the release been reported to the appropriate regional office? -800-833-6388 OR 711 (TTY)



#### UNDERGROUND STORAGE TANK Site Check/Site Assessment Checklist

FOR OFFICE USE ONLY

Underground Storage Tank Section Department of Ecology

> PO Box 47655 Olympia WA 98504-7655

Site #:_____

Facility Site ID #:

#### INSTRUCTIONS

When a release has not been confirmed and reported, this Site Check/Site Assessment Checklist must be completed and signed by a person certified by ICC or a Washington registered professional engineer who is competent, by means of examination, experience, or education, to perform site assessments. **The results of the site check or site assessment must be included with this checklist.** This form must be submitted to Ecology at the address shown below within 30 days after completion of the site check/site assessment.

**SITE INFORMATION:** Include the Ecology site ID number if the tanks are registered with Ecology. This number may be found on the tank owner's invoice or tank permit.

**TANK INFORMATION:** Please list all tanks for which the site check or site assessment is being conducted. Use the owner's tank ID numbers if available, and indicate tank capacity and substance stored.

**REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT:** Please check the appropriate item.

**<u>CHECKLIST</u>**: Please initial each item in the appropriate box.

**<u>SITE ASSESSOR INFORMATION</u>**: This information must be signed by the registered site assessor who is responsible for conducting the site check/site assessment.

#### SITE INFORMATION

Site ID Number (Available from Ecolog	gy if the tanks are registered): _	8613	
Site/Business Name: 7 - ELEVEN	No. 25983		
Site Address: 3540 MARTIN	AYE		_ Telephone: ( <u>360) 847 - 1208</u>
OLYMPIA	Street		98506
City	State		Zip Code

TANK INFORMATION		
Tank ID No.	Tank Capacity	Substance Stored
REG	12,000	UNEADED GATOLINE
NOL	12,000	UNLEADED GASOLINE
SNL		UNLEADED GASOLINE

#### REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT

#### Check one:

-

Investigate suspected release due to on-site environmental contamination.	
Investigate suspected release due to off-site environmental contamination.	
Extend temporary closure of UST system for more than 12 months.	
UST system undergoing change-in-service.	
UST system permanently closed with tank removed.	
Abandoned tank containing product.	
Required by Ecology or delegated agency for UST system closed before 12/22/88.	
Other (describe):	-

CHECKLIST		
		-
Each item of the following checklist shall be initialed by the person registered with the Department of	YES	NO
Ecology whose signature appears below.		110
1. The location of the UST site is shown on a vicinity map.	ABS	
<ol> <li>A brief summary of information obtained during the site inspection is provided. (see Section 3.2 in site assessment guidance)</li> </ol>	CHA	
3. A summary of UST system data is provided. (see Section 3.1.)	CHA	
4. The soils characteristics at the UST site are described. (see Section 5.2)	Eth	
5. Is there any apparent groundwater in the tank excavation?	CH	
6. A brief description of the surrounding land use is provided. (see Section 3.1)	Ett	
<ol> <li>Information has been provided indicating the number and types of samples collected, methods used to collect and analyze the samples, and the name and address of the laboratory used to perform the analyses.</li> </ol>	AB	
8. A sketch or sketches showing the following items is provided:		
- location and ID number for all field samples collected	EHA	
- groundwater samples distinguished from soil samples (if applicable)	-	EHA
- samples collected from stockpiled excavated soil	CHA	
- tank and piping locations and limits of excavation pit	CHA	
- adjacent structures and streets	ELA	
- approximate locations of any on-site and nearby utilities	ELS	
9. If sampling procedures different from those specified in the guidance were used, has justification for using these alternative sampling procedures been provided? (see Section 3.4)		QA
10. A table is provided showing laboratory results for each sample collected including; sample ID number, constituents analyzed for and corresponding concentration, analytical method and detection limit for that method.	etA	
11. Any factors that may have compromised the quality of the data or validity of the results are described.	Eth	
12. The results of this site check/site assessment indicate that a confirmed release of a regulated		
12. The results of this site check/site assessment indicate that a confirmed release of a regulated substance has occurred	(DA)	

			_
SITE ASSESSOR INFORMATIO	N		
EMILY HARPER WA STATES	HE ASSESSOR #8196039-47	STANTEL CONSULTING SERVICES, INC.	105
Person registered with Ecology		Firm Affiliated with	
Business Address: 11130 NE		Telephone: ( <u>425)8699448</u>	
	Street		
BELLEVUE	WA	98004	
City	State	Zip Code	
Thereby contify that There have in us	an anaible above of nonforming the site	aboak/oita appagement departied about Pargons	
	esponsible charge of performing the site feet to penalties under Chapter 173.360	check/site assessment described above. Persons WAC.	

Nachu	as 1		
Date		Signature of Person Registered with Ecology	

If you need this publication in an alternate format, please contact Toxics Cleanup Program at (360) 407-7170. For persons with a speech or hearing impairment call 711 for relay service or 800-833-6388 for TTY.

APPENDIX E UST AND WASTE DISPOSAL DOCUMENTS UST SYSTEM REMOVAL REPORT 7-ELEVEN STORE NO. 25983

January 6, 2015



This Shipp	oing Order	must be legibly filled Carbon, and retained	in, in lnk indelible Pencil, or d by the agent	in		Shipper No.		5903	
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ين 14			MARINÉ VACUUM SERVICE						
Page	of		(Name of	f carrier)	(SCAC)	Dale	<u></u>	<del>-74</del>	
	nents, the letters "COD" mL	ist appear before consignee's name or	as otherwise provided in item 430, Sec.1.	FROM: Shipper	XAR C.	to her	e constantina c		
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City SEATT			Zip Code 98108		pra -	for the sy	40-7491		
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## **CHANGE ORDER**

852 S 66th St Tacoma, WA 98409 Phone: 253.531.2144 Fax: 253.536.2068

E.

Job Number:	2141104		Change Order #:		1
Project Name:	Stantec 7-11 Olympia #25983		Date:		11/7/2014
Project Address:	3541 Martin Way East Olympia, WA. 98506				
<u>TO:</u>	Stantec Consulting Services Inc. Attn: Paul Fairbairn 11130 NE 33rd Place, Suite 200 Bellevue, WA. 98004				
Additional Scope:	Load, transport & dispose P(	CS > 100 t	tons T&T		
	1392.74 tons	per ton		\$	23,564,40
			Total	\$	£3.564.40;
The Contract Sum pr The Contract Sum wi	ously authorized Change Orders: ior to this Change Order was:			<del>\$\$ \$\$ \$\$</del> \$ <del>\$</del>	62,580,000 62,580,000 63,584,40 136,144,407
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<u>Saybr Contractors,</u> 3852 S. 66th S Tacoma, WA. §	Street		<u>Stantec Consulti</u> 11130 NE 33rd Bellevue,	Place	e, Suite 200
Michael T. Muller			Paul F	airba	irn
MMTM	Digitally signed by Michael T. Muller DN: cn=Michael T. Muller, o=Saybr Contractors, Inc, ou, email=mmuller@saybr.com, c=US Date: 2014.11.07 08:53:56 -08'00'	Signed: Date:		- 60	

"REGIONAL DISPOSAL COMPANY INTERMODA PO BOX 51057 LOS ANGELES, CA 90074-1057 (206) 332-7731

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TO:

REMARKS

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Saybr Construciton Inc

3852 S 66th Street

Tacoma, WA 98409

214104 12010 A A /U

MC.

INVOICE

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N	/e reserve the right to s	uspend ser	vice without notice on any past due accou	nt.				
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Form # 401 To re-order this form, call BFI Print & Promotion Bolutions 1-888-254-8784. Also available, compatible 2 Window Envelopes #TW10R.

REGIONAL DISPOSAL COMPANY INTERMODA PO BOX 51057 LOS ANGELES, CA 90074-1057 (206) 332-7731

TO;

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Saybr Construciton Inc 3852 S 66th Street Tacoma, WA 98409

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REGIONAI Seat TOMER 013213 Saybr Construcitor 3852 S 66th Street Tacoma, WA 98409 LW-14243 SCALE IN SCALE OUT TTY. UNIT 0.00 YD TRACKIN	G QTY	IODAL 	NET TO NET WEI	SITE TICK 01 WEIGHMASTEF Karyn B DATE/TIME IN 10-11-2 VEHICLE SOIL TEFERENCE WAR VAC SILL OF LADIN ONS	914087 014 11:3 6 26.19 52,380		DATE/TIME	-2014 IN IN BOUND	11:53 a OICE TOTAL
REGIONAI Seat Southard Seat Saybr Construcitor 3852 S 66th Street Tacoma, WA 98409 LW-14243 SCALE IN SCALE OUT SCALE OUT TY. UNIT 0.00 YD TRACKIN 26.19 TN SW-CONT	G QTY	ODAL 90,720 38,340 RIPTION OLYMPIA	NET TO NET WEI	SITE TICK 01 VEIGHMASTEF Karyn B DATE/TIME IN 10-11-2 //EHICLE SOIL SEFENENCE MAR VAC SILL OF LADIN ONS CGHT	914087 01.4 11:3 G 26.19 52,380 RATE	EXTENSI	I NI	-2014 IN IN BOUND	11:53 a 'OICE TOTAL

×		REGIONA	AL DISPOSAL INTER	RMODAL		01	кет# 914088	CEL	L	х
-	12	• Sea	3rd and lander ttle, WA	*		Karyn H				
	213 or Cons	strucito ch Stree				DATE/TIME IN 10-11-2 VEHICLE SOIL	2014 12:1	2 pm 10-	e/TIME OUT -11-2014 ITAINER	12:38 pm
100		A 98409				REFERENCE MAR VAC BILL OF LADI			IN	VOICE
	SCALE SCALE		GROSS WEIGHT TARE WEIGHT	90,280 38,740	NET NET W	TONS EIGHT	25.77 51,540		INBOUND	
OTY.	UNIT		DE	SCRIPTION			RATE	EXTENSION	TAX	TOTAL
0.0 25.7		TRACKIN SW-CONT	IG QTY SOIL W/FUEL	OLYMPIA	/THUR					h
										NET AMOUNT
									-	TENDERED
1T	he undersign	ed Individual e	igning this document on behalf o	f Customer acknowledge	s that he or she	has read and	understands the ter	rms and conditions	· [	CHANGE
	PR (07/12)	i side and that r	he or she has the authority to sig		GNATURE		2. Cha		t	CHECK#
TOMER 0132 Sayb 3852	:13 or Cons	5eat		MODAL		SITE TICK 01 WEIGHMASTER IN - Ki DATE/TIME IN 10-13-2	914123 m L. OUT			
m		h Stree	n Inc t			VEHICLE SOIL	014 12:2	the second s	13-2014 AINER	
	ma, WA	h Stree 98409	t			VEHICLE			13-2014 AINER	12:50 pm /OICE
		98409	GROSS WEIGHT	96,860 39,100	NET I	VEHICLE SOIL REFERENCE MARVAC BILL OF LADIN	<b>a</b> 28,88		13-2014 AINER INV	
LW-1	MA, WA 4243 SCALE	98409	t GROSS WEIGHT TARE WEIGHT	96,860 39,100		VEHICLE SOIL REFERENCE MARVAC BILL OF LADIN	a		13-2014 AINER	12:50 pm /OICE TOTAL
	MA, WA 4243 SCALE SCALE UNIT YD	98409 IN OUT TRACKIN	t GROSS WEIGHT TARE WEIGHT DES	39,100	NET T NET WE	VEHICLE SOIL REFERENCE MARVAC BILL OF LADIN	a 28.88 57,760	CONT	13-2014 AINER INV	VOICE
LW-1	A 243 SCALE SCALE UNIT YD TN	98409 IN OUT TRACKIN SW-CONT	t GROSS WEIGHT TARE WEIGHT Des NG QTY	39, 100	NET T NET WE	VEHICLE SOIL MARVAC BILL OF LADIN 'ONS IGHT'	а 28.88 57,760 <b>нате</b>	EXTENSION	13-2014 AINER INV	/OICE

**REGIONAL DISPOSAL COMPANY INTERMODA** PO BOX 51057 LOS ANGELES, CA 90074-1057 214/104, 1010 M (206) 332-7731

TO:

Saybr Construciton Inc 3852 S 66th Street Tacoma, WA 98409

VV	0	C	E
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INVOICE NO.	0000048005
	1
PAGE	Oct-15-14
DATE	13213
CUSTOMER NO.	LW-14143
SITE NO.	
REFERENCE NO.	

NC.

OTY DESCRIPTION SERVICE DATE 47659 E Marginal Wa S., Seattle Balance forward : Payments : \$0.00 Adjustments : Invoices : Vehicle: SOIL SIT 01-914086 26.58 TN 11 - Oct VH SW-CONT SOIL W/FUEL ......... Material Summary 26.58 TN VH SW-CONT SOIL W/FUEL Payment due upon receipt of this invoice. 1.5% per month (18% per annum) late charge on balances over 30 days from date of involce. Payments received after involce date are not reflected. TOTAL THIS INVOICE Account Status To ensure proper credit, please include your account number on your check and include the bottom portion of this invoice. When making payment on multiple accounts, please include the account numbers and the amounts of payment. PLEASE PAY THIS 61 - 90 DAYS OVER 80 DAYS 31 - 60 DAYS CURRENT \$ 0.00 \$ 0.00 \$ 0.00 AMOUNT We reserve the right to suspend service without notice on any past due account. Please remit to:

SI

		s: Call (206)332-7731 or email:	
REMARKS	*** Dieage referen	ce your involce number on each check stub ***	
REFERENCE NO.			PLEASE RETURN THIS PORTION WITH REMITTANCE
SITE NO.			
CUSTOMER NO.	19719		
DATE	13213	(206) 332-7731	REMITTANCE
INVOICE NO. PAGE	1 Oct-15-14	PO BOX 51057 LOS ANGELES, CA 90074-1057	AMOUNT OF
	0000048005	REGIONAL DISPOSAL COMPANY INT	ERMODA

013213 10-11-2014 8:19 am 10-	
Date:Time IN     Date:Time IN       013213     10-11-2014     8:19 am     10-11-2014       Saybr Construction Inc     SOIL     CON       152 S 66th Street     REFERENCE	
Saybr Construciton Inc 152 S 66th Street REFERENCE	TIME OUT
152 S 66th Street	11-2014 8:32
	INVOICE
LW-14143	
SCALE IN GROSS WEIGHT 92,000 NET TONS 26.58	
SCALE OUT TARE WEIGHT 38,840 NET WEIGHT 53,160	INBOUND
TY. UNIT DESCRIPTION RATE EXTENSION	TAX TOT
0.00 YD TRACKING QTY	
26.58 TN SW-CONT SOIL W/FUEL SEATTLE/KING	
	NET AMO
	TENDER
	011010
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.	CHANG
	CHECK
-142UPR (07/12) 2/21 SIGNATURE // CW C/A /A	
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REGIONAL DISPOSAL COMPANY INTERMODA PO BOX 51057 LOS ANGELES, CA 90074-1057 (206) 332-7731

TO:

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Saybr Construciton Inc 3852 S 66th Street Tacoma, WA 98409

 0000048060

 INVOICE NO.

 PAGE

 OCt-31-14

 DATE

 13213

 CUSTOMER NO.

 BITE NO.

 REFERENCE NO.

	SERVICE DATE SCOOK	lartin Way E., Olyn	DESCRIPTI	ON	REF	ERENCE	OTY.	AMOUNT
		Balance forwa Payments : Adjustments : Invoices :						\$0.00 \$0.00 \$0.00
I	16 - Oct VH	Vehicle: SW-CONT SOI	SOIL L W/FUEL		01-91	4240 28.8	35 TN	filmann,
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				Material Summa	ertuur (soo en re arv	***	1 (R) (I	1.1.1.1
	VH	SW-CONT SOI	L W/FUEL	<u>Material Domini</u>	<u>ar y</u>	51.3	B3 TN	
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				NOV (	)5			
				SA) (	CALCERS, INC		2 141124	51010
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	Account Status	over 30 days from date of Payments received after To ensure proper credit, portion of this invoice. V	r involce date are not reliecte please include your account Vhen making payment on mu	d. number on your check and	Include the bottom	TOTAL THIS INVO	CE	12,155.8 <b>8</b> .,
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ITE		REGIONAL DISPOSAL INTERMODAL	01	жет# 914263	CELL		
× *		3rd and lander Seattle, WA	IN - D		DUT - JAMI	Е В.	
	Con	struciton Inc	DATE/TIME II 10-16- VEHICLE SOIL	N 2014 2:27		IME OUT 6-2014 INER	2:43 pm
JCOMa	a, W		REFERENCE MAR VAC	2		IN	VOICE
LW-14	243		BILL OF LAD	ING			
		E IN GROSS WEIGHT 87,040 E OUT TARE WEIGHT 42,080	NET TONS NET WEIGHT	22.48 44,960	I	NBOUND	
	UNIT	DESCRIPTION		RATE	EXTENSION	TAX	TOTAL
22.48	e tevera	TRACKING QTY SW-CONT SOIL W/FUEL OLYMPIA/ Ined individual aigning this document on behalf of Customer acknowledges is aide and that he or she has the authority to sign this document on behalf of Sign	lhet he or she has read and	understande the form	ns and conditions		NET AMOUNT TENDERED CHANGE CHECK#
			-	VETA	losu		
TE		REGIONAL DISPOSAL INTERMODAL 3rd and lander	01 WEIGHMASTE	914240	CELL		
		Seattle, WA	IN - J/	AMIE B. OU	T - Drinda		
	Cons	struciton Inc	DATE/TIME IN 10-16-2 VEHICLE SOIL			ME OUT 6-2014 NER	11:08 an
	a, W2	th Street A 98409	REFERENCE MAR VAC BILL OF LADI			INV	OICE
	CALE CALE	C IN GROSS WEIGHT 99,520 C OUT TARE WEIGHT 41,820	NET TONS NET WEIGHT	28.85 57,700	II	NBOUND	45
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		All and the second seco		N N			
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The un	idereign	ed individual signing this decument on behalf of Customer acknowledges the side and that he or she has the sutherity to sign this document on behalf of	at he or she has read and i	understands the form	and conditions		CHANGE
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444045LF10/16/14 444036LF10/16/14 444032LF10/16/14	444045 444036	8900 8900	8900	KLH	16-Oct-14	16-Oct-14	105020	52 50999832	100000			
136LF10/16/14 032LF10/16/14	444036		0000						38200	19.10000038	66820	33 40999985
J32LF10/16/14			0000	KLH	16-Oct-14	16-Oct-14	111320	55.65999985	39500	19.75	71820	35,90999985
	444032	8900	8900	KLH	16-Oct-14	16-Oct-14	105300	52 65000153	41260	20,62999916	64040	32.0200046
444031LF10/16/14	444031	8900	8900	KLH	16-Oct-14	16-Oct-14	98740	49.36999893	38600	19.29999924	60140	30.06999969
444030LF10/16/14	444030	8900	8900	KLH	16-Oct-14	16-Oct-14	93340	46.66999817	38200	19.10000038	55140	27.56999969
443935LF10/14/14	443935	8900	8900	KLH	14-Oct-14	14-Oct-14	100440	50.22000122	38200	19.10000038	62240	31.12000084
443931LF10/14/14	443931	8900	8900	KLH	14-Oct-14	14-Oct-14	100040	50.0200046	41260	20.62999916	58780	29.38999939
443929LF10/14/14	443929	8900	8900	KLH	14-Oct-14	14-Oct-14	96500	48.25	38600	19.29999924	57900	28.95000076
443893LF10/14/14	443893	8900	8900	KLH	14-Oct-14	14-Oct-14	98480	49.24000168	38300	19.14999962	60180	30.09000015
443892LF10/14/14	443892	8900	8900	KLH	14-Oct-14	14-Oct-14	99760	49.88000107	38600	19.29999924	61160	30.57999992
443891LF10/14/14	443891	8900	8900	KLH	14-Oct-14	14-Oct-14	109660	54,83000183	41260	20.62999916	68400	34,20000076
443890LF10/14/14	443890	8900	8900	KLH	14-Oct-14	14-Oct-14	100000	50	38600	19.29999924	61400	30.70000076
443959LF10/15/14	443959	8900	8900	KLH	15-Oct-14	15-Oct-14	106620	53.31000137	39500	19.75	67120	33.56000137
443957LF10/15/14	443957	8900	8900	KLH	15-Oct-14	15-Oct-14	100000	50	38440	19.21999931	61560	30.78000069
4439561 F10/15/14	443956	8900	8900	KLH	15-Oct-14	15-Oct-14	104960	52.47999954	38200	19.1000038	66760	33.38000107
443955LF10/15/14	443955		8900	KLH	15-Oct-14	15-Oct-14	102100	51.04999924	41260	20.62999916	60840	30.4200008
443951LF10/15/14	443951		8900	KLH	15-Oct-14	15-Oct-14	95420	47.70999908	38300	19, 14999962	57120	28.55999947
4439491 F10/15/14	443949	8900	8900	KLH	15-Oct-14	15-Oct-14	102740	51,36999893	38200	19.10000038	64540	32.27000046
443946LF10/15/14	443946		8900	KLH	15-Oct-14	15-Oct-14	103700	51.84999847	41260	20.62999916	62440	31.21999931
4439451,F10/15/14	443945	(R	8900	KLH	15-Oct-14	15-Oct-14	98720	49.3600061	38600	19.29999924	60120	30.05999947
443943LF10/15/14	443943	100	8900	KLH	15-Oct-14	15-Oct-14	101760	50.88000107	39180	19.59000015	62580	31.2900092
443936LF10/14/14	443936	1	8900	KLH	14-Oct-14	14-Oct-14	96100	48.04999924	38300	19 14999962	57800	28.89999962
444082LF10/17/14	444082	1.00	8900	KLH	17-Oct-14	17-Oct-14	101100	50.54999924	38200	19.10000038	62900	31,45000076
444081LF10/17/14	444081	8900	8900	KLH	17-Oct-14	17-Oct-14	98480	49.24000168	38580	19.29000092	29900	29.95000076
444071LF10/17/14	444071	8900	8900	KLH	17-Oct-14	17-Oct-14	94520	47.25999832	39500	19.75	55020	27,51000023
444070LF10/17/14	444070	8900	8900	KLH	17-Oct-14	17-Oct-14	108480	54.24000168	41260	20.62999916	67220	33.61000061
444064LF10/16/14	444064	8900	8900	KLH	16-Oct-14	16-Oct-14	95440	47 72000122	38520	19 26000023	56920	28.45999908
444018LF10/16/14	444018	8900	8900	KLH	16-Oct-14	16-Oct-14	94420	47.20999908	39500	19.75	54920	27.45999908
444016LF10/16/14	444016	-	8900	KLH	16-Oct-14	16-Oct-14	94380	47.18999863	41260	20.62999916	53120	26.55999947
444010LF10/15/14	444010	8900	8900	KLH	15-Oct-14	15-Oct-14	94860	47.43000031	39500	19.75	55360	27.68000031
444009LF10/15/14	444009	8900	8900	KLH	15-Oct-14	15-Oct-14	98960	49.47999954	38200	19.10000038	60760	30.37999916
444006LF10/15/14	444006	8900	8900	KIH	15-Oct-14	15-Oct-14	102180	51.0900015	41260	20.62999916	60920	30.45999908
444004LF10/15/14	444004	8900	8900	KLH	15-Oct-14	15-Oct-14	00066	49.5	38300	19.14999962	60700	30,35000038
444001LF10/15/14	444001	8900	8900	KLH	15-Oct-14	15-Oct-14	89140	44.56999969	39500	19.75	49640	24 81999969
444000LF10/15/14	444000	8900	8900	KLH	15-Oct-14	15-Oct-14	91760	45.88000107	38440	19.21999931	53320	26,65999985
443995LF10/15/14	443995	8900	8900	KLH	15-Oct-14	15-Oct-14	105360	52.68000031	38200	19.10000038	67160	33.58000183
443971LF10/15/14	443971	8900	8900	KLH	15-Oct-14	15-Oct-14	103560	51.77999878	41260	20.62999916	62300	31.14999962
443965LF10/15/14	443965	8900	8900	KCH	15-Oct-14	15-Oct-14	103160	51.58000183	38300	19.14999962	64860	32,43000031
									F	Total Tons		1156.960005

### WASTE ACCEPTANCE APPLICATION CONTAMINATED SOILS, DREDGE SPOILS, AND DEBRIS

(Complete an application for each waste)

-	dress: 3852 S 66 th St	's Inc	Customer Number	8900
City Con 206	//State/Zip: Tacoma WA htact name & number: M 5-730-0957	98409 ickey McAloon	Material Number	58
mm	ncaloon@saybr.com			
			Tip Fee per ton	refulse tax
Gen	neral Information for wa	ste disposal;	n	etuse
1.	Project Address:	3541 Martin Way E, Olympia, WA 98506		
2.	Charge Account numbe	r		
3.	Nominal quantity (ton day)	or CY per Est. 600 cy		
4.	Source Type "1" thru "4	4" (see Acceptance Process) 1		
5.	Waste current location	As above		
6.	Waste original location	As above		
7.	Please give a detail des may have impacted the	cription of activities which occurred on or no soils.	ear soils original location v	which
	UST dispensers le	aking		
8.				

Waste Oils and Unknown Oils:

• Analyze waste by NWTPH-Gx & NWTPH-Dx to identify contaminants. Additional testing will be required based on these results.

#### **Gasoline Range Organics (C6 – C12):**

- Analyze waste by NWTPH-Gx.
- Analyze waste for BTEX compounds with EPA Method 8021 or 8260.
- If TPH > 5000 ppm, analyze waste for TCLP metals.
- If TPH > 5000 ppm analyze waste by 8260 and 8270.

Diesel Range Organics (C12 - C24):

Ded DE 10-13-14

- Analyze waste by NWTPH-Dx.
- If TPH>5000 ppm, analyze waste for TCLP metals.
- If TPH>5000 ppm, analyze waste by EPA Method 8260 and 8270.

#### Heavy Oil Organics (> C24):

- Analyze waste for heavy fuel by NWTPH-Dx.
- Analyze waste for PCB's by EPA Method 8082 when there is a potential the PCB's may be present.
- If TPH>5000 ppm, analyze waste for TCLP metals.
- If TPH>5000 ppm, analyze waste by EPA Method 8260 and 8270.
- 9. List of possible additional analysis. Selected items depend on potential contaminants, avallable analytical, and generator knowledge of process and/or history:
  - X a. Waste samples were collected in accordance with WAC 173-303-110(2).
  - X b. Lab analytical procedures complied with WAC 173-303-110(3).
  - c. Waste has been analyzed and is non-corrosive per WAC 173-303-090(6) (a) (iii) [pH].
  - d. Waste has been analyzed and is non-toxic per WAC 173-303-090(8) [TCLP analysis for metals].
  - e. Waste has been analyzed and is non-toxic per WAC 173-303-090(8) [TCLP analysis for F-list organics].
  - f. Waste has been analyzed and is non-toxic per WAC 173-303-090(8) [TCLP analysis for acids/base neutrals].
  - g. Waste has been analyzed and is non-toxic per WAC 173-303-090(8) [TCLP analysis for pesticides and herbicides].
  - h. Waste has been analyzed and is non-toxic per WAC 173-303-101(5) (Fish bioassay only].
  - I. Waste has been analyzed and is non-persistent per WAC 173-303-102 [PAH only].
  - Waste has been analyzed for PCB's per EPA Method 8082.
  - ] k. Waste has been analyzed for diesel and/or heavy oil range organics per NWTPH-Dx.
  - XX I. Waste has been analyzed for gasoline range organics per NWTPH-Gx.

XX m. Waste has been analyzed for BTEX per EPA Methods 8021 or 8260.

n. Chain of custody and lab analytical data for required waste analyses is d. Total Lead analysis from soil borings okey. I Fer attached.

X o. Other:

- 10. Customer certifies that:
  - a. The waste sampled and intended for disposal under this certification is neither dangerous nor extremely hazardous waste as determined by WAC 173-303.
  - b. The waste has no free liquids per WAC 173-303-110(3) (c) (i).
  - c. To the best of its knowledge, there have been no alterations to the waste that would affect the accuracy of the analyses performed above.
  - d. There have been no material changes in the character of the waste after the analyses were performed which would render those analyses inaccurate.
  - e. The samples analyzed are representative of the waste to be tendered to the Cowlitz County Headquarters Landfill for disposal.

that I do

____10-13-04____

Signature of Authorized Agent

Date

Michael Mc Aloon

Printed Name and Title of Authorized Agent

Date:	11/07/14						
Project:	7- Eleven Store #25983						
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	UST & Fuel System Removal						
Address:	3541 Martin Way East						
	Olympia, WA. 98506						
Project Char	age Orders	7					
r oject chai	Be of deta						
Change			# of		Unit		<b>T</b> . 4 . 1
Number	Description/Comments/Calculations	Units	Units		Price		Total
CHANGE OR	DED 1						
1	Load, transport & dispose PCS >100 tons T&T						
-	- Cowlitz County	Ton	1156.96				
	- Regional Disposal	Ton	157.87				
	- Regional Disposal	Ton	26.58				
	- · ·	Ton	51.33				
	- Regional Disposal - Total PCS		1392.74	ċ	-	ć d	2 4 6 4
	TOTAL CHANGE ORDER 1		1332.74	Ş	- Carlos and a	2 8	The second
	TOTAL CHANGE ORDER 1					2 1	io, aon 1
CHANGE OR	DER 2	Г					
2a	Demo oll/water separator						
	- pre priced and approved	LS	1	\$		\$ 🖌	1,2,45
2b	Unit Prices U1: Saw cut, break and remove additional paving						
	- actual amount removed 102' x 42' = 4284sf						
	- amount per bld 2500sf						
	- additional paving removed 4284 - 2500 = 1784sf	SF	1784	\$		\$ 🗖	3,508
2c	Unit Prices U3: Excavation & mgmt of soll from UST field,						
	dispenser islands and subsurface piping in excess of amount						
	estimated in bid Item #9 (200cy)						
	- total PCS removed 1392.74tons						
	- conversion from tons to $cy = 1.4$ tons/cy						
	- 1392.74 tons 1.4 = 994.81cy	CY	994.81	\$		\$ .	2,461.1
24	Unit Prices U4: Soil handling (relocation of stockpiled mtri)						
2d	- total excavation area 102' x 42' x 25' = 3966.67cy						
	- less tank displacement = 180cy						
	- less amount included in bid item #9 = 200cy						
	- total soll handling is 3966.67-180-200 = 3586.67 - less PCS above is 3586.67 - 994.81 = 2591.86	CY	2591.86	\$	-	\$ 🛲	50060
2e	Unit Prices U8: Provide, haul and place compacted clean fill						
	in excess of the amount estimated in bid item #11						
	- PCS removed (see above) = 994.81cy	CY	994.81	\$		\$ 📹	2,880,0
2f	Unit Prices U9: Provide additional concrete or asphalt paving						
	in excess of the amount estimated in bid item #13						
	- actual paving installed 4284sf						
	- less amount in bid item #13 2500sf						
	- less amount in bid item #13 2500sf - total additional paving 4284sf - 2500sf = 1784sf	SF	1784	\$		\$ 🖌	9,276,8

Date:	11/06/14
Project:	7- Eleven Store #25983
	UST & Fuel System Removal
Address:	3541 Martin Way East
	Olympia, WA. 98506

### Summary of Change Orders - Revised Contract Value

1	Load, transport & dispose PCS >100 tons T&T	\$ 400500.000
	Total Change Order 1	\$ 983,5643.00
2a	Demo oil/water separator	\$
2b	Unit Prices U1	\$ (2,563.09)
2c	Unit Prices U3	\$ 652401.02
2d	Unit Prices U4	\$ 40,895,03
2e	Unit Prices U8	\$ 22,80.57
2f	Unit Prices U9	\$ QETERO
	Total Change Order 2	\$ 159,082.55

### Summary of Contract Value

ŝ,

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Original Base Contract Value	\$ 12.580.00
Change Order 1	\$ 40564.00
Subtotal - Revised Contract Value	\$ 436,044,00
Change Order 2	\$ \$20,082.537
Total Revised Contract Value	\$ (105,226.9%

plus wsst



3852 S 66th St • Tacoma, WA 98409 Phone (253) 531-2144 • Fax (253) 536-2068

### **CERTIFICATE OF DISPOSAL**

October 8, 2014

Stantec Consulting Services Attn: Paul Fairbairn 11130 NE 33rd Place, Suite 200 Bellevue, WA. 98004

Facility Site Address:7-Eleven #259833541 Martin Way East<br/>Olympia, WA. 98506

This letter is to certify that Saybr Contractors, Inc. has removed and disposed of the following tanks in accordance with all applicable Federal, State, and Local regulations.

Type of Tank: Three each 12,000 gallon fiberglass UST's

**Date Triple Rinsed:** 10/7/14 by Marine Vacuum Service Inc.

**Date Cleaned & Removed:** 10/8/14

**Date Disposed:** 10/8/14 – tanks were cleaned, crushed and disposed of via a City of Olympia construction debris dumpster.

Please contact me at (253) 531-2144 should you have any questions or concerns regarding this matter.

Sincerely,

SAYBR CONTRACTORS, INC.

Michael T. Muller C.O.O.

### APPENDIX F COMPACTION TEST REPORTS UST SYSTEM REMOVAL REPORT 7-ELEVEN STORE NO. 25983

January 6, 2015



	Engineered Assuran		0 11 0		The Testay & Con
Stantec 7-11 UST Rer	noval Olympia - 148	5137-01 - IPD	-Soli C	ompaction: Re	port #D34
CLIENT	Saybr Contrac	etors, Inc.		DATE	10/17/2014
PROJECT LOCATION	3541 Martin V Olympia WA	Vay East		PERMIT #	143029
Inspection Information	on:				
<b>Inspection Date:</b> 10/17/2014	Time Onsite: 01:00 PM	Weather Condition	ns: rainy	, 60	
Inspection Performed:	IPD-Soil Compaction				
Field Data:					
Work / Location:	parking lot near monitoring	wells 4 and 5.		Gauge Standard M	<b>IS:</b> 10337
Equipment ID & Serial #:	CPN MC-1, Ser. #MD60108	5185		Gauge Standard D	<b>S:</b> 37586
Test Samples:					
Sample #: Description:		Proctor Value(pe	f): Optim	um Moisture and Ove	rsize Rock Cori
1. S14-600 Poorly graded Sand	with Silt and Gravel	134.1	7.4		
<b>FEST METHOD</b>	ASTM D-155	7 /AASHTO T-	180		
In Place Density Test			100		
Test # Mode / Depth		,	Dry Dens	. Moist % Sample #	# % Comp. %

	Depth									
1	8	20' left of MW-5	-2.5'bfg	137.7	125.6	9.6	1	93.	7	90
2	8	near MW-4	-2.5'bfg	140.9	127.3	10.7	1	94.	9	90
	e Soils ted Fills	Soils consistent with Procto Soils found to be firm and s knowledge, meet compactio Contractor notified of resul	stable; and	to the best of	of our	<ul> <li>Y</li> <li>Y</li> <li>Y</li> <li>Y</li> </ul>	es O I	No		

#### **Remarks:**

Arrived on site to perform compaction inspection of newly placed subgrade material in the 7-11 parking lot. I met with foreman, Pat. I asked to see site plans, and job specs but was informed that there were none on site. Only a site map was provided. Pat informed me that only 90% compaction was required, but I had no way of verifying that. Compaction was performed, on the aproximate 12" lift, with a hoepack, and large vibratory roller prior to my arrival.

I asked Pat and the dump truck driver where the material was from, but no one knew. It was described as native material from a nearby location that was excavated and imported to this site. A client proctor was provided, but a new sample was requested to be taken for a new proctor. Client provided proctor was from 2013, and there was no way of verifying a consistent match. So blind shots were taken. Test results are pending new proctor results.

#### **Images:**

All reach apply only to satual locations and materials benefit. As a matual primerica to clean, the pillin and metal-test of septements are solventiand in the coefficiential property of cleans, and antibitation for publication of maturements, conclusions or conclusions are expending our reports in metrod pending our retires approal. C 2008 - 2012 Materials Testing & Cansulting, Inc. All rights construct.

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War website. In a mainty inclusion



UPLOADED: 10/17/2014 16:52:00

UPLOADED: 10/17/2014 16:52:00

parking lot Facing east

site map

REPORTED BY: Luke McCann REVIEWED BY: Deane Ramsdell, Project Manager

All results apply only to several locations and essential tends. As a matual preterior to cleans, the paths and merelyes, all reports an selenting as the confidential property of cleans, and antibertration for paths along of materians are confidential property of cleans, and antibertration for paths and merelyes, and essential property of cleans, and antibertration for paths and merelyes, and essential property of cleans, and antibertration for paths and merelyes, and essential property of cleans, and antibertration for paths and merelyes, and essential property of cleans, and antibertration for paths and essential property of cleans, and antibertration for paths and essential property of cleans, and antibertration for paths and essential property of cleans, and antibertration for paths and essential property of cleans, and antibertration for paths and essential property of cleans, and antibertration for paths and essential property of cleans, and antibertration for paths and essential property of essential property of

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Stantec 7-11 UST Removal Olympia - 14S137-01, 10/17/2014, #D34768, Page 2 of 2

Geotechnical Engineering • Special Inspection • Materials Testing • Environmental Consulting



Client:	Saybr Contractors, Inc.	Date:	October 17, 2014
Address:	3541 Martin Way E	Project:	Stantec 7-11 UST Removal Olympia
	Olympia	Project #:	14S137-01
Attn:	Mike Muller	Sample #:	S14-600

As requested MTC, Inc. has performed the following test(s) on the sample referenced above. The testing was performed in accordance with current applicable AASHTO or ASTM standards as indicated below. The results obtained in our laboratory were as follows below or on the attached pages:

	Test(s) Performed:	Test	Test(s) Performed:	Test
		Results		Results
	Sieve Analysis		Sulfate Soundness	
<b>√</b>	Proctor	134.1 @ 7.4%	Unit Weight	
	Sand Equivalent		WSDOT Degradation	
	Fracture Count			
	Moisture Content			
	Specific Gravity, Coarse			
	Specific Gravity, Fine			
	Hydrometer Analysis			
	Atterberg Limits			
	Asphalt Extraction/Gradation			
	Rice Density			

If you have any questions concerning the test results, the procedures used, or if we can be of any further assistance please call on us at the number below.

Respectfully Submitted, Samuel Hyatt WABO Supervising Laboratory Technician

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# Materials Testing & Consulting, Inc. Geotechnical Engineering • Special Inspection • Materials Testing • Environmental Consulting



### **Sieve Report**

Project #: Client:	Stantec 7-11 US 14S137-01 Saybr Contracto Existing Stockp S14-600	ors, Inc.	mpia	Date Received: Sampled By: Date Tested: Tested By:	LM 21-Oct-14		7 Unified Soils Classification Sys graded Sand with Silt and Gravel	Certifiate # 156.01, 136.02
				ASTM D-2216,	ASTM D-241	9, ASTM D-4318, ASTM	I D-5821	
	Specifications No Specs Samp	le Meets Specs ?	N/A			$\begin{array}{c} D_{(5)} = 0.033  mm \\ D_{(10)} = 0.066  mm \\ D_{(15)} = 0.134  mm \\ D_{(30)} = 0.405  mm \\ D_{(50)} = 2.165  mm \\ D_{(60)} = 4.625  mm \\ D_{(90)} = 18.695  mm \end{array}$	% Gravel = 39.5% % Sand = 49.1% % Silt & Clay = 11.4% Liquid Limit = n/a Plasticity Index = n/a Sand Equivalent = n/a Fracture %, 1 Face = n/a Fracture %, 2+ Faces = n/a	Coeff. of Curvature, $C_c = 0.54$ Coeff. of Uniformity, $C_U = 70.05$ Fineness Modulus = 4.07 Plastic Limit = n/a Moisture %, as sampled = 6.49 Req'd Sand Equivalent = Req'd Fracture %, 1 Face = Req'd Fracture %, 2+ Faces =
					ASTM C-13	5, ASTM D-6913	· · · · · · · · · · · · · · · · · · ·	
		Actual Cumulative	Interpolated Cumulative				Grain Size Distribution	
Sieve	Size	Percent	Percent	Specs	Specs		4. 3. 11/2 11/2 11/2 11/2 11/2 11/2 11/2 11/	222.02
US	Metric	Passing	Passing	Max	Min	ີ ໂດຍ 100% <b>¢ ♦ ♦</b>	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆ そのシジャンジンで、ジング、単本・◆◆◆◆ そのシジャンジンで、ジング、単本・◆◆◆◆	100.0%
12.00"	300.00		100%	100.0%	0.0%			
10.00"	250.00		100%	100.0%	0.0%			
8.00"	200.00		100%	100.0%	0.0%	90%		90.0%
6.00"	150.00		100%	100.0%	0.0%		1	
4.00"	100.00		100%	100.0%	0.0%	80%		80.0%
3.00"	75.00		100%	100.0%	0.0%			
2.50"	63.00	100%	100%	100.0%	0.0%		<b>N</b>	
2.00"	50.00	98%	98%	100.0%	0.0%	70%		70.0%
1.75"	45.00	98%	98%	100.0%	0.0%		Λ	
1.50" 1.25"	37.50 31.50	96% 96%	96% 96%	100.0% 100.0%	0.0% 0.0%	60%		60.0%
1.25"	25.00	93%	93%	100.0%	0.0%			
3/4"	19.00	90%	90%	100.0%	0.0%	0 88 4 30%		
5/8"	16.00	86%	86%	100.0%	0.0%	^{LL} 50%		50.0% %
1/2"	12.50	80%	80%	100.0%	0.0%			
3/8"	9.50	75%	75%	100.0%	0.0%	40%		40.0%
1/4"	6.30	67%	67%	100.0%	0.0%		N	
#4	4.75	61%	61%	100.0%	0.0%			
#8	2.36		51%	100.0%	0.0%	30%	······	
#10	2.00	49%	49%	100.0%	0.0%			
#16	1.18		43%	100.0%	0.0%	20%		20.0%
#20	0.850	40%	40%	100.0%	0.0%			
#30	0.600		35%	100.0%	0.0%			
#40	0.425	31%	31%	100.0%	0.0%	10%	╶╫╫┼┼┼┼╌╌╌╫╫┼┼┼╌┼╌╌╌╫╫┼┼┼╌┼╌	10.0%
#50	0.300		25%	100.0%	0.0%			
#60	0.250	22%	22%	100.0%	0.0%	0%		0.0%
#80	0.180	18%	18%	100.0%	0.0%	10	0.000 10.000 1.000	0.100 0.010 0.001
#100 #140	0.150 0.106	16%	16% 13%	100.0% 100.0%	0.0% 0.0%		Particle Size (mm)	
#140 #170	0.106		13%	100.0%	0.0%			
#170 #200	0.090	11.4%	12%	100.0%	0.0%	+ Sieve Sizes	Min Sners	secs Sieve Results
	0.075 Spears Engineering & Tech		11.4/0	100.070	0.070	0.000 31265		

**Comments:** 

and J. Agen C Reviewed by:

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### **Proctor Report**

Р	Stante Project: Olym		T Removal	Date Received:	17-Oct-14	Unified Soils	Classification Syst	tem, ASTM D-2487		А	STM C-1	36	
<b>Project #:</b> 14S137-01						-SM, Poorly graded Sand with Silt and Gravel		Sieve	Size		Specifi		
Client: Saybr Contractors, Inc. Date Tested: 21-Oct-1						Sample Colo	r		US	200.00	Passing	Max	Min
Source: Existing Stockpile Tested By: CL/FP Brown Sample#: \$14-600									12.00" 10.00"	300.00 250.00		100.0 % 100.0 %	0.0 %
Sa	Sample#: \$14-600 Sample Prepared: Moist: X						Manual:		8.00"	200.00		100.0 %	0.0 %
		r.	sample riepareu.	Dry:	л	M	chanical: X		6.00"	150.00		100.0 %	
			Test Standard:	ASTM D698:			то т 99:	Method	4.00"	100.00		100.0 %	0.0%
			i est standara.	ASTM D 1557:	x		O T 180:	B	3.00"	75.00		100.0 %	
	Assumed Sp.	Gr.	Point	Percent	Dry	10.0011	Uncorrected F	Proctor Value	2.50"	63.00	100 %	100.0 %	0.0 %
	2.70		Number	Moisture	Density		Max. Dry Density			50.00	98 %	100.0 %	
			1	7.5 %	122.6	1	25.3 lbs/ft ³	9.8 %	1.75"	45.00	98 %	100.0 %	0.0 %
			2	9.7 %	126.2				1.50"	37.50	96 %	100.0 %	0.0 %
			3	11.8 %	122.6	v	alue w/ Oversize (	Correction Applied	1.25"	31.50	96 %	100.0 %	0.0 %
			4	13.9 %	118.2		Max. Dry Density	Optimum Moist	1.00"	25.00	93 %	100.0 %	0.0 %
	ACCREDITED	5				1	34.1 Ibs/ft	7.4%	3/4"	19.00	90 %	100.0 %	0.0 %
Ce	ertificate #: 1366.01, 1366.02								5/8"	16.00	86 %	100.0 %	0.0 %
									1/2"	12.50	80 %	100.0 %	0.0 %
				Moisture De	ensity Relatio	nship			3/8"	9.50	75 %	100.0~%	0.0 %
	t					1			1/4"	6.30	67 %	100.0~%	0.0 %
	127.0				•				#4	4.75	61 %	100.0~%	0.0 %
	ł				•				#8	2.36		100.0~%	0.0 %
	125.0					<u> </u>			#10	2.00	49 %	100.0 %	0.0 %
ity	ł								#16	1.18		100.0 %	0.0 %
Dry Density	123.0						•		#20	0.850	40 %	100.0 %	0.0 %
ry I	l l								#30	0.600		100.0 %	0.0 %
Q	121.0						+		#40	0.425	31 %	100.0 %	0.0 %
	i.								#50	0.300		100.0 %	0.0 %
	119.0								#60	0.250	22 %	100.0 %	0.0 %
									#80	0.180	18 %	100.0 %	0.0 %
	117.0 + · · · · · · · · · · · · · · · · · ·	6%	7% 8	% 9%	10%	11%	12% 13%	14% 15%	#100	0.150	16 %	100.0 %	0.0 %
				Perce	nt Moisture				#140	0.106		100.0 %	0.0%
					٠	Data Points -	Zero Air Voids Curve	Curve Fit	#170 #200	0.090 0.075	114%	100.0 % 100.0 %	
	AS	STM D-47	18, Misc. Oversiz	e Correction Valu	ies		Specs: No Spec	cs	11200	0.075		s Specs?	
			0/.	Oversize Mat'l:	25%		0/	Gravel: 39.5%	с.	0.54		D ₍₁₀₎ :	0.066
% O1	versize Co	orrected	Optimum	Gversize widt I:	23/0			% Sand: 49.1%		0.34 70.07		$D_{(10)}$ . $D_{(30)}$ :	
		Density	Moisture					t&Clay: 11.4%		4.07		$D_{(30)}$ . $D_{(60)}$ :	
		126.9	9.4%				/0 511	acciay. 11.470	1.101.	<del>т</del> .07		D(60).	4.023
-		128.6	8.9%					LL: n/a	PL:	n/a		PI:	n/a
		130.3	8.4%						11.				
		132.1	8.0%				Sand Equ	uivalent: n/a	Real	d Sand E	quivalent:		
		133.9	7.5%				Sund Equ		neq	. June D			
		135.7	7.0%				Fracture %,	1 Face: n/a	Reg'd I	Fracture %	6, 1 Face:		
			nnical Services PS, 1996-98				Fracture %, 2+		Req'd Fra				
All consilie o					1 11 .			horization for publication of statements, co					

Comments:

Somel H. Agen

Reviewed by:

Geotechnical Engineering • Special Inspection • Materials Testing • Environmental Consulting



Client:	Saybr Contractors, Inc.	Date:	October 20, 2014
Address:	3541 Martin Way E	Project:	Stantec 7-11 UST Removal Olympia
	Olympia	Project #:	14S137-01
Attn:	Mike Muller	Sample #:	S14-603

As requested MTC, Inc. has performed the following test(s) on the sample referenced above. The testing was performed in accordance with current applicable AASHTO or ASTM standards as indicated below. The results obtained in our laboratory were as follows below or on the attached pages:

	Test(s) Performed:	Test	Test(s) Performed:	Test
		Results		Results
	Sieve Analysis	PASS	Sulfate Soundness	
<b>√</b>	Proctor	136.9 @ 7.7%	Unit Weight	
$\checkmark$	Sand Equivalent	65	WSDOT Degradation	
$\checkmark$	Fracture Count	99.7		
	Moisture Content			
	Specific Gravity, Coarse			
	Specific Gravity, Fine			
	Hydrometer Analysis			
	Atterberg Limits			
	Asphalt Extraction/Gradation			
	Rice Density			

If you have any questions concerning the test results, the procedures used, or if we can be of any further assistance please call on us at the number below.

and A. A.

Respectfully Submitted, Samuel Hyatt WABO Supervising Laboratory Technician

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### **Sieve Report**

Project #: Client:	Stantec 7-11 US 14S137-01 Saybr Contractor Holroyd Lacey S14-603		mpia	Date Received Sampled By Date Tested Tested By	: LM : 22-Oct-14	SW-S	SC, Well-g ple Color:	7 Unified Soils Classification Sy graded Sand with Silty Clay and G :	
				ASTM D-2216,	ASTM D-241	9, ASTM D-43	18, ASTM	4 D-5821	
	Specifications 2014 WSDOT 9-( Samp	03.9(3) Crushed S le Meets Specs ?		rse		$\begin{array}{c} D_{(5)}=\ 0.060\\ D_{(10)}=\ 0.181\\ D_{(15)}=\ 0.366\\ D_{(30)}=\ 1.242\\ D_{(50)}=\ 3.129\\ D_{(60)}=\ 4.365\\ D_{(90)}=\ 9.417 \end{array}$	mm mm mm mm	% Gravel = 36.9% % Sand = 56.9% % Silt & Clay = 6.2% Liquid Limit = n/a Plasticity Index = n/a Sand Equivalent = 65 Fracture %, 1 Face = 99.7% Fracture %, 2+ Faces = 0.0%	Coeff. of Curvature, $C_C = 1$ . Coeff. of Uniformity, $C_U = 2$ . Fineness Modulus = 4. Plastic Limit = m Moisture %, as sampled = 2. Req'd Sand Equivalent = 44 Req'd Fracture %, 1 Face = 7: Red'd Fracture %, 2+ Faces = n
					ASTM C-13	6, ASTM D-6913		Thethe 70, 2 Thees 0.070	Requiractare 70, 21 Taces in
		Actual	Interpolated			1		Grain Size Distribution	
		Cumulative	Cumulative			<b>J</b>		E.	
Sieve		Percent	Percent	Specs	Specs		0 5 5	7,2,2,3,4,1,2,2,3,4,1,2,2,2,3,4,1,2,2,2,2,2,2,4,1,2,2,2,2,2,2,2,2,2,2	8814
US	Metric	Passing	Passing	Max	Min	<b>  </b>	100%		*****
12.00"	300.00		100%					N N N	
10.00"	250.00		100%				90%	<b>\ \ \</b>	90.09
8.00"	200.00		100%					<u> </u>	
6.00" 4.00"	150.00		100% 100%						
4.00" 3.00"	100.00 75.00						80%		80.09
			100%						
2.50" 2.00"	63.00 50.00		100% 100%				70%		70.09
1.75"	45.00		100%				70%		10.09
1.50"	37.50		100%						
1.25"	31.50		100%				60%		60.09
1.00"	25.00	100%	100%			<u>Bu</u>			
3/4"	19.00	100%	100%	100.0%	99.0%	% Pass			50.09
5/8"	16.00	100%	100%			*	50%		50.09
1/2"	12.50	98%	98%	100.0%	80.0%				
3/8"	9.50	90%	90%				40%		40.09
1/4"	6.30	75%	75%						
#4	4.75	63%	63%	66.0%	46.0%				
#8	2.36		44%		1		30%		30.09
#10	2.00	41%	41%		1				
#16	1.18		29%		1		20%	NN	20.09
#20	0.850	24%	24%		1		[ ]		N
#30	0.600		20%		1				
#40	0.425	17%	17%	24.0%	8.0%		10%		10.09
#50	0.300	100/	13%			<b>I</b> I			♦_111111
#60	0.250	12%	12%		1		0%		0.0%
#80 #100	0.180	10% 9%	10%		1		1	100.000 10.000 1.000	0.100 0.010 0.001
	0.150	9%	9% 7%		1			Particle Size (mm)	
#140	0.106		7%			<b>I</b> I			
#170 #200	0.090 0.075	6.2%	7% 6.2%	10.0%	0.0%	<b>  </b> _	Sieve Sizes	Max Specs	Specs Sieve Results
		6.2% nical Services PS, 1996-98	0.2%	10.0%	0.0%	II	2.310 0400		-pere order doubt

**Comments:** 

Reviewed by:

Somel H. Afgen

Geotechnical Engineering • Special Inspection • Materials Testing • Environmental Consulting



### **Proctor Report**

Project: (	5 1	JST Removal	Date Received:		Unified Soils Classification System, A				STM C-1		
				SW-SC, Well-graded Sand with Silty C	Clay and Gravel	Sieve		Percent			
				Sample Color Brown		US 12.00"	mm 300.00	Passing	Max	Min	
Source: F Sample#: S		/	Tested By:	CL/FP	Brown		12.00"	250.00			
Bampien. B	14-005	Sample Prepared:	Moist:	X	Manual:		8.00"	200.00			
		Sample I repareu.	Dry:		Mechanical: X		6.00"	150.00			
		Test Standard:	ASTM D698:		AASHTO T 99:	Method	4.00"	100.00			
			ASTM D 1557:	х	AASHTO T 180:	В	3.00"	75.00			
Assumed	l Sp. Gr.	Point	Percent	Dry	Uncorrected Procto	r Value	2.50"	63.00			
2.		Number	Moisture	Density	Max. Dry Density	Optimum Moist	2.00"	50.00			
		1	5.8 %	131.9	134.2 lbs/ft ³	8.5 %	1.75"	45.00			
		2	7.5 %	133.3			1.50"	37.50			
		3	9.3 %	134.6	Value w/ Oversize Corre	ction Applied	1.25"	31.50			
		4	11.0 %	131.7	Max. Dry Density	Optimum Moist	1.00"	25.00	100 %		
ACCRED					136.9 lbs/ft ³	7.7%	3/4"	19.00	100 %	100.0~%	99.0 9
Certificate #: 1366.01, 1	1366.02						5/8"	16.00	100 %		
			M. LA		<u></u>		1/2"	12.50		100.0~%	80.0 %
			Moisture D	ensity Relati	onship		3/8"	9.50	90 %		
136.0							1/4"	6.30	75 %		
[							#4	4.75	63 %	66.0 %	46.0 %
					•		#8	2.36			
134.0					Zero Air Voids		#10	2.00	41 %		
sity .							#16	1.18	24.07		
Dry Density				•			#20	0.850	24 %		
È I							#30	0.600 0.425	17.0/	24.0 %	8.0 %
132.0		•					#40 #50	0.425	17 %	24.0 %	8.0 %
1							#30 #60	0.300	12 %		
[							#80	0.230	12 %		
130.0	/	´		.			#80	0.130	9%		
4%	5%	6%	7%	8%	9% 10% 1	1% 12%	#100	0.106	<i>J</i> /0		
			Perc	ent Moisture			#140	0.090			
				•	Data Points Zero Air Voids Curve	Curve Fit	#200	0.075	6.2 %	10.0 %	0.0 %
	ASTM D-4	4718, Misc. Oversize	e Correction Val	ues	Specs: 2014 WSDOT	9-03.9(3) Crushed Sur	facing To	op Course	Meet	s Specs?	Yes
		%	<b>Oversize Mat'l:</b>	10%	% Grav	el: 36.9%	C _c :	1.95		D ₍₁₀₎ :	0.181
% Oversize	Corrected	Optimum				d: 56.9%		24.12			1.242
Retained	Density	Moisture			% Silt&Cla			4.32			4.365
5%	135.6	8.1%								(00).	
10%	137.0	7.7%			L	L: n/a	PL:	n/a		PI:	n/a
15%	138.4	7.3%									
20%	139.9	6.9%			Sand Equivaler	nt: 65	Req'	d Sand Ed	juivalent:	40	
25%	141.4	6.5%			1		. 1				
30%	142.9	6.1%			Fracture %, 1 Fac		Req'd F	Fracture %	6, 1 Face:	75%	
5070						s: 0.0%		cture %, 2			

Comments:

Some H. Afgen Reviewed by:

Geotechnical Engineering • Special Inspection • Materials Testing • Environmental Consulting



#### Project: Stantec 7-11 UST Removal Olympia Date Received: 20-Oct-14 ASTM D 2487 Soils Classification Project #: 14S137-01 Sampled By: LM SW-SC, Well-graded Sand with Silty Clay and Gravel Client : Saybr Contractors, Inc. Date Tested: 22-Oct-14 Sample Color Tested By: CL/FP Source: Holroyd Lacey Brown Sample#: S14-603 Sand Equivalent - ASTM D-2419, AASHTO T-176 Temperature of Solution: 72 CCREDITED Sand Equivalent = (Sand Reading/Clay Reading) x 100 #1 #2 #3 Clay Reading: 5.2 4.8 n/a Sand Reading: 3.3 3.1 20 mins 20 mins Time: 20 mins Sand Equivalent: 64 65 n/a Average Sand Equivalent: 64.5 Adjusted Sand Equivalent: 65 Required Sand Equivalent: 40

All results apply only to actual locations and materials tested. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

**Comments:** 

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## Sand Equivalent Report

Geotechnical Engineering • Special Inspection • Materials Testing • Environmental Consulting



### Percentage of Fractured Particles in Coarse Aggregate - ASTM D-5821 & AASHTO T-335

 Project:
 Stantec 7-11 UST Removal Olympia

 Project #:
 14S137-01

 Client:
 Saybr Contractors, Inc.

 Source:
 Holroyd Lacey

Sample#: S14-603

Date Received: 20-Oct-14

Sampled By: LM Date Tested: 22-Oct-14

Tested By: CL/FP

Sieve Size	1 - Fractured Face Mass	2 or more Fractured Face Mass	Total Sample Mass	% Fracture, 1 Face	% Fracture, 2+ Faces
1" to #4	2195.6		2202.1	99.7%	0.0%
				#DIV/0!	#DIV/0!
				#DIV/0!	#DIV/0!
				#DIV/0!	#DIV/0!
				#DIV/0!	#DIV/0!
				#DIV/0!	#DIV/0!
				#DIV/0!	#DIV/0!

Combined Fracture, 1 Face:99.7%Required Fracture, 1 Face:75%

Combined Fracture, 2+ Faces: 0.0%

Required Fracture, 2+ Faces: n/a

Comments:

Samuel

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### APPENDIX G PHOTOGRAPHIC LOG UST SYSTEM REMOVAL REPORT 7-ELEVEN STORE NO. 25983

January 6, 2015







Removal of pieces of second 12,000-gallon single-wall fiberglass UST for disposal.

