



October 16, 2006
Project 001.0173.00003

Mr. Kurt Peterson
Cascadia Law Group PLLC
7400 Trevanion Avenue
Pittsburgh, Pennsylvania 15218

Re: Final Remedial Investigation Report, Former Arco Service Station #0855,
Longview, Washington

Dear Kurt:

SLR International Corp is pleased to submit three copies of the Final Remedial Investigation Report for the above-referenced site. The report describes the investigation activities, and presents the field and analytical data.

If you have any questions, please call me at (425) 402-8800.

Sincerely,

SLR International Corp

A handwritten signature in black ink, appearing to read "Michael D. Staton".

Michael D. Staton, L.G.
Principal Geologist

cc: Tona Wakefield, Wakefield Family LLC (2 copies)

Attachment: Final Remedial Investigation Report

**FINAL REMEDIAL INVESTIGATION REPORT
FORMER ARCO SERVICE STATION #0855
4603 OCEAN BEACH HIGHWAY
LONGVIEW, WASHINGTON

PROJECT 001.0173.00003**

Prepared for

Wakefield Family, LLC

October 2006

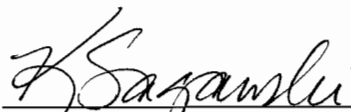
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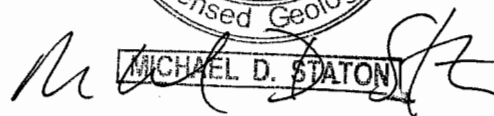


FINAL REMEDIAL INVESTIGATION REPORT, FORMER ARCO SERVICE STATION #0855, LONGVIEW, WASHINGTON

The material and data in this report were prepared under the supervision and direction of the undersigned.



Kim A. Saganski, L.G.
Project Geologist


MICHAEL D. STATON

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EXECUTIVE SUMMARY

From May 2005 through August 2006, SLR International Corp conducted a remedial investigation at former Arco Service Station #0855 in Longview, Washington. The investigation was conducted to address several data gaps that needed to be resolved in order to meet Ecology's objectives for remedial investigations [WAC 173-340-350(7)(iii)], and to provide information that can be used to evaluate and select a site remedial action.

The investigation primarily consisted of drilling and sampling 24 on-site and 6 off-site soil borings, completing 8 of the borings with deep groundwater monitoring wells and 4 of the borings with shallow groundwater monitoring wells, and collecting groundwater samples from the new and existing wells. Based on the soil sample analytical results, soil containing petroleum hydrocarbon concentrations greater than the MTCA Method A cleanup levels occurs in the northeastern, northern, and western parts of the site [near the dispenser island and the former gasoline underground storage tank (UST) basin]. Localized areas of soil containing petroleum hydrocarbon concentrations greater than the Method A cleanup levels also occur in the west-central part of the site, near the former used oil and heating oil USTs. The lateral extents of all of the areas of impacted soil have been defined. The impacted soil typically extends to depths of less than 15 feet below ground surface (bgs); however, at localized areas near the dispenser island and the former gasoline UST basin, the impacted soil extends through a clayey silt unit to an underlying semi-confined aquifer. The impacted soil at the former gasoline UST basin extends to a depth of approximately 22 feet, and the impacted soil near the dispenser island extends to a depth of greater than 25 feet. Soil samples could not be collected at depths below 25 feet in borings near the dispenser island due to heaving sands in the borehole. However, based on the benzene concentrations (0.13 and 1.1 milligrams per kilogram) in the deepest samples (at 21 and 25 feet) from the two deep borings near the dispenser island and the thickness of saturated sand unit (extends to a depth of greater than 46 feet), SLR believes that the vertical extent of the impacted soil near the dispenser island likely occurs within the saturated sand unit.

From May 2005 through August 2006, gasoline free product was present on the groundwater in shallow monitoring well MW-3 at thicknesses ranging from a film to 0.24 feet. Free product was not present in any of the other monitoring wells. Based on the groundwater sample analytical results, the shallow unconfined groundwater beneath the dispenser island contains petroleum hydrocarbon concentrations greater than the MTCA Method A cleanup levels. The impacted shallow groundwater extends in all directions up to approximately 40 feet away from the dispenser island, and the lateral extent of the impacted groundwater has been delineated. Since the potential sources of contamination

at the site were removed in 1999, SLR believes that the lateral extent of the impacted groundwater has likely stabilized.

Based on the groundwater sample analytical results, the deep semi-confined groundwater beneath the dispenser island contains volatile petroleum hydrocarbon concentrations greater than the MTCA Method A cleanup levels. The impacted deep groundwater extends in all directions up to approximately 85 feet away from the dispenser island, and the lateral extent of the impacted groundwater has been delineated. The groundwater within the saturated sand unit (at depths below 21 feet bgs) was under pressure, and heaving sands prevented the installation of a monitoring well or a temporary wellpoint at depths below 26 feet bgs. Based on the groundwater concentrations near the top of the saturated sand unit and thickness of the unit (greater than 25 feet), SLR believes that the vertical extent of the impacted groundwater likely occurs within the saturated sand unit.

Based on the results of the investigation activities, all of the data gaps have been sufficiently resolved and Ecology's objectives for remedial investigations have been met. The investigation results will also be used in the evaluation and selection of a site remedial action.

1. INTRODUCTION

From May 2005 through August 2006, SLR International Corp (SLR) conducted a remedial investigation at former Arco Service Station #0855 (the site) in Longview, Washington. Based on the results of previous site assessment activities, SLR identified several data gaps that needed to be resolved in order to meet the Washington Department of Ecology's (Ecology's) objectives for remedial investigations [WAC 173-340-350(7)(iii)] and to provide information to evaluate and design a site remedial action. The purpose of this investigation was to resolve the identified data gaps, which included the following:

- The source of the free product (at monitoring well MW-3) and the elevated dissolved-phase petroleum hydrocarbon concentrations (at monitoring well MW-4) in the northeastern part of the site has not been identified.
- The soil conditions along the abandoned underground dispenser lines have not been assessed.
- The lateral and vertical extents of the hydrocarbon-impacted soil near the dispenser island have not been delineated.
- The lateral and vertical extents of the hydrocarbon-impacted soil near the former gasoline underground storage tank (UST) basin have not been delineated.
- The lateral extent of the hydrocarbon-impacted soil near the former heating oil and used oil UST basin has not been defined.
- The lateral extent of the hydrocarbon-impacted shallow groundwater has not been delineated.
- The lateral extent of the hydrocarbon-impacted deeper groundwater (beneath a clayey silt unit) has not been defined.
- The vertical extent of the hydrocarbon-impacted groundwater has not been characterized.
- The shallow and deep groundwater receptors in the site area have not been identified.

- The potential affects of underground utilities on groundwater contamination migration pathways have not been assessed.
- The potential presence of hazardous substances (e.g., asbestos, lead-based paint) in the site building and canopy materials has not been assessed.

To resolve these data gaps, the tasks completed for this investigation included the following:

- Drilled 24 on-site soil borings (SSB-1 through SSB-18, DMW-1 through DMW-5, and MW-11) and 6 off-site soil borings (MW-8, MW-9, MW-10, DMW-6, DMW-7, and DMW-8), and collected at least one soil sample from each of the borings, except DMW-6, for quantitative chemical analysis.
- Installed deep groundwater monitoring wells in on-site borings DMW-1 through DMW-5, and installed a shallow groundwater monitoring well in on-site boring MW-11.
- Installed deep groundwater monitoring wells in off-site borings DMW-6, DMW-7, and DMW-8, and installed shallow groundwater monitoring wells in off-site borings MW-8, MW-9, and MW-10.
- Temporarily installed a deep groundwater wellpoint in on-site boring SSB-15, and collected a groundwater sample from the wellpoint for quantitative chemical analysis.
- Excavated two off-site test pits (TP-1 and TP-2) and collected a soil sample from each test pit for quantitative chemical analysis.
- Surveyed the top of casing elevations of the new monitoring wells and the existing monitoring wells.
- Measured the depths to groundwater and free product, if present, in all of the monitoring wells.
- Collected groundwater samples from all of the monitoring wells for quantitative chemical analysis. Groundwater sampling events were conducted in May 2005, in November/December 2005, and in August 2006.
- Conducted a hazardous materials survey of the site building and canopy.
- Reviewed Cowlitz County records to map the locations and depths of the underground utilities in the site area.

- Reviewed Ecology's water supply well database and the Cowlitz County Health Department's well records for a one-mile radius area from the site.
- Interpreted the compiled data.

2. BACKGROUND

2.1 General Site Information

The site is located near the western end of Longview, Washington, at the western corner of the intersection of Ocean Beach Highway and 46th Avenue. The location of the site is shown on Figure 1. The site address is 4603 Ocean Beach Highway. The site is a 0.3-acre parcel located within the northeastern corner of a 1.07-acre property that is owned by Wakefield Family LLC. The 1.07-acre property includes the site parcel and undeveloped land to the west, northwest, and southwest of the site.

From 1957 to 1977, Atlantic Richfield Corporation used the site as a retail gasoline service station and automobile repair garage. The station operations were discontinued in 1977. The underground fuel storage tanks (USTs) and dispensers were inactive after 1977; however, they were not removed until 1999. From 1977 through 2005, the site was leased to several commercial businesses. The site has been vacant since December 2005. The existing structures at the site consist of the former service station building, and the former station canopy and dispenser island. The site structures are shown on Figure 2.

The site is bounded to the north and northeast by Ocean Beach Highway, the Boon Dox Tavern, and the Boon Dox Market; to the east by Ocean Beach Highway and a Texaco service station; to the southeast by 46th Avenue and Henri's restaurant; to the south by 46th Avenue and an apartment building; and to the southwest, west, and northwest by undeveloped land (Figure 2). The site slopes gently downward to the western and southwestern parts of the site. The site surface consists of asphalt or concrete, except for gravel surfaces above the two former UST basins and a dirt/grass surface within the planter at the eastern corner of the site.

The nearest surface water body is the Cutoff Slough, which is located approximately 750 feet to the east of the site. The Columbia River is located approximately 1.4 miles to the southwest of the site. Marshy undeveloped land is located adjacent to the western and northwestern boundaries of the site.

2.2 Previous Investigation Results

From July 1999 through July 2003, several environmental investigations and groundwater monitoring events were conducted at the site. In July 1999, 3 Kings

Environmental, Inc. (3 Kings) removed all of the USTs and collected soil samples from the extents of the excavations. The fuel dispensers were also removed; however, the underground dispenser lines were capped at both ends and left in place. The USTs consisted of four gasoline tanks located in the western part of the site, and a heating oil tank and a waste oil tank in the southwestern part of the site. The locations of the former tanks are shown on Figure 2. After removal of the tanks, a total of six soil samples were collected from the sidewalls and floor of the gasoline tank excavation. The soil sample analytical results showed that the analyte concentrations in all of the samples were below the method reporting limits (MRLs). Since contamination was not observed in the excavated soil, the soil was used as backfill material in the excavation. A total of five soil samples were collected from the sidewalls and floor of the heating oil tank and waste oil tank excavation. The soil sample analytical results indicated that the composite sample from the northeastern and eastern sidewalls contained a diesel-range organics (DRO) concentration [2,100 milligrams per kilogram (mg/kg)] that exceeded the current Model Toxics Control Act (MTCA) Method A cleanup level¹ (2,000 mg/kg). The sample collected from the western sidewall of the excavation contained a heavy oil-range organics (HO) concentration (6,200 mg/kg) that exceeded the current Method A cleanup level (2,000 mg/kg). All of the other soil samples contained analyte concentrations below the MRLs. The excavated soil from the heating oil and waste oil tank excavation was hauled off site for disposal. The results of the tank removal activities were presented in 3 King's letter report dated August 3, 1999.

In March 2000, IT Corporation (IT) conducted an environmental assessment that consisted of drilling and sampling three soil borings, installing shallow groundwater monitoring wells (designated MW-1, MW-2, and MW-3) in the borings, and collecting groundwater samples from the wells. MW-1 was installed near the former heating oil/waste oil tank basin, MW-2 was installed within the former gasoline tank basin, and MW-3 was installed adjacent to the dispenser island (Figure 2). Soil sample analytical results showed that the four samples collected from borings MW-2 and MW-3, at depths ranging from 2 to 20 feet below ground surface (bgs), contained benzene, ethylbenzene, total xylenes, and/or gasoline-range organics (GRO) concentrations that exceeded the current MTCA Method A cleanup levels. The groundwater sample analytical results revealed that the samples from wells MW-2 and MW-3 contained benzene, toluene, ethylbenzene, total xylenes, and/or GRO concentrations that exceeded the current Method A cleanup levels. The soil and groundwater samples from MW-1 did not contain analyte concentrations above the Method A cleanup levels. The results of the assessment activities were detailed in IT's letter report dated May 12, 2000.

In October 2000, SECOR International, Inc. (SECOR) conducted a subsurface investigation to delineate the lateral extent of the hydrocarbon-impacted groundwater. The investigation consisted of: 1) drilling and sampling four on-site soil borings and

¹ Chapter 173-340 WAC, Model Toxics Control Act Cleanup Regulation, Method A Cleanup Levels. Amended February 12, 2001.

installing shallow groundwater monitoring wells (designated MW-4, MW-5, MW-6, and MW-7) in the borings; 2) drilling and sampling six soil borings (designated GP-1, GP-2, GP-3, GP-5, GP-6, and GP-7) to the north and east of the site, and temporarily installing shallow groundwater wellpoints in the borings; and 3) collecting groundwater samples from the new and existing monitoring wells and from the temporary wellpoints. The locations of the monitoring wells and the off-site borings are shown on Figure 2. The soil sample analytical results showed that the samples collected from on-site borings MW-4 and MW-7, at 5 feet bgs, contained GRO, total xylenes, and/or naphthalene concentrations that exceeded the current MTCA Method A cleanup levels. The soil samples from the other on-site borings contained analyte concentrations below the current Method A cleanup levels or the MRLs. The soil samples from all of the off-site borings did not contain analyte concentrations above the MRLs. The groundwater sample analytical results showed that the samples from wells MW-3 and MW-4 contained benzene, toluene, ethylbenzene, total xylenes, 1,2-dichloroethane (EDC), naphthalene, and/or GRO concentrations that exceeded the current Method A cleanup levels. The samples from the other monitoring wells did not contain analyte concentrations above the Method A cleanup levels. The groundwater samples from the off-site wellpoints did not contain analyte concentrations above the MRLs. The results of the investigation were detailed in SECOR's report, *Groundwater Monitoring Well Installation and Geoprobe Boring Report*, dated June 20, 2001.

In March 2000, July 2000, January 2001, April 2001, July 2001, October 2001, January 2002, and July 2003, SECOR or Delta Environmental Consultants, Inc. (Delta) conducted groundwater monitoring events at site. Each monitoring event consisted of measuring the depths to groundwater and free product, if present, in the monitoring wells, and collecting groundwater samples from the wells. In July 2003, 0.02 feet of free product was present in well MW-3. Free product was not detected in any of the other wells during the monitoring events. The groundwater monitoring data showed that the shallow groundwater flow direction beneath the site was inconsistent. Table 1 of this report presents the previous depth to groundwater, product thickness, and groundwater elevation data. The groundwater sample analytical results indicated the following:

- The samples from MW-3 and MW-4 consistently contained benzene, ethylbenzene, and GRO concentrations greater than the current MTCA Method A cleanup levels.
- The samples from MW-2 contained benzene, total xylenes, and GRO concentrations that decreased over time to below the current Method A cleanup levels by October 2000.
- The April 2001 and January 2002 samples from MW-5 contained benzene and/or GRO concentrations that exceeded the current Method A cleanup levels.

- From July 2001 to January 2002, the samples from MW-6 contained GRO concentrations that exceeded the current Method A cleanup levels.
- In July 2003, the samples from MW-3, MW-4, MW-6, and MW-7 contained DRO and/or HO concentrations that exceeded the current Method A cleanup levels.
- In July 2003, the samples from MW-2 and MW-3 contained total lead concentrations that exceeded the current Method A cleanup level; however, based on the dissolved lead concentrations below the Method A cleanup level, the total lead concentrations were likely due to sediment in the samples.

Table 2 presents the previous groundwater sample analytical results. The results of the previous groundwater monitoring events were detailed in several reports that are listed in the References section of this report.

3. REMEDIAL INVESTIGATION

To resolve the data gaps described in Section 1 and to provide the necessary information to adequately evaluate and design a remedial action, SLR conducted a remedial investigation at the site from May 2005 through August 2006. The investigation activities are described below, and the field methods and sampling procedures are detailed in Appendix A.

3.1 Drill and Sample Soil Borings

All of the drilling and well installation activities were conducted by Geo-Tech Explorations, Inc. (Geo-Tech) of Tualatin, Oregon, or Cascade Drilling, Inc. (Cascade) of Woodinville, Washington, under the direction of an SLR geologist. The soil borings were drilled and sampled by using hydraulic push-probe methods or hollow-stem auger methods. The soil cuttings from all of the soil borings are stored on site in properly labeled, 55-gallon drums pending off-site disposal.

To identify the source of the free product and the impacted groundwater in the northeastern part of the site, four soil borings (designated SSB-1, SSB-2, SSB-3, and SSB-15) were drilled and sampled at locations near the dispenser island (Figure 3). SSB-1, SSB-2, and SSB-3 were drilled to depths ranging from approximately 15 to 18 feet bgs, and SSB-15 was drilled to approximately 25 feet bgs.

To assess the soil conditions near the abandoned underground dispenser lines, one soil boring (designated SSB-6) was drilled and sampled along the estimated location of the lines (Figure 3). The boring was extended to a depth of approximately 10 feet bgs.

To delineate the lateral extent of the impacted soil near the dispenser island, three soil borings (designated SSB-4, SSB-5, and MW-11) were drilled and sampled at locations to the southwest, northwest, and northeast of the dispenser island (Figure 3). The borings were drilled to depths ranging from approximately 10 to 14 feet bgs.

To define the vertical extent of the impacted soil near the dispenser island, previously described boring SSB-15 and an additional boring (designated DMW-1) were drilled and sampled near the northwestern end of the dispenser island (Figure 3). DMW-1 was drilled to a depth of approximately 47 feet bgs. SSB-15 was temporarily completed as a groundwater wellpoint and DMW-1 was completed as a groundwater monitoring well to assess the deep groundwater conditions.

To delineate the lateral extent of the impacted soil at the former gasoline UST area, seven soil borings (designated SSB-7, SSB-9, SSB-10, SSB-11, SSB-16, SSB-17, and SSB-18) were drilled and sampled at locations near the sidewalls of the former tank basin and to the west and southwest of the former tank basin (Figure 3). The borings were drilled to depths ranging from 10 to 15 feet bgs. To determine the vertical extent of the impacted soil at the former gasoline UST area, a soil boring (designated SSB-12) was drilled within the former tank basin, next to monitoring well MW-2. SSB-12 was extended to a depth of approximately 25 feet bgs.

To characterize the lateral extent of the impacted soil near the former heating oil and waste oil UST area, three soil borings (designated SSB-8, SSB-13, and SSB-14) were drilled and sampled at locations to the northwest, northeast, and southeast of the former tank basin (Figure 3). The borings were drilled to depths of approximately 10 feet bgs.

3.2 Install Groundwater Monitoring Wells

To delineate the lateral extent of the shallow impacted groundwater, four soil borings were drilled and sampled in the northern part of the site and to the southeast, east, and northeast of the site, and each of the borings was completed as a shallow groundwater monitoring well (designated MW-8, MW-9, MW-10, and MW-11). The locations of the wells are shown on Figure 3. Prior to drilling, SLR obtained a permit from the Washington State Department of Transportation (WSDOT) to install wells MW-9 and MW-10 on WSDOT property located along or near the south side of Ocean Beach Highway. SLR also obtained a permit from Cowlitz County to install well MW-8 on county property along 46th Avenue. All of the wells were completed at a depth of approximately 14 feet bgs.

To assess the lateral extent of the deep impacted groundwater, seven soil borings were drilled in the northern, western, eastern, and southern parts of the site and to the north, northeast, and east of the site, and each of the borings was completed as a deep groundwater monitoring well (designated DMW-2 through DMW-8). The locations of the wells are shown on Figure 3. Prior to drilling, Wakefield Family LLC obtained a permit from WSDOT to install wells DMW-6, DMW-7, and DMW-8 on WSDOT property located along or near the north and south sides of Ocean Beach Highway. The wells were completed at depths ranging from approximately 24 to 30 feet bgs.

To define the vertical extent of the deep impacted groundwater, boring DMW-1 was drilled near the northwestern end of the dispenser island (Figure 3). The boring was drilled to a depth of approximately 47 feet bgs, and a saturated sand unit was encountered from approximately 21 feet to the bottom of the boring. The groundwater within the sand unit was under pressure, and heaving sands prevented the installation of a monitoring well (DMW-1) at depths below 26 feet bgs. Due to the injection of clean water to try to prevent the sand from heaving into the borehole, a temporary wellpoint was not installed

in the boring at a depth below 26 feet bgs because any groundwater sample results would likely have been affected by the injected clean water.

All of the monitoring wells were constructed with 2-inch-diameter, schedule 40 PVC well screen and riser pipe. Each of the shallow wells was constructed with a 10-foot-long screen that was installed at a depth that intersected the groundwater table. Each of the deep wells was constructed with a 5-foot-long screen that was installed at or near the top of the first saturated unit that occurred below a semi-confining clayey silt unit (discussed in Section 3.8). A flush-grade, traffic-rated, steel monument was installed to protect each well. The well construction details are presented on the soil boring logs in Appendix A. Following installation, each well was developed by using a combination of bailing and surging in order to minimize the amount of fine-grained material in the well screen and to increase groundwater flow into the well. The development water is stored on site in properly labeled, 55-gallon drums pending off-site disposal.

3.3 Excavate Test Pits

To delineate the southwestern extent of the hydrocarbon-impacted soil near the former gasoline UST basin, Cowlitz Clean Sweep, Inc., of Longview, Washington, excavated two test pits (designated TP-1 and TP-2) at locations approximately 10 feet to the west of the site (Figure 3). The excavation activities were conducted under the direction of an SLR geologist. Test pits were used in this area because the marshy land was too wet for a drill rig to access. The test pits were excavated to depths of approximately 7.5 and 7.8 feet bgs.

3.4 Soil Sampling

During the drilling of all of the soil borings that were advanced with a hydraulic push-probe rig, soil samples were collected on a continuous basis. The samples from the push-probe borings were collected by using 5-foot-long, 1.5-inch-diameter acetate liners that were placed inside of the drilling rods. During the drilling of all of the soil borings that were advanced with a hollow-stem-auger rig, soil samples were collected at intervals that ranged from continuous to approximately every 5 feet. The samples from the auger borings were collected by using an 18-inch-long, 2-inch-diameter, split spoon sampler or an 18-inch-long, 2½-inch-diameter split-barrel sampler. The samples from the test pits were collected from the soil near the center of the backhoe bucket by using a decontaminated stainless steel spoon. The soil sampling procedures are described in Appendix A.

All of the soil samples were field screened for the presence of petroleum hydrocarbons by using visual appearance, odors, and a photoionization detector (PID). Strong petroleum hydrocarbon-like odors and/or PID readings greater than 100 parts per million (ppm) were detected in at least one sample from borings SSB-1, SSB-2, SSB-3, SSB-6, SSB-15,

and DMW-1. All of these borings were located near the dispenser island or the underground dispenser lines (Figure 3). There was limited to no field evidence of contamination in the samples from all of the other borings.

The excavated soil from the test pits was field screened for the presence of petroleum hydrocarbons by using visual appearance, odors, and a PID. There was no field evidence of contamination in the soil from either test pit.

Based on the field screening results, at least one selected soil sample from each boring, except DMW-6, and from each test pit was submitted to Friedman & Bruya, Inc. (F&B) in Seattle, Washington, for quantitative chemical analysis. Since DMW-6 was located approximately five feet from boring MW-9 and there was no field evidence of contamination in the boring, a soil sample from DMW-6 was not submitted for analysis. If there was no evidence of contamination in a boring or a test pit, then the sample(s) collected at the likely depth of contamination (e.g., near a potential contaminant source, near the groundwater table, or near the top of the deep aquifer) was submitted to F&B for analysis.

3.5 Groundwater Sampling

In May 2005 and November/December 2005, SLR collected groundwater samples from all of the monitoring wells, except MW-3. Samples were not collected from MW-3 due to the presence of free product (up to 0.01 feet thick) in the well. In May 2005, a groundwater sample was also collected from the temporary wellpoint in boring SSB-15. In August 2006, SLR collected groundwater samples from all of the deep monitoring wells.

Prior to the sampling event in May 2005, a peristaltic pump with new polyethylene tubing was used to slowly purge a minimum of three casing volumes of water from each well. After installing deep wells in November 2005, disposable PVC bailers were used to purge the wells instead of a peristaltic pump. Field parameters (pH, temperature, and conductivity) were measured after each well volume had been removed. Purging continued until the pH, temperature, and conductivity measurements had stabilized to within 10 percent of the previous measurements. The groundwater samples were collected by using the peristaltic pump (May 2005 event) or disposable bailers (November/December 2005 and August 2006 events). All of the groundwater samples were submitted to F&B for quantitative chemical analysis. The groundwater sampling procedures are described in Appendix A. The sampling purge water is stored on site in properly labeled, 55-gallon drums pending off-site disposal.

3.6 Groundwater Monitoring

In May 2005 and August 2006, Gibbs & Olson, Inc., of Longview, Washington, surveyed the ground surface and top of casing elevations of the new and existing groundwater monitoring wells. The elevations were surveyed to the nearest 0.01 foot, based on the NAVD 88 datum. The top of casing elevations are presented in Table 1.

On May 25 and December 7, 2005, and on August 16, 2006, SLR measured the depths to groundwater and free product, if present, in all of the monitoring wells by using an electronic water level indicator or an electronic oil/water interface probe (well MW-3 only). The top of casing elevations were used to convert the depth to groundwater measurements to groundwater elevations. The procedures to measure the depths to groundwater and free product are described in Appendix A.

3.7 Site Geology

The uppermost geology beneath the site area, except for beneath the undeveloped land, consists of approximately 3 to 10 feet of sand or gravel fill. The uppermost geology beneath the undeveloped land, where fill is not present, consists of up to approximately 2 feet of silty topsoil. The fill or topsoil is underlain by a clayey silt unit that ranges from approximately 4.5 to 15.5 feet thick. Laterally discontinuous silty sand lenses up to 2 feet thick are interbedded within the clayey silt unit. The clayey silt unit is typically underlain by a sandy silt unit, where present, that is up to 7 feet thick. A silty sand unit that is up to 2.5 feet thick occurs locally beneath the clayey silt unit or the sandy silt unit, where present. A sand unit that is at least 25.5 feet thick occurs beneath the clayey silt, sandy silt, or silty sand units. The sand unit is present throughout the site area. Cross sectional views of the geology beneath the site area (sections A-A' and B-B') are shown on Figures 5 and 6. The locations of cross sections A-A' and B-B' are shown on Figure 4.

Unconfined groundwater is locally present in the fill unit and is present in sandy lenses within the clayey silt unit. Beneath the clayey silt unit, groundwater is present in the silty sand and sand units. As discussed in Section 3.8, the groundwater in the silty sand and sand units appears to be under semi-confined conditions.

3.8 Site Hydrogeology

The groundwater monitoring data from the 2005 and 2006 monitoring events, as well as from the previous groundwater monitoring events, are presented in Table 1. On May 25, 2005, a film of gasoline product was present in MW-3. Free product was not detected in any of the other wells. The depths to groundwater in the shallow wells (the deep wells were not installed by May 2005) ranged from 4.00 to 10.30 feet. The groundwater elevations in the wells ranged from -0.78 feet to 4.74 feet above the NAVD 88 datum. The groundwater elevations were inconsistent and could not be used to determine a

general groundwater flow direction beneath the site area. The groundwater elevations on May 25, 2005, are presented on Figure 7.

On December 7, 2005, 0.01 feet of gasoline product was present in MW-3. Free product was not detected in any of the other wells. The depths to groundwater in the shallow wells and deep wells ranged from 3.69 to 6.36 feet and from 5.88 to 12.15 feet, respectively. The groundwater elevations in the shallow wells and deep wells ranged from 1.90 to 4.84 feet and from -5.49 to 2.26 feet, respectively, above the NAVD 88 datum. The shallow groundwater elevations were inconsistent and could not be used to determine a general shallow groundwater flow direction beneath the site area. Due to inconsistent deep groundwater elevations in the northern, western, and eastern parts of the site and an unstable (slowly rising) groundwater level in DMW-3, a general flow direction of the groundwater in the deep aquifer could not be determined. The groundwater elevations in the shallow and deep wells on December 7, 2005, are presented on Figures 8 and 9, respectively.

On August 16, 2006, 0.24 feet of gasoline product was measured in MW-3. Free product was not detected in any of the other wells. The depths to groundwater in the shallow wells and deep wells ranged from 4.67 to 7.18 feet and from 4.55 to 7.74 feet, respectively. The groundwater elevations in the shallow wells and deep wells ranged from 1.67 to 4.20 feet and from 1.41 to 2.27 feet, respectively, above the NAVD 88 datum. The shallow groundwater elevations were inconsistent and could not be used to determine a general shallow groundwater flow direction beneath the site area. The deep groundwater elevations were inconsistent and could not be used to determine a general deep groundwater flow direction beneath the site area; however, there were flow components to the north and the east. The groundwater elevations in the shallow and deep wells on August 16, 2006, are presented on Figures 10 and 11, respectively.

Due to the variable thickness of the fill unit, the groundwater table occurs in the fill unit (perched on top of the clayey silt unit) or in sandy lenses within the underlying clayey silt unit. The inconsistent shallow groundwater elevations beneath the site area appear to be due to the variable depths of the top of the clayey silt unit (perching unit) where groundwater is present in the fill and the variable depths of the uppermost laterally discontinuous saturated sandy lenses in the clayey silt unit, where the water table is below the fill unit.

During drilling of the deep borings, especially DMW-1, the groundwater beneath the clayey silt unit was under pressure. In December 2005 and August 2006, the depths to groundwater in the deep wells were approximately 15 to 18 feet above the tops of the well screens. Since the deep groundwater is under pressure and rises significantly above the well screens, the groundwater beneath the clayey silt unit is under semi-confined or confined conditions. Based on the presence of saturated sandy lenses throughout the confining unit (the clayey silt), there is likely some hydraulic connection between the shallow groundwater and the deep groundwater. The inconsistent deep groundwater

elevations may also indicate localized hydraulic connections between the shallow water-bearing zone and the deeper aquifer. Due to the likely hydraulic connections, SLR believes that the groundwater beneath the clayey silt unit (the uppermost aquifer beneath the site area) is under semi-confined conditions.

To assess the vertical hydraulic gradient between the shallow water-bearing zone and the deep semi-confined aquifer, five of the deep wells were installed approximately 3 to 5 feet from shallow wells. The five sets of shallow and deep monitoring wells (DMW-1 and MW-3, DMW-2 and MW-2, DMW-4 and MW-5, DMW-5 and MW-11, and DMW-6 and MW-9) are shown on Figure 3. Based on the December 2005 and August 2006 groundwater monitoring data from the wells, the groundwater elevations in the shallow wells were typically 0.49 to 2.79 feet higher than the groundwater elevations in the deep wells. The higher groundwater elevations in the shallow wells indicate a downward vertical gradient from the shallow unconfined water-bearing zone to the deeper semi-confined aquifer.

3.9 Review of Ecology and Cowlitz County Well Records

Based on SLR's review of Ecology and Cowlitz County Health Department records, there are 23 water supply wells located within a one-mile radius of the site. The approximate locations of the wells are shown on Figure 12. The nearest supply well (designated by SLR as #18) is located approximately 2,200 feet to the southwest of the site. The depths of the wells range from approximately 74 to 1,065 feet bgs. Completion logs for the water supply wells and a table that describes the well completion details are presented in Appendix B. The groundwater extracted from the supply wells in the site area is primarily used for domestic purposes.

3.10 Review of Cowlitz County Records

SLR reviewed Cowlitz County records regarding the underground utilities near the site to determine if there are any utilities installed at depths below the groundwater table. The locations of the underground utilities near the site are shown on Figure 2. All of the underground utilities, except the sanitary sewer line, near the site occur at depths shallower than 4 feet bgs (the approximate shallowest depth of the high seasonal groundwater table). The bottom of the sanitary sewer line, which is located along the southern edge of Ocean Beach Highway and along the western edge of 46th Avenue, occurs at depths of up to 8 feet bgs. Based on depths to groundwater that are typically less than 8 feet beneath the site, the groundwater intersects the backfill around and above the sewer line, and the fill material may act as a preferential pathway for groundwater migration.

3.11 Hazardous Materials Survey

On May 25, 2005, Prezant Associates, Inc. (Prezant) conducted an inspection of the site building and canopy for hazardous materials (e.g., asbestos-containing materials, and lead and arsenic painted surfaces). Suspected materials were sampled and analyzed by Prezant in their laboratory. The results of the survey showed that approximately 200 square feet of vinyl floor sheeting in the building contains asbestos. Paint chip samples contained detectable quantities of lead; however, TCLP results showed that the painted materials would be classified as non-hazardous wastes after demolition. The Prezant report that details their field procedures and findings is presented in Appendix C.

4. SAMPLE ANALYTICAL RESULTS

4.1 Soil Samples

All of the soil samples were analyzed for EDC and for benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8260B, for GRO by Ecology Method NWTPH-Gx, and for DRO and HO by Ecology Method NWTPH-Dx (after silica gel cleanup). The samples from the borings located near the heating oil and waste oil tank basin (SSB-8, SSB-13, and SSB-14) were also analyzed for polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8270C SIM. The soil sample analytical results showed that samples from borings SSB-1, SSB-2, SSB-3, SSB-5, SSB-6, SSB-15, and DMW-1 contained GRO and benzene concentrations (up to 2,300 and 16 mg/kg, respectively) that exceeded the MTCA Method A cleanup levels (30 and 0.03 mg/kg, respectively). Samples from borings SSB-1, SSB-2, SSB-3, SSB-6, SSB-15, and DMW-1 also contained toluene, ethylbenzene, and/or total xylenes concentrations that exceeded the Method A cleanup levels (7, 6, and 9 mg/kg, respectively). The soil samples from all of the other borings, as well as the deep soil samples from borings SSB-1, SSB-5, and SSB-6, contained GRO and BTEX concentrations that were below the Method A cleanup levels or the MRLs. EDC was not detected in any of the soil samples from the borings at concentrations above the MRLs.

Soil samples collected from SSB-9 and SSB-17 contained DRO concentrations (2,200 and 2,600 mg/kg, respectively) that exceeded the MTCA Method A cleanup level (2,000 mg/kg). Samples from SSB-1 and SSB-15 also contained DRO concentrations greater than the Method A cleanup level; however, the laboratory reported that the concentrations were due to overlap from the gasoline range. The soil samples from all of the borings contained HO and PAH concentrations that were below the Method A cleanup levels or the MRLs. The soil sample analytical results are presented in Table 3 (GRO, BTEX, and EDC) and Table 4 (DRO, HO, and PAHs). Copies of the laboratory reports are presented in Appendix D.

The petroleum hydrocarbon concentrations typically decreased with depth; however, the deepest analyzed soil samples from borings SSB-2 (at 17 feet bgs), SSB-3 (at 12 feet bgs), SSB-15 (at 24 feet bgs), and DMW-1 (at 21 feet bgs) contained benzene concentrations that exceeded the MTCA Method A cleanup level.

4.2 Groundwater Samples

All of the groundwater samples from the three sampling events were analyzed for BTEX, EDC, GRO, DRO, and HO. The groundwater sample analytical results are presented in Table 2, and copies of the laboratory reports are presented in Appendix D.

4.2.1 May 2005 Sampling Event

The groundwater sample analytical results from the May 2005 event showed that the sample from the deep wellpoint in boring SSB-15 contained benzene, toluene, ethylbenzene, total xylenes, GRO, and DRO concentrations [9,600, 1,100, 2,400, 11,600, 67,000, and 2,300 micrograms per liter ($\mu\text{g/L}$), respectively] that exceeded the MTCA Method A cleanup levels (5, 1,000, 700, 1,000, 800, and 500 $\mu\text{g/L}$, respectively). The sample from shallow well MW-4 contained benzene, GRO, and DRO concentrations [270, 9,600, and 2,300 $\mu\text{g/L}$, respectively] that exceeded the MTCA Method A cleanup levels. The sample from shallow well MW-10 contained benzene, GRO, and DRO concentrations (45, 1,000, and 1,200 $\mu\text{g/L}$, respectively) that exceeded the Method A cleanup levels. All of the samples from the other shallow monitoring wells did not contain analyte concentrations above the Method A cleanup levels or the MRLs.

4.2.2 November/December 2005 Sampling Event

The groundwater sample analytical results from the November/December 2005 sampling event showed that the sample from shallow well MW-4 contained benzene, ethylbenzene, total xylenes, and GRO concentrations (990, 1,100, 1,353, and 11,000 $\mu\text{g/L}$, respectively) that exceeded the MTCA Method A cleanup levels. The sample from shallow well MW-10 contained benzene and GRO concentrations (31 and 1,400 $\mu\text{g/L}$, respectively) that exceeded the Method A cleanup levels. The sample from deep well DMW-1 contained benzene, ethylbenzene, total xylenes, and GRO concentrations (4,000, 1,100, 4,090, and 22,000 $\mu\text{g/L}$, respectively) that exceeded the Method A cleanup levels. The samples from deep wells DMW-2, DMW-4, DMW-5 contained benzene concentrations (11, 56, and 36 $\mu\text{g/L}$, respectively) that exceeded the Method A cleanup level. The samples from MW-4, MW-10, and DMW-1 contained DRO concentrations greater than the Method A cleanup level; however, the laboratory reported that the concentrations were due to overlap from the gasoline range. The samples from shallow wells MW-1, MW-2, MW-5, MW-6, MW-7, MW-8, MW-9, and MW-11, and from deep wells DMW-3, DMW-6, DMW-7, and DMW-8 did not contain analyte concentrations above the Method A cleanup levels or the MRLs.

4.2.3 August 2006 Sampling Event

The groundwater sample analytical results from the August 2006 sampling event showed that the sample from deep well DMW-1 contained benzene, ethylbenzene, total xylenes, and GRO concentrations (4,100, 520, 841, and 16,000 µg/L, respectively) that exceeded the MTCA Method A cleanup levels. The samples from deep wells DMW-2, DMW-4, DMW-5 contained benzene concentrations (10, 5.7, and 74 µg/L, respectively) that exceeded the Method A cleanup level. The sample from DMW-1 contained a DRO concentration greater than the Method A cleanup level; however, the laboratory reported that the concentration was due to overlap from the gasoline range. The samples from deep wells DMW-3, DMW-6, DMW-7, and DMW-8 did not contain analyte concentrations above the MRLs.

5. CONCLUSIONS

From May 2005 through August 2006, SLR conducted a remedial investigation at former Arco Service Station #0855 in Longview, Washington. The investigation was conducted to address several data gaps that needed to be resolved in order to meet Ecology's objectives for remedial investigations [WAC 173-340-350(7)(iii)], and to provide information that can be used to evaluate and select a site remedial action. Based on the results of the investigation activities, all of the data gaps have been sufficiently resolved and Ecology's objectives for remedial investigations have been met. A discussion of how each of the data gaps was resolved is presented below.

To identify the source of the free product and the elevated dissolved-phase hydrocarbon concentrations in the northeastern part of the site, four soil borings (SSB-1, SSB-2, SSB-3, and SSB-15) were drilled and sampled at locations near the dispenser island. Soil samples from all four borings contained GRO, benzene, toluene, ethylbenzene, and/or total xylenes concentrations greater than the MTCA Method A cleanup levels. The highest concentrations were at borings SSB-1 and SSB-15. Even though there was no evidence of free product in the soil samples from the borings, the elevated concentrations in the samples, the proximity of the free product to the dispenser island, and the presence of impacted shallow groundwater only in the vicinity of the dispenser island indicate that the source of the product and dissolved-phase hydrocarbons is at the dispenser island.

To assess the soil conditions near the abandoned underground dispenser lines, a soil boring (SSB-6) was drilled and sampled adjacent to the lines. The soil sample collected at a depth of approximately 5 feet bgs contained GRO, benzene, ethylbenzene, and total xylenes concentrations greater than the MTCA Method A cleanup levels. There was no field evidence of contamination above approximately 4.5 feet bgs, and the sample collected at 9 feet bgs did not contain petroleum hydrocarbon concentrations above the MRLs. Since the impacted soil only occurred at depths near the groundwater table and the groundwater flow direction is variable in that area, the impacted soil at SSB-6 may be due to a release(s) from the dispenser island or from the dispenser lines. Based on the analytical results of the soil and groundwater samples located beneath the northern part of the site, the lateral extent of the impacted soil near the dispenser lines has been defined. The impacted soil likely extends less than 20 feet away from the lines in the northern and southern directions (Figure 13).

To delineate the lateral extent of the impacted soil near the dispenser island, three soil borings (SSB-4, SSB-5, and MW-11) were drilled and sampled to the northwest,

northeast, and southwest of the dispenser island. The soil sample collected from boring SSB-5, at a depth of approximately 3 to 5 feet bgs, contained GRO and benzene concentrations that exceeded the MTCA Method A cleanup levels. Since SSB-5 is located adjacent to the former station building, the impacted soil extends beneath the northeastern side of the building. The samples from SSB-4 and MW-11 contained petroleum hydrocarbon concentrations below the Method A cleanup levels or the MRLs. The GRO and benzene concentrations in the soil samples from SSB-4 and SSB-5 were over 20 times lower than the concentrations in the samples from borings (SSB-1 and SSB-15) located adjacent to the dispenser island, which indicates that the concentrations decrease rapidly with distance away from the dispenser island (the source area). The estimated area of impacted soil near the dispenser island is shown on Figure 13.

To delineate the vertical extent of the impacted soil near the dispenser island, two borings (SSB-15 and DMW-1) located adjacent to the dispenser island were drilled to approximately 25 and 47 feet bgs, respectively. The samples collected from SSB-15, at depths of 5, 15, 19, and 24 feet bgs, contained benzene concentrations that exceeded the MTCA Method A cleanup level. The benzene concentrations decreased from 16 mg/kg at 5 feet bgs to 0.06 mg/kg at 15 and 19 feet bgs, and then increased to 1.1 mg/kg at 24 feet (near the top of the semi-confined aquifer). The samples collected from DMW-1, at depths of 5, 15, and 21 feet bgs, also contained benzene concentrations that exceeded the Method A cleanup level. The benzene concentrations decreased from 0.90 mg/kg at 5 feet bgs to 0.11 mg/kg at 15 feet bgs, and then did not effectively change at 21 feet bgs (near the top of the aquifer) where the concentration was 0.13 mg/kg. Soil samples could not be collected at depths below 23 feet in boring DMW-1 due to heaving sands in the borehole. The soil sample results indicate that the impacted soil extends to the semi-confined aquifer (within the saturated sand unit), and that the vertical extent of the impacted soil could not be delineated. However, based on the benzene concentrations (0.13 and 1.1 mg/kg) in the deepest samples from SSB-15 and DMW-1 (at 21 and 24 feet bgs) and the thickness of saturated sand unit (extends to a depth of greater than 46 feet), SLR believes that the vertical extent of the impacted soil likely occurs within the saturated sand unit.

To delineate the lateral extent of the hydrocarbon-impacted soil near the former gasoline UST area, seven soil borings (SSB-7, SSB-9, SSB-10, SSB-11, SSB-16, SSB-17, and SSB-18) were drilled and sampled at locations near the sidewalls of the former tank basin and to the west and southwest of the former tank basin. In addition, two test pits (TP-1 and TP-2) were excavated and sampled at locations approximately 10 feet to the west of the site. The soil samples from boring SSB-9 and SSB-17, collected at depths of approximately 4 to 5 and 6.5 to 7 feet bgs, respectively, contained DRO concentrations that exceeded the MTCA Method A cleanup level. Based on the depths of the impacted soil at SSB-9, SSB-17, and at previous boring MW-7 (5 feet bgs) that are near the groundwater table, there appears to be a western groundwater flow component near the former gasoline UST area and that impacted groundwater from the tank basin is the source of the impacted soil at SSB-9, SSB-17, and MW-7. Based on the lack of

detectable petroleum hydrocarbons in the samples from TP-1 and TP-2, the impacted soil extends approximately 35 feet to the west of the former tank basin. The soil samples from borings SSB-7, SSB-10, SSB-11, SSB-16, and SSB-18 did not contain analyte concentrations greater than the Method A cleanup levels; therefore, the northwestern, northeastern, southern, and southeastern extents of the impacted soil near the former gasoline UST area have been delineated. The estimated area of impacted soil near the former gasoline UST basin is shown on Figure 13.

To delineate the vertical extent of the impacted soil in the former gasoline UST basin, a boring (SSB-12) was drilled within the basin to approximately 25 feet bgs. The soil sample collected from SSB-12, at 24 feet bgs, did not contain analyte concentrations greater than the MRLs. Based on the benzene concentration greater than the MTCA Method A cleanup level in the 20-foot-deep soil sample from previous boring MW-2 (located next to SSB-12) and the lack of detectable petroleum hydrocarbons in the 24-foot-deep sample from SSB-12, the impacted soil beneath the former tank basin extends to a depth of approximately 22 feet bgs (near the top of the semi-confined aquifer).

To delineate the lateral extent of the impacted soil near the former heating oil and used oil UST area, three soil borings (SSB-8, SSB-13, and SSB-14) were drilled and sampled at locations to the northwest, northeast, and southeast of the former tank basin. The soil samples from the borings did not contain analyte concentrations greater than the MRLs; therefore, the impacted soil near the former heating oil and used oil UST area extends less than 5 feet from the former tanks. The estimated area of impacted soil near the former heating oil and used oil UST area is shown on Figure 13.

To delineate the lateral extent of the impacted shallow groundwater, four groundwater monitoring wells (MW-8, MW-9, MW-10, and MW-11) were installed in the northern part of the site and to the southeast, east, and northeast of the site, and groundwater samples were collected from all of the shallow wells, except MW-3, in May 2005 and November/December 2005. Groundwater samples were not collected from MW-3 due to the presence of gasoline free product. The groundwater samples from MW-4 and MW-10 contained petroleum hydrocarbon concentrations that exceeded the MTCA Method A cleanup levels. The samples from all of the other shallow wells did not contain analyte concentrations greater than the Method A cleanup levels or the MRLs. Based on the 2005 sampling results and the previous groundwater sampling results from the wellpoints (GP-1, GP-2, GP-3, GP-5, GP-6, and GP-7) located to the east of Ocean Beach Highway, the lateral extent of the impacted shallow groundwater has been delineated in all directions. The shallow groundwater that contains petroleum hydrocarbon concentrations greater than the Method A cleanup levels occurs beneath the dispenser island and extends in all directions up to approximately 40 feet away from the dispenser island. The impacted groundwater extends off site to the northeast, beneath a localized area of Ocean Beach Highway. The estimated area of impacted shallow groundwater is shown on Figure 14. Since the potential sources of contamination at the

site were removed in 1999, SLR believes that the lateral extent of the impacted groundwater has likely stabilized.

To assess the lateral extent of the impacted groundwater within the semi-confined aquifer, seven deep groundwater monitoring wells were installed in the northern, western, eastern, and southern parts of the site and to the north, northeast, and east of the site, and groundwater samples were collected from all of the deep wells in December 2005 and August 2006. The groundwater samples from wells DMW-1, DMW-2, DMW-4, and DMW-5 contained benzene concentrations that exceeded the MTCA Method A cleanup level. The samples from DMW-1 also contained ethylbenzene, total xylenes, and GRO concentrations that exceeded the Method A cleanup levels. The samples from all of the other deep wells did not contain analyte concentrations greater than the Method A cleanup levels or the MRLs. Based on the groundwater sample analytical results, the lateral extent of the impacted deep groundwater has been delineated in all directions. The groundwater within the aquifer that contains petroleum hydrocarbon concentrations greater than the Method A cleanup levels occurs beneath the dispenser island and extends in all directions up to approximately 85 feet away from the dispenser island. The impacted groundwater extends off site to the northwest (beneath undeveloped marshy land), to the north/northeast (beneath the southeastbound lanes of Ocean Beach Highway), and to the east/southeast (beneath a localized area of 46th Avenue). The estimated area of impacted deep groundwater is shown on Figure 14. Since the potential sources of contamination at the site were removed in 1999, SLR believes that the lateral extent of the impacted groundwater has likely stabilized.

To delineate the vertical extent of the impacted groundwater beneath the site, boring DMW-1 was drilled to approximately 47 feet bgs. The groundwater within the saturated sand unit (at depths below approximately 21 feet bgs) was under pressure, and heaving sands prevented the installation of a monitoring well or a temporary wellpoint at depths below 26 feet bgs. Based on the groundwater concentrations near the top of the saturated sand unit and the thickness of the unit (greater than 25 feet), SLR believes that the vertical extent of the impacted groundwater likely occurs within the saturated sand unit.

According to Cowlitz County records, the sanitary sewer line located along the southern edge of Ocean Beach Highway and along the western edge of 46th Avenue occurs at depths below the groundwater table. Based on the groundwater sample analytical results from shallow well MW-10 (located less than 5 feet from the sewer line), shallow impacted groundwater likely intersects the backfill above and around the sewer line, and the backfill material may act as a preferential pathway for impacted groundwater migration. However, based on the limited lateral extent of the impacted shallow groundwater beneath the site area and the distance of the sewer line from the likely contaminant source area (the dispenser island), any impacted groundwater within the backfill material likely migrated a limited distance prior to attenuation to below MTCA Method A cleanup levels. There do not appear to be any other potential receptors of the impacted shallow groundwater.

Based on Ecology and Cowlitz County Health Department well records, the nearest water supply well is approximately 2,200 feet to the southwest of the site. The nearest surface water body, Cutoff Slough, is approximately 750 feet to the east of the site. Based on the depth of the aquifer (approximately 20 feet bgs) beneath the site and the limited lateral extent of the impacted deep groundwater, there do not appear to be any potential receptors of the impacted deep groundwater.

Based on the results of the hazardous materials survey of the building and canopy materials, approximately 200 square feet of vinyl floor sheeting in the building contains asbestos. Other hazardous materials in the building and canopy are minimal.

LIMITATIONS

The services reflected in this report were performed consistent with generally accepted professional consulting principals and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This information is solely for the use of our client unless otherwise noted. Any reliance on this information by a third party is at such party's sole risk.

Opinions and recommendations contained herein apply to conditions existing when services were performed and are intended only for the client, purposes, location, timeframes, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report.

REFERENCES

- 3 Kings Environmental, Inc. 1999. Letter to Tona Wakefield. August 3.
- Delta Environmental Consultants, Inc. 2003. *Groundwater Monitoring Report*. July 15.
- IT Corporation. 2000. Letter to Mr. Mike Whelan, Arco Products Company. May 12.
- SECOR International, Inc. 2000a. *Groundwater Monitoring Well Installation and Geoprobe Boring Report, Former Arco Service Station No. 0855*. June 20.
- SECOR International, Inc. 2000b. *ARCO Quarterly Groundwater Monitoring Report – 3rd Quarter 2000*. October 16, 2001.
- SECOR International, Inc. 2001a. *ARCO Quarterly Groundwater Monitoring Report – 4th Quarter 2000*. January 23.
- SECOR International, Inc. 2001b. *ARCO Quarterly Groundwater Monitoring Report – 1st Quarter 2001*. March 6.
- SECOR International, Inc. 2001c. *ARCO Quarterly Groundwater Monitoring Report – 2nd Quarter 2001*. May 11.
- SECOR International, Inc. 2001d. *ARCO Quarterly Groundwater Monitoring Report – 3rd Quarter 2001*. September 19.
- SECOR International, Inc. 2001e. *ARCO Quarterly Groundwater Monitoring Report – 4th Quarter 2001*. December 31.
- SECOR International, Inc. 2002. *ARCO Quarterly Groundwater Monitoring Report – 1st Quarter 2002*. February 13.
- Washington Department of Ecology. 2001. *Model Toxics Control Act Cleanup Regulation, Chapter 173-340 WAC*. Publication No. 94-06. Amended February 12.

TABLES

Table 1
Groundwater Monitoring Data
Former Arco Service Station #0855
Longview Washington

Well Number	Top of Casing Elevation ^a (feet)	Date Measured	Depth to Groundwater ^b (feet)	Free Product Thickness (feet)	Groundwater Elevation (feet)
Shallow Monitoring Wells					
MW-1	8.34	03/27/00	4.36	NP	3.98
		05/23/00	5.20	NP	3.14
		07/20/00	5.55	NP	2.79
		10/18/00	5.41	NP	2.93
		01/18/01	4.81	NP	3.53
		04/18/01	4.58	NP	3.76
		07/17/01	5.54	NP	2.80
	8.25°	10/18/01	5.26	NP	3.08
		01/16/02	4.45	NP	3.89
		07/09/03	5.80	NP	2.54
		05/25/05	4.12	NP	4.13
		12/07/05	3.77	NP	4.48
		08/16/06	6.58	NP	1.67
MW-2	8.76	03/27/00	3.61	NP	5.15
		05/23/00	4.64	NP	4.12
		07/20/00	5.06	NP	3.70
		10/18/00	5.19	NP	3.57
		01/18/00	3.96	NP	4.80
		04/18/01	3.83	NP	4.93
		07/17/01	5.08	NP	3.68
	8.89°	10/18/01	4.83	NP	3.93
		01/16/02	3.71	NP	5.05
		07/09/03	5.36	NP	3.40
		05/25/05	4.15	NP	4.74
		12/07/05	4.09	NP	4.80
		08/16/06	5.96	NP	2.93
MW-3	8.78	03/27/00	5.61	NP	3.17
		05/23/00	6.46	NP	2.32
		07/20/00	7.05	NP	1.73
		10/18/00	6.84	NP	1.94
		01/18/01	6.37	NP	2.41
		04/18/01	5.46	NP	3.32
		07/17/01	6.93	NP	1.85
	8.58°	10/18/01	6.47	NP	2.31
		01/16/01	4.83	NP	3.95
		07/09/03	6.72	0.02	2.08*
		05/25/05	4.65	Film	3.93
		12/07/05	4.45	0.01	4.14*
		08/16/06	6.91	0.24	1.86*
MW-4	8.78	11/15/00	6.88	NP	1.90
		01/18/01	6.78	NP	2.00
		04/18/01	6.90	NP	1.88
		07/17/01	7.50	NP	1.28
		10/18/01	6.92	NP	1.86
		01/16/02	6.15	NP	2.63
		07/09/03	7.04	NP	1.74
	8.69°	05/25/05	6.24	NP	2.45
		12/07/05	5.70	NP	2.99
		08/16/06	6.84	NP	1.85

Table 1
Groundwater Monitoring Data
Former Arco Service Station #0855
Longview Washington

Well Number	Top of Casing Elevation ^a (feet)	Date Measured	Depth to Groundwater ^b (feet)	Free Product Thickness (feet)	Groundwater Elevation (feet)
Shallow Monitoring Wells (continued)					
MW-5	8.78	11/15/00	6.54	NP	2.24
		01/18/01	6.07	NP	2.71
		04/18/01	5.46	NP	3.32
		07/17/01	6.79	NP	1.99
	8.67 ^c	10/18/01	6.50	NP	2.28
		01/16/02	5.49	NP	3.29
		07/09/03	6.86	NP	1.92
		05/25/05	5.64	NP	3.03
		12/07/05	5.53	NP	3.14
		08/16/06	6.28	NP	2.39
MW-6	8.21	11/15/00	6.15	NP	2.06
		01/18/01	5.85	NP	2.36
		04/18/01	5.70	NP	2.51
		07/17/01	6.02	NP	2.19
	8.11 ^c	10/18/01	6.03	NP	2.18
		01/16/02	5.80	NP	2.41
		07/09/03	6.16	NP	2.05
		05/25/05	4.00	NP	4.11
		12/07/05	5.70	NP	2.41
		08/16/06	6.40	NP	1.71
MW-7	8.45	11/15/00	6.52	NP	1.93
		01/18/01	6.24	NP	2.21
		04/18/01	5.98	NP	2.47
		07/17/01	6.44	NP	2.01
	8.26 ^c	10/18/01	6.39	NP	2.06
		01/16/02	6.31	NP	2.14
		07/09/03	7.00	NP	1.45
		05/25/05	5.61	NP	2.65
		12/07/05	6.36 ^d	NP	1.90
		08/16/06	6.40	NP	1.86
MW-8	6.45	05/25/05	4.50	NP	1.95
		12/07/05	3.69	NP	2.76
		08/16/06	4.67	NP	1.78
MW-9	9.43	05/25/05	4.66	NP	4.77
		12/07/05	4.59	NP	4.84
		08/16/06	5.23	NP	4.20
MW-10	9.52	05/25/05	10.30	NP	-0.78
		12/07/05	5.90	NP	3.62
		08/16/06	7.18	NP	2.34
MW-11	8.16	12/07/05	3.87	NP	4.29
		08/16/06	6.10	NP	2.06
Deep Monitoring Wells					
DMW-1	8.55	12/07/05	6.73	NP	1.82
		08/16/06	6.28	NP	2.27
DMW-2	8.29	12/07/05	6.10	NP	2.19
		08/16/06	6.71	NP	1.58
DMW-3	6.66	12/07/05	12.15 ^d	NP	-5.49
		08/16/06	4.55	NP	2.11
DMW-4	8.55	12/07/05	6.30	NP	2.25
		08/16/06	7.12	NP	1.43

Table 1
Groundwater Monitoring Data
Former Arco Service Station #0855
Longview Washington

Well Number	Top of Casing Elevation ^a (feet)	Date Measured	Depth to Groundwater ^b (feet)	Free Product Thickness (feet)	Groundwater Elevation (feet)
Deep Monitoring Wells (continued)					
DMW-5	8.14	12/07/05	5.88	NP	2.26
		08/16/06	6.57	NP	1.57
DMW-6	9.15	08/16/06	7.74	NP	1.41
DMW-7	8.12	08/16/06	6.68	NP	1.44
DMW-8	9.09	08/16/06	7.65	NP	1.44
NOTES: NP = Product not present. ^a Top of well casing elevations were surveyed based on NAVD 88 datum. ^b Measurements in feet below top of well casing. ^c Top of casing (TOC) elevation was re-surveyed in May 2005. ^d Water in well was under pressure and rising when the cap was removed. The water level was recorded after the well cap was off for over 2 hours. [*] Groundwater elevation corrected for product thickness by using the equation: Groundwater elevation = TOC elevation - depth to groundwater + (product thickness x 0.80).					

Table 2
Groundwater Sample Analytical Results
Former Arco Service Station #0855
Longview, Washington

Well Number	Sample Date	Benzene ^a (µg/L)	Toluene ^a (µg/L)	Ethylbenzene ^a (µg/L)	Total Xylenes ^a (µg/L)	Napthalene ^b (µg/L)	EDB ^b (µg/L)	EDC ^b (µg/L)	MTBE ^b (µg/L)	GRO ^c (µg/L)	DRO ^d (µg/L)	HO ^d (µg/L)	Total Lead ^e (µg/L)	Dissolved Lead ^e (µg/L)
MTCA Method A Cleanup Levels^f														
Shallow Wells		5	1,000	700	1,000	160	0	5	20	800	500	500	15	15
MW-1	03/27/00	ND	ND	ND	ND	NA	NA	NA	NA	ND	ND	ND	NA	NA
	05/23/00	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA
	07/20/00	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA
	10/18/00	ND	ND	1.61	ND	NA	NA	NA	NA	404	NA	NA	NA	NA
	01/18/01	ND	ND	ND	ND	ND	ND	ND	ND	95.6	NA	NA	NA	NA
	04/18/01	ND	ND	ND	ND	4.30	ND	ND	ND	NA	NA	NA	NA	NA
	07/17/01	ND	2.63	1.46	ND	NA	NA	NA	NA	386	NA	NA	NA	NA
	10/18/01	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA
	01/16/02	ND	ND	ND	ND	NA	NA	NA	NA	104	NA	NA	NA	NA
	07/09/03	<0.50	<0.50	<0.50	<1.0	NA	<0.01	<1.0	<1.0	<50	NA	<500	1.70	<1.0
	05/25/05	<1.0	<1.0	<1.0	<2.0	NA	NA	<1.0	NA	<100	<50	<250	NA	NA
	11/30/05	<1.0	<1.0	<1.0	<3.0	NA	NA	<1.0	NA	<100	<50	NA	NA	NA
MW-2	03/27/00	6.89	49.5	599	2,490	NA	NA	NA	NA	17,100	ND	ND	NA	NA
	05/23/00	26.2	16.2	614	1,770	NA	NA	NA	NA	13,200	NA	NA	NA	NA
	07/20/00	11.9	11.8	304	330	NA	NA	NA	NA	7,220	NA	NA	NA	NA
	10/18/00	3.67	1.23	13.9	7.55	NA	NA	NA	NA	743	NA	NA	NA	NA
	01/18/00	ND	ND	41.1	5.62	ND	ND	ND	ND	691	NA	NA	NA	NA
	04/18/01	ND	ND	8.73	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA
	07/17/01	ND	1.26	14	ND	NA	NA	NA	NA	430	NA	NA	NA	NA
	10/18/01	2.11	ND	3.64	ND	NA	NA	NA	NA	304	NA	NA	NA	NA
	01/16/02	1.16	0.81	37.1	6.71	NA	NA	NA	NA	370	NA	NA	NA	NA
	07/09/03	0.86	<0.50	6.43	1.28	NA	<0.01	<1.0	<5.0	131	<250	<500	15.9	<1.0
	05/30/05	<1.0	<1.0	<1.0	<2.0	NA	NA	<2.0	NA	<100	52	<250	NA	NA
	12/01/05	<1.0	<1.0	<1.0	<3.0	NA	NA	<1.0	NA	120	<50	NA	NA	NA
MW-3	03/07/00	7,520	12,900	2,780	14,500	NA	NA	NA	NA	93,700	ND	ND	NA	NA
	05/23/00	4,710	8,330	2,280	11,200	NA	NA	NA	NA	65,200	NA	NA	NA	NA
	07/20/00	10,700	22,600	3,160	17,400	NA	NA	NA	NA	145,000	NA	NA	NA	NA
	10/18/00	12,900	33,000	4,890	26,700	NA	NA	NA	NA	179,000	NA	NA	NA	NA
	01/18/01	9,380	17,200	3,940	20,230	607	ND	155	ND	121,000	NA	NA	NA	NA
	04/18/01	7,700	15,300	3,430	16,990	405	ND	101	ND	NA	NA	NA	NA	NA
	07/17/01	10,100	21,400	4,120	20,900	NA	NA	NA	NA	940,000	NA	NA	NA	NA
	10/18/01	7,200	19,700	3,340	17,300	NA	NA	NA	NA	139,000	NA	NA	NA	NA
	01/16/02	13,600	26,600	3,920	20,800	NA	NA	NA	NA	177,000	NA	NA	NA	NA
	07/09/03	11,800	20,100	4,560	21,200	NA	<0.01	107	<20	124,000	3,750	623	28.5	7.98
	05/25/05													
	11/28/05													

Not sampled due to presence of free product.

Not sampled due to presence of free product.

Table 2
Groundwater Sample Analytical Results
Former Arco Service Station #0855
Longview, Washington

Well Number	Sample Date	Benzene ^a (µg/L)	Toluene ^a (µg/L)	Ethylbenzene ^a (µg/L)	Total Xylenes ^a (µg/L)	Napthalene ^b (µg/L)	EDB ^b (µg/L)	EDC ^b (µg/L)	MTBE ^b (µg/L)	GRO ^c (µg/L)	DRO ^d (µg/L)	HO ^d (µg/L)	Total Lead ^e (µg/L)	Dissolved Lead ^e (µg/L)
MTCA Method A Cleanup Levels^f														
Shallow Wells (continued)														
MW-4	11/15/00	1,310	53.6	2,430	7,250	NA	NA	NA	NA	45,500	NA	NA	NA	NA
	01/18/01	1,130	ND	2,030	2,764	331	ND	ND	ND	29,400	NA	NA	NA	NA
	04/18/01	1,280	ND	1,700	2,591	289	ND	ND	ND	NA	NA	NA	NA	NA
	07/17/01	1,610	35	2,870	1,870	NA	NA	NA	NA	34,900	NA	NA	NA	NA
	10/18/01	1,040	ND	2,300	1,320	NA	NA	NA	NA	33,000	NA	NA	NA	NA
	01/16/02	733	ND	920	948	NA	NA	NA	NA	19,300	NA	NA	NA	NA
	07/09/03	906	39.1	1,350	156	NA	<0.01	<25 ^a	<20	14,100	798	<500	6.50	2.57
	05/24/05	310	2.9	410	185 ^g	NA	NA	<2.0	NA	9,600	2,300	<250	NA	NA
	12/01/05	990	140	1,100	1,353 ^h	NA	NA	<10 ^h	NA	11,000	2,900 ⁱ	NA	NA	NA
	11/15/00	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA
	01/18/01	ND	ND	6.76	10.1	2.44	ND	ND	ND	786	NA	NA	NA	NA
	04/18/01	9.42	ND	1.90	3.28	2.42	ND	ND	ND	694	NA	NA	NA	NA
MW-5	07/17/01	1.83	1.16	1.48	1.45	NA	NA	NA	NA	647	NA	NA	NA	NA
	10/18/01	3.05	1.39	48	24.9	NA	NA	NA	NA	2,800	NA	NA	NA	NA
	01/16/02	52.3	3.82	1.54	4.64	NA	NA	<1.0	<5.0	615	<250	<500	5.83	<1.0
	07/09/03	1.26	0.99	<1.0	<2.0	NA	<0.01	<1.0	NA	460	120	<250	NA	NA
	05/24/05	<1.0	<1.0	<1.0	<3.0	NA	NA	<1.0	NA	420	230 ⁱ	NA	NA	NA
	11/28/05	<1.0	<1.0	<1.0	<3.0	NA	NA	<1.0	NA	131	NA	NA	NA	NA
	11/15/00	ND	ND	ND	ND	NA	NA	NA	NA	732	NA	NA	NA	NA
	01/18/01	ND	ND	ND	ND	NA	ND	ND	ND	NA	NA	NA	NA	NA
	04/18/01	ND	ND	1.33	5.79	NA	NA	NA	NA	892	NA	NA	NA	NA
	07/17/01	ND	1.35	2.60	5.48	NA	NA	NA	NA	1,000	NA	NA	NA	NA
	10/18/01	ND	ND	1.58	2.78	NA	NA	NA	NA	810	NA	NA	NA	NA
	01/16/02	ND	0.72	1.15	4.84	NA	<0.01	<1.0	<1.0	462	958	<500	12.1	<1.0
MW-6	07/09/03	<0.50	0.53	<1.0	<2.0	NA	NA	<1.0	NA	370	270	<250	NA	NA
	05/25/05	<1.0	<1.0	<1.0	<3.0	NA	NA	<1.0	NA	290	210 ⁱ	NA	NA	NA
	11/28/05	<1.0	<1.0	<1.0	<3.0	NA	NA	<1.0	NA	113	NA	NA	NA	NA
	11/15/00	ND	ND	ND	1.35	NA	NA	NA	NA	242	NA	NA	NA	NA
	01/18/01	ND	ND	ND	ND	ND	ND	ND	ND	275	NA	NA	NA	NA
	04/18/01	ND	ND	ND	ND	NA	NA	NA	NA	286	NA	NA	NA	NA
	07/17/01	ND	ND	ND	ND	NA	NA	NA	NA	362	NA	NA	NA	NA
	10/18/01	ND	ND	ND	ND	NA	NA	NA	NA	232	2,050	<500	4.32	<1.0
	01/16/02	ND	ND	<0.50	1.48	NA	<0.01	<1.0	<1.0	<100	220	<250	NA	NA
	07/09/03	<0.50	<0.50	<1.0	<2.0	NA	NA	<1.0	NA	<100	140	<250	NA	NA
	05/25/05	<1.0	<1.0	<1.0	<3.0	NA	NA	<1.0	NA	<100	<70	<250	NA	NA
	11/30/05	<1.0	<1.0	<1.0	<3.0	NA	NA	<1.0	NA	<100	<50	NA	NA	NA
MW-8	05/25/05	<1.0	<1.0	<1.0	<3.0	NA	NA	<1.0	NA	<100	<70	<250	NA	NA
	11/29/05	<1.0	<1.0	<1.0	<3.0	NA	NA	<1.0	NA	<100	<50	NA	NA	NA

Table 2
Groundwater Sample Analytical Results
Former Arco Service Station #0855
Longview, Washington

Well Number	Sample Date	Benzene ^a (µg/L)	Toluene ^a (µg/L)	Ethylbenzene ^a (µg/L)	Total Xylenes ^a (µg/L)	Napthalene ^b (µg/L)	EDB ^b (µg/L)	EDC ^b (µg/L)	MTBE ^b (µg/L)	GRO ^c (µg/L)	DRO ^d (µg/L)	HO ^d (µg/L)	Total Lead ^e (µg/L)	Dissolved Lead ^e (µg/L)
MTCA Method A Cleanup Levels^f														
Shallow Wells (continued)														
MW-9	05/25/05	<1.0	<1.0	<1.0	<3.0	NA	NA	<1.0	NA	<100	<50	<250	NA	NA
	11/28/05	<1.0	<1.0	<1.0	<3.0	NA	NA	<1.0	NA	<100	<50	NA	NA	NA
MW-10	05/25/05	45	<1.0	110	<2.0	NA	NA	<1.0	NA	1,000	1,200	<250	NA	NA
	11/30/05	31	<1.0	110	<3.0	NA	NA	<1.0	NA	1,400	1,000 ⁱ	NA	NA	NA
MW-11	12/05/05	<1.0	<1.0	<1.0	<3.0	NA	NA	<1.0	NA	<100	<50	NA	NA	NA
Deep Wells/Wellpoint														
SSB-15	05/25/05	9,600	1,200	2,400	11,600 ^g	NA	NA	<10 ^h	NA	67,000 E	2,300	<250	NA	NA
DMW-1	12/07/05	4,000	160	1,100	4,090 ^g	NA	NA	<100 ^h	NA	22,000	2,900 ⁱ	NA	NA	NA
	08/17/06	4,100	<1.0	520	841 ^g	NA	NA	<1.0	NA	16,000	930 ⁱ	NA	NA	NA
DMW-2	12/07/05	11	<1.0	40	46 ^g	NA	NA	<1.0	NA	270	<50	NA	NA	NA
	08/16/06	10	<1.0	5.6	<3.0	NA	NA	<1.0	NA	<100	<50	NA	NA	NA
DMW-3	12/07/05	<1.0	<1.0	<1.0	<3.0	NA	NA	<1.0	NA	<50	<50	NA	NA	NA
	08/17/06	<1.0	<1.0	<1.0	<3.0	NA	NA	<1.0	NA	<100	<50	NA	NA	NA
DMW-4	12/05/05	56	<1.0	<1.0	<3.0	NA	NA	<1.0	NA	230	<50	NA	NA	NA
	08/17/06	5.7	<1.0	<1.0	<3.0	NA	NA	<1.0	NA	210	<50	NA	NA	NA
DMW-5	12/05/05	36	<1.0	<1.0	<3.0	NA	NA	<1.0	NA	130	<50	NA	NA	NA
	08/17/06	74	<1.0	<1.0	<3.0	NA	NA	<1.0	NA	170	<50	NA	NA	NA
DMW-6	08/16/06	<1.0	<1.0	<1.0	<3.0	NA	NA	<1.0	NA	<100	<50	NA	NA	NA
DMW-7	08/16/06	<1.0	<1.0	<1.0	<3.0	NA	NA	<1.0	NA	<100	<50	NA	NA	NA
DMW-8	08/16/06	<1.0	<1.0	<1.0	<3.0	NA	NA	<1.0	NA	<100	<50	NA	NA	NA

NOTES: Values in bold exceed the MTCA Method A cleanup levels.

All concentrations in micrograms per liter (µg/L).

ND = Not detected above the laboratory method reporting limit (MRL).

NA = Not analyzed.

E = Laboratory estimated value.

^a Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8021B or EPA Method 8260B.

^b Volatile organic compounds (VOCs) by EPA Method 8260B or 8270C SIM (naphthalene only).

^c Gasoline-range organics (GRO) by Ecology Method NWTTPH-Gx.

^d Diesel-range organics (DRO) and heavy oil-range organics (HO) by Ecology Method NWTTPH-Dx.

^e Total and dissolved lead by EPA Method 6020.

^f Chapter 173-340 WAC, Model Toxics Control Act (MTCA) Cleanup Regulation, Method A Cleanup Levels. Amended February 12, 2001.

^g Total xylenes calculated by using the formula: total xylenes concentration = (m, p-xylene concentration) + (o-xylene concentration).

^h Method reporting limit exceeds the Method A cleanup level.

ⁱ The laboratory reported that the DRO concentration is due to overlap from the gasoline range.

Table 3
Soil Sample Analytical Results - GRO, BTEX, and EDC
Former Arco Service Station #0855
Longview, Washington

Sample ID	Date Sampled	Approximate Sample Depth (feet)	Analytical Results in milligrams per kilogram (mg/kg)					EDC ^b
			GRO ^a	Benzene ^b	Toluene ^b	Ethylbenzene ^b	Total Xylenes ^{b,c}	
MTCA Method A Cleanup Levels ^d			30	0.03	7	6	9	11 ^e
Soil Boring Samples								
SSB1-5	05/23/05	5-6	2,300	11	73	40	217	<0.5
SSB1-15	05/23/05	14-15	3	<0.03	<0.05	<0.05	1.1	<0.05
SSB2-3	05/23/05	3-4	100	0.50	6.1	3.8	23.8	<0.05
SSB2-17	05/25/05	17-18	<2	0.04	<0.05	<0.05	0.11	<0.05
SSB3-3-5	05/23/05	3-5	170	1.1	0.90	2.8	13.6	<0.05
SSB3-12	05/25/05	12-13	21	0.57	<0.05	0.89	1.58	<0.05
SSB4-5	05/25/05	4-5	6	<0.03	<0.05	<0.05	<0.1	<0.05
SSB4-12	05/25/05	12-13	4	<0.03	<0.05	<0.05	<0.1	<0.05
SSB5-3-5	05/23/05	3-5	95	0.05	<0.05	1.7	6.65	<0.05
SSB5-9-10	05/23/05	9-10	6	<0.03	<0.05	<0.05	<0.1	<0.05
SSB6-5	05/23/05	5-6	120	0.25	2.1	11 ^f	65 ^f	<0.05
SSB6-9	05/23/05	9-10	<2	<0.03	<0.05	<0.05	<0.1	<0.05
SSB7-5	05/23/05	5-6	<2	<0.03	<0.05	<0.05	<0.1	<0.05
SSB7-9	05/23/05	9-10	6	<0.03	<0.05	<0.05	0.13	<0.05
SSB8-5	05/23/05	5-6	8	<0.03	<0.05	<0.05	<0.1	<0.05
SSB8-9	05/23/05	9-10	<2	<0.03	<0.05	<0.05	<0.1	<0.05
SSB9-5	05/24/05	4-5	9	<0.03	<0.05	<0.05	<0.1	<0.05
SSB9-12	05/24/05	12-13	<2	<0.03	<0.05	<0.05	<0.1	<0.05
SSB10-5	05/24/05	5-6	<2	<0.03	<0.05	<0.05	<0.1	<0.05
SSB10-9	05/24/05	9-10	<2	<0.03	<0.05	<0.05	<0.1	<0.05
SSB11-5	05/24/05	5-6	<2	<0.03	<0.05	<0.05	<0.1	<0.05
SSB11-9	05/24/05	9-10	<2	<0.03	<0.05	<0.05	<0.1	<0.05
SSB12-9	05/24/05	9-10	2	<0.03	<0.05	<0.05	<0.1	<0.05
SSB12-25	05/24/05	24-25	<2	<0.03	<0.05	<0.05	<0.1	<0.05
SSB13-5-7	05/24/05	5-7	4	<0.03	<0.05	<0.05	<0.1	<0.05
SSB13-9	05/24/05	9-10	<2	<0.03	<0.05	<0.05	<0.1	<0.05
SSB14-5	05/24/05	5-6	<2	<0.03	<0.05	<0.05	<0.1	<0.05
SSB14-9	05/24/05	9-10	<2	<0.03	<0.05	<0.05	<0.1	<0.05
SSB15-5	05/25/05	5-6	2,200	16	82	27	152	<0.05
SSB15-15	05/25/05	15-16	750	0.06	1.6	4.5	27.1	<0.05
SSB15-19	05/25/05	19-20	51	0.06	0.2	0.3	2.29	<0.05
SSB15-24	05/25/05	24-25	18	1.1	0.2	1.6	8.7	<0.05
MW8-5	05/23/05	5-6	<2	<0.03	<0.05	<0.05	<0.1	<0.05
MW8-10	05/23/05	10-11	<2	<0.03	<0.05	<0.05	<0.1	<0.05
MW9-5	05/23/05	5-6	<2	<0.03	<0.05	<0.05	<0.1	<0.05
MW9-10	05/23/05	10-11	<2	<0.03	<0.05	<0.05	<0.1	<0.05
MW10-5	05/25/05	5-6	5	<0.03	<0.05	<0.05	<0.1	<0.05
MW10-14	05/25/05	14-15	2	<0.03	<0.05	<0.05	<0.1	<0.05
MW-11-3.75	11/29/05	3.75-4.25	<2	<0.03	<0.03	<0.03	<0.13	<0.03
SSB16-4	11/29/05	4-4.5	2	<0.03	<0.03	<0.03	<0.13	<0.03
DMW3-7	11/30/05	7-7.5	<2	<0.03	<0.03	<0.03	<0.13	<0.03
DMW3-19	11/30/05	18.5-19	<2	<0.03	<0.03	<0.03	<0.13	<0.03
DMW4-5	11/30/05	5-5.5	3	<0.03	<0.03	<0.03	<0.13	<0.03
DMW4-24.5	11/30/05	24.5-25	<2	<0.03	<0.03	<0.03	<0.13	<0.03
DMW5-23	12/02/05	23-23.5	<2	<0.03	<0.03	<0.03	<0.13	<0.03
SSB17-6.5	12/02/05	6.5-7	6	<0.03	<0.03	<0.03	<0.13	<0.03
SSB18-6	12/02/05	6-6.5	4	<0.03	<0.03	<0.03	<0.13	<0.03
DMW1-5	12/05/05	5-5.5	92	0.90	1.4	6.7	42	<0.3
DMW1-15	12/05/05	15-15.5	19	0.11	0.15	0.6	2.95	<0.03
DMW1-21	12/05/05	21-21.5	<2	0.13	<0.03	0.04	0.11	<0.03
DMW2-20.75	12/05/05	20.75-21.25	6	<0.03	<0.03	0.03	<0.13	<0.03
DMW7-5	08/15/06	5-5.5	<2	<0.03	<0.05	<0.05	<0.15	<0.05
DMW-8-5	08/15/06	5-5.5	<2	<0.03	<0.05	<0.05	<0.15	<0.05
Test Pit Samples								
TP1-5.5	08/17/06	5.5-6	<2	<0.03	<0.05	<0.05	<0.15	<0.05
TP2-5.5	08/17/06	5.5-6	<2	<0.03	<0.05	<0.05	<0.15	<0.05

NOTES: Values in bold exceed the MTCA Method A cleanup levels.

^a Gasoline-range organics (GRO) by Ecology Method NWTPH-G.

^b Benzene, toluene, ethylbenzene, and total xylenes (BTEX), and 1,2-dichloroethane (EDC) by EPA Method 8260B.

^c Total xylenes concentration calculated using the formula: total xylenes concentration = (reported m,p-xylene concentration) + (reported o-xylene concentration).

^d Chapter 173-340 WAC, Model Toxics Control Act (MTCA) Cleanup Regulation, Method A Cleanup Levels, Amended February 12, 2001.

^e Since there is no Method A cleanup level, the Method B cleanup level was used.

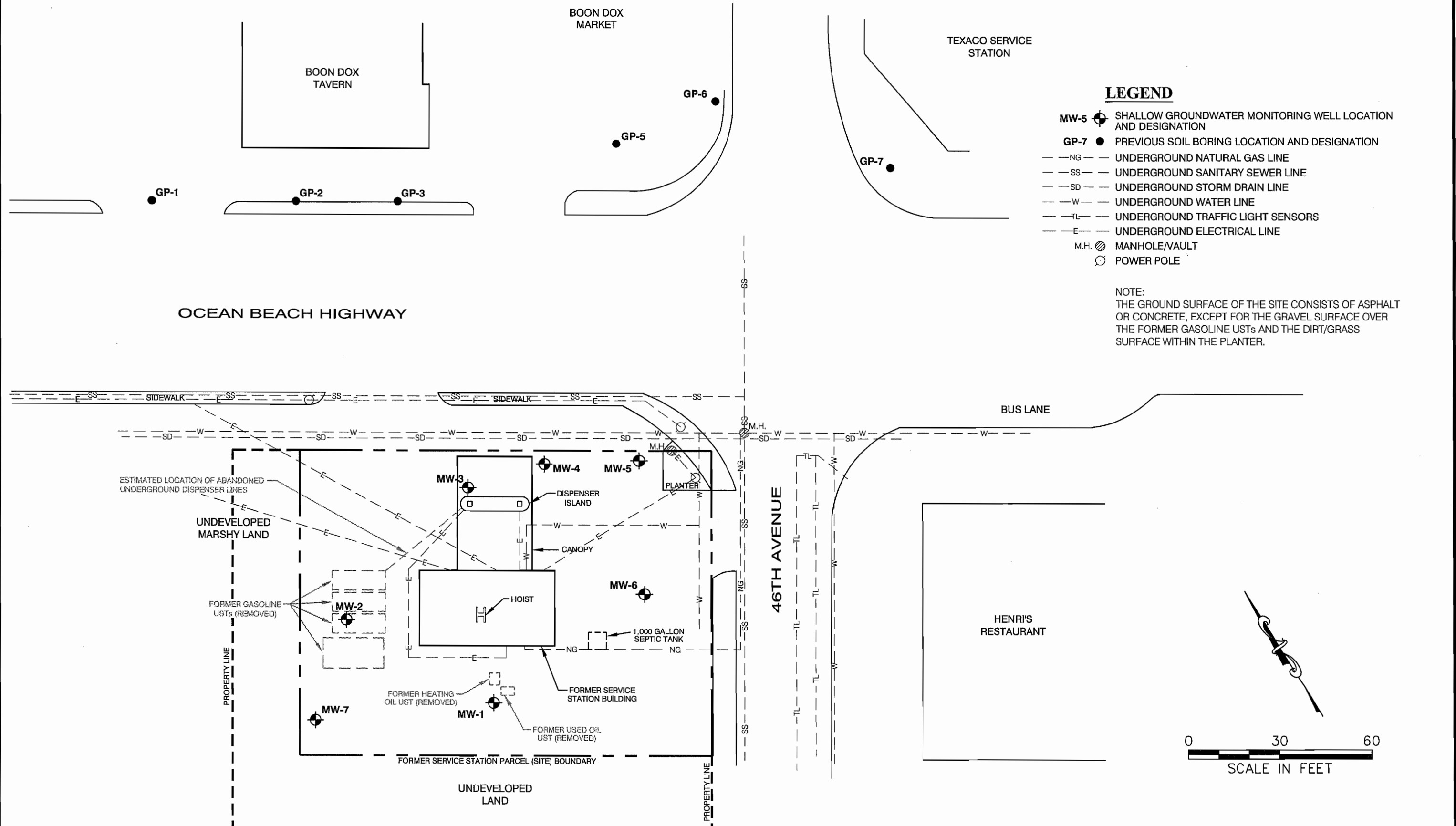
^f Sample was analyzed outside of recommended holding time.

Table 4
Soil Sample Analytical Results - DRO, HO, and PAHs
Former Arco Service Station #0855
Longview, Washington

Sample ID	Date Sampled	Approximate Sample Depth (feet)	Analytical Results in milligrams per kilogram (mg/kg)					
			DRO ^a	HO ^a	Naphthalene ^b	Fluorene ^b	Fluoranthene ^b	Pyrene ^b
MTCA Method A Cleanup Levels ^c			2,000	2,000	5	3,200 ^d	3,200 ^d	2,400 ^d
Soil Boring Samples								
SSB1-5	05/23/05	5-6	2,700 ^e	<250	NA	NA	NA	NA
SSB1-15	05/23/05	14-15	<50	<250	NA	NA	NA	NA
SSB2-3	05/23/05	3-4	340 ^e	<250	NA	NA	NA	NA
SSB2-17	05/25/05	17-18	<50	<250	NA	NA	NA	NA
SSB3-3-5	05/23/05	3-5	260 ^e	<250	NA	NA	NA	NA
SSB3-12	05/25/05	12-13	<50	<250	NA	NA	NA	NA
SSB4-5	05/25/05	4-5	<50	<250	NA	NA	NA	NA
SSB4-12	05/25/05	12-13	<50	<250	NA	NA	NA	NA
SSB5-3-5	05/23/05	3-5	<50	<250	NA	NA	NA	NA
SSB5-9-10	05/23/05	9-10	79 ^e	<250	NA	NA	NA	NA
SSB6-5	05/23/05	5-6	940 ^e	<250	NA	NA	NA	NA
SSB6-9	05/23/05	9-10	<50	<250	NA	NA	NA	NA
SSB7-5	05/23/05	5-6	<50	<250	NA	NA	NA	NA
SSB7-9	05/23/05	9-10	86 ^e	<250	NA	NA	NA	NA
SSB8-5	05/23/05	5-6	<50	<250	0.16	<0.05	<0.05	<0.05
SSB8-9	05/23/05	9-10	<50	<250	<0.005	<0.005	<0.005	<0.005
SSB9-5	05/24/05	4-5	2,200	<250	NA	NA	NA	NA
SSB9-12	05/24/05	12-13	<50	650 ^f	NA	NA	NA	NA
SSB10-5	05/24/05	5-6	<50	<250	NA	NA	NA	NA
SSB10-9	05/24/05	9-10	<50	<250	NA	NA	NA	NA
SSB11-5	05/24/05	5-6	<50	<250	NA	NA	NA	NA
SSB11-9	05/24/05	9-10	<50	<250	NA	NA	NA	NA
SSB12-9	05/24/05	9-10	<50	<250	NA	NA	NA	NA
SSB12-25	05/24/05	24-25	<50	<250	NA	NA	NA	NA
SSB13-5-7	05/24/05	5-7	<50	<250	<0.005	0.0053	0.012	0.025
SSB13-9	05/24/05	9-10	<50	<250	<0.005	<0.005	<0.005	<0.005
SSB14-5	05/24/05	5-6	<50	<250	<0.05	<0.05	<0.05	<0.05
SSB14-9	05/24/05	9-10	<50	<250	<0.005	<0.005	<0.005	<0.005
SSB15-5	05/25/05	5-6	3,300 ^e	<250	NA	NA	NA	NA
SSB15-15	05/25/05	15-16	1,600 ^e	<250	NA	NA	NA	NA
SSB15-19	05/25/05	19-20	<50	<250	NA	NA	NA	NA
SSB15-24	05/25/05	24-25	<50	<250	NA	NA	NA	NA
MW8-5	05/23/05	5-6	<50	<250	NA	NA	NA	NA
MW8-10	05/23/05	10-11	<50	<250	NA	NA	NA	NA
MW9-5	05/23/05	5-6	<50	<250	NA	NA	NA	NA
MW9-10	05/23/05	10-11	<50	<250	NA	NA	NA	NA
MW10-5	05/25/05	5-6	<50	<250	NA	NA	NA	NA
MW10-14	05/25/05	14-15	<50	<250	NA	NA	NA	NA
MW-11-3.75	11/29/05	3.75-4.25	<50	NA	NA	NA	NA	NA
SSB16-4	11/29/05	4-4.5	<50	NA	NA	NA	NA	NA
DMW3-7	11/30/05	7-7.5	<50	NA	NA	NA	NA	NA
DMW3-19	11/30/05	18.5-19	<50	NA	NA	NA	NA	NA
DMW4-5	11/30/05	5-5.5	<50	NA	NA	NA	NA	NA
DMW4-24.5	11/30/05	24.5-25	<50	NA	NA	NA	NA	NA
DMW5-23	12/02/05	23-23.5	<50	NA	NA	NA	NA	NA
SSB17-6.5	12/02/05	6.5-7	2,600	NA	NA	NA	NA	NA
SSB18-6	12/02/05	6-6.5	230	NA	NA	NA	NA	NA
DMW1-5	12/05/05	5-5.5	280 ^e	NA	NA	NA	NA	NA
DMW1-15	12/05/05	15-15.5	<50	NA	NA	NA	NA	NA
DMW1-21	12/05/05	21-21.5	<50	NA	NA	NA	NA	NA
DMW2-20.75	12/05/05	20.75-21.25	<50	NA	NA	NA	NA	NA
DMW7-5	08/15/06	5-5.5	<50	<250	NA	NA	NA	NA
DMW8-5	08/15/06	5-5.5	<50	<250	NA	NA	NA	NA
Test Pit Samples								
TP1-5.5	08/17/06	5.5-6	<50	<250	NA	NA	NA	NA
TP2-5.5	08/17/06	5.5-6	<50	<250	NA	NA	NA	NA
NOTES: NA = Not analyzed. Values in bold exceed the MTCA Method A cleanup levels. Table 4 only contains the polynuclear aromatic hydrocarbon (PAH) compounds that were detected at concentrations greater than the method reporting limit. ^a Diesel-range organics (DRO) and heavy oil-range organics (HO) by Ecology Method NWTPH-Dx (after silica gel cleanup). ^b PAHs by EPA Method 8270C SIM. ^c Chapter 173-340 WAC, Model Toxics Control Act (MTCA) Cleanup Regulation, Method A Cleanup Levels. Amended February 12, 2001. ^d Since there is no Method A cleanup level, the Method B cleanup level was used. ^e The laboratory reported that the DRO concentration is due to overlap from the gasoline range. ^f The sample was re-analyzed specifically against motor oil.								

FIGURES

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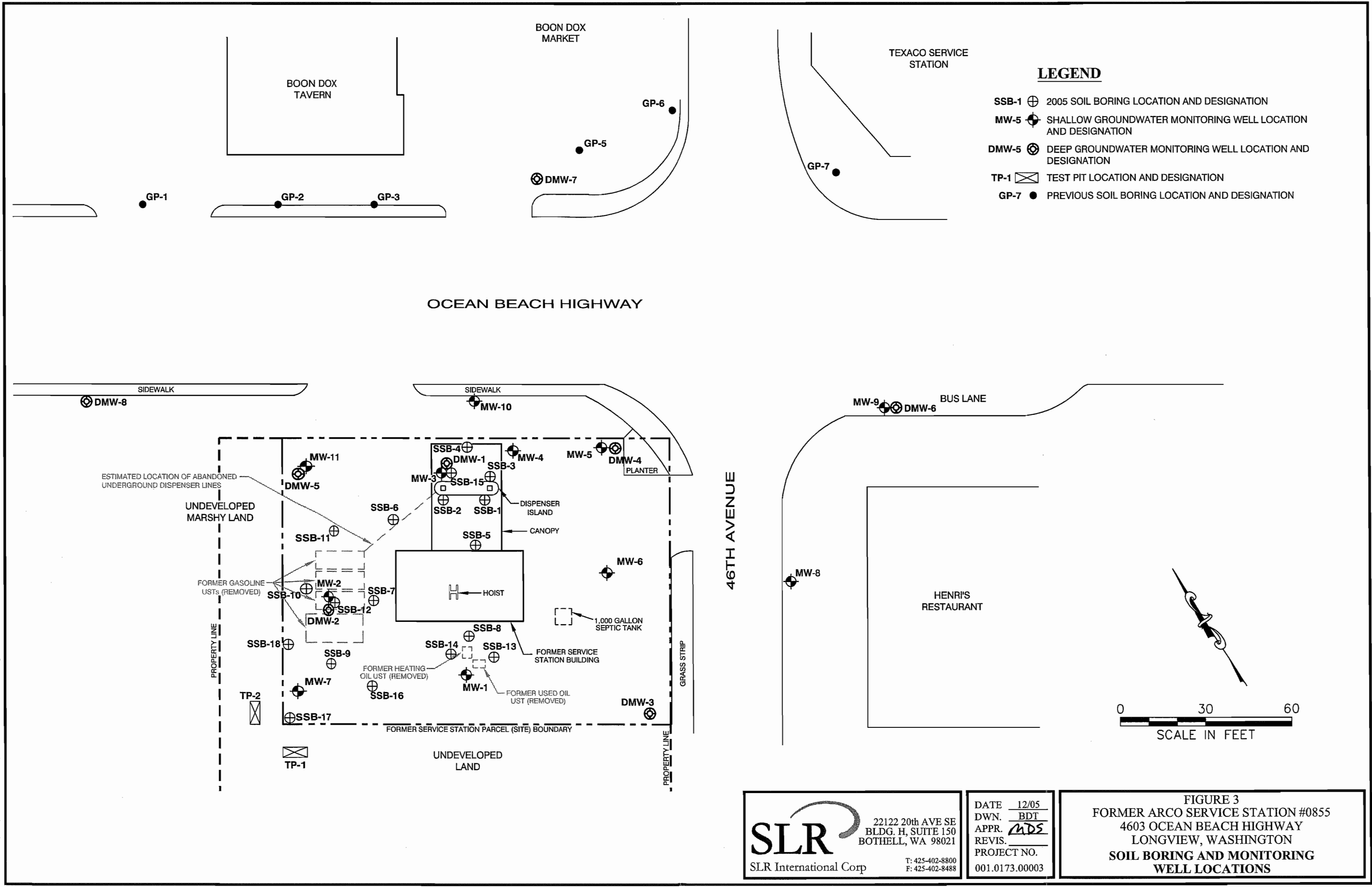


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BLDG. H, SUITE 150
BOTHELL, WA 98021
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F: 425-402-8488

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001.0173.00003

FIGURE 2
FORMER ARCO SERVICE STATION #0855
4603 OCEAN BEACH HIGHWAY
LONGVIEW, WASHINGTON
SITE MAP

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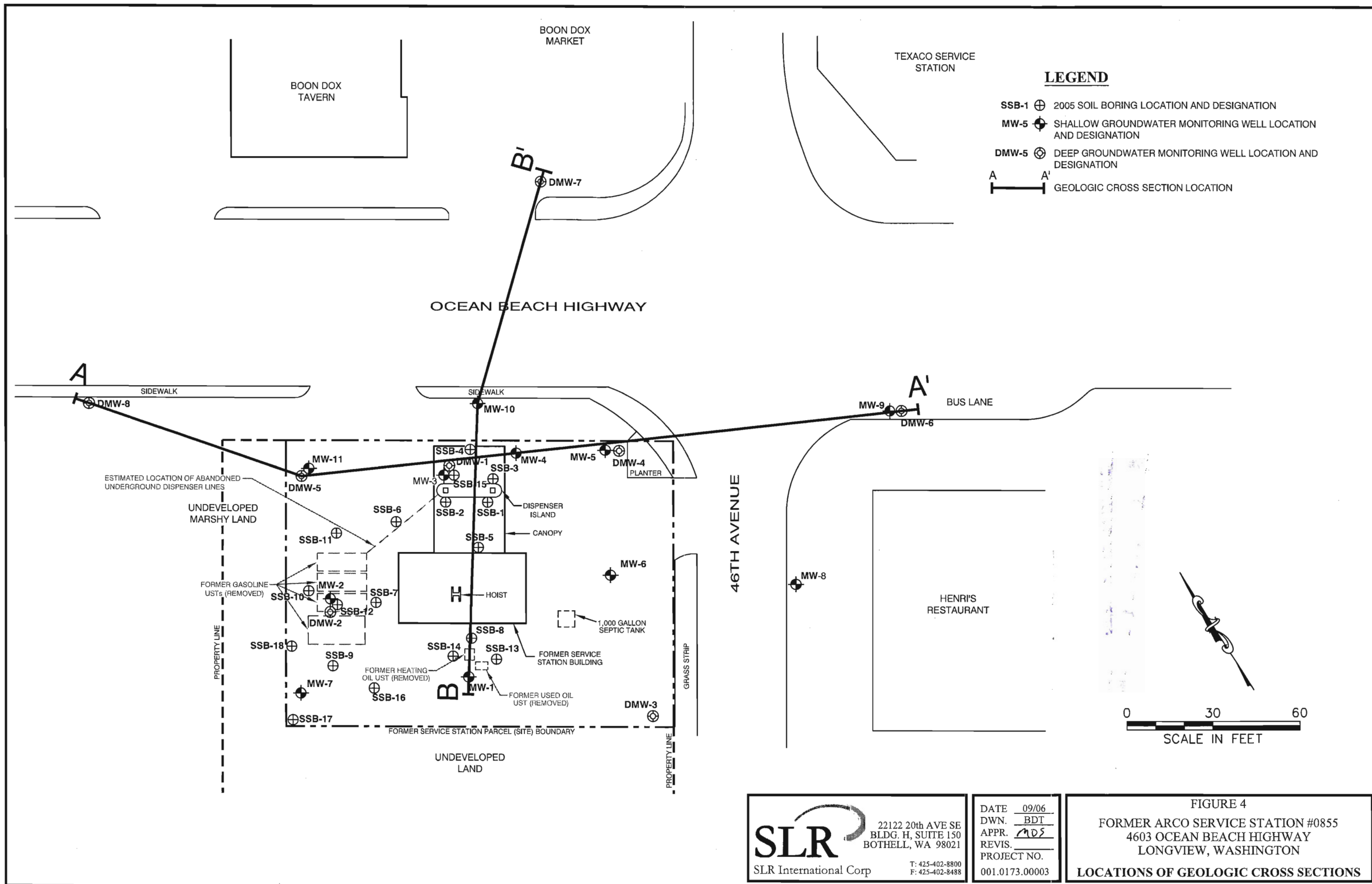
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BOTHELL, WA 98021

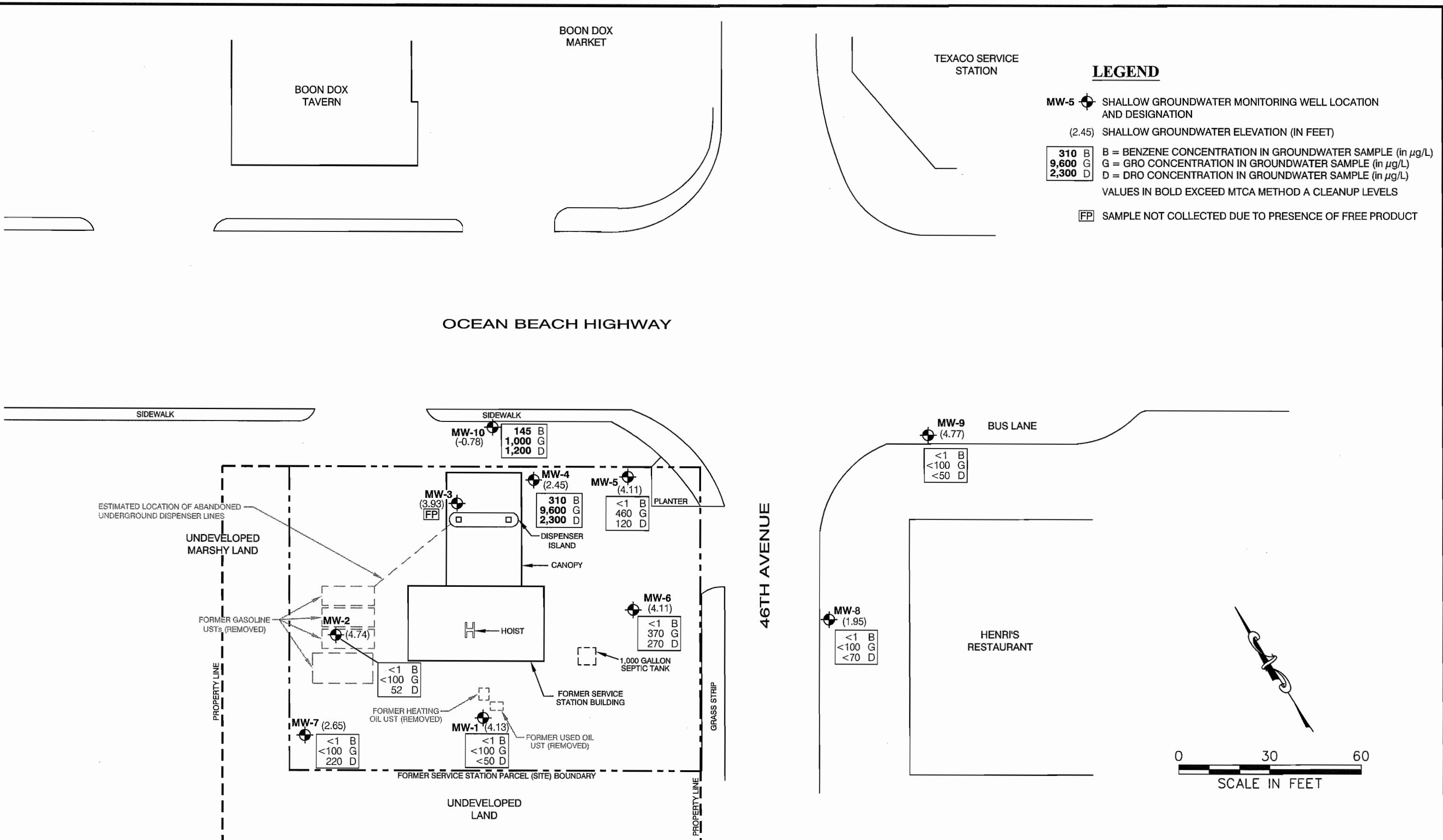
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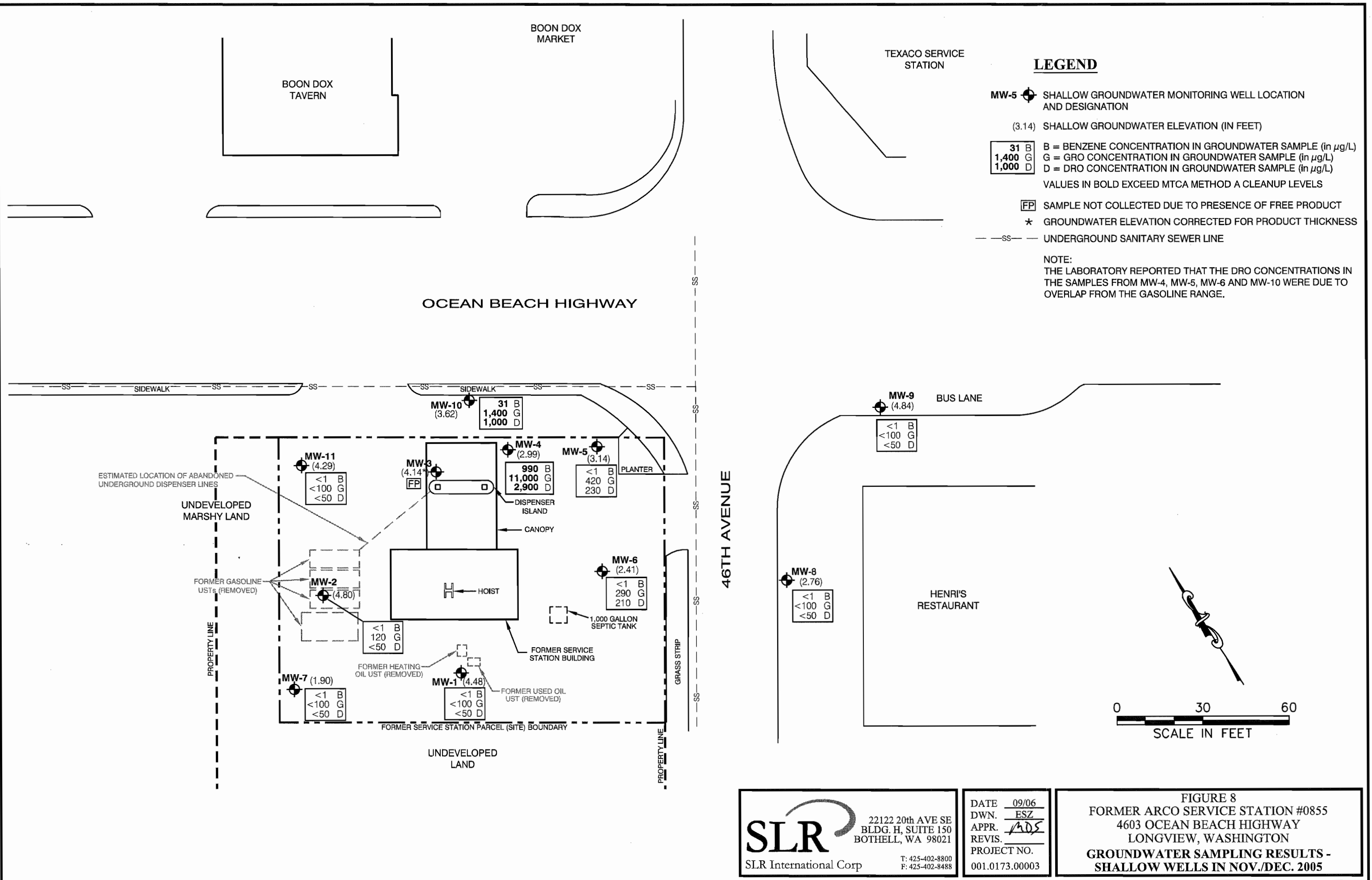


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FIGURE 7
FORMER ARCO SERVICE STATION #0855
4603 OCEAN BEACH HIGHWAY
LONGVIEW, WASHINGTON
GROUNDWATER SAMPLING RESULTS -
SHALLOW WELLS IN MAY 2005

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PROJECT NO. 001.0173.00003

FIGURE 8
FORMER ARCO SERVICE STATION #0855
4603 OCEAN BEACH HIGHWAY
LONGVIEW, WASHINGTON
GROUNDWATER SAMPLING RESULTS -
SHALLOW WELLS IN NOV./DEC. 2005

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BOON DOX
MARKET

BOON DOX
TAVERN

TEXACO SERVICE
STATION

LEGEND

DMW-5  DEEP GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

(2.25) DEEP GROUNDWATER ELEVATION (IN FEET)

4,000	B
22,000	G
2,900	D

B = BENZENE CONCENTRATION IN GROUNDWATER SAMPLE (in $\mu\text{g/L}$)
G = GRO CONCENTRATION IN GROUNDWATER SAMPLE (in $\mu\text{g/L}$)
D = DRO CONCENTRATION IN GROUNDWATER SAMPLE (in $\mu\text{g/L}$)

VALUES IN BOLD EXCEED MTCA METHOD A CLEANUP LEVELS

NOTE:
THE LABORATORY REPORTED THAT THE DRO CONCENTRATION IN THE SAMPLE FROM DMW-1 WAS DUE TO OVERLAP FROM THE GASOLINE RANGE.

OCEAN BEACH HIGHWAY

SIDEWALK

SIDEWALK

BUS LANE

46TH AVENUE

ESTIMATED LOCATION OF ABANDONED
UNDERGROUND DISPENSER LINES

UNDEVELOPED
MARSHY LAND

FORMER GASOLINE
USTs (REMOVED)

PROPERTY LINE

DMW-5
(2.26)

36	B
130	G
<50	D

4,000	B
22,000	G
2,900	D

DMW-1
(1.82)

DISPENSER
ISLAND

CANOPY

HOIST

DMW-4
(2.25)

56	B
230	G
<50	D

PLANTER

1,000 GALLON
SEPTIC TANK

FORMER SERVICE
STATION BUILDING

FORMER HEATING
OIL UST (REMOVED)

FORMER USED OIL
UST (REMOVED)

DMW-3
(-5.49)

<1.0	B
<50	G
<50	D

FORMER SERVICE STATION PARCEL (SITE) BOUNDARY

UNDEVELOPED
LAND

GRASS STRIP
PROPERTY LINE

HENRI'S
RESTAURANT

0 30 60
SCALE IN FEET

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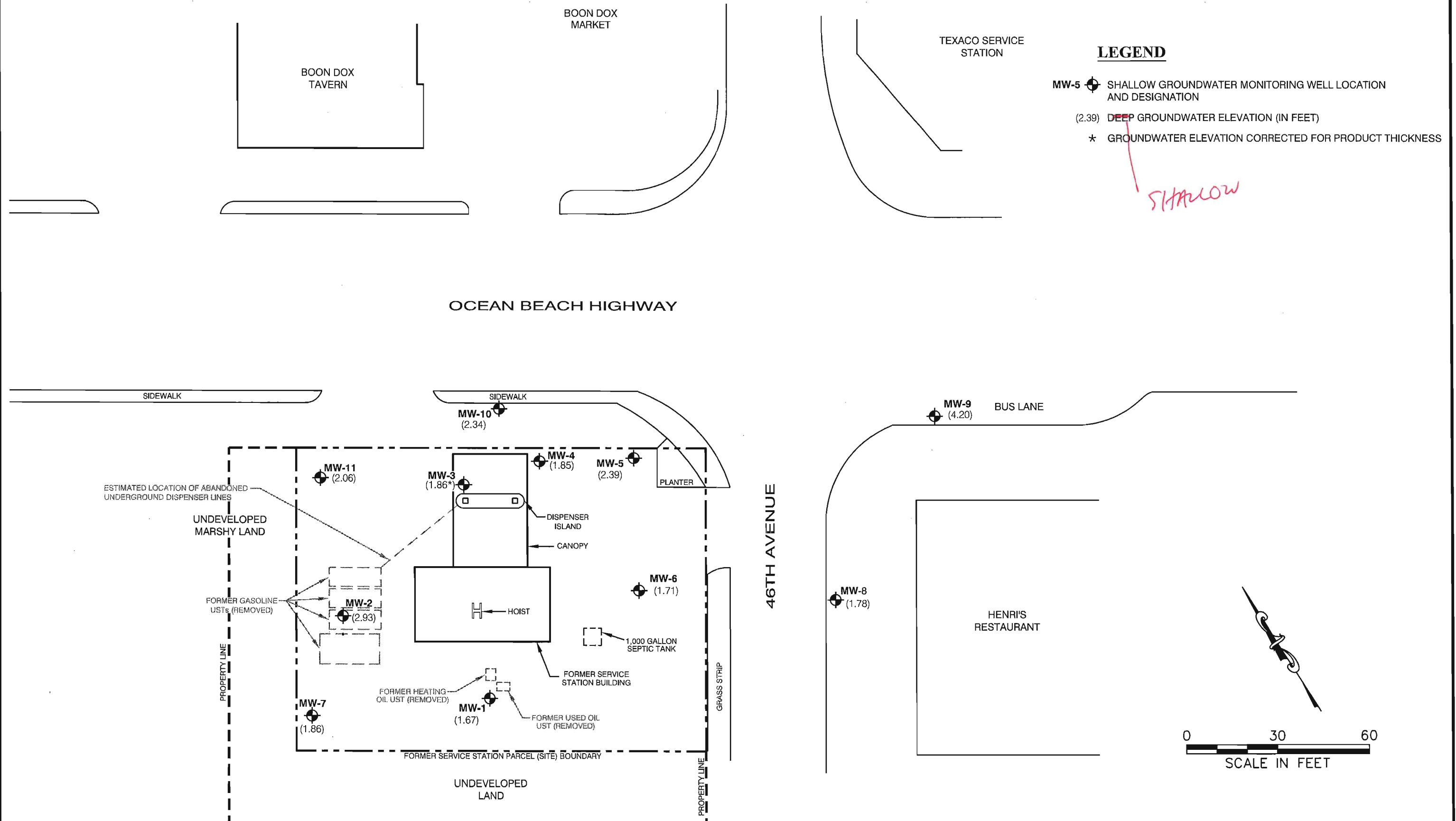
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F: 425-402-8488

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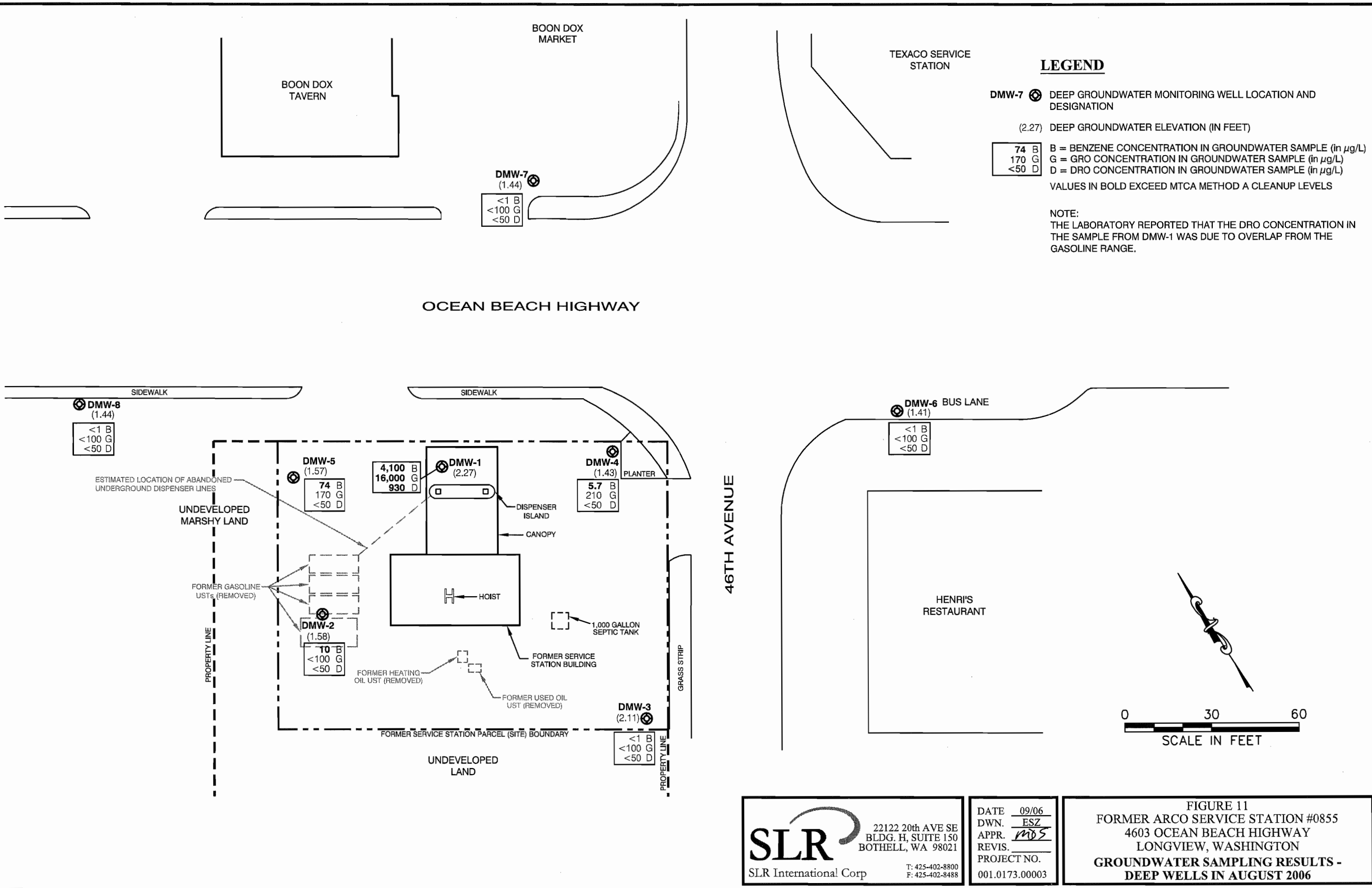
FIGURE 9
FORMER ARCO SERVICE STATION #0855
4603 OCEAN BEACH HIGHWAY
LONGVIEW, WASHINGTON
**GROUNDWATER SAMPLING RESULTS -
DEEP WELLS IN NOV./DEC. 2005**

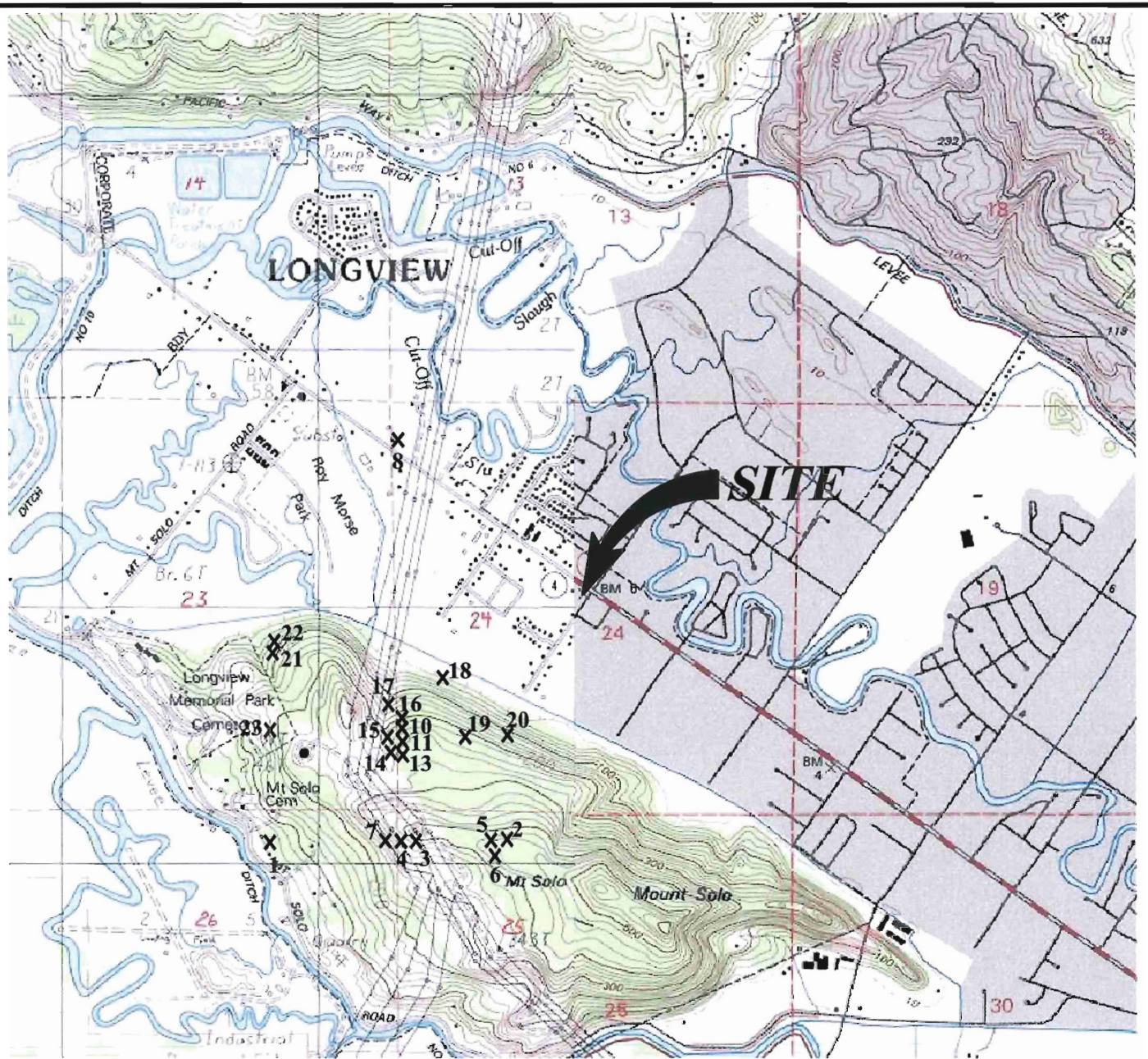
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 SLR International Corp	22122 20th AVE SE BLDG. H, SUITE 150 BOTHELL, WA 98021	DATE 09/06 DWN. ESZ APPR. mds REVIS. PROJECT NO. 001.0173.00003	FIGURE 10 FORMER ARCO SERVICE STATION #0855 4603 OCEAN BEACH HIGHWAY LONGVIEW, WASHINGTON SHALLOW GROUNDWATER ELEVATIONS - AUGUST 2006
	T: 425-402-8800 F: 425-402-8488		

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LEGEND:

3 X APPROXIMATE WATER SUPPLY WELL LOCATION
AND SLR DESIGNATED NUMBER

NOTE:

WELLS #9 AND #12 ARE LOCATED IN SECTION 28 OF T8N,
R3W; HOWEVER, THE EXACT LOCATIONS (1/4 SECTIONS)
OF THE WELLS ARE NOT RECORDED.



0 2000 4000
SCALE IN FEET



22122 20th AVE SE
BLDG. H, SUITE 150
BOTHELL, WA 98021

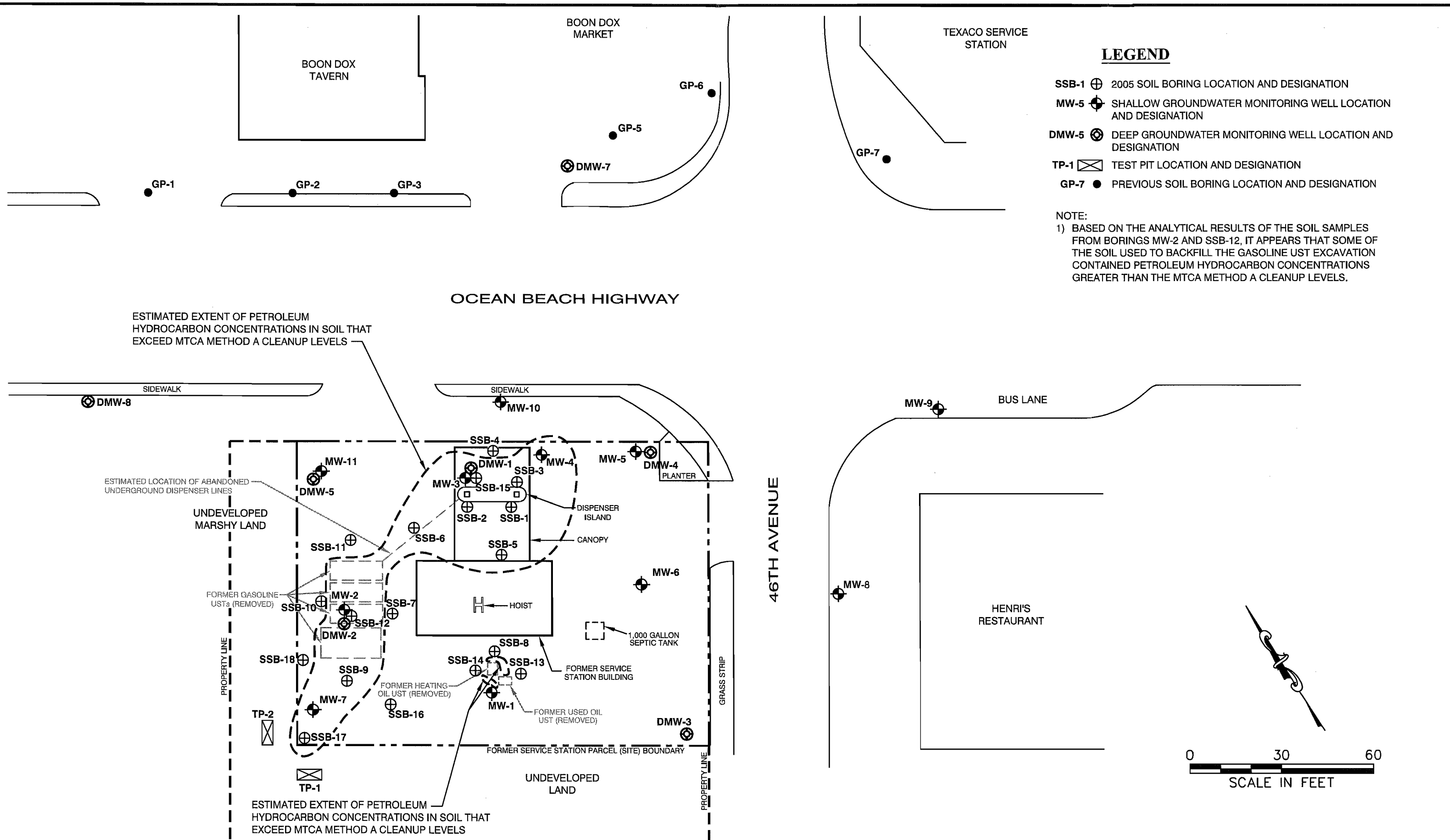
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F: 425-402-8488

DATE 06/04
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APPR. *mdj*
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PROJECT NO.
001.0173.00003

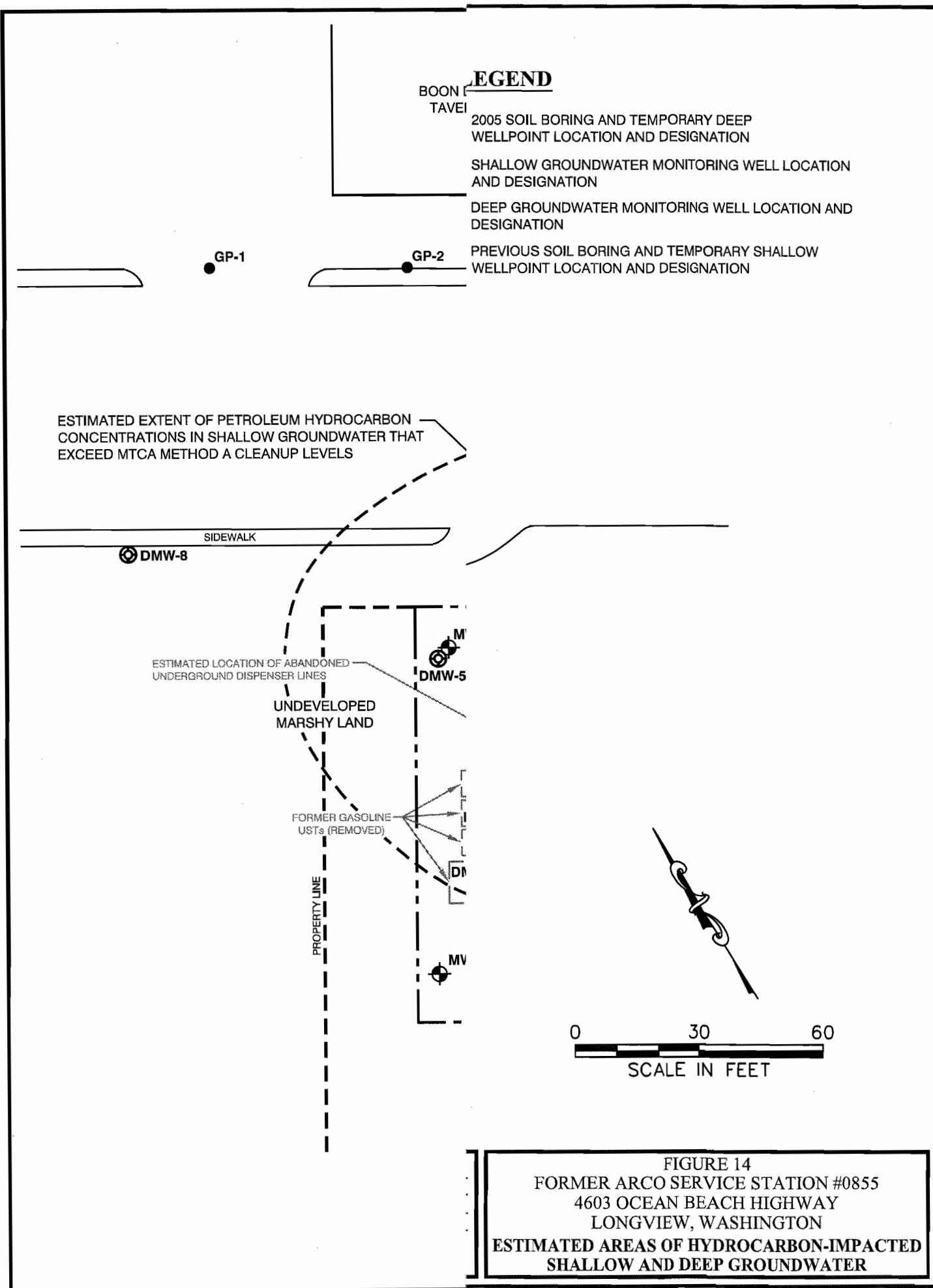
FIGURE 12
FORMER ARCO SERVICE STATION #0855
LONGVIEW, WASHINGTON

WATER SUPPLY WELL LOCATION MAP

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SLR SLR International Corp	22122 20th AVE SE BLDG. H, SUITE 150 BOTHELL, WA 98021	DATE 09/06 DWN. BDT APPR. MDS REVIS. PROJECT NO. 001.0173.00003	FIGURE 13 FORMER ARCO SERVICE STATION #0855 4603 OCEAN BEACH HIGHWAY LONGVIEW, WASHINGTON ESTIMATED AREAS OF HYDROCARBON-IMPACTED SOIL
	T: 425-402-8800 F: 425-402-8488		



APPENDIX A
FIELD METHODS AND SAMPLING PROCEDURES

FIELD METHODS AND SAMPLING PROCEDURES

This appendix documents the procedures that SLR used to perform the investigation activities described in this report. The appendix includes information on the following subjects:

- Drilling methods and soil sampling procedures
- Groundwater monitoring well installation
- Test pit sampling procedures
- Groundwater monitoring techniques
- Groundwater sampling techniques

Soil boring logs that include well construction details are included at the end of this appendix.

A.1 Drill and Sample Soil Borings

On May 23, 24, and 25, 2005, Geo-Tech Explorations, Inc (Geo-Tech), of Tualatin, Oregon, drilled and sampled 15 on-site soil borings (SSB-1 through SSB-15) and 3 off-site soil borings (MW-8, MW-9, and MW-10). All of the drilling activities were conducted under the direction of an SLR geologist. Geo-Tech drilled the borings by using hydraulic push-probe methods. The borings were advanced to depths ranging from approximately 10 to 25 feet below ground surface (bgs). During the drilling of each boring, soil samples were collected on a continuous basis. The samples were collected by using 5-foot-long, 1.5-inch-diameter acetate liners within the drill rods.

From November 29 through December 5, 2005, Cascade Drilling, Inc. (Cascade), of Woodinville, Washington, drilled and sampled 9 on-site soil borings (SSB-16, SSB-17, SSB-18, MW-11, DMW-1, DMW-2, DMW-3, DMW-4, and DMW-5) and 2 off site soil borings (MW-9 and MW-10). All of the drilling activities were conducted under the direction of an SLR geologist. Cascade drilled the borings by using hollow-stem auger methods. The borings were advanced to depths ranging from approximately 10 to 47 feet bgs. During the drilling of each boring, soil samples were collected on a continuous basis to approximately every 5 feet. The samples were collected by using an 18-inch-long, 2-inch-diameter, split-spoon sampler that was driven with a 140-pound hammer. Blow counts were recorded on the boring logs for each of the samples.

the screened interval concurrent with retraction of the auger flights. Hydrated bentonite was placed above the sand pack to create a seal. A flush-grade, traffic-rated, steel monument was installed to protect each well. Figure A-3 presents generalized monitoring well construction details for MW-11.

Deep monitoring wells DMW-1 through DMW-8 were installed within a hollow-stem auger borehole. Each well was constructed with a 5-foot-long screen that was installed at or near the top of the first saturated unit that was encountered below a semi-confining silt unit. To prevent any cross contamination from the shallow water-bearing unit to the deeper aquifer, a steel conductor casing was temporarily installed in the on-site borings (DMW-1 through DMW-5) to depths ranging from 15 to 20 feet bgs. After hydrated bentonite was installed in the conductor casing to create a seal, the boring was extended below the casing. After installation of each well, the conductor casing was removed. A filter pack of #10/20 silica sand was placed around the screened interval of each deep well concurrent with retraction of the auger flights. Hydrated bentonite was placed above the sand pack to create a seal. A flush-grade, traffic-rated, steel monument was installed to protect each well. Figure A-3 presents generalized monitoring well construction details for the deep wells.

After installation, GeoTech or Cascade developed each well by using a combination of surging and pumping in order to minimize the amount of fine-grained material in the well screen and to increase groundwater flow into the well. The development water is stored on site in properly labeled 55-gallon drums pending off-site disposal.

A temporary wellpoint was installed in soil boring SSB-15. The wellpoint consisted of a 4-foot-long steel screen that was exposed when the hydraulic-push probe drill rods were raised several feet. The screen was installed at or near the top of the first saturated unit that was encountered below a semi-confining silt unit. After collecting a groundwater sample, the wellpoint screen and drill rods were removed, and the boring was abandoned with hydrated bentonite.

A.3 Excavate and Sample Test Pits

On August 17, 2006, Cowlitz Clean Sweep, Inc., of Longview, Washington, excavated two test pits (designated TP-1 and TP-2) at locations approximately 10 feet to the west of the site (Figure 3). The excavation activities were conducted under the direction of an SLR geologist. SLR screened the excavated soil for the presence of petroleum hydrocarbons by using physical appearance, odors, and a PID. Based on the field screening results, SLR collected samples of the excavated soil near the center of the backhoe bucket by using a decontaminated stainless steel spoon. The samples were transferred to laboratory-prepared glass jars with TeflonTM-lined lids, and placed in a chilled cooler for transport to the testing laboratory. Chain-of-custody procedures were used to document the sample. After collecting the samples, the excavated soil was used to backfill the test pits.

SOIL CLASSIFICATION

Classification of soils in this report is based on visual field estimates and laboratory observations which include density/consistency, moisture condition, grain size, and plasticity estimates of ASTM D 2488 were used as an information guide. Dual symbols are used to indicate borderline soil classifications.

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS	
			GRAPH	LETTER		
COARSE GRAINED SOILS (MORE THAN 50% OF MATERIAL IS LARGER THAN #200 SIEVE SIZE)	GRAVEL AND GRAVELLY SOILS (MORE THAN 50% OF COARSE FRACTION RETAINED ON #4 SIEVE)	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES	
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES	
				GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES	
			GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES		
	SAND AND SANDY SOILS (MORE THAN 50% OF COARSE FRACTION PASSING ON #4 SIEVE)	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES	
				SM	SILTY SANDS, SAND - SILT MIXTURES	
			SC	CLAYEY SANDS, SAND - CLAY MIXTURES		
FINE GRAINED SOILS (MORE THAN 50% OF MATERIAL IS SMALLER THAN #200 SIEVE SIZE)	SILTS AND CLAYS (LIQUID LIMIT LESS THAN 50)		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY		
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS		
			OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY		
	SILTS AND CLAYS (LIQUID LIMIT GREATER THAN 50)		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS		
			CH	INORGANIC CLAYS OF HIGH PLASTICITY		
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS		
		HIGHLY ORGANIC SOILS			PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS
DENSITY/CONSISTENCY					SAMPLING LEGEND	
Soil density/consistency in borings is related primarily to the Standard Penetration Resistance, and is estimated based on visual observations and is presented in the soil description.					AC = Auger Cuttings SS = Split Spoon ST = Shelby Tube CB = Core Barrel GP = Geo-Probe RC = Rock Core PT = Packer Permeability Test HA = Hand Auger	
SAND or GRAVEL Density	Standard penetration Resistance in Blows/ft.	SILT or CLAY Consistency	Standard penetration Resistance in Blows/ft.			
Very loose	0 - 4	Very soft	0 - 2			
Loose	4 - 10	Soft	2 - 4			
Medium dense	10 - 30	Medium stiff	4 - 8			
Dense	30 - 50	Stiff	8 - 15			
Very dense	>50	Very stiff	15 - 30			
		Hard	>30			
MINOR CONSTITUENTS			MOISTURE		COMMENTS	
Trace	0 - 5%	Dry	Little perceptible moisture	MSL=Mean Sea Level		
Few	5 - 15%	Damp	Some perceptible moisture	bgs=Below Ground Surface		
Little	15 - 25%	Moist	Probably near optimum moisture content	HSA=Hollow Stem Auger		
Some	25 - 45%	Wet	Much perceptible moisture probably above optimum	TOC=Top of Casing		
WATER LEVEL MEASUREMENT						
▽	Depth to water encountered during first sampling event			Note: Water level measurements shown on the logs represent conditions at the time indicated and may not reflect static levels.		
▼	Depth to water encountered during second sampling event					
▽	Depth to water encountered during third sampling event					



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BOTHELL, WA 98021

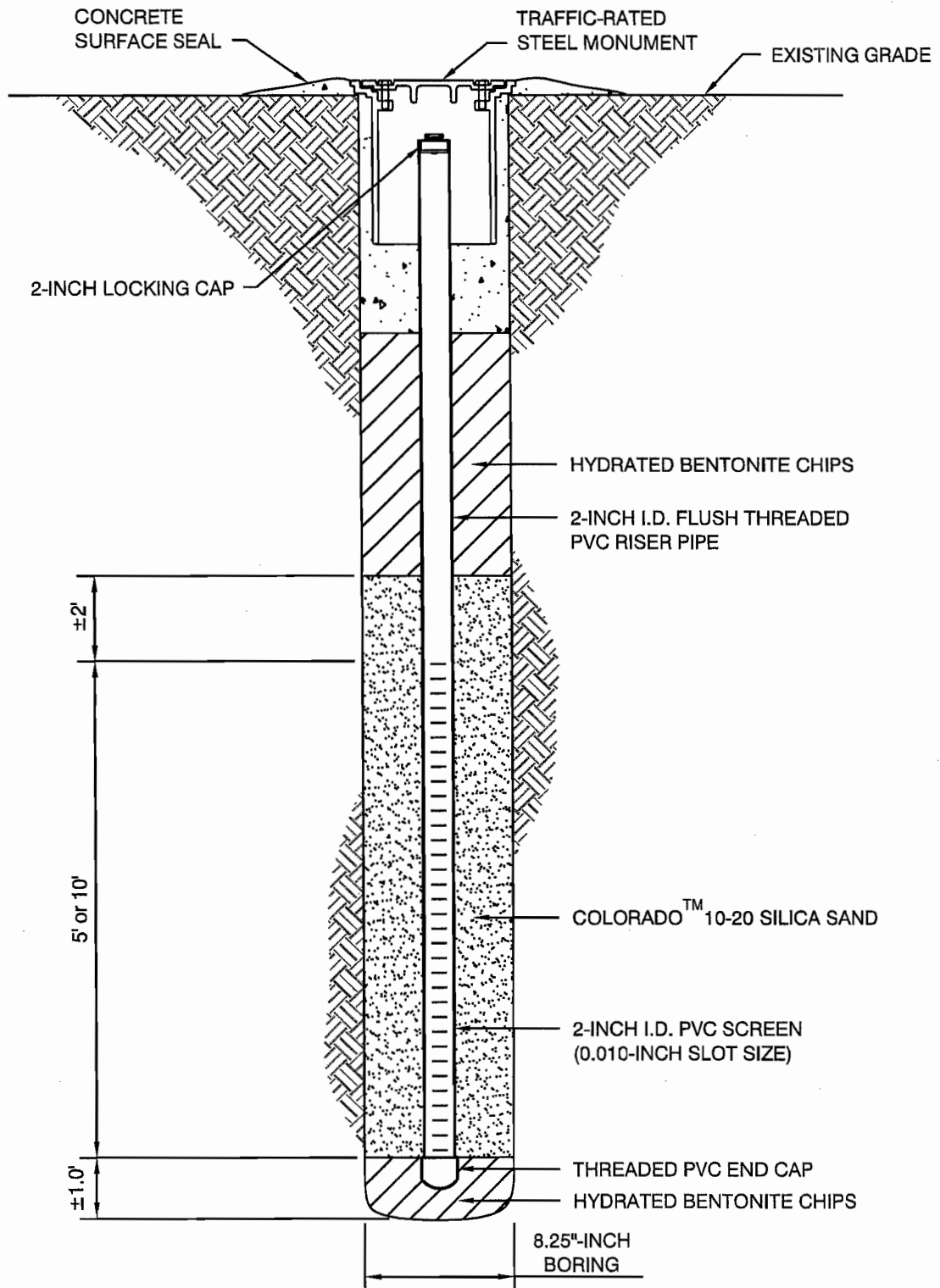
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APPR. [Signature]
REVIS.
PROJECT NO.
001.0173.00002

FIGURE A-1
FORMER ARCO SERVICE STATION #0855
LONGVIEW, WASHINGTON

SOIL CLASSIFICATION SYSTEM



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FIGURE A-3
FORMER ARCO SERVICE STATION #0855
4603 OCEAN BEACH HIGHWAY
LONGVIEW, WASHINGTON
GENERALIZED WELL CONSTRUCTION DETAILS -
AUGER BORINGS



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BORING NUMBER SSB-2

PAGE 1 OF 1

CLIENT Wakefield Family, LLCPROJECT NAME Former Arco Service Station #0855PROJECT NUMBER 001.0173.00002PROJECT LOCATION Longview, WashingtonDATE STARTED 5/23/05COMPLETED 5/23/05GROUND ELEVATION _____ HOLE SIZE 3.65" diameterDRILLING DRILLING CONTRACTOR GeoTech Explorations, Inc.

GROUND WATER LEVELS:

DRILLING DRILLING METHOD GeoprobeAT TIME OF DRILLING ---LOGGED BY K. Saganski

CHECKED BY _____

AT END OF DRILLING ---

NOTES _____

AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0								
		GP	SSB2-3*	100			0.3 CONCRETE. SILTY SAND, brown, fine to coarse, trace gravel, moist, slight hydrocarbon-like odor.	181
5					SM			
		GP		100			Fine to medium sand; strong hydrocarbon-like odors.	384
10								76
		GP		100	MH		9.5 CLAYEY SILT, gray, trace organics, moist, medium plasticity, slight hydrocarbon-like odors.	
15								
		GP	SSB2-17*	100	ML		14.0 SANDY SILT, brownish gray, some fine sand, moist, strong hydrocarbon-like odors. Slight hydrocarbon-like odors.	240
								35
							18.0 No hydrocarbon-like odors. Boring completed at 18.0 feet.	0

REMARKS

- (1) GP = Soil samples were collected on a continuous basis by using 5-foot-long, 1.5-inch-diameter acetate liners within the drill rods.
- (2) * = Soil sample submitted to laboratory for analysis.
- (3) PID readings are in parts per million (ppm).



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BORING NUMBER SSB-4

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CLIENT Wakefield Family, LLC

PROJECT NAME Former Arco Service Station #0855

PROJECT NUMBER 001.0173.00002

PROJECT LOCATION Longview, Washington

DATE STARTED 5/25/05

COMPLETED 5/25/05

GROUND ELEVATION _____

HOLE SIZE 3.65" diameter

DRILLING DRILLING CONTRACTOR GeoTech Explorations, Inc.

GROUND WATER LEVELS:

DRILLING DRILLING METHOD Geoprobe

AT TIME OF DRILLING ---

LOGGED BY K. Saganski

CHECKED BY _____

AT END OF DRILLING ---

NOTES _____

AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0								
		GP		100	SM		0.3 ASPHALT. SILTY SAND , brown to dark brown, fine to medium, few gravel, moist, no hydrocarbon-like odors.	0
5			SSB4-5*					
		GP		0			7.0 CLAYEY SILT , gray, trace organics, medium plasticity, slight hydrocarbon-like odors.	
10					MH			
		GP	SSB4-12*	100				0

Boring completed at 13.0 feet.

REMARKS

- (1) GP = Soil samples were collected on a continuous basis by using 5-foot-long, 1.5-inch-diameter acetate liners within the drill rods.
- (2) * = Soil sample submitted to laboratory for analysis.
- (3) PID readings are in parts per million (ppm).



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CLIENT Wakefield Family, LLCPROJECT NAME Former Arco Service Station #0855PROJECT NUMBER 001.0173.00002PROJECT LOCATION Longview, WashingtonDATE STARTED 5/23/05COMPLETED 5/23/05

GROUND ELEVATION _____

HOLE SIZE 3.65" diameterDRILLING DRILLING CONTRACTOR GeoTech Explorations, Inc.

GROUND WATER LEVELS:

DRILLING DRILLING METHOD GeoprobeAT TIME OF DRILLING ---LOGGED BY K. Saganski

CHECKED BY _____

AT END OF DRILLING ---

NOTES _____

AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0								
		GP		100	SM		0.3 ASPHALT. SILTY SAND , brown to gray, fine to medium, few gravel, moist, no hydrocarbon-like odors.	0
5			SSB6-5*				4.5 CLAYEY SILT , gray, trace organics, medium plasticity, moist, strong hydrocarbon-like odors. No hydrocarbon-like odors.	211
		GP		100	MH			0
			SSB6-9*					
10					ML		9.5 SILTY SAND , brown to gray, fine to medium, some fines, few gravel, moist, no hydrocarbon-like odors. Boring completed at 10.0 feet.	

REMARKS

- (1) GP = Soil samples were collected on a continuous basis by using 5-foot-long, 1.5-inch-diameter acetate liners within the drill rods.
- (2) * = Soil sample submitted to laboratory for analysis.
- (3) PID readings are in parts per million (ppm).



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BORING NUMBER SSB-8

PAGE 1 OF 1

CLIENT Wakefield Family, LLC

PROJECT NAME Former Arco Service Station #0855

PROJECT NUMBER 001.0173.00002

PROJECT LOCATION Longview, Washington

DATE STARTED 5/23/05

COMPLETED 5/23/05

GROUND ELEVATION _____

HOLE SIZE 3.65" diameter

DRILLING DRILLING CONTRACTOR GeoTech Explorations, Inc.

GROUND WATER LEVELS:

DRILLING DRILLING METHOD Geoprobe

▽ AT TIME OF DRILLING 7.5 ft

LOGGED BY K. Saganski

CHECKED BY _____

AT END OF DRILLING _____

NOTES _____

AFTER DRILLING _____

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0								
		GP		100	SM		0.3 ASPHALT. SILTY SAND, brown, fine to medium, few gravel, moist, no hydrocarbon-like odors.	0
5			SSB8-5*					
		GP		100			▽ Wet.	
			SSB8-9*		MH		8.0 CLAYEY SILT, gray, trace organics, medium plasticity, no hydrocarbon-like odors.	0
10							10.0	

Boring completed at 10.0 feet.

REMARKS

- (1) GP = Soil samples were collected on a continuous basis by using 5-foot-long, 1.5-inch-diameter acetate liners within the drill rods.
- (2) * = Soil sample submitted to laboratory for analysis.
- (3) PID readings are in parts per million (ppm).

▽ Water level at time of drilling.



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BORING NUMBER SSB-10

PAGE 1 OF 1

CLIENT Wakefield Family, LLC

PROJECT NAME Former Arco Service Station #0855

PROJECT NUMBER 001.0173.00002

PROJECT LOCATION Longview, Washington

DATE STARTED 5/24/05

COMPLETED 5/24/05

GROUND ELEVATION _____

HOLE SIZE 3.65" diameter

DRILLING DRILLING CONTRACTOR GeoTech Explorations, Inc.

GROUND WATER LEVELS:

DRILLING DRILLING METHOD Geoprobe

AT TIME OF DRILLING ---

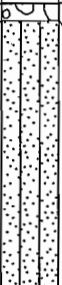
LOGGED BY K. Saganski

CHECKED BY _____

AT END OF DRILLING ---

NOTES _____

AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0								
		GP		100	SM		0.3 GRAVEL. SAND WITH SILT, brown, fine to medium, few gravel, moist, no hydrocarbon-like odors.	0
5			SSB10-5*					
		GP		100	MH		5.5 CLAYEY SILT, gray, trace organics, moist, medium plasticity, no hydrocarbon-like odors.	0
			SSB10-9*					
10								

Boring completed at 10.0 feet.

REMARKS

- (1) GP = Soil samples were collected on a continuous basis by using 5-foot-long, 1.5-inch-diameter acetate liners within the drill rods.
- (2) * = Soil sample submitted to laboratory for analysis.
- (3) PID readings are in parts per million (ppm).



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BORING NUMBER SSB-12

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CLIENT Wakefield Family, LLC

PROJECT NAME Former Arco Service Station #0855

PROJECT NUMBER 001.0173.00002

PROJECT LOCATION Longview, Washington

DATE STARTED 5/24/05

COMPLETED 5/24/05

GROUND ELEVATION _____

HOLE SIZE 3.65" diameter

DRILLING DRILLING CONTRACTOR GeoTech Explorations, Inc.

GROUND WATER LEVELS:

DRILLING DRILLING METHOD Geoprobe

▽ AT TIME OF DRILLING 6.5 ft

LOGGED BY K. Saganski

CHECKED BY _____

AT END OF DRILLING _____

NOTES _____

AFTER DRILLING _____

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0								
		GP		100	GP		0.3 GRAVEL. SAND, brown, fine to medium, no hydrocarbon-like odors.	0
5		GP		100	SW		Wet.	0
		GP	SSB12-9*	100	GW		8.0 SANDY GRAVEL, brown, fine to medium, few fine to medium sand, wet.	0
					SW		9.0 SAND, gray, fine to medium, wet, slight hydrocarbon-like odors.	
10							9.5 CLAYEY SILT, gray, trace organics, medium plasticity, moist to wet, slight petroleum odor.	
		GP		100	MH			0
15							14.5 SANDY SILT, gray brown, few fine sand, moist to wet, no hydrocarbon-like odors.	
		GP		100	ML			
							18.5 SILTY SAND, dark brown, fine-grained, wet, no hydrocarbon-like odors.	0
20					SM			

REMARKS

- (1) GP = Soil samples were collected on a continuous basis by using 5-foot-long, 1.5-inch-diameter acetate liners within the drill rods.
- (2) * = Soil sample submitted to laboratory for analysis.
- (3) PID readings are in parts per million (ppm).

▽ Water level at time of drilling.

▼ Confined groundwater at time of drilling.

(Continued Next Page)



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BORING NUMBER SSB-13

PAGE 1 OF 1

CLIENT Wakefield Family, LLC

PROJECT NAME Former Arco Service Station #0855

PROJECT NUMBER 001.0173.00002

PROJECT LOCATION Longview, Washington

DATE STARTED 5/24/05

COMPLETED 5/24/05

GROUND ELEVATION _____

HOLE SIZE 3.65" diameter

DRILLING DRILLING CONTRACTOR GeoTech Explorations, Inc.

GROUND WATER LEVELS:

DRILLING DRILLING METHOD Geoprobe

AT TIME OF DRILLING _____

LOGGED BY K. Sacanski

CHECKED BY _____

AT END OF DRILLING _____

NOTES _____

AFTER DRILLING _____

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0								
							0.3 ASPHALT.	
					SW		SAND, brown, fine to medium, moist, no hydrocarbon-like odors.	
		GP		100			2.5 SILTY SAND, brown, fine to medium, moist, no hydrocarbon-like odors.	0
5								
			SSB13-5-7*		SM			
		GP		100				
			SSB13-9*		MH		8.0 CLAYEY SILT, brown gray, medium plasticity, trace organics, moist, no hydrocarbon-like odors.	0
10							10.0	

Boring completed at 10.0 feet.

REMARKS

- (1) GP = Soil samples were collected on a continuous basis by using 5-foot-long, 1.5-inch-diameter acetate liners within the drill rods.
- (2) * = Soil sample submitted to laboratory for analysis.
- (3) PID readings are in parts per million (ppm).



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BORING NUMBER SSB-15

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CLIENT Wakefield Family, LLC

PROJECT NAME Former Arco Service Station #0855

PROJECT NUMBER 001.0173.00002

PROJECT LOCATION Longview, Washington

DATE STARTED 5/25/05

COMPLETED 5/25/05

GROUND ELEVATION _____

HOLE SIZE 3.65" diameter

DRILLING DRILLING CONTRACTOR GeoTech Explorations, Inc.

GROUND WATER LEVELS:

DRILLING DRILLING METHOD Geoprobe

AT TIME OF DRILLING ---

LOGGED BY K. Saganski

CHECKED BY _____

AT END OF DRILLING ---

NOTES _____

AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0								
0.3							CONCRETE.	
		GP		100			SILTY SAND , brown, fine to medium, few fines, trace gravel, moist, strong hydrocarbon-like odors.	168
5					SM			
			SSB15-5*					
		GP		100				
10								
		GP		100	MH		CLAYEY SILT , gray, medium plasticity, trace organics, moist, slight hydrocarbon-like odors.	73
15								
		GP		100				
			SSB15-15*					
		GP		100				
			SSB15-19*		ML		SANDY SILT , gray, some fine sand, moist, no hydrocarbon-like odors.	0
20								

REMARKS

- (1) GP = Soil samples were collected on a continuous basis by using 5-foot-long, 1.5-inch-diameter acetate liners within the drill rods.
- (2) * = Soil sample submitted to laboratory for analysis.
- (3) PID readings are in parts per million (ppm).

▼ Confined groundwater at time of drilling.

(Continued Next Page)



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CLIENT Wakefield Family, LLCPROJECT NAME Former Arco Service Station #0855PROJECT NUMBER 001.0173.00003PROJECT LOCATION Longview, WashingtonDATE STARTED 11/29/05COMPLETED 11/29/05

GROUND ELEVATION _____

HOLE SIZE 8.5" diameterDRILLING CONTRACTOR Cascade Drilling

GROUND WATER LEVELS:

DRILLING METHOD Limited Access Hollow Stem Auger Rig▽ AT TIME OF DRILLING 8.5 ftLOGGED BY B. Johnson

CHECKED BY _____

AT END OF DRILLING _____

NOTES _____

AFTER DRILLING _____

DEPTH (ft)	INTERVAL	TYPE	NAME	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0					AS		0.3 ASPHALT.	
					SM		SAND WITH SILT, brown, fine to coarse sand, few fines, few fine to coarse gravel, loose, moist, no hydrocarbon-like odors.	
		SS	NS	10				-
5		SS	SSB16-4*	7			4.0 CLAYEY SILT, dark brown, firm to stiff, moist to wet, slight organic odor, trace organics.	6.2
		SS		14			Blue-gray.	2.0
		SS		12	MH			1.8
		SS		5			▽	1.7
10							10.0	

Boring completed at 10.0 feet.

REMARKS

Soil samples were collected on a continuous basis by using a decontaminated 18-inch-long, 2-inch inside-diameter, split-spoon sampler.

SS = Split-spoon sampler.

*=Soil sample submitted to laboratory for analysis.

Photoionization detector (PID) readings are in parts per million (ppm).

NS = No soil present in sampler.

▽ Water level at time of drilling.



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CLIENT Wakefield Family, LLCPROJECT NAME Former Arco Service Station #0855PROJECT NUMBER 001.0173.00003PROJECT LOCATION Longview, WashingtonDATE STARTED 12/2/05 COMPLETED 12/2/05GROUND ELEVATION _____ HOLE SIZE 8.5" diameterDRILLING CONTRACTOR Cascade Drilling

GROUND WATER LEVELS:

DRILLING METHOD Limited Access Hollow Stem Auger Rig▽ AT TIME OF DRILLING 6.0 ftLOGGED BY B. Johnson

CHECKED BY _____

AT END OF DRILLING _____

NOTES _____

AFTER DRILLING _____

DEPTH (ft)	INTERVAL	TYPE	NAME	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0					AS		0.3 ASPHALT.	
							SILTY SAND, brown, fine to coarse sand, little fines, few fine to coarse gravel, medium density, moist, no hydrocarbon-like odors.	
		SS		24	SM			1.4
5		SS		13				1.9
		SS	SSB18-6*	7	ML		5.5 Gray, no gravel, slight hydrocarbon or organic odor.	
							6.0 SANDY SILT, brown to gray, little fine sand, firm, moist, slight hydrocarbon or organic odor.	1.7
		SS		10	MH		CLAYEY SILT, gray, firm to stiff, wet, no hydrocarbon-like odors, trace organics.	1.9
							Slight organic odor.	
		SS		6			No odors.	1.4
10							10.0	

Boring completed at 10.0 feet.

REMARKS

Soil samples were collected on a continuous basis by using a decontaminated 18-inch-long, 2-inch inside-diameter, split-spoon sampler.

SS = Split-spoon sampler.

*=Soil sample submitted to laboratory for analysis.

Photoionization detector (PID) readings are in parts per million (ppm).

▽ Water level at time of drilling.



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WELL NUMBER MW-9

PAGE 1 OF 1

CLIENT Wakefield Family, LLCPROJECT NAME Former Arco Service Station #0855PROJECT NUMBER 001.0173.00003PROJECT LOCATION Longview, WashingtonDATE STARTED 5/23/05 COMPLETED 5/23/05GROUND ELEVATION 9.7 ft HOLE SIZE 3.65" diameterDRILLING CONTRACTOR GeoTech Explorations, Inc.

GROUND WATER LEVELS:

DRILLING METHOD Geoprobe▽ AT TIME OF DRILLING 10.0 ftLOGGED BY K. Saganski

CHECKED BY _____

AT END OF DRILLING ---

NOTES _____

AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
0							ASPHALT.		
		GP		100	SP		0.8 GRAVELLY SAND, brown, fine to medium, some fine gravel, few fines, moist, no hydrocarbon-like odors.		
5			MW9-5*				6.0 CLAYEY SILT, gray, medium plasticity, trace organics, moist, no hydrocarbon-like odors.		
		GP		100	MH				
10			MW9-10*				10.0 ▽ SILTY SAND, brown, fine to medium, trace gravel, wet, no hydrocarbon-like odors.		
		GP		100	SM				
							11.5 CLAYEY SILT, gray, trace organics, medium plasticity, moist, no hydrocarbon-like odors.		
					MH				
							14.0		

Boring completed at 14.0 feet.

WELL COMPLETION DETAILS

0 to 4.0 feet: 2.0-inch-diameter, flush-threaded, Schedule 40
PVC blank riser pipe.4.0 to 14.0 feet: 2.0-inch-diameter, flush-threaded, Schedule 40
PVC pre-packed well screen with 0.010-inch machined slots.14.0 to 14.1 feet: 2.0-inch-diameter, flush-threaded,
Schedule 40 PVC well cap.

0 to 1.0 foot: Concrete.

1.0 to 3.0 feet: Hydrated bentonite chips.

3.0 to 14.1 feet: #10/20 silica sand.

REMARKS

- (1) GP = Soil samples were collected on a continuous basis by using 5-foot-long, 1.5-inch-diameter acetate liners within the drill rods.
- (2) * = Soil sample submitted to laboratory for analysis.
- (3) PID readings are in parts per million (ppm).

▽ Water level at time of drilling.



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WELL NUMBER MW-11

PAGE 1 OF 1

CLIENT Wakefield Family, LLCPROJECT NAME Former Arco Service Station #0855PROJECT NUMBER 001.0173.00003PROJECT LOCATION Longview, WashingtonDATE STARTED 11/29/05 COMPLETED 11/29/05GROUND ELEVATION 8.7 ft HOLE SIZE 8.5" diameterDRILLING CONTRACTOR Cascade Drilling

GROUND WATER LEVELS:

DRILLING METHOD Limited Access Hollow Stem Auger Rig▽ AT TIME OF DRILLING 9.5 ftLOGGED BY B. Johnson

CHECKED BY _____

AT END OF DRILLING ---

NOTES _____

AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
0					AS	0.3	ASPHALT.		
					SM		SILTY SAND, brown to gray, fine to medium sand, little fines, few fine to coarse gravel, moist, no hydrocarbon-like odors.		Concrete
					CO	3.0			Bentonite
					SM	3.3	CONCRETE.		
					SM	3.8	SILTY SAND, brown to gray, fine to medium sand, little fines, few fine to coarse gravel, moist, no hydrocarbon-like odors.	1.3	
5		SS	MW11-3.75*	7			CLAYEY SILT, gray, soft to stiff, moist to wet, trace organics, slight organic odor.	1.4	
		SS		9			No organic odor.		
		SS		12				0.9	
		SS		4	MH		Slight organic odor.	1.2	Screen
10		SS		9			▽	1.5	
		SS		12				1.2	
		SS		2				1.3	Sand Pack
						14.0			

Boring completed at 14.0 feet.

WELL COMPLETION DETAILS

0 to 3.0 feet: 2.0-inch-diameter, flush-threaded,
Schedule 40 PVC blank riser pipe.
3.0 to 13.0 feet: 2.0-inch-diameter, flush-threaded,
Schedule 40 PVC well screen with 0.010-inch machined
slots.
13.0 to 13.1 feet: 2.0-inch-diameter, flush-threaded,
Schedule 40 PVC well cap.0 to 2.0 foot: Concrete.
2.0 to 2.5 feet: Hydrated bentonite chips.
2.5 to 14.0 feet: #10/20 silica sand.

REMARKS

Soil samples were collected on a continuous basis by using a decontaminated 18-inch-long, 2-inch inside-diameter, split-spoon sampler.

SS = Split-spoon sampler.

*=Soil sample submitted to laboratory for analysis.

Photoionization detector (PID) readings are in parts per million (ppm).

▽ Water level at time of drilling.



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WELL NUMBER DMW-1

PAGE 2 OF 3

CLIENT Wakefield Family, LLC

PROJECT NAME Former Arco Service Station #0855

PROJECT NUMBER 001.0173.00003

PROJECT LOCATION Longview, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
20									
					MH		CLAYEY SILT, gray to brown, firm to stiff, moist to wet, slight hydrocarbon odor, trace organics. (continued)		
		SS	DMW1-21*	71			SAND, gray, fine to coarse sand, very dense, wet, slight organic odor.	12.5	
25									
		SS	NS	100 for 4"			Heaving sands in borehole.	-	
30									
					SP				
35									
		SS	NS	100 for 4"			Heaving sands in borehole.	-	
40									
		SS	NS	100 for 4"			Heaving sands in borehole.	-	

REMARKS

Soil samples were collected on a continuous basis by using a decontaminated 18-inch-long, 2-inch inside-diameter, split-spoon sampler.

SS = Split-spoon sampler.

*=Soil sample submitted to laboratory for analysis.

Photoionization detector (PID) readings are in parts per million (ppm).

NS = No soil present in sampler.

▽ Water level at time of drilling.

▼ Confined groundwater at time of drilling.

ARCO #0855 FORMER ARCO #0855.GPJ GINT US.GDT 9/14/06

(Continued Next Page)



22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800

PAGE 1 OF 2

CLIENT Wakefield Family, LLC

PROJECT NAME Former Arco Service Station #0855

PROJECT NUMBER 001.0173.00003

PROJECT LOCATION Longview, Washington

DATE STARTED 12/5/05

COMPLETED 12/5/05

GROUND ELEVATION 8.87 ft

HOLE SIZE 16.25" diameter

DRILLING CONTRACTOR Cascade Drilling

GROUND WATER LEVELS:

DRILLING METHOD Limited Access Hollow Stem Auger Rig

▽ AT TIME OF DRILLING 7.0 ft

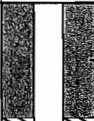
LOGGED BY B. Johnson

CHECKED BY

AT END OF DRILLING ---

NOTES

AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
0									
5					SW		SAND , brown, fine to medium, medium density, moist to wet, no hydrocarbon-like odor.		
	X	SS		17				2	
10					SP		GRAVELLY SAND , brown, fine to coarse sand, little fine gravel, loose, wet, no hydrocarbon-like odors.		
	X	SS		10				2.9	
15					GP		SANDY GRAVEL , gray, fine to coarse gravel, little fine to medium sand, loose, wet, no hydrocarbon-like odors.		
	X	SS	NS	7				-	
20					MH		CLAYEY SILT , gray to brown, stiff, moist to wet, trace organics, slight hydrocarbon odor.		

REMARKS

Soil samples were collected on a continuous basis by using a decontaminated 18-inch-long, 2-inch inside-diameter, split-spoon sampler.

SS = Split-spoon sampler.

*=Soil sample submitted to laboratory for analysis.

Photoionization detector (PID) readings are in parts per million (ppm).

NS = No soil present in sampler.

∇ Water level at time of drilling.

 Confined groundwater at time of drilling.

ARCO #0855 FORMER ARCO #0855.GPJ GINT US.GDT 9/14/06

(Continued Next Page)



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WELL NUMBER DMW-3

PAGE 1 OF 2

CLIENT Wakefield Family, LLC

PROJECT NAME Former Arco Service Station #0855

PROJECT NUMBER 001.0173.00003

PROJECT LOCATION Longview, Washington

DATE STARTED 11/30/05 COMPLETED 11/30/05

GROUND ELEVATION 7.08 ft HOLE SIZE 16.25" diameter

DRILLING CONTRACTOR Cascade Drilling

GROUND WATER LEVELS:

DRILLING METHOD Limited Access Hollow Stem Auger Rig

▽ AT TIME OF DRILLING 7.5 ft

LOGGED BY B. Johnson

CHECKED BY _____

AT END OF DRILLING ---

NOTES _____

AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
0					AS		0.3 ASPHALT.		
					SM		SILTY SAND, brown, fine to coarse sand, little fines, few fine to coarse gravel, moist, no hydrocarbon-like odors.		
							3.0		
		SS		6			CLAYEY SILT, brown to gray, firm to very stiff, moist to wet, trace organics, slight organic odor.	1.2	
5		SS		11				1.4	
		SS	DMW3-7*	12	MH		No organics.	1.6	
		SS		12			▽ Trace organics.	1.5	
10		SS		6				1.4	
		SS		17			No organics.	1.6	
		SS		15			12.0 SILT WITH SAND, gray to brown, few fine sand, soft to stiff, moist to wet, no organics, no hydrocarbon-like odors.	1.3	
		SS		10				1.5	
15		SS		4	ML			2.0	
		SS	DMW3-19*	10			SILTY SAND interbed, approximately 0.01 feet thick.	1.4	
		SS		9	SW		19.0 SAND, dark gray, fine to medium sand, loose, wet, no hydrocarbon-like odors.	1.6	

REMARKS

Soil samples were collected on a continuous basis by using a decontaminated 18-inch-long, 2-inch inside-diameter, split-spoon sampler.

SS = Split-spoon sampler.

*=Soil sample submitted to laboratory for analysis.

Photoionization detector (PID) readings are in parts per million (ppm).

▽ Water level at time of drilling.

▼ Confined groundwater at time of drilling.

ARCO #0855 FORMER ARCO #0855.GPJ GINT US.GDT 9/14/06

(Continued Next Page)



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WELL NUMBER DMW-4

PAGE 1 OF 2

CLIENT Wakefield Family, LLC

PROJECT NAME Former Arco Service Station #0855

PROJECT NUMBER 001.0173.00003

PROJECT LOCATION Longview, Washington

DATE STARTED 12/1/05 COMPLETED 12/1/05

GROUND ELEVATION 9.01 ft HOLE SIZE 16.25" diameter

DRILLING CONTRACTOR Cascade Drilling

GROUND WATER LEVELS:

DRILLING METHOD Limited Access Hollow Stem Auger Rig

▽ AT TIME OF DRILLING 12.0 ft

LOGGED BY B. Johnson

CHECKED BY _____

AT END OF DRILLING ---

NOTES _____

AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
0					AS CO	0.3 0.5	ASPHALT. CONCRETE. SILTY SAND, brown to gray, fine to medium sand, little fines, few fine gravel, moist, no hydrocarbon-like odors.		Concrete
5					SM	5.3			
	X	SS	DMW4-5*	9			CLAYEY SILT, brown to gray, trace organics, soft to very stiff, moist to wet, no hydrocarbon-like odors.	1.3	
10							Interbed of SILTY SAND, approximately 0.1' thick	1.0	
	X	SS		2	MH		▽		Bentonite
15									
	X	SS		3				0.9	
							No organics.	1.8	
	X	SS		21					
20								1.7	
	X	SS		18					

REMARKS

Soil samples were collected on a continuous basis by using a decontaminated 18-inch-long, 2-inch inside-diameter, split-spoon sampler.

SS = Split-spoon sampler.

*=Soil sample submitted to laboratory for analysis.

Photoionization detector (PID) readings are in parts per million (ppm).

▽ Water level at time of drilling.

▽ Confined groundwater at time of drilling.

ARCO #0855 FORMER ARCO #0855.GPJ GINT US.GDT 9/14/06

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WELL NUMBER DMW-5

PAGE 1 OF 2

CLIENT Wakefield Family, LLCPROJECT NAME Former Arco Service Station #0855PROJECT NUMBER 001.0173.00003PROJECT LOCATION Longview, WashingtonDATE STARTED 12/1/05COMPLETED 12/2/05GROUND ELEVATION 8.70 ftHOLE SIZE 16.25" diameterDRILLING CONTRACTOR Cascade Drilling

GROUND WATER LEVELS:

DRILLING METHOD Limited Access Hollow Stem Auger Rig▽ AT TIME OF DRILLING 12.0 ftLOGGED BY B. Johnson

CHECKED BY _____

AT END OF DRILLING ---

NOTES _____

AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
0									
					SM		SILTY SAND, brown, fine to coarse sand, little fines, few fine to coarse gravel, moist, no hydrocarbon-like odors.		
						3.0			
					SP		SAND, brown, fine to coarse, trace coarse gravel, moist, organic odor.		
5						5.5			
	X	SS		17			CLAYEY SILT, gray, firm to very stiff, moist to wet, organic odor, trace organics.	1.6	
10									
	X	SS		8				1.6	
					MH		▽		
15									
	X	SS		7			No organic odor.	1.5	
	X	SS		30			No organics.	1.0	
20									
	X	SS		50 for 6"	ML		SANDY SILT, brown to gray, little fine sand, hard, moist to wet, no hydrocarbon-like odors.	0.9	

REMARKS

Soil samples were collected on a continuous basis by using a decontaminated 18-inch-long, 2-inch inside-diameter, split-spoon sampler.

SS = Split-spoon sampler.

*=Soil sample submitted to laboratory for analysis.

Photoionization detector (PID) readings are in parts per million (ppm).

▽ Water level at time of drilling.

▽ Confined groundwater at time of drilling.

ARCO #0855 FORMER ARCO #0855 GPJ GINT US.GDT 9/14/06

(Continued Next Page)



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WELL NUMBER DMW-6

PAGE 1 OF 2

CLIENT Wakefield Family, LLC

PROJECT NAME Former Arco Service Station #0855

PROJECT NUMBER 001.0173.00003

PROJECT LOCATION Longview, Washington

DATE STARTED 8/14/06 COMPLETED 8/14/06

GROUND ELEVATION 9.69 ft HOLE SIZE 8.5" diameter

DRILLING CONTRACTOR Cascade Drilling

GROUND WATER LEVELS:

DRILLING METHOD Limited Access Hollow Stem Auger Rig

▽ AT TIME OF DRILLING 10.0 ft

LOGGED BY B. Johnson

CHECKED BY _____

AT END OF DRILLING ---

NOTES _____

AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
0					AS	0.5	ASPHALT.		
					SP		GRAVELLY SAND, dark brown, fine to coarse, some fine to medium gravel, few fines, dense, moist, no hydrocarbon-like odors.		
5									
	X	SS	DMW6-5	65/6"				0.3	
10									
	X	SS		2-3-3				0.3	
15									
	X	SS		1-1-1				3.1	
	X	SS		4-5-7				3.2	
20					ML	19.5			

← Cement

← Bentonite

REMARKS

Soil samples were collected by using a decontaminated 18-inch-long, 2.5-inch inside-diameter, split-barrel sampler.

SS = Split spoon sampler.

Photoionization detector (PID) readings are in parts per million (ppm).

▽ Water level at time of drilling.

▼ Confined groundwater at time of drilling.

(Continued Next Page)

ARCO #0855 FORMER ARCO #0855.GPJ GINT US.GDT 9/14/06



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WELL NUMBER DMW-7

PAGE 1 OF 2

CLIENT Wakefield Family, LLCPROJECT NAME Former Arco Service Station #0855PROJECT NUMBER 001.0173.00003PROJECT LOCATION Longview, WashingtonDATE STARTED 12/1/05 COMPLETED 8/15/06GROUND ELEVATION 8.43 ft HOLE SIZE 8.5" diameterDRILLING CONTRACTOR Cascade Drilling

GROUND WATER LEVELS:

DRILLING METHOD Limited Access Hollow Stem Auger RigAT TIME OF DRILLING ---LOGGED BY B. JohnsonCHECKED BY ---AT END OF DRILLING ---NOTES ---AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
0					AS		0.4 ASPHALT.		
					GM		GRAVEL with SILT, dark brown, fine to coarse gravel, some silt, moist, organic odor.		
5							5.0		
	X	SS	DMW7-5*	3-6-7			CLAYEY SILT, dark gray to dark brown, trace organics (roots), stiff, moist, no hydrocarbon-like odors.	3.0	
10	X	SS		3-4-4				1.8	
					ML				
15	X	SS		1-2-1			15 feet: Becomes soft.	1.9	
	X	SS		1-3-6			17.5 feet: Trace sand, medium stiff.	1.3	
20					SM		19.5		

REMARKS

Soil samples were collected on a continuous basis by using a decontaminated 18-inch-long, 2.5-inch inside-diameter, split-barrel sampler.

SS = Split spoon sampler.

*=Soil sample submitted to laboratory for analysis.

Photoionization detector (PID) readings are in parts per million (ppm).

▼ Confined groundwater at time of drilling.

ARCO #0855 FORMER ARCO #0855.GPJ GINT US.GDT 9/14/06

(Continued Next Page)



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WELL NUMBER DMW-8

PAGE 1 OF 2

CLIENT Wakefield Family, LLCPROJECT NAME Former Arco Service Station #0855PROJECT NUMBER 001.0173.00003PROJECT LOCATION Longview, WashingtonDATE STARTED 12/1/05COMPLETED 8/15/06GROUND ELEVATION 9.63 ftHOLE SIZE 8.5" diameterDRILLING CONTRACTOR Cascade Drilling

GROUND WATER LEVELS:

DRILLING METHOD Limited Access Hollow Stem Auger RigAT TIME OF DRILLING ---LOGGED BY B. JohnsonCHECKED BY ---AT END OF DRILLING ---NOTES ---AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
0									
					ML	0.5	TOPSOIL, light brown, silty, some organics (roots).		
							SAND, dark brown, fine to coarse, medium dense, moist, no hydrocarbon-like odors.		
5					SW				
	X	SS	DMW8-5*	20-26-31			5 to 8 feet: becomes light gray with trace fine gravel and silt.	1.6	
						8.0			
							CLAYEY SILT, light gray, trace organics (roots), stiff, moist, no hydrocarbon-like odors.		
10									
	X	SS		3-6-9				1.1	
					ML				
15									
	X	SS		0-1-0			15 feet: Becomes very soft.	1.6	
						17.0			
	X	SS		2-3-5	ML		SANDY SILT, dark gray, some fine sand, medium stiff, wet, no hydrocarbon-like odors.	1.3	
20					SM	19.5			

REMARKS

Soil samples were collected on a continuous basis by using a decontaminated 18-inch-long, 2.5-inch inside-diameter, split-barrel sampler.

SS = Split spoon sampler.

*=Soil sample submitted to laboratory for analysis.

Photoionization detector (PID) readings are in parts per million (ppm).

▼ Confined groundwater at time of drilling.

ARCO #0855 FORMER ARCO #0855.GPJ GINT US.GDT 9/14/06

(Continued Next Page)

APPENDIX B
WATER SUPPLY WELL LOGS

WATER WELL REPORT
STATE OF WASHINGTONStart Card No. 089988
Water Right Permit No.

①

(1) OWNER: Name HOWELL, CAROL A. Address 129 RIDGECREST DR. LONGVIEW, WA 98632-
(2) LOCATION OF WELL: County COMALTE - NE 1/4 NE 1/4 Sec 26 T 8N N., R 3N W
(2a) STREET ADDRESS OF WELL (or nearest address) 129 RIDGECREST DR.

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well
(If more than one)
NEW WELL Method: ROTARY AIR

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 381 ft. Depth of completed well 381 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from +1 ft. to 140 ft.
STEEL/PVC LINER 4.5 " Dia. from 121 ft. to 381 ft.
" Dia. from ft. to ft.

Perforations: YES

Type of perforator used DRILL BIT
SIZE of perforations 7/16 in. by 7/16 in.
40 perforations from 342 ft. to 378 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO

Manufacturer's Name
Type Model No.
Diam. slot size from ft. to ft.
Diam. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 24 ft.
Material used in seal CEMENT GROUT
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off PRESSURE GROUT

(7) PUMP: Manufacturer's Name FAIRBANKS MORSE
Type SUBMERSIBLE H.P. 2

(8) WATER LEVELS: Land-surface elevation
above mean sea level ... 85 ft.
Static level 217 ft. below top of well Date 09/08/92
Artesian Pressure lbs. per square inch Date
Artesian water controlled by N/A

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.

Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test / /
Bailer test gal./min. ft. drawdown after hrs.
Air test 20 gal./min. w/ stem set at 379 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water 51 Was a chemical analysis made? YES

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
CLAY GRITTY LIGHT BROWN	0	3
CLAY W/ WOOD DARK BROWN	3	6
CLAY SANDY BROWN	6	40
SAND BROWN	40	56
CLAY GRITTY DARK BROWN	56	135
CLAY STICKY DARK GREY	135	151
CLAY GRITTY BROWN	151	193
CLAY SANDY GREY	193	214
CLAY GRITTY BROWN	214	267
SANDSTONE GREY	267	274
SANDSTONE BROWN	274	361
SANDSTONE GREY WATER BEARING	361	381
SANDSTONE GREY	381	381

Work started 09/02/92

Completed 09/08/92

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME EDGELL WELL DRILLING INC.

(Person, firm, or corporation) (Type or print)

ADDRESS P O BOX 695 CASTLE ROCK WA

(SIGNED) Bon Edgell License No. 115

Contractor's

Registration No. R0NEDPW121QM

Date 09/16/92

Please print, sign and return to the Department of Ecology

2



Water Well Report

Original - Ecology, 1st copy - owner, 2nd copy - driller

Construction/Decommission

☒ Construction
☐ Decommission ORIGINAL INSTALLATION Notice
of Intent Number 172099

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal
☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other

TYPE OF WORK: Owner's number of well (if more than one) _____
☒ New well ☐ Reconditioned Method: ☐ Dug ☐ Bored ☐ Driven
☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 302 ft.
Depth of completed well 302 ft.

CONSTRUCTION DETAILS

Casing ☒ Welded 6" Diam from 2'10" ft. to 158'1" ft.
Installed: ☐ Liner installed 4.5" Diam from 142 ft. to 302 ft.
☐ Threaded Diam. from _____ ft. to _____ ft.

Perforations: ☒ Yes ☐ No
Type of perforator used Saw
SIZE of perfs 3/8 in. by 6 in. and no. of perfs 48 from 180 ft. to 301 ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____
Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 58 ft.
Material used in seal Hole plug

Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 115.7 ft. below top of well Date 5-10-05
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____
Yield _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Air test 2 _____ gal./min. with stem set at 301 ft. for 1 _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

Current

Notice of Intent No. W 182602

Unique Ecology Well ID Tag No. AKJ 458

Water Right Permit No. _____

Property Owner Name Tracy & Jennifer Powell MAY 16 2005

Well Street Address 108 S Crest Lane

City Longview County Cowlitz

Location NE1/4-1/4 NW1/4 Sec 25 Twn 8N R3W EWM or WWM ☒ circle one

Lat/Long (s, t, r) Lat Deg _____ Lat Min/Sec _____

still REQUIRED) Long Deg _____ Long Min/Sec _____

Tax Parcel No. WL2513062

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation. Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
TOP SOIL	0	2
CLAY BROWN	2	14
CLAY RED-BROWN	14	51
CLAY YELLOW-BROWN	51	89
CLAY GRAY-BROWN	89	146
SILTSTONE GRAY-BLUE MED-SOFT	146	171
SHALE ROCK BLUE MED	171	189
ROCK BLUE MED WATER-BEARING	189	221
SHALE ROCK BLUE-GRAY MED-SOFT	221	281
SILTSTONE GRAY SOFT	281	302

Start Date 5-9-05

Completed Date 5-10-05

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name(Print) Chris McGhee

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2115

Drilling Company Dale McGhee & Sons Well Drilling, Inc.

Address 3032 Allen Street

City, State, Zip Kelso, WA 98626

Contractor's

Registration No. DALEM*212MC

Date 5-12-05

Ecology is an Equal Opportunity Employer.

ECY 050-1-20 (Rev 2/03)

IF TRAINEE,

Driller's Licensed No. _____

Driller's Signature _____

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

3

File Original with
Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy

Revised WATER WELL REPORT

STATE OF WASHINGTON

Notice of Intent

W124697

UNIQUE WELL I.D. #

AFF-276

Water Right Permit No.

(1) OWNER: Name Larry Johnson Address 11106 N.W. 35th Ave Vancouver WA
(2) LOCATION OF WELL: County Cowlitz NW 1/4, NW 1/4 Sec. 25 T. 8 N. R. 34 WM 98685
(2a) STREET ADDRESS OF WELL: (or nearest address) 120 Bridgeview Lane Longview, WA
TAX PARCEL NO.: W125-13-032 98632

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal
☐ Irrigation ☐ Test Well ☐ Other
☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) 1
☒ New Well Method: ☐ Dug ☐ Bored
☐ Deepened ☐ Cable ☐ Driven
☐ Reconditioned ☒ Rotary ☐ Jetted
☐ Decommission

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 285 feet Depth of completed well 285 ft

(6) CONSTRUCTION DETAILS

Casing installed:

☒ Welded☒ Liner installed☐ Threaded

Diam. from 1 ft. to 38 ft
Diam. from 5 ft. to 285 ft
Diam. from _____ ft. to _____ ft

Perforations:

☒ Yes ☐ No

Type of perforator used

SAW

SIZE of perforations

19 in by 4 in
perforations from 245 ft. to 285 ft

Screens:

☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____

Model No _____

Diam _____

Slot Size _____

from _____

ft to _____

ft

Diam _____

Slot Size _____

from _____

ft to _____

ft

Gravel/Filter packed:

☐ Yes ☒ No☐ Size of gravel/sand _____

Material placed from _____

ft. to _____

ft

Surface seal:

☒ Yes ☐ NoTo what depth? 38 ftMaterial used in seal Ben-ton-iteDid any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____

Depth of strata _____

Method of sealing strata off _____

(7) PUMP: Manufacturer's Name GrundfosType 750715HP 3/4(8) WATER LEVELS: Land-surface elevation above mean sea level 250 ft.Static level 80 ft. below top of wellDate 2-12-02

Artesian pressure _____

lbs per square inch

Artesian water is controlled by _____

(Cap valve etc)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield _____ gal/min with _____ ft drawdown after _____ hrs.

Yield _____ gal/min with _____ ft drawdown after _____ hrs.

Yield _____ gal/min with _____ ft drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time Water Level Time Water Level Time Water Level

Date of test 2-12-02

Bailer test _____ gal/min. with _____ ft drawdown after _____ hrs.

Airtest 82 gal/min. with 37.5 ft drawdown after 2 hrs

Artesian flow _____ g.p.m. Date _____

Temperature of water 49° Was a chemical analysis made? ☐ Yes ☒ No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered

MATERIAL	FROM	TO
TOP SOIL	0	2
Light brown clay	2	30
Black rock Hard	30	75
Grey shale rock Hard	75	170
Greyish black rock Hard	170	285

RECEIVED

MAR 01 2002

Washington State
Department of Ecology

Work Started 2-9-02 Completed 2-12-02

WELL CONSTRUCTION CERTIFICATION.

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name Louise Bopp License No 1785
(Licensed Driller/Engineer)

Trainee Name _____ License No. _____

Drilling Company IRA BOPP Pump & Well

(Signed) John J. Bopp License No 1785
(Licensed Driller/Engineer)

Address 210 S Pacific Kelso, Wash

Contractor's
Registration No IRABOPW110814 Date 2-12-02

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDO number is (360) 407-6006.

4

File Original and First Copy with
Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Water Right Permit No.

Start Card No.

UNIQUE WELL I.D. #

W 124660

PCR-988

(1) OWNER: Name Kris Johnson Address 520 Hausler Rd. Kelso, WA 98626

(2) LOCATION OF WELL: County Cowlitz NW 1/4 NW 1/4 Sec 25 T. 8 N. R. 3W W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) Lot 1 Bridgeview Lane Longview, WA 98632

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐
☐ Irrigation ☐ Test Well ☐ Other ☐
☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) 1

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 425 feet. Depth of completed well 425 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 Diam. from +1 ft. to 50 ft.
Welded 42 Diam. from -3 ft. to 245 ft.
Liner installed ☒
Threaded ☐ Diam. from _____ ft. to _____ ft.

Perforations: Yes ☒ No ☐ SAW
Type of perforator used
SIZE of perforations 4 in. by 4 in.
40 perforations from 220 ft. to 245 ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 50 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name Grundfos
Type: 10S1521 H.P. 1 1/2

(8) WATER LEVELS: Land surface elevation 400 ft. above mean sea level
Static level 165 ft. below top of well Date 5-25-00
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

" " " " " "
" " " " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)
Time Water Level Time Water Level Time Water Level

Date of test 5-25-00
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airstest 5 gal./min. with stem set at 425 ft. for 1 hrs.
Artesian flow 5 g.p.m. Date 5-25-00
Temperature of water 47 Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
TOP SOIL	0	2
Light Brown Clay	2	27
Brownish Black Rock med HARD.	27	56
Grey shale Rock "	56	100
Blackish Grey Rock (HARD)	100	140
Brown Shale Rock (med. HARD)	140	150
Grey Shale Rock "	150	425

RECEIVED

JUN 26 2000

DEPARTMENT OF ECOLOGY
WELL DRILLING UNIT

Work Started 5-20-00 Completed 5-25-00 2400

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME IRA Bopp Pump & Well (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 2119 S. Pacific Kelso WA 98626

(Signed) IRA Bopp License No. 1785

Contractor's Registration No. 1785 Date 5-25-00

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

The Department of Ecology does NOT warrant the data and/or use information on this Well Report

File Original and First Copy with
Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. **W095112**

Unique WELL I.D. # **ACV062**

Water Right Permit No. _____

- (1) OWNER: Name **MT. SOLO ASSOC., C/O GUTTORMSEN BRO.** Address **14922 GOODRICH DR., N.W., GIG HARBOR, WA 98329**
- (2) LOCATION OF WELL: County **COWLITZ** - **NE 1/4 NW 1/4 Sec 25 T. 8N N.R. 3E W.M.**
- (2a) STREET ADDRESS OF WELL (or nearest address) **LOT 102, ST. HELENS HEIGHTS, SOUTH CREST LANE, LONGVIEW, WA.**

- (3) PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐
☐ Irrigation ☐ Test Well ☐ Other ☒
☐ DeWater

- (4) TYPE OF WORK: Owner's number of well (if more than one) _____
 Abandoned ☐ New Well ☒ Method: Dug ☐ Bored ☐
 Deepened ☐ Cable ☐ Driven ☐
 Reconditioned ☐ Rotary ☒ Jetted ☐

- (5) DIMENSIONS: Diameter of well **6** inches.
 Drilled **803** feet. Depth of completed well **741** ft.

- (6) CONSTRUCTION DETAILS:
 Casing installed: **6"** Diam. from **+1** ft. to **59** ft.
 Welded ☒ **4"** Diam. from **-1** ft. to **741** ft.
 Liner installed ☒
 Threaded ☐ Diam. from _____ ft. to _____ ft.

- Perforations: Yes ☒ No ☐
 Type of perforator used **SAWCUT**
 SIZE of perforations **125** in. by **12** in.
20 perforations from **480** ft. to **480** ft.
20 perforations from **680** ft. to **680** ft.
 perforations from _____ ft. to _____ ft.

- Screens: Yes ☐ No ☒
 Manufacturer's Name _____
 Type _____ Model No. _____
 Diam. _____ Slot size _____ from _____ ft. to _____ ft.
 Diam. _____ Slot size _____ from _____ ft. to _____ ft.

- Gravel packed: Yes ☐ No ☒ Size of gravel _____
 Gravel placed from _____ ft. to _____ ft.

- Surface seal: Yes ☒ No ☐ To what depth? **59** ft.
 Material used in seal **CEMENT GROUT**
 Did any strata contain unusable water? Yes ☐ No ☒
 Type of water? _____ Depth of strata _____
 Method of sealing strata off _____

- (7) PUMP: Manufacturer's Name _____
 Type: _____ H.P. _____

- (8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
 Static level **278** ft. below top of well Date **6/22/99**
 Artesian pressure _____ lbs. per square inch Date _____
 Artesian water is controlled by _____ (Cap, valve, etc.)

- (9) WELL TESTS: Drawdown is amount water level is lowered below static level
 Was a pump test made? Yes ☐ No ☒ If yes, by whom? _____
 Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

- Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

- Date of test _____
 Boiler test _____ gal./min. with _____ ft. drawdown after _____ hrs.
 Airstest **7** gal./min. with stem set at **800** ft. for **1** hrs.
 Artesian flow _____ g.p.m. Date _____
 Temperature of water _____ Was a chemical analyses made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information

MATERIAL	FROM	TO
TOP SOIL - BROWN	0	2
SILTY CLAY - BROWN	2	14
SILT - LT. BROWN	14	36
DECOMPOSED ROCK W/CLAY BLUE	36	54
BASALT - BLUE - MEDIUM / HARD	54	98
BASALT - BLUE/GRAY - MEDIUM	98	142
BASALT - BLUE HARD	142	146
BASALT - BLUE MEDIUM	146	197
BASALT - GRAY MEDIUM	197	260
BASALT - BLUE/GRAY MEDIUM	260	282
BASALT - BLUE MEDIUM	282	309
BASALT - BLUE W/BROWN TINT BROKEN	309	333
BASALT - GRAY MEDIUM/SOFT	333	395
BASALT - BLUE HARD	395	456
BASALT - BLUE MEDIUM	456	485
BASALT - BLUE/GRAY MEDIUM/SOFT	485	495
BASALT - BLUE MEDIUM	495	565
BASALT - BLUE HARD	565	584
BASALT - GRAY MEDIUM - SOFT	584	603
BASALT - GRAY MEDIUM	603	631
SAND STONE - BLUE/GRAY SOFT	631	750
CLAY STONE - GRAY MEDIUM/SOFT	750	803

Work Started **6/18/99**, 19. Completed **6/23/99**, 19

WELL CONSTRUCTOR CERTIFICATION

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME **PITNER DRILLING & PUMP, Donald R. Pitner Sr.**
 (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address **P.O. BOX 1570, WOODLAND, WA 98674**

(Signed) *Donald R. Pitner Sr.* License No. **0392**
 (WELL DRILLER)

Contractor's Registration No. **PITNEDP201PF** Date **6/25/99**, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (360) 407-6006.

6

RECEIVED
DEPT. OF ECOLOGY/SWRD
Original Permit No. W 095132
TAG No. AFC 006
Fracturing Permit No. W 148106
'01 NOV -5 AM 31
108323

FRACTURING LOG

1. OWNER: Name Mt Solo Association/Guttormsen Bros
Address: 14922 Goodrich Dr NW Gig Harbor, WA 98329

Total depth 1065' Diameter 6"

2. LOCATION OF WELL: County Cowlitz
NE 1/4 NW 1/4 Sec. 25 T 8N N, R 3W WM

3. TYPE OF WORK: Hydrofracturing Date 10/4/01

4. WELL TESTS:

Yield: gal./min. with ft. drawdown after Hrs.
Pre-frac: _____

Post-frac: _____

5. HYDRO-FRACTURING LOG

945 - bottom
840 - 945
735 - 840
630 - 735
525 - 630
420 - 525
315 - 420

6. FRACTURER'S STATEMENT:

This well was hydro-fractured under my jurisdiction and this report is true to the best of my knowledge and belief.

Name Northwest Hydrofracturing
Address 13812 W Lincoln Rd Spokane, Wa 99224
Signed Lynn Bartholomew
License No. 0028 Date 11-02-01

2-20-2001 5:43PM

FLOPPY DRIVE 14:00:00 500 1.00 1000

P 2

File Original and First Copy with
Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W 095132

Unique WELL ID # AEC 006

Water Right Permit No.

108324

(1) OWNER: Name MT SOLO ASSOC /GUTTERMAN BROS

Address 14922 GOODRICH DR., N.W., GIG HARBOR, WA 98329

(2) LOCATION OF WELL County COWLITZ

NE 1/4 NW 1/4 Sec 25 T 8N R 3W WM

(2a) STREET ADDRESS OF WELL (for street address) LOT #5, MT SOLO PARK, LONGVIEW, WA

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal
(Di Water ☐ Irrigation ☐ Other)

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION:

Indicate the type of rock or strata penetrated, and show thickness of sections and the kind and nature of the material in each stratum penetrated with at least one entry for each change of information.

(4) TYPE OF WORK: ☒ New Well ☐ Abandoned ☐ Drilled ☐ Driven
☐ Deepened ☐ Cased ☐ Drilled
☐ Reconditioned ☐ Reamed ☐ Jetted

MATERIAL	FROM	TO
DEEPEMED EXISTING WELL SEE ATTACHED		
WELL LOG		
SILT STONE GRAY	625	673
SILT STONE BROWN GRAY	673	689
SILT STONE LT GRAY	689	710
SAND STONE LT GRAY	710	790
SAND STONE BLUE	790	842
SAND STONE	842	895
SAND STONE BROWN	895	945
SAND STONE BROWN	945	965
SAND STONE LT GRAY W BROWN LINT	965	1015
SAND STONE LT BLUL	1015	1065

(5) DIMENSIONS: Diameter of well 4.5" inches
Drilled 441 feet Depth of completion 1065 ft

(6) CONSTRUCTION DETAILS

Casing Installed 4.5" Dia. 1065 ft to 1065 ft
Welded ☐ Dia. 1065 ft to 1065 ft
Liner Installed ☒ Dia. 1065 ft to 1065 ft
Threaded ☐ Dia. 1065 ft to 1065 ft

Perforations: Yes ☒ No ☐
Type of perforator used SAWCUT
SIZE of perforations 125 in by 12 in
30 perforations from 830 ft to 860 ft
30 perforations from 900 ft to 920 ft
30 perforations from 1040 ft to 1060 ft

Screens: Yes ☐ No ☒
Manufacturer's Name
Type
Diam. Slot size from ft to ft
Diam. Slot size from ft to ft

Gravel packed: Yes ☐ No ☒
Gravel placed from ft to ft

Surface seal: Yes ☐ No ☒
Material used in seal
Did any strata contain undesirable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name

Type

(8) WATER LEVELS

Land surface elevation above mean sea level

Static level 150 ft above top of well Date 9/16/99

Artesian pressure ft per square inch Date

Artesian water is controlled by

(9) WELL TESTS: Drawdown is at least seven feet below static level

Was a pump test made? Yes ☐ No ☒ If not, by whom?

Yield gpm with ft drawdown after hrs

Recovery data (time taken at zero drawdown put up from drawdown to water level)

Time Water Level Time Water Level Time Water Level

Date of test

Darker test gal/min with ft drawdown after hrs

Artesian flow gal/min with drawdown ft to ft hrs

Artesian flow gpm Date

Temperature of water Was it higher than ambient water? Yes ☐ No ☒

WELL TO BE HYDROFRACTURED
RECEIVED

NOV-05-2001

Washington State
Department of Ecology

Work Started 9/14/99 19 Completed 9/16/99 19

WELL CONSTRUCTOR CERTIFICATION.

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME PITNER DRILLING & PUMP, DONALD R. PITNER SR. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address P.O. BOX 1570, WOODLAND, WA 98374

(Signed) *Donald R. Pitner* License No 0382 (WELL DRILLER)

Contractor's Registration No 360-225-6455 Date 9/17/99 19

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6000. The TDD number is (360) 407-6005.

7

WATER WELL REPORT
STATE OF WASHINGTONSheet Card No. 069986
Water Right Permit No.

(1) OWNER: Name MOLITOR, TONY		Address 110 SOLO MEADOWS LN. LONGVIEW, WA 98632-	
(2) LOCATION OF WELL: County COWLITZ		NW 1/4 NW 1/4 Sec 25 T 8 N., R 3W WM	
(2a) STREET ADDRESS OF WELL (or nearest address) 110 SOLO MEADOWS LN.			
(3) PROPOSED USE: DOMESTIC		(10) WELL LOG	
(4) TYPE OF WORK:		Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.	
NEW WELL		MATERIAL	
Owner's Number of well (if more than one)		FROM TO	
Method: ROTARY AIR		CLAY W/ COBBLES BROWN 0 8	
(5) DIMENSIONS:		CLAY STICKY W/ BROKEN ROCK 8 21	
Diameter of well 6 inches		CLAY BROWN 21 36	
Drilled 381 ft.		CLAY STICKY BROWN 36 45	
Depth of completed well 381 ft.		SANDSTONE GREY 45 72	
(6) CONSTRUCTION DETAILS:		SANDSTONE W/ BROKEN ROCK GREY 72 88	
Casing installed: 6 " Dia. from +1 ft. to 75 ft.		ROCK SOFT GREY 88 146	
STEEL/PVC LINER 4.5 " Dia. from 61 ft. to 381 ft.		SANDSTONE W/ ROCK BROWN 146 171	
Dia. from ft. to ft.		SANDSTONE GREY 171 230	
Perforations: YES		SANDSTONE W/ ROCK DARK GREY 230 287	
Type of perforator used DRILL BIT		CLAYSTONE SANDY BROWN 287 302	
Size of perforations 7/16 in. by 7/16 in.		SANDSTONE W/ ROCK GREY 302 327	
40 perforations from 342 ft. to 378 ft.		SANDSTONE GREY WATER BEARING 327 329	
perforations from ft. to ft.		SANDSTONE HARD GREY 329 356	
perforations from ft. to ft.		CLAYSTONE BROWN 356 381	
Screens: NO			
Manufacturer's Name			
Type			
Diam. slot size from ft. to ft.			
Diam. slot size from ft. to ft.			
Gravel packed: NO			
Gravel placed from ft. to ft.			
Surface seal: YES			
Material used in seal CEMENT GROUT			
To what depth? 24 ft.			
Did any strata contain unusable water? NO			
Type of water? Depth of strata ft.			
Method of sealing strata off PRESSURE GROUT			
(7) PUMP: Manufacturer's Name			
Type N/A H.P.			
(8) WATER LEVELS:			
Land-surface elevation			
above mean sea level ... 65 ft.			
Static level 171 ft. below top of well Date 10/30/92			
Artesian Pressure lbs. per square inch Date			
Artesian water controlled by N/A			
(9) WELL TESTS: Drawdown in amount water level is lowered below static level.		Work started 10/27/92 Completed 10/30/92	
Was a pump test made? NO If yes, by whom?		WELL CONSTRUCTOR CERTIFICATION:	
Yield: gal./min with ft. drawdown after hrs.		I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.	
Recovery data		NAME EDGEELL WELL DRILLING INC.	
Time Water Level Time Water Level Time Water Level		(Person, firm, or corporation) (Type or print)	
Date of test / /		ADDRESS P O BOX 695 CASTLE ROCK WA	
Bailer test gal./min. ft. drawdown after hrs.		[SIGNED] <i>Ron Edgell</i> License No. 115	
Air test 5 gal./min. w/ stem set at 378 ft. for 1 hrs.		Contractor's	
Artesian flow g.p.m. Date		Registration No. ROMEDPW121QM Date 11/12/92	
Temperature of water 51 Was a chemical analysis made? YES			



WATER WELL REPORT

Original & 1st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission ("x" in circle)

☒ Construction

☐ Decommission ORIGINAL CONSTRUCTION Notice

141275 of Intent Number

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other	
TYPE OF WORK: Owner's number of well (if more than one) _____ ☒ New Well ☐ Reconditioned ☐ Method ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted	
DIMENSIONS: Diameter of well <u>6</u> inches, drilled <u>170</u> ft Depth of completed well <u>160</u> ft	
CONSTRUCTION DETAILS Casing ☒ Welded <u>6</u> " Diam from <u>42</u> ft to <u>150</u> ft Installed: ☒ Liner installed <u>5</u> " Diam from <u>145</u> ft to <u>150</u> ft ☐ Threaded _____" Diam from _____ ft to _____ ft	
Perforations: ☐ Yes ☒ No Type of perforator used _____ SIZE of perfs _____ in by _____ in and no of perfs _____ from _____ ft to _____ ft	
Screens: ☒ Yes ☐ No ☒ K-Pac Location <u>145</u> Manufacturer's Name <u>COOK</u> Type <u>Stainless Steel</u> Model No <u>SS 12</u> Diam <u>6</u> " Slot Size <u>12</u> from <u>150</u> ft to <u>160</u> ft Diam _____ Slot Size _____ from _____ ft to _____ ft	
Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____ Materials placed from _____ ft to _____ ft	
Surface Seal: ☒ Yes ☐ No To what depth? <u>19+</u> ft Materials used in seal <u>Bentonite</u> Did any strata contain unusable water? ☐ Yes ☐ No Type of water? _____ Depth of strata _____ Method of sealing strata off _____	
PUMP: Manufacturer's Name <u>Grundfos</u> Type <u>40 GPM Submersible</u> HP <u>3 HP</u>	
WATER LEVELS: Land-surface elevation above mean sea level <u>10</u> ft Static level <u>4</u> ft below top of well Date <u>10-31-2003</u> Artesian pressure _____ lbs per square inch Date _____ Artesian water is controlled by _____ (cap, valve, etc.)	
WELL TESTS: Drawdown is amount water level is lowered below static level Was a pump test made? ☒ Yes ☐ No If yes, by whom? <u>Wells and More</u> Yield <u>50</u> gal/min with <u>28</u> ft drawdown after <u>1</u> hrs Yield _____ gal/min with _____ ft drawdown after _____ hrs Yield _____ gal/min with _____ ft drawdown after _____ hrs Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level) Time Water Level Time Water Level Time Water Level _____ Date of test _____ Bailer test _____ gal/min with _____ ft drawdown after _____ hrs Airtest <u>50</u> gal/min with stem set at <u>160</u> ft for <u>1</u> hrs Artesian flow <u>50+</u> gpm Date <u>10-31-2003</u> Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No	

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Ted R. Frandsen
Driller/Engineer/Trainee Signature Ted R. Frandsen
Driller or Trainee License No. 0811

If trainee, licensed driller's
Signature and License no. _____

CURRENT

Notice of Intent No. W 172717

Unique Ecology Well ID Tag No. AHG 117

Water Right Permit No. _____

Property Owner Name Dean Armstrong

Well Street Address 5228 Ocean Beach Hy

City Longview County: Cowlitz

Location N 1/4 - 1/4 NW 1/4 Sec 24 Twn 9 R 3 EWM circle one

Lat/Long: _____ Lat Deg _____ Lat Min/Sec _____

(s, t, r still) REQUIRED) Long Deg _____ Long Min/Sec _____

Tax Parcel No. W12408004

CONSTRUCTION OR DECOMMISSION PROCEDURE
Formation Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
Top Soil	0	1
Brown Clay	1	4
Darker Brown Clay	4	7
Darker Brown Clay	7	17
Gray Sand	17	84
Gray Sand with Wood	84	86
Gray Sand	86	116
Gray Sand with Wood	116	124
Gray Sand	124	170
Water at 17'		

RECEIVED

NOV 13 2003

DEPARTMENT OF ECOLOGY
WELL DRILLING UNIT

Start Date 10-9-2003 Completed Date 10-31-2003

Drilling Company Wells and More

Address 1042 Luecke Rd

City, State, Zip Toutle, Wa, 98649

Contractor's CCP EX WELLS
Registration No. 12206 Date 11-3-2003

Ecology is an Equal Opportunity Employer ECY 050-1-20 (Rev 4/01)

Start Card No. W 068439
Unique Well I.D. # ACR665
Water Right Permit No.

(1) ADDRESS: Name MALLORY, ALLYN Address 1619 DOROTHY STREET LONGVIEW, WA 98632-																																																																																																				
(2) LOCATION OF WELL: County COMLITZ - 1/4 1/4 Sec 24 T 8N N., R 3W WM																																																																																																				
(2a) STREET ADDRESS OF WELL (or nearest address) 111 RIDGECREST LANE, LONGVIEW																																																																																																				
(3) PROPOSED USE: DOMESTIC																																																																																																				
(4) TYPE OF WORK: Owner's Number of well (If more than one) 1 NEW WELL Method: ROTARY																																																																																																				
(5) DIMENSIONS: Diameter of well 6 inches Drilled 568 ft. Depth of completed well 568 ft.																																																																																																				
(6) CONSTRUCTION DETAILS: Casing installed: 6 " Dia. from +1.2 ft. to 79.4 ft. WELDED " Dia. from ft. to ft. 4.5 " Dia. from 8 ft. to 568 ft.																																																																																																				
Perforations: YES Type of perforator used SAN SIZE of perforations 3/8 in. by 6 in. 68 perforations from 268 ft. to 567 ft. perforations from ft. to ft. perforations from ft. to ft.																																																																																																				
Screens: NO Manufacturer's Name Type Model No. Diam. slot size from ft. to ft. Diam. slot size from ft. to ft.																																																																																																				
Gravel packed: NO Size of gravel Gravel placed from ft. to ft.																																																																																																				
Surface seal: YES To what depth? 18 ft. Material used in seal CEMENT GROUT Did any strata contain unusable water? YES Type of water? SILTY Depth of strata 50 ft. Method of sealing strata off CASD																																																																																																				
(7) PUMP: Manufacturer's Name Type H.P.																																																																																																				
(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft. Static level 205 ft. below top of well Date 04/30/97 Artesian Pressure lbs. per square inch Date Artesian water controlled by																																																																																																				
(9) WELL TESTS: Drawdown is amount water level is lowered below static level. Was a pump test made? NO If yes, by whom? Yield: gal./min with ft. drawdown after hrs. Recovery data Time Water Level Time Water Level Time Water Level Date of test / / Bailer test gal/min. ft. drawdown after hrs. Air test 3.75 gal/min. w/ stem set at 567 ft. for 1 hrs. Artesian flow g.p.m. Date Temperature of water Was a chemical analysis made? NO																																																																																																				
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PLEASE SEE ATTACHED SHEET FOR ADDITIONAL FORMATIONS																																																																																																				
Work started 04/23/97 Completed 04/30/97																																																																																																				
(9) WELL TESTS: Drawdown is amount water level is lowered below static level. Was a pump test made? NO If yes, by whom? Yield: gal./min with ft. drawdown after hrs. Recovery data Time Water Level Time Water Level Time Water Level Date of test / / Bailer test gal/min. ft. drawdown after hrs. Air test 3.75 gal/min. w/ stem set at 567 ft. for 1 hrs. Artesian flow g.p.m. Date Temperature of water Was a chemical analysis made? NO																																																																																																				
WELL CONSTRUCTOR CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief. NAME DALE MCGHEE & SONS, INC. (Person, firm, or corporation) (Type or print) ADDRESS 3032 WILSON ST. KELSO, WA. [SIGNED] License No. 2345 Contractor's Registration No. DALEMI212MC Date 05/06/97																																																																																																				

WATER WELL REPORT
STATE OF WASHINGTON
CONTINUATION SHEET

(10) WELL LOG		
MATERIAL	FROM	TO
SANDSTONE GRAY	267	291
SHALE AND SANDSTONE	291	326
BLUE - GREEN	291	326
SILTSTONE GRAY SOFT	326	344
SANDSTONE GRAY BLUE	344	379
MED. SOFT	344	379
SILTSTONE AND SANDSTONE	379	390
GRAY MED. SOFT	379	390
SILTSTONE AND SANDSTONE	390	482
GRAY MED. SOFT WITH	390	482
SHALE STREAKS MEDIUM	390	482
SANDSTONE BLUE MED. SOFT	482	537
SANDSTONE GRAY MED. SOFT	537	544
SANDSTONE AND SILTSTONE	544	568
GRAY MED. SOFT	544	568
	568	

10

WATER WELL REPORT

Start Card No. W 182552

Unique Well I.D. # AKJ413

Water Right Permit No.

STATE OF WASHINGTON

160499

(1) OWNER: Name MUSBAUM, BARRY		Address 18506 SE 35TH STREET VANCOUVER, WA 98683-	
(2) LOCATION OF WELL: County COWLITZ		- SW 1/4 SW 1/4 Sec 24 T 8 N., R 3W WM	
(2a) STREET ADDRESS OF WELL (or nearest address) 125 POINT ROAD, LONGVIEW			
(3) PROPOSED USE: DOMESTIC		(10) WELL LOG	
(4) TYPE OF WORK:		Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.	
Owner's Number of well (If more than one) 1			
Method: ROTARY			
(5) DIMENSIONS:		MATERIAL	
Diameter of well 6 inches		FROM	
Drilled 444 ft.		TO	
Depth of completed well 444 ft.			
(6) CONSTRUCTION DETAILS:			
Casing installed: 6 " Dia. from +2 ft. to 38.42 ft.		PIT ROCK	
WELDED " Dia. from ft. to ft.		TOP SOIL	
4.5 " Dia. from 4 ft. to 444 ft.		CLAY YELLOW	
		SHALE ROCK BROWN WEATHERED	
Perforations: YES		ROCK BLUE MEDIUM	
Type of perforator used SAW		ROCK BROWN MEDIUM	
SIZE of perforations 3/8 in. by 6 in.		ROCK BLUE MEDIUM	
45 perforations from 204 ft. to 443 ft.		SHALE AND SILTSTONE	
perforations from ft. to ft.		BLUE - GREEN MEDIUM	
perforations from ft. to ft.		SHALE ROCK BLUE-GRAY MEDIUM	
		SHALE AND SILTSTONE	
		GRAY MED. SOFT	
Screens: NO		ROCK BLUE - GREEN MEDIUM	
Manufacturer's Name		SHALE AND SILTSTONE	
Type		GRAY MED. SOFT	
Diam. slot size from ft. to ft.		SHALE ROCK BLUE MEDIUM	
Diam. slot size from ft. to ft.		SHALE ROCK GRAY RED	
		MED. SOFT	
Gravel packed: NO		SHALE ROCK BLUE MEDIUM	
Size of gravel		SHALE GRAY MED. SOFT	
Gravel placed from ft. to ft.		SHALE AND SILTSTONE	
		GRAY MED. SOFT	
Surface seal: YES			
To what depth? 38 ft.			
Material used in seal 3/8" BENTONITE			
Did any strata contain unusable water? NO			
Type of water? Depth of strata ft.			
Method of sealing strata off			
(7) PUMP: Manufacturer's Name		Work started 11/24/04	
Type		Completed 12/01/04	
H.P.			
(8) WATER LEVELS:			
Land-surface elevation			
above mean sea level ... ft.			
Static level 114.6 ft. below top of well Date 12/01/04			
Artesian Pressure lbs. per square inch Date			
Artesian water controlled by			
(9) WELL TESTS: Drawdown is amount water level is lowered below static level.		WELL CONSTRUCTOR CERTIFICATION:	
Was a pump test made? NO If yes, by whom?		I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.	
Yield: gal./min with ft. drawdown after hrs.			
Recovery data		NAME DALE MCGHEE & SONS, INC.	
Time Water Level Time Water Level Time Water Level		(Person, firm, or corporation) (Type or print)	
		ADDRESS 3032 ALLEN ST. KELSO, WA.	
Date of test / /		[SIGNED] <i>Chapman</i> License No. 2115	
Bailer test gal/min. ft. drawdown after hrs.		Contractor's	
Air test .83 gal/min. w/ stem set at 443 ft. for 1 hrs.		Registration No. DALEMI#212MC	
Artesian flow g.p.m. Date		Date 12/06/04	
Temperature of water Was a chemical analysis made? NO			

RECEIVED

DEC 09 2004

Washington State
Department of Ecology

WATER WELL REPORT

Start Card No. W 182554
Unique Well I.D. # AKJ414
Water Right Permit No.

STATE OF WASHINGTON

160474

(1) OWNER: Name **MUSBAUM, BARRY** Address **18506 SE 35TH STREET VANCOUVER, WA 98683-**

(2) LOCATION OF WELL: County **COWLITZ** - SW 1/4 SW 1/4 Sec 24 T 8 N., R 3W WM

(2a) STREET ADDRESS OF WELL (or nearest address) **125 POINT ROAD, LONGVIEW**

(3) PROPOSED USE: **DOMESTIC**

(10) WELL LOG

(4) TYPE OF WORK: Owner's Number of well
(If more than one) **2**
NEW WELL Method: **ROTARY**

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

(5) DIMENSIONS: Diameter of well **6** inches
Drilled **262** ft. Depth of completed well **262** ft.

MATERIAL	FROM	TO
TOP SOIL	0	2
CLAY YELLOW-BROWN	2	21
SHALE ROCK BLUE MED. SOFT	21	28
SHALE ROCK BLUE MEDIUM	28	63
SHALE AND SILTSTONE	63	114
BLUE-GRAY MED. SOFT	63	114
SHALE ROCK BLUE-GRAY MEDIUM	114	127
SHALE AND SILTSTONE	127	171
BLUE-GRAY MED. SOFT	127	171
SHALE ROCK YELLOW-BROWN MED. SOFT	171	174
SHALE ROCK BLUE MEDIUM	174	262

(6) CONSTRUCTION DETAILS:

Casing installed: **6** " Dia. from **+2.25** ft. to **38.16** ft.
WELDED " Dia. from ft. to ft.
" Dia. from ft. to ft.

Perforations: **NO**

Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: **NO**

Manufacturer's Name
Type Model No.
Diam. slot size from ft. to ft.
Diam. slot size from ft. to ft.

Gravel packed: **NO**

Size of gravel
Gravel placed from ft. to ft.

Surface seal: **YES**To what depth? **38** ft.Material used in seal **3/8" BENTONITE**Did any strata contain unusable water? **NO**

Type of water? Depth of strata ft.

Method of sealing strata off

(7) PUMP: Manufacturer's Name

Type H.P.

(8) WATER LEVELS:

Land-surface elevation
above mean sea level ... ft.

Static level **178.2** ft. below top of well Date **12/02/04**

Artesian Pressure lbs. per square inch Date

Artesian water controlled by

RECEIVED

DEC 13 2004

Washington State
Department of EcologyWork started **12/01/04**Completed **12/02/04**

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.

Was a pump test made? **NO** If yes, by whom?

Yield: gal./min with ft. drawdown after hrs.

Recovery data

Time	Water Level	Time	Water Level	Time	Water Level

Date of test / /

Bailer test gal./min. ft. drawdown after hrs.

Air test .33 gal./min. w/ stem set at **259** ft. for 1 hrs.

Artesian flow g.p.m. Date

Temperature of water Was a chemical analysis made? **NO**

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME **DALE MCGHEE & SONS, INC.**

(Person, firm, or corporation) (Type or print)

ADDRESS **3032 ALLEN ST. KELSO, WA.**[SIGNED]  License No. **2115**

Contractor's

Registration No. **DALENI#212MC**Date **12/08/04**

WATER WELL REPORT

STATE OF WASHINGTON

12

Application No. _____

Permit No.

(1) OWNER: Name M.L. Ceglowski Address 2028-42nd, Longview, Wa. 98632

(2) LOCATION OF WELL: County Cowlitz — 1/4 — 1/4 Sec 24 T 8 N. R. 3W W.M.

Bearing and distance from section or subdivision corner

(3) **PROPOSED USE:** Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)

New well	☒	Method: Dug	☐	Bored	☐
Deepened	☐	Cable	☒	Driven	☐
Reconditioned	☐	Rotary	☐	Jetted	☐

(5) **DIMENSIONS:** Diameter of well 6 inches.
 Drilled 230 ft. Depth of completed well 230 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +1 ft. to 221 ft.

Threaded ☐ " Diam. from " ft. to " ft.

Welded ☒ " Diam. from " ft. to " ft.

Perforations: Yes ☐ No ☒

Type of perforator used.....

SIZE of perforations in. by in.

..... perforations from ft. to ft.

..... perforations from ft. to ft.

..... perforations from ft. to ft.

Screens: Yes ☐ No ☒

Manufacturer's Name.....

Type..... Model No.....

Diam. Slot size from ft. to ft.

Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? ft.
Material used in seal
Did any strata contain unusable water? Yes ☒ No ☐
Type of water? Fine Sand Depth of strata
Method of sealing strata on Cased

(7) PUMP: Manufacturer's Name _____
Type: _____ HP _____

(8) WATER LEVELS: Land-surface elevation above mean sea level.....ft.
 Static level ft. below top of well Date.....
 Artesian pressure lbs. per square inch Date.....
 Artesian water is controlled by.....(Cap. valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? Yes ☐ No ☒ If yes, by whom?

Yield:	gal./min. with	ft. drawdown after	hrs
"	"	"	"
"	"	"	"
"	"	"	"

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)					
Time	Water Level	Time	Water Level	Time	Water Level
.....					
.....					

Date of test _____
 Bailer test _____ gal/min, with _____ ft. drawdown after _____ hrs
 Artesian flow _____ g.p.m. Date _____
 Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Clay, Yellow	0	20
Clay, Yellow, Sandy	20	60
Silt	60	197
Clay, Blue	197	208
Clay, Gravel; Brown, Large	208	212
Clay, Brown; Gravel, Small	212	225
Clay, Brown; Gravel, Large	225	230
Rock, Brown	230	+

(Well Unusable)

Work started 8/22 1983 Completed 9/6 1983

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Williams Well Drilling, Inc.
(Person, firm, or corporation) (Type or print)

Address 957 Jackson Hwy. So., Toledo, Wa. 98591

[Signed] Steve Williams
(Well Driller)

License No. 0536 Date September 13 19 83

File Original and First Copy with
Department of EcologySecond Copy - Owner's Copy
Third Copy - Driller's copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W096214

Unique WELL I.D. #

Water Right Permit No.

13

(1) OWNER: Name Jim and Lori HillAddress 3009 E. McLoughlin Blvd., Vancouver, WA 98661(2) LOCATION OF WELL: County Cowlitz- SW 1/4 SW 1/4 Sec 24 T. 8N N.R. 3W W.M.(2a) STREET ADDRESS OF WELL (or nearest address) next to 120 Ridgecrest Lane, Longview, WA(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐
☐ Irrigation ☐ Test Well ☐ Other ☐
☐ DeWater(4) TYPE OF WORK: Owner's number of well
(If more than one)
Abandoned ☐ New Well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 418 feet. Depth of completed well 418 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +1 ft. to 275 ft.
Welded ☒ 4.5 " Diam. from 178 ft. to 418 ft.
Liner installed ☒
Threaded ☐ " Diam. from _____ ft. to _____ ft.Perforations: Yes ☐ No ☒Type of perforator used S&WSIZE of perforations .1 in. by 3 in.
100 perforations from 300 ft. to 358 ft.
35 perforations from 358 ft. to 373 ft.
60 perforations from 373 ft. to 378 ft.
90 perforations from 378 ft. to 390 ft.Screens: Yes ☐ No ☒

Manufacturer's Name _____

Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.Gravel packed: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.Surface seal: Yes ☒ No ☐ To what depth? 18 ft.Material used in seal bentonite, 3/8 hole plugDid any strata contain unusable water? Yes ☐ No ☒

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation _____ ft.
above mean sea level _____ ft.Static level 270 ft. below top of well Date 1/6/98

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____
(Cap, valve, etc)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? Yes ☐ No ☒ If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

" " " " " "

" " " " " "

" " " " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time Water Level Time Water Level Time Water Level

" " " " " "

" " " " " "

" " " " " "

" " " " " "

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 3 gal./min. with stem set at 380 ft. for 1.5 hrs.Artesian flow _____ g.p.m. Date 12/16/97Temperature of water _____ Was a chemical analyses made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information

MATERIAL	FROM	TO
See next line	0	46
Clay, tan, sandy, layers of white and rust		
Rock, brown, highly weathered	46	51
See next line	51	82
Clay, gray and brown layers, sticky		
Clay, lt. brown, silty, soft	82	94
See next line	94	107
Clay layers, lt. brown, gray, white, red,		
See next line	107	113
Sandstone, brown, fine grainsoft		
Rock, gray, hard	113	114
Clay, brown and gray	114	117
Compacted silt and sand	117	204
Shale, brown	204	209
Shale and clay, blue/gray	209	223
Clay, gray, sandy	223	233
Rock and shale, gray	233	239
Compacted silt and sand	239	273
Rock and shale, gray	273	275
Rock, red, med./hard	275	279
Sandstone, gray	279	374
See next line	374	387
Sandstone, coarse, lt. gray, & rock & water		
Sandstone, brown, fine	387	418

Work Started 12/9/97, 19. Completed 12/17/97, 19

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Zent Drilling, Inc.

(PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 7310 St. Johns Road, Vancouver, WA 98665(Signed) Walter Zent License No. 2365
(WELL DRILLER)Contractor's
Registration
No. ZENTOI*28500 Date 12-22, 19 97

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (360) 407-6006.

WATER WELL REPORT

Start Card No. W 066556

Unique Well I.D. # ACD760

Water Right Permit No.

STATE OF WASHINGTON

(1) OWNER: Name **UTTMANN, RICHARD** Address **31 CEDAR GATES LONGVIEW, WA 98632-**

(2) LOCATION OF WELL: County **COWLITZ** - SW 1/4 SW 1/4 Sec 24 T 8N N., R 3W WM

(2a) STREET ADDRESS OF WELL (or nearest address) **120 RIDGECREST LANE, LONGVIEW**

(3) PROPOSED USE: **DOMESTIC**

(10) WELL LOG

(4) TYPE OF WORK: Owner's Number of well
(If more than one) **1**

NEW WELL Method: **ROTARY**

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

(5) DIMENSIONS: Diameter of well **6** inches

Drilled **74** ft. Depth of completed well **74** ft.

MATERIAL

	FROM	TO
TOP SOIL	0	1
CLAY YELLOW-BROWN	1	8
CLAY BROWN RED	8	18
ROCK BROKEN WITH	18	22
CLAY BROWN	18	22
ROCK BROKEN WITH	22	34
STREAKS CLAY	22	34
ROCK BLUE	34	36
ROCK BROWN AND	36	43
BLUE BROKEN	36	43
SHALE ROCK BLUE MEDIUM	43	61
ROCK BLUE AND	61	74.1
BROWN BROKEN WATER BEARING	61	74.1
	74	

(6) CONSTRUCTION DETAILS:

Casing installed: **6** " Dia. from **+1** ft. to **74.1** ft.

WELDED " Dia. from ft. to ft.

" Dia. from ft. to ft.

Perforations: **YES**

Type of perforator used **TORCH-CUT**

SIZE of perforations **3/8** in. by **6** in.

20 perforations from **55** ft. to **73** ft.

perforations from ft. to ft.

perforations from ft. to ft.

Screens: **NO**

Manufacturer's Name

Type Model No.

Diam. slot size from ft. to ft.

Diam. slot size from ft. to ft.

Gravel packed: **YES** Size of gravel **-1/2**

Gravel placed from **27** ft. to **73** ft.

Surface seal: **YES** To what depth? **27** ft.

Material used in seal **CEMENT/HOLE PLG**

Did any strata contain unusable water? **NO**

Type of water? Depth of strata ft.

Method of sealing strata off

(7) PUMP: Manufacturer's Name

Type H.P.

(8) WATER LEVELS: Land-surface elevation

above mean sea level ... ft.

Static level **37** ft. below top of well Date **06/14/96**

Artesian Pressure lbs. per square inch Date

Artesian water controlled by

Work started **06/13/96** Completed **06/14/96**

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.

Was a pump test made? **NO** If yes, by whom?

Yield: gal./min with ft. drawdown after hrs.

Recovery data

Time Water Level Time Water Level Time Water Level

Date of test / /

Bailer test gal/min. ft. drawdown after hrs.

Air test **10** gal/min. w/ stem set at **61** ft. for **1** hrs.

Artesian flow g.p.m. Date

Temperature of water Was a chemical analysis made? **NO**

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME **DALE MCGHEE & SONS, INC.**

(Person, firm, or corporation) (Type or print)

ADDRESS **3032 ALLEN ST. KELSO, WA**[SIGNED] *Chas R McGhee* license No. **2115**

Contractor's

Registration No. **DALEMI#212MC**Date **06/24/96**

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WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W 051924
Unique Well I.D. #
Water Right Permit No.

(1) OWNER: Name **MCQUIRE, RUSTY** Address **106 RIDGECREST LANE LONGVIEW, WA 98632-**

(2) LOCATION OF WELL: County **COMLITZ** - SW 1/4 SW 1/4 Sec 24 T 8 N., R 3 W WM

(2a) STREET ADDRESS OF WELL (or nearest address) **106 RIDGECREST LANE, LONGVIEW**

(3) PROPOSED USE: **DOMESTIC**

(10) WELL LOG

(4) TYPE OF WORK: Owner's Number of well
(If more than one)
NEW WELL Method: **ROTARY**

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

(5) DIMENSIONS: Diameter of well **6** inches
Drilled **518** ft. Depth of completed well **516** ft.

MATERIAL	FROM	TO
TOP SOIL	0	02
CLAY BROWN	02	05
CLAY RED	05	09
SANDY CLAY YELLOW LIGHT	09	34
BROWN	09	34
SANDY CLAY ORANGE	34	40
SANDY CLAY TAN ORANGE	40	44
SANDY CLAY GRITTY TAN	44	49
SANDY CLAY TAN BROWN	49	65
ROCK BROKEN WITH	65	101
CLAY STREAKS SOFT	65	101
ROCK HARD	101	104
CLAY BROWN TAN	104	109
CLAY SANDY GREEN	109	124
BLUE WITH SLIGHT	109	124
SHALE	109	124
CLAY GREEN GRAY	124	171
CLAY BLUE - GREEN	171	183
CLAY SANDY BLUE - GREEN	183	188
SOFT	183	188
CLAY BLUE - GREEN HARD	188	191
CLAY DARK GRAY	191	193
W/SOME RED HARD	191	193
CLAY BLUE MED. HARD	193	201
CLAY GRAY W/SOME	201	206
WOOD	201	206
CLAY GRAY MED. HARD	206	213
CLAY BLUE - GREEN MED. HARD	213	218
CLAY SANDY GREEN	218	220
BLUE	218	220
CLAY BLUE MED. HARD	220	227
CLAY SANDY GREEN	227	232
BLUE MEDIUM	227	232

(6) CONSTRUCTION DETAILS:
Casing installed: **6** " Dia. from **+3.1** ft. to **157.3** ft.
PVC LINER **4** " Dia. from **0** ft. to **256** ft.
" Dia. from **ft.** to **ft.**

Perforations: **NO**

Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: **YES**

Manufacturer's Name **HYDROFILIC**
Type **SLOTTED** Model No. **CLASS 160**
Diam. **4** slot size **28** from **256** ft. to **516** ft.
Diam. slot size from ft. to ft.

Gravel packed: **YES** Size of gravel **SAND**
Gravel placed from **248** ft. to **518** ft.

Surface seal: **YES** To what depth? **157** ft.
Material used in seal **CEMENT/HOLE PLG**
Did any strata contain unusable water? **NO**
Type of water? Depth of strata ft.
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type H.P.

(8) WATER LEVELS: Land-surface elevation
above mean sea level ... ft.
Static level **215** ft. below top of well Date **08/31/94**
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

PLEASE SEE ATTACHED SHEET FOR ADDITIONAL FORMATIONS

Work started **08/25/94**Completed **08/31/94**

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? **NO** If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data

Time	Water Level	Time	Water Level	Time	Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test **4** gal/min. w/ stem set at **382** ft. for **1** hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? **NO**

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME **DALE MCBEE & SONS, INC.**

(Person, firm, or corporation) (Type or print)

ADDRESS **3032 ALLEN ST. KELSO, WA.**[SIGNED] *[Signature]* License No. **0298**

Contractor's

Registration No. **DALEMI#212MC**Date **09/22/94**

WATER WELL REPORT
STATE OF WASHINGTON
CONTINUATION SHEET

(10) WELL LOG	FROM	TO
MATERIAL		
SANDY CLAY BLUE - GREEN MED. SOFT	232	234
CLAY BLUE - GREEN HARD	234	236
SANDY CLAY BLUE - GREEN MED. SOFT	236	238
SOFT	238	247
SILTSTONE GREEN BLUE	238	247
SHALE MED. SOFT	247	248
SANDSTONE MEDIUM	248	255
SHALE MEDIUM	255	256
SHALE WITH SILTSTONE	256	280
SANDSTONE GRAY BLUE	280	299
BLUE MED. SOFT	280	299
SILTSTONE AND SANDSTONE	299	309
GRAY GREEN MED. SOFT	299	309
SHALE MEDIUM	309	310
SILTSTONE SHALE SANDSTONE	310	340
BLUE - GREEN MED. SOFT	310	340
SILTSTONE GRAY GREEN	340	375
MED. SOFT	340	375
SANDSTONE AND SILTSTONE	375	394
GREEN BLUE	375	394
SILTSTONE GRAY MED. SOFT	394	410
SILTSTONE GRAY MEDIUM	410	425
SILTSTONE AND SANDSTONE	425	433
GRAY BLUE MEDIUM	425	433
SHALE SILTSTONE SANDSTONE	433	438
SILTSTONE GRAY GREEN	438	451
MED. SOFT	438	451
SILTSTONE AND SANDSTONE	451	460
GRAY BLUE MED. SOFT	451	460
SILTSTONE AND SANDSTONE	460	518
BLUE-GRAY	460	518

File Original and First Copy with
Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Water Right Permit No.

Start Card No. W 9880 25

UNIQUE WELL I.D. # ACN-519

(1) OWNER: Name SCOTT TIFT Address 636 CALIFORNIA WAY LONGVIEW, WA. 98632(2) LOCATION OF WELL: County COWLITZ SW 1/4 SW 1/4 Sec 24 T. 8 N. R. 3W W.M.(2a) STREET ADDRESS OF WELL (or nearest address) 107 RIDGECREST LANE LONGVIEW, WA. 98632(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐
☐ Irrigation ☐ Test Well ☐ Other ☐
☐ DeWater

(4) TYPE OF WORK: Owner's number of well (If more than one) _____

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 305 feet. Depth of completed well 305 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 ft. Diam. from +1 ft. to 58 ft.
Welded ☐ 4.5 ft. Diam. from 45 ft. to 305 ft.
Liner installed ☐
Threaded ☐ Diam. from _____ ft. to _____ ft.Perforations: Yes ☒ No ☐Type of perforator used DRILL BITSIZE of perforations 7/16 in. by 7/16 in.60 perforations from _____ ft. to _____ ft.247 perforations from _____ ft. to 302 ft.

_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____

Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 25 ft.Material used in seal BENTONITEDid any strata contain unusable water? Yes ☐ No ☒

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

(7) PUMP: Manufacturer's Name FAIRBANKS MORSEType: SUBMERSIBLE H.P. 1

(8) WATER LEVELS: Land-surface elevation _____ ft.

Static level 152 ft. below top of well Date 9/27/97

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? Yes ☐ No ☒ If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

" " " "

" " " "

" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time Water Level Time Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airstest 8 gal./min. with stem set at 300 ft. for 1 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water 51 Was a chemical analysis made? Yes ☒ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
CLAY	BROWN	0 34
COBBLES W/SAND		34 37
CLAYSTONE	GREY	37 52
SANDSTONE	LIGHT GREY	52 77
CLAYSTONE	BROWN	77 123
CLAY	BLUISH GREY	123 151
CLAYSTONE (SANDY)	GREY	151 163
CLAYSTONE	LIGHT BROWN	163 169
SANDSTONE	LIGHT GREY	169 174
ROCK BROKEN	LIGHT GREY	174 183
CLAYSTONE	LIGHT GREY	183 243
CLAYSTONE W/ROCK	LIGHT GREY	243 256
CLAYSTONE	LIGHT GREY	256 277
SANDSTONE	LIGHT GREY	277 305
WATERBEARING	289-293	293 305

Work Started 9/24, 19. Completed 9/27, 19

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME RON EDGELL WELL DRILLING INC.
(PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)Address PO BOX 695 CASTLE ROCK, WA. 98611(Signed) Guy E. Cavender License No. 2166
(WELL DRILLER)Contractor's
Registration
No. RONEDWD065D1 Date 10/01/97, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TOD number is (206) 407-6006.

WATER WELL REPORT

Start Card No. W 075832
Unique Well I.D. # ACR666
Water Right Permit No.

STATE OF WASHINGTON

(1) OWNER: Name POPPERT, KEITH Address 9305-C NE HIGHWAY #99 VANCOUVER, WA 98665-		1/4 SW 1/4 Sec 24 T 6N N., R 3W WM	
(2) LOCATION OF WELL: County COWLITZ			
(2a) STREET ADDRESS OF WELL (or nearest address) 115 RIDGECREST LANE, LONGVIEW			
(3) PROPOSED USE: DOMESTIC		(10) WELL LOG	
(4) TYPE OF WORK: Owner's Number of well (If more than one) 1 Method: ROTARY		Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.	
NEW WELL			
(5) DIMENSIONS: Diameter of well 6 inches Drilled 529 ft. Depth of completed well 529 ft.			
(6) CONSTRUCTION DETAILS: Casing installed: 6 " Dia. from +2.1 ft. to 98.5 ft. WELDED " Dia. from ft. to ft. 4.5 " Dia. from +1 ft. to 529 ft.			
Perforations: YES Type of perforator used SAW SIZE of perforations 3/8 in. by 6 in. 65 perforations from 268 ft. to 528 ft. perforations from ft. to ft. perforations from ft. to ft.			
Screens: NO Manufacturer's Name Type Diam. slot size from ft. to ft. Diam. slot size from ft. to ft.			
Gravel packed: NO Size of gravel Gravel placed from ft. to ft.			
Surface seal: YES To what depth? 36 ft. Material used in seal CEMENT GROUT Did any strata contain unusable water? NO Type of water? Depth of strata ft. Method of sealing strata off			
(7) PUMP: Manufacturer's Name Type H.P.			
(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft. Static level 242 ft. below top of well Date 05/02/97 Artesian Pressure lbs. per square inch Date Artesian water controlled by			
(9) WELL TESTS: Drawdown is amount water level is lowered below static level. Was a pump test made? NO If yes, by whom? Yield: gal./min with ft. drawdown after hrs. Recovery data Time Water Level Time Water Level Time Water Level			
Date of test / / Bailer test gal/min. ft. drawdown after hrs. Air test 8 gal/min. w/ stem set at 528 ft. for 1 hrs. Artesian flow g.p.m. Date Temperature of water Was a chemical analysis made? NO			
		MATERIAL FROM TO CLAY BROWN 0 3 CLAY BROWN YELLOW 3 15 SILTY CLAY YELLOW-BROWN 15 33 SILTY SANDY CLAY GRAY 33 36 BROWN YELLOW 33 36 SILTY SANDY CLAY RED 36 42 CLAY BLUE-GRAY SOFT 42 46 SILTSTONE CLAY BLUE-GRAY 46 70 SOFT 46 70 SILTSTONE SANDSTONE AND 70 113 SLIGHT CLAY GRAY 70 113 BLUE SOFT 70 113 CLAY BLUE - GREEN MEDIUM 113 121 CLAY BLUE MEDIUM 121 123 CLAY GRAY RED 123 126 MEDIUM 126 126 CLAY BLUE - GREEN MEDIUM 126 151 CLAY BROWN MEDIUM 151 155 CLAY GRAY BLUE 155 166 MEDIUM 166 166 SHALE ROCK BLUE 166 171 MEDIUM 171 171 CLAY BLUE GRAY 171 185 MEDIUM 185 185 CLAY BLUE GRAY 185 187 WITH SANDSTONE BROWN 187 187 SHALE ROCK BLUE WITH CLAY 187 191 MEDIUM 191 191 SHALE ROCK BLUE MED. HARD 191 194 SHALE ROCK BLUE WITH 194 197 CLAY BROWN MEDIUM 197 197 SANDY CLAY BROWNISH GRAY 197 205 MEDIUM 197 205	
		PLEASE SEE ATTACHED SHEET FOR ADDITIONAL FORMATIONS	
		Work started 04/29/97 Completed 05/02/97	
		WELL CONSTRUCTOR CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.	
		NAME DALE MCGHEE & SONS, INC. (Person, firm, or corporation) (Type or print)	
		ADDRESS 3032 ALLEN ST. KELSO, WA.	
		[SIGNED] <i>[Signature]</i> License No. 0298	
		Contractor's Registration No. DALEMT#1212NC Date 05/06/97	

WATER WELL REPORT
STATE OF WASHINGTON
CONTINUATION SHEET

(10) WELL LOG	FROM	TO
MATERIAL		
SHALE ROCK BLUE WITH CLAY	205	210
GRAY BLUE MEDIUM	205	210
SILTY CLAY LIGHT BROWN	210	230
SANDSTONE	210	230
SILTSTONE AND CLAY	230	238
BROWN	230	238
SILTSTONE SANDSTONE GRAY	238	293
MEDIUM	238	293
SANDSTONE BLUE MED. SOFT	293	296
SHALE MED. HARD	296	297
SANDSTONE BLUE-GRAY MEDIUM	297	301
SHALE ROCK MED. HARD	301	304
SANDSTONE BLUE-GRAY MED. SOFT	304	315
WITH SHALE STREAKS	304	315
SILTSTONE GRAY BROWN	315	346
MEDIUM	315	346
SILTSTONE AND SHALE	346	357
BLUE GRAY	346	357
CLAY BLUE-GRAY MEDIUM	357	358
SILTSTONE GRAY BLUE	358	368
WITH SLIGHT CLAY AND	358	368
SHALE	358	368
SHALE ROCK BLUE MED. HARD	368	376
SILTSTONE AND SHALE	376	388
BLUE MEDIUM	376	388
SANDSTONE LIGHT GRAY	388	455
MED. SOFT	388	455
SILTSTONE GRAY MED. SOFT	455	470
SANDSTONE BLUE MED. SOFT	470	529
	529	

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WATER WELL REPORT

Start Card No. W 104407

STATE OF WASHINGTON

Unique Well I.D. # AKB919

Water Right Permit No.

(1) OWNER: Name LONG, KENNETH		Address 1209 N 1ST. STREET KENLCO, WA 98626-	
(2) LOCATION OF WELL: County COMALTE		- S $\frac{1}{2}$ 1/4 SW 1/4 Sec 24 T 8N N., R 3W WM	
(2a) STREET ADDRESS OF WELL (or nearest address) 127 RIDGECREST LANE, LONGVIEW			
(3) PROPOSED USE: DOMESTIC		(10) WELL LOG	
(4) TYPE OF WORK: Owner's Number of well (If more than one) 1 Method: ROTARY		Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.	
NEW WELL			
(5) DIMENSIONS: Diameter of well 6 inches Drilled 629 ft. Depth of completed well 629 ft.		MATERIAL	
(6) CONSTRUCTION DETAILS:		FROM TO	
Casing installed: 6 " Dia. from +1.8 ft. to 150 ft.		TOP SOIL 0 1	
WELDED " Dia. from ft. to ft.		CLAY BROWN 1 3	
" Dia. from ft. to ft.		CLAY RED 3 19	
Perforations: NO		CLAY YELLOW-BROWN 19 29	
Type of perforator used		CLAY YELLOW-BROWN WITH SLIGHT 29 36	
SIZE of perforations in. by in.		SHALE 29 36	
perforations from ft. to ft.		CLAY YELLOW 36 41	
perforations from ft. to ft.		SILTSTONE BLUE-GRAY SOFT 41 46	
perforations from ft. to ft.		SILTSTONE BLUE-GRAY MEDIUM 46 55	
Screens: NO		SILTSTONE GREEN GRAY 55 76	
Manufacturer's Name		MEDIUM 55 76	
Type		SILTSTONE GRAY BROWN 76 84	
Diam. slot size from ft. to ft.		MED. SOFT 76 84	
Diam. slot size from ft. to ft.		SANDY CLAY BLUE - GREEN SOFT 84 93	
Gravel packed: NO		SANDSTONE BLUE - GREEN SOFT 93 104	
Gravel placed from ft. to ft.		SANDSTONE GRAY MEDIUM 104 108	
Surface seal: YES		SILTSTONE AND CLAY 108 122	
Material used in seal CEMENT/HOLE PLG		GRAY BROWN 108 122	
Did any strata contain unusable water? NO		SANDSTONE BLUE MED. SOFT 122 127	
Type of water? Depth of strata ft.		SANDSTONE GRAY MEDIUM 127 148	
Method of sealing strata off		ROCK BLUE MED. HARD 148 148.4	
(7) PUMP: Manufacturer's Name		SANDSTONE GRAY MEDIUM 148.4 152	
Type H.P.		SILTSTONE AND SANDSTONE 152 172	
(8) WATER LEVELS: Land-surface elevation		GRAY MED. SOFT 152 172	
Static level 298 ft. below top of well Date 04/03/98		SHALE ROCK BLUE MEDIUM 172 197	
Artesian Pressure lbs. per square inch		SHALE AND SANDSTONE 197 261	
Artesian water controlled by		GRAY MED. SOFT 197 261	
(9) WELL TESTS: Drawdown is amount water level is lowered below static level.		SILTSTONE GRAY MED. SOFT 261 304	
Was a pump test made? NO If yes, by whom?		SANDSTONE GRAY MED. SOFT 304 326	
Yield: gal./min with ft. drawdown after hrs.		SILTSTONE GRAY MED. SOFT 326 359	
Recovery data		SILTSTONE BLUE-GRAY MEDIUM 359 387	
Time Water Level Time Water Level Time Water Level		SILTSTONE AND SANDSTONE 387 411	
Date of test / /		GRAY MEDIUM 387 411	
Bailer test gal/min. ft. drawdown after hrs.		PLEASE SEE ATTACHED SHEET FOR ADDITIONAL FORMATIONS	
Air test -1 gal/min. w/ stem set at 628 ft. for 1 hrs.		Work started 03/31/98	
Artesian flow g.p.m. Date		Completed 04/03/98	
Temperature of water Was a chemical analysis made? NO		WELL CONSTRUCTOR CERTIFICATION:	
		I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.	
		NAME DALE MCGHEE & SONS, INC.	
		(Person, firm, or corporation) (Type or print)	
		ADDRESS 3032 ALLEN ST. KENLCO, WA.	
		[SIGNED] <i>Chas R. McGhee</i> License No. 2115	
		Contractor's	
		Registration No. DALEMI#212MC Date 04/13/98	

WATER WELL REPORT
STATE OF WASHINGTON
CONTINUATION SHEET

(10) WELL LOG		
MATERIAL	FROM	TO
SILTSTONE GRAY MEDIUM	411	454
SILTSTONE AND SANDSTONE	454	478
GRAY MEDIUM	454	478
SANDSTONE GRAY MEDIUM	478	499
SILTSTONE GRAY SOFT	499	521
SILTSTONE AND SANDSTONE	521	544
GRAY MEDIUM	521	544
SILTSTONE GRAY SOFT	544	569
SILTSTONE AND SANDSTONE	569	597
MED. SOFT	569	597
SILTSTONE GRAY MED. SOFT	597	629
	629	

20



WATER WELL REPORT

Original & 1st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission ("x" in circle)

☒ Construction

☐ Decommission *ORIGINAL CONSTRUCTION Notice*

189522 of Intent Number

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal
☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other

TYPE OF WORK: Owner's number of well (if more than one)

☒ New Well ☐ Reconditioned Method: ☐ Dug ☐ Bored ☐ Driven
☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6" inches, drilled 440 ft.
 Depth of completed well 415 ft.

CONSTRUCTION DETAILS

Casing: ☒ Welded 6" Diam. from +2 ft. to 78 ft.
 Installed: ☐ Liner installed P.V.C. 4.5 Diam. from 65 ft. to 420 ft.
☐ Threaded Diam. from _____ ft. to _____ ft.

Perforations: ☒ Yes ☐ No

Type of perforator used Drilled

SIZE of perfs 9/16 in. by Round in. and no. of perfs 120 from 180 ft. to 395 ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location

Manufacturer's Name

Type _____ Model No. _____

Diam. _____ Slot Size _____ from _____ ft. to _____ ft.

Diam. _____ Slot Size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 55 ft

Materials used in seal Bentonite Hole-Plug

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 129 ft. below top of well Date 1-27-06

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____

(cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level.

Was a pump test made? ☐ Yes ☒ No If yes, by whom?

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ ins.

Yield: _____ gal./min. with _____ ft. drawdown after _____ ins.

Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level)

Time	Water Level	Time	Water Level
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 2 gal./min. with stem set at 400 ft. for 2 ins.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CURRENT

Notice of Intent No. W-242577

Unique Ecology Well ID Tag No. AKR-766

Water Right Permit No. _____

Property Owner Name James Peterson

Well Street Address 115 S. Crest Lane

City Longview, Wa.

County Cowlitz

Location S.E. 1/4-1/4 S.W. 1/4 Sec. 24 Twn. 8 R. 3W. EWM circle or one WWM

Lat/Long: (s, t, r still REQUIRED) Lat Deg _____ Lat Nlin/Sec _____
 Long Deg _____ Long Nhn/Sec _____

Tax Parcel No. WL2513061

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered.

(USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Topsoil	0	2
Clay, Yellow	2	22
Rock, Brown Soft	22	27
Rock, Blue W/Fractures	27	71
Rock, Blue Basalt	71	97
Shalerock, Blue Hard	97	103
Rock, Blue Basalt	103	190
Shale, Yellow	190	203
Shale, Blue Soft Cavey	203	210
Sandstone, Blue	210	280
Shale, Blue W/Brown	280	370
Sandstone, Blue	370	415
Shale, Blue Cavey	415	420
Shale, Gray Soft	420	440

Start Date 1-23-06

Completed Date 1-27-06

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Kenneth Williams

Drilling Company Williams Well Drilling, Inc.

Driller/Engineer/trainee Signature Kenneth Williams

Address 957 Jackson Hwy. S.

Driller or Trainee License No. 1768

City, State, Zip Toledo, WA 98591

Contractor's

Registration No. WILLIWD000KP Date 1/30/06

If trainee, licensed driller's

Signature and License no. _____

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 4/01)

File Original and First Copy with
Department of Ecology
Second Copy - Owner's Copy
Third Copy Driller's copy

WATER WELL REPORT

STATE OF WASHINGTON

Notice of Intent **W139972**UNIQUE WELL ID # **AGE431**

Water Right Permit No

21

(1) OWNER Name **EDDIE & GAIL MEHER** Address **23200 NE SANDY BLVD #75, TROUTDALE, OR 97601**
(2) LOCATION OF WELL County **COWLITZ** **NE 1/4 SE 1/4 Sec 23 T 8 N R 3W WM**
(2a) STREET ADDRESS OF WELL (or nearest address) **LOT 8 OF ASSESERS PLAT 21 RECORDED VOLUME 13) Block 3**
TAX PARCEL NO

(3) PROPOSED USE ☒ Domestic ☐ Industrial ☐ Municipal
☐ Irrigation ☐ Test Well ☐ Other
☐ DeWater

(4) TYPE OF WORK Owner's number of well (if more than one) _____
☒ New Well Method ☐ Dug ☐ Bored
☐ Deepened ☐ Cable ☐ Driven
☐ Reconditioned ☒ Rotary ☐ Jetted
☐ Decommission

(5) DIMENSIONS Diameter of well **6** inches
Drilled **400** feet Depth of completed well **400** ft

(6) CONSTRUCTION DETAILS

Casing Installed

☒ Welded **6** Diam from **+1** ft to **172** ft
☒ Liner installed **4** Diam from **160** ft to **400** ft
☐ Threaded Diam from _____ ft to _____ ft

Perforations ☒ Yes ☐ No

Type of perforator used **SAW CUT**

SIZE of perforations **1/8** in by **6** in
30 perforations from **350** ft to **370** ft
perforations from _____ ft to _____ ft
perforations from _____ ft to _____ ft

Screens ☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____
Type _____ Model No _____
Diam _____ Slot size _____ from _____ ft to _____ ft
Diam _____ Slot size _____ from _____ ft to _____ ft

Gravel/Filter packed ☐ Yes ☒ No ☐ Size of gravel/sand _____
Material placed from _____ ft to _____ ft

Surface seal ☒ Yes ☐ No To what depth? **18** ft

Material used in seal **BENTONITE**Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

(7) PUMP Manufacturer's Name _____
Type _____ HP _____

(8) WATER LEVELS Land-surface elevation above mean sea level _____ ft

Static level **210** ft below top of well Date **8/20/2002**

Artesian pressure _____ lbs per square inch Date _____

Artesian water is controlled by _____
(Cap valve etc)

(9) WELL TESTS Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☒ No If yes by whom?

Yield _____ gal/min with _____ ft drawdown after _____ hrs

Yield _____ gal/min with _____ ft drawdown after _____ hrs

Yield _____ gal/min with _____ ft drawdown after _____ hrs

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal/min with _____ ft drawdown after _____ hrs

Airtest **6** gal/min with stem set at **400** ft for **1** hrs

Artesian flow _____ g p m Date _____

Temperature of water _____ Was a chemical analyses made? ☐ Yes ☒ No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION

Formation Describe by color character size of material and structure and the kind and nature of the material in each stratum penetrated with at least one entry for each change of information. Indicate all water encountered

MATERIAL	FROM	TO
BROWN CLAY	0	56
BLUE CLAY	56	142
BROWN WEATHERED ROCK MED HARD	142	172
HARD BLUE ROCK	172	360
FRACTURED SHALE ROCK & WATER	360	380
HARD BLUE ROCK	380	400

RECEIVED**AUG 29 2002****Washington State
Department of Ecology**Work Started **8/18/2002** 19 Completed **8/20/2002** 19

WELL CONSTRUCTION CERTIFICATION

I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name **DON PITNER JR** License No **1438**
(Licensed Driller/Engineer)

Trainee Name _____ License No _____

Drilling Company **DON PITNER JR WELL DRILLING**(Signed) **Don Pitner Jr** License No **1438**
(Licensed Driller/Engineer)Address **PO BOX 21**

Contractor's

Registration No **DONPIJW1210R** Date **8/26/02** 19

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (360) 407-6006.

UNIQUE WELL I.D. # ACK-777

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each chance of information.

MATERIAL	FROM	TO
TOP SOIL	0	1
Light Brown Clay	1	30
Gray Shale med. soft	30	38
Brown Gravel	38	60
Brown Sandstone (med Hard)	60	68
Gray Shale "	68	165
Black Rock "Hard"	165	200
Gray Shale Rock med Hard "	200	225

~~RECEIVED~~

~~DEC 09 1999~~

~~DEPARTMENT OF ECOLOGY~~
WELL DRILLING UNIT

Work Started 10-20-19. Completed 10-22-19

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME RA Bopp Kump & West
(PERSON, FIRM OR CORPORATION) (TYPE OR PRINT)
Address 2110 S. Pacific Heights, Wash.
(Signed) Jornia L. Bopp License No. 1785
(WELL DRILLER)

Contractor's
Registration
No. 1A7 BOPW1004 Date 10-25- 1999

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

23

WATER WELL REPORT
STATE OF WASHINGTONStart Card No.
Water Right Permit No.NW10 ACN-506
W099402

(1) OWNER: Name DAVID SMALL		Address 137 RIDGECREST DRIVE LONGVIEW, WA 98611-	
(2) LOCATION OF WELL: County COWLITZ		- SE 1/4 SE 1/4 Sec 23 T 8 N., R 3W WM	
(2a) STREET ADDRESS OF WELL (or nearest address) 137 RIDGECREST DRIVE			
(3) PROPOSED USE: DOMESTIC		(10) WELL LOG	
(4) TYPE OF WORK:		Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.	
NEW WELL		OWNER'S Number of well (If more than one) Method: ROTARY AIR	
(5) DIMENSIONS:		Diameter of well 6 inches	
Drilled 180 ft.		Depth of completed well 180 ft.	
(6) CONSTRUCTION DETAILS:		MATERIAL	
Casing installed: 6" Dia. from +1 ft. to 37 ft.		CLAY STICKY SOFT BROWN	
STEEL/PVC LINER 4.5" Dia. from 20 ft. to 180 ft.		CLAY STICKY BROWN	
		CLAY STICKY W/ COBBLES BROWN	
		CLAY STICKY LIGHT BROWN	
		CLAY STICKY BROWN	
		CLAY SANDY GREY	
		SANDSTONE GREY	
		CLAYSTONE SANDY LIGHT GREY	
		CLAY SANDY GREY	
		SANDSTONE LIGHT GREY	
		SANDSTONE BROWN GREY	
		SANDSTONE LIGHT GREY	
		SANDSTONE LIGHT GREY	
		SANDSTONE W/ CLAY BROWN	
		SANDSTONE BLuish GREY	
		SANDSTONE GREY	
		SANDSTONE W/ ROCK LAYERS GREY	
		ROCK SOFT WATER BEARING GREY	
		BASALT GREY	
Perforations: YES		FROM TO	
Type of perforator used DRILL BIT		0 3	
SIZE of perforations 7/16 in. by 7/16 in.		0 3	
60 perforations from 122 ft. to 177 ft.		3 5	
perforations from ft. to ft.		5 9	
perforations from ft. to ft.		9 17	
perforations from ft. to ft.		17 28	
perforations from ft. to ft.		28 32	
perforations from ft. to ft.		32 54	
perforations from ft. to ft.		54 61	
perforations from ft. to ft.		61 72	
perforations from ft. to ft.		72 84	
perforations from ft. to ft.		84 87	
perforations from ft. to ft.		87 114	
perforations from ft. to ft.		114 131	
perforations from ft. to ft.		131 136	
perforations from ft. to ft.		136 139	
perforations from ft. to ft.		139 150	
perforations from ft. to ft.		150 161	
perforations from ft. to ft.		161 161	
perforations from ft. to ft.		161 180	
Screens: NO		RECEIVED	
Manufacturer's Name		98 APR 20 A9:13	
Type		S.W. REGIONAL OFFICE	
Diam. slot size from ft. to ft.			
Diam. slot size from ft. to ft.			
Gravel packed: NO			
Gravel placed from ft. to ft.			
Size of gravel			
Surface seal: YES			
Material used in seal BENTONITE			
To what depth? 25 ft.			
Did any strata contain unusable water? NO			
Type of water? Depth of strata ft.			
Method of sealing strata off OTHER			
(7) PUMP: Manufacturer's Name			
Type N/A		H.P.	
(8) WATER LEVELS:			
Land-surface elevation			
Static level 79 ft. above mean sea level ...		ft.	
Artesian Pressure lbs. per square inch		Date 10/28/97	
Artesian water controlled by N/A			
(9) WELL TESTS: Drawdown is amount water level is lowered below static level.		Work started 10/25/97 Completed 10/28/97	
Was a pump test made? NO		WELL CONSTRUCTOR CERTIFICATION:	
Yield: gal./min with ft. drawdown after hrs.		I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.	
Recovery data		NAME EDGELL WELL DRILLING INC.	
Time Water Level Time Water Level Time Water Level		(Person, firm, or corporation) (Type or print)	
Date of test / /		ADDRESS P O BOX 695 CASTLE ROCK WA	
Bailer test gal./min. ft. drawdown after hrs.		[SIGNED] <i>Tim Edgar</i> License No. 2155	
Air test 7 gal./min. w/ steam set at 175 ft. for 1 hrs.		Contractor's	
Artesian flow g.p.m. Date		Registration No. R0NEDWD065D1	
Temperature of water 51 Was a chemical analysis made? YES		Date 11/21/97	

APPENDIX C
HAZARDOUS MATERIALS SURVEY REPORT



June 10, 2005

Mr. Mike Staton, EMBA
SLR International Corp.
22122 20th Avenue SE
Building H, Suite 150
Bothell, Washington 98021

RE: Hazardous Materials Survey Report for 4603 Ocean Beach Highway, Longview,
WA

Dear Mr. Staton,

Prezant Associates, Inc (Prezant) is pleased to present the following asbestos, lead, and arsenic survey report for the building located at 4603 Ocean Beach Highway in Longview, Washington.

We appreciate the opportunity to have been of service to you. If you have any questions regarding this report, please feel free to contact me at (206) 281-8858.

Sincerely,

A handwritten signature in black ink that reads "Mindy Uber". The signature is fluid and cursive, with the first name "Mindy" being more prominent than the last name "Uber".

Mindy Uber
Prezant Associates Inc.

Enclosures (4)

Asbestos and Lead Report
Laboratory Results
Field Notes
Certification

Prezant Associates, Inc.
1730 Minor Avenue
Suite 900
Seattle, WA 98101

Voice 206.281.8858
Fax 206.281.8922
www.prezant.com

4603 OCEAN BEACH HWY
HAZMAT SURVEY REPORT
S504-0001

Section 1 - Introduction

On May 25, 2005 Mindy Uber of Prezant Associates, Inc. conducted an inspection for suspect asbestos-containing building materials, lead and arsenic painted surfaces, and a regulated lead debris waste stream sample at the building located at 4603 Ocean Beach Highway in Longview, Washington. Ms. Uber is an EPA accredited AHERA building inspector. A copy of her certificate can be found in the enclosed attachments (Certificate #05-0014, Expiration Date January 5, 2006).

This survey was conducted in preparation for the potential demolition of the building. Accessible building areas were visited and samples were taken of building materials suspected to contain asbestos (roofing, flooring materials, etc.). The samples were analyzed for the presence of asbestos and the quantities of asbestos-containing materials were estimated. Please see Table 1 for a list of asbestos-containing materials and Table 2 for an inventory of all sampled building materials.

Prezant sampled painted surfaces to determine their lead and arsenic content. Please see Tables 3 and 4 for paint sampling results. Also, building components expected to be part of the waste stream were analyzed for lead. The results of the waste stream analysis are presented in Table 5.

Sample locations can be found in the enclosed attachments.



Section 2 - Executive Summary

Asbestos

Please see Table 1 for a summary of all suspect asbestos-containing materials found at the building located at 4603 Ocean Beach Highway in Longview, Washington.

TABLE 1 - Summary of Asbestos-Containing Materials found at 4603 Ocean Beach Highway

Material Description	Location	Asbestos Content	Approximate Quantity	Estimated Removal Cost
Vinyl floor sheeting, orange square pebble pattern with paper backing and brown mastic	Kitchen	Vinyl: No asbestos detected Paper backing: 40% Chrysotile Mastic: No asbestos detected	200 square feet	\$500.00
Mobilization Fee				\$500.00

Removal Estimate \$1,000.00

The total removal estimate of asbestos-containing materials at the building is \$1,000.00. The estimated costs do not include consultant services, sales tax, permits, or any other additional cost, which the owner may incur during the project. The cost estimates are based on market conditions that exist in the State of Washington at this time. Prices may vary with market fluctuations. Prezant Associates recommends verification of all quantities and removal costs by a certified abatement contractor.

The estimated costs for this project have been developed based upon our knowledge of the proposed project, our past experience with similar projects, and the level of effort required to satisfactorily complete this project. The estimated costs provided for each option are considered to be informational only, for use as budgetary estimates, and not contractually binding.

The estimated costs are "best-effort" estimates, but are subject to many variables beyond the control of Prezant. Such variables include, but are not limited to: project duration, contractor work schedule, hour of work allowed by the owner, contractor performance, regulatory agency interpretation of changing regulations, and project delays.

The removal estimates are for approximating actual bid prices from contractors only, and may not reflect the actual final costs of asbestos removal. They do not include sales tax, or Owner costs such as abatement project oversight and monitoring for compliance to law, and compliance to project plans and specifications. These estimates assume that adequate, professional plans and specifications are prepared and the abatement costs are minimized by professional project management, and that all asbestos containing materials are abated during one project by the same asbestos contractor.



Lead

Based on laboratory analysis, five of the paint chip samples collected from the building contained detectable quantities of lead. The presence of lead in coatings raises concerns about worker and environmental protection. Special precautions will need to be taken to demolish the structures on this property. The recommendations are addressed in the Regulatory Compliance section. Please see Table 3 for lead paint chip sampling results.

Arsenic

No detectable arsenic was identified in the seven paint chip samples collected. Please see Table 4 for arsenic paint chip sampling results.

Toxicity Characteristic Leachate Procedure (TCLP)

A TCLP sample was collected at the time of the survey to determine if the waste is considered hazardous relative to lead. . A material "fails" the TCLP when there is greater than 5.0 parts per million of lead in the leachate. Waste characterization anticipated from this demolition was less than 5.0 parts per million of lead, and therefore is considered non-hazardous. Please see Table 5 for TCLP sampling results.

PCB Containing Light Ballasts

Thirty fluorescent light fixtures were identified inside the coffee shop and around the building exterior. The ballasts are assumed to contain PCBs and the bulbs are assumed to contain mercury. The fixtures should be disposed of as hazardous waste unless verified that they do not contain PCBs and mercury.



Section 3 - Regulatory Compliance

Asbestos

The intent of the asbestos survey is to comply with governing asbestos regulations required by the State of Washington and Puget Sound Clean Air Agency (PSCAA). Currently, the State of Washington requires a written "good faith inspection" for identification of asbestos-containing materials prior to any remodeling or demolition work. During demolition and construction work it is the responsibility of the owner and the contractors to make this survey document available to all concerned parties who may be handling the building materials.

In addition, PSCAA requires that a copy of the written asbestos survey be made available on-site for inspection by a PSCAA Control Officer during construction and demolition work. The survey is required to be performed in accordance with 40 CFR 763.86. These federal standards require inspections to be conducted by an EPA Accredited Building Inspector with analysis to be provided by an asbestos laboratory certified by the National Bureau of Standards. The requirements are described in Article 1 and Article 4 of PSCAA's Asbestos Control Standards. All survey work was conducted in compliance with the above mentioned standards.

Lead

When lead is discovered in a paint coating, worker protection and environmental protection requirements apply to all construction activities that may disturb these coatings. The issues surrounding the demolition of materials that have lead-containing coatings include worker exposure, public health, and waste characterization.

Worker Exposure to Lead

WAC 296-155-176, Lead, applies to all construction work where an employee may be occupationally exposed to lead. Construction work includes activities such as demolition or salvage, removal or encapsulation, and renovation of materials that contain lead. When a worker may be exposed to lead, the employer must take the following actions according to WAC 296-155-176:

1. Perform an exposure assessment for each operation where the employee may be exposed to lead at or above 30 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). The exposure assessment consists of personal air monitoring to determine representative lead exposure levels for the work being performed;
2. During the exposure assessment for demolition operations, the employer must provide and require to be worn half-mask air-purifying respirators equipped with high efficiency particulate air (HEPA) filters and disposable clothing;
3. A designated change area which allows for separate storage areas for work and street clothing to prevent cross contamination;
4. Hand washing facilities to allow employees to wash their hands and faces.
5. Biological monitoring in the form of blood sampling and analysis for lead and zinc protoporphyrin levels.
6. Training to include hazard communication, safety, and the limitations, proper use, and maintenance of respirators.



In addition to the protective equipment and hygiene requirements, the employer must attempt to reduce the levels of airborne lead through the use of engineering controls such as ventilation and wet methods.

Public Health

The owner should ensure that the general public will not have access to the site during demolition activities. In addition, controlling visible emissions (dust) will decrease the airborne concentration of lead, thus decreasing the airborne exposure levels of the general public and potential contamination of surrounding areas from dust migration.

Waste Characterization

Once the demolition waste is accumulated, it is necessary for the generated waste to be characterized before it can be accepted by a landfill. Waste characterization is determined using the Toxicity Characteristic Leachate Process (TCLP) which determines the leaching potential of lead in the construction debris. A material "fails" the TCLP when there is greater than 5.0 parts per million of lead in the leachate.



Section 4 - Sampling Plan and Laboratory Analysis

Asbestos

Objectives

The objective of sampling was to determine the quantity and location of building materials (roofing, flooring materials, etc.) that contain asbestos.

Asbestos Sampling Plan Protocol

This survey was conducted using a protocol adapted from the Asbestos Hazard Emergency Response Act (AHERA). The protocol is as follows:

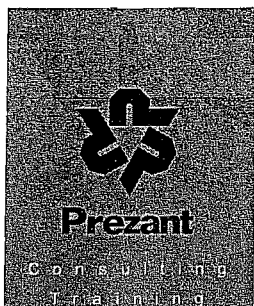
1. Group materials into homogeneous sampling areas.
2. Quantify each homogeneous sampling area and collect samples from each area using the "3-5-7" criteria for surfacing material to determine the number of samples needed. Quantify and collect a minimum of three samples of each thermal system insulation (the number of samples collected of miscellaneous materials was determined by the inspector).
3. Samples of each material were taken to the substrate, ensuring that all components of the material were included.
4. Sampling was performed by a Certified Building Inspector, and the use of proper protective equipment and procedures was followed.

Asbestos Sampling Procedure

1. Spread the plastic drop cloth (if needed) and set up other equipment, e.g., ladder.
2. Put on protective equipment (respirator and protective clothing if needed).
3. Label sample container with its identification number and record number. Record sample location, and type of material sampled on a sampling data form.
4. Moisten area where sample is to be extracted (spray the immediate area with water).
5. Extract sample using a clean knife, drill capsule, or cork boring tool to cut out or scrape off approximately one tablespoon of the material. Penetrate all layers of material.
6. Place sample in a container and tightly seal it.
7. Wipe the exterior of the container with a wet wipe to remove any material that may have adhered to it during sampling.
8. Clean tools with wet wipes and wet mop or vacuum area with HEPA vacuum to clean all debris.
9. Seal the sampling location with caulking compound, spackle or duct tape.
10. Discard protective clothing, wet wipes and rags, cartridge filters, and drop cloth in a labeled plastic waste bag.

Asbestos Laboratory Analysis

The bulk samples were analyzed in our laboratory using polarized light microscopy (PLM) with dispersion staining in accordance with US EPA method 600/R-93/116 as specified in 40 CFR Chapter I (7-1-93 edition) Part 763, Subpart F, Appendix A, pages 499-504. Polarizing light microscopy quantifies asbestos concentrations at between 100% and 1% detection levels. Levels below 1% can only be stated as "trace."



For samples containing more than one separable layer of materials, the report will include findings for each layer (labeled L-1 for layer one and L-2 for layer two, etc.) and a total percentage for the entire sample. The asbestos concentration in the sample is determined by visual estimation.

For those samples with asbestos concentrations between 1 and 10 percent based on visual estimation, the EPA recommends a procedure known as point counting (NESHAPS, 40 CFR Part 61). Point counting is a statistically more accurate means of quantification for samples with low concentrations of asbestos.

Lead

Objectives

The objectives of the sampling were to determine locations of coatings that are lead containing and the percentage of lead in those coatings.

Lead Sampling Procedure

1. Spread the plastic drop cloth (if needed) and set up other equipment, e.g., ladder.
2. Put on protective equipment (respirator and protective clothing if needed).
3. Label sample container with its identification number and record number. Record sample location, and type of material sampled on a sampling data form.
4. Mark the location of the sample on the sampling diagram and record the sample identification number on the plan diagram.
5. Extract sample using a clean knife to scrape off approximately one tablespoon of the material. Penetrate all layers of material.
6. Place sample in a container and tightly seal.
7. Wipe the exterior of the container with a wet wipe to remove any material that may have adhered to it during sampling.
8. Clean tools with wet wipes and wet mop to clean all debris.
9. Discard protective clothing, wet wipes and rags, cartridge filters, and drop cloth in a labeled plastic bag.

Lead Laboratory Analysis

Examination of these samples was conducted for the presence of inorganic lead using atomic absorption spectrophotometry (AAS) in accordance with NIOSH 7082, Issue 2, as revised in 1994. This method reports results in milligrams per kilogram (mg/kg) or its equivalent, parts per million (ppm).

TCLP

Objectives

The objective of the TCLP sampling was to determine whether the waste stream of the structure to be demolished is considered hazardous or non-hazardous waste. A hazardous waste is defined as a waste stream which contains leachable lead above the allowable limit of 5 parts per million (ppm).



TCLP Sampling Procedure

Field observations were used to determine which materials would be part of the waste stream and their representative quantities in this waste stream. These materials were sampled in quantities which estimate their contribution to the anticipated total waste stream.

TCLP Laboratory Analysis

Examination of these samples was conducted for the presence of leachable lead using atomic absorption spectrophotometry (AAS) in accordance with EPA SW-846 Method 1311/7420 (Toxicity Characteristic Leachate Process). This method reports results in milligrams of leachable lead per liter of extraction fluid (mg/L).

Arsenic

Arsenic paint chip samples were collected using the same protocols as the lead paint chip samples. The samples were submitted to NVL Laboratories, Inc. in Seattle, Washington and analyzed according to EPA Method 6010.



Section 5 - Survey Results

Asbestos

TABLE 2 - Inventory of Sampled Building Materials at 4603 Ocean Beach Highway in Longview, Washington

Sample ID	Material Description	Location	Asbestos Content	Friability
SLR-01	12" floor tile, light green with white and gray streaks over green and white vinyl floor sheeting with paper backing and mastic	Sitting area and prep area	No asbestos detected	Friable when removed
SLR-02	12" floor tile, dark green with white and green streaks with yellow mastic (over vinyl floor sheeting)	Sitting area and prep area	No asbestos detected	Non-friable
SLR-03	12" floor tile, rust orange with brown streaks and yellow mastic (over vinyl floor sheeting)	Sitting area and prep area	No asbestos detected	Non-friable
SLR-04	Vinyl floor sheeting, orange square pebble pattern with paper backing and brown mastic	Kitchen	Vinyl: No asbestos detected Paper backing: 40% Chrysotile Mastic: No asbestos detected	Friable when removed
SLR-05	Vinyl floor sheeting, white with paper backing and brown mastic	Storage room	No asbestos detected	Friable when removed
SLR-06	White cove base mastic	Throughout	No asbestos detected	Non-friable
SLR-07 through SLR-09	Gypsum wallboard with texturing and mudded seams	Throughout	No asbestos detected	Friable
SLR-10 and SLR-11	Texturing on wallboard	Throughout	No asbestos detected	Friable
SLR-12	2'x4' ceiling tile, fissure pattern, lay-in	Sitting area and prep area	No asbestos detected	Friable
SLR-13	White sink undercoating	Kitchen	No asbestos detected	Non-friable
SLR-14	White ceramic tile grout and mastic	Bathrooms	No asbestos detected	Non-friable
SLR-15	2 layers black 3-tab shingles with felt paper	Roof	No asbestos detected	Friable
SLR-16	3 layers gray 3-tab shingles with felt paper	Awning roof	No asbestos detected	Friable



Lead

Five of the painted surfaces sampled at the building contain detectable quantities of lead. Please see Table 3 for lead sampling results. Please see attachments for sample locations.

TABLE 3 - Paint Coatings Sampled for Lead at 4603 Ocean Beach Highway in Longview, Washington

Sample Number	Color and Location	Reporting limit (mg/kg)	Results (mg/kg)
L-01	White paint on metal wall—interior	66	1,100
L-02	White paint on gypsum wallboard—interior	66	<66
L-03	Tan paint on metal ceiling—interior	64	1,100
L-04	Dark reddish pink on metal—exterior	67	<67
L-05	White paint on metal—exterior	65	890
L-06	White paint on wood—exterior	64	<64
L-07	White paint on stone—exterior	66	<66
L-08	Dark reddish pink over gray and orange paint on metal—exterior canopy support pole	66	2,400
L-09	Bright green over multiple colors on metal—exterior	77	410

*mg/kg equivalent to parts per million (ppm)

Arsenic

None of the painted surfaces sampled at the building contain detectable quantities of arsenic. Please see Table 4 for arsenic sampling results. Please see attachments for sample locations.

TABLE 4 - Paint Coatings Sampled for Arsenic at 4603 Ocean Beach Highway in Longview, Washington

Sample Number	Color and Location	Reporting limit (mg/kg)	Results (mg/kg)
A-01	Tan paint on metal ceiling—interior	20	<20
A-02	Dark reddish pink on metal—exterior	20	<20
A-03	White paint on metal—exterior	20	<20
A-04	White paint on wood—exterior	20	<20
A-05	White paint on stone—exterior	20	<20
A-06	Dark reddish pink over gray and orange paint on metal—exterior canopy support pole	20	<20
A-07	Bright green over multiple colors on metal—exterior	41	<41

*mg/kg equivalent to parts per million (ppm)



TCLP

A material "fails" the TCLP when there is greater than 5.0 parts per million (ppm) of lead in the leachate. The waste stream from the building will be considered non-hazardous relative to lead. The sample components for the waste stream included painted wood and concrete. The metal portions of the building were assumed to be recycled during the demolition and were not included in the sample.

TABLE 5 – TCLP Results for 4603 Ocean Beach Highway in Longview, Washington

Sample ID	Result (mg/L)*
TCLP-01	<0.6

*mg/L is equivalent to parts per million (ppm)



Section 6 - Conclusions and Recommendations

Extreme caution should be used during demolition to ensure that additional potentially hazardous materials are not uncovered. In the event that additional potentially hazardous materials are discovered, the materials must be sampled by an AHERA accredited building inspector and analyzed to determine if the material contains asbestos prior to disturbance.

Asbestos

Asbestos-containing materials are required to be removed and disposed of in accordance with Washington State Regulations prior to any demolition, renovation, or remodeling that would disturb these materials. Washington State Department of Labor and Industries and PSCAA require that the abatement be performed using Certified Asbestos Workers under the direct on-site supervision of a Certified Asbestos Supervisor.

Prezant Associates recommends that a Certified Asbestos Project Designer design any asbestos abatement job to ensure that the job is completed according to regulation standards.

Lead

Lead was identified in five of the painted surfaces, which require that special precautions be taken to demolish the building. The potential of the presence of lead in coatings raises concerns about worker and environmental protection. Workers disturbing lead-containing coatings are covered under the lead standard (WAC 296-155-176) until shown they are not being exposed above the action limit of $30 \mu\text{g}/\text{m}^3$ and the permissible exposure limit of $50 \mu\text{g}/\text{m}^3$. The requirements of this standard include, but are not limited to, air monitoring, respiratory protection, medical surveillance, lead work plan, warning signs, and wash stations.

Arsenic

No arsenic was detected in the painted surfaces on the building; therefore no special precautions need to be taken related to arsenic.

TCLP

Based on the lead waste stream analysis all waste from the demolition will be considered non-hazardous relative to lead.



Section 7 - Limits of Survey

Asbestos and lead surveys are non-comprehensive by nature and subject to many limitations including those presented below. Our assessment has considered risks pertaining to asbestos and lead, however, this survey is limited to only those locations sampled. This survey was not designed to identify all potential concerns or eliminate all risk associated with demolition.

Evaluation of other risks, such as toxic and hazardous substances in (or in contact with) soil and ground water, structural, electrical, mechanical, radon gas, slope stability, building settlement, moisture, or site drainage/flooding have not been included. No warranty, expressed or implied, is made.

Prezant Associates is not responsible for materials which are in the interior of the building or require destructive means to access, or materials which are hidden from sight, those materials hidden behind walls, or materials which cannot be found with reasonable diligence.

Prezant Associates, Inc. performed this survey in accordance with the generally accepted standards of care that exist in the industrial hygiene profession in Washington State at the time of this study. The asbestos survey was performed in preparation for removal of asbestos-containing materials in accordance with NESHAPS regulations.





NVLAP LAB CODE 200613-0



330 6th Ave. North, Suite 200 Seattle, WA 98109

OFFICE: (206) 281-8858 FAX: (206) 281-8922

Bulk Asbestos Fiber Analysis

SLR International Corporation
22122 20th Avenue SE, Bldg. H, Suite 150
Bothell, WA 98021-

Project Location: 4603 Ocean Beach Highway
Longview, WA

PAI Batch Number: 05-1224
Client Job Number: S504-0001
Number of Samples: 16
Turn Around Time: 5 day

Batch Number:	05-1224	SLR International Corporation
Lab Sample Number:	05006925	S504-0001
Client Sample Number:	SLR-01	4603 Ocean Beach Highway Longview, WA

L-1 Pale gray hard tile material with gray streaks

Asbestos Fibrous Components:
No Asbestos Detected

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
45% Calcite Filler and Binder
40% Mineral Filler and Binder
10% Vinyl Filler and Binder
5% Mineral Fragments

Comments:

L-2 Yellow resinous sticky mastic

Asbestos Fibrous Components:
No Asbestos Detected

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
96% Resin and Binder
4% Mineral Fragments

Comments:

L-3 Off-white hard tile material

Asbestos Fibrous Components:
No Asbestos Detected

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
55% Calcite Filler and Binder
40% Mineral Filler and Binder
5% Vinyl Filler and Binder

Comments:

Sampled By: Mindy Uber

Received By: John McCaslin

Reviewed By: George McCaslin

5/26/2005

6/3/2005

Deitrie Hanson
Analyzed By: Deitrie Hanson

6/3/2005



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Bulk Asbestos Fiber Analysis

L-4 Yellow resinous sticky mastic

Asbestos Fibrous Components:	Non-Asbestos Fibrous Components:	Non-Fibrous Components:
No Asbestos Detected		95% Resin and Binder
		3% Mineral Fragments
		2% Filler and Binder

Comments:

Batch Number:	05-1224	SLR International Corporation
Lab Sample Number:	05006926	S504-0001
Client Sample Number:	SLR-02	4603 Ocean Beach Highway Longview, WA

L-1 Green hard tile material with dark green streaks

Asbestos Fibrous Components:	Non-Asbestos Fibrous Components:	Non-Fibrous Components:
No Asbestos Detected		55% Calcite Filler and Binder
		40% Mineral Filler and Binder
		5% Vinyl Filler and Binder

Comments:

L-2 Yellow transparent resinous sticky mastic

Asbestos Fibrous Components:	Non-Asbestos Fibrous Components:	Non-Fibrous Components:
No Asbestos Detected		96% Resin and Binder
		2% Mineral Fragments
		2% Filler and Binder

Comments:

Sampled By: Mindy Uber
Received By: John McCaslin
Reviewed By: George McCaslin

5/26/2005
6/3/2005

Deitrie Hanson
Analyzed By: Deitrie Hanson
6/3/2005



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Bulk Asbestos Fiber Analysis**L-3 Off-white hard tile material****Asbestos Fibrous Components:**
No Asbestos Detected**Non-Asbestos Fibrous Components:****Non-Fibrous Components:**
55% Calcite Filler and Binder
40% Mineral Filler and Binder
5% Vinyl Filler and Binder

Comments:

L-4 Yellow resinous sticky mastic**Asbestos Fibrous Components:**
No Asbestos Detected**Non-Asbestos Fibrous Components:****Non-Fibrous Components:**
98% Resin and Binder
2% Mineral Fragments

Comments:

Batch Number: 05-1224
Lab Sample Number: 05006927
Client Sample Number: **SLR-03**SLR International Corporation
S504-0001
4603 Ocean Beach Highway
Longview, WA**L-1 Dull orange hard tile material****Asbestos Fibrous Components:**
No Asbestos Detected**Non-Asbestos Fibrous Components:****Non-Fibrous Components:**
55% Calcite Filler and Binder
40% Mineral Filler and Binder
5% Vinyl Filler and Binder

Comments:

L-2 Yellow resinous mastic**Asbestos Fibrous Components:**
No Asbestos Detected**Non-Asbestos Fibrous Components:****Non-Fibrous Components:**
97% Resin and Binder
3% Mineral Fragments

Comments:

Sampled By: Mindy Uber

Received By: John McCaslin

Reviewed By: George McCaslin

5/26/2005

6/3/2005

Analyzed By: Deitrie Hanson

6/3/2005



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330 6th Ave. North, Suite 200 Seattle, WA 98109

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Bulk Asbestos Fiber Analysis

Batch Number: 05-1224
Lab Sample Number: 05006928
Client Sample Number: **SLR-04**

SLR International Corporation
S504-0001
4603 Ocean Beach Highway
Longview, WA

L-1 Dark orange and pink mosaic opaque sheet vinyl tile material

Asbestos Fibrous Components:
No Asbestos Detected

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
90% Plastic Particles
10% Vinyl Filler and Binder

Comments:

L-2 Pale gray fibrous backing

Asbestos Fibrous Components:
40% Chrysotile

Non-Asbestos Fibrous Components:
45% Cellulose

Non-Fibrous Components:
10% Talc Filler and Binder
5% Mineral Fragments

Comments:

L-3 Tan opaque mastic

Asbestos Fibrous Components:
No Asbestos Detected

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
92% Resin and Binder
5% Mineral Fragments
3% Filler and Binder

Comments:

Batch Number: 05-1224
Lab Sample Number: 05006929
Client Sample Number: **SLR-05**

SLR International Corporation
S504-0001
4603 Ocean Beach Highway
Longview, WA

Sampled By: Mindy Uber
Received By: John McCaslin
Reviewed By: George McCaslin

5/26/2005

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Bulk Asbestos Fiber Analysis**L-1 White and pale gray opaque pliable sheet vinyl tile material****Asbestos Fibrous Components:**
No Asbestos Detected**Non-Asbestos Fibrous Components:****Non-Fibrous Components:**

90% Plastic Particles

10% Vinyl Filler and Binder

Comments:

L-2 Pale gray fibrous backing**Asbestos Fibrous Components:**
No Asbestos Detected**Non-Asbestos Fibrous Components:**

65% Cellulose

Non-Fibrous Components:

30% Filler and Binder

5% Mineral Fragments

Comments:

L-3 Tan opaque mastic**Asbestos Fibrous Components:**
No Asbestos Detected**Non-Asbestos Fibrous Components:****Non-Fibrous Components:**

95% Resin and Binder

3% Mineral Fragments

2% Filler and Binder

Comments:

Batch Number: 05-1224
Lab Sample Number: 05006930
Client Sample Number: **SLR-06**SLR International Corporation
S504-0001
4603 Ocean Beach Highway
Longview, WA**Pale yellow beige opaque pliable rubbery material****Asbestos Fibrous Components:**
No Asbestos Detected**Non-Asbestos Fibrous Components:**

5% Cellulose

Non-Fibrous Components:

90% Resin and Binder

5% Mineral Fragments

Comments:

Sampled By: Mindy Uber
Received By: John McCaslin
Reviewed By: George McCaslin5/26/2005
6/3/2005
Analyzed By: Deitrie Hanson

6/3/2005



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Bulk Asbestos Fiber Analysis

Batch Number:	05-1224	SLR International Corporation
Lab Sample Number:	05006931	S504-0001
Client Sample Number:	SLR-07	4603 Ocean Beach Highway Longview, WA

L-1 White paint**Asbestos Fibrous Components:**
No Asbestos Detected**Non-Asbestos Fibrous Components:****Non-Fibrous Components:**
100% Paint

Comments:

L-2 White crystalline powdery material**Asbestos Fibrous Components:**
No Asbestos Detected**Non-Asbestos Fibrous Components:****Non-Fibrous Components:**
92% Calcite Filler and Binder
5% Vermiculite
3% Mineral Fragments

Comments:

L-3 Pale tan fibrous tape-like papery material**Asbestos Fibrous Components:**
No Asbestos Detected**Non-Asbestos Fibrous Components:**
97% Cellulose**Non-Fibrous Components:**
3% Filler and Binder

Comments:

L-4 White crystalline powdery material**Asbestos Fibrous Components:**
No Asbestos Detected**Non-Asbestos Fibrous Components:****Non-Fibrous Components:**
95% Calcite Filler and Binder
3% Mineral Fragments
2% Filler and Binder

Comments:

Sampled By: Mindy Uber
Received By: John McCaslin
Reviewed By: George McCaslin

5/26/2005

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Deitrie Hanson
Analyzed By: Deitrie Hanson

6/3/2005



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330 6th Ave. North, Suite 200 Seattle, WA 98109

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Bulk Asbestos Fiber Analysis**L-5 Brown fibrous papery material**

Asbestos Fibrous Components:	Non-Asbestos Fibrous Components:	Non-Fibrous Components:
No Asbestos Detected	99% Cellulose	1% Filler and Binder

Comments:

L-6 White powdery fibrous material

Asbestos Fibrous Components:	Non-Asbestos Fibrous Components:	Non-Fibrous Components:
No Asbestos Detected	15% Cellulose	80% Talc Filler and Binder
		5% Mineral Fragments

Comments:

Batch Number:	05-1224	SLR International Corporation
Lab Sample Number:	05006932	S504-0001
Client Sample Number:	SLR-08	4603 Ocean Beach Highway
		Longview, WA

L-1 White paint

Asbestos Fibrous Components:	Non-Asbestos Fibrous Components:	Non-Fibrous Components:
No Asbestos Detected		100% Paint

Comments:

L-2 White crystalline powdery material

Asbestos Fibrous Components:	Non-Asbestos Fibrous Components:	Non-Fibrous Components:
No Asbestos Detected		90% Calcite Filler and Binder
		5% Vermiculite
		5% Mineral Fragments

Comments:

Sampled By: Mindy Uber
Received By: John McCaslin
Reviewed By: George McCaslin

5/26/2005
6/3/2005

Deitrie Hanson
Analyzed By: Deitrie Hanson

6/3/2005



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Bulk Asbestos Fiber Analysis**L-3** Pale tan and brown fibrous papery material

Asbestos Fibrous Components:	Non-Asbestos Fibrous Components:	Non-Fibrous Components:
No Asbestos Detected	97% Cellulose	3% Filler and Binder

Comments:

L-4 White powdery fibrous material

Asbestos Fibrous Components:	Non-Asbestos Fibrous Components:	Non-Fibrous Components:
No Asbestos Detected	15% Cellulose	80% Talc Filler and Binder
		5% Mineral Fragments

Comments:

Batch Number:	05-1224	SLR International Corporation
Lab Sample Number:	05006933	S504-0001
Client Sample Number:	SLR-09	4603 Ocean Beach Highway Longview, WA

L-1 White paint

Asbestos Fibrous Components:	Non-Asbestos Fibrous Components:	Non-Fibrous Components:
No Asbestos Detected		100% Paint

Comments:

L-2 White crystalline powdery material

Asbestos Fibrous Components:	Non-Asbestos Fibrous Components:	Non-Fibrous Components:
No Asbestos Detected		90% Calcite Filler and Binder
		5% Mineral Fragments
		5% Filler and Binder

Comments:

Sampled By: Mindy Uber
Received By: John McCaslin
Reviewed By: George McCaslin

5/26/2005
6/3/2005

Deitrie Hanson
Analyzed By: Deitrie Hanson

6/3/2005



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330 6th Ave. North, Suite 200 Seattle, WA 98109

OFFICE: (206) 281-8858 FAX: (206) 281-8922

Bulk Asbestos Fiber Analysis**L-3 Tan fibrous tape-like papery material**

Asbestos Fibrous Components:	Non-Asbestos Fibrous Components:	Non-Fibrous Components:
No Asbestos Detected	97% Cellulose	3% Filler and Binder

Comments:

Batch Number:	05-1224	SLR International Corporation
Lab Sample Number:	05006934	S504-0001
Client Sample Number:	SLR-10	4603 Ocean Beach Highway Longview, WA

L-1 White paint

Asbestos Fibrous Components:	Non-Asbestos Fibrous Components:	Non-Fibrous Components:
No Asbestos Detected		100% Paint

Comments:

L-2 White crystalline powdery material

Asbestos Fibrous Components:	Non-Asbestos Fibrous Components:	Non-Fibrous Components:
No Asbestos Detected		90% Calcite Filler and Binder
		5% Vermiculite
		3% Mineral Fragments
		2% Filler and Binder

Comments:

Batch Number:	05-1224	SLR International Corporation
Lab Sample Number:	05006935	S504-0001
Client Sample Number:	SLR-11	4603 Ocean Beach Highway Longview, WA

Sampled By: Mindy Uber

Received By: John McCaslin

Reviewed By: George McCaslin

5/26/2005

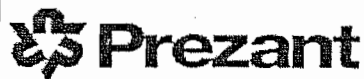
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6/3/2005



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330.6th Ave. North, Suite 200 Seattle, WA 98109

OFFICE: (206) 281-8858 FAX: (206) 281-8922

Bulk Asbestos Fiber Analysis**L-1** White paintAsbestos Fibrous Components:
No Asbestos Detected

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
100% Paint

Comments:

L-2 White crystalline powdery materialAsbestos Fibrous Components:
No Asbestos Detected

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
90% Calcite Filler and Binder
5% Vermiculite
5% Mineral Fragments

Comments:

Batch Number: 05-1224
Lab Sample Number: 05006936
Client Sample Number: **SLR-12**SLR International Corporation
S504-0001
4603 Ocean Beach Highway
Longview, WA**L-1** White paintAsbestos Fibrous Components:
No Asbestos Detected

Non-Asbestos Fibrous Components:

Non-Fibrous Components:
100% Paint

Comments:

L-2 Pale brown and white fibrous opaque materialAsbestos Fibrous Components:
No Asbestos DetectedNon-Asbestos Fibrous Components:
45% Cellulose
35% Mineral WoolNon-Fibrous Components:
15% Perlite
5% Filler and Binder

Comments:

Sampled By: Mindy Uber
Received By: John McCaslin
Reviewed By: George McCaslin

5/26/2005

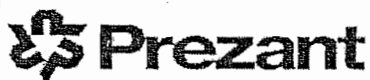
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Analyzed By: Deitrie Hanson

6/3/2005



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OFFICE: (206) 281-8858 FAX: (206) 281-8922

Bulk Asbestos Fiber Analysis

Batch Number:	05-1224	SLR International Corporation
Lab Sample Number:	05006937	S504-0001
Client Sample Number:	SLR-13	4603 Ocean Beach Highway Longview, WA

Pale beige pliable fibrous crystalline flaky material

Asbestos Fibrous Components:	Non-Asbestos Fibrous Components:	Non-Fibrous Components:
No Asbestos Detected	30% Cellulose	55% Calcite Filler and Binder
		10% Resin and Binder
		5% Mineral Fragments

Comments:

Batch Number:	05-1224	SLR International Corporation
Lab Sample Number:	05006938	S504-0001
Client Sample Number:	SLR-14	4603 Ocean Beach Highway Longview, WA

Dark reddish brown and gray stained white hard crystalline material

Asbestos Fibrous Components:	Non-Asbestos Fibrous Components:	Non-Fibrous Components:
No Asbestos Detected		95% Mineral Filler and Binder
		3% Miscellaneous Particles
		2% Filler and Binder

Comments:

Batch Number:	05-1224	SLR International Corporation
Lab Sample Number:	05006939	S504-0001
Client Sample Number:	SLR-15	4603 Ocean Beach Highway Longview, WA

Sampled By: Mindy Über
Received By: John McCaslin
Reviewed By: George McCaslin

5/26/2005
6/3/2005

Deitrie Hanson
Analyzed By: Deitrie Hanson

6/3/2005



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330 6th Ave. North, Suite 200 Seattle, WA 98109

OFFICE: (206) 281-8858 FAX: (206) 281-8922

Bulk Asbestos Fiber Analysis**L-1 Black rocks****Asbestos Fibrous Components:**
No Asbestos Detected**Non-Asbestos Fibrous Components:****Non-Fibrous Components:**
98% Rocks
2% Mineral Fragments

Comments:

L-2 Black thick asphaltic fibrous granular material**Asbestos Fibrous Components:**
No Asbestos Detected**Non-Asbestos Fibrous Components:**
65% Cellulose**Non-Fibrous Components:**
30% Asphalt Filler and Binder
5% Filler and Binder

Comments:

L-3 Black asphaltic fibrous material**Asbestos Fibrous Components:**
No Asbestos Detected**Non-Asbestos Fibrous Components:****Non-Fibrous Components:**
95% Asphalt Filler and Binder
5% Mineral Fragments

Comments:

Batch Number: 05-1224
Lab Sample Number: 05006940
Client Sample Number: **SLR-16**SLR International Corporation
S504-0001
4603 Ocean Beach Highway
Longview, WA**L-1 White painted rocks****Asbestos Fibrous Components:**
No Asbestos Detected**Non-Asbestos Fibrous Components:****Non-Fibrous Components:**
95% Rocks
3% Paint
2% Mineral Fragments

Comments:

Sampled By: Mindy Uber

Received By: John McCaslin

Reviewed By: George McCaslin

5/26/2005

6/3/2005

Analyzed By: Deitrie Hanson

6/3/2005



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330 6th Ave. North, Suite 200 Seattle, WA 98109

OFFICE: (206) 281-8858 FAX: (206) 281-8922

Bulk Asbestos Fiber Analysis

L-2 Black asphaltic fibrous material

Asbestos Fibrous Components:	Non-Asbestos Fibrous Components:	Non-Fibrous Components:
No Asbestos Detected	12% Glass Fiber	80% Asphalt Filler and Binder
		5% Mineral Granules
		3% Filler and Binder

Comments:

L-3 White paint on black asphaltic fibrous papery material

Asbestos Fibrous Components:	Non-Asbestos Fibrous Components:	Non-Fibrous Components:
No Asbestos Detected	65% Cellulose	30% Paint
		5% Filler and Binder

Comments:

Sampled By: Mindy Uber
Received By: John McCaslin 5/26/2005
Reviewed By: George McCaslin 6/3/2005

Deitrie Hanson
Analyzed By: Deitrie Hanson 6/3/2005



Prézan

June 03, 2005

PAI Batch #: 05-1225

Client: Mike Staton
Company: SLR International Corp.
22122 20th Ave SE, Bldg. H, Suite 150
Bothell, WA 98021

Project: 4603 Ocean Beach Hwy, Longview, WA
Matrix: Paint Chips - Total Lead
Date Sampled: 5/25/2005
Date Received: 5/26/2005
Date Analyzed: 6/3/2005

Project #: S504-0001
P.O. #: N/A
Sampled By: Mindy Uber
Method: EPA SW-846 Method 7420
Analyst: John McCaslin

LEAD SAMPLE RESULTS

PAI Lab ID	Client ID	RL (mg/kg)	Concentration (mg/kg)	Percent %
05006941	L-01	66	1,100	0.110
05006942	L-02	66	< 66	< 0.007
05006943	L-03	64	1,100	0.110
05006944	L-04	67	< 67	< 0.007
05006945	L-05	65	890	0.089
05006946	L-06	64	< 64	< 0.006
05006947	L-07	66	< 66	< 0.007
05006948	L-08	66	2,400	0.240
05006949	* L-09	77	410	0.041

* Sample contained <0.25g as prescribed in method.

QA/QC Results
Batch QC MS
Method Blank

94% Recovery
< 65 mg/kg

RL - reporting limit
mg - milligrams
kg - kilograms
< - less than

Reviewed by:


Deitrie Hanson, Laboratory Manager



Prezant

June 02, 2005

PAI Batch #: 05-1226

Client: Mike Ståton
Company: SLR International Corp.
22122 20th Avenue SE, Bldg. H. Suite 150
Bothell, WA 98021

Project:	4603 Ocean Beach Hwy, Longview, WA	Project #:	S504-0001
Matrix:	TCLP-Lead	P.O. #:	N/A
Date Sampled:	5/25/2005	Sampled By:	Mindy Uber
Date Received:	5/26/2005	Method:	EPA SW-846 Method 1311/7420
Date Analyzed:	6/3/2005	Analyst:	<i>John McCaslin</i>

LEAD SAMPLE RESULTS

PAI Lab ID	Client ID	RL (mg/L)	Concentration (mg/L)
05006950	TCLP-01	0.6	< 0.6

QA/QC Results
Batch QC MS
Method Blank

103% Recovery
< 0.6 mg/L

RL - reporting limit
mg - milligrams
L - liters
< - less than

Reviewed by:

Deitrie Hanson, Laboratory Manager



Prezant Associates, Inc.
Lead Sample Data Sheet

Page 1 of 1

Batch #: 05-1226
PAI Project #: 5504-8881

Client: SLR International Client Contact: Mike Staton Date: 5/25/05

Location: 4603 Ocean Beach Hwy PAI Project Manager: C. Taigh
Longview

Sampled by: M. Uber Lab: Prezant Associates, Inc. Method: EPA SW-846 - 7420

Contaminant: Lead

TCLP Composition Worksheet for Construction/Demolition Debris

Field Sample #: TCLP-01 Lab Sample #: 05006950

Min-Max %	Sample Wt. Lab (grams)	Description of Materials Sampled
25 %	10.00	Painted wood
75 %	30.00	Painted brick
Total--100%	40.00 grams	

Prezant Representative Signature: Mindy Uber
Revision 01/2000

Date: 5/25/05

NVL Laboratories, Inc.

4708 Aurora Ave. N., Seattle, WA 98103
Tel: 206.547.0100, Fax: 206.634.1936
www.nvllabs.com

Analysis Report

AIHA - IH
#101861

**Total Metals**

Client: Prezant Associates, Inc.
Address: 1730 Minor Ave. Suite 900
Seattle, WA 98101

Attention: Ms. Mindy Uber
Project Location: 4603 Ocean Beach HWY

Batch #: 2507433.00

Matrix: Paint Chips

Method: EPA 6010

Client Project #: S504-0001

Samples Received: 7

Total Samples Analyzed: 7

Lab ID	Client Sample #	Elements	Sample wt (g)	RL mg / kg	Results in mg / kg	Results in ppm
25046280	A-01	Arsenic (As)	0.2004	20.0	< 20.0	< 20.0
25046281	A-02	Arsenic (As)	0.2004	20.0	< 20.0	< 20.0
25046282	A-03	Arsenic (As)	0.2007	20.0	< 20.0	< 20.0
25046283	A-04	Arsenic (As)	0.1998	20.0	< 20.0	< 20.0
25046284	A-05	Arsenic (As)	0.2008	20.0	< 20.0	< 20.0
25046285	A-06	Arsenic (As)	0.2008	20.0	< 20.0	< 20.0
25046286	A-07	Arsenic (As)	0.0964	41.0	< 41.0	< 41.0

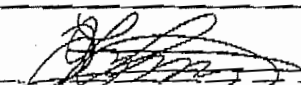
Sampled by: Client

Analyzed by: Cheston Perry

Reviewed by: Nick Ly

Date Analyzed: 06/01/2005

Date Issued: 06/01/2005


Nick Ly, Technical Director

mg / kg = Milligrams per kilogram
ppm = Parts per million

RL = Reporting Limit
'<' = Below the reporting Limit

Note : Method QC results are acceptable unless stated otherwise.

Bench Run No: 25-0531-2

Page 1 of 1

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103
 Tel: 206.547.0100 Emerg. Pager: 206.344.1878
 Fax: 206.634.1936 1.866.NVL.LABS (685.5227)

**CHAIN of CUSTODY
SAMPLE LOG**

Client Prezant Associates, Inc.
 Address 1730 Minor Ave. Suite 900

NVL Batch Number 2507433.00
 Client Job Number S504-0001

Seattle, WA 98101
 Project Manager Ms. Mindy Uber
 Project Location 4603 Ocean Beach HWY

Total Samples 7 Rush Samples _____
 Turn Around Time 13 Days Rush TAT _____
 Due Date 06/01/2005 Time 3:00 PM
 Email address muber@prezant.com

Phone: (206) 281-8858 Fax: (206) 281-8922 Cell: (206) 795-0340

☐ Asbestos Air	☐ PCM (NIOSH 7400)	☐ TEM (NIOSH 7402)	☐ TEM (AHERA)	☐ TEM (EPA Level II)	☐ Other
☐ Asbestos Bulk	☐ PLM (EPA/600/R-93/116)	☐ PLM (EPA Point Count)	☐ PLM (EPA Gravimetry)	☐ TEM BULK	
☐ Mold/Fungus	☐ Mold Air	☐ Mold Bulk	☐ Rotometer Calibration		
METALS	Inst. /Det Limit	Matrix	RCRA Metals	☐ All 8	Other Metals
☒ Total Metals	☒ FAA (ppm)	☐ Air Filter	☒ Arsenic (As)	☐ Lead (Pb)	☐ All 3
☐ TCLP	☐ ICP (ppm)	☐ Drinking water	☐ Barium (Ba)	☐ Mercury (Hg)	☐ Copper (Cu)
	☐ GFAA (ppb)	☐ Dust/wipe (Area)	☐ Cadmium (Cd)	☐ Selenium (Se)	☐ Nickel (Ni)
	☐ CVAA (ppb)	☐ Soil	☐ Chromium (Cr)	☐ Silver (Ag)	☐ Zinc (Zn)
☐ Other Types of Analysis	☐ Fiberglass	☐ Nuisance Dust	☐ Other (Specify) _____		
	☐ Silica	☐ Respirable Dust			

Condition of Package ☒ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

	Lab ID	Client Sample Number	Comments (e.g. Sample area, Sample Volume, etc)	A/R
1	25046280	A-01		A
2	25046281	A-02		A
3	25046282	A-03		A
4	25046283	A-04		A
5	25046284	A-05		A
6	25046285	A-06		A
7	25046286	A-07		A
8				
9				
10				
11				
12				
13				
14				
15				

	Print Below	Sign Below	Company	Date	Time
Sampled by	Client				
Relinquished by					
Received by	John Caparimo		NVL-AUR	5/26/05	3:00 PM
Relinquished by					
Analyzed by	Cheston Perry		NVL-AUR	6/1/05	
Results Called by					
☐ Faxed ☐ Emailed					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.
 See clients COC

Sample Log Chain of Custody

Prezant Laboratory Services

INTERNAL

Client: Mike Staton
 Company: SLR International Corp.
 Client Address: 22122 20th Ave SE, Bldg H, Ste 150
Bethell WA 98021
 City State Zip

PAI Batch #: 05-1224
 Prezant Job #: 5504-0001
 Client Job #: _____
 Number of Samples: 16

Phone #: 425-402-8800
 2nd or Cell #: _____
 Fax #: 425-402-8488
 e-mail Address: _____

Project Manager: Chuck Haigh

Project Location: 4603 Ocean Beach Hwy
Longview

Condition: ☒ Good ☐ Damaged ☐ Severe Damage

TYPE OF ANALYSIS		
ASBESTOS:	METALS:	
☐ PCM (air)	☐ Paint	☐ Soil
☒ PLM (bulk)	☐ Wipe	☐ Air
☐ Pt. Count (bulk)	☐ TCLP	☐ Water
Other Method: _____		

Turn Around Time (other):		
2 hour / 4 hour	Same Day	One Day
Two Day	<u>3-5 days</u>	10 days
Price per Sample: <u>16.20</u>		

#	Client Sample ID	PAI Laboratory ID	Comments	#	Client Sample ID	PAI Laboratory ID	Comments
1	SLR-01	05006925		11	SLR-11	05006935	
2	SLR-02	26		12	SLR-12	36	
3	SLR-03	27		13	SLR-13	37	
4	SLR-04	28		14	SLR-14	38	
5	SLR-05	29		15	SLR-15	39	
6	SLR-06	30		16	SLR-16	40	
7	SLR-07	31		17			
8	SLR-08	32		18			
9	SLR-09	33		19			
10	SLR-10	34		20			

	Signature	Date	Time
Sampled by:	<u>M. Utter</u>	<u>5/25/05</u>	
Relinquished by:	<u>Mindy Upen</u>	<u>5/26/05</u>	<u>8:15am</u>
Received by:			
Relinquished by:			
Received for Laboratory by:	<u>[Signature]</u>	<u>5/26/2005</u>	<u>0841</u>
Analyzed by:	<u>Kristie Danson</u>	<u>6/3/2005</u>	<u>1220</u>
Preliminary Results Reported to P.M. by:	<u>Kristie Danson</u>	<u>6/3/2005</u>	<u>1443</u>
Final Report to P.M. by:	<u>Kristie Danson</u>	<u>6/16/2005</u>	<u>0228</u>
Special Instructions: <u>Due 6/3/2005</u>			

Sample Log Chain of Custody

Prezant Laboratory Services

INTERNAL

Client: Mike Staton
 Company: SLR International Corp.
 Client Address: 22122 20th Ave SE, Bldg H, Ste 150
Bothell WA 98021
 City State Zip
 Phone #: 425-402-8800
 2nd or Cell #: _____
 Fax #: 425-402-8488
 e-mail Address: _____

PAI Batch #: 05-1225
 Prezant Job #: 5504-0001
 Client Job #: _____
 Number of Samples: 9

TYPE OF ANALYSIS

ASBESTOS:	METALS: <u>Lead</u>	
☐ PCM (air)	☒ Paint	☐ Soil
☐ PLM (bulk)	☐ Wipe	☐ Air
☐ Pt. Count (bulk)	☐ TCLP	☐ Water
Other Method: _____		

Project Manager: Chuck Haigh

Project Location: 4603 Ocean Beach Hwy
Longview

Turn Around Time (other):		
2 hour / 4 hour	Same Day	One Day
Two Day	<u>3-5 days</u>	10 days
Price per Sample: <u>18.00</u>		

Condition: ☒ Good ☐ Damaged ☐ Severe Damage

#	Client Sample ID	PAI Laboratory ID	Comments	#	Client Sample ID	PAI Laboratory ID	Comments
1	L-01	05006941		11			
2	L-02	42		12			
3	L-03	43		13			
4	L-04	44		14			
5	L-05	45		15			
6	L-06	46		16			
7	L-07	47		17			
8	L-08	48		18			
9	L-09	49		19			
10				20			

Signature

Date

Time

Sampled by: <u>M. Weber</u>	<u>Mindy Ober</u>	<u>5/25/05</u>	
Relinquished by: _____		<u>5/26/05</u>	<u>8:15 am</u>
Received by: _____			
Relinquished by: _____			
Received for Laboratory by: _____	<u>[Signature]</u>	<u>5/26/2005</u>	<u>0849</u>
Analyzed by: _____	<u>[Signature]</u>	<u>6/3/2005</u>	<u>11646</u>
Preliminary Results Reported to P.M. by: _____		<u>6/6/2005</u>	<u>0213</u>
Final Report to P.M. by: _____	<u>Debbie Dannon</u>		
Special Instructions: <u>Done 6/3/2005</u>			

Sample Log Chain of Custody

Prezant Laboratory Services

INTERNAL

Client: Mike Staton
 Company: SLR International Corp.
 Client Address: 22122 20th Ave SE, Bldg #, Ste 150
Bothell WA 98021
 City State Zip
 Phone #: 425-402-8800
 2nd or Cell #:
 Fax #: 425-402-8488
 e-mail Address:

PAI Batch #: 05-1226
 Prezant Job #: 5504-0001
 Client Job #:
 Number of Samples: 1

Project Manager: Chuck Haigh

Project Location: 4603 Ocean Beach Hwy
Longview

Condition: ☒ Good ☐ Damaged ☐ Severe Damage

TYPE OF ANALYSIS		
ASBESTOS:	METALS: <u>lead</u>	
☐ PCM (air)	☐ Paint	☐ Soil
☐ PLM (bulk)	☐ Wipe	☐ Air
☐ Pt. Count (bulk)	☒ TCLP	☐ Water
Other Method:		

Turn Around Time (other):		
2 hour / 4 hour	Same Day	One Day
Two Day	<u>3-5 days</u>	10 days
Price per Sample: <u>80.00</u>		

#	Client Sample ID	PAI Laboratory ID	Comments	#	Client Sample ID	PAI Laboratory ID	Comments
1	<u>TCLP-01</u>	<u>05006950</u>		11			
2				12			
3				13			
4				14			
5				15			
6				16			
7				17			
8				18			
9				19			
10				20			

Signature

Date

Time

Sampled by:	<u>M. Uber</u>	<u>Windy Uber</u>	<u>5/25/05</u>	
Relinquished by:			<u>5/26/05</u>	<u>8:28 am</u>
Received by:				
Relinquished by:				
Received for Laboratory by:			<u>5/26/2005</u>	<u>0855</u>
Analyzed by:			<u>6/2/2005</u>	<u>1130</u>
Preliminary Results Reported to P.M. by:				
Final Report to P.M. by:	<u>Electric Dawson</u>		<u>6/3/2005</u>	<u>1042</u>
Special Instructions: <u>Due 6/3/2005</u>				



Prezant

Consulting
Training
Laboratory

Project "Bean me Up" Espresso
4603 Ocean Beach Hwy
Description Longview

Page 1 of 3
Job Number SE04-0001
Date 5/25/05
Made By M. Uber

Notes

exterior is metal, wood, brick

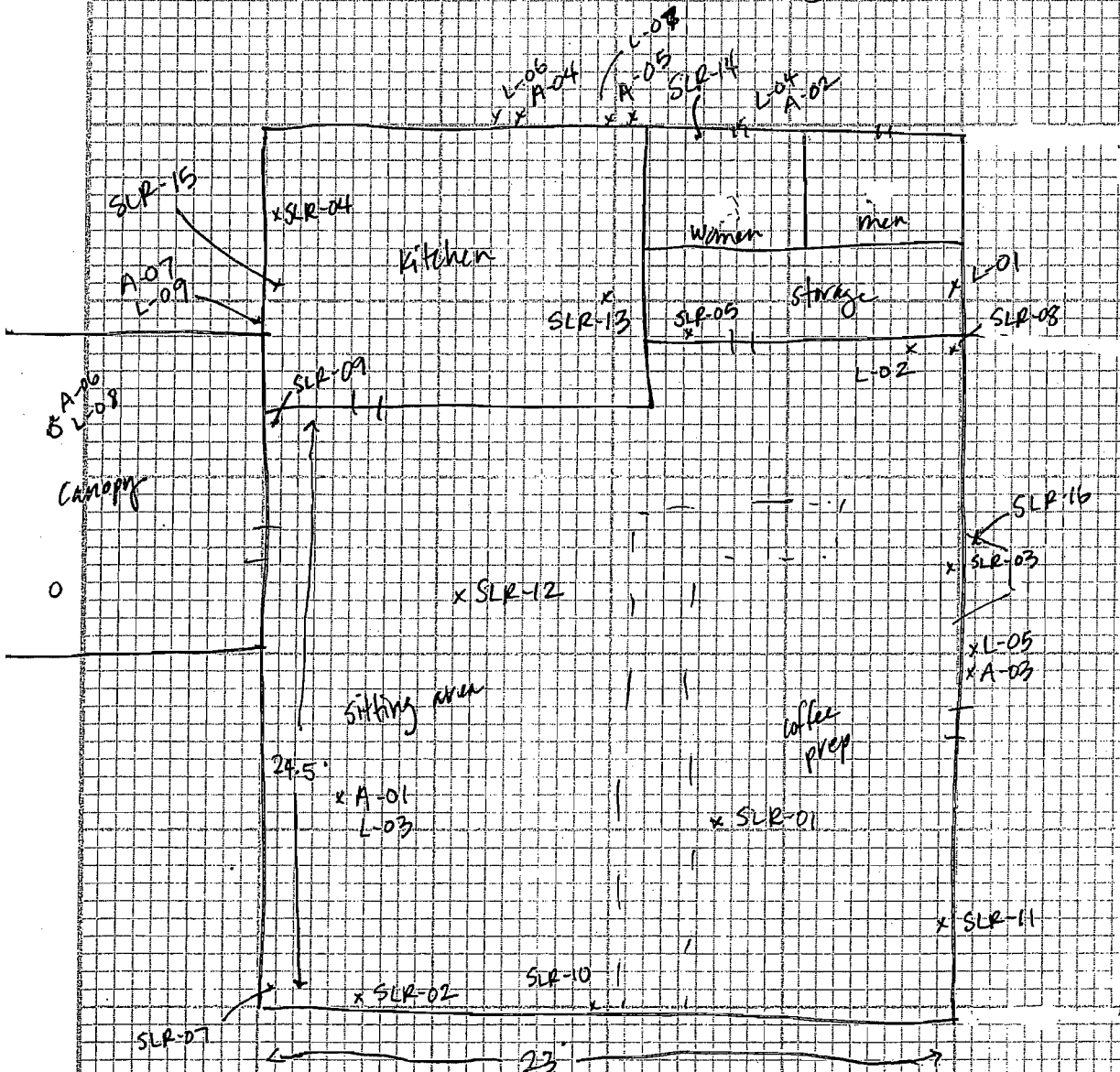
canopy roof is metal - other roof is shingles (3-tab)

6 - 4' 4" bulb fixtures
1 - 8' 4" bulb fixture

→ inside

10 - 4' 2" bulb fixtures - canopy

13 8' 1" bulb fixtures - perimeter of building





Prezant

Consulting
Training
Laboratory

Project 4603 Ocean Beach Hwy
Longview

Page 2 of 3

Job Number 5504-0001

Description _____

Date 5/25/05

Made By m. Ober

Notes Asbestos samples

Sample ID	Description	Location	Quantity
SLR-01	12" FT, light green w/ white & gray streaks over green & white VFS w/ pb & mastic	sitting prep	
SLR-02	12" FT, dark green w/ white & green streaks w/ yellow mastic over VFS accent tile	sitting prep	26 SF 12 SF
SLR-03	12" FT, rust orange w/ brown streaks and yellow mastic accent tile	sitting prep	7 SF 35 SF
SLR-04	VFS, orange square pebble pattern w/ paper backing & brown mastic	Kitchen	12 x 16
SLR-05	VFS, white w/ paper backing & brown mastic	storage	50 SF
SLR-06	white cave base mastic	throughout	
SLR-07-09	GWB w/ mudded seams & texturing	throughout (not storage)	
SLR-10 & 11	texturing on GWB	throughout (not storage)	
SLR-12	2' x 4' ceiling tile, fissure, lay-in	sitting & prep	
SLR-13	white sink undercoating	Kitchen	Leach
SLR-14	white ceramic tile grout & mastic	bathrooms	
SLR-15	2 layers 3-tab shingles w/ felt paper	building roof	
SLR-16	3 layers gray 3-tab shingles w/ felt paper	awning roof	

APPENDIX D
LABORATORY REPORTS

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

June 9, 2005

Mike Staton, Project Manager
SLR International Corp.
22122 20th Ave. SE., H-150
Bothell, WA 98021

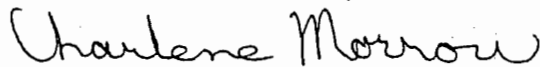
Dear Mr. Staton:

Included are the results from the testing of material submitted on May 26, 2005 from the Longview-Wakefield, 001.0173.00002, F&BI 505285 project. There are 87 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Charlene Morrow
Chemist

Enclosures
SLR0609R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/09/05

Date Received: 05/26/05

Project: Longview-Wakefield, 001.0173.00002, F&BI 505285

Date Extracted: 06/06/05

Date Analyzed: 06/06/06 and 06/07/05

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx

Results Reported on a Dry Weight Basis

Results Reported as $\mu\text{g/g}$ (ppm)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 66-150)
SSB1-5 d 505285-01	2,300	130
SSB1-15 505285-03	3	102
SSB2-3 d 505285-04	100	104
SSB2-17 505285-06	<2	102
SSB3-3-5 505285-07	170	239
SSB3-12 505285-10	21	120
SSB4-5 505285-11	6	112
SSB4-12 505285-12	4	114
SSB5-3-5 505285-13	95	176
SSB5-9-10 505285-14	6	119
SSB6-9 505285-15	<2	105

d - The sample was diluted.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/09/05

Date Received: 05/26/05

Project: Longview-Wakefield, 001.0173.00002, F&BI 505285

Date Extracted: 06/06/05

Date Analyzed: 06/06/06 and 06/07/05

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx

Results Reported on a Dry Weight Basis

Results Reported as $\mu\text{g/g}$ (ppm)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 66-150)
SSB7-5 505285-16	<2	101
SSB7-9 505285-17	6	103
SSB8-5 505285-18	8	147
SSB8-9 505285-19	<2	104
SSB9-5 505285-20	9	122
SSB9-12 505285-21	<2	105
SSB10-5 505285-22	<2	100
SSB10-9 505285-23	<2	100
SSB11-5 505285-24	<2	100
SSB11-9 505285-25	<2	100
SSB12-9 505285-26	2	102

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/09/05

Date Received: 05/26/05

Project: Longview-Wakefield, 001.0173.00002, F&BI 505285

Date Extracted: 06/06/05

Date Analyzed: 06/06/06 and 06/07/05

**RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**

Results Reported on a Dry Weight Basis

Results Reported as µg/g (ppm)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 66-150)
SSB12-25 505285-28	<2	101
SSB13-5-7 505285-29	4	112
SSB13-9 505285-30	<2	99
SSB14-5 505285-31	<2	102
SSB14-9 505285-32	<2	99
SSB15-5 d 505285-33	2,200	123
SSB15-15 d 505285-34	750	133
SSB15-19 505285-35	51	112
SSB15-24 505285-36	18	103
MW10-5 505285-37	5	121
MW10-14 505285-39	2	116

d - The sample was diluted.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/09/05

Date Received: 05/26/05

Project: Longview-Wakefield, 001.0173.00002, F&BI 505285

Date Extracted: 06/06/05

Date Analyzed: 06/06/06 and 06/07/05

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx

Results Reported on a Dry Weight Basis

Results Reported as $\mu\text{g/g}$ (ppm)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 66-150)
MW9-5 505285-40	<2	98
MW9-10 505285-41	<2	101
MW8-5 505285-42	<2	101
MW8-10 505285-43	<2	99
SSB6-5 d 505285-44	120	111
Method Blank	<2	99
Method Blank	<2	99

d - The sample was diluted.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/09/05

Date Received: 05/26/05

Project: Longview-Wakefield, 001.0173.00002, F&BI 505285

Date Extracted: 06/02/05

Date Analyzed: 06/03/05

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**

Results Reported as µg/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 52-150)
MW1-0505 505285-46	<100	101
MW4-0505 d 505285-47	9,600	143
MW5-0505 505285-48	460	127
MW6-0505 505285-49	370	118
MW7-0505 505285-50	<100	109
MW8-0505 505285-51	<100	101
MW9-0505 505285-52	<100	100
MW10-0505 505285-53	1,000	ip
SSB15-W 505285-54	67,000 ve	ip
Method Blank	<100	97

d - The sample was diluted.

ve - The value reported exceeded the calibration range established for the analyte. The reported concentration is an estimate.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/09/05

Date Received: 05/26/05

Project: Longview-Wakefield, 001.0173.00002, F&BI 505285

Date Extracted: 05/27/05

Date Analyzed: 06/01/05 and 06/02/05

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

Extended to Include Motor Oil Range Compounds

**Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis**

Results Reported on a Dry Weight Basis

Results Reported as µg/g (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>TRPH</u> (C ₁₀ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 67-131)
SSB1-5 x 505285-01	2,700	2,700	103
SSB1-15 505285-03	<50	<20	99
SSB2-3 x 505285-04	340	360	96
SSB2-17 505285-06	<50	<20	94
SSB3-3-5 x 505285-07	260	260	103
SSB3-12 505285-10	<50	<250	106
SSB4-5 505285-11	<50	<250	94
SSB4-12 505285-12	<50	<250	92
SSB5-3-5 505285-13	<50	<250	96

x - The pattern of peaks present is not indicative of diesel. The result is due to overlap from the gasoline range.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/09/05

Date Received: 05/26/05

Project: Longview-Wakefield, 001.0173.00002, F&BI 505285

Date Extracted: 05/27/05

Date Analyzed: 06/01/05 and 06/02/05

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

Extended to Include Motor Oil Range Compounds

Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis

Results Reported on a Dry Weight Basis

Results Reported as µg/g (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>TRPH</u> (C ₁₀ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 67-131)
SSB5-9-10 x 505285-14	79	<250	97
SSB6-9 505285-15	<50	<250	96
SSB7-5 505285-16	<50	<250	99
SSB7-9 x 505285-17	86	<250	98
SSB8-5 505285-18	<50	<250	94
SSB8-9 505285-19	<50	<250	97
SSB9-5 505285-20	2,200	2,200	94
SSB9-12 y 505285-21	<50	290	95
SSB10-5 505285-22	<50	<250	92

x - The pattern of peaks present is not indicative of diesel. The result is due to overlap from the gasoline range.

y - The pattern of peaks present is not indicative of diesel. The sample was reanalyzed against motor oil.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/09/05

Date Received: 05/26/05

Project: Longview-Wakefield, 001.0173.00002, F&BI 505285

Date Extracted: 05/27/05

Date Analyzed: 06/01/05 and 06/02/05

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

Extended to Include Motor Oil Range Compounds

Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis

Results Reported on a Dry Weight Basis

Results Reported as µg/g (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>TRPH</u> (C ₁₀ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 67-131)
SSB10-9 505285-23	<50	<250	100
SSB11-5 505285-24	<50	<250	93
SSB11-9 505285-25	<50	<250	95
SSB12-9 505285-26	<50	<250	97
SSB12-25 505285-28	<50	<250	104
SSB13-5-7 505285-29	<50	<250	95
SSB13-9 505285-30	<50	<250	101
SSB14-5 505285-31	<50	<250	105
SSB14-9 505285-32	<50	<250	94

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/09/05

Date Received: 05/26/05

Project: Longview-Wakefield, 001.0173.00002, F&BI 505285

Date Extracted: 05/27/05

Date Analyzed: 06/01/05 and 06/02/05

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

Extended to Include Motor Oil Range Compounds

Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis

Results Reported on a Dry Weight Basis

Results Reported as µg/g (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>TRPH</u> (C ₁₀ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 67-131)
SSB15-5 x 505285-33	3,300	3,200	101
SSB15-15 x 505285-34	1,600	1,600	97
SSB15-19 505285-35	<50	<250	96
SSB15-24 505285-36	<50	<250	95
MW10-5 505285-37	<50	<250	94
MW10-14 505285-39	<50	<250	93
MW9-5 505285-40	<50	<250	98
MW9-10 505285-41	<50	<250	95
MW8-5 505285-42	<50	<250	98

x - The pattern of peaks present is not indicative of diesel. The result is due to overlap from the gasoline range.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/09/05

Date Received: 05/26/05

Project: Longview-Wakefield, 001.0173.00002, F&BI 505285

Date Extracted: 05/27/05

Date Analyzed: 06/01/05 and 06/02/05

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

Extended to Include Motor Oil Range Compounds

**Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis**

Results Reported on a Dry Weight Basis

Results Reported as $\mu\text{g/g}$ (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>TRPH</u> (C ₁₀ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 67-131)
MW8-10 505285-43	<50	<250	110
SSB6-5 x 505285-44	940	940	99
Method Blank	<50	<250	98
Method Blank	<50	<250	97

x - The pattern of peaks present is not indicative of diesel. The result is due to overlap from the gasoline range.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/09/05

Date Received: 05/26/05

Project: Longview-Wakefield, 001.0173.00002, F&BI 505285

Date Extracted: 05/27/05

Date Analyzed: 06/09/05

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

Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis

Results Reported on a Dry Weight Basis

Results Reported as µg/g (ppm)

<u>Sample ID</u> Laboratory ID	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 67-131)
SSB9-12 505285-21	650	97
Method Blank	<250	97

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/09/05

Date Received: 05/26/05

Project: Longview-Wakefield, 001.0173.00002, F&BI 505285

Date Extracted: 05/27/05 and 06/01/05

Date Analyzed: 05/31/05, 06/01/05, and 06/02/05

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

Extended to Include Motor Oil Range Compounds

**Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis**

Results Reported as µg/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>TRPH</u> (C ₁₀ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 68-143)
MW1-0505 505285-46	<50	<250	95
MW4-0505 505285-47	2,300	2,200	73
MW5-0505 505285-48	120	<250	68
MW6-0505 505285-49	270	250	79
MW7-0505 505285-50	220	<250	82
MW8-0505 505285-51	<70	<250	79
MW9-0505 505285-52	<50	<250	79
MW10-0505 505285-53	1,200	1,200	73
SSB15-W 505285-54	2,300	2,200	74
Method Blank	<50	<250	89

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID: SSB1-5	Client: SLR International Corp.
Date Received: 05/26/05	Project: 001.0173.00002, F&BI 505285
Date Extracted: 05/31/05	Lab ID: 505285-01 1/10
Date Analyzed: 06/01/05	Data File: 060115.D
Matrix: soil	Instrument: GCMS5
Units: ug/g (ppm)	Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	106	36	146
1,2-Dichloroethane-d4	107	40	139
Toluene-d8	103	36	152
4-Bromofluorobenzene	105	67	124

Compounds:	Concentration ug/g (ppm)
Benzene	11
Toluene	73
Ethylbenzene	40
m,p-Xylene	150
o-Xylene	67
1,2-Dichloroethane (EDC)	<0.5

Note: The sample was diluted due to the presence of high levels of material. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID: SSB1-15	Client: SLR International Corp.
Date Received: 05/26/05	Project: 001.0173.00002, F&BI 505285
Date Extracted: 05/31/05	Lab ID: 505285-03
Date Analyzed: 06/01/05	Data File: 060113.D
Matrix: soil	Instrument: GCMS5
Units: ug/g (ppm)	Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	105	36	146
1,2-Dichloroethane-d4	105	40	139
Toluene-d8	103	36	152
4-Bromofluorobenzene	107	67	124

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	1.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB2-3	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-04
Date Analyzed:	06/01/05	Data File:	060117.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	106	36	146
1,2-Dichloroethane-d4	111	40	139
Toluene-d8	104	36	152
4-Bromofluorobenzene	105	67	124

Compounds:	Concentration ug/g (ppm)
Benzene	0.50
Toluene	6.5 ve
Ethylbenzene	3.8 ve
m,p-Xylene	15 ve
o-Xylene	7.7
1,2-Dichloroethane (EDC)	<0.05

ve - The value reported exceeded the calibration range established for the analyte. The reported concentration is an estimate.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID: SSB2-3	Client: SLR International Corp.
Date Received: 05/26/05	Project: 001.0173.00002, F&BI 505285
Date Extracted: 05/31/05	Lab ID: 505285-04 1/2
Date Analyzed: 06/02/05	Data File: 060138.D
Matrix: soil	Instrument: GCMS5
Units: ug/g (ppm)	Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	101	36	146
1,2-Dichloroethane-d4	106	40	139
Toluene-d8	91	36	152
4-Bromofluorobenzene	90	67	124

Compounds:	Concentration ug/g (ppm)
Benzene	0.4
Toluene	6.1
Ethylbenzene	3.8
m,p-Xylene	16
o-Xylene	7.8
1,2-Dichloroethane (EDC)	<0.1

Note: The sample was diluted due to the presence of high levels of material. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB2-17	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-06
Date Analyzed:	06/01/05	Data File:	060118.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	104	36	146
1,2-Dichloroethane-d4	110	40	139
Toluene-d8	103	36	152
4-Bromofluorobenzene	109	67	124

Compounds:	Concentration ug/g (ppm)
Benzene	0.04
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	0.11
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB3-3-5	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-07
Date Analyzed:	06/01/05	Data File:	060119.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	102	36	146
1,2-Dichloroethane-d4	112	40	139
Toluene-d8	105	36	152
4-Bromofluorobenzene	106	67	124

Compounds:	Concentration ug/g (ppm)
Benzene	1.1
Toluene	0.9
Ethylbenzene	2.8
m,p-Xylene	9.9
o-Xylene	3.7
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB3-12	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-10
Date Analyzed:	06/01/05	Data File:	060120.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	105	36	146
1,2-Dichloroethane-d4	110	40	139
Toluene-d8	103	36	152
4-Bromofluorobenzene	108	67	124

Compounds:	Concentration ug/g (ppm)
Benzene	0.57
Toluene	<0.05
Ethylbenzene	0.89
m,p-Xylene	1.4
o-Xylene	0.18
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB4-5	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-11
Date Analyzed:	06/01/05	Data File:	060121.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	102	36	146
1,2-Dichloroethane-d4	108	40	139
Toluene-d8	104	36	152
4-Bromofluorobenzene	105	67	124

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB4-12	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-12
Date Analyzed:	06/01/05	Data File:	060122.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	106	36	146
1,2-Dichloroethane-d4	112	40	139
Toluene-d8	103	36	152
4-Bromofluorobenzene	106	67	124

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB5-3-5	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-13
Date Analyzed:	06/02/05	Data File:	060127.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	107	83	129
1,2-Dichloroethane-d4	111	67	133
Toluene-d8	107	73	140
4-Bromofluorobenzene	105	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	0.05
Toluene	<0.05
Ethylbenzene	1.7
m,p-Xylene	5.7
o-Xylene	0.95
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB5-9-10	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-14
Date Analyzed:	06/02/05	Data File:	060128.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	105	83	129
1,2-Dichloroethane-d4	110	67	133
Toluene-d8	104	73	140
4-Bromofluorobenzene	105	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB6-9	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-15
Date Analyzed:	06/02/05	Data File:	060129.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	107	83	129
1,2-Dichloroethane-d4	112	67	133
Toluene-d8	102	73	140
4-Bromofluorobenzene	108	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB7-5	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-16
Date Analyzed:	06/02/05	Data File:	060130.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	109	83	129
1,2-Dichloroethane-d4	112	67	133
Toluene-d8	102	73	140
4-Bromofluorobenzene	107	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID: SSB7-9	Client: SLR International Corp.
Date Received: 05/26/05	Project: 001.0173.00002, F&BI 505285
Date Extracted: 05/31/05	Lab ID: 505285-17
Date Analyzed: 06/02/05	Data File: 060131.D
Matrix: soil	Instrument: GCMS5
Units: ug/g (ppm)	Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	109	83	129
1,2-Dichloroethane-d4	111	67	133
Toluene-d8	103	73	140
4-Bromofluorobenzene	105	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	0.13
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB8-5	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-18
Date Analyzed:	06/02/05	Data File:	060132.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	108	83	129
1,2-Dichloroethane-d4	111	67	133
Toluene-d8	105	73	140
4-Bromofluorobenzene	109	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB8-9	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-19
Date Analyzed:	06/02/05	Data File:	060133.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	109	83	129
1,2-Dichloroethane-d4	114	67	133
Toluene-d8	103	73	140
4-Bromofluorobenzene	107	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB9-5	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-20
Date Analyzed:	06/02/05	Data File:	060134.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	107	83	129
1,2-Dichloroethane-d4	107	67	133
Toluene-d8	104	73	140
4-Bromofluorobenzene	108	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB9-12	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-21
Date Analyzed:	06/02/05	Data File:	060135.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	109	83	129
1,2-Dichloroethane-d4	109	67	133
Toluene-d8	104	73	140
4-Bromofluorobenzene	110	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB10-5	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-22
Date Analyzed:	06/02/05	Data File:	060136.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	110	83	129
1,2-Dichloroethane-d4	114	67	133
Toluene-d8	105	73	140
4-Bromofluorobenzene	108	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB10-9	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-23
Date Analyzed:	06/03/05	Data File:	060317.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	117	36	146
1,2-Dichloroethane-d4	112	40	139
Toluene-d8	97	36	152
4-Bromofluorobenzene	110	67	124

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB11-5	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-24
Date Analyzed:	06/06/05	Data File:	060617.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	105	36	146
1,2-Dichloroethane-d4	105	40	139
Toluene-d8	96	36	152
4-Bromofluorobenzene	105	67	124

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB11-9	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-25
Date Analyzed:	06/04/05	Data File:	060327.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	113	83	129
1,2-Dichloroethane-d4	107	67	133
Toluene-d8	95	73	140
4-Bromofluorobenzene	107	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB12-9	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-26
Date Analyzed:	06/04/05	Data File:	060328.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	112	83	129
1,2-Dichloroethane-d4	106	67	133
Toluene-d8	95	73	140
4-Bromofluorobenzene	107	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB12-25	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-28
Date Analyzed:	06/04/05	Data File:	060329.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	110	83	129
1,2-Dichloroethane-d4	103	67	133
Toluene-d8	94	73	140
4-Bromofluorobenzene	108	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID: SSB13-5-7	Client: SLR International Corp.
Date Received: 05/26/05	Project: 001.0173.00002, F&BI 505285
Date Extracted: 05/31/05	Lab ID: 505285-29
Date Analyzed: 06/04/05	Data File: 060330.D
Matrix: soil	Instrument: GCMS5
Units: ug/g (ppm)	Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	113	83	129
1,2-Dichloroethane-d4	109	67	133
Toluene-d8	99	73	140
4-Bromofluorobenzene	113	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB13-9	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-30
Date Analyzed:	06/04/05	Data File:	060331.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	111	83	129
1,2-Dichloroethane-d4	103	67	133
Toluene-d8	97	73	140
4-Bromofluorobenzene	111	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB14-5	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-31
Date Analyzed:	06/04/05	Data File:	060332.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	114	83	129
1,2-Dichloroethane-d4	109	67	133
Toluene-d8	99	73	140
4-Bromofluorobenzene	113	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID: SSB14-9	Client: SLR International Corp.
Date Received: 05/26/05	Project: 001.0173.00002, F&BI 505285
Date Extracted: 05/31/05	Lab ID: 505285-32
Date Analyzed: 06/04/05	Data File: 060333.D
Matrix: soil	Instrument: GCMS5
Units: ug/g (ppm)	Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	113	83	129
1,2-Dichloroethane-d4	112	67	133
Toluene-d8	99	73	140
4-Bromofluorobenzene	111	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB15-5	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-33
Date Analyzed:	06/04/05	Data File:	060334.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	110	83	129
1,2-Dichloroethane-d4	112	67	133
Toluene-d8	110	73	140
4-Bromofluorobenzene	112	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	12 ve
Toluene	48 ve
Ethylbenzene	24 ve
m,p-Xylene	72 ve
o-Xylene	49 ve
1,2-Dichloroethane (EDC)	<0.05

ve - The value reported exceeded the calibration range established for the analyte. The reported concentration is an estimate.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB15-5	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-33 1/200
Date Analyzed:	06/06/05	Data File:	060621.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	76	36	146
1,2-Dichloroethane-d4	72	40	139
Toluene-d8	140	36	152
4-Bromofluorobenzene	112	67	124

Compounds:	Concentration ug/g (ppm)
Benzene	16
Toluene	82
Ethylbenzene	27
m,p-Xylene	110
o-Xylene	42
1,2-Dichloroethane (EDC)	<10

Note: The sample was diluted due to the presence of high levels of material. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB15-15	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-34
Date Analyzed:	06/06/05	Data File:	060618.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	105	36	146
1,2-Dichloroethane-d4	107	40	139
Toluene-d8	99	36	152
4-Bromofluorobenzene	102	67	124

Compounds:	Concentration ug/g (ppm)
Benzene	0.06
Toluene	1.6
Ethylbenzene	4.5
m,p-Xylene	18 ve
o-Xylene	7.0
1,2-Dichloroethane (EDC)	<0.05

ve - The value reported exceeded the calibration range established for the analyte. The reported concentration is an estimate.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB15-15	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-34 1/2
Date Analyzed:	06/06/05	Data File:	060620.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	101	36	146
1,2-Dichloroethane-d4	105	40	139
Toluene-d8	99	36	152
4-Bromofluorobenzene	105	67	124

Compounds:	Concentration ug/g (ppm)
Benzene	<0.06
Toluene	1.6
Ethylbenzene	4.6
m,p-Xylene	20
o-Xylene	7.1
1,2-Dichloroethane (EDC)	<0.1

Note: The sample was diluted due to the presence of high levels of material. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB15-19	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-35
Date Analyzed:	06/06/05	Data File:	060619.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	99	36	146
1,2-Dichloroethane-d4	103	40	139
Toluene-d8	97	36	152
4-Bromofluorobenzene	106	67	124

Compounds:	Concentration ug/g (ppm)
Benzene	0.06
Toluene	0.20
Ethylbenzene	0.30
m,p-Xylene	1.5
o-Xylene	0.79
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB15-24	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-36
Date Analyzed:	06/04/05	Data File:	060337.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	103	83	129
1,2-Dichloroethane-d4	109	67	133
Toluene-d8	97	73	140
4-Bromofluorobenzene	104	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	1.1
Toluene	0.20
Ethylbenzene	1.6
m,p-Xylene	6.4
o-Xylene	2.3
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW10-5	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-37
Date Analyzed:	06/04/05	Data File:	060338.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	102	83	129
1,2-Dichloroethane-d4	111	67	133
Toluene-d8	97	73	140
4-Bromofluorobenzene	106	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW10-14	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-39
Date Analyzed:	06/04/05	Data File:	060339.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	102	83	129
1,2-Dichloroethane-d4	107	67	133
Toluene-d8	96	73	140
4-Bromofluorobenzene	107	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID: MW9-5	Client: SLR International Corp.
Date Received: 05/26/05	Project: 001.0173.00002, F&BI 505285
Date Extracted: 05/31/05	Lab ID: 505285-40
Date Analyzed: 06/04/05	Data File: 060340.D
Matrix: soil	Instrument: GCMS5
Units: ug/g (ppm)	Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	105	83	129
1,2-Dichloroethane-d4	106	67	133
Toluene-d8	98	73	140
4-Bromofluorobenzene	105	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW9-10	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-41
Date Analyzed:	06/04/05	Data File:	060341.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	106	83	129
1,2-Dichloroethane-d4	101	67	133
Toluene-d8	96	73	140
4-Bromofluorobenzene	106	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW8-5	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-42
Date Analyzed:	06/04/05	Data File:	060342.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	105	83	129
1,2-Dichloroethane-d4	114	67	133
Toluene-d8	96	73	140
4-Bromofluorobenzene	103	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW8-10	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-43
Date Analyzed:	06/04/05	Data File:	060343.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	105	83	129
1,2-Dichloroethane-d4	107	67	133
Toluene-d8	95	73	140
4-Bromofluorobenzene	107	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB6-5	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-44
Date Analyzed:	06/04/05	Data File:	060344.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	104	83	129
1,2-Dichloroethane-d4	110	67	133
Toluene-d8	103	73	140
4-Bromofluorobenzene	105	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	0.25
Toluene	2.1
Ethylbenzene	10 ve
m,p-Xylene	33 ve
o-Xylene	17 ve
1,2-Dichloroethane (EDC)	<0.05

ve - The value reported exceeded the calibration range established for the analyte. The reported concentration is an estimate.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB6-5	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	505285-44 1/20
Date Analyzed:	06/09/05	Data File:	060834.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	97	36	146
1,2-Dichloroethane-d4	100	40	139
Toluene-d8	86	36	152
4-Bromofluorobenzene	99	67	124

Compounds:	Concentration ug/g (ppm)
Benzene	<0.6
Toluene	2
Ethylbenzene	11
m,p-Xylene	46
o-Xylene	19
1,2-Dichloroethane (EDC)	<1

Note: The sample was diluted due to the presence of high levels of material. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

Note: The sample was analyzed outside of recommended holding time.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/09/05

Date Received: 05/26/05

Project: Longview-Wakefield, 001.0173.00002, F&BI 505285

Client Sample ID: Method Blank

Date Received: Not Applicable

Date Extracted: 05/31/05

Date Analyzed: 06/01/05

Matrix: soil

Units: ug/g (ppm)

Client: SLR International Corp.

Project: 001.0173.00002, F&BI 505285

Lab ID: 05-707 mb

Data File: 060139D

Instrument: GCMS5

Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	111	36	146
1,2-Dichloroethane-d4	111	40	139
Toluene-d8	103	36	152
4-Bromofluorobenzene	107	67	124

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	SLR International Corp.
Date Received:	Not Applicable	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/31/05	Lab ID:	05-752 mb
Date Analyzed:	06/04/05	Data File:	060326.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	114	83	129
1,2-Dichloroethane-d4	110	67	133
Toluene-d8	96	73	140
4-Bromofluorobenzene	109	84	136

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05

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ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW1-0505	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/27/05	Lab ID:	505285-46
Date Analyzed:	05/28/05	Data File:	052728.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	111	83	129
1,2-Dichloroethane-d4	112	67	133
Toluene-d8	101	73	140
4-Bromofluorobenzene	107	84	136

Compounds:	Concentration ug/L (ppb)
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

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ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID: MW4-0505	Client: SLR International Corp.
Date Received: 05/26/05	Project: 001.0173.00002, F&BI 505285
Date Extracted: 05/27/05	Lab ID: 505285-47 1/2
Date Analyzed: 06/01/05	Data File: 060108.D
Matrix: water	Instrument: GCMS5
Units: ug/L (ppb)	Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	106	83	129
1,2-Dichloroethane-d4	110	67	133
Toluene-d8	107	73	140
4-Bromofluorobenzene	105	84	136

Compounds:	Concentration ug/L (ppb)
Benzene	270
Toluene	2.9
Ethylbenzene	320 ve
m,p-Xylene	180
o-Xylene	4.8
1,2-Dichloroethane (EDC)	<2

ve - The value reported exceeded the calibration range established for the analyte. The reported concentration is an estimate.

Note: The sample was diluted due to the presence of high levels of material. Detection limits are raised due to dilution.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW4-0505	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/27/05	Lab ID:	505285-47 1/10
Date Analyzed:	05/28/05	Data File:	052729.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	111	83	129
1,2-Dichloroethane-d4	110	67	133
Toluene-d8	104	73	140
4-Bromofluorobenzene	107	84	136

Compounds:	Concentration ug/L (ppb)
Benzene	310
Toluene	<10
Ethylbenzene	410
m,p-Xylene	220
o-Xylene	<10
1,2-Dichloroethane (EDC)	<10

Note: The sample was diluted due to the presence of high levels of material. Detection limits are raised due to dilution.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW5-0505	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/27/05	Lab ID:	505285-48
Date Analyzed:	06/01/05	Data File:	060106.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	103	83	129
1,2-Dichloroethane-d4	109	67	133
Toluene-d8	103	73	140
4-Bromofluorobenzene	108	84	136

Compounds:	Concentration ug/L (ppb)
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

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ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW6-0505	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/27/05	Lab ID:	505285-49
Date Analyzed:	05/28/05	Data File:	052731.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	110	83	129
1,2-Dichloroethane-d4	111	67	133
Toluene-d8	104	73	140
4-Bromofluorobenzene	109	84	136

Compounds:	Concentration ug/L (ppb)
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW7-0505	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/27/05	Lab ID:	505285-50
Date Analyzed:	05/28/05	Data File:	052732.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	109	83	129
1,2-Dichloroethane-d4	112	67	133
Toluene-d8	101	73	140
4-Bromofluorobenzene	110	84	136

Compounds:	Concentration ug/L (ppb)
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW8-0505	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/27/05	Lab ID:	505285-51
Date Analyzed:	05/28/05	Data File:	052733.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	111	83	129
1,2-Dichloroethane-d4	116	67	133
Toluene-d8	100	73	140
4-Bromofluorobenzene	106	84	136

Compounds:	Concentration ug/L (ppb)
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW9-0505	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/27/05	Lab ID:	505285-52
Date Analyzed:	05/27/05	Data File:	052726.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	111	83	129
1,2-Dichloroethane-d4	109	67	133
Toluene-d8	103	73	140
4-Bromofluorobenzene	109	84	136

Compounds:	Concentration ug/L (ppb)
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

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ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW10-0505	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/27/05	Lab ID:	505285-53
Date Analyzed:	05/27/05	Data File:	052727.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	109	83	129
1,2-Dichloroethane-d4	110	67	133
Toluene-d8	104	73	140
4-Bromofluorobenzene	106	84	136

Compounds:	Concentration ug/L (ppb)
Benzene	45
Toluene	<1
Ethylbenzene	110
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB15-W	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/27/05	Lab ID:	505285-54 1/10
Date Analyzed:	05/28/05	Data File:	052734.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	109	83	129
1,2-Dichloroethane-d4	108	67	133
Toluene-d8	100	73	140
4-Bromofluorobenzene	105	84	136

Compounds:	Concentration ug/L (ppb)
Benzene	7,400 ve
Toluene	1,100
Ethylbenzene	2,700 ve
m,p-Xylene	8,400 ve
o-Xylene	3,800 ve
1,2-Dichloroethane (EDC)	<10

ve - The value reported exceeded the calibration range established for the analyte. The reported concentration is an estimate.

Note: The sample was diluted due to the presence of high levels of material. Detection limits are raised due to dilution.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB15-W	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/27/05	Lab ID:	505285-54 1/100
Date Analyzed:	06/01/05	Data File:	060107.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	108	83	129
1,2-Dichloroethane-d4	111	67	133
Toluene-d8	104	73	140
4-Bromofluorobenzene	107	84	136

Compounds:	Concentration ug/L (ppb)
Benzene	9,600
Toluene	1,000
Ethylbenzene	2,400
m,p-Xylene	8,300
o-Xylene	3,300
1,2-Dichloroethane (EDC)	<100

Note: The sample was diluted due to the presence of high levels of material. Detection limits are raised due to dilution.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	SLR International Corp.
Date Received:	Not Applicable	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/27/05	Lab ID:	05-705 mb
Date Analyzed:	05/27/05	Data File:	052705.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	102	83	129
1,2-Dichloroethane-d4	106	67	133
Toluene-d8	100	73	140
4-Bromofluorobenzene	104	84	136

Compounds:	Concentration ug/L (ppb)
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	SLR International Corp.
Date Received:	Not Applicable	Project:	001.0173.00002, F&BI 505285
Date Extracted:	06/01/05	Lab ID:	05-708 mb
Date Analyzed:	06/01/05	Data File:	060105.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	107	83	129
1,2-Dichloroethane-d4	110	67	133
Toluene-d8	102	73	140
4-Bromofluorobenzene	106	84	136

Compounds:	Concentration ug/L (ppb)
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PNA Compounds By EPA Method 8270C SIM

Client Sample ID: SSB8-5	Client: SLR International Corp.
Date Received: 05/26/05	Project: 001.0173.00002, F&BI 505285
Date Extracted: 05/27/05	Lab ID: 505285-18 1/10
Date Analyzed: 06/06/05	Data File: 060527.D
Matrix: soil	Instrument: GCMS3
Units: ug/kg (ppb)	Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	128	38	158
Benzo(a)anthracene-d12	101	35	146

Compounds:	Concentration ug/kg (ppb)
Naphthalene	160
Acenaphthylene	<50
Acenaphthene	<50
Fluorene	<50
Phenanthrene	<50
Anthracene	<50
Fluoranthene	<50
Pyrene	<50
Benz(a)anthracene	<170
Chrysene	<50
Benzo(b)fluoranthene	<170
Benzo(k)fluoranthene	<170
Benzo(a)pyrene	<170
Indeno(1,2,3-cd)pyrene	<170
Dibenzo(a,h)anthracene	<170
Benzo(g,h,i)perylene	<170

Note: The sample was diluted due to sample matrix effects. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PNA Compounds By EPA Method 8270C SIM

Client Sample ID:	SSB8-9	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/27/05	Lab ID:	505285-19
Date Analyzed:	06/05/05	Data File:	060521.D
Matrix:	soil	Instrument:	GCMS3
Units:	ug/kg (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	88	38	158
Benzo(a)anthracene-d12	85	35	146

Compounds:	Concentration ug/kg (ppb)
Naphthalene	<5
Acenaphthylene	<5
Acenaphthene	<5
Fluorene	<5
Phenanthrene	<5
Anthracene	<5
Fluoranthene	<5
Pyrene	<5
Benz(a)anthracene	<17
Chrysene	<5
Benzo(b)fluoranthene	<17
Benzo(k)fluoranthene	<17
Benzo(a)pyrene	<17
Indeno(1,2,3-cd)pyrene	<17
Dibenzo(a,h)anthracene	<17
Benzo(g,h,i)perylene	<17

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PNA Compounds By EPA Method 8270C SIM

Client Sample ID:	SSB13-5-7	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/27/05	Lab ID:	505285-29
Date Analyzed:	06/05/05	Data File:	060523.D
Matrix:	soil	Instrument:	GCMS3
Units:	ug/kg (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	87	38	158
Benzo(a)anthracene-d12	85	35	146

Compounds:	Concentration ug/kg (ppb)
Naphthalene	<5
Acenaphthylene	<5
Acenaphthene	<5
Fluorene	5.3
Phenanthrene	<5
Anthracene	<5
Fluoranthene	12
Pyrene	25
Benz(a)anthracene	<17
Chrysene	<5
Benzo(b)fluoranthene	<17
Benzo(k)fluoranthene	<17
Benzo(a)pyrene	<17
Indeno(1,2,3-cd)pyrene	<17
Dibenzo(a,h)anthracene	<17
Benzo(g,h,i)perylene	<17

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PNA Compounds By EPA Method 8270C SIM

Client Sample ID:	SSB13-9	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/27/05	Lab ID:	505285-30
Date Analyzed:	06/05/05	Data File:	060524.D
Matrix:	soil	Instrument:	GCMS3
Units:	ug/kg (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	87	38	158
Benzo(a)anthracene-d12	88	35	146

Compounds:	Concentration ug/kg (ppb)
Naphthalene	<5
Acenaphthylene	<5
Acenaphthene	<5
Fluorene	<5
Phenanthrene	<5
Anthracene	<5
Fluoranthene	<5
Pyrene	<5
Benz(a)anthracene	<17
Chrysene	<5
Benzo(b)fluoranthene	<17
Benzo(k)fluoranthene	<17
Benzo(a)pyrene	<17
Indeno(1,2,3-cd)pyrene	<17
Dibenzo(a,h)anthracene	<17
Benzo(g,h,i)perylene	<17

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PNA Compounds By EPA Method 8270C SIM

Client Sample ID:	SSB14-5	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/27/05	Lab ID:	505285-31 1/10
Date Analyzed:	06/06/05	Data File:	060533.D
Matrix:	soil	Instrument:	GCMS3
Units:	ug/kg (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	143	38	158
Benzo(a)anthracene-d12	108	35	146

Compounds:	Concentration ug/kg (ppb)
Naphthalene	<50
Acenaphthylene	<50
Acenaphthene	<50
Fluorene	<50
Phenanthrene	<50
Anthracene	<50
Fluoranthene	<50
Pyrene	<50
Benz(a)anthracene	<170
Chrysene	<50
Benzo(b)fluoranthene	<170
Benzo(k)fluoranthene	<170
Benzo(a)pyrene	<170
Indeno(1,2,3-cd)pyrene	<170
Dibenzo(a,h)anthracene	<170
Benzo(g,h,i)perylene	<170

Note: The sample was diluted due to sample matrix effects. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PNA Compounds By EPA Method 8270C SIM

Client Sample ID:	SSB14-9	Client:	SLR International Corp.
Date Received:	05/26/05	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/27/05	Lab ID:	505285-32
Date Analyzed:	06/05/05	Data File:	060525.D
Matrix:	soil	Instrument:	GCMS3
Units:	ug/kg (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	91	38	158
Benzo(a)anthracene-d12	90	35	146

Compounds:	Concentration ug/kg (ppb)
Naphthalene	<5
Acenaphthylene	<5
Acenaphthene	<5
Fluorene	<5
Phenanthrene	<5
Anthracene	<5
Fluoranthene	<5
Pyrene	<5
Benz(a)anthracene	<17
Chrysene	<5
Benzo(b)fluoranthene	<17
Benzo(k)fluoranthene	<17
Benzo(a)pyrene	<17
Indeno(1,2,3-cd)pyrene	<17
Dibenzo(a,h)anthracene	<17
Benzo(g,h,i)perylene	<17

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PNA Compounds By EPA Method 8270C SIM

Client Sample ID:	Method Blank	Client:	SLR International Corp.
Date Received:	Not Applicable	Project:	001.0173.00002, F&BI 505285
Date Extracted:	05/27/05	Lab ID:	05-720 mb
Date Analyzed:	06/05/05	Data File:	060520.D
Matrix:	soil	Instrument:	GCMS3
Units:	ug/kg (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	95	38	158
Benzo(a)anthracene-d12	93	35	146

Compounds:	Concentration ug/kg (ppb)
Naphthalene	<5
Acenaphthylene	<5
Acenaphthene	<5
Fluorene	<5
Phenanthrene	<5
Anthracene	<5
Fluoranthene	<5
Pyrene	<5
Benz(a)anthracene	<17
Chrysene	<5
Benzo(b)fluoranthene	<17
Benzo(k)fluoranthene	<17
Benzo(a)pyrene	<17
Indeno(1,2,3-cd)pyrene	<17
Dibenzo(a,h)anthracene	<17
Benzo(g,h,i)perylene	<17

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/09/05

Date Received: 05/26/05

Project: Longview-Wakefield, 001.0173.00002, F&BI 505285

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**

Laboratory Code: 505285-03 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	µg/g (ppm)	3	3	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Gasoline	µg/g (ppm)	20	90	90	58-134	0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/09/05

Date Received: 05/26/05

Project: Longview-Wakefield, 001.0173.00002, F&BI 505285

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx

Laboratory Code: 505285-42 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	µg/g (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Gasoline	µg/g (ppm)	20	75	88	58-134	16

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/09/05

Date Received: 05/26/05

Project: Longview-Wakefield, 001.0173.00002, F&BI 505285

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 505294-03 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	µg/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Gasoline	µg/L (ppb)	1,000	106	109	66-124	3

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/09/05

Date Received: 05/26/05

Project: Longview-Wakefield, 001.0173.00002, F&BI 505285

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

Laboratory Code: 505285-19 (Matrix Spike) Silica Gel

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	µg/g (ppm)	5,000	<50	135	125	61-136	8

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	µg/g (ppm)	5,000	125	61-140

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/09/05

Date Received: 05/26/05

Project: Longview-Wakefield, 001.0173.00002, F&BI 505285

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

Laboratory Code: 505285-28 (Matrix Spike) Silica Gel

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	µg/g (ppm)	5,000	<50	133	133	61-136	0

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	µg/g (ppm)	5,000	130	61-140

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/09/05

Date Received: 05/26/05

Project: Longview-Wakefield, 001.0173.00002, F&BI 505285

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

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel	µg/L (ppb)	2,500	93	87	68-144	7

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/09/05

Date Received: 05/26/05

Project: Longview-Wakefield, 001.0173.00002, F&BI 505285

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260B

Laboratory Code: 505285-22 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
1,2-Dichloroethane (EDC)	µg/g (ppm)	2.5	<0.05	106	67-137
Benzene	µg/g (ppm)	2.5	<0.03	85	41-133
Toluene	µg/g (ppm)	2.5	<0.05	79	45-142

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
1,2-Dichloroethane (EDC)	µg/g (ppm)	2.5	101	109	67-137	7
Benzene	µg/g (ppm)	2.5	94	93	71-119	2
Toluene	µg/g (ppm)	2.5	90	90	73-130	0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/09/05

Date Received: 05/26/05

Project: Longview-Wakefield, 001.0173.00002, F&BI 505285

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260B

Laboratory Code: 505285-23 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
1,2-Dichloroethane (EDC)	µg/g (ppm)	<0.05	<0.05	nm
Benzene	µg/g (ppm)	<0.03	<0.03	nm
Toluene	µg/g (ppm)	<0.05	<0.05	nm

Laboratory Code: 505285-23 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
1,2-Dichloroethane (EDC)	µg/g (ppm)	2.5	<0.05	100	67-137
Benzene	µg/g (ppm)	2.5	<0.03	91	41-133
Toluene	µg/g (ppm)	2.5	<0.05	91	45-142

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
1,2-Dichloroethane (EDC)	µg/g (ppm)	2.5	124	67-137
Benzene	µg/g (ppm)	2.5	89	71-119
Toluene	µg/g (ppm)	2.5	91	73-130

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

Note: The calibration verification result associated with 505285-33 for 1,2-Dichloroethane (EDC) exceeded 15% deviation. The average deviation for all compounds was less than or equal 15%, therefore the initial calibration is considered valid.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/09/05

Date Received: 05/26/05

Project: Longview-Wakefield, 001.0173.00002, F&BI 505285

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260B

Laboratory Code: 505282-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
1,2-Dichloroethane (EDC)	µg/L (ppb)	<1	<1	nm
Benzene	µg/L (ppb)	<1	<1	nm
Toluene	µg/L (ppb)	<1	<1	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
1,2-Dichloroethane (EDC)	µg/L (ppb)	50	104	111	83-123	7
Benzene	µg/L (ppb)	50	95	90	76-122	5
Toluene	µg/L (ppb)	50	92	91	78-128	2

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/09/05

Date Received: 05/26/05

Project: Longview-Wakefield, 001.0173.00002, F&BI 505285

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260B

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
1,2-Dichloroethane (EDC)	µg/L (ppb)	50	104	104	83-123	2
Benzene	µg/L (ppb)	50	96	93	76-122	1
Toluene	µg/L (ppb)	50	93	90	78-128	1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/09/05

Date Received: 05/26/05

Project: Longview-Wakefield, 001.0173.00002, F&BI 505285

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR PNA'S BY EPA METHOD 8270C SIM

Laboratory Code: 505285-19 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Naphthalene	µg/kg (ppb)	<5	<5	nm
Acenaphthylene	µg/kg (ppb)	<5	<5	nm
Acenaphthene	µg/kg (ppb)	<5	<5	nm
Fluorene	µg/kg (ppb)	<5	<5	nm
Phenanthrene	µg/kg (ppb)	<5	<5	nm
Anthracene	µg/kg (ppb)	<5	<5	nm
Fluoranthene	µg/kg (ppb)	<5	<5	nm
Pyrene	µg/kg (ppb)	<5	<5	nm
Benz(a)anthracene	µg/kg (ppb)	<17	<17	nm
Chrysene	µg/kg (ppb)	<5	<5	nm
Benzo(b)fluoranthene	µg/kg (ppb)	<17	<17	nm
Benzo(k)fluoranthene	µg/kg (ppb)	<17	<17	nm
Benzo(a)pyrene	µg/kg (ppb)	<17	<17	nm
Indeno(1,2,3-cd)pyrene	µg/kg (ppb)	<17	<17	nm
Dibenzo(a,h)anthracene	µg/kg (ppb)	<17	<17	nm
Benzo(g,h,i)perylene	µg/kg (ppb)	<17	<17	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	µg/kg (ppb)	170	90	92	69-105	2
Acenaphthylene	µg/kg (ppb)	170	85	87	62-117	3
Acenaphthene	µg/kg (ppb)	170	88	90	66-115	3
Fluorene	µg/kg (ppb)	170	88	91	62-116	3
Phenanthrene	µg/kg (ppb)	170	88	91	68-109	3
Anthracene	µg/kg (ppb)	170	82	85	56-102	4
Fluoranthene	µg/kg (ppb)	170	105	107	64-115	2
Pyrene	µg/kg (ppb)	170	102	104	67-118	2
Benz(a)anthracene	µg/kg (ppb)	170	91	93	53-121	2
Chrysene	µg/kg (ppb)	170	91	93	59-115	2
Benzo(b)fluoranthene	µg/kg (ppb)	170	109	113	58-132	3
Benzo(k)fluoranthene	µg/kg (ppb)	170	112	116	66-120	3
Benzo(a)pyrene	µg/kg (ppb)	170	93	96	49-116	3
Indeno(1,2,3-cd)pyrene	µg/kg (ppb)	170	112	114	61-121	2
Dibenzo(a,h)anthracene	µg/kg (ppb)	170	112	114	63-126	2
Benzo(g,h,i)perylene	µg/kg (ppb)	170	110	112	55-121	1

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

1155/B04/VL

CM 02/26/00

SMALL CHAIN OF CUSTODY

SAMPLERS (signature) K Saganstki
 PROJECT NAME/NO. Longview-Wakefield PO #
001-0173-00002
 REMARKS Use acid/silica gel cleanup for TPH-D

Send Report To Mike Staton
 Company SLR
 Address _____
 City, State, ZIP _____
 Phone # 425 402 8800 Fax # 402 8488

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

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED							Notes					
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	EDC 8260						
SSB1-5	01A-E	5/23/05	1530	S	5	X	X	X				X						
SSB1-8-10	02A-E	{	1540	{	{											Hold		
SSB1-15	03A-E		1545			X	X	X			X							
SSB2-3	04A-E		1600			X	X	X			X							
SSB2-9-10	05A-E	↓	1610	{	{											Hold		
SSB2-17	06A-E	5/23/05	1215			X	X	X			X							
SSB3-3-5	07A-E	5/23/05	1640			X	X	X			X							
SSB3-9	08A-E	{	1650	↓	↓											Hold		
SSB3-10	09A-E	↓	1655															Hold
SSB3-12	10A-E	5/23/05	1040			X	X	X						X				
Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282 Fax (206) 283-5044						SIGNATURE		PRINT NAME		COMPANY		DATE		TIME				
Relinquished by: <u>K Saganstki</u>						<u>K Saganstki</u>		SLR		SLR		5/26/05		1415				
Received by: <u>Mike Young</u>						<u>Mike Young</u>		FTE		FTE		5/26/05		1415				
Relinquished by: _____						_____		_____		_____		_____		_____		_____		
Received by: _____						_____		_____		_____		_____		_____		_____		

cm 6,26,25

STATEMENT OF ALAN J. COFFORD

Send Report To Mike Station

Company SLR

Address_

City, State, ZIP:

Phone # 425 402 8800 Fax # 402 8488

SAMPLERS (signature) *Kazandir*

PROJECT NAME/NO.	PO #

PROJECT NAME/NO.
Longview-Waferfield

2000-0173-00002

REMARKS use acid/silica gel clamp
for pH-D and TTH-O

Page # 7 of 7

TURNAROUND TIME

☒ Standard (2 Weeks)☐ RUSH_

Rush charges authorized by:

SAMPLE DISPOSAL

☒ Dispose after 30 days

- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED							Notes				
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	EDC 8260		TPH-0	PAHs by 8270		
SSB9-12	21A-E	5/24/05	1325	S	5	X	X	X				X					
SSB10-5	22A-E		1335			X	X	X				X					
SSB10-9	23A-E		1340			X	X	X				X					
SSB11-5	24A-E		1445			X	X	X				X					
SSB11-9	25A-E		1450			X	X	X				X					
SSB12-9	26A-E		1400			X	X	X				X					
SSB12-14	27A-E		1405														
SSB12-25	28A-E		1420			X	X	X				X					
SSB13-5-7	29A-E		1600			X	X	X				X					
SSB13-9	30A-E		1605			X	X	X				X					
Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282 Fax (206) 283-5044		Relinquished by:	SIGNATURE		PRINT NAME		COMPANY		DATE	TIME							
		Received by:	<i>K. Saganowski</i>		K Saganowski		SLR		5/24/05	14:1							
		Relinquished by:	<i>Eric Young</i>		Eric Young		FBI		5/25/05	14:12							
		Received by:															

2052820

Send Report To Mike Staton

Company SLR

Address

City, State, ZIP

Phone # 425 402 8800 Fax # 402 8488

SAMPLE CHAIN OF CUSTODY

CM 05/26/05

003/153/804/v4

SAMPLERS (signature) <i>K. Saganski</i>	
PROJECT NAME/NO. <i>Longview - Wakefield</i>	PO #
DO# 0173.00002	
REMARKS <i>wee acid/silica gel cleanup for TPH-D and TPH-O</i>	

Page # <i>4</i> of <i>5</i>
TURNAROUND TIME ☒ Standard (2 Weeks) ☐ RUSH Rush charges authorized by:
SAMPLE DISPOSAL ☒ Dispose after 30 days ☐ Return samples ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED						Notes			
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HPS		EDC 8260	TPH-O	
SSB14-5	31 A-E	5/24/05	1615	S	5	X	X	X				X	X		
SSB14-9	32 A-E	↓	1620			X	X	X				X	X		
SSB15-5	33 A-E	5/24/05	1350			X	X	X				X			
SSB15-15	34 A-E	↓	1405			X	X	X				X			
SSB15-19	35 A-E	↓	1415			X	X	X				X			
SSB15-24	36 A-E	↓	1430			X	X	X				X			
MW10-5	37 A-E	↓	1100			X	X	X				X			
MW10-8-10	38 A-E	↓	1110												Hold
MW10-14	39 A-E	↓	1120			X	X	X				X			
MW 9-5	40 A-E	5/23/05	1330		✓	X	X	X				X			

Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 283-8282 Fax (206) 283-5044 FORMS\COC\COC.DOC	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
	Relinquished by: <i>K. Saganski</i>	<i>K. Saganski</i>	<i>SLR</i>	<i>5/24/05</i>	<i>1411</i>
	Received by: <i>[Signature]</i>	<i>Eric Young</i>	<i>FBI</i>	<i>5/26/05</i>	<i>1412</i>
	Relinquished by:				
	Received by:				

75/km/a,

PO #

REMARKS base acid silica gel clamp

Tax # 4028488

~~Standard (2 Weeks)~~

Rush charges authorized by:

☒ Dispose after 30 days

- Return samples

☐ Will call with instructions

FORMS\COC\COC.DOC

SAMPLE CHAIN OF CUSTODY

CM 05/26/05 B05/VS3/B04/v4

000000

Send Report To Mike Staton
 Company SLR
 Address _____
 City, State, ZIP _____
 Phone # 425 402 8800 Fax # 402 8488

SAMPLERS (signature) [Signature]
 PROJECT NAME/NO. Longview-Wahfield PO # _____
001-0173-00002
 REMARKS Use acid/silica gel cleanup
Limited volume on some
TPH-D Samples
TPH-D

Page # 6 of 6
 TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH
 Rush charges authorized by: _____
 SAMPLE DISPOSAL
☒ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED								Notes	
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	EDC 806	TPH-O		
MW1-0505	46 A-D	5/25/05	2030	W	6	X	X	X				X	X	TPH-O	
~~MW2-0505~~	~~47 A-D~~	~~5/24/05~~	~~1130~~												
MW4-0505	47 A-D	5/24/05	2000											X	
MW5-0505	48 A-D	↓	2100											X	
MW6-0505	49 A-D	5/25/05	930											X	
MW7-0505	50 A-D	(	1920											X	
MW8-0505	51 A-D		1815											X	
MW9-0505	52 A-D		1645											X	
MW10-0505	53 A-D	↓	1500											X	
SSB15- ~~0505~~	54 A-D	↓	1530	↓	↓									X	

SIGNATURE		PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>		<u>Mike Staton</u>	<u>SLR</u>	<u>5/26/05</u>	<u>14:11</u>
Received by: <u>[Signature]</u>		<u>Eric Spence</u>	<u>FBI</u>	<u>5/26/05</u>	<u>14:12</u>
Relinquished by:					
Received by:					

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

June 13, 2005

Mike Staton, Project Manager
SLR International Corp.
22122 20th Ave. SE., H-150
Bothell, WA 98021

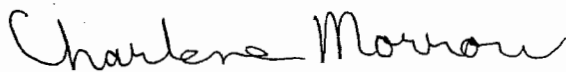
Dear Mr. Staton:

Included are the results from the testing of material submitted on May 31, 2005 from the Longview, 001.0173.00002, F&BI 505310 project. There are 7 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Charlene Morrow
Chemist

Enclosures
SLR0613R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/13/05
Date Received: 05/31/05
Project: Longview, 001.0173.00002, F&BI 505310
Date Extracted: 06/02/05
Date Analyzed: 06/03/05

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**
Results Reported as µg/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate <u>(% Recovery)</u> (Limit 52-150)
MW2-0505 505310-01	<100	99
Method Blank	<100	97

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/13/05

Date Received: 05/31/05

Project: Longview, 001.0173.00002, F&BI 505310

Date Extracted: 06/01/05

Date Analyzed: 06/07/05 and 06/09/05

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL
USING METHOD NWTPH-Dx
Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis
Extended to Include Motor Oil Range Compounds
Results Reported as µg/L (ppb)**

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>TRPH</u> (C ₁₀ -C ₃₆)	Surrogate (% Recovery) (Limit 68-143)
MW2-0505 505310-01	52	<250	114
Method Blank	<50	<250	111

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID: MW2-0505
Date Received: 05/31/05
Date Extracted: 06/06/05
Date Analyzed: 06/07/05
Matrix: water
Units: ug/L (ppb)

Client: SLR International Corp.
Project: 001.0173.00002, F&BI 505310
Lab ID: 505310-01
Data File: 060636.D
Instrument: GCMS5
Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	98	83	129
1,2-Dichloroethane-d4	107	67	133
Toluene-d8	96	73	140
4-Bromofluorobenzene	106	84	136

Compounds:	Concentration ug/L (ppb)
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	SLR International Corp.
Date Received:	Not Applicable	Project:	001.0173.00002, F&BI 505310
Date Extracted:	06/06/05	Lab ID:	05-754 mb
Date Analyzed:	06/06/05	Data File:	060614.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	101	83	129
1,2-Dichloroethane-d4	105	67	133
Toluene-d8	96	73	140
4-Bromofluorobenzene	108	84	136

Compounds:	Concentration ug/L (ppb)
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/13/05

Date Received: 05/31/05

Project: Longview, 001.0173.00002, F&BI 505310

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 505294-03 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	µg/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Gasoline	µg/L (ppb)	1,000	106	109	66-124	3

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/13/05

Date Received: 05/31/05

Project: Longview, 001.0173.00002, F&BI 505310

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

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	µg/L (ppb)	2,500	89	101	68-144	13

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/13/05

Date Received: 05/31/05

Project: Longview, 001.0173.00002, F&BI 505310

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260B

Laboratory Code: 506049-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
1,2-Dichloroethane (EDC)	µg/L (ppb)	<1	<1	nm
Benzene	µg/L (ppb)	<1	<1	nm
Toluene	µg/L (ppb)	<1	<1	nm

Laboratory Code: 506049-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
1,2-Dichloroethane (EDC)	µg/L (ppb)	50	<1	96	59-149
Benzene	µg/L (ppb)	50	<1	86	55-125
Toluene	µg/L (ppb)	50	<1	83	62-130

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
1,2-Dichloroethane (EDC)	µg/L (ppb)	50	102	83-123
Benzene	µg/L (ppb)	50	90	76-122
Toluene	µg/L (ppb)	50	91	78-128

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

December 29, 2005

Mike Staton, Project Manager
SLR International Corp.
22122 20th Ave. SE., H-150
Bothell, WA 98021

Dear Mr. Staton:

Included is the amended report from the testing of material submitted on December 2, 2005 from the Former Arco Station, #001.0173.00003, F&BI 512011 project. At your request, the water and soil results were split into two separate reports.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
SLR1220R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

December 20, 2005

Mike Staton, Project Manager
SLR International Corp.
22122 20th Ave. SE., H-150
Bothell, WA 98021

Dear Mr. Staton:

Included are the results from the testing of soil submitted on December 2, 2005 from the Former Arco Station, #001.0173.00003, F&BI 512011 project. There are 10 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
SLR1220R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/20/05

Date Received: 12/02/05

Project: Former Arco Station, #001.0173.00003, F&BI 512011

Date Extracted: 12/05/05

Date Analyzed: 12/05/05

**RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-G_x**

Results Reported on a Dry Weight Basis

Results Reported as µg/g (ppm)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 66-150)
DMW3-7 512011-06	<2	132
DMW3-19 512011-13	<2	140
DMW4-5 512011-16	3	148
DMW4-24.5 512011-23	<2	145
Method Blank	<2	62

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/20/05

Date Received: 12/02/05

Project: Former Arco Station, #001.0173.00003, F&BI 512011

Date Extracted: 12/02/05

Date Analyzed: 12/02/05

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

Extended to Include Motor Oil Range Compounds

**Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis**

Results Reported on a Dry Weight Basis

Results Reported as $\mu\text{g/g}$ (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 67-131)
DMW3-7 512011-06	<50	80
DMW3-19 512011-13	<50	91
DMW4-5 512011-16	<50	85
DMW4-24.5 512011-23	<50	83
Method Blank	<50	86

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW3-7	Client:	SLR International Corp.
Date Received:	12/02/05	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/02/05	Lab ID:	512011-06
Date Analyzed:	12/03/05	Data File:	120232.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	93	36	146
1,2-Dichloroethane-d4	93	40	139
Toluene-d8	94	36	152
4-Bromofluorobenzene	102	67	124

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.03
Ethylbenzene	<0.03
m,p-Xylene	<0.1
o-Xylene	<0.03
1,2-Dichloroethane (EDC)	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID: DMW3-19

Date Received: 12/02/05

Date Extracted: 12/02/05

Date Analyzed: 12/03/05

Matrix: soil

Units: ug/g (ppm)

Client: SLR International Corp.

Project: Former Arco Station, #001.0173.00003

Lab ID: 512011-13

Data File: 120234.D

Instrument: GCMS5

Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	98	36	146
1,2-Dichloroethane-d4	105	40	139
Toluene-d8	104	36	152
4-Bromofluorobenzene	110	67	124

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.03
Ethylbenzene	<0.03
m,p-Xylene	<0.1
o-Xylene	<0.03
1,2-Dichloroethane (EDC)	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW4-5	Client:	SLR International Corp.
Date Received:	12/02/05	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/02/05	Lab ID:	512011-16
Date Analyzed:	12/03/05	Data File:	120235.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	88	36	146
1,2-Dichloroethane-d4	93	40	139
Toluene-d8	91	36	152
4-Bromofluorobenzene	100	67	124

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.03
Ethylbenzene	<0.03
m,p-Xylene	<0.1
o-Xylene	<0.03
1,2-Dichloroethane (EDC)	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID: DMW4-24.5
Date Received: 12/02/05
Date Extracted: 12/02/05
Date Analyzed: 12/03/05
Matrix: soil
Units: ug/g (ppm)

Client: SLR International Corp.
Project: Former Arco Station, #001.0173.00003
Lab ID: 512011-23
Data File: 120236.D
Instrument: GCMS5
Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	93	36	146
1,2-Dichloroethane-d4	97	40	139
Toluene-d8	97	36	152
4-Bromofluorobenzene	104	67	124

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.03
Ethylbenzene	<0.03
m,p-Xylene	<0.1
o-Xylene	<0.03
1,2-Dichloroethane (EDC)	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	SLR International Corp.
Date Received:	Not Applicable	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/02/05	Lab ID:	051588 mb
Date Analyzed:	12/03/05	Data File:	120231.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	88	36	146
1,2-Dichloroethane-d4	91	40	139
Toluene-d8	89	36	152
4-Bromofluorobenzene	93	67	124

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.03
Ethylbenzene	<0.03
m,p-Xylene	<0.1
o-Xylene	<0.03
1,2-Dichloroethane (EDC)	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/20/05

Date Received: 12/02/05

Project: Former Arco Station, #001.0173.00003, F&BI 512011

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-G_x

Laboratory Code: 512011-06 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	µg/g (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	µg/g (ppm)	20	94	58-134

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/20/05

Date Received: 12/02/05

Project: Former Arco Station, #001.0173.00003, F&BI 512011

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

Laboratory Code: 512020-04 (Matrix Spike) Silica Gel

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel	µg/g (ppm)	5,000	<50	99	106	61-136	7

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel	µg/g (ppm)	5,000	86	61-140

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/20/05

Date Received: 12/02/05

Project: Former Arco Station, #001.0173.00003, F&BI 512011

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260B

Laboratory Code: 512011-06 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	µg/g (ppm)	<0.03	<0.03	nm
Toluene	µg/g (ppm)	<0.03	<0.03	nm
Ethylbenzene	µg/g (ppm)	<0.03	<0.03	nm
m,p-Xylene	µg/g (ppm)	<0.1	<0.1	nm

Laboratory Code: 512011-12 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Benzene	µg/g (ppm)	5	<0.03	115	64-128
Toluene	µg/g (ppm)	5	<0.05	112	58-138
Ethylbenzene	µg/g (ppm)	2.5	<0.05	120	66-134
m,p-Xylene	µg/g (ppm)	2.5	<0.1	121	68-123

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	µg/g (ppm)	5	110	52-158
Toluene	µg/g (ppm)	5	108	73-130
Ethylbenzene	µg/g (ppm)	2.5	118	73-131
m,p-Xylene	µg/g (ppm)	2.5	118	77-122

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

512011

SAMPLE CHAIN OF CUSTODY

ME / 12.02.05

153/13/COS

Send Report To SLR 33 Mike Staben
 Company SLR
 Address 22122 20th Ave. SE
 City, State, ZIP Bothell, WA
 Phone # 425-402-8800 Fax # _____

SAMPLERS (signature) Ben Sdr
 PROJECT NAME/NO. Former Arco Station
 # 001.0173.00003
 REMARKS
 • silica gel cleanup for NWTPH-DX
 • HOLD all remaining samples

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

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED							Notes			
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	NWTPH DX		DRD only	NWTPH Ex	8260B BTEX and EDC
MW10-1105	01 A-F	11-30-05	1510	W	6											
MW7-1105	02 A-F		1615													
MW1-1105	03 A-F		1800	W	6											
DMW3-3	04 A-E		0850	S	5											
DMW3-5	05 A-E		0910													
DMW3-7	06 A-E		0925													RUSH
DMW3-8.5	07 A-E		0935													
DMW3-10	08 A-E		0950													
DMW3-11.5	09 A-E		1015													
DMW3-DMW3-13	10 A-E	11-30	1040	S	5											

Signature: Ben Sdr PRINT NAME: Ben Sdr COMPANY: SLR DATE: 12-05 TIME: 1830

Relinquished by: Ben Sdr Received by: Mike Staben

Relinquished by: Mike Staben Received by: Mike Staben

Relinquished by: Mike Staben Received by: Mike Staben

Relinquished by: Mike Staben Received by: Mike Staben

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

512011

SAMPLE CHAIN OF CUSTODY

ME 12-2-05

VS3/V3/508
2 of 3Send Report To Mike StabenCompany SLRAddress 22122 20th Ave SECity, State, ZIP Bellevue, WAPhone # 425-402-5800 Fax #SAMPLERS (signature) Ben SylPROJECT NAME/NO. Former Arco Station

PO #

001.0173.00003

REMARKS

- silica gel cleanup for NWTPH-DX
- HOLD all remaining samples

Page #

TURNAROUND TIME

Standard (2 Weeks)

RUSH Selected Ser:

Rush charges authorized by: Samy

SAMPLE DISPOSAL

- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED							Notes			
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HPS	NWTPH-DX		DRO only	NWTPH-GX	8260 B
DMW3-14.5	11 A-E	11-30-05	1055	S	5											
DMW3-16	12 A-E		1120													
DMW3-19	13 A-E		1345													
DMW3-20	14 A-E		1420													
DMW3-24	15 A-E	11-30-05	1435													
DMW4-5	16 A-E	12-1-05	0820													
DMW4-11	17 A-E		0840													
DMW4-15.5	18 A-E		0855													
DMW4-18.5	19 A-E		1045													
DMW4-20	20 A-E	12-1-05	1100	S	5											
Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282 Fax (206) 283-5044						SIGNATURE		PRINT NAME		COMPANY		DATE		TIME		
Relinquished by: <u>Ben Syl</u>						<u>Ben Syl</u>		<u>SLR</u>		<u>SLR</u>		<u>12-1-05</u>		<u>1830</u>		
Received by: <u>mt and law</u>						<u>Nhan Phan</u>		<u>FBI</u>		<u>FBI</u>		<u>12-2-05</u>		<u>0930</u>		
Relinquished by:																
Received by:																

512011

SAMPLE CHAIN OF CUSTODY

ME 12-02-05

VS3/V3/3/co.

Send Report To Mike StadenCompany SLRAddress 22122 20th Ave SECity, State, ZIP Bothell, WAPhone # 425-402-8800

Fax #

SAMPLERS (signature) <u>Ben Sch</u>	
PROJECT NAME/NO. <u>Former Arco Station</u> <u># 001.0173.00003</u>	PO #
REMARKS <u>• HOLD remaining samples</u> <u>• silica gel cleanup for NWTPH-DX</u>	

Page # <u>3</u> of <u>3</u>	TURNAROUND TIME <u>Standard (2 Weeks)</u> <u>RUSH Selected</u> Rush charges authorized by: <u>sample</u>
SAMPLE DISPOSAL ☐ Dispose after 30 days ☐ Return samples ☐ Will call with instructions	

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED						Notes
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HPS	
DMW4-21.5	21 A-E	12-1-05	1115	S	5							
DMW4-23	22 A-E		1130									
DMW4-24.5	23 A-E		1155									
DMW5-5.5	24 A-E		1355									
DMW5-11	25 A-E		1415									
DMW5-16	26 A-E		1430	S	5							
MW4-1205	27 A-E		1610	W	6							
MW2-1205-7730 _{gs}	28 A-F		1730	W	6							

Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282 Fax (206) 283-5044	SIGNATURE <u>Ben Sch</u> Relinquished by: <u>Mike Staden</u> Received by: <u>Mike Staden</u> Relinquished by: <u>Mike Staden</u> Received by:	PRINT NAME <u>Ben Sch</u> <u>Mike Staden</u> <u>Mike Staden</u>	COMPANY <u>SLR</u> <u>FBI</u>	DATE <u>12-1-05</u> <u>12-2-05</u>	TIME <u>1830</u> <u>09:30</u>

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

December 20, 2005

Mike Staton, Project Manager
SLR International Corp.
22122 20th Ave. SE., H-150
Bothell, WA 98021

Dear Mr. Staton:

Included are the results from the testing of water submitted on December 2, 2005 from the Former Arco Station, #001.0173.00003, F&BI 512011 project. There are 14 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
SLR1220R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/20/05

Date Received: 12/02/05

Project: Former Arco Station, #001.0173.00003, F&BI 512011

Date Extracted: 12/12/05

Date Analyzed: 12/12/05

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**

Results Reported as µg/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 52-150)
MW10-1105 512011-01	1,400	100
MW7-1105 512011-02	<100	93
MW1-1105 512011-03	<100	83
MW4-1205 d 512011-27	11,000	126
MW2-1205 512011-28	120	73
Method Blank	<100	102

d - The sample was diluted.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/20/05

Date Received: 12/02/05

Project: Former Arco Station, #001.0173.00003, F&BI 512011

Date Extracted: 12/06/05

Date Analyzed: 12/07/05

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL
USING METHOD NWTPH-D_x**

Extended to Include Motor Oil Range Compounds

**Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis**

Results Reported as µg/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Surrogate</u> (% Recovery) (Limit 68-143)
MW10-1105 x 512011-01	1,000	ip
MW7-1105 512011-02	140	81
MW1-1105 512011-03	<50	79
MW4-1205 x 512011-27	2,900	77
MW2-1205 512011-28	<50	76
Method Blank	<50	76

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

x - The pattern of peaks present is not indicative of diesel. The result is due to overlap from the gasoline range.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID: MW10-1105
Date Received: 12/02/05
Date Extracted: 12/07/05
Date Analyzed: 12/07/05
Matrix: water
Units: ug/L (ppb)

Client: SLR International Corp.
Project: Former Arco Station, #001.0173.00003
Lab ID: 512011-01
Data File: 120720.D
Instrument: GCMS5
Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	88	75	125
1,2-Dichloroethane-d4	85	67	133
Toluene-d8	88	79	129
4-Bromofluorobenzene	95	76	145

Compounds:	Concentration ug/L (ppb)
Benzene	31
Toluene	<1
Ethylbenzene	110
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW7-1105	Client:	SLR International Corp.
Date Received:	12/02/05	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/07/05	Lab ID:	512011-02
Date Analyzed:	12/08/05	Data File:	120806.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	90	75	125
1,2-Dichloroethane-d4	86	67	133
Toluene-d8	85	79	129
4-Bromofluorobenzene	90	76	145

Compounds:	Concentration ug/L (ppb)
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW1-1105	Client:	SLR International Corp.
Date Received:	12/02/05	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/07/05	Lab ID:	512011-03
Date Analyzed:	12/07/05	Data File:	120722.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	90	75	125
1,2-Dichloroethane-d4	75	67	133
Toluene-d8	89	79	129
4-Bromofluorobenzene	97	76	145

Compounds:	Concentration ug/L (ppb)
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW4-1205	Client:	SLR International Corp.
Date Received:	12/02/05	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/07/05	Lab ID:	512011-27
Date Analyzed:	12/07/05	Data File:	120723.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	85	75	125
1,2-Dichloroethane-d4	71	67	133
Toluene-d8	90	79	129
4-Bromofluorobenzene	98	76	145

Compounds:	Concentration ug/L (ppb)
Benzene	750 ve
Toluene	140
Ethylbenzene	660 ve
m,p-Xylene	940 ve
o-Xylene	56
1,2-Dichloroethane (EDC)	<1

ve - The value reported exceeded the calibration range established for the analyte. The reported concentration is an estimate.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID: MW4-1205
Date Received: 12/02/05
Date Extracted: 12/07/05
Date Analyzed: 12/08/05
Matrix: water
Units: ug/L (ppb)

Client: SLR International Corp.
Project: Former Arco Station, #001.0173.00003
Lab ID: 512011-27 1/10
Data File: 120809.D
Instrument: GCMS5
Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	93	75	125
1,2-Dichloroethane-d4	92	67	133
Toluene-d8	90	79	129
4-Bromofluorobenzene	95	76	145

Compounds:	Concentration ug/L (ppb)
Benzene	990
Toluene	140
Ethylbenzene	1,100
m,p-Xylene	1,300
o-Xylene	53
1,2-Dichloroethane (EDC)	<10

Note: The sample was diluted due to the presence of high levels of material. Detection limits are raised due to dilution.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW2-1205	Client:	SLR International Corp.
Date Received:	12/02/05	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/07/05	Lab ID:	512011-28
Date Analyzed:	12/08/05	Data File:	120807.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	89	75	125
1,2-Dichloroethane-d4	85	67	133
Toluene-d8	83	79	129
4-Bromofluorobenzene	91	76	145

Compounds:	Concentration ug/L (ppb)
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	SLR International Corp.
Date Received:	Not Applicable	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/07/05	Lab ID:	051592 mb
Date Analyzed:	12/07/05	Data File:	120709.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	87	75	125
1,2-Dichloroethane-d4	85	67	133
Toluene-d8	84	79	129
4-Bromofluorobenzene	91	76	145

Compounds:	Concentration ug/L (ppb)
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	SLR International Corp.
Date Received:	Not Applicable	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/07/05	Lab ID:	051619 mb
Date Analyzed:	12/08/05	Data File:	120804.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	88	75	125
1,2-Dichloroethane-d4	88	67	133
Toluene-d8	86	79	129
4-Bromofluorobenzene	94	76	145

Compounds:	Concentration ug/L (ppb)
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/20/05

Date Received: 12/02/05

Project: Former Arco Station, #001.0173.00003, F&BI 512011

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**

Laboratory Code: 512046-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	µg/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	µg/L (ppb)	1,000	84	66-124

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/20/05

Date Received: 12/02/05

Project: Former Arco Station, #001.0173.00003, F&BI 512011

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

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel	µg/L (ppb)	2,500	102	108	68-144	6

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/20/05

Date Received: 12/02/05

Project: Former Arco Station, #001.0173.00003, F&BI 512011

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260B

Laboratory Code: 512025-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	µg/L (ppb)	<1	<1	nm
Toluene	µg/L (ppb)	<1	<1	nm
Ethylbenzene	µg/L (ppb)	<1	<1	nm
m,p-Xylene	µg/L (ppb)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benzene	µg/L (ppb)	100	109	109	75-124	0
Toluene	µg/L (ppb)	100	107	108	72-129	1
Ethylbenzene	µg/L (ppb)	50	113	113	70-130	1
m,p-Xylene	µg/L (ppb)	50	118	119	70-130	1

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/20/05

Date Received: 12/02/05

Project: Former Arco Station, #001.0173.00003, F&BI 512011

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260B

Laboratory Code: 512074-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	µg/L (ppb)	11	11	0
Toluene	µg/L (ppb)	<1	<1	nm
Ethylbenzene	µg/L (ppb)	40	39	3
m,p-Xylene	µg/L (ppb)	46	46	0

Laboratory Code: 512074-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Benzene	µg/L (ppb)	100	11	113	76-113
Toluene	µg/L (ppb)	100	<1	113	70-130
Ethylbenzene	µg/L (ppb)	50	40	115	50-150
m,p-Xylene	µg/L (ppb)	50	46	121	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	µg/L (ppb)	100	107	75-124
Toluene	µg/L (ppb)	100	105	72-129
Ethylbenzene	µg/L (ppb)	50	113	70-130
m,p-Xylene	µg/L (ppb)	50	117	70-130

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

512011

SAMPLE CHAIN OF CUSTODY

ME / 12-02-05

153/13/COS

Send Report To SLR 33 Mike Staben
 Company SLR
 Address 22122 20th Ave. SE
 City, State, ZIP Bothell, WA
 Phone # 425-402-8800 Fax #

SAMPLERS (signature) Ben Sln
 PROJECT NAME/NO. Former Arco Station
 # 001-0173-00003
 REMARKS
 • silica gel cleanup for NWTPH-DX
 • HOLD all remaining samples

Page # 1 of 3
 TURNAROUND TIME
☒ Standard (2 Weeks)
☒ RUSH call selected soil
 Rush charges authorized by: Sample
 SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED							Notes		
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	NWTPH DX only		NWTPH Gx	8260B BTEX and EDC
MW10 - 1105	01 A-F	11-30-05	1510	W	6										
MW7 - 1105	02 A-F		1615												
MW1 - 1105	03 A-F		1800	W	6										
DMW3-3	04 A-E		0850	S	5										
DMW3-5	05 A-E		0910												
DMW3-7	06 A-E		0925									X	X	X	RUSH
DMW3-8.5	07 A-E		0935												
DMW3-10	08 A-E		0950												
DMW3-11.5	09 A-E		1015												
DMW3-DMW3-13	10 A-E	11-30	1040	S	5										

Signature: Ben Sln PRINT NAME: Ben Sln COMPANY: SLR DATE: 12-1-05 TIME: 1830

Relinquished by: Ben Sln Received by: Mike Staben

Relinquished by: Mike Staben Received by: Mike Staben

Relinquished by: Mike Staben Received by: Mike Staben

Relinquished by: Mike Staben Received by: Mike Staben

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

512011

SAMPLE CHAIN OF CUSTODY

ME 12-2-05

VS3/V3/COE
2 of 3Send Report To Mike StadenCompany SLRAddress 22122 20th Ave SECity, State, ZIP Bedwell, WAPhone # 425-402-8800 Fax #SAMPLERS (signature) BarryPROJECT NAME/NO. former Arco Station# 001.0173.0003

REMARKS

- silica gel cleanup for NWTPH-DX
- HOLD all remaining samples

TURNAROUND TIME

☒ Standard (2 Weeks)
☒ RUSH selected
Rush charges authorized by: Samy

SAMPLE DISPOSAL

- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED								Notes				
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	NWTPH-DX DAO only	NWTPH-GX		8260 B BTEX and EDC			
DMW3 - 14.5	11 A-E	11-30-05	1055	5	5													
DMW3 - 16	12 A-E	{	1120	{	{													
DMW3 - 19	13 A-E		1345															
DMW3 - 20	14 A-E		1420															
DMW3 - 24	15 A-E	11-30-05	1435															
DMW4 - 5	16 A-E	12-1-05	0820	{	{													
DMW4 - 11	17 A-E	{	0840															
DMW4 - 15.5	18 A-E		0855															
DMW4 - 18.5	19 A-E		1045	{	{													
DMW4 - 20	20 A-E	12-1-05	1100			5												

Friedman & Bruya, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COG\COG.DOC

SIGNATURE

Relinquished by: BarryReceived by: Sam

Relinquished by:

Received by:

PRINT NAME

Beau Johnson

Nhan Pham

COMPANY

SLR

FBI

TIME

1830

0930

DATE

12-1-05

12-2-05

VS3/V3/Co

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

December 20, 2005

Mike Staton, Project Manager
SLR International Corp.
22122 20th Ave. SE., H-150
Bothell, WA 98021

Dear Mr. Staton:

Included are the results from the testing of water submitted on December 7, 2005 from the Former Arco Station, #001.0173.00003, F&BI 512055 project. There are 9 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
SLR1220R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/20/05

Date Received: 12/07/05

Project: Former Arco Station, #001.0173.00003, F&BI 512055

Date Extracted: 12/12/05

Date Analyzed: 12/14/05

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**

Results Reported as µg/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 52-150)
MW11-1205 512055-05	<100	119
DMW5-1205 512055-06	130	116
DMW4-1205 512055-07	230	123
Method Blank	<100	118

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/20/05

Date Received: 12/07/05

Project: Former Arco Station, #001.0173.00003, F&BI 512055

Date Extracted: 12/07/05

Date Analyzed: 12/12/05

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

**Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis**

Results Reported as µg/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>DieselRange</u> (C ₁₀ -C ₂₅)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 68-143)
MW11-1205 512055-05	<50	71
DMW5-1205 512055-06	<50	70
DMW4-1205 512055-07	<50	71
Method Blank	<50	71

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW11-1205	Client:	SLR International Corp.
Date Received:	12/07/05	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/07/05	Lab ID:	512055-05
Date Analyzed:	12/07/05	Data File:	120717.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	92	75	125
1,2-Dichloroethane-d4	91	67	133
Toluene-d8	91	79	129
4-Bromofluorobenzene	98	76	145

Compounds:	Concentration ug/L (ppb)
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW5-1205	Client:	SLR International Corp.
Date Received:	12/07/05	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/07/05	Lab ID:	512055-06
Date Analyzed:	12/07/05	Data File:	120718.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	89	75	125
1,2-Dichloroethane-d4	83	67	133
Toluene-d8	86	79	129
4-Bromofluorobenzene	92	76	145

Compounds:	Concentration ug/L (ppb)
Benzene	36
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW4-1205	Client:	SLR International Corp.
Date Received:	12/07/05	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/07/05	Lab ID:	512055-07
Date Analyzed:	12/07/05	Data File:	120719.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	91	75	125
1,2-Dichloroethane-d4	87	67	133
Toluene-d8	89	79	129
4-Bromofluorobenzene	98	76	145

Compounds:	Concentration ug/L (ppb)
Benzene	56
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	SLR International Corp.
Date Received:	Not Applicable	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/07/05	Lab ID:	051592 mb
Date Analyzed:	12/07/05	Data File:	120709.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	87	75	125
1,2-Dichloroethane-d4	85	67	133
Toluene-d8	84	79	129
4-Bromofluorobenzene	91	76	145

Compounds:	Concentration ug/L (ppb)
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/20/05

Date Received: 12/07/05

Project: Former Arco Station, #001.0173.00003, F&BI 512055

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-G_x**

Laboratory Code: 512046-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	µg/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	µg/L (ppb)	1,000	84	66-124

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/20/05

Date Received: 12/07/05

Project: Former Arco Station, #001.0173.00003, F&BI 512055

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

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel	µg/L (ppb)	2,500	102	108	68-144	6

FRIEDMAN & BRUYA, INC.**ENVIRONMENTAL CHEMISTS**

Date of Report: 12/20/05

Date Received: 12/07/05

Project: Former Arco Station, #001.0173.00003, F&BI 512055

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260B**

Laboratory Code: 512025-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	µg/L (ppb)	<1	<1	nm
Toluene	µg/L (ppb)	<1	<1	nm
Ethylbenzene	µg/L (ppb)	<1	<1	nm
m,p-Xylene	µg/L (ppb)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benzene	µg/L (ppb)	100	109	109	75-124	0
Toluene	µg/L (ppb)	100	107	108	72-129	1
Ethylbenzene	µg/L (ppb)	50	113	113	70-130	1
m,p-Xylene	µg/L (ppb)	50	118	119	70-130	1

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

512055

SAMPLE CHAIN OF CUSTODY ME

12-07-05

US3/ COS/ 2/V2

Send Report To Mike StadenCompany SLRAddress 22122 20th Ave SECity, State, ZIP Bothell, WAPhone # 425-402-8800

Fax #

SAMPLERS (signature) [Signature]PROJECT NAME/NO. Former Aero Station# cont. 0173.00003

REMARKS

* Silica gel cleanup for DRO
* hold all unmarked samplesPage # 1 of 2

TURNAROUND TIME

☒ Standard (2 Weeks)☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

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

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED						Notes			
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS		GTEx & EOC	6x TPH-6x	DRO TPH-6x
* DMW1-5	01A-E	12-5-05	0915	S	5							X	X		
DMW1-10.5	02A-E		0930												
* DMW1-15	03A-E		0945									X	X		
* DMW1-21	04A-E		1000	S	5							X	X		
DMW1-1205	05A-F		1120	W	6							X	X		
DMW5-1205	06A-F		1645									X	X		
DMW4-1205	07A-F	12-5-05	1840	W	6							X	X		
DMW2-6	08A-E		1445	S	5										
DMW2-11	09A-E		1455												
* DMW2-20.75	10A-E	12-5-05	1530	S	5							X	X		

SIGNATURE		PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>		Beau Schwan	SLR	12-6-05	1430
Received by: <u>[Signature]</u>		Phan Pham	FEBI	12-7-05	10:00
Relinquished by:					
Received by:					

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

ME 12-07-05
SAMPLE CHAIN OF CUSTODY

Company SLR

City, State, ZIP Bothell, WA

Fax #

PROJECT NAME/NO:-

former Area Station
#001-0173-0003

REMARKS

* silica gel cleanup for DRG
* hold all unmarked samples

TURNAROUND TIME

☒ Standard (2 Weeks)

☐ RUSH

SAMPLE DISPOSAL

☐ Dispose after 30 days☐ Return samples☐ Will call with instructions[illegible]

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

December 29, 2005

Mike Staton, Project Manager
SLR International Corp.
22122 20th Ave. SE., H-150
Bothell, WA 98021

Dear Mr. Staton:

Included is the amended report from the testing of material submitted on December 7, 2005 from the Former Arco Station, #001.0173.00003, F&BI 512055 project. At your request, the water and soil results were split into two separate reports.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
SLR1220R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
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3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

December 20, 2005

Mike Staton, Project Manager
SLR International Corp.
22122 20th Ave. SE., H-150
Bothell, WA 98021

Dear Mr. Staton:

Included are the results from the testing of soil submitted on December 7, 2005 from the Former Arco Station, #001.0173.00003, F&BI 512055 project. There are 11 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
SLR1220R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/20/05

Date Received: 12/07/05

Project: Former Arco Station, #001.0173.00003, F&BI 512055

Date Extracted: 12/08/05

Date Analyzed: 12/08/05

**RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-G_x**

Results Reported on a Dry Weight Basis

Results Reported as µg/g (ppm)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 66-150)
DMW1-5 d 512055-01	92	100
DMW1-15 512055-03	19	104
DMW1-21 512055-04	<2	94
DMW2-20.75 512055-10	6	119
Method Blank	<2	70

d - The sample was diluted.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/20/05

Date Received: 12/07/05

Project: Former Arco Station, #001.0173.00003, F&BI 512055

Date Extracted: 12/08/05

Date Analyzed: 12/09/05

**RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL
USING METHOD NWTPH-D_x**

**Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis**
Results Reported on a Dry Weight Basis
Results Reported as µg/g (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 67-131)
DMW1-5 x 512055-01	280	78
DMW1-15 512055-03	<50	73
DMW1-21 512055-04	<50	77
DMW2-20.75 512055-10	<50	77
Method Blank	<50	76

x - The pattern of peaks present is not indicative of diesel. The result is due to overlap from the gasoline range.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW1-5	Client:	SLR International Corp.
Date Received:	12/07/05	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/09/05	Lab ID:	512055-01
Date Analyzed:	12/13/05	Data File:	121312.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	92	51	134
1,2-Dichloroethane-d4	101	51	137
Toluene-d8	90	54	139
4-Bromofluorobenzene	95	42	164

Compounds:	Concentration ug/g (ppm)
Benzene	1.0
Toluene	1.4
Ethylbenzene	6.7 ve
m,p-Xylene	25 ve
o-Xylene	11 ve
1,2-Dichloroethane (EDC)	<0.03

ve - The value reported exceeded the calibration range established for the analyte. The reported concentration is an estimate.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW1-5	Client:	SLR International Corp.
Date Received:	12/07/05	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/09/05	Lab ID:	512055-01 1/10
Date Analyzed:	12/13/05	Data File:	121317.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	94	51	134
1,2-Dichloroethane-d4	104	51	137
Toluene-d8	90	54	139
4-Bromofluorobenzene	98	42	164

Compounds:	Concentration ug/g (ppm)
Benzene	0.9
Toluene	1.4
Ethylbenzene	6.7
m,p-Xylene	30
o-Xylene	12
1,2-Dichloroethane (EDC)	<0.3

Note: The sample was diluted due to the presence of high levels of material. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW1-15	Client:	SLR International Corp.
Date Received:	12/07/05	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/09/05	Lab ID:	512055-03
Date Analyzed:	12/13/05	Data File:	121316.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	91	51	134
1,2-Dichloroethane-d4	99	51	137
Toluene-d8	86	54	139
4-Bromofluorobenzene	92	42	164

Compounds:	Concentration ug/g (ppm)
Benzene	0.11
Toluene	0.15
Ethylbenzene	0.60
m,p-Xylene	2.3
o-Xylene	0.65
1,2-Dichloroethane (EDC)	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW1-21	Client:	SLR International Corp.
Date Received:	12/07/05	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/09/05	Lab ID:	512055-04
Date Analyzed:	12/13/05	Data File:	121314.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	99	51	134
1,2-Dichloroethane-d4	111	51	137
Toluene-d8	98	54	139
4-Bromofluorobenzene	105	42	164

Compounds:	Concentration ug/g (ppm)
Benzene	0.13
Toluene	<0.03
Ethylbenzene	0.04
m,p-Xylene	0.11
o-Xylene	<0.03
1,2-Dichloroethane (EDC)	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW2-20.75	Client:	SLR International Corp.
Date Received:	12/07/05	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/09/05	Lab ID:	512055-10
Date Analyzed:	12/13/05	Data File:	121318.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	91	51	134
1,2-Dichloroethane-d4	98	51	137
Toluene-d8	89	54	139
4-Bromofluorobenzene	93	42	164

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.03
Ethylbenzene	0.03
m,p-Xylene	<0.1
o-Xylene	<0.03
1,2-Dichloroethane (EDC)	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	SLR International Corp.
Date Received:	Not Applicable	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/09/05	Lab ID:	051621 mb
Date Analyzed:	12/09/05	Data File:	120904.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	90	51	134
1,2-Dichloroethane-d4	93	51	137
Toluene-d8	86	54	139
4-Bromofluorobenzene	92	42	164

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.03
Ethylbenzene	<0.03
m,p-Xylene	<0.1
o-Xylene	<0.03
1,2-Dichloroethane (EDC)	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/20/05

Date Received: 12/07/05

Project: Former Arco Station, #001.0173.00003, F&BI 512055

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-G_x**

Laboratory Code: 512061-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	µg/g (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	µg/g (ppm)	20	74	58-134

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/20/05

Date Received: 12/07/05

Project: Former Arco Station, #001.0173.00003, F&BI 512055

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

Laboratory Code: 512055-04 (Matrix Spike) Silica Gel

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel	µg/g (ppm)	5,000	<50	92	92	71-130	0

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel	µg/g (ppm)	5,000	88	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/20/05

Date Received: 12/07/05

Project: Former Arco Station, #001.0173.00003, F&BI 512055

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260B

Laboratory Code: 512098-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	µg/g (ppm)	<0.03	<0.03	nm
Toluene	µg/g (ppm)	<0.05	<0.05	nm
Ethylbenzene	µg/g (ppm)	<0.03	<0.03	nm
m,p-Xylene	µg/g (ppm)	<0.1	<0.1	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benzene	µg/g (ppm)	5	107	104	71-119	3
Toluene	µg/g (ppm)	5	106	101	73-130	5
Ethylbenzene	µg/g (ppm)	2.5	111	105	70-130	6
m,p-Xylene	µg/g (ppm)	2.5	117	111	70-130	6

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

512055

SAMPLE CHAIN OF CUSTODY

ME

12-07-05

US3/ C05/

Page # 1 of 2

Send Report To Mike StadenCompany SLRAddress 22122 20th Ave SECity, State, ZIP Bothell, WAPhone # 425-402-8800 Fax #SAMPLERS (signature) [Signature]PROJECT NAME/NO. Former Arco Station

PO #

CON-0173.00003

REMARKS

* Silica gel cleanup for DRO
* hold all unmarked samples

TURNAROUND TIME

☒ Standard (2 Weeks)☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

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

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED						Notes
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	
* DMW1-5	01A-E	12-5-05	0915	S	5							
DMW1-10.5	02A-E		0930									
* DMW1-15	03A-E		0945									
* DMW1-21	04A-E		1000	S	5							
mw11-1205	05A-F		1120	W	6							
DMW5-1205	06A-F		1645									
DMW4-1205	07A-F	12-5-05	1840	W	6							
DMW2-6	08A-E		1445	S	5							
DMW2-11	09A-E		1455									
* DMW2-20.75	10A-E	12-5-05	1530	S	5							

Friedman & Bruya, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

SIGNATURE

Relinquished by: [Signature]Received by: [Signature]

Relinquished by:

Received by:

PRINT NAME

Beau Schwan

Phan Phan

COMPANY

SLR

FEBI

DATE

12-6-05

12-7-05

TIME

1430

10:00

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
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Seattle, WA 98119-2029
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FAX: (206) 283-5044
e-mail: fbi@isomedia.com

December 29, 2005

Mike Staton, Project Manager
SLR International Corp.
22122 20th Ave. SE., H-150
Bothell, WA 98021

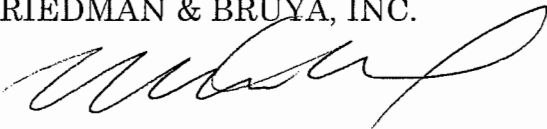
Dear Mr. Staton:

Included is the amended report from the testing of material submitted on November 30, 2005 from the Former Arco Station/#001.0173.00003, F&BI 511288 project. At your request, the water and soil results were split into two separate reports.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
SLR1209R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

December 9, 2005

Mike Staton, Project Manager
SLR International Corp.
22122 20th Ave. SE., H-150
Bothell, WA 98021

Dear Mr. Staton:

Included are the results from the testing of soil submitted on November 30, 2005 from the Former Arco Station/#001.0173.00003, F&BI 511288 project. There are 8 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
SLR1209R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/09/05

Date Received: 11/30/05

Project: Former Arco Station/#001.0173.00003, F&BI 511288

Date Extracted: 11/30/05

Date Analyzed: 11/30/05

**RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**

Results Reported on a Dry Weight Basis

Results Reported as $\mu\text{g/g}$ (ppm)

<u>Sample ID</u>	<u>Gasoline Range</u>	Surrogate (% Recovery)
Laboratory ID		(Limit 66-150)
MW-11-3.75 511288-06	<2	80
SSB16-4 511288-12	2	80
Method Blank	<2	80

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/09/05

Date Received: 11/30/05

Project: Former Arco Station/#001.0173.00003, F&BI 511288

Date Extracted: 11/30/05

Date Analyzed: 11/30/05

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

**Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis**

Results Reported on a Dry Weight Basis

Results Reported as µg/g (ppm)

<u>Sample ID</u>	<u>Diesel Range</u>	<u>Surrogate</u>
Laboratory ID	(C ₁₀ -C ₂₅)	(% Recovery)
		(Limit 67-131)
MW-11-3.75	<50	77
511288-06		
SSB16-4	<50	82
511288-12		
Method Blank	<50	73

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-11-3.75	Client:	SLR International Corp.
Date Received:	11/30/05	Project:	Former Arco Station/#001.0173.00003
Date Extracted:	11/30/05	Lab ID:	511288-06
Date Analyzed:	11/30/05	Data File:	113007.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	90	36	146
1,2-Dichloroethane-d4	89	40	139
Toluene-d8	100	36	152
4-Bromofluorobenzene	91	67	124

Compounds:	Concentration ug/g (ppm)
1,2-Dichloroethane (EDC)	<0.03
Benzene	<0.03
Toluene	<0.03
Ethylbenzene	<0.03
m,p-Xylene	<0.1
o-Xylene	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID: SSB16-4
Date Received: 11/30/05
Date Extracted: 11/30/05
Date Analyzed: 11/30/05
Matrix: soil
Units: ug/g (ppm)

Client: SLR International Corp.
Project: Former Arco Station/#001.0173.00003
Lab ID: 511288-12
Data File: 113008.D
Instrument: GCMS5
Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	97	36	146
1,2-Dichloroethane-d4	96	40	139
Toluene-d8	105	36	152
4-Bromofluorobenzene	94	67	124

Compounds:	Concentration ug/g (ppm)
1,2-Dichloroethane (EDC)	<0.03
Benzene	<0.03
Toluene	<0.03
Ethylbenzene	<0.03
m,p-Xylene	<0.1
o-Xylene	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	SLR International Corp.
Date Received:	Not Applicable	Project:	Former Arco Station/#001.0173.00003
Date Extracted:	11/30/05	Lab ID:	051585 mb
Date Analyzed:	11/30/05	Data File:	113006.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	87	36	146
1,2-Dichloroethane-d4	89	40	139
Toluene-d8	93	36	152
4-Bromofluorobenzene	82	67	124

Compounds:	Concentration ug/g (ppm)
1,2-Dichloroethane (EDC)	<0.03
Benzene	<0.03
Toluene	<0.03
Ethylbenzene	<0.03
m,p-Xylene	<0.1
o-Xylene	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/09/05

Date Received: 11/30/05

Project: Former Arco Station/#001.0173.00003, F&BI 511288

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 511288-06 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	µg/g (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	µg/g (ppm)	20	84	58-134

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/09/05

Date Received: 11/30/05

Project: Former Arco Station/#001.0173.00003, F&BI 511288

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

Laboratory Code: 511288-12 (Matrix Spike) Silica Gel

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel	µg/g (ppm)	5,000	<50	89	89	71-130	0

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel	µg/g (ppm)	5,000	86	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/09/05

Date Received: 11/30/05

Project: Former Arco Station/#001.0173.00003, F&BI 511288

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260B

Laboratory Code: 511288-12 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	µg/g (ppm)	<0.05	<0.05	nm
Toluene	µg/g (ppm)	<0.05	<0.05	nm
Ethylbenzene	µg/g (ppm)	<0.05	<0.05	nm
m,p-Xylene	µg/g (ppm)	<0.05	<0.05	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benzene	µg/g (ppm)	5	105	104	73-126	2
Toluene	µg/g (ppm)	5	111	108	75-136	3
Ethylbenzene	µg/g (ppm)	2.5	117	112	73-131	4
m,p-Xylene	µg/g (ppm)	2.5	120	115	77-122	4

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

511208

Send Report To Mike Staden

Company SLR

Address 27122 20th Ave SE

City, State, ZIP Bothell, WA

Phone # 425-402-8841 Fax # 8841-8841

SAMPLE CHAIN OF CUSTODY

ME 11-30-05

B05/V52/V

SAMPLERS (signature) [Signature]

PROJECT NAME/NO. Farmer Arco Station

001.0173.00003

REMARKS
For DRO use ~~65~~ silica-gel
cleanup, and only DRO ~~65~~ ~~no~~ ~~65~~

Page # 1 of 2

TURNAROUND TIME
☒ Standard (2 Weeks)
☒ RUSH 2-se:15 only
Rush charges authorized by:

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

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED						Notes
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	
MW9-1105	01 A-F	11-28-05	1255	W	6	X	X	X				
MW6-1105	02 A-F		1530									
MW5-1105	03 A-F	11-28-05	1645									
MW8-1105	04 A-F	11-29-05	0730	W	6	X	X	X				
SSB19-6	05 A-E		1210	S	5							
SSB19-3.75	06 A-E											* RUSH
SSB19-7.25	07 A-E		1220									
SSB19-9	08 A-E		1240									
SSB19-10.25	09 A-E		1255									
SSB19-12	10 A-E	11-29-05	1310	S	5	X	X	X				

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

Relinquished by: [Signature] PRINT NAME: Beau Schwen COMPANY: SLR DATE: 11-29-05 TIME: 1730

Received by: [Signature] PRINT NAME: Nhan Phan COMPANY: FeBI DATE: 11-29-05 TIME: 9:30

Relinquished by: _____

Received by: _____

$$2 \frac{BOS}{VS2} / \sqrt{3}$$

SAMPLERS (signature)

[illegible]

Formal - Afro Nation
001.0173.0003

REMARKS	

For DRO, use silica-gel cleanup, and for ARO, use silica-gel cleanup.

every country. 1800-1810.

[illegible]

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

December 9, 2005

Mike Staton, Project Manager
SLR International Corp.
22122 20th Ave. SE., H-150
Bothell, WA 98021

Dear Mr. Staton:

Included are the results from the testing of water submitted on November 30, 2005 from the Former Arco Station/#001.0173.00003, F&BI 511288 project. There are 10 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
SLR1209R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/09/05

Date Received: 11/30/05

Project: Former Arco Station/#001.0173.00003, F&BI 511288

Date Extracted: 12/01/05

Date Analyzed: 12/02/05 and 12/06/05

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE**

USING METHOD NWTPH-G_x

Results Reported as µg/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u> (C ₆ -C ₁₀)	<u>Surrogate</u> (% Recovery) (Limit 52-150)
MW9-1105 511288-01	<100	61
MW6-1105 511288-02	290	126
MW5-1105 511288-03	420	ip
MW8-1105 511288-04	<100	58
Method Blank	<100	98

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/09/05

Date Received: 11/30/05

Project: Former Arco Station/#001.0173.00003, F&BI 511288

Date Extracted: 11/30/05

Date Analyzed: 12/02/05

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL
USING METHOD NWTPH-D_x**

**Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis**

Results Reported as µg/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Surrogate</u> (% Recovery) (Limit 67-131)
MW9-1105 511288-01	<50	76
MW6-1105 x 511288-02	210	70
MW5-1105 x 511288-03	230	81
MW8-1105 511288-04	<50	74
Method Blank	<50	77

x - The pattern of peaks present is not indicative of diesel. The result is due to overlap from the gasoline range.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW9-1105	Client:	SLR International Corp.
Date Received:	11/30/05	Project:	Former Arco Station/#001.0173.00003
Date Extracted:	11/30/05	Lab ID:	511288-01
Date Analyzed:	11/30/05	Data File:	113015.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	96	83	129
1,2-Dichloroethane-d4	96	67	133
Toluene-d8	102	73	140
4-Bromofluorobenzene	92	84	136

Compounds:	Concentration ug/L (ppb)
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW6-1105	Client:	SLR International Corp.
Date Received:	11/30/05	Project:	Former Arco Station/#001.0173.00003
Date Extracted:	11/30/05	Lab ID:	511288-02
Date Analyzed:	11/30/05	Data File:	113016.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	97	83	129
1,2-Dichloroethane-d4	98	67	133
Toluene-d8	105	73	140
4-Bromofluorobenzene	92	84	136

Compounds:	Concentration ug/L (ppb)
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW5-1105	Client:	SLR International Corp.
Date Received:	11/30/05	Project:	Former Arco Station/#001.0173.00003
Date Extracted:	11/30/05	Lab ID:	511288-03
Date Analyzed:	11/30/05	Data File:	113017.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	97	83	129
1,2-Dichloroethane-d4	95	67	133
Toluene-d8	105	73	140
4-Bromofluorobenzene	96	84	136

Compounds:	Concentration ug/L (ppb)
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW8-1105	Client:	SLR International Corp.
Date Received:	11/30/05	Project:	Former Arco Station/#001.0173.00003
Date Extracted:	11/30/05	Lab ID:	511288-04
Date Analyzed:	11/30/05	Data File:	113018.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	99	83	129
1,2-Dichloroethane-d4	99	67	133
Toluene-d8	105	73	140
4-Bromofluorobenzene	95	84	136

Compounds:	Concentration ug/L (ppb)
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	SLR International Corp.
Date Received:	Not Applicable	Project:	Former Arco Station/#001.0173.00003
Date Extracted:	11/30/05	Lab ID:	051586 mb
Date Analyzed:	11/30/05	Data File:	113013.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	92	83	129
1,2-Dichloroethane-d4	93	67	133
Toluene-d8	98	73	140
4-Bromofluorobenzene	88	84	136

Compounds:	Concentration ug/L (ppb)
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/09/05

Date Received: 11/30/05

Project: Former Arco Station/#001.0173.00003, F&BI 511288

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 511288-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	µg/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	µg/L (ppb)	1,000	80	66-124

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/09/05

Date Received: 11/30/05

Project: Former Arco Station/#001.0173.00003, F&BI 511288

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

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel	µg/L (ppb)	2,500	100	102	68-144	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/09/05

Date Received: 11/30/05

Project: Former Arco Station/#001.0173.00003, F&BI 511288

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260B

Laboratory Code: 511266-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	µg/L (ppb)	<1	<1	nm
Toluene	µg/L (ppb)	<1	<1	nm
Ethylbenzene	µg/L (ppb)	<1	<1	nm
m,p-Xylene	µg/L (ppb)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benzene	µg/L (ppb)	100	111	106	75-121	5
Toluene	µg/L (ppb)	100	118	112	78-128	5
Ethylbenzene	µg/L (ppb)	50	121	117	77-131	4
m,p-Xylene	µg/L (ppb)	50	124	120	82-132	3

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

511288

Send Report To Mike StardenCompany SLRAddress 27122 20th Ave SECity, State, ZIP Bellevue, WAPhone # 425-402-8844 Fax # 8846

SAMPLE CHAIN OF CUSTODY

ME 11-30-05

B05/V52/V

SAMPLERS (signature) [Signature]PROJECT NAME/NO. Farmer Arco Station# 001.0173.00003

REMARKS

For DRO use ~~BS~~ silica-gel
cleanup, and only DRO. ~~no~~ ^{BS}Page # 1 of 2

TURNAROUND TIME

☒ Standard (2 Weeks)☒ RUSH 2-se.15 only
Rush charges authorized by:

SAMPLE DISPOSAL

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

ANALYSES REQUESTED

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Notes
MW9-1105	01 A-F	11-28-05	1255	W	6	X	X	X			X	
MW6-1105	02 A-F		1530									
MW5-1105	03 A-F	11-28-05	1645									
MW8-1105	04 A-F	11-29-05	0730	W	6	X	X	X			X	
SSB19-6	05 A-E		1210	S	5							
SSB19-3.75	06 A-E											* RUSH
SSB19-7.25	07 A-E		1220									
SSB19-9	08 A-E		1240									
SSB19-10.25	09 A-E		1255									
SSB19-12	10 A-E	11-29-05	1310	S	5	X	X	X			X	

Friedman & Bruya, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COC\COC.DOC

SIGNATURE

Relinquished by: [Signature]Received by: [Signature]

Relinquished by:

Received by:

PRINT NAME

Beau Schwan

Nhan Phan

COMPANY

SLR

FBI

DATE

11-29-05 1730

11-29-05 9:30 A

511280
Send Report To Mike Staden

Company _____

Address 22122 Ave SE

City, State, ZIP Bothell, WA

Phone # 425-402-5820 Fax # 425-402-8800

Fax # _____

SAMPLE CHAIN OF CUSTODY

ME 11-30-05

$$\frac{B05}{2} / \frac{VS2}{2} / \frac{V3}{2}$$

SAMPLERS (signature)

PROJECT NAME/NO.

former Arco Stadion

001.0173.0003

REMARKS

REMARKS
For DRO, use silica-gel cleanup,
and only DRO results.

Page #

of

TURNAROUND TIME

☒ Standard (2 Weeks)

☒ RUSH 2:50.1 Sample Only

SAMPLE DISPOSAL

☐ Dispose after 30 days☐ Return samples☐ Will call with instructions[illegible]

Friedman & Bruva, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

December 9, 2005

Mike Staton, Project Manager
SLR International Corp.
22122 20th Ave. SE., H-150
Bothell, WA 98021

Dear Mr. Staton:

Included are the results from the testing of material submitted on December 2, 2005 from the Former Arco Station, #001.0173.00003, F&BI 512028 project. There are 9 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
SLR1209R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/09/05

Date Received: 12/02/05

Project: Former Arco Station, #001.0173.00003, F&BI 512028

Date Extracted: 12/06/05

Date Analyzed: 12/06/05

**RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**

Results Reported on a Dry Weight Basis

Results Reported as $\mu\text{g/g}$ (ppm)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 66-150)
DMW5-23 512028-04	<2	95
SSB17-6.5 512028-08	6	102
SSB18-6 512028-12	4	123
Method Blank	<2	62

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/09/05

Date Received: 12/02/05

Project: Former Arco Station, #001.0173.00003, F&BI 512028

Date Extracted: 12/05/05

Date Analyzed: 12/06/05

**RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL**

USING METHOD NWTPH-Dx

**Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis**

Results Reported on a Dry Weight Basis

Results Reported as µg/g (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	Surrogate (% Recovery) (Limit 67-131)
DMW5-23 512028-04	<50	83
SSB17-6.5 512028-08	2,600	77
SSB18-6 512028-12	230	80
Method Blank	<50	75

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW5-23	Client:	SLR International Corp.
Date Received:	12/02/05	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/05/05	Lab ID:	512028-04
Date Analyzed:	12/06/05	Data File:	120606.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	86	51	134
1,2-Dichloroethane-d4	87	51	137
Toluene-d8	87	54	139
4-Bromofluorobenzene	93	42	164

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.03
Ethylbenzene	<0.03
m,p-Xylene	<0.1
o-Xylene	<0.03
1,2-Dichloroethane (EDC)	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB17-6.5	Client:	SLR International Corp.
Date Received:	12/02/05	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/05/05	Lab ID:	512028-08
Date Analyzed:	12/06/05	Data File:	120607.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	87	51	134
1,2-Dichloroethane-d4	87	51	137
Toluene-d8	88	54	139
4-Bromofluorobenzene	91	42	164

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.03
Ethylbenzene	<0.03
m,p-Xylene	<0.1
o-Xylene	<0.03
1,2-Dichloroethane (EDC)	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSB18-6	Client:	SLR International Corp.
Date Received:	12/02/05	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/05/05	Lab ID:	512028-12
Date Analyzed:	12/06/05	Data File:	120608.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	87	51	134
1,2-Dichloroethane-d4	88	51	137
Toluene-d8	88	54	139
4-Bromofluorobenzene	93	42	164

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.03
Ethylbenzene	<0.03
m,p-Xylene	<0.1
o-Xylene	<0.03
1,2-Dichloroethane (EDC)	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	SLR International Corp.
Date Received:	Not Applicable	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/05/05	Lab ID:	051590 mb
Date Analyzed:	12/06/05	Data File:	120605.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	88	51	134
1,2-Dichloroethane-d4	89	51	137
Toluene-d8	89	54	139
4-Bromofluorobenzene	94	42	164

Compounds:	Concentration ug/g (ppm)
Benzene	<0.03
Toluene	<0.03
Ethylbenzene	<0.03
m,p-Xylene	<0.1
o-Xylene	<0.03
1,2-Dichloroethane (EDC)	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/09/05

Date Received: 12/02/05

Project: Former Arco Station, #001.0173.00003, F&BI 512028

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**

Laboratory Code: 512011-06 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	µg/g (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	µg/g (ppm)	20	94	58-134

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/09/05

Date Received: 12/02/05

Project: Former Arco Station, #001.0173.00003, F&BI 512028

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

Laboratory Code: 512024-06 (Matrix Spike) Silica Gel

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel	µg/g (ppm)	5,000	<50	99	97	71-130	2

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel	µg/g (ppm)	5,000	87	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/09/05

Date Received: 12/02/05

Project: Former Arco Station, #001.0173.00003, F&BI 512028

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260B

Laboratory Code: 512028-12 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	µg/g (ppm)	<0.03	<0.03	nm
Toluene	µg/g (ppm)	<0.05	<0.05	nm
Ethylbenzene	µg/g (ppm)	<0.05	<0.05	nm
m,p-Xylene	µg/g (ppm)	<0.1	<0.1	nm

Laboratory Code: 512028-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Benzene	µg/g (ppm)	5	<0.03	116	60-124
Toluene	µg/g (ppm)	5	<0.05	118	61-130
Ethylbenzene	µg/g (ppm)	2.5	<0.05	121	50-150
m,p-Xylene	µg/g (ppm)	2.5	<0.1	121	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	µg/g (ppm)	5	101	71-119
Toluene	µg/g (ppm)	5	104	73-130
Ethylbenzene	µg/g (ppm)	2.5	104	70-130
m,p-Xylene	µg/g (ppm)	2.5	106	70-130

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

512028

Send Report To Mike StadenCompany SLRAddress 22122 20th Ave SECity, State, ZIP Bellevue, WAPhone # 425-402-8800

Fax #

SAMPLE CHAIN OF CUSTODY

ME 12/02/05

V52/coy/v1

SAMPLERS (signature) <u>Ben Staden</u>		Page # <u>1</u> of <u>2</u>
PROJECT NAME/NO. <u>Former Arco Station</u>	PO #	TURNAROUND TIME ☐ Standard (2 Weeks) ☒ RUSH
# <u>001.0173.00003</u>		Rush charges authorized by:
REMARKS • silica-gel cleanup for NWTPH-Bx • hold all other soil samples		SAMPLE DISPOSAL ☐ Dispose after 30 days ☐ Return samples ☐ Will call with instructions

ANALYSES REQUESTED												Notes
TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	NWTPH-DX Pro only	NWTPH-LX	BTEX, EOC by 8260B				
Sample ID	Lab ID	Date	Time	Sample Type	# of containers							
DMWS - 18	01A-E	12-2-05	0810	S	5							
DMWS - 20	02A-E	{	0825	{	{							
DMWS - 20.5	03A-E		0835									
DMWS - 23	04A-E	{	0900	{	{		X	X	X		RUSH	
DMWS - 26	05A-E		0915									
~~SSB~~ SSB17-4	06A-E	{	1035	{	{							
SSB17 - 5	07A-E		1055									
SSB17 - 6.5	08A-E	{	1105	{	{		X	X	X		RUSH	
SSB17 ÷ 7.5	09A-E		1125									
SSB17 - 10	10A-E	12-2-05	1135	S	5							

SIGNATURE		PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>Ben Staden</u>		Ben Staden	SLR	12-2-05	1750
Received by: <u>Michele Trivino Costales</u>		Michele Trivino Costales	F&B	12/2/05	1750
Relinquished by:					
Received by:					

Friedman & Bruya, Inc.
3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COC\COC.DOC

SAMPLE CHAIN OF CUSTODY ME 12/02/05

512028

usa/cap/v1

Page # 2 of 2

Send Report To Mike Staden
 Company SLR
 Address 22122 20th Ave SE
 City, State, ZIP Bothell, WA
 Phone # 425-402-8800 Fax #

SAMPLERS (signature) Ben Sgh
 PROJECT NAME/NO. former Arco Station
 # 001.0173.00003
 REMARKS
 • silica-gel cleaning for NW7PH-Dx
 • hold SSB18-10 until results from
 SSB18-6, hold other soil samples

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

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	NW7PH-Dx DRO only	NW7PH-Gx	BTEX, EDC by 8260 B	Notes
SSB18-5	11 A-E	12-2-05	1155	S	5										
SSB18-6	12 A-E	{	1215	{	{										RUSH
SSB18-8	13 A-E	{	1235	{	{										
SSB18-10	14 A-E	12-2-05	1245	S	5										* hold until results from SSB18-6
Trips Blank	15 A-B	-	-	W	2										

Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282 Fax (206) 283-5044	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>Ben Sgh</u>	<u>Ben Sgh</u>	Beau Staden	SLR	12-2-05	1750
Received by: <u>Michelle Foster</u>	<u>Michelle Foster</u>	Michelle Costales	F&B	12/2/05	1750
Relinquished by:					
Received by:					

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

December 21, 2005

Mike Staton, Project Manager
SLR International Corp.
22122 20th Ave. SE., H-150
Bothell, WA 98021

Dear Mr. Staton:

Included are the results from the testing of material submitted on December 8, 2005 from the Former Arco Station, #001.0173.00003, F&BI 512074 project. There are 10 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
SLR1221R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/21/05

Date Received: 12/08/05

Project: Former Arco Station, #001.0173.00003, F&BI 512074

Date Extracted: 12/16/05

Date Analyzed: 12/16/05 and 12/19/05

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**

Results Reported as $\mu\text{g/L}$ (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 52-150)
DMW2-1205 512074-01	270	93
DMW3-1205 512074-02	<50	89
DMW1-1205 d 512074-03	22,000	99
Method Blank	<50	93

d - The sample was diluted.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/21/05

Date Received: 12/08/05

Project: Former Arco Station, #001.0173.00003, F&BI 512074

Date Extracted: 12/12/05

Date Analyzed: 12/13/05

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

**Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis**

Results Reported as µg/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 68-143)
DMW2-1205 512074-01	<50	98
DMW3-1205 512074-02	<50	94
DMW1-1205 x 512074-03	2,900	105
Method Blank	<50	88

x - The pattern of peaks present is not indicative of diesel. The result is due to overlap from the gasoline range.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW2-1205	Client:	SLR International Corp.
Date Received:	12/08/05	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/08/05	Lab ID:	512074-01
Date Analyzed:	12/08/05	Data File:	120810.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	88	75	125
1,2-Dichloroethane-d4	88	67	133
Toluene-d8	85	79	129
4-Bromofluorobenzene	92	76	145

Compounds:	Concentration ug/L (ppb)
Benzene	11
Toluene	<1
Ethylbenzene	40
m,p-Xylene	46
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW3-1205	Client:	SLR International Corp.
Date Received:	12/08/05	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/08/05	Lab ID:	512074-02
Date Analyzed:	12/08/05	Data File:	120812.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	96	75	125
1,2-Dichloroethane-d4	89	67	133
Toluene-d8	91	79	129
4-Bromofluorobenzene	97	76	145

Compounds:	Concentration ug/L (ppb)
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW1-1205	Client:	SLR International Corp.
Date Received:	12/08/05	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/08/05	Lab ID:	512074-03
Date Analyzed:	12/08/05	Data File:	120813.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	88	75	125
1,2-Dichloroethane-d4	86	67	133
Toluene-d8	88	79	129
4-Bromofluorobenzene	93	76	145

Compounds:	Concentration ug/L (ppb)
Benzene	1,800 ve
Toluene	130
Ethylbenzene	630 ve
m,p-Xylene	1,600 ve
o-Xylene	580 ve
1,2-Dichloroethane (EDC)	<1

ve - The value reported exceeded the calibration range established for the analyte. The reported concentration is an estimate.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW1-1205	Client:	SLR International Corp.
Date Received:	12/08/05	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/08/05	Lab ID:	512074-03 1/100
Date Analyzed:	12/09/05	Data File:	120847.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	90	75	125
1,2-Dichloroethane-d4	92	67	133
Toluene-d8	88	79	129
4-Bromofluorobenzene	93	76	145

Compounds:	Concentration ug/L (ppb)
Benzene	4,000
Toluene	160
Ethylbenzene	1,100
m,p-Xylene	3,300
o-Xylene	790
1,2-Dichloroethane (EDC)	<100

Note: The sample was diluted due to the presence of high levels of material. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	SLR International Corp.
Date Received:	Not Applicable	Project:	Former Arco Station, #001.0173.00003
Date Extracted:	12/08/05	Lab ID:	051619 mb
Date Analyzed:	12/08/05	Data File:	120804.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	88	75	125
1,2-Dichloroethane-d4	88	67	133
Toluene-d8	86	79	129
4-Bromofluorobenzene	94	76	145

Compounds:	Concentration ug/L (ppb)
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/21/05

Date Received: 12/08/05

Project: Former Arco Station, #001.0173.00003, F&BI 512074

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-G_x**

Laboratory Code: 512173-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	µg/L (ppb)	350	400	13

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	µg/L (ppb)	1,000	70	66-124

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/21/05

Date Received: 12/08/05

Project: Former Arco Station, #001.0173.00003, F&BI 512074

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

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel	µg/L (ppb)	2,500	139	118	68-144	16

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/21/05

Date Received: 12/08/05

Project: Former Arco Station, #001.0173.00003, F&BI 512074

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260B

Laboratory Code: 512074-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	µg/L (ppb)	11	11	0
Toluene	µg/L (ppb)	<1	<1	nm
Ethylbenzene	µg/L (ppb)	40	39	3
m,p-Xylene	µg/L (ppb)	46	46	0

Laboratory Code: 512074-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Benzene	µg/L (ppb)	100	11	113	76-113
Toluene	µg/L (ppb)	100	<1	113	70-130
Ethylbenzene	µg/L (ppb)	50	40	115	50-150
m,p-Xylene	µg/L (ppb)	50	46	121	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	µg/L (ppb)	100	107	75-124
Toluene	µg/L (ppb)	100	105	72-129
Ethylbenzene	µg/L (ppb)	50	113	70-130
m,p-Xylene	µg/L (ppb)	50	117	70-130

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

CS/V2

SAMPLERS (signature)	PO #
PROJECT NAME/NO. Former Arco Station # C01.0173.00003	REMARKS • silica gel cleanup for ORO analysis analyst: [signature] date: 11/14/04

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

[illegible]

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

September 6, 2006

Mike Staton, Project Manager
SLR International Corp.
22122 20th Ave. SE., H-150
Bothell, WA 98021

Dear Mr. Staton:

Included are the results from the testing of soil submitted on August 21, 2006 from the Former Arco Station #0855, Project #:001.0173.00003, F&BI 608218 project. There are 10 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
SLR0906R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/06/06

Date Received: 08/21/06

Project: Former Arco Station #0855, Project #:001.0173.00003, F&BI 608218

Date Extracted: 08/22/06

Date Analyzed: 08/23/06

**RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**

Results Reported on a Dry Weight Basis

Results Reported as µg/g (ppm)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 58-139)
DMW7-5 608218-01	<2	97
DMW8-5 608218-02	<2	97
TP2-5.5 608218-04	<2	97
TP1-5.5 608218-05	<2	97
Method Blank	<2	98

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/06/06

Date Received: 08/21/06

Project: Former Arco Station #0855, Project #:001.0173.00003, F&BI 608218

Date Extracted: 08/22/06

Date Analyzed: 08/23/06

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

Extended to Include Motor Oil Range Compounds

Sample Extracts Passed Through a

Silica Gel Column Prior to Analysis

Results Reported on a Dry Weight Basis

Results Reported as µg/g (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>TRPH</u> (C ₁₀ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 67-127)
DMW7-5 608218-01	<50	<250	72
DMW8-5 608218-02	<50	<250	77
TP2-5.5 608218-04	<50	<250	75
TP1-5.5 608218-05	<50	<250	79
Method Blank	<50	<250	77

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW7-5	Client:	SLR International Corp.
Date Received:	08/21/06	Project:	#001.0173.00003, F&BI 608218
Date Extracted:	08/22/06	Lab ID:	608218-01
Date Analyzed:	08/22/06	Data File:	082218.D
Matrix:	Soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	46 ip	51	134
1,2-Dichloroethane-d4	50 ip	51	137
Toluene-d8	46 ip	54	139
4-Bromofluorobenzene	49	42	164

Compounds:	Concentration ug/g (ppm)
1,2-Dichloroethane (EDC)	<0.05
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID: DMW8-5
Date Received: 08/21/06
Date Extracted: 08/22/06
Date Analyzed: 08/22/06
Matrix: soil
Units: ug/g (ppm)

Client: SLR International Corp.
Project: #001.0173.00003, F&BI 608218
Lab ID: 608218-02
Data File: 082219.D
Instrument: GCMS5
Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	64	51	134
1,2-Dichloroethane-d4	65	51	137
Toluene-d8	66	54	139
4-Bromofluorobenzene	65	42	164

Compounds:	Concentration ug/g (ppm)
1,2-Dichloroethane (EDC)	<0.05
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID: TP2-5.5	Client: SLR International Corp.
Date Received: 08/21/06	Project: #001.0173.00003, F&BI 608218
Date Extracted: 08/22/06	Lab ID: 608218-04
Date Analyzed: 08/22/06	Data File: 082220.D
Matrix: Soil	Instrument: GCMS5
Units: ug/g (ppm)	Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	41 ip	51	134
1,2-Dichloroethane-d4	45 ip	51	137
Toluene-d8	41 ip	54	139
4-Bromofluorobenzene	44	42	164

Compounds:	Concentration ug/g (ppm)
1,2-Dichloroethane (EDC)	<0.05
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	TP1-5.5	Client:	SLR International Corp.
Date Received:	08/21/06	Project:	#001.0173.00003, F&BI 608218
Date Extracted:	08/22/06	Lab ID:	608218-05
Date Analyzed:	08/22/06	Data File:	082221.D
Matrix:	Soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	43 ip	51	134
1,2-Dichloroethane-d4	48 ip	51	137
Toluene-d8	42 ip	54	139
4-Bromofluorobenzene	43	42	164

Compounds:	Concentration ug/g (ppm)
1,2-Dichloroethane (EDC)	<0.05
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	SLR International Corp.
Date Received:	Not Applicable	Project:	#001.0173.00003, F&BI 608218
Date Extracted:	08/22/06	Lab ID:	061215 mb
Date Analyzed:	08/22/06	Data File:	082205.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	100	51	134
1,2-Dichloroethane-d4	100	51	137
Toluene-d8	105	54	139
4-Bromofluorobenzene	121	42	164

Compounds:	Concentration ug/g (ppm)
1,2-Dichloroethane (EDC)	<0.05
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/06/06

Date Received: 08/21/06

Project: Former Arco Station #0855, Project #:001.0173.00003, F&BI 608218

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING
METHOD NWTPH-G_x**

Laboratory Code: 608157-03 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	µg/g (ppm)	370	280	28 h

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	µg/g (ppm)	20	95	58-137

h - RPD results are likely outside control limits due to sample inhomogeneity.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/06/06

Date Received: 08/21/06

Project: Former Arco Station #0855, Project #:001.0173.00003, F&BI 608218

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

Laboratory Code: 608231-01 (Matrix Spike) Silica Gel

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	µg/g (ppm)	5,000	<50	128	129	82-133	1

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	µg/g (ppm)	5,000	125	69-142

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/06/06

Date Received: 08/21/06

Project: Former Arco Station #0855, Project #:001.0173.00003, F&BI 608218

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260B

Laboratory Code: 608231-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
1,2-Dichloroethane (EDC)	µg/g (ppm)	<0.05	<0.05	nm
Benzene	µg/g (ppm)	<0.03	<0.03	nm
Toluene	µg/g (ppm)	<0.05	<0.05	nm
Ethylbenzene	µg/g (ppm)	<0.05	<0.05	nm
m,p-Xylene	µg/g (ppm)	<0.1	<0.1	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
1,2-Dichloroethane (EDC)	µg/g (ppm)	2.5	103	103	67-137	0
Benzene	µg/g (ppm)	5	91	90	71-119	1
Toluene	µg/g (ppm)	5	98	97	73-130	1
Ethylbenzene	µg/g (ppm)	2.5	104	102	70-130	2
m,p-Xylene	µg/g (ppm)	2.5	107	106	70-130	1

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

SAMPLE AIR CL VOI M / C - 100
[REDACTED] Page #
SAMPLERS (signature) 2' 2' of

Phone # _____

1

REMARKS

For DRG use silica gel cleanup

TURNAROUND TIME

TURNAROUND TIME

~~X~~ Standard (2 Weeks)

RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Dispose after 30 days

☐ Return samples

☐ Will call with instructions[illegible]

FORMS\COC\COC.DOC

Received by:

Nhan Phan

Champion

10:21	8/21

90/12/5	14:00

Samples received at 7__°C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
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September 6, 2006

Mike Staton, Project Manager
SLR International Corp.
22122 20th Ave. SE., H-150
Bothell, WA 98021

Dear Mr. Staton:

Included are the results from the testing of water submitted on August 21, 2006 from the Former Arco Station #0855, Project #: 001.0173.00003, F&BI 608218 project. There are 15 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
SLR0906R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/06/06

Date Received: 08/21/06

Project: Former Arco Station #0855, Project #:001.0173.00003, F&BI 608218

Date Extracted: 08/23/06

Date Analyzed: 08/23/06 and 08/24/06

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**

Results Reported as µg/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 51-134)
DMW1-0806 d 608218-06	16,000	105
DMW2-0806 608218-07	<100	99
DMW3-0806 608218-08	<100	94
DMW4-0806 608218-09	210	92
DMW5-0806 608218-10	170	98
DMW6-0806 608218-11	<100	98
DMW7-0806 608218-12	<100	97
DMW8-0806 608218-13	<100	100
Method Blank	<100	97

d - The sample was diluted.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/06/06

Date Received: 08/21/06

Project: Former Arco Station #0855, Project #:001.0173.00003, F&BI 608218

Date Extracted: 08/22/06

Date Analyzed: 08/22/06

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

Extended to Include Motor Oil Range Compounds

**Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis**

Results Reported as µg/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>TRPH</u> (C ₁₀ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 52-134)
DMW1-0806 x 608218-06	930	930	70
DMW2-0806 608218-07	<50	<250	72
DMW3-0806 608218-08	<50	<250	91
DMW4-0806 608218-09	<50	<250	74
DMW5-0806 608218-10	<50	<250	78
DMW6-0806 608218-11	<50	<250	75
DMW7-0806 608218-12	<50	<250	73
DMW8-0806 608218-13	<50	<250	65
Method Blank	<50	<250	76

x - The pattern of peaks present is not indicative of diesel, results are due to gasoline range hydrocarbons.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW1-0806	Client:	SLR International Corp.
Date Received:	08/21/06	Project:	#:001.0173.00003, F&BI 608218
Date Extracted:	08/29/06	Lab ID:	608218-06
Date Analyzed:	08/29/06	Data File:	082906.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	96	75	125
1,2-Dichloroethane-d4	96	67	133
Toluene-d8	103	79	129
4-Bromofluorobenzene	118	76	145

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1
Benzene	1,800 ve
Toluene	<1
Ethylbenzene	490 ve
m,p-Xylene	350 ve
o-Xylene	1.4

ve - The value reported exceeded the calibration range established for the analyte. The reported concentration is an estimate.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW1-0806	Client:	SLR International Corp.
Date Received:	08/21/06	Project:	#:001.0173.00003, F&BI 608218
Date Extracted:	08/29/06	Lab ID:	608218-06 1/100
Date Analyzed:	08/29/06	Data File:	082916.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	96	75	125
1,2-Dichloroethane-d4	97	67	133
Toluene-d8	101	79	129
4-Bromofluorobenzene	118	76	145

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<100
Benzene	4,100
Toluene	<100
Ethylbenzene	520
m,p-Xylene	320
o-Xylene	<100

Note: The sample was diluted due to the presence of high levels of material. Detection limits are raised due to dilution.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW2-0806	Client:	SLR International Corp.
Date Received:	08/21/06	Project:	#:001.0173.00003, F&BI 608218
Date Extracted:	08/29/06	Lab ID:	608218-07
Date Analyzed:	08/29/06	Data File:	082908.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	96	75	125
1,2-Dichloroethane-d4	95	67	133
Toluene-d8	101	79	129
4-Bromofluorobenzene	120	76	145

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1
Benzene	10
Toluene	<1
Ethylbenzene	5.6
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW3-0806	Client:	SLR International Corp.
Date Received:	08/21/06	Project:	#:001.0173.00003, F&BI 608218
Date Extracted:	08/29/06	Lab ID:	608218-08
Date Analyzed:	08/29/06	Data File:	082909.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	94	75	125
1,2-Dichloroethane-d4	93	67	133
Toluene-d8	100	79	129
4-Bromofluorobenzene	117	76	145

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID: DMW4-0806	Client: SLR International Corp.
Date Received: 08/21/06	Project: #:001.0173.00003, F&BI 608218
Date Extracted: 08/29/06	Lab ID: 608218-09
Date Analyzed: 08/29/06	Data File: 082910.D
Matrix: water	Instrument: GCMS5
Units: ug/L (ppb)	Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	95	75	125
1,2-Dichloroethane-d4	94	67	133
Toluene-d8	101	79	129
4-Bromofluorobenzene	118	76	145

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1
Benzene	5.7
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW5-0806	Client:	SLR International Corp.
Date Received:	08/21/06	Project:	#:001.0173.00003, F&BI 608218
Date Extracted:	08/29/06	Lab ID:	608218-10
Date Analyzed:	08/29/06	Data File:	082911.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	96	75	125
1,2-Dichloroethane-d4	98	67	133
Toluene-d8	102	79	129
4-Bromofluorobenzene	122	76	145

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1
Benzene	74
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW6-0806	Client:	SLR International Corp.
Date Received:	08/21/06	Project:	#:001.0173.00003, F&BI 608218
Date Extracted:	08/29/06	Lab ID:	608218-11
Date Analyzed:	08/29/06	Data File:	082912.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	95	75	125
1,2-Dichloroethane-d4	94	67	133
Toluene-d8	100	79	129
4-Bromofluorobenzene	118	76	145

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID: DMW7-0806	Client: SLR International Corp.
Date Received: 08/21/06	Project: #:001.0173.00003, F&BI 608218
Date Extracted: 08/29/06	Lab ID: 608218-12
Date Analyzed: 08/29/06	Data File: 082913.D
Matrix: water	Instrument: GCMS5
Units: ug/L (ppb)	Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	96	75	125
1,2-Dichloroethane-d4	93	67	133
Toluene-d8	100	79	129
4-Bromofluorobenzene	118	76	145

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID: DMW8-0806	Client: SLR International Corp.
Date Received: 08/21/06	Project: #:001.0173.00003, F&BI 608218
Date Extracted: 08/29/06	Lab ID: 608218-13
Date Analyzed: 08/29/06	Data File: 082914.D
Matrix: water	Instrument: GCMS5
Units: ug/L (ppb)	Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	95	75	125
1,2-Dichloroethane-d4	94	67	133
Toluene-d8	99	79	129
4-Bromofluorobenzene	118	76	145

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	SLR International Corp.
Date Received:	Not Applicable	Project:	#: 001.0173.00003, F&BI 608218
Date Extracted:	08/23/06	Lab ID:	061218 mb
Date Analyzed:	08/24/06	Data File:	082330.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	95	75	125
1,2-Dichloroethane-d4	93	67	133
Toluene-d8	100	79	129
4-Bromofluorobenzene	113	76	145

Compounds:	Concentration ug/L (ppb)
1,2-Dibromoethane (EDB)	<1
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/06/06

Date Received: 08/21/06

Project: Former Arco Station #0855, Project #:001.0173.00003, F&BI 608218

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-G_x**

Laboratory Code: 608217-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	µg/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	µg/L (ppb)	1,000	87	63-129

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/06/06

Date Received: 08/21/06

Project: Former Arco Station #0855, Project #:001.0173.00003, F&BI 608218

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

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	µg/L (ppb)	2,500	98	105	73-142	7

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/06/06

Date Received: 08/21/06

Project: Former Arco Station #0855, Project #:001.0173.00003, F&BI 608218

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260B**

Laboratory Code: 608218-13 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
1,2-Dichloroethane (EDC)	µg/L (ppb)	<1	<1	nm
Benzene	µg/L (ppb)	<1	<1	nm
Toluene	µg/L (ppb)	<1	<1	nm
Ethylbenzene	µg/L (ppb)	<1	<1	nm
m,p-Xylene	µg/L (ppb)	<2	<2	nm

Laboratory Code: 608218-13 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
1,2-Dichloroethane (EDC)	µg/L (ppb)	50	<1	103	56-137
Benzene	µg/L (ppb)	100	<1	97	76-112
Toluene	µg/L (ppb)	100	<1	101	69-129
Ethylbenzene	µg/L (ppb)	50	<1	99	50-150
m,p-Xylene	µg/L (ppb)	50	<2	103	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
1,2-Dichloroethane (EDC)	µg/L (ppb)	50	95	67-137
Benzene	µg/L (ppb)	100	92	74-123
Toluene	µg/L (ppb)	100	96	72-128
Ethylbenzene	µg/L (ppb)	50	94	70-130
m,p-Xylene	µg/L (ppb)	50	98	70-130

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

608218

Send Report To Mike Staden

Company SLR

Address 22122 20th Ave SE

City, State, ZIP Bothell, WA

Phone # 425-402-8800 Fax # _____

SAMPLE MAIN CONTROL

Page # 1 of 2

TURNAROUND TIME

☒ Standard (2 Weeks)

☐ RUSH

Rush charges authorized by: _____

SAMPLE DISPOSAL

☐ Dispose after 30 days

☐ Return samples

☐ Will call with instructions

SAMPLERS (signature) _____

PROJECT NAME/NO Former Arco Station #0855

Project #: 001.0173.00003

REMARKS * For DRO use - add silica gel clean up

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED						Notes
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	
DMW7-5	01 A-E	8-15-06	0810	S	5							
DMW8-5	02 A-E		1055		5							
DMW6-5	03 A-E	8-14-06	1315		5							
TP2-5.5	04 A-E	8-17-06	10:05		5							
TP1-5.5	05 A-E	8-17-06	1120		5							
DMW1-0806	06 A-E		1520	W								
DMW2-0806	07 A-E	8-16-06	1800									
DMW3-0806	08 A-E	8-17-06	0820									
DMW4-0806	09 A-E	8-17-06	1500									
DMW5-0806	10 A-E		1310									

Friedman & Bruya, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

SIGNATURE

Relinquished by: Mike Staden

Received by: Jim Johannes

Relinquished by: Mike Staden

Received by: Mike Staden

PRINT NAME

COMPANY

DATE

TIME

SAMPLES received at 7 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

September 6, 2006

Mike Staton, Project Manager
SLR International Corp.
22122 20th Ave. SE., H-150
Bothell, WA 98021

Dear Mr. Staton:

Included are the results from the testing of soil submitted on August 21, 2006 from the Former Arco Station #0855, Project #:001.0173.00003, F&BI 608218 project. There are 10 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
SLR0906R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/06/06

Date Received: 08/21/06

Project: Former Arco Station #0855, Project #:001.0173.00003, F&BI 608218

Date Extracted: 08/22/06

Date Analyzed: 08/23/06

**RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**

Results Reported on a Dry Weight Basis

Results Reported as $\mu\text{g/g}$ (ppm)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 58-139)
DMW7-5 608218-01	<2	97
DMW8-5 608218-02	<2	97
TP2-5.5 608218-04	<2	97
TP1-5.5 608218-05	<2	97
Method Blank	<2	98

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/06/06

Date Received: 08/21/06

Project: Former Arco Station #0855, Project #:001.0173.00003, F&BI 608218

Date Extracted: 08/22/06

Date Analyzed: 08/23/06

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

Extended to Include Motor Oil Range Compounds

**Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis**

Results Reported on a Dry Weight Basis

Results Reported as µg/g (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>TRPH</u> (C ₁₀ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 67-127)
DMW7-5 608218-01	<50	<250	72
DMW8-5 608218-02	<50	<250	77
TP2-5.5 608218-04	<50	<250	75
TP1-5.5 608218-05	<50	<250	79
Method Blank	<50	<250	77

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW7-5	Client:	SLR International Corp.
Date Received:	08/21/06	Project:	#001.0173.00003, F&BI 608218
Date Extracted:	08/22/06	Lab ID:	608218-01
Date Analyzed:	08/22/06	Data File:	082218.D
Matrix:	Soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	46 ip	51	134
1,2-Dichloroethane-d4	50 ip	51	137
Toluene-d8	46 ip	54	139
4-Bromofluorobenzene	49	42	164

Compounds:	Concentration ug/g (ppm)
1,2-Dichloroethane (EDC)	<0.05
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW8-5	Client:	SLR International Corp.
Date Received:	08/21/06	Project:	#001.0173.00003, F&BI 608218
Date Extracted:	08/22/06	Lab ID:	608218-02
Date Analyzed:	08/22/06	Data File:	082219.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	64	51	134
1,2-Dichloroethane-d4	65	51	137
Toluene-d8	66	54	139
4-Bromofluorobenzene	65	42	164

Compounds:	Concentration ug/g (ppm)
1,2-Dichloroethane (EDC)	<0.05
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	TP2-5.5	Client:	SLR International Corp.
Date Received:	08/21/06	Project:	#001.0173.00003, F&BI 608218
Date Extracted:	08/22/06	Lab ID:	608218-04
Date Analyzed:	08/22/06	Data File:	082220.D
Matrix:	Soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	41 ip	51	134
1,2-Dichloroethane-d4	45 ip	51	137
Toluene-d8	41 ip	54	139
4-Bromofluorobenzene	44	42	164

Compounds:	Concentration ug/g (ppm)
1,2-Dichloroethane (EDC)	<0.05
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	TP1-5.5	Client:	SLR International Corp.
Date Received:	08/21/06	Project:	#001.0173.00003, F&BI 608218
Date Extracted:	08/22/06	Lab ID:	608218-05
Date Analyzed:	08/22/06	Data File:	082221.D
Matrix:	Soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	43 ip	51	134
1,2-Dichloroethane-d4	48 ip	51	137
Toluene-d8	42 ip	54	139
4-Bromofluorobenzene	43	42	164

Compounds:	Concentration ug/g (ppm)
1,2-Dichloroethane (EDC)	<0.05
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	SLR International Corp.
Date Received:	Not Applicable	Project:	#001.0173.00003, F&BI 608218
Date Extracted:	08/22/06	Lab ID:	061215 mb
Date Analyzed:	08/22/06	Data File:	082205.D
Matrix:	soil	Instrument:	GCMS5
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	100	51	134
1,2-Dichloroethane-d4	100	51	137
Toluene-d8	105	54	139
4-Bromofluorobenzene	121	42	164

Compounds:	Concentration ug/g (ppm)
1,2-Dichloroethane (EDC)	<0.05
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/06/06

Date Received: 08/21/06

Project: Former Arco Station #0855, Project #:001.0173.00003, F&BI 608218

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING
METHOD NWTPH-G_x**

Laboratory Code: 608157-03 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	µg/g (ppm)	370	280	28 h

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	µg/g (ppm)	20	95	58-137

h - RPD results are likely outside control limits due to sample inhomogeneity.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/06/06

Date Received: 08/21/06

Project: Former Arco Station #0855, Project #:001.0173.00003, F&BI 608218

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

Laboratory Code: 608231-01 (Matrix Spike) Silica Gel

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	µg/g (ppm)	5,000	<50	128	129	82-133	1

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	µg/g (ppm)	5,000	125	69-142

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/06/06

Date Received: 08/21/06

Project: Former Arco Station #0855, Project #:001.0173.00003, F&BI 608218

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260B

Laboratory Code: 608231-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
1,2-Dichloroethane (EDC)	µg/g (ppm)	<0.05	<0.05	nm
Benzene	µg/g (ppm)	<0.03	<0.03	nm
Toluene	µg/g (ppm)	<0.05	<0.05	nm
Ethylbenzene	µg/g (ppm)	<0.05	<0.05	nm
m,p-Xylene	µg/g (ppm)	<0.1	<0.1	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
1,2-Dichloroethane (EDC)	µg/g (ppm)	2.5	103	103	67-137	0
Benzene	µg/g (ppm)	5	91	90	71-119	1
Toluene	µg/g (ppm)	5	98	97	73-130	1
Ethylbenzene	µg/g (ppm)	2.5	104	102	70-130	2
m,p-Xylene	µg/g (ppm)	2.5	107	106	70-130	1

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

608218

Send Report To Mike Staden

Company SLR

Address 22122 20th Ave SE

City, State, ZIP Bothell, WA

Phone # 425-402-8800 Fax # _____

SAMPLE CHAIN OF CUSTODY ME 08-21-06

SAMPLERS (signature) [Signature]

PROJECT NAME/NO Former Broco Station # 0855

Project #: 001.0173.00003

REMARKS * For DRO use with silica gel cleanup

VS1/V4/ of 21 DO3

Page # _____

TURNAROUND TIME

☒ Standard (2 Weeks)

☐ RUSH

Rush charges authorized by: _____

SAMPLE DISPOSAL

☐ Dispose after 30 days

☐ Return samples

☐ Will call with instructions

ANALYSES REQUESTED				Sample Type	# of containers	Notes									
Sample ID	Lab ID	Date	Time			TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	87EX by 8260B	1,2-EDC by 8260B	6XO by 8260B	6XO by 8260B
DMW7-5	01 A-E	8-15-06	0810	S	5							X	X	X	X
DMW8-5	02 A-E		1055		5							X	X	X	X
DMW6-5	03 A-E	8-14-06	1315		5							X	X	X	X
TP2-5.5	04 A-E	8-17-06	10:05		5							X	X	X	X
TP1-5.5	05 A-E	8-17-06	1120		5							X	X	X	X
DMW1-0806	06 A-E		1520	W											
DMW2-0806	07 A-E	8-16-06	1800												
DMW3-0806	08 A-E	8-17-06	0820												
DMW4-0806	09 A-E	8-17-06	1500												
DMW5-0806	10 A-E		1310									X	X	X	X

SIGNATURE

Relinquished by: [Signature]

Received by: [Signature]

Relinquished by: [Signature]

Received by: [Signature]

PRINT NAME

Mike Staden

Jim Johannes

Whan Phan

COMPANY

SLR

Champion

FEI

DATE

8/21/06

8/24/06

8/21/06

TIME

12:00

1201

14:00

Samples received at 7 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

September 6, 2006

Mike Staton, Project Manager
SLR International Corp.
22122 20th Ave. SE., H-150
Bothell, WA 98021

Dear Mr. Staton:

Included are the results from the testing of water submitted on August 21, 2006 from the Former Arco Station #0855, Project #: 001.0173.00003, F&BI 608218 project. There are 15 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
SLR0906R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/06/06

Date Received: 08/21/06

Project: Former Arco Station #0855, Project #:001.0173.00003, F&BI 608218

Date Extracted: 08/23/06

Date Analyzed: 08/23/06 and 08/24/06

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-G_x**

Results Reported as µg/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 51-134)
DMW1-0806 d 608218-06	16,000	105
DMW2-0806 608218-07	<100	99
DMW3-0806 608218-08	<100	94
DMW4-0806 608218-09	210	92
DMW5-0806 608218-10	170	98
DMW6-0806 608218-11	<100	98
DMW7-0806 608218-12	<100	97
DMW8-0806 608218-13	<100	100
Method Blank	<100	97

d - The sample was diluted.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/06/06

Date Received: 08/21/06

Project: Former Arco Station #0855, Project #:001.0173.00003, F&BI 608218

Date Extracted: 08/22/06

Date Analyzed: 08/22/06

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL
USING METHOD NWTPH-D_x**

Extended to Include Motor Oil Range Compounds

**Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis**

Results Reported as µg/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>TRPH</u> (C ₁₀ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 52-134)
DMW1-0806 x 608218-06	930	930	70
DMW2-0806 608218-07	<50	<250	72
DMW3-0806 608218-08	<50	<250	91
DMW4-0806 608218-09	<50	<250	74
DMW5-0806 608218-10	<50	<250	78
DMW6-0806 608218-11	<50	<250	75
DMW7-0806 608218-12	<50	<250	73
DMW8-0806 608218-13	<50	<250	65
Method Blank	<50	<250	76

x - The pattern of peaks present is not indicative of diesel, results are due to gasoline range hydrocarbons.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW1-0806	Client:	SLR International Corp.
Date Received:	08/21/06	Project:	#:001.0173.00003, F&BI 608218
Date Extracted:	08/29/06	Lab ID:	608218-06
Date Analyzed:	08/29/06	Data File:	082906.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	96	75	125
1,2-Dichloroethane-d4	96	67	133
Toluene-d8	103	79	129
4-Bromofluorobenzene	118	76	145

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1
Benzene	1,800 ve
Toluene	<1
Ethylbenzene	490 ve
m,p-Xylene	350 ve
o-Xylene	1.4

ve - The value reported exceeded the calibration range established for the analyte. The reported concentration is an estimate.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW1-0806	Client:	SLR International Corp.
Date Received:	08/21/06	Project:	#:001.0173.00003, F&BI 608218
Date Extracted:	08/29/06	Lab ID:	608218-06 1/100
Date Analyzed:	08/29/06	Data File:	082916.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	96	75	125
1,2-Dichloroethane-d4	97	67	133
Toluene-d8	101	79	129
4-Bromofluorobenzene	118	76	145

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<100
Benzene	4,100
Toluene	<100
Ethylbenzene	520
m,p-Xylene	320
o-Xylene	<100

Note: The sample was diluted due to the presence of high levels of material. Detection limits are raised due to dilution.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW2-0806	Client:	SLR International Corp.
Date Received:	08/21/06	Project:	#:001.0173.00003, F&BI 608218
Date Extracted:	08/29/06	Lab ID:	608218-07
Date Analyzed:	08/29/06	Data File:	082908.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	96	75	125
1,2-Dichloroethane-d4	95	67	133
Toluene-d8	101	79	129
4-Bromofluorobenzene	120	76	145

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1
Benzene	10
Toluene	<1
Ethylbenzene	5.6
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID: DMW3-0806	Client: SLR International Corp.
Date Received: 08/21/06	Project: #:001.0173.00003, F&BI 608218
Date Extracted: 08/29/06	Lab ID: 608218-08
Date Analyzed: 08/29/06	Data File: 082909.D
Matrix: water	Instrument: GCMS5
Units: ug/L (ppb)	Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	94	75	125
1,2-Dichloroethane-d4	93	67	133
Toluene-d8	100	79	129
4-Bromofluorobenzene	117	76	145

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW4-0806	Client:	SLR International Corp.
Date Received:	08/21/06	Project:	#:001.0173.00003, F&BI 608218
Date Extracted:	08/29/06	Lab ID:	608218-09
Date Analyzed:	08/29/06	Data File:	082910.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	95	75	125
1,2-Dichloroethane-d4	94	67	133
Toluene-d8	101	79	129
4-Bromofluorobenzene	118	76	145

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1
Benzene	5.7
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID: DMW5-0806	Client: SLR International Corp.
Date Received: 08/21/06	Project: #:001.0173.00003, F&BI 608218
Date Extracted: 08/29/06	Lab ID: 608218-10
Date Analyzed: 08/29/06	Data File: 082911.D
Matrix: water	Instrument: GCMS5
Units: ug/L (ppb)	Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	96	75	125
1,2-Dichloroethane-d4	98	67	133
Toluene-d8	102	79	129
4-Bromofluorobenzene	122	76	145

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1
Benzene	74
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW6-0806	Client:	SLR International Corp.
Date Received:	08/21/06	Project:	#:001.0173.00003, F&BI 608218
Date Extracted:	08/29/06	Lab ID:	608218-11
Date Analyzed:	08/29/06	Data File:	082912.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	95	75	125
1,2-Dichloroethane-d4	94	67	133
Toluene-d8	100	79	129
4-Bromofluorobenzene	118	76	145

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW7-0806	Client:	SLR International Corp.
Date Received:	08/21/06	Project:	#:001.0173.00003, F&BI 608218
Date Extracted:	08/29/06	Lab ID:	608218-12
Date Analyzed:	08/29/06	Data File:	082913.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	96	75	125
1,2-Dichloroethane-d4	93	67	133
Toluene-d8	100	79	129
4-Bromofluorobenzene	118	76	145

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	DMW8-0806	Client:	SLR International Corp.
Date Received:	08/21/06	Project:	#:001.0173.00003, F&BI 608218
Date Extracted:	08/29/06	Lab ID:	608218-13
Date Analyzed:	08/29/06	Data File:	082914.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	95	75	125
1,2-Dichloroethane-d4	94	67	133
Toluene-d8	99	79	129
4-Bromofluorobenzene	118	76	145

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	SLR International Corp.
Date Received:	Not Applicable	Project:	#: 001.0173.00003, F&BI 608218
Date Extracted:	08/23/06	Lab ID:	061218 mb
Date Analyzed:	08/24/06	Data File:	082330.D
Matrix:	water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	95	75	125
1,2-Dichloroethane-d4	93	67	133
Toluene-d8	100	79	129
4-Bromofluorobenzene	113	76	145

Compounds:	Concentration ug/L (ppb)
1,2-Dibromoethane (EDB)	<1
Benzene	<1
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/06/06

Date Received: 08/21/06

Project: Former Arco Station #0855, Project #:001.0173.00003, F&BI 608218

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-G_x**

Laboratory Code: 608217-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	µg/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	µg/L (ppb)	1,000	87	63-129

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/06/06

Date Received: 08/21/06

Project: Former Arco Station #0855, Project #:001.0173.00003, F&BI 608218

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

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	µg/L (ppb)	2,500	98	105	73-142	7

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/06/06

Date Received: 08/21/06

Project: Former Arco Station #0855, Project #:001.0173.00003, F&BI 608218

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260B

Laboratory Code: 608218-13 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
1,2-Dichloroethane (EDC)	µg/L (ppb)	<1	<1	nm
Benzene	µg/L (ppb)	<1	<1	nm
Toluene	µg/L (ppb)	<1	<1	nm
Ethylbenzene	µg/L (ppb)	<1	<1	nm
m,p-Xylene	µg/L (ppb)	<2	<2	nm

Laboratory Code: 608218-13 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
1,2-Dichloroethane (EDC)	µg/L (ppb)	50	<1	103	56-137
Benzene	µg/L (ppb)	100	<1	97	76-112
Toluene	µg/L (ppb)	100	<1	101	69-129
Ethylbenzene	µg/L (ppb)	50	<1	99	50-150
m,p-Xylene	µg/L (ppb)	50	<2	103	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
1,2-Dichloroethane (EDC)	µg/L (ppb)	50	95	67-137
Benzene	µg/L (ppb)	100	92	74-123
Toluene	µg/L (ppb)	100	96	72-128
Ethylbenzene	µg/L (ppb)	50	94	70-130
m,p-Xylene	µg/L (ppb)	50	98	70-130

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

608218

SAMPLER COLLECTION CL-001-001

M- Aug 21 - 6

51/14/03

Send Report To Mike StadenCompany SLRAddress 22122 20th Ave SECity, State, ZIP Bothell, WAPhone # 425-402-8800 Fax #SAMPLERS (signature) [Signature]PROJECT NAME/NO Former Arco Station #0855Project #: 001.0173.00003

REMARKS

* For DRO use with silica gel
clean upTURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

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

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED						Notes				
						TPH-Diesel	TPH-Gasoline	BTEX by 8221B	VOCs by 8260	SVOCs by 8270	HFS		6TK by 8240B	1,2-EDC by 8240B	6KO by 8260B	6KO by NWTPH-6X
DMW7-5	01 A-E	8-15-06	0810	S	5											
DMW8-5	02 A-E		1055		5											
DMW6-5	03 A-E	8-14-06	1315		5											
TP2-5.5	04 A-E	8-17-06	10:05		5											
TP1-5.5	05 A-E	8-17-06	1120		5											
DMW1-0806	06 A-E		1520	W												
DMW2-0806	07 A-E	8-16-06	1800													
DMW3-0806	08 A-E	8-17-06	0820													
DMW4-0806	09 A-E	8-17-06	1500													
DMW5-0806	10 A-E		1310													

SIGNATURE		PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>		Mike Staden	SLR	8/21/06	12:00
Received by: <u>[Signature]</u>		Jim Johannes	Champion	8/24/06	1201
Relinquished by:					
Received by: <u>[Signature]</u>		Whan Phan	FeB	8/21/06	14:00

