October 1, 2012
Project 101.00418.00005

Mr. Norman Hepner
Washington Department of Ecology
15 West Yakima Avenue, Suite 200
Yakima, Washington 98902

Re: Quarterly Groundwater Sampling Report – August 2012 Event, Stevens Pass Ski Area, Skykomish, Washington

Dear Mr. Hepner:

On behalf of New Stevens LLC, SLR International Corporation (SLR) has prepared this report to present the results of the quarterly groundwater sampling activities conducted in August 2012 at two areas [the former Stevens Pass Mini Mart gas station (Mini Mart) and the current vehicle maintenance facility] of the Stevens Pass ski area (ski area) property. The locations of the former Mini Mart area and the current vehicle maintenance facility are shown on Figure 1. The objectives of the groundwater sampling program are: 1) to assess the effectiveness of the soil and groundwater remedial action that was completed in 2011 at the former Mini Mart area and the current vehicle maintenance facility, and 2) to demonstrate that the petroleum hydrocarbon concentrations in the groundwater at both areas have been reduced to below the Model Toxics Control Act (MTCA) Method A cleanup levels[1] or to levels that will naturally attenuate to below the cleanup levels within a reasonable timeframe.

BACKGROUND

From August through November 2011, a remedial action was completed at the former Mini Mart area and the current vehicle maintenance facility (SLR, 2011b). The objectives of the remedial action were: 1) to remove the accessible soil that contained petroleum hydrocarbon concentrations greater than the site soil cleanup levels, and in doing so, minimize the source of the petroleum hydrocarbon-impacted groundwater, 2) to reduce the risks associated with the inaccessible impacted soil, and 3) to reduce the petroleum hydrocarbon concentrations in the groundwater to below the site groundwater cleanup levels or to levels that will naturally attenuate to below the cleanup levels within a reasonable timeframe.

To remediate the petroleum hydrocarbon-impacted soil at the former Mini Mart area and the current vehicle maintenance facility, the accessible soils at each area that contained

[1] Chapter 173-340 WAC, Model Toxics Control Act Cleanup Regulation. Method A Cleanup Levels. Revised November 2007.

petroleum hydrocarbon concentrations greater than the site soil cleanup levels were excavated and hauled off-site for disposal. Each soil excavation was extended laterally until the petroleum hydrocarbon concentrations in the final confirmation sidewall samples were below the site soil cleanup levels or until there were potential structural concerns for a nearby building, utility, or other structure. Each excavation was extended vertically to at least one foot below the groundwater table to remove the source of the impacted groundwater and to allow for recovery of the groundwater. However, if the excavation within a specific grid cell did not extend to below the groundwater table, then a floor sample was collected to confirm that the impacted soil had been removed at that location. A total of 19,864 tons of excavated soil (approximately 16,724 tons from the former Mini Mart area and 3,140 tons from the current vehicle maintenance facility) were hauled to the Greater Wenatchee Regional Landfill for disposal (SLR, 2011b). The approximate areas of soil excavation at the current vehicle maintenance facility and at the former Mini Mart area are shown on Figures 2 and 3, respectively.

After completing the soil excavations, there are a total of six remaining localized areas of inaccessible soil at the north end of the current vehicle maintenance building, at the north and south corners of the former maintenance building, and along the eastern edge of the southern Mini Mart area excavation that contain petroleum hydrocarbon concentrations greater than the site soil cleanup levels. The former maintenance building is located at the northern part of the former Mini Mart area (see Figure 3). To reduce the risks (direct human contact, protection of groundwater, and/or protection of terrestrial ecological organisms) associated with the remaining impacted soil, an 8-inch-thick, reinforced concrete surface cap or a 6-inch-thick asphalt surface cap was installed over each area of remaining impacted soil. Where the impacted soil extends beneath a building, the existing concrete floor of the building serves as a surface cap. Institutional controls will also be implemented to further minimize the risks associated with the remaining soil that contains petroleum hydrocarbon concentrations greater than the site cleanup levels.

To remediate the known petroleum hydrocarbon-impacted groundwater at the former Mini Mart area and the current vehicle maintenance facility, a total of 465,905 gallons of groundwater were extracted from the open excavations (SLR, 2011b). The total volumes of groundwater pumped from the former Mini Mart area excavations and the current vehicle maintenance facility excavations were approximately 450,505 and 15,400 gallons, respectively. All of the extracted groundwater was pumped through a treatment system and then reinfiltrated to the subsurface via a trench located south (hydraulically upgradient) of the southern Mini Mart area excavation. Based on treatment system sample analytical results, the system effectively reduced the petroleum hydrocarbon concentrations to below the MTCA Method A groundwater cleanup levels prior to reinfiltration.

After backfilling the excavations, a total of four groundwater monitoring wells were installed at the former Mini Mart area and the current vehicle maintenance facility on October 26, 2011. In accordance with the Draft Remedial Action Work Plan (Work Plan; SLR, 2011a), two of the wells (VMW-4 and SMW-4) were installed near the centers of the northern vehicle maintenance facility excavation and the southern Mini Mart area excavation, respectively. Based on the encountered petroleum hydrocarbon-impacted soil to the north of the former maintenance building, an additional monitoring well (SMW-5) was installed near the northern Mini Mart area excavation. After discovering that a previous monitoring well (SMW-1) at the former Mini Mart area had been destroyed, a replacement well (SMW-1R) was installed at the previous location of SMW-1. Based on the well installation activities that were conducted prior to and during the remedial action, there are currently four groundwater monitoring wells (VMW-1 through VMW-4) at the current vehicle maintenance facility and five groundwater monitoring wells (SMW-1R and SMW-2 through SMW-5) at the former Mini Mart area (see Figures 2 and 3, respectively).

In November 2011, March 2012, and May 2012, SLR conducted quarterly groundwater sampling events after completing the remedial action. The sample analytical results showed that the groundwater in all of the wells at the former Mini Mart area and the current vehicle maintenance facility did not contain petroleum hydrocarbon concentrations greater than the MTCA Method A cleanup levels (SLR, 2011b; SLR, 2012a; and SLR, 2012b).

AUGUST 2012 SAMPLING EVENT

On August 28 and 29, 2012, SLR conducted a quarterly groundwater sampling event at the current vehicle maintenance facility and the former Mini Mart area. Prior to sampling, the depths to groundwater were measured in all of the monitoring wells by using an electronic water level probe. Well VMW-1 at the current vehicle maintenance facility was dry at the time of sampling.

SLR collected groundwater samples from all of the monitoring wells at the current vehicle maintenance facility, except VMW-1, and from all of the monitoring wells at the former Mini Mart area for laboratory analysis. SLR purged each well by using a peristaltic pump with dedicated tubing at a flow rate of approximately 0.33 liters per minute. During purging, field parameters of temperature, conductivity, dissolved oxygen, pH, and oxidation-reduction (redox) potential were measured every three minutes. Each groundwater sample was collected following the stabilization of the field parameter measurements. Dissolved ferrous iron was measured in the field at the time of sampling. The samples were submitted to Friedman & Bruya, Inc. (F&B) in Seattle, Washington, for analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8021B, gasoline-range organics (GRO) by Northwest Method NWTPH-Gx, and diesel-

range organics (DRO) and heavy oil-range organics (HO) by Northwest Method NWTPH-Dx (after silica gel cleanup).

Based on the previous detection of petroleum hydrocarbons in one of the groundwater samples from the May 2012 sampling event at the former Mini Mart area, the groundwater samples from that area were analyzed for natural attenuation parameters (nitrate and sulfate by EPA Method 300.0, alkalinity by Standard Method 2320, dissolved manganese by EPA Method 200.8, and dissolved methane by EPA Method RSK-175). Since there were no detections of petroleum hydrocarbons in the groundwater samples from the March and May 2012 sampling events at the current vehicle maintenance facility, the groundwater samples from that area were not analyzed for natural attenuation parameters.

Groundwater Monitoring Results

Current Vehicle Maintenance Facility

On August 29, 2012, the depths to groundwater in the monitoring wells at the current vehicle maintenance facility ranged from 9.54 to 11.76 feet; however, well VMW-1 was dry at the time of the measurements and the depth of that well is 13.68 feet. The depth to groundwater measurements were converted to groundwater elevations by using the results of previous well elevation surveys conducted by Harmsen and Associates (Harmsen) of Monroe, Washington. The groundwater elevations in the wells ranged from less than 969.51 feet (at the well that was dry) to 983.58 feet. Based on the groundwater elevations, the general groundwater flow direction beneath the current vehicle maintenance facility was to the north-northeast. This flow direction is consistent with the flow direction during the previous groundwater sampling events conducted in August 2010, November 2011, March 2012, and May 2012 (SLR, 2010, SLR, 2011b, SLR, 2012a, and SLR, 2012b respectively). The groundwater monitoring data from the August 2012 sampling event, as well as from the previous sampling events, at the current vehicle maintenance facility are presented in Table 1. The groundwater elevations in the wells at the current vehicle maintenance facility on August 29, 2012, are shown on Figure 2.

Former Mini Mart Area

On August 28, 2012, the depths to groundwater in the monitoring wells at the former Mini Mart area ranged from 4.71 to 9.45 feet. The depth to groundwater measurements were converted to groundwater elevations by using the results of the previous well elevation surveys conducted by Harmsen. The groundwater elevations in the wells ranged from 925.16 to 928.67 feet. Based on the groundwater elevations, the general groundwater flow direction beneath the southern part of the former Mini Mart area was to the northeast and then the flow direction veered to the north beneath the northern part of the area. This flow direction is consistent with the flow direction observed during the March and May 2012 sampling events (SLR, 2012a and SLR, 2012b). The groundwater monitoring data from

the August 2012 sampling event, as well as from the previous sampling events, at the former Mini Mart area are presented in Table 1. The groundwater elevations in the wells at the former Mini Mart area on August 28, 2012, are shown on Figure 3.

Groundwater Sample Analytical Results

Current Vehicle Maintenance Facility

The groundwater sample analytical results showed that the samples from all of the wells at the current vehicle maintenance facility did not contain detectable petroleum hydrocarbon concentrations and the method reporting limits (MRLs) were below the MTCA Method A cleanup levels. The groundwater sample analytical results from the August 2012 event, as well as from the previous groundwater sampling events, at the current vehicle maintenance facility are presented in Table 2. The analytical results from the August 2012 event (benzene, GRO, and DRO only) are also shown on Figure 2. A copy of the laboratory analytical report is attached.

Former Mini Mart Area

The groundwater sample analytical results showed that the samples from all of the wells at the former Mini Mart area did not contain detectable petroleum hydrocarbon concentrations and the MRLs were below the MTCA Method A cleanup levels. The groundwater sample analytical results from the August 2012 event (petroleum hydrocarbons only), as well as from the previous groundwater sampling events, at the former Mini Mart area are presented in Table 2. The analytical results from the August 2012 event (benzene, GRO, and DRO only) are also shown on Figure 3. A copy of the laboratory analytical report is attached.

Based on the presence of petroleum hydrocarbons in a May 2012 sample from the former Mini Mart area, the groundwater samples from that area were also analyzed for natural attenuation parameters. The sampling purge water was also field tested for additonal natural attenuation parameters (DO, redox potential, and dissolved ferrous iron). The DO concentrations were greatest [up to 7.81 milligrams per liter (mg/L)] at the well (SMW-1R) located hydraulically upgradient of the previous southern excavation area, and decreased to 0.64 mg/L at the well (SMW-4) that previously contained detectable petroleum hydrocarbon concentrations (within the southern excavation area). The DO concentration (0.98 mg/L) remained low at SMW-3 (in the northeastern part of the former Mini Mart area), and then increased to 1.67 mg/L at downgradient well SMW-5. The greatest dissolved methane, dissolved manganese, and dissolved ferrous iron concentrations, and the lowest nitrate, sulfate, and redox potential concentrations were detected at well SMW-3, which is located in an area of abundant organic material (decomposed wood and peat) in the shallow subsurface soil. The groundwater sample

analytical results and field measurements for the natural attenuation parameters are presented in Table 3, and a copy of the laboratory analytical report is attached.

CONCLUSIONS

During the November 2011, March 2012, May 2012, and August 2012 groundwater sampling events, the petroleum hydrocarbon concentrations in all of the groundwater samples from the wells at the current vehicle maintenance facility and the former Mini Mart area (with one exception) were either not detected above the MRLs or were below the MTCA Method A cleanup levels. The sample collected from well SMW-4 at the former Mini Mart area on March 1, 2012, contained a DRO concentration (900 µg/L) that exceeded the Method A cleanup level; however, due to low temperatures, the sample was collected with a disposable bailer instead of a peristaltic pump, and it was highly turbid. When temperatures were above freezing, SLR re-sampled SMW-4 with a peristaltic pump by using low-flow methods on March 29, 2012. The sample, which was clear with no evidence of particulates, did not contain a DRO concentration above the MRL (SLR, 2012a). The discrepancy between the March 1st and 29th samples, as well as the other quarterly samples from SMW-4, indicates that the detected DRO concentration on March 1st was due to DRO-impacted particulates in the sample, and did not represent groundwater conditions.

During the May and August 2012 sampling events, the groundwater samples from the former Mini Mart area were analyzed for natural attenuation parameters. The consistently high DO concentrations in the groundwater at the southern (hydraulically upgradient) end of the former Mini Mart area demonstrates the presence of an aerobic (high oxygen) subsurface environment. The significantly lower DO concentrations in the groundwater at the only well (SMW-4) in that area that contained detectable petroleum hydrocarbons shows that there is more biological activity where petroleum hydrocarbons are present and that biodegradation of the petroleum is likely occurring. Further downgradient (near well SMW-3), the relatively high dissolved methane, dissolved manganese, and dissolved ferrous iron concentrations and the relatively low DO, nitrate, sulfate, and redox potential concentrations indicate the presence of a reducing (low oxygen) subsurface environment due to the oxygen/nutrient demand of the bacteria decomposing the abundant naturally-occurring organics (peat and wood debris) in the subsurface. The consistent lack of detectable petroleum hydrocarbons in the groundwater samples from the downgradient wells (SMW-3 and SMW-5) at the former Mini Mart area show that natural attenuation (including biodegradation) is reducing any remaining petroleum hydrocarbon concentrations in the groundwater to below detectable levels.

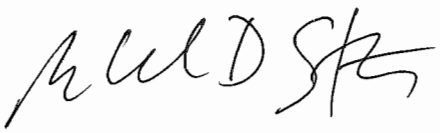
The quarterly groundwater sampling results from November 2011 through August 2012 confirm the effectiveness of the previous remedial actions at removing the sources of

petroleum hydrocarbon-impacted groundwater in these areas. Since the petroleum hydrocarbon concentrations in the groundwater samples from both areas have been below the MTCA Method A cleanup levels for four consecutive quarterly events and natural attenuation is reducing any remaining petroleum hydrocarbon concentrations in the groundwater at the former Mini Mart area to below detectable levels, SLR believes that no further actions are necessary at the current vehicle maintenance facility and the former Mini Mart area of the Stevens Pass ski area.

If you have any questions, please contact me at (425) 471-0479.

Sincerely,

SLR International Corporation



Michael D. Staton, L.G.
Principal Geologist

Attachments: Limitations
References
Tables 1 through 3
Figures 1 through 3
Laboratory Reports

cc: Harry Grant, Riddell Williams P.S. (one hard copy and one electronic copy)

LIMITATIONS

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

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

REFERENCES

SLR International Corporation. 2010. *Remedial Investigation Report, Stevens Pass Ski Resort, 93001 Northeast Stevens Pass Highway, Skykomish, Washington.* August 26.

SLR International Corporation. 2011a. *Draft Remedial Action Work Plan, Stevens Pass Ski Resort, 93001 Northeast Stevens Pass Highway, Skykomish, Washington.* February 8.

SLR International Corporation. 2011b. *Remedial Action Report, Stevens Pass Ski Area, Skykomish, Washington.* December 8.

SLR International Corporation. 2012a. *Quarterly Groundwater Sampling Report – March 2012 Event, Stevens Pass Ski Area, Skykomish, Washington.* May 10.

SLR International Corporation. 2012b. *Quarterly Groundwater Sampling Report – May 2012 Event, Stevens Pass Ski Area, Skykomish, Washington.* July 5.

TABLES

Table 1
Groundwater Monitoring Data
Stevens Pass Ski Area
Skykomish, Washington

Monitoring Well Number	Well Elevation[a] (feet)	Date Measured	Depth to Groundwater[b] (feet)	Groundwater Elevation (feet)
Current Vehicle Maintenance Facility				
VMW-1	983.82	08/16/10	Dry	< 970.12
	983.19[c]	11/07/11	Dry	<969.51
		03/01/12	Dry	<969.51
		05/22/12	Dry	<969.51
		08/29/12	Dry	<969.51
VMW-2	991.61	08/16/10	10.10	981.51
	990.86[c]	11/07/11	6.43	984.43
		03/01/12	7.14	983.72
		05/22/12	3.99	986.87
		08/29/12	10.10	980.76
VMW-3	996.08	08/16/10	11.76	984.32
	995.34[c]	11/07/11	6.58	988.76
		03/01/12	7.63	987.71
		05/22/12	4.46	990.88
		08/29/12	11.76	983.58
VMW-4	987.89	11/07/11	5.92	981.97
		03/01/12	6.95	980.94
		05/22/12	3.63	984.26
		08/29/12	9.54	978.35
Former Mini Mart Area				
SMW-1	938.34	08/16/10	10.00	928.34
		Well was destroyed prior to August 2011.		
SMW-1R	938.12	11/07/11	4.82	933.30
		03/01/12	7.12	931.00
		05/23/12	Above Casing[d]	>938.12
		08/28/12	9.45	928.67
SMW-2	937.41	08/16/10	9.82	927.59
	936.73[c]	11/07/11	5.51	931.22
		03/01/12	7.51	929.22
		05/23/12	Above Casing[d]	>936.73
		08/28/12	9.28	927.45
SMW-3	933.01	08/16/10	5.88	927.13
	932.11[c]	11/07/11	4.71	927.40
		03/01/12	4.10	928.01
		05/23/12	2.35	929.76
		08/28/12	4.71	927.40
SMW-4	935.92	11/07/11	4.51	931.41
		03/01/12	6.58	929.34
		03/29/12	7.06	928.86
		05/23/12	Above Casing[d]	>935.92
		08/28/12	8.34	927.58
SMW-5	931.98	11/07/11	3.52	928.46
		03/01/12	6.09	925.89
		05/23/12	3.61	928.37
		08/28/12	6.82	925.16

NOTES:

[a] Top of well casings surveyed relative to arbitrary site datum by Harmsen and Associates on August 16, 2010 and November 7, 2011. The site datum (southeast corner of concrete electrical transformer pad located approximately 100 feet west of southwest corner of current vehicle maintenance building) was assigned an elevation of 1,000.00 feet.

[b] Depths to groundwater measured from the top of each well casing by using an electronic water level meter.

[c] Well elevation was resurveyed after a small section was cut from the top of the well.

[d] After removing the well cap, groundwater was flowing out of the top of the well under its own hydrostatic pressure at the time of measurement.

Table 2
Groundwater Sample Analytical Results - BTEX, GRO, DRO, and HO
Stevens Pass Ski Area
Skykomish, Washington

Monitoring Well Number	Sample Name	Date Collected	Analytical Results (µg/L)						
			Benzene[a]	Toluene[a]	Ethylbenzene[a]	Total Xylenes[a]	GRO[b]	DRO[c]	HO[c]
MTCA Method A Cleanup Levels[d]			**5**	**1,000**	**700**	**1,000**	**800**	**500**	**500**
Current Vehicle Maintenance Facility									
VMW-2	VMW2-0810	08/16/10	<1	<1	<1	<3	<100	<50	<250
	VMW2-110711	11/07/11	<1	<1	<1	<3	<100	<50	<250
	VMW2-0312	03/01/12	<1	<1	<1	<3	<100	<50	<250
	VMW2-0512	05/22/12	<1	<1	<1	<3	<100	<50	<250
	VMW2-0812	08/29/12	<1	<1	<1	<3	<100	<50	<250
VMW-3	VMW3-0810	08/16/10	<1	<1	<1	3.60	110	120	<250
	VMW3-110711	11/07/11	<1	<1	<1	<3	<100	<50	<250
	VMW3-0312	03/01/12	<1	<1	<1	<3	<100	<50	<250
	VMW3-0512	05/22/12	<1	<1	<1	<3	<100	<50	<250
	VMW3-0812	08/29/12	<1	<1	<1	<3	<100	<50	<250
VMW-4	VMW4-110711	11/07/11	2.0	<1	<1	22	100	<50	<250
	VMW4-0312	03/01/12	<1	<1	<1	<3	<100	<50	<250
	VMW4-0512	05/22/12	<1	<1	<1	<3	<100	<50	<250
	VMW4-0812	08/29/12	<1	<1	<1	<3	<100	<50	<250
Former Mini Mart Area									
SMW-1	SMW1-0810	08/16/10	<1	<1	<1	<3	<100	<50	<250
		Well was destroyed prior to August 2011.							
SMW-1R	SMW-1R-110711	11/07/11	<1	<1	<1	<3	<100	<50	<250
	SMW1R-0312	03/01/12	<1	<1	<1	<3	<100	<50	<250
	SMW1R-0512	05/23/12	<1	<1	<1	<3	<100	<50	<250
	SMW1R-0812	08/28/12	<1	<1	<1	<3	<100	<50	<250
SMW-2	SMW2-0810	08/16/10	<1	<1	<1	<3	<100	<50	<250
	SMW-2-110711	11/07/11	<1	<1	<1	<3	<100	<50	<250
	SMW2-0312	03/01/12	<1	<1	<1	<3	<100	<50	<250
	SMW2-0512	05/23/12	<1	<1	<1	<3	<100	<50	<250
	SMW2-0812	08/28/12	<1	<1	<1	<3	<100	<50	<250
SMW-3	SMW3-0810	08/16/10	<1	<1	<1	<3	<100	<50	<250
	SMW-3-110711	11/07/11	<1	<1	<1	<3	<100	<50	<250
	SMW3-0312	03/01/12	<1	<1	<1	<3	<100	<50	<250
	SMW3-0512	05/23/12	<1	<1	<1	<3	<100	<50	<250
	SMW3-0812	08/28/12	<1	<1	<1	<3	<100	<50	<250
SMW-4	SMW-4-110711	11/07/11	<1	1.2	<1	<3	140	140	<250
	SMW4-0312	03/01/12	<1	<1	3.3	<3	220	**900[e]**	<250
	SMW4-032912	03/29/12	<1	<1	2.0	<3	140	<50	<250
	SMW4-0512	05/23/12	<1	<1	1.4	5.9	180	50[f]	<250
	SMW4-0812	08/28/12	<1	<1	<1	<3	<100	<50	<250
SMW-5	SMW-5-110711	11/07/11	<1	<1	<1	<3	<100	<50	<250
	SMW5-0312	03/01/12	<1	<1	<1	<3	<100	<50	<250
	SMW5-0512	05/23/12	<1	<1	<1	<3	<100	<50	<250
	SMW5-0812	08/29/12	<1	<1	<1	<3	<100	<50	<250

NOTES:

Bold value exceeds MTCA Method A Cleanup Level.

µg/L = micrograms per liter (ppb).

[a]Benzene, toluene, ethylbenzene, and total xylenes by EPA Method 8021B.

[b]Gasoline-range organics (GRO) by Ecology Method NWTPH-Gx.

[c]Diesel-range organics (DRO) and heavy oil-range organics (HO) by Ecology Method NWTPH-Dx (after silica gel cleanup).

[d]Chapter 173-340 WAC, Model Toxics Control Act (MTCA) Cleanup Regulation, Method A Cleanup Levels. Revised November 2007.

[e]The sample was highly turbid and it appears that the DRO concentration was due to DRO-impacted particulates in the sample, and did not represent groundwater conditions.

[f]The laboratory noted that the sample's chromatographic pattern did not match the diesel fuel standard.

Table 3
Groundwater Sample Analytical Results - Natural Attenuation Parameters
Stevens Pass Ski Area
Skykomish, Washington

Sample Location	Sample Name	Sample Date	Nitrate[a] (mg/L)	Sulfate[a] (mg/L)	Dissolved Methane[b] (mg/L)	Dissolved Oxygen[c] (mg/L)	Dissolved Manganese[d] (µg/L)	Dissolved Ferrous Iron[e] (mg/L)	Alkalinity[f] (mg/L $CaCO_3$)	Redox Potential[g] (mV)
Former Mini Mart Area										
SMW-1R	SMW1R-0512	05/23/12	0.98	2.75	<0.005	7.85	33.7	0.0	31.0	134.3
	SMW1R-0812	08/28/12	0.40	16.0	<0.7	7.81	96.2	0.1	84.1	-4.3
SMW-2	SMW2-0512	05/23/12	0.37	3.37	0.005	10.21	27.0	0.0	4.30	206.3
	SMW2-0812	08/28/12	0.20	7.80	<0.7	1.61	15.4	0.2	13.0	21.6
SMW-3	SMW3-0512	05/23/12	0.087	<0.10	24.7	0.61	1,080	2.1	87.6	-10.3
	SMW3-0812	08/28/12	0.10	2.50	4,220	0.98	1,480	1.9	72.9	-56.1
SMW-4	SMW4-0512	05/23/12	0.15	7.12	0.08	0.40	510	0.3	59.3	65.0
	SMW4-0812	08/28/12	0.10	17.2	26.5	0.64	435	0.7	99.6	-32.3
SMW-5	SMW5-0512	05/23/12	0.31	3.80	<0.005	4.07	55.6	0.2	20.0	113.1
	SMW5-0812	08/29/12	0.10	4.80	205	1.67	258	0.1	28.7	69.7

NOTES:

NA = Not analyzed.

mg/L = milligrams per liter (ppm).

µg/L = micrograms per liter (ppb).

mg/L $CaCO_3$ = milligrams per liter calcium carbonate equivalent.

mV = millivolts.

[a]Nitrate and sulfate by EPA Method 300.0.

[b]Dissolved methane by EPA Method RSK 175.

[c]Dissolved oxygen by EPA Method 360.1 (field instrument reading).

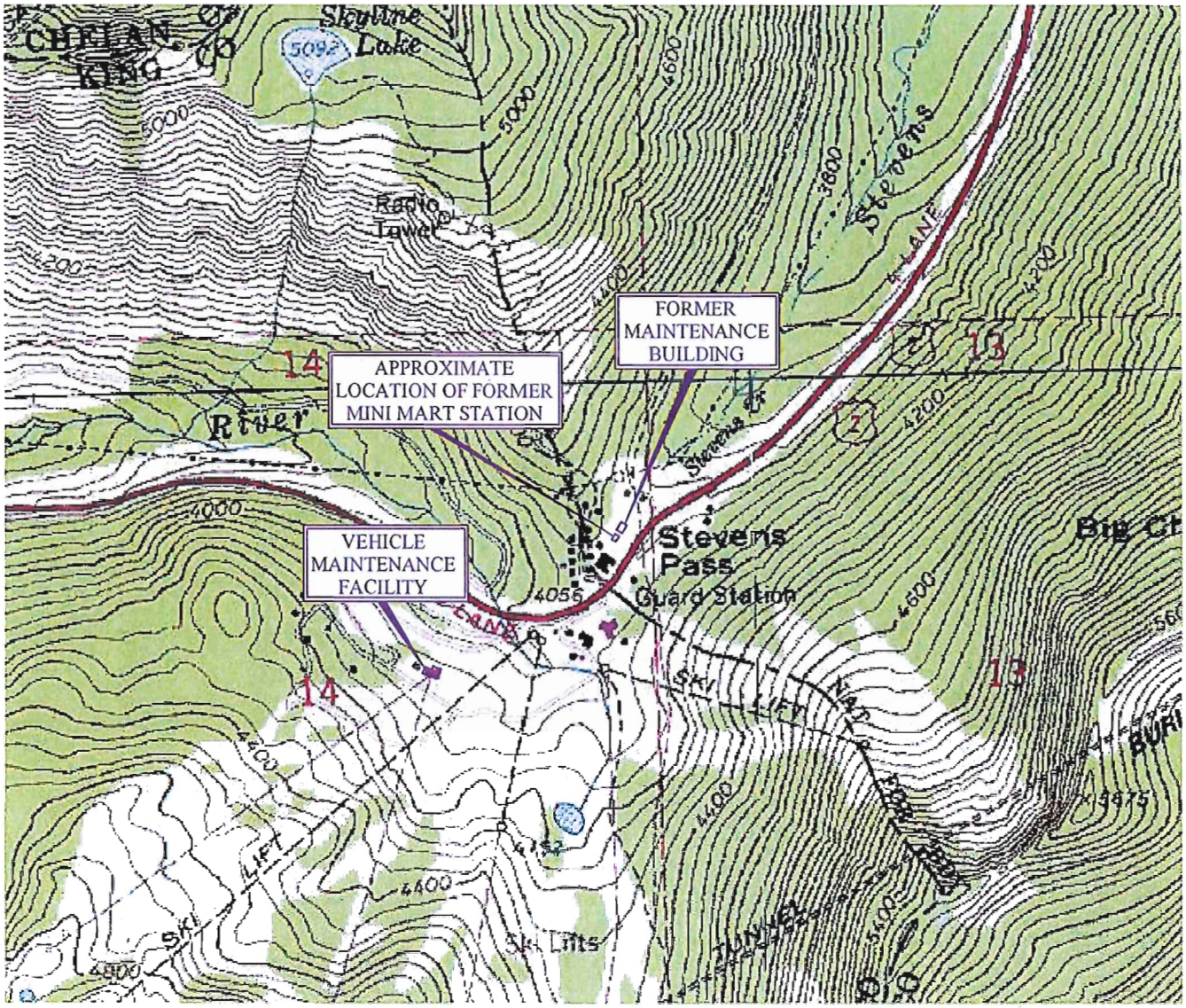
[d]Dissolved manganese by EPA Method 200.8.

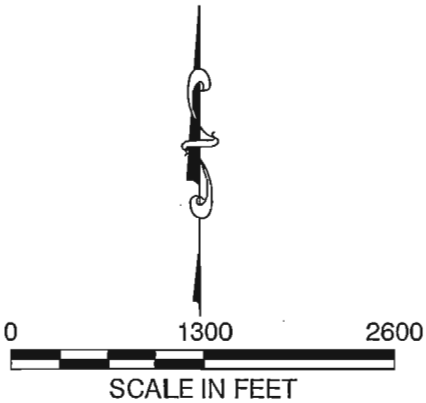
[e]Dissolved ferrous iron by Standard Method 3500 (field test kit).

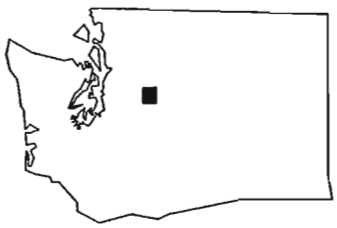
[f]Alkalinity by EPA Method 310.1 or Standard Method 2320.

[g]Oxidation-reduction (redox) potential by EPA Method D1498-76 (field instrument reading).

FIGURES







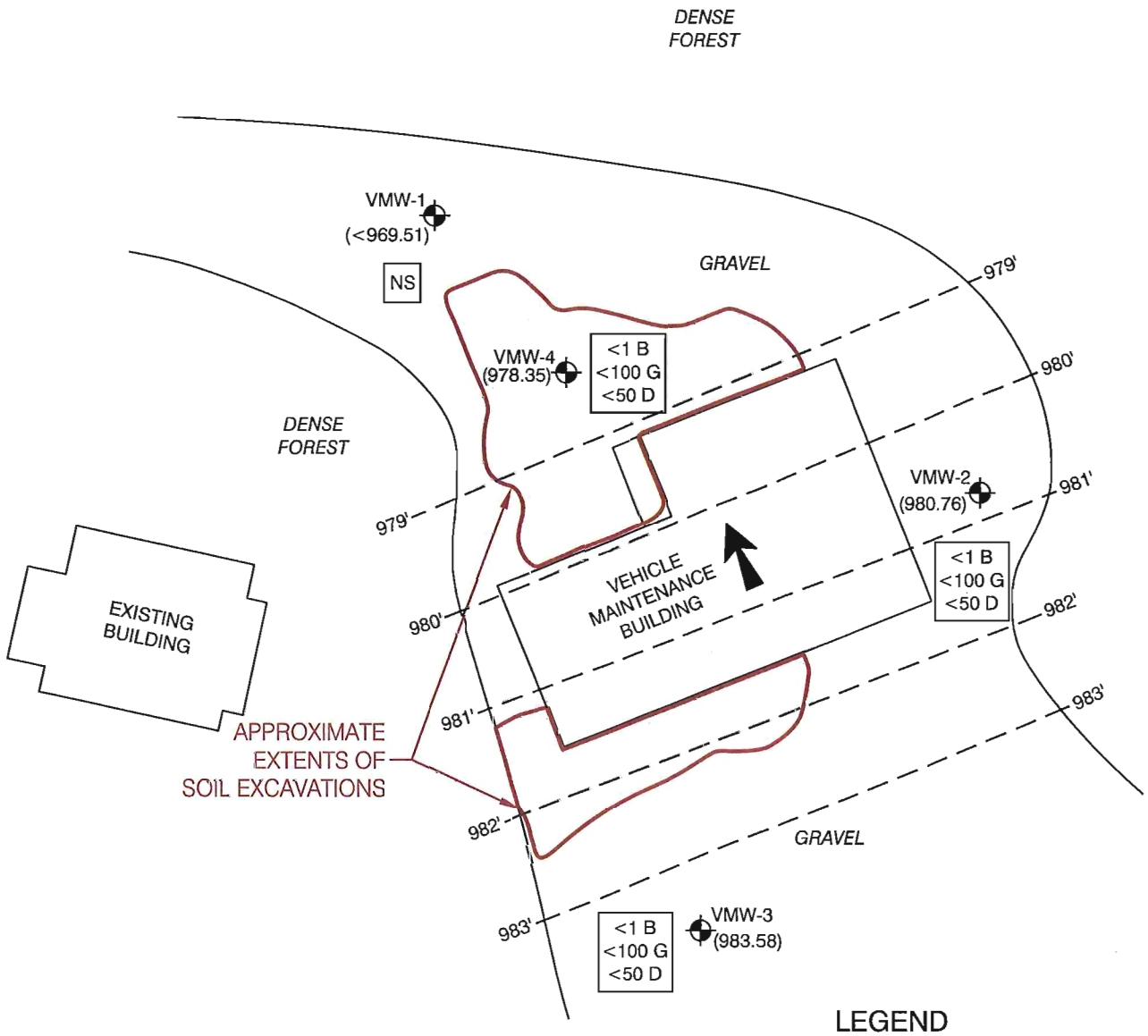
WASHINGTON

USGS 7.5 MINUTE QUADRANGLE, STEVENS PASS
WASHINGTON, 1987

SLR
22118 20th AVE SE
BLDG. G, SUITE 202
BOTHELL, WA 98021
T: 425-402-8800
F: 425-402-8488

DATE	6/10
DWN.	EMG
APPR.	MDS
REVIS.	
PROJECT NO.	101.0418.00005

FIGURE 1
STEVENS PASS SKI RESORT
SKYKOMISH, WASHINGTON
LOCATIONS OF VEHICLE MAINTENANCE FACILITY, FORMER MINI MART STATION AND FORMER MAINTENANCE BUILDING



LEGEND

VMW-2 ⊕	GROUNDWATER MONITORING WELL LOCATION
➡	GENERAL GROUNDWATER FLOW DIRECTION
(980.76)	GROUNDWATER ELEVATION (IN FEET) ON AUGUST 29, 2012
982'	GROUNDWATER SURFACE ELEVATION CONTOUR LINE (IN FEET)
<1 B	B= BENZENE CONCENTRATION (µg/L) IN GROUNDWATER SAMPLE
<100 G	G= GRO CONCENTRATION (µg/L) IN GROUNDWATER SAMPLE
<50 D	D= DRO CONCENTRATION (µg/L) IN GROUNDWATER SAMPLE
NS	NOT SAMPLED BECAUSE WELL WAS DRY

0 50 100

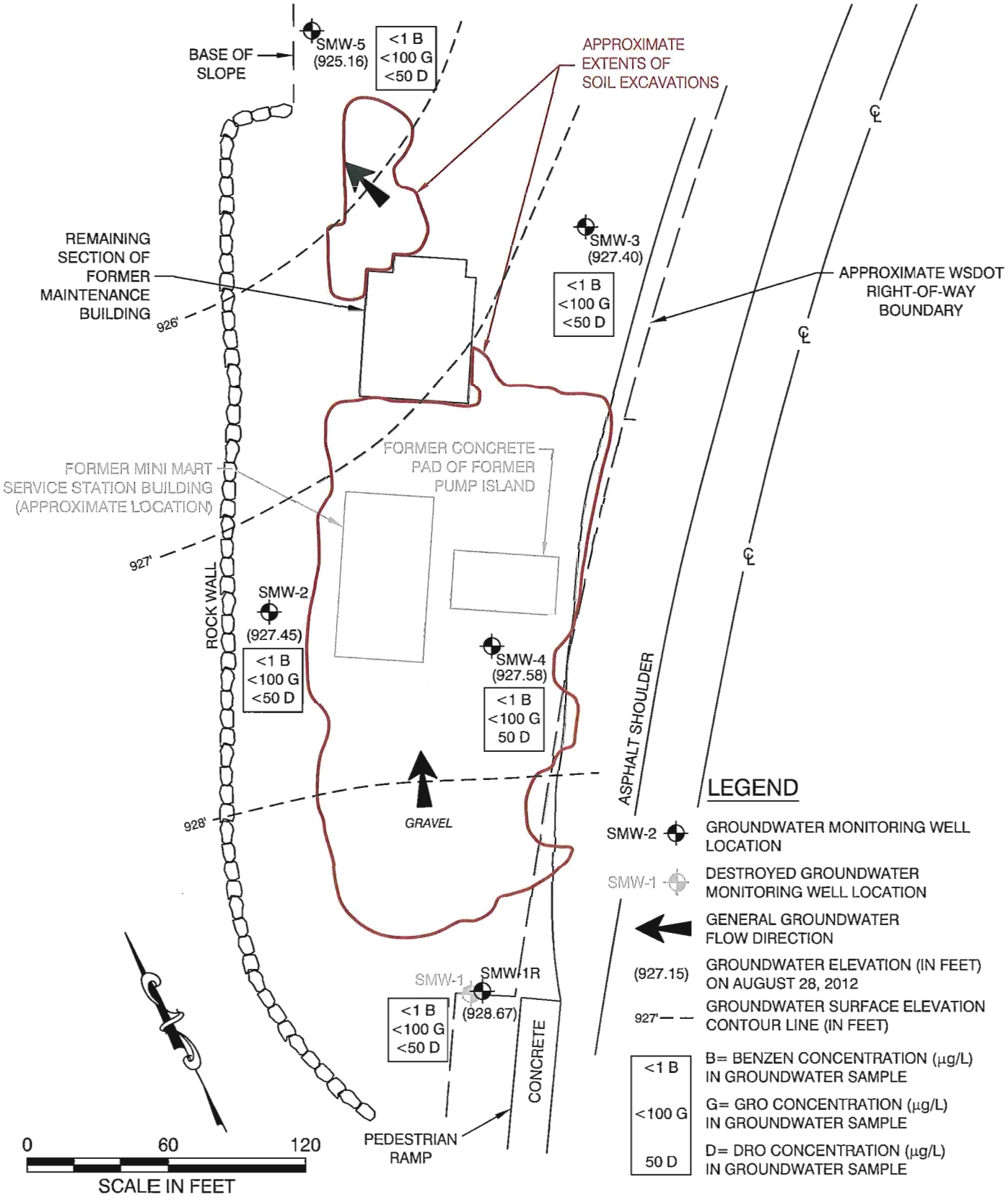
SCALE IN FEET

SLR
22118 20th AVE SE
BLDG. G, SUITE 202
BOTHELL, WA 98021
T: 425-402-8800
F: 425-402-8488

DATE 9/25
DWN. NMB
APPR. MDS
REVIS.
PROJECT NO.
101.00418.00005

FIGURE 2
STEVENS PASS SKI AREA
SKYKOMISH, WASHINGTON
AUGUST 2012 GROUNDWATER MONITORING RESULTS - CURRENT VEHICLE MAINTENANCE FACILITY

"N:\Portland\Figures\Bothell\STEVENS\101.00418.00005 F8.dwg"



SLR
22118 20th AVE SE
BLDG. G, SUITE 202
BOTHELL, WA 98021
T: 425-402-8800
F: 425-402-8488

DATE 9/25
DWN. NMB
APPR. MDS
REVIS.
PROJECT NO.
101.00418.00005

FIGURE 3
STEVENS PASS SKI AREA
SKYKOMISH, WASHINGTON
AUGUST 2012 GROUNDWATER MONITORING RESULTS - FORMER MINI MART STATION AREA

"N:\Portland\Figures\Bothell\STEVENS\101.00418.00005 F9.dwg"

LABORATORY REPORTS

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
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
e-mail: fbi@isomedia.com

September 19, 2012

Mike Staton, Project Manager
SLR International Corp.
22118 20th Ave. SE., G-202
Bothell, WA 98021

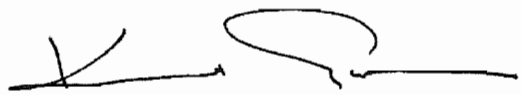
Dear Mr. Staton:

Included are the results from the testing of material submitted on August 30, 2012 from the Stevens Pass Vehicle Maintenance Facility 101.00418.00005, F&BI 208435 project. There are 6 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.



Kurt Johnson
Chemist

Enclosures
mcp/KJ
SLR0919R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on August 30, 2012 by Friedman & Bruya, Inc. from the SLR International Corp. Stevens Pass Vehicle Maintenance Facility 101.00418.00005, F&BI 208435 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SLR International Corp.
208435-01	VMW2-0812
208435-02	VMW3-0812
208435-03	VMW4-0812

The samples were sent to Analytical Resources, Inc. for nitrate analysis. The report generated by ARI is enclosed.

All quality control requirements were acceptable.

Date of Report: 09/19/12
Date Received: 08/30/12
Project: Stevens Pass Vehicle Maintenance Facility 101.00418.00005, F&BI 208435
Date Extracted: 09/04/12
Date Analyzed: 09/04/12

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 52-124)
VMW2-0812 208435-01	<1	<1	<1	<3	<100	98
VMW3-0812 208435-02	<1	<1	<1	<3	<100	96
VMW4-0812 208435-03	<1	<1	<1	<3	<100	98
Method Blank 02-1567 MB	<1	<1	<1	<3	<100	96

Date of Report: 09/19/12
Date Received: 08/30/12
Project: Stevens Pass Vehicle Maintenance Facility 101.00418.00005, F&BI 208435
Date Extracted: 09/04/12
Date Analyzed: 09/10/12

RESULTS FROM THE ANALYSIS OF 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)
VMW2-0812 208435-01	<50	<250	94
VMW3-0812 208435-02	<50	<250	73
VMW4-0812 208435-03	<50	<250	93
Method Blank 02-1563 MB	<50	<250	88

Date of Report: 09/19/12
Date Received: 08/30/12
Project: Stevens Pass Vehicle Maintenance Facility 101.00418.00005, F&BI 208435

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 208435-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	94	65-118
Toluene	ug/L (ppb)	50	100	72-122
Ethylbenzene	ug/L (ppb)	50	102	73-126
Xylenes	ug/L (ppb)	150	99	74-118
Gasoline	ug/L (ppb)	1,000	104	69-134

Date of Report: 09/19/12
Date Received: 08/30/12
Project: Stevens Pass Vehicle Maintenance Facility 101.00418.00005, F&BI 208435

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED 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 Extended	ug/L (ppb)	2,500	95	86	61-133	10

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 - Analyte present in the blank and the sample.

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 - Analysis performed outside the method or client-specified holding time requirement.

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 - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

September 4, 2012

Michele Costales Poquiz
Friedman & Bruya
3012 16th Ave W
Seattle, WA 98119

RE: Project: 208435
ARI Job No.: VH62

Dear Michele:

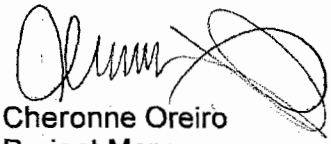
Please find enclosed the original Chain-of-Custody record (COC), sample receipt documentation, and the final data for the samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted three water samples on August 30, 2012 under job number VH62. For further details regarding sample receipt, please refer to the enclosed Cooler Receipt Form.

The samples were analyzed Nitrate by EPA method 300.0, as requested on the COC.

There were no anomalies associated with the analysis of these samples.

An electronic copy of this report and all associated raw data will be kept on file at ARI. Should you have any questions or concerns, please feel free to call me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.



Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: eFile VH62

Enclosures

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

208435

SAMPLE CHAIN OF CUSTODY KJ 08/30/12 D03/V3/AI3

[redacted]age # 1 of 1

Send Report To MIKE STATON

Company SLR INTERNATIONAL CORP

Address 22118 20TH AVE SE, G-202

City, State, ZIP BOTHELL, WA 98021

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

SAMPLERS (signature) [signatures]

PROJECT NAME/NO. STEVENS PASS VEHICLE MAINTENANCE FACILITY 101.00498.00005

PO#

REMARKS NWTPH-Dx [illegible] AFTER [illegible] CLEANUP; 48-HOUR HOLD TIME FOR NITRATE

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 by8260	SVOCs by 8270	HFS	[illegible]	[illegible]	[illegible]	[illegible]			Notes
VMW2-0812	01 A-M	8/29/12	1333	WATER	13	X	X	X										[illegible]
VMW3-0812	02	8/29/12	1433	↓	↓	X	X	X										[illegible]
VMW4-0812	03	8/29/12	1158	↓	↓	X	X	X										[illegible]

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]	[illegible]	SLR	[illegible]	[illegible]
Received by: [signature]	Nhan Phan	FeBI	8/30/12	0929
Relinquished by:				
Received by:		Samples received at 1 °C		

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
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
e-mail: fbi@isomedia.com

September 20, 2012

Mike Staton, Project Manager
SLR International Corp.
22118 20th Ave. SE., G-202
Bothell, WA 98021

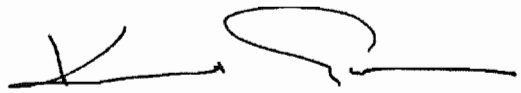
Dear Mr. Staton:

Included are the results from the testing of material submitted on August 30, 2012 from the Stevens Pass Former Mini Mart Area 101.00418.00005, F&BI 208434 project. There are 6 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.



Kurt Johnson
Chemist

Enclosures
mcp/KJ
SLR0920R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on August 30, 2012 by Friedman & Bruya, Inc. from the SLR International Corp. Stevens Pass Former Mini Mart Area 101.00418.00005, F&BI 208434 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SLR International Corp.
208434-01	SMW1R-0812
208434-02	SMW2-0812
208434-03	SMW3-0812
208434-04	SMW4-0812
208434-05	SMW5-0812

All quality control requirements were acceptable.

The samples were sent to Analytical Resources, Inc. for sulfate, nitrate, alkalinity, dissolved manganese, and dissolved methane analyses. The report generated by ARI is enclosed.

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 - Analyte present in the blank and the sample.

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 - Analysis performed outside the method or client-specified holding time requirement.

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 - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Date of Report: 09/20/12
Date Received: 08/30/12
Project: Stevens Pass Former Mini Mart Area 101.00418.00005, F&BI 208434
Date Extracted: 09/04/12
Date Analyzed: 09/04/12

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 52-124)
SMW1R-0812 208434-01	<1	<1	<1	<3	<100	100
SMW2-0812 208434-02	<1	<1	<1	<3	<100	98
SMW3-0812 208434-03	<1	<1	<1	<3	<100	99
SMW4-0812 208434-04	<1	<1	<1	<3	<100	98
SMW5-0812 208434-05	<1	<1	<1	<3	<100	100
Method Blank 02-1567 MB	<1	<1	<1	<3	<100	96

Date of Report: 09/20/12
Date Received: 08/30/12
Project: Stevens Pass Former Mini Mart Area 101.00418.00005, F&BI 208434
Date Extracted: 09/04/12
Date Analyzed: 09/10/12

RESULTS FROM THE ANALYSIS OF 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)
SMW1R-0812 208434-01	<50	<250	96
SMW2-0812 208434-02	<50	<250	77
SMW3-0812 208434-03	<50	<250	73
SMW4-0812 208434-04	<50	<250	77
SMW5-0812 208434-05	<50	<250	82
Method Blank 02-1563 MB	<50	<250	88

Date of Report: 09/20/12
Date Received: 08/30/12
Project: Stevens Pass Former Mini Mart Area 101.00418.00005, F&BI 208434

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 208435-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	94	65-118
Toluene	ug/L (ppb)	50	100	72-122
Ethylbenzene	ug/L (ppb)	50	102	73-126
Xylenes	ug/L (ppb)	150	99	74-118
Gasoline	ug/L (ppb)	1,000	104	69-134

Date of Report: 09/20/12
Date Received: 08/30/12
Project: Stevens Pass Former Mini Mart Area 101.00418.00005, F&BI 208434

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED 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 Extended	ug/L (ppb)	2,500	95	86	61-133	10

208434

SAMPLE CHAIN OF CUSTODY

KJ 08/30/12 1 of 1 VS/D03/A2

Send Report To MIKE STATON
Company SLR INTERNATIONAL CORP
Address 22118 20TH AVE SE, G-202
City, State, ZIP BOTHELL, WA 98021
Phone # (425) 402-8800 Fax # (425) 402-8488

SAMPLERS (signature)

PROJECT NAME/NO.: STEVENS PASS FORMER MINI MART AREA 101.00418.00005
PO#: 101.00418.00005

REMARKS: NWTPH-Dx FOR DRO & HO AFTER SILICA GEL CLEANUP
48-HOUR HOLD TIME FOR NITRATE

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 by8260	SVOCs by 8270	HFS	Sulfate & nitrate by 300.0	Alkalinity by 310.1	Dissolved Mn by 200.8	Dissolved methane by RSK-175			Notes
SMW1R-0812	01	8/28/12	1303	WATER	13	X	X	X										HOLD FOR ADDITIONAL ANALYSES PENDING DRO/HO & GRO RESULTS
SMW2-0812	02		1113			X	X	X										
SMW3-0812	03		1358			X	X	X										
SMW4-0812	04	↓	1201			X	X	X										
SMW5-0812	05	8/29/12	0949	↓	↓	X	X	X										↓
																		Samples received at 1 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	CHRIS LEE	SLR	8/30/12	0929
Received by:	Nhan Phan	FEBI	8/30/12	0929
Relinquished by:				
Received by:				

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

Analytical Resources, Incorporated
Analytical Chemists and Consultants

September 4, 2012

Michele Costales Poquiz
Friedman & Bruya
3012 16th Ave W
Seattle, WA 98119

RE: Project: 208434
ARI Job No.: VH67

Dear Michele:

Please find enclosed the original Chain-of-Custody record (COC), sample receipt documentation, and the final data for the samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted five water samples on August 30, 2012 under job number VH67. For further details regarding sample receipt, please refer to the enclosed Cooler Receipt Form.

The samples were analyzed Nitrate by EPA method 300.0, as requested on the COC.

Samples **SMW1R-0812**, **SMW2-0812**, **SMW3-0812**, and **SMW4-0812** were analyzed outside the method recommended holding time.

There were no other anomalies associated with the analysis of these samples.

An electronic copy of this report and all associated raw data will be kept on file at ARI. Should you have any questions or concerns, please feel free to call me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: eFile VH67

Enclosures

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: VH67
Client: Friedman and Bruya, Inc
Project Event: 208434
Project Name: 208434

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	SMW1R-0812	VH67A	12-16495	Water	08/28/12 13:03	08/30/12 16:00
2.	SMW2-0812	VH67B	12-16496	Water	08/28/12 11:13	08/30/12 16:00
3.	SMW3-0812	VH67C	12-16497	Water	08/28/12 13:58	08/30/12 16:00
4.	SMW4-0812	VH67D	12-16498	Water	08/28/12 12:01	08/30/12 16:00
5.	SMW5-0812	VH67E	12-16499	Water	08/29/12 09:49	08/30/12 16:00

SAMPLE RESULTS-CONVENTIONALS
VH67-Friedman and Bruya, Inc

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: MS
Reported: 08/31/12

Project: 208434
Event: 208434
Date Sampled: 08/28/12
Date Received: 08/30/12

Client ID: SMW1R-0812
ARI ID: 12-16495 VH67A

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	08/30/12 083012#1	EPA 300.0	mg-N/L	0.1	0.4

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VH67-Friedman and Bruya, Inc

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: JMB
Reported: 08/31/12

Project: 208434
Event: 208434
Date Sampled: 08/28/12
Date Received: 08/30/12

Client ID: SMW2-0812
ARI ID: 12-16496 VH67B

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	08/30/12 083012#1	EPA 300.0	mg-N/L	0.1	0.2

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VH67-Friedman and Bruya, Inc

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: NB
Reported: 08/31/12

Project: 208434
Event: 208434
Date Sampled: 08/28/12
Date Received: 08/30/12

Client ID: SMW3-0812
ARI ID: 12-16497 VH67C

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	08/30/12 083012#1	EPA 300.0	mg-N/L	0.1	0.1

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VH67-Friedman and Bruya, Inc

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/31/12

Project: 208434
Event: 208434
Date Sampled: 08/28/12
Date Received: 08/30/12

Client ID: SMW4-0812
ARI ID: 12-16498 VH67D

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	08/30/12 083012#1	EPA 300.0	mg-N/L	0.1	0.1

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VH67-Friedman and Bruya, Inc

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/31/12

Project: 208434
Event: 208434
Date Sampled: 08/29/12
Date Received: 08/30/12

Client ID: SMW5-0812
ARI ID: 12-16499 VH67E

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	08/30/12 083012#1	EPA 300.0	mg-N/L	0.1	0.1

RL Analytical reporting limit
U Undetected at reported detection limit

MS/MSD RESULTS-CONVENTIONALS
VH67-Friedman and Bruya, Inc

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/31/12

Project: 208434
Event: 208434
Date Sampled: 08/28/12
Date Received: 08/30/12

Analyte	Method	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: VH67A Client ID: SMW1R-0812							
N-Nitrate	EPA 300.0	08/30/12	mg-N/L	0.4	2.4	2.0	100.0%

REPLICATE RESULTS-CONVENTIONALS
VH67-Friedman and Bruya, Inc

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/31/12

Project: 208434
Event: 208434
Date Sampled: 08/28/12
Date Received: 08/30/12

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: VH67A Client ID: SMW1R-0812						
N-Nitrate	EPA 300.0	08/30/12	mg-N/L	0.4	0.4	0.0%

METHOD BLANK RESULTS-CONVENTIONALS
VH67-Friedman and Bruya, Inc

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/31/12

Project: 208434
Event: 208434
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
N-Nitrate	EPA 300.0	08/30/12	mg-N/L	< 0.1 U	

STANDARD REFERENCE RESULTS-CONVENTIONALS
VH67-Friedman and Bruya, Inc

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/31/12

Project: 208434
Event: 208434
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Method	Date	Units	SRM	True Value	Recovery
N-Nitrate ERA #230511	EPA 300.0	08/30/12	mg-N/L	2.9	3.0	96.7%

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 ~~ALS~~ ARI

PROJECT NAME/NO.	PO #
208434	B-907

REMARKS

Please Email Results

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	Dioxins and Furans by 8290	EPH	VPH	Nitrate	Sulfate	Alkalinity					Notes
SMW1R-0812		8/28/12	1303	W	2				X							
SMW2-0812			1113													
SMW3-0812			1358													
SMW4-0812			1201													
SWM5-0812		8/29/12	0949													

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	8/30/12	2:00PM
Received by:	Jennifer M. Ilsop	ARI	8/30/12	1600
Relinquished by:				
Received by:				

Analytical Resources, Incorporated
Analytical Chemists and Consultants

September 17, 2012

Michele Costales Poquiz
Friedman & Bruya
3012 16th Ave W
Seattle, WA 98119

RE: Project: 208434
ARI Job No.: VJ02

Dear Michele:

Please find enclosed the Chain-of-Custody records (COCs), sample receipt documentation, and the final data for the samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted five water samples and removed water samples from archive on September 11, 2012, under ARI job VJ02. For details regarding sample receipt, please refer to the enclosed Cooler Receipt Forms.

The samples were analyzed for Sulfate, Alkalinity, Dissolved Manganese, and Dissolved Methane, as requested.

All sample aliquots for Dissolved Methane were analyzed outside the recommended holding time of fourteen days.

The aliquots for Alkalinity were analyzed outside the recommended holding time of fourteen days for samples **SMW1R-0812**, **SMW2-0812**, **SMW3-0812**, and **SMW4-0812**. All sample bottles for Alkalinity had head-space.

There were no other anomalies associated with the analysis of these samples.

An electronic copy of this report and all associated raw data will be kept on file at ARI. Should you have any questions or concerns, please feel free to call me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: eFile VJ02

Enclosures

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: VJ02
Client: Friedman and Bruya, Inc
Project Event: 208434
Project Name: 208434

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	SMW1R-0812	VJ02A	12-17304	Water	08/28/12 13:03	09/11/12 14:55
2.	SMW2-0812	VJ02B	12-17305	Water	08/28/12 11:13	09/11/12 14:55
3.	SMW3-0812	VJ02C	12-17306	Water	08/28/12 13:58	09/11/12 14:55
4.	SMW4-0812	VJ02D	12-17307	Water	08/28/12 12:01	09/11/12 14:55
5.	SMW5-0812	VJ02E	12-17308	Water	08/29/12 09:49	09/11/12 14:55
6.	SMW1R-0812	VJ02F	12-17309	Water	08/28/12 13:03	09/11/12 14:55
7.	SMW2-0812	VJ02G	12-17310	Water	08/28/12 11:13	09/11/12 14:55
8.	SMW3-0812	VJ02H	12-17311	Water	08/28/12 13:58	09/11/12 14:55
9.	SMW4-0812	VJ02I	12-17312	Water	08/28/12 12:01	09/11/12 14:55
10.	SMW5-0812	VJ02J	12-17313	Water	08/29/12 09:49	09/11/12 14:55

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
METHANE ETHANE ETHENE

Modified RSK 175
Page 1 of 1
Matrix: Water

QC Report No: VJ02-Friedman and Bruya, Inc
Project: 208434
208434
Date Received: 09/11/12

Data Release Authorized:
Reported: 09/13/12

ARI ID	Sample ID	Analysis Date	DL	Analyte	RL	Result
VJ02A 12-17304	SMW1R-0812	09/12/12	1.0	Methane	0.7	< 0.7 U
VJ02B 12-17305	SMW2-0812	09/12/12	1.0	Methane	0.7	< 0.7 U
VJ02C 12-17306	SMW3-0812	09/12/12	1.0	**Methane**	**0.7**	**4,220**
VJ02D 12-17307	SMW4-0812	09/12/12	1.0	**Methane**	**0.7**	**26.5**
VJ02E 12-17308	SMW5-0812	09/12/12	1.0	**Methane**	**0.7**	**205**
VJ02EDUP	SMW5-0812	09/12/12	1.0	**Methane**	**0.7**	**206** RPD: 0.49 %
091212MB	Method Blank	09/12/12	1.0	Methane	0.7	< 0.7 U

Reported in ug/L (ppb)

ANALYTICAL RESOURCES INCORPORATED

RSK 175 WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VJ02-Friedman and Bruya, Inc
Project: 208434
208434

ARI ID	Client ID	PRP	TOT OUT
VJ02A	SMW1R-0812	91.1%	0
VJ02B	SMW2-0812	94.5%	0
VJ02C	SMW3-0812	90.6%	0
VJ02D	SMW4-0812	96.1%	0
VJ02E	SMW5-0812	96.7%	0
VJ02EDUP	SMW5-0812	95.6%	0
MB-091212	Method Blank	106%	0
LCS-091212	Lab Control	99.5%	0
LCSD-091212	Lab Control Dup	101%	0

	LCS/MB LIMITS	QC LIMITS
(PRP) = Propane	(79-132)	(72-122)

Log Number Range: 12-17304 to 12-17308

FORM-II RSK 175

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
METHANE ETHANE ETHENE

Modified RSK 175
Page 1 of 1
Matrix: Water

QC Report No: VJ02-Friedman and Bruya, Inc
Project: 208434
208434
Date Received: 09/11/12

Data Release Authorized:
Reported: 09/13/12

ARI ID	Analysis Date	Analyte	Spike	Result	Recovery	RPD
091212LCS	09/12/12	Methane	654	689	105.3%	2.3%
091212LCSD				673	102.8%	

Reported in ug/L (ppb)

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: SMW1R-0812
SAMPLE

Lab Sample ID: VJ02A
LIMS ID: 12-17304
Matrix: Water
Data Release Authorized:
Reported: 09/14/12

QC Report No: VJ02-Friedman and Bruya, Inc
Project: 208434
208434
Date Sampled: 08/28/12
Date Received: 09/11/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	09/12/12	200.8	09/13/12	**7439-96-5**	**Manganese**	0.5	**96.2**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: SMW2-0812
SAMPLE

Lab Sample ID: VJ02B
LIMS ID: 12-17305
Matrix: Water
Data Release Authorized:
Reported: 09/14/12

QC Report No: VJ02-Friedman and Bruya, Inc
Project: 208434
208434
Date Sampled: 08/28/12
Date Received: 09/11/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	09/12/12	200.8	09/13/12	**7439-96-5**	**Manganese**	0.5	**15.4**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: SMW3-0812
SAMPLE

Lab Sample ID: VJ02C
LIMS ID: 12-17306
Matrix: Water
Data Release Authorized:
Reported: 09/14/12

QC Report No: VJ02-Friedman and Bruya, Inc
Project: 208434
208434
Date Sampled: 08/28/12
Date Received: 09/11/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	09/12/12	200.8	09/13/12	**7439-96-5**	**Manganese**	5	**1,480**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: SMW4-0812
SAMPLE

Lab Sample ID: VJ02D
LIMS ID: 12-17307
Matrix: Water
Data Release Authorized:
Reported: 09/14/12

QC Report No: VJ02-Friedman and Bruya, Inc
Project: 208434
208434
Date Sampled: 08/28/12
Date Received: 09/11/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	09/12/12	200.8	09/13/12	**7439-96-5**	**Manganese**	1	**435**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: SMW5-0812
SAMPLE

Lab Sample ID: VJ02E
LIMS ID: 12-17308
Matrix: Water
Data Release Authorized:
Reported: 09/14/12

QC Report No: VJ02-Friedman and Bruya, Inc
Project: 208434
208434
Date Sampled: 08/29/12
Date Received: 09/11/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	09/12/12	200.8	09/13/12	**7439-96-5**	**Manganese**	0.5	**258**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: SMW1R-0812
MATRIX SPIKE

Lab Sample ID: VJ02A
LIMS ID: 12-17304
Matrix: Water
Data Release Authorized:
Reported: 09/14/12

QC Report No: VJ02-Friedman and Bruya, Inc
Project: 208434
208434
Date Sampled: 08/28/12
Date Received: 09/11/12

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Manganese	200.8	96.2	117	25.0	83.2%	

Reported in µg/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: SMW1R-0812
DUPLICATE

Lab Sample ID: VJ02A
LIMS ID: 12-17304
Matrix: Water
Data Release Authorized:
Reported: 09/14/12

QC Report No: VJ02-Friedman and Bruya, Inc
Project: 208434
208434
Date Sampled: 08/28/12
Date Received: 09/11/12

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Manganese	200.8	96.2	95.8	0.4%	+/- 20%	

Reported in µg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: VJ02LCS
LIMS ID: 12-17305
Matrix: Water
Data Release Authorized:
Reported: 09/14/12

QC Report No: VJ02-Friedman and Bruya, Inc
Project: 208434
208434
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Manganese	200.8	25.7	25.0	103%	

Reported in µg/L

N-Control limit not met
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: VJ02MB
LIMS ID: 12-17305
Matrix: Water
Data Release Authorized:
Reported: 09/14/12

QC Report No: VJ02-Friedman and Bruya, Inc
Project: 208434
208434
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	09/12/12	200.8	09/13/12	7439-96-5	Manganese	0.5	0.5	U

U-Analyte undetected at given RL
RL-Reporting Limit

SAMPLE RESULTS-CONVENTIONALS
VJ02-Friedman and Bruya, Inc

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 09/14/12

Project: 208434
Event: 208434
Date Sampled: 08/28/12
Date Received: 09/11/12

Client ID: SMW1R-0812
ARI ID: 12-17309 VJ02F

Analyte	Date Batch	Method	Units	RL	Sample
Alkalinity	09/11/12 091112#1	SM 2320	mg/L CaCO3	1.0	84.1
Carbonate	09/11/12	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	09/11/12	SM 2320	mg/L CaCO3	1.0	84.1
Hydroxide	09/11/12	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Sulfate	09/14/12 091412#1	EPA 300.0	mg/L	1.0	16.0

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VJ02-Friedman and Bruya, Inc

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 09/14/12

Project: 208434
Event: 208434
Date Sampled: 08/28/12
Date Received: 09/11/12

Client ID: SMW2-0812
ARI ID: 12-17310 VJ02G

Analyte	Date Batch	Method	Units	RL	Sample
Alkalinity	09/11/12 091112#1	SM 2320	mg/L CaCO3	1.0	13.0
Carbonate	09/11/12	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	09/11/12	SM 2320	mg/L CaCO3	1.0	13.0
Hydroxide	09/11/12	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Sulfate	09/14/12 091412#1	EPA 300.0	mg/L	0.2	7.8

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VJ02-Friedman and Bruya, Inc

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 09/14/12

Project: 208434
Event: 208434
Date Sampled: 08/28/12
Date Received: 09/11/12

Client ID: SMW3-0812
ARI ID: 12-17311 VJ02H

Analyte	Date Batch	Method	Units	RL	Sample
Alkalinity	09/11/12 091112#1	SM 2320	mg/L CaCO3	1.0	72.9
Carbonate	09/11/12	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	09/11/12	SM 2320	mg/L CaCO3	1.0	72.9
Hydroxide	09/11/12	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Sulfate	09/13/12 091312#1	EPA 300.0	mg/L	0.1	2.5

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VJ02-Friedman and Bruya, Inc

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 09/14/12

Project: 208434
Event: 208434
Date Sampled: 08/28/12
Date Received: 09/11/12

Client ID: SMW4-0812
ARI ID: 12-17312 VJ02I

Analyte	Date Batch	Method	Units	RL	Sample
Alkalinity	09/11/12 091112#1	SM 2320	mg/L CaCO3	1.0	99.6
Carbonate	09/11/12	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	09/11/12	SM 2320	mg/L CaCO3	1.0	99.6
Hydroxide	09/11/12	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Sulfate	09/14/12 091412#1	EPA 300.0	mg/L	1.0	17.2

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VJ02-Friedman and Bruya, Inc

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 09/14/12

Project: 208434
Event: 208434
Date Sampled: 08/29/12
Date Received: 09/11/12

Client ID: SMW5-0812
ARI ID: 12-17313 VJ02J

Analyte	Date Batch	Method	Units	RL	Sample
Alkalinity	09/11/12 091112#1	SM 2320	mg/L CaCO3	1.0	28.7
Carbonate	09/11/12	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	09/11/12	SM 2320	mg/L CaCO3	1.0	28.7
Hydroxide	09/11/12	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Sulfate	09/14/12 091412#1	EPA 300.0	mg/L	0.2	4.8

RL Analytical reporting limit
U Undetected at reported detection limit

MS/MSD RESULTS-CONVENTIONALS
VJ02-Friedman and Bruya, Inc

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 09/14/12

Project: 208434
Event: 208434
Date Sampled: 08/28/12
Date Received: 09/11/12

Analyte	Method	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: VJ02F Client ID: SMW1R-0812							
Sulfate	EPA 300.0	09/14/12	mg/L	16.0	60.2	40.0	110.5%

REPLICATE RESULTS-CONVENTIONALS
VJ02-Friedman and Bruya, Inc

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 09/14/12

Project: 208434
Event: 208434
Date Sampled: 08/28/12
Date Received: 09/11/12

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: VJ02F Client ID: SMW1R-0812						
Alkalinity	SM 2320	09/11/12	mg/L CaCO3	84.1	84.7	0.7%
Carbonate	SM 2320	09/11/12	mg/L CaCO3	< 1.0	< 1.0	NA
Bicarbonate	SM 2320	09/11/12	mg/L CaCO3	84.1	84.7	0.7%
Hydroxide	SM 2320	09/11/12	mg/L CaCO3	< 1.0	< 1.0	NA
Sulfate	EPA 300.0	09/14/12	mg/L	16.0	14.6	9.2%

METHOD BLANK RESULTS-CONVENTIONALS
VJ02-Friedman and Bruya, Inc

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 09/14/12

Project: 208434
Event: 208434
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
Sulfate	EPA 300.0	09/13/12	mg/L	< 0.1 U	
		09/14/12		< 0.1 U	

STANDARD REFERENCE RESULTS-CONVENTIONALS
VJ02-Friedman and Bruya, Inc

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 09/14/12

Project: 208434
Event: 208434
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Method	Date	Units	SRM	True Value	Recovery
Alkalinity	SM 2320	09/11/12	mg/L CaCO3	45.5	44.4	102.5%
ERA #P114506						
Sulfate	EPA 300.0	09/13/12	mg/L	3.1	3.0	103.3%
ERA #070811		09/14/12		3.1	3.0	103.3%

VJ02

SAMPLE CHAIN OF CUSTODY

Send Report To Michele Poquiz
Company Friedman and Bruya, Inc.
Address
City, State, ZIP
Phone # Fax #

SAMPLERS *(signature)*

PROJECT NAME/NO.	PO #
208434	B-942

~~PROJECT ADDRESS~~

mpoquiz@friedmanandbruya.com

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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	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Sulfate by 300.0	Alkalinity by 310.1	Dissolved Mn by 200.8	Dissolved Methane by RSK-175			Notes
SMW1R-0812		8/28/12	1303	water								X	X	X	X			
SMW2-0812		↓	1113	↓								↓	↓	↓	↓			
SMW3-0812			1358															
SMW4-0812		↓	1201															
SMW5-0812		8/29/12	0949	↓								↓	↓	↓	↓			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Michele Costales Poquiz	F&B1	9/11/12	11:54AM
Received by:	Jennifer Millsap	ARI	9/11/12	1455
Relinquished by:				
Received by:				

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

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