July 27, 2001
LSI - ADAPT Job No. WA01-6486

Interwest Construction and Development, Inc.
1425 - 22nd Street Northwest, Suite E
Auburn, Washington 98001-3334

Attention: Mr. Joel Kessel

Subject: Limited Phase II Environmental Site Assessment
Truck Operator's Property
407A Porter Way
Milton, Washington

Dear Mr. Kessel:

The following report summarizes the results of LSI-ADAPT's (ADAPT's) Limited Phase II Environmental Site Assessment at the above referenced site. Written authorization to complete our work was given by Mr. Joel Kessel of Interwest Construction and Development, Inc.

This report has been prepared for the exclusive use of Interwest Construction and Development, Inc., and their agents for specific application to the project site. Use or reliance upon this report by a third party is at their own risk. ADAPT does not make any representation or warranty, express or implied, to such other parties as to the accuracy or completeness of this report or the suitability of its use by such other parties for any purpose whatever, known or unknown, to ADAPT.

SUMMARY OF PREVIOUS SITE WORK

Previous environmental reports completed on the current subject property and adjacent property to the west that were available for our review are as follows:

- Phase II Environmental Site Assessment, GTI Property, Milton, Washington (Columbia Environmental, Project No. 96652-1, July 1996).
- Remedial Investigation (Soil), The 407 Porter Way Project, Milton, Pierce County, Washington (Saltbush Environmental Services, Inc., dated August 26, 1999, Job No. 990321001).
- Remedial Investigation (Groundwater), The 407 Porter Way Project, Milton, Pierce County, Washington (Saltbush Environmental Services, Inc., dated October 19, 1999, Job No. 990321001).

Columbia Environmental completed a limited subsurface assessment of the property in July 1996. The assessment included advancing three soil borings and sampling soil and groundwater. The results of the assessment indicated that soil and groundwater samples collected to the east of the truck maintenance facility (on the western portion of the current subject parcel) exhibited diesel and motor oil-range total petroleum hydrocarbon (TPH) concentrations of to 730 parts per million (ppm), which were in excess of the Washington Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method A cleanup

level. Specific groundwater test results were not given, and analytical test certificates were not provided. The report indicated that no TPH was contained in two water samples collected from the ditches around the periphery of the site. The report recommended that further assessment should be performed. One of the maps provided for this report depicted oil/water separators on the west-central and southwest portions of the current subject site. The plan also showed drum storage areas on the south-central and north-central portions of the site.

The soil and groundwater remediation assessments completed by Saltbush included advancing fourteen (14) soils borings and an additional four borings that were completed as groundwater monitoring wells. The results of the assessments indicated an area of near surface petroleum impacts that were in excess of the MTCA Method A cleanup level of 200 ppm, with TPH concentrations ranging up to about 930 ppm. The report depicts this plume extending onto the western margin of the current subject parcel, as shown on the enclosed Site and Exploration Plan, Figure 2. Initial groundwater samples from two Geoprobe explorations performed near the western property boundary exhibited diesel and motor oil-range TPH concentrations of up to 2,000 parts per billion (ppb) and 12,000 ppb, respectively.

Groundwater samples were subsequently collected from four groundwater monitoring wells (see Figure 2). A soil sample collected from well MW-4, located adjacent to the truck repair building and former above ground waste oil storage tank, exhibited detectable concentrations of volatile organic compounds, including 230 ppm of 1,4 dichlorobenzene, which was in excess of the MTCA Method B cleanup level of 182 ppm. This sample also exhibited diesel and motor oil-range TPH concentrations of 400 ppm and 410 ppm, respectively. This sample did not exhibit detectable concentrations of PCBs, and exhibited low-level concentrations of heavy metals that were below MTCA cleanup levels. Soil samples collected from the other borings did not contain detectable concentrations of TPH. A water sample collected from well MW-4 exhibited a xylenes concentrations of 28 parts per billion (ppb) which is above the MTCA Method A cleanup level of 20 ppb. This sample did not exhibit detectable concentrations of other volatile organic compounds. The water samples collected from wells MW-1 through MW-4 did not exhibit detectable concentrations of gasoline through motor oil-range TPH. Groundwater depths at the time of sampling were about 2.98 feet to 3.47 feet below ground surface, with an inferred migration direction to the east, toward the current subject parcel.

Based upon our discussions with representatives from H & H and Saltbush Environmental Services, Inc., it is our understanding that no additional environmental work has been done to date. The representatives from H & H stated that the subject site and adjacent parcel to the west were filled during the 1960's and 1970's. They indicated that a substantial amount of wood debris from the waterfront logging yards was used for fill on the property. It was also thought that slag waste from Asarco's Tacoma plant may have been utilized for ballast at the logging docks, and therefore may have been incorporated into these materials.

PURPOSE AND SCOPE

The purpose of this Limited Phase II assessment was to assess current soil and groundwater conditions across the parcel, including near the previously identified release from the H & H Equipment property, and review existing plans and permits at the City of Milton's offices with regard to the site. Our scope of work included advancing five test pit excavations to a maximum depth of 11 feet bgs. The exploration locations are shown on the attached Site and Exploration Plan, Figures 2. Representative soil samples were collected, logged, and screened from each exploration. Each sample collected from the explorations were screened with a photoionization detector (PID) equipped with an 10.6 eV lamp. Following screening and collection, samples were placed in laboratory prepared glass jars equipped with teflon-lined

screw-on lids. All sample jars were subsequently placed in a chilled cooler until they could be transported to an analytical laboratory under ADAPT's chain-of-custody procedures. Selected soil samples collected from the explorations were submitted for analysis for TPH by Washington TPH-Hydrocarbon Identification method for gasoline through motor oil-range hydrocarbons. Soil samples exhibiting detectable concentrations by this method were subsequently quantified for diesel and motor oil-range TPH by Ecology Method WTPH-Diesel-range extended. In addition, selected soil samples were analyzed for total lead, chromium, cadmium, and arsenic by EPA Methods 6010B.

Representative groundwater samples were collected from test pits TP-2, TP-3, TP-4, and TP-5. Samples were collected utilizing polyethylene tubing and a peristaltic pump. Water samples were collected near the phreatic surface at the time of sampling. Water was slowly pumped from the probe locations until it was relatively clear and non-turbid. Samples were subsequently collected. After collection, samples were placed in laboratory prepared glass jars equipped with teflon-lined screw-on lids. All sample containers were subsequently placed in a chilled cooler until they could be transported to an analytical laboratory under ADAPT's chain-of-custody procedures. Selected groundwater samples collected from the explorations were submitted for analysis for TPH by Washington TPH-Hydrocarbon Identification method for gasoline through motor oil-range hydrocarbons. Groundwater samples exhibiting detectable concentrations by this method were subsequently quantified for gasoline, diesel and motor oil-range TPH by Ecology Method WTPH-Diesel-range extended and benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8020. In addition, selected soil samples were analyzed for total lead, chromium, cadmium, and arsenic by EPA Methods 6000/7000.

SITE DESCRIPTION

A Location Map (Figure 1) and Site and Exploration Plan (Figure 2) are included in Appendix A. The subject site is located at 407A Porter Way within the city limit of Milton, Washington (Section 26, Township 20 North, Range 5 East, W.M.). The subject parcel is a rectangular-shaped site that covers a reported 147,840 square feet. Topographically, the site is generally flat with total elevation change of less than 5 feet. At the time of our site visit, the site supported two 60-foot office trailers and four smaller storage containers near the northwest corner of the property, and two 40-foot trailers and parked equipment near the southeast corner of the property. We observed wood debris and pallet boards stored along the north-central portion of the site. We also observed two stormwater catch basins on the western portion of the site. The bulk of the property was gravel-surfaced, with other areas thinly to moderately overgrown with grass and weeds. While minor surficial staining was present in the gravel on the western portion of the property, we did not observe any obvious signs of surficial spills or impacts, such as significant surficial staining or stressed vegetation. We also did not observe any stored drums, or evidence of above ground or underground storage tanks (USTs or ASTs). The site is bordered to the west by H & H Diesel, and on all other sides by undeveloped or rural/residential properties.

The property resides in the lowland where Hylebos Creek enters the northern limit of the Puyallup River floodplain. According to the United States Geological Survey (USGS) 7.5 minute series topographic map "Poverty Bay" (1961; photo revised 1994), the site resides at an elevation of about 20 feet above mean sea level.

RESULTS

File Review

ADAPT reviewed files concerning the site at the City of Milton Office of Public Works. The reviewed files indicated that a sewer easement was constructed along the northern side of the property in 1989. Also, two stormwater catch basins were installed on the western side of the property in 1998 which directed water offsite to the south. The files also contained two letters from the Washington Department of Ecology. An initial complaint was filed against the site on March 25, 1999 for illegally pressure washing trucks on the site. An October 2, 2000 letter from Marilou Pivirotto of Ecology stated that several of the observed conditions were in violation of their stormwater pollution prevention plan (SWPPP), including; ground stained from drums present onsite, storage of batteries and oily equipment on the ground surface, compressor condensate discharged directly on the ground, and pressure washing of vehicles on unpaved areas of the site. The letter further stated that the site was not covered by a National Pollution Elimination Discharge System (NPDES) permit. Ecology recommended that the surficially stained soil at the site be removed within ninety (90) days, the soils should be properly disposed of offsite, and a report should be written to document this action. The letter also requested that the report include confirmation sampling to indicate that removal was complete, and receipts for disposal of the contaminated soils should be provided. An October 19, 2000 letter from Ecology stated that additional site visits were made and no changes in site management were observed. We did not review any additional communication from Ecology in this regard in the City files. We attempted to contact Ms. Pivirotto at Ecology concerning this issue, and they have not responded to our telephone calls at the time of this writing.

According to a representative from H & H Diesel, Ecology was concerned that fill soils previously placed at the site may contained slag material from Asarco's Tacoma plant. No information we reviewed in the City of Milton's files mentioned this issue.

H & H Diesel at 407 Porter Way is included on Ecology's Confirmed and Suspected Contaminated Sites (C&SCS) list (dated 5/30/01), Leaking Underground Storage Tank (LUST) list (dated 6/8/01), and the RCRA hazardous waste handlers report (dated 6/13/01). The C&SCS report indicate the site has confirmed soil contamination from petroleum impacts, suspected petroleum impacts to soil and groundwater, and suspected priority metals impacts to soil and groundwater. The LUST report indicates that the affected media at the site include soil and groundwater, and the site status, in both cases, is listed as "awaiting cleanup". The site is also listed as a RCRA conditionally exempt generator.

Subsurface Conditions

In general the test pit explorations disclosed crushed rock surfacing over medium dense to dense, moist variable gray to brown to black, sand to silty sand soils with occasional brick, asphalt, concrete, metal piping and organic fragments interpreted to be fill soils. These soils extended to depth ranging from approximately 4 to 8 feet bgs. These soils were underlain by moist to wet, brown wood fragments with variable sand and gravel. In general, the wood debris appeared to become finer with depth, and terminated in test pit TP-3 in sawdust-like material, and coarser wood debris in the other test pits. Test pit TP-3 also disclosed a 1½-foot thick stratum of cement-like material at the 7-foot to 8½-foot depth. For more specific soil information, please refer to the attached test pit exploration logs included in Appendix C.

Soil samples screened from approximately the 1½ to 3-foot depth in test pit TP-2, in the area of the former shop building, exhibited a slight petroleum odor and PID readings of up to 5 ppm. Soils screened from the other explorations did not exhibit signs of significant petroleum impacts, such as staining, odors, or significant PID readings.

Groundwater was encountered at depths of about 5½ feet to 8 feet bgs in the explorations at the time of our site work. Groundwater conditions should be expected to fluctuate due to season, amount of precipitation, and other on-site and off-site factors.

Analytical Results

Soil: Soil samples TP-1/3-3.5, TP-2/1.5-2, TP-3/3-3.5, TP-4/2-2.5 and TP-5/2-2.5 were screened for gasoline through motor oil-range TPH by Ecology Method WTPH-HCID. Samples TP-2/1.5-2 and TP-3/3-3.5 did not exhibit detectable concentrations of TPH. The other samples exhibited detectable concentrations of motor oil-range TPH and were subsequently quantified using Ecology method WTPH-D extended. Samples TP-1/3-3.5, TP-4/2-2.5 and TP-5/2-2.5 exhibited motor-range TPH concentrations of 100 ppm, 330 ppm, and 380 ppm, respectively. All of the above samples, along with sample TP-3/7-7½, were also analyzed for total lead, chromium, cadmium, and arsenic. All of the samples, excluding TP-3/7-7½, exhibited non-detectable to low-level concentrations of these total metals that were below MTCA Method A cleanup levels. Sample TP-3/7-7½ exhibited an arsenic concentration of 45 ppm, which is in excess of the MTCA Method A cleanup level of 20 ppm. Soil analytical test results are summarized on the enclosed Table 1, and analytical test certificates are included in Appendix D.

Groundwater: Groundwater samples TP-4/W-1, and TP-5/W-1 exhibited gasoline-range TPH concentrations of 680 parts per billion (ppb) and 180 ppb, and low level concentrations of xylenes, both of which are below current MTCA Method A cleanup levels. Sample TP-4/W-1 did not exhibit detectable concentrations of diesel or motor oil-range TPH, while sample TP-5/W-1 exhibited diesel and motor oil-range TPH concentrations of 490 ppb and 3,100 ppb. Cumulatively, these concentrations are in excess of the MTCA cleanup level of 500 ppb. Samples TP-2/W-1 and TP-3/W-1 exhibited concentrations of total lead, chromium, arsenic and cadmium (TP-3/W-1 only) that were in excess of MTCA Method A cleanup levels. Groundwater test results are summarized on the enclosed Table 2, and analytical test certificates are included in Appendix D.

CONCLUSIONS

Soils: Previous analytical test results completed by others (Saltbush) indicated near surface soils located along the west-central margin of the current subject property exhibited motor oil-range TPH concentrations of up to 930 parts per million. The results of the current study revealed the presence of slightly elevated heavy-end TPH concentrations in shallow soils collected from two of the on-site test pits. These concentrations are in excess of the current MTCA Method A cleanup level of 200 ppm for non-gasoline TPH in soils. The current Interim TPH policy could be utilized to establish a risk-based calculated cleanup value. It has been our experience that the risk-based calculated values are often more lenient than the strict MTCA Method A cleanup levels. It is our understanding that revised Ecology cleanup levels will be effective on August 15, 2001. According to proposed guideline documents we have received, the new Method A cleanup level for diesel-range TPH will be increased to 2,000 ppm for unlimited site usage. Therefore, the residual concentrations of TPH in soil in the areas tested for the current and past assessments at the site falls below this proposed value. Only one of the soil samples exhibited metals concentrations (arsenic) in excess of the MTCA Method A cleanup level. Given that this

result was from a discrete sample from a discontinuous stratum, it does not appear to represent a significant risk to the site. Also, in our opinion, the petroleum hydrocarbons encountered in these samples do not appear to represent a significant risk to the site. However, if such soils are removed from the property, they would be regarded as "problem waste" due to the odor and should be properly manifested and disposed of at a Subtitle "D" Landfill or approved petroleum thermal treatment facility.

Groundwater: Initial groundwater sampling from Geoprobe explorations completed by Saltbush indicated elevated concentrations of diesel and motor oil-range TPH; however, further groundwater testing from four monitoring wells installed on the current subject site and adjacent parcel to the west did not indicate detectable concentrations of gasoline-through motor oil-range TPH. The diesel and heavy hydrocarbons encountered in water sample TP-5/W-1 may be the result of the release associated with the H & H facility, as discovered by Saltbush Environmental Services, Inc. However, the source of the low-level gasoline-range TPH and xylenes encountered in samples TP-4/W-1 and TP-5/W-1 was not obvious, and may be associated with past surficial spills. Also, the elevated metals concentrations exhibited by water samples from test pits TP-2 and TP-3 may be related to the possible presence of ASARCO slag contained in the fill soils. However, only one of the analyzed soil samples exhibited elevated concentrations of heavy metals, and we did not observe any slag or clinker-type fragments within the fill matrix. Both the elevated concentrations of heavy TPH and select heavy metals may be biased due to the sampling method. The water samples collected from the test pits included some suspended organic matter and sediment. It is therefore possible that the measured metal and TPH concentrations may be representative of the suspended matter contained within the samples and may not be entirely in the dissolved phase. Typically, groundwater samples collected from resource protection groundwater monitoring wells using low flow purge sampling technology provide more representative and repeatable results.

Based upon our discussions with Saltbush Environmental, Inc. the assessment reports submitted to Ecology consider both the H & H Diesel property and the subject property as one parcel. No information we were able to obtain indicated that Ecology has granted "No Further Action" status for the site. Therefore, the current subject site must be considered a listed confirmed contaminated site. Application for "No Further Action" status would include submitting a report summarizing the site work completed to date in the prescribed Department of Ecology format.

The Method A groundwater cleanup level for diesel-range TPH is 500 ppb. However, in our opinion, there may be justification for concluding that the groundwater at the site is "non-potable" per Washington Administrative Code (WAC) 173-340-720. Therefore, it is possible that groundwater cleanup levels may be established on a site specific basis.

At this time, we do not know what conditions of concern raised by Ecology with regard to the violations of the SWPP plan are directed specifically at the current subject parcel. As was previously stated, we have not been able to contact Ecology concerning this issue. We recommend contacting Ecology to discuss their concerns with regard to the eastern undeveloped parcel. Given that the site is zoned for industrial usage and the likely "non-potable" nature of the near-surface aquifer, we do not anticipate that Ecology would aggressively pursue any current or future owner/operators with regard to enforcement order mandated additional site cleanup or assessment activities. However, given the previous site violations and requests by Ecology, it would be prudent to discuss their concerns with the site with respect to future development.

We anticipate that groundwater monitoring may be requested by Ecology. The existing resource protection wells, if viable, could be utilized for additional groundwater monitoring. It is our understanding that the wells have been sampled one time. Typically, Ecology has often required four (4) quarters of seasonal compliance sampling levels before granting "no further action" status for groundwater at a site.

Specific liability associated with the residual petroleum impacts in the soil and groundwater may occur if impacted soils and groundwater are exposed during subsurface work, such as trenching, pile installation, or dewatering. Such impacted soils and groundwater would need to handled, manifested, and treated or disposed of properly.

Finally, our test pits were not extended into native soils, and all of the explorations disclosed wood waste materials below depths of 4 to 8 feet below ground surface and extending beyond the full depth explored (up to 11 feet bgs). These conditions may require deep pile support for planned future site buildings.

LIMITATIONS

This report has been prepared to aid in the evaluation of the site. Our conclusions and recommendations have been prepared in accordance with generally accepted professional engineering principles and practices. We make no other warranty, either express or implied. Our conclusions are based on results of field explorations in a limited portion of the subject site, and on our interpretation of analytical results. If conditions are encountered that appear different from those described in this report, we must be notified so we may review and verify or modify our recommendations.

We appreciate the opportunity to be of service to you. If you have any questions or need additional information please contact us at 206-654-7045.

Respectfully Submitted,

LSI - ADAPT

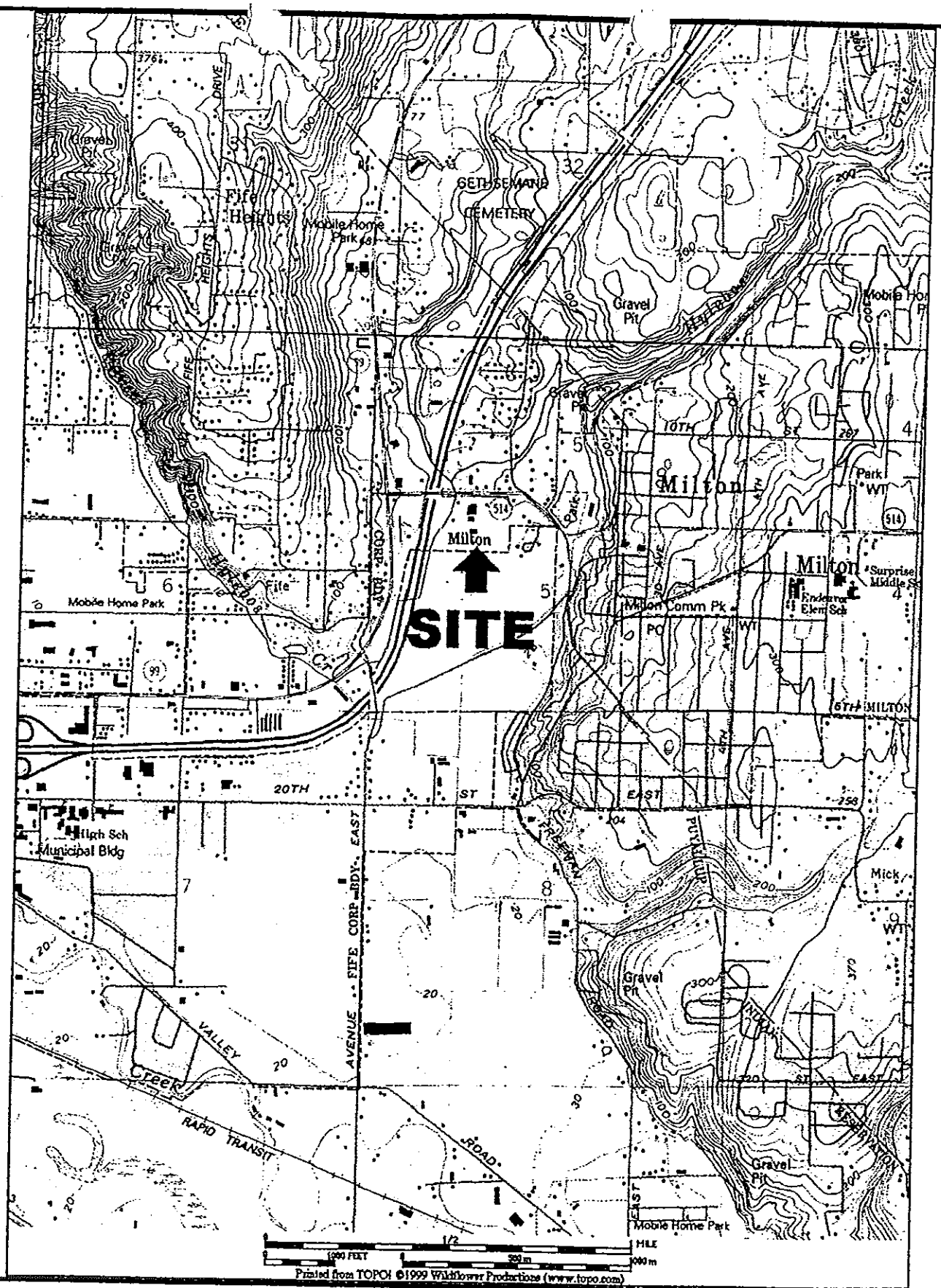
Daryl S. Petrarca, R.E.A., VP
Environmental Services

Charles C. Cacek, Senior Project Manager
Environmental Services

Enclosures: Appendix A – Figures
Appendix B – Tables 1 and 2
Appendix C – Test Pit Logs
Appendix D – Analytical Test Certificates

APPENDIX A

FIGURES



LSI ADAPT

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FIGURE 1 - Location/Topographic Map

Project : Truck Operators Property
Location : 407a Porter Way
Milton, Washington
Client : Interwest Consrtuction & Development
Date : 07/11/01 **Job #** : S-WA-01-6486

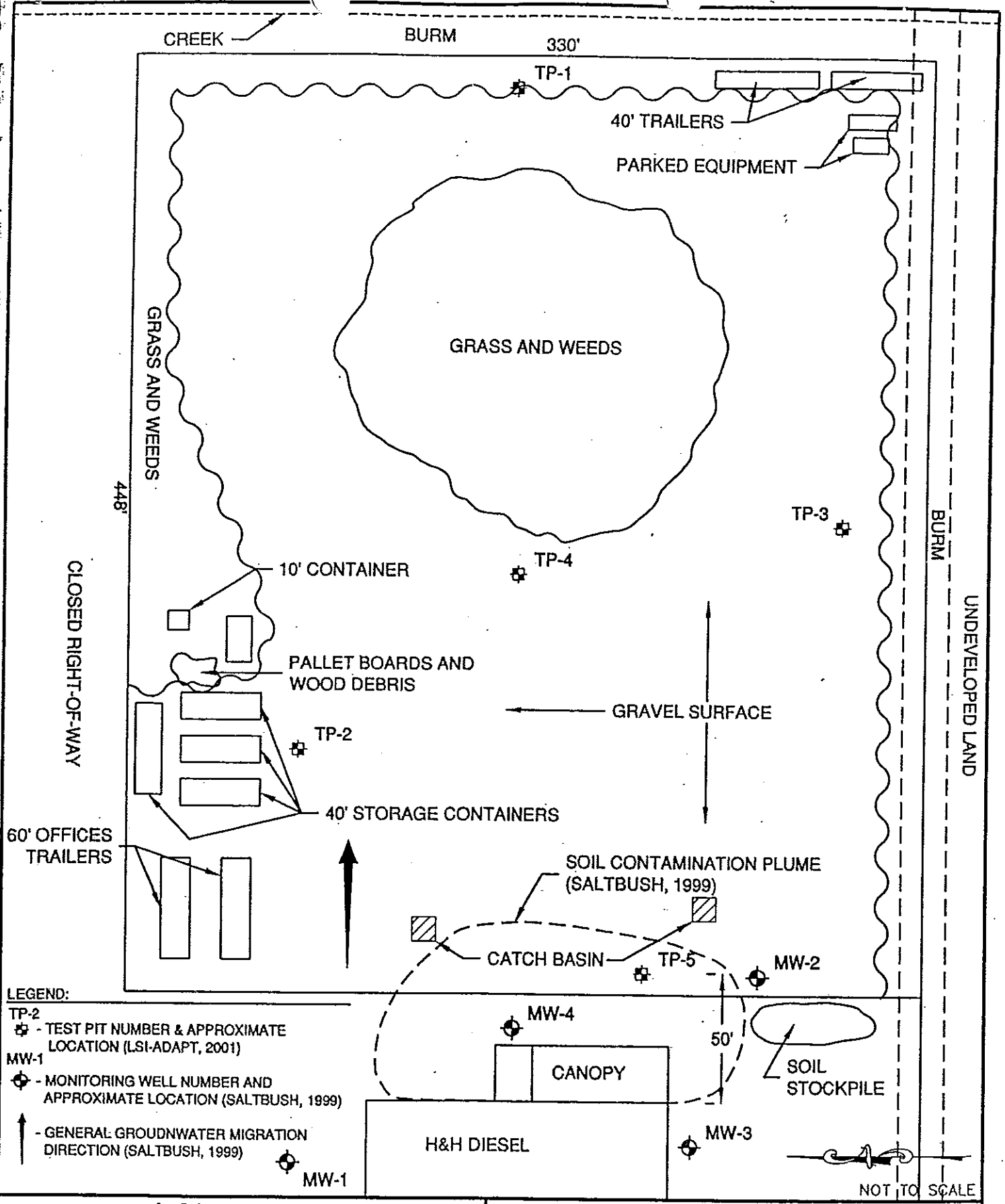

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FIGURE 2 - Site Plan

Project : Truck Operators Property
Location : 407a Porter Way
Milton, Washington
Client : Interwest Consrtuction & Development
Date : 07/11/01 **Job #** : S-WA-01-6486

APPENDIX B

TABLES 1 AND 2

TABLE 1: SUMMARY OF ANALYTICAL TEST RESULTS - SOIL
407A PORTER WAY
MILTON, WASHINGTON
LSI - ADAPT JOB NO. S-WA01-6486

Samples collected on June 28, 2001

Sample No.	Depth (feet)	PID (ppm)	WTPH-HCID			Lead (ppm)	Chromium (ppm)	Cadmium (ppm)	Arsenic (ppm)
			Gasoline (ppm)	Diesel (ppm)	Motor Oil (ppm)				
TP-1/3.0-3.5	3.0 to 3.5	0.2	<23	<58	*100	55	42	<0.58	12
TP-2/1.5-2.0	1.5 to 2.0	5	<22	<54	<110	<5.4	<0.54	<0.54	<11
TP-3/3.0-3.5	3.0 to 3.5	0.4	<25	<63	<130	12	25	<0.63	<13
TP-3/7.0-7.5	7.0 to 7.5	0.6	NT	NT	NT	<14	50	<1.4	15
TP-4/2.0-2.5	2.0 to 2.5	0.4	<22	<56	*330	28	32	<0.56	<11
TP-5/2.0-2.5	2.0 to 2.5	0.9	<22	<56	*380	56	26	<0.56	<11
MTCA			100	2,000	2,000	250	2,000	2	20

Notes:
ppm = all concentrations reported in parts per million, which is equivalent to milligrams/kilogram
PID = Photoionization detector
WTPH-HCID = Washington Total Petroleum Hydrocarbons - Hydrocarbon Identification
Lead, Chromium, Cadmium and Arsenic analyzed by EPA Method 6010
MTCA: Model Toxics Control Act (Method A cleanup levels shown)
= exceeds current MTCA Method A Cleanup Level

* = Samples exhibited a detectable concentration of diesel-range TPH and were subsequently analyzed for TPH by WTPH-Diesel range extended (diesel and oil-range TPH).

TABLE 2: SUMMARY OF ANALYTICAL TEST RESULTS - GROUNDWATER
407A PORTER WAY
MILTON, WASHINGTON
LSI - ADAPT JOB NO. S-WA01-6486

Samples collected on June 28, 2001

Sample No.	WTPH-HCID			B	T	E	X	Lead	Chromium	Cadmium	Arsenic
	Gasoline (ppb)	Diesel (ppb)	Motor Oil (ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
TP-2/W-1	NT	NT	NT	NT	NT	NT	NT	62	21	<4.4	62
TP-3/W-1	NT	NT	NT	NT	NT	NT	NT	330	110	14	180
TP-4/W-1	680	<250	<500	<1	<1	<1	3.5	NT	NT	NT	NT
TP-5/W-1	180	490	3,100	<1	<1	<1	3.1	NT	NT	NT	NT
MTCA	800/1,000	500	500	5	1,000	700	1,000	15	50	5	5

Notes:
ppb = all concentrations reported in parts per billion, which is equivalent to micrograms/kilogram
WTPH-HCID = Washington Total Petroleum Hydrocarbons - Hydrocarbon Identification
BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes by EPA Method 8020
Lead, Chromium, Cadmium and Arsenic analyzed by EPA Method 200.8
MTCA: Model Toxics Control Act (Method A cleanup levels shown)
= In excess of current MTCA Method A cleanup level

* = Samples exhibited a detectable concentration of diesel-range TPH and were subsequently

APPENDIX C

TEST PIT EXPLORATION LOGS

TEST PIT LOG

LSI ADAPT
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Seattle, Washington 98134
TEL: 206.654.7045 FAX: 206.654.7048

PROJECT : Truck Operators Property
LOCATION : 407A Porter Way
Milton, Washington

Job Number : WA01-6486

Test Pit No. : **TP-1**

Interwest Construction & Development

Ground Surface Elevation : N/A

Elevation Reference : N/A

DEPTH (feet)	SAMPLE NUMBER	SAMPLE TYPE	POCKET PENETROMETER (tons/ft²)	TORVANE (tons/ft²)	P.I.D. (ppm)	WATER BEARING ZONE	MATERIAL DESCRIPTION	LABORATORY TESTING
0							6-inches of crushed rock surfacing over dense, moist, dark brown with gray, silty, gravelly, fine to medium SAND with metal piping, rubbish, wood and concrete (Fill)	
					0.2			WTPH-HCID Total Metals
5							Medium stiff, moist, brown, fine, sandy SILT with wood and fine organics (Fill)	
					0.6		With abundant wood debris and straw	
10					0.2	▽	Medium stiff, dark gray to black, fine, sandy SILT with some broken asphalt, refusal at 11.0 feet depth	
							Test pit terminated at 11.0 feet; No caving observed; Very slow seepage at base of pit.	
15								
20								

LEGEND

- ▼ DATE — Static Water Level at Drilling
- ▽ DATE — Static Water Level
- Perched Groundwater
- 5 gal. Bucket — Bucket Sample
- 100 to 1000 g — Bag Sample
- Water Bearing
- Water Seepage Indicator
- MC = XX — Moisture Content (%)
- XX — Grain Size Analysis (% fines shown)

File Name : Test Pit Log.dwg

Start Date : 06/28/01

Completion Date : 06/28/01

Logged By : C.C.C.

TEST PIT LOG

LSI ADAPT
800 Maynard Avenue South, Suite 403
Seattle, Washington 98134
TEL: 206.654.7045 FAX: 206.654.7048

PROJECT : Truck Operators Property
LOCATION : 407A Porter Way
Milton, Washington

Job Number : WA01-6486

Test Pit No. : TP- 2

Interwest Construction & Development

Ground Surface Elevation : N/A

Elevation Reference : N/A

DEPTH (feet)	SAMPLE NUMBER	SAMPLE TYPE	POCKET PENETROMETER (tons/ft²)	TORVANE (tons/ft²)	P.I.D. (ppm)	WATER BEARING ZONE	MATERIAL DESCRIPTION	LABORATORY TESTING
0							9-inches of crushed rock surfacing over dense, moist, gray, silty, gravelly, fine to medium SAND, trace organics (Fill)	
					5.0			WTPH-HCID Total Metals
					0.2		Loose, moist to wet, brown, organic-rich, fine SAND with some broken asphalt (Fill)	
5						▽	Wet, broken wood debris and gravel (Fill)	
							Refusal at 8.5 feet depth	
10							Test pit terminated at 8.5 feet; No caving observed; Moderate seepage observed at 6.0 feet depth.	
15								
20								

LEGEND

- DATE ▼ — Static Water Level at Drilling
- DATE ▽ — Static Water Level
- Perched Groundwater
- 5 gal. Bucket — Bucket Sample
- 100 to 1000 g — Bag Sample
- Water Bearing
- Water Seepage Indicator
- MC = XX — Moisture Content (%)
- XX — Grain Size Analysis (% fines shown)

File Name : Test Pit Log.dwg

Start Date : 06/28/01

Completion Date : 06/28/01

Logged By : C.C.C.

TEST PIT LOG

LSI ADAPT
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Seattle, Washington 98134
TEL: 206.654.7045 FAX: 206.654.7048

PROJECT : Truck Operators Property
LOCATION : 407A Porter Way
Milton, Washington

Job Number : WA01-6486

Test Pit No. : TP-3

Interwest Construction & Development

Ground Surface Elevation : N/A

Elevation Reference : N/A

DEPTH (feet)	SAMPLE NUMBER	SAMPLE TYPE	POCKET PENETROMETER (tons/ft²)	TORVANE (tons/ft²)	P.I.D. (ppm)	WATER BEARING ZONE	MATERIAL DESCRIPTION	LABORATORY TESTING
0							8 inches of crushed rock surfacing over loose, moist to damp, dark gray-brown to black, gravelly, silty, fine SAND with some wood pieces, asphalt and brick (Fill)	
					0.4			WTPH-HCID Total Metals
5								
					0.6		Light-gray, lithified, cementatious material (Fill)	Total Metals
						▽	Dense, damp, gray to black, gravelly, fine to medium SAND with variable silt (Fill)	
10							Wet, brown wood debris with some gravel and metal pieces (Fill)	
							Test pit terminated at 12.5 feet; Some caving observed throughout; Seepage observed at 8.5 feet depth.	
15								
20								

LEGEND

- ▼ DATE — Static Water Level at Drilling
- ▽ DATE — Static Water Level
- ▼ — Perched Groundwater
- 5 gal. Bucket — Bucket Sample
- 100 to 1000 g — Bag Sample
- Water Bearing
- Water Seepage Indicator
- MC = XX — Moisture Content (%)
- XX — Grain Size Analysis (% fines shown)

Start Date : 06/28/01

Completion Date : 06/28/01

Logged By : C.C.C.

File Name : Test Pit Log.dwg

TEST PIT LOG

LSI ADAPT
800 Maynard Avenue South, Suite 403
Seattle, Washington 98134
TEL: 206.654.7045 FAX: 206.654.7048

PROJECT : Truck Operators Property
LOCATION : 407A Porter Way
Milton, Washington

Job Number : WA01-6486

Test Pit No. : TP- 4

Interwest Construction & Development

Ground Surface Elevation : N/A

Elevation Reference : N/A

DEPTH (feet)	SAMPLE NUMBER	SAMPLE TYPE	POCKET PENETROMETER (tons/ft²)	TORVANE (tons/ft²)	P.I.D. (ppm)	WATER BEARING ZONE	MATERIAL DESCRIPTION	LABORATORY TESTING
0							6-inches of crushed rock surfacing over dense, moist, gray-brown to black, gravelly, fine SAND with abundant broken concrete, steel piping, and brick fragments (Fill)	
					0.4			WTPH-HCID Total Metals
5							Grades to medium desne, moist, medium brown, silty, gravelly, fine SAND with some wood debris (Fill)	
					0.8		Damp to wet, brown SAND with fine wood WASTE and larger wood pieces and some dimension lumber (Fill)	
10						▽	Very soft, wet, brown, fine wood waste debris (Fill)	
15							Test pit terminated at 13.0 feet; Some caving observed; Moderate seepage observed at 9.0 feet depth.	
20								

LEGEND

- DATE ▼ — Static Water Level at Drilling
- DATE ▽ — Static Water Level
- ▼ — Perched Groundwater
- 5 gal. Bucket — Bucket Sample
- 100 to 1000 g — Bag Sample
- Water Bearing
- Water Seepage Indicator
- MC = XX — Moisture Content (%)
- XX — Grain Size Analysis (% fines shown)

File Name : Test Pit Log.dwg

Start Date : 06/28/01

Completion Date : 06/28/01

Logged By : C.C.C.

TEST PIT LOG

LSI ADAPT
800 Maynard Avenue South, Suite 403
Seattle, Washington 98134
TEL: 206.654.7045 FAX: 206.654.7048

PROJECT : Truck Operators Property
LOCATION : 407A Porter Way
Milton, Washington

Job Number : WA01-6486

Test Pit No. : TP- 5

Interwest Construction & Development

Ground Surface Elevation : N/A

Elevation Reference : N/A

DEPTH (feet)	SAMPLE NUMBER	SAMPLE TYPE	POCKET PENETROMETER (tons/ft²)	TORVANE (tons/ft²)	P.I.D. (ppm)	WATER BEARING ZONE	MATERIAL DESCRIPTION :	LABORATORY TESTING
0							6-inches of crushed rock gravel surfacing over dense, moist, gray, gravelly, fine to coarse SAND, some silt	
					0.9		Grades to sandy GRAVEL mixed with brown wood waste	WTPH-HCID Total Metals
5					0.6		Damp, brown wood waste, some gravel	
					0.5		Medium dense, moist to wet, dark gray, silty, gravelly, fine SAND with moderate to abundant wood waste	
						▽	Soft, wet, brown, fine wood waste	
10							Test pit terminated at 9.5 feet; Some caving observed; Slow groundwater seepage observed at 8.5 feet depth.	
15								
20								

LEGEND

- DATE ▽ — Static Water Level at Drilling
- DATE ▽ — Static Water Level
- Perched Groundwater
- 5 gal. Bucket — Bucket Sample
- 100 to 1000 g — Bag Sample
- Water Bearing
- Water Seepage Indicator
- MC = XX — Moisture Content (%)
- XX — Grain Size Analysis (% fines shown)

File Name : Test Pit Log.dwg

Start Date : 06/28/01

Completion Date : 06/28/01

Logged By : C.C.C.

APPENDIX D

ANALYTICAL TEST CERTIFICATES

OnSite Environmental Inc.
Analytical Testing and Mobile Laboratory Services

July 13, 2001

Keith Ross
LSI-Adapt Engineering
800 Maynard Avenue S, Suite 403
Seattle, WA 98134

Re: Analytical Data for Project WA01-6486
Laboratory Reference No. 0106-220

Dear Keith:

Enclosed are the analytical results and associated quality control data for samples submitted on June 29, 2001.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: July 13, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

NWTPH-HCID

Date Extracted: 7-5-01
Date Analyzed: 7-5-01

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	TP-1/3-3½	TP-2/1½'-2'	TP-3/3-3½
Lab ID:	06-220-01	06-220-04	06-220-05
Gasoline:	ND	ND	ND
PQL:	23	22	25
Diesel Fuel:	ND	ND	ND
PQL:	58	54	63
Heavy Oil:	Heavy Oil	ND	ND
PQL:	120	110	130
Surrogate Recovery:			
o-Terphenyl	119%	115%	117%

Flags:

Date of Report: July 13, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

NWTPH-HCID

Date Extracted:	7-5-01
Date Analyzed:	7-5&6-01
Matrix:	Soil
Units:	mg/Kg (ppm)

Client ID:	TP-4/2-2½	TP-5/2-2½
Lab ID:	06-220-09	06-220-11
Gasoline:	ND	ND
PQL:	22	22
Diesel Fuel:	ND	ND
PQL:	56	56
Heavy Oil:	Heavy Oil	Heavy Oil
PQL:	110	110
Surrogate Recovery:		
o-Terphenyl	126%	131%

Flags:

Date of Report: July 13, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

NWTPH-HCID
METHOD BLANK QUALITY CONTROL

Date Extracted:	7-5-01
Date Analyzed:	7-5-01
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	MB0705S1
Gasoline:	ND
PQL:	20
Diesel Fuel:	ND
PQL:	50
Heavy Oil:	ND
PQL:	100
Surrogate Recovery:	
o-Terphenyl	116%

Flags

Date of Report: July 13, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

NWTPH-HCID

Date Extracted:	7-5-01	
Date Analyzed:	7-5-01	
Matrix:	Water	
Units:	mg/L (ppm)	
Client ID:	TP-4/W-1	TP-5/W-1
Lab ID:	06-220-16	06-220-17
Gasoline:	Gasoline Range Hydrocarbons	Gasoline Range Hydrocarbons
PQL:	0.25	0.25
Diesel Fuel:	Diesel Fuel #2	Diesel Fuel #2
PQL:	0.63	0.63
Heavy Oil:	Heavy Oil	Heavy Oil
PQL:	0.63	0.63
Surrogate Recovery:		
o-Terphenyl	104%	101%
Flags:		

Date of Report: July 13, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

NWTPH-HCID
METHOD BLANK QUALITY CONTROL

Date Extracted:	7-5-01
Date Analyzed:	7-5-01
Matrix:	Water
Units:	mg/L (ppm)
Lab ID:	MB0705W1
Gasoline:	ND
PQL:	0.25
Diesel Fuel:	ND
PQL:	0.63
Heavy Oil:	ND
PQL:	0.63
Surrogate Recovery:	
o-Terphenyl	69%

Flags

Date of Report: July 13, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

TOTAL METALS
EPA 6010B

Date Extracted: 7-5-01
Date Analyzed: 7-11,12&13-01

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 06-220-01
Client ID: TP-1/3-31/2

Analyte	Method	Result	PQL
Arsenic	6010B	12	12
Cadmium	6010B	ND	0.58
Chromium	6010B	42	0.58
Lead	6010B	55	5.8

Date of Report: July 13, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

TOTAL METALS
EPA 6010B

Date Extracted: 7-5-01
Date Analyzed: 7-11,12&13-01

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 06-220-04
Client ID: TP-2/11/2'-2'

Analyte	Method	Result	PQL
Arsenic	6010B	ND	11
Cadmium	6010B	ND	0.54
Chromium	6010B	20	0.54
Lead	6010B	ND	5.4

Date of Report: July 13, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

TOTAL METALS
EPA 6010B

Date Extracted: 7-5-01
Date Analyzed: 7-11,12&13-01

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 06-220-05
Client ID: TP-3/3-31/2

Analyte	Method	Result	PQL
Arsenic	6010B	ND	13
Cadmium	6010B	ND	0.63
Chromium	6010B	25	0.63
Lead	6010B	12	6.3

Date of Report: July 13, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

TOTAL METALS
EPA 6010B

Date Extracted: 7-5-01
Date Analyzed: 7-11,12&13-01

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 06-220-09
Client ID: TP-4/2-21/2

Analyte	Method	Result	PQL
Arsenic	6010B	ND	11
Cadmium	6010B	ND	0.56
Chromium	6010B	32	0.56
Lead	6010B	28	5.6

Date of Report: July 13, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

TOTAL METALS
EPA 6010B

Date Extracted: 7-5-01
Date Analyzed: 7-11,12&13-01

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 06-220-11
Client ID: TP-5/2-21/2

Analyte	Method	Result	PQL
Arsenic	6010B	ND	11
Cadmium	6010B	ND	0.56
Chromium	6010B	26	0.56
Lead	6010B	56	5.6

Date of Report: July 13, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

TOTAL METALS
EPA 6010B
METHOD BLANK QUALITY CONTROL

Date Extracted: 7-5-01
Date Analyzed: 7-11,12&13-01

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0705S1

Analyte	Method	Result	PQL
Arsenic	6010B	ND	10
Cadmium	6010B	ND	0.50
Chromium	6010B	ND	0.50
Lead	6010B	ND	5.0

Date of Report: July 13, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

TOTAL METALS
EPA 6010B
DUPLICATE QUALITY CONTROL

Date Extracted: 7-5-01
Date Analyzed: 7-11,12&13-01

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 07-022-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	ND	ND	NA	10	
Cadmium	ND	ND	NA	0.50	
Chromium	24.3	25.5	4.4	0.50	
Lead	8.36	8.09	3.3	5.0	

Date of Report: July 13, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

TOTAL METALS
EPA 6010B
MS/MSD QUALITY CONTROL

Date Extracted: 7-5-01
Date Analyzed: 7-11,12&13-01

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 07-022-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	83.9	84	97.9	98	15	
Cadmium	50	47.2	94	48.3	97	2.3	
Chromium	100	112	88	116	91	3.0	
Lead	250	220	85	225	86	2.2	

Date of Report: July 13, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

TOTAL METALS
EPA 200.8

Date Extracted: 7-10-01
Date Analyzed: 7-11-01

Matrix: Water
Units: ug/L (ppb)

Lab ID: 06-220-14
Client ID: TP-2/W-1

Analyte	Method	Result	PQL
Arsenic	200.8	62	3.3
Cadmium	200.8	ND	4.4
Chromium	200.8	21	11
Lead	200.8	45	1.1

Date of Report: July 13, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

TOTAL METALS
EPA 200.8

Date Extracted: 7-10-01
Date Analyzed: 7-11-01

Matrix: Water
Units: ug/L (ppb)

Lab ID: 06-220-15
Client ID: TP-3/W-1

Analyte	Method	Result	PQL
Arsenic	200.8	180	3.3
Cadmium	200.8	14	4.4
Chromium	200.8	110	33
Lead	200.8	330	1.1

Date of Report: July 13, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

TOTAL METALS
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Extracted: 7-10-01
Date Analyzed: 7-11-01

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0710W2

Analyte	Method	Result	PQL
Arsenic	200.8	ND	3.3
Cadmium	200.8	ND	4.4
Chromium	200.8	ND	11
Lead	200.8	ND	1.1

Date of Report: July 13, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

TOTAL METALS
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Extracted: 7-10-01
Date Analyzed: 7-11-01

Matrix: Water
Units: ug/L (ppb)

Lab ID: 07-040-07

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	5.92	6.85	15	3.3	
Cadmium	ND	ND	NA	4.4	
Chromium	ND	ND	NA	33	
Lead	ND	ND	NA	1.1	

Date of Report: July 13, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

TOTAL METALS
EPA 200.8
MS/MSD QUALITY CONTROL

Date Extracted: 7-10-01
Date Analyzed: 7-11-01

Matrix: Water
Units: ug/L (ppb)

Lab ID: 07-040-07

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	44	102	87	104	89	1.6	
Cadmium	110	96.2	87	96.6	88	0.45	
Chromium	110	90.2	82	92.2	84	2.2	
Lead	44	103	94	106	96	2.6	

Date of Report: July 13, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

% MOISTURE

Date Analyzed: 7-5-01

Client ID	Lab ID	% Moisture
TP-1 / 3'-3 1/2'	06-220-01	14
TP-2 / 1 1/2'-2'	06-220-04	7.0
TP-3 / 3'-3 1/2'	06-220-05	20
TP-4 / 2'-2 1/2'	06-220-09	11
TP-5 / 2'-2 1/2'	06-220-11	11

OnSite Environmental Inc.

DATA QUALIFIERS AND ABBREVIATIONS

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

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

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

D - Data from 1:____ dilution.

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

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

G - Insufficient sample quantity for duplicate analysis.

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

I - Compound recovery is outside of the control limits.

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

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

L - The RPD is outside of the control limits.

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

O - Hydrocarbons outside the defined gasoline range are present in the sample; NWTPH-Dx recommended.

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

Q - Surrogate recovery is outside of the control limits.

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

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

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

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

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

X - Sample extract treated with a silica gel cleanup procedure.

Y - Sample extract treated with an acid cleanup procedure.

Z -

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

OnSite
Environmental Inc.
Analytical Testing and Mobile Laboratory Services

July 18, 2001

Keith Ross
LSI-Adapt Engineering
800 Maynard Avenue S, Suite 403
Seattle, WA 98134

Re: Analytical Data for Project WA01-6486
Laboratory Reference No. 0106-220

Dear Keith:

Enclosed are the analytical results and associated quality control data for samples submitted on June 29, 2001.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881 • Fax (425) 885-4603

Date of Report: July 18, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

NWTPH-Gx/BTEX

Date Extracted: 7-13-01
Date Analyzed: 7-13-01

Matrix: Water
Units: ug/L (ppb)

Client ID:	TP-4/W-1			TP-5/W-1		
Lab ID:	06-220-16			06-220-17		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	ND		1.0	ND		1.0
Toluene	ND		1.0	ND		1.0
Ethyl Benzene	ND		1.0	ND		1.0
m,p-Xylene	1.0		1.0	1.5		1.0
o-Xylene	2.5		1.0	1.6		1.0
TPH-Gas	680		100	180		100
Surrogate Recovery:						
Fluorobenzene	123%			124%		

Date of Report: July 18, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 7-13-01
Date Analyzed: 7-13-01

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0713W1

	Result	Flags	PQL
Benzene	ND		1.0
Toluene	ND		1.0
Ethyl Benzene	ND		1.0
m,p-Xylene	ND		1.0
o-Xylene	ND		1.0
TPH-Gas	ND		100

Surrogate Recovery:
Fluorobenzene 100%

Date of Report: July 18, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 7-13-01
Date Analyzed: 7-13-01

Matrix: Water
Units: ug/L (ppb)

Lab ID:	07-083-01 Original	07-083-01 Duplicate	RPD	Flags
Benzene	ND	ND	NA	
Toluene	ND	ND	NA	
Ethyl Benzene	ND	ND	NA	
m,p-Xylene	ND	ND	NA	
o-Xylene	ND	ND	NA	
TPH-Gas	ND	ND	NA	
Surrogate Recovery:				
Fluorobenzene	100%	99%		

Date of Report: July 18, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

NWTPH-Gx/BTEX
MS/MSD QUALITY CONTROL

Date Extracted: 7-13-01
Date Analyzed: 7-13-01

Matrix: Water
Units: ug/L (ppb)

Spike Level: 50.0 ppb

Lab ID:	07-083-01 MS	Percent Recovery	07-083-01 MSD	Percent Recovery	RPD	Flags
Benzene	45.6	91	45.1	90	0.95	
Toluene	49.1	98	48.4	97	1.4	
Ethyl Benzene	49.5	99	48.8	98	1.4	
m,p-Xylene	50.2	100	49.4	99	1.6	
o-Xylene	49.8	100	49.0	98	1.5	

Surrogate Recovery:

Fluorobenzene	101%	99%

Date of Report: July 18, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

NWTPH-Dx

Date Extracted:	7-14-01
Date Analyzed:	7-14-01
Matrix:	Soil
Units:	mg/Kg (ppm)

Client ID:	TP-1/3-3½	TP-4/2-2½	TP-5/2-2½
Lab ID:	06-220-01	06-220-09	06-220-11
Diesel Fuel:	ND	ND	ND
PQL:	29	140	140
Heavy Oil:	100	330	380
PQL:	58	280	280
Surrogate Recovery:			
o-Terphenyl	80%	---	---
Flags:		S	S

Date of Report: July 18, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	7-14-01
Date Analyzed:	7-14-01
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	MB0714S1
Diesel Fuel:	ND
PQL:	25
Heavy Oil:	ND
PQL:	50
Surrogate Recovery:	
o-Terphenyl	98%

Flags:

Date of Report: July 18, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted:	7-14-01
Date Analyzed:	7-14-01
Matrix:	Soil
Units:	mg/Kg (ppm)

Lab ID:	07-088-02	07-088-02 DUP
Diesel Fuel:	ND	ND
PQL:	25	25
RPD:	N/A	
Surrogate Recovery:		
o-Terphenyl	88%	72%

Flags:

Date of Report: July 18, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

NWTPH-Dx

Date Extracted:	7-5-01	
Date Analyzed:	7-16-01	
Matrix:	Water	
Units:	mg/L (ppm)	
Client ID:	TP-4/W-1	TP-5/W-1
Lab ID:	06-220-16	06-220-17
Diesel Fuel:	ND	0.49
PQL:	0.25	0.25
Heavy Oil:	ND	3.1
PQL:	0.50	0.50
Surrogate Recovery:		
o-Terphenyl	104%	98%
Flags:	Y	Y

Date of Report: July 18, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	7-5-01
Date Analyzed:	7-12-01
Matrix:	Water
Units:	mg/L (ppm)
Lab ID:	MB0705W1
Diesel Fuel:	ND
PQL:	0.25
Heavy Oil:	ND
PQL:	0.50
Surrogate Recovery:	
o-Terphenyl	99%
Flags:	Y

Date of Report: July 18, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted:	7-5-01
Date Analyzed:	7-5-01
Matrix:	Water
Units:	mg/L (ppm)

Lab ID:	07-009-01	07-009-01 DUP
Diesel Fuel:	ND	ND
PQL:	0.25	0.25
RPD:	N/A	
Surrogate Recovery:		
o-Terphenyl	61%	78%

Flags:

OnSite Environmental Inc.

DATA QUALIFIERS AND ABBREVIATIONS

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

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I - Compound recovery is outside of the control limits.

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

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

L - The RPD is outside of the control limits.

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

O - Hydrocarbons outside the defined gasoline range are present in the sample; NWTPH-Dx recommended.

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

Q - Surrogate recovery is outside of the control limits.

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

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

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

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

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

X - Sample extract treated with a silica gel cleanup procedure.

Y - Sample extract treated with an acid cleanup procedure.

Z -

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

teg TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES

06-220

CHAIN-OF-CUSTODY RECORD

CLIENT: LSI-ADAPT

ADDRESS: 800 Maynard Ave. S. Suite 403 Seattle 98134

PHONE: 206 654 7045 FAX: 206 654 7042

CLIENT PROJECT #: WA01-6486 PROJECT MANAGER: Keith Ross

DATE: 6/28/01 PAGE 1 OF 2

PROJECT NAME: Truck Operations Property

LOCATION: 407 Porter Way, Milton WA

COLLECTOR: Charles Cacek DATE OF COLLECTION 6/28/01

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES: VOA 8010/8021B	VOA 8021B BTEX	VOA 8260	SEMI VOL 8270	TPH - HCID	TPH 8015 (gasoline)	TPH 8015 (diesel)	TPH 8015 (d & o)	PAH 8100	PCBs 8082	Pesticides 8081	TOTAL LEAD	pH	NWTPH- ACID	Total (Pb, Cr, As) Metals	NWTPH-Gasoline	NWTPH-Dx	DRO WF	NOTES	Total Number of Containers	Laboratory Note Number
TP-1/3-3½		9:45	Soil	8-oz												⊗	⊗		⊗		⊗	Hold		
2. TP-1/7-7½		9:55	Soil																					
3. TP-1/10-10½		10:05																						
4. TP-2/1½-2'		10:30														⊗	⊗				⊗			
5. TP-3/3-3½		10:50														⊗	⊗				⊗			
6. TP-3/7-7½		11:10		4-oz																				
7. TP-3/5-5½		11:20		8-oz																				
8. TP-3/12-12½		11:30		4-oz																				
9. TP-4/2-2½		1:20														⊗	⊗		⊗	⊗	⊗			
10. TP-4/5-5½		1:30																						
11. TP-5/2-2½		2:20		8-oz												⊗	⊗		⊗	⊗	⊗	⊗ Added 7/5/01. DB		
12. TP-5/5½-6		2:30																						
13. TP-5/7½-8		2:40		4-oz																				
TP-2/W-1		12:15	Water	2-500ml Amb																		Hold preserved w/ HCl		
15.				2-VOA																		" " " "		
16.				1-500ml														⊗				" " " Nitric		
17. TP-3/W-1		12:45		2-500ml Amb																		" preserved w/ HCl		
18.				2-VOA																				

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
		P. Juttner	6/29/01 8:55
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
		[illegible]	6/29/01 9:45

SAMPLE DISPOSAL INSTRUCTIONS

☐ TEG DISPOSAL @ $2.00 each ☐ Return ☐ Pickup

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:

⊗ Added 7/13/01 DB

Turn Around Time:

teg TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES

06-220

CHAIN-OF-CUSTODY RECORD

CLIENT: CSI - ADAPT

ADDRESS: 800 Maynard Avenue S. Ste 403 Seattle 98134

PHONE: 206 654 7045 FAX: 206 654 7048

CLIENT PROJECT #: WA01-6436 PROJECT MANAGER: Keith Ross

DATE: 6/28/01 PAGE 2 OF 2

PROJECT NAME: Truck Operations Property

LOCATION: 407 Porter Way Milton WA

COLLECTOR: Charles Cacek DATE OF COLLECTION 6/29/01

	Sample Number	Depth	Time	Sample Type	Container Type	NWTPH-HCID	Total Pb (CCDAS)	NWTPH-G/BTEX	NWTPH-DX	NOTES	Total Number of Containers	Laboratory Note Number
5	TP-3/W-1		12:45	Water	1-500ml	⊗				Hold - Preserved w/nitric		
6	2. TP-4/W-1		1:45		2-500ml Amber			⊗	⊗	" " " HCl		
	3. ↓		↓		2-VOAs		⊗			" " "		
	4.				1-liter Amber					Unpreserved		
7	5. TP-5/W-1		3:25		2-500ml Amber			⊗	⊗	Hold - preserved w/ HCl		
	6. ↓		↓		2-VOA		⊗			" " "		
	7. ↓		↓		1-liter Amber					" Unpreserved		
	8.											
	9.											
	10.											
	11.									⊗ Added 7/5/01. DD		
	12.											
	13.											
	15.											
	16.											
	17.											
	18.											

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
		P. Luttner	6/29/01 8:55
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
		[illegible]	6/29/01 9:45

SAMPLE DISPOSAL INSTRUCTIONS

☐ TEG DISPOSAL @ $2.00 each ☐ Return ☐ Pickup

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:

Hold all samples

⊗ Added 7/13/01 DD

Turn Around Time:

Date of Report: July 26, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

TOTAL METALS
EPA 6010B

Date Extracted: 7-25&26-01
Date Analyzed: 7-26-01

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 06-220-06
Client ID: TP-3/7-71/2

Analyte	Method	Result	PQL
Arsenic	6010B	43	29
Cadmium	6010B	ND	1.4
Chromium	6010B	50	1.4
Lead	6010B	ND	14

Date of Report: July 26, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

TOTAL METALS
EPA 6010B
METHOD BLANK QUALITY CONTROL

Date Extracted:	7-25&26-01
Date Analyzed:	7-25&26-01
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0725S1 & MB0726S4

Analyte	Method	Result	PQL
Arsenic	6010B	ND	10
Cadmium	6010B	ND	0.50
Chromium	6010B	ND	0.50
Lead	6010B	ND	5.0

Date of Report: July 26, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

TOTAL METALS
EPA 6010B
DUPLICATE QUALITY CONTROL

Date Extracted: 7-25&26-01
Date Analyzed: 7-25&26-01

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 07-158-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	ND	ND	NA	10	
Cadmium	ND	ND	NA	0.50	
Chromium	21.2	21.7	2.0	0.50	
Lead	87.1	90.9	4.3	5.0	

Date of Report: July 26, 2001
Samples Submitted: June 29, 2001
Lab Traveler: 06-220
Project: WA01-6486

TOTAL METALS
EPA 6010B
MS/MSD QUALITY CONTROL

Date Extracted: 7-25&26-01
Date Analyzed: 7-25&26-01

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 07-158-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**101**	101	**84.1**	84	19	
Cadmium	50	**45.3**	91	**45.0**	90	0.73	
Chromium	100	**114**	93	**114**	93	0	
Lead	250	**294**	83	**306**	88	4.0	

OnSite Environmental Inc.

DATA QUALIFIERS AND ABBREVIATIONS

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

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

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

D - Data from 1:____ dilution.

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

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

G - Insufficient sample quantity for duplicate analysis.

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

I - Compound recovery is outside of the control limits.

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

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

L - The RPD is outside of the control limits.

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

O - Hydrocarbons outside the defined gasoline range are present in the sample; NWTPH-Dx recommended.

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

Q - Surrogate recovery is outside of the control limits.

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

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

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

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

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

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