Hilton Seattle Hotel
Groundwater Current Conditions
Seattle, Washington

October 14, 2011

Submitted To:
Mr. Frank Finneran
General Manager
Hilton Seattle Hotel
1301 6th Avenue
Seattle, Washington 98101-2304

By:
Shannon & Wilson, Inc.
400 N 34th Street, Suite 100
Seattle, Washington 98103

21-1-12341-002

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

ALASKA
CALIFORNIA
COLORADO
FLORIDA
MISSOURI
OREGON
WASHINGTON

October 14, 2011

Mr. Frank Finneran
General Manager
Hilton Seattle Hotel
1301 6th Avenue
Seattle, WA 98101-2304

RE: HILTON SEATTLE HOTEL GROUNDWATER CURRENT CONDITIONS, SEATTLE, WASHINGTON

Dear Mr. Finneran:

This letter report provides the results of our investigation of the current groundwater conditions at the Hilton Seattle Hotel in Seattle, Washington (the Site). Our work was performed in general accordance with our proposal dated July 22, 2011, and included collecting baseline petroleum product and water level measurements, petroleum product sampling and baildown testing (if product was present), groundwater sampling, and reviewing available environmental information to identify potential sources of previously identified contamination at the Site.

BACKGROUND

The Site is located at 1301 6th Avenue in downtown Seattle, Washington, and occupies the southeast quarter of the city block bounded by Union and University Streets, and Fifth and Sixth Avenues (Figure 1). The hotel was built over a parking structure in approximately 1970. Two 2,000-gallon gasoline underground storage tanks (USTs) were installed along the eastern property line in the parking garage during construction of the hotel. Approximately two years after installation, it was reported that one of the two USTs developed a leak and was replaced. The two tanks were abandoned in place in 1985 by filling with cement slurry.

In the early 1990s, gasoline vapors were encountered in an excavation to extend the hotel elevator shaft down to the depth of the pedestrian concourse leading toward Rainier Tower. In 1994, Environmental Associates, Inc. drilled a boring adjacent to the abandoned USTs and confirmed the presence of gasoline-related contamination in soil samples from the boring (Environmental Associates, 1994). In 1997 and 1998, Shannon & Wilson, Inc. conducted site investigations and data evaluations related to closure of two former USTs beneath the Site

400 NORTH 34th STREET – SUITE 100
PO BOX 300303
SEATTLE, WA 98103
206-632-8020 FAX 206-695-6777
TDD: 1-800-833-6388
www.shannonwilson.com

(Shannon & Wilson, 1998a,b). At the time, no soil contamination was detected in borings advanced at the Site, but over a foot of floating product was observed in the upgradient well (MW-5) and dissolved gasoline-range petroleum hydrocarbons were detected in groundwater at MW-5 and also at the down-gradient wells (MW-2, MW-3, and MW-4).

Because floating product was found upgradient of the abandoned USTs and groundwater flow was interpreted to be to the west-northwest at a relatively steep gradient, the source of the gasoline was attributed to an offsite source. The Shannon & Wilson July 1998 report also assessed risks and found no complete exposure pathways exist at the site. Based on the available site information the Washington State Department of Ecology (Ecology) issued a No Further Action (NFA) letter in October 1998.

In a periodic review conducted in February 2010 (Ecology, 2010), Ecology rescinded the NFA, citing the presence of free-floating petroleum product in MW-5 as a concern. The purpose of this current investigation is to assess groundwater conditions at the Site in response to Ecology's concern. The field activities described in the following sections were performed in accordance with our Sampling and Analysis Plan dated August 4, 2011 (Shannon & Wilson, 2011).

BASELINE MEASURMENTS

Baseline water level and product measurements were collected from MW-2, MW-3, MW-4, and MW-5 on August 11, 2011. Free-floating petroleum product was observed in MW-5 at a thickness of 2.3 feet. The thickness observed in 1998 was 1.7 feet. Product was not observed in MW-2, MW-3, and MW-4; however, a petroleum odor was observed at MW-2 and MW-3. A summary of the well measurements collected is presented in Table 1.

Groundwater elevation contours for measurements collected in January 1998 and August 2011 are presented in Figure 2, and cross sections of subsurface conditions at the Site are presented in Figures 3 and 4. For both sets of data, the water level in MW-5 was adjusted to account for the weight of the floating petroleum product encountered. The measurements show the groundwater flow direction to be in the west-northwest direction, with a calculated groundwater flow gradient of 0.018 foot/foot. In January 1998, the groundwater flow gradient was estimated to be 0.026 foot/foot and the flow direction was also west-northwest.

PRODUCT SAMPLE AND BAILDOWN TESTING RESULTS

A sample of the petroleum product observed in MW-5 was collected on August 11, 2011, and submitted to Fremont Analytical in Seattle, Washington (Fremont), for analysis of gasoline-range hydrocarbons by Method Northwest Total Petroleum Hydrocarbons-Gasoline (NWTPH-G); benzene, toluene, ethylbenzene, and xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8021B; and total lead by EPA Methods 6020/200.8. These results are presented in Table 2. Flashpoint analysis by Method EPA 1010/ASTM D93 was also conducted on the product sample for disposal purposes. The laboratory analytical report is included at the end of this report.

Sample results suggest that the free-floating product in MW-5 is a leaded gasoline. In the United States, the removal of lead from gasoline began in the early 1970s under authority of the Clean Air Act, and its use in motor fuels has been completely phased out since December 1995. While the presence of lead suggests that the product has been subjected to at least 40 years of weathering, the chromatogram presented in the laboratory analytical report show response peaks more indicative of relatively unweathered gasoline.

To evaluate the potential recovery of product observed in MW-5, two product baildown tests were conducted. The first test was conducted on August 24, 2011, and the second on September 6, 2011. Baildown testing involved removing a volume of product from the well and measuring the thickness of the product as the surrounding formation responded to the imposed differential in fluid elevations. Both baildown tests showed rapid recovery of product from the adjacent formation, with product returning to its pre-test thickness in less than an hour. Measured changes in product thickness from the second baildown test are shown in Figure 5. This test involved two separate baildowns. Product and water were removed during the first baildown, and product only was removed during the second. Both cases showed a rapid recovery of product to its initial thickness.

GROUNDWATER SAMPLING RESULTS

Groundwater samples were collected from monitoring wells MW-2, MW-3, and MW-4 on August 25 and 26, 2011. Since product was observed in MW-5, a groundwater sample was not collected, as contamination is known to be present. Groundwater samples were submitted to Fremont for analysis of gasoline-range hydrocarbons by Method NWTPH-G, BTEX by EPA Method 8021B, and total lead by EPA Methods 6020/200.8. Groundwater sampling results are

shown in Figure 6 as well as in Table 2. The laboratory analytical reports for these samples are presented in Appendix A.

The sample collected from MW-2 had detections of gasoline, benzene, and ethylbenzene above their respective Washington State Model Toxics Control Act (MTCA) Method A groundwater cleanup criteria (Ecology, 2007). MW-3 and MW-4 had detections of gasoline below the MTCA Method A groundwater cleanup criterion, and MW-4 had a detection of total lead below the MTCA Method A cleanup criterion.

INVESTIGATION-DERIVED WASTE (IDW)

IDW generated during field activities at the Site include purged groundwater, recovered product, decontamination fluids, used personal protective equipment, and disposable sampling equipment. Purge water, recovered product, and decontamination fluids were contained in a labeled 15-gallon Washington State Department of Transportation-approved drum. Disposal of the drum was coordinated through Emerald Services, Inc. of Seattle, Washington. In accordance with the disposal facility's request, a sample of the drum contents was collected and analyzed for BTEX by EPA Method 8021B. The laboratory analytical report for this sample is presented in Appendix A. The drum was disposed on September 26, 2011, and disposal documentation can be found in Appendix B.

HISTORICAL LAND USE

A review of available environmental information was performed to identify potential sources for the free-floating product observed in MW-5 and dissolved petroleum contamination identified in Site groundwater. Our investigation identified numerous properties in the immediate vicinity of the Site that used USTs to store petroleum products. Table 3 provides a brief summary of our findings for parcels with the potential to impact the Site, and Figure 1 shows the approximate historical locations of UST identified in our search.

Parcels believed to be upgradient of the Site based on local topography include Parcels 5, 7, and 8 (Figure 1). Additionally, the southern portion of parcel occupied by the Site (Parcel 3) may be considered upgradient of the MW-5 location. USTs used to store petroleum products were identified on each of these parcels, and land use activities requiring the use of these USTs all pre-date the phase-out of leaded fuels. Aside from the known contamination at the Site, petroleum from a UST release was identified only at the southern end of Parcel 7. Petroleum contamination in soil was identified at this location in 1995. Two USTs were reportedly removed in 2001, but the status of cleanup efforts initiated in 1995 is unknown.

CONCLUSIONS

Based on our review of the results presented, we offer the following conclusions regarding the current conditions of groundwater at the Site:

- Free-floating petroleum product believed to be leaded gasoline exists beneath the city sidewalk right-of-way (ROW) adjacent to the Site. While the available data does not delineate the full extent of the product plume, there appears to be a significant amount of petroleum above residual concentrations in the immediate vicinity of MW-5. Based on observations from the initial baildown tests, recovery of the product appears feasible.
- The observed petroleum product in MW-5 appears to be adversely affecting groundwater conditions at the Site. Concentrations of gasoline, benzene, and ethylbenzene are above MTCA Method A groundwater cleanup criterion only in MW-2, which is nearest to MW-5, with concentrations decreasing with increasing distance from MW-5 (at MW-3 and MW-4).
- Because free-floating petroleum product was not observed in what are believed to be hydraulically connected, downgradient wells, the product observed in MW-5 appears to be isolated. This isolation is reinforced by sample results that show the product is relatively unweathered for its presumed age. The unweathered nature of the product suggests that little interaction within the subsurface environment (e.g., exposure to air and hydrocarbon-consuming bacteria) is occurring.
- The mechanism preventing the downgradient migration of product in MW-5 could not be determined based on existing data.
- The prevalence of historical USTs identified in the vicinity of the Site suggests that potential off-site sources exist for the petroleum contamination observed in MW-5; however, because all of the potential sources pre-date the phase-out of leaded fuel and the fact that definitive exploration would need to have occurred in the ROW (i.e., in 6th Avenue), efforts to identify the extent and specific source of contamination would be prohibitive with respect to cost and traffic impacts.

LIMITATIONS

The findings and conclusions documented in this letter report have been prepared for specific application to this project and have been developed in a manner consistent with the level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area, and in accordance with the terms and conditions set forth in our agreement. The conclusions presented in this letter report are professional opinions based on interpretation of information currently available to us and are made within the

operational scope, budget, and schedule constraints of this project. No warranty, express or implied, is made.

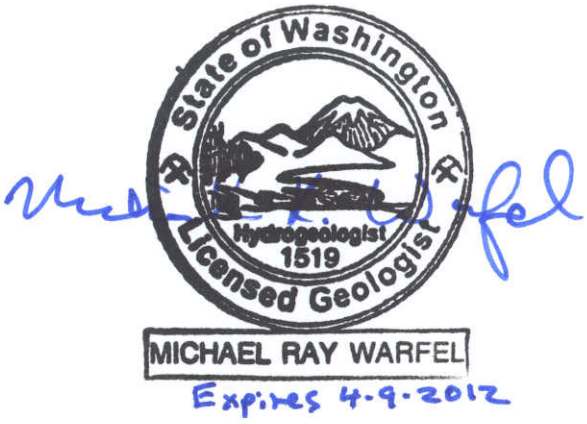
Shannon & Wilson, Inc. has prepared Appendix C, "Important Information About Your Geotechnical/Environmental Report." While not written specifically for this project, this enclosure should assist you and other in understanding the use and limitations of our reports.

We appreciate the opportunity to be of continued service on this project. If you have any questions, please call me at (206) 695-6851 or Mike Warfel at (206) 695-6700.

Sincerely,

SHANNON & WILSON, INC.

Michael S. Reynolds
Environmental Engineer



Michael R. Warfel, L.G., L.H.G.,
Vice President

MSR:MRW/msr

Enc: References
Table 1 – Well Measurements
Table 2 – Product and Groundwater Sampling Results
Table 3 – Land Use Summary (5 pages)
Figure 1 – Site and Exploration Plan
Figure 2 – Groundwater Elevation Contours
Figure 3 – Section A-A'
Figure 4 – Section B-B'
Figure 5 – Baildown Test Results
Figure 6 – Groundwater Contaminant Concentrations
Appendix A – Laboratory Analytical Reports
Appendix B – Disposal Documents
Appendix C – Important Information About Your Geotechnical/Environmental Report

c: Zahoor Ahmed, R.C. Hedreen Co.

REFERENCES

Environmental Associates, Inc., 1994, Soil and groundwater sampling and testing, Hilton Hotel – underground storage tanks, Sixth Avenue and University Street, Seattle, Washington, December 1.

Shannon & Wilson, Inc., 1998a, Site assessment report, Seattle Hilton Hotel, Seattle, Washington, February.

Shannon & Wilson, Inc., 1998b, Closure services related to Hilton USTs, Seattle Hilton Hotel, Seattle, Washington, July.

Shannon & Wilson, Inc., 2011, Seattle Hilton Hotel groundwater current conditions sampling and analysis plan, Seattle, Washington, August 4.

Washington State Department of Ecology (Ecology), 1998, Seattle Hilton Hotel parking garage voluntary cleanup program no further action letter, October.

Washington State Department of Ecology (Ecology), 2007, The Model Toxics Control Act cleanup regulation, chapter 173-340 WAC: Olympia, Washington, Washington State Department of Ecology, October 12.

Washington State Department of Ecology (Ecology), 2010, Periodic review, Hilton Hotel Parking Garage, Facility Site ID#: 56642815, February.

TABLE 1
WELL MEASURMENTS

Monitoring Well	Grade Elevation (ft)[1]	Total Depth of Well (ft)	Well Screen Interval (ft)	TOC Distance Below Grade (ft)	Headspace PID Reading (ppm)	Depth to Air/Oil Interface (ft)	Depth to Oil/Water Interface (ft)	Depth to Air/Water Interface (ft)[2]	Estimated Groundwater Elevation (ft)
MW-2	162.9	35	15 - 35	0.32	88.0	No product observed.		21.98	140.57
MW-3	161.7	30	15 - 30	0.475	45.4	No product observed.		21.02	140.22
MW-4	154.6	20.5	5.5 - 20.5	0.265	0.3	No product observed.		15.4	138.90
MW-5	175.6	39.5	20 - 40	0.25	1319	33.58	35.91	34.21	141.17

Notes:
[1] Grade elevation for MW-5 estimated from King County iMap, Aug 2011; relative elevations for other wells based on measurments taken January 1998.
[2] Depth to Air/Water Interface in MW-5 corrected for presence of petroleum product using gasoline density of 729 kilograms per cubic meter.
ft = feet
PID = photoionization detector
ppm = parts per million
TOC = top of casing

TABLE 2
PRODUCT AND GROUNDWATER SAMPLING RESULTS

Monitoring Well	Sample ID	Sample Date	Sample Matrix	Sampling Results (µg/L)					
				Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	Lead
MW-2	MW-2-082511	8/25/2011	Water	**2,950**	**76.1**	2.19	**863**	22.0	< 1.0
MW-3	MW-3-082511	8/25/2011	Water	153	< 1.0	< 1.0	< 1.0	1.35	< 1.0
MW-4	MW-4-082611	8/26/2011	Water	135	< 1.0	< 1.0	< 1.0	< 1.0	5.57
MW-5	MW-5-081111	8/11/2011	Product	75,800,000 (7.58%)	4,270,000 (0.43%)	942,000 (0.09%)	2,270,000 (0.23%)	4,570,000 (0.46%)	656
MTCA Method A Groundwater Criteria				800	5	1,000	700	1,000	15

Notes:
Bold indicates detection above groundwater cleanup criteria in groundwater sample.
< = detection below reporting limit shown.
µg/L = micrograms per liter
MTCA = Washington State Model Toxics Control Act

TABLE 3
LAND USE SUMMARY

Parcel No.	Current Land Use [1]		Historical Land Use [2]		Known Environmental Concerns [3]	
	Address	Use	Address	Use	Database Listings	Identified Issues
1	1326 5th Avenue	Office Building and Retail (Skinner Building), 8 Stories, Built 1927	1326 5th Avenue	University of Washington Grounds, 1888	Allsites, RCRA-NonGen, Manifest	None.
2	1325 6th Avenue	Washington Athletic Club, Hotel and Retail, 21 Stories, Built 1930	1321 6th Avenue	Hotel and Parking, 3 Stories, Built 1909	Allsites, CSCSL, Finds, LUST, UST, ICR, RCRA-NonGen, Manifest	Petroleum contamination in soil and groundwater from UST leak identified in 1986. Cleanup started in 1995, monitoring as of 1998. Seven USTs removed in 2001, size and contents not specified.
3	1301 6th Avenue	Seattle Hilton Hotel and Parking, 24 Stories, Built 1969	1301 6th Avenue	1) Parking Lot, Built 1938; 2) Parking Garage, 8 Stories, Built 1969, Gas Pumps on Main Deck, USTs not listed	Allsites, CSCSL NFA, Inst Control, VCP, Finds, UST, ICR, EDR Historical Auto Stations & Cleaners	Petroleum contamination in soil and groundwater from underground storage tank leak identified in 1996. Historic LUST NFA with Environmental Covenant issued October 1998 after site assessment. 2 2,000-gallon USTs closed in place in 1996, contents not specified. Auto station present in 1966, no release reported. Laundry present in 1925, no release reported.
			1305 6th Avenue	Storage Garage and Gas Station, 1941, Stove Heat, 4 USTs: 4-2,000 gal		

TABLE 3
LAND USE SUMMARY

Parcel No.	Current Land Use [1]		Historical Land Use [2]		Known Environmental Concerns [3]	
	Address	Use	Address	Use	Database Listings	Identified Issues
4	601 Union Street	Office Building (Two Union Square), 56 Stories, Built 1989	605 Union Street	Store and Loft, 2 Stories, Built 1923, Roof used for parking	Allsites, Finds, UST, RCRA-NonGen, Manifest, EDR Historical Auto Stations	Auto stations listed from 1930 to 1980, no release reported. Five USTs removed in 1996: 2 Regular Gasoline, 1 Super Premium Gasoline, 1 Diesel, 1 Waste. Tank sizes not specified.
			1314-18 6th Avenue	Parking Garage with Fueling (Washington Athletic Club), 3 Stories, Built 1926		
			615-25 Union Street	1) Gas Station, Present in 1935, Stove Heat, 3 USTs: 2-500 gal, 1,000 gal; 2) Gas Station, Present in 1940, 5 USTs: 2,000 gal, 6,000 gal, 3,000 gal, 1,000 gal, 550 gal; 3) Parking Garage, 3 Stories, Built 1964, 6 USTs: 3,000 gal, 5,000 gal, 6,000 gal, 2,000 gal, 2-550 gal		
			1314 7th Avenue	Parking with Fueling, 1949, USTs not listed		
			1317 7th Avenue	Rooming House, 3 Stories, Built 1919		
			1317 1/2 7th Avenue	Residence, 1 Story, Built 1919, Stove Heat		

TABLE 3
LAND USE SUMMARY

Parcel No.	Current Land Use [1]		Historical Land Use [2]		Known Environmental Concerns [3]	
	Address	Use	Address	Use	Database Listings	Identified Issues
5	600 University Street	Office Building, Retail and Garage (One Union Square), 36 Stories, Built 1980	1309 7th Avenue	Printing Plant (Seattle Star), 2 Stories, Built 1905-1923	EDR Historical Auto Stations	Auto stations listed from 1935 to 1944, no release reported.
			1300 7th Avenue	Parking Lot, 1945		
			620 University Street	1) Gas Station, Built 1931, USTs not listed; 2) Club (American Legion), 1 Story, Built 1946-47, Stove Heat		
			1306 6th Avenue	1) Office Building, 3 Stories, Built 1905; 2) Parking Lot with Fueling, Present in 1965, 2 USTs: 2-8,000 gal		
6	1200 5th Avenue	Office Building and Retail (IBM Building), 22 Story, 1964, Fueling in Basement Garage, USTs not specified	1200 5th Avenue	University of Washington Grounds, 1888	Allsites, UST, RCRA-NonGen, Manifest, EDR Historical Auto Stations & Cleaners	Auto stations listed from 1925 to 1966, no release reported. 2 USTs removed in 1998: 1 Regular Gasoline, 1 Super Premium Gasoline. Laundry listed in 1960, no release reported.

TABLE 3
LAND USE SUMMARY

Parcel No.	Current Land Use [1]		Historical Land Use [2]		Known Environmental Concerns [3]	
	Address	Use	Address	Use	Database Listings	Identified Issues
7	1217 6th Avenue	Church and Parking (Plymouth Congregational), 3 Story, Built 1968	520 Seneca Street	1) Gas Station, Built 1937, Stove Heat, 3 USTs: 1,000 gal, 2-550 gal; 2) Gas Station, Built 1948, Stove, 3 USTs: 2,500 gal, 2,000 gal, 1,000 gal; 3) Gas Station & Parking, Built 1956, Stove Heat, 3 USTs: 3-3,000 gal	Allsites, CSCSL, LUST, UST, EDR Historical Auto Stations & Cleaners	Petroleum contamination in soil from UST leak identified in 1995. Status of cleanup started in 1995 unknown. 2 USTs removed in 2001, size and contents not specified. Auto stations listed from 1940 to 1955. Laundry listed from 1930 to 1935, no release reported.
			1209-15 6th Avenue	Church, 3 Stories, Built 1911		
8	1200 6th Avenue	Office Building, Retail and Parking (Transwestern Park Place Building), 21 Stories, Built 1971	1200 6th Avenue	1) Residence and Store, 3 Stories, Built 1901, Stove Heat; 2) Warehouse, 1 Stories, Built 1954	Allsites, CSCSL, LUST, UST, Manifest, EDR Historical Auto Stations, EDR Historical Cleaners	Auto stations listed from 1925 to 1951, no release reported. Laundry listed in 1930, no release reported.
			1204-10 6th Avenue	Parking Lot, 1951		
			1220 6th Avenue	Parking Lot with Shelter and Fueling, 1967, Stove Heat, 3 USTs: 3-3,000 gal		
			623 University Street	Parking Lot with Shelter, Built 1950, Stove Heat		
			1211 7th Avenue	Residence, 2 Stories, Built 1909, Stove Heat		

TABLE 3
LAND USE SUMMARY

Parcel No.	Current Land Use [1]		Historical Land Use [2]		Known Environmental Concerns [3]	
	Address	Use	Address	Use	Database Listings	Identified Issues
8 (cont')			1215 7th Avenue	Residence, 1 Story, Built 1909, Stove Heat		
			606-10 Seneca Street	Stores and Loft, 3 Stories, Built 1909, Stove Heat		

Notes:

[1] Source: King County Parcel Viewer.

[2] Sources: Sanborn Maps (1888, 1893, 1905, 1949, 1950, 1969), Kroll Maps (1938, 1961), Polk Directories (1941, 1951, 1967), Historical Tax Assessor Records.

[3] Source: Environmental Data Resources Radius Map Report (July 27, 2011).

CSCSL = Confirmed and Suspected Contaminated Sites List

EDR = Environmental Data Resources, Inc.

ICR = Independent Cleanup Report

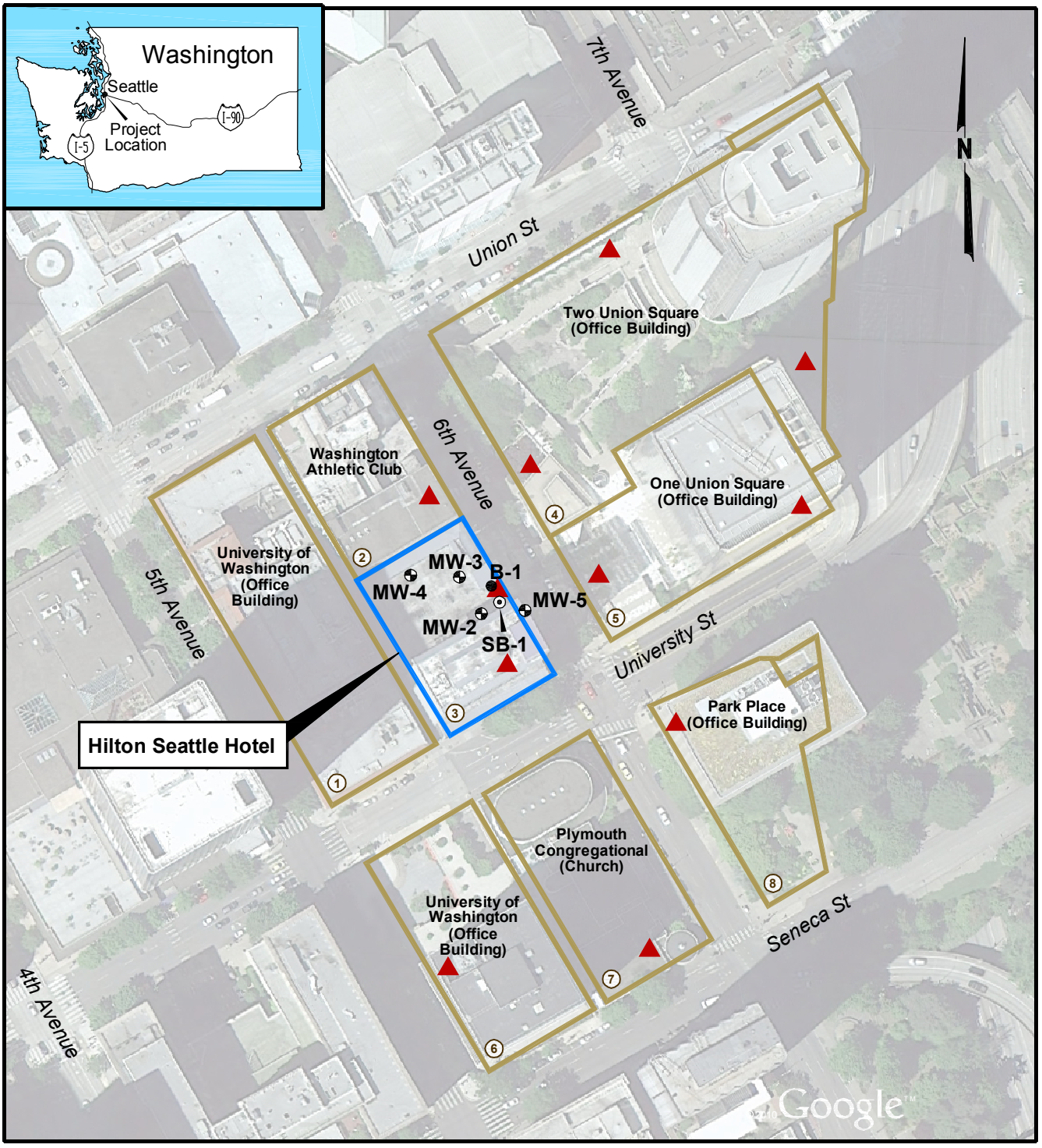
LUST = Leaking Underground Storage Tank

NFA = No Further Action

RCRA = Resource Conservation and Recovery Act

UST = Underground Storage Tank

VCP = Voluntary Cleanup Program



LEGEND

- Approximate Parcel Boundary
- (1) Parcel Designation
- MW-2 ⊕ Monitoring Well Designation and Approximate Location (Shannon & Wilson, 1998)
- SB-1 ⊙ Boring Designation and Approximate Location (Shannon & Wilson, 1998)
- B-1 ● Boring Designation and Approximate Location (Environmental Associates, Inc., 1994)
- ▲ Approximate Historical Location of Underground Storage Tank (UST)

NOTE

Parcels adapted from *"kcproperty_mapper2101634819006.pdf"* downloaded 7-22-11 from http://www5.kingcounty.gov. Aerial imagery provided by Google Earth Pro, reproduced by permission granted by Google Earth™ Mapping Service.

0 160 320

Approximate Scale in Feet

Hilton Seattle Hotel
6th Avenue and University Street
Seattle, Washington

SITE AND EXPLORATION PLAN

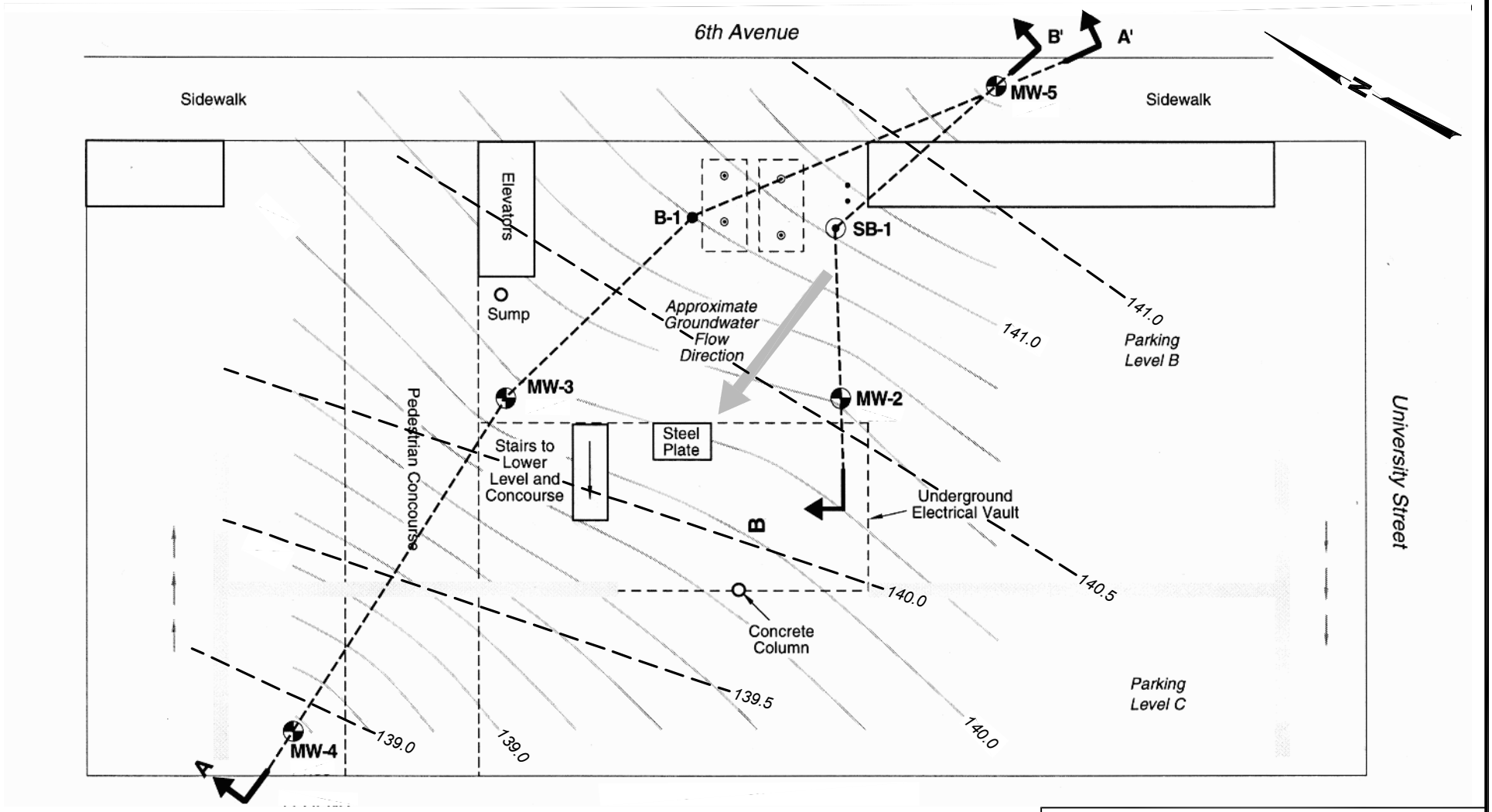
October 2011 21-1-12341-002

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. 1

Filename: J:\21\12341-002\21-1-12341-002 Fig 1.dwg Date: 10-03-2011 Login: cnt

Filename: J:\211\12341-002\21-1-12341-002 Fig 2.dwg Date: 10-04-2011 Login: cnt



LEGEND

- Monitoring Well Designation and Approximate Location
- Boring Designation and Approximate Location
- Boring Designation and Approximate Location (by Environmental Associates, Inc., 11-94)
- 139.0 Groundwater Elevation Contour in Feet, 0.2-Ft. Interval (1-98)
- 139.0 Groundwater Elevation Contour in Feet, 0.5-Ft. Interval (8-11)
- A Generalized Subsurface Cross Section Location

0 20 40

Scale in Feet

NOTES

1. Site plan is based on pacing and tape measure by Shannon & Wilson and should be considered approximate.
2. Groundwater elevations are based on an arbitrary site datum.

Hilton Seattle Hotel
6th Avenue and University Street
Seattle, Washington

GROUNDWATER ELEVATION CONTOURS

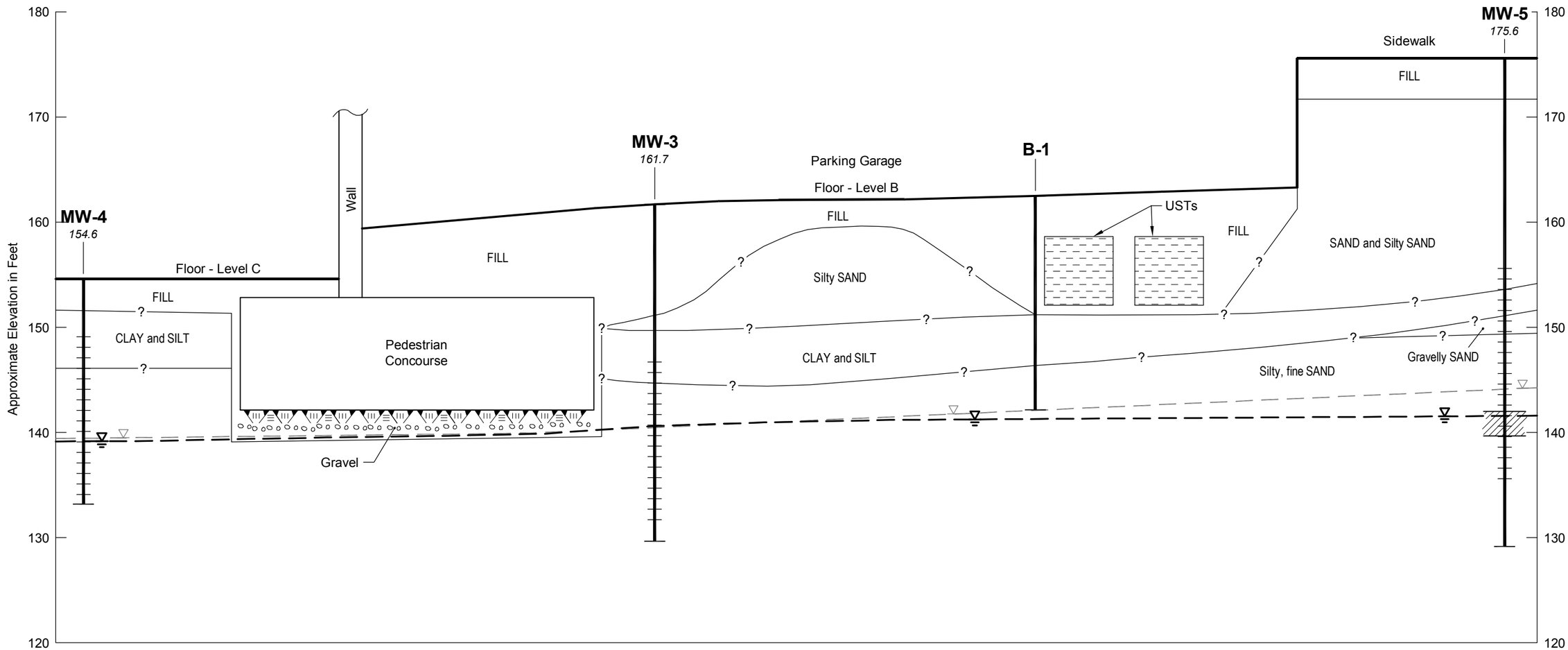
October 2011 21-1-12341-002

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

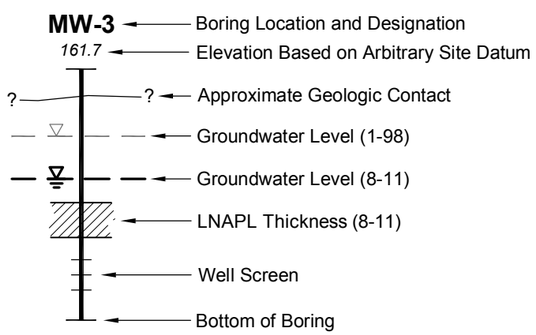
FIG. 2

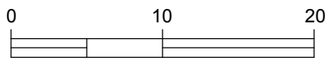
FIG. 2

A Northwest — **A'** Southeast



LEGEND





NOTE

This subsurface profile is generalized from materials observed in soil borings. Variations may exist between profile and actual conditions.

Hilton Seattle Hotel
6th Avenue and University Street
Seattle, Washington

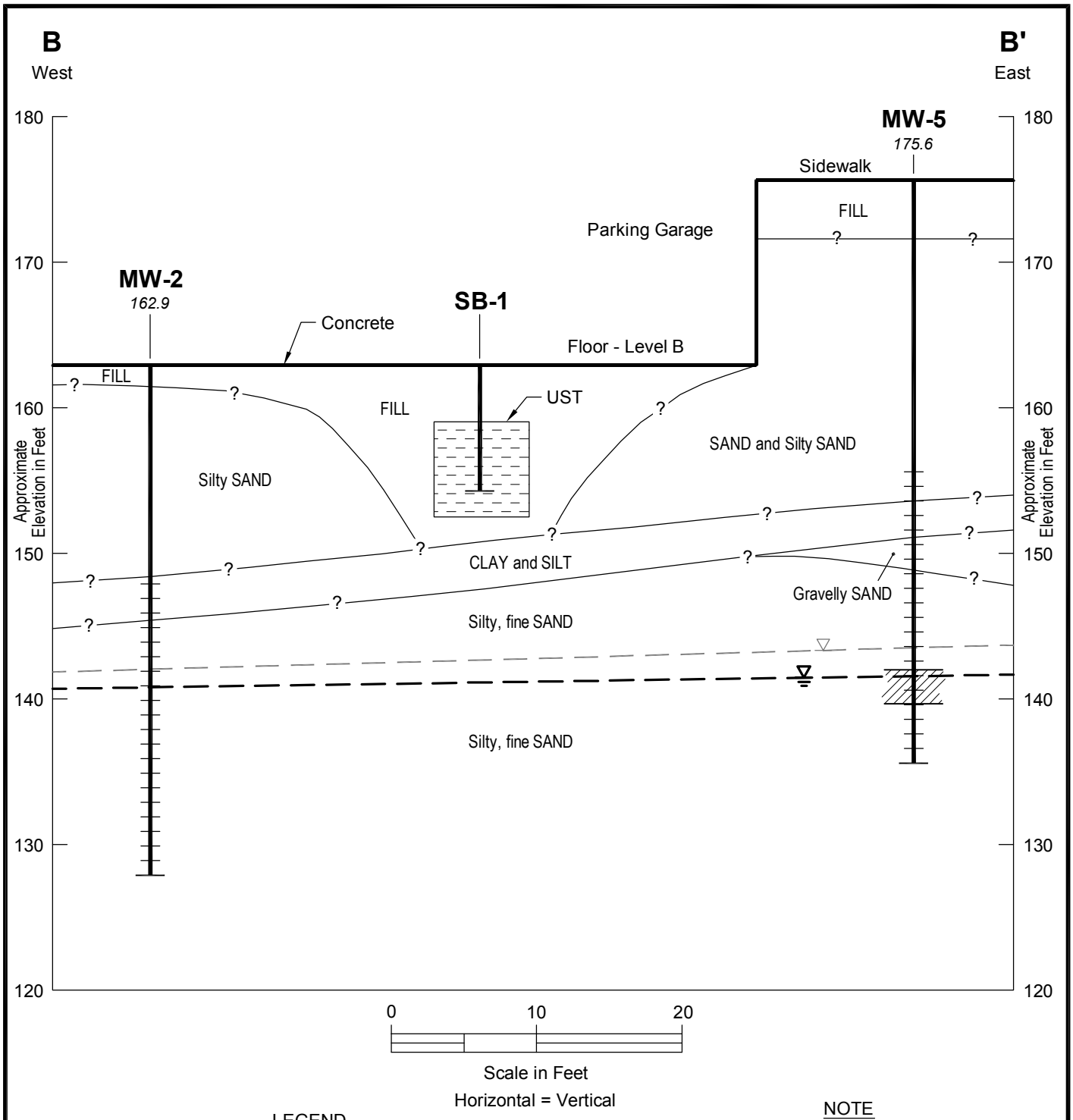
CROSS SECTION A-A'

October 2011 21-1-12341-002

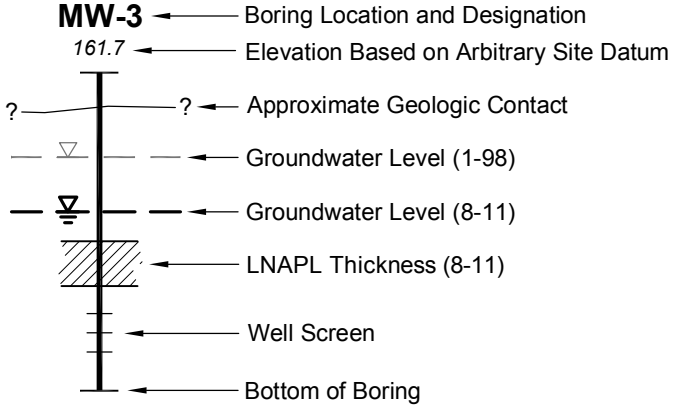
SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. 3

Filename: J:\21\12341-002\21-1-12341-002 Fig 3.dwg Date: 10-04-2011 Login: cnt



LEGEND



NOTE

This subsurface profile is generalized from materials observed in soil borings. Variations may exist between profile and actual conditions.

Hilton Seattle Hotel
6th Avenue and University Street
Seattle, Washington

CROSS SECTION B-B'

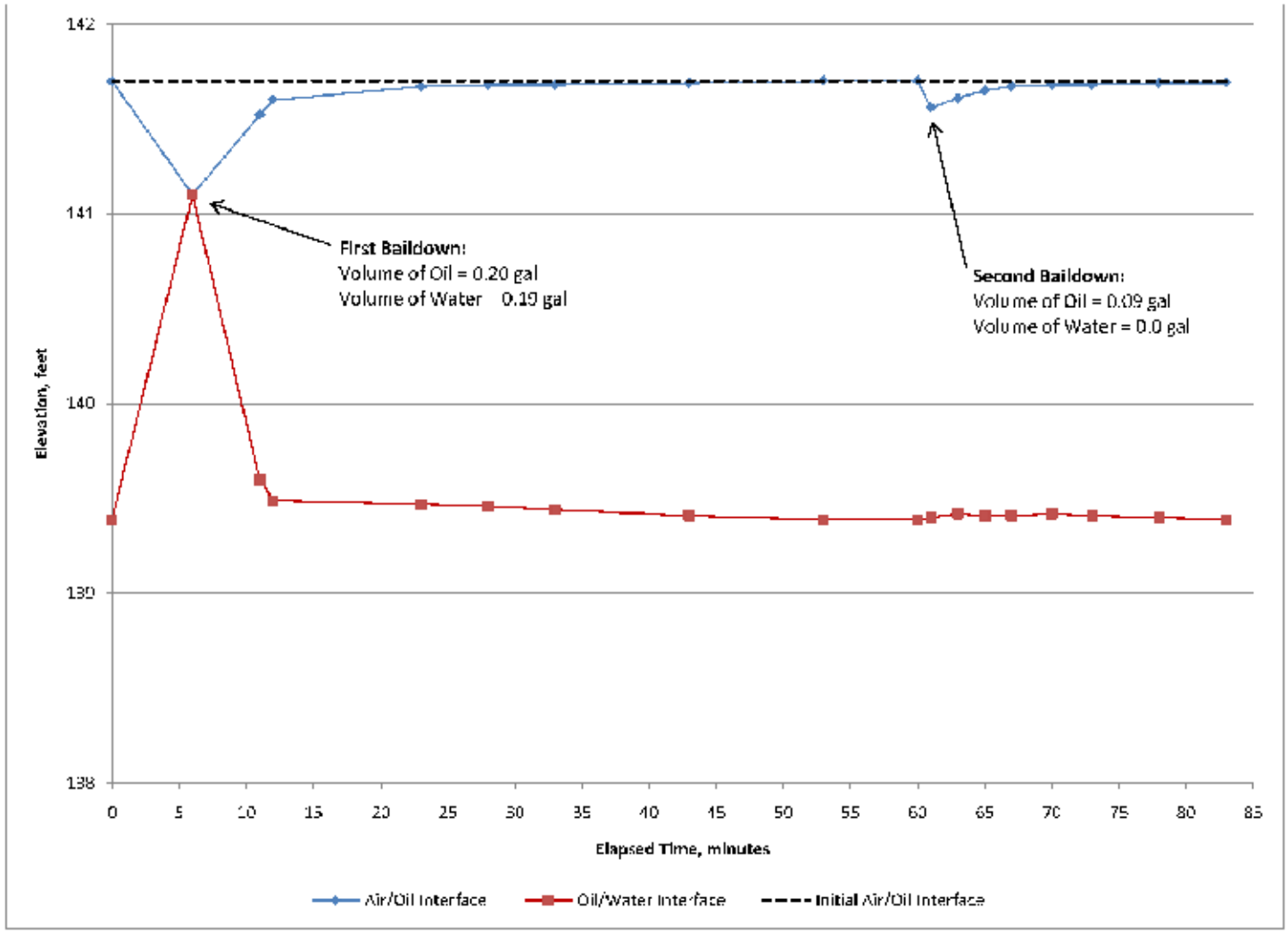
October 2011 21-1-12341-002

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. 4

Filename: J:\211\12341-002\21-1-12341-002 Fig 4.dwg Date: 10-04-2011 Login: cnt

Filename: J:\211\12341-002\21-1-12341-002 Fig 5.dwg Date: 10-04-2011 Login: cnt



Hilton Seattle Hotel
6th Avenue and University Street
Seattle, Washington

PRODUCT BAILDOWN TEST

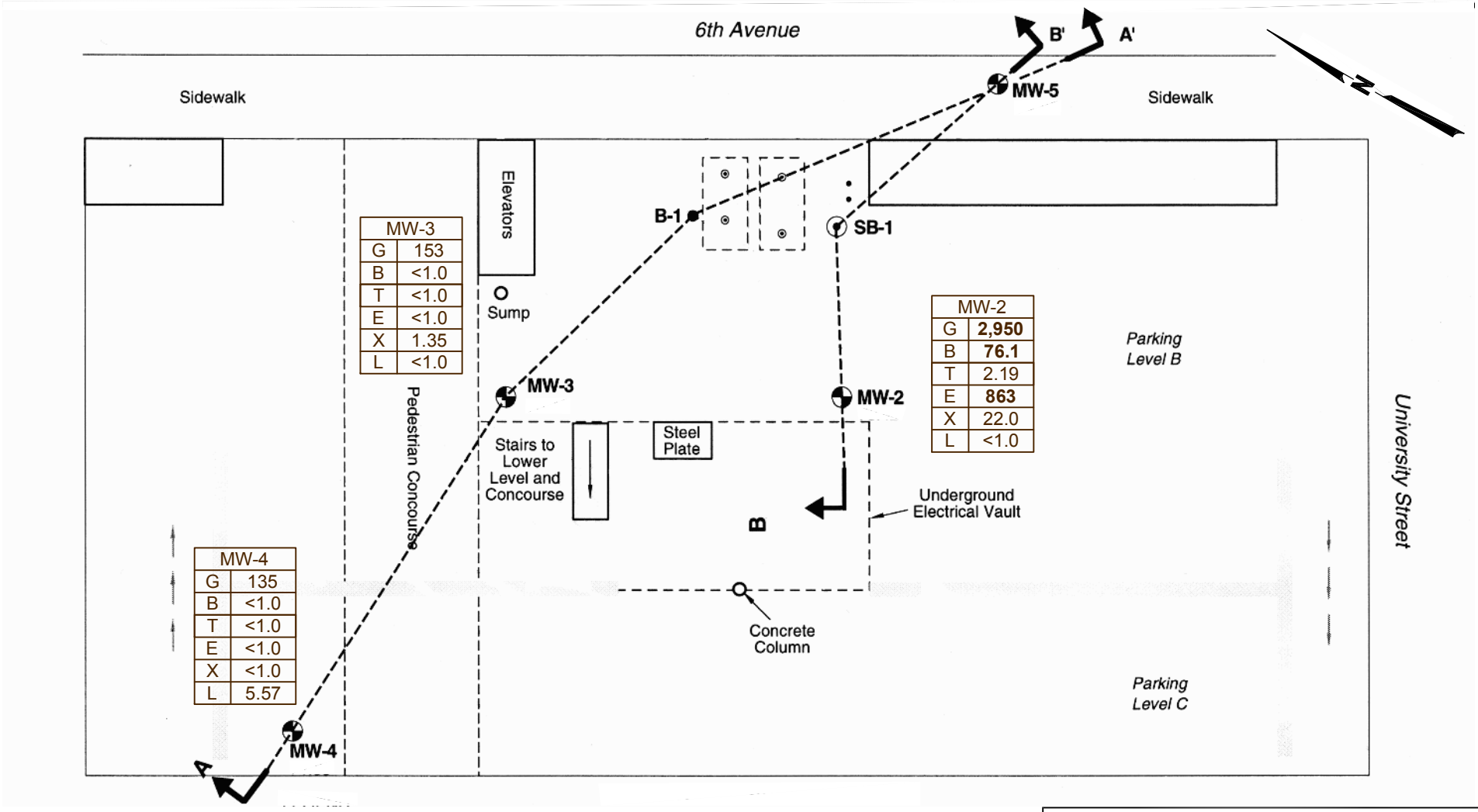
October 2011 21-1-12341-002

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. 5

FIG. 5

Filename: J:\211\12341-002\21-1-12341-002 Fig 6.dwg Date: 10-04-2011 Login: cnt



LEGEND

- Monitoring Well Designation and Approximate Location
- Boring Designation and Approximate Location
- Boring Designation and Approximate Location (by Environmental Associates, Inc., 11-94)
- A — Generalized Subsurface Cross Section Location

- G Gasoline
- B Benzene
- T Toluene
- E Ethylbenzene
- X Xylenes
- L Total Lead
- **BOLD** Detection Above Cleanup Criteria
- < Detection Below Reporting Limit Shown

0 20 40

Scale in Feet

NOTES

1. Site plan is based on pacing and tape measure by Shannon & Wilson and should be considered approximate.
2. All concentrations are in micrograms per liter.

Hilton Seattle Hotel
6th Avenue and University Street
Seattle, Washington

GROUNDWATER CONTAMINANT CONCENTRATIONS

October 2011 21-1-12341-002

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. 6

FIG. 6

APPENDIX A

LABORATORY ANALYTICAL REPORTS

Fremont Analytical

1311 N. 35th St.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Shannon & Wilson
Mike Reynolds
400 N. 34th Street, Suite 100
Seattle, Washington 98103

RE: Hilton Seattle Hotel
Lab ID: 1108041

August 15, 2011

Attention Mike Reynolds:

Fremont Analytical, Inc. received 1 sample(s) on 8/11/2011 for the analyses presented in the following report.

Flashpoint by EPA 1010/ASTM D93
Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B)
Total Metals by EPA Method 6020

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Michael Dee
Sr. Chemist / Principal

Fremont Analytical

Date: *08/15/2011*

CLIENT: Shannon & Wilson
Project: Hilton Seattle Hotel
Lab Order: 1108041

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1108041-001	MW-5-081111	08/11/2011 9:00 AM	08/11/2011 10:15 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Fremont Analytical

Case Narrative

WO#: **1108041**
Date: **8/15/2011**

CLIENT: Shannon & Wilson
Project: Hilton Seattle Hotel

I. SAMPLE RECEIPT:
All samples were received intact.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Analytical Report

WO#: **1108041**
Date Reported: **8/15/2011**

Client: Shannon & Wilson
Project: Hilton Seattle Hotel
Lab ID: 1108041-001
Client Sample ID: MW-5-081111

Collection Date: 8/11/2011 9:00:00 AM
Matrix: Oil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B)				Batch ID: 942		Analyst: SG
Benzene	4,270,000	80,000		mg/Kg	200000	8/12/2011 5:15:00 PM
Toluene	942,000	600,000		mg/Kg	200000	8/12/2011 5:15:00 PM
Ethylbenzene	2,270,000	200,000		mg/Kg	200000	8/12/2011 5:15:00 PM
m,p-Xylene	3,270,000	600,000		mg/Kg	200000	8/12/2011 5:15:00 PM
o-Xylene	1,300,000	600,000		mg/Kg	200000	8/12/2011 5:15:00 PM
Gasoline	75,800,000	20,000,000		mg/Kg	200000	8/12/2011 5:15:00 PM
Surr: 1 Fluorobenzene	140	65-135	SC	%REC	200000	8/12/2011 5:15:00 PM
Surr: 1-Chloro-3-Fluorobenzene	195	65-135	SC	%REC	200000	8/12/2011 5:15:00 PM

NOTES:
C - Coelution prevents determination
S - High surrogate recovery attributed to TPH interference. The method is in control as indicated by the MB & LCS.

Total Metals by EPA Method 6020				Batch ID: 940		Analyst: MC
Lead	656	1.56		mg/Kg	1	8/12/2011 1:44:14 PM
Flashpoint by EPA 1010/ASTM D93				Batch ID: R1495		Analyst: EM
Flashpoint	< 18 °F			°F	1	8/12/2011 10:19:18 AM

Qualifiers:

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

Fremont Analytical

Date: *8/15/2011*

Work Order: 1108041
CLIENT: Shannon & Wilson
Project: Hilton Seattle Hotel

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID: **MB-940** SampType: **MBLK** Units: **mg/Kg** Prep Date: **8/12/2011** RunNo: **1501**
Client ID: **MBLKS** Batch ID: **940** Analysis Date: **8/12/2011** SeqNo: **26911**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.400									

Sample ID: **LCS-940** SampType: **LCS** Units: **mg/Kg** Prep Date: **8/12/2011** RunNo: **1501**
Client ID: **LCSS** Batch ID: **940** Analysis Date: **8/12/2011** SeqNo: **26912**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	26.8	0.200	25.00	0	107	80	120				

Sample ID: **1108041-001ADUP** SampType: **DUP** Units: **mg/Kg** Prep Date: **8/12/2011** RunNo: **1501**
Client ID: **MW-5-081111** Batch ID: **940** Analysis Date: **8/12/2011** SeqNo: **26914**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	715	1.50		0	0	0	0	656.0	8.53	30	

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits				

Fremont Analytical

Date: *8/15/2011*

Work Order: 1108041
CLIENT: Shannon & Wilson
Project: Hilton Seattle Hotel

QC SUMMARY REPORT

Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B)

Sample ID: **1108041-001ADUP** SampType: **DUP** Units: **mg/Kg** Prep Date: **8/12/2011** RunNo: **1504**
Client ID: **MW-5-081111** Batch ID: **942** Analysis Date: **8/12/2011** SeqNo: **26959**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	4,390,000	80,000						4,268,000	2.92	30	
Toluene	957,000	600,000						942,400	1.50	30	
Ethylbenzene	2,320,000	200,000						2,272,000	2.27	30	
m,p-Xylene	3,310,000	600,000						3,268,000	1.32	30	
o-Xylene	1,310,000	600,000						1,300,000	0.506	30	
Gasoline	77,800,000	20,000,000						75,800,000	2.60	30	
Surr: 1 Fluorobenzene	2,860,000		2,000,000		143	65	135		0		SC
Surr: 1-Chloro-3-Fluorobenzene	3,960,000		2,000,000		198	65	135		0		SC

Sample ID: **LCS-942** SampType: **LCS** Units: **mg/Kg** Prep Date: **8/12/2011** RunNo: **1504**
Client ID: **LCSS** Batch ID: **942** Analysis Date: **8/12/2011** SeqNo: **26962**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.618	0.0200	0.5000	0	124	65	135				
Toluene	0.604	0.150	0.5000	0	121	65	135				
Surr: 1 Fluorobenzene	0.491		0.5000		98.2	65	135				
Surr: 1-Chloro-3-Fluorobenzene	0.492		0.5000		98.5	65	135				

Sample ID: **MB-942** SampType: **MBLK** Units: **mg/Kg** Prep Date: **8/12/2011** RunNo: **1504**
Client ID: **MBLKS** Batch ID: **942** Analysis Date: **8/12/2011** SeqNo: **26963**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0200									
Toluene	ND	0.150									
Ethylbenzene	ND	0.0500									
m,p-Xylene	ND	0.150									

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits				

Fremont Analytical

Chain of Custody Record

2930 Westlake Ave. N. Suite 100
Seattle, WA 98109
Tel: 206-352-3790
Fax: 206-352-7178

Laboratory Project No (internal): 1108041

Date: August 11, 2011

Page: 1 of: 1

Client: Shannon + Wilson, Inc.
Address: 400 N. 34th St. Suite
City, State, Zip: Seattle, WA 98103
Tel: 206-695-6851

Project Name: Hilton Seattle Hotel
Location: Seattle, WA
Collected by: MSR

Reports To (PM): Michael Reynolds
Fax: 206-695-6777
Email: msr@shanwil.com
Project No: 21-1-12341-002

	Sample Name	Time	Sample Type (Matrix)	Container Type	Date of Collection	VOA 8260	VOA 8021B BTEX	NWTPH-Gx	NWTPH-HCID	NWTPH-Dx/Dx Ext.	SEMI VOL 8270C	PAH 8270	PCBs 8082	Cl PESTICIDES 8081	Cl HERBICIDES 8151A	Metals*	Total (T) | Dissolved (D)	Anions (IC)**	Phosphate, T				Comments/Depth
1	MW-5-081111	0900	GWPL	4 oz	8/11/11		X	X								X			X				
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							

*Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

**Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Relinquished	Date/Time	Received	Date/Time
x	8/11/11 1015	x Tony Zebre	8/11/11 10:15
Relinquished	Date/Time	Received	Date/Time
x		x	

Sample Receipt:	
Good?	Y
Cooler Temperature:	OK
Seals Intact?:	N/A
Total Number of Containers:	1

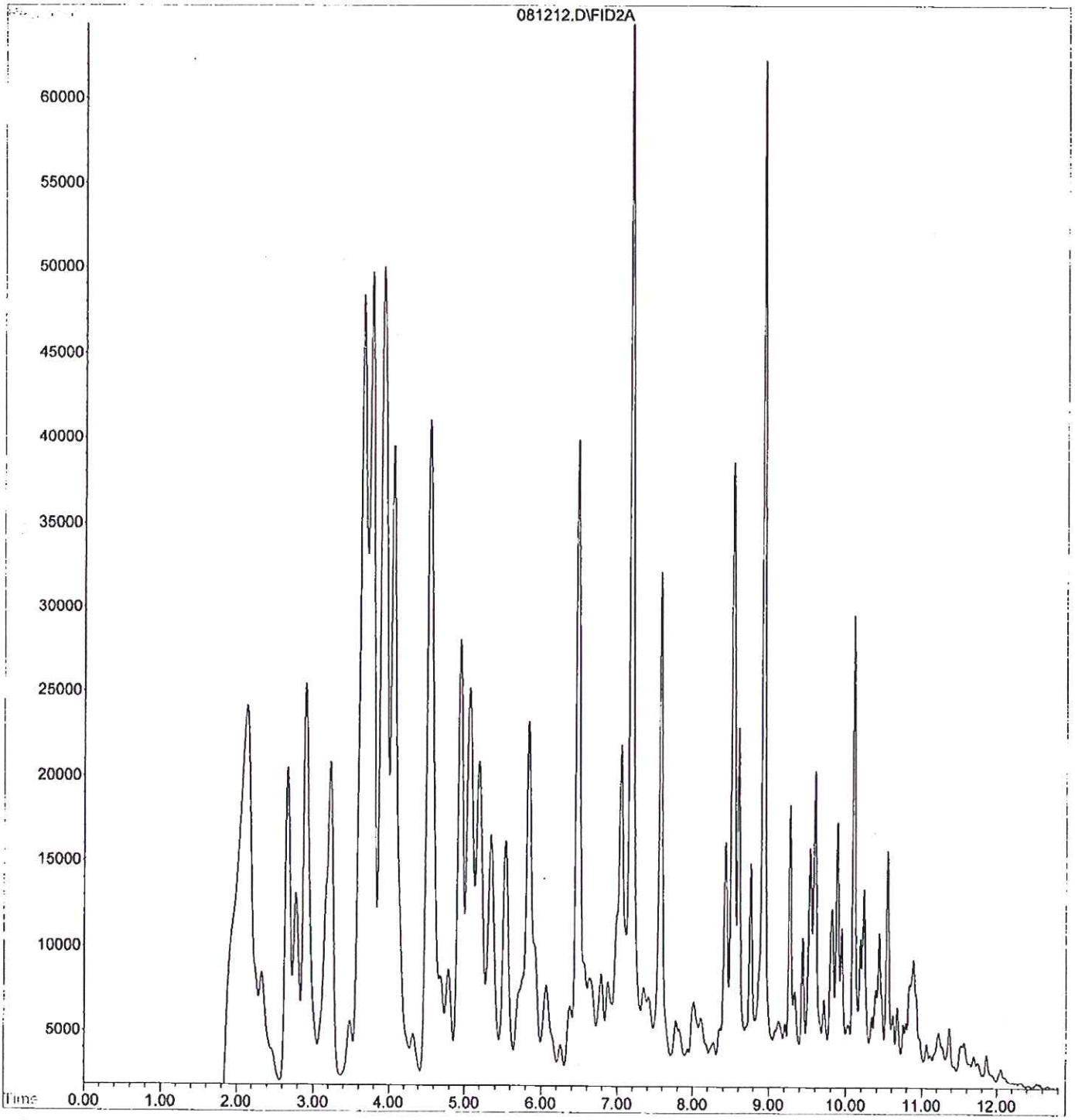
Special Remarks:

TAT --> 24HR 48HR Standard

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

www.fremontanalytical.com

File : C:\HPCHEM\2\DATA\081211\081212.D
Operator :
Acquired : 12 Aug 2011 5:15 pm using AcqMethod GXBTEX.M
Instrument : Gx BTEX
Sample Name: 1108041-001A 4,000,000 X
Misc Info : SAMP O-GXBTEX-S
Vial Number: 12



Fremont Analytical

1311 N. 35th St.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Shannon & Wilson
Mike Reynolds
400 N. 34th Street, Suite 100
Seattle, Washington 98103

RE: Hilton Seattle Hotel
Lab ID: 1108134

September 01, 2011

Attention Mike Reynolds:

Fremont Analytical, Inc. received 2 sample(s) on 8/26/2011 for the analyses presented in the following report.

Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B)
Total Metals by EPA Method 200.8

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Michael Dee
Sr. Chemist / Principal

Fremont Analytical

Date: *09/01/2011*

CLIENT: Shannon & Wilson
Project: Hilton Seattle Hotel
Lab Order: 1108134

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1108134-001	MW-4-082611	08/26/2011 8:20 AM	08/26/2011 10:00 AM
1108134-002	DRUM	08/26/2011 9:30 AM	08/26/2011 10:00 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Fremont Analytical

Case Narrative

WO#: **1108134**
Date: **9/1/2011**

CLIENT: Shannon & Wilson
Project: Hilton Seattle Hotel

I. SAMPLE RECEIPT:
All samples were received intact. The internal ice chest temperatures were measured on receipt and are recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Analytical Report

WO#: **1108134**
Date Reported: **9/1/2011**

Client: Shannon & Wilson
Project: Hilton Seattle Hotel
Lab ID: 1108134-001
Client Sample ID: MW-4-082611

Collection Date: 8/26/2011 8:20:00 AM
Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B)				Batch ID: R1706		Analyst: SG
Benzene	ND	1.00		µg/L	1	8/31/2011 11:04:00 PM
Toluene	ND	1.00		µg/L	1	8/31/2011 11:04:00 PM
Ethylbenzene	ND	1.00		µg/L	1	8/31/2011 11:04:00 PM
m,p-Xylene	ND	1.00		µg/L	1	8/31/2011 11:04:00 PM
o-Xylene	ND	1.00		µg/L	1	8/31/2011 11:04:00 PM
Gasoline	135	50.0		µg/L	1	8/31/2011 11:04:00 PM
Surr: 1 Fluorobenzene	86.6	65-135		%REC	1	8/31/2011 11:04:00 PM
Surr: 1-Chloro-3-Fluorobenzene	89.2	65-135		%REC	1	8/31/2011 11:04:00 PM
Total Metals by EPA Method 200.8				Batch ID: 1039		Analyst: BR
Lead	5.57	1.00		µg/L	1	8/30/2011 6:35:57 PM

Qualifiers:

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

Fremont Analytical

Analytical Report

WO#: **1108134**
Date Reported: **9/1/2011**

Client: Shannon & Wilson
Project: Hilton Seattle Hotel
Lab ID: 1108134-002
Client Sample ID: DRUM

Collection Date: 8/26/2011 9:30:00 AM
Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B)				Batch ID: R1706		Analyst: SG
Benzene	ND	1,000		µg/L	1000	9/1/2011 1:17:00 AM
Toluene	ND	1,000		µg/L	1000	9/1/2011 1:17:00 AM
Ethylbenzene	ND	1,000		µg/L	1000	9/1/2011 1:17:00 AM
m,p-Xylene	5,680	1,000		µg/L	1000	9/1/2011 1:17:00 AM
o-Xylene	2,270	1,000		µg/L	1000	9/1/2011 1:17:00 AM
Gasoline	1,950,000	50,000		µg/L	1000	9/1/2011 1:17:00 AM
Surr: 1 Fluorobenzene	99.6	65-135		%REC	1000	9/1/2011 1:17:00 AM
Surr: 1-Chloro-3-Fluorobenzene	105	65-135		%REC	1000	9/1/2011 1:17:00 AM

Qualifiers:

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

Fremont Analytical

Date: 9/1/2011

Work Order: 1108134
CLIENT: Shannon & Wilson
Project: Hilton Seattle Hotel

QC SUMMARY REPORT

Total Metals by EPA Method 200.8

Sample ID: MB-1039	SampType: MBLK			Units: µg/L		Prep Date: 8/30/2011			RunNo: 1696		
Client ID: MBLKW	Batch ID: 1039					Analysis Date: 8/30/2011			SeqNo: 30597		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	1.00									

Sample ID: LCS-1039	SampType: LCS			Units: µg/L		Prep Date: 8/30/2011			RunNo: 1696		
Client ID: LCSW	Batch ID: 1039					Analysis Date: 8/30/2011			SeqNo: 30598		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	47.6	1.00	50.00	0	95.3	85	115				

Sample ID: 1108134-001CDUP	SampType: DUP			Units: µg/L		Prep Date: 8/30/2011			RunNo: 1696		
Client ID: MW-4-082611	Batch ID: 1039					Analysis Date: 8/30/2011			SeqNo: 30600		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.83	1.00						5.568	4.67	30	

Sample ID: 1108134-001CMS	SampType: MS			Units: µg/L		Prep Date: 8/30/2011			RunNo: 1696		
Client ID: MW-4-082611	Batch ID: 1039					Analysis Date: 8/30/2011			SeqNo: 30601		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	244	1.00	250.0	5.568	95.3	70	130				

Sample ID: 1108134-001CMSD	SampType: MSD			Units: µg/L		Prep Date: 8/30/2011			RunNo: 1696		
Client ID: MW-4-082611	Batch ID: 1039					Analysis Date: 8/30/2011			SeqNo: 30602		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	243	1.00	250.0	5.568	95.1	70	130	243.8	0.199	30	

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits				

Fremont Analytical

Date: 9/1/2011

Work Order: 1108134
CLIENT: Shannon & Wilson
Project: Hilton Seattle Hotel

QC SUMMARY REPORT

Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B)

Sample ID: **1108134-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **8/31/2011** RunNo: **1706**
Client ID: **MW-4-082611** Batch ID: **R1706** Analysis Date: **8/31/2011** SeqNo: **30764**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00						0	0	30	
Toluene	ND	1.00						0	0	30	
Ethylbenzene	ND	1.00						0	0	30	
m,p-Xylene	ND	1.00						0	0	30	
o-Xylene	ND	1.00						0	0	30	
Gasoline	125	50.0						135.0	7.69	30	
Surr: 1 Fluorobenzene	9.39		10.00		93.9	65	135		0		
Surr: 1-Chloro-3-Fluorobenzene	9.83		10.00		98.3	65	135		0		

Sample ID: **1108134-001AMS** SampType: **MS** Units: **µg/L** Prep Date: **8/31/2011** RunNo: **1706**
Client ID: **MW-4-082611** Batch ID: **R1706** Analysis Date: **8/31/2011** SeqNo: **30765**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	10.1	1.00	10.00	0	101	65	135				
Toluene	9.97	1.00	10.00	0	99.7	65	135				
Surr: 1 Fluorobenzene	10.5		10.00		105	65	135				
Surr: 1-Chloro-3-Fluorobenzene	10.3		10.00		103	65	135				

Sample ID: **1108134-001AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **8/31/2011** RunNo: **1706**
Client ID: **MW-4-082611** Batch ID: **R1706** Analysis Date: **9/1/2011** SeqNo: **30766**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	10.3	1.00	10.00	0	103	65	135	10.11	1.86	30	
Toluene	10.2	1.00	10.00	0	102	65	135	9.973	2.01	30	
Surr: 1 Fluorobenzene	10.4		10.00		104	65	135		0		
Surr: 1-Chloro-3-Fluorobenzene	10.1		10.00		101	65	135		0		

Qualifiers:
E Value above quantitation range
H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits
ND Not detected at the Reporting Limit
R RPD outside accepted recovery limits
RL Reporting Limit
S Spike recovery outside accepted recovery limits

Fremont Analytical

Date: *9/1/2011*

Work Order: 1108134
CLIENT: Shannon & Wilson
Project: Hilton Seattle Hotel

QC SUMMARY REPORT

Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B)

Sample ID: **LCS-R1706** SampType: **LCS** Units: **µg/L** Prep Date: **8/31/2011** RunNo: **1706**
Client ID: **LCSW** Batch ID: **R1706** Analysis Date: **8/31/2011** SeqNo: **30770**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	10.3	1.00	10.00	0	103	65	135				
Toluene	10.1	1.00	10.00	0	101	65	135				
Gasoline	525	50.0	500.0	0	105	65	135				
Surr: 1 Fluorobenzene	10.3		10.00		103	65	135				
Surr: 1-Chloro-3-Fluorobenzene	9.94		10.00		99.4	65	135				

Sample ID: **MB-R1706** SampType: **MBLK** Units: **µg/L** Prep Date: **8/31/2011** RunNo: **1706**
Client ID: **MBLKW** Batch ID: **R1706** Analysis Date: **8/31/2011** SeqNo: **30771**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00									
Toluene	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Gasoline	ND	50.0									
Surr: 1 Fluorobenzene	9.82		10.00		98.2	65	135				
Surr: 1-Chloro-3-Fluorobenzene	10.5		10.00		105	65	135				

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits				

Fremont Analytical

Sample Log-In Check List

Client Name: **SW**	Work Order Number: **1108134**
Logged by: **Troy Zehr**	Date Received: **8/26/2011 10:00:00 AM**

Chain of Custody

1.	Were seals intact?	Yes ☐	No ☐	Not Present ☑
2.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3.	How was the sample delivered?			

Log In

4.	Coolers are present?	Yes ☑	No ☐	NA ☐
5.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
6.	Were all coolers received at a temperature of >0° C to 10.0°C	Yes ☑	No ☐	NA ☐
7.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
8.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9.	Are samples properly preserved?	Yes ☑	No ☐	
10.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11.	Is there headspace present in VOA vials?	Yes ☐	No ☑	No VOA Vials ☐
12.	Did all sample containers arrive in good condition?(unbroken)	Yes ☑	No ☐	
13.	Does paperwork match bottle labels?	Yes ☑	No ☐	
14.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15.	Is it clear what analyses were requested?	Yes ☑	No ☐	
16.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

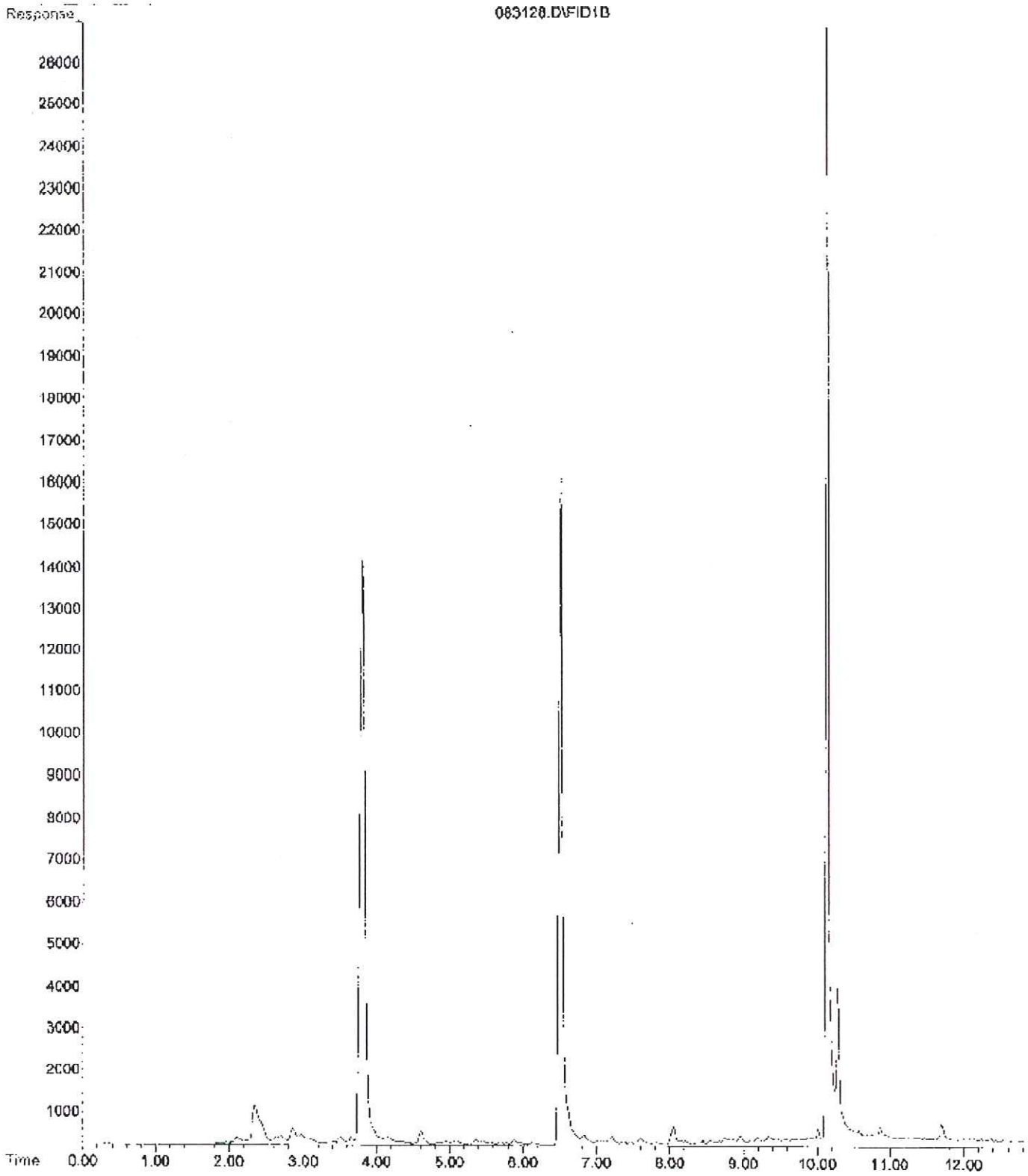
Client Instructions: _____

18. Additional remarks/Disrepancies

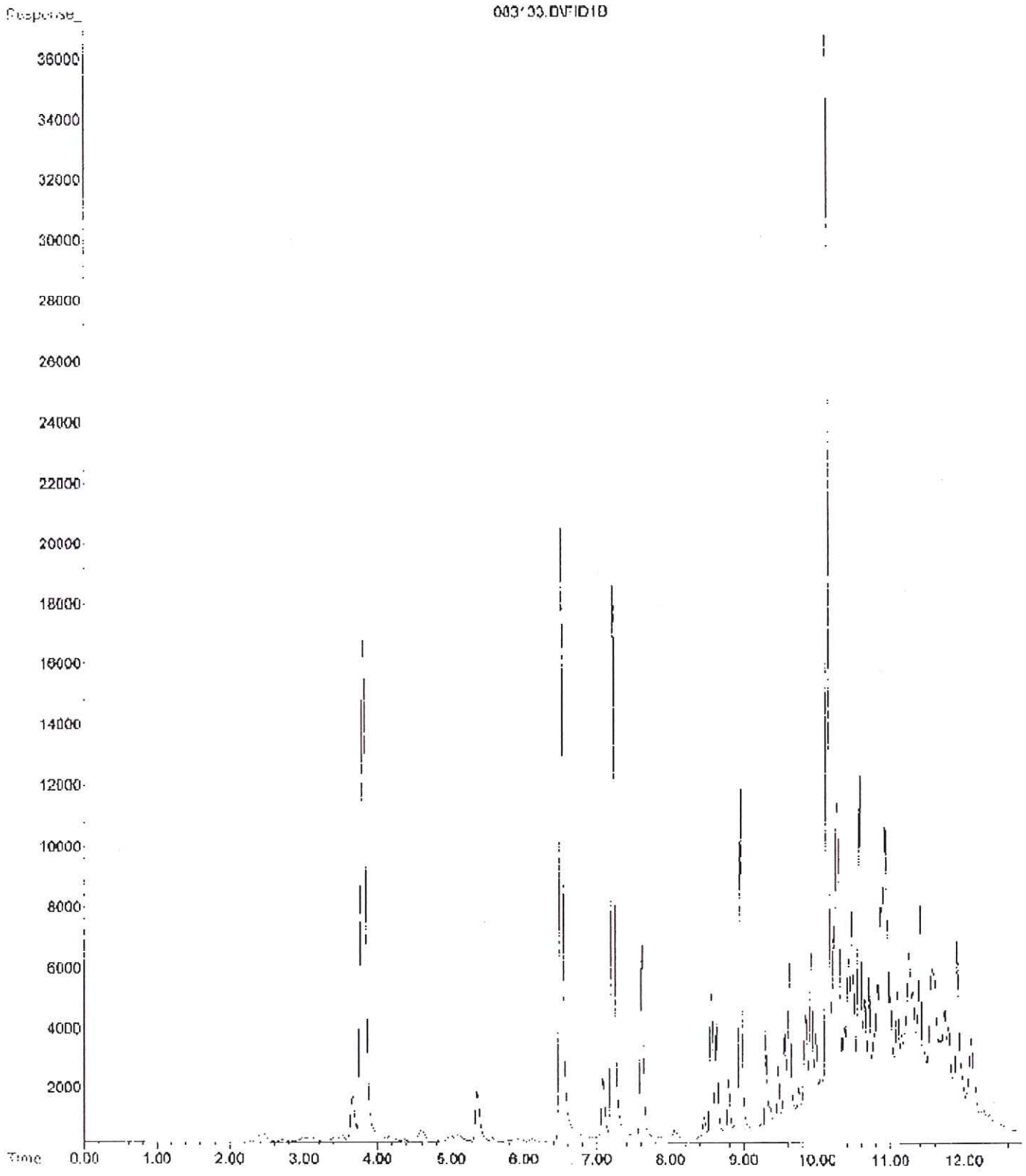
Item Information

Item #	Temp °C	Condition
Cooler	8.9	Good

File : C \HPCHEM\2\DATA\083111\083128.D
Operator :
Acquired : 31 Aug 2011 11 04 pm using AcqMothod GXBTEX.M
Instrument : Gx BTEX
Sample Name: 1108134-001A
Misc Info : SAMP O-GXBTEX-W
Vial Number: 28



File : C:\HPCHEM\2\DATA\083111\083133.D
Operator :
Acquired : 1 Sep 2011 1:17 am using AcqMethod GXBTEX.M
Instrument : Gx BTEX
Sample Name. 1106134-002A 10 UL
Misc Info : SAMP O GXBTEX-W
Vial Number: 33



Fremont ANALYTICAL

Chain of Custody Record

1311 N. 35th Street
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Laboratory Project No (internal): 110834

Date: 8/26/11

Page: 1 of 1

Client: Shannon & Wilson

Address: 400 N. 34th St, Suite 100

City, State, Zip: Seattle WA 98103 Tel: 206 695 6851

Project Name: Hi Hotel Seattle Hotel

Location: Seattle

Collected by: MSiz

Reports To (PM): Mike Reynolds Fax: 206-695-6777 Email: msiz@shanwil.com

Project No: 21-1-12341-002

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)	VOC (EPA 8260)	BTEX - EPA 8260	Gasoline Range Organics	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics	SGH (TOC) (EPA 9071)	PAH (EPA 8270 - SIM)	PCBs (EPA 8082)	Cl Pesticides (EPA 8081)	Cl Herbicides (EPA 8151)	Metals* (6020 / 200.8)	Total (T) / Dissolved (D)	Anions (IC)**	Comments/Depth
1	MW-4-082611	8/26/11	0820	water		X	X		X					X	T			HOLD Diesel
2	Drum	8/26/11	0930	water		X												
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

*Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

**Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Sample Disposal: ☐ Return to Client ☐ Disposal by Lab (A fee may be assessed if samples are retained after 30 days)

Special Remarks:

Relinquished	Date/Time	Received	Date/Time
	8/26/11 1000		8/26/11 10:00
Relinquished	Date/Time	Received	Date/Time

TAT: 24 Hour 2 Day 3 Day STD

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

www.fremontanalytical.com

1311 N. 35th St.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Shannon & Wilson
Mike Reynolds
400 N. 34th Street, Suite 100
Seattle, Washington 98103

RE: Hilton Seattle Hotel
Lab ID: 1108125

August 30, 2011

Attention Mike Reynolds:

Fremont Analytical, Inc. received 3 sample(s) on 8/25/2011 for the analyses presented in the following report.

Gasoline by NWTPH-Gx
Total Metals by EPA Method 200.8
Volatile Organic Compounds by EPA Method 8260

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Michael Dee
Sr. Chemist / Principal

Fremont Analytical

Date: *08/30/2011*

CLIENT: Shannon & Wilson
Project: Hilton Seattle Hotel
Lab Order: 1108125

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1108125-001	MW-2-082511	08/25/2011 12:25 PM	08/25/2011 2:15 PM
1108125-002	MW-3-082511	08/25/2011 11:10 AM	08/25/2011 2:15 PM
1108125-003	Trip Blank	08/17/2011 12:00 AM	08/25/2011 2:15 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Fremont Analytical

Case Narrative

WO#: **1108125**
Date: **8/30/2011**

CLIENT: Shannon & Wilson
Project: Hilton Seattle Hotel

I. SAMPLE RECEIPT:
All samples were received intact. The internal ice chest temperatures were measured on receipt and are recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Analytical Report

WO#: **1108125**
Date Reported: **8/30/2011**

Client: Shannon & Wilson
Collection Date: 8/25/2011 12:25:00 PM
Project: Hilton Seattle Hotel
Lab ID: 1108125-001
Matrix: Water
Client Sample ID: MW-2-082511

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: R1686		Analyst: PH
Gasoline	2,950	50.0		µg/L	1	8/25/2011 7:33:00 PM
Surr: 1,2-Dichloroethane-d4	95.4	65-135		%REC	1	8/25/2011 7:33:00 PM
Surr: Fluorobenzene	93.0	65-135		%REC	1	8/25/2011 7:33:00 PM
Volatile Organic Compounds by EPA Method 8260				Batch ID: R1684		Analyst: PH
Benzene	76.1	1.00		µg/L	1	8/25/2011 7:33:00 PM
Toluene	2.19	1.00		µg/L	1	8/25/2011 7:33:00 PM
Ethylbenzene	863	1.00		µg/L	1	8/25/2011 7:33:00 PM
m,p-Xylene	17.6	1.00		µg/L	1	8/25/2011 7:33:00 PM
o-Xylene	4.39	1.00		µg/L	1	8/25/2011 7:33:00 PM
Surr: 1-Bromo-4-fluorobenzene	111	72-135		%REC	1	8/25/2011 7:33:00 PM
Surr: Dibromofluoromethane	102	75.1-135		%REC	1	8/25/2011 7:33:00 PM
Surr: Toluene-d8	96.5	76.5-134		%REC	1	8/25/2011 7:33:00 PM
Total Metals by EPA Method 200.8				Batch ID: 1010		Analyst: BR
Lead	ND	1.00		µg/L	1	8/26/2011 5:35:19 PM

Qualifiers:

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

Analytical Report

WO#: **1108125**
Date Reported: **8/30/2011**

Client: Shannon & Wilson
Project: Hilton Seattle Hotel
Lab ID: 1108125-002
Client Sample ID: MW-3-082511

Collection Date: 8/25/2011 11:10:00 AM
Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: R1686		Analyst: PH
Gasoline	153	50.0		µg/L	1	8/25/2011 8:18:00 PM
Surr: 1,2-Dichloroethane-d4	84.5	65-135		%REC	1	8/25/2011 8:18:00 PM
Surr: Fluorobenzene	87.5	65-135		%REC	1	8/25/2011 8:18:00 PM
Volatile Organic Compounds by EPA Method 8260				Batch ID: R1684		Analyst: PH
Benzene	ND	1.00		µg/L	1	8/25/2011 8:18:00 PM
Toluene	ND	1.00		µg/L	1	8/25/2011 8:18:00 PM
Ethylbenzene	ND	1.00		µg/L	1	8/25/2011 8:18:00 PM
m,p-Xylene	1.35	1.00		µg/L	1	8/25/2011 8:18:00 PM
o-Xylene	ND	1.00		µg/L	1	8/25/2011 8:18:00 PM
Surr: 1-Bromo-4-fluorobenzene	108	72-135		%REC	1	8/25/2011 8:18:00 PM
Surr: Dibromofluoromethane	101	75.1-135		%REC	1	8/25/2011 8:18:00 PM
Surr: Toluene-d8	96.5	76.5-134		%REC	1	8/25/2011 8:18:00 PM
Total Metals by EPA Method 200.8				Batch ID: 1010		Analyst: BR
Lead	ND	1.00		µg/L	1	8/26/2011 5:48:27 PM

Qualifiers:

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

Fremont Analytical

Date: 8/30/2011

Work Order: 1108125
CLIENT: Shannon & Wilson
Project: Hilton Seattle Hotel

QC SUMMARY REPORT

Total Metals by EPA Method 200.8

Sample ID: **MB-1010** SampType: **MBLK** Units: **µg/L** Prep Date: **8/25/2011** RunNo: **1661**
Client ID: **MBLKW** Batch ID: **1010** Analysis Date: **8/26/2011** SeqNo: **30000**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	1.00									

Sample ID: **LCS-1010** SampType: **LCS** Units: **µg/L** Prep Date: **8/25/2011** RunNo: **1661**
Client ID: **LCSW** Batch ID: **1010** Analysis Date: **8/26/2011** SeqNo: **30001**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	52.8	1.00	50.00	0	106	85	115				

Sample ID: **1108093-003DMS** SampType: **MS** Units: **µg/L** Prep Date: **8/25/2011** RunNo: **1661**
Client ID: **BATCH** Batch ID: **1010** Analysis Date: **8/26/2011** SeqNo: **30004**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	264	1.00	250.0	0	105	70	130				

Sample ID: **1108093-003DMSD** SampType: **MSD** Units: **µg/L** Prep Date: **8/25/2011** RunNo: **1661**
Client ID: **BATCH** Batch ID: **1010** Analysis Date: **8/26/2011** SeqNo: **30005**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	268	1.00	250.0	0	107	70	130	263.5	1.62	30	

Sample ID: **1108125-001CDUP** SampType: **DUP** Units: **µg/L** Prep Date: **8/25/2011** RunNo: **1661**
Client ID: **MW-2-082511** Batch ID: **1010** Analysis Date: **8/26/2011** SeqNo: **30073**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	1.00						0	0	30	R

Qualifiers:

- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not detected at the Reporting Limit
- R RPD outside accepted recovery limits
- RL Reporting Limit
- S Spike recovery outside accepted recovery limits

Fremont Analytical

Date: *8/30/2011*

Work Order: 1108125
CLIENT: Shannon & Wilson
Project: Hilton Seattle Hotel

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID: **MB-R1686**	SampType: **MBLK**	Units: **µg/L**	Prep Date: **8/25/2011**	RunNo: **1686**
Client ID: **MBLKW**	Batch ID: **R1686**		Analysis Date: **8/25/2011**	SeqNo: **30372**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	50.0									
Surr: 1,2-Dichloroethane-d4	8.07		10.00		80.7	65	135				
Surr: Fluorobenzene	9.02		10.00		90.2	65	135				

Sample ID: **LCS-R1686**	SampType: **LCS**	Units: **µg/L**	Prep Date: **8/25/2011**	RunNo: **1686**
Client ID: **LCSW**	Batch ID: **R1686**		Analysis Date: **8/25/2011**	SeqNo: **30373**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	412	50.0	500.0	0	82.5	65	135				
Surr: 1,2-Dichloroethane-d4	8.06		10.00		80.6	65	135				
Surr: Fluorobenzene	9.14		10.00		91.4	65	135				

Sample ID: **1108125-002ADUP**	SampType: **DUP**	Units: **µg/L**	Prep Date: **8/25/2011**	RunNo: **1686**
Client ID: **MW-3-082511**	Batch ID: **R1686**		Analysis Date: **8/25/2011**	SeqNo: **30376**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	176	50.0						153.5	13.7	30	
Surr: 1,2-Dichloroethane-d4	8.08		10.00		80.8	65	135		0		
Surr: Fluorobenzene	8.76		10.00		87.6	65	135		0		

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits				

Fremont Analytical

Date: *8/30/2011*

Work Order: 1108125
CLIENT: Shannon & Wilson
Project: Hilton Seattle Hotel

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID: **MB-R1684**	SampType: **MBLK**	Units: **µg/L**	Prep Date: **8/25/2011**	RunNo: **1684**
Client ID: **MBLKW**	Batch ID: **R1684**		Analysis Date: **8/25/2011**	SeqNo: **30347**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00									
Toluene	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Surr: 1-Bromo-4-fluorobenzene	10.8		10.00		108	72	135				
Surr: Dibromofluoromethane	10.6		10.00		106	75.1	135				
Surr: Toluene-d8	9.48		10.00		94.8	76.5	134				

Sample ID: **LCS-R1684**	SampType: **LCS**	Units: **µg/L**	Prep Date: **8/25/2011**	RunNo: **1684**
Client ID: **LCSW**	Batch ID: **R1684**		Analysis Date: **8/25/2011**	SeqNo: **30348**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	10.6	1.00	10.00	0	106	65	135				
Toluene	12.0	1.00	10.00	0	120	65	135				
Surr: 1-Bromo-4-fluorobenzene	10.6		10.00		106	72	135				
Surr: Dibromofluoromethane	9.78		10.00		97.8	75.1	135				
Surr: Toluene-d8	9.41		10.00		94.1	76.5	134				

Sample ID: **1108125-001AMS**	SampType: **MS**	Units: **µg/L**	Prep Date: **8/25/2011**	RunNo: **1684**
Client ID: **MW-2-082511**	Batch ID: **R1684**		Analysis Date: **8/25/2011**	SeqNo: **30351**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	86.6	1.00	10.00	76.06	105	65	135				
Toluene	13.7	1.00	10.00	2.190	116	65	135				
Surr: 1-Bromo-4-fluorobenzene	10.0		10.00		100	72	135				

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits				

Fremont Analytical

Date: *8/30/2011*

Work Order: 1108125
CLIENT: Shannon & Wilson
Project: Hilton Seattle Hotel

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID: **1108125-001AMS** SampType: **MS** Units: **µg/L** Prep Date: **8/25/2011** RunNo: **1684**
Client ID: **MW-2-082511** Batch ID: **R1684** Analysis Date: **8/25/2011** SeqNo: **30351**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	9.71		10.00		97.1	75.1	135				
Surr: Toluene-d8	10.4		10.00		104	76.5	134				

Sample ID: **1108125-002ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **8/25/2011** RunNo: **1684**
Client ID: **MW-3-082511** Batch ID: **R1684** Analysis Date: **8/25/2011** SeqNo: **30353**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00						0	0	30	
Toluene	ND	1.00						0	0	30	
Ethylbenzene	ND	1.00						0	0	30	
m,p-Xylene	1.36	1.00						1.350	0.738	30	
o-Xylene	ND	1.00						0	0	30	
Surr: 1-Bromo-4-fluorobenzene	10.7		10.00		107	72	135		0		
Surr: Dibromofluoromethane	10.4		10.00		104	75.1	135		0		
Surr: Toluene-d8	9.41		10.00		94.1	76.5	134		0		

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits				

Fremont Analytical

Sample Log-In Check List

Client Name: **SW**	Work Order Number: **1108125**
Logged by: **Troy Zehr**	Date Received: **8/25/2011 2:15:00 PM**

Chain of Custody

1.	Were seals intact?	Yes ☐	No ☐	Not Present ☑
2.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3.	How was the sample delivered?	Client		

Log In

4.	Coolers are present?	Yes ☑	No ☐	NA ☐
5.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
6.	Were all coolers received at a temperature of >0° C to 10.0°C	Yes ☑	No ☐	NA ☐
7.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
8.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9.	Are samples properly preserved?	Yes ☑	No ☐	
10.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11.	Is there headspace present in VOA vials?	Yes ☐	No ☑	No VOA Vials ☐
12.	Did all sample containers arrive in good condition?(unbroken)	Yes ☑	No ☐	
13.	Does paperwork match bottle labels?	Yes ☑	No ☐	
14.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15.	Is it clear what analyses were requested?	Yes ☑	No ☐	
16.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☑ No ☐ NA ☐

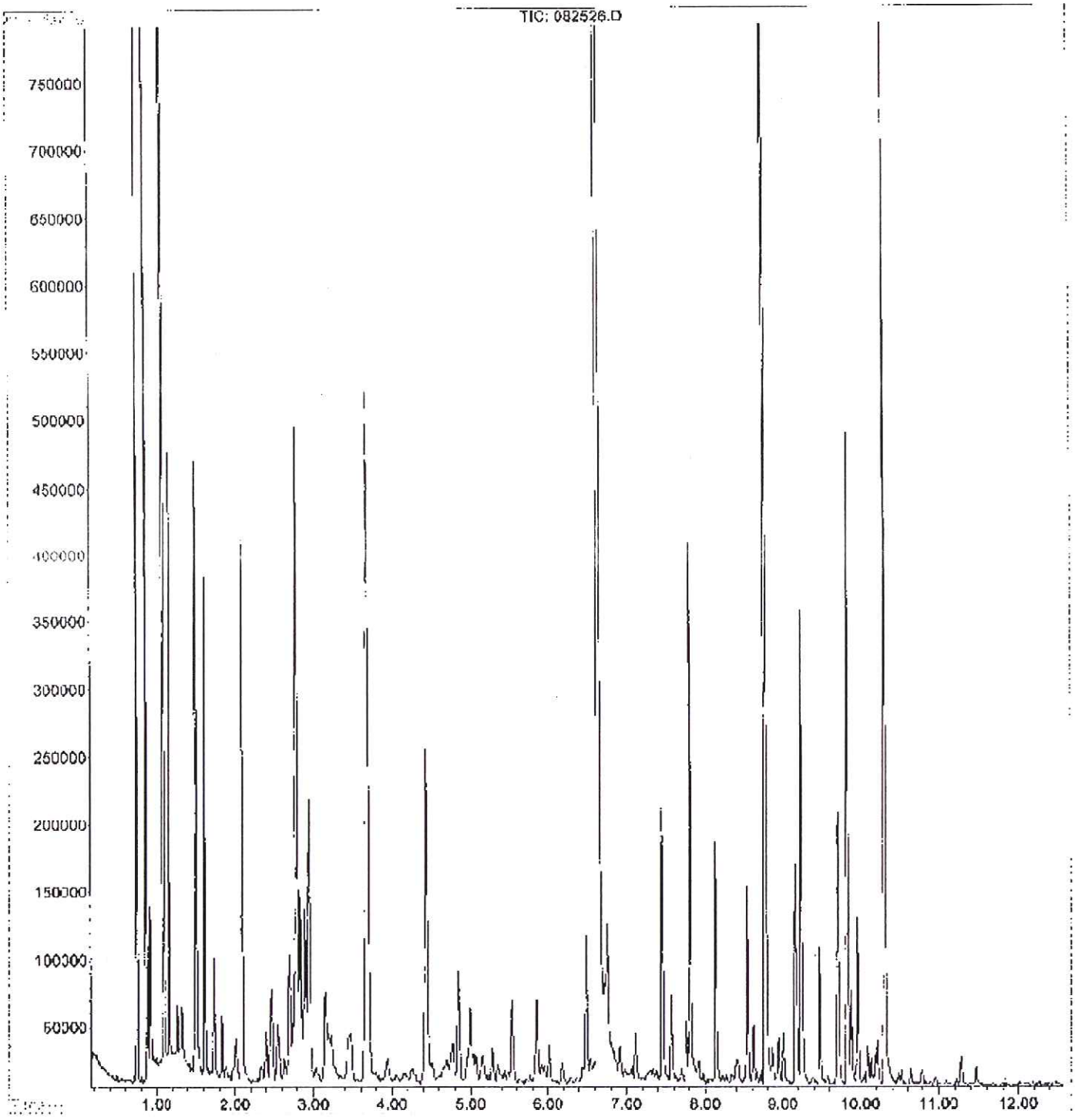
Person Notified:	Mike Reynolds	Date:	8/25/2011
By Whom:	Troy Zehr	Via:	☑ eMail ☑ Phone ☐ Fax ☐ In Person
Regarding:	Total or Dissolved Metals		
Client Instructions:	Run as Total Metals		

18. Additional remarks/Disrepancies

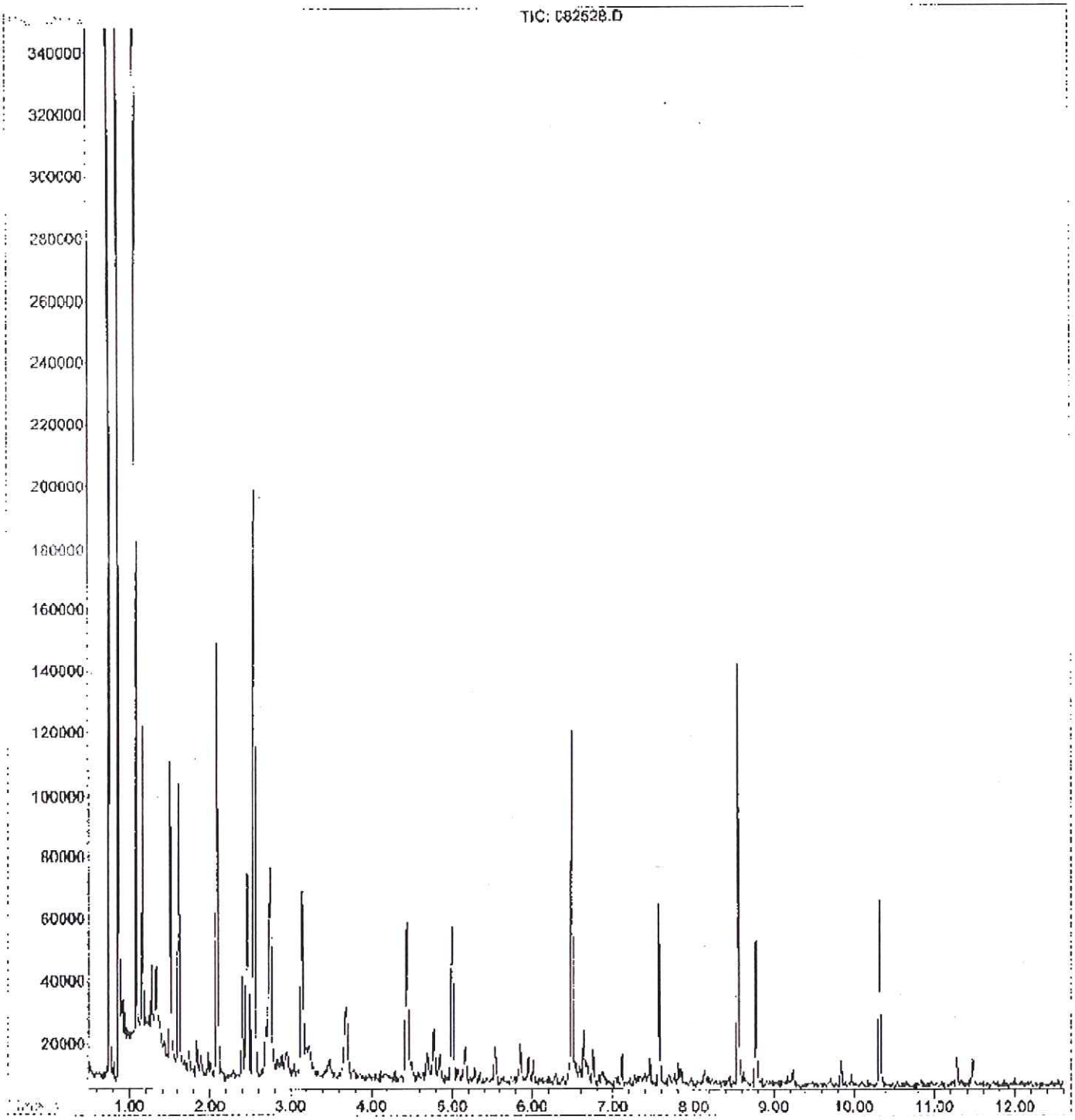
Item Information

Item #	Temp °C	Condition
Cooler	8.0	Good

File : C:\HPCHEM\1\DATA\082511\082526.D
Operator :
Acquired : 25 Aug 2011 7:33 pm using AcqMethod OFSL8260
Instrument : GC/MS Ins
Sample Name: 1108125-001A
Misc Info : SAMP O-VOC-W
Vial Number: 26



File : C:\HPCHEM\1\DATA\082511\082528.D
Operator :
Acquired : 25 Aug 2011 8:18 pm using AcqMethod OFSL8260
Instrument : GC/MS Ins
Sample Name: 1108125-002A
Misc Info : SAMP O-VOC-W
Vial Number: 28



Fremont Analytical

Chain of Custody Record

1311 N. 35th Street Tel: 206-352-3790
Seattle, WA 98103 Fax: 206-352-7178

Laboratory Project No (Internal): 1108125

Date: 8/25/11 Page: 1 of: 1

Client: Shannon & Wilson
Address: 400 N 34th St, Suite 100
City, State, Zip Seattle, WA 98103 Tel: 206-695-6855
Reports To (PM): Mike Reynolds Fax: 206-695-6855 Email: msr@shannonwilson.com

Project Name: H. Hon Seattle Hotel
Location: Seattle
Collected by: MSR
Project No: 21-1-12341-002

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)	VOC (EPA 8260)	PCB's	Chlorinated Identification (PCID)	Diesel/Heavy Oil Range (NWTPH-Dx)	SEMI VOC (EPA 8270)	PAH (EPA 8270)	Pesticides (EPA 8081)	Chlorinated (EPA 8151)	Metals* (EPA 6010/7000)	TPH (T) (NWTPH-Gx/BTEX)	Comments/Detection
1	MW-2-082511	8/25/11	Water	1225	X	X	X					X			HOLD Diesel
2	MW-3-082511	8/25/11	Water	1110	X	X	X					X			HOLD Diesel
3															
4															
5															
6															
7															
8															
9															
10															

*Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual Sb Ag As B Ba Be Ca Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

**Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate/Nitrite

Sample Disposal: ☐ Return to Client ☐ Disposal by Lab (A fee may be assessed if samples are retained after 30 days)

Special Remarks

Relinquished x	Date/Time 8/25/11	1415	Received x	Date/Time 8/25/11	14:15
Relinquished x	Date/Time		Received x	Date/Time	

TAT --> Next Day 2 Day 3 Day STD

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

www.fremontanalytical.com

APPENDIX B

DISPOSAL DOCUMENTS

EMERALD RECYCLING
WASTE ACCEPTANCE FORM

See Emerald's list of generic profiles for further instructions.
Please complete all portions of this form for approval.

A COPY OF THIS FORM MUST ACCOMPANY EACH SHIPMENT

www.emeraldnw.com

Generator Name: HILTON SEATTLE HOTEL (ETSHIL1301)

Generator Address: 1301 6TH AVENUE

SEATTLE, WA 98111

Industry Type:

Waste Name/Description:
WATER WITH GASOLINE

Process Generating Waste:
WELL PUMP-OUT

Composition (include percentages for each constituent and account for 100% of waste):

WATER 98-100%

GASOLINE 0-2% (benzene <0.005 ppm)

Physical State at 70°F:

- ☐ Solid
- ☐ Sludge
- ■ Liquid
- ☐ Powder

pH:

- ☐ ≤2
- ☐ 2-4
- ■ >4 - <10
- ☐ 10-12.5
- ☐ ≥12.5
- ☐ N/A

Flashpoint:

- ■ ≤100
- ☐ 101-139
- ☐ 140-200
- ☐ >200
- ☐ No flash

Odor (describe):

Metals Constituents: ☐ Not suspected ■ Data report attached* ☐ MSDS attached*

Other regulated contaminants: ☐ Not suspected ■ Data report attached* ☐ MSDS attached*

Shipping and volume information:

Standard shipping container: ■ Drum ☐ Tote ☐ Bulk

Estimated volume per shipment: 1 X DM15

Estimated volume per year:

Request Submitted by: S. WILSON Date: 5/22/2011

Broker Name (if appropriate): SHANNON & WILSON - MICHAEL REYNOLDS

Profile Number Assigned: 602900 Destination Facility: ☒ Airport Way ☐ Vancouver

Approved by: [signature] Approval Date: 9/14/11 Exp. Date: 9/14/13

Special handling instructions:

**All correspondence, data reports, and MSDSs corresponding to this WAF are included with the original WAF only.*
The original WAF is filed in the facility operating record.

*** IN CASE OF EMERGENCY CALL 1-800-424-9300 Contract# 7619 ***

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: EXEMPT

Manifest Document No.: 61562

2. Page 1 of 1

3. Generator's Name and Mailing Address:
HILTON SEATTLE HOTEL
400 N. 34TH ST. SUITE 100
SEATTLE, WA 98103

Site Address:
HILTON SEATTLE HOTEL
1301 6TH AVENUE
SEATTLE, WA 98111

4. Generator's Phone ((206) 695-6851

134283

5. Transporter 1 Company Name: EMERALD SERVICES, INC.

6. US EPA ID Number: WAD058364647

A. State Transporter's ID

B. Transporter 1 Phone: (206) 832-3000

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address:
EMERALD SERVICES INC - AIRPORT WAY
1500 AIRPORT WAY S.
SEATTLE, WA 98134

10. US EPA ID Number: WAD058367152

E. State Facility's ID

F. Facility's Phone: (206) 832-3090

11. WASTE DESCRIPTION	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. Non regulated waste - liquid	1	DM	16	G
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above

1)G02900 Rinse water or process water w/ trace organics

WAF ATTACHED

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

REPORT ANY RQ DISCHARGE TO NATIONAL RESPONSE CENTER 800-424-8802, AND 911 EMERGENCY NUMBER OR LOCAL OPERATOR. GENERATOR CONTACT: MICHAEL REYNOLDS (206) 695-6851

GENERATOR

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name: Scott Lykes

Signature:

Date: Month 9 Day 26 Year 11

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Steve A. LaFrance

Signature: Steven A LaFrance

Date: Month 9 Day 26 Year 11

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name: Antonio Pedroza

Signature:

Date: Month 9 Day 30 Year 11

NON-HAZARDOUS WASTE

APPENDIX C

IMPORTANT INFORMATION ABOUT YOUR GEOTECHNICAL/ENVIRONMENTAL REPORT

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

Attachment to and part of Report 21-1-12341-002

Date: October 14, 2011
To: Mr. Frank Finneran
Hilton Seattle Hotel

IMPORTANT INFORMATION ABOUT YOUR GEOTECHNICAL/ENVIRONMENTAL REPORT

CONSULTING SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES AND FOR SPECIFIC CLIENTS.

Consultants prepare reports to meet the specific needs of specific individuals. A report prepared for a civil engineer may not be adequate for a construction contractor or even another civil engineer. Unless indicated otherwise, your consultant prepared your report expressly for you and expressly for the purposes you indicated. No one other than you should apply this report for its intended purpose without first conferring with the consultant. No party should apply this report for any purpose other than that originally contemplated without first conferring with the consultant.

THE CONSULTANT'S REPORT IS BASED ON PROJECT-SPECIFIC FACTORS.

A geotechnical/environmental report is based on a subsurface exploration plan designed to consider a unique set of project-specific factors. Depending on the project, these may include: the general nature of the structure and property involved; its size and configuration; its historical use and practice; the location of the structure on the site and its orientation; other improvements such as access roads, parking lots, and underground utilities; and the additional risk created by scope-of-service limitations imposed by the client. To help avoid costly problems, ask the consultant to evaluate how any factors that change subsequent to the date of the report may affect the recommendations. Unless your consultant indicates otherwise, your report should not be used: (1) when the nature of the proposed project is changed (for example, if an office building will be erected instead of a parking garage, or if a refrigerated warehouse will be built instead of an unrefrigerated one, or chemicals are discovered on or near the site); (2) when the size, elevation, or configuration of the proposed project is altered; (3) when the location or orientation of the proposed project is modified; (4) when there is a change of ownership; or (5) for application to an adjacent site. Consultants cannot accept responsibility for problems that may occur if they are not consulted after factors which were considered in the development of the report have changed.

SUBSURFACE CONDITIONS CAN CHANGE.

Subsurface conditions may be affected as a result of natural processes or human activity. Because a geotechnical/environmental report is based on conditions that existed at the time of subsurface exploration, construction decisions should not be based on a report whose adequacy may have been affected by time. Ask the consultant to advise if additional tests are desirable before construction starts; for example, groundwater conditions commonly vary seasonally.

Construction operations at or adjacent to the site and natural events such as floods, earthquakes, or groundwater fluctuations may also affect subsurface conditions and, thus, the continuing adequacy of a geotechnical/environmental report. The consultant should be kept apprised of any such events, and should be consulted to determine if additional tests are necessary.

MOST RECOMMENDATIONS ARE PROFESSIONAL JUDGMENTS.

Site exploration and testing identifies actual surface and subsurface conditions only at those points where samples are taken. The data were extrapolated by your consultant, who then applied judgment to render an opinion about overall subsurface conditions. The actual interface between materials may be far more gradual or abrupt than your report indicates. Actual conditions in areas not sampled may differ from those predicted in your report. While nothing can be done to prevent such situations, you and your consultant can work together to help reduce their impacts. Retaining your consultant to observe subsurface construction operations can be particularly beneficial in this respect.

A REPORT'S CONCLUSIONS ARE PRELIMINARY.

The conclusions contained in your consultant's report are preliminary because they must be based on the assumption that conditions revealed through selective exploratory sampling are indicative of actual conditions throughout a site. Actual subsurface conditions can be discerned only during earthwork; therefore, you should retain your consultant to observe actual conditions and to provide conclusions. Only the consultant who prepared the report is fully familiar with the background information needed to determine whether or not the report's recommendations based on those conclusions are valid and whether or not the contractor is abiding by applicable recommendations. The consultant who developed your report cannot assume responsibility or liability for the adequacy of the report's recommendations if another party is retained to observe construction.

THE CONSULTANT'S REPORT IS SUBJECT TO MISINTERPRETATION.

Costly problems can occur when other design professionals develop their plans based on misinterpretation of a geotechnical/environmental report. To help avoid these problems, the consultant should be retained to work with other project design professionals to explain relevant geotechnical, geological, hydrogeological, and environmental findings, and to review the adequacy of their plans and specifications relative to these issues.

BORING LOGS AND/OR MONITORING WELL DATA SHOULD NOT BE SEPARATED FROM THE REPORT.

Final boring logs developed by the consultant are based upon interpretation of field logs (assembled by site personnel), field test results, and laboratory and/or office evaluation of field samples and data. Only final boring logs and data are customarily included in geotechnical/environmental reports. These final logs should not, under any circumstances, be redrawn for inclusion in architectural or other design drawings, because drafters may commit errors or omissions in the transfer process.

To reduce the likelihood of boring log or monitoring well misinterpretation, contractors should be given ready access to the complete geotechnical engineering/environmental report prepared or authorized for their use. If access is provided only to the report prepared for you, you should advise contractors of the report's limitations, assuming that a contractor was not one of the specific persons for whom the report was prepared, and that developing construction cost estimates was not one of the specific purposes for which it was prepared. While a contractor may gain important knowledge from a report prepared for another party, the contractor should discuss the report with your consultant and perform the additional or alternative work believed necessary to obtain the data specifically appropriate for construction cost estimating purposes. Some clients hold the mistaken impression that simply disclaiming responsibility for the accuracy of subsurface information always insulates them from attendant liability. Providing the best available information to contractors helps prevent costly construction problems and the adversarial attitudes that aggravate them to a disproportionate scale.

READ RESPONSIBILITY CLAUSES CLOSELY.

Because geotechnical/environmental engineering is based extensively on judgment and opinion, it is far less exact than other design disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, consultants have developed a number of clauses for use in their contracts, reports and other documents. These responsibility clauses are not exculpatory clauses designed to transfer the consultant's liabilities to other parties; rather, they are definitive clauses that identify where the consultant's responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these definitive clauses are likely to appear in your report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.

The preceding paragraphs are based on information provided by the
ASFE/Association of Engineering Firms Practicing in the Geosciences, Silver Spring, Maryland