APPENDIX C

HWA'S GEOTECHNICAL FEASIBILITY ASSESSMENT REPORT

HWA GeoSciences Inc.
Geotechnical • Pavement Engineering • Hydrogeology • Geoenvironmental • Inspection & Testing

April 8, 2009
HWA Project No. 2009-017-21

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

To: **Mr. Mike Staton, R.G.**

Subject: **FINAL GEOTECHNICAL FEASIBILITY ASSESSMENT**
Closed City of Yakima Landfill
Yakima, Washington

As requested, HWA GeoSciences Inc. (HWA) completed a geotechnical assessment, of the subject project site in Yakima, Washington, for the purpose of evaluating potential geotechnical constructability issues related to the local subsurface conditions and there impact on the feasibility of future site development.. Results of our assessment and geotechnical recommendations for general development of the site follow in this final report.

This work was authorized by subcontract agreement between HWA and SLR Corporation, Inc. (SLR), on February 20th, 2009.

PROJECT DESCRIPTION

The closed City of Yakima Landfill is located at the south end of the former Boise Cascade sawmill and plywood facility situated on 240 acres of land. The property address is 805 North 7th Street, in Yakima, Washington (see Figure 1). The property was used for lumber mill operations from 1904 to 2006, and is currently used for log storage and log chipping. In the past, the site accommodated three log ponds, railroad siding, a boiler house and other buildings comprising the sawmill (SLR, 2009). Over time, log storage transitioned from ponds to log decks with sprinklers, and the southern pond was drained and utilized by the City of Yakima as a landfill. The landfill was operated from 1963 to 1970, and was reported closed by the Yakima County Health district in 1972 (SLR, 2009).

The area of the closed landfill reportedly encompasses approximately 28 acres. The actual extent of landfill is being determined as part of the main study by SLR. The landfill is unlined, but reportedly was covered with 2 to 3 feet of clay in addition to 10 feet of wood debris in log deck areas. The landfill reportedly averages about 12 feet deep and apparently deepens toward the southeast to as much as 30 feet (SLR, 2009). Currently, the City of Yakima would like to develop the property into a public recreational facility and/or water park including, swimming pool(s), roads, parking, and ancillary structures.

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SITE CONDITIONS

Currently, the property is used as a log yard and is roughly rectangular in shape as depicted on Figure 2. It is bounded on the north by railroad tracks, on the south by a fence along the property line; along the east the property adjoins the embankment of US Interstate I-82, and on the west by North 8th Street. The site is slightly inclined downwards towards the southeast and accessed via gated entry from North 8th Street, at the intersection of East E Street. The northwest portion of the site is occupied by the former plywood plant. A paved road circuits the interior perimeter of the site.

GEOLOGY

According to the *Geologic Map for the Yakima East 15-Minute Quadrangle,* by the Washington Division of Geology and Earth Resources (Bentley, et al 1993), the site is underlain by alluvium consisting of silt, sand and gravel deposited directly by the Yakima River. The gravels contained in these deposits typically consist of mixed lithologies.

EXPLORATION PROGRAM

An exploration program was planned and conducted by SLR to assess localized subsurface conditions within the project site, in general accordance with our approved scope of work. Under subcontract to SLR, an engineering geologist from HWA monitored exploration activities on two separate days to observe the subsurface conditions that were encountered during test pitting and soil borings.

Soil samples were collected using a 300-pound hammer to drive 3.25-inch O.D. split-spoons at periodic depth intervals in the borings. Soil samples collected for lithologic descriptions were placed in sealed plastic bags and transported to SLR offices in Bothell, Washington. After review of the draft exploration logs provided by SLR, HWA prepared a testing schedule that was reviewed and approved by Mike Staton of SLR. The exploration samples were then transferred to HWA for visual assessment and laboratory testing as described below.

LABORATORY TESTING

Physical testing of soil samples was performed at HWA's laboratory in Lynnwood, Washington. Laboratory testing of selected soil samples retrieved from the test explorations included Atterberg Limits, moisture contents, and particle size analyses. In addition, 29 waste samples were tested for moisture content. All testing was accomplished in general accordance with ASTM standards, as appropriate. The results of all the laboratory testing are summarized on Table 1 and Figures 3 through 14

SUBSURFACE CONDITIONS

Following is a generalized summary of the subsurface conditions observed by our geologist, who was on site for two days during exploration, and from review of logs of explorations provided by SLR, Inc. In general, the site is underlain by granular fill directly overlying native soils, or over wood waste or municipal solid waste (MSW). At depth, wood waste or municipal solid waste

directly overlies native alluvial soils. More detailed descriptions are provided for the various soil units as observed in order of occurrence from existing site grades.

Fill/Cover Soils: Fill/Cover soils consisting of loose to dense, silty sand with gravel to silty gravel with sand, and silt with sand to gravelly silt was encountered overlying native alluvial soils, wood waste, or MSW. Depending upon site location, the fill may also contain significant amounts of wood waste and/or construction debris. Where encountered, the fill/cover soil ranged from 1 to 5.5 feet in thickness. Around the perimeter of the MSW waste cell, the fill was situated over disturbed native soils or wood waste apparently to level and provide a stable traffic area. Typically, within the waste cell area, a layer of fill was placed directly over MSW as a cover prior to placement of wood waste.

Wood Waste: Wood waste consisting of sawdust to coarse bark strippings was encountered either directly overlying MSW or cover soils within the east and central portions of the site. Where encountered, the wood waste ranged from 1 to 10.5 feet in thickness. In general, the layer of wood waste appears to thicken towards the east. Results of field and laboratory testing indicate that the bulk density of the wood waste ranges from 38 to 84 pcf depending upon degree of compaction, moisture content, and the amount of soil that was incorporated into the wood waste. Moisture contents determined in the laboratory for samples obtained during exploration ranged from 40 to over 126% by dry weight. Table 1 provides a compilation of the wood waste characteristics noted in the field and from laboratory testing.

MSW: Municipal solid waste (MSW) was encountered within the interior of the site, except in the northwest corner currently occupied by the plywood mill and its immediate surroundings. Where encountered, the MSW layer ranged from 1 to 15 feet in thickness. In general, the MSW layer is thickest within the central and southeastern portions of the site. Depending upon location, MSW is covered by as little as 2 feet to as much as 13.5 feet of fill, wood waste and cover soil combined. Results of field and laboratory testing indicate that the bulk density of the MSW soil ranges from about 44 to 116 pcf depending upon degree of compaction, composition, moisture content, and amount of soil that was incorporated into the MSW. Moisture contents determined in the laboratory for samples obtained during exploration ranged from 25.9 to over 123% by dry weight. Review of the exploration logs and laboratory sample descriptions indicate that on average the MSW appears to be composed of roughly 21% OP (Organic-Putrescible material-composed of food, garden, and animal waste), 56% ON (Organic Non-Putrescible-composed of paper, wood, textiles, leather, plastic, rubber, paints and sludge), and about 23% ID and IN (Inorganic-degradable materials like metal and non-degradable waste composed of glass, ceramics, soil, ash, concrete, etc) by volume. Table 1 provides a compilation of the MSW characteristics noted in the field and from laboratory testing.

Alluvium: In explorations where the fill, wood waste or MSW layers were fully penetrated, mineral soil was encountered and typically was comprised of medium dense

to dense, poorly to well graded, gravel with silt and sand to silty sand with gravel. Locally, layers of medium stiff, low plastic, sandy silt were encountered overlying the deeper coarse grained soil layer. These deposits are interpreted as native alluvium deposited by the Yakima River. These soils are typically water-bearing and coincident with the local water table. Granular alluvium is generally competent for support of structures, and excavates relatively easy with conventional excavating equipment. Side slopes of excavations will require shoring for long-term support when and where alluvial soils are saturated.

GEOTECHNICAL FEASIBILITY OF SITE DEVELOPMENT

We understand that currently, the City of Yakima is evaluating the potential development of the property into a public recreational facility and/or water park including, swimming pool(s), roads, parking, and ancillary structures. We further understand that, prior to any development, the surficial layer of wood waste (primarily located within the log deck area) will be removed. This will probably necessitate its' replacement with granular fill to re-level the site. Based upon the results of the current study, it appears that the main geotechnical limitation to site development is the potential for future structural damage due to load-induced settlement of the underlying MSW from future structures, and from differential settlement between structures due to variation of load, waste thickness or composition. Currently, standard ground improvement procedures exist which, if properly implemented, serve to mitigate the risk of structural damage due to settlement. Discussions with regard to settlement and foundation considerations follow below.

Settlement Considerations

The MSW layer is considered highly compressible, and will exhibit unique settlement response characteristics. MSW is considered to have three components of settlement: primary, secondary, and bio-degradation. Primary settlement occurs rapidly; typically, within about 40 days of application of load. Secondary and bio-degradation settlement occur over longer periods of time and are sometimes lumped together and termed "delayed compression." Secondary settlement is a function of the increase in loading conditions, and occurs over a period of months to years (more typical for MSW and organic materials). Biodegradation settlement occurs independently of loading conditions as a function of aerobic and anaerobic decomposition of organic matter within the refuse. The rate of biodegradation settlement is considered to slow with increasing age of the refuse and can be inferred from decreasing rates of landfill gas production. Preloading is also believed to slow the rate of biodegradation settlement, because the induced primary and secondary settlements tend to reduce the pore spaces around degradable materials and, thereby, slow the aerobic decomposition process.

Although the MSW underlying the subject site has undergone some consolidation due to placement of fill/cover and wood waste in addition to loading by log storage, variations in density, composition, moisture content and thickness make differential (non-uniform) settlement a more likely cause of damage for future structures constructed over MSW.

To mitigate potential adverse settlement effects on structures, it is common to construct a surcharge preload for any areas of the site that may be underlain by problematic compressible materials. Typically, preloads are comprised of both compacted structural fill, within the basal area that will provide for permanent foundation support of structures and pavement areas, and non-compacted fill which will act as a temporary surcharge load that is at least equal to or greater than any future loading that will be imposed on the site development area. The structural fill thickness is commonly proportioned to be equal to or greater than the anticipated induced preload settlement. In general, we anticipate that the preload treatment for this site will range from 10 to 15 feet thick over an area larger than the footprint of any planned structures or ancillary structures at a future date. Typically, settlement plates are installed prior to and monitored during the placement of pre-load fill and for some time thereafter to allow consolidation of the underlying deposits to occur. The average cumulative settlement is tabulated and the shape of the settlement versus log of time plots are reviewed to determine when primary and secondary settlement are nearing completion to the degree that portions of the pre-load may be removed to allow construction to proceed. Based on our experience with preloading at other landfill sites, this procedure may take between 90 and 180 days to be effective. Upon removal of the preload, the secondary compression portion of the settlement is anticipated to cease or become very gradual over the design life of the facilities. The bio-degradation component of the settlement, however, is likely to continue for many years, until such time as all of the organic matter is completely decomposed.

We recommend that site treatment by preloading should not be restricted to only those areas where grade-supported structures will be constructed, but should be extended into areas that will support utilities or ancillary structures adjacent to heavy structures planned to be pile-supported. This will serve to reduce the potential for differential settlement between heavy pile-supported structures and the surrounding hardscaped areas, parking areas, and at utility connections with the structures. There are methodologies that presently exist that can compensate for differential settlement effects between services and fixed structures, and between perimeter development and such structures. However, limits exist with current design procedures on the magnitude of differential settlements that can be tolerated between fixed, pile-supported, building structures and adjoining yard areas and the connections of services entering/leaving the structures. Utilizing both site preloading methods and existing other methodologies for mitigation of differential settlement effects, we believe that these constraints can be dealt with on a location specific basis for a given development concept.

Generalized Foundation Considerations for New Structures

Depending on the location, size, and type proposed, certain structures may be supported at grade within a suitably designed structural fill using spread footings or rafted mat foundations, in our view. The advantage of using grade-supported structures lies in avoidance of large future differential settlements between the buildings that are otherwise supported on non-yielding pile foundations and adjacent paved parking and/or yard areas that are undergoing long-term settlements.

For large (greater than about 30,000 square feet) and/or tall (greater than a couple of stories) buildings, or for settlement-intolerant structures such as a swimming pools and buildings with substantial amounts of glazing, foundation support utilizing deep foundations are recommended. In our opinion, auger-cast piles or low displacement driven steel piles are best suited to this site. For environmental considerations, auger-cast piles are probably the preferred deep foundation type, but constructability issues exist with regard to the potential for large grout takes within the MSW that cannot be predicted. Moreover, pile foundations will be influenced by potentially high downdrag loadings associated with future settlement of the compressible materials through which they penetrate. This negative skin-friction or downdrag loading must be addressed in the initial foundation design and reduces the normal capacity of a given pile type. Low displacement steel piles are influenced to a lesser degree than auger-cast piles. Another significant consideration that results from using a piling system will be that associated with the potential migration of water along the pile shaft from the waste cell to the underlying aquifer. This may not be permitted in certain areas of the site. The required depth of penetration into the dense gravel layer will depend on the size and type of pile. We can provide recommendations for appropriate foundation types and associated design capacities as the development moves into the preliminary design phase.

Seismic Design Considerations and Parameters

Table 2 presents recommended seismic coefficients for use with the General Procedure described in Section 1615 of IBC 2006 for design of structures, as applicable. The seismic ground motion procedure contained in IBC 2006 is based upon a Maximum Considered Earthquake (MCE) with a 2 percent probability of exceedance in 50 years (i.e. recurrence interval of approximately 2,500 years). Ground motions for the MCE in the IBC 2006 are linked to probabilistic earthquake hazard mapping efforts that have been conducted by the United States Geological Survey (Frankel, et al., 1996, 2002, 2004). The Site Class for the project site was estimated based upon the type and observed density of the soils encountered in our explorations, as well as our general knowledge of the site.

Table 2: Seismic Coefficients for IBC 2006 Code Based Evaluation

Site Class	PGA (g)	Design Spectral Response Parameters		Control Periods	
		S_{DS}	S_{D1}	T_0	T_s
D	0.19	0.48	0.26	0.11	0.54

Soil liquefaction is a phenomenon wherein loose, saturated, granular deposits temporarily lose strength and behave as a liquid in response to earthquake shaking. Although regional ground water is relatively shallow, based on our observation of relatively dense native alluvial soils within the borings, we consider the potential for seismic liquefaction on the site to be low.

Concrete - Leachate Reaction Potential

The results of testing on five leachate samples undertaken by Aquatic Research (2009) on behalf of SLR were reviewed in order to provide an assessment of the potential for sulfate attack and/or the corrosion of steel foundation components by chloride of Portland cement concrete structures in contact with leachate on site. The reported results indicate pH values ranging from 6.24 to 6.78, sulfate and chloride concentrations ranging from <1.0 to 29.1 mg/l, and 10.5 to 128 mg/l, respectively. Comparison of the range of sulfate values obtained at the site (all<150 ppm) with those outlined in Table 2.3 of ACI-201(ACI, 2006a) indicate that no special requirements are needed in foundation concrete for sulfate resistance. According to Table 4.4.1 *Maximum Chloride Content for Corrosion Protection of Reinforcement,* in ACI-318-05 (ACI, 2006b), the maximum water soluble chloride ion (Cl^-) in concrete, as a percent by weight of cement is limited to 0.15%. The highest chloride value determined was 128 mg/l which is roughly equivalent to 0.06 lbs of cement in a standard 5 sack mix. This amount is less than 9% of the limit specified in ACI-318-05 (e.g. 0.0015 x 470 lbs = 0.71 lbs). Therefore, it appears likely that special coatings or lower water/cement ratios are not required to mitigate the potential effects of chloride in the leachate represented by the test results.

Closure

We have prepared this report for the SLR Inc. and the City of Yakima for use in preliminary design of this project. The conclusions and interpretations presented in this report should not be construed as our warranty of existing subsurface conditions. Experience has shown that soil and ground water conditions can vary significantly over small distances. Inconsistent conditions can occur between exploration locations and may not be detected by a geotechnical study of this nature. If, during future site operations, subsurface conditions are encountered which vary appreciably from those described herein, HWA should be notified for review of the recommendations of this report, and revision of such if necessary.

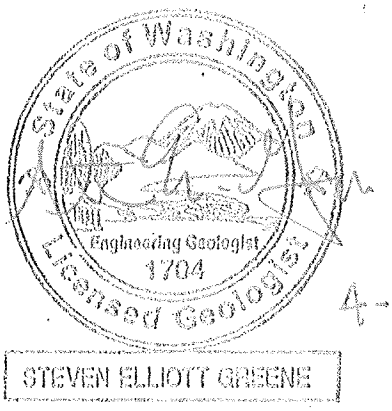
Sufficient geotechnical monitoring, testing, and consultation should be provided during construction to confirm that the actual conditions encountered are consistent with those indicated by the explorations, to provide recommendations for design changes should conditions revealed during construction differ from those anticipated, and to verify that geotechnical aspects of construction comply with the contract plans and specifications.

The scope of our work did not include environmental assessments or evaluations regarding the presence or absence of wetlands or hazardous substances in the soil, surface water, or ground water at this site.

We appreciate this opportunity to be of service.

Sincerely,

HWA GEOSCIENCES INC.



Steven E. Greene, L.G., L.E.G.
Engineering Geologist/Vice-President

Lorne A. Balanko, P.E.
Principal

Attachments

Table 1	Summary of Apparent and Measured Waste Properties
Figure 1	Project Site and Vicinity Map
Figure 2	Aerial View of Project Site
Figures 3-13	Particle Size Analysis of Soils
Figure 14	Plasticity Index of Soils

REFERENCES

American Concrete Institute, 2006, Guide to Durable Concrete, AC!-201.2R-01, in ACI Manual of Concrete Practice, Part 1.

American Concrete Institute, 2006, Building Code Requirements for Structural Concrete, ACI-318-05, in ACI Manual of Concrete Practice, Part 3, Chapter 4-Durability Requirements.

Aquatic Research Inc., 2009, Laboratory Analysis of Selected Parameters on Water, Case File Number FBI003-74, prepared for Freidman & Bruya, Inc., 2-27-09.

Bentley, R.D., N.P. Campbell, and J.E. Powell, 1993, *Geologic Maps of part of the Yakima Fold Belt, Northeastern Yakima County, Washington*, WDNR Open File Report 93-3, Sheet 1: Yakima East 15-Minute Quadrangle.

SLR International Corp., 2009, *Remedial Investigation Work Plan, Closed City of Yakima Landfill Site, Yakima, Washington.*

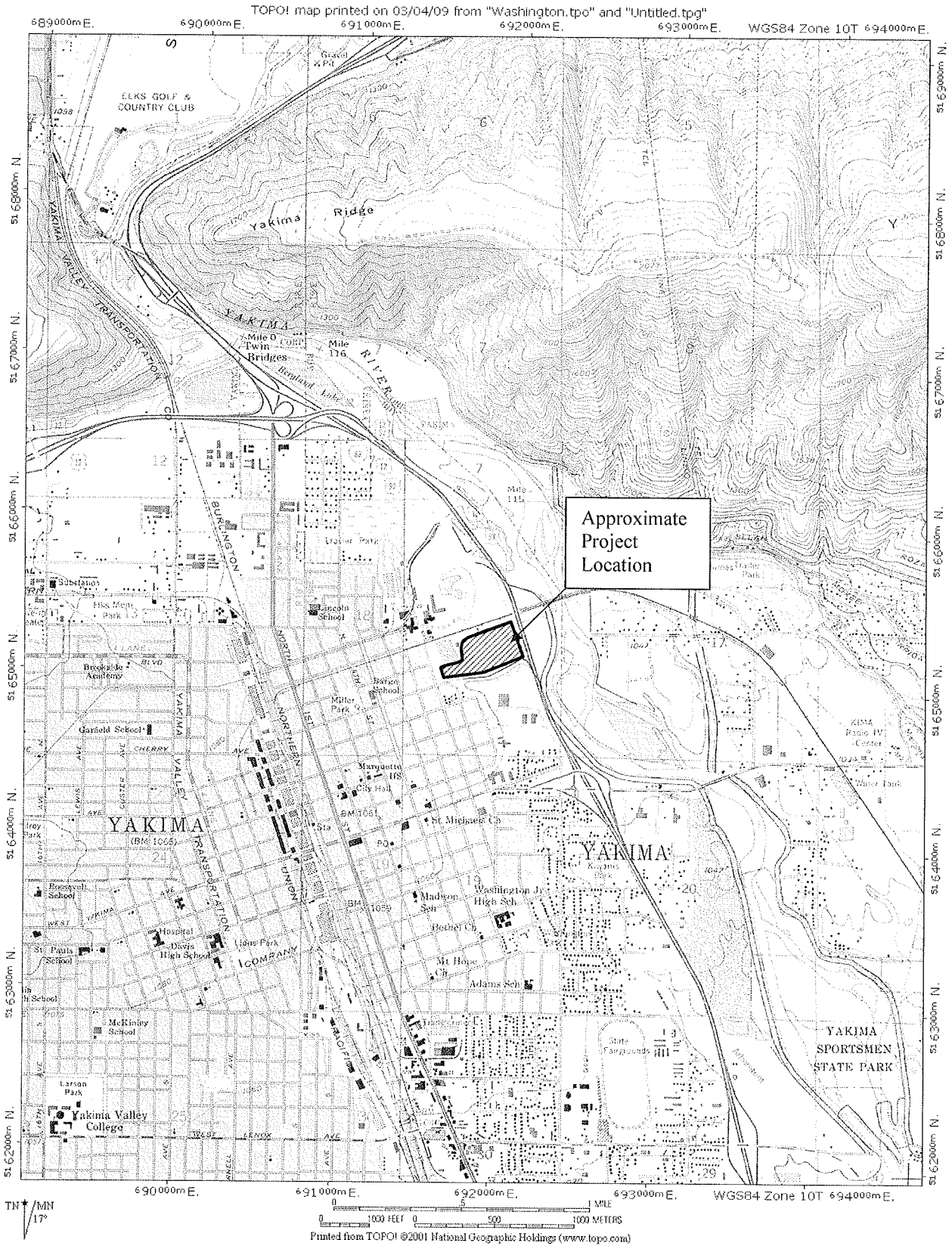
Closed Yakima Landfill

HWA GeoSciences Inc.

TABLE 1 Summary of Apparent and Measured Waste properties

							Bulk	Dry	Waste	Major Constiuients (visual)		
Exploration	Sample No.	Depth	Length	Volume	Weight	MC	Unit Weight	Unit Weight	Type	OP	ON	ID + IN
MW-11	S-2	5	12	0.03408	1041.41	41.9%	67.4	47.5	WW	0%	80%	20%
MW-11	S-3	12.5	6	0.01704	651.71	40.0%	84.3	60.2	WW	0%	70%	30%
SB-13	S-2	5	13.5	0.03834	770.61	81.6%	44.3	24.4	MSW	75%	15%	10%
SB-14	S-1B	6	6	0.01704	399.73	65.1%	51.7	31.3	MSW	0%	80%	20%
SB-14	S-3	17.5	7	0.01988	335.31	44.4%	37.2	25.8	MSW	0%	75%	25%
SB-15	S-4	10	5.4	0.015336	376.65	62.8%	54.1	33.3	MSW	30%	50%	20%
SB-18	S-4	10	9	0.02556	516.71	84.5%	44.6	24.2	MSW	20%	70%	10%
SB-18	S-6	15	8	0.02272	545.43	52.3%	52.9	34.8	MSW	50%	40%	10%
SB-19	S-2	7.5	14	0.03976	884.55	25.9%	49.0	39.0	MSW	0%	50%	50%
SB-20	S-6	15	6	0.01704	896.09	29.4%	115.9	89.6	MSW	0%	100%	0%
SB-21	S-2	5	18	0.05112	1108.03	144.9%	47.8	19.5	WW	0%	100%	0%
SB-21	S-6	15	14	0.03976	1626.4	35.6%	90.2	66.5	MSW	0%	60%	40%
SB-22	S-1	2.5	12	0.03408	1190.17	28.8%	77.0	59.8	MSW	90%	5%	5%
SB-23	S-2	5	9	0.02556	1049.57	34.0%	90.5	67.6	MSW	60%	30%	10%
SB-24	S-4	10	12	0.03408	808.14	123.3%	52.3	23.4	MSW	10%	90%	0%
SB-25	S-5	12.5	5	0.0142	476.77	35.1%	74.0	54.8	MSW	0%	75%	25%
SB-26	S-3	7.5	14	0.03976	1563.32	42.9%	86.7	60.7	MSW	0%	50%	50%
SB-26	S-5	12.5	6	0.01704	638.68	50.9%	82.6	54.8	MSW	0%	40%	60%
SB-27	S-5	12.5	18	0.05112	1704.57	100.4%	73.5	36.7	MSW	10%	60%	30%
SB-28	S-2	5.5	12	0.03408	584.2	49.1%	37.8	25.3	MSW	0%	90%	10%
SB-29	S-1	2.5	18	0.05112	1319.87	100.4%	56.9	28.4	WW	0%	90%	10%
SB-29	S-4	15	11	0.03124	658.1	126.3%	46.4	20.5	WW	0%	100%	0%
SB-30	S-1	2.5	16.2	0.046008	1252.53	98.9%	60.0	30.2	WW	0%	100%	0%
SB-33	S-1	2.5	15	0.0426	1332.96	72.8%	69.0	39.9	WW	0%	80%	20%
SB-34	S-2	10	11	0.03124	1045.41	38.7%	73.8	53.2	MSW	10%	70%	20%
SB-35	S-1	2.5	16	0.04544	1503.54	61.9%	72.9	45.1	WW	0%	75%	25%
SB-37	S-1	2.5	18	0.05112	1475.64	71.9%	63.6	37.0	WW	0%	85%	15%
SB-38	S-1	12.5	12	0.03408	723.32	69.2%	46.8	27.7	MSW	50%	10%	40%
SB-40	S-1	2.5	12.8	0.036352	1066.84	39.0%	64.7	46.5	WW	0%	95%	5%

OP- Organic Putrescible waste: food, garden, and animal waste capable of being decoposed by microorganisms
ON- Organic Non-Putrescible waste: paper, wood textiles leather, plastic, rubber, paint, oil, grease, chemicals, sludge.
ID- Inorganic Degradable waste: metals
IN- Inorganic Non-degradable waste: glass, soil, ash, concrete, bricks, construction debris.



PROJECT SITE & VICINTY MAP

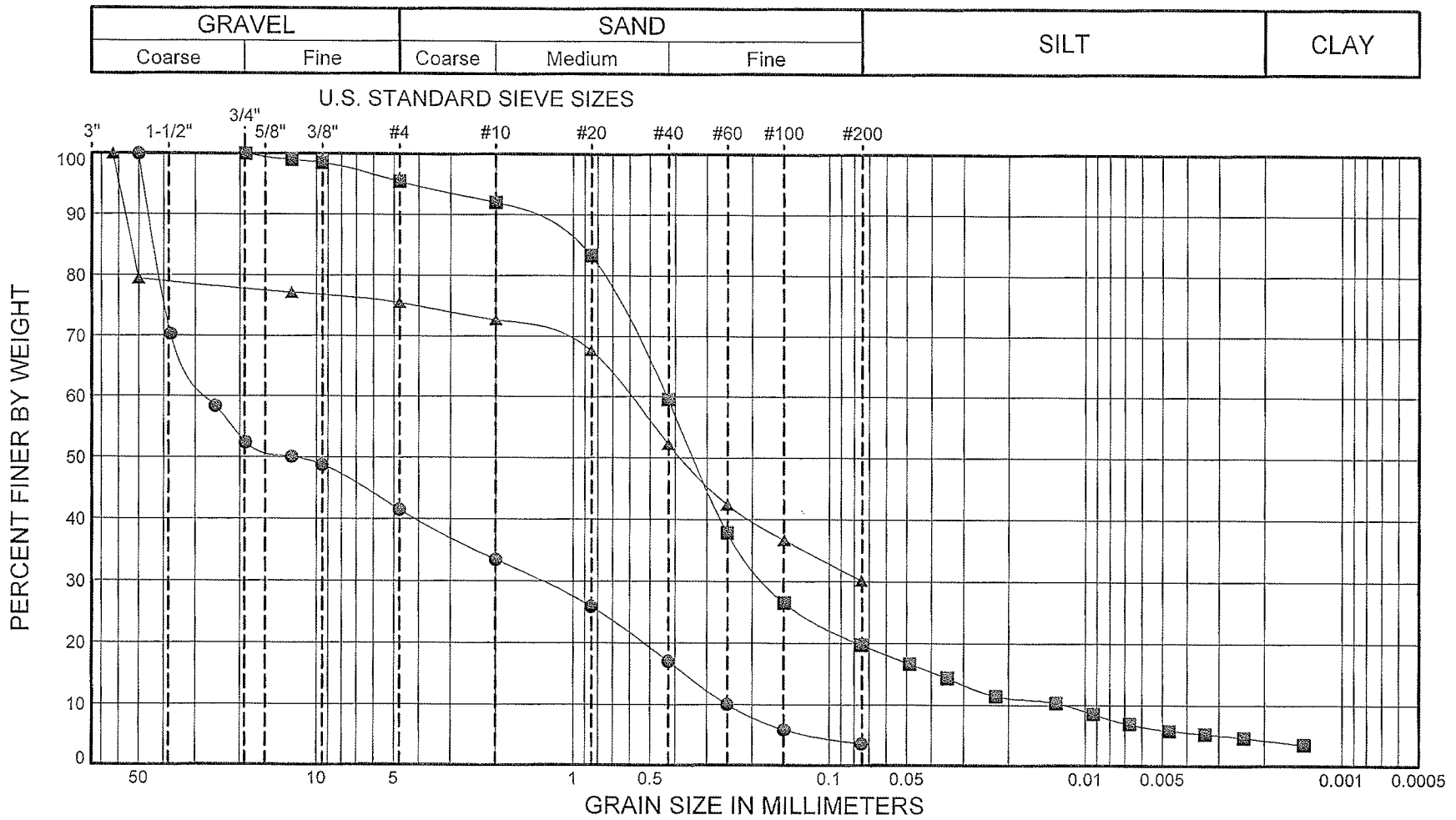
GEOTECHNICAL ASSESSMENT
CLOSED CITY OF YAKIMA LANDFILL
YAKIMA, WASHINGTON

FIGURE NO. 1

PROJECT NO. 2009-017

HWA GEOSCIENCES INC.

HWA GeoSciences Inc.	AERIAL VIEW OF PROJECT SITE GEOTECHNICAL ASSESSMENT CLOSED CITY OF YAKIMA LANDFILL YAKIMA, WASHINGTON	FIGURE NO. 2 PROJECT NO. 2009-017



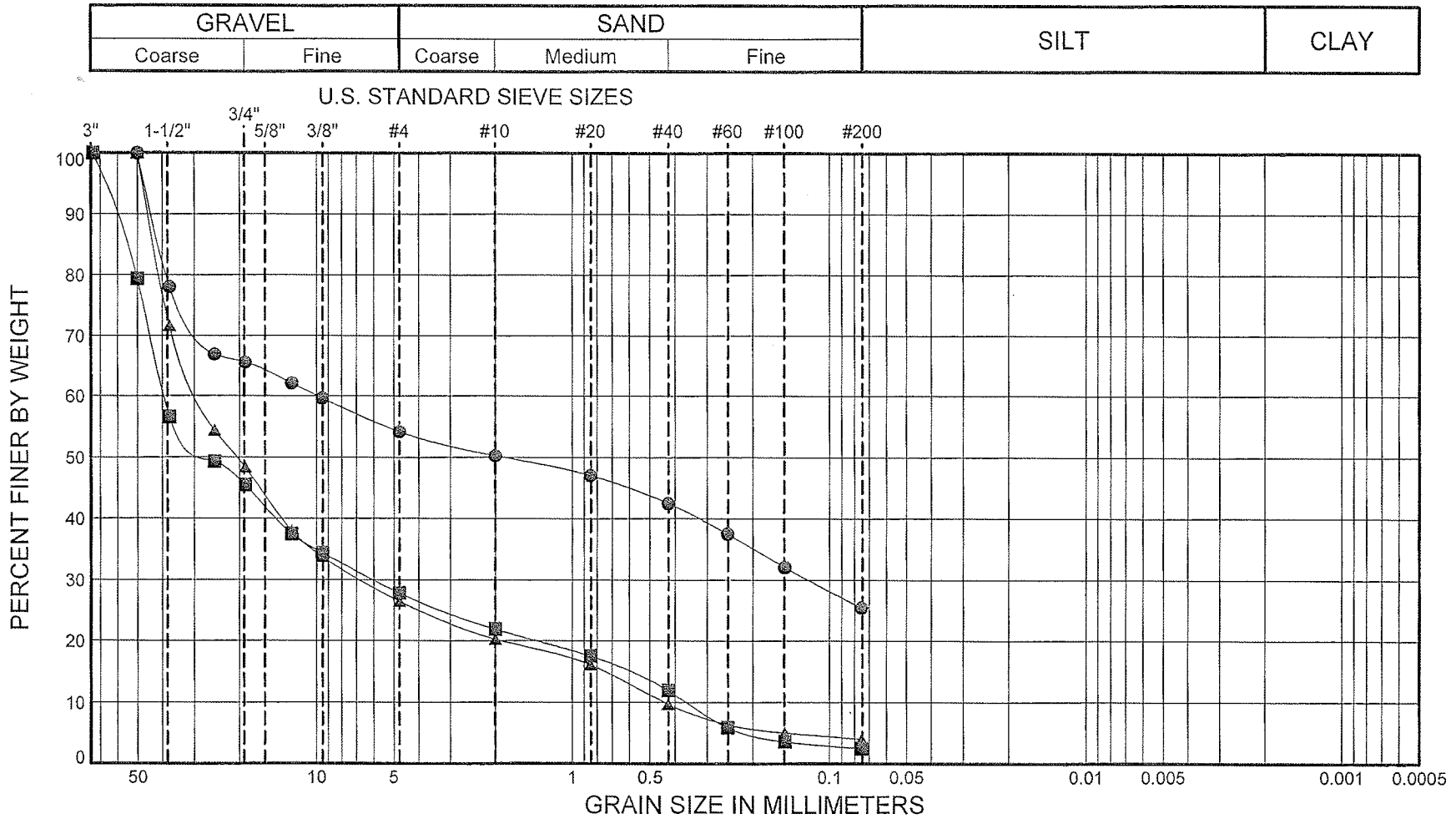
SYMBOL	SAMPLE		DEPTH (ft)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	MW-12	S-5	15.0 - 16.5	(GP) Dark grayish brown, poorly graded GRAVEL with sand	11				58.5	37.9	3.6
■	MW-13	S-6	14.5 - 16.0	(SM) Very dark grayish brown, silty SAND	45				4.5	75.7	19.8
▲	MW-13	S-7	17.0 - 18.5	(SM) Grayish brown, silty SAND with gravel	27				24.4	45.4	30.2

HWA GEOSCIENCES INC.

Closed City of Yakima Landfill
Geotechnical Assessment

PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D422

PROJECT NO.: 2009-017-21 FIGURE: 3



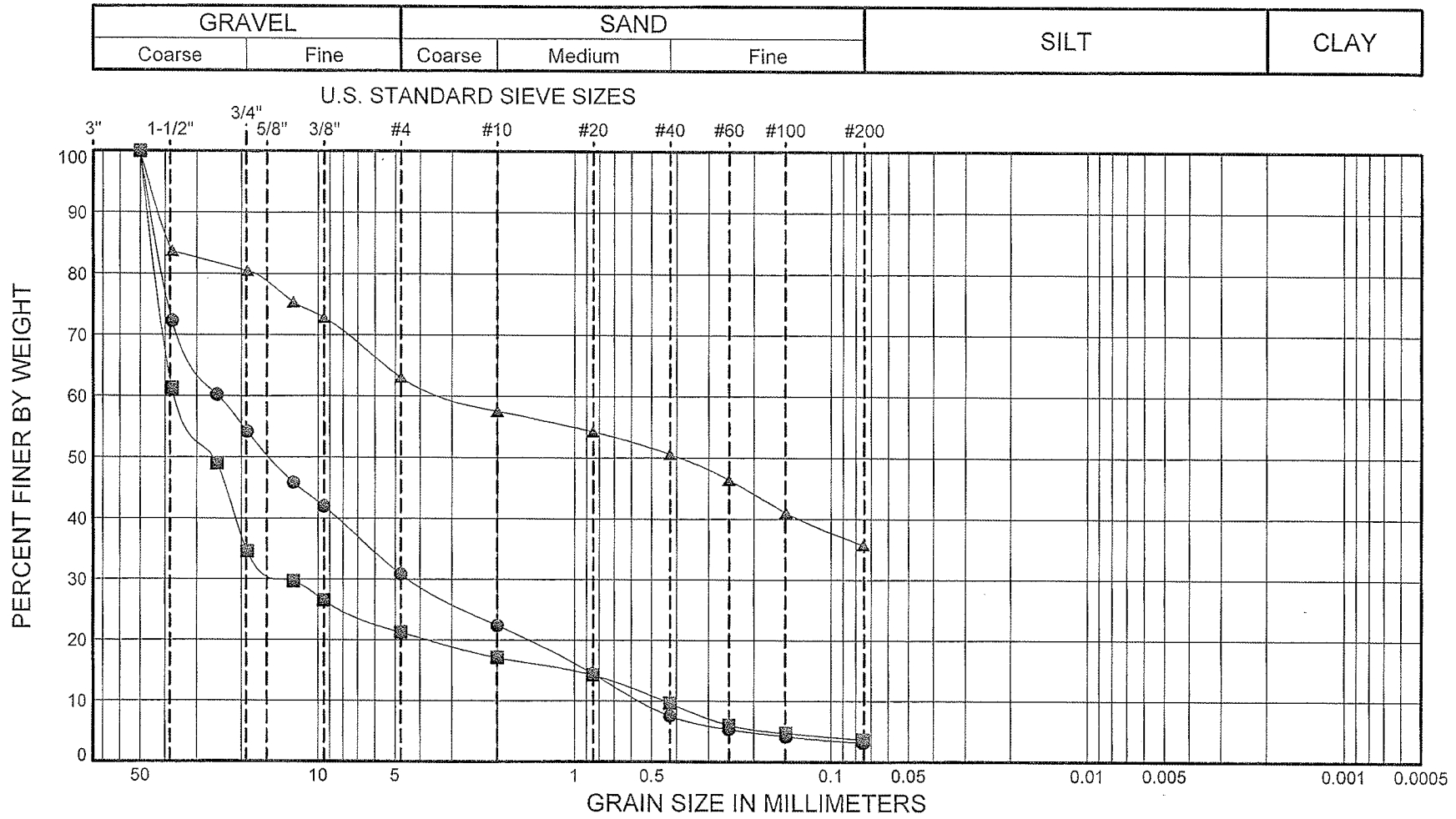
SYMBOL	SAMPLE		DEPTH (ft)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	SB-14	S-2	5.0 - 6.5	(GM) Very dark brown, silty GRAVEL with sand, trace organics.	18				45.8	28.7	25.5
■	SB-14	S-4	20.0 - 21.5	(GW) Dark brownish gray, well graded GRAVEL with sand	6				72.1	25.4	2.5
▲	SB-17	S-4	12.5 - 13.4	(GP) Brown, poorly graded GRAVEL with sand	5				73.5	22.5	4.0

HWA GEOSCIENCES INC.

Closed City of Yakima Landfill
Geotechnical Assessment

PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D422

PROJECT NO.: 2009-017-21 FIGURE: 4



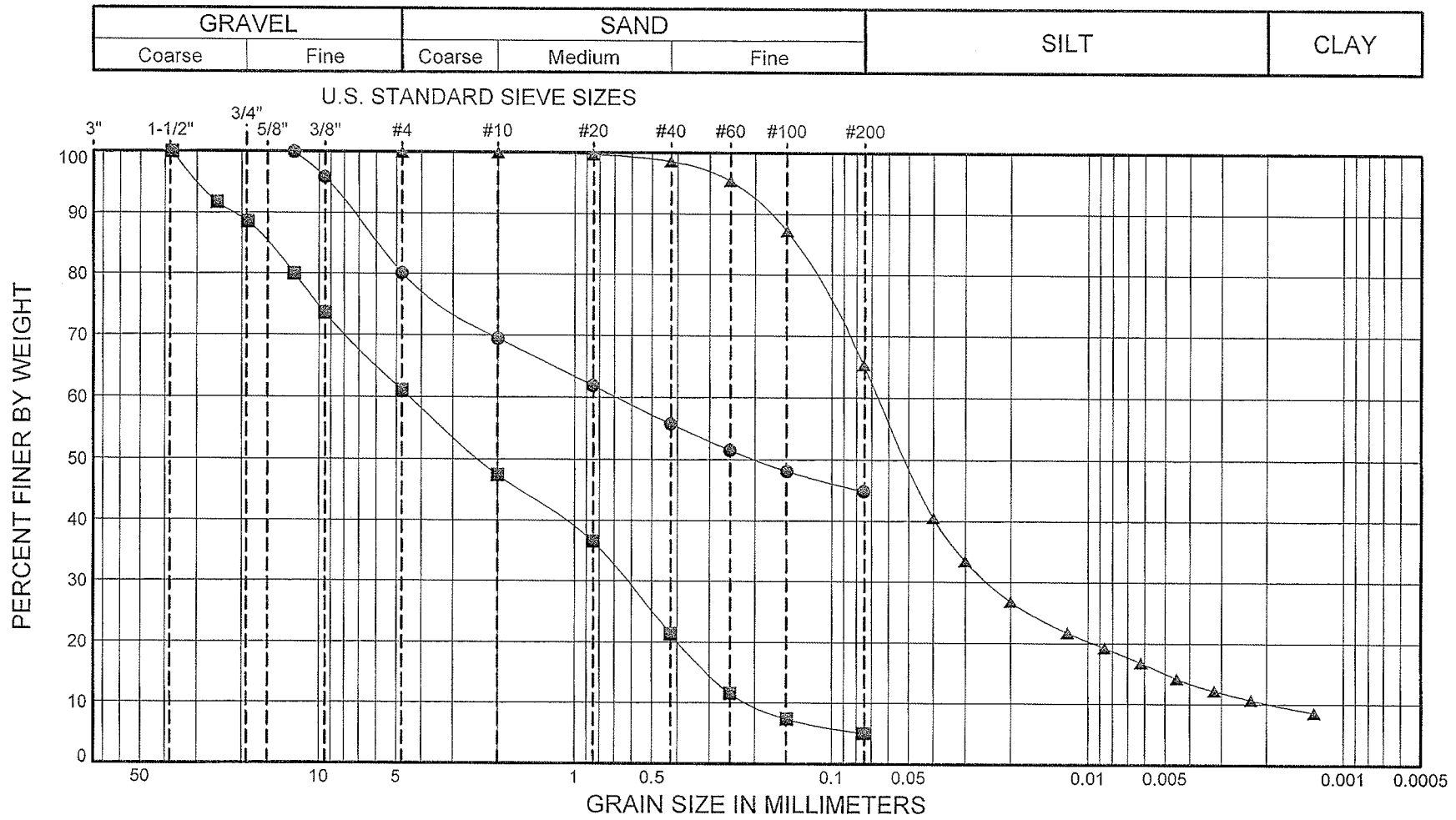
SYMBOL	SAMPLE		DEPTH (ft)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	SB-18	S-8	19.0 - 20.0	(GW) Dark grayish brown, well graded GRAVEL with sand	3				69.1	27.7	3.1
■	SB-19	S-6	17.5 - 19.0	(GP) Olive gray, poorly graded GRAVEL with sand	6				78.7	17.6	3.7
▲	SB-20	S-3	5.0 - 6.5	(GM) Dark grayish brown, silty GRAVEL with sand	25				36.9	27.3	35.8

HWA GEOSCIENCES INC.

Closed City of Yakima Landfill
Geotechnical Assessment

PARTICLE-SIZE ANALYSIS OF SOILS METHOD ASTM D422

PROJECT NO.: 2009-017-21 FIGURE: 5



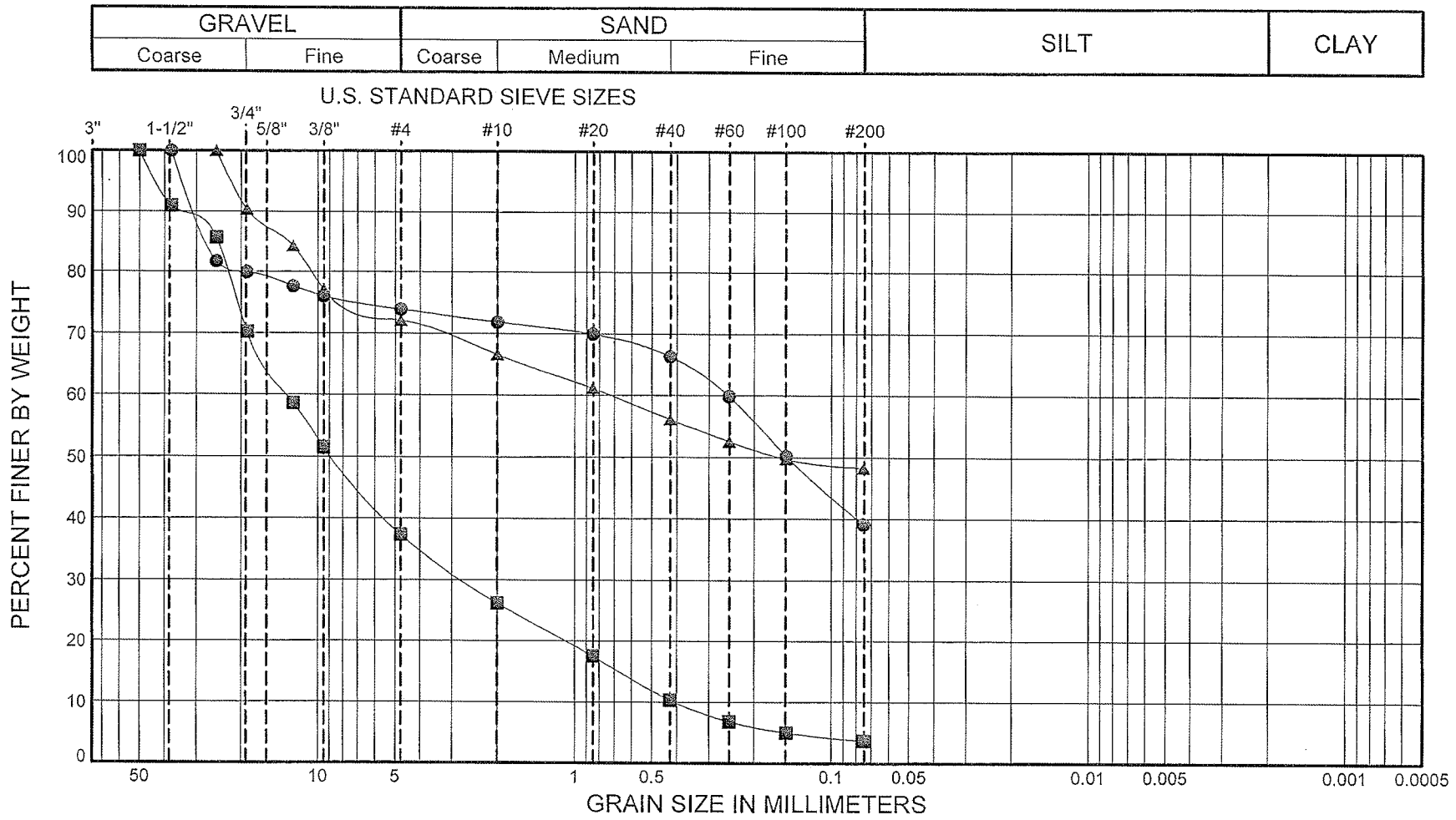
SYMBOL	SAMPLE		DEPTH (ft)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	SB-21	S-4	8.5 - 10.0	(SM) Dark grayish brown, silty SAND with gravel	41				19.8	35.2	45.0
■	SB-21	S-8	20.0 - 21.5	(SP-SM) Dark gray, poorly graded SAND with silt and gravel	14				38.9	56.1	5.0
▲	SB-22	S-4	10.0 - 11.5	(ML) Olive brown, SILT with sand	18	34	27	7	0.0	34.6	65.4

HWA GEOSCIENCES INC.

Closed City of Yakima Landfill
Geotechnical Assessment

PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D422

PROJECT NO.: 2009-017-21 FIGURE: 6



SYMBOL	SAMPLE		DEPTH (ft)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	SB-23	S-3	7.5 - 9.0	(SM) Very dark olive gray, silty SAND with gravel	20				26.0	34.8	39.2
■	SB-23	S-6	15.0 - 16.5	(GW) Gray, well graded GRAVEL with sand	4				62.6	33.7	3.7
▲	SB-24	S-1	2.5 - 4.0	(SM) Black, silty SAND with gravel (contains wood)	59				27.9	23.8	48.3

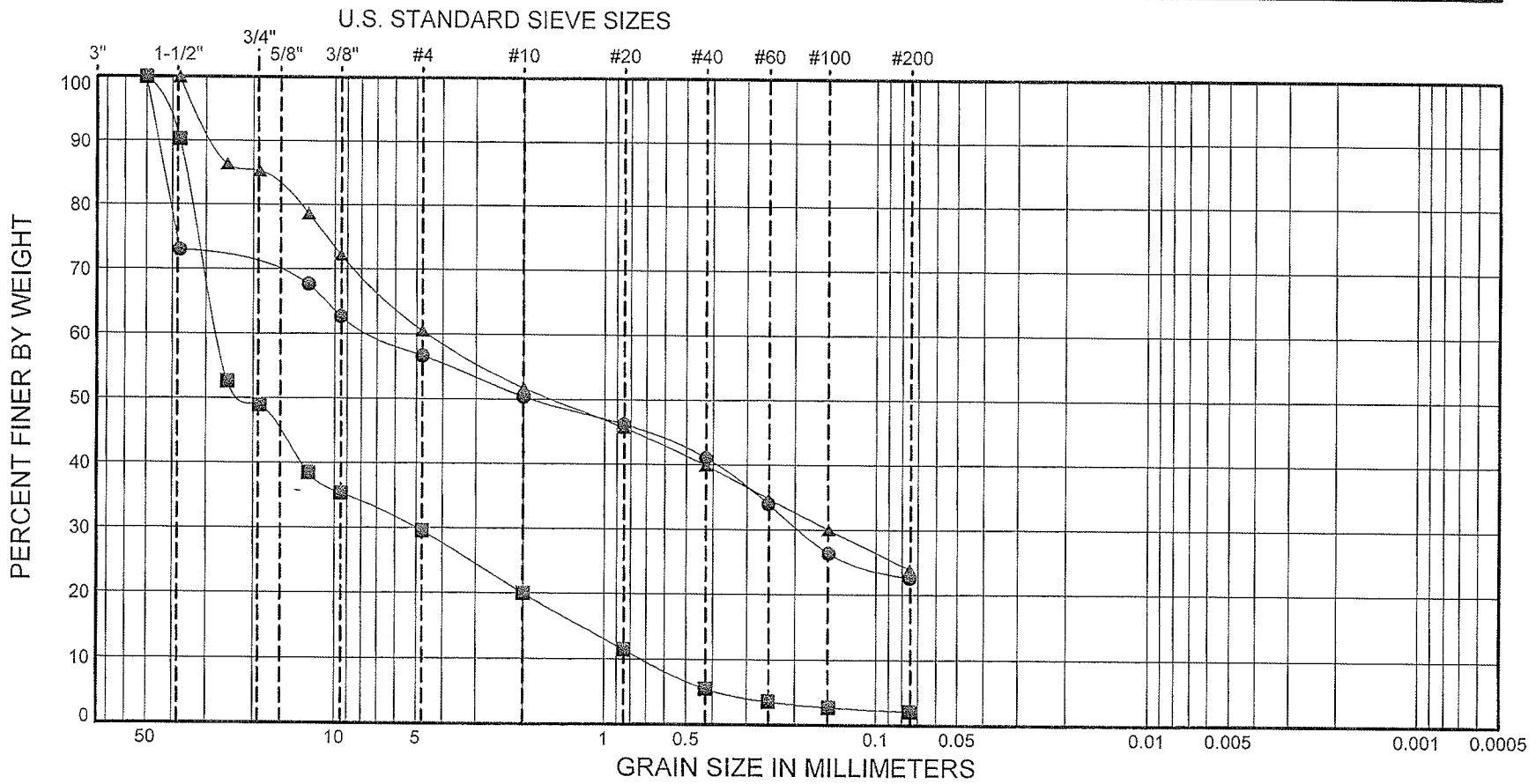
HWA GEOSCIENCES INC.

Closed City of Yakima Landfill
Geotechnical Assessment

PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D422

PROJECT NO.: 2009-017-21 FIGURE: 7

GRAVEL		SAND			SILT	CLAY
Coarse	Fine	Coarse	Medium	Fine		



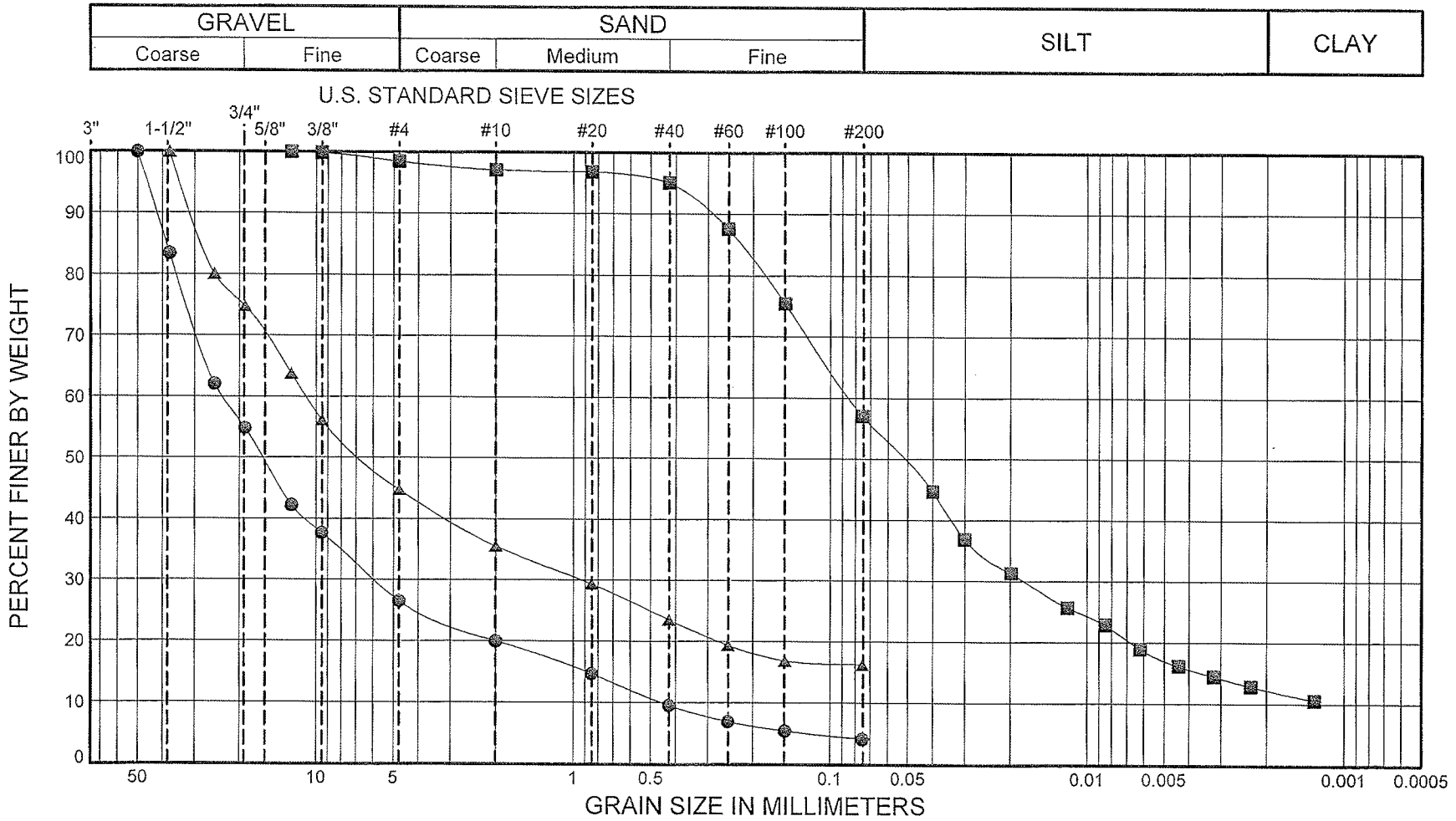
SYMBOL	SAMPLE		DEPTH (ft)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	SB-26	S-1	2.5 - 4.0	(GM) Very dark brown, silty GRAVEL with sand (contains wood)	31				43.3	34.1	22.6
■	SB-26	S-6	15.0 - 15.9	(GW) Brown, well graded GRAVEL with sand	7				70.4	27.6	2.1
▲	SB-28	S-1	2.5 - 4.0	(GM) Dark brown, silty GRAVEL with sand	9				39.4	36.7	23.9

HWA GEOSCIENCES INC.

Closed City of Yakima Landfill
Geotechnical Assessment

PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D422

PROJECT NO.: 2009-017-21 FIGURE: 8



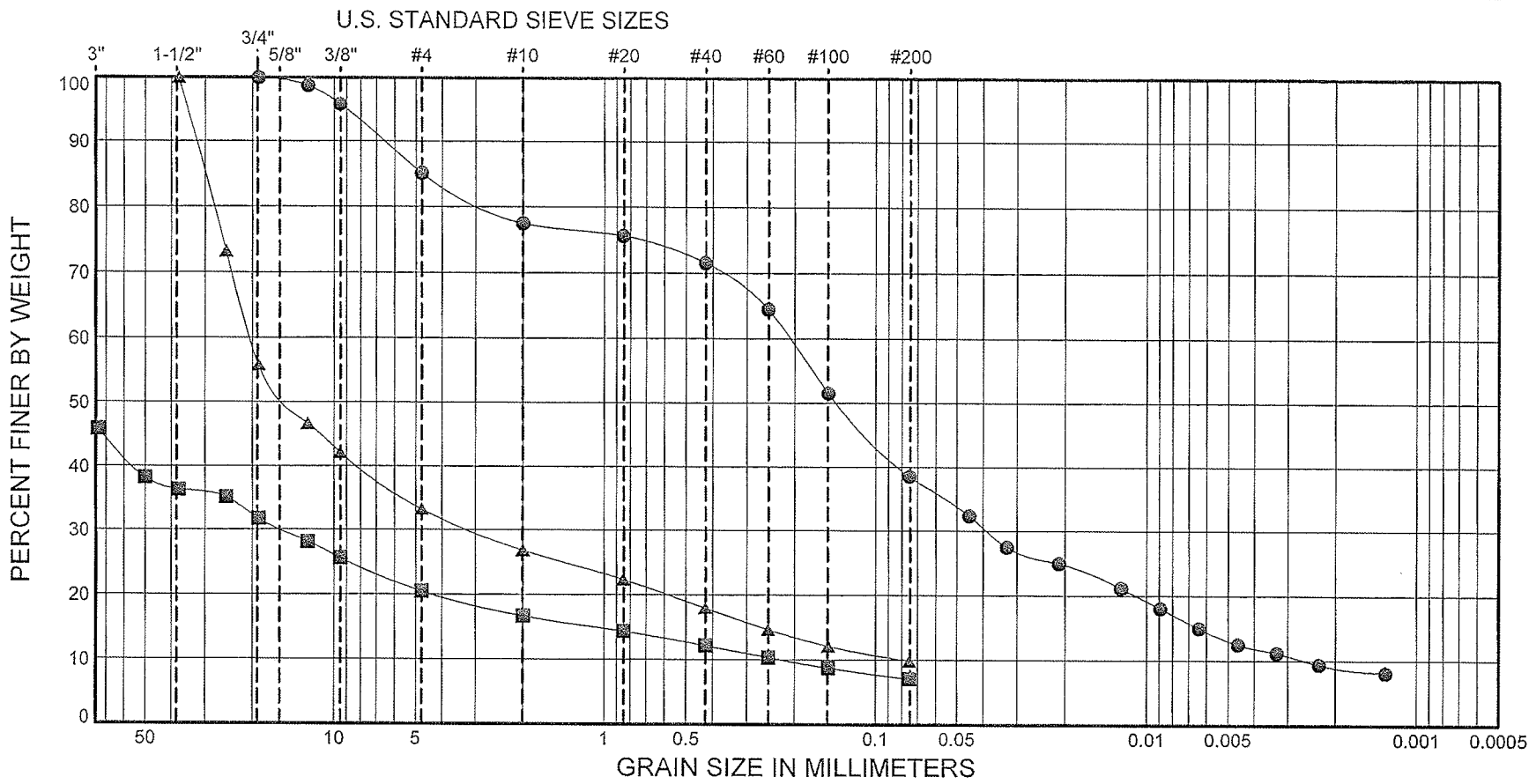
SYMBOL	SAMPLE		DEPTH (ft)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	SB-28	S-3	12.5 - 14.0	(GP) Dark grayish brown, poorly graded GRAVEL with sand	5				73.5	22.4	4.2
■	SB-30	S-4	20.0 - 21.5	(ML) Olive brown, SILT with sand	23	32	24	8	1.5	41.4	57.1
▲	SB-31	S-1	2.5 - 4.0	(GM) Very dark brown, silty GRAVEL with sand (Contains wood)	23				55.2	28.5	16.3

HWA GEOSCIENCES INC.

Closed City of Yakima Landfill
Geotechnical Assessment

PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D422

PROJECT NO.: 2009-017-21 FIGURE: 9



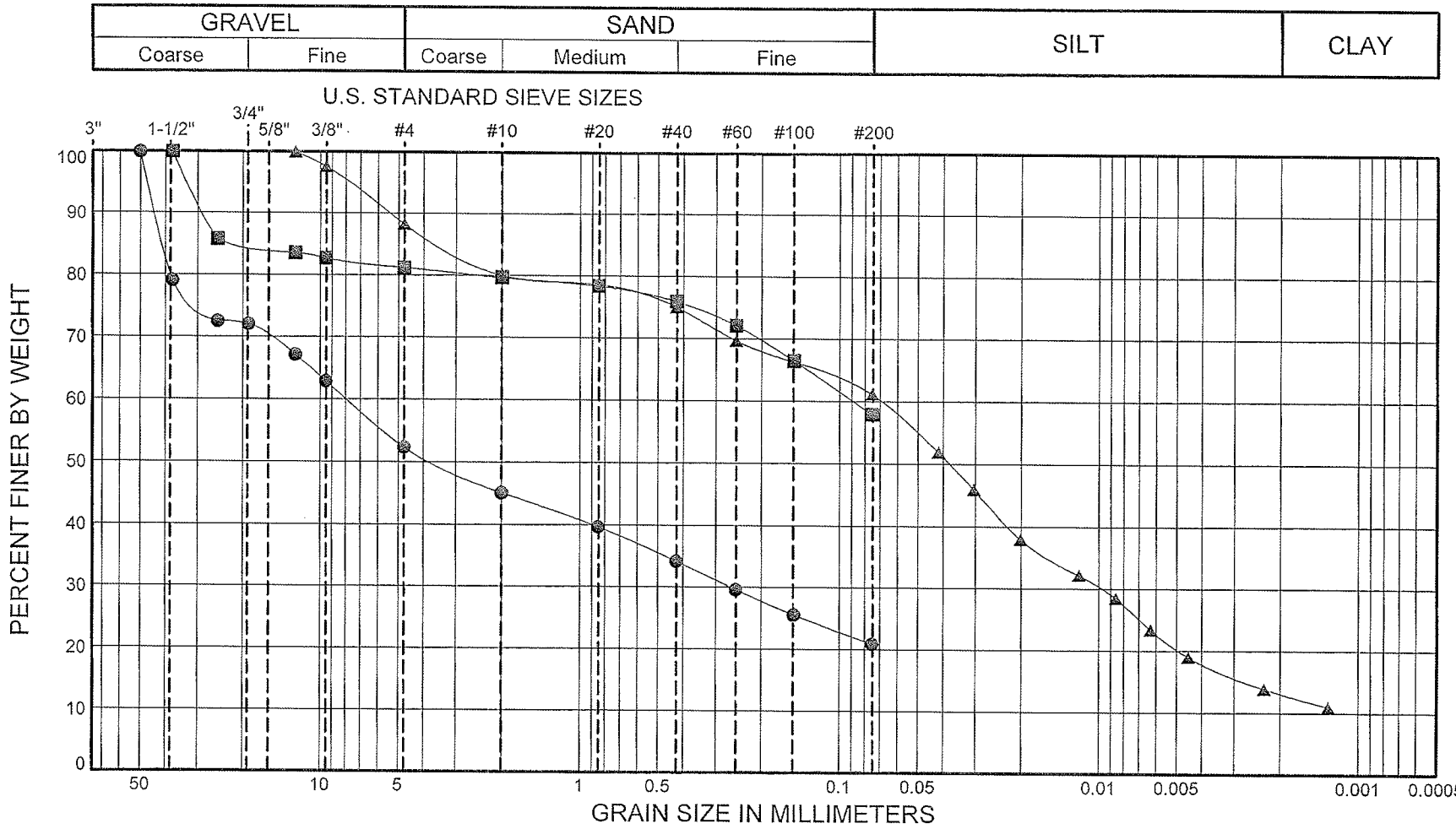
SYMBOL	SAMPLE		DEPTH (ft)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	SB-31	S-2	15.0 - 16.5	(SM) Very dark brownish gray, silty SAND (fines MH)	63	59	57	2	14.8	46.6	38.6
■	SB-33	S-1	2.0 - 3.5	(GM) Very dark brown, silty GRAVEL with cobbles (trace wood)	9				25.3	13.5	7.0
▲	SB-34	S-1	3.0 - 4.0	(GP-GM) Very dark brown, poorly graded GRAVEL with silt and sand (trace wood)	13				66.7	23.4	9.8

HWA GEOSCIENCES INC.

Closed City of Yakima Landfill
Geotechnical Assessment

PARTICLE-SIZE ANALYSIS OF SOILS METHOD ASTM D422

PROJECT NO.: 2009-017-21 FIGURE: 10



SYMBOL	SAMPLE		DEPTH (ft)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	SB-37	S-1	2.0 - 3.5	(GM) Dark grayish brown, silty GRAVEL with sand (trace wood)	8				47.6	31.4	21.0
■	SB-37	S-2	5.5 - 6.5	(ML) Very dark grayish brown, SILT with sand (trace wood)	34				18.8	23.3	57.9
▲	SB-37	S-4	15.0 - 16.5	(ML) Dark olive brown, SILT with sand (contains organic material)	40	57	32	25	11.7	27.1	61.2

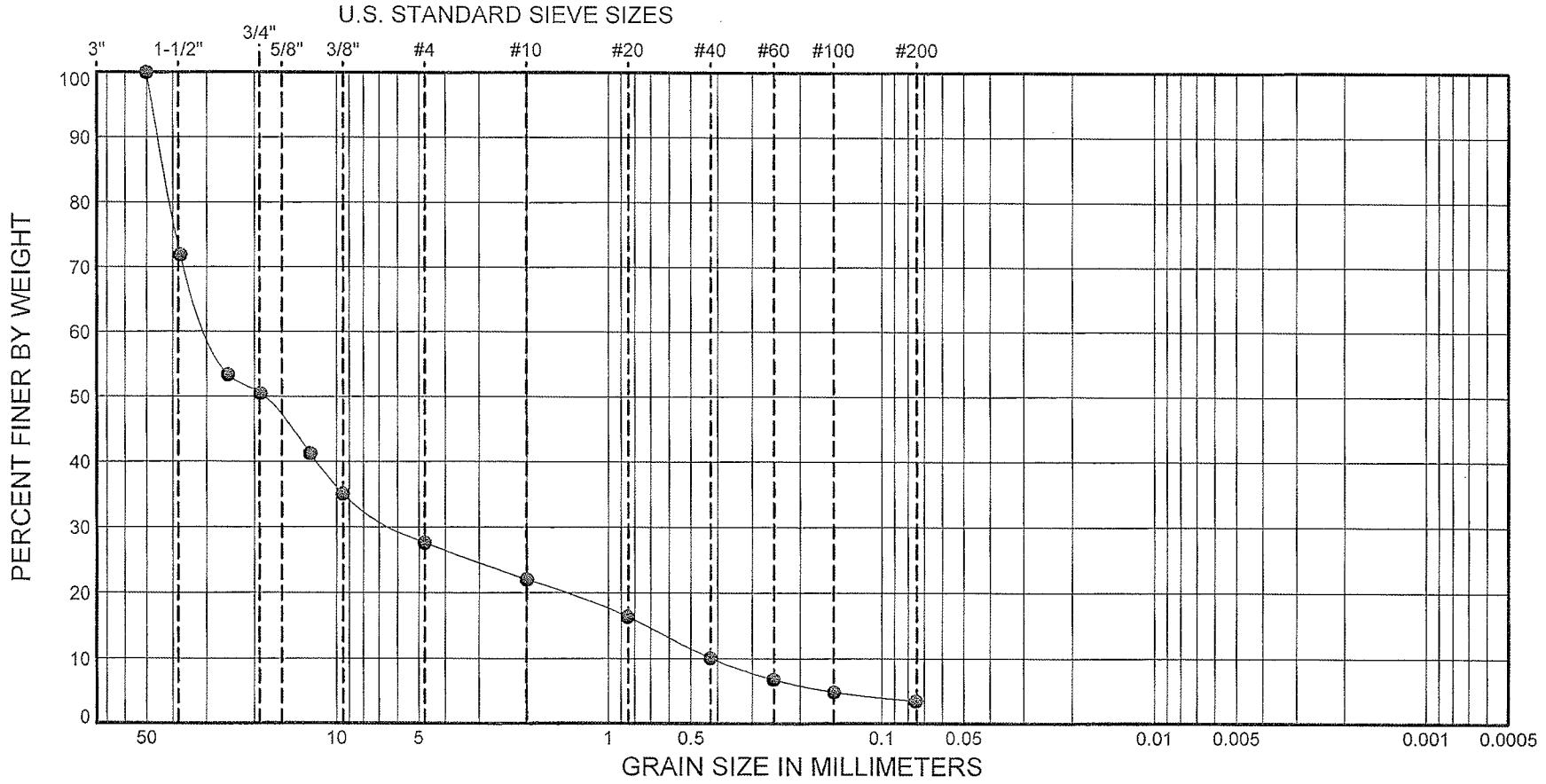
HWA GEOSCIENCES INC.

Closed City of Yakima Landfill
Geotechnical Assessment

PARTICLE-SIZE ANALYSIS OF SOILS METHOD ASTM D422

PROJECT NO.: 2009-017-21 FIGURE: 11

GRAVEL		SAND			SILT	CLAY
Coarse	Fine	Coarse	Medium	Fine		



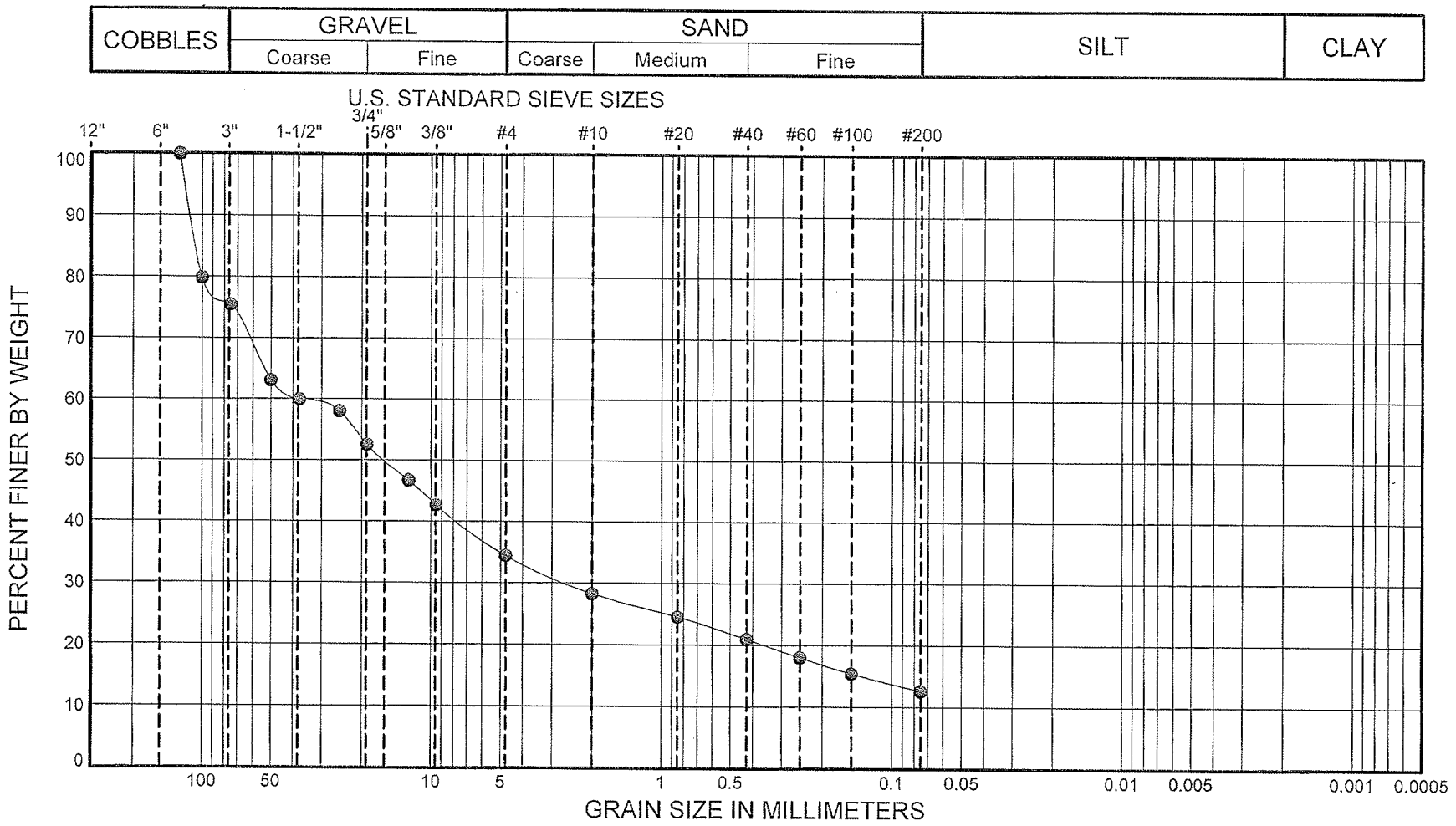
SYMBOL	SAMPLE		DEPTH (ft)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	SB-38	S-2	17.5 - 19.0	(GW) Olive gray, well graded GRAVEL with sand	3				72.4	24.1	3.5

HWA GEOSCIENCES INC.

Closed City of Yakima Landfill
Geotechnical Assessment

PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D422

PROJECT NO.: 2009-017-21 FIGURE: 12



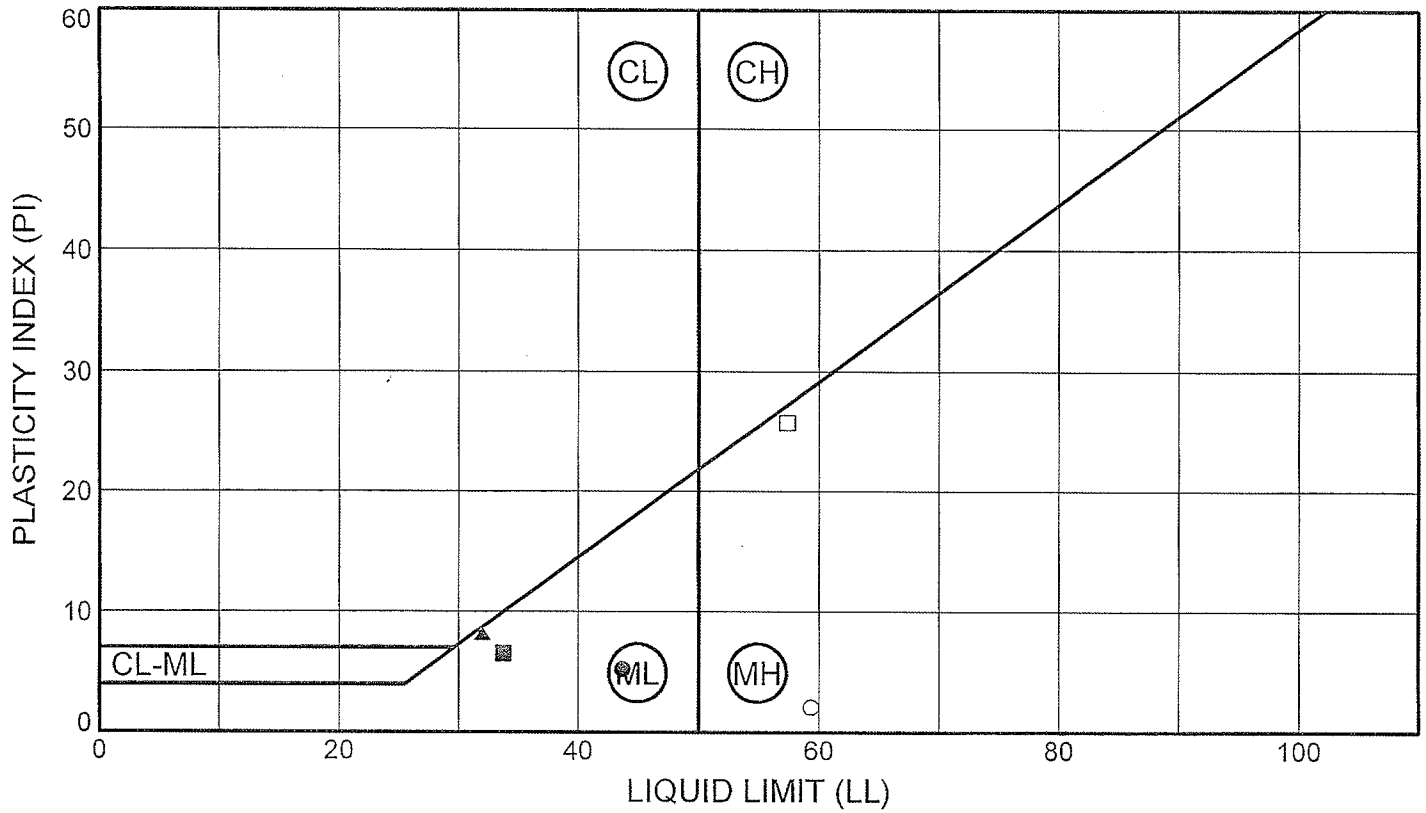
SYMBOL	SAMPLE		DEPTH (ft)	CLASSIFICATION	% MC	% Cobble	% Gravel	% Sand	% Fines
●	TP-33	S-1	2.0 - 4.0	(GM) Very dark brown, silty GRAVEL with sand and Cobbles	9	24.6	41.0	21.8	12.7

HWA GeoSciences Inc.

Closed City of Yakima Landfill
Geotechnical Assessment

PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D422

PROJECT NO.: 2009-017-21 FIGURE: 13



SYMBOL	SAMPLE		DEPTH (ft)	CLASSIFICATION	% MC	LL	PL	PI	% Fines
●	MW-13	S-5	13.0 - 14.5	(ML) Very dark grayish brown, SILT with sand	28	44	38	6	
■	SB-22	S-4	10.0 - 11.5	(ML) Olive brown, SILT with sand	18	34	27	7	65.4
▲	SB-30	S-4	20.0 - 21.5	(ML) Olive brown, SILT with sand	23	32	24	8	57.1
○	SB-31	S-2	15.0 - 16.5	(SM) Very dark brownish gray, silty SAND (fines MH)	63	59	57	2	38.6
□	SB-37	S-4	15.0 - 16.5	(ML) Dark olive brown, SILT with sand (contains organic material)	40	57	32	25	61.2

HWA GeoSciences Inc.

Closed City of Yakima Landfill
Geotechnical Assessment

LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS METHOD ASTM D4318

PROJECT NO.: 2009-017-21 FIGURE: 14

APPENDIX D

LABORATORY ANALYTICAL 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

February 26, 2009

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 February 3, 2009 from the Yakima LF PO 001.0221.00004, F&BI 902020 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
SLR0226R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on February 3, 2009 by Friedman & Bruya, Inc. from the SLR International Corp. Yakima LF PO 001.0221.00004, F&BI 902020 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SLR International Corp.
902020-01	TP-9
902020-02	TP-22
902020-03	TP-33

The samples were sent to Amtest for TCLP VOC analysis. Review of the enclosed report indicates that all quality assurance was acceptable.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	TP-9	Client:	SLR International Corp.
Date Received:	02/03/09	Project:	Yakima LF PO 001.0221.00004, F&BI 902020
Date Extracted:	02/04/09	Lab ID:	902020-01
Date Analyzed:	02/09/09	Data File:	902020-01.014
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	72	60	125
Indium	76	60	125
Holmium	82	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Chromium	<1	5.0
Arsenic	<1	5.0
Selenium	<1	1.0
Silver	<1	5.0
Cadmium	<1	1.0
Barium	<1	100
Lead	<1	5.0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	TP-22	Client:	SLR International Corp.
Date Received:	02/03/09	Project:	Yakima LF PO 001.0221.00004, F&BI 902020
Date Extracted:	02/04/09	Lab ID:	902020-02
Date Analyzed:	02/09/09	Data File:	902020-02.015
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	70	60	125
Indium	74	60	125
Holmium	80	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Chromium	<1	5.0
Arsenic	<1	5.0
Selenium	<1	1.0
Silver	<1	5.0
Cadmium	<1	1.0
Barium	1.86	100
Lead	<1	5.0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	TP-33	Client:	SLR International Corp.
Date Received:	02/03/09	Project:	Yakima LF PO 001.0221.00004, F&BI 902020
Date Extracted:	02/04/09	Lab ID:	902020-03
Date Analyzed:	02/09/09	Data File:	902020-03.016
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	70	60	125
Indium	73	60	125
Holmium	80	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Chromium	<1	5.0
Arsenic	<1	5.0
Selenium	<1	1.0
Silver	<1	5.0
Cadmium	<1	1.0
Barium	1.41	100
Lead	<1	5.0

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	Method Blank	Client:	SLR International Corp.
Date Received:	Not Applicable	Project:	Yakima LF PO 001.0221.00004, F&BI 902020
Date Extracted:	02/04/09	Lab ID:	I9-052 mb
Date Analyzed:	02/09/09	Data File:	I9-052 mb.008
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	84	60	125
Indium	86	60	125
Holmium	90	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Chromium	<1	5.0
Arsenic	<1	5.0
Selenium	<1	1.0
Silver	<1	5.0
Cadmium	<1	1.0
Barium	<1	100
Lead	<1	5.0

Date of Report: 02/26/09
Date Received: 02/03/09
Project: Yakima LF PO 001.0221.00004, F&BI 902020
Date Extracted: 02/04/09
Date Analyzed: 02/06/09

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TCLP METALS IN ACCORDANCE WITH EPA METHOD 1631E AND 40 CFR PART 261

Results Reported as mg/L (ppm)

Sample ID Laboratory ID	Mercury
TP-9 902020-01	<0.02
TP-22 902020-02	<0.02
TP-33 902020-03	<0.02
Method Blank	<0.02
TCLP Limits	*0.2*

Date of Report: 02/26/09
Date Received: 02/03/09
Project: Yakima LF PO 001.0221.00004, F&BI 902020

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TCLP METALS USING EPA METHOD 200.8 AND 40 CFR PART 261

Laboratory Code: 902014-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	<1	<1	nm	0-20
Arsenic	mg/L (ppm)	<1	<1	nm	0-20
Selenium	mg/L (ppm)	<1	<1	nm	0-20
Silver	mg/L (ppm)	<1	<1	nm	0-20
Cadmium	mg/L (ppm)	<1	<1	nm	0-20
Barium	mg/L (ppm)	1.91	1.92	1	0-20
Lead	mg/L (ppm)	13.3	13.3	0	0-20

Laboratory Code: 902014-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Chromium	mg/L (ppm)	2.0	<1	94	50-150
Arsenic	mg/L (ppm)	1.0	<1	99	50-150
Selenium	mg/L (ppm)	0.5	<1	99	50-150
Silver	mg/L (ppm)	0.5	<1	99	50-150
Cadmium	mg/L (ppm)	0.5	<1	97	50-150
Barium	mg/L (ppm)	5.0	1.91	102 b	50-150
Lead	mg/L (ppm)	1.0	13.3	85 b	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Chromium	mg/L (ppm)	2.0	103	70-130
Arsenic	mg/L (ppm)	1.0	99	70-130
Selenium	mg/L (ppm)	0.5	99	70-130
Silver	mg/L (ppm)	0.5	99	70-130
Cadmium	mg/L (ppm)	0.5	100	70-130
Barium	mg/L (ppm)	5.0	102	70-130
Lead	mg/L (ppm)	1.0	94	70-130

Date of Report: 02/26/09
Date Received: 02/03/09
Project: Yakima LF PO 001.0221.00004, F&BI 902020

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR TCLP METALS IN ACCORDANCE WITH EPA METHOD 1631E AND 40 CFR PART 261

Laboratory Code: 902014-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Control Limits	RPD (Limit 20)
Mercury	mg/L (ppm)	0.005	<0.02	102	103	50-150	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Mercury	mg/L (ppm)	0.005	95	70-130

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - The analyte indicated was found in the method blank. The result should be considered an estimate.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - The sample was extracted outside of holding time. Results should be considered estimates.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - The value reported exceeded the calibration range established for the analyte. The reported concentration should be considered an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The pattern of peaks present is not indicative of diesel.

y - The pattern of peaks present is not indicative of motor oil.

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664

AMTEST LABORATORIES

Professional Analytical Services

Feb 26 2009
Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Attention: Michael Erdahl

Dear Michael Erdahl:

Enclosed please find the analytical data for your project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
TP-9	Soil	09-A002090	TCLP
TP-22	Soil	09-A002091	TCLP
TP-33	Soil	09-A002092	TCLP

Your samples were received on Tuesday, February 3, 2009. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Method Detection Limits (MDL's), as opposed to Practical Quantitation Limits (PQL's).

If you should have any questions pertaining to the data package, please feel free to contact me.

Sincerely,

Kathy Fugiel
President

Project #: 902020
PO Number: H-1736

BACT = Bacteriological
CONV = Conventionals
TC=Total Coliforms

MET = Metals
ORG = Organics

NUT=Nutrients
DEM=Demand

MIN=Minerals
APC=Aerobic Plate Count

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com

AMTEST LABORATORIES

Professional Analytical Services

ANALYSIS REPORT

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Attention: Michael Erdahl
Project #: 902020
PO Number: H-1736
All results reported on an as received basis.

Date Received: 02/03/09
Date Reported: 2/26/09

AMTEST Identification Number 09-A002090
Client Identification TP-9
Sampling Date 01/26/09

TCLP Volatiles

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANLST	DATE	M.A.C.	EXCDS MAC
Benzene	< 0.05	mg/l			TCLP 624	JR	02/25/09	0.50	NO
Carbon Tetrachloride	< 0.05	mg/l			TCLP 624	JR	02/25/09	0.50	NO
Chlorobenzene	< 1	mg/l			TCLP 624	JR	02/25/09	100	NO
Chloroform	< 0.06	mg/l			TCLP 624	JR	02/25/09	6.0	NO
1,2-Dichloroethane	< 0.05	mg/l			TCLP 624	JR	02/25/09	None	NO
1,2-Dichlorobenzene	< 0.05	mg/l			TCLP 624	JR	02/25/09	0.50	NO
1,1-Dichloroethylene	< 0.07	mg/l			TCLP 624	JR	02/25/09	0.70	NO
Methyl Ethyl Ketone	< 2	mg/l			TCLP 624	JR	02/25/09	200	NO
Tetrachloroethylene	< 0.07	mg/l			TCLP 624	JR	02/25/09	0.70	NO
Vinyl Chloride	< 0.05	mg/l			TCLP 624	JR	02/25/09	0.20	NO
Trichloroethylene	< 0.05	mg/l			TCLP 624	JR	02/25/09	0.50	NO

AMTEST Identification Number 09-A002091
Client Identification TP-22
Sampling Date 01/27/09

TCLP Volatiles

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANLST	DATE	M.A.C.	EXCDS MAC
Benzene	< 0.05	mg/l			TCLP 624	JR	02/25/09	0.50	NO
Carbon Tetrachloride	< 0.05	mg/l			TCLP 624	JR	02/25/09	0.50	NO
Chlorobenzene	< 1	mg/l			TCLP 624	JR	02/25/09	100	NO
Chloroform	< 0.06	mg/l			TCLP 624	JR	02/25/09	6.0	NO
1,2-Dichloroethane	< 0.05	mg/l			TCLP 624	JR	02/25/09	None	NO
1,2-Dichlorobenzene	< 0.05	mg/l			TCLP 624	JR	02/25/09	0.50	NO
1,1-Dichloroethylene	< 0.07	mg/l			TCLP 624	JR	02/25/09	0.70	NO
Methyl Ethyl Ketone	< 2	mg/l			TCLP 624	JR	02/25/09	200	NO
Tetrachloroethylene	< 0.07	mg/l			TCLP 624	JR	02/25/09	0.70	NO
Vinyl Chloride	< 0.05	mg/l			TCLP 624	JR	02/25/09	0.20	NO
Trichloroethylene	< 0.05	mg/l			TCLP 624	JR	02/25/09	0.50	NO

AMTEST Identification Number 09-A002092
Client Identification TP-33
Sampling Date 01/28/09

TCLP Volatiles

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANLST	DATE	M.A.C.	EXCDS MAC
Benzene	< 0.05	mg/l			TCLP 624	JR	02/25/09	0.50	NO
Carbon Tetrachloride	< 0.05	mg/l			TCLP 624	JR	02/25/09	0.50	NO
Chlorobenzene	< 1	mg/l			TCLP 624	JR	02/25/09	100	NO
Chloroform	< 0.06	mg/l			TCLP 624	JR	02/25/09	6.0	NO
1,2-Dichloroethane	< 0.05	mg/l			TCLP 624	JR	02/25/09	None	NO
1,2-Dichlorobenzene	< 0.05	mg/l			TCLP 624	JR	02/25/09	0.50	NO
1,1-Dichloroethylene	< 0.07	mg/l			TCLP 624	JR	02/25/09	0.70	NO
Methyl Ethyl Ketone	< 2	mg/l			TCLP 624	JR	02/25/09	200	NO
Tetrachloroethylene	< 0.07	mg/l			TCLP 624	JR	02/25/09	0.70	NO
Vinyl Chloride	< 0.05	mg/l			TCLP 624	JR	02/25/09	0.20	NO
Trichloroethylene	< 0.05	mg/l			TCLP 624	JR	02/25/09	0.50	NO

Kathy Fugiel
President

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER Anatest

PROJECT NAME/NO. 902020

PO # H-1736

REMARKS

Please Email Results
merdahl@friedmanandbruya.com

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 Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: Oil and Grease	EPH	VPH	Nitrate	Sulfate	Alkalinity	TCLP VOCs				Notes
TP-9	2090	1/26/09		S	1							X				
TP-22	91	1/27/09			1							X				
TP-33	92	1/28/09			1							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:		Michael Erdahl	Friedman & Bruya	2/3/09	12:00 Noon
Received by:		Kathy Fugit	Anatest	2/4/09	
Relinquished by:					
Received by:					

902020

SAMPLE CHAIN OF CUSTODY

ME 02/03/09 BI,

Page # _____ of _____

Send Report To: Mike Stanton
Company: SLR
Address: 22122 20th Ave SE Bldg H Ste150
City, State, ZIP: Bothell, WA
Phone # 425 402 8800 Fax # 98021

SAMPLERS (signature):

PROJECT NAME/NO.: Yakima LF

PO #: 001.0221.0004

REMARKS: Samples are municipal solid waste.

TURNAROUND TIME
- [x] Standard (2 Weeks)
- [ ] RUSH _____
- Rush charges authorized by: _____

SAMPLE DISPOSAL
- [x] Dispose after 30 days
- [ ] Return samples
- [ ] Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	TCLP Metals	TCLP VOCs					Notes
TP-9	01	1/26/09	1215	WASTE	1							X	X					
TP-22	02	1/27/09	1050	WASTE	1							X	X					
TP-33	03	1/28/09	0905	WASTE	1							X	X					
												Samples received at 4 °C						

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Brendan Robinson	SLR	2/2/09	1400
Received by:	Nhan Phan	FeBI	2/3/09	10:00
Relinquished by:				
Received by:				

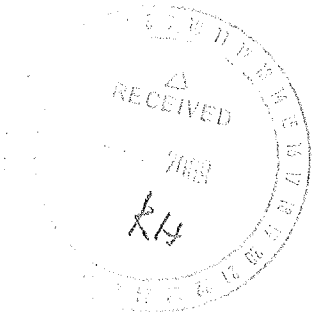
Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

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



March 2, 2009

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 February 13, 2009 from the Yakima LF PO 001.0221.00004, F&BI 902123 project. There are 20 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
SLR0302R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on February 13, 2009 by Friedman & Bruya, Inc. from the SLR International Corp. Yakima LF, F&BI 902123 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SLR International Corp.
902123-01	TP-51-Waste
902123-02	TP-53-Waste
902123-03	SB-18-19-19.5
902123-04	SB-19-5.5-6
902123-05	SB-11-Leachate
902123-06	SB-13-Leachate
902123-07	SB-16-Leachate
902123-08	SB-18-Leachate
902123-09	SB-19-Leachate

The samples were sent to Amtest for bromide analysis, Onsite for TCLP Volatiles analysis, and Aquatic Research for alkalinity, Ca, K, Fe, Mg, Na, fluoride, chloride, sulfate, phosphate, nitrate, and nitrite analyses. Review of the enclosed reports from Onsite and Aquatic Research indicates that all quality assurance was acceptable. The report generated by Amtest will be forwarded to your office upon receipt.

All quality control requirements were acceptable.

Date of Report: 03/02/09
Date Received: 02/13/09
Project: Yakima LF, F&BI 902123
Date Analyzed: 02/13/09

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR pH USING EPA METHOD 9040C

Sample ID Laboratory ID	pH
SB-11-Leachate 902123-05	6.28
SB-13-Leachate 902123-06	6.55
SB-16-Leachate 902123-07	6.47
SB-18-Leachate 902123-08	6.52
SB-19-Leachate 902123-09	6.42

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	SB-11-Leachate	Client:	SLR International Corp.
Date Received:	02/13/09	Project:	Yakima LF, F&BI 902123
Date Extracted:	02/16/09	Lab ID:	902123-05
Date Analyzed:	02/17/09	Data File:	902123-05.019
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	99	60	125
Indium	90	60	125
Holmium	94	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	<1
Cobalt	<1
Nickel	1.66
Copper	<1
Zinc	7.39
Arsenic	1.28
Selenium	<1
Cadmium	<1
Barium	50.4
Thallium	<1
Lead	<1
Manganese	1,150

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	SB-13-Leachate	Client:	SLR International Corp.
Date Received:	02/13/09	Project:	Yakima LF, F&BI 902123
Date Extracted:	02/16/09	Lab ID:	902123-06
Date Analyzed:	02/17/09	Data File:	902123-06.020
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	100	60	125
Indium	85	60	125
Holmium	93	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	1.20
Cobalt	2.20
Nickel	5.90
Copper	2.32
Zinc	9.29
Arsenic	6.39
Selenium	2.92
Cadmium	<1
Barium	121
Thallium	<1
Lead	<1
Manganese	2,390

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	SB-16-Leachate	Client:	SLR International Corp.
Date Received:	02/13/09	Project:	Yakima LF, F&BI 902123
Date Extracted:	02/16/09	Lab ID:	902123-07
Date Analyzed:	02/17/09	Data File:	902123-07.021
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	114	60	125
Indium	90	60	125
Holmium	98	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	<1
Cobalt	1.34
Nickel	3.69
Copper	<1
Zinc	4.63
Arsenic	7.34
Selenium	<1
Cadmium	<1
Barium	131
Thallium	<1
Lead	<1
Manganese	1,330

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	SB-18-Leachate	Client:	SLR International Corp.
Date Received:	02/13/09	Project:	Yakima LF, F&BI 902123
Date Extracted:	02/16/09	Lab ID:	902123-08
Date Analyzed:	02/17/09	Data File:	902123-08.022
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	109	60	125
Indium	90	60	125
Holmium	99	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	<1
Cobalt	3.15
Nickel	5.48
Copper	1.46
Zinc	19.2
Arsenic	8.10
Selenium	2.46
Cadmium	<1
Barium	121
Thallium	<1
Lead	<1
Manganese	2,530

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	SB-19-Leachate	Client:	SLR International Corp.
Date Received:	02/13/09	Project:	Yakima LF, F&BI 902123
Date Extracted:	02/16/09	Lab ID:	902123-09
Date Analyzed:	02/17/09	Data File:	902123-09.023
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	109	60	125
Indium	88	60	125
Holmium	95	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	<1
Cobalt	1.30
Nickel	3.79
Copper	<1
Zinc	6.97
Arsenic	12.1
Selenium	<1
Cadmium	<1
Barium	91.0
Thallium	<1
Lead	<1
Manganese	1,940

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	SLR International Corp.
Date Received:	Not Applicable	Project:	Yakima LF, F&BI 902123
Date Extracted:	02/16/09	Lab ID:	I9-070 mb
Date Analyzed:	02/17/09	Data File:	I9-070 mb.008
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	89	60	125
Indium	86	60	125
Holmium	90	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	<1
Cobalt	<1
Nickel	<1
Copper	<1
Zinc	<2
Arsenic	<1
Selenium	<1
Cadmium	<1
Barium	<1
Thallium	<1
Lead	<1
Manganese	<1

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	TP-51-Waste	Client:	SLR International Corp.
Date Received:	02/13/09	Project:	Yakima LF, F&BI 902123
Date Extracted:	02/17/09	Lab ID:	902123-01
Date Analyzed:	02/18/09	Data File:	902123-01.012
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	95	60	125
Indium	95	60	125
Holmium	100	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Chromium	<1	5.0
Arsenic	<1	5.0
Selenium	<1	1.0
Silver	<1	5.0
Cadmium	<1	1.0
Barium	2.04	100
Lead	1.24	5.0

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	TP-53-Waste	Client:	SLR International Corp.
Date Received:	02/13/09	Project:	Yakima LF, F&BI 902123
Date Extracted:	02/17/09	Lab ID:	902123-02
Date Analyzed:	02/18/09	Data File:	907123-02.015
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	91	60	125
Indium	92	60	125
Holmium	97	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Chromium	<1	5.0
Arsenic	<1	5.0
Selenium	<1	1.0
Silver	<1	5.0
Cadmium	<1	1.0
Barium	4.85	100
Lead	1.72	5.0

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	SB-18-19-19.5	Client:	SLR International Corp.
Date Received:	02/13/09	Project:	Yakima LF, F&BI 902123
Date Extracted:	02/17/09	Lab ID:	902123-03
Date Analyzed:	02/18/09	Data File:	907123-03.016
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	93	60	125
Indium	95	60	125
Holmium	97	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Chromium	<1	5.0
Arsenic	<1	5.0
Selenium	<1	1.0
Silver	<1	5.0
Cadmium	<1	1.0
Barium	<1	100
Lead	<1	5.0

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	SB-19-5.5-6	Client:	SLR International Corp.
Date Received:	02/13/09	Project:	Yakima LF, F&BI 902123
Date Extracted:	02/17/09	Lab ID:	902123-04
Date Analyzed:	02/18/09	Data File:	907123-04.017
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	93	60	125
Indium	91	60	125
Holmium	95	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Chromium	<1	5.0
Arsenic	<1	5.0
Selenium	<1	1.0
Silver	<1	5.0
Cadmium	<1	1.0
Barium	<1	100
Lead	<1	5.0

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	Method Blank	Client:	SLR International Corp.
Date Received:	Not Applicable	Project:	Yakima LF, F&BI 902123
Date Extracted:	02/17/09	Lab ID:	I9-071 mb
Date Analyzed:	02/18/09	Data File:	I9-071 mb.008
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	96	60	125
Indium	95	60	125
Holmium	99	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Chromium	<1	5.0
Arsenic	<1	5.0
Selenium	<1	1.0
Silver	<1	5.0
Cadmium	<1	1.0
Barium	<1	100
Lead	<1	5.0

Date of Report: 03/02/09
Date Received: 02/13/09
Project: Yakima LF, F&BI 902123
Date Extracted: 02/17/09
Date Analyzed: 02/20/09

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TCLP METALS IN ACCORDANCE WITH EPA METHOD 1631E AND 40 CFR PART 261

Results Reported as mg/L (ppm)

Sample ID Laboratory ID	Mercury
TP-51-Waste 902123-01	<0.02
TP-53-Waste 902123-02	<0.02
SB-18-19-19.5 902123-03	<0.02
SB-19-5.5-6 902123-04	<0.02
Method Blank	<0.02
TCLP Limit	*0.2*

Date of Report: 03/02/09
Date Received: 02/13/09
Project: Yakima LF, F&BI 902123

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR pH BY METHOD 9040C

Laboratory Code: 902123-09 (Duplicate)

Analyte	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
pH	6.42	6.40	0	0-20

Date of Report: 03/02/09
Date Received: 02/13/09
Project: Yakima LF, F&BI 902123

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 200.8

Laboratory Code: 902114-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	ug/L (ppb)	<1	<1	nm	0-20
Cobalt	ug/L (ppb)	<1	<1	nm	0-20
Nickel	ug/L (ppb)	<1	<1	nm	0-20
Copper	ug/L (ppb)	57.5	47.9	18	0-20
Zinc	ug/L (ppb)	55.3	46.9	16	0-20
Arsenic	ug/L (ppb)	<1	<1	nm	0-20
Selenium	ug/L (ppb)	<1	<1	nm	0-20
Cadmium	ug/L (ppb)	<1	<1	nm	0-20
Barium	ug/L (ppb)	7.02	6.42	9	0-20
Thallium	ug/L (ppb)	<1	<1	nm	0-20
Lead	ug/L (ppb)	<1	<1	nm	0-20
Manganese	ug/L (ppb)	4.98	4.29	15	0-20

Laboratory Code: 902114-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Chromium	ug/L (ppb)	20	<1	102	50-150
Cobalt	ug/L (ppb)	20	<1	104	50-150
Nickel	ug/L (ppb)	20	<1	106	50-150
Copper	ug/L (ppb)	20	57.5	30 b	50-150
Zinc	ug/L (ppb)	50	55.3	85 b	50-150
Arsenic	ug/L (ppb)	10	<1	110	50-150
Selenium	ug/L (ppb)	5	<1	113	50-150
Cadmium	ug/L (ppb)	5	<1	109	50-150
Barium	ug/L (ppb)	50	7.02	103	50-150
Thallium	ug/L (ppb)	5	<1	104	50-150
Lead	ug/L (ppb)	10	<1	101	50-150
Manganese	ug/L (ppb)	20	4.98	133 b	50-150

Date of Report: 03/02/09
Date Received: 02/13/09
Project: Yakima LF, F&BI 902123

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 200.8

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Chromium	ug/L (ppb)	20	104	70-130
Cobalt	ug/L (ppb)	20	103	70-130
Nickel	ug/L (ppb)	20	105	70-130
Copper	ug/L (ppb)	20	105	70-130
Zinc	ug/L (ppb)	50	108	70-130
Arsenic	ug/L (ppb)	10	96	70-130
Selenium	ug/L (ppb)	5	106	70-130
Cadmium	ug/L (ppb)	5	109	70-130
Barium	ug/L (ppb)	50	104	70-130
Thallium	ug/L (ppb)	5	110	70-130
Lead	ug/L (ppb)	10	108	70-130
Manganese	ug/L (ppb)	20	105	70-130

Date of Report: 03/02/09
Date Received: 02/13/09
Project: Yakima LF, F&BI 902123

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TCLP METALS USING EPA METHOD 200.8 AND 40 CFR PART 261

Laboratory Code: 902123-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	<1	<1	nm	0-20
Arsenic	mg/L (ppm)	<1	<1	nm	0-20
Selenium	mg/L (ppm)	<1	<1	nm	0-20
Silver	mg/L (ppm)	<1	<1	nm	0-20
Cadmium	mg/L (ppm)	<1	<1	nm	0-20
Barium	mg/L (ppm)	2.04	2.02	1	0-20
Lead	mg/L (ppm)	1.24	1.29	4	0-20

Laboratory Code: 902123-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Chromium	mg/L (ppm)	2.0	<1	96	50-150
Arsenic	mg/L (ppm)	1.0	<1	93	50-150
Selenium	mg/L (ppm)	0.5	<1	95	50-150
Silver	mg/L (ppm)	0.5	<1	93	50-150
Cadmium	mg/L (ppm)	0.5	<1	96	50-150
Barium	mg/L (ppm)	5.0	2.04	100 b	50-150
Lead	mg/L (ppm)	1.0	1.24	83 b	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Chromium	mg/L (ppm)	2.0	96	70-130
Arsenic	mg/L (ppm)	1.0	94	70-130
Selenium	mg/L (ppm)	0.5	99	70-130
Silver	mg/L (ppm)	0.5	97	70-130
Cadmium	mg/L (ppm)	0.5	96	70-130
Barium	mg/L (ppm)	5.0	99	70-130
Lead	mg/L (ppm)	1.0	93	70-130

Date of Report: 03/02/09
Date Received: 02/13/09
Project: Yakima LF, F&BI 902123

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR TCLP METALS IN ACCORDANCE WITH EPA METHOD 1631E AND 40 CFR PART 261

Laboratory Code: 902123-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Control Limits	RPD (Limit 20)
Mercury	mg/L (ppm)	0.005	<0.02	107	117	50-150	9

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Mercury	mg/L (ppm)	0.005	114	70-130

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - The analyte indicated was found in the method blank. The result should be considered an estimate.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - The sample was extracted outside of holding time. Results should be considered estimates.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - The value reported exceeded the calibration range established for the analyte. The reported concentration should be considered an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The pattern of peaks present is not indicative of diesel.

y - The pattern of peaks present is not indicative of motor oil.

AMTEST LABORATORIES

Professional Analytical Services

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664

Feb 26 2009
Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Attention: Michael Erdahl

Dear Michael Erdahl:

Enclosed please find the analytical data for your project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
SB-11 Leachate	Water	09-A002771	CONV
SB-13 Leachate	Water	09-A002772	CONV
SB-16 Leachate	Water	09-A002773	CONV
SB-18 Leachate	Water	09-A002774	CONV
SB-19 Leachate	Water	09-A002775	CONV

Your samples were received on Tuesday, February 17, 2009. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Method Detection Limits (MDL's), as opposed to Practical Quantitation Limits (PQL's).

If you should have any questions pertaining to the data package, please feel free to contact me.

Sincerely,

Kathy Fugiel
President

Project #: 902123
PO Number: H-1784

BACT = Bacteriological
CONV = Conventionals
TC=Total Coliforms

MET = Metals
ORG = Organics

NUT=Nutrients
DEM=Demand

MIN=Minerals
APC=Aerobic Plate Count

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com

AMTEST LABORATORIES

Professional Analytical Services

ANALYSIS REPORT

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Attention: Michael Erdahl
Project #: 902123
PO Number: H-1784
All results reported on an as received basis.

Date Received: 02/17/09
Date Reported: 2/26/09

AMTEST Identification Number 09-A002771
Client Identification SB-11 Leachate
Sampling Date 02/11/09

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Bromide	< 0.3	mg/l		0.02	EPA 300.0	MO	02/18/09

AMTEST Identification Number 09-A002772
Client Identification SB-13 Leachate
Sampling Date 02/11/09

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Bromide	< 0.3	mg/l		0.02	EPA 300.0	MO	02/18/09

AMTEST Identification Number 09-A002773
Client Identification SB-16 Leachate
Sampling Date 02/11/09

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Bromide	< 0.3	mg/l		0.02	EPA 300.0	MO	02/18/09

AMTEST Identification Number 09-A002774
Client Identification SB-18 Leachate
Sampling Date 02/11/09

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Bromide	< 0.3	mg/l		0.02	EPA 300.0	MO	02/18/09

AMTEST Identification Number 09-A002775
Client Identification SB-19 Leachate
Sampling Date 02/11/09

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Bromide	< 0.3	mg/l		0.02	EPA 300.0	MO	02/18/09

Kathy Fugiel
President

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER

PROJECT NAME/NO. 902123

PO # A1754

REMARKS

Please Email Results
merdahl@friedmanandbruya.com

Page # _____ of _____

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 Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: Oil and Grease	EPH	VPH	Nitrate	Sulfate	Alkalinity	Phenols (by 300.0 or equivalent)			Notes
SB-11 Leachate	2771	02/11/09	0930	W	1							X			
SB-13 Leachate	72	"	1705	"	1							X			
SB-16 Leachate	73	"	1720	"	1							X			
SB-18 Leachate	74	02/12/09	1315	"	1							X			
SB-19 Leachate	75	"	1330	"	1							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:		Michael Erdahl Eric Lowry	Friedman & Bruya	02/17	1130
Received by:		Kathy Flogel	Antest	2/17/09	
Relinquished by:					
Received by:					

AQUATIC RESEARCH INCORPORATED

LABORATORY & CONSULTING SERVICES

3927 AURORA AVENUE NORTH, SEATTLE, WA 98103

PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER: FBI003-74 **PAGE 1**

REPORT DATE: 02/27/09

DATE SAMPLED: 02/11/09 **DATE RECEIVED:** 02/13/09

FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER SAMPLES FROM FRIEDMAN & BRUYA, INC. / PROJECT NO. 902123

CASE NARRATIVE

Five water samples were received by the laboratory in good condition and analyzed according to the chain of custody. No difficulties were encountered in the preparation or analysis of these samples. Sample data follows while QA/QC data is contained on the subsequent pages.

SAMPLE DATA

SAMPLE ID	CHLORIDE (mg/l)	FLUORIDE (mg/l)	SULFATE (mg/l)	NITRATE (mg/l)	NITRITE (mg/l)	SRP (mg/l)
SB-11 LEACHATE	10.5	0.37	2.11	0.032	<0.002	0.004
SB-13 LEACHATE	128	0.37	29.1	0.117	0.003	0.004
SB-16 LEACHATE	21.6	0.30	<1.00	0.192	0.004	0.009
SB-18 LEACHATE	37.9	0.67	10.8	0.139	0.005	0.007
SB-19 LEACHATE	13.5	0.50	1.40	0.127	0.006	0.005

SAMPLE ID	pH	ALKALINITY (mgCaCO3/l)	HCO3 (mgCaCO3/l)	CO3 (mgCaCO3/l)
SB-11 LEACHATE	6.78	234	170	<1.00
SB-13 LEACHATE	6.52	326	195	<1.00
SB-16 LEACHATE	6.39	438	229	<1.00
SB-18 LEACHATE	6.36	441	223	<1.00
SB-19 LEACHATE	6.24	301	131	<1.00

AQUATIC RESEARCH INCORPORATED

LABORATORY & CONSULTING SERVICES

3927 AURORA AVENUE NORTH, SEATTLE, WA 98103

PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER:	FBI003-74	PAGE 2	
REPORT DATE:	02/27/09		
DATE SAMPLED:	02/11/09	DATE RECEIVED:	02/13/09

FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER SAMPLES FROM FRIEDMAN & BRUYA, INC. / PROJECT NO. 902123

SAMPLE DATA

	DISSOLVED METALS				
SAMPLE ID	IRON (mg/l)	POTASSIUM (mg/l)	CALCIUM (mg/l)	MAGNESIUM (mg/l)	SODIUM (mg/l)
SB-11 LEACHATE	7.78	6.87	30.1	12.8	21.6
SB-13 LEACHATE	25.9	20.7	55.2	21.8	68.7
SB-16 LEACHATE	39.9	31.3	44.8	17.6	29.4
SB-18 LEACHATE	36.5	15.5	59.7	22.1	46.5
SB-19 LEACHATE	43.3	10.7	45.0	16.4	18.6

AQUATIC RESEARCH INCORPORATED

LABORATORY & CONSULTING SERVICES

3927 AURORA AVENUE NORTH, SEATTLE, WA 98103

PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER: FBI003-74 **PAGE 3**

REPORT DATE: 02/27/09

DATE SAMPLED: 02/11/09 **DATE RECEIVED:** 02/13/09

FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER SAMPLES FROM FRIEDMAN & BRUYA, INC. / PROJECT NO. 902123

QA/QC DATA

QC PARAMETER	CHLORIDE (mg/l)	FLUORIDE (mg/l)	SULFATE (mg/l)	NITRATE (mg/l)	NITRITE (mg/l)	SRP (mg/l)
METHOD	SM204500CLC	EPA 340.2	SM184500SO4E	SM184500N03F	EPA354.1	EPA 365.1
DATE ANALYZED	02/17/09	02/18/09	02/17/09	02/13/09	02/13/09	02/13/09
DETECTION LIMIT	0.50	0.10	1.00	0.010	0.002	0.001
DUPLICATE						
SAMPLE ID	SB-19 LEACHATE	SB-11 LEACHATE	BATCH	BATCH	SB-19 LEACHATE	BATCH
ORIGINAL	13.5	0.37	4.88	0.265	0.006	0.003
DUPLICATE	13.8	0.36	5.14	0.263	0.006	0.003
RPD	2.15%	3.58%	5.26%	0.68%	0.00%	2.74%
SPIKE SAMPLE						
SAMPLE ID	SB-19 LEACHATE	SB-11 LEACHATE	BATCH	BATCH	SB-19 LEACHATE	BATCH
ORIGINAL	13.5	0.37	4.88	0.265	0.006	0.003
SPIKED SAMPLE	23.6	1.41	15.2	0.479	0.046	0.023
SPIKE ADDED	10.0	1.00	10.0	0.200	0.040	0.020
% RECOVERY	100.69%	103.10%	103.43%	106.90%	100.00%	95.62%
QC CHECK						
FOUND	28.8	1.04	9.30	0.406	0.040	0.034
TRUE	30.0	1.00	10.0	0.408	0.040	0.033
% RECOVERY	96.12%	104.26%	92.98%	99.62%	100.00%	103.77%
BLANK	<0.50	<0.10	<1.00	<0.010	<0.002	<0.001

RPD = RELATIVE PERCENT DIFFERENCE.
NA = NOT APPLICABLE OR NOT AVAILABLE.
NC = NOT CALCULABLE DUE TO ONE OR MORE VALUES BEING BELOW THE DETECTION LIMIT.
OR = RECOVERY NOT CALCULABLE DUE TO SPIKE SAMPLE OUT OF RANGE OR SPIKE TOO LOW RELATIVE TO SAMPLE CONCENTRATION.

AQUATIC RESEARCH INCORPORATED

LABORATORY & CONSULTING SERVICES

3927 AURORA AVENUE NORTH, SEATTLE, WA 98103

PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER:	**FBI003-74**		**PAGE 4**
REPORT DATE:	**02/27/09**		
DATE SAMPLED:	**02/11/09**	**DATE RECEIVED:**	**02/13/09**

FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER SAMPLES FROM FRIEDMAN & BRUYA, INC. / PROJECT NO. 902123

QA/QC DATA

QC PARAMETER	pH	ALKALINITY (mgCaCO3/l)	HCO3 (mgCaCO3/l)	CO3 (mgCaCO3/l)
METHOD	EPA 150.1	EPA 310.1	EPA 310.1	EPA 310.1
DATE ANALYZED	02/13/09	02/23/09	02/23/09	02/23/09
DETECTION LIMIT	0.10	1.00	1.00	1.00
DUPLICATE				
SAMPLE ID		BATCH		
ORIGINAL		45.7		
DUPLICATE		46.2		
RPD	NA	1.09%	NA	NA
SPIKE SAMPLE				
SAMPLE ID				
ORIGINAL				
SPIKED SAMPLE				
SPIKE ADDED				
% RECOVERY	NA	NA	NA	NA
QC CHECK (mg/l)				
FOUND		98.7		
TRUE		100		
% RECOVERY	NA	98.70%	NA	NA
BLANK	NA	NA	NA	NA

RPD = RELATIVE PERCENT DIFFERENCE.
NA = NOT APPLICABLE OR NOT AVAILABLE.
NC = NOT CALCULABLE DUE TO ONE OR MORE VALUES BEING BELOW THE DETECTION LIMIT.
OR = RECOVERY NOT CALCULABLE DUE TO SPIKE SAMPLE OUT OF RANGE OR SPIKE TOO LOW RELATIVE TO SAMPLE CONCENTRATION.

AQUATIC RESEARCH INCORPORATED

LABORATORY & CONSULTING SERVICES
3927 AURORA AVENUE NORTH, SEATTLE, WA 98103
PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER: FBI003-74 **PAGE 5**
REPORT DATE: 02/27/09
DATE SAMPLED: 02/11/09 **DATE RECEIVED:** 02/13/09
FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER SAMPLES FROM FRIEDMAN & BRUYA, INC. / PROJECT NO. 902123

QA/QC DATA

	DISSOLVED METALS				
QC PARAMETER	IRON (mg/l)	POTASSIUM (mg/l)	CALCIUM (mg/l)	MAGNESIUM (mg/l)	SODIUM (mg/l)
METHOD	EPA 6010	EPA 6010	EPA 6010	EPA 6010	EPA 6010
DATE ANALYZED	02/19/09	02/19/09	02/19/09	02/19/09	02/19/09
DETECTION LIMIT	0.010	0.500	0.100	0.100	0.100
DUPLICATE					
SAMPLE ID	BATCH	BATCH	BATCH	BATCH	BATCH
ORIGINAL	4.63	3.11	29.2	41.0	24.6
DUPLICATE	4.66	2.96	29.8	41.3	24.4
RPD	0.63%	4.87%	1.87%	0.70%	0.94%
SPIKE SAMPLE					
SAMPLE ID	BATCH	BATCH		BATCH	BATCH
ORIGINAL	4.63	3.11		41.0	24.6
SPIKED SAMPLE	14.0	13.1		50.2	36.1
SPIKE ADDED	10.0	10.0		10.0	10.0
% RECOVERY	93.76%	99.44%	NA	91.76%	114.60%
QC CHECK (mg/l)					
FOUND	9.48	10.1	10.0	9.65	9.25
TRUE	10.0	10.0	10.0	10.0	10.0
% RECOVERY	94.77%	101.05%	100.24%	96.54%	92.52%
BLANK	<0.010	<0.500	<0.100	<0.100	<0.005

RPD = RELATIVE PERCENT DIFFERENCE.
NA = NOT APPLICABLE OR NOT AVAILABLE.
NC = NOT CALCULABLE DUE TO ONE OR MORE VALUES BEING BELOW THE DETECTION LIMIT.
OR = RECOVERY NOT CALCULABLE DUE TO SPIKE SAMPLE OUT OF RANGE OR SPIKE TOO LOW RELATIVE TO SAMPLE CONCENTRATION.

SUBMITTED BY:

Steven Lazoff
Laboratory Director

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

FDL003.7C

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER

PROJECT NAME/NO. 902123

PO #

REMARKS * Poly's for metals have been field filtered & pres. w/ HNO3

Please Email Results
merdahl@friedmanandbruya.com

Page # _____ of _____

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 Sampled	Time Sampled	Matrix	# of jars	Oil and Grease	EPH	VPH	Nitrate	Sulfate	Alkalinity	* Anions	Carbonate/Bicarb	Ca, K, Fe, Mg, Na by 6010 Dissolved Metals		Notes
								by SM 2/13/09								
SB-11 Leachate		02/11	0930	W	1			pH = 6.78				X	X	X		* - Anions Include: Fluoride Chloride ~~Bromide~~ Sulfate ORTHO Phosphate Nitrite ~~Nitrate/Nitrite~~ Nitrate (48)
SB-13 Leachate		02/11	1705		1			= 6.52								
SB-16 Leachate		02/11	1720		2			= 6.39								
SB-18 Leachate		02/12	1315		1			= 6.36								
SB-19 Leachate		02/12	1330		1			= 6.24								
					6											

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	~~Michael Erdahl~~ Eric Vanse	Friedman & Bruya	02/13	1215
Received by:	S. Nielson	ARI	2/13	1400
Relinquished by:				
Received by:				

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

OnSite Environmental Inc.
Analytical Laboratory Testing Services

February 24, 2009

Michael Erdahl
Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029

Re: Analytical Data for Project 902123
Laboratory Reference No. 0902-104

Dear Michael:

Enclosed are the analytical results and associated quality control data for samples submitted on February 13, 2009.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: February 24, 2009
Samples Submitted: February 13, 2009
Laboratory Reference: 0902-104
Project: 902123

Case Narrative

Samples were collected on February 11 and 12, 2009, and received by the laboratory on February 13, 2009. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

TCLP Volatiles by EPA 1311/8260B Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

The soil that was used for the TCLP extraction of samples SB-18-19-19.5 and SB-19-5.5-6 was located in Method 5035 VOA vials that contained headspace. Some loss of volatiles may have occurred.

Normally 25g of sample are tumbled for the TCLP extraction. Due to limited sample volumes, 15.5g were tumbled for sample SB-18-19-19.5 and 16.8g were tumbled for sample SB-19-5.5-6.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: February 24, 2009
Samples Submitted: February 13, 2009
Laboratory Reference: 0902-104
Project: 902123

TCLP VOLATILES
EPA 1311/8260B

Date Extracted:	2-18-09
Date Analyzed:	2-19-09
Matrix:	TCLP Extract
Units:	ug/L (ppb)
Lab ID:	02-104-01
Client ID:	**TP-51-WASTE**

Compound	Results	Flags	PQL
Vinyl Chloride	ND		2.0
1,1-Dichloroethene	ND		2.0
2-Butanone	ND		50
Chloroform	ND		2.0
Carbon Tetrachloride	ND		2.0
Benzene	ND		2.0
1,2-Dichloroethane	ND		2.0
Trichloroethene	ND		2.0
Tetrachloroethene	ND		2.0
Chlorobenzene	ND		2.0
1,4-Dichlorobenzene	ND		2.0
Hexachlorobutadiene	ND		2.0

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	82	71-126
Toluene-d8	78	76-116
4-Bromofluorobenzene	83	70-123

Date of Report: February 24, 2009
Samples Submitted: February 13, 2009
Laboratory Reference: 0902-104
Project: 902123

TCLP VOLATILES
EPA 1311/8260B

Date Extracted:	2-18-09
Date Analyzed:	2-19-09
Matrix:	TCLP Extract
Units:	ug/L (ppb)
Lab ID:	02-104-02
Client ID:	**TP-53-WASTE**

Compound	Results	Flags	PQL
Vinyl Chloride	ND		2.0
1,1-Dichloroethene	ND		2.0
2-Butanone	ND		50
Chloroform	ND		2.0
Carbon Tetrachloride	ND		2.0
Benzene	ND		2.0
1,2-Dichloroethane	ND		2.0
Trichloroethene	ND		2.0
Tetrachloroethene	ND		2.0
Chlorobenzene	ND		2.0
1,4-Dichlorobenzene	ND		2.0
Hexachlorobutadiene	ND		2.0

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	81	71-126
Toluene-d8	84	76-116
4-Bromofluorobenzene	89	70-123

Date of Report: February 24, 2009
Samples Submitted: February 13, 2009
Laboratory Reference: 0902-104
Project: 902123

TCLP VOLATILES
EPA 1311/8260B

Date Extracted:	2-18-09
Date Analyzed:	2-19-09
Matrix:	TCLP Extract
Units:	ug/L (ppb)
Lab ID:	02-104-03
Client ID:	**SB-18-19-19.5**

Compound	Results	Flags	PQL
Vinyl Chloride	ND		2.0
1,1-Dichloroethene	ND		2.0
2-Butanone	ND		50
Chloroform	ND		2.0
Carbon Tetrachloride	ND		2.0
Benzene	ND		2.0
1,2-Dichloroethane	ND		2.0
Trichloroethene	ND		2.0
Tetrachloroethene	ND		2.0
Chlorobenzene	ND		2.0
1,4-Dichlorobenzene	ND		2.0
Hexachlorobutadiene	ND		2.0

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	82	71-126
Toluene-d8	84	76-116
4-Bromofluorobenzene	89	70-123

Date of Report: February 24, 2009
Samples Submitted: February 13, 2009
Laboratory Reference: 0902-104
Project: 902123

TCLP VOLATILES
EPA 1311/8260B

Date Extracted:	2-19-09
Date Analyzed:	2-20-09
Matrix:	TCLP Extract
Units:	ug/L (ppb)
Lab ID:	02-104-04
Client ID:	**SB-19-5.5-6**

Compound	**Results**	**Flags**	**PQL**
Vinyl Chloride	ND		2.0
1,1-Dichloroethene	ND		2.0
2-Butanone	ND		50
Chloroform	ND		2.0
Carbon Tetrachloride	ND		2.0
Benzene	ND		2.0
1,2-Dichloroethane	ND		2.0
Trichloroethene	ND		2.0
Tetrachloroethene	ND		2.0
Chlorobenzene	ND		2.0
1,4-Dichlorobenzene	ND		2.0
Hexachlorobutadiene	ND		2.0

Surrogate	**Percent Recovery**	**Control Limits**
Dibromofluoromethane	86	71-126
Toluene-d8	83	76-116
4-Bromofluorobenzene	87	70-123

Date of Report: February 24, 2009
Samples Submitted: February 13, 2009
Laboratory Reference: 0902-104
Project: 902123

TCLP VOLATILES
EPA 1311/8260B
METHOD BLANK QUALITY CONTROL

Date Extracted:	2-18-09
Date Analyzed:	2-19-09
Matrix:	TCLP Extract
Units:	ug/L (ppb)
Lab ID:	MB0218T2

Compound	Results	Flags	PQL
Vinyl Chloride	ND		2.0
1,1-Dichloroethene	ND		2.0
2-Butanone	ND		50
Chloroform	ND		2.0
Carbon Tetrachloride	ND		2.0
Benzene	ND		2.0
1,2-Dichloroethane	ND		2.0
Trichloroethene	ND		2.0
Tetrachloroethene	ND		2.0
Chlorobenzene	ND		2.0
1,4-Dichlorobenzene	ND		2.0
Hexachlorobutadiene	ND		2.0

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	83	71-126
Toluene-d8	83	76-116
4-Bromofluorobenzene	84	70-123

Date of Report: February 24, 2009
Samples Submitted: February 13, 2009
Laboratory Reference: 0902-104
Project: 902123

TCLP VOLATILES
EPA 1311/8260B
METHOD BLANK QUALITY CONTROL

Date Extracted:	2-19-09
Date Analyzed:	2-20-09
Matrix:	TCLP Extract
Units:	ug/L (ppb)
Lab ID:	MB0219T2

Compound	Results	Flags	PQL
Vinyl Chloride	ND		2.0
1,1-Dichloroethene	ND		2.0
2-Butanone	ND		50
Chloroform	ND		2.0
Carbon Tetrachloride	ND		2.0
Benzene	ND		2.0
1,2-Dichloroethane	ND		2.0
Trichloroethene	ND		2.0
Tetrachloroethene	ND		2.0
Chlorobenzene	ND		2.0
1,4-Dichlorobenzene	ND		2.0
Hexachlorobutadiene	ND		2.0

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	78	71-126
Toluene-d8	79	76-116
4-Bromofluorobenzene	86	70-123

Date of Report: February 24, 2009
Samples Submitted: February 13, 2009
Laboratory Reference: 0902-104
Project: 902123

TCLP VOLATILES
EPA 1311/8260B
SB/SBD QUALITY CONTROL

Date Extracted: 2-19-09
Date Analyzed: 2-19-09

Matrix: TCLP Extract
Units: ug/L (ppb)

Lab ID: SB0219T1

Compound	Spike Amount	SB	Percent Recovery	SBD	Percent Recovery	Recovery Limits	Flags
1,1-Dichloroethene	10.0	7.26	73	7.56	76	70-130	
Benzene	10.0	7.92	79	8.38	84	70-130	
Trichloroethene	10.0	9.42	94	9.55	96	70-116	
Toluene	10.0	9.10	91	9.47	95	76-119	
Chlorobenzene	10.0	9.21	92	9.82	98	77-112	

	RPD	RPD Limit	Flags
1,1-Dichloroethene	4	20	
Benzene	6	16	
Trichloroethene	1	16	
Toluene	4	15	
Chlorobenzene	6	15	

Date of Report: February 24, 2009
Samples Submitted: February 13, 2009
Laboratory Reference: 0902-104
Project: 902123

TCLP VOLATILES
EPA 1311/8260B
SB/SBD QUALITY CONTROL

Date Extracted: 2-20-09
Date Analyzed: 2-20-09

Matrix: TCLP Extract
Units: ug/L (ppb)

Lab ID: SB0220T1

Compound	Spike Amount	SB	Percent Recovery	SBD	Percent Recovery	Recovery Limits	Flags
1,1-Dichloroethene	10.0	7.24	72	7.63	76	70-130	
Benzene	10.0	7.77	78	8.34	83	70-130	
Trichloroethene	10.0	9.31	93	9.77	98	70-116	
Toluene	10.0	8.70	87	9.59	96	76-119	
Chlorobenzene	10.0	8.91	89	10.0	100	77-112	

	RPD	RPD Limit	Flags
1,1-Dichloroethene	5	20	
Benzene	7	16	
Trichloroethene	5	16	
Toluene	10	15	
Chlorobenzene	12	15	

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER 02-104

PROJECT NAME/NO. 902123 | PO # H4757

REMARKS

Please Email Results
merdahl@friedmanandbruya.com

Page # ____ of ____

TURNAROUND TIME
☒ Standard (2 Weeks)
~~☒ RUSH 48 Hrs or ASAP~~
Rush charges authorized by:

NO RUSH 02/13

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	Oil and Grease	EPH	VPH	Nitrate	Sulfate	Alkalinity	TCLP-VOCs (8260)			Notes
TP-S1-WASTE	1	02/11/09	1310	SOIL	1							X			
TP-S3-WASTE	2	02/11/09	1445		1							X			
SB-18-19-19.5	3	02/12/09	0920		2							X			
SB-19-5.5-6	4	02/12/09	1015		2							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: [signature]	~~Michael Erdahl~~ Eric Young	Friedman & Bruya	02/12	12
Received by: [signature]	M. YOUN	OSE	2/13/09	1400
Relinquished by:				
Received by:				

902123

SAMPLE CHAIN OF CUSTODY

ME 2/13/09

BI2 / VSI

Page # 1 of 1

Send Report To: Mike Staton

Company: SLR Int'l Corp

Address: 22122 20th Ave SE H-150

City, State, ZIP: Bothell WA 98021

Phone #: (425) 402-8800 Fax #: (425) 402-8488

SAMPLERS (signature): [illegible]

PROJECT NAME/NO.: Yakima LF

PO #: 001.0221.00004

REMARKS:

TURNAROUND TIME
- ☒ Standard (2 Weeks)
- ☒ RUSH TCLP VOCs (soil) [illegible]
- Rush charges authorized by: [illegible]

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

ANALYSES REQUESTED

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	~~TPH-Diesel~~ pH by 9040/9045	~~TPH-Gasoline~~ Bicarbonate and carbonate by 310.1	BTEX by 8021B	VOCs by 8260	~~SVOCs by 8270~~ Anions by 300	HFS	TCLP-Metals	TCLP-VOCs	~~PCBs by 8082~~	Dissolved metals by 200.8		Notes
TP-51-Waste	01 A-B	2/11/09	1310	Soil	2							X	X				
TP-53-Waste	02 A-B	↓	1445	Soil	2							X	X				
SB-18-19-19.5	03 A-E	2/12/09	0920	Soil	5							X	X				
SB-19-~~[illegible]~~ 55-6	04 A-E	↓	1015	Soil	5							X	X				
SB-11-Leachate	05 A-C	2/11/09	0930	Water	3	X	X			X				X			
SB-13-Leachate	06 A-C	↓	1705	↓	↓	X	X			X				X			
SB-16-Leachate	07 A-C	↓	1720	↓	↓	X	X			X				X			
SB-18-Leachate	08 A-C	2/12/09	1315	↓	↓	X	X			X				X			
SB-19-Leachate	09 A-C	↓	1330	↓	↓	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:	[signature]	Mike Staton	SLR	2/13/09	10:25
Received by:	[signature]	Nhan Phan	FeBI	2/13/09	12:00
Relinquished by:					
Received by:					

Samples received at 2 °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

March 3, 2009

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 February 18, 2009 from the Yakima LF 001.0221.00004, F&BI 902167 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.

Michael Erdahl
Project Manager

Enclosures
SLR0303R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 18, 2009 by Friedman & Bruya, Inc. from the SLR International Corp. Yakima LF 001.0221.00004, F&BI 902167 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SLR International Corp.
902167-01	SB-27-15.5-16

The samples were sent to Onsite for TCLP VOC analysis. Review of the enclosed report indicates that all quality assurance was acceptable.

All quality control requirements were acceptable.

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	SB-27-15.5-16	Client:	SLR International Corp.
Date Received:	02/18/09	Project:	Yakima LF 001.0221.00004, F&BI 902167
Date Extracted:	02/24/09	Lab ID:	902167-01
Date Analyzed:	02/25/09	Data File:	902167-01.011
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	92	60	125
Indium	109	60	125
Holmium	104	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Chromium	<1	5.0
Arsenic	<1	5.0
Selenium	<1	1.0
Silver	<1	5.0
Cadmium	<1	1.0
Barium	<1	100
Lead	<1	5.0

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	Method Blank	Client:	SLR International Corp.
Date Received:	Not Applicable	Project:	Yakima LF 001.0221.00004, F&BI 902167
Date Extracted:	02/24/09	Lab ID:	I9-082 mb
Date Analyzed:	02/25/09	Data File:	I9-082 mb.008
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	95	60	125
Indium	104	60	125
Holmium	101	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Chromium	<1	5.0
Arsenic	<1	5.0
Selenium	<1	1.0
Silver	<1	5.0
Cadmium	<1	1.0
Barium	<1	100
Lead	<1	5.0

Date of Report: 03/03/09
Date Received: 02/18/09
Project: Yakima LF 001.0221.00004, F&BI 902167
Date Extracted: 02/24/09
Date Analyzed: 02/27/09

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TCLP METALS IN ACCORDANCE WITH EPA METHOD 1631E AND 40 CFR PART 261

Results Reported as mg/L (ppm)

Sample ID Laboratory ID	Mercury
SB-27-15.5-16 902167-01	<0.02
Method Blank	<0.02
TCLP Limit	*0.2*

Date of Report: 03/03/09
Date Received: 02/18/09
Project: Yakima LF 001.0221.00004, F&BI 902167

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TCLP METALS USING EPA METHOD 200.8 AND 40 CFR PART 261

Laboratory Code: 902167-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	<1	<1	nm	0-20
Arsenic	mg/L (ppm)	<1	<1	nm	0-20
Selenium	mg/L (ppm)	<1	<1	nm	0-20
Silver	mg/L (ppm)	<1	<1	nm	0-20
Cadmium	mg/L (ppm)	<1	<1	nm	0-20
Barium	mg/L (ppm)	<1	<1	nm	0-20
Lead	mg/L (ppm)	<1	<1	nm	0-20

Laboratory Code: 902167-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Chromium	mg/L (ppm)	2.0	<1	87	50-150
Arsenic	mg/L (ppm)	1.0	<1	90	50-150
Selenium	mg/L (ppm)	0.5	<1	92	50-150
Silver	mg/L (ppm)	0.5	<1	95	50-150
Cadmium	mg/L (ppm)	0.5	<1	100	50-150
Barium	mg/L (ppm)	5.0	<1	97	50-150
Lead	mg/L (ppm)	1.0	<1	94	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Chromium	mg/L (ppm)	2.0	91	70-130
Arsenic	mg/L (ppm)	1.0	95	70-130
Selenium	mg/L (ppm)	0.5	100	70-130
Silver	mg/L (ppm)	0.5	98	70-130
Cadmium	mg/L (ppm)	0.5	100	70-130
Barium	mg/L (ppm)	5.0	96	70-130
Lead	mg/L (ppm)	1.0	94	70-130

Date of Report: 03/03/09
Date Received: 02/18/09
Project: Yakima LF 001.0221.00004, F&BI 902167

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR TCLP METALS IN ACCORDANCE WITH EPA METHOD 1631E AND 40 CFR PART 261

Laboratory Code: 902167-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Control Limits	RPD (Limit 20)
Mercury	mg/L (ppm)	0.005	<0.02	101	98	50-150	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Mercury	mg/L (ppm)	0.005	99	70-130

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - The analyte indicated was found in the method blank. The result should be considered an estimate.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - The sample was extracted outside of holding time. Results should be considered estimates.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - The value reported exceeded the calibration range established for the analyte. The reported concentration should be considered an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The pattern of peaks present is not indicative of diesel.

y - The pattern of peaks present is not indicative of motor oil.

OnSite Environmental Inc.
Analytical Laboratory Testing Services

February 24, 2009

Michael Erdahl
Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029

Re: Analytical Data for Project 902167
Laboratory Reference No. 0902-126

Dear Michael:

Enclosed are the analytical results and associated quality control data for samples submitted on February 19, 2009.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: February 24, 2009
Samples Submitted: February 19, 2009
Laboratory Reference: 0902-126
Project: 902167

Case Narrative

Samples were collected on February 17, 2009, and received by the laboratory on February 19, 2009. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

TCLP Volatiles by EPA 1311/8260B Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

The soil that was used for the TCLP extraction of sample SB-27-15.5-16 was located in Method 5035 VOA vials that contained headspace. Some loss of volatiles may have occurred.

Normally 25g of sample are tumbled for the TCLP extraction. Due to limited sample volume, 19.6g were tumbled for sample SB-27-15.5-16.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: February 24, 2009
Samples Submitted: February 19, 2009
Laboratory Reference: 0902-126
Project: 902167

TCLP VOLATILES
EPA 1311/8260B

Date Extracted:	2-19-09
Date Analyzed:	2-20-09
Matrix:	TCLP Extract
Units:	ug/L (ppb)
Lab ID:	02-126-01
Client ID:	**SB-27-15.5-16**

Compound	**Results**	**Flags**	**PQL**
Vinyl Chloride	ND		2.0
1,1-Dichloroethene	ND		2.0
2-Butanone	ND		50
Chloroform	ND		2.0
Carbon Tetrachloride	ND		2.0
Benzene	ND		2.0
1,2-Dichloroethane	ND		2.0
Trichloroethene	ND		2.0
Tetrachloroethene	ND		2.0
Chlorobenzene	ND		2.0
1,4-Dichlorobenzene	ND		2.0
Hexachlorobutadiene	ND		2.0

Surrogate	**Percent Recovery**	**Control Limits**
Dibromofluoromethane	81	71-126
Toluene-d8	79	76-116
4-Bromofluorobenzene	84	70-123

Date of Report: February 24, 2009
Samples Submitted: February 19, 2009
Laboratory Reference: 0902-126
Project: 902167

TCLP VOLATILES
EPA 1311/8260B
METHOD BLANK QUALITY CONTROL

Date Extracted: 2-19-09
Date Analyzed: 2-20-09

Matrix: TCLP Extract
Units: ug/L (ppb)

Lab ID: MB0219T2

Compound	Results	Flags	PQL
Vinyl Chloride	ND		2.0
1,1-Dichloroethene	ND		2.0
2-Butanone	ND		50
Chloroform	ND		2.0
Carbon Tetrachloride	ND		2.0
Benzene	ND		2.0
1,2-Dichloroethane	ND		2.0
Trichloroethene	ND		2.0
Tetrachloroethene	ND		2.0
Chlorobenzene	ND		2.0
1,4-Dichlorobenzene	ND		2.0
Hexachlorobutadiene	ND		2.0

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	78	71-126
Toluene-d8	79	76-116
4-Bromofluorobenzene	86	70-123

Date of Report: February 24, 2009
Samples Submitted: February 19, 2009
Laboratory Reference: 0902-126
Project: 902167

TCLP VOLATILES
EPA 1311/8260B
SB/SBD QUALITY CONTROL

Date Extracted: 2-20-09
Date Analyzed: 2-20-09

Matrix: TCLP Extract
Units: ug/L (ppb)

Lab ID: SB0220T1

Compound	Spike Amount	SB	Percent Recovery	SBD	Percent Recovery	Recovery Limits	Flags
1,1-Dichloroethene	10.0	7.24	72	7.63	76	70-130	
Benzene	10.0	7.77	78	8.34	83	70-130	
Trichloroethene	10.0	9.31	93	9.77	98	70-116	
Toluene	10.0	8.70	87	9.59	96	76-119	
Chlorobenzene	10.0	8.91	89	10.0	100	77-112	

	RPD	RPD Limit	Flags
1,1-Dichloroethene	5	20	
Benzene	7	16	
Trichloroethene	5	16	
Toluene	10	15	
Chlorobenzene	12	15	

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

02-126

Page # 1 of 1

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER

PROJECT NAME/NO.	PO #
902167	H-1761

REMARKS

Please Email Results
merdahl@friedmanandbruya.com

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 Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: Oil and Grease	EPH	VPH	Nitrate	Sulfate	Alkalinity	TCLP-VOC				Notes
SB-27-15516	1	2/17/09	11 15	Soil	4							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:		~~Michael Erdahl~~	Friedman & Bruya	02/19	10
Received by:		[redacted] M. VOUN	OSE	2/19/09	1200
Relinquished by:					
Received by:					

902167

SAMPLE CHAIN OF CUSTODY ME 02-18-09

VSI / AI

Page # 1 of 1

Send Report To Mike Staton
Company SLR International Corp
Address 22122 20th Ave SE, H-150
City, State, ZIP Bothell, WA 98021
Phone # (425) 402-8800 Fax # (425) 402-8488

SAMPLERS (signature)

PROJECT NAME/NO.: Yakima LF 001.0221.00004
PO #: 001.0221.00004

REMARKS: 48-hr hold on VOCs

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 Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	TCLP - VOCs	TCLP - Metals					Notes
						ANALYSES REQUESTED												
SB-27-15.5-16	01 A-F	2/17/09	1115	Soil	6							X	X					
												Samples received at 1 °C						

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Chris Lee	SLR	2/18/09	0835
Received by:	R. NELSON	CHAMPION	2-18-09	1010
Relinquished by:				
Received by:	Nhan Phan	FeBI	2-18-09	11:20

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.
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

May 6, 2009

Mike Staton, Project Manager
SLR International Corp.
22122 20th Ave. SE., H-150
Bothell, WA 98021

Dear Mr. Staton:

Included are the amended results from the testing of material submitted on February 27, 2009 from the Yakima LF 001.0221.00004, F&BI 902271 project. Per your request, the vinyl chloride level was lowered below the normal reporting limit.

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
SLR0313R.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

March 13, 2009

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 February 27, 2009 from the Yakima LF 001.0221.00004, F&BI 902271 project. There are 35 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
SLR0313R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on February 27, 2009 by Friedman & Bruya, Inc. from the SLR International Corp. Yakima LF 001.0221.00004, F&BI 902271 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SLR International Corp.
902271-01	MW7-0209
902271-02	MW8-0209
902271-03	MW9A-0209
902271-04	MW11-0209
902271-05	MW12-0209
902271-06	MW13-0209

The samples were sent to Amtest for bromide analysis and Aquatic Research for alkalinity, Ca, K, Fe, Mg, Na, fluoride, chloride, sulfate, phosphate, nitrate, and nitrite analyses. Review of the enclosed reports from Amtest and Aquatic Research indicates that all quality assurance was acceptable.

The 8270C compound 2-nitrophenol failed the calibration acceptance criteria. The sample result was flagged accordingly. All other quality control requirements were acceptable.

Date of Report: 03/13/09
Date Received: 02/27/09
Project: Yakima LF 001.0221.00004, F&BI 902271
Date Extracted: 03/02/09
Date Analyzed: 03/03/09

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
MW7-0209 902271-01	<100	95
MW8-0209 902271-02	<100	96
MW9A-0209 902271-03	<100	95
MW11-0209 902271-04	<100	96
MW12-0209 902271-05	<100	96
MW13-0209 902271-06	<100	96
Method Blank	<100	96

Date of Report: 03/13/09
Date Received: 02/27/09
Project: Yakima LF 001.0221.00004, F&BI 902271
Date Extracted: 03/02/09
Date Analyzed: 03/06/09

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx
Sample Extracts Passed Through a Silica Gel Column Prior to Analysis
Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
MW7-0209 902271-01	<50	<250	67
MW8-0209 902271-02	<50	<250	74
MW9A-0209 902271-03	<50	<250	73
MW11-0209 902271-04	<50	<250	63
MW12-0209 902271-05	<50	<250	72
MW13-0209 902271-06	<50	<250	76
Method Blank	<50	<250	78

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW7-0209	Client:	SLR International Corp.
Date Received:	02/27/09	Project:	Yakima LF 001.0221.00004
Date Extracted:	03/02/09	Lab ID:	902271-01
Date Analyzed:	03/03/09	Data File:	902271-01.031
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	104	60	125
Indium	93	60	125
Holmium	95	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	<1
Cobalt	<1
Nickel	2.40
Copper	<1
Zinc	1.66
Arsenic	3.83
Selenium	<1
Cadmium	<1
Barium	67.2
Thallium	<1
Lead	<1
Manganese	1,950

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW8-0209	Client:	SLR International Corp.
Date Received:	02/27/09	Project:	Yakima LF 001.0221.00004
Date Extracted:	03/02/09	Lab ID:	902271-02
Date Analyzed:	03/03/09	Data File:	902271-02.032
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	91	60	125
Indium	90	60	125
Holmium	91	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	<1
Cobalt	4.40
Nickel	9.24
Copper	<1
Zinc	2.91
Arsenic	<1
Selenium	1.54
Cadmium	<1
Barium	78.7
Thallium	<1
Lead	<1
Manganese	2,380

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW9A-0209	Client:	SLR International Corp.
Date Received:	02/27/09	Project:	Yakima LF 001.0221.00004
Date Extracted:	03/02/09	Lab ID:	902271-03
Date Analyzed:	03/03/09	Data File:	902271-03.033
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	95	60	125
Indium	93	60	125
Holmium	95	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	<1
Cobalt	<1
Nickel	1.47
Copper	1.14
Zinc	1.25
Arsenic	<1
Selenium	<1
Cadmium	<1
Barium	11.3
Thallium	<1
Lead	<1
Manganese	<10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW11-0209	Client:	SLR International Corp.
Date Received:	02/27/09	Project:	Yakima LF 001.0221.00004
Date Extracted:	03/02/09	Lab ID:	902271-04
Date Analyzed:	03/03/09	Data File:	902271-04.034
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	116	60	125
Indium	97	60	125
Holmium	97	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	<1
Cobalt	<1
Nickel	1.62
Copper	<1
Zinc	6.43
Arsenic	4.33
Selenium	<1
Cadmium	<1
Barium	51.4
Thallium	<1
Lead	<1
Manganese	1,410

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW12-0209	Client:	SLR International Corp.
Date Received:	02/27/09	Project:	Yakima LF 001.0221.00004
Date Extracted:	03/02/09	Lab ID:	902271-05
Date Analyzed:	03/03/09	Data File:	902271-05.035
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	105	60	125
Indium	92	60	125
Holmium	95	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	<1
Cobalt	<1
Nickel	<1
Copper	<1
Zinc	1.39
Arsenic	<1
Selenium	<1
Cadmium	<1
Barium	16.8
Thallium	<1
Lead	<1
Manganese	503

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW13-0209	Client:	SLR International Corp.
Date Received:	02/27/09	Project:	Yakima LF 001.0221.00004
Date Extracted:	03/02/09	Lab ID:	902271-06
Date Analyzed:	03/03/09	Data File:	902271-06.036
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	103	60	125
Indium	94	60	125
Holmium	100	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	<1
Cobalt	<1
Nickel	1.37
Copper	<1
Zinc	1.13
Arsenic	<1
Selenium	<1
Cadmium	<1
Barium	24.5
Thallium	<1
Lead	<1
Manganese	649

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	SLR International Corp.
Date Received:	NA	Project:	Yakima LF 001.0221.00004
Date Extracted:	03/02/09	Lab ID:	I9-089 mb
Date Analyzed:	03/03/09	Data File:	I9-089 mb.020
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	86	60	125
Indium	95	60	125
Holmium	95	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	<1
Cobalt	<1
Nickel	<1
Copper	<1
Zinc	<1
Arsenic	<1
Selenium	<1
Cadmium	<1
Barium	<1
Thallium	<1
Lead	<1
Manganese	<10

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW7-0209	Client:	SLR International Corp.
Date Received:	02/27/09	Project:	Yakima LF 001.0221.00004
Date Extracted:	03/03/09	Lab ID:	902271-01
Date Analyzed:	03/03/09	Data File:	030307.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	58	118
Toluene-d8	106	59	117
4-Bromofluorobenzene	124	45	141

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<1	Tetrachloroethene	<1
Vinyl chloride	<0.03 j	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<1	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<1
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW8-0209	Client:	SLR International Corp.
Date Received:	02/27/09	Project:	Yakima LF 001.0221.00004
Date Extracted:	03/03/09	Lab ID:	902271-02
Date Analyzed:	03/03/09	Data File:	030308.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	58	118
Toluene-d8	103	59	117
4-Bromofluorobenzene	122	45	141

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<1	Tetrachloroethene	<1
Vinyl chloride	<0.03 j	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<1	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<1
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW9A-0209	Client:	SLR International Corp.
Date Received:	02/27/09	Project:	Yakima LF 001.0221.00004
Date Extracted:	03/03/09	Lab ID:	902271-03
Date Analyzed:	03/03/09	Data File:	030309.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	107	58	118
Toluene-d8	108	59	117
4-Bromofluorobenzene	130	45	141

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<1	Tetrachloroethene	<1
Vinyl chloride	<0.03 j	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	2.9	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<1	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<1
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW11-0209	Client:	SLR International Corp.
Date Received:	02/27/09	Project:	Yakima LF 001.0221.00004
Date Extracted:	03/03/09	Lab ID:	902271-04
Date Analyzed:	03/03/09	Data File:	030310.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	58	118
Toluene-d8	106	59	117
4-Bromofluorobenzene	124	45	141

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<1	Tetrachloroethene	<1
Vinyl chloride	<0.03 j	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<1	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<1
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW12-0209	Client:	SLR International Corp.
Date Received:	02/27/09	Project:	Yakima LF 001.0221.00004
Date Extracted:	03/03/09	Lab ID:	902271-05
Date Analyzed:	03/03/09	Data File:	030311.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	58	118
Toluene-d8	107	59	117
4-Bromofluorobenzene	123	45	141

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<1	Tetrachloroethene	<1
Vinyl chloride	<0.03 j	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<1	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<1
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW13-0209	Client:	SLR International Corp.
Date Received:	02/27/09	Project:	Yakima LF 001.0221.00004
Date Extracted:	03/03/09	Lab ID:	902271-06
Date Analyzed:	03/03/09	Data File:	030312.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	58	118
Toluene-d8	108	59	117
4-Bromofluorobenzene	126	45	141

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<1	Tetrachloroethene	<1
Vinyl chloride	<0.03 j	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<1	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<1
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SLR International Corp.
Date Received:	NA	Project:	Yakima LF 001.0221.00004
Date Extracted:	03/03/09	Lab ID:	090271 mb
Date Analyzed:	03/03/09	Data File:	030306.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	58	118
Toluene-d8	105	59	117
4-Bromofluorobenzene	125	45	141

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<1	Tetrachloroethene	<1
Vinyl chloride	<0.03 j	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<1	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<1
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW7-0209	Client:	SLR International Corp.
Date Received:	02/27/09	Project:	Yakima LF 001.0221.00004
Date Extracted:	03/02/09	Lab ID:	902271-01
Date Analyzed:	03/03/09	Data File:	030308.D
Matrix:	Water	Instrument:	GCMS3
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	57	27	76
Phenol-d6	31	13	58
Nitrobenzene-d5	103	55	115
2-Fluorobiphenyl	101	51	113
2,4,6-Tribromophenol	98	28	107
Terphenyl-d14	90	45	119

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<1	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<30
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<1	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<1	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	1.0
N-Nitroso-di-n-propylamine	<1	4-Nitroaniline	<10
4-Methylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10 ca	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<100	Anthracene	<1
Bis(2-chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<3	Benz(a)anthracene	<1
4-Chloro-3-methylphenol	<10	Chrysene	<1
2-Methylnaphthalene	<1	Bis(2-ethylhexyl) phthalate	<10
Hexachlorocyclopentadiene	<3	Di-n-octyl phthalate	<1
2,4,6-Trichlorophenol	<10	Benzo(a)pyrene	<1
2,4,5-Trichlorophenol	<10	Benzo(b)fluoranthene	<1
2-Chloronaphthalene	<1	Benzo(k)fluoranthene	<1
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<1
Dimethyl phthalate	<1	Dibenz(a,h)anthracene	<1
Acenaphthylene	<1	Benzo(g,h,i)perylene	<1
2,6-Dinitrotoluene	<1		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW8-0209	Client:	SLR International Corp.
Date Received:	02/27/09	Project:	Yakima LF 001.0221.00004
Date Extracted:	03/02/09	Lab ID:	902271-02
Date Analyzed:	03/03/09	Data File:	030309.D
Matrix:	Water	Instrument:	GCMS3
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	61	27	76
Phenol-d6	32	13	58
Nitrobenzene-d5	102	55	115
2-Fluorobiphenyl	100	51	113
2,4,6-Tribromophenol	94	28	107
Terphenyl-d14	90	45	119

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<1	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<30
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<1	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<1	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<1	4-Nitroaniline	<10
4-Methylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10 ca	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<100	Anthracene	<1
Bis(2-chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<3	Benz(a)anthracene	<1
4-Chloro-3-methylphenol	<10	Chrysene	<1
2-Methylnaphthalene	<1	Bis(2-ethylhexyl) phthalate	<10
Hexachlorocyclopentadiene	<3	Di-n-octyl phthalate	<1
2,4,6-Trichlorophenol	<10	Benzo(a)pyrene	<1
2,4,5-Trichlorophenol	<10	Benzo(b)fluoranthene	<1
2-Chloronaphthalene	<1	Benzo(k)fluoranthene	<1
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<1
Dimethyl phthalate	<1	Dibenz(a,h)anthracene	<1
Acenaphthylene	<1	Benzo(g,h,i)perylene	<1
2,6-Dinitrotoluene	<1		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW9A-0209	Client:	SLR International Corp.
Date Received:	02/27/09	Project:	Yakima LF 001.0221.00004
Date Extracted:	03/02/09	Lab ID:	902271-03
Date Analyzed:	03/03/09	Data File:	030310.D
Matrix:	Water	Instrument:	GCMS3
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	60	27	76
Phenol-d6	34	13	58
Nitrobenzene-d5	101	55	115
2-Fluorobiphenyl	99	51	113
2,4,6-Tribromophenol	91	28	107
Terphenyl-d14	88	45	119

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<1	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<30
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<1	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<1	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<1	4-Nitroaniline	<10
4-Methylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10 ca	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<100	Anthracene	<1
Bis(2-chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<3	Benz(a)anthracene	<1
4-Chloro-3-methylphenol	<10	Chrysene	<1
2-Methylnaphthalene	<1	Bis(2-ethylhexyl) phthalate	<10
Hexachlorocyclopentadiene	<3	Di-n-octyl phthalate	<1
2,4,6-Trichlorophenol	<10	Benzo(a)pyrene	<1
2,4,5-Trichlorophenol	<10	Benzo(b)fluoranthene	<1
2-Chloronaphthalene	<1	Benzo(k)fluoranthene	<1
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<1
Dimethyl phthalate	<1	Dibenz(a,h)anthracene	<1
Acenaphthylene	<1	Benzo(g,h,i)perylene	<1
2,6-Dinitrotoluene	<1		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW11-0209	Client:	SLR International Corp.
Date Received:	02/27/09	Project:	Yakima LF 001.0221.00004
Date Extracted:	03/02/09	Lab ID:	902271-04
Date Analyzed:	03/03/09	Data File:	030311.D
Matrix:	Water	Instrument:	GCMS3
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	59	27	76
Phenol-d6	31	13	58
Nitrobenzene-d5	94	55	115
2-Fluorobiphenyl	99	51	113
2,4,6-Tribromophenol	96	28	107
Terphenyl-d14	87	45	119

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<1	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<30
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<1	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<1	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<1	4-Nitroaniline	<10
4-Methylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10 ca	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<100	Anthracene	<1
Bis(2-chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<3	Benz(a)anthracene	<1
4-Chloro-3-methylphenol	<10	Chrysene	<1
2-Methylnaphthalene	<1	Bis(2-ethylhexyl) phthalate	<10
Hexachlorocyclopentadiene	<3	Di-n-octyl phthalate	<1
2,4,6-Trichlorophenol	<10	Benzo(a)pyrene	<1
2,4,5-Trichlorophenol	<10	Benzo(b)fluoranthene	<1
2-Chloronaphthalene	<1	Benzo(k)fluoranthene	<1
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<1
Dimethyl phthalate	<1	Dibenz(a,h)anthracene	<1
Acenaphthylene	<1	Benzo(g,h,i)perylene	<1
2,6-Dinitrotoluene	<1		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW12-0209	Client:	SLR International Corp.
Date Received:	02/27/09	Project:	Yakima LF 001.0221.00004
Date Extracted:	03/02/09	Lab ID:	902271-05
Date Analyzed:	03/03/09	Data File:	030312.D
Matrix:	Water	Instrument:	GCMS3
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	56	27	76
Phenol-d6	30	13	58
Nitrobenzene-d5	95	55	115
2-Fluorobiphenyl	97	51	113
2,4,6-Tribromophenol	95	28	107
Terphenyl-d14	89	45	119

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<1	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<30
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<1	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<1	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<1	4-Nitroaniline	<10
4-Methylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10 ca	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<100	Anthracene	<1
Bis(2-chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<3	Benz(a)anthracene	<1
4-Chloro-3-methylphenol	<10	Chrysene	<1
2-Methylnaphthalene	<1	Bis(2-ethylhexyl) phthalate	<10
Hexachlorocyclopentadiene	<3	Di-n-octyl phthalate	<1
2,4,6-Trichlorophenol	<10	Benzo(a)pyrene	<1
2,4,5-Trichlorophenol	<10	Benzo(b)fluoranthene	<1
2-Chloronaphthalene	<1	Benzo(k)fluoranthene	<1
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<1
Dimethyl phthalate	<1	Dibenz(a,h)anthracene	<1
Acenaphthylene	<1	Benzo(g,h,i)perylene	<1
2,6-Dinitrotoluene	<1		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW13-0209	Client:	SLR International Corp.
Date Received:	02/27/09	Project:	Yakima LF 001.0221.00004
Date Extracted:	03/02/09	Lab ID:	902271-06
Date Analyzed:	03/03/09	Data File:	030313.D
Matrix:	Water	Instrument:	GCMS3
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	52	27	76
Phenol-d6	31	13	58
Nitrobenzene-d5	89	55	115
2-Fluorobiphenyl	99	51	113
2,4,6-Tribromophenol	99	28	107
Terphenyl-d14	86	45	119

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<1	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<30
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<1	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<1	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<1	4-Nitroaniline	<10
4-Methylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10 ca	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<100	Anthracene	<1
Bis(2-chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<3	Benz(a)anthracene	<1
4-Chloro-3-methylphenol	<10	Chrysene	<1
2-Methylnaphthalene	<1	Bis(2-ethylhexyl) phthalate	<10
Hexachlorocyclopentadiene	<3	Di-n-octyl phthalate	<1
2,4,6-Trichlorophenol	<10	Benzo(a)pyrene	<1
2,4,5-Trichlorophenol	<10	Benzo(b)fluoranthene	<1
2-Chloronaphthalene	<1	Benzo(k)fluoranthene	<1
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<1
Dimethyl phthalate	<1	Dibenz(a,h)anthracene	<1
Acenaphthylene	<1	Benzo(g,h,i)perylene	<1
2,6-Dinitrotoluene	<1		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	Method Blank	Client:	SLR International Corp.
Date Received:	NA	Project:	Yakima LF 001.0221.00004
Date Extracted:	03/02/09	Lab ID:	09296mb
Date Analyzed:	03/03/09	Data File:	030306.D
Matrix:	Water	Instrument:	GCMS3
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	60	27	76
Phenol-d6	30	13	58
Nitrobenzene-d5	99	55	115
2-Fluorobiphenyl	98	51	113
2,4,6-Tribromophenol	92	28	107
Terphenyl-d14	92	45	119

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<1	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<30
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<1	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<1	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<1	4-Nitroaniline	<10
4-Methylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10 ca	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<100	Anthracene	<1
Bis(2-chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<3	Benz(a)anthracene	<1
4-Chloro-3-methylphenol	<10	Chrysene	<1
2-Methylnaphthalene	<1	Bis(2-ethylhexyl) phthalate	<10
Hexachlorocyclopentadiene	<3	Di-n-octyl phthalate	<1
2,4,6-Trichlorophenol	<10	Benzo(a)pyrene	<1
2,4,5-Trichlorophenol	<10	Benzo(b)fluoranthene	<1
2-Chloronaphthalene	<1	Benzo(k)fluoranthene	<1
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<1
Dimethyl phthalate	<1	Dibenz(a,h)anthracene	<1
Acenaphthylene	<1	Benzo(g,h,i)perylene	<1
2,6-Dinitrotoluene	<1		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/13/09
Date Received: 02/27/09
Project: Yakima LF 001.0221.00004, F&BI 902271
Date Extracted: 03/02/09
Date Analyzed: 03/03/09

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR PCBs AS AROCLORS USING EPA METHOD 8082

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Aroclor 1221	1232	1016	1242	1248	1254	1260	1262	Surrogate (% Rec.) (Limit 61-132)
MW7-0209 902271-01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	95
MW8-0209 902271-02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	93
MW9A-0209 902271-03	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	106
MW11-0209 902271-04	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	102
MW12-0209 902271-05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	94
MW13-0209 902271-06	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	87
Method Blank	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	71

Date of Report: 03/13/09
Date Received: 02/27/09
Project: Yakima LF 001.0221.00004, F&BI 902271

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 902267-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	115	70-130

Date of Report: 03/13/09
Date Received: 02/27/09
Project: Yakima LF 001.0221.00004, F&BI 902271

QUALITY ASSURANCE RESULTS FROM 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	ug/L (ppb)	2,500	121	123	69-135	2

Date of Report: 03/13/09
Date Received: 02/27/09
Project: Yakima LF 001.0221.00004, F&BI 902271

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 200.8

Laboratory Code: 902270-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	ug/L (ppb)	5.62	5.35	5	0-20
Cobalt	ug/L (ppb)	<1	<1	nm	0-20
Nickel	ug/L (ppb)	4.78	4.94	3	0-20
Copper	ug/L (ppb)	1.78	1.76	1	0-20
Zinc	ug/L (ppb)	6.39	5.42	16	0-20
Arsenic	ug/L (ppb)	<1	<1	nm	0-20
Selenium	ug/L (ppb)	<1	1.09	nm	0-20
Cadmium	ug/L (ppb)	<1	<1	nm	0-20
Barium	ug/L (ppb)	27.8	27.4	1	0-20
Thallium	ug/L (ppb)	<1	<1	nm	0-20
Lead	ug/L (ppb)	<1	<1	nm	0-20
Manganese	ug/L (ppb)	<10	<10	nm	0-20

Laboratory Code: 902270-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Chromium	ug/L (ppb)	20	5.62	88 b	50-150
Cobalt	ug/L (ppb)	20	<1	97	50-150
Nickel	ug/L (ppb)	20	4.78	95 b	50-150
Copper	ug/L (ppb)	20	1.78	90	50-150
Zinc	ug/L (ppb)	50	6.39	92	50-150
Arsenic	ug/L (ppb)	10	<1	100	50-150
Selenium	ug/L (ppb)	5	<1	97	50-150
Cadmium	ug/L (ppb)	5	<1	100	50-150
Barium	ug/L (ppb)	50	27.8	99 b	50-150
Thallium	ug/L (ppb)	5	<1	106	50-150
Lead	ug/L (ppb)	10	<1	104	50-150
Manganese	ug/L (ppb)	20	<10	87	50-150

Date of Report: 03/13/09
Date Received: 02/27/09
Project: Yakima LF 001.0221.00004, F&BI 902271

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 200.8

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Chromium	ug/L (ppb)	20	97	70-130
Cobalt	ug/L (ppb)	20	99	70-130
Nickel	ug/L (ppb)	20	99	70-130
Copper	ug/L (ppb)	20	101	70-130
Zinc	ug/L (ppb)	50	95	70-130
Arsenic	ug/L (ppb)	10	92	70-130
Selenium	ug/L (ppb)	5	96	70-130
Cadmium	ug/L (ppb)	5	106	70-130
Barium	ug/L (ppb)	50	102	70-130
Thallium	ug/L (ppb)	5	105	70-130
Lead	ug/L (ppb)	10	105	70-130
Manganese	ug/L (ppb)	20	98	70-130

Date of Report: 03/13/09
Date Received: 02/27/09
Project: Yakima LF 001.0221.00004, F&BI 902271

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 902271-06 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	<1	<1	nm
Chloromethane	ug/L (ppb)	<1	<1	nm
Vinyl chloride	ug/L (ppb)	<0.2	<0.2	nm
Bromomethane	ug/L (ppb)	<1	<1	nm
Chloroethane	ug/L (ppb)	<1	<1	nm
Trichlorofluoromethane	ug/L (ppb)	<1	<1	nm
Acetone	ug/L (ppb)	<10	<10	nm
1,1-Dichloroethene	ug/L (ppb)	<1	<1	nm
Methylene chloride	ug/L (ppb)	<5	<5	nm
Methyl t-butyl ether (MTBE)	ug/L (ppb)	<1	<1	nm
trans-1,2-Dichloroethene	ug/L (ppb)	<1	<1	nm
1,1-Dichloroethane	ug/L (ppb)	<1	<1	nm
2,2-Dichloropropane	ug/L (ppb)	<1	<1	nm
cis-1,2-Dichloroethene	ug/L (ppb)	<1	<1	nm
Chloroform	ug/L (ppb)	<1	<1	nm
2-Butanone (MEK)	ug/L (ppb)	<10	<10	nm
1,2-Dichloroethane (EDC)	ug/L (ppb)	<1	<1	nm
1,1,1-Trichloroethane	ug/L (ppb)	<1	<1	nm
1,1-Dichloropropene	ug/L (ppb)	<1	<1	nm
Carbon tetrachloride	ug/L (ppb)	<1	<1	nm
Benzene	ug/L (ppb)	<1	<1	nm
Trichloroethene	ug/L (ppb)	<1	<1	nm
1,2-Dichloropropane	ug/L (ppb)	<1	<1	nm
Bromodichloromethane	ug/L (ppb)	<1	<1	nm
Dibromomethane	ug/L (ppb)	<1	<1	nm
4-Methyl-2-pentanone	ug/L (ppb)	<10	<10	nm
cis-1,3-Dichloropropene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
trans-1,3-Dichloropropene	ug/L (ppb)	<1	<1	nm
1,1,2-Trichloroethane	ug/L (ppb)	<1	<1	nm
2-Hexanone	ug/L (ppb)	<10	<10	nm
1,3-Dichloropropane	ug/L (ppb)	<1	<1	nm
Tetrachloroethene	ug/L (ppb)	<1	<1	nm
Dibromochloromethane	ug/L (ppb)	<1	<1	nm
1,2-Dibromoethane (EDB)	ug/L (ppb)	<1	<1	nm
Chlorobenzene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
1,1,1,2-Tetrachloroethane	ug/L (ppb)	<1	<1	nm
m,p-Xylene	ug/L (ppb)	<2	<2	nm
o-Xylene	ug/L (ppb)	<1	<1	nm
Styrene	ug/L (ppb)	<1	<1	nm
Isopropylbenzene	ug/L (ppb)	<1	<1	nm
Bromoform	ug/L (ppb)	<1	<1	nm
n-Propylbenzene	ug/L (ppb)	<1	<1	nm
Bromobenzene	ug/L (ppb)	<1	<1	nm
1,3,5-Trimethylbenzene	ug/L (ppb)	<1	<1	nm
1,1,2,2-Tetrachloroethane	ug/L (ppb)	<1	<1	nm
1,2,3-Trichloropropane	ug/L (ppb)	<1	<1	nm
2-Chlorotoluene	ug/L (ppb)	<1	<1	nm
4-Chlorotoluene	ug/L (ppb)	<1	<1	nm
tert-Butylbenzene	ug/L (ppb)	<1	<1	nm
1,2,4-Trimethylbenzene	ug/L (ppb)	<1	<1	nm
sec-Butylbenzene	ug/L (ppb)	<1	<1	nm
p-Isopropyltoluene	ug/L (ppb)	<1	<1	nm
1,3-Dichlorobenzene	ug/L (ppb)	<1	<1	nm
1,4-Dichlorobenzene	ug/L (ppb)	<1	<1	nm
1,2-Dichlorobenzene	ug/L (ppb)	<1	<1	nm
1,2-Dibromo-3-chloropropane	ug/L (ppb)	<1	<1	nm
1,2,4-Trichlorobenzene	ug/L (ppb)	<1	<1	nm
Hexachlorobutadiene	ug/L (ppb)	<1	<1	nm
Naphthalene	ug/L (ppb)	<1	<1	nm
1,2,3-Trichlorobenzene	ug/L (ppb)	<1	<1	nm

Date of Report: 03/13/09
Date Received: 02/27/09
Project: Yakima LF 001.0221.00004, F&BI 902271

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 902267-12 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<1	106	27-155
Chloromethane	ug/L (ppb)	50	<1	110	30-167
Vinyl chloride	ug/L (ppb)	50	<0.2	122	36-166
Bromomethane	ug/L (ppb)	50	<1	133	47-169
Chloroethane	ug/L (ppb)	50	<1	147	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<1	116	48-158
Acetone	ug/L (ppb)	50	<10	98	31-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	107	69-118
Methylene chloride	ug/L (ppb)	50	<5	104	68-126
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	95	80-119
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	97	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	101	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<1	112	60-136
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	96	71-127
Chloroform	ug/L (ppb)	50	<1	105	65-132
2-Butanone (MEK)	ug/L (ppb)	50	<10	75	64-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	109	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	112	62-133
1,1-Dichloropropene	ug/L (ppb)	50	<1	102	71-124
Carbon tetrachloride	ug/L (ppb)	50	<1	112	62-134
Benzene	ug/L (ppb)	50	<1	97	77-120
Trichloroethene	ug/L (ppb)	50	<1	98	79-118
1,2-Dichloropropane	ug/L (ppb)	50	<1	97	79-119
Bromodichloromethane	ug/L (ppb)	50	<1	106	60-136
Dibromomethane	ug/L (ppb)	50	<1	95	66-141
4-Methyl-2-pentanone	ug/L (ppb)	50	<10	96	58-134
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	97	75-127
Toluene	ug/L (ppb)	50	<1	101	77-120
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	109	75-128
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	99	68-131
2-Hexanone	ug/L (ppb)	50	<10	94	54-142
1,3-Dichloropropane	ug/L (ppb)	50	<1	100	71-128
Tetrachloroethene	ug/L (ppb)	50	<1	93	77-121
Dibromochloromethane	ug/L (ppb)	50	<1	107	71-128
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	97	69-134
Chlorobenzene	ug/L (ppb)	50	<1	100	78-118
Ethylbenzene	ug/L (ppb)	50	<1	108	78-120
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	110	78-124
m,p-Xylene	ug/L (ppb)	100	<2	108	76-121
o-Xylene	ug/L (ppb)	50	<1	109	71-125
Styrene	ug/L (ppb)	50	<1	113	74-125
Isopropylbenzene	ug/L (ppb)	50	<1	114	71-125
Bromoform	ug/L (ppb)	50	<1	106	65-142
n-Propylbenzene	ug/L (ppb)	50	<1	110	68-127
Bromobenzene	ug/L (ppb)	50	<1	99	78-116
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	114	74-121
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	93	51-154
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	93	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	109	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	110	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	114	69-122
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	114	68-126
sec-Butylbenzene	ug/L (ppb)	50	<1	113	68-129
p-Isopropyltoluene	ug/L (ppb)	50	<1	117	70-125
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	103	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	102	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	104	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<1	98	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	106	76-132
Hexachlorobutadiene	ug/L (ppb)	50	<1	110	68-128
Naphthalene	ug/L (ppb)	50	<1	101	47-159
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	101	70-143

Date of Report: 03/13/09
Date Received: 02/27/09
Project: Yakima LF 001.0221.00004, F&BI 902271

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	111	102	31-145	8
Chloromethane	ug/L (ppb)	50	102	100	22-155	2
Vinyl chloride	ug/L (ppb)	50	105	102	33-158	3
Bromomethane	ug/L (ppb)	50	109	107	26-174	2
Chloroethane	ug/L (ppb)	50	114	116	35-157	2
Trichlorofluoromethane	ug/L (ppb)	50	87	85	49-153	2
Acetone	ug/L (ppb)	50	103	88	38-171	16
1,1-Dichloroethene	ug/L (ppb)	50	92	90	55-139	2
Methylene chloride	ug/L (ppb)	50	88	87	52-129	1
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	95	96	72-125	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	89	89	73-120	0
1,1-Dichloroethane	ug/L (ppb)	50	93	92	75-118	1
2,2-Dichloropropane	ug/L (ppb)	50	111	108	68-128	3
cis-1,2-Dichloroethene	ug/L (ppb)	50	92	91	78-119	1
Chloroform	ug/L (ppb)	50	98	96	78-120	2
2-Butanone (MEK)	ug/L (ppb)	50	90	84	61-139	7
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	99	98	74-129	1
1,1,1-Trichloroethane	ug/L (ppb)	50	102	100	68-130	2
1,1-Dichloropropene	ug/L (ppb)	50	97	95	74-123	2
Carbon tetrachloride	ug/L (ppb)	50	105	102	67-131	3
Benzene	ug/L (ppb)	50	91	90	76-115	1
Trichloroethene	ug/L (ppb)	50	92	91	76-118	1
1,2-Dichloropropane	ug/L (ppb)	50	90	89	74-119	1
Bromodichloromethane	ug/L (ppb)	50	100	98	78-122	2
Dibromomethane	ug/L (ppb)	50	92	91	80-119	1
4-Methyl-2-pentanone	ug/L (ppb)	50	96	97	56-134	1
cis-1,3-Dichloropropene	ug/L (ppb)	50	95	95	77-122	0
Toluene	ug/L (ppb)	50	97	95	77-115	2
trans-1,3-Dichloropropene	ug/L (ppb)	50	106	106	78-128	0
1,1,2-Trichloroethane	ug/L (ppb)	50	96	96	82-116	0
2-Hexanone	ug/L (ppb)	50	102	101	58-144	1
1,3-Dichloropropane	ug/L (ppb)	50	97	97	80-118	0
Tetrachloroethene	ug/L (ppb)	50	95	93	79-119	2
Dibromochloromethane	ug/L (ppb)	50	107	106	86-122	1
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	98	97	84-116	1
Chlorobenzene	ug/L (ppb)	50	95	94	81-110	1
Ethylbenzene	ug/L (ppb)	50	100	99	80-113	1
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	104	103	81-119	1
m,p-Xylene	ug/L (ppb)	100	100	99	80-120	1
o-Xylene	ug/L (ppb)	50	101	101	79-115	0
Styrene	ug/L (ppb)	50	105	104	79-111	1
Isopropylbenzene	ug/L (ppb)	50	106	104	76-115	2
Bromoform	ug/L (ppb)	50	107	107	80-131	0
n-Propylbenzene	ug/L (ppb)	50	103	100	74-119	3
Bromobenzene	ug/L (ppb)	50	97	96	80-116	1
1,3,5-Trimethylbenzene	ug/L (ppb)	50	106	105	75-115	1
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	94	93	78-118	1
1,2,3-Trichloropropane	ug/L (ppb)	50	93	93	76-124	0
2-Chlorotoluene	ug/L (ppb)	50	102	100	77-115	2
4-Chlorotoluene	ug/L (ppb)	50	103	100	77-116	3
tert-Butylbenzene	ug/L (ppb)	50	107	105	76-113	2
1,2,4-Trimethylbenzene	ug/L (ppb)	50	106	104	75-115	2
sec-Butylbenzene	ug/L (ppb)	50	105	104	74-116	1
p-Isopropyltoluene	ug/L (ppb)	50	109	106	75-117	3
1,3-Dichlorobenzene	ug/L (ppb)	50	98	96	81-111	2
1,4-Dichlorobenzene	ug/L (ppb)	50	96	95	81-110	1
1,2-Dichlorobenzene	ug/L (ppb)	50	99	98	81-111	1
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	103	102	72-137	1
1,2,4-Trichlorobenzene	ug/L (ppb)	50	104	101	74-131	3
Hexachlorobutadiene	ug/L (ppb)	50	106	102	64-138	4
Naphthalene	ug/L (ppb)	50	102	101	74-131	1
1,2,3-Trichlorobenzene	ug/L (ppb)	50	101	99	73-134	2

Date of Report: 03/13/09
Date Received: 02/27/09
Project: Yakima LF 001.0221.00004, F&BI 902271

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Phenol	ug/L (ppb)	75	34	28	18-54	19
Bis(2-chloroethyl) ether	ug/L (ppb)	50	86	85	29-124	1
2-Chlorophenol	ug/L (ppb)	75	81	79	43-101	2
1,3-Dichlorobenzene	ug/L (ppb)	50	79	84	50-109	6
1,4-Dichlorobenzene	ug/L (ppb)	50	91	96	45-103	5
1,2-Dichlorobenzene	ug/L (ppb)	50	86	94	50-112	9
Bis(2-chloroisopropyl) ether	ug/L (ppb)	50	122 vo	130 vo	46-110	6
Hexachloroethane	ug/L (ppb)	50	96	106	46-114	10
N-Nitroso-di-n-propylamine	ug/L (ppb)	50	101	109	45-114	8
4-Methylphenol	ug/L (ppb)	75	73	71	31-91	3
Nitrobenzene	ug/L (ppb)	50	93	98	50-111	5
Isophorone	ug/L (ppb)	50	107	111	52-120	4
2,4-Dimethylphenol	ug/L (ppb)	75	81	82	38-94	1
Bis(2-chloroethoxy)methane	ug/L (ppb)	50	91	95	48-110	4
1,2,4-Trichlorobenzene	ug/L (ppb)	50	91	94	45-110	3
Hexachlorobutadiene	ug/L (ppb)	50	92	99	35-120	7
4-Chloro-3-methylphenol	ug/L (ppb)	75	88	89	46-107	1
2-Methylnaphthalene	ug/L (ppb)	50	97	101	41-133	4
Hexachlorocyclopentadiene	ug/L (ppb)	100	96	99	26-99	3
2,4,6-Trichlorophenol	ug/L (ppb)	75	87	89	43-105	2
2-Chloronaphthalene	ug/L (ppb)	50	93	95	53-111	2
Dimethyl phthalate	ug/L (ppb)	50	93	95	53-114	2
2,6-Dinitrotoluene	ug/L (ppb)	50	85	85	48-117	0
Acenaphthene	ug/L (ppb)	50	88	90	41-114	2
2,4-Dinitrotoluene	ug/L (ppb)	50	91	92	46-119	1
4-Nitrophenol	ug/L (ppb)	75	46	42	15-66	9
Diethyl phthalate	ug/L (ppb)	50	98	99	55-115	1
4-Chlorophenyl phenyl ether	ug/L (ppb)	50	103	104	54-115	1
N-Nitrosodiphenylamine	ug/L (ppb)	50	76	78	22-133	3
4-Bromophenyl phenyl ether	ug/L (ppb)	50	93	96	54-113	3
Hexachlorobenzene	ug/L (ppb)	50	93	94	37-110	1
Pentachlorophenol	ug/L (ppb)	75	86	87	39-126	1
Carbazole	ug/L (ppb)	50	92	93	38-162	1
Di-n-butyl phthalate	ug/L (ppb)	50	104	108	53-113	4
Pyrene	ug/L (ppb)	50	89	90	35-115	1
Benzyl butyl phthalate	ug/L (ppb)	50	95	96	24-132	1
Chrysene	ug/L (ppb)	50	85	86	39-126	1
Bis(2-ethylhexyl) phthalate	ug/L (ppb)	50	102	103	37-134	1
Di-n-octyl phthalate	ug/L (ppb)	50	117	118	46-132	1

Date of Report: 03/13/09
Date Received: 02/27/09
Project: Yakima LF 001.0221.00004, F&BI 902271

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR POLYCHLORINATED BIPHENYLS AS AROCLOR 1016/1260 BY EPA METHOD 8082

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	% Recovery LCS	% Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	ug/L (ppb)	2.5	102	108	52-135	6
Aroclor 1260	ug/L (ppb)	2.5	95	100	60-128	5

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - The analyte indicated was found in the method blank. The result should be considered an estimate.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - The sample was extracted outside of holding time. Results should be considered estimates.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - The value reported exceeded the calibration range established for the analyte. The reported concentration should be considered an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The pattern of peaks present is not indicative of diesel.

y - The pattern of peaks present is not indicative of motor oil.

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664

AMTEST LABORATORIES

Professional Analytical Services

RECEIVED
MAR 10 2009

Mar 6 2009
Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Attention: Michael Erdahl

Dear Michael Erdahl:

Enclosed please find the analytical data for your project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
MW7-0209	Water	09-A003717	CONV
MW8-0209	Water	09-A003718	CONV
MW9a-0209	Water	09-A003719	CONV
MW11-0209	Water	09-A003720	CONV
MW12-0209	Water	09-A003721	CONV
MW13-0209	Water	09-A003722	CONV

Your samples were received on Tuesday, March 3, 2009. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Method Detection Limits (MDL's), as opposed to Practical Quantitation Limits (PQL's).

If you should have any questions pertaining to the data package, please feel free to contact me.

Sincerely,

Kathy Fugiel
President

Project #: 902271
PO Number: H-17777

BACT = Bacteriological
CONV = Conventionals
TC=Total Coliforms

MET = Metals
ORG = Organics

NUT=Nutrients
DEM=Demand

MIN=Minerals
APC=Aerobic Plate Count

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com

AMTEST LABORATORIES

Professional Analytical Services

ANALYSIS REPORT

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Attention: Michael Erdahl
Project #: 902271
PO Number: H-17777
All results reported on an as received basis.

Date Received: 03/03/09
Date Reported: 3/ 6/09

AMTEST Identification Number 09-A003717
Client Identification MW7-0209
Sampling Date 02/26/09

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Bromide	< 0.02	mg/l		0.02	EPA 300.0	KF	03/04/09

AMTEST Identification Number 09-A003718
Client Identification MW8-0209
Sampling Date 02/26/09

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Bromide	0.33	mg/l		0.02	EPA 300.0	KF	03/04/09

AMTEST Identification Number 09-A003719
Client Identification MW9a-0209
Sampling Date 02/26/09

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Bromide	0.05	mg/l		0.02	EPA 300.0	KF	03/04/09

AMTEST Identification Number **09-A003720**
Client Identification **MW11-0209**
Sampling Date **02/26/09**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Bromide	0.11	mg/l		0.02	EPA 300.0	KF	03/04/09

AMTEST Identification Number **09-A003721**
Client Identification **MW12-0209**
Sampling Date **02/26/09**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Bromide	< 0.02	mg/l		0.02	EPA 300.0	KF	03/04/09

AMTEST Identification Number **09-A003722**
Client Identification **MW13-0209**
Sampling Date **02/26/09**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Bromide	< 0.02	mg/l		0.02	EPA 300.0	KF	03/04/09

Kathy Fugiel
President

AMTEST LABORATORIES

QC Summary for sample numbers: 09-A003717 to 09-A003722

MATRIX SPIKES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
09-A003508	Bromide	mg/l	< 0.02	1.0	1.0	100.00 %

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Bromide	mg/l	1.0	1.2	120. %
Bromide	mg/l	0.05	0.05	100. %

BLANKS

ANALYTE	UNITS	RESULT
Bromide	mg/l	< 0.02
Bromide	mg/l	< 0.02

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER

PROJECT NAME/NO.	PO #
902271	H-1777

REMARKS

Please Email Results
merdahl@friedmanandbruya.com

Page # 1 of 1

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 Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: Oil and Grease	EPH	VPH	Nitrate	Sulfate	Alkalinity	Bromide				Notes
MW7-0209	3717	2/26/09	1215	W	1							✓				
MW8-0209	18		1115		1							✓				
MW9A-0209	19		1425		1							✓				
MW11-0209	20		1325		1							✓				
MW12-0209	21		1525		1							✓				
MW13-0209	22		1120		1							✓				

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:		Michael Erdahl	Friedman & Bruya	3/2/09	1230
Received by:		Kathy Fuglevand	Anatek	3/3/09	
Relinquished by:					
Received by:					

AQUATIC RESEARCH INCORPORATED

LABORATORY & CONSULTING SERVICES

3927 AURORA AVENUE NORTH, SEATTLE, WA 98103

PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER:	**FBI003-88**	**PAGE 1**	
REPORT DATE:	**03/11/09**		
DATE SAMPLED:	**02/26/09**	**DATE RECEIVED:**	**02/27/09**

FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER SAMPLES FROM FRIEDMAN & BRUYA, INC.

CASE NARRATIVE

Six water samples were received by the laboratory in good condition and analyzed according to the chain of custody. No difficulties were encountered in the preparation or analysis of these samples. Sample data follows while QA/QC data is contained on the subsequent pages.

SAMPLE DATA

SAMPLE ID	CHLORIDE (mg/l)	FLUORIDE (mg/l)	SULFATE (mg/l)	NITRATE (mg/l)	NITRITE (mg/l)	SRP (mg/l)
MW7-0209	20.7	0.75	<1.00	1.61	0.015	0.004
MW8-0209	32.8	0.39	3.02	14.4	0.026	0.001
MW9A-0209	15.2	0.32	7.90	2.18	0.014	0.120
MW11-0209	11.9	0.31	<1.00	0.033	0.011	0.022
MW12-0209	7.62	0.80	6.17	0.014	<0.002	0.077
MW13-0209	6.06	0.71	4.63	0.018	0.003	0.210

SAMPLE ID	pH	ALKALINITY (mgCaCO3/l)	HCO3 (mgCaCO3/l)	CO3 (mgCaCO3/l)
MW7-0209	6.28	264	121	<1.00
MW8-0209	6.54	284	173	<1.00
MW9A-0209	6.69	118	80.6	<1.00
MW11-0209	6.28	216	99.1	<1.00
MW12-0209	6.01	67.5	21.2	<1.00
MW13-0209	6.49	136	79.0	<1.00

AQUATIC RESEARCH INCORPORATED

LABORATORY & CONSULTING SERVICES

3927 AURORA AVENUE NORTH, SEATTLE, WA 98103

PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER:	**FBI003-88**	**PAGE 2**	
REPORT DATE:	**03/11/09**		
DATE SAMPLED:	**02/26/09**	**DATE RECEIVED:**	**02/27/09**

FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER SAMPLES FROM FRIEDMAN & BRUYA, INC.

SAMPLE DATA

	DISSOLVED METALS				
SAMPLE ID	IRON (mg/l)	POTASSIUM (mg/l)	CALCIUM (mg/l)	MAGNESIUM (mg/l)	SODIUM (mg/l)
MW7-0209	23.7	11.2	39.9	15.0	19.3
MW8-0209	3.33	23.4	35.4	15.6	27.0
MW9A-0209	<0.010	3.68	26.6	8.57	10.9
MW11-0209	24.1	5.81	30.0	10.7	15.3
MW12-0209	7.60	1.95	9.14	3.53	10.3
MW13-0209	3.65	2.94	31.7	3.55	10.7

AQUATIC RESEARCH INCORPORATED

LABORATORY & CONSULTING SERVICES

3927 AURORA AVENUE NORTH, SEATTLE, WA 98103

PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER: FBI003-88 **PAGE 3**

REPORT DATE: 03/11/09

DATE SAMPLED: 02/26/09 **DATE RECEIVED:** 02/27/09

FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER SAMPLES FROM FRIEDMAN & BRUYA, INC.

QA/QC DATA

QC PARAMETER	CHLORIDE (mg/l)	FLUORIDE (mg/l)	SULFATE (mg/l)	NITRATE (mg/l)	NITRITE (mg/l)	SRP (mg/l)
METHOD	SM204500CLC	EPA 340.2	SM184500SO4E	SM184500N03F	EPA354.1	EPA 365.1
DATE ANALYZED	02/27/09	03/04/09	03/03/09	02/27/09	02/27/09	02/27/09
DETECTION LIMIT	0.50	0.10	1.00	0.010	0.002	0.001
DUPLICATE						
SAMPLE ID	BATCH	MW7-0209	BATCH	MW13-0209	MW13-0209	MW11-0209
ORIGINAL	146	0.75	9.30	0.018	0.003	0.022
DUPLICATE	145	0.81	9.39	0.016	0.003	0.021
RPD	0.94%	8.19%	1.01%	15.90%	0.00%	2.58%
SPIKE SAMPLE						
SAMPLE ID	BATCH	MW7-0209	BATCH	MW13-0209	MW13-0209	MW11-0209
ORIGINAL	146	0.75	9.30	0.018	0.003	0.022
SPIKED SAMPLE	155	1.79	19.1	0.219	0.042	0.043
SPIKE ADDED	10.0	1.00	10.0	0.200	0.040	0.020
% RECOVERY	82.11%	104.40%	98.33%	100.41%	97.50%	105.96%
QC CHECK						
FOUND	28.9	1.00	9.17	0.400	0.039	0.033
TRUE	30.0	1.00	10.0	0.408	0.040	0.033
% RECOVERY	96.45%	100.11%	91.66%	97.93%	97.50%	99.92%
BLANK	<0.50	<0.10	<1.00	<0.010	<0.002	<0.001

RPD = RELATIVE PERCENT DIFFERENCE.
NA = NOT APPLICABLE OR NOT AVAILABLE.
NC = NOT CALCULABLE DUE TO ONE OR MORE VALUES BEING BELOW THE DETECTION LIMIT.
OR = RECOVERY NOT CALCULABLE DUE TO SPIKE SAMPLE OUT OF RANGE OR SPIKE TOO LOW RELATIVE TO SAMPLE CONCENTRATION.

AQUATIC RESEARCH INCORPORATED

LABORATORY & CONSULTING SERVICES

3927 AURORA AVENUE NORTH, SEATTLE, WA 98103

PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER: FBI003-88 **PAGE 4**

REPORT DATE: 03/11/09

DATE SAMPLED: 02/26/09 **DATE RECEIVED:** 02/27/09

FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER SAMPLES FROM FRIEDMAN & BRUYA, INC.

QA/QC DATA

QC PARAMETER	pH	ALKALINITY (mgCaCO3/l)	HCO3 (mgCaCO3/l)	CO3 (mgCaCO3/l)
METHOD	EPA 150.1	EPA 310.1	EPA 310.1	EPA 310.1
DATE ANALYZED	02/27/09	03/06/09	03/06/09	03/06/09
DETECTION LIMIT	0.10	1.00	1.00	1.00
DUPLICATE				
SAMPLE ID		BATCH		
ORIGINAL		50.6		
DUPLICATE		50.7		
RPD	NA	0.20%	NA	NA
SPIKE SAMPLE				
SAMPLE ID				
ORIGINAL				
SPIKED SAMPLE				
SPIKE ADDED				
% RECOVERY	NA	NA	NA	NA
QC CHECK (mg/l)				
FOUND		98.5		
TRUE		100		
% RECOVERY	NA	98.50%	NA	NA
BLANK	NA	NA	NA	NA

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CASE FILE NUMBER: FBI003-88 **PAGE 5**
REPORT DATE: 03/11/09
DATE SAMPLED: 02/26/09 **DATE RECEIVED:** 02/27/09
FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER SAMPLES FROM FRIEDMAN & BRUYA, INC.

QA/QC DATA

	DISSOLVED METALS				
QC PARAMETER	IRON (mg/l)	POTASSIUM (mg/l)	CALCIUM (mg/l)	MAGNESIUM (mg/l)	SODIUM (mg/l)
METHOD	EPA 6010	EPA 6010	EPA 6010	EPA 6010	EPA 6010
DATE ANALYZED	03/04/09	03/04/09	03/04/09	03/04/09	03/04/09
DETECTION LIMIT	0.010	0.500	0.100	0.100	0.100
DUPLICATE					
SAMPLE ID	BATCH	BATCH	BATCH	BATCH	BATCH
ORIGINAL	<0.010	3.79	34.1	4.21	26.2
DUPLICATE	<0.010	4.08	34.7	4.97	26.9
RPD	NC	7.24%	1.67%	16.44%	2.58%
SPIKE SAMPLE					
SAMPLE ID	BATCH	BATCH		BATCH	
ORIGINAL	<0.010	3.79		4.21	
SPIKED SAMPLE	9.43	14.4		14.1	
SPIKE ADDED	10.0	10.0		10.0	
% RECOVERY	94.28%	106.30%	NA	98.50%	NA
QC CHECK (mg/l)					
FOUND	9.24	9.20	9.87	9.75	10.8
TRUE	10.0	10.0	10.0	10.0	10.0
% RECOVERY	92.38%	92.04%	98.68%	97.53%	108.27%
BLANK	<0.010	<0.500	<0.100	<0.100	<0.005

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SUBMITTED BY:

Steven Lazoff
Laboratory Director

FBI003-88

Aquatic Research Incorporated

3927 Aurora Ave. N / Seattle, WA 98103 / (206) 632-2715

CHAIN-OF-CUSTODY RECORD

CLIENT: FRIEDMAN & BRUYA

SAMPLING DATE: 02/26/09

SAMPLERS:

SHEET 1 OF 1

PROJECT ID: (1) 11 call with proj ID

CASE FILE NO.:

DATA RECORDED BY:

SAMPLE INFORMATION

SAMPLE ID	DATE/TIME COLLECTED	CARB/BICARB	Fluoride	Chloride	Sulfate	Orthophosphate	NITRATE	NITRATE/NITRITE	Calcium #	Potassium #	Iron #	Manganese #	Sodium #					2/27/09		BOTT #	NOTES
MW7-0209	2/26 12:15	X	X	X	X	X	X	X	X	X	X	X	X			pH =		6.28		1	*Dissolved METALS
MW8-0209	11:15	X	X	X	X	X	X	X	X	X	X	X	X			=		6.54		1	
MW9A-0209	14:25	X	X	X	X	X	X	X	X	X	X	X	X			=		6.69		1	
MW11-0209	13:25	X	X	X	X	X	X	X	X	X	X	X	X			=		6.28		2	(Metals are field filtered)
MW12-0209	15:25	X	X	X	X	X	X	X	X	X	X	X	X			=		6.01		2	
MW13-0209	16:20	X	X	X	X	X	X	X	X	X	X	X	X			=		6.49		1	

PARAMETERS

	Relinquished By	Date/Time	Received By	Date/Time
Printed Name	Eric Young		Jim Meadows	2/27/09
Signature				1:45pm
Affiliation	F+R		ARI	

	Relinquished By	Date/Time	Received By	Date/Time
Printed Name				
Signature				
Affiliation				

Miscellaneous Notes (Hazardous Materials, Quick turn-around time, etc.):

902271

SAMPLE CHAIN OF CUSTODY

ME 02/27/09

BI4/Day/12

Page # 1 of 1

Send Report To: Mike Staton

Company: SLR International Corp.

Address: 22122 20th Ave. SE #H-150

City, State, ZIP: Bothell, WA 98021

Phone #: (425) 402-8800 Fax #: (425) 402-8488

SAMPLERS (signature):

PROJECT NAME/NO.: Yakima LF 001.0221.00004

PO #: 001.0221.00004

REMARKS: DRO after Silica Gel Cleanup; 500mL poly w/ HNO_3 preservative was field-filtered

TURNAROUND TIME
- [x] Standard (2 Weeks)
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [x] Dispose after 30 days
- [ ] Return samples
- [ ] Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel/HO	TPH-Gasoline	BTEX by 8021B	VOCs by 8260B	SVOCs by 8270D	HFS	PCBs by 8082	Dissolved Metals by 200.8	Bicarbonate & Carbonate by 310.1	Anions by 300.0			Notes
MW7-0209	01 A-I	2/26/09	1215	Water	9	X	X		X	X		X	X	X	X			
MW8-0209	02 A-I		1115			X	X		X	X		X	X	X	X			
MW9A-0209	03 A-I		1425			X	X		X	X		X	X	X	X			
MW11-0209	04 A-I		1325			X	X		X	X		X	X	X	X			
MW12-0209	05 A-I		1525			X	X		X	X		X	X	X	X			
MW13-0209	06 A-I	↓	1620	↓	↓	X	X		X	X		X	X	X	X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	CHRIS LEE	SLR	2/27/09	1200
Received by:	ERIC YOUNG	F&B	2/27/09	12:00
Relinquished by:				
Received by:			1	

Samples received at ___ °C

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

FORMS\COC\COC.DOC