SITE CHARACTERIZATION KRIS'S MINI MART 6000 PORTAL WAY FERNDALE, WA 98248 FS ID# 96443724

prepared for:

Mr. Narain Naidu Kris's Mini Mart 6000 Portal Way Ferndale, WA 98248

March 12, 2014

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EXECUTIVE SUMMARY

A release of petroleum products to soil was discovered at the Kris's Mini Mart retail fueling station located at 6000 Portal Way in Ferndale, Washington (Figure 1) during tank system maintenance/repair activities performed on a gasoline underground storage tank (UST). A Site Check was conducted following the discovery of a hole in the super unleaded tank (Tank ID#:40536) on July 27, 2012. The leak was located in the bottom of the tank near the dipstick striker plate on the north end of the UST. The leaking tank was reported to Ecology (ERTS #636609). The tank was repaired in August 2012. The site has been listed in the Washington Department of Ecology (Ecology) Leaking Underground Storage Tank (LUST) database since 1992.

Seven soil borings were advanced at the site using a hollow stem auger and seven groundwater monitoring wells were installed on May 7-9, 2013, to characterize the extent of the gasoline release. Soil and groundwater samples were collected for laboratory analysis.

Field screening and laboratory analytical results were used to evaluate the subsurface conditions at the boring locations. Field screening and laboratory analytical results of soil samples collected during the well installation process indicated that petroleum impacted soil is located south of the UST pit and below the fuel dispenser area. The petroleum impacted soil is located at a depth of approximately 6 feet below the ground surface (bgs) in native sandy soil.

Laboratory analytical results for groundwater samples collected from the monitoring wells indicate that petroleum impacted groundwater is located southeast of the gasoline UST pit and in the fuel dispenser area.

This Site Characterization report was prepared by Whatcom Environmental Services on behalf of Kris's Mini Mart. The report documents the results of a Site Characterization conducted in accordance with WAC 173-340-450(5)(b).

1.0 INTRODUCTION

This report documents the results of site characterization/remedial investigation work conducted at Kris's Mini Mart located at 6000 Portal Way in Ferndale, WA (the subject property). The site location is shown on Figure 1. Kris's Mini Mart is an operating retail fueling station and convenience store.

Based on the historical soil and groundwater contamination documented at the site in the 1990's (discussed below) and the discovery of a leaking gasoline tank, a site characterization investigation was initiated. Seven soil borings were advanced at the site using a hollow stem auger and seven groundwater monitoring wells were installed on May 7-9, 2013. Soil samples were collected from each soil boring to further characterize the areal extent of soil contamination previously documented at the subject property during an Underground Storage Tank (UST) Site Check conducted at the property in September 2012 (WES, 2012).

Field screening and laboratory analytical results of soil samples collected during the well installation process indicated that petroleum impacted soil is located south of the UST pit and below the fuel dispenser area. The petroleum impacted soil is located at a depth of approximately 6 feet below the ground surface (bgs) in native sandy soil.

Laboratory analytical results for groundwater samples collected from the monitoring wells indicate that petroleum impacted groundwater is located southeast of the gasoline UST pit and in the fuel dispenser area.

2.0 SUBJECT PROPERTY DESCRIPTION

Kris's Mini Mart is currently an operational retail fueling station. The property has been assigned the Facility Site ID#: 96443724. Four operational USTs are located on the subject property; two regular unleaded tanks (10,000 and 8,000 gallon), one super unleaded tank (8,000 gallon), and one diesel tank (6,000 gallon). The site is listed in the LUST database with its status listed as 'Cleanup Started'. Four historical tanks were removed from the site during a 1990s facility upgrade which razed the entire property and rebuilt a new fueling station and convenience store.

The subject property is situated approximately 0.1 miles east of Interstate 5 (I-5) Freeway Exit #263, approximately 0.35 miles north of the Nooksack River, and approximately 0.9 miles north/northeast of the city of Ferndale's downtown business core. The site is zoned as Highway Commercial by the City of Ferndale. The site is bordered on the north and east by commercial and rural residential properties; on the west by I-5 and Portal Way; and on the south by other rural residential properties. A site location map is provided as Figure 1.

The subject property has a median elevation of approximately 40 feet above mean sea level and the site topography is generally flat. The property is covered by asphalt pavement and two structures; a convenience store and fuel dispenser canopy. Stormwater is collected in catch basins and routed through an oil/water separator located in the southwest corner of the subject property.

2.1 SITE GEOLOGY

The subject property is located in the northern portion of the Puget Sound Basin. The region is characterized by thick sequences of Pleistocene glacial advance outwash and melt-water deposits that settled on a basement of tectonically deformed sedimentary and ancient metamorphic bedrock. The glacial deposits have been reworked by more recent fluvial, lacustrine, and aeolian actions into the landforms present today.

Soils in the area of the subject property are described in the Soil Survey of Whatcom County Area Washington (USDA, 1992). Soils at the property are described as Tromp loam with slopes ranging from 0 to 2 percent. The Tromp loam is a very deep, moderately-well drained soil that formed in a mixture of volcanic ash and loess over glacial outwash.

The site is underlain by glacial outwash of the Sumas Stade of the Pleistocene Epoch (WSDNR, 2000). The outwash consists of loose, moderately to well-sorted gravels, sandy gravels, and coarse to medium sands with rare areas of fine sand and silt. Bedding is massive to well-stratified. Color is brown to gray depending on oxidation state. Thickness ranges from 3 meters to as much as 280 meters.

Field evidence confirmed that the site is underlain by the glacial outwash of the Sumas Stade. The general geologic sequence encountered in the soil borings was:

- 0 to 0.25 ft Asphalt
- 0.25 to 1.25 ft Imported fill material consisting of brown sandy gravel.

 This material was likely used to level the site prior to development.
- 1.25 to 15 ft Native soil consisting of brown medium sand that was loose and moist to wet (at depth).

The soil boring locations are shown on Figure 2. All of the soil borings encountered medium sand to 14 feet below ground surface (bgs). Soil borelogs are included in Appendix A.

2.2 SOIL PHYSICAL PROPERTIES

Four soil samples collected from the 2013 soil borings (B-8 5.5-6.0, B-10 8.0-8.5, B-10 13.0-13.5, B-13 5.5-6.0) were analyzed for physical properties including grain size distribution, bulk density, porosity, and hydraulic conductivity. All analyses were performed by applicable ASTM, EPA or API methodologies.

The physical properties analysis determined that the site soils have a native hydraulic conductivity ranging from 7.23E-03 cm/sec to 1.12E-02 cm/sec, averaging 6.56E-03 cm/sec. The soil intrinsic permeability ranges from 7.16E-08cm² to 1.09E-07 cm², averaging 6.45E-08 cm². All four samples were categorized as medium sand.

The soil physical properties data are summarized in Table 1. A copy of the physical properties data report is included in Appendix B.

2.3 SITE HYDROGEOLOGY

Groundwater was encountered in each soil boring at a depth of approximately 4 feet bgs. Seven groundwater monitoring wells are currently located on the subject property. Seven new groundwater monitoring wells were installed as part of the 2013 remedial investigation. The elevations of the top of the monitoring well casings were surveyed by a licensed surveyor. Groundwater at the site generally flows from the northwest to the southeast with an average gradient of approximately 0.0025 ft/ft. The groundwater flow direction and gradient maps are presented in Appendix C.

3.0 SITE HISTORY AND PREVIOUS INVESTIGATIONS

Several previous investigations have been conducted at the subject property since 1992 when petroleum contaminated soil was encountered during the upgrade of the site to its current configuration. Two historical reports were found in the Department of Ecology's UST/LUST files; a 1992 UST Site Assessment report and a 1993 Site Closure report. The two reports were reviewed by Whatcom Environmental as part of a subsurface investigation conducted in 2003 (WES, 2003).

Results of the 2003 subsurface investigation indicated that diesel and gasoline range soil and groundwater contamination were located along the southwestern portion of the subject property. An air sparge/vapor extraction system was installed at the site in 2004 to enhance natural bioremediation. Groundwater at the site was monitored between 2003 and 2011.

In November 2010 tank monitoring activities indicated that water was entering the super unleaded tank. A tank tightness test indicated there was a leak on top of the tank at the fill spout riser pipe. The riser pipe was replaced in early 2011. In 2011 tank monitoring activities again indicated that water was entering the super unleaded tank. The riser pipe was re-inspected and found to be intact. The tank was taken out of service. In July 2012 the tank was drained and inspected and water was observed entering the bottom of the tank. A hole in the bottom of the tank was identified at the weld seam of the tank gauging striker plate. The hole along the failed striker plate weld seam was approximately 2 inches long and 1 inch wide and "L" shaped. The hole was repaired by NW Tank Lining and Inspection Inc. on August 28, 2012.

A UST Site Check was conducted following the tank repair per the Underground Storage Tank Regulation WAC 173-360-370 (2). The UST Site Check discovered gasoline range soil and groundwater contamination southeast of the UST pit.

The Site Characterization work was initiated in 2012 and continued in 2013 in accordance with the Model Toxics Control Act WAC 173-340-450(5)(b).

A brief summary of the site ownership history and historical remedial reports is provided below in chronological order.

3.1 HISTORICAL OWNERSHIP SUMMARY

Historical title documents were reviewed and historical Polk City directories were searched to establish the ownership history of the subject property. The first indication of the site as an automobile filling and service station was in a 1931 title document/lease agreement where it was listed as "Anderson's Service", branded as an Associated Oil Company station. The site was listed also in the 1931 Polk directory. The property has also been known as; "Tex's Arco and Big Little Grocery" (1982), "T.J.'s Market" (1987), "Lee's Mini Mart" (1992 - a Texaco branded station). No listing was found for any of those business names in the historical Polk directories. The property ownership history is summarized below:

•	Chevron Texaco Corp (Associated Oil)	1931-1937
	 Leased property from Magnus Anderson 	
•	Magnus Anderson and Berna Magdalena Anderson	pre- 4/10/45
•	James W. Nelson and Viola Anna Nelson	4/10/45 - 8/9/45
•	Harold Ahlstedt and Asta C. Ahlstedt	8/9/45 - 6/28/74
•	Herman B Filbeck and Bertie Filbeck	6/28/74 - 2/2/76
•	Frank E. Sirmans and Donna J. Sirmans	2/2/76 - 2/12/81
•	Northwestern Commercial Bank	2/12/81 - 9/20/84
•	Thomas James Hull and Alberta K. Hull	6/4/82 - 12/13/86
•	Robin and Cathy LaFave	12/13/86- 11/18/94
•	Richard G. and Marilyn Sievers	12/13/86 - 7/14/03
•	Larry E. and Phyllis L. Bird	12/13/86 - 10/8/90
•	Darrell K. Bornstein, Jr.	12/18/87 - 7/3/97
•	James Unruh and Leanne Unruh	11/18/94- 10/21/97
•	Rick D. Sievers	10/21/97 - 7/14/03
•	Narain and Munsi S. Naidu	7/14/03 - present

3.2 1992 - UST SITE ASSESSMENT

A copy of a 1992 UST Site Assessment report prepared by Materials Testing & Consulting of Mount Vernon, Washington was reviewed (MTC, 1992). The report was prepared at the time four new tanks were installed at the site as part of a property

upgrade and remodel project. Five USTs were removed from the ground from four separate tank pits located at three areas on the property (east of the current dispenser canopy and in the southwest and northwest corners of the site). The tank pit soils were sampled and samples collected in the southwest corner were found to be the most highly contaminated by kerosene from leakage of an aboveground storage tank historically located in that vicinity. Water samples collected from the open pits indicated that the southern half of the property had been adversely impacted by petroleum contamination. The report conclusions stated that due to the high water table at the site, impacted soils were not removed and a biological agent would be used to remediate subsurface contamination at the site.

Five groundwater monitoring wells were installed at the site in 1992. The wells were identified as MW-1 through MW-5. The well locations are shown on Figure 2. The wells were presumably installed using saw cut PVC pipe constructed in or near the removed UST tank pits. There are no borelogs or well installation diagrams for the wells, and it is assumed they were installed during backfilling of the tank pits. It is unknown if the original five wells are screened across the water table.

3.3 1993 - SITE CLOSURE REPORT

A copy of a 1993 Site Closure report prepared by Pacific Remediation, Inc. of Mount Vernon, Washington was reviewed (PRI, 1993). The report stated that, following the application of a biological remediation agent, groundwater sampling indicated that the site was cleaned to the applicable cleanup levels in place at the time. No description of the process used to treat the soil and/or groundwater was provided in the report. A note written by Ecology personnel and attached to the document indicated that Ecology recommended further monitoring of the site groundwater and confirmatory soil sampling to help further characterize the site.

3.4 2003 - SUBSURFACE SOIL AND GROUNDWATER INVESTIGATION

A subsurface soil and groundwater investigation was conducted by Whatcom Environmental Services Inc. at the subject property in 2003 (WES, 2003). Six soil borings were drilled at the site using a GeoProbe drill rig to further characterize the extent of subsurface soil and groundwater contamination on the southern portion of the

property. The boring locations are shown on Figure 2. Soil samples were collected from five of the six soil borings. Groundwater samples were also collected from five of the borings. Laboratory analytical results indicated that soil and groundwater in the southwest corner of the property were contaminated with gasoline, diesel, and lube-oil range total petroleum hydrocarbons (TPH) and BTEX constituents at concentrations exceeding the Model Toxics Control Act (MTCA) Method A cleanup levels. The report recommended that further remedial action be conducted at the subject property.

3.5 2003 - PRODUCT RECOVERY SUMP AND AIR SPARGE/VAPOR EXTRACTION SYSTEM INSTALLATION

Remedial actions commenced at the site in March 2003. One product extraction sump was installed along the southern fence line. The extraction sump location is shown on Figure 2. The extraction sump was installed to allow for the recovery of floating petroleum product from the groundwater surface. The extraction sump was constructed of 18-inch diameter vertically slotted PVC piping that was inserted into the ground approximately 6 feet. Pea gravel was used to fill in the area surrounding the pipe up to approximately 40 inches bgs. Clean fill was used to bring the area surrounding the pipe up to grade. A manhole cover was used to protect the top of the extraction sump and the area was asphalted.

The extraction sump was periodically pumped over the course of a year and the oily water and free product were stored in 55-gallon drums prior to offsite disposal. Approximately six full drums of oily water and recovered product were generated. The product thickness in the drums was measured using oil sensitive paste and a volume of recovered product was estimated from the thickness of the layer. Approximately 100 gallons of free product were recovered from the extraction sump.

An air sparge/vapor extraction (AS/VE) system was installed at the site between 2003 and 2004. Six air sparge wells were installed in May 2003 on the southern half of the property (AS-1 through AS-6). The wells were constructed using 2-inch diameter machine slotted PVC. The wells were installed to a depth of approximately 16 feet below ground surface (bgs) and screened from approximately 13 to 16 feet bgs. Copies of the 2003 AS well installation diagrams are included in Appendix D.

The AS/VE system lines were installed in June 2003. The AS lines were constructed using 2 inch PVC. The horizontal VE lines were constructed with 4 inch

perforated corrugated plastic drain line. The VE lines were encased in a geo-textile fabric sock and backfilled in gravel. The AS lines were installed approximately 2 feet bgs and the VE lines were installed approximately 1.5 feet bgs. The lines run to an equipment enclosure located at the southwest corner of the subject property. The AS/VE system components are shown on Figure 2.

Two new monitoring wells (MW-6 and MW-7) were constructed along the southern property fence line on May 30, 2003. The wells were constructed to act as groundwater recirculation wells. Copies of the well installation diagrams are included in Appendix D.

The VE system was brought online on September 17, 2004 after all floating petroleum product had been removed from the extraction sump. The AS system was turned on November 8, 2004. The system has been operational since that time. The original AS blower malfunctioned and was replaced with an air compressor in 2010.

Groundwater monitoring has occurred periodically since 1994. The groundwater monitoring results are discussed in Section 7.

3.6 2012 - UST SITE CHECK

Whatcom Environmental Services Inc. conducted an Underground Storage Tank Site Check for the UST system on September 10, 2012 (WES, 2012). The Site Check was conducted following the discovery of a hole in the super unleaded tank (Tank ID#:40536) in July of that year. The leak was located in the bottom of the tank near the dipstick striker plate on the north end of the UST. The leaking tank was reported to Ecology (ERTS #636609). The tank was repaired in August 2012.

Soil and groundwater samples were collected as part of the Site Check. Soil samples were collected from the four sides of the tank pit (outside of the tank pit footprint) via direct push soil borings in accordance with Ecology's Guidance for Site Checks and Site Assessments for Underground Storage Tanks (Ecology, 2003). Groundwater samples were collected from all soil borings.

Field screening and soil sample analytical results indicated that soil on the south side of the tank pit has been impacted by gasoline range TPH at concentrations exceeding the MTCA Method A target cleanup level. Groundwater analytical results indicated that shallow groundwater located south and southeast of the tank pit has been impacted by gasoline range TPH and benzene at concentrations exceeding the MTCA Method A cleanup levels.

3.7 2013 – SITE CHARACTERIZATION AND MONITORING WELL INSTALLATION

Additional site characterization work was initiated in May 2013 in order to better characterize the extent of the gasoline release discovered during the UST Site Check. The results of that investigation are presented in this report. Seven soil borings were advanced at the site using a hollow stem auger and seven groundwater monitoring wells were installed. Soil samples were collected from each soil boring to characterize the areal and vertical extent of soil contamination previously documented at the subject property.

Field screening and laboratory analytical results from soil samples collected during the well installation process indicate that petroleum impacted soil is located south of the UST pit, beneath the fuel dispenser islands, and south and east of the fuel dispenser islands at depths ranging from approximately 6 to 14 feet below the ground surface (bgs).

Laboratory analytical results of groundwater samples collected from the monitoring wells indicate that petroleum impacted groundwater is located to the south and southeast of the UST pit and beneath the fuel dispenser islands.

4.0 INVESTIGATIVE METHODS

The subsurface conditions at the site were investigated in an attempt to delineate the areal extent of the gasoline release to soil and groundwater documented in the previous investigations, and to identify any other contamination related to the operation of the property as a retail fueling station. Seven soil borings were drilled and soil samples were collected for laboratory analysis. Seven groundwater monitoring wells were installed in the borings, and groundwater samples were collected for laboratory analysis.

4.1 SOIL BORINGS AND SOIL SAMPLE COLLECTION

Subsurface utilities were publicly located several days prior to drilling and the boring locations were pre-cleared to a depth of approximately 5 feet bgs using a hand auger before initiating each soil boring. The drill rig equipment was decontaminated prior to initiating each soil boring. The borings were continuously cored to an average depth of 14 feet below grade. Soil cores were logged in the field and soil descriptions generally followed ASTM D 2487 'Unified Soil Classification System' procedures for description and identification of soils. The soil borings were identified as B-8 through B-14. Soil boring logs are included in Appendix A.

The soil cores were evaluated in the field for organic vapors using a photoionization detector (PID) and for petroleum products using sheen tests. Immediately after the soil cores were described, a portion of each sample was sheen tested and the remainder of the sample was placed in a labeled re-sealable bag. The PID was inserted into the re-sealable bag in order to evaluate the presence of organic vapors, and a headspace organic vapor detection in parts per million (ppm) was recorded on the boring log. Sheen tests were recorded as: NS – no sheen, VSS – very slight sheen, SS – slight sheen, MS – moderate sheen, and HS – heavy sheen.

One or more soil samples were collected from each soil boring location via EPA Method 5035A in sample containers provided by the lab. Soil samples were stored on ice in a cooler immediately after collection. Standard industry protocols regarding sample collection, preservation, chain-of-custody, and shipping were followed. The

samples were identified by both the boring number from which they originated and the depth from which they were collected.

4.2 SOIL SAMPLE ANALYTICAL PROCEDURES

The samples were analyzed at ALS Laboratory Group in Everett, Washington. ALS is accredited by the Washington State Department of Ecology. Strict chain-of-custody and QA/QC protocols were followed for each sample. The following laboratory methods were used to analyze the soil samples:

NWTPH-Dx: Diesel and oil range TPH

NWTPH-Gx: Gasoline range TPH

EPA Method 8021: Benzene, toluene, ethylbenzene, and total xylenes (BTEX constituents) and Methyl tert-butyl ether (MTBE)

EPA Method 8260: Ethylene dichloride (EDC) and Ethylene dibromide (EDB)

EPA Method 6020: Lead (Pb)

4.3 GROUNDWATER MONITORING WELL INSTALLATION AND GROUNDWATER SAMPLING PROCEDURE

Groundwater monitoring wells were installed in each of the seven soil borings. The wells were identified as MW-8 through MW-14. The monitoring wells were installed to a depth of 15 feet bgs and were constructed with machine slotted, 2-inch diameter PVC pipe. The well screen lengths are 10 feet and the top of the PVC well casings are protected with flush mounted well monuments. The 2013 groundwater monitoring well construction diagrams are provided in Appendix E.

The wells were developed using disposable bailers. Water was bailed from each well until the turbidity decreased. Each monitoring well was sampled using the low-flow sampling technique, recommended and approved by the U.S. Environmental Protection Agency (USEPA, 1998). The low-flow sampling technique minimizes the impact of the purging process on groundwater chemistry and provides an accurate representation of the groundwater's condition at the time of sampling. A YSI Model 556 multi probe meter was used in conjunction with a flow-through cell to monitor groundwater chemistry

during the low-flow purging process. Purging was considered adequate and groundwater samples were collected when the water chemistry parameters had stabilized.

Groundwater samples were collected in sample bottles provided by the analytical laboratory and stored on ice in a cooler immediately after collection. Dissolved arsenic and lead samples were filtered in the field using a disposable 0.45 µm in-line filter. One duplicate sample and one equipment blank sample were also collected during each sampling event. Standard industry protocols regarding sample collection, preservation, chain-of-custody, and shipping were followed. Groundwater samples were identified by the monitoring well identification number of the well from which they were collected.

4.4 GROUNDWATER SAMPLE ANALYTICAL PROCEDURE

All groundwater samples were analyzed at ALS Laboratory Group in Everett, Washington. Strict chain-of-custody and QA/QC protocols were followed for each sample. The following laboratory methods were used to analyze the groundwater samples:

NWTPH-Dx: Diesel and oil range TPH

NWTPH-Gx: Gasoline range TPH

EPA Method 8021: BTEX and MTBE

EPA Method 8260 SIM: EDC and EDB

EPA Method 200.8: Dissolved Pb

All samples were analyzed within the prescribed holding times, and the equipment blank and duplicate sample results were within acceptable limits.

5.0 SOIL AND GROUNDWATER SCREENING LEVELS

The MTCA Method A target cleanup levels for soil and groundwater were selected as screening levels for this site characterization. Those levels have been established for unrestricted land use in accordance with WAC 173-340 and can be found in Table 740-1 and Table 740-2 (Ecology, 2007).

A simplified TEE (WAC 173-340-7492) was conducted and it was determined that the concentrations of contaminants listed in MTCA Table 749-2 (Ecology 2007) for unrestricted land use are required to be used as soil cleanup levels at the subject property (WAC 173-340-7492(1)(d)). The only soil contaminants of potential concern at the site affected by the TEE determination are gasoline range organics, diesel range organics, and lead. The MTCA Method A cleanup level for gasoline range organics in soil is 100 mg/kg, and the Table 749-2 (Priority Contaminants of Ecological Concern) cleanup level for gasoline range organics in soil is 200 mg/kg. The MTCA Method A cleanup level for diesel range organics in soil is 2,000 mg/kg, and the Table 749-2 cleanup level for lead in soil is 250 mg/kg, and the Table 749-2 cleanup level for lead in soil is 250 mg/kg, and the Table 749-2 cleanup level for lead in soil is 220 mg/kg.

6.0 SOIL SAMPLE RESULTS

The site characterization work described herein has provided further information related to the horizontal and vertical extent of contamination at the site. The soil boring locations are shown on Figure 2. The soil sample descriptions, depths of collection and field screening results are included in Table 2, and the laboratory analytical data are summarized in Table 3. The original laboratory analytical data reports are provided in Appendix F.

Fifteen soil samples were collected (B-8 through B-14 at various depths) to further characterize the contamination discovered at the subject property. Multiple soil samples (B-9 6ft, B-10 6.5ft, B-11 6.5ft, B-11 10ft, B-12 6.5ft) contained detections of gasoline range TPH at concentrations exceeding the MTCA Method A target cleanup level. Samples B-14 2ft and B-14 9ft contained diesel range TPH exceeding the MTCA Method A target cleanup level. Multiple soil samples (B-9 6ft, B-9 14ft, B-10 6.5ft, B-11 6.5ft, B-12 6.5ft, and B-13 6.5ft) contained BTEX constituent concentrations above the target cleanup levels. Several soil samples contained natural background concentrations of lead (ranging up to 5.8 mg/kg) which all met the MTCA Method A target cleanup level of 250 mg/kg. The natural background levels for lead are approximately 17 mg/kg Statewide and approximately 10.8 mg/kg for Whatcom/Skagit Counties (Ecology, 1994). The soil analytical data are summarized in Table 3.

All samples were analyzed within the prescribed holding times, and sample analytical QA/QC results were within acceptable limits.

7.0 GROUNDWATER SAMPLE RESULTS

Groundwater samples were collected for laboratory analysis in May, August, and November 2013, and February 2014. The groundwater monitoring well locations are shown on Figure 3. Groundwater analytical data are summarized in Table 4. The original laboratory analytical data reports are provided in Appendix G.

The water quality indicator parameter measurements were collected immediately prior to sample collection as per the EPA recommended low-flow groundwater sampling method (USEPA 1998). The depth-to-water and final water quality indicator parameter measurements for each well are shown on Table 5.

Gasoline range TPH and BTEX constituents were detected in the samples collected from monitoring wells MW-8 through MW-13 during the four quarterly sampling events. Gasoline range TPH and BTEX constituents were detected at concentrations which exceeded the MTCA Method A target cleanup levels in wells MW-8, MW-9, MW-10, MW-11, MW-12, and MW-13. Diesel range TPH was detected at concentrations which exceeded the MTCA Method A target cleanup level in wells MW-11, MW-12, and MW-14.

Concentrations of MTBE, EDC, EDB, and lead were not detected in any of the wells at concentrations above the laboratory's reporting limits during any of the sampling events.

Based on the gasoline and diesel concentrations detected in wells MW-11 and MW-12, it appears that the dissolved gasoline plume and diesel plume have co-mingled beneath the fuel dispenser area. Dissolved gasoline and diesel range TPH concentrations detected in February 2014 are shown on Figure 4.

8.0 TERRESTRIAL ECOLOGICAL EVALUATION

In order to confirm the site is not a threat to the environment, a terrestrial ecological evaluation (TEE) was conducted in accordance with WAC 173-340-7490. The goal of the TEE is to determine if contaminants remaining onsite pose a threat to terrestrial ecological receptors (plants and wildlife). The site did not qualify for a primary exclusion (WAC 173-340-7491) because there were more than 1.5 acres of undeveloped land located within 500 feet of the site. A simplified TEE (WAC 173-340-7492) was conducted and it was determined that the concentrations of contaminants listed in Table 749-2 for industrial properties are required to be used as cleanup levels at the subject property (WAC 173-340-7492(1)(d)).

Documentation related to the TEE decision making process is included in Appendix H.

9.0 CONCLUSIONS

A site characterization investigation was completed at the Kris' Mini Mart retail fueling station located at 6000 Portal Way in Ferndale, Washington. The investigation was undertaken in an effort to characterize the subsurface soil and groundwater conditions at the site and to establish a groundwater monitoring well system.

Seven hollow stem auger soil borings were advanced to a depth of 15 feet bgs on May 7-9, 2013. One or more soil samples were collected from each soil boring location for laboratory analysis to characterize the extent of soil contamination present at the site. Soil sample results indicated that gasoline range TPH and benzene were present at concentrations which exceeded the MTCA Method A target cleanup levels at depths ranging from 6 to 10 feet bgs in the native sandy soils located south and southeast of the USTs and beneath the fuel dispenser islands. Diesel range TPH was detected at concentrations which exceeded the MTCA Method A target cleanup level at depths ranging from 2 to 9 feet bgs south of the fuel dispenser islands.

Groundwater monitoring wells were installed in each soil boring. The depth to water was determined to range from approximately 3 to 5 feet bgs. Groundwater was determined to flow towards the southeast. Groundwater sample results indicated that gasoline range TPH and BTEX constituents were present at concentrations which exceeded the MTCA Method A target cleanup levels in wells located south and southeast of the USTs and beneath the fuel dispenser islands. Diesel range TPH was detected at concentrations which exceeded the MTCA Method A target cleanup level in wells located between the fuel dispenser islands and south of the fuel dispenser islands.

Based on the gasoline and diesel concentrations detected in wells MW-11 and MW-12, it appears that the dissolved gasoline plume and diesel plume have co-mingled beneath the fuel dispenser area.

A Feasibility Study will be conducted to evaluate remedial options for the site.

10.0 LIMITATIONS

No site investigation can wholly eliminate uncertainty regarding the potential for contamination in connection with a property. Performance of this investigation by Whatcom Environmental Services Inc. is intended to reduce, but not eliminate, uncertainty regarding the potential for environmental contamination in connection with the subject property.

The interpretation of subsurface soil and groundwater conditions is based on Whatcom Environmental Services' field observations and chemical analytical data collected from relatively widely spaced sampling locations at the site. It is possible that contamination exists beneath portions of the site that were not explored, sampled, or analyzed. No warranty, express or implied, is given regarding the presence of hidden or unidentified sources of contamination of the subject property. In addition, no warranty, express or implied is given regarding geotechnical or geologic hazards.

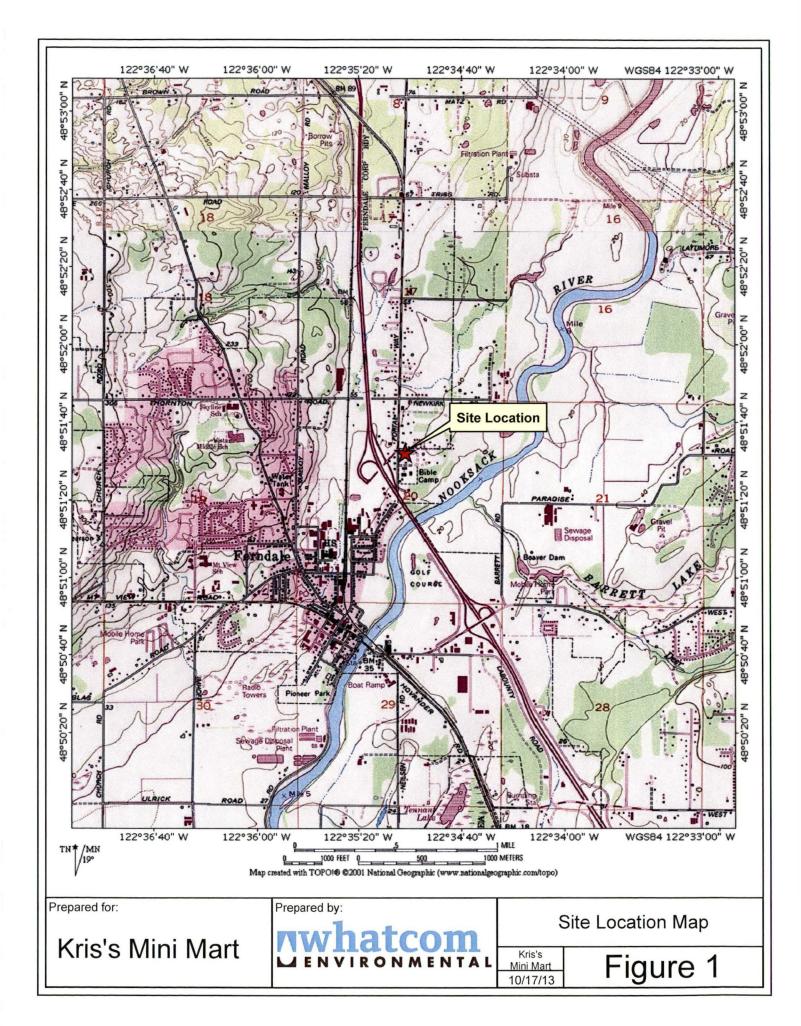
This environmental report is based on conditions that existed at the time the investigation was performed and samples collected. The findings and conclusions of this report may be affected by the passage of time, by manmade events such as construction on or adjacent to the site, or by natural events such as floods, earthquakes, ground instability, or groundwater fluctuations.

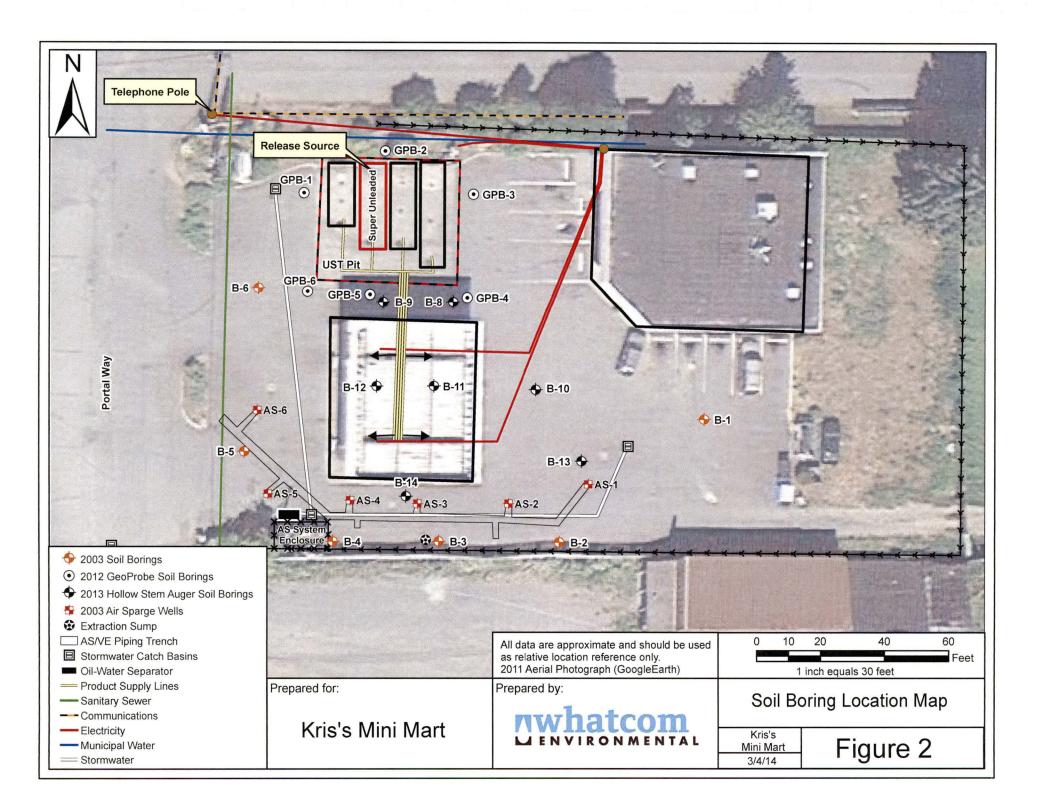
Within the limitations of scope, schedule, and budget, our services have been executed in accordance with generally accepted environmental practices in this area at the time this report was prepared. No warranty or other conditions, express or implied, should be understood.

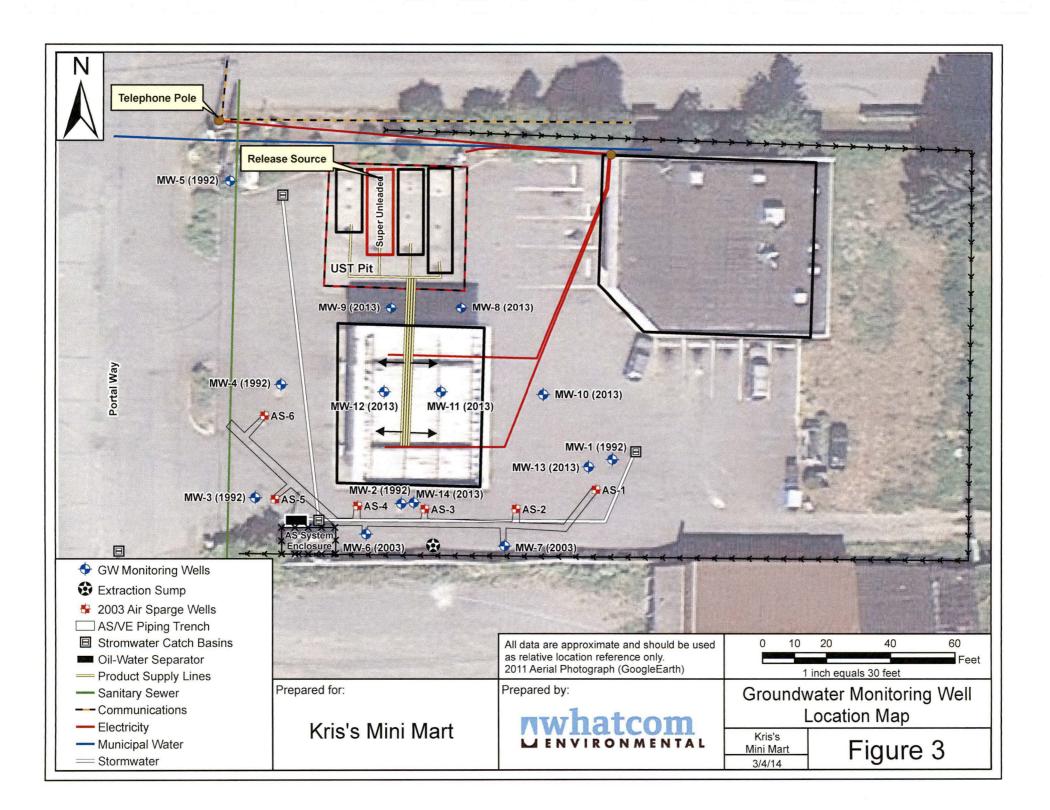
This report has been prepared for use by Kris's Mini Mart (Mr. Narain Naidu). Whatcom Environmental Services prepares a report for the client's exclusive use for a particular project and in accordance with generally accepted practices at the time of investigation. This report was prepared for exclusive use by the client and its agents and may not be used, relied upon, or assigned to a third party without written consent from Whatcom Environmental Services Inc. This report is not intended for use by others, and the information contained herein is not applicable to other sites. This report may be made available to regulatory agencies.

11.0 REFERENCES

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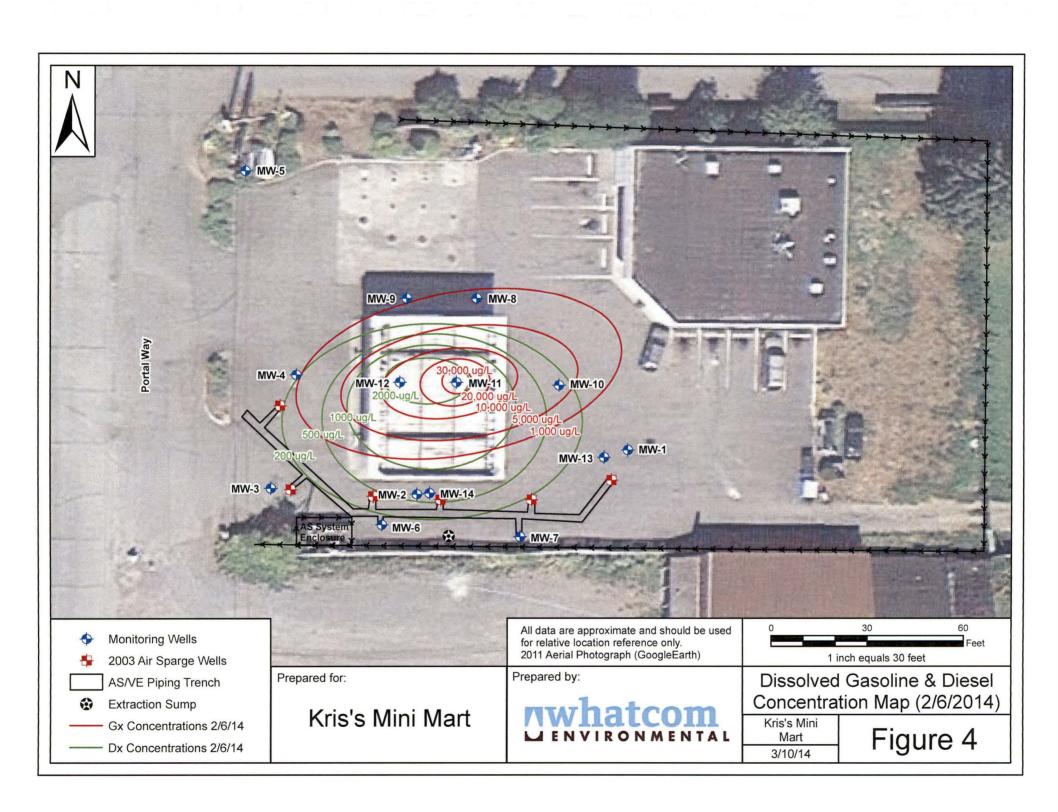


Table 1. Soil Physical Properties - Kris's Mini Mart, 6000 Portal Way, Ferndale

Sample ID	Date	Grain Density g/cm ³	Dry Bulk Density g/cm ³	Volumetric Water Content cm ³ /cm ³	Total Measured Porosity cm ³ /cm ³	Air Filled Porosity cm ³ /cm ³	Intrinsic Permiability cm²	Native Hydraulic Conductivity cm/sec	Description USCS/ATSM	Median Grain Size mm
B-8 5.5-6.0	5/21/2013	2.71	1.49	0.452	0.234	0.217	1.09E-07	1.12E-02	Medium Sand	0.611
B-10 8.0-8.5	5/21/2013	2.70	1.54	0.429	0.112	0.317	2.29E-08	2.33E-03	Medium Sand	0.481
B-10 13.0-13.5	5/21/2013	2.71	1.57	0.419	0.191	0.229	7.16E-08	7.23E-03	Medium Sand	0.55
B-13 5.5-6.0	5/21/2013	2.70	1.63	0.397	0.177	0.220	5.46E-08	5.48E-03	Medium Sand	0.877

Table 2. Soil Sample Descriptions - Kris's Mini Mart, 6000 Portal Way, Ferndale

Sample ID	Date	Location and Description	Sheen Test*	PID (ppm)
B-8 (8.5 ft)	5/7/13	Collected 8.5 ft bgs from southeast corner of UST pit. Medium sand, brown, minor gravel, loose, wet	NS	128
B-9 (6 ft)	5/7/13	Collected 6 ft bgs from south of center of UST pit, at first indication of petroleum impacts. Medium sand, brown, loose, wet	MS	821
B-9 (9 ft)	5/7/13	Collected 9 ft bgs from south of center of UST pit. Medium sand, brown, loose, wet	SS	860
B-9 (14 ft)	5/7/13	Collected 14 ft bgs from south of center of UST pit, at bottom of boring. Medium sand, brown, loose, wet	NS	11.5
B-10 (6.5 ft)	5/8/13	Collected 6.5 ft bgs east of dispenser slab at indication of petroleum impacts. Medium sand, brown, loose, wet	HS	4800
B-10 (14 ft)	5/8/13	Collected 6.5 ft bgs east of dispenser slab at bottom of boring. Medium sand, brown, loose, wet	NS	65
B-11 (6.5 ft)	5/9/13	Collected 6.5 ft bgs beneath east side of dispenser slab at indication of petroleum impacts. Medium sand, brown, loose, wet	HS	2705
B-11 (10 ft)	5/9/13	Collected 10 ft bgs beneath east side of dispenser slab Medium sand, brown, loose, wet	VSS	564
B-11 (15 ft)	5/9/13	Collected 15 ft bgs beneath east side of dispenser slab at bottom of boring. Medium sand, minor gravel, brown, loose, wet	NS	2
B-12 (6.5 ft)	5/9/13	Collected 6.5 ft bgs beneath west side of dispenser slab at indication of petroleum impacts.	MS	1516

Table 2. Soil Sample Descriptions - Kris's Mini Mart, 6000 Portal Way, Ferndale

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Sample ID	Date	Location and Description	Sheen Test*	PID (ppm)
		Medium sand, brown, loose, moist		
B-13 (6.5 ft)	5/7/13	Collected 6.5 ft bgs east of south end of dispenser slab at indication of petroleum impacts. Medium sand, brown, loose, wet	MS	147
B-13 (14 ft)	5/7/13	Collected 14 ft bgs east of south end of dispenser slab at bottom of boring. Medium sand, brown, loose, wet	NS	0.0
B-14 (2 ft)	5/7/13	Collected 2 ft bgs south of center of dispenser slab at indication of petroleum impacts. Medium sand, minor gravel, brown, loose, moist	SS	190
B-14 (6 ft)	5/7/13	Collected 6 ft bgs south of center of dispenser slab. Medium sand, brown, loose, moist	SS	4
B-14 (9 ft)	5/7/13	Collected 9 ft bgs south of center of dispenser slab at indication of petroleum impacts. Medium sand, brown, loose, wet	MS	302
B-16 (6.5 ft)	5/9/13	Duplicate sample collected 6.5 ft bgs from B-11. Medium sand, brown, loose, wet	нѕ	2705

^{*} NS = No Sheen; VSS = Very Slight Sheen; SS = Slight Sheen; MS = Moderate Sheen; HS = Heavy Sheen

Table 3. Soil Sample Analytical Results - Kris's Mini Mart, 6000 Portal Way, Ferndale

Sample ID	Date	NWTPH-Gx Volatile Range mg/kg	NWTPH-Dx Diesel Range mg/kg	NWTPH-Dx Oil Range mg/kg	EPA-8021 Benzene mg/kg	EPA-8021 Toluene mg/kg	EPA-8021 Ethylbenzene mg/kg	EPA-8021 Xylenes mg/kg	EPA-8021 MTBE mg/kg	EPA-8260 EDB mg/kg	EPA-8260 EDC mg/kg	EPA-6020 Lead mg/kg
MTCA Method A	Clean-up Levels	100/30*	2,000	2,000	0.03	 7	6	9	0.1	0.005		250
Table 749-	2 Cleanup Levels	200	460	·	••							220
B-8 (8.5 ft)	5/7/13	4.6	ND(<25)	ND(<50)	ND(<0.03)	ND(<0.05)	ND(<0.05)	ND(<0.20)	ND(<0.10)	ND(<5.0)	ND(<10)	2.0
B-9 (6 ft)	5/7/13	1300	ND{<220)	ND(<50)	ND(<0.60)	ND(<1.0)	6.1	7.0	ND(<2.0)	ND(<5.0)	ND(<10)	1.9
B-9 (9 ft)	5/7/13	92	ND(<25)	ND(<50)	ND(<0.06)	0.12	0.19	ND(<0.40)	ND(<0.20)	NA	NA	NA
B-9 (14 ft)	5/7/13	ND(<3.0)	ND(<25)	ND(<50)	0.12	0.085	ND(<0.05)	ND(<0.20)	ND(0.10)	NA	NA	NA
B-10 (6.5 ft)	5/8/13	4900	ND(<220)	ND(<50)	ND(<3.0)	82	21	300	ND(<10)	ND(<5.0)	ND(<10)	2.1
B-10 (14 ft)	5/8/13	ND(<3.0)	NA	NA	ND(<0.03)	0.061	ND(<0.05)	0.24	ND(<0.10)	NA	NA	NA
B-11 (6.5 ft)	5/9/13	3000	ND(<220)	ND(<50)	ND(<1.5)	36	22	300	ND(<5.0)	ND(<5.0)	ND(<10)	2.3
B-11 (10 ft)	5/9/13	59	ND(<25)	ND(<50)	ND(<0.03)	0.54	0.44	4.2	ND(<0.10)	NA	NA	NA
B-11 (15 ft)	5/9/13	ND(<3.0)	NA	NA	ND(<0.03)	ND(<0.05)	ND(<0.05)	ND(<0.20)	ND(<0.10)	NA	NA	2
B-12 (6.5 ft)	5/9/13	2600	ND(<220)	ND(<50)	ND(<1.2)	ND(<2.0)	2.2	110	ND(<4.0)	NA	ΝA	NA
B-13 (6.5 ft)	5/7/13	6.2	ND(<25)	ND(<50)	0.031	0.072	ND(<0.05)	ND(<0.20)	ND(<0.10)	NA	NA	NA
B-13 (14 ft)	5/7/13	ND(<3.0)	NA	NA	ND(<0.03)	ND(<0.05)	ND(<0.05)	ND(<0.20)	ND(<0.10)	NA	NA	NA
B-14 (2 ft)	5/7/13	ND(<130)	2200	1400	ND(<0.30)	ND(<0.50)	ND(<0.50)	ND(<2.0)	ND(<1.0)	NA	NA	NA
B-14 (6 ft)	5/7/13	ND(<3.0)	330	310	ND(<0.03)	ND(<0.05)	ND(<0.05)	ND(<0.20)	ND(<0.10)	NA	NA	NA
B-14 (9 ft)	5/7/13	ND(<70)	2600	950	ND(<0.30)	ND(<0.50)	1.1	ND(<2.0)	ND(<1.0)	ND(<5.0)	ND(<10)	5.8
B- 16 (6.5 ft) (dup. of B-11)	5/9/13	2600	ND(<220)	ND(<50)	ND(<1.5)	22	15	230	ND(<5.0)	NA	NA	2.2

No. 10 (10 No. 10 No. 1

^{* -} Cleanup level dependent on BTEX concentrations

ND - indicates analyte was not detected at level above reporting limit (shown in parentheses)

NA - indicates that the sample was Not Analyzed for the specified analyte

BOLD - indicates that the concentration in the sample exceeds the MTCA Method A target cleanup levels

ttalics - indicated that the laboratory reporting limit was rasied above the MTCA Method A target cleanup level due to dilution of the sample

All samples collected using EPA Method 5035A

Table 4. Groundwater Sample Analytical Results - Kris's Mini Mart, 6000 Portal Way, Ferndale

MTCA Method A Clean-	2/22/1994 4/5/1995 2/6/2003 7/26/2005** 10/26/2006 2/14/2007 7/11/2007 2/27/2008 9/11/2008 2/24/2009 2/9/2010 11/9/2010 2/16/2011	1,000/800* 500 40 130 Not enough water in ND(<50) NA ND(<50) Not enough water in ND(<50) Not enough water in ND(<50) NOt enough water in ND(<50) ND(<50)	in well to sample ND(<130) NA ND(<130)		5 46 6.1 980 45 NA	1,000 ND(<100) ND(<1.0) 50 ND(<1)	700 5.6 ND(<1.0) 2	1,000 15.7 ND(<1.0) ND(<3)	20 NA NA ND(<3)	NA NA NA	0.01 NA NA NA	15 NA NA NA						
MW-1	4/5/1995 2/6/2003 7/26/2005** 10/26/2006 2/14/2007 7/11/2007 2/27/2008 9/11/2008 2/24/2009 2/9/2010 11/9/2010	40 130 Not enough water in Not enough water in Not (<50) NA ND(<50) Not enough water in Not (<50)	NA ND(<130) in well to sample in well to sample ND(<130) NA ND(<130)	NA ND(<250) ND(<250) NA	6.1 980 45	ND(<1.0) 50	ND(<1.0)	ND(<1.0)	NA	NA	NA	NA						
	2/6/2003 7/26/2005** 10/26/2006 2/14/2007 7/11/2007 2/27/2008 9/11/2008 2/24/2009 2/9/2010 11/9/2010	130 Not enough water in Not enough water in ND(<50) NA ND(<50) Not enough water in ND(<50)	ND(<130) in well to sample in well to sample ND(<130) NA ND(<130)	ND(<250) ND(<250) NA	980 45	50	. ,											
	7/26/2005** 10/26/2006 2/14/2007 7/11/2007 2/27/2008 9/11/2008 2/24/2009 2/9/2010 11/9/2010	Not enough water in Not enough water in ND(<50) NA ND(<50) Not enough water in ND(<50)	in well to sample in well to sample ND(<130) NA ND(<130)	ND(<250) NA	45		2	ND(<3)	ND(<3)	NA	NA	NA						
	10/26/2006 2/14/2007 7/11/2007 2/27/2008 9/11/2008 2/24/2009 2/9/2010 11/9/2010	Not enough water (ND(<50) NA ND(<50) Not enough water (ND(<50)	in well to sample ND(<130) NA ND(<130)	ND(<250) NA		ND(<1)												
	2/14/2007 7/11/2007 2/27/2008 9/11/2008 2/24/2009 2/9/2010 11/9/2010	ND(<50) NA ND(<50) Not enough water (ND(<50)	ND(<130) NA ND(<130)	ND(<250) NA		ND(c1)		Not enough water in well to sample										
	7/11/2007 2/27/2008 9/11/2008 2/24/2009 2/9/2010 11/9/2010	NA ND(<50) Not enough water in ND(<50)	NA ND(<130)	NA		ND/<11												
	2/27/2008 9/11/2008 2/24/2009 2/9/2010 11/9/2010	ND(<50) Not enough water i ND(<50)	ND(<130)		NΔ	1417(-1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA						
	9/11/2008 2/24/2009 2/9/2010 11/9/2010	Not enough water i ND(<50)		ND(<250)	444.5	NA	NA	NA	NA	NA	NA	NA						
	2/24/2009 2/9/2010 11/9/2010	ND(<50)	in well to sample	112[~200]	22	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	ΝA						
	2/9/2010 11/9/2010																	
	11/9/2010	ND(<50)	ND(<130)	ND(<250)	ND(<1)	ND(<1)	ND{<1}	ND(<3)	ND(<3)	NA.	NA	NA						
		MD(~20)	ND(<130)	ND(<250)	ND(<1)	ND(<1)	ND(<1)	ND(<3)	NA	NA	NA	NA						
	2/16/2011	ND(<50)	NA	NA	7.1	ND(<1)	ND(<1)	ND(<3)	NA	NA	NA	NA						
		ND(<50)	ND(<130)	ND(<250)	1	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA						
	11/3/2011	Not enough water	Not enough water in well to sample															
	5/23/2013	ND(<50)	ND(<130)	ND(<250)	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA						
	8/12/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
	11/14/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
	2/6/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
MW-2	2/22/1994	ND(<100)	Ν̈́Α	ΝA	ND(<1)	ND(<1)	ND(<1)	ND(<1)	NA	NA	NA	NA						
	6/20/1994	400	NA	NA	5.2	0.8	4.6	9.5	NA	NA	NA	NA						
	4/5/1995	700	NA	NA	27	ND(<3)	3	9	NA	NA	NA	NA						
	11/18/2002	2,800	4,100	2,300	2,000	170	11	20	180	NA	NA	NA						
	2/6/2003	1,600	2,300	920	4,000	99	11	19	ND(<15)	NA	NA	NA						
	7/26/2005	2,700	1,400	810	1,200	300	5 9	330	ND(<60)	NA	NA	NA						
	10/26/2006	Not enough water	in well to sample															
	2/14/2007	ND(<250)	5,200	2,600	86	16	36	130	ND(<3)	NA	NA	NA						
	7/11/2007	1,400	800	310	150	40	50	180	3	NA	NA	NA						
	2/27/2008	270	320	ND(<250)	26	3	14	58	ND(<3)	NA	NA	NA						
	9/11/2008	980	1,400	340	22	6	28	110	NA	NA	NA	NA						
	2/24/2009	300	2,200	740	7	5	7	23	ND(<3)	NA	NA	NA						
	2/24/2009 (dup)	310	2,000	740	7	5	8	26	ND(<3)	NA	NA	NA						
	2/9/2010	120	2,400	690	3.6	1.3	3.1	4.0	NA NA	NA	NA	NA.						
	11/9/2010	81	NA	NA NA	2.2	ND(<1)	ND(<1)	ND(<3)	NA	NA.	NA	NA						
	2/16/2011	ND(<50)	NA	NA	1.2	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA						
	11/3/2011	110	2,000	930	1.1	ND(<1)	1.7	ND(<3)	NA	NA.	NA	NA						
	8/12/2013	NA.	NA	NA	NA	NA NA	NA.	NA	NA.	NA	NA.	NA						
	11/14/2013	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA						
	2/6/2014	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA						

Table 4. Groundwater Sample Analytical Results - Kris's Mini Mart, 6000 Portal Way, Ferndale

Sample ID	Date	NWTPH- Gx Gasoline Range $\mu g/L$	NWTPH-D κ Diesel Range μ g/L	NWTPH-D≍ Lube-Oil Range μg/L	EPA-8021 Benzene µg/L	EPA-8021 Toluene μg/L	EPA-8021 Ethylbenzene µg/L	EPA-8021 Xylenes μg/L	EPA-8021 MTBE μ g/L	EPA-8260 EDC µg/L	EPA-8260 EDB μg/L	EPA-200.8 Lead (Dissolved) µg/L
MTCA Method A Cle	an-up Levels	1,000/800*	500	500	5	1,000	700	1,000	20	5	0.01	15
MW-3	2/22/1994	ND(<100)	NA	NA	ND(<1)	ND(<1)	ND(<1)	ND(<1)	NA	NA	NA	NA
	6/20/1994	ND(<100)	NA	NA	ND(<1)	ND(<1)	ND(<1)	ND(<1)	NA	NA	NA	NA
	4/5/1995	ND(<100)	NA	NA	0.8	ND(<1)	ND(<1)	ND(<1)	NA	NA	NA	NA
	2/6/2003	ND(<50)	480	750	4	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA
	7/26/2005	Not enough water	in well to sample	;								
	10/26/2006	Not enough water	in well to sample	;								
	2/14/2007	ND(<50)	250	300	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA.	NA	NA
	7/11/2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/27/2008	ND(<50)	ND(<130)	ND(<250)	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA
	9/11/2008	Not enough water	in well to sample	:								
	2/24/2009	ND(<50)	140	ND(<250)	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA
	2/9/2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/9/2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	· NA
	2/16/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA.	NA	NA
	11/3/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA.	NA
	5/23/2013	ND(<50)	1,000	ND(<250)	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA
	8/12/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/14/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/6/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	6/20/1994	ND(<100)	NA	NA	ND(<1)	42	ND(<25)	ND(<25)	NA	NA	NA	NA
	4/5/1995	ND(<100)	NA	NA	ND(<1)	2	ND(<25)	ND(<25)	NA	NA	NA	NA
	11/18/2002	ND(<50)	ND(<130)	ND(<250)	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA
	2/6/2003	ND(<50)	ND(<130)	ND(<250)	14	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA
	7/26/2005	ND(<50)	ND(<130)	ND(<250)	5	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA
	10/26/2006	Not enough water	• •	•		• •			• •			
	2/14/2007	ND(<50)	ND(<130)	ND(<250)	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA
	7/11/2007	NA	NA	NA	NA	NA	NA	NA	NA.	NA	NA	NA
	2/27/2008	ND(<50)	ND(<130)	ND(<250)	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA
	9/11/2008	ND(<50)	ND(<130)	ND(<250)	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA
	2/24/2009	NA	NA	NA	NA:	NA	NA	NA	NΛ	NA	NA	NΑ
	2/9/2010	NA.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/9/2010	ND(<50)	NA	NA	ND(<1)	ND(<1)	ND(<1)	ND(<3)	NA	NA	NA	NA
	2/16/2011	NA	NA NA	NA	NA NA	NA	NA.	NA	NA	NA	NA	NA
	• •	NA NA	NA NA	NA NA	NA	NA	NA.	NA	NA	NA	NA	NA
	11/3/2011	ND(<50)	ND(<130)	ND(<250)	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA.	NA.
	5/23/2013	• •	ND(<130) NA	ND(<250) NA	NA NA	ND(<1)	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
	8/12/2013	NA NA		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
	11/14/2013	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
	2/6/2014	NA	NA	NA	NA	NA	INA	IVA	MW	IAW	IVA	IAV

Table 4. Groundwater Sample Analytical Results - Kris's Mini Mart, 6000 Portal Way, Ferndale

Sample ID	Date	NWTPH-Gx Gasoline Range µg/L	NWTPH-Dx Diesel Range µg/L	NWTPH-D x Lube-Oil Range μ g/L	EPA-8021 Benzene μg/L	EPA-8021 Toluene µg/L	EPA-8021 Ethylbenzene μg/L	EPA-8021 Xylenes µg/L	EPA-8021 MTBE μg/L	EPA-8260 EDC µg/L	EPA-8260 EDB µg/L	EPA-200.8 Lead (Dissolved) μg/L
MTCA Method A Cle	ean-up Levels	1,000/800*	500	500	5	1,000	700	1,000	20	5	0.01	15
MW-5	2/25/2003	ND(<50)	ND(<130)	ND(<250)	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA NA	NA
	7/26/2005	ND(<50)	ND(<130)	ND(<250)	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA
	10/26/2006	Not enough water	in well to sample	;	• •		, ,	, ,	• •			
	2/14/2007	ND(<50)	ND(<130)	ND(<250)	ND(<1)	ND(<1)	ND{<1}	ND(<3)	ND(<3)	NA	NA	NA
	7/11/2007	NA	NA	NA	NA	NA	NA.	NA	NA	NA	NA	NA
	2/27/2008	ND(<50)	ND(<130)	ND(<250)	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA
	9/11/2008	NA	ΝA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/24/2009	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/9/2010	NA	NA	NA	NA	NA	NA	NA	ΝA	NA	NA	NA
	11/9/2010	ND(<50)	NA	NA	ND(<1)	ND(<1)	ND(<1)	ND(<3)	NA	NA	NΑ	NA
	2/16/2011	NA	ΝA	NA	NA	NA	NA	NA	NA	NA	NA	· NA
	11/3/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/23/2013	ND(<50)	ND(<130)	ND(<250)	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA
	8/12/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/14/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/6/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-6	7/26/2005	1,300	1,400	ND(<250)	740	31	9	65	ND[<15]	NA	NA	NA
	10/26/2006	ND(<50)	2,800	1,300	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA
	2/14/2007	ND(<50)	740	ND(<250)	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA
	7/11/2007	ND(<50)	4,900	640	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA
	2/27/2008	ND(<50)	2,100	420	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA
	9/11/2008	ND(<50)	360	ND(<250)	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA
	2/24/2009	ND(<50)	3,100	390	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA
	2/9/2010	ND(<50)	2,200	350	ND(<1)	ND(<1)	ND(<1)	ND(<3)	NA	NA	NA	NA
	11/9/2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/16/2011	ND(<50)	810	ND(<250)	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA
	11/3/2011	60	840	ND(<250)	ND(<1)	ND(<1)	ND(<1)	ND(<3)	NA	NA	NA	NA
	5/23/2013	ND(<50)	7,800	ND(<250)	ND(<1)	ND[<1]	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA
	8/12/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/14/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/6/2014	NA	NA	NA	NΛ	NA	NA	NA	NA	NA	NA	NA

Table 4. Groundwater Sample Analytical Results - Kris's Mini Mart, 6000 Portal Way, Ferndale

Sample ID	. Date	NWTPH-Gx Gasoline Range µg/L	NWTPH-Dx Diesel Range µg/L	NWTPH-Dx Lube-Oil Range µg/L	EPA-8021 Benzene μg/L	EPA-8021 Toluene $\mu \mathrm{g/L}$	EPA-8021 Ethylbenzene µg/L	EPA-8021 Xylenes μg/L	EPA-8021 MTBE μg/L	EPA-8260 EDC μg/L	EPA-8260 EDB μg/L	EPA-200.8 Lead (Dissolved) µg/L
MTCA Method A (Clean-up Levels	1,000/800*	500	500	5	1,000	700	1,000	20	5	0,01	15
MW-7	7/26/2005	130,000	14,000	5,100	24,000	29,000	1,700	14,000	ND(<1500)	NA	NA	NA
	10/26/2006	ND(<50)	1,600	790	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA
	2/14/2007	ND(<50)	900	540	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA
	7/11/2007	ND(<50)	320	ND(<250)	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA
	2/27/2008	ND(<50)	500	280	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA
	9/11/2008	ND(<50)	ND(<130)	ND(<250)	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	NA	NA	NA
	2/24/2009	56	340	250	ND(<1)	ND(<1)	ì	ND(<3)	ND(<3)	NA	NA	NA
	2/9/2010	ND(<50)	500	310	ND(<1)	ND(<1)	ND(<1)	ND(<3)	NA	NA	NA	NA
	11/9/2010	NA	NA -	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/16/2011	1,100	ND(<130)	ND(<250)	15	34	25	250	ND(<3)	NA	NA	NA
	11/3/2011	ND(<50)	ND(<130)	ND(<250)	ND(<1)	ND(<1)	ND(<1)	ND(<3)	NA	NA	NA	NA
	5/23/2013	460	510	ND(<250)	3.3	69	1.7	60.0	ND(<3)	NA	NA	NA
	5/23/2013 (dup. MW-17)	530	490	ND(<250)	3.8	79	1.9	72.0	ND(<3)	NA	NA	NA
	8/12/2013	NA	NA	NA	NA	NA	NA.	NA	NA	NA	NA	NA
	11/14/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/6/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-8	5/22/2013	6,100	ND(<250)	ND(<250)	43	6.4	5.9	16.0	ND(<3)	ND(<0.02)	ND(<0.01)	ND(<1)
	8/12/2013	990	ND(<250)	ND(<250)	2.5	2.6	2,3	3.7	ND(<3)	ND(<0.02)	ND(<0.01)	ND(<1)
	11/14/2013	960	250	ND(<250)	ND(<1)	2.2	1.6	ND(<3)	ND(<3)	ND(<0.02)	ND(<0.01)	ND(<1)
	2/6/2014	1,700	160	ND(<250)	46.0	24.0	3.4	12.0	ND(<3)	ND(<0.02)	ND(<0.01)	ND(<1)
MW-9	5/22/2013	4,000	ND(<250)	ND(<250)	40	5.9	9.7	49.0	ND(<3)	ND(<0.02)	ND(<0.01)	ND(<1)
	8/12/2013	3,500	ND(<250)	ND(<250)	22	2.4	8.7	57.0	ND(<3)	ND(<0.02)	ND(<0.01)	ND(<1)
	11/14/2013	1,000	ND(<130)	ND(<250)	6.3	ND(<1)	ND(<1)	ND(<3)	ND(<3)	ND(<0.02)	ND(<0.01)	ND(<1)
	11/14/13 (dup. MW-15)	970	ND(<130)	ND(<250)	5.2	ND(<1)	ND(<1)	3.5	ND(<3)	ND(<0.02)	ND(<0.01)	ND(<1)
	2/6/2014	800	ND(<130)	ND(<250)	ND(<1)	ND(<1)	ND(<1)	7.8	ND(<3)	ND(<0.02)	ND(<0.01)	ND(<1)
MW-10	5/22/2013	12,000	ND(<250)	ND(<250)	3.9	1,200	180	1,600	ND(<3)	ND(<0.02)	ND(<0.01)	ND(<1)
	8/12/2013	2,400	ND(<130)	ND(<250)	6.9	130	38	290	ND(<6)	ND(<0.02)	ND(<0.01)	ND(<1)
	11/14/2013	690	ND(<130)	ND(<250)	1.7	87	5,1	78	ND(<3)	ND(<0.02)	ND(<0.01)	ND(<1)
	2/6/2014	6,300	270	ND(<250)	ND(<5)	510	60.0	1,000	ND(<15)	ND(<0.02)	ND(<0.01)	ND(<1)
MW-11	5/22/2013	41,000	ND(<2500)	ND(<250)	18	2,400	740	7,300	ND(<30)	ND(<0.02)	ND(<0.01)	ND(<1)
	8/12/2013	39,000	ND(<630)	ND(<250)	66	2,100	910	7,200	ND(<75)	ND(<0.02)	ND(<0.01)	ND(<1)
	11/14/2013	20,000	1,500	ND(<250)	ND(<20)	1,300	430	4,200	ND(<60)	ND(<0.02)	ND(<0.01)	ND(<1)
	2/6/2014	34,000	2,500	ND(<250)	ND(<25)	1,600	660	6,800	ND(<75)	ND(<0.02)	ND(<0.01)	ND(<1)
MW-12	5/22/2013	31,000	ND(<2500)	ND(<250)	120	880	290	5,900	ND(<75)	ND(<0.02)	ND(<0.01)	ND(<1)
	8/13/2013	41,000	ND(<1300)	ND(<250)	ND(<50)	1,000	400	8,400	ND(<150)	ND(<0,02)	ND(<0.01)	ND(<1)
	8/13/13 (dup. MW-15)	37,000	ND(<630)	ND(<250)	ND(<25)	880	340	7,500	ND(<75)	ND(<0.02)	ND(<0.01)	ND(<1)
	11/14/2013	14,000	2,500	ND(<250)	ND(<10)	220	110	2,800	ND(<30)	ND(<0.02)	ND(<0.01)	ND(<1)
	2/6/2014	14,000	2,800	ND(<250)	ND(<10)	310	130	2,800	ND(<30)	ND(<0.02)	ND(<0.01)	ND(<1)
	2/6/2014 (dup. MW-15)	12,000	2,200	ND(<250)	ND(<10)	250	110	2,400	ND(<30)	ND(<0.02)	ND(<0.01)	ND(<1)

Table 4. Groundwater Sample Analytical Results - Kris's Mini Mart, 6000 Portal Way, Ferndale

Sample ID	Date	NWTPH-Gx Gasoline Range µg/L	NWTPH-Dx Diesel Range µg/L	NWTPH-Dx Lube-Oil Range µg/L	EPA-8021 Benzene µg/L	EPA-8021 Toluene µg/L	EPA-8021 Ethylbenzene $\mu \mathrm{g/L}$	EPA-8021 Xylenes μ g/L	EPA-8021 MTBE μg/L	EPA-8260 EDC μg/L	EPA-8260 EDB μg/L	EPA-200.8 Lead (Dissolved) μg/L
MTCA Method A C	lean-up Levels	1,000/800*	500	500	5	1,000	700	1,000	20	5	0.01	15
MW-13	5/22/2013	2,000	ND(<250)	ND(<250)	8.3	6.8	38	200	ND(<3)	ND(<0.02)	ND(<0.01)	ND(<1)
	8/13/2013	65	ND(<130)	ND(<250)	ND(<1)	ND(<1)	ND(<1)	8.8	ND(<3)	ND(<0.02)	ND(<0.01)	ND(<1)
	11/14/2013	3,100	320	ND(<250)	ND(<5)	57	48	700	ND(<15)	ND(<0.02)	ND(<0.01)	ND(<1)
	2/7/2014	81	ND(<130)	ND(<250)	ND(<1)	ND(<1)	ND(<1)	10	ND(<3)	ND(<0.02)	ND(<0.01)	ND(<1)
MW-14	5/22/2013	460	1,000	ND(<250)	ND(<1)	ND(<1)	6.9	ND(<3)	ND(<3)	ND(<0.02)	ND(<0.01)	ND(<1)
	5/22/2013 (dup. MW-15)	480	890	ND(<250)	ND(<1)	ND(<1)	6.8	ND(<3)	ND(<3)	ND(<0.02)	ND(<0.01)	ND(<1)
	8/13/2013	ND(<50)	280	ND(<250)	ND(<1)	ND(<1)	2.0	ND(<3)	ND(<3)	ND(<0.02)	ND(<0.01)	ND(<1)
	11/14/2013	ND(<50)	480	380	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	ND(<0.02)	ND(<0.01)	ND(<1)
	2/7/2014	ND(<50)	470	550	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	ND(<0.02)	ND(<0.01)	ND(<1)
Equipment Blank	5/22/2013 (MW-16)	ND(<50)	ND(<130)	ND(<250)	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	ND(<0.02)	ND(<0.01)	NA
	5/23/2013 (MW-18)	ND(<50)	ND(<130)	ND(<250)	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	ND(<0.02)	ND(<0.01)	NA
	8/13/2013 (MW-16)	ND(<50)	ND(<130)	ND(<250)	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	ND(<0.02)	ND(<0.01)	NA
	11/14/2013 (MW-16)	ND(<50)	ND(<130)	ND(<250)	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	ND(<0.02)	ND(<0.01)	NA
	2/6/2014 (MW-16)	ND(<50)	ND(<130)	ND(<250)	ND(<1)	ND(<1)	ND(<1)	ND(<3)	ND(<3)	ND(<0.02)	ND(<0,01)	NA

^{* -} Cleanup level dependent on BTEX concentrations

Bold indicates that selected analyte concentration was reported above the MTCA Method A cleanup level

italics - indicated that the laboratory reporting limit was rasied above the MTCA Method A target cleanup level due to dilution of the sample

ND - indicates analyte was not detected at level above reporting limit (shown in parentheses)

NA - indicates that the sample was Not Analyzed for the specified analyte

^{** -} VE System turned on 9/10/2004. AS System turned on 11/8/2004.

^{*** -} As of 7/11/07, all wells are sampled using a "low-flow" sample collection technique

Table 5. Groundwater Chemistry Parameters Kris's Mini Mart, 6000 Portal Way, Ferndale

		₽TW	Тетр	EC	TDS	Salinity	DO	pH	ORP
Well ID	Date	(ft)	(°C)	(mS/cm)			(mg/L)	•	(mV)
MW-1	5/23/2013	3.71	17.43	0.091	0.059	0.04	0.05	6.64	40.7
	8/12/2013	NA	NA	NA	NA	NA	NA	NA	NA
	11/14/2013	NA	NA	NA	NA	NA_	NA	NA	NA
	2/6/2014	NA	NA	NA	NA	NA	NA	NA	NA
MW-2	5/23/2013	4.05	16.31	0.057	0.037	0.03	2.85	6.59	96.9
	8/12/2013	NA	NA	NA	NA	NA	NA	NA	NA
	11/14/2013	NA	NA	NA	NA	NA	NA	NA	NA
	2/6/2014	NA	NA	NA.	NA	NA	NA	NA	NA
MW-3	5/23/2013	3.64	15.41	0.235	0.152	0.11	2.62	6.65	120.3
	8/12/2013	NA	NA	NA	NA	NA	NA	NA	NA
	11/14/2013	NA	NA	NA	NA	NA	NA	NA	NA
	2/6/2014	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	5/23/2013	3.9	14.99	0.262	0.171	0.13	2.83	6.93	85.5
	8/12/2013	NA.	NA	NA	NA	NA	NA	NA	NA
	11/14/2013	NA	NA	NA	NA	NA	NA	NA	NA
	2/6/2014	NA	NA	NA	NA	ΝA	NA	NA	NA
MW-5	5/23/2013	2 70	12.10	0.337	0.219	0.16	0.24	6.84	96.3
22.44-3	8/12/2013	3.72 NA	12.19 NA	NA	0.219 NA	NA	NA	NA	NA
								NA NA	
	11/14/2013	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA		NA NA
	2/6/2014	NA	NA	NA	NA	NA	NA	NA	NA
MW-6	5/23/2013	3.93	14.14	0.341	0.221	0.16	0.07	6.46	10.8
	8/12/2013	NA	NA	NΑ	NA	NA	NA	NA	NA
	11/14/2013	NA	NA	NA	NA	NA	NA	NA	NA
	2/6/2014	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	5/23/2013	4.21	14.24	0.333	0.216	0.16	0.02	6.99	-13.4
	8/12/2013	NA	NA	NA	NA	NA	NA	NA	NA
	11/14/2013	NA	NA	NA	NA	NA	NA	NA	NA
	2/6/2014	NA	NA	NA	NA	NA	NA	NA	NA
MW-8	5/23/2013	4.05	14.53	0.221	0.144	0.11	0.28	6.44	-17.3
	8/12/2013	5.45	19.43	0.288	0.187	0.14	0.15	6.5	- 58.6
	11/14/2013	4.44	14.73	0.231	0.15	0.11	0.03	6.9	-56.8
	2/6/2014	3.90	8.02	0.282	0.183	0.13	1.27	6.59	23.3
MW-9	5/23/2013	4.09	12.62	0.207	0.134	0.10	0.20	6.41	38.0
	8/12/2013	5.48	17.89	0.262	0.17	0.12	0.11	6.49	-67.4
	11/14/2013	4.47	15.17	0.258	0.168	0.12	0.19	6.67	9.1
	2/6/2014	3.95	8.19	0.208	0.135	0.10	1.57	6.61	72.9
MW-10	5/23/2013	4.22	13.46	0.309	0.201	0.15	0.15	6.6	16.1
	8/12/2013	5.63	17.4	0.283	0.184	0.14	0.12	6.67	-18.3
	11/14/2013	4.66	14.75	0.273	0.177	0.13	0.02	6.77	-47.4
	2/6/2014	4.06	9.23	0.274	0.178	0.13	0.16	6.73	-47.9
MW-11	5/23/2013	4.32	12.7	0.525	0.164	0.12	0.27	6.5	15.5
	8/12/2013	5.71	16.72	0.24	0.156	0.11	0.16	6.5	-48.6
	11/14/2013	4.71	15.13	0.236	0.153	0.11	0.02	7.08	-141.5
	2/6/2014	4.16	8.97	0.264	0.171	0.13	0.25	6.67	-45.1
MW-12	5/23/2013	4.19	12.64	0.287	0.187	0.14	0.17	6.63	28.6
	8/12/2013	5.55	17.17	0.25	0.163	0.12	1.06	6.58	-17.2
	11/14/2013	4.58	16.67	0.259	0.169	0.12	0.04	6.89	-90.6
	2/6/2014	4.02	9.84	0.289	0.188	0.14	0.32	6.81	-32.5
MW-13	5/23/2013	3.87	14.95	0.24	0.156	0.11	0.13	6.58	44.6
	8/12/2013	5.29	19.71	0.283	0.184	0.13	0.56	6.66	35.3
	11/14/2013	4.32	15.48	0.287	0.186	0.14	0.27	6.74	-13
	2/7/2014	3.69	9.89	0.286	0.186	0.14	3.02	6.66	30.0
MW-14	5/23/2013	3.99	14.38	0.274	0.178	0.13	0.32	6.76	40.8
TET 24. T.4	8/12/2013	5.36	21.02	0.274	0.178	0.13	1.24	6.86	34.1
	11/14/2013	4.25	16.73	0.276	0.179	0.13	1.57	6.97	48.7
	2/7/2014	3.82	10.92	0.280	0.182	0.13	0.44	7.01	46.2

NA - indicates that the sample was Not Analyzed for the specified analyte

APPENDIX A

Soil Borelogs

Project: Kris' Mini Mart

Client: Narian Naidu Boring Number: B-8 Location: SE of UST pit

Date Completed: 5/7/2013

Sheet: 1 of 1

Drilled by: EDI - Tom Adams

Logged by: Thom Davis

First Encountered Water: 3 ft

Total Depth: 14 feet bgs

Depth/Description .	Blow Count*	PID (ppm)	Sheen	Sample
0.0 to 0.25 ft: Asphalt				
0.25 to 0.75 ft: Sandy gravel fill material, brown, loose, moist	Cleared to 5'	2.0	VSS	
0.75 to 5.0 ft: Medium sand with minor gravel, brown, loose, moist (wet below 3 feet)	bgs with hand auger for utilities before drilling	0.0	NS	
5.0 to 6.5 ft: Medium to coarse sand, brown loose, wet (geotechnical sample)	12-12-19	12.7	NS	3.5-6'-
7.5 to 9.0 ft: Medium sand, minor gravel brown, loose, wet	4-5-10	128 @8.5'	NS	8.5'
12.5 to 14.0 ft: No recovery - Heaving sands	10-24-40	No Recovery		
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WHATCOM ENVIRONMENTAL SERVICES INC.

Project: Kris' Mini Mart

Client: Narian Naidu Boring Number: B-9

Location: South center of UST pit

Date Completed: 5/7/2013

Sheet: 1 of 1

Drilled by: EDI - Tom Adams

Logged by: Thom Davis

First Encountered Water: 4 ft

Total Depth: 14 feet bgs

Depth/Description	Blow Count*	PID (ppm)	Sheen	Sample
0.0 to 0.25 ft: Asphalt				
0.25 to 1.25 ft: Sandy gravel fill material, brown,	C1	0.0	NS	
loose, moist 1.25 to 5.0 ft: Medium to coarse sand, minor gravel, brown, loose, moist	Cleared to 5' bgs with hand auger for utilities before drilling	6.7	vss	
(wet below 4.0 ft) 5.0 to 6.5 ft: Medium sand, brown, loose, wet	6-12-14	821	MS	6.0'
7.5 to 9.0 ft: Medium sand, minor gravel, brown, loose, wet	9-14-24	860	SS	9.0'
12.5 to 14.0 ft: Medium sand, brown, loose, wet	14 and 50 for 6 in.	11.5	NS	14.0'
-				
	_			

WHATCOM ENVIRONMENTAL SERVICES INC.

Project: Kris' Mini Mart

Client: Narian Naidu Boring Number: B-10

Location: East of canopy and dispensers

Date Completed: 5/8/2013

Sheet: 1 of 1

Drilled by: EDI - Tom Adams

Logged by: Thom Davis

First Encountered Water: 3.5 ft

Total Depth: 14 feet bgs

Depth/Description	Blow Count*	PID (ppm)	Sheen	Sample
0.0 to 0.25 ft: Asphalt 0.25 to 1.25 ft: Sandy gravel fill material, brown, loose, moist	Cleared to 5' bgs with hand auger	0	NS	
1.25 to 5.0 ft: Medium sand, brown, loose, wet	for utilities before drilling	16 @4.5 ft	NS	
5.0 to 6.5 ft: Medium sand, brown, loose, wet	9-10-16	411 @6.0 ft 4,800 @6.5 ft	нѕ	6.5'
7.5 to 9.0 ft: Medium sand, brown, loose, wet (geotechnical sample)	9-14-17	1,356 @ <i>7.5 f</i> t 56	vss vss	8-8.5ft
12.5 to 14.0 ft: Medium sand, minor fine sand, brown, loose, wet (geotechnical sample)	14-26-21	@9.0 ft 446 @12.5 ft 65 @14.0 ft	ns ns	14.0' 13-13.5
Driller noted approximately 1.5 feet of heaving sands in boring before installing well.				
* - A California Split-Spoon sampler was used to collect samples and reco				

WHATCOM ENVIRONMENTAL SERVICES INC.

Project: Kris' Mini Mart

Client: Narian Naidu Boring Number: B-11

Location: East side; under canopy

Date Completed: 5/9/2013

Sheet: 1 of 1

Drilled by: EDI - Tom Adams

Logged by: Thom Davis

First Encountered Water: 4.0 ft

Total Depth: 15 feet bgs

Depth/Description	Blow Count*	PID (ppm)	Sheen	Sample
0.0 to 0.67 ft: Concrete slab				
0.67 to 0.8 ft: Asphalt layer				
	Cleared to 5'	50 @ 1 ft	VSS	
0.8 to 1.75 ft: Sandy gravel fill material, brown,	bgs with hand auger	73 @ 1.3 ft	VSS	
loose, moist	for utilities			
	before drilling			
1.75 to 2.75 ft: Sandy silt, dark, brown, firm, moist		9@2ft		
(organic layer)		2 @ 3.8 ft	VSS	
2.75 to 5.0 ft: Medium sand, brown, loose, moist	⊣ 3	 00 @ 4.25 ft	SS	
(wet below 4 ft bgs)		2,344 @ 5 ft	HS	
5.0 to 6.5 ft: Limited recovery. Medium sand,	5-6-9	2,705	HS	6.5'
brown, loose, wet		@ 6.5 ft		
· · · · · · · · · · · · · · · · · · ·	_			
10.0 to 11.5 ft: Limited recovery. Medium sand,	10-17-29	564	VSS	10'
brown, loose, wet	7	@ 10 ft		
15.0 to 16.5 ft: Medium sand, minor gravel, brown,	9-15-17	2	NS	15′
loose, wet		@ 15 ft		
Regular split spoon sampler used to collect sample at this interval				
	-			
- A California Split-Spoon sampler was used to collect samples and record	Blow Counts (unles	s otherwise n	oted)	

WHATCOM ENVIRONMENTAL SERVICES INC.

Project: Kris' Mini Mart

Client: Narian Naidu Boring Number: B-12

Date Completed: 5/9/2013

Location: West side; under canopy

Sheet: 1 of 1

Drilled by: EDI - Tom Adams

Logged by: Thom Davis
First Encountered Water: 4 ft

Total Depth: 15 feet bgs

Depth/Description	Blow Count*	PID (ppm)	Sheen	Sample
0.0 to 0.67 ft: Concrete slab				
0.67 to 0.8 ft: Asphalt layer	Cleared to 5'			
2 8 4 2 0 0 fts. Sanda married fill marketical buseress	bgs with			
0.8 to 2.0 ft: Sandy gravel fill material, brown, loose, moist	hand auger			
loose, moist	for utilities			
	before drilling			
2.0 to 2.6 ft: Sandy silt, dark, brown, firm, moist	\dashv	1		
(organic layer)	<u> </u>]
2.6 to 5.0 ft: Medium sand, brown, loose, moist		350		
(wet below 4 feet bgs)		@4 ft		
 				
5.0 to 6.5 ft: Medium sand, brown, loose, wet	5-17-22	525	MS	
		@5ft	MO	
		550 @6ft	MS	
- -		1,516	MS	6.5'
		@6.5 ft	IVIO	0.0
10.0 to 11.5 ft: Medium sand, brown, loose, wet	10-22-	250		
ioto to 11.0 In modulu balla, blown, 10000, wot	50 for 6"	@10 ft		
		165	SS	
		@ 10.25 ft		
		447	MS	
		@ 11 ft		
15.0 to 16.5 ft: No recovery.	9-11-17	No		
Regular split spoon sampler used to collect sample at this interval		Recovery		
				
Driller noted approximately 2.0 feet of heaving sands in boring				
before installing well.				
				

WHATCOM ENVIRONMENTAL SERVICES INC.

Project: Kris' Mini Mart

Client: Narian Naidu Boring Number: B-13

Location: South of store door, near MW-1

Date Completed: 5/7/2013

Sheet: 1 of 1

Drilled by: EDI - Tom Adams

Logged by: Thom Davis

First Encountered Water: 4 ft

Total Depth: 14 feet bgs

Depth/Description	Blow Count*	PID (ppm)	Sheen	Sample
0.0 to 0.25 ft: Asphalt 0.25 to 1.25 ft: Sandy gravel fill material, brown, loose, moist	Cleared to 5'	0.0	VSS	
1.25 to 5.0 ft: Medium sand, brown, loose, moist (wet below 4 feet)	bgs with hand auger for utilities before drilling	0.0	vss	
5.0 to 6.5 ft: Medium sand, brown, loose, wet (geotechnical sample)	9-12-17	80 @ 5 ft 147 @ 6.5 ft	ss Ms	5.5-6' 6.5'
7.5 to 9.0 ft: Pounded rock. Limited recovery. Medium to coarse sand, brown, loose, wet	26-24-19	0.0	ns	
12.5 to 14.0 ft: Medium sand, brown, loose, wet Regular split spoon sampler used to collect sample at this interval	14 and 50 for 5"	0.0	NS	14'
- A California Split-Spoon sampler was used to collect samples and record l	Blow Counts (unless	s otherwise n	oted)	

WHATCOM ENVIRONMENTAL SERVICES INC.

Project: Kris' Mini Mart

Client: Narian Naidu Boring Number: B-14

Location: South center of dispensers, near MW-2

Date Completed: 5/7/2013

Sheet: 1 of 1

Drilled by: EDI - Tom Adams

Logged by: Thom Davis

First Encountered Water: 5 ft

Total Depth: 14 feet bgs

Depth/Description	Blow Count*	PID (ppm)	Sheen	Sample
0.0 to 0.25 ft: Asphalt				
0.25 to 1.25 ft: Sandy gravel fill material, brown, loose, moist	Cleared to 5' bgs with hand auger for utilities	92 @1ft 190	SS	2^{i}
1.25 to 5.0 ft: Medium sand, brown, loose, moist	before drilling	@2 ft 2 @4 ft		
5.0 to 6.5 ft: Medium sand, brown, loose, wet	0-0-1	3.8 @6ft	SS	6'
7.5 to 9.0 ft: Medium sand, brown, loose, wet	3-3-3	302	MS	9'
12.5 to 14.0 ft: Medium sand, brown, loose, wet	9-36- 50 for 4"	5	VSS	
* - A California Split-Spoon sampler was used to collect samples and record	I Blow Counts (unles	s otherwise r	oted)	

WHATCOM ENVIRONMENTAL SERVICES INC.

APPENDIX B

Soil Physical Properties Analysis



8100 Secura Way • Santa Fe Springs, CA 90670 Telephone (562) 347-2500 • Fax (562) 907-3610

May 31, 2013

Harold Cashman Whatcom Environmental Services 228 E. Champion Street, Suite 101 Bellingham, WA 98225

Re:

PTS File No: 43321 Physical Properties Data

Kris's Mini Mart

Dear Mr. Cashman:

Please find enclosed report for Physical Properties analyses conducted upon samples received from your Kris's Mini Mart project. All analyses were performed by applicable ASTM, EPA, or API methodologies. An electronic version of the report has previously been sent to your attention via the internet. The samples are currently in storage and will be retained for thirty days past completion of testing at no charge. Please note that the samples will be disposed of at that time. You may contact me regarding storage, disposal, or return of the samples.

PTS Laboratories appreciates the opportunity to be of service. If you have any questions or require additional information, please contact Rachel Spitz at (562) 347-2504.

Sincerely, PTS Laboratories

Michael Mark Brady, P.G.

District Manager

Encl.

PTS Laboratories

Project Name:

Kris's Mini Mart

PTS File No: 43321

Project Number:

N/A

Client: Whatcom Environmental Services

TEST PROGRAM - 20130515

CORE ID	Depth ft.	Core Recovery ft.	New Mexico RBDM Pkg.	Notes
		Plugs:	Vert. 1"	
Date Received: 20130515				
B-8 5.5-6.0	5.5-6	0.50	X	
B-10 8.0-8.5	8-8.5	0.50	X	
B-10 13.0-13.5	13-13.5	0.50	x	
B-13 5.5-6.0	5,5-6	0.50	Х	
TOTALS:	4 cores	2.00	4	4

Laboratory Test Program Notes

Contaminant identification:

Standard TAT for basic analysis is 10 business days.

New Mexico RBDM Package: Intrinsic permeability to water/hydraulic conductivity, total porosity, air-filled porosity, dry bulk density, volumetric moisture content, foc, and grain size analyses.

PTS File No:

43321

Client:

Whatcom Environmental Services

PHYSICAL PROPERTIES DATA - NEW MEXICO PACKAGE RBDM

PROJECT NAME: Kris's Mini Mart

PROJECT NO:

N/A

			METHODS:	S: API RP40		ASTM D2216/API RP40	API F	RP40	API RP 40; EPA 9100	
					_				25.0 PSI CONF	INING STRESS
						VOLUMETRIC	TOTAL	AIR	INTRINSIC	NATIVE
				GRAIN	DRY BULK	WATER CONTENT	MEASURED	FILLED	PERMEABILITY	HYDRAULIC
SAMPLE	DEPTH,	SAMPLE	ANALYSIS	DENSITY	DENSITY	AS FRACTION OF Vb	POROSITY	POROSITY	TO WATER	CONDUCTIVITY
ID.	ft.	ORIENTATION (1)	DATE	[g/cm ³]	[g/cm ³]	[cm³/cm³]	[cm ³ /cm ³]	[cm³/cm³]	[cm ²]	[cm/sec]
B-8 5.5-6.0	5.6	V	20130521	2.71	1.49	0.452	0.234	0.217	1.09E-07	1.12E-02
B-10 8.0-8.5	8.1	V	20130521	2.70	1.54	0.429	0.112	0.317	2.29E-08	2.33E-03
B-10 13.0-13.5	13.1	V	20130521	2.71	1.57	0.419	0.191	0.229	7.16E-08	7.23E-03
B-13 5.5-6.0	5.6	V	20130521	2.70	1.63	0.397	0.177	0.220	5.46E-08	5.48E-03

⁽¹⁾ Sample Orientation: H = horizontal; V = vertical; R = remold (2) Native State or Effective = With as-received pore fluids in place (3) Permeability to water and hydraulic conductivity measured at saturated conditions

PTS File No:

43321

Client:

Whatcom Environmental Services

ORGANIC CARBON DATA - TOC (foc)

(METHODOLOGY: WALKLEY-BLACK)

PROJECT NAME:

Kris's Mini Mart

PROJECT NO:

N/A

SAMPLE ID.	DEPTH,	ANALYSIS DATE	ANALYSIS TIME	SAMPLE MATRIX	TOTAL ORGANIC CARBON, mg/kg	FRACTION ORGANIC CARBON, g/g
B-8 5.5-6.0	5.6	20130528	1032	SOIL	2350	2.35E-03
B-10 8.0-8.5	8.1	20130528	1032	SOIL	4550	4.55E-03
B-10 13.0-13.5 B-13 5.5-6.0	13.1 5.6	20130528 20130528	1032 1032	SOIL SOIL	1450 4000	1.45E-03 4.00E-03

Blank	N/A	20130528	1032	BLANK	ND	ND
SRM D079-542	N/A	20130528	1032	SRM	3300	3.30E-03

Reporting Limit: 100

1.00E-04

QC DATA

_	do DATA						
	-			Certified	QC Pe	erformance	
	SRM ID/Lot No.	REC (%)	Control Limits	Concentration	Acceptanc	e Limits, mg/kg	
_				mg/kg	Lower	Upper	
	SRM D079-542	97	75-125	3400	2550	4250	

ND = Not Detected

PTS Laboratories, Inc.

Whatcom Environmental Services

PTS File No: 43321

PARTICLE SIZE SUMMARY

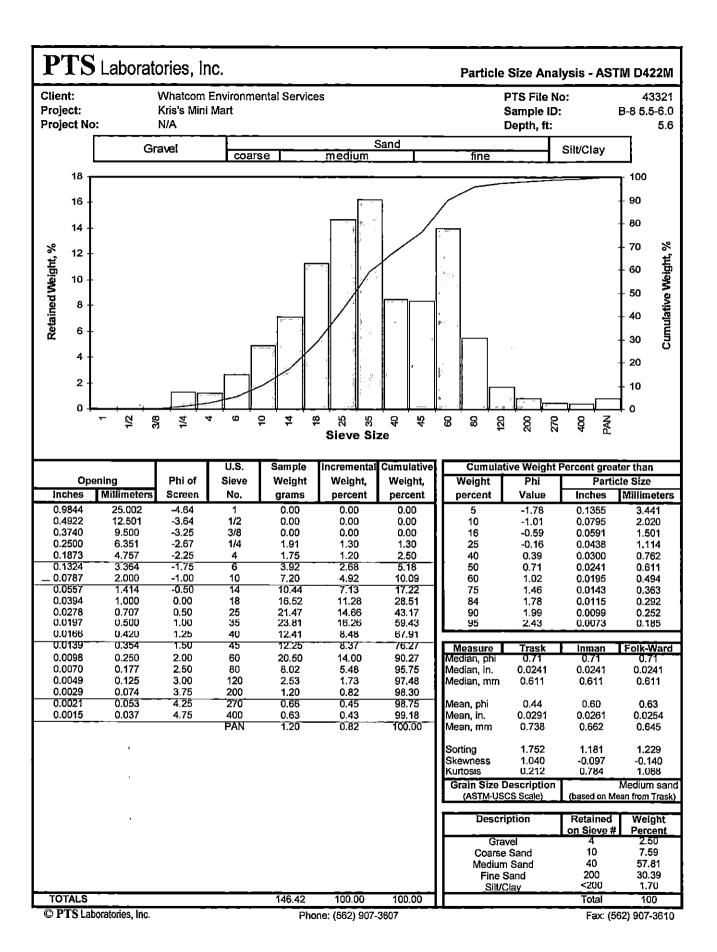
(METHODOLOGY: ASTM D422)

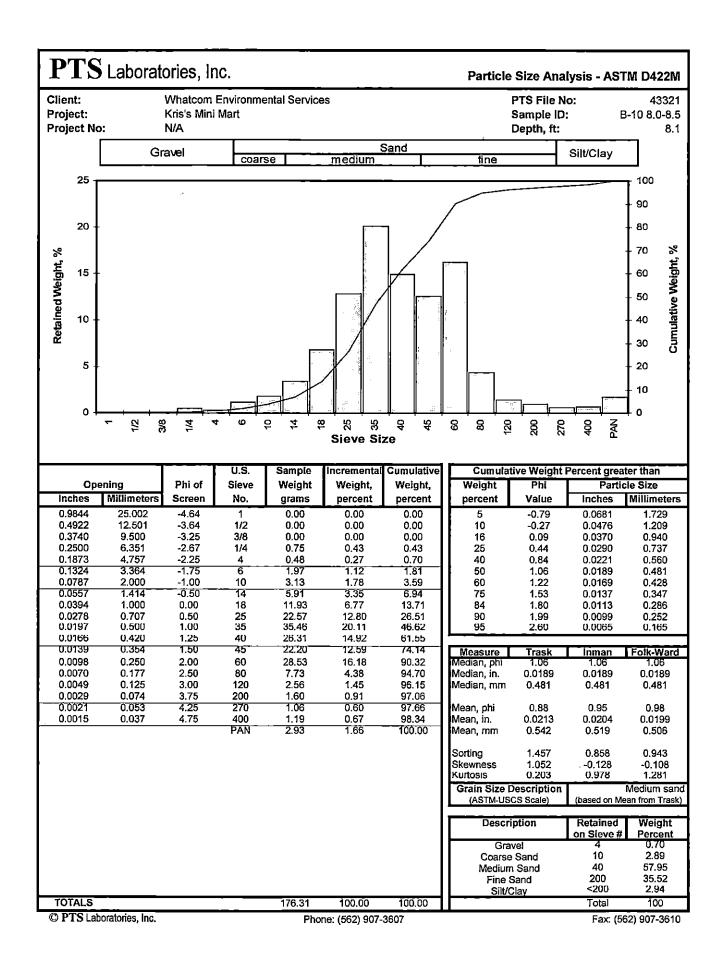
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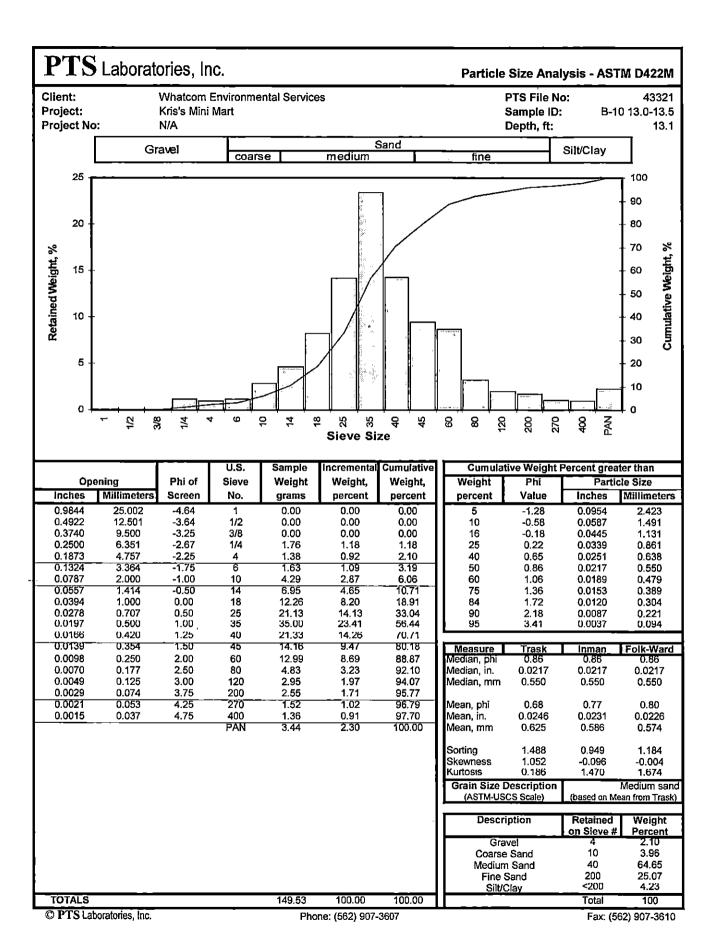
Kris's Mini Mart

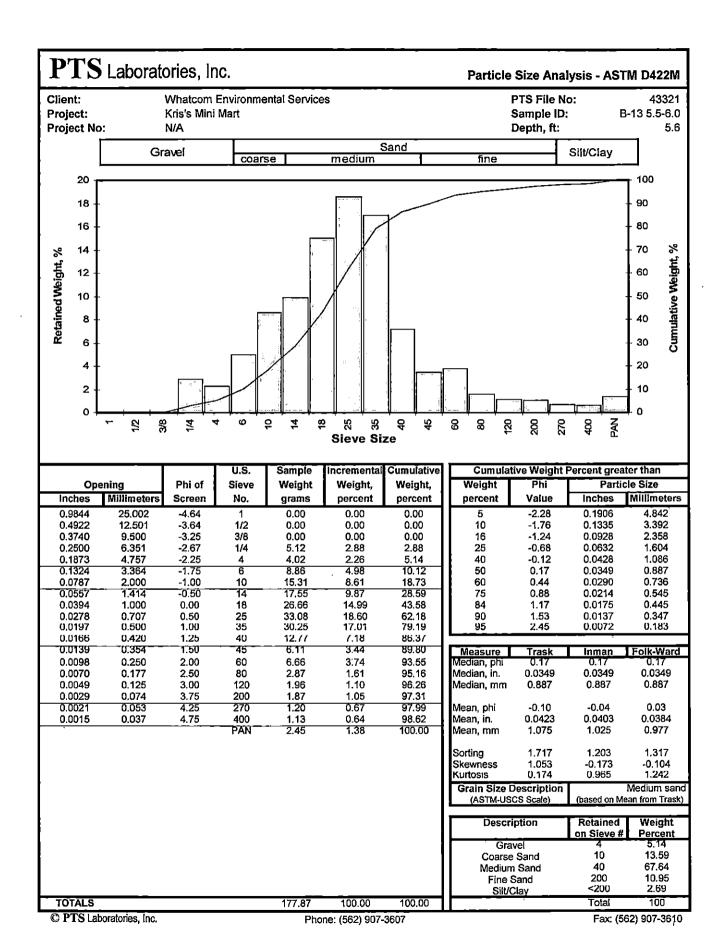
N/A

		Description	Median	Particle Size Distribution, wt. percent							
i		USCS/ASTM	Grain Size,	Gravel		Sand Size		Silt/Clay			
Sample ID	Depth, ft.	(1)	mm		Coarse	Medium	Fine].			
B-8 5.5-6.0	5.6	Medium sand	0.611	2.50	7.59	57.81	30.39	1.70			
B-10 8.0-8.5	8.1	Medium sand	0.481	0.70	2.89	57.95	35.52	2.94			
B-10 13.0-13,5	13.1	Medium sand	0.550	2.10	3.96	64,65	25.07	4.23			
B-13 5.5-6.0	5.6	Medium sand	0.887	5.14	13.59	67.64	10.95	2.69			









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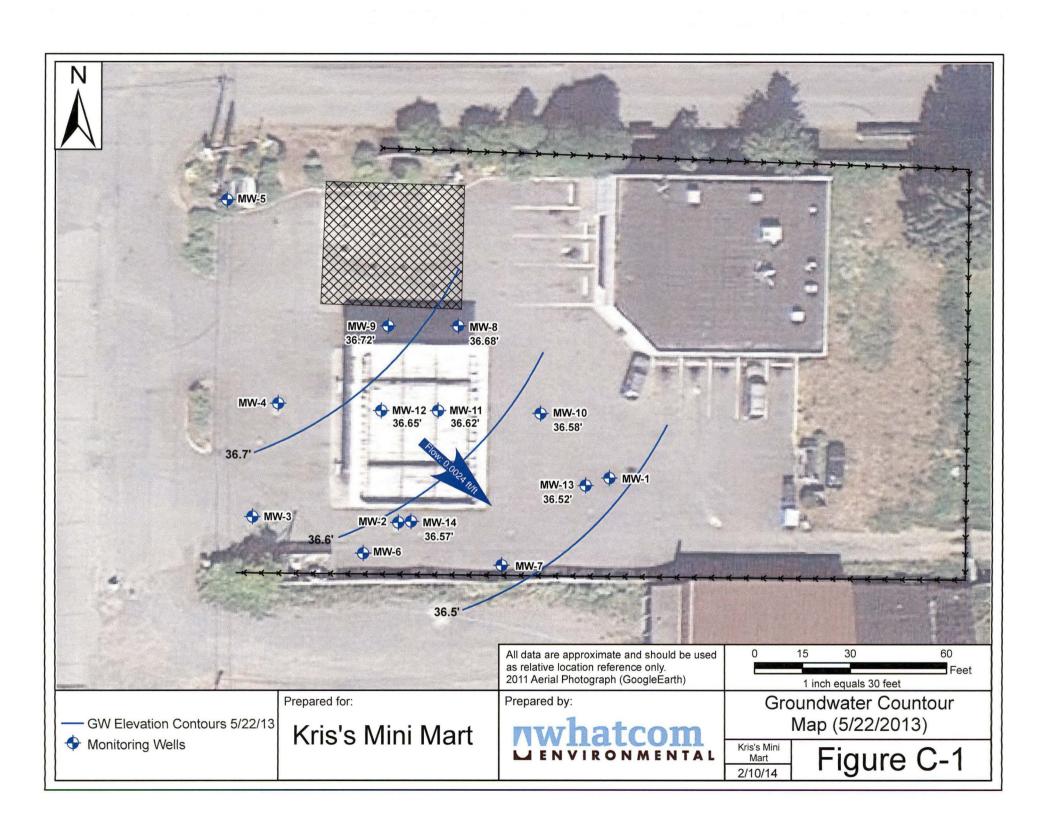
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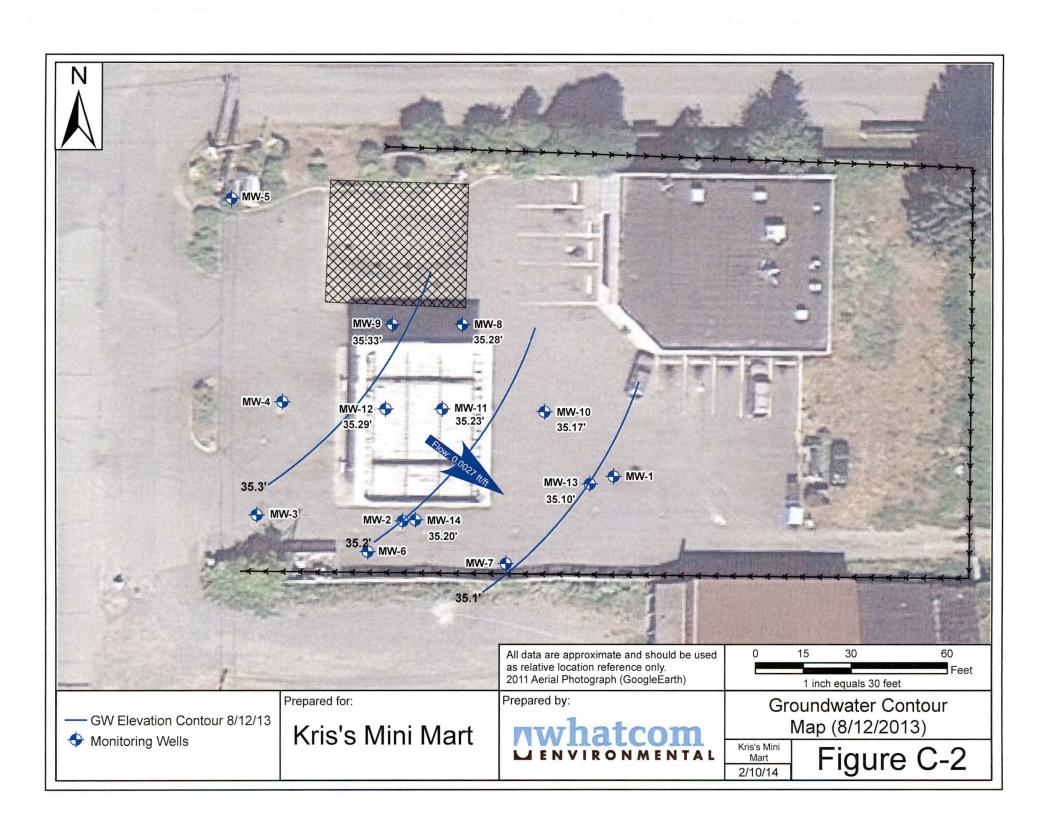
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PROJECT NAME Kris's Mini K	Whateom Environmental Services DIDRESS CITY ZIP CODE 228 E. Champion St. #WI, Bellimham, WA 98225 ROJECT MANAGER Hasold Cashman PHONE NUMBER Kris's Mini Mart (360) 752-9571 ROJECT NUMBER FAX NUMBER					PACK	ACK.	ACK		ш	H H	0221		2	42	40 g	_ 3		Z ST		8 E	KEDM Laumeers		S	AMPLE IN	TEGR	πΥ (C	HECK):
PROJECT NUMBER		(n.)	FAX NUMBER		8	ΛΙΤ	SNS	TES	`	SKAG	<u>ğ</u>	STE	78	AST	83 ≱	:	RP40	=	NO.		ME E	(M)			ITACT		ON IC	E
SITE LOCATION , ,		(360)	752-9573	LES	PAC	UCT	RATIK	PERI	86	S PA	윒	N.	API	14	, AST	<u>چ</u> ا	, API	<u> </u>		<u> </u>	S, AS	1		P	TS QUOT	E NO.		
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SITE LOCATION FE INDUITE WAS SAMPLER SIGNATURE ALL COMMENTS OF THE PROPERTY O	lm			NUMBER OF SAMPLES	SOIL PROPERTIES PACKAGE	HYDRAULIC CONDUCTIVITY PACKAGE	PORE FLUID SATURATIONS PACKAGE	TCEC/TNRCC PROPERTIES PACKAGE	CAPILLARITY PACKAGE	FLUID PROPERTIES PACKAGE	000	MOISTURE CONTENT, ASTM D2216	POROSITY: TOTAL, API RP40	POROSITY: EFFECTIVE, ASTM D425M	SPECIFIC GRAVITY, ASTM D864	BULK DENSITY (DRY), API RP40 or ASTM D2937	AIR PERMEABILITY, API RP40	2 2	GRAIN SIZE DISTRIBLITION, ASTM D422/4464M	IOC: WALKLEY-BLACK	ATTERBERG LIMITS, ASTM D4318	New Mexico			TS FILE:	433	321	†
SAMIFLE ID MOMBEN	DAIE	TIME	DEPTH, FT	NUMB	SOIL	нурв	PORE	TCEQ.	CAPI⊓	F.UID	HQ.	MOIST	5 5	OF.O	SPECI	BULK	AIR PE	HACK	GHAIN	5	ATTE	1/0/n		İ		OMM		
B-8 5.5-6.0 B-10 8.0-8.5 B-10 13.0-13.5 B-13 5.5-6.0	5/7/13		5.5-6.0		;																	X						
B-10 8.0-8.5	5/8/13	_	8.0-8.5																	1		×				<u>.</u>		
B-10 13,0-13.5	5/8/13	<u></u> :	13.0-13.5																			X						
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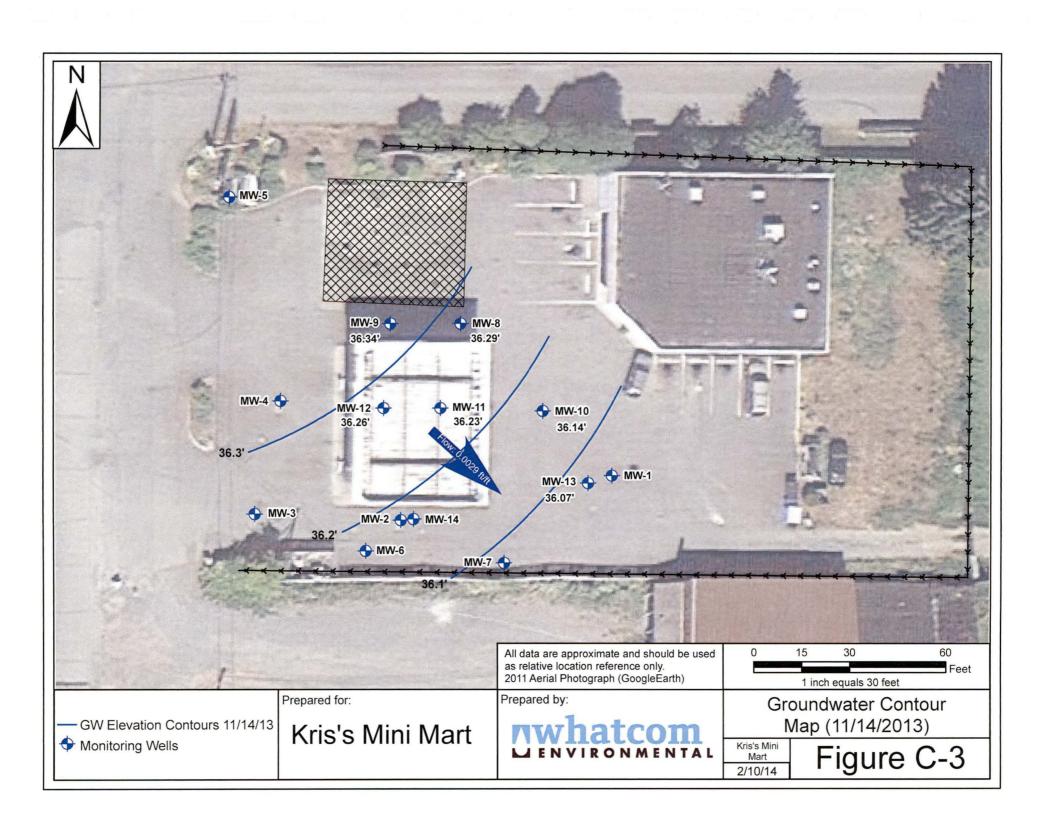
PTS Laboratories, Inc. *8100 Secura Way - Santa Fe Springs, CA 90670 - Phone (562) 347-2500 - Fax (562) 907-3610 PTS Laboratories, Inc. - 4342 W. 12th St. - Houston, TX 77055 - Phone (713) 316-1800 - Fax (713) 316-1882

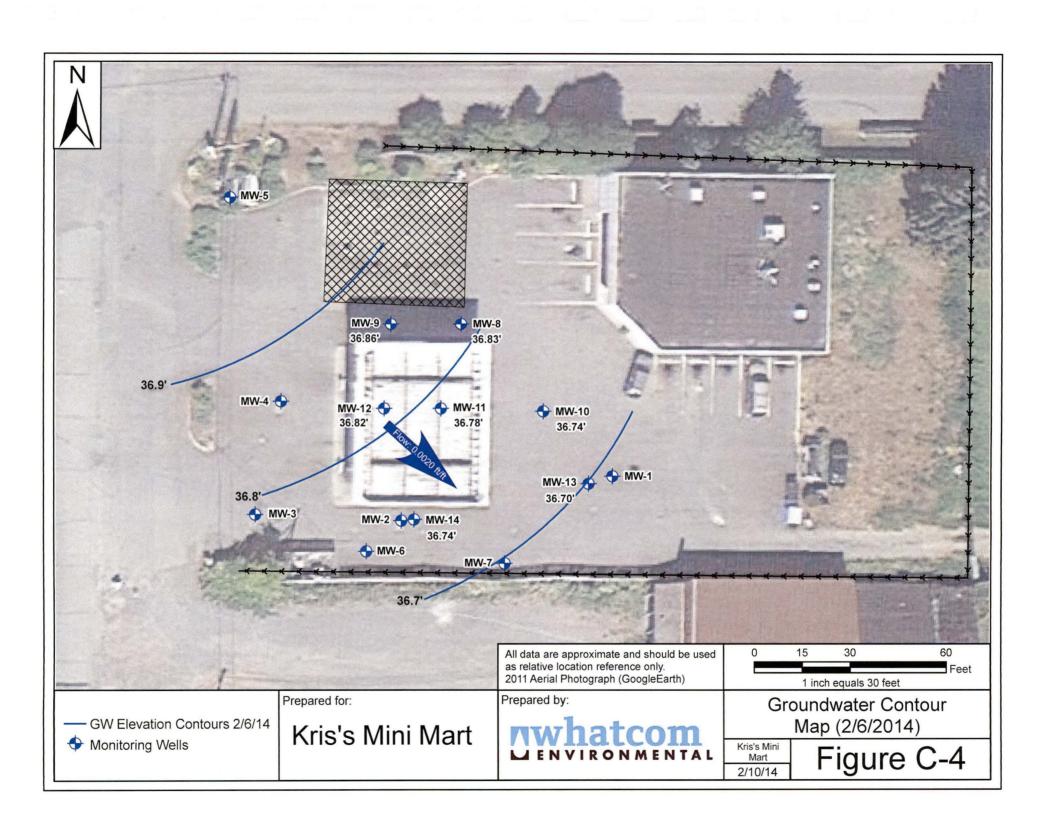
APPENDIX C

Groundwater Contour Maps









APPENDIX D

2003 Well Construction Diagrams

Samp Loc Je	(Feet	Geolog	ic Descript	ion	Air Sparge Well Piezometer						ations	
					13'5" 15'2" 15'6" Depths ir from Groun	d Surface	Coo Type Casi Scre Scre San Ben Grot Bore Drill Drille Logg Com Date	ations: t MSL)1 rdinates: X e of Casing: ng Diameter: en Slot:C en Style: [X if Pack: Norte conite Seal: t Type: 3/8 Hole Diame Rig: [X]Holle ed By: Holoe ed By: Horol pletion Date:	X PVC So Stainles X 2" 0.008 0.00	2	ush Thread] 6"	Slurry Field EC
		METHOD	SS=Split Spoon	C=Cuttings	(Not to	ocaie)		tion: 6000		Way		

والمتنا المنتا المناف والمناف
Sam Sam Sam Sam Sam Sam Sam Sam Sam Sam	Geologic Description	Air Sparge Well Piezometer	Design Specifications
Sym Samp Samp Sym Samp Sym Samp Sym Samp Sym Geologic Description	Piezometer	Elevations: (feet MSL)1	
		13'9"	
			Comments: Slight sheen in cuttings
		15'6" 15'10"	
		16'	Whatcom Environmental Services
		Depths in Feet from Ground Surface	AS-2
	METHOD SS=Split Spoon C=Cuttings	(Not to Scale)	Project: Sievers Location: 6000 Portal Way

our discussion of the first operations of the control of the first of the first of the control of the control of

Air Sparge Well Geologic Description Design Specifications Piezometer Elevations: (feet MSL)1_ Coordinates: X _____ Y Casing Diameter: 🛛 2" 🔲 3" 🔲 4" 🖂 6" 🖂 🔃 Screen Style: XMachine Slot Wire Wrap Sand Pack: Norton 10-20 Silica Sand Bentonite Seal: 1/2" Pellets X Hole Plug Slurry □1/4" Pellets □ _____ Grout Type: 3/8 Baroid Weight: Bore Hole Diameter: 11" Drill Rig: Mollow Stem Rotary Drilled By: Holocene Drilling- Matt Graham Logged By: <u>Harold Cashman</u> Completion Date: <u>5/29/03</u> D-T-W Date Date Field pH Field EC 5' 10'6" Comments: Heavy sheen in cuttings 16'4" 16'8" Whatcom Environmental 17' Services Depths in Feet from Ground Surface Project: Sievers Location: 6000 Portal Way (Not to Scale) METHOD SS=Split Spoon C=Cuttings

Air Sparge Well Sym Samp Loc PID (ppm) Depth (Feet) Geologic Description Design Specifications Piezometer Elevations: (feet MSL)1 _____ 2 ____ Coordingtes: X _____ Y Type of Casing: X PVC Sched. 40 Flush Thread
Stainless Steel Casing Diameter: X 2" ☐ 3" ☐ 4" ☐ 6" ☐ ____ Screen Slot: □ 0.008 🗵 0.010 □ Screen Style: Machine Slot Wire Wrop ____ Sand Pack: Norton 10-20 Silica Sand Bentonite Seal: 1/2" Pellets X Hole Plug Slurry □1/4" Pellets □ _____ Grout Type: 3/8 Baroid Weight: Bore Hole Digmeter 11" Drill Rig: XHollow Stem Rotary ... Drilled By: Holocene Drilling- Matt Graham Logged By: <u>Harold Cashman</u> Completion Date: 5/29/03 D-T-W Field pH Field EC Date Date 6'6" 11' 13'11" Comments: Heavy sheen in cuttings 15'8" 16' Whatcom Environmental 17' Services Depths in Feet from Ground Surface Project: Sievers Location: 6000 Portal Way (Not to Scale) METHOD SS=Split Spoon C=Cuttings

S.	हुँउ	(Peet)	Geologic	Description		Air Sparge Well Piezometer				n Sp	ecifico	ations	
		+						Elevation (feet M	ons: ISL) 1		2_		
		+					-2	Coordin	iates: X		Y_		
		†					ኞ	Туре о	f Casing: []	☑ PVC Sci	hed. 40 Flu s Steel	ush Thread	
		Ţ			ļ			Casing	Diameter:[_ ∑ 2" □ ;	3" □4" [□6" □ _	
		T						Screen	Slot: 0.	008 🗓 o.	010 🔲 _		
		†						Screen	Style: 🛚	Machine S	lot 🗌 Wire	Wrap 🔲	
		+						Sand F	ack: <u>Nortor</u>	10-20 S	ilica Sand		
		+						Benton				ole Plug 🔲	-
		+ 1						C					
		+						Bore H	ole Diamet	er: 11"	weight:	·	
		+ -						Drill Ri	g: 🖾Hollo	w Stem [□Rotary [
								Drilled	By: Holocer	<u>re Drilling-</u>	- Matt Graf	ham	
		- ↓						Logged	By: <u>Harold</u> tion Date:	5/29/03			
								Date	D-T-W	MSL	Date	Field pH	Field EC
		1 1			.								
!						4	<u>'</u>					<u> </u>	
		T				12.3	a'						
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		+			ĺ			Comment	s: <u>Heavy s</u>	sheen in c	<u>uttings</u>		
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Ì	.	1				16'8"	7'						
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		+	метнор	SS=Split Spoon C=Cu	uttings	(Not to Scale)	ice		t: Sievers on: 6000		Wav	<u> </u>	

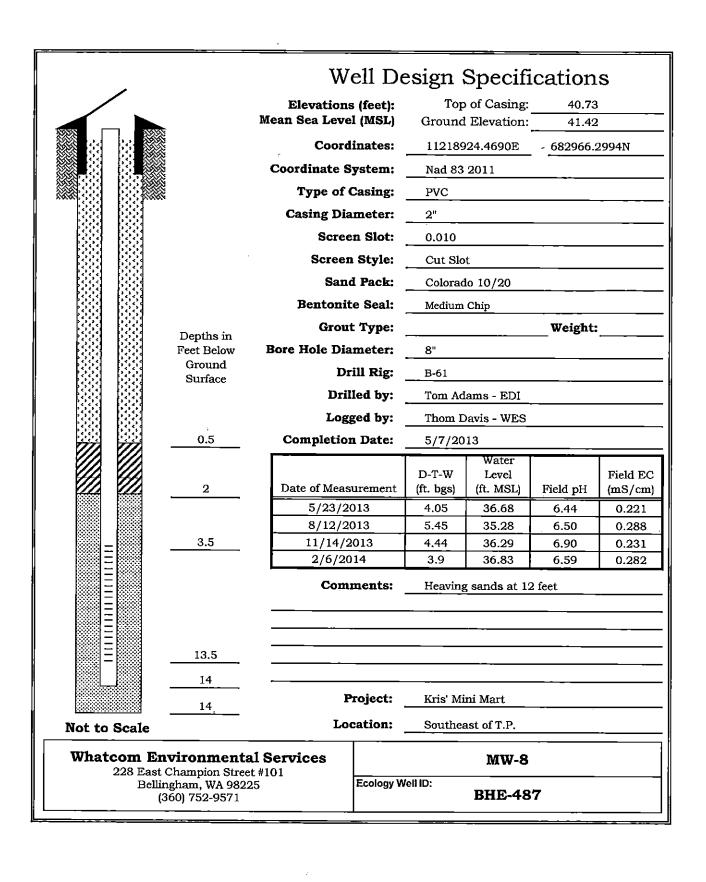
Sym	Somp Loc PID	Geologic	Description		Air Sparge Well Piezometer	Design Specifications
KS	Sor Lo	<u>E</u> Geologic	Description			Design Specifications Elevations: (feet MSL)12 Coordinates: XY Type of Casing: \[\text{N PVC Sched. 40 Flush Thread} \] \[\text{Casing Diameter: } \text{N 2" } \] \[3" \] \[4" \] \[6" \] \[Screen Slot: \[\] \[0.008 \[\text{N 0.010} \] \[Screen Style: \[\text{N Machine Slot } \] \[Wire Wrap \[\] \] \[Sand Pack: \[Norton 10-20 Silica Sand \] \[Bentonite Seal: \[\] \[1/4" Pellets \[\] \]
					3' 12'	Grout Type: 3/8 Baroid Weight: Bore Hole Diameter: 11" Drill Rig: XHollow Stern Rotary Drilled By: Holocene Drilling— Matt Groham Logged By: Harold Cashman Completion Date: 5/30/03 Date D—T—W MSL Date Field pH Field EC
					15'2"	Comments: Moderate sheen in cuttings
						Whatcom Environmental Services ΔS—6
		METHOD :	SS=Split Spoon C=Cu	ıttings	from Ground Surface (Not to Scale)	Project: Sievers Location: 6000 Portal Way

والمتنا المتنا المتنا المتنا لمتنا المتنا
Sym	Somp Loc PiD (ppm) Depth (Feet)	Geologic Description	DDC Well Piezometer	Design Specifications
8	SS	Ocologic Description	Piezometer 1 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Elevations: (feet MSL) 1
				Drill Rig: XHollow Stem Rotary Drilled By: Holocene Drilling— Matt Graham Logged By: Harold Coshman Completion Date: 5/30/03 Date D—T—W MSL Date Field pH Field EC Comments: Heavy sheen in cuttings
				Whatcom Environmental Services
	+		Depths in Feet from Ground Surfac	MW-6
		METHOD SS=Split Spoon C C=Cuttings	(Not to Comio)	Project: Sievers Location: 6000 Portal Way

DDC Well Geologic Description Design Specifications Piezometer Elevations: (feet MSL)1______2____2 Coordinates: X ______Y Type of Casing: X PVC Sched. 40 Flush Thread
Stainless Steel Casing Diameter: 🛛 2" 🔲 3" 🔲 4" 🔲 6" 🔲 __ Screen Slot: 0.008 X 0.010 **_3'2**" Screen Style: X Machine Slot Wire Wrap ___ Sand Pack: Norton 10-20 Silica Sand Bentonite Seal: 1/2" Pellets X Hole Plug Slurry □1/4" Peliets □ _____ Grout Type: 3/8 Baroid Weight: 6'8" Bore Hole Diameter 11" Drill Rig: Albellow Stem Rotary -Drilled By: Holocene Drilling— Matt Graham Logged By: Harold Cashman Completion Date: 5/30/03 D-T-W Date Date Field pH Field EC 11' 13'6" Comments: Heavy sheen in cuttings 15'8" 16' Whatcom Environmental 16' Services Depths in Feet from Ground Surface Project: Sievers Location: 6000 Portal Way (Not to Scale) SS=Split Spoon | C | C=Cuttings METHOD

APPENDIX E

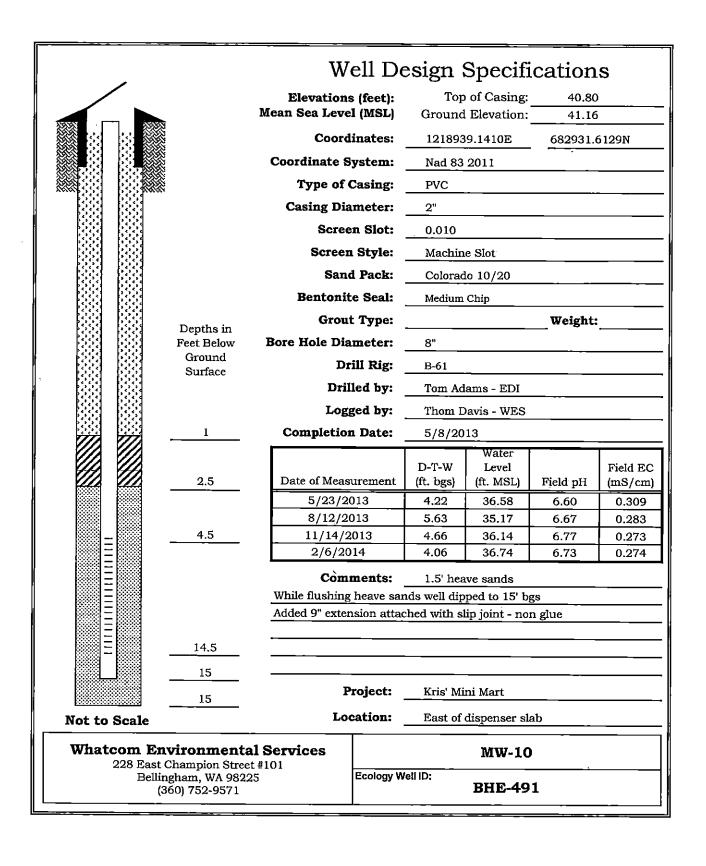
2013 Well Construction Diagrams



	i i	W	ell De	esign (Specifi	cation	s
		Elevations Mean Sea Level	(feet):	Тор	of Casing: Elevation:	40.81 41,01	
			inates:		98.6350E	682966.6	
		Coordinate S	•			082900.0	J-10014
		Type of C	•	PVC	2011		
		Casing Dia		2"			
		_	n Slot:	0.010			
		Screen	•	Machin	e Slot		
			l Pack:		lo 10/20		
		Bentonit		Medium			
			: Type:	Medium	Спр	Weight:	
	Depths in Feet Below	Bore Hole Dia		 8"		— weight:	
	Ground		ill Rig:				
	Surface		- ,	B-61	ama EDI		
			led by:	F	ams - EDI		<u>_</u>
	,	Completion	ged by:		avis - WES		
	I	Completion	I Date.	5/7/20	Water		
	_			D-T-W	Level		Field EC
	2	Date of Meass		(ft. bgs) 4.09	(ft. MSL) 36.72	Field pH 6.41	(mS/cm) 0.207
		8/12/20		5.48	35.33	6.49	0.262
	3.8	11/14/2		4.47	36.34	6.67	0.258
		2/6/20	14	3.95	36.86	6.61	0.208
		Com	ments:				
		-			·	_	
	13.8						
		-					
	14		roject:	Kris' Mi	ni Mart		
	14		cation:		<u> </u>		
Not to Scale			Tation;	South o	11.F.		
Whatcom En	vironment				MW-9		
	gham, WA 982 60) 752-9571	25 	Ecology W	/ell 1D:	BHE-48	8	
					-		

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[[[[[[[[[[[[[[[[[[[1			Completion Date:	5/9/20 D-T-W	13 Water Level	Field pH	Field EC (mS/cm)	
8/12/2013 5.71 35.23 6.50 0.24 - 3.5 11/14/2013 4.71 36.23 7.08 0.23	5/23/2013 4.32 36.62 6.50 0.525	10000001 - 10000003	3.5	8/12/2013 11/14/2013 2/6/2014	5.71 4.71	35.23 36.23	6.50 0.525 6.50 0.240 7.08 0.236		
	_ 3.5 11/14/2013 4.71 36.23 7.08 0.236	=		Comments:					
	3.5		13.5 14						
	3.5 11/14/2013 4.71 36.23 7.08 0.236 2/6/2014 4.16 36.78 6.67 0.264 Comments:			Project:	Kris' Mi				
D-T-W Level Field pH (mS/c	[22] [22]			Drilled by: Logged by:					
Logged by: Thom Davis - WES	[533] [534]		Depths in Feet Below Ground Surface	Bore Hole Diameter: Drill Rig:	8" Sim Co -	· Track Rig			
Feet Below Ground Surface Drill Rig: Sim Co - Track Rig Tom Adams - EDI Logged by: Thom Davis - WES 1 Completion Date: 5/9/2013 Date of Measurement (ft. bgs) (ft. MSL) Field pH (mS/d)	Feet Below Bore Hole Diameter: 8" Ground Surface Drill Rig: Sim Co - Track Rig Drilled by: Tom Adams - EDI		Double 1	Bentonite Seal: Grout Type:	Medium	Chip	Weight:	<u> </u>	
Grout Type: Depths in Feet Below Ground Surface Drilled by: Logged by: 1 Completion Date: Date of Measurement Grout Type: 8" Sim Co - Track Rig Tom Adams - EDI Thom Davis - WES 5/9/2013 Water D-T-W Level (ft. bgs) (ft. MSL) Field pH (mS/d)	Grout Type: Weight: Depths in Feet Below Bore Hole Diameter: 8" Ground Surface Drill Rig: Sim Co - Track Rig Drilled by: Tom Adams - EDI			Sand Pack:	Colorad	lo 10/20			
Sand Pack: Colorado 10/20 Bentonite Seal: Medium Chip Depths in Feet Below Ground Surface Drill Rig: Sim Co - Track Rig Tom Adams - EDI Logged by: Thom Davis - WES 1 Completion Date: 5/9/2013 Date of Measurement (ft. bgs) (ft. MSL) Field pH (mS/d)	Sand Pack: Colorado 10/20 Bentonite Seal: Medium Chip Grout Type: Weight: Depths in Feet Below Bore Hole Diameter: 8" Ground Surface Drill Rig: Sim Co - Track Rig Tom Adams - EDI			Screen Slot:	0.010 Machin	e Slot			
Screen Style: Machine Slot Sand Pack: Colorado 10/20 Bentonite Seal: Medium Chip Depths in Feet Below Ground Surface Drill Rig: Sim Co - Track Rig Drilled by: Tom Adams - EDI Logged by: Thom Davis - WES 1 Completion Date: 5/9/2013 Date of Measurement (ft. bgs) (ft. MSL) Field pH (mS/d)	Screen Style: Machine Slot Sand Pack: Colorado 10/20 Bentonite Seal: Medium Chip Grout Type: Weight: Depths in Feet Below Bore Hole Diameter: 8" Ground Surface Drill Rig: Sim Co - Track Rig Tom Adams - EDI		;	Casing Diameter:	2"				
Casing Diameter: 2" Screen Slot: 0.010 Screen Style: Machine Slot Sand Pack: Colorado 10/20 Bentonite Seal: Medium Chip Grout Type: Weight: Depths in Feet Below Ground Surface Drill Rig: Sim Co - Track Rig Drilled by: Tom Adams - EDI Logged by: Thom Davis - WES 1 Completion Date: 5/9/2013 Date of Measurement (ft. bgs) (ft. MSL) Field pH (mS/o	Casing Diameter: 2" Screen Slot: 0.010 Screen Style: Machine Slot Sand Pack: Colorado 10/20 Bentonite Seal: Medium Chip Grout Type: Weight: Depths in Feet Below Ground Surface Drill Rig: Sim Co - Track Rig Tom Adams - EDI			Coordinate System:		2011		<u>-</u>	
Type of Casing: Casing Diameter: 2" Screen Slot: 0.010 Screen Style: Machine Slot Colorado 10/20 Bentonite Seal: Medium Chip Depths in Peet Below Ground Surface Bore Hole Diameter: 9 Sim Co - Track Rig Tom Adams - EDI Logged by: Thom Davis - WES 1 Completion Date: 5/9/2013 Date of Measurement (ft. bgs) (ft. MSL) Field pH (mS/d)	Type of Casing: Casing Diameter: 2" Screen Slot: 0.010 Screen Style: Machine Slot Sand Pack: Colorado 10/20 Bentonite Seal: Medium Chip Depths in Feet Below Ground Ground Surface Bore Hole Diameter: Sim Co - Track Rig Tom Adams - EDI		24444	Mean Sea Level (MSL) Coordinates:		Elevation: 4.4310E	41.29 682933.4		
Coordinates: 1218914.4310E 682933.4834N	Coordinates: 1218914.4310E 682933.4834N Coordinate System: Nad 83 2011 Type of Casing: PVC Casing Diameter: 2" Screen Slot: 0.010 Screen Style: Machine Slot Sand Pack: Colorado 10/20 Bentonite Seal: Medium Chip Oppths in Feet Below Ground Type: Weight: Ground Surface Drill Rig: Sim Co - Track Rig Tom Adams - EDI			Elevations (feet): Mean Sea Level (MSL)	_	of Casing:	40.94		

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(VV C.I.I.)		~~ <	Snooifi	cation	
Elevations (feet			of Casing:	40.84	
Mean Sea Level (MS)		Ground	Elevation:	41.18	
Coordinates	<u> </u>	121889	6.0810E	682934.3	3747N
Coordinate System	:	Nad 83	2011		
Type of Casing	:1	PVC			
Casing Diamete	:	2"			
Screen Slo	: <u> </u>	0.010			
Screen Style	:!	Machine	Slot		
Sand Pacl	:	Colorad	o 10/20		
Bentonite Sea	:1	Medium	Chip		
Grout Type Depths in	:			Weight:	
Feet Below Bore Hole Diamete	:{	8"			
Ground Drill Rig	:	Sim Co -	Track Rig		
हिंदेर्ड हिंदेर्ड Drilled by	:	Tom Ad	ams - EDI		
Logged by	:	Thom D	avis - WES		
1 Completion Date	: :	5/9/20	13		
			Water	ı	
2 Date of Measureme)-T-W t. bgs)	Level (ft. MSL)	Field pH	Field EC (mS/cm)
5/23/2013		4.19	36.65	6.63	0.287
8/12/2013		5.55	35.29	6.58	0.250
3.811/14/2013		4.58	36.26	6.89	0.259
2/6/2014		4.02	36.82	6.81	0.289
Comment	:	2' Heavy	Sand at 14	bgs	
= 13.8					
		72-1-1 3 61	- 1 3 5		
14 Project	-	Kris' Mi			
Not to Scale Location	:	West sid	le under car	пору	
Whatcom Environmental Services 228 East Champion Street #101			MW-12	2	
Bellingham, WA 98225 (360) 752-9571	y Well II	D:	BHE-49	2	

ī	Elevations Mean Sea Level Coord Coordinate S Type of C	(feet): I (MSL) inates: ystem:	Top Ground 121896	of Casing: Elevation: 5.5130E	40.39 40.83 682914.	
Î	Mean Sea Level Coordi Coordinate S Type of C	(MSL) inates: ystem:	Ground 121896	Elevation:	40.83	<u> </u>
	Coordinate Sy	ystem:		5.5130E	682914.3	20002
	Type of C	•	Mad 92			UEUAF
			nau oo	2011		
	Coning Dia	Casing:	PVC		<u> </u>	
	Casing Dia	meter:	2"			
Screen Style: Machine Slot						
	Screen	Style:	Machin	e Slot		
	Sand	l Pack:	Colorad	o 10/20		
	Bentonit	e Seal:	Medium	Chip		
the in	Grout	Туре:			Weight:	:
Below	Bore Hole Dia	meter:	8"			
	Dr	ill Rig:	B-61			
	Dril	led by:	Tom Ad	ams - EDI		
	Logg	ged by:	Thom D	avis - WES		
1	Completion	Date:	5/7/20	13		
			D-T-W	Water Level		Field EC
2						(mS/cm)
						0.240
.5_		 +	4.32	36.07	6.74	0.287
	2/7/20	14	3.69	36.70	6.66	0.286
	Com	nents:		.		
						
3.5						
.4					<u> </u>	
.4		•	Kris' Mi	ni Mart	.	
_	Loc	ation:	In front	of store		
				MW-13	.	
WA 98225	201	Ecology W	eli ID:	BHE-49	o	
		Bentonit Grout ths in Below bund fface Driff Logg Completion Date of Meass 5/23/20 8/12/20 8/12/20 11/14/2 2/7/20 Comm C	Sand Pack: Bentonite Seal: Grout Type: this in Below ound fface Bore Hole Diameter: Drilled by: Logged by: Completion Date: Date of Measurement 5/23/2013 8/12/2013 11/14/2013 2/7/2014 Comments: Comments: Amental Services ion Street #101 WA 98225 Ecology W	Sand Pack: Colorad Medium	Sand Pack: Colorado 10/20	Sand Pack: Colorado 10/20

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		737		aiaua (N:C		_
				_	_	cation	
		Elevations Mean Sea Leve		_	of Casing: Elevation:	40.56 41.05	
			inates:		7.3890E	682903.2	
		Coordinate S		Nad 83		002300.2	271011
		Type of (-	PVC	2011		
		Casing Dia	_	2"			-
		_	n Slot:	0.010			
			Style:		- 01-4		
			i Style: i Pack:	Machin			
		Sant Bentonit		Medium	lo 10/20		
			Type:	Medium	Спір	Waisht	
	Depths in Feet Below	Bore Hole Dia		 8"		Weight:	
	Ground		meter: ill Rig:	·			- ,
	Surface		in Rig: led by:	B-61	ana EDI		
					ams - EDI		
	1	Completion	ged by:		avis - WES		
		Completion	Date:	5/7/20	Water		
				D-T-W	Level		Field EC
	2	Date of Meas		(ft. bgs) 3.99	(ft. MSL) 36.57	Field pH 6.76	(mS/cm)
		8/12/20		5.36	35.20	6.86	0.274
=	3.5	11/14/2		4.25	36.31	6.97	0.276
		2/7/20	14	3.82	36.74	7.01	0.28
		Com	ments:				
							
							
Ξ	13.5						
	14						
	14	P	roject:	Kris' Mi	ni Mart		
Not to Scale		Loc	cation:	South c	enter disper	isers	
Whatcom En					MW-14	<u> </u>	
Belling	Champion Stree gham, WA 982		Ecology W	ell ID:			-
(36	60) 752-9571				BHE-48	9 	
							

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APPENDIX F

Soil Laboratory Analytical Data Report



May 20, 2013

Mr. Thom Davis Whatcom Environmental Svcs., Inc. 228 E. Champion St., Suite 101 Bellingham, WA 98225

Dear Mr. Davis,

On May 10th, 16 samples were received by our laboratory and assigned our laboratory project number EV13050059. The project was identified as your Kris' Mini Mart. 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

Rick Bagan



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: **CLIENT PROJECT:**

Thom Davis

CLIENT SAMPLE ID

Kris' Mini Mart B-8 8.5ft

DATE:

5/20/2013

ALS JOB#:

EV13050059

ALS SAMPLE#:

-01

DATE RECEIVED:

5/10/2013

COLLECTION DATE:

5/7/2013 9:30:00 AM

WDOE ACCREDITATION:

C601

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	4.6	3.0	1	MG/KG	05/10/2013	DLC
Methyl T-Butyl Ether	EPA-8021	U	0.10	1	MG/KG	05/10/2013	DLC
Benzene	EPA-8021	U	0.030	1	MG/KG	05/10/2013	DLC
Toluene	EPA-8021	U	0.050	1	MG/KG	05/10/2013	DLC
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	05/10/2013	DLC
Xylenes	EPA-8021	U	0.20	1	MG/KG	05/10/2013	DLC
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	05/10/2013	LAP
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	05/10/2013	LAP
1,2-Dichloroethane	EPA-8260	U	10	1	UG/KG	05/14/2013	GAP
1,2-Dibromoethane	EPA-8260	U	5.0	1	UG/KG	05/14/2013	GAP
Lead	EPA-6020	2.0	0.50	5	MG/KG	05/13/2013	RAL
						ANALYSIS A	
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	73.8				05/10/2013	DLC
TFT	EPA-8021	74.8				05/10/2013	DLC
C25	NWTPH-DX	94.4				05/10/2013	LAP
1,2-Dichloroethane-d4	EPA-8260	106				05/14/2013	GAP

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

Chromatogram indicates that it is likely that sample contains highly weathered gasoline.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

Thom Davis

CLIENT PROJECT: Kris' Mini Mart

CLIENT CONTACT:

CLIENT SAMPLE ID B-9 6ft DATE: 5/20/2013

ALS JOB#: EV13050059

ALS SAMPLE#:

-02

DATE RECEIVED: **COLLECTION DATE:** 5/10/2013

5/7/2013 11:30:00 AM

WDOE ACCREDITATION:

C601

			REPORTING LIMITS	DILUTION		ANALYSIS A	
ANALYTE	METHOD	RESULTS	Tilali 12	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	1300	300	100	MG/KG	05/13/2013	DLC
Methyl T-Butyl Ether	EPA-8021	U	2.0	20	MG/KG	05/13/2013	DLC
Benzene	EPA-8021	U	0.60	20	MG/KG	05/13/2013	DLC
Toluene	EPA-8021	U	1.0	20	MG/KG	05/13/2013	DLC
Ethylbenzene	EPA-8021	6.1	1.0	20	MG/KG	05/13/2013	DLC
Xylenes	EPA-8021	7.0	4.0	20	MG/KG	05/13/2013	DLC
TPH-Diesel Range	NWTPH-DX	υ	220	1	MG/KG	05/10/2013	LAP
TPH-Oil Range	NWTPH-DX	υ	50	1	MG/KG	05/10/2013	LAP
1,2-Dichloroethane	EPA-8260	U	10	1	UG/KG	05/14/2013	GAP
1,2-Dibromoethane	EPA-8260	U	5.0	1	UG/KG	05/14/2013	GAP
Lead	EPA-6020	1.9	0.50	5	MG/KG	05/13/2013	RAL

			ANALYSIS ANALYSIS
SURROGATE	METHOD	%REC	DATE BY
TFT 100X Dilution	NWTPH-GX	0.0951 gs2	05/13/2013 DLC
TFT 20X Dilution	EPA-8021	2.95 GS2	05/13/2013 DLC
C25	NWTPH-DX	89.1	05/10/2013 LAP
1,2-Dichloroethane-d4	EPA-8260	182 GS1	05/14/2013 GAP

GS1 - Surrogate outside of control limits due to matrix effect. gs2 - Surrogate outside of control limits due to dilution.

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

Chromatogram indicates that it is likely that sample contains highly weathered gasoline.

Diesel range product reporting limits raised due to volatile range product overlap.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT:

CLIENT SAMPLE ID

Thom Davis

CLIENT PROJECT: Kris' Mini Mart

B-9 9ft

DATE:

5/20/2013

ALS JOB#: EV13050059

ALS SAMPLE#:

-03

DATE RECEIVED:

COLLECTION DATE:

5/10/2013 5/7/2013 11:45:00 AM

WDOE ACCREDITATION:

C601

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A	NALYSIS BY
TPH-Volatile Range	NWTPH-GX	92	6.0	2	MG/KG	05/13/2013	DLC
Methyl T-Butyl Ether	EPA-8021	U	0.20	2	MG/KG	05/13/2013	DLC
Benzene	EPA-8021	U	0.060	2	MG/KG	05/13/2013	DLC
Toluene	EPA-8021	0.12	0.10	2	MG/KG	05/13/2013	DLC
Ethylbenzene	EPA-8021	0.19	0.10	2	MG/KG	05/13/2013	DLC
Xylenes	EPA-8021	U	0.40	2	MG/KG	05/13/2013	DLC
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	05/10/2013	LAP
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	05/10/2013	LAP
Benzene	EPA-8260	13	5.0	1	UG/KG	05/17/2013	GAP
SURROGATE	METHOD	%REC				ANALYSIS A	ANALYSIS BY
TFT 2X Dilution	NWTPH-GX	99.1				05/13/2013	DLC
TET 2X Dilution	FPA-8021	98.4				05/13/2013	DLC

			AMALISIS AMALISIS
SURROGATE	METHOD	%REC	DATE BY
TFT 2X Dilution	NWTPH-GX	99.1	05/13/2013 DLC
TFT 2X Dilution	EPA-8021	98.4	05/13/2013 DLC
C25	NWTPH-DX	92.4	05/10/2013 LAP
Toluene-d8	EPA-8260	94.9	05/17/2013 GAP

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

Chromatogram indicates that it is likely that sample contains highly weathered gasoline.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT: Thom Davis Kris' Mini Mart

CLIENT SAMPLE ID B-9 14ft

DATE: ALS JOB#: 5/20/2013 EV13050059

ALS SAMPLE#:

-04

DATE RECEIVED:

-04 5/10/2013

COLLECTION DATE:

5/7/2013 11:56:00 AM

WDOE ACCREDITATION:

C601

π			REPORTING	DILUTION		ANALYSIS A	
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	05/10/2013	DLC
Methyl T-Butyl Ether	EPA-8021	U	0.10	1	MG/KG	05/10/2013	DLC
Benzene	EPA-8021	0.12	0.030	1	MG/KG	05/10/2013	DLC
Toluene	EPA-8021	0.085	0.050	1	MG/KG	05/10/2013	DLC
Ethylbenzen e	EPA-8021	U	0.050	1	MG/KG	05/10/2013	DLC
Xylenes	EPA-8021	U	0.20	1	MG/KG	05/10/2013	DLC
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	05/10/2013	LAP
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	05/10/2013	LAP

			ANALYSIS ANALYSIS
SURROGATE	METHOD	%REC	DATE BY
TFT	NWTPH-GX	79.5	05/10/2013 DLC
TFT	EPA-8021	76.7	05/10/2013 DLC
C25	NWTPH-DX	61.0	05/10/2013 LAP

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



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT: Thom Davis Kris' Mini Mart

CLIENT SAMPLE ID

B-14 2ft

DATE:

TE: 5/20/2013

ALS JOB#:

EV13050059

ALS SAMPLE#:

-05

DATE RECEIVED:

5/10/2013

COLLECTION DATE:

5/7/2013 1:45:00 PM

WDOE ACCREDITATION:

C601

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A	ANALYSIS By
TPH-Volatile Range	NWTPH-GX	U	130	20	MG/KG	05/14/2013	DLC
Methyl T-Butyl Ether	EPA-8021	U	1.0	10	MG/KG	05/13/2013	DLC
Benzene	EPA-8021	U	0.30	10	MG/KG	05/13/2013	DLC
Toluene	EPA-8021	U	0.50	10	MG/KG	05/13/2013	DLC
Ethylbenzene	EPA-8021	U	0.50	10	MG/KG	05/13/2013	DLC
Xylenes	EPA-8021	U	2.0	10	MG/KG	05/13/2013	DLC
TPH-Diesel Range	NWTPH-DX	2200	250	10	MG/KG	05/13/2013	LAP
TPH-Oil Range	NWTPH-DX	1400	500	10	MG/KG	05/13/2013	LAP
						ANALVEIC A	MAI VEIE

SURROGATE	METHOD	%REC	DATE	BY
TFT 20X Dilution	NWTPH-GX	0.274 GS2	05/14/2013	DLC
TFT 10X Dilution	EPA-8021	1.06 GS2	05/13/2013	DLC
C25 10X Dilution	NWTPH-DX	117 DS2	05/13/2013	LAP

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

GS2 - Surrogate outside of control limits due to dilution.

DS2 - Due to high dilution factor surrogate results should be considered uncontrolled.

Chromatogram indicates that it is likely that sample contains diesel 1 and lube oil.

Gasoline range reporting limit raised due to semivolatile range product overlap.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT:

Thom Davis

B-14 6ft

CLIENT SAMPLE ID

Kris' Mini Mart

DATE:

5/20/2013

ALS JOB#:

EV13050059

ALS SAMPLE#:

-06

DATE RECEIVED:

5/10/2013

COLLECTION DATE:

5/7/2013 1:55:00 PM

WDOE ACCREDITATION:

C601

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	05/13/2013	DLC
Methyl T-Butyl Ether	EPA-8021	U	0.10	1	MG/KG	05/13/2013	DLC
Benzene	EPA-8021	U	0.030	1	MG/KG	05/13/2013	DLC
Toluene	EPA-8021	U	0.050	1	MG/KG	05/13/2013	DLC
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	05/13/2013	DLC
Xylenes	EPA-8021	υ	0.20	1	MG/KG	05/13/2013	DLC
TPH-Diesel Range	NWTPH-DX	330	25	1	MG/KG	05/10/2013	LAP
TPH-Oil Range	NWTPH-DX	310	50	1	MG/KG	05/10/2013	LAP
						ANALYSIS A	NALYSIS
SUBBOGATE	RETUOD	N/DEO				DATE	BY

			ANALYSIS ANALYSIS
SURROGATE	METHOD	%REC	DATE BY
TFT	NWTPH-GX	75.7	05/13/2013 DLC
TFT	EPA-8021	74.4	05/13/2013 DLC
C25	NWTPH-DX	94.5	05/10/2013 LAP

U - Analyte analyzed for but not detected at level above reporting limit. Chromatogram indicates that it is likely that sample contains diesel 1 and lube oil.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT:

Thom Davis

CLIENT SAMPLE ID

Kris' Mini Mart B-14 9ft

DATE:

5/20/2013

ALS JOB#:

EV13050059

ALS SAMPLE#:

-07 5/10/2013

DATE RECEIVED: **COLLECTION DATE:**

5/7/2013 2:10:00 PM

WDOE ACCREDITATION:

C601

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A	NALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	70	10	MG/KG	05/13/2013	DLC
Methyl T-Butyl Ether	EPA-8021	U	1.0	10	MG/KG	05/13/2013	DLC
Benzene	EPA-8021	U	0.30	10	MG/KG	05/13/2013	DLC
Toluene	EPA-8021	U	0.50	10	MG/KG	05/13/2013	DLC
Ethylbenzene	EPA-8021	1.1	0.50	10	MG/KG	05/13/2013	DLC
Xylenes	EPA-8021	U	2.0	10	MG/KG	05/13/2013	DLC
TPH-Diesel Range	NWTPH-DX	2600	120	5	MG/KG	05/13/2013	LAP
TPH-Oil Range	NWTPH-DX	950	50	1	MG/KG	05/10/2013	LAP
1,2-Dichloroethane	EPA-8260	U	10	1	UG/KG	05/14/2013	GAP
1,2-Dibromoethane	EPA-8260	U	5.0	1	UG/KG	05/14/2013	GAP
Lead	EPA-6020	5.8	0.50	5	MG/KG	05/13/2013	RAL
SUBBOCATE	METHOD	9/ BEC				ANALYSIS A	ANALYSIS BY

			ANALYSIS ANALYSIS DATE BY
SURROGATE	METHOD	%REC	PAIC BI
TFT 10X Dilution	NWTPH-GX	0.799 GS2	05/13/2013 DLC
TFT 10X Dilution	EPA-8021	1.02 GS2	05/13/2013 DLC
C25	NWTPH-DX	110	05/10/2013 LAP
1,2-Dichloroethane-d4	EPA-8260	103	05/14/2013 GAP

GS2 - Surrogate outside of control limits due to dilution.

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

Chromatogram indicates that it is likely that sample contains diesel 1 and lube oil.

Gasoline range reporting limit raised due to semivolatile range product overlap.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT:

Thom Davis Kris' Mini Mart

CLIENT SAMPLE ID B-13 6.5ft

DATE: ALS JOB#: 5/20/2013

ALS SAMPLE#:

EV13050059

-08

DATE RECEIVED: **COLLECTION DATE:** 5/10/2013 5/7/2013 4:05:00 PM

WDOE ACCREDITATION:

C601

DATA RESULTS ...

			REPORTING	DILUTION		ANALYSIS A	ANALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	6.2	3.0	1	MG/KG	05/13/2013	DLC
Methyl T-Butyl Ether	EPA-8021	U	0.10	1	MG/KG	05/13/2013	DLC
Benzene	EPA-8021	0.031	0.030	1	MG/KG	05/13/2013	DLC
Toluene	EPA-8021	0.072	0.050	1	MG/KG	05/13/2013	DLC
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	05/13/2013	DLC
Xylenes	EPA-8021	U	0.20	1	MG/KG	05/13/2013	DLC
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	05/10/2013	LAP
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	05/10/2013	LAP
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	05/10/2013	LAP
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	05/10/2013	LAP
						ANALYSIS A	ANALYSIS
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	85.5				05/13/2013	DLC
TFT	EPA-8021	82.1	•			05/13/2013	DLC
C25	NWTPH-DX	94.0				05/10/2013	LAP
C25	NWTPH-DX	94.0				05/10/2013	LAP

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

Chromatogram indicates that it is likely that sample contains highly weathered gasoline.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: **CLIENT PROJECT:**

Thom Davis

CLIENT SAMPLE ID

Kris' Mini Mart B-13 14ft

DATE:

5/20/2013

ALS JOB#:

EV13050059

ALS SAMPLE#:

-09 5/10/2013

DATE RECEIVED: **COLLECTION DATE:**

5/7/2013 4:20:00 PM

C601

WDOE ACCREDITATION:

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A	NALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	05/10/2013	DLC
Methyl T-Butyl Ether	EPA-8021	U	0.10	1	MG/KG	05/10/2013	DLC
Benzene	EPA-8021	U	0.030	1	MG/KG	05/10/2013	DLC
Toluene	EPA-8021	U	0.050	1	MG/KG	05/10/2013	DLC
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	05/10/2013	DLC
Xylenes	EPA-8021	U	0.20	1	MG/KG	05/10/2013	DLC
		<u> </u>					

			ANALYSIS A DATE	NALYSIS BY
SURROGATE	METHOD	%REC	DATE	ы
TFT	NWTPH-GX	72.4	05/10/2013	DLC
TFT	EPA-8021	72.5	05/10/2013	DLC

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



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT:

Thom Davis

CLIENT SAMPLE ID

Kris' Mini Mart B-10 6.5ft

DATE: ALS JOB#: 5/20/2013 EV13050059

ALS SAMPLE#:

-10 5/10/2013

DATE RECEIVED: **COLLECTION DATE:**

5/8/2013 8:55:00 AM

WDOE ACCREDITATION: C601

METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A DATE	ANALYSIS BY
NWTPH-GX	4900	300	100	MG/KG	05/10/2013	DLC
EPA-8021	U	10	100	MG/KG	05/10/2013	DLC
EPA-8021	U	3.0	100	MG/KG	05/10/2013	DLC
EPA-8021	82	5.0	100	MG/KG	05/10/2013	DLC
EPA-8021	21	5.0	100	MG/KG	05/10/2013	DLC
EPA-8021	300	20	100	MG/KG	05/10/2013	DLC
NWTPH-DX	U	220	1	MG/KG	05/11/2013	LAP
NWTPH-DX	U	50	1	MG/KG	05/11/2013	LAP
EPA-8260	υ	10	1	UG/KG	05/14/2013	GAP
EPA-8260	U	5.0	1	UG/KG	05/14/2013	GAP
EPA-6020	2.1	0.50	5	MG/KG	05/13/2013	RAL
	NWTPH-GX EPA-8021 EPA-8021 EPA-8021 EPA-8021 NWTPH-DX NWTPH-DX EPA-8260 EPA-8260	NWTPH-GX 4900 EPA-8021 U EPA-8021 U EPA-8021 82 EPA-8021 21 EPA-8021 300 NWTPH-DX U NWTPH-DX U EPA-8260 U EPA-8260 U	NWTPH-GX 4900 300 EPA-8021 U 10 EPA-8021 U 3.0 EPA-8021 82 5.0 EPA-8021 21 5.0 EPA-8021 20 00 20 NWTPH-DX U 220 NWTPH-DX U 50 EPA-8260 U 10 EPA-8260 U 5.0	NWTPH-GX 4900 300 100 EPA-8021 U 10 100 EPA-8021 U 3.0 100 EPA-8021 82 5.0 100 EPA-8021 21 5.0 100 EPA-8021 21 5.0 100 NWTPH-DX U 220 1 NWTPH-DX U 50 1 EPA-8260 U 10 10 1 EPA-8260 U 5.0 1	NWTPH-GX 4900 300 100 MG/KG EPA-8021 U 10 100 MG/KG EPA-8021 U 3.0 100 MG/KG EPA-8021 82 5.0 100 MG/KG EPA-8021 21 5.0 100 MG/KG EPA-8021 21 5.0 100 MG/KG EPA-8021 21 5.0 100 MG/KG NWTPH-DX U 220 1 MG/KG NWTPH-DX U 50 1 MG/KG EPA-8260 U 10 10 1 UG/KG EPA-8260 U 5.0 1 UG/KG	NWTPH-GX 4900 300 100 MG/KG 05/10/2013 EPA-8021 U 10 100 MG/KG 05/10/2013 EPA-8021 U 3.0 100 MG/KG 05/10/2013 EPA-8021 82 5.0 100 MG/KG 05/10/2013 EPA-8021 21 5.0 100 MG/KG 05/10/2013 EPA-8021 21 5.0 100 MG/KG 05/10/2013 EPA-8021 300 20 100 MG/KG 05/10/2013 NWTPH-DX U 220 1 MG/KG 05/11/2013 NWTPH-DX U 50 1 MG/KG 05/11/2013 NWTPH-DX U 50 1 MG/KG 05/11/2013 EPA-8260 U 10 10 1 UG/KG 05/14/2013 EPA-8260 U 5.0 1 UG/KG 05/14/2013

			ANALYSIS ANALYSIS
SURROGATE	METHOD	%REC	DATE BY
TFT 100X Dilution	NWTPH-GX	0.0243 GS2	05/10/2013 DLC
TFT 100X Dilution	EPA-8021	0.0457 GS2	05/10/2013 DLC
C25	NWTPH-DX	99.4	05/11/2013 LAP
1,2-Dichloroethane-d4	EPA-8260	111	05/14/2013 GAP

GS2 - Surrogate outside of control limits due to dilution.

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains extremely weathered gasoline.

Diesel range product reporting limits raised due to volatile range product overlap.



CLIENT:

TFT

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT:

Thom Davis

CLIENT PROJECT: CLIENT SAMPLE ID Kris' Mini Mart B-10 14ft

DATE:

5/20/2013

ALS JOB#: EV13050059

ALS SAMPLE#:

-11

DATE RECEIVED:

5/10/2013

COLLECTION DATE:

5/8/2013 9:15:00 AM

05/13/2013

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WDOE ACCREDITATION:

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			REPORTING	DILUTION		ANALYSIS A	NALYSIS	
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY	
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	05/13/2013	DLC	į.
Methyl T-Butyl Ether	EPA-8021	U	0.10	1	MG/KG	05/13/2013	DLC	3
Benzene	EPA-8021	U	0.030	1	MG/KG	05/13/2013	DLC	-(
Toluene	EPA-8021	0.061	0.050	1	MG/KG	05/13/2013	DLC	-1
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	05/13/2013	DLC	11
Xylenes	EPA-8021	0.24	0.20	1	MG/KG	05/13/2013	DLC	_ ::
						ANALYSIS A	NALYSIS	
SURROGATE	METHOD	%REC				DATE	BY	
TFT	NWTPH-GX	80.9				05/13/2013	DLC	;

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

EPA-8021

81.8



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT:

Thom Davis

CLIENT SAMPLE ID

Kris' Mini Mart B-12 6.5ft

DATE:

5/20/2013

ALS JOB#:

EV13050059

ALS SAMPLE#:

-12

DATE RECEIVED:

5/10/2013

COLLECTION DATE:

5/9/2013 9:15:00 AM

WDOE ACCREDITATION:

C601

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A	NALYSIS BY
TPH-Volatile Range	NWTPH-GX	2600	120	40	MG/KG	05/13/2013	DLC
Methyl T-Butyl Ether	EPA-8021	U	4.0	40	MG/KG	05/13/2013	DLC
Benzene	EPA-8021	U	1.2	40	MG/KG	05/13/2013	DLC
Toluene	EPA-8021	U	2.0	40	MG/KG	05/13/2013	DLC
Ethylbenzene	EPA-8021	2.2	2.0	40	MG/KG	05/13/2013	DLC
Xylenes	EPA-8021	110	8.0	40	MG/KG	05/13/2013	DLC
TPH-Diesel Range	NWTPH-DX	U	220	1	MG/KG	05/11/2013	LAP
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	05/11/2013	LAP

			ANALYSIS ANAL	YSIS.
SURROGATE	METHOD	%REC	DATE B	Y
TFT 40X Dilution	NWTPH-GX	0.0857 GS2	05/13/2013 DL	.C
TFT 40X Dilution	EPA-8021	0.109 GS2	05/13/2013 DL	.C
C25	NWTPH-DX	81.9	05/11/2013 LA	P

GS2 - Surrogate outside of control limits due to dilution.

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

Chromatogram indicates that it is likely that sample contains extremely weathered gasoline.

Diesel range product reporting limits raised due to volatile range product overlap.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT:

CLIENT SAMPLE ID

Thom Davis

B-11 6.5ft

CLIENT PROJECT: Kris' N

Kris' Mini Mart

DATE:

5/20/2013

ALS JOB#:

EV13050059

ALS SAMPLE#:

-13

DATE RECEIVED:

5/10/2013

COLLECTION DATE:

5/9/2013 11:20:00 AM

WDOE ACCREDITATION:

C601

			REPORTING	DILUTION		ANALYSIS A	
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	3000	150	50	MG/KG	05/13/2013	DLC
Methyl T-Butyl Ether	EPA-8021	U	5.0	50	MG/KG	05/13/2013	DLC
Benzene	EPA-8021	U	1.5	50	MG/KG	05/13/2013	DLC
Toluene	EPA-8021	36	2.5	50	MG/KG	05/13/2013	DLC
Ethylbenzene	EPA-8021	22	2.5	50 .	MG/KG	05/13/2013	DLC
Xylenes	EPA-8021	300	10	50	MG/KG	05/13/2013	DLC
TPH-Diesel Range	NWTPH-DX	U	220	1	MG/KG	05/11/2013	LAP
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	05/11/2013	LAP
1,2-Dichloroethane	EPA-8260	U	10	1	UG/KG	05/14/2013	GAP
1,2-Dibromoethane	EPA-8260	U	5.0	1	UG/KG	05/14/2013	GAP
Lead	EPA-6020	2.3	0.50	5	MG/KG	05/13/2013	RAL

			ANALYSIS ANALYSIS
SURROGATE	METHOD	%REC	DATE BY
TFT 50X Dilution	NWTPH-GX	0.0303 GS2	05/13/2013 DLC
TFT 50X Dilution	EPA-8021	0.0778 GS2	05/13/2013 DLC
C25	NWTPH-DX	73.8	05/11/2013 LAP
1,2-Dichloroethane-d4	EPA-8260	109	05/14/2013 GAP

GS2 - Surrogate outside of control limits due to dilution.

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

Chromatogram indicates that it is likely that sample contains extremely weathered gasoline.

Diesel range product reporting limits raised due to volatile range product overlap.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT:

Thom Davis Kris' Mini Mart

CLIENT SAMPLE ID B-11 10ft

DATE: ALS JOB#: 5/20/2013

EV13050059

ALS SAMPLE#:

-14

DATE RECEIVED:

5/10/2013

COLLECTION DATE:

5/9/2013 11:40:00 AM

WDOE ACCREDITATION:

C601

DATA RESULTS

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	59	3.0	1	MG/KG	05/13/2013	DLC
Methyl T-Butyl Ether	EPA-8021	U	0.10	1	MG/KG	05/13/2013	DLC
Benzene	EPA-8021	U	0.030	1	MG/KG	05/13/2013	DLC
Toluene	EPA-8021	0.54	0.050	1	MG/KG	05/13/2013	DLC
Ethylbenzene	EPA-8021	0.44	0.050	1	MG/KG	05/13/2013	DLC
Xylenes	EPA-8021	4.2	0.20	1	MG/KG	05/13/2013	DLC
TPH-Diesel Range	NWTPH-DX	Ŭ	25	1	MG/KG	05/11/2013	LAP
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	05/11/2013	LAP
						ANALYSIS A	NALYSIS

SURROGATE	METHOD	%REC	ANALYSIS AN DATE	ALYSIS BY
TFT	NWTPH-GX	107	05/13/2013	DLC
TFT	EPA-8021	107	05/13/2013	DLC
C25	NWTPH-DX	94.4	05/11/2013	LAP

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

Chromatogram indicates that it is likely that sample contains extremely weathered gasoline.



CLIENT:

TFT

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT: Thom Davis Kris' Mini Mart

CLIENT SAMPLE ID

B-11 15ft

DATE: 5/

5/20/2013

ALS JOB#:

EV13050059

ALS SAMPLE#:

-15

DATE RECEIVED:

5/10/2013

COLLECTION DATE:

5/9/2013 12:00:00 PM

05/11/2013

DLC

WDOE ACCREDITATION:

C601

DATA RESULTS -

			REPORTING	DILUTION		ANALYSIS A	ANALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	05/11/2013	DLC
Methyl T-Butyl Ether	EPA-8021	U	0.10	1	MG/KG	05/11/2013	DLC
Benzene	EPA-8021	U	0.030	1	MG/KG	05/11/2013	DLC
Toluene	EPA-8021	U	0.050	1	MG/KG	05/11/2013	DLC
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	05/11/2013	DLC
Xylenes	EPA-8021	U	0.20	1	MG/KG	05/11/2013	DLC
Lead	EPA-6020	2.0	0.50	5	MG/KG	05/13/2013	RAL
SURROGATE	METHOD	%REC				ANALYSIS A	ANALYSIS BY
TFT	NWTPH-GX	71.9				05/11/2013	DLC

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

EPA-8021



CLIENT:

TFT 50X Dilution

C25

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT:

Thom Davis

CLIENT PROJECT: Kris' Min
CLIENT SAMPLE ID B-16 6.5

Thom Dovic

Kris' Mini Mart B-16 6.5ft DATE:

: 5/20/2013

ALS JOB#:

EV13050059

ALS SAMPLE#:

: -16

DATE RECEIVED:

5/10/2013

COLLECTION DATE:

5/9/2013 1:00:00 PM

05/13/2013

05/11/2013

DLC

LAP

WDOE ACCREDITATION:

C601

DATA RESULTS __

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A	NALYSIS BY
TPH-Volatile Range	NWTPH-GX	2600	150	50	MG/KG	05/13/2013	DLC
Methyl T-Butyl Ether	EPA-8021	U	5.0	50	MG/KG	05/13/2013	DLC
Benzene	EPA-8021	U	1.5	50	MG/KG	05/13/2013	DLC
Toluene	EPA-8021	22	2.5	50	MG/KG	05/13/2013	DLC
Ethylbenzene	EPA-8021	15	2.5	50	MG/KG	05/13/2013	DLC
Xylenes	EPA-8021	230	10	50	MG/KG	05/13/2013	DLC
TPH-Diesel Range	NWTPH-DX	U	220	1	MG/KG	05/11/2013	LAP
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	05/11/2013	LAP
Lead	EPA-6020	2.2	0.50	5	MG/KG	05/13/2013	RAL
						ANALYSIS A	
SURROGATE	METHOD	%REC				DATE	BY
TFT 50X Dilution	NWTPH-GX	0.0349 GS2				05/13/2013	DLC

GS2 - Surrogate outside of control limits due to dilution.

0.0743 GS2

84.5

EPA-8021

NWTPH-DX

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

Chromatogram indicates that it is likely that sample contains extremely weathered gasoline.

Diesel range product reporting limits raised due to volatile range product overlap.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

DATE: ALS SDG#: 5/20/2013

WDOE ACCREDITATION:

EV13050059 C601

CLIENT CONTACT: CLIENT PROJECT: Thom Davis Kris' Mini Mart

LABORATORY BLANK RESULTS

MBG-051013S - Batch 3729 - Soil by NWTPH-GX

REPORTING DILUTION ANALYSIS ANALYSIS DATE BY **ANALYTE METHOD RESULTS** LIMITS **FACTOR** UNITS TPH-Volatile Range **NWTPH-GX** U 3.0 1 MG/KG 05/10/2013 DLC

MB-051013S - Batch 3729 - Soil by EPA-8021

REPORTING DILUTION **ANALYSIS ANALYSIS ANALYTE METHOD RESULTS** LIMITS **FACTOR** . UNITS DATE BY Methyl T-Butyl Ether MG/KG 05/10/2013 DLC EPA-8021 ш 0.10 1 u DLC Benzene EPA-8021 0.030 MG/KG 05/10/2013 1 Toluene EPA-8021 U 0.050 MG/KG 05/10/2013 DLC 1 Ethylbenzene EPA-8021 U 0.050 MG/KG 05/10/2013 DLC 1 MG/KG 05/10/2013 DLC **Xylenes** EPA-8021 0.20 1

MB-051013S2 - Batch 3728 - Soil by NWTPH-DX

REPORTING DILUTION **ANALYSIS ANALYSIS** RESULTS **FACTOR** DATE BY **ANALYTE** METHOD LIMITS UNITS MG/KG 05/10/2013 TPH-Diesel Range **NWTPH-DX** 25 LAP U 1 TPH-Oil Range **NWTPH-DX** U 50 MG/KG 05/10/2013 LAP 1

MB-051413S - Batch 3739 - Soil by EPA-8260

DILUTION REPORTING ANALYSIS ANALYSIS **ANALYTE** METHOD RESULTS **FACTOR** UNITS DATE BY LIMITS 1.1-Dichloroethene EPA-8260 U 10 UG/KG 05/14/2013 GAP 1 1,2-Dichloroethane EPA-8260 U 10 UG/KG 05/14/2013 GAP 1 Benzene EPA-8260 Ū 5.0 UG/KG 05/14/2013 GAP 1 Toluene EPA-8260 U UG/KG 05/14/2013 GAP 10 1 1,2-Dibromoethane EPA-8260 UG/KG 05/14/2013 **GAP** U 5.0 1

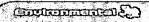
MB-051713S - Batch 3750 - Soil by EPA-8260

REPORTING ANALYSIS ANALYSIS DILUTION **ANALYTE METHOD RESULTS** LIMITS **FACTOR** UNITS DATE BY 1,1-Dichloroethene EPA-8260 u 10 1 UG/KG 05/17/2013 GAP 1.2-Dichloroethane EPA-8260 U 10 1 UG/KG 05/17/2013 **GAP** Benzene EPA-8260 U 5.0 1 UG/KG 05/17/2013 GAP Toluene EPA-8260 U 10 1 UG/KG 05/17/2013 GAP 1,2-Dibromoethane EPA-8260 U 5.0 1 UG/KG 05/17/2013 GAP

Page 18

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





CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

DATE: ALS SDG#: 5/20/2013

WDOE ACCREDITATION:

EV13050059

CLIENT CONTACT: CLIENT PROJECT: Thom Davis Kris' Mini Mart

C601

LABORATORY BLANK RESULTS

MB-051013S - Batch 3726 - Soil by EPA-6020

REPORTING DILUTION **ANALYSIS ANALYSIS** ANALYTE RESULTS **METHOD** LIMITS **FACTOR** UNITS DATE BY Lead EPA-6020 U 0.10 1 MG/KG 05/13/2013 RAL



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

ALS SDG#:

5/20/2013 EV13050059

WDOE ACCREDITATION:

DATE:

C601

CLIENT CONTACT: CLIENT PROJECT: Thom Davis Kris' Mini Mart

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 3729 - Soil by NWTPH-GX

					ANALYSIS	ANALYSIS	
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	DATE	BY	
TPH-Volatile Range - BS	NWTPH-GX	75.7			05/10/2013	DLC	
TPH-Volatile Range - BSD	NWTPH-GX	73.6	3		05/10/2013	DLC	

ALS Test Batch ID: 3729 - Soil by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS Date	ANALYSIS By
Methyl T-Butyl Ether - BS	EPA-8021	85.5		·	05/10/2013	DLC
Methyl T-Butyl Ether - BSD	EPA-8021	88.2	3		05/10/2013	DLC
Benzene - BS	EPA-8021	85.5			05/10/2013	DLC
Benzene - BSD	EPA-8021	89.3	4		05/10/2013	DLC
Toluene - BS	EPA-8021	88.7			05/10/2013	DLC ·
Toluene - BSD	EPA-8021	91.7	3		05/10/2013	DLC
Ethylbenzene - BS	EPA-8021	85.8			05/10/2013	DLC
Ethylbenzene - BSD	EPA-8021	88.6	3		05/10/2013	DLC
Xylenes - BS	EPA-8021	87.8			05/10/2013	DLC
Xylenes - BSD	EPA-8021	90.7	3		05/10/2013	DLC

ALS Test Batch ID: 3728 - Soil by NWTPH-DX

					ANALYSIS	ANALYSIS	
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	DATE	BY	
TPH-Diesel Range - BS	NWTPH-DX	81.5			05/10/2013	LAP	
TPH-Diesel Range - BSD	NWTPH-DX	90.6	11		05/10/2013	LAP	

ALS Test Batch ID: 3739 - Soil by EPA-8260

					ANALYSIS	ANALYSIS
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	DATE	BY
1,1-Dichloroethene - BS	EPA-8260	108			05/14/2013	GAP
1,1-Dichloroethene - BSD	EPA-8260	111	2		05/14/2013	GAP
Benzene - BS	EPA-8260	108			05/14/2013	GAP
Benzene - BSD	EPA-8260	106	2		05/14/2013	GAP
Toluene - BS	EPA-8260	102			05/14/2013	GAP
Toluene - BSD	EPA-8260	96.4	6		05/14/2013	GAP

ALS Test Batch ID: 3750 - Soil by EPA-8260

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
1,1-Dichloroethene - BS	EPA-8260	107			05/17/2013	GAP
1,1-Dichloroethene - BSD	EPA-8260	108	1		05/17/2013	GAP

Page 20

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





CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

ALS SDG#: WDOE ACCREDITATION: 5/20/2013

DATE:

EV13050059 C601

CLIENT CONTACT: CLIENT PROJECT:

Thom Davis Kris' Mini Mart

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS Date	ANALYSIS BY
Benzene - BS	EPA-8260	114			05/17/2013	GAP
Benzene - BSD	EPA-8260	114	0		05/17/2013	GAP
Toluene - BS	EPA-8260	109			05/17/2013	GAP
Toluene - BSD	EPA-8260	109	0		05/17/2013	GAP

ALS Test Batch ID: 3726 - Soil by EPA-6020

					ANALYSIS	ANALYSIS
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	DATE	BY
Lead - BS	EPA-6020	106			05/13/2013	RAL
Lead - BSD	EPA-6020	105	1		05/13/2013	RAL

APPROVED BY

Laboratory Director

Received By: ..

A18 Environmental 8620 Holly Drive, Suite 100 Everett, WA 98208 Phone (425) 356-2600 (425) 356-2626 Fax http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

EV13	2500	59

* Tumaround request less than standard may incur Rush Charges

(Laboratory Use Only)

ALS Job#

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	ADDRESS:	aim #	1945	67	`	7 - LV (M	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 🗷 EPA-8260 🗆	Halogenated Volatiles by	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM	PCB 🛮 Pesticides 🖾 by EPA 8081/8082	Metals-MTCA-5□ RCRA-8 □ Pri Pol □ TAL	Metals Other (Specify)	-Metal							NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
		MPLE I.D.	DATE	TIME	TYPE	LAB#	NWT	MA I	NWI	BTEX	MTB	Halo	Volat	E08/	ED8/	Semi	Polyc	ЬСВ	Meta	_	TCLP							NUN	띭
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Received By: .

ALS Environmental 8620 Holly Drive, Suite 100 Everett, WA 98208 Phone (425) 356-2600 (425) 356-2626 Fax http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job#	(Laboratory Use Only)
M//20	77) N TO

* Turnaround request less than standard may incur Rush Charges

I W G G													Date	<u></u>	[4		. Pag		4-		<u>. Of _</u>	4	
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PROJECT MANAGER: Thom										_] Wis				□ _s								
ADDRESS: 228 E Champion #101						}				Semivolatile Organic Compounds by EPA 8270	Polycyclic Arematic Hydrocarbons (PAH) by EPA-8270 SIM	. 82	₹,	(9d)	TCLP-Metals 🗆 VOA 🗀 Semi-Vol 🖯 Pest 🗀 Herbs 🗀								
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SAMPLE I.D. DATE TIME TYPE LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 \$ EPA-8260 □	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Serniv	alycyc	PCB Pesticides	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL	Metals Other (Specify) Lead	N-410.				} }			NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
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APPENDIX G

Groundwater Laboratory Analytical Data Reports



June 3, 2013

Mr. Thom Davis Whatcom Environmental Svcs., Inc. 228 E. Champion St., Suite 101 Bellingham, WA 98225

Dear Mr. Davis,

On May 24th, 18 samples were received by our laboratory and assigned our laboratory project number EV13050149. The project was identified as your Kris' Mini Mart. 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

Rick Bagan

Laboratory Director



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT:

Thom Davis

CLIENT PROJECT:

Kris' Mini Mart

CLIENT SAMPLE ID MW-8 DATE:

6/3/2013

ALS JOB#:

EV13050149

ALS SAMPLE#:

-01

DATE RECEIVED: **COLLECTION DATE:** 5/24/2013

5/22/2013 11:00:00 AM

WDOE ACCREDITATION: C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A	NALYSIS BY
TPH-Volatile Range	NWTPH-GX	6100	250	5	UG/L	05/29/2013	DLC
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	05/28/2013	DLC
Benzene	EPA-8021	43	1.0	1	UG/L	05/28/2013	DLC
Toluene	EPA-8021	6.4	1.0	1	UG/L	05/28/2013	DLC
Ethylbenzene	EPA-8021	5.9	1.0	1	UG/L	05/28/2013	DLC
Xylenes	EPA-8021	16	3.0	1	UG/L	05/28/2013	DLC
TPH-Diesel Range	NWTPH-DX	υ	250	1	UG/L	05/28/2013	EBS
TPH-Oil Range	NWTPH-DX	υ	250	1	UG/L	05/28/2013	EBS
1,2-Dichloroethane	EPA-8260 SIM	υ	0.020	1	UG/L	06/01/2013	GAP
1,2-Dibromoethane	* EPA-8260 SIM	U	0.010	1	UG/L	06/01/2013	GAP
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	05/29/2013	RAL
SURROGATE	METHOD	%REC				ANALYSIS A	ANALYSIS BY

SURROGATE	METHOD	%REC	DATE BY
TFT 5X Dilution	NWTPH-GX	113	05/29/2013 DLC
TFT	EPA-8021	189 GS3	05/28/2013 DLC
C25	NWTPH-DX	87.4	05/28/2013 EBS
1,2-Dichloroethane-d4	EPA-8260 SIM	97.4	06/01/2013 GAP

GS3 - Surrogate outside of control limits due to coeluting compounds.

Diesel range product reporting limits raised due to volatile range product overlap.

ALS Laboratory Group A Campbell Brothers Limited Company

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

Chromatogram indicates that it is likely that sample contains highly weathered gasoline.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT:

Thom Davis

CLIENT SAMPLE ID

Kris' Mini Mart MW-9

DATE:

6/3/2013

ALS JOB#:

EV13050149

ALS SAMPLE#:

-02

DATE RECEIVED:

5/24/2013

5/22/2013 12:00:00 PM

COLLECTION DATE: WDOE ACCREDITATION:

C601

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	4000	250	5	UG/L	05/29/2013	DLC
Methyl T-Butyl Ether	EPA-8021	ប	3.0	1	UG/L	05/29/2013	DLC
Benzene	EPA-8021	40	1.0	1	UG/L	05/29/2013	DLC
Toluene	EPA-8021	5.9	1.0	1	UG/L	05/29/2013	DLC
Ethylbenzene	EPA-8021	9.7	1.0	1	UG/L	05/29/2013	DLC
Xylenes	EPA-8021	49	3.0	1	UG/L	05/29/2013	DLC
TPH-Diesel Range	NWTPH-DX	U	250	1	UG/L	05/28/2013	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	05/28/2013	EBS
1,2-Dichloroethane	EPA-8260 SIM	υ	0.020	1	UG/L	06/01/2013	GAP
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	06/01/2013	GAP
Lead (Dissolved)	EPA-200.8	υ	1.0	1	UG/L	05/29/2013	RAL
						ANALYSIS A	ANALYSIS
SUBBOCATE	METHOD	0/BEC				DATE	BY

SURROGATE	METHOD	%REC	ANALYSIS ANALYSIS
			DATE BY
TFT 5X Dilution	NWTPH-GX	110	05/29/2013 DLC
TFT	EPA-8021	169 GS3	05/29/2013 DLC
C25	NWTPH-DX	89.3	05/28/2013 EBS
1,2-Dichloroethane-d4	EPA-8260 SIM	97.6	06/01/2013 GAP

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

GS3 - Surrogate outside of control limits due to coeluting compounds.

Chromatogram indicates that it is likely that sample contains highly weathered gasoline.

Diesel range product reporting limits raised due to volatile range product overlap.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT:

Thom Davis

CLIENT PROJECT: CLIENT SAMPLE ID Kris' Mini Mart MW-10

DATE:

6/3/2013 EV13050149

ALS JOB#: ALS SAMPLE#:

-03

DATE RECEIVED:

5/24/2013

COLLECTION DATE:

5/22/2013 1:00:00 PM

WDOE ACCREDITATION:

C601

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A	NALYSIS BY
TPH-Volatile Range	NWTPH-GX	12000	500	10	UG/L	05/29/2013	DLC
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	05/29/2013	DLC
Benzene	EPA-8021	3.9	1.0	1	UG/L	05/29/2013	DLC
Toluene	EPA-8021	1200	10	10	UG/L	05/29/2013	DLC
Ethylbenzene	EPA-8021	180	10	10	UG/L	05/29/2013	DLC
Xylenes	EPA-8021	1600	30	10	UG/L	05/29/2013	DLC
TPH-Diesel Range	NWTPH-DX	U	250	1	UG/L	05/28/2013	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	05/28/2013	EBS
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	06/01/2013	GAP
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	06/01/2013	GAP
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	05/29/2013	RAL

			ANALYSIS ANALYSIS
SURROGATE	METHOD	%REC	DATE BY
TFT 10X Dilution	NWTPH-GX	98.5	05/29/2013 DLC
TFT	EPA-8021	131	05/29/2013 DLC
TFT 10X Dilution	EPA-8021	106	05/29/2013 DLC
C25	NWTPH-DX	89.7	05/28/2013 EBS
1,2-Dichloroethane-d4	EPA-8260 SIM	97.6	06/01/2013 GAP

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

Chromatogram indicates that it is likely that sample contains lightly weathered gasoline. Diesel range product reporting limits raised due to volatile range product overlap.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

Thom Davis

CLIENT CONTACT: **CLIENT PROJECT:**

Kris' Mini Mart

CLIENT SAMPLE ID MW-11

DATE:

6/3/2013

ALS JOB#: EV13050149

ALS SAMPLE#:

-04

DATE RECEIVED: **COLLECTION DATE:** 5/24/2013

5/22/2013 2:00:00 PM

WDOE ACCREDITATION: C601

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	41000	1200	25	UG/L	05/29/2013	DLC
Methyl T-Butyl Ether	EPA-8021	U	30	10	UG/L	05/29/2013	DLC
Benzene	EPA-8021	18	10	10	UG/L	05/29/2013	DLC
Toluene	EPA-8021	2400	25	25	UG/L	05/29/2013	DLC
Ethylbenzene	EPA-8021	740	10	10	UG/L	05/29/2013	DLC
Xylenes	EPA-8021	7300	75	25	UG/L	05/29/2013	DLC
TPH-Diesel Range	NWTPH-DX	U	2500	1	UG/L	05/28/2013	EB\$
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	05/28/2013	EBS
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	06/01/2013	GAP
1,2-Dibromoethane	EPA-8260 SIM	υ	0.010	1	UG/L	06/01/2013	GAP
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	05/29/2013	RAL

			ANALYSIS ANALYSIS
SURROGATE	METHOD	%REC	DATE BY
TFT 25X Dilution	NWTPH-GX	92.1	05/29/2013 DLC
TFT 10X Dilution	EPA-8021	112	05/29/2013 DLC
TFT 25X Dilution	EPA-8021	109	05/29/2013 DLC
C25	NWTPH-DX	91.8	05/28/2013 EB\$
1,2-Dichloroethane-d4	EPA-8260 SIM	98.0	06/01/2013 GAP

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

Chromatogram indicates that it is likely that sample contains lightly weathered gasoline.

Diesel range product reporting limits raised due to volatile range product overlap.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT:

Thom Davis

MW-12

CLIENT SAMPLE ID

Kris' Mini Mart

ALS JOB#: ALS SAMPLE#: 6/3/2013 EV13050149

DATE:

-05

DATE RECEIVED:

5/24/2013

COLLECTION DATE:

5/22/2013 3:00:00 PM

WDOE ACCREDITATION: C601

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A	NALYSIS BY
TPH-Volatile Range	NWTPH-GX	31000	1200	25	UG/L	05/29/2013	DLC
Methyl T-Butyl Ether	EPA-8021	U	75	25	UG/L	05/29/2013	DLC
Benzene	EPA-8021	120	25	25	UG/L	05/29/2013	DLC
Toluene	EPA-8021	880	25	25	UG/L	05/29/2013	DLC
Ethylbenzene	EPA-8021	290	25	25	UG/L	05/29/2013	DLC
Xylenes	EPA-8021	5900	75	25	UG/L	05/29/2013	DLC
TPH-Diesel Range	NWTPH-DX	U	2500	1	UG/L	05/28/2013	EBS
TPH-Oil Range	NWTPH-DX	υ	250	1	UG/L	05/28/2013	EBS
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	06/01/2013	GAP
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	06/01/2013	GAP
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	05/30/2013	RAL
•						ANALYSIS A	NALYSIS BY
SURROGATE	METHOD	%REC				DATE	Вī

•			AIALTOID AN	
SURROGATE	METHOD	%REC	DATE	BY
TFT 25X Dilution	NWTPH-GX	95.4	05/29/2013	DLC
TFT 25X Dilution	EPA-8021	104	05/29/2013	DLC
C25	NWTPH-DX	88:4	05/28/2013	EBS
1,2-Dichloroethane-d4	EPA-8260 SIM	94.7	06/01/2013	GAP

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

Chromatogram indicates that it is likely that sample contains lightly weathered gasoline.

Diesel range product reporting limits raised due to volatile range product overlap.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT:

Thom Davis Kris' Mini Mart

MW-13

CLIENT SAMPLE ID

DATE: ALS JOB#:

6/3/2013 EV13050149

ALS SAMPLE#:

-06

DATE RECEIVED:

5/24/2013

COLLECTION DATE:

5/22/2013 4:00:00 PM

WDOE ACCREDITATION: C601

			REPORTING	DILUTION		ANALYSIS A	MALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	2000	50	1	UG/L	05/29/2013	DLC
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	05/29/2013	DLC
Benzene	EPA-8021	8.3	1.0	1	UG/L	05/29/2013	DLC
Toluene	EPA-8021	6.8	1.0	1	UG/L	05/29/2013	DLC
Ethylbenzene	EPA-8021	38	1.0	1	UG/L	05/29/2013	DLC
Xylenes	EPA-8021	200	3.0	1	UG/L	05/29/2013	DLC
TPH-Diesel Range	NWTPH-DX	U	250	1	UG/L	05/28/2013	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	05/28/2013	EBS
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	06/01/2013	GAP
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	06/01/2013	GAP
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	05/29/2013	RAL

			ANALYSIS ANALYSIS
SURROGATE	METHOD	%REC	DATE BY
TFT	NWTPH-GX	87.6	05/29/2013 DLC
TFT	EPA-8021	103	05/29/2013 DLC
C25	NWTPH-DX	89.1	05/28/2013 EBS
1,2-Dichloroethane-d4	EPA-8260 SIM	95.9	06/01/2013 GAP

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

Chromatogram indicates that it is likely that sample contains weathered gasoline.

Diesel range product reporting limits raised due to volatile range product overlap.



CLIENT: Whatcom Environmental Svcs., Inc.

DATE: 6/3/2013 228 E. Champion St., Suite 101 ALS JOB#: EV13050149

-07

Bellingham, WA 98225 ALS SAMPLE#:

CLIENT CONTACT: Thom Davis DATE RECEIVED: 5/24/2013

CLIENT PROJECT: Kris' Mini Mart 5/22/2013 5:00:00 PM COLLECTION DATE:

MW-14 WDOE ACCREDITATION: CLIENT SAMPLE ID C601

DATA RESULTS REPORTING DILUTION ANALYSIS ANALYSIS LIMITS **FACTOR** DATE BY **ANALYTE** RESULTS METHOD UNITS TPH-Volatile Range **NWTPH-GX** 460 50 UG/L 05/29/2013 DLC 1 Methyl T-Butyl Ether 3.0 UG/L DLC EPA-8021 U 1 05/29/2013 U UG/L DLC Benzene EPA-8021 1.0 1 05/29/2013 UG/L Toluene EPA-8021 U 05/29/2013 DLC 1.0 Ethylbenzene EPA-8021 6.9 1.0 UG/L 05/29/2013 DLC **Xylenes** EPA-8021 U 3.0 UG/L 05/29/2013 DLC NWTPH-DX UG/L **TPH-Diesel Range** 1000 130 05/28/2013 **EBS TPH-Oil Range** NWTPH-DX U 250 UG/L 05/28/2013 **EBS** 06/01/2013 1,2-Dichloroethane EPA-8260 SIM U 0.020 UG/L GAP 1,2-Dibromoethane EPA-8260 SIM U 0.010 1 UG/L 06/01/2013 GAP Lead (Dissolved) EPA-200.8 U 1.0 1 UG/L 05/29/2013 RAL ANALYSIS ANALYSIS DATE BY **SURROGATE METHOD** %REC TFT **NWTPH-GX** 92.5 05/29/2013 DLC **TFT** 05/29/2013 DLC EPA-8021 105 C25 **NWTPH-DX EBS** 89.9 05/28/2013 1,2-Dichloroethane-d4 EPA-8260 SIM 97.9 06/01/2013 GAP

Chromatogram indicates that it is likely that sample contains highly weathered gasoline and weathered diesel 1.

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



DATE:

ALS JOB#:

6/3/2013

5/24/2013

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UG/L

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UG/L

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06/01/2013

06/01/2013

05/29/2013

GAP

GAP

RAL

EV13050149

CLIENT:

CLIENT CONTACT:

1,2-Dichloroethane

1,2-Dibromoethane

Lead (Dissolved)

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

EPA-8260 SIM

EPA-8260 SIM

EPA-200.8

ALS SAMPLE#: Thom Davis DATE RECEIVED:

DATA RESULTS

Kris' Mini Mart **CLIENT PROJECT:** 5/22/2013 6:00:00 PM **COLLECTION DATE:**

CLIENT SAMPLE ID MW-15 WDOE ACCREDITATION: C601

U

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U

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	480	50	1	UG/L	05/29/2013	DLC
Methyl T-Butyl Ether	EPA-8021	υ	3.0	1	UG/L	05/29/2013	DLC
Benzene	EPA-8021	υ	1.0	1	UG/L	05/29/2013	DLC
Toluene	EPA-8021	υ	1.0	1	UG/L	05/29/2013	DLC
Ethylbenzene	EPA-8021	6.8	1.0	1	UG/L	05/29/2013	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	05/29/2013	DLC
TPH-Diesel Range	NWTPH-DX	890	130	1	UG/L	05/28/2013	EBS
TPH-Oil Range	NWTPH-DX	υ	250	1	UG/L	05/28/2013	EBS

0.020

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1.0

			Analysis analysis Date by
SURROGATE	METHOD	%REC	DAIL DI
TFT	NWTPH-GX	110	05/29/2013 DLC
TFT	EPA-8021	114	05/29/2013 DLC
C25	NWTPH-DX	86.8	05/28/2013 EBS
1,2-Dichloroethane-d4	EPA-8260 SIM	98.2	06/01/2013 GAP

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

Chromatogram indicates that it is likely that sample contains highly weathered gasoline and weathered diesel 1.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT:

Thom Davis Kris' Mini Mart

CLIENT SAMPLE ID MW-16

DATE: ALS JOB#:

6/3/2013 EV13050149

ALS SAMPLE#:

-09

DATE RECEIVED:

5/24/2013

COLLECTION DATE:

5/22/2013 5:30:00 PM

WDOE ACCREDITATION: C601

			REPORTING	DILUTION		ANALYSIS A	ANALYSIS	
ANALYTE	METHOD ,	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY	
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	05/29/2013	DLC	
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	05/29/2013	DLC	
Benzene .	EPA-8021	U	1.0	1	UG/L	05/29/2013	DLC	
Toluene	EPA-8021	υ	1.0	1	UG/L	05/29/2013	DLC	
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	05/29/2013	DLC	
Xylenes	EPA-8021	U	3.0	1	UG/L	05/29/2013	DLC	
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	05/28/2013	EBS	
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	05/28/2013	EBS	
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	06/01/2013	GAP	
1,2-Dibromoethane	EPA-8260 SIM	υ	0.010	1	UG/L	06/01/2013	GAĖ	
						ANALYSIS A	ANALYSIS	_

			ANALYSIS ANALYSIS
SURROGATE	METHOD	%REC	DATE BY
TFT	NWTPH-GX	91.0	05/29/2013 DLC
TFT	EPA-8021	102	05/29/2013 DLC
C25	NWTPH-DX	88.0	05/28/2013 EBS
1,2-Dichloroethane-d4	EPA-8260 SIM	98.6	06/01/2013 GAP

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



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

Thom Davis

CLIENT CONTACT: **CLIENT PROJECT:**

Kris' Mini Mart

MW-1 CLIENT SAMPLE ID

DATE:

6/3/2013 EV13050149

ALS JOB#: ALS SAMPLE#:

-10

DATE RECEIVED:

5/24/2013

COLLECTION DATE:

5/23/2013 1:10:00 PM

WDOE ACCREDITATION:

C601

			REPORTING	DILUTION		ANALYSIS ANALYSIS		
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY	
TPH-Volatile Range	NWTPH-GX	υ	50	1	UG/L	05/29/2013	DLC	
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	05/29/2013	DLC	
Benzene	EPA-8021	U	1.0	1	UG/L	05/29/2013	DLC	
Toluene	EPA-8021	U	1.0	1	UG/L	05/29/2013	DLC	
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	05/29/2013	DLC	
Xylenes	EPA-8021	υ	3.0	1	UG/L	05/29/2013	DLC	
TPH-Diesel Range	NWTPH-DX	Ū	130	1	UG/L	05/28/2013	EB\$	
TPH-Oil Range	NWTPH-DX	ŭ	250	1	UG/L	05/28/2013	EBS	

			ANALYSIS ANALYSIS
SURROGATE	METHOD	%REC	DATE BY
TFT	NWTPH-GX	71.9	05/29/2013 DLC
TFT	EPA-8021	84.5	05/29/2013 DLC
C25	NWTPH-DX	87.1	05/28/2013 EBS

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



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT:

Thom Davis

CLIENT PROJECT: CLIENT SAMPLE ID Kris' Mini Mart

MW-2

. Inc. DAT

DATE:

6/3/2013

ALS JOB#:

EV13050149

ALS SAMPLE#:

-11

DATE RECEIVED:

5/24/2013

COLLECTION DATE:

5/23/2013 1:30:00 PM

WDOE ACCREDITATION:

C601

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A	NALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	05/29/2013	DLC
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	05/29/2013	DLC
Benzene	EPA-8021	U	1.0	1	UG/L	05/29/2013	DLC
Toluene	EPA-8021	Ŭ	1.0	1	UG/L	05/29/2013	DLC
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	05/29/2013	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	05/29/2013	DLC
TPH-Diesel Range	NWTPH-DX	320	130	1	UG/L	05/28/2013	EBS
TPH-Oil Range	NWTPH-DX	320	250	1	UG/L	05/28/2013	EBS

			ANALYSIS ANALYSIS
SURROGATE	METHOD	%REC	DATE BY
TFT	NWTPH-GX	84.6	05/29/2013 DLC
TFT	EPA-8021	98.3	05/29/2013 DLC
C25	NWTPH-DX	91.2	05/28/2013 EBS

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

Chromatogram indicates that it is likely that sample contains an unidentified diesel range product and lube oil.



CLIENT:

Whatcom Environmental Sycs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

ALS JOB#: ALS SAMPLE#:

DATE:

6/3/2013

EV13050149

-12

Thom Davis

CLIENT CONTACT: **CLIENT PROJECT: CLIENT SAMPLE ID**

Kris' Mini Mart

MW-3

DATE RECEIVED: **COLLECTION DATE:** 5/24/2013 5/23/2013 11:15:00 AM

WDOE ACCREDITATION:

C601

DATA RESULTS

			REPORTING	DILUTION		ANALYSIS A	NALYSI
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	05/29/2013	DLC
Methyl T-Butyl Ether	EPA-8021	υ	3.0	1	UG/L	05/29/2013	DLC
Benzene	EPA-8021	ប	1.0	1	UG/L	05/29/2013	DLC
Toluene	EPA-8021	υ	1.0	1	UG/L	05/29/2013	DLC
Ethylbenzene	EPA-8021	υ	1.0	1	UG/L	05/29/2013	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	05/29/2013	DLC
TPH-Diesel Range	NWTPH-DX	1000	130	1	UG/L	05/28/2013	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	05/28/2013	EBS

SURROGATE	METHOD	%REC	ANALYSIS ANALYS DATE BY	SIS
TFT	NWTPH-GX	85.3	05/29/2013 DLC	
TFT	EPA-8021	97.7	05/29/2013 DLC	
C25	NWTPH-DX	92.7	05/28/2013 EBS	

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

Chromatogram indicates that it is likely that sample contains an unidentified diesel range product.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: **CLIENT PROJECT:**

Thom Davis

CLIENT SAMPLE ID

MW-4

Kris' Mini Mart

6/3/2013 DATE:

ALS JOB#: EV13050149

ALS SAMPLE#:

-13

DATE RECEIVED: 5/24/2013

5/23/2013 10:15:00 AM

WDOE ACCREDITATION: C601

COLLECTION DATE:

			REPORTING	DILUTION		ANALYSIS A	ANALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	05/30/2013	DLC
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	05/30/2013	DLC
Benzene	EPA-8021	U	1.0	1	UG/L	05/30/2013	DLC
Toluene	EPA-8021	U	1.0	1	UG/L	05/30/2013	DLC
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	05/30/2013	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	05/30/2013	DLC
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	05/29/2013	EB\$
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	05/29/2013	EBS
						ANALYSIS A	ANALYSIS
SURROGATE	METHOD	%REC				DATE	BY
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SURROGATE	METHOD	%REC	DATE BY
TFT	NWTPH-GX	99.1	05/30/2013 DLC
TFT	EPA-8021	102	05/30/2013 DLC
C25	NWTPH-DX	90.5	05/29/2013 EBS

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



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

Thom Davis

CLIENT PROJECT:

CLIENT CONTACT:

CLIENT SAMPLE ID

Kris' Mini Mart

MW-5

DATE: 6/3/2013

EV13050149

ALS SAMPLE#:

ALS JOB#:

-14

DATE RECEIVED:

5/24/2013

COLLECTION DATE:

5/23/2013 9:15:00 AM

WDOE ACCREDITATION:

C601

			REPORTING		ANALYSIS ANALYSIS			
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY	
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	05/30/2013	DLC	
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	05/30/2013	DLC	
Benzene	EPA-8021	U	1.0	1	UG/L	05/30/2013	DLC	
Toluene	EPA-8021	υ	1.0	1	UG/L	05/30/2013	DLC	
Ethylbenzene	EPA-8021	υ	1.0	1	UG/L	05/30/2013	DLC	
Xylenes	EPA-8021	υ	3.0	1	UG/L	05/30/2013	DLC	
TPH-Diesel Range	NWTPH-DX	υ	130	1	UG/L	05/29/2013	EBS	
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	05/29/2013	EBS	

			ANALYSIS ANALYSIS	ANALYSIS ANALYSIS		
SURROGATE	METHOD	%REC	DATE BY			
TFT	NWTPH-GX	82.7	05/30/2013 DLC			
TFT	EPA-8021	94.5	05/30/2013 DLC			
C25	NWTPH-DX	93.7	05/29/2013 EBS			

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



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: **CLIENT PROJECT:**

Thom Davis

CLIENT SAMPLE ID

Kris' Mini Mart

MW-6

DATE:

6/3/2013

ALS JOB#:

EV13050149

ALS SAMPLE#:

-15 5/24/2013

DATE RECEIVED: **COLLECTION DATE:**

5/23/2013 12:30:00 PM

WDOE ACCREDITATION:

C601

DATA RESULTS

			REPORTING	DILUTION		ANALYSIS A	MALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	05/30/2013	DLC
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	05/30/2013	DLC
Benzene	EPA-8021	U	1.0	1	UG/L	05/30/2013	DLC
Toluene	EPA-8021	U	1.0	1	UG/L	05/30/2013	DLC
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	05/30/2013	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	05/30/2013	DLC
TPH-Diesel Range	NWTPH-DX	7800	130	1	UG/L	05/29/2013	EBS
TPH-Oil Range	NWTPH-DX	ប	250	1	UG/L	05/29/2013	EBS

			Analysis analysis
SURROGATE	METHOD	%REC	DATE BY
TFT	NWTPH-GX	87.6	05/30/2013 DLC
TFT	EPA-8021	101	05/30/2013 DLC
C25	NWTPH-DX	87.9	05/29/2013 EBS

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

Chromatogram indicates that it is likely that sample contains an unidentified diesel range product.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: **CLIENT PROJECT:**

Thom Davis Kris' Mini Mart

MW-7

CLIENT SAMPLE ID

DATE: ALS JOB#: 6/3/2013 EV13050149

ALS SAMPLE#:

-16

DATE RECEIVED: **COLLECTION DATE:** 5/24/2013 5/23/2013 12:00:00 PM

WDOE ACCREDITATION:

C601

			REPORTING	DILUTION		ANALYSIS ANALYSIS		
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY	
TPH-Volatile Range	NWTPH-GX	460	50	1	UG/L	05/30/2013	DLC	
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	05/30/2013	DLC	
Benzene	EPA-8021	3.3	1.0	1	UG/L	05/30/2013	DLC	
Toluene	EPA-8021	69	1.0	1	UG/L	05/30/2013	DLC	
Ethylbenzene	EPA-8021	1.7	1.0	1	UG/L	05/30/2013	DLC	
Xylenes	EPA-8021	60	3.0	1	UG/L	05/30/2013	DLC	
TPH-Diesel Range	NWTPH-DX	510	130	1	UG/L	05/29/2013	EBS	
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	05/29/2013	EBS	

			ANALYSIS A	NALYSIS
SURROGATE	METHOD	%REC	DATE	BY
TFT	NWTPH-GX	94.2	05/30/2013	DLC
TFT	EPA-8021	101	05/30/2013	DLC
C25	NWTPH-DX	87.8	05/29/2013	EBS

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

Chromatogram indicates that it is likely that sample contains lightly weathered gasoline and weathered diesel.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT:

Thom Davis

CLIENT SAMPLE ID

Kris' Mini Mart

MW-17

DATE:

6/3/2013

ALS JOB#:

ALS SAMPLE#:

EV13050149 -17

DATE RECEIVED:

5/24/2013

COLLECTION DATE:

5/23/2013 12:15:00 PM

WDOE ACCREDITATION:

C601

DATA RESULTS

			REPORTING	DILUTION		ANALYSIS A	MALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	530	50	1	UG/L	05/30/2013	DLC
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	05/30/2013	DLC
Benzene	EPA-8021	3.8	1.0	1	UG/L	05/30/2013	DLC
Toluene	EPA-8021	79	1.0	1	UG/L	05/30/2013	DLC
Ethylbenzene	EPA-8021	1.9	1.0	1	UG/L	05/30/2013	DLC
Xylenes	EPA-8021	72	3.0	1	UG/L	05/30/2013	DLC
TPH-Diesel Range	NWTPH-DX	490	130	1	UG/L	05/29/2013	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	05/29/2013	EBS

011ppg 0.475	•		ANALYSIS AF DATE	NALYSIS BY
SURROGATE	METHOD	%REC		
TFT	NWTPH-GX	82.9	05/30/2013	DLC
TFT	EPA-8021	97.3	05/30/2013	DLC
C25	NWTPH-DX	92.4	05/29/2013	EBS

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

Chromatogram indicates that it is likely that sample contains lightly weathered gasoline and weathered diesel.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT:

Thom Davis Kris' Mini Mart

MW-18

CLIENT SAMPLE ID

DATE:

6/3/2013

EV13050149

ALS JOB#: ALS SAMPLE#:

-18

C601

DATE RECEIVED:

COLLECTION DATE:

WDOE ACCREDITATION:

5/24/2013

5/23/2013 2:00:00 PM

DATA RESULTS :--

			REPORTING LIMITS	DILUTION		ANALYSIS A	
ANALYTE	METHOD	RESULTS	LIMIT 2	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	05/30/2013	DLC
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	05/30/2013	DLC
Benzene	EPA-8021	U	1.0	1	UG/L	05/30/2013	DLC
Toluene	EPA-8021	U	1.0	1	UG/L	05/30/2013	DLC
Ethylbenzene	EPA-8021	Ŭ	1.0	1	UG/L	05/30/2013	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	05/30/2013	DLC
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	05/29/2013	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	05/29/2013	EBS

			ANALYSIS A	NALYSIS
SURROGATE	METHOD	%REC	DATE	BY
TFT	NWTPH-GX	79.5	05/30/2013	DLC
TFT	EPA-8021	93.5	05/30/2013	DLC
C25	NWTPH-DX	89.4	05/29/2013	EBS

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



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

DATE:

6/3/2013

ALS SDG#:

EV13050149

WDOE ACCREDITATION:

C601

CLIENT CONTACT: CLIENT PROJECT:

Thom Davis Kris' Mini Mart

		PSULTS

MRG-052813W2 -	Ratch 3777 .	- Water by NWTPH-GX
INDO-OJZO I JANZ -	Daicii 3111	- YYALCI DV IXYY I FR-GA

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	05/28/2013	DLC

MB-052813W2 - Batch 3777 - Water by EPA-8021

			REPORTING	DILUTION		ANALYSIS ANALYSIS	
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
Methyl T-Butyl Ether	EPA-8021	υ	3.0	1	UG/L	05/28/2013	DLC
Benzene	EPA-8021	υ	1.0	1	UG/L	05/28/2013	DLC
Toluene	EPA-8021	υ	1.0	1	UG/L	05/28/2013	DLC
Ethylbenzene	EPA-8021	υ	1.0	1	UG/L	05/28/2013	DLC
Xylenes	EPA-8021	υ	3.0	1	UG/L	05/28/2013	DLC

MB-052813W2 - Batch 3778 - Water by NWTPH-DX

			REPORTING	DILUTION		ANALYSIS A	ANALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	05/29/2013	EBS
TPH-Oil Range	NWTPH-DX	ប	250	1	UG/L	05/29/2013	EBS

MB-060113W - Batch 3783 - Water by EPA-8260 SIM

			REPORTING	DILUTION		ANALYSIS A	ANALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
1,1-Dichloroethene	EPA-8260 SIM	υ	0.020	1	UG/L	05/31/2013	GAP
1,2-Dichloroethane	EPA-8260 SIM	υ	0.10	1	UG/L	05/31/2013	GAP
1,2-Dibromoethane	EPA-8260 SIM	υ	0.010	1	UG/L	05/31/2013	GAP

MB-052813W - Batch 3772 - Water by EPA-200.8

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY .
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	05/29/2013	RAL

Page 20

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



CLIENT:

Whatcom Environmental Sycs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

DATE:

6/3/2013

ALS SDG#: WDOE ACCREDITATION:

EV13050149 C601

CLIENT CONTACT: CLIENT PROJECT: Thom Davis Kris' Mini Mart

LABORATORY CONTROL SAMPLE RESULTS

ALC Toct	Batch ID:	2777 18/04	er by NWTPH-GX
ALS LEST	Batch ID:	<i>3///</i> - vvat	er by NWIPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range - BS	NWTPH-GX	71.9			05/28/2013	DLC
TPH-Volatile Range - BSD	NWTPH-GX	70.2	2		05/28/2013	DLC

ALS Test Batch ID: 3777 - Water by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
Methyl T-Butyl Ether - BS	EPA-8021	102		40,12	05/28/2013	DLC
Methyl T-Butyl Ether - BSD	EPA-8021	106	4		05/28/2013	DLC
Benzene - BS	EPA-8021	99.6			05/28/2013	DLC
Benzene - BSD	EPA-8021	106	6		05/28/2013	DLC
Toluene - BS	EPA-8021	97.6			05/28/2013	DLC
Toluene - BSD	EPA-8021	104	7		05/28/2013	DLC
Ethylbenzene - BS	EPA-8021	95.5			05/28/2013	DLC
Ethylbenzene - BSD	EPA-8021	101	6		05/28/2013	DLC
Xylenes - BS	EPA-8021	98.1	•		05/28/2013	DLC
Xylenes - BSD	EPA-8021	104	5		05/28/2013	DLC

ALS Test Batch ID: 3778 - Water by NWTPH-DX

	~				ANALYSIS	ANALYSIS
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	DATE	BY
TPH-Diesel Range - BS	NWTPH-DX	89.3			05/29/2013	EBS
TPH-Diesel Range - BSD	NWTPH-DX	90.5	1		05/29/2013	EBS

ALS Test Batch ID: 3783 - Water by EPA-8260 SIM

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
1,1-Dichloroethene - BS	EPA-8260 SIM	106			05/31/2013	GAP
1,1-Dichloroethene - BSD	EPA-8260 SIM	87.0	19		05/31/2013	GAP

ALS Test Batch ID: 3772 - Water by EPA-200.8

							_
Lead (Dissolved) - BSD	EPA-200.8	93.7	2		05/29/2013	RAL	
Lead (Dissolved) - BS	EPA-200.8	92.0			05/29/2013	RAL	
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	DATE	BY	

Page 21

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





APPROVED BY

Laboratory Director

ALS Environmental 8620 Holly Drive, Suite 100 Everett, WA 98208

Phone (425) 356-2600 (425) 356-2626 Fax http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job#	(Laboratory Use Only)

* Turnaround request less than standard may incur Rush Charges

	PRO	JECTID: Kris' Miv		ΑN	IALY	SIS	REC	UE	TE)									OTI	IER	(Sp	ecify)							
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		SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 X EPA-8260	Halogenated Volatiles by EPA	Volatile Organic Compounds by EPA	EDB / EDG by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM	PCB Pesticides by EPA 8081/8082	Metals-MTCA-5 🗆 RCRA-8 🗆 Pd Pol 🖫 TAL 🗀	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐			ĺ	ļ			Ì	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
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ALS Environmental 8620 Holly Drive, Suite 100 Everett, WA 98208 Phone (425) 356-2600 (425) 356-2626 Fax http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

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A113050149	

(Laboratory Use Only)

Γ	PROJECTID: Kris Wini Wast						ALY	SIS	REG	UES	TEL)									OTI	IER	(Spe	cify)			_	
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ŀ	ADDRESS: Calm # ; 19	456	7 -			NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 € EPA-8260 □	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soll)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM	PCB Pesticides by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL	Metals Other (Specify)	TCLP-Metals □ VOA □ Semi-Voi □ Pest □ Herbs □							NUMBER	RECEIVED IN GOOD CONDITION?
[SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWT	NWT	NWI	EE GE	MTB	Halo	Volat	60B	EDB/	Sem	Polyc	PCB	Meta	Meta	10.L₽						\bot		품
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August 30, 2013

Mr. Harold Cashman Whatcom Environmental Svcs., Inc. 228 E. Champion St., Suite 101 Bellingham, WA 98225

Dear Mr. Cashman,

On August 14th, 9 samples were received by our laboratory and assigned our laboratory project number EV13080077. The project was identified as your Kris' Mini Mart. 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

Rick Bagan

Laboratory Director



CLIENT:

C25

1,2-Dichloroethane-d4

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT:

CLIENT SAMPLE ID

Harold Cashman Kris' Mini Mart

MW-8

DATE:

8/30/2013

ALS JOB#:

EV13080077

ALS SAMPLE#:

-01

DATE RECEIVED:

COLLECTION DATE:

8/14/2013

8/12/2013 1:25:00 PM

08/15/2013

08/16/2013

EBS

GAP

WDOE ACCREDITATION: C601

		DAT	ARESULTS			生化 推定	148 Martin (1981) (1981)
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	990	50	1	UG/L	08/16/2013	DLC
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	08/16/2013	DLC
Benzene	EPA-8021	2.5	1.0	1	UG/L	08/16/2013	DLC
Toluene	EPA-8021	2.6	1.0	1	UG/L	08/16/2013	DLC
Ethylbenzene	EPA-8021	2.3	1.0	1	UG/L	08/16/2013	DLC
Xylenes	EPA-8021	3.7	3.0	1	UG/L	08/16/2013	DLC
TPH-Diesel Range	NWTPH-DX	U	250	1	UG/L	08/15/2013	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	08/15/2013	EBS
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	08/16/2013	GAP
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	08/16/2013	GAP
Lead	EPA-200.8	U	1.0	1	UG/L	08/19/2013	RAL
SURROGATE	METHOD	%REC				ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	107				08/16/2013	DLC
TFT	EPA-8021	106				08/16/2013	DLC

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

96.1

99.1

NWTPH-DX

EPA-8260 SIM

Chromatogram indicates that it is likely that sample contains highly weathered gasoline.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT: Harold Cashman Kris! Mini Mart

CLIENT SAMPLE ID

MW-9

AILE OF AINACIONS

DATE:

8/30/2013

ALS JOB#:

EV13080077

ALS SAMPLE#:

-02

C601

DATE RECEIVED: COLLECTION DATE:

WDOE ACCREDITATION:

8/14/2013

8/12/2013 2:15:00 PM

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A DATE	NALYSIS BY	•
TPH-Volatile Range	NWTPH-GX	3500	100	2	UG/L	08/16/2013	DLC	:
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	08/16/2013	DLC	:
Benzene	EPA-8021	22	1.0	1	UG/L	08/16/2013	DLC	:
Toluene	EPA-8021	2.4	1.0	1	UG/L	08/16/2013	DLC	:
Ethylbenzene	EPA-8021	8.7	1.0	1	UG/L	08/16/2013	DLC	:
Xylenes	EPA-8021	57	3.0	1	UG/L	08/16/2013	DLC	:
TPH-Diesel Range	NWTPH-DX	U	250	1	UG/L	08/15/2013	EBS	:
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	08/15/2013	EBS	:
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	08/16/2013	GAP	:
1,2-Dibromoethane	EPA-8260 SIM	U -	0.010	1	UG/L	08/16/2013	GAP	:
Lead	EPA-200.8	U	1.0	1	UG/L	08/19/2013	RAL	:

SURROGATE	METHOD	%REC	ANALYSIS ANALYSIS DATE BY	
TFT 2X Dilution	NWTPH-GX	128	08/16/2013 DLC	
TFT	EPA-8021	116	08/16/2013 DLC	
C25	NWTPH-DX	98.0	08/15/2013 EBS	
1,2-Dichloroethane-d4	EPA-8260 SIM	99.7	08/16/2013 GAP	

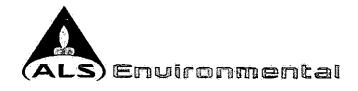
U - Analyte analyzed for but not detected at level above reporting limit.

ALS Laboratory Group A Campbell Brothers Limited Company



Chromatogram indicates that it is likely that sample contains weathered gasoline.

Diesel range product reporting limits raised due to volatile range product overlap.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT:

Harold Cashman Kris' Mini Mart

CLIENT SAMPLE ID

MW-10

DATE:

8/30/2013

ALS JOB#: ALS SAMPLE#: EV13080077

-03

DATE RECEIVED:

8/14/2013

COLLECTION DATE:

8/12/2013 3:10:00 PM

WDOE ACCREDITATION:

C601

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A Date	NALYSIS BY	,
TPH-Volatile Range	NWTPH-GX	2400	100	2	UG/L	08/16/2013	DLC	:
Methyl T-Butyl Ether	EPA-8021	U	6.0	2	UG/L	08/16/2013	DLC	:
Вепzепе	EPA-8021	6.9	_ 2.0	2	UG/L	08/16/2013	DLC	
Toluene	EPA-8021	130	2.0	2	UG/L	08/16/2013	DLC	:
Ethylbenzene	EPA-8021	38	2.0	2	UG/L	08/16/2013	DLC	÷
Xylenes	EPA-8021	290	6.0	2	UG/L	08/16/2013	DLC	;
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	08/15/2013	EBS	ź
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	08/15/2013	EBS	:
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	08/16/2013	GAP	*
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	08/16/2013	GAP	:
Lead	EPA-200.8	U	1.0	1	UG/L	08/19/2013	RAL	:

				ANALYSIS ANALYSIS		
SURROGATE	METHOD	%REC		DATE	BY	
TFT 2X Dilution	NWTPH-GX	113		08/16/2013	DLC	
TFT 2X Dilution	EPA-8021	111	1	08/16/2013	DLC	
C25	NWTPH-DX	98.0		08/15/2013	EBS	
1,2-Dichloroethane-d4	EPA-8260 SIM	100		08/16/2013	GAP	

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

Chromatogram indicates that it is likely that sample contains lightly weathered gasoline.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: **CLIENT PROJECT:**

Harold Cashman Kris' Mini Mart

CLIENT SAMPLE ID

MW-11

DATE:

8/30/2013

ALS JOB#:

EV13080077

ALS SAMPLE#:

-04

DATE RECEIVED:

8/14/2013

COLLECTION DATE:

8/12/2013 3:50:00 PM

WDOE ACCREDITATION: C601

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A	NALYSIS BY	
TPH-Volatile Range	NWTPH-GX	39000	1200	25	UG/L	08/16/2013	DLC	1.
Methyl T-Butyl Ether	EPA-8021	ប	75	25	UG/L	08/16/2013	DLC	:
Benzene	EPA-8021	66	25	25	UG/L	08/16/2013	DLC	;
Toluene	EPA-8021	2100	25	25	UG/L	08/16/2013	DLC	;
Ethylbenzene	EPA-8021	910	25	25	UG/L	08/16/2013	DLC	÷
Xylenes	EPA-8021	7200	75	25	UG/L	08/16/2013	DLC	:
TPH-Diesel Range	NWTPH-DX	U	- 630	1	UG/L	08/15/2013	EBS	:
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	08/15/2013	EBS	:
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	08/16/2013	GAP	1
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	08/16/2013	GAP	
Lead	EPA-200.8	U	1.0	1	UG/L	08/19/2013	RAL	:

SURROGATE	METHOD	%REC	ANALYSIS ANALYSIS DATE BY
TFT 25X Dilution	NWTPH-GX	121	08/16/2013 DLC
TFT 25X Dilution	EPA-8021	106	08/16/2013 DLC
C25	NWTPH-DX	98.3	08/15/2013 EBS
1,2-Dichloroethane-d4	EPA-8260 SIM	101	08/16/2013 GAP

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



Chromatogram indicates that it is likely that sample contains lightly weathered gasoline. Diesel range product reporting limits raised due to volatile range product overlap.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT:

Harold Cashman

CLIENT PROJECT: CLIENT SAMPLE ID Kris' Mini Mart

MW-12

DATE:

8/30/2013

ALS JOB#:

EV13080077

ALS SAMPLE#:

: -05

DATE RECEIVED:

8/14/2013

COLLECTION DATE:

8/13/2013 10:10:00 AM

WDOE ACCREDITATION:

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ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A DATE	NALYSIS BY	•
TPH-Volatile Range	NWTPH-GX	41000	2500	50	UG/L	08/16/2013	DLC	1
Methyl T-Butyl Ether	EPA-8021	U	150	50	UG/L	08/16/2013	DLC	:
Benzene	EPA-8021	U	50	50	UG/L	08/16/2013	DLC	?
Toluene	EPA-8021	1000	50	50	UG/L	08/16/2013	DLC	:
Ethylbenzene	EPA-8021	400	50	50	UG/L	08/16/2013	DLC	:
Xylenes	EPA-8021	8400	150	50	UG/L	08/16/2013	DLC	:
TPH-Diesel Range	NWTPH-DX	U	1300	1	UG/L	08/19/2013	EBS	:
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	08/19/2013	EBS	:
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	08/16/2013	GAP	:
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	08/16/2013	GAP	:
Lead	EPA-200.8	U	1.0	1	UG/L	08/19/2013	RAL	:

			Analysis analysis
SURROGATE	METHOD	%REC	DATE BY
TFT 50X Dilution	NWTPH-GX	104	08/16/2013 DLC
TFT 50X Dilution	EPA-8021	102	08/16/2013 DLC
C25	NWTPH-DX	92.8	08/19/2013 EBS -
1,2-Dichloroethane-d4	EPA-8260 SIM	101	08/16/2013 GAP

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

Chromatogram indicates that it is likely that sample contains lightly weathered gasoline.

Diesel range product reporting limits raised due to volatile range product overlap.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: **CLIENT PROJECT:**

Harold Cashman Kris' Mini Mart

CLIENT SAMPLE ID

MW-13

DATE:

8/30/2013

ALS JOB#:

EV13080077

ALS SAMPLE#:

-06

DATE RECEIVED:

8/14/2013

COLLECTION DATE:

8/13/2013 12:50:00 PM

WDOE ACCREDITATION: C601

DATA RESULTS

METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A DATE	NALYSIS BY	1
NWTPH-GX	65	50	1	UG/L	08/16/2013	DLC	3
EPA-8021	U	3.0	1	UG/L	08/16/2013	DLC	!
EPA-8021	U	1.0	1	UG/L	08/16/2013	DLC	i
EPA-8021	Ū	1.0	1	UG/L	08/16/2013	DLC	÷
EPA-8021	υ	1.0	1	UG/L	08/16/2013	DLC	:
EPA-8021	8.8	3.0	1	UG/L	08/16/2013	DLC	:
NWTPH-DX	U	130	1	UG/L	08/19/2013	EBS	i
NWTPH-DX	U	250	1	UG/L	08/19/2013	EBS	:
EPA-8260 SIM	U	0.020	1	UG/L	08/16/2013	GAP	!
EPA-8260 SIM	U	0.010	1	UG/L	08/16/2013	GAP	:
EPA-200.8	U	1.0	1	UG/L	08/19/2013	RAL	:
_	NWTPH-GX EPA-8021 EPA-8021 EPA-8021 EPA-8021 EPA-8021 NWTPH-DX NWTPH-DX EPA-8260 SIM EPA-8260 SIM	NWTPH-GX 65 EPA-8021 U EPA-8021 U EPA-8021 U EPA-8021 U EPA-8021 U EPA-8021 U EPA-8021 U EPA-8021 U EPA-8021 U EPA-8021 U EPA-8021 U EPA-8021 U NWTPH-DX U NWTPH-DX U EPA-8260 SIM U EPA-8260 SIM U	NWTPH-GX 65 50 EPA-8021 U 3.0 EPA-8021 U 1.0 EPA-80	NWTPH-GX 65 50 1 EPA-8021 U 3.0 1 EPA-8021 U 1.0 1 EPA-8021 U 1.0 1 EPA-8021 U 1.0 1 EPA-8021 U 1.0 1 EPA-8021 U 1.0 1 EPA-8021 U 1.0 1 EPA-8021 U 1.0 1 EPA-8021 U 1.0 1 EPA-8021 S.8 3.0 1 NWTPH-DX U 130 1 NWTPH-DX U 250 1 EPA-8260 SIM U 0.020 1 EPA-8260 SIM U 0.010 1	NWTPH-GX 65 50 1 UG/L EPA-8021 U 3.0 1 UG/L EPA-8021 U 1.0 1 UG/L EPA-8021 U 1.0 1 UG/L EPA-8021 U 1.0 1 UG/L EPA-8021 U 1.0 1 UG/L EPA-8021 U 1.0 1 UG/L EPA-8021 U 1.0 1 UG/L EPA-8021 U 5.0 1 UG/L EPA-8021 8.8 3.0 1 UG/L NWTPH-DX U 130 1 UG/L NWTPH-DX U 250 1 UG/L EPA-8260 SIM U 0.020 1 UG/L EPA-8260 SIM U 0.010 1 UG/L	NWTPH-GX 65 50 1 UG/L 08/16/2013 EPA-8021 U 3.0 1 UG/L 08/16/2013 EPA-8021 U 1.0 1 UG/L 08/16/2013 EPA-8021 U 1.0 1 UG/L 08/16/2013 EPA-8021 U 1.0 1 UG/L 08/16/2013 EPA-8021 U 1.0 1 UG/L 08/16/2013 EPA-8021 U 1.0 1 UG/L 08/16/2013 EPA-8021 U 1.0 1 UG/L 08/16/2013 EPA-8021 B.8 3.0 1 UG/L 08/16/2013 NWTPH-DX U 130 1 UG/L 08/16/2013 NWTPH-DX U 250 1 UG/L 08/19/2013 EPA-8260 SIM U 0.020 1 UG/L 08/16/2013 EPA-8260 SIM U 0.010 1 UG/L 08/16/2013	NWTPH-GX 65 50 1 UG/L 08/16/2013 DLC EPA-8021 U 3.0 1 UG/L 08/16/2013 DLC EPA-8021 U 1.0 1 UG/L 08/16/2013 DLC EPA-8021 U 1.0 1 UG/L 08/16/2013 DLC EPA-8021 U 1.0 1 UG/L 08/16/2013 DLC EPA-8021 U 1.0 1 UG/L 08/16/2013 DLC EPA-8021 U 1.0 1 UG/L 08/16/2013 DLC EPA-8021 U 1.0 1 UG/L 08/16/2013 DLC EPA-8021 B.8 3.0 1 UG/L 08/16/2013 DLC NWTPH-DX U 130 1 UG/L 08/16/2013 EBS NWTPH-DX U 250 1 UG/L 08/19/2013 EBS EPA-8260 SIM U 0.020 1 UG/L 08/16/2013 GAP EPA-8260 SIM U 0.010 1 UG/L 08/16/2013 GAP

			ANALYSIS ANALYSIS	
SURROGATE	METHOD	%REC	DATE BY	
TFT	NWTPH-GX	109	08/16/2013 DLC	
TFT	EPA-8021	113	08/16/2013 DLC	
C25	NWTPH-DX	91.0	08/19/2013 EBS	
1,2-Dichloroethane-d4	EPA-8260 SIM	102	08/16/2013 GAP	

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

Chromatogram indicates that it is likely that sample contains highly weathered gasoline.

ALS Laboratory Group A Campbell Brothers Limited Company



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT: Harold Cashman Kris' Mini Mart

CLIENT SAMPLE ID

MW-14

.

DATE:

8/30/2013

ALS JOB#:

EV13080077

ALS SAMPLE#:

-07

DATE RECEIVED:

8/14/2013

COLLECTION DATE:

8/13/2013 1:45:00 PM

WDOE ACCREDITATION:

C601

		KILL LINE	A RESULTS * 5					
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A	ANALYSIS BY	١
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	08/16/2013	DLC	:
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	08/16/2013	DLC	;
Benzene	EPA-8021	U	1.0	1	UG/L	08/16/2013	DLC	;
Toluene	EPA-8021	U	1.0	1	UG/L	08/16/2013	DLC	ŧ
Ethylbenzene	EPA-8021	2.0	1.0	1	UG/L	08/16/2013	DLC	:
Xylenes	EPA-8021	บ	3.0	1	UG/L	08/16/2013	DLC	:
TPH-Diesel Range	NWTPH-DX	280	130	1	UG/L	08/19/2013	EBS	ţ
TPH-Oil Range	NWTPH-DX	Ū	250	1	UG/L	08/19/2013	EBS	!
1,2-Dichloroethane	EPA-8260 SIM	· U	0.020	1	UG/L	08/16/2013	GAP	:
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	08/16/2013	GAP	1
Lead	EPA-200.8	U	1.0	1	UG/L	08/19/2013	RAL	;

			ANALYSIS ANA	LYSIS
SURROGATE	METHOD	%REC	DATE	BY
TFT	NWTPH-GX	113	08/16/2013	DLC
TFT	EPA-8021	116	08/16/2013	DLC
C25	NWTPH-DX	90.3	08/19/2013 E	EBS
1,2-Dichloroethane-d4	EPA-8260 SIM	103	08/16/2013 0	GAP

U - Analyte analyzed for but not detected at level above reporting limit. Chromatogram indicates that it is likely that sample contains weathered diesel.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: **CLIENT PROJECT:**

Harold Cashman Kris' Mini Mart

CLIENT SAMPLE ID

MW-15

DATE:

8/30/2013

ALS JOB#:

EV13080077

ALS SAMPLE#:

-08

DATE RECEIVED: **COLLECTION DATE:** 8/14/2013

8/13/2013 10:30:00 AM

WDOE ACCREDITATION: C601

A DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A DATE	NALYSIS BY	,
TPH-Volatile Range	NWTPH-GX	37000	1200	25	UG/L	08/16/2013	DLC	1
Methyl T-Butyl Ether	EPA-8021	U	75	25	UG/L	08/16/2013	DLC	:
Benzene	EPA-8021	U	25	25	UG/L	08/16/2013	DLC	:
Toluene	EPA-8021	880	25	25	UG/L	08/16/2013	DLC	;
Ethylbenzene	EPA-8021	340	25	25	UG/L	08/16/2013	DLC	:
Xylenes	EPA-8021	7500	75	25	UG/L	08/16/2013	DLC	:
TPH-Diesel Range	NWTPH-DX	U	630	1	UG/L	08/15/2013	EBS	:
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	08/15/2013	EBS	:
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	08/16/2013	GAP	:
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	08/16/2013	GAP	:
Lead	EPA-200.8	U	1.0	1	UG/L	08/19/2013	RAL	:

SURROGATE	METHOD	%REC	ANALYSIS A DATE	NALYSIS BY
TFT 25X Dilution	NWTPH-GX	102	08/16/2013	DLC
TFT 25X Dilution	EPA-8021	100	08/16/2013	DLC
C25	NWTPH-DX	104	08/15/2013	EBS
1,2-Dichloroethane-d4	EPA-8260 SIM	101	08/16/2013	GAP

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

ALS Laboratory Group A Campbell Brothers Limited Company

Chromatogram indicates that it is likely that sample contains lightly weathered gasoline.

Diesel range product reporting limits raised due to volatile range product overlap.



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CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT:

Harold Cashman

CLIENT PROJECT: CLIENT SAMPLE ID Kris' Mini Mart

MW-16

DATE:

8/30/2013

ALS JOB#:

EV13080077

ALS SAMPLE#:

-09

DATE RECEIVED: **COLLECTION DATE:** 8/14/2013

8/13/2013 11:30:00 AM

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ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A	NALYSIS BY	1
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	08/16/2013	DLC	:
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	08/16/2013	DLC	:
Benzene	EPA-8021	U	1.0	1	UG/L	08/16/2013	DLC	:
Toluene	EPA-8021	U	1.0	1	UG/L	08/16/2013	DLC	:
Ethylbenzene	EPA-8021	U	i.o	1	UG/L	08/16/2013	DLC	:
Xylenes	EPA-8021	U	3.0	1	UG/L	08/16/2013	DLC	:
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	08/15/2013	EBS	:
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	08/15/2013	EBS	:
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	· 1	UG/L	08/16/2013	GAP	:
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	t	UG/L	08/16/2013	GAP	:
						ANALYSIS ANALY		

SURROGATE	METHOD	%REC	ANALYSIS ANALYSIS DATE BY
TFT	NWTPH-GX	114	08/16/2013 DLC
TFT	EPA-8021	114	08/16/2013 DLC
C25	NWTPH-DX	98.7	08/15/2013 EBS
1,2-Dichloroethane-d4	EPA-8260 SIM	101	08/16/2013 GAP

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



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

ALS SDG#:

8/30/2013 EV13080077

WDOE ACCREDITATION: C601

DATE:

CLIENT CONTACT: **CLIENT PROJECT:**

Harold Cashman Kris' Mini Mart

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MBG-081513W2 -	Ratch	6716 -	Water	hy NWTPH-G	X
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			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	08/16/2013	DLC

MB-081513W2 - Batch 6716 - Water by EPA-8021

			REPORTING	DILUTION		NALYSIS	
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	08/16/2013	DLC
Benzene	EPA-8021	U	1.0	1	UG/L	08/16/2013	DLC
Toluene	EPA-8021	U	1.0	1	UG/L	08/16/2013	DLC
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	08/16/2013	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	08/16/2013	DLC

MB-081513W - Batch 6751 - Water by NWTPH-DX

			REPORTING	DILUTION		ANALYSIS A	NALYSIS	
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY	
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	08/19/2013	EBS	
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	08/19/2013	EBS	

MB-081513W2 - Batch 6700 - Water by EPA-8260 SIM

			REPORTING	DILUTION		ANALYSIS A	WALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BŸ
1,1-Dichloroethene	EPA-8260 SIM	U	0.020	1	UG/L	08/15/2013	GAP
1,2-Dichloroethane	EPA-8260 SIM	U	0.10	1	UG/L	08/15/2013	GAP
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	08/15/2013	GAP

MB-081613W - Batch 6757 - Water by EPA-200.8

			REPORTING	DILUTION	ANALYSIS ANALYSIS					
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY			
Lead	EPA-200.8	U	1.0	1	UG/L	08/19/2013	RAL			

Page 11

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208

| PHONE 425-356-2600 | FAX 425-356-2626







CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

ALS SDG#:

8/30/2013 EV13080077

WDOE ACCREDITATION:

DATE:

C601

CLIENT CONTACT: CLIENT PROJECT:

Harold Cashman Kris' Mini Mart

														E			

ALS Test Batch ID: 6716 - Water by NWTPH-GX

					ANALYSIS	ANALYSIS
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	DATE	BY
TPH-Volatile Range - BS	NWTPH-GX	59.6			08/16/2013	DLC
TPH-Volatile Range - BSD	NWTPH-GX	60.2	1		08/16/2013	DLC

ALS Test Batch ID: 6716 - Water by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL.	ANALYSIS Date	ANALYSIS BY
Methyl T-Butyl Ether - BS	EPA-8021	95.6			08/16/2013	DLC
Methyl T-Butyl Ether - BSD	EPA-8021	96.7	1		08/16/2013	DLC
Benzene - BS	EPA-8021	97.0			08/16/2013	DLC
Benzene - BSD	EPA-8021	99.3	2		08/16/2013	DLC
Toluene - BS	EPA-8021	96.7			08/16/2013	DLC
Toluene - BSD	EPA-8021	98.6	2		08/16/2013	DLC
Ethylbenzene - BS	EPA-8021	95.4			08/16/2013	DLC
Ethylbenzene - BSD	EPA-8021	98.5	3		08/16/2013	DLC
Xylenes - BS	EPA-8021	99.5			08/16/2013	DLC
Xylenes - BSD	EPA-8021	102	3		08/16/2013	DLC

ALS Test Batch ID: 6751 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS Date	ANALYSIS BY
TPH-Diesel Range - BS	NWTPH-DX	78.4			08/19/2013	EBS
TPH-Diesel Range - BSD	NWTPH-DX	78.1	0		08/19/2013	EBS

ALS Test Batch ID: 6700 - Water by EPA-8260 SIM

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
1,1-Dichloroethene - BS	EPA-8260 SIM	103			08/16/2013	GAP
1,1-Dichloroethene - BSD	EPA-8260 SIM	109	6		08/16/2013	GAP

ALS Test Batch ID: 6757 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS Date	ANALYSIS BY
Lead - BS	EPA-200.8	94.1			08/19/2013	RAL
Lead - BSD	EPA-200.8	98.5	5		08/19/2013	RAL

Page 12

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208

ALS Laboratory Group A Campbell Brothers Limited Company



<u>CERTIFICATE OF ANALYSIS</u>

APPROVED BY

Laboratory Director

LABORATORY COPY

Received By:

ALS Environmentai 8620 Holly Drive, Suite 100 Everett, WA 98208 Phone (425) 356-2600 Fax (425) 356-2626 http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

(Laboratory Use Only)

* Turnaround request less than standard may incur Rush Charges

Date 8-13-13 Page_

EV13080077

PROJECT ID: KIZIS' MI	AN	ALY	SIS	REC	UES	STE)									OT	HEF	(Sp	ecif	/)			<u> </u>				
PROJECT HATCOLD GSHMAN														<u> </u>	□ Was						i						
ADDRESS: 228 E. GUMPION ST #101														8270	-8270	182	TAL []		Herb			!					_
REZUNKNIM h]				l		A 8260			Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM	☐ by EPA 8081/8082	Metals-MTCA-5□ RCRA-8 □ Pri Pol □ TAL	3	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐				, l				RECEIVED IN GOOD CONDITION?				
PHONE: (360) 752-95	7-(FAX:]				260 □	8260	by EP	ter)		a spur	(PAH)	PA 80	PriF							.		S.E.	
PO. #:	E-MAIL: 45	Cashmue	WHATONZ	WIL.]				EPA-8	y EPA	spun	M (wa	1	подше	arbons] by E	A-8	Lest A	Semi-\							AIN'	00
INVOICE TO COLONY I	NSVRANCE				-			<u> </u>	21	tiles b	ошо	3260 S	3260 (s	nic Cr	Hydroc	□ sa	RCB	scify)	PA □					ĺ		Į Č	
ATTENTION: MATT MILL	LER (AL	MEA)			┤ॗ	l		A-802	PA-80	d Vola	anic (y EPA 8	FPA	e Orga	omatic	☐ Pesticides	,A-5	ı (Sp								P. C.	; <u>N</u>
ADDRESS: CLAIM # 194567								BTEX by EPA-8021	MTBE by EPA-8021 X EPA-8260 □	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	volatil	clic Ar		s-MT(Metals Other (Specify)	-Metal							NIMBER OF CONTAINERS	i E
- SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	хаця	MTBI	Halog	Volati	EDB/	EDB/	Semi	Polyco	PCB	Metal	Metal	TCLP							2) <u> E</u>
1. NW-8	8-12-13	1:25	WATER	1		Χ	χ	X	Χ			X						X								6	<u> </u>
2 MW-9	8-12-13	2:15		2		X	X	X	X			X						X								<u> </u>	
2. <u>MW-a</u> 3. <u>MW-IU</u>	8-12-13	3:10		3		X	X	X	Χ			X	<u> </u>					X								6	1
4. MW-11	8-12-13	3:50		4		X	Χ	X	Χ			X	_	_				X								6	
5. MW-12	MW-12 8-13-13 10:10 \ 5		- 		X	X	X	X			X						X							\perp	6		
6. MW-13	8-13-13	12:50		6		X	X	X	X			X						X		<u> </u>	<u></u>					6	
7. MW-14	8-13-13	_		7		X	X	Χ	X			X					ļ. <u>.</u>	X			_					6	
8. MW-15	8-13-13	10:30		8		X	X	X	X			X				ļ		X							\perp	6	
7. MW-14 8. MW-15 9. MW-16	8-13-13	11:30	1	9		X	X	X	X			X													\perp	5	-
10.	1			ľ											!												
SPECIAL INSTRUCTIONS																											
SIGNATURES (Name, Comp. 1. Relinquished By: Received By:	any Date, Tin	ne): V25 Rock	, 8/14,	/13, 5	7: <u>]</u> 44	3 <i>0</i>	8/)	4).	B 02	Orga Sandar	anic,	Me	tals	& Inc	T(orga 2	JRN/ nic /	ARO Analy	UND /sis	REC			O in E	0	ess [Days*		
2. Relinquished By:											Fuel	s & (rbon	SAN	alysis F	5		_							



November 27, 2013

Mr. Harold Cashman Whatcom Environmental Svcs., Inc. 228 E. Champion St., Suite 101 Bellingham, WA 98225

Dear Mr. Cashman,

On November 15th, 9 samples were received by our laboratory and assigned our laboratory project number EV13110099. The project was identified as your Kris' Mini Mart. 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

Rick Bagan

Laboratory Director



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT:

Harold Cashman

CLIENT SAMPLE ID

Kris' Mini Mart

MW-8

DATE:

11/27/2013

ALS JOB#: ALS SAMPLE#:

EV13110099

-01

DATE RECEIVED:

11/15/2013

COLLECTION DATE:

11/14/2013 11:55:00 AM

WDOE ACCREDITATION: C601

			REPORTING	DILUTION		ANALYSIS A	
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	960	50	1	UG/L	11/18/2013	DLC
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	11/18/2013	DLC
Benzene	EPA-8021	U	1.0	1	UG/L	11/18/2013	DLC
Toluene	EPA-8021	2.2	1.0	1	UG/L	11/18/2013	DLC
Ethylbenzene	EPA-8021	1.6	1.0	1	UG/L	11/18/2013	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	11/18/2013	DLC
TPH-Diesel Range	NWTPH-DX	250	130	1	UG/L	11/20/2013	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	11/20/2013	EBS
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	11/18/2013	GAP
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	11/18/2013	GAP
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	11/20/2013	RAL
						ANALYSIS A	NALYSIS
SURROGATE	METHOD	%REC				DATE	BY

SURROGATE	METHOD	%REC	ANALYSIS ANAI Date e	LYSIS BY
TFT	NWTPH-GX	106	11/18/2013 D	LC
TFT	EPA-8021	119	11/18/2013 D	LC
C25	NWTPH-DX	103	11/20/2013 E	BS
1,2-Dichloroethane-d4	EPA-8260 SIM	105	11/18/2013 G	AP_

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

Chromatogram indicates that it is likely that sample contains highly weathered gasoline and weathered diesel.

Diesel range product results biased high due to gasoline range product overlap.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

Harold Cashman

CLIENT PROJECT: CLIENT SAMPLE ID

CLIENT CONTACT:

Kris' Mini Mart MW-9

DATE: 11/27/2013

ALS JOB#: EV13110099

ALS SAMPLE#: -02

11/15/2013

DATE RECEIVED: **COLLECTION DATE:**

11/14/2013 12:00:00 PM

WDOE ACCREDITATION: C601

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A Date	NALYSIS By	
TPH-Volatile Range	NWTPH-GX	1000	50	1	UG/L	11/18/2013	DLC	
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	11/18/2013	DLC	
Benzene	EPA-8021	6.3 F3	1.0	1	UG/L	11/18/2013	DLC	
Toluene	EPA-8021	U	1.0	1	UG/L	11/18/2013	DLC	
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	11/18/2013	DLC	
Xylenes	EPA-8021	U	3.0	1	UG/L	11/18/2013	DLC	
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	11/20/2013	EBS	
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	11/20/2013	EBS	
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	11/18/2013	GAP	
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	11/18/2013	GAP	
Lead (Dissolved)	EPA-200.8	U	1.0	1	` UG/L	11/20/2013	RAL	

			ANALYSIS ANAL	
SURROGATE	METHOD	%REC	DATE: B	·Υ
TFT	NWTPH-GX	140	11/18/2013 DL	LC
TFT	EPA-8021	158 GS3	11/18/2013 DL	LC
C25	NWTPH-DX	100	11/20/2013 EE	BS
1,2-Dichloroethane-d4	EPA-8260 SIM	105	11/18/2013 GA	AP

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

GS3 - Surrogate outside of control limits due to coeluting compounds.

F3 - Analyte results biased high due to coeluting compound. Chromatogram indicates that it is likely that sample contains highly weathered gasoline.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT: Harold Cashman Kris' Mini Mart

CLIENT SAMPLE ID

MW-10

DATE:

11/27/2013

ALS JOB#:

EV13110099

ALS SAMPLE#:

-03

DATE RECEIVED:

11/15/2013

COLLECTION DATE:

11/14/2013 11:50:00 AM

WDOE ACCREDITATION: C601

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A	NALYSIS BY	
TPH-Volatile Range	NWTPH-GX	690	50	1	UG/L	11/18/2013	DLC	
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	11/18/2013	DLC	
Benzene	EPA-8021	1.7	1.0	1	UG/L	11/18/2013	DLC	
Toluene	EPA-8021	87	1.0	1	UG/L	11/18/2013	DLC	
Ethylbenzene	EPA-8021	5.1	1.0	1	UG/L	11/18/2013	DLC	
Xylenes	EPA-8021	78	3.0	1	UG/L	11/18/2013	DLC	
TPH-Diesel Range	NWTPH-DX	Ù	130	1	UG/L	11/20/2013	EBS	
TPH-Oil Range	NWTPH-DX	Ŭ	250	1	UG/L	11/20/2013	EBS	
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	11/18/2013	GAP	
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	11/18/2013	GAP	
Lead (Dissolved)	EPA-200.8	ŭ	1.0	1	UG/L	11/20/2013	RAL	

			ANALYSIS ADATE	ANALYSIS BY	
SURROGATE	METHOD	%REC	DATE	БТ	
TFT	NWTPH-GX	96.7	11/18/2013	DLC	
TFT	EPA-8021	104	11/18/2013	DLC	
C25	NWTPH-DX	93.8	11/20/2013	EBS	
1,2-Dichloroethane-d4	EPA-8260 SIM	106	11/18/2013	GAP	,

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

Chromatogram indicates that it is likely that sample contains lightly weathered gasoline.



CLIENT:

C25

1,2-Dichloroethane-d4

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

ALS SAMPLE#:

CLIENT CONTACT: Harold Cashman

CLIENT PROJECT: Kris' Mini Mart

CLIENT SAMPLE ID MW-11 DATE: 11/27/2013

ALS JOB#: EV13110099 -04

DATE RECEIVED: 11/15/2013

COLLECTION DATE: 11/14/2013 12:45:00 PM

11/19/2013

11/18/2013

EBS

GAP

WDOE ACCREDITATION: 0601

GLIENT SAMPLE ID	10104 - 1 1		WDOE A	JUREDITATION:	C601			
		I E E DAT	A RESULTS					
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A	ANALYSIS By	,
TPH-Volatile Range	NWTPH-GX	20000	1000	20	UG/L	11/19/2013	DLC	;
Methyl T-Butyl Ether	EPA-8021	υ	60	20	UG/L	11/19/2013	DLC	:
Benzene	EPA-8021	υ	20	20	UG/L	11/19/2013	DLC	÷
Toluene	EPA-8021	1300	20	20	UG/L	11/19/2013	DLC	:
Ethylbenzene	EPA-8021	430	20	20	UG/L	11/19/2013	DLC	:
Xylenes	EPA-8021	4200	60	20	UG/L	11/19/2013	DLC	÷
TPH-Diesel Range	NWTPH-DX	1500	130	1	UG/L	11/19/2013	EBS	:
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	11/19/2013	EBS	:
1,2-Dichloroethane	EPA-8260 SIM	ឋ	0.020	1	UG/L	11/18/2013	GAP	;
1,2-Dibromoethane	EPA-8260 SIM	Ŭ	0.010	1	UG/L	11/18/2013	GAP	;
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	11/20/2013	RAL	:
SURROGATE	METHOD	%REC				ANALYSIS A	ANALYSIS By	
TFT 20X Dilution	NWTPH-GX	106				11/19/2013	DLC	;
TFT 20X Dilution	EPA-8021	114				11/19/2013	DLC	į

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

96.7

108

NWTPH-DX

EPA-8260 SIM

Chromatogram indicates that it is likely that sample contains highly weathered gasoline and an unidentified diesel range product. Diesel range product results biased high due to gasoline range product overlap.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: **CLIENT PROJECT:**

Harold Cashman Kris' Mini Mart

CLIENT SAMPLE ID

MW-12

DATE:

11/27/2013

ALS JOB#: EV13110099

ALS SAMPLE#:

-05

DATE RECEIVED:

11/15/2013

COLLECTION DATE:

11/14/2013 1:45:00 PM

WDOE ACCREDITATION: C601

DATA	RESU	LTS
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			REPORTING LIMITS	DILUTION FACTOR		ANALYSIS A	NALYSIS BY	
ANALYTE	METHOD	RESULTS	<u>-</u>		UNITS			
TPH-Volatile Range	NWTPH-GX	14000	500	10	UG/L	11/19/2013	DLC	
Methyl T-Butyl Ether	EPA-8021	U	30	10	UG/L	11/19/2013	DLC	
Benzene	EPA-8021	U	10	10	UG/L	11/19/2013	DLC	
Toluene	EPA-8021	220	10	10	UG/L	11/19/2013	DLC	:
Ethylbenzene	EPA-8021	110	10	10	UG/L	11/19/2013	DLC	
Xylenes	EPA-8021	2800	30	10	UG/L	11/19/2013	DLC	
TPH-Diesel Range	NWTPH-DX	2500	130	1	UG/L	11/19/2013	EBS	
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	11/19/2013	EBS	
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	11/18/2013	GAP	
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	11/18/2013	GAP	
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	11/20/2013	RAL	

SURROGATE	METHOD	%REC	ANALYSIS ANALYSIS DATE BY
TFT 10X Dilution	NWTPH-GX	100	11/19/2013 DLC
TFT 10X Dilution	EPA-8021	106	11/19/2013 DLC
C25	NWTPH-DX	100	11/19/2013 EBS
1,2-Dichloroethane-d4	EPA-8260 SIM	106	11/18/2013 GAP

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

Chromatogram indicates that it is likely that sample contains highly weathered gasoline and an unidentified diesel range product. Diesel range product results biased high due to gasoline range product overlap.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: **CLIENT PROJECT:**

Harold Cashman Kris' Mini Mart

CLIENT SAMPLE ID

MW-13

DATE:

11/27/2013

ALS JOB#:

EV13110099

ALS SAMPLE#:

-06

DATE RECEIVED:

11/15/2013

COLLECTION DATE:

11/14/2013 1:25:00 PM

WDOE ACCREDITATION: C601

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A DATE	NALYSIS BY	•
TPH-Volatile Range	NWTPH-GX	3100	250	5	UG/L	11/19/2013	DLC	;
Methyl T-Butyl Ether	EPA-8021	U	15	5	UG/L	11/19/2013	DLC	;
Benzene	EPA-8021	U	5.0	5	UG/L	11/19/2013	DLC	:
Toluene	EPA-8021	57	5.0	5	UG/L	11/19/2013	DLC	:
Ethylbenzene	EPA-8021	48	5.0	5	UG/L	11/19/2013	DLC	:
Xylenes	EPA-8021	700	15	5	UG/L	11/19/2013	DLC	:
TPH-Diesel Range	NWTPH-DX	320	130	1	UG/L	11/19/2013	EBS	;
TPH-Oil Range	NWTPH-DX	υ	250	1	UG/L	11/19/2013	EBS	;
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	11/18/2013	GAP	:
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	11/18/2013	GAP	:
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	11/20/2013	RAL	:

SURROGATE	METHOD	%REC	ANALYSIS ANALYSIS DATE BY
TFT 5X Dilution	NWTPH-GX	109	11/19/2013 DLC
TFT 5X Dilution	EPA-8021	112	11/19/2013 DLC
C25	NWTPH-DX	103	11/19/2013 EBS
1,2-Dichloroethane-d4	EPA-8260 SIM	105	11/18/2013 GAP

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

Chromatogram indicates that it is likely that sample contains highly weathered gasoline and weathered diesel.

Diesel range product results biased high due to gasoline range product overlap.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT:

Harold Cashman Kris' Mini Mart

CLIENT SAMPLE ID

MW-14

DATE:

11/27/2013

ALS JOB#:

EV13110099

ALS SAMPLE#:

-07

DATE RECEIVED:

11/15/2013

COLLECTION DATE:

11/14/2013 2:15:00 PM

WDOE ACCREDITATION: C601

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A DATE	NALYSIS BY	
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	11/19/2013	DLC	:
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	11/19/2013	DLC	1
Benzene	EPA-8021	υ	1.0	1	UG/L	11/19/2013	DLC	-
Toluene	EPA-8021	U	1.0	1	UG/L	11/19/2013	DLC	1
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	11/19/2013	DLC	;
Kylenes	EPA-8021	U	3.0	1	UG/L	11/19/2013	DLC	:
TPH-Diesel Range	NWTPH-DX	480	130	1	UG/L	11/19/2013	EBS	
TPH-Oil Range	NWTPH-DX	380	250	1	UG/L	11/19/2013	EBS	
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	11/18/2013	GAP	:
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	11/18/2013	GAP	
_ead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	11/20/2013	RAL	:

			ANALYSIS ANAL	
SURROGATE	METHOD	%REC	DATE B'	Υ
TFT	NWTPH-GX	99.5	11/19/2013 DL	_C
TFT	EPA-8021	112	11/19/2013 DL	_C
C25	NWTPH-DX	99.8	11/19/2013 EB	3S
1,2-Dichloroethane-d4	EPA-8260 SIM	106	11/18/2013 GA	4P

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

Chromatogram indicates that it is likely that sample contains weathered diesel and light oil/lube oil.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT:

Harold Cashman Kris' Mini Mart

CLIENT SAMPLE ID

MW-15

DATE:

11/27/2013

ALS JOB#:

EV13110099

ALS SAMPLE#:

-08

DATE RECEIVED:

11/15/2013

COLLECTION DATE:

11/14/2013 12:00:00 PM

WDOE ACCREDITATION: C601

METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A	ANALYSIS By	,
NWTPH-GX	970	50	1	UG/L	11/18/2013	DLC	:
EPA-8021	υ	3.0	1	UG/L	11/18/2013	DLC	;
EPA-8021	5.2 F3	1.0	1	UG/L	11/18/2013	DLC	;
EPA-8021	υ	1.0	1	UG/L	11/18/2013	DLC	;
EPA-8021	υ	1.0	1	UG/L	11/18/2013	DLC	;
EPA-8021	3.5	3.0	1	UG/L	11/18/2013	DLC	;
NWTPH-DX	U	130	1	UG/L	11/20/2013	EBS	;
NWTPH-DX	U	250	1	UG/L	11/20/2013	EBS	i
EPA-8260 SIM	U	0.020	1	UG/L	11/18/2013	GAP	1
EPA-8260 SIM	U	0.010	1	UG/L	11/18/2013	GAP	;
EPA-200.8	U	1.0	1	UG/L	11/20/2013	RAL	;
	NWTPH-GX EPA-8021 EPA-8021 EPA-8021 EPA-8021 EPA-8021 NWTPH-DX NWTPH-DX EPA-8260 SIM EPA-8260 SIM	NWTPH-GX 970 EPA-8021 U EPA-8021 5.2 F3 EPA-8021 U EPA-8021 U EPA-8021 U EPA-8021 U EPA-8021 U EPA-8021 U EPA-8021 U EPA-8021 U U EPA-8021 U U EPA-8021 U U EPA-8001 U EPA-8260 SIM U EPA-8260 SIM U	METHOD RESULTS LIMITS NWTPH-GX 970 50 EPA-8021 U 3.0 EPA-8021 5.2 F3 1.0 EPA-8021 U 1.0 EPA-8021 U 1.0 EPA-8021 U 1.0 EPA-8021 U 1.0 NWTPH-DX U 130 NWTPH-DX U 250 EPA-8260 SIM U 0.020 EPA-8260 SIM U 0.010	METHOD RESULTS LIMITS FACTOR NWTPH-GX 970 50 1 EPA-8021 U 3.0 1 EPA-8021 5.2 F3 1.0 1 EPA-8021 U 1.0 1 EPA-8021 U 1.0 1 EPA-8021 3.5 3.0 1 NWTPH-DX U 130 1 NWTPH-DX U 250 1 EPA-8260 SIM U 0.020 1 EPA-8260 SIM U 0.010 1	METHOD RESULTS LIMITS FACTOR UNITS NWTPH-GX 970 50 1 UG/L EPA-8021 U 3.0 1 UG/L EPA-8021 5.2 F3 1.0 1 UG/L EPA-8021 U 1.0 1 UG/L EPA-8021 U 1.0 1 UG/L EPA-8021 3.5 3.0 1 UG/L NWTPH-DX U 130 1 UG/L NWTPH-DX U 250 1 UG/L EPA-8260 SIM U 0.020 1 UG/L EPA-8260 SIM U 0.010 1 UG/L	METHOD RESULTS LIMITS FACTOR UNITS DATE NWTPH-GX 970 50 1 UG/L 11/18/2013 EPA-8021 U 3.0 1 UG/L 11/18/2013 EPA-8021 5.2 F3 1.0 1 UG/L 11/18/2013 EPA-8021 U 1.0 1 UG/L 11/18/2013 EPA-8021 U 1.0 1 UG/L 11/18/2013 EPA-8021 3.5 3.0 1 UG/L 11/18/2013 NWTPH-DX U 130 1 UG/L 11/20/2013 NWTPH-DX U 250 1 UG/L 11/20/2013 EPA-8260 SIM U 0.020 1 UG/L 11/18/2013 EPA-8260 SIM U 0.010 1 UG/L 11/18/2013	METHOD RESULTS LIMITS FACTOR UNITS DATE BY NWTPH-GX 970 50 1 UG/L 11/18/2013 DLC EPA-8021 U 3.0 1 UG/L 11/18/2013 DLC EPA-8021 5.2 F3 1.0 1 UG/L 11/18/2013 DLC EPA-8021 U 1.0 1 UG/L 11/18/2013 DLC EPA-8021 U 1.0 1 UG/L 11/18/2013 DLC EPA-8021 U 1.0 1 UG/L 11/18/2013 DLC EPA-8021 3.5 3.0 1 UG/L 11/18/2013 DLC NWTPH-DX U 130 1 UG/L 11/20/2013 EBS NWTPH-DX U 250 1 UG/L 11/20/2013 EBS EPA-8260 SIM U 0.020 1 UG/L 11/18/2013 GAP EPA-8260 SIM U 0.010 1

			ANALYSIS ANA	ANALYSIS ANALYSIS		
SURROGATE	METHOD	%REC	DATE I	BY		
TFT	NWTPH-GX	125	11/18/2013 D	DLC		
TFT	EPA-8021	130	11/18/2013 D	DLC		
C25	NWTPH-DX	99.0	11/20/2013 E	BS		
1,2-Dichloroethane-d4	EPA-8260 SIM	106	11/18/2013 G	AP		

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

F3 - Analyte results biased high due to coeluting compound.

Chromatogram indicates that it is likely that sample contains highly weathered gasoline.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT:

Harold Cashman

CLIENT PROJECT:

Kris' Mini Mart

CLIENT SAMPLE ID

MW-16

DATE:

- 1

11/27/2013

ALS JOB#:

EV13110099

ALS SAMPLE#:

-09 11/15/2013

DATE RECEIVED: COLLECTION DATE:

11/14/2013 1:05:00 PM

WDOE ACCREDITATION: C

C601

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY	•
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	11/18/2013	DLC	:
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	11/18/2013	DLC	:
Benzene	EPA-8021	U	1.0	1	UG/L	11/18/2013	DLC	:
Toluene	EPA-8021	U	1.0	1	UG/L	11/18/2013	DLC	:
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	11/18/2013	DLC	:
Xylenes	EPA-8021	U	3.0	1	UG/L	11/18/2013	DLC	:
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	11/20/2013	EBS	:
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	11/20/2013	EBS	:
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	11/18/2013	GAP	:
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	11/18/2013	GAP	:

SURROGATE	METHOD	%REC	ANALYSIS ANALYSIS DATE BY	
TFT	NWTPH-GX	95.7	11/18/2013 DLC	
TFT	EPA-8021	99.5	11/18/2013 DLC	
C25	NWTPH-DX	102	11/20/2013 EBS	
1,2-Dichloroethane-d4	EPA-8260 SIM	107	11/18/2013 GAP	

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



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

ALS SDG#:

11/27/2013 EV13110099

WDOE ACCREDITATION: C601

DATE:

CLIENT CONTACT: CLIENT PROJECT:

Harold Cashman Kris' Mini Mart

ORATO		

MRG-111813W -	Ratch 7402.	- Water by NWTPH-GX

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	11/18/2013	DLC

MB-111813W - Batch 7402 - Water by EPA-8021

			REPORTING	DILUTION	ANALYSIS ANALYSIS		
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	11/18/2013	DLC
Benzene	EPA-8021	U	1.0	1	UG/L	11/18/2013	DLC
Toluene	EPA-8021	υ	1.0	1	UG/L	11/18/2013	DLC
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	11/18/2013	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	11/18/2013	DLC

MB-111913W - Batch 7400 - Water by NWTPH-DX

			REPORTING	DILUTION	ANALYSIS ANALYSIS			
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY	
TPH-Diesel Range	NWTPH-DX	υ	130	1	UG/L	11/20/2013	EBS	
TPH-Oil Range	NWTPH-DX	υ	250	1	UG/L	11/20/2013	EBS	

MB-111413W - Batch 7390 - Water by EPA-8260 SIM

			REPORTING	DILUTION	analysis analysis		
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
1,1-Dichloroethene	EPA-8260 SIM	U	0.020	1	UG/L	11/14/2013	GAP
1,2-Dichloroethane	EPA-8260 SIM	Ü	0.10	1	UG/L	11/14/2013	GAP
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	11/14/2013	GAP

MB-111813W - Batch 7388 - Water by EPA-200.8

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	11/18/2013	RAL





CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

ALS SDG#:

11/27/2013 EV13110099

WDOE ACCREDITATION:

DATE:

C601

CLIENT CONTACT: CLIENT PROJECT:

Harold Cashman Kris' Mini Mart

	OL SAMPLE RESULTS

ALS Test Batch ID: 7402 - Water by NWTPH-GX

					ANALYSIS	ANALYSIS
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	DATE	BY
TPH-Volatile Range - BS	NWTPH-GX	74.6			11/18/2013	DLC
TPH-Volatile Range - BSD	NWTPH-GX	76.2	2		11/18/2013	DLC

ALS Test Batch ID: 7402 - Water by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS Date	ANALYSIS BY
Methyl T-Butyl Ether - BS	EPA-8021	90.1			11/18/2013	DLC
Methyl T-Butyl Ether - BSD	EPA-8021	91.5	2		11/18/2013	DLC
Benzene - BS	EPA-8021	87.7			11/18/2013	DLC
Benzene - BSD	EPA-8021	93.8	7		11/18/2013	DLC
Toluene - BS	EPA-8021	88.7			11/18/2013	DLC
Toluene - BSD	EPA-8021	94.4	6		11/18/2013	DLC
Ethylbenzene - BS	EPA-8021	88.5			11/18/2013	DLC
Ethylbenzene - BSD	EPA-8021	94.5	7		11/18/2013	DLC
Xylenes - BS	EPA-8021	90.5			11/18/2013	DLC
Xylenes - BSD	EPA-8021	96.0	6		11/18/2013	DLC

ALS Test Batch ID: 7400 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS Date	ANALYSIS BY
TPH-Diesel Range - BS	NWTPH-DX	85.0			11/20/2013	EBS
TPH-Diesel Range - BSD	NWTPH-DX	90.7	6		11/20/2013	EBS

ALS Test Batch ID: 7390 - Water by EPA-8260 SIM

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	DATE	BY
1,1-Dichloroethene - BS	EPA-8260 SIM	109			11/14/2013	GAP
1,1-Dichloroethene - BSD	EPA-8260 SIM	106	3		11/14/2013	GAP

ALS Test Batch ID: 7388 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS Date	ANALYSIS BY
Lead (Dissolved) - BS	EPA-200.8	%NEC 95.7	npu	GUAL	11/18/2013	BAL
, ,						
Lead (Dissolved) - BSD	EPA-200.8	95.2	U		11/18/2013	RAL

Page 12

ALS Laboratory Group A Campbell Brothers Limited Company

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208

ANIAL VOIC

ANIAL VOICE





APPROVED BY

Laboratory Director

ALS Environmental 8620 Holly Drive, Suite 100 Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ **Laboratory Analysis Request**

	ALS JOD#	(Laboratory Use Only)	
	EV/13	110099	
Date 11/4/	13 Page	0f	

* Turnaround request less than standard may incur Rush Charges

-	PROJECTID: KRIS' MINI	ROJECT ID: KRIS' MINI MART EPORT TO WHATCOM ENVIRONMENTAL SERVICES						SIS	REC	UES	3TE!)							12		OTI	HER	(Sp	ecify)			
	REPORT TO WHATCOM ENV	MPANY: WHATCOM ENVIRONMENTAL SETEVICES																	Dissolu			ļ Ì						
	PROJECT HAROLD (ASH	MAN													_				7		`							
	ADDRESS: 228 E. GAMPI	ON 5T	#101			1						0			8270	-8270	82	IAL [~	Herb		į ļ						
	BELLINAHAM, WA	9822	.5]		1 826(y EPA	by EPA	81/80		(p_l)	_est □							}	MOI
	PHONE: (360) 752-9571	FAX:								EPA-8260 □	EPA 8260	Volatile Organic Compounds by EPA 8260	ter)		Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 StM	PCB Pesticides by EPA 8081/8082	Metals-MTCA-5 🗆 RCRA-8 🗀 Pri Pol 🗅 TAL 🗀		rCLP-Metals □ V0A □ Semi-Vol □ Pest □ Herbs □			j				E I	RECEIVED IN GOOD CONDITION?
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	ADDRESS: CAIM #	+ 1011	y-/- >			NWTPH-HCID	ΧŒ	<u>-6</u>	BTEX by EPA-8021	MTBE by EPA-80212	Halogenated Volatiles	Orgar	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by E PA 8260 (soil)	latile (с Атоп] Pes	MTCA	Metals Other (Specify) LEAD	etals							NUMBER OF CONTAINERS	VED
		DATE	567	TYPE	LAB#	Ē	NWTPH-DX	NWTPH-GX	<u>점</u>	TBE	alogei	attile	38 / EC	18/EE	miyo	lycycli	妈	etals-	etals (IP-M						İ		
5	SAMPLE I.D.				LAB#	ž		z V	√	>	光	۸c			Š	8	2	Σ	ž V	2		一	\rightarrow			+	Z	<u>«</u>
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February 19, 2014

Mr. Harold Cashman Whatcom Environmental Svcs., Inc. 228 E. Champion St., Suite 101 Bellingham, WA 98225

Dear Mr. Cashman,

On February 11th, 9 samples were received by our laboratory and assigned our laboratory project number EV14020039. The project was identified as your Kris Mini Mart. 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

Rick Bagan

Laboratory Director



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT:

Harold Cashman

CLIENT SAMPLE ID

Kris Mini Mart

MW-8

DATE:

2/19/2014

ALS JOB#:

EV14020039 -01

ALS SAMPLE#: DATE RECEIVED:

2/11/2014

COLLECTION DATE: 2/6/2014 11:10:00 AM

WDOE ACCREDITATION: C601

			REPORTING LIMITS	DILUTION FACTOR		ANALYSIS A		
ANALYTE	METHOD	RESULTS	LIMITS	FACION	UNITS	DATE	BY	
TPH-Volatile Range	NWTPH-GX	1700	250	5	UG/L	02/13/2014	DLC	
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	02/13/2014	DLC	
Benzene	EPA-8021	46	1.0	1	UG/L	02/13/2014	DLC	
Toluene	EPA-8021	24	1.0	1	UG/L	02/13/2014	DLC	
Ethylbenzene	EPA-8021	3.4	1.0	1	UG/L	02/13/2014	DLC	
Xylenes	EPA-8021	12	3.0	1	UG/L	02/13/2014	DLC	
TPH-Diesel Range	NWTPH-DX	160	130	1	UG/L	02/12/2014	EBS	
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	02/12/2014	EBS	
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	02/14/2014	GAP	
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	02/14/2014	GAP	
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	02/17/2014	RAL	

			ANALYSIS AN DATE	IALYSIS BY
SURROGATE	METHOD	%REC	DAIL	ъ.
TFT 5X Dilution	NWTPH-GX	125	02/13/2014	DLC
TFT	EPA-8021	147 GS3	02/13/2014	DLC
C25	NWTPH-DX	109	02/12/2014	EBS
1,2-Dichloroethane-d4	EPA-8260 SIM	97.8	02/14/2014	GAP

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

GS3 - Surrogate outside of control limits due to coeluting compounds.

Chromatogram indicates that it is likely that sample contains weathered gasoline and an unidentified diesel range product.

Diesel range product results biased high due to gasoline range product overlap.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

Harold Cashman

CLIENT PROJECT: CLIENT SAMPLE ID

CLIENT CONTACT:

Kris Mini Mart MW-9

DATE:

2/19/2014 EV14020039

ALS JOB#:

ALS SAMPLE#:

-02

DATE RECEIVED:

2/11/2014

COLLECTION DATE:

2/6/2014 12:10:00 PM

C601 WDOE ACCREDITATION:

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A	NALYSIS BY	,
TPH-Volatile Range	NWTPH-GX	800	50	1	UG/L	02/13/2014	DLC	
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	02/13/2014	DLC	
Benzene	EPA-8021	U	1.0	1	UG/L	02/13/2014	DLC	
Toluene	EPA-8021	U	1.0	1	UG/L	02/13/2014	DLC	
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	02/13/2014	DLC	
Xylenes	EPA-8021	7.8	3.0	1	UG/L	02/13/2014	DLC	
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	02/12/2014	EBS	
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	02/12/2014	EBS	- 1
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	02/14/2014	GAP	
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	02/14/2014	GAP	
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	02/17/2014	RAL	

SURROGATE	METHOD	%REC	ANALYSIS ANALYSIS DATE BY
TFT	NWTPH-GX	123	02/13/2014 DLC
TFT	EPA-8021	120	02/13/2014 DLC
C25	NWTPH-DX	119	02/12/2014 EBS
1,2-Dichloroethane-d4	EPA-8260 SIM	99.2	02/14/2014 GAP

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

Chromatogram indicates that it is likely that sample contains highly weathered gasoline.



CERTIFICATIE/OF/ANALYSIS

CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT:

Harold Cashman Kris Mini Mart

CLIENT SAMPLE ID

MW-11

DATE:

2/19/2014

ALS JOB#:

EV14020039

ALS SAMPLE#:

-03

DATE RECEIVED:

2/11/2014

COLLECTION DATE:

2/6/2014 2:15:00 PM

WDOE ACCREDITATION: C601

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《公司教》 《在文章》。		Maria de DAT	A RESULTS	10, 30, 40, 40, 40, 41, 41		<u> Basarana</u>	Har Marie	網
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A	ANALYSIS BY	•
TPH-Volatile Range	NWTPH-GX	34000	1200	25	UG/L	02/13/2014	DLC	ì
Methyl T-Butyl Ether	EPA-8021	U	75	25	UG/L	02/13/2014	DLC	;
Benzene	EPA-8021	U	25	25	UG/L	02/13/2014	DLC	÷
Toluene	EPA-8021	1600	25	25	UG/L	02/13/2014	DLC	.;
Ethylbenzene	EPA-8021	660	25	25	UG/L	02/13/2014	DLC	4
Xylenes	EPA-8021	6800	75	25	UG/L	02/13/2014	DLC	:
TPH-Diesel Range	NWTPH-DX	2500	130	1	UG/L	02/12/2014	EBS	:
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	02/12/2014	EBS	;
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	02/14/2014	GAP	:
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	02/14/2014	GAP	;
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	02/17/2014	RAL	:
SURROGATE	METHOD	%REC				ANALYSIS A	ANALYSIS BY	,
TFT 25X Dilution	NWTPH-GX	118				02/13/2014	DLC	1
TFT 25X Dilution	EPA-8021	117				02/13/2014	DLC	.1
C25	NWTPH-DX	120				02/12/2014	EBS	4
1,2-Dichloroethane-d4	EPA-8260 SIM	97.1				02/14/2014	GAP	

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

Chromatogram indicates that it is likely that sample contains weathered gasoline and an unidentified diesel range product.

Diesel range product results biased high due to gasoline range product overlap.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: Harold CLIENT PROJECT: Kris Mi

Harold Cashman Kris Mini Mart

CLIENT SAMPLE ID MW-12

DATE:

2/19/2014

ALS JOB#:

EV14020039

ALS SAMPLE#:

: -04

DATE RECEIVED:

2/11/2014

COLLECTION DATE:

2/6/2014 1:15:00 PM

WDOE ACCREDITATION: C601

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS Date	ANALYSIS By	
TPH-Volatile Range	NWTPH-GX	14000	500	10	UG/L	02/13/2014	DLC	;
Methyl T-Butyl Ether	EPA-8021	U	30	10	UG/L	02/13/2014	DLC	į
Benzene	EPA-8021	Ŭ	10	10	UG/L	02/13/2014	DLC	;
Toluene	EPA-8021	310	10	10	UG/L	02/13/2014	DLC	Ţ
Ethylbenzene	EPA-8021	130	10	10	UG/L	02/13/2014	DLC	í
Xylenes	EPA-8021	2800	30	10	UG/L	02/13/2014	DLC	;
TPH-Diesel Range	NWTPH-DX	2800	130	t	UG/L	02/12/2014	EBS	;
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	02/12/2014	EBS	;
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	02/14/2014	GAP	;
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	02/14/2014	GAP	:
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	02/17/2014	RAL	;

SURROGATE			ANALYSIS AF	
	METHOD	%REC	DATE	BY
TFT 10X Dilution	NWTPH-GX	107	02/13/2014	DLC
TFT 10X Dilution	EPA-8021	102	02/13/2014	DLC
C25	NWTPH-DX	123	02/12/2014	EBS
1,2-Dichloroethane-d4	EPA-8260 SIM	97.7	02/14/2014	GAP

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

Chromatogram indicates that it is likely that sample contains weathered gasoline and an unidentified diesel range product.

Diesel range product results biased high due to gasoline range product overlap.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT:

Harold Cashman

CLIENT SAMPLE ID

Kris Mini Mart

MW-10

DATE:

2/19/2014

ALS JOB#:

EV14020039

ALS SAMPLE#:

-05

DATE RECEIVED:

2/11/2014

COLLECTION DATE:

2/6/2014 3:20:00 PM

WDOE ACCREDITATION:

C601

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A	NALYSIS BY	,
TPH-Volatile Range	NWTPH-GX	6300	250	5	UG/L	02/13/2014	DLC	ţ
Methyl T-Butyl Ether	EPA-8021	υ	15	5	UG/L	02/13/2014	DLC	.;
Benzene	EPA-8021	U	5.0	5	UG/L	02/13/2014	DLC	í
Toluene	EPA-8021	510	5.0	5	UG/L	02/13/2014	DLC	;
Ethylbenzene	EPA-8021	60	5.0	5	UG/L	02/13/2014	DLC	;
Xylenes	EPA-8021	1000	15	5	UG/L	02/13/2014	DLC	;
TPH-Diesel Range	NWTPH-DX	270	130	1	UG/L	02/12/2014	EBS	;
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	02/12/2014	EBS	:
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	02/14/2014	GAP	:
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	02/14/2014	GAP	:
Lead (Dissolved) EPA-200.8	EPA-200.8	υ	1.0	1	UG/L	02/17/2014	RAL	;
		,				ANALYSIS A	NALYSIS	ı

SURROGATE	METHOD	%REC		ANALYSIS ANALYSIS DATE BY 02/13/2014 DLC 02/13/2014 DLC			
TFT 5X Dilution	NWTPH-GX	99.7	00/40/0	014 DIO			
			02/13/2	014 DLC			
TFT 5X Dilution	EPA-8021	97.1	02/13/2	014 DLC			
C25	NWTPH-DX	104	02/12/2	014 EBS			
1,2-Dichloroethane-d4	EPA-8260 SIM	98.3	02/14/2	014 GAP			

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

Chromatogram indicates that it is likely that sample contains weathered gasoline and an unidentified diesel range product.

Diesel range product results biased high due to gasoline range product overlap.



CERTIFICATE OF ANALYSIS A LANGE OF ANALYSIS

CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: **CLIENT PROJECT:** Harold Cashman Kris Mini Mart

CLIENT SAMPLE ID

MW-15

DATE:

2/19/2014

ALS JOB#: ALS SAMPLE#:

EV14020039

DATE RECEIVED:

-06 2/11/2014

COLLECTION DATE:

2/6/2014 12:40:00 PM

WDOE ACCREDITATION:

C601

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS Date	ANALYSIS BY	•
TPH-Volatile Range	NWTPH-GX	12000	500	10	UG/L	02/13/2014	DLC	4
Methyl T-Butyl Ether	EPA-8021	U	30	10	UG/L	02/13/2014	DLC	:
Benzene	EPA-8021	U	10	10	UG/L	02/13/2014	DLC	ž
Toluene	EPA-8021	250	10	10	UG/L	02/13/2014	DLC	t
Ethylbenzene	EPA-8021	110	10	10	UG/L	02/13/2014	DLC	ì
Xylenes	EPA-8021	2400	30	10	UG/L	02/13/2014	DLC	1
TPH-Diesel Range	NWTPH-DX	2200	130	1	UG/L	02/12/2014	EBS	÷
TPH-Oil Range	NWTPH-DX	Ü	250	1	UG/L	02/12/2014	EBS	:
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	02/14/2014	GAP	:
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	02/14/2014	GAP	:
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	02/17/2014	RAL	:

SURROGATE	METHOD	%REC	ANALYSIS AN DATE	ALYSIS BY
TFT 10X Dilution	NWTPH-GX	122	02/13/2014	DLC
TFT 10X Dilution	EPA-8021	113	02/13/2014	DLC
C25	NWTPH-DX	103	02/12/2014	EBS
1,2-Dichloroethane-d4	EPA-8260 SIM	97.2	. 02/14/2014	GAP_

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

Chromatogram indicates that it is likely that sample contains weathered gasoline and an unidentified diesel range product.

Diesel range product results biased high due to gasoline range product overlap.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT:

Harold Cashman

CLIENT PROJECT:

1,2-Dichloroethane-d4

Kris Mini Mart

DATE:

2/19/2014

ALS JOB#:

EV14020039

ALS SAMPLE#:

-07

DATE RECEIVED: **COLLECTION DATE:** 2/11/2014 2/6/2014 2:45:00 PM

02/14/2014

GAP

CLIENT SAMPLE ID	MW-16		WDOE AC	CCREDITATION:	C601			
		DA [*]	ARESULTS.				10. 150	Į.
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A	NALYSIS BY	
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	02/13/2014	DLC	
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	02/13/2014	DLC	
Benzene	EPA-8021	U	1.0	1	UG/L	02/13/2014	DLC	
Toluene	EPA-8021	U	1.0	1	UG/L	02/13/2014	DLC	
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	02/13/2014	DLC	
Xylenes	EPA-8021	U	3.0	1	UG/L	02/13/2014	DLC	
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	02/12/2014	EBS	
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	02/12/2014	EBS	
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	02/14/2014	GAP	
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	02/14/2014	GAP	
Lead (Dissolved)	EPA-200.8	U	1.0	11	UG/L	02/17/2014	RAL	
SURROGATE	METHOD	%REC				ANALYSIS A	NALYSIS BY	
TFT	NWTPH-GX	99.3				02/13/2014	DLC	
TFT	EPA-8021	96.9				02/13/2014	DLC	
C25	NWTPH-DX	103				02/12/2014	EBS	

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

EPA-8260 SIM

97.2



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT: CLIENT PROJECT: Harold Cashman Kris Mini Mart

CLIENT SAMPLE ID

MW-13

DEBITION OF ANALYSIS

DATE:

2/19/2014

ALS JOB#:

EV14020039

ALS SAMPLE#:

: -08

DATE RECEIVED:

2/11/2014

COLLECTION DATE:

2/7/2014 10:15:00 AM

WDOE ACCREDITATION: C

C601

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS Date	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	81	50	1	UG/L	02/13/2014	DLC
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	02/13/2014	DLC
Benzene	EPA-8021	U	1.0	1	UG/L	02/13/2014	DLC
Toluene	EPA-8021	U	1.0	1	UG/L	02/13/2014	DLC
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	02/13/2014	DLC
Xylenes	EPA-8021	10	3.0	1	UG/L	02/13/2014	DLC
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	02/12/2014	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	02/12/2014	EBS
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	02/14/2014	GAP
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	02/14/2014	GAP
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	02/17/2014	RAL
SURROGATE	METHOD	%REC				ANALYSIS Date	ANALYSIS BY

			ANALYSIS ANA DATE	LYSIS BY
SURROGATE	METHOD	%REC	DATE	ы
TFT	NWTPH-GX	80.9	02/13/2014 D	DLC
TFT	EPA-8021	77.1	02/13/2014 D	DLC
C25	NWTPH-DX	84.1	02/12/2014 E	EBS
1,2-Dichloroethane-d4	EPA-8260 SIM	101	02/14/2014 G	3AP_

U - Analyte analyzed for but not detected at level above reporting limit. Chromatogram indicates that it is likely that sample contains highly weathered gasoline.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

CLIENT CONTACT:

Harold Cashman

CLIENT PROJECT: CLIENT SAMPLE ID Kris Mini Mart MW-14 DATE:

E: 2/19/2014

ALS JOB#:

EV14020039

ALS SAMPLE#:

-09

DATE RECEIVED:

2/11/2014

COLLECTION DATE:

2/7/2014 11:10:00 AM

WDOE ACCREDITATION:

C601

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A Date	NALYSIS BY	
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	02/13/2014	DLC	
Methyl T-Butyl Ether	EPA-8021	υ	3.0	1	UG/L	02/13/2014	DLC	
Benzene	EPA-8021	U	1.0	1	UG/L	02/13/2014	DLC	
Toluene	EPA-8021	U	1.0	1	UG/L	02/13/2014	DLC	
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	02/13/2014	DLC	1
Xylenes	EPA-8021	U	3.0	1	UG/L	02/13/2014	DLC	
TPH-Diesel Range	NWTPH-DX	470	130	1	UG/L	02/13/2014	EBS	
TPH-Oil Range	NWTPH-DX	550	250	1	UG/L	02/13/2014	EBS	
1,2-Dichloroethane	EPA-8260 SIM	U	0.020	1	UG/L	02/14/2014	GAP	
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	02/14/2014	GAP	
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	02/17/2014	RAL	

		ANALYSIS ANALYSIS	
SURROGATE	METHOD	%REC	DATE BY
TFT	NWTPH-GX	83.6	02/13/2014 DLC
TFT	EPA-8021	79.0	02/13/2014 DLC
C25	NWTPH-DX	85.1	02/13/2014 EBS
1,2-Dichloroethane-d4	EPA-8260 SIM	101	02/14/2014 GAP
•		*	

U - Analyte analyzed for but not detected at level above reporting limit. Chromatogram indicates that it is likely that sample contains light oil/lube oil.



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

ALS SDG#:

2/19/2014 EV14020039

WDOE ACCREDITATION: C601

DATE:

CLIENT CONTACT: CLIENT PROJECT:

Harold Cashman Kris Mini Mart

LABORATORYBLANK RESULTS MANAGEMENT OF THE STATE OF THE ST

あれた いりいフィイババ	Datab 7619	Water by NWTPH-GX	
WID-UZU/ 1444 -	Baich /612 -	water by NW I Ph-GX	

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	02/07/2014	DLC

MB-020714W - Batch 7612 - Water by EPA-8021

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
Methyl T-Butyl Ether	EPA-8021	U	3.0	1	UG/L	02/07/2014	DLC
Benzene	EPA-8021	υ	1.0	1	UG/L	02/07/2014	DLC
Toluene	EPA-8021	U	, 1.0	1	UG/L	02/07/2014	DLC
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	02/07/2014	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	02/07/2014	DLC

MB-021214W - Batch 7621 - Water by NWTPH-DX

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	02/12/2014	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	02/12/2014	EBS

MB-021414W - Batch 7627 - Water by EPA-8260 SIM

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
1,1-Dichloroethene	EPA-8260 SIM	U	0.020	1	UG/L	02/14/2014	GAP
1,2-Dichloroethane	EPA-8260 SIM	U	0.10	1	UG/L	02/14/2014	GAP
1,2-Dibromoethane	EPA-8260 SIM	U	0.010	1	UG/L	02/14/2014	GAP

MB-021314W - Batch 7623 - Water by EPA-200.8

			REPORTING	DILUTION		ANALYSIS A	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	02/17/2014	RAL



CLIENT:

Whatcom Environmental Svcs., Inc.

228 E. Champion St., Suite 101

Bellingham, WA 98225

ALS SDG#:

DATE:

2/19/2014 EV14020039

WDOE ACCREDITATION:

C601

CLIENT CONTACT: CLIENT PROJECT:

Harold Cashman Kris Mini Mart

- L	ABOR	ATORY C	ONTROL	SAMPLE F	{ESULTS

ALS Test Batch ID: 7612 - Water by NWTPH-GX

					ANALYSIS	ANALYSIS
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	DATE	BY
TPH-Volatile Range - BS	NWTPH-GX	75.8			02/07/2014	DLC
TPH-Volatile Range - BSD	NWTPH-GX	72.5	4		02/07/2014	DLC

ALS Test Batch ID: 7612 - Water by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY	
Methyl T-Butyl Ether - BS	EPA-8021	87.8		40.12	02/07/2014	DLC	
Methyl T-Butyl Ether - BSD	EPA-8021	89.2	2		02/07/2014	DLC	
Benzene - BS	EPA-8021	95.0			02/07/2014	DLC	
Benzene - BSD	EPA-8021	97.0	2		02/07/2014	DLC	
Toluene - BS	EPA-8021	100			02/07/2014	DLC	
Toluene - BSD	EPA-8021	102	2		02/07/2014	DLC	
Ethylbenzene - BS	EPA-8021	98.0			02/07/2014	DLC	
Ethylbenzene - BSD	EPA-8021	100	2		02/07/2014	DLC	
Xylenes - BS	EPA-8021	97.9			02/07/2014	DLC	
Xylenes - BSD	EPA-8021	100	2		02/07/2014	DLC	

ALS Test Batch ID: 7621 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS Date	ANALYSIS BY
TPH-Diesel Range - BS	NWTPH-DX	79.0			02/12/2014	EBS
TPH-Diesel Range - BSD	NWTPH-DX	80.2	2		02/12/2014	EBS

ALS Test Batch ID: 7627 - Water by EPA-8260 SIM

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS Date	ANALYSIS BY	
1,1-Dichloroethene - BS	EPA-8260 SIM	84.4	IN D	GOAL	02/14/2014	GAP	
1,1-Dichloroethene - BSD	EPA-8260 SIM	80.7	5		02/14/2014	GAP	

ALS Test Batch ID: 7623 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL		ANALYSIS DATE	ANALYSIS BY
Lead (Dissolved) - BS	EPA-200.8	94.1				02/17/2014	RAL
Lead (Dissolved) - BSD	EPA-200.8	94.4	0		•	02/17/2014	RAL

Page 12

ALS Laboratory Group A Campbell Brothers Limited Company

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208





APPROVED BY

Laboratory Director

ALS Environmental 8620 Holly Drive, Suite 100 Everett, WA 98208 Phone (425) 356-2600 Fax (425) 356-2626 http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

	ALS Job#	(Laboratory Use Only)
6	-1114	270220

* Turnaround request less than standard may incur Rush Charges

PROJECTIO: Kris Mini Mat	AN	ALY	SIS	REC	UE	STE)									OTH	IER	(Spec	ify)				
COMPANY: Whatcom Endironmental Services																					ļ		
PROJECT HANDIO CASANGO										_					os 🗆						- 1		
ADDRESS: 229 E. Champion St. #101							0			8270	t-8270	382	TAL [] Herb								~.
Bellinehaur, WA 98225							4 8260			y EPA	by EP#	81/80			Pest [ļ	Š.
PHONE: 360-752-9571 FAX: 360-752-9573					280	8260	by EPA	(er		q spu	(PAH)	by EPA 8081/8082	3 Pri	30	lo lo						- 1	SE	B
PO. #: E-MAIL: h 1 cashwan C whoten INVOICE TO COMPANY: Cony & Rewarder.					EPA-8260	y EPA	nnds	M (wa	Oil)	nodw	arbons		A-8 [emi-V							OF CONTAINERS	8
	1			_	<u>Ā</u>	iles b	ошро	260 SI	260 (s	nic Cc	Hydroc	s	I RCR	cify)	IA□ §		İ					NO.	<u> </u>
ATTENTION: 40 Carol Woler	ے ا			A-802	¥-80;	Vola	anic C	EPA 8	EPA 8	Orga	matic	Pesticides	A-5□	ogs) .	□ VC							R	ž
ADDRESS: Claim# 194567	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021-25	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SiM		Metals-MTCA-5 🗆 RCRA-8 🗇 Pri Pol 🗀 TAL 🗅	Metals Other (Specify)	TCLP-Metals 🗆 VOA 🗆 Semi-Vol 🗀 Pest 🗀 Herbs 🗅							NUMBER	RECEIVED IN GOOD CONDITION?
SAMPLE I.D. DATE TIME TYPE LAB#	M	N N	N M	BTEX	MTB	Halog	Volat	EDB/	EDB/	Semi	Polycy	PCB	Metal	Metal	TCLP							Ž	띭
1. MW-8 2/6/14 11:10 water 1		x	1	4	X			X		-				X								6	
$\frac{12!0}{2}$		٢	1	x	火			X						X								6	
3. MW-11 (2:15 (3		1	4	14	1			イ						y _								6	
4. WW-12 1:15 4		×	*	X	4			K						Ý					T		- 1	6	
5. WW-10 3:20 5		4	4	4	V			4						¥								`	
6. MW-15 12:40 6		4	X	X	V			¥						X					\top	 		6	
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APPENDIX H

Terrestrial Ecological Evaluation



Voluntary Cleanup Program

Washington State Department of Ecology Toxics Cleanup Program

TERRESTRIAL ECOLOGICAL EVALUATION FORM

Under the Model Toxics Control Act (MTCA), a terrestrial ecological evaluation is necessary if hazardous substances are released into the soils at a Site. In the event of such a release, you must take one of the following three actions as part of your investigation and cleanup of the Site:

- Document an exclusion from further evaluation using the criteria in WAC 173-340-7491.
- 2. Conduct a simplified evaluation as set forth in WAC 173-340-7492.
- 3. Conduct a site-specific evaluation as set forth in WAC 173-340-7493.

When requesting a written opinion under the Voluntary Cleanup Program (VCP), you must complete this form and submit it to the Department of Ecology (Ecology). The form documents the type and results of your evaluation.

Completion of this form is not sufficient to document your evaluation. You still need to document your analysis and the basis for your conclusion in your cleanup plan or report.

If you have questions about how to conduct a terrestrial ecological evaluation, please contact the Ecology site manager assigned to your Site. For additional guidance, please refer to www.ecy.wa.gov/programs/tcp/policies/terrestrial/TEEHome.htm.

Step 1: IDENTIFY HAZARDOUS WASTE	SITE					
Please identify below the hazardous waste site for which you are documenting an evaluation.						
Facility/Site Name: Kris's Mini Mart	Facility/Site Name: Kris's Mini Mart					
Facility/Site Address: 6000 Portal Way, Ferndale, WA						
Facility/Site No: 96443724	VCP Project No.:					

Step 2: IDENTIFY EVA	LUATOR	110.00							
Please identify below the person who conducted the evaluation and their contact information.									
Name: Aimee Schimelfen		Title: Environmental Scientist							
Organization: Whatcom	Organization: Whatcom Environmental Services								
Mailing address: 228 E Champion St									
City: Bellingham			te: WA	Zip code: 98225					
Phone: 360-752-9571	Fax: 360-752-9571		E-mail: aschimelfen	ig@whatcomenvironmental.com					

Step 3	Step 3: DOCUMENT EVALUATION TYPE AND RESULTS					
A. Exc	lusion	from further evaluation.				
1. Doe	s the S	ite qualify for an exclusion from further evaluation?				
	☐ Y	es If you answered "YES," then answer Question 2.				
	⊠ N Unkn					
2. Wha	at is the	basis for the exclusion? Check all that apply. Then skip to Step 4 of this form.				
Poin	t of Co	mpliance: WAC 173-340-7491(1)(a)				
		All soil contamination is, or will be,* at least 15 feet below the surface.				
		All soil contamination is, or will be,* at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.				
Barr	iers to	Exposure: WAC 173-340-7491(1)(b)				
		All contaminated soil, is or will be,* covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination.				
Und	evelope	ed Land: WAC 173-340-7491(1)(c)				
		There is less than 0.25 acres of contiguous# undeveloped± land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride; toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.				
		For sites not containing any of the chemicals mentioned above, there is less than 1.5 acres of contiguous# undeveloped* land on or within 500 feet of any area of the Site.				
Bacl	kground	I Concentrations: WAC 173-340-7491(1)(d)				
		Concentrations of hazardous substances in soil do not exceed natural background levels as described in WAC 173-340-200 and 173-340-709.				
acceptal	ble to Ed					
prevent # "Conti	wildlife f guous" (s, exten	land" is land that is not covered by building, roads, paved areas, or other barriers that would rom feeding on plants, earthworms, insects, or other food in or on the soil. Indeveloped land is an area of undeveloped land that is not divided into smaller areas of sive paving, or similar structures that are likely to reduce the potential use of the overall area				

В.	Simplified	valuation.	
1.	Does the S	e qualify for a simplified evaluation?	
	⊠ Ye	If you answered "YES," then answer Question 2 below.	
1	□ N Unkno	or If you answered "NO" or "UNKNOWN," then skip to Step 3C of this form.	
2.	Did you co	duct a simplified evaluation?	
	⊠ Yo	If you answered "YES," then answer Question 3 below.	
	□ N	If you answered "NŌ," then skip to Step 3C of this form.	
3.	Was furthe	evaluation necessary?	
	⊠ Yo	If you answered "YES," then answer Question 4 below.	
	□ N	If you answered "NO," then answer Question 5 below.	
4.	If further e	aluation was necessary, what did you do?	
	\boxtimes	Used the concentrations listed in Table 749-2 as cleanup levels. <i>If so, then skip</i> Step 4 of this form.	o to
		Conducted a site-specific evaluation. If so, then skip to Step 3C of this form.	
5.	If no furthe	evaluation was necessary, what was the reason? Check all that apply. The	n skip
	Exposure A	alysis: WAC 173-340-7492(2)(a)	
		Area of soil contamination at the Site is not more than 350 square feet.	
		Current or planned land use makes wildlife exposure unlikely. Used Table 749-	-1.
	Pathway A	alysis: WAC 173-340-7492(2)(b)	
		No potential exposure pathways from soil contamination to ecological receptors	; _
	Contamina	Analysis: WAC 173-340-7492(2)(c)	
		No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet a concentrations that exceed the values listed in Table 749-2.	at
		No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (calternative depth if approved by Ecology) at concentrations that exceed the valuisted in Table 749-2, and institutional controls are used to manage remaining contamination.	
		No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet a concentrations likely to be toxic or have the potential to bioaccumulate as deterusing Ecology-approved bioassays.	
		No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (calternative depth if approved by Ecology) at concentrations likely to be toxic or left the potential to bioaccumulate as determined using Ecology-approved bioassay institutional controls are used to manage remaining contamination.	have

C.	Site-specific evaluation . A site-specific evaluation process consists of two parts: (1) formulating the problem, and (2) selecting the methods for addressing the identified problem. Both steps require consultation with and approval by Ecology. See WAC 173-340-7493(1)(c).
1.	Was there a problem? See WAC 173-340-7493(2).
	Yes If you answered "YES," then answer Question 2 below.
	☐ No If you answered "NO," then identify the reason here and then skip to Question 5 below:
	No issues were identified during the problem formulation step.
	While issues were identified, those issues were addressed by the cleanup actions for protecting human health.
2.	What did you do to resolve the problem? See WAC 173-340-7493(3).
	Used the concentrations listed in Table 749-3 as cleanup levels. If so, then skip to Question 5 below.
	Used one or more of the methods listed in WAC 173-340-7493(3) to evaluate and address the identified problem. <i>If so, then answer Questions 3 and 4 below.</i>
3.	If you conducted further site-specific evaluations, what methods did you use? Check all that apply. See WAC 173-340-7493(3).
	Literature surveys.
	Soil bioassays.
	Wildlife exposure model.
	Biomarkers.
	Site-specific field studies.
	Weight of evidence.
	Other methods approved by Ecology. If so, please specify:
4.	What was the result of those evaluations?
	Confirmed there was no problem.
	Confirmed there was a problem and established site-specific cleanup levels.
5.	Have you already obtained Ecology's approval of both your problem formulation and problem resolution steps?
	☐ Yes If so, please identify the Ecology staff who approved those steps:
	□ No

Step 4: SUBMITTAL

Please mail your completed form to the Ecology site manager assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.



Northwest Region: Attn: VCP Coordinator 3190 160th Ave. SE Bellevue, WA 98008-5452

Southwest Region: Attn: VCP Coordinator P.O. Box 47775 Olympia, WA 98504-7775 Central Region: Attn: VCP Coordinator 15 W. Yakima Ave., Suite 200 Yakima, WA 98902

Eastern Region: Attn: VCP Coordinator N. 4601 Monroe Spokane WA 99205-1295

Terrestrial Ecological Evaluation Process-Simplified or Site-Specific Evaluation?

Documentation Form

	Terrestrial Concern	Response (Circle One)
*1	Is the site is located on or directly adjacent to an area where management or land use plans will maintain or restore <u>native</u> or <u>semi-native</u> vegetation?	Yes /No
*2a	Is the site used by a <u>threatened or endangered</u> <u>species?</u>	Yes /No
*2b	Is the site used by a <u>wildlife species classified by the</u> state department of fish and wildlife as a "priority species" or "species of concern" under Title 77 RCW?	Yes /No
*2c	Is the site used by a plant species classified by the Washington state department of Natural Resources natural heritage program as "endangered," "threatened," or "sensitive" under Title 79 RCW.	Yes /No
*3	Is the site (area where the contamination is located) located on a property that contains at least ten acres of <u>native vegetation</u> within 500 feet of the area where the contamination is located?	Yes /No
4	Has the department determined that the site may present a risk to significant wildlife populations?	Yes /No

^{*1} This includes for example, green-belts, protected wetlands, forestlands, locally designated environmentally sensitive areas, open space areas managed for wildlife, and some parks or outdoor recreation areas. This does not include park areas used for intensive sport activities such as baseball or football.

^{*2}a What are the threatened or endangered species in Washington state?

^{*2}b Which plant species are classified as threatened, endangered, or sensitive? Where can I find out more information about this topic?

^{*2}c For plants, "used" means that a plant species grows at the site or has been found growing at the site. For animals, "used" means that individuals of a species have been observed to live, feed or breed at the site.

^{*3} For this analysis, do not include native vegetation beyond the property boundary.

The following sources shall be used in making this determination: Natural Vegetation of Oregon and Washington, J.F. Franklin and C.T. Dyrness, Oregon State University Press, 1988, and L.C. Hitchcock, C.L. Hitchcock, J.W. Thompson and A. Cronquist, 1955-1969, <u>Vascular Plants of the Pacific Northwest(5 volumes</u>). Areas planted with native species for ornamental or landscaping purposes shall not be considered to be native vegetation. [WAC 173-340-7491(2)(c)(i)]

(Here's a link to the <u>Seattle Public Library</u> and the <u>Washington State Library</u> to borrow a copy of Natural Vegetation of Oregon and Washington, J.F. Franklin and C.T. Dyrness, Oregon State University Press, 1988, or you may purchase it through your favorite bookseller. Here's an additional link to a useful online <u>Field Guide to Selected Rare Plants of Washington</u> developed by the Washington State Department of Natural Resources' Natural Heritage Program (WNHP) and the Spokane District of the U.S.D.I. Bureau of Land Management (BLM) which contains fact sheets for 139 vascular plant species and one lichen species.

Here is an aid to calculating area and an <u>aerial photo depicting a site</u>, its 500 foot boundary and several labeled circles identifying various areas for reference in judging the area of native vegetation within the 500 foot radius.

[Exclusions Main] [TEE Definitions] [Simplified or Site-Specific?] [Simplified Ecological Evaluation] [Site-Specific Ecological Evaluation] [WAC 173-340-7493] [Index of Tables]

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Table 749-1
Simplified Terrestrial Ecological Evaluation-Exposure Analysis Procedure

Estimate the area of contiguous (connected) <u>undeveloped land</u> on the site or within 500 feet of any area of the site to the nearest 1/2 acre (1/4 acre if the area is less than 0.5 acre).					
1) From the table below, find the number of points corresponding to the area and enter this number in the field to the right.					
Area (acres) Points 0.25 or less 4 0.5 5 1.0 6 1.5 7 2.0 8 2.5 9 3.0 10 3.5 11 4.0 or more 12	12				
2) Is this an industrial or commercial property? If yes, enter a score of 3. If no, enter a score of 1	3				
3) ^a Enter a score in the box to the right for the habitat quality of the site, using the following rating system ^b . High=1, Intermediate=2, Low=3	3				
4) Is the undeveloped land likely to attract wildlife? If yes, enter a score of 1 in the box to the right. If no, enter a score of 2. ^c	1				
5) Are there any of the following soil contaminants present: Chlorinated dioxins/furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, pentachlorobenzene? If yes, enter a score of 1 in the box to the right. If no, enter a score of 4.	4				
6) Add the numbers in the boxes on lines 2-5 and enter this number in the box to the right. If this number is larger than the number in the box on line 1, the simplified evaluation may be ended.	11				

Notes for Table 749-1

Low: Early <u>successional</u> vegetative stands; vegetation predominantly noxious, nonnative, exotic plant species or weeds. Areas severely disturbed by human activity, including intensively cultivated croplands. Areas isolated from other habitat used by wildlife.

^a It is expected that this habitat evaluation will be undertaken by an experienced field biologist. If this is not the case, enter a conservative score of (1) for questions 3 and 4.

^b **Habitat rating system.** Rate the quality of the habitat as high, intermediate or low based on your professional judgment as a field biologist. The following are suggested factors to consider in making this evaluation:

High: Area is ecologically significant for one or more of the following reasons: Late-<u>successional</u> native plant communities present; relatively high species diversity; used by an uncommon or rare species; <u>priority habitat</u> (as defined by the Washington Department of fish and Wildlife); part of a larger area of habitat where size or fragmentation may be important for the retention of some species.

Intermediate: Area does not rate as either high or low.

^c Indicate "yes" if the area attracts wildlife or is likely to do so. Examples: Birds frequently visit the area to feed; evidence of high use b mammals (tracks, scat, etc.); habitat "island" in an industrial area; unusual features of an area that make it important for feeding animals; heavy use during seasonal migrations.

[Area Calculation Aid] [Aerial Photo with Area Designations] [TEE Table 749-1] [Index of Tables]

[Exclusions Main] [TEE Definitions] [Simplified or Site-Specific?] [Simplified Ecological Evaluation] [Site-Specific Ecological Evaluation] [WAC 173-340-7493]

[TEE Home]

