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**FINAL REPORT FOR
EXTENDED PHASE II ENVIRONMENTAL SITE ASSESSMENT
SEATAC PARKING GARAGE DEVELOPMENT SITE
SEATAC, WASHINGTON**

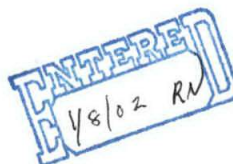
Prepared for:

Sea-Tac Investments LLC.
(as the successor to
SunReal Inc.)

Submitted by:

Golder Associates Inc.
Redmond, Washington

April 5, 2001



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1. INTRODUCTION

This report, prepared by Golder Associates Inc. (Golder) for Sea-Tac Investments LLC. (the successor to SunReal Inc.), consists of an extension of the Phase II Environmental Site Assessment (ESA) for the SeaTac Parking Garage Development site. The subject property is located along the west side of the 16,000 block of International Boulevard (Highway 99) SeaTac, Washington as presented on Figure 1. The area of the site occupied by the AirPro facility is located at the north end of the subject property. An alleyway separates the subject property from the adjacent Louden Realty property to the north (See Figure 2).

In conducting the initial Phase II ESA, gasoline range petroleum hydrocarbons (and potentially diesel), benzene, toluene, ethylbenzene, and total xylenes contamination accompanied by polyaromatic hydrocarbons (PAHs) were identified in site groundwater below the AirPro repair shop substantially above State Regulatory cleanup regulations. The contamination was detected in monitoring well MW-1. The monitoring well is located on the east side of the AirPro repair shop building. MW-1 was completed at an approximate depth of 52 feet below ground surface (bgs). No soil associated with petroleum hydrocarbon contamination was encountered above 45 feet bgs. There was no clear source for the groundwater contamination at MW-1 evident at the conclusion of the original Phase II ESA.

However, subsequent conversations with the current property owner, Mr. Jerry Scarsella, clarified that two underground storage tanks (USTs) were removed from the yard on the east side of the AirPro ~~repair shop~~ in the early 1970s. In addition, Mr. Scarsella stated that it was his understanding that the USTs had been closed in-place on the adjacent property (Louden Realty) to the north of the subject property. The work amended to the original scope of work included conducting additional investigations to determine whether either of the two reported UST closure locations could be the source of the petroleum hydrocarbon contamination detected in the groundwater at site monitoring well MW-1 during the initial Phase II ESA investigation.

1.1 Objective

The objective of the additional work for the Phase II ESA was to identify whether the two previously removed USTs near the AirPro repair shop or the reported closed in-place USTs on the realty office (Louden Realty) to the north may have leaked and could serve as the source of petroleum hydrocarbon contamination detected in the site monitoring well MW-1.

1.2 Scope of Work

The extended Phase II ESA consisted of sampling and laboratory analysis for potential contaminants in soil and groundwater in an area focused on the two UST closure locations identified above. Subsurface soils were investigated for the extended Phase II

ESA using a direct push drill rig (StratoProbe). Standard StratoProbe drilling methods were used to collect soil and one groundwater sample for chemical analysis.

This Phase II ESA report provides the results of the site investigation and includes: a description of field sampling activities and methods; identification of the analytical methods used to analyze soil, and groundwater samples; comparisons of the sampling results to regulatory criteria; and conclusions regarding the findings.

1.3 Site Description

The site consists of four properties, identified as the Scarsella, Pong, Cavey, and Collop properties. Six tenants occupy various buildings on these parcels, including:

- AirPro Equipment - a hydraulic lift supplier.
- Pacific Water Sports (PWS) - a kayak manufacturer and retailer.
- The Pool Works - a pool retailer.
- Lightfoots - a long-term parking facility and car rental agency.
- A closed catering company/banquet hall.
- Tenant Storage Building.

The southern property (Collop) is an undeveloped wetland.

The extended Phase II ESA investigation focused on the areas adjacent to the AirPro repair shop and the AirPro office building. The AirPro office building fronts International Boulevard and is located in the northeast corner of the subject property. The AirPro repair shop is located in the northwest corner of the subject property and is accessed from International Boulevard by the alley that runs between the AirPro office building and Loudon Realty to the north. A complete site description is provided in the original Phase I ESA (Golder, 2000).

2. PHASE II ENVIRONMENTAL INVESTIGATION

The amended Phase II ESA activities consisted of conducting a subsurface investigation to assess the likelihood that either the removed USTs near the AirPro building or the abandoned Loudon Realty USTs could serve as the source of the petroleum hydrocarbon contamination observed at monitoring well MW-1.

The Washington State Model Toxics Control Act Cleanup Regulation, Chapter 173-340 (MTCA) of the Washington Administrative Code (WAC) is referenced to determine if detected constituents of concern exceed regulatory cleanup levels. However, MTCA is currently being revised, and the proposed amendments are scheduled to be promulgated later in 2001. The proposed amendments include new cleanup levels for a number of specific chemicals or compounds. Consequently, the proposed cleanup levels are also included when comparing potential constituents of concern against regulatory limits. In general, the cleanup levels referenced in this report will reflect the MTCA Method A cleanup levels. The Method A cleanup levels are representative of unrestricted use for soil and "the highest beneficial use and the reasonable maximum exposure expected to occur under both current and potential future use" for groundwater.

A total of six additional sample locations were completed for the extended Phase II ESA. All of the original Phase II ESA and extend Phase II ESA sampling locations are shown in Figure 2 with the exception of the surface water sampling location associated with the wetland area on the Collop property.

A Golder representative was on site at all times during the field investigation to provide oversight for drilling activities, complete soil borehole logs, perform all soil and groundwater sampling activities, and record all relevant site activities in the field project logbook. Work was conducted in accordance with our proposal and Golder technical procedures, TP 1.2-5 "Drilling, Sampling, and Logging of Soils," TP 1.2-6 "Field Identification of Soil, TP 1.2-20 "Collection of Groundwater Quality Samples," and TP 1.2-23 "Chain Of Custody."

2.1 Explanation of Sample Locations

Soil sample locations were selected in an effort to: 1) locate potential petroleum contaminated soil that could be associated with either the removed USTs in the AirPro repair yard, or the allegedly closed USTs on the Loudon Realty property to the north; and 2) to define the lateral extent of contamination, if encountered.

The first sample location was placed in the center of an area identified by Mr. Scarsella as the location of the removed USTs in the AirPro repair shop yard. Based on field observations that identified moderate petroleum hydrocarbon contamination in GP11 soils, the next three sampling locations (GP12, GP13, and GP14) were positioned to define the extent of the contamination. Sampling locations GP15 and GP16 were positioned with the intent of determining if the USTs closed on the Loudon Realty

property to the north may have contributed to the contamination found in groundwater at MW-1.

2.1.1 StratoProbe Drilling and Sampling

A total of six StratoProbe borings (GP11 through GP16) were completed to depths ranging from 16 feet below ground surface (bgs) at GP12 to 24 feet bgs at GP16. All StratoProbe drilling and sampling was completed on December 13, 2000. Transglobal Environmental Geosciences Northwest Inc. (TEG) of Lacey, Washington, was retained by Golder to conduct all StratoProbe drilling activities. TEG was also used as the analytical laboratory.

In general, StratoProbe boreholes were advanced and soil samples collected using the StratoProbe hydraulic drive point system designed for the collection of discrete interval soil samples. Soil samples were obtained using a 48-inch (nominal) overall length sampler equipped with an inert plastic liner. The soil sampler was decontaminated prior to each use using a non-phosphate detergent wash followed by a thorough tap water rinse and subsequent distilled water rinse prior to each use.

Following decontamination, the sampler was threaded onto the leading edge of the probe rod and advanced to depth using the direct push system. Soil samples were retrieved by retracting the probe rod to the surface and disassembling the sampler to obtain the soil core contained in the liner. The liner was cut along the long axis to expose the soil core. While exposed, the sample was briefly surveyed with a photoionization detector (PID) to determine the general state with respect to potential petroleum hydrocarbon contamination. Portions of the soil sample were placed in a Ziplock plastic bag, allowed to set for at least five minutes, and the headspace was surveyed with a PID. The sample was inspected and a geotechnical description recorded on a soil boring log. Copies of field soil borehole logs are presented in Appendix A. The interval for which soil samples were collected are specified on the borehole logs.

Subsurface soil samples submitted for chemical analysis from each boring were selected in part based on organic vapor monitoring field screening results, and distance and depth in relation to potential sources. However, there were relatively few organic vapors detected by PID screening during the drilling investigation with the exception of soils encountered in GP11. The StratoProbe soil samples collected and submitted for chemical analyses were placed directly into two 4 oz. glass jars provided by the analytical laboratory and sealed with Teflon lined lids. Any remaining soil material was placed in a Ziplock bag and sealed as noted above. The sample jars were then labeled and placed in an ice chest for temporary storage at approximately 4°C until relinquished to the analytical laboratory. StratoProbe soil samples selected for chemical analysis were submitted to the laboratory under formal chain-of-custody procedures on December 14, 2000.

2.1.2 Groundwater Quality Sampling

One groundwater quality sample was collected for chemical analysis from the GP12 sampling location at approximately 8 feet bgs. Drilling was conducted at GP12 in the manner described above until a limited perched water zone was encountered at approximately 8 feet bgs. Upon encountering the water zone, the drive point was removed and a sheathed well point placed in the rods. The well point was set in the perched water zone in the shielded position. The rods were then retracted and the screened interval of the well point exposed. The well point subsequently silted up and water was not allowed to enter the sampler as anticipated. The well point was removed from the boring and a small stainless steel well screen was placed at the end of a 10-foot length of inert tubing. The tubing was attached to a peristaltic pump, and the tubing and the screen were inserted into the boring to the perched water zone.

The groundwater sample was collected by capturing the discharge from the pump discharge hose directly into clean bottles provided by the analytical laboratory. Groundwater samples collected for metals analysis were filtered with an in-line 0.45-micron filter prior to being placed in the respective sample container. Sample containers for volatile organics analyses (gasoline range petroleum hydrocarbons and BTEX) were collected so that no air bubbles remained within the sample vials once the cap had been sealed. Upon collection, sample labels and a chain-of-custody form were completed and labels affixed to the bottles. The bottles were then placed in a cooler maintained at a temperature of 4° C until delivered to the analytical laboratory.

The StratoProbe groundwater sample collected from GP-12 was submitted to the analytical laboratory for chemical analysis under formal chain-of-custody procedures on December 14, 2000.

3. ANALYTICAL METHODS

All the soil samples and the groundwater sample collected in association with the extended Phase II ESA were submitted to TEG's analytical laboratory. All of the samples were analyzed for total petroleum hydrocarbons in the gasoline, diesel, and oil ranges. The NWTPH-G_(BTEX) analysis was conducted to identify concentrations of gasoline range TPH, and benzene, toluene, ethylbenzene, and total xylenes (BTEX). Similarly, NWTPH-Dx analysis was conducted to identify the concentrations of diesel and/or oil range petroleum hydrocarbons.

The soil sample found to exhibit the highest concentration of petroleum hydrocarbon contamination (PG11-4-14) was also analyzed for polyaromatic hydrocarbons (PAHs) by EPA Method 8100. Since the petroleum hydrocarbon contamination detected in the above referenced sample was identified in the gasoline range, the sample was also analyzed for total lead. The GP12 groundwater sample was also analyzed for RCRA total metals. The total metals analysis for the soil and groundwater samples was conducted using the EPA 6000/7000 series methods.

4. ANALYTICAL RESULTS

The analytical results for the samples collected in association with the extended Phase II ESA activities and submitted to the analytical laboratory for chemical analyses are presented in the following sections by their respective media. Analytical results for site soils and groundwater are provided on Table 1 and Table 2. The complete analytical reports are provided in Appendix B.

4.1 Soils

Review of Table 1 indicates that of the six extended Phase II ESA sample locations, only one location (GP11) was identified with gasoline range petroleum hydrocarbon concentrations above the method detection limit (MDL). The concentrations reported for gasoline range petroleum hydrocarbons at GP11 are above both the current and proposed MTCA Method A cleanup level (100 mg/kg). Two soil samples (GP11-4-14 and GP11-7-21) were collected from the GP-11 boring. Gasoline range petroleum hydrocarbons were detected in both samples at 440 mg/kg and 320 mg/kg (GP11-4-14 and GP11-7-21, respectively). Benzene was not detected in either of these soil samples. Toluene was also not detected above the MDL in the GP11-4-14 sample. Ethylbenzene and total xylenes were detected in the GP11-4-17 sample at concentrations of 560 $\mu\text{g/kg}$ and 3,200 $\mu\text{g/kg}$, respectively. Toluene was detected in the GP11-7-21 sample at a concentration of 270 $\mu\text{g/kg}$. The concentrations of ethylbenzene and total xylenes appeared to increase with depth. The concentrations of ethylbenzene and total xylenes detected in the GP11-7-21 sample were reported at 1,200 $\mu\text{g/kg}$ and 9,500 $\mu\text{g/kg}$, respectively. The 9,500 $\mu\text{g/kg}$ concentration of total xylenes exceeds the proposed MTCA Method A cleanup level (1,000 $\mu\text{g/L}$).

Concentrations of diesel and oil range petroleum hydrocarbons were not detected above the MDL in either of the two soil samples collected at this location or in any of the other extended Phase II soil sample locations.

4.2 Groundwater

One groundwater sample was collected from GP12 located approximately 50 feet east of the removed UST location in the AirPro repair shop yard. The groundwater sample was analyzed for gasoline, diesel and oil range petroleum hydrocarbons, BTEX, and RCRA total metals. A concentration of 21,000 $\mu\text{g/L}$ diesel range petroleum hydrocarbons was detected in the perched water sample collected from GP12. The concentrations of diesel detected in the GP12 groundwater sample exceed both the current 1,000 $\mu\text{g/L}$ total petroleum hydrocarbon limit and the proposed 500 $\mu\text{g/L}$ Method A cleanup level for diesel range petroleum hydrocarbons. Gasoline range petroleum hydrocarbons were not detected in the sample collected from GP12 above the MDL.

Review of the groundwater analytical results shows that most of the metals were not detected above their respective MDLs and no metals were detected above the current or proposed MTCA Method A cleanup levels. The analytical results for the groundwater sample are presented on Table 2.

5. SUMMARY

The collection and chemical analyses of subsurface soils was conducted to identify whether site soils in the vicinity of the removed USTs in the AirPro repair shop yard or the Loudon Realty Property could be a source of the petroleum hydrocarbon contamination observed at site monitoring well MW-1.

Six locations were sampled during the extended Phase II ESA using StratoProbe drilling and sampling techniques. The sample locations were positioned to confirm the presence of potential petroleum contaminated soil associated with either the removed USTs in the AirPro repair yard or the allegedly closed USTs on the Loudon Realty property if it were present in the upper 20 feet of the soil column. Additional locations were sampled in an effort to define the extent of contamination.

The first sample location GP11 was placed in the center of the area identified by Mr. Scarsella as the location of the removed USTs in the AirPro repair shop yard. Chemical analysis of two soil samples collected from the GP11 boring confirmed that moderate concentrations (320 to 440 mg/kg) of gasoline range petroleum hydrocarbons are present in subsurface soils between 14 and 23 feet bgs. At these concentrations, the subsurface soils at the GP11 location are above the current and or proposed MTCA Method A cleanup levels of 100 mg/kg.

Chemical analysis for BTEX indicated that benzene was not present in either of the GP11 soil samples above the MDL. With the exception of total xylenes (9.5 mg/kg) in sample GP11-7-21, toluene, ethylbenzene and total xylenes were reported as non-detect at their respective MDLs or were below their current and or proposed MTCA Method A cleanup levels. Total xylenes in sample GP11-7-21 were reported at 9.5 mg/kg which is above the proposed MTCA Method A cleanup level.

Drilling locations within an approximate 50-foot radius (MW-1, GP12, GP13, and GP14) of the USTs removed from the AirPro yard indicated that petroleum hydrocarbon contamination in the soil did not likely spread horizontally at depth (16 to 24 feet bgs) from the central UST area (GP11). Therefore, gasoline range petroleum hydrocarbon soil contamination may be limited to 25 to 30 feet from the UST area at depths to approximately 20 feet bgs (excluding contaminated soils associated with groundwater).

Chemical analysis of the groundwater sample collected from GP12 indicates that the perched water zone encountered at approximately 8 feet bgs has been impacted by diesel range petroleum hydrocarbons. The soil samples above and below this thin perched water zone were both reported with non-detectable concentrations of gasoline range and diesel range petroleum hydrocarbons. The source of this thin zone of impacted groundwater is not known.

No petroleum hydrocarbons were detected in the soil samples collected from sampling locations GP15 and GP16 which were positioned to determine if the USTs closed on the Loudon Realty property released petroleum hydrocarbons that may have migrated horizontally onto the subject property (to depths of approximately 20 feet bgs) and contributed to the contamination found in the groundwater at MW-1.

6. CONCLUSIONS

Review of the analytical results of the extended Phase II ESA samples indicates that the subsurface soils in the area of the removed USTs at AirPro have been impacted by gasoline range petroleum hydrocarbons and BTEX constituents. These soils exhibit concentrations of gasoline petroleum hydrocarbons above the current and proposed MTCA Method A cleanup levels. The extent of the gasoline range petroleum hydrocarbon impacted soils appears to be relatively limited laterally at depths to 20 feet bgs. Due to the presence of the gasoline range petroleum hydrocarbons in soils, it is possible that the former USTs in the AirPro repair shop and remaining contaminated soils could be a contributing source to the groundwater contamination observed in monitoring well MW-1. It is uncertain, however, whether these soils are the primary source or if other sources exist as well.

7. STANDARD LIMITATIONS

This extension of the Phase II ESA has been prepared for the exclusive use of Sea-Tac Investments LLC. We have performed this extended Phase II ESA in substantial conformance with the scope of work outlined in our proposal and as amended in subsequent conversations.

This report includes data and information collected during the site Phase I and Phase II investigations and is based solely on the condition of the property at that time. There is always the possibility that the disposal or release of hazardous materials to the soil or groundwater has occurred and been covered so as not to be readily obvious from the surface and was not detected by the Phase II field investigations. There is always a degree of risk that additional materials, not identified in this study, requiring special handling, may be encountered. Furthermore, it is possible the soil and groundwater collection and testing activities were not sufficient to represent all conditions of potential impact to the property.

The Phase I information is generally used to identify the potential for recognized environmental conditions to have impacted the subject property. The Phase II ESA further investigates the recognized environmental conditions to determine if the subject property has indeed been impacted at levels above regulatory limits. However, the Phase II ESA does not define the degree or quantify the impact but instead only identifies the presence of the impacts.

In evaluating the property, Golder has relied in good faith on historical information provided by individuals noted in this report. We accept no responsibility for any deficiencies, misstatements, or inaccuracies contained in this report as a consequence of omissions, misrepresentations, or fraudulent acts of persons interviewed.

This report is not meant to represent a legal opinion. No other warranty, expressed or implied, is made. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Golder accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report. This study is based on information provided by others that is presumed to be true and correct. Golder is not responsible for misrepresentations and misstatements from these sources used to evaluate this property.

8. REFERENCES

Department of Ecology (Washington State), The Model Toxics Control Act Cleanup Regulations, Chapter 173-340, WAC Amended 1993.

Department of Ecology (Washington State), Proposed Amendments Washington State Register, Issue 00-16. The Model Toxics Control Act Cleanup Regulations, Chapter 173-340 WAC. August 2000.

Golder Associates Inc., Phase I Environmental Site Assessment. SunReal Inc. SeaTac Parking Garage Site. SeaTac, Washington. April 5, 2001.

TABLES

April 5, 2001

TABLE 1

013-1427.200

Soil Sample Analytical Results
Extended Phase II Investigation

COMPOUNDS/ANALYSIS	SAMPLE ID	STRATOPROBE SOIL								REGULATORY CLEANUP LEVELS	
		GP11-4-14	GP11-7-21	GP12-2-7	GP12-4-14	GP13-4-12	GP14-4-14	GP15-6-16	GP16-6-18	MTCA Method A Cleanup Levels (Current)	MTCA Method A Cleanup Levels (Proposed)
Total Petroleum Hydrocarbons and BTEX	Depth ft bgs/Units	14-15.5	21-23	7-8	14-16	12-12.8	14-16	16-18	18-20		
Mineral Spirits	mg/Kg	<5	<5	<5	<5	<5	<5	<5	<5		
TPH-Gas	mg/Kg	440	320	<5	<5	<5	<5	<5	<5	100	100
Kerosene/Jet Fuel	mg/Kg	<20	<20	<20	<20	<20	<20	<20	<20		
TPH-Diesel	mg/Kg	<20	<20	<20	<20	<20	<20	<20	<20	200	2,000
TPH-Oil	mg/Kg	<50	<50	<50	<50	<50	<50	<50	<50	200	2,000
Benzene	mg/Kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.5	0.03
Toluene	mg/Kg	<0.050	0.27	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	40	7
Ethylbenzene	mg/Kg	0.56	1.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	20	6
Total Xylenes	mg/Kg	3.2	9.5	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	20	9
PAHs by 810070C											
Naphthalene*	mg/Kg	0.87	-	-	-	-	-	-	-	--	5
TOTAL METALS 6000/7000 Series											
Lead	mg/Kg	<5	-	-	-	-	-	-	-	250	--

* = Indicates that no other PAHs were detected above their respective MDL.

- = Sample was not analyzed for that compound.

-- = Not detected and the PQL is shown on this table.

bold indicates that the concentration exceeds the proposed MTCA Method A cleanup level.

underline indicates that the concentration exceeds the current MTCA Method A cleanup level.

- = indicates there is not a MTCA cleanup level identified under the respective MTCA Method.

TABLE 2

Groundwater Sample Analytical Results
Extended Phase II Investigation

Compound	Units	Well GP12-GW	MTCA Method A Cleanup Level (Current)	MTCA Method A Cleanup Level (Proposed)	MTCA Method B Cleanup Levels
ORGANICS					
Mineral Spirits	µg/L	<100	1000 Total TPH		
Gasoline Range	µg/L	<100	1000 Total TPH	800	--
Diesel Range	µg/L	<u>21,000</u>	1000 Total TPH	500	--
Kerosene/Jet Fuel	µg/L	<200	1000 Total TPH		--
Heavy Oil	µg/L	<500	1000 Total TPH	500	--
Benzene	µg/L	<1	5	5	--
Toluene	µg/L	<1	40	1000	--
Ethylbenzene	µg/L	<1	30	700	--
Total Xylene	µg/L	2.5	20	1000	--
TOTAL METALS					
Arsenic	µg/L	1.5	5	5	--
Barium	µg/L	16	--	--	1,120
Cadmium	µg/L	<0.5	5	5	--
Chromium	µg/L	<10	50	50	--
Lead	µg/L	<0.5	5	15	--
Mercury	µg/L	<0.20	2	2	--
Selenium	µg/L	<50	--	--	80
Silver	µg/L	<10	--	--	80

"*" = Analysis based upon NWTPH-HCID.

"-" Sample was not analyzed for that compound.

Shading indicates that the concentration exceeds the proposed MTCA Method A cleanup level.

Underline indicates that the concentration exceeds the current MTCA Method A cleanup level.

"- -" = indicates there is not a MTCA cleanup level identified under the respective MTCA Method.

FIGURES

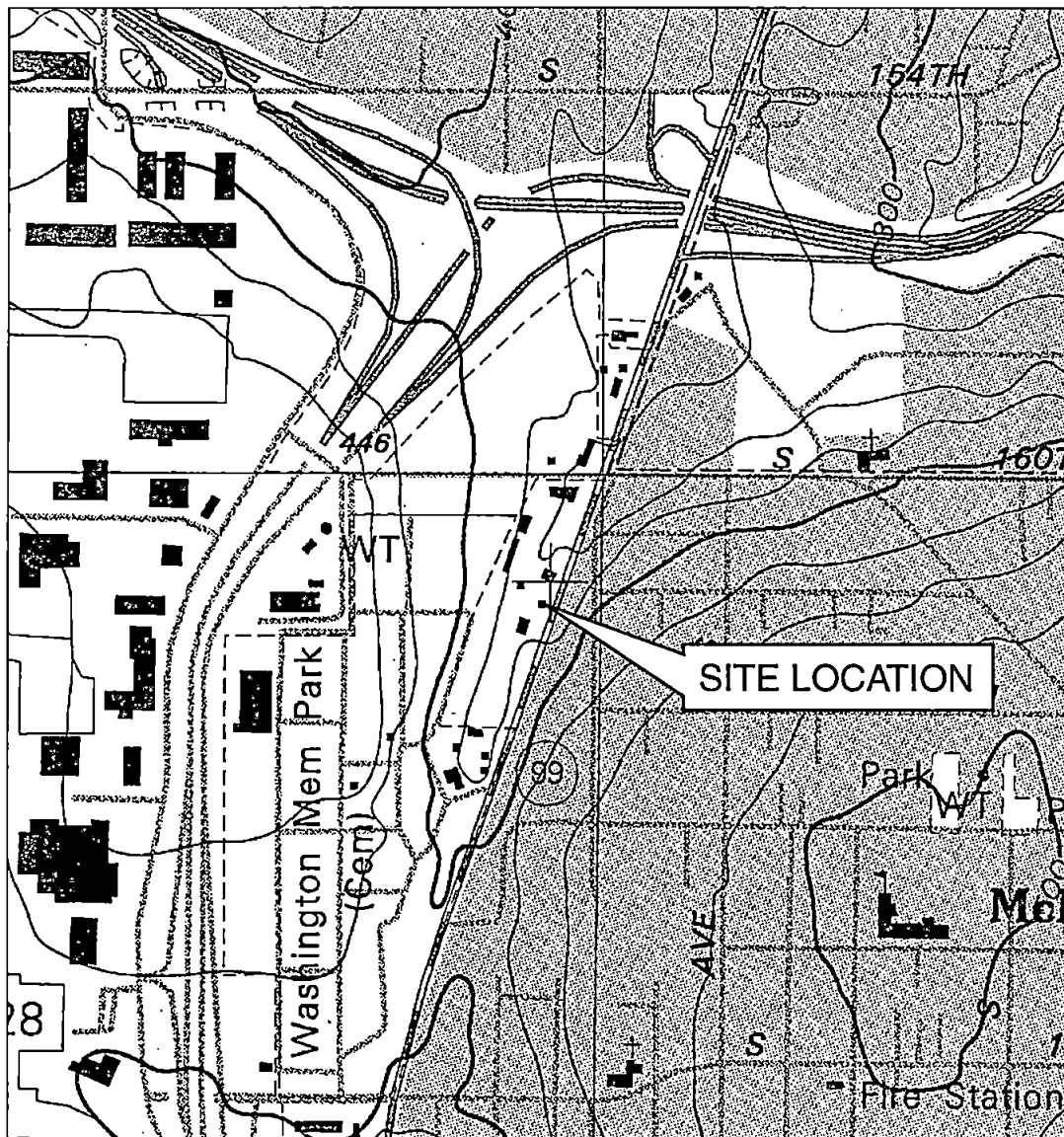
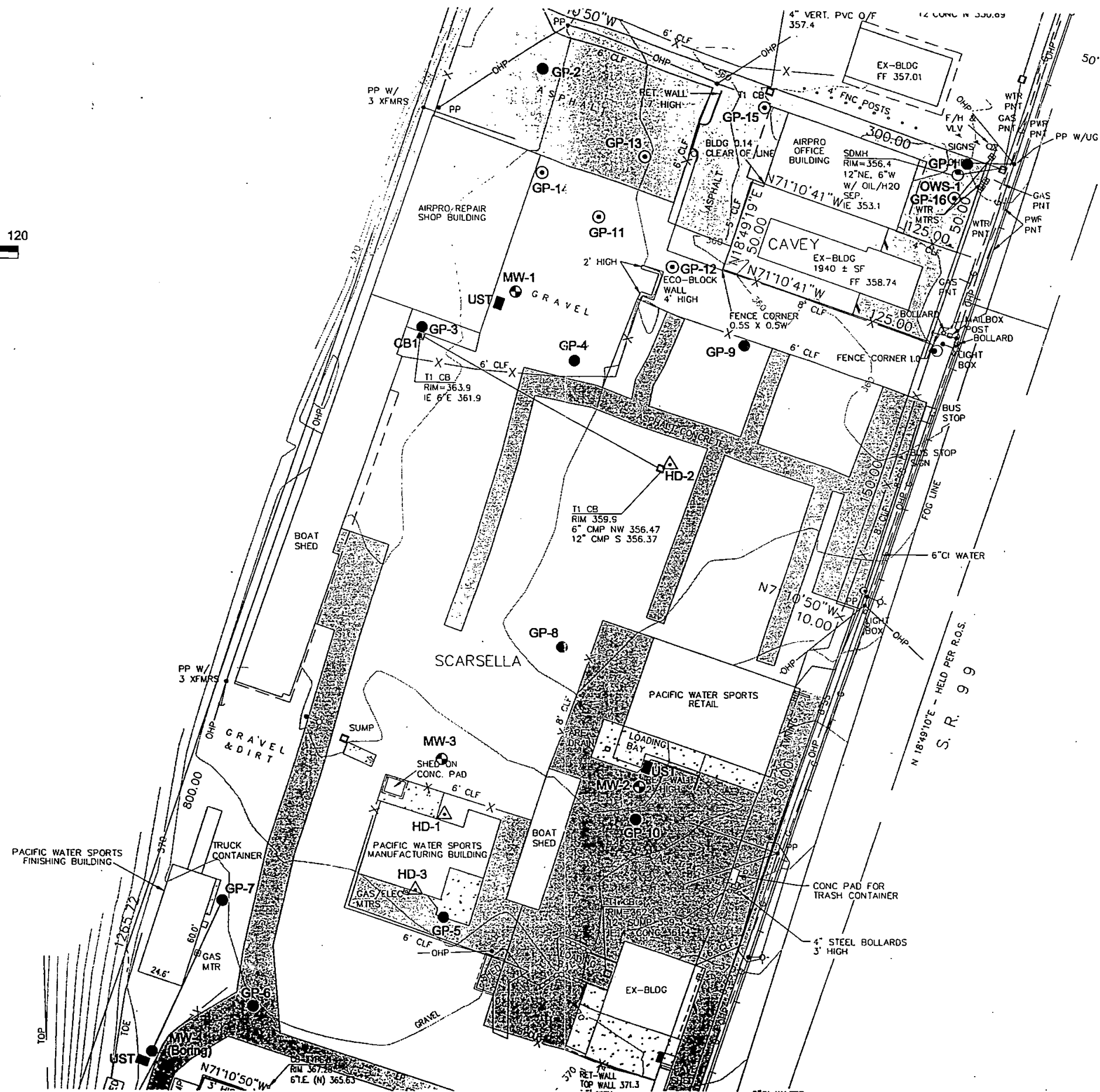
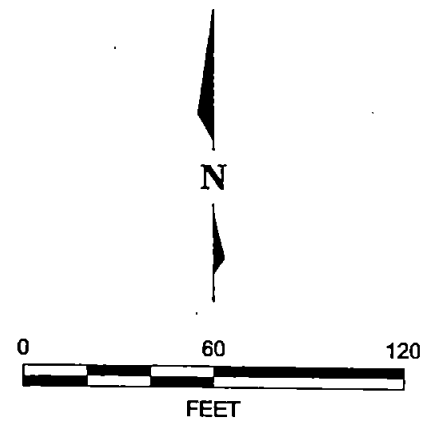


FIGURE 1
SITE VICINITY MAP
 SUNREAL/SEATAC GARAGE ESAWA



LEGEND

- EXTENDED PHASE II SOIL SAMPLE LOCATIONS
- ⊗ MONITORING WELL
- SOIL SAMPLE LOCATION
- SLUDGE SAMPLE LOCATION
- △ HAND SAMPLE SOIL LOCATION

FIGURE 2
EXTENDED PHASE II ESA SEATAC
PARKING GARAGE DEVELOPMENT
SITE SAMPLING LOCATIONS
SUNREAL/SEATAC GARAGE ESA/WA

APPENDIX A
COMPLETED FIELD FORMS

RECORD OF BOREHOLE # GP-11

STA. PROJECT NO. 003-1321
INCLINATION 90°

OFFSET 003-1321
AZIMUTH

ELEVATION
DRILLING DATE 12/8/00

SHEET 1 OF 2
DATUM
DRILL RIG
Stratoprobe

DEPTH SCALE (FEET)	BORING METHOD	SOIL PROFILE	GRAPHIC LOG	USCS	SAMPLES				SAMPLE DESCRIPTION	NOTES PIEZOMETER STANDPIPE INSTALLATION
		SOIL PROFILE DESCRIPTION			NUMBER	TYPE	BLOWS/ 6 IN.	RECOVERY		
1	Direct Push STRATOPROBE								00-06 Crushed GRAVEL & Silty SAND	
2									06-25 Compact, Moderate Yellowish Brown () unstrat. Fied SAND trace gravel	850
3									25-30 Same as 4-65	PTD 0.0
4										15-30 gas cap present?
5										25 ppm m conc
6										200 HS log
7										chem sample 4-5
8										7W
9										40-65, PTD 32
10										70 ppm HS log
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RECORD OF BOREHOLE # GP11

STA. PROJECT NO. 003-132/
INCLINATION 90°

OFFSET

L R

AZIMUTH

ELEVATION
DRILLING DATE 12/13/00

SHEET 2 OF 2
DATUM
DRILL RIG
Stratoprobe

DEPTH SCALE (FEET)	BORING METHOD	SOIL PROFILE	GRAPHIC LOG	USCS	SAMPLES				SAMPLE DESCRIPTION	NOTES PIEZOMETER STANDPIPE INSTALLATION
		SOIL PROFILE DESCRIPTION			NUMBER	TYPE	BLOWS/ 6 IN.	RECOVERY		
20	Direct Push STRATOPROBE				6			32/30		1005
22										#21-23
24					7					2000 PPM
26										HS
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RECORD OF BOREHOLE # GP12

STA. PROJECT NO. 003-132/
INCLINATION 90°

OFFSET 50.8 ft
ELEVATION
DRILLING DATE 12/13/00

SHEET 1 OF 1
DATUM
DRILL RIG
Stratoprobe

DEPTH SCALE (FEET)	BORING METHOD	SOIL PROFILE	GRAPHIC LOG	USCS	SAMPLES				SAMPLE DESCRIPTION	NOTES PIEZOMETER STANDPIPE INSTALLATION
		SOIL PROFILE DESCRIPTION			NUMBER	TYPE	BLOWS/ 6 IN.	RECOVERY		
2	Direct Push STRATOPROBE				1				0-6 - Sand & Grushed Gravel	1050 HS 60-30 ppm
									6-30 Compact, Moderate to Brown	HS 60-30 ppm
									() unstratified Sand	30-35
									Silt, trace gravel / trace	
									best organics, dump fill	
									3-35 Compact, Moderate Brown	
									() unstratified, to slightly	PEA 110 HS
									interbedded with FeOx, Sandy SILT	
									dump (FILL)	1100
									40-52 - Compact to dense	
									Moderate Brown (un)	
					2				unstratified, Sandy SILT,	PEA 110 HS
									trace organics (colored horich	
									dump (FILL)	
									52-70 Compact, Moderate Brown	Chen sample 7-8 1110
									() unstratified	
									Silt SAND, little gravel, trace	
									interbedded, dump FILL	8-95 HS 60 ppm
									70-80 Loose to compact	
					3				moderate brown to olive gray	
									fine sandy SILT (mostly silt)	Chen sample
									TPH odor	collected water sample light red
									8-95 Compact med grain	
									unstratified, SILT (mostly silt)	1125
									95-10 Compact to loose, med grain	
									& dark yellowish brown unstratified	
									fine SAND to SILT dump ()	
					4				10-12 Compact to loose, med grain	
									to dark yellowish brown unstratified	
									SAND (fine) dump	Chen sample 14-16 PEA 1.3 (2100)
									12-125 SAME AS ABOVE	
									175-16 Dense to compact	
									dark yellowish brown, silty SAND	1140 NO odor
									trace gravel (TELL)	PEA 1.1 ppm (2100)
									TO 16 Feet	

RECORD OF BOREHOLE # GP13

STA. PROJECT NO. 003-132/
INCLINATION 90°

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DRILLING DATE 12/13/00

SHEET 1 OF 1
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DRILL RIG
Stratoprobe

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DEPTH SCALE (FEET)	BORING METHOD	SOIL PROFILE		GRAPHIC LOG	USCS	SAMPLES				SAMPLE DESCRIPTION	NOTES PIEZOMETER STANDPIPE INSTALLATION																		
		SOIL PROFILE DESCRIPTION				NUMBER	TYPE	BLOWS/ 6 IN.	RECOVERY																				
1	Direct Push STRATAPORE					1				0-1' loose to compact	1240																		
2										12/40		Brownish Black ()																	
4										unstratified, silty SAND																			
6										little to trace gravel glass dump																			
8										(FILL)																			
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RECORD OF BOREHOLE # GA 14

STA. PROJECT NO. 003-132/
INCLINATION 90°

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DRILLING DATE 12/13/00

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SHEET 1 OF 1

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DEPTH SCALE (FEET)	BORING METHOD	SOIL PROFILE	GRAPHIC LOG	USCS	SAMPLES				SAMPLE DESCRIPTION	NOTES PIEZOMETER STANDPIPE INSTALLATION
		SOIL PROFILE DESCRIPTION			NUMBER	TYPE	BLOWS/ 6 IN.	RECOVERY		
0									0-06 Silty SAND and Gravelled Gravel	1350
2					1			32/40	06-24 Compact, medium to dark brown () unstratified	06-24 No odor
4									Sandy SILT, trace to little gravel	PED not working
6									check & trace FILL in	PED 0.01 ppm HS (2100) time
8									24-32 - Compact, dark yellowish brown () unstratified	
10									Fine Sandy SILT & OK staining trace gravel	1460
12									40-63 Compact to loose	14-500
14									dark yellowish brown ()	NO odor
16									stratified, layers of fine to med SAND, clay	PED 0.01 ppm HS (2100)
18										
20									80-102 Dense olive gray ()	14110
22									unstratified sand, SILT & some gravel, clays (FILL)	14-500
24									102-107 loose lt grayish brown	NO odor
26									unstratified f. SAND clay	HS PED 0.01 ppm HS (2100)
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DEPTH SCALE
DRILLING CONTRACTOR TCG
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Golder Associates

LOGGED BY T. Norton
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RECORD OF BOREHOLE # GP 15

STA. PROJECT NO. 003-132/
INCLINATION 90°

OFFSET 003-132/
AZIMUTH 90°

SHEET 1 OF 1
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DRILL RIG

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ELEVATION
DRILLING DATE 12/13/00

Stratoprobe

DEPTH (FEET)	BORING METHOD	SOIL PROFILE DESCRIPTION	GRAPHIC LOG	USCS	SAMPLES				SAMPLE DESCRIPTION	NOTES PIEZOMETER STANDPIPE INSTALLATION
					NUMBER	TYPE	BLOWS/ 6 IN.	RECOVERY		
0-2									0-2 Dark 0-2 Dark Compact, moderate dark brown	1570
2-4									() unstratified, Sandy SILT, little to some gravel FILL	Pit reading at 2100
4-6										
6-8									40-53 Compact to loose dark yellowish Brown () unstratified P. med SAND trace silt clump	1520 No odor
8-10									() 53-80 Compact, dark yellowish brown to light gray unstratified P. to med SAND, little to some silt, little to some gravel clump	HS PFL 0.6 ppm mudflow (2100) No odor
10-12									80-100 Loose olive gray to yellowish Brown () unstratified FINE SAND some silt clump (cleaned somewhat)	1520 Sample 104 check
12-14									10-11 Compact to dense olive gray to yellowish brown unstratified Silty P SAND, little to some gravel clump (FILL)	HS PFL 0.4 ppm (2100) 1540
14-16									11-15 Dense, olive gray to yellowish Brown unstratified Silty SAND Some to med Gravel (FILL) clump	1550
16-18									15-18 Same as above	HS PFL 0.5 ppm mudflow (2100) HS Clean Sample 16-18 1600
18-20									18-20 Same as above	Slight odor? Sample 18-20 PFL HS 0.6 ppm (2100) 1610

DEPTH SCALE
DRILLING CONTRACTOR TCG
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RECORD OF BOREHOLE # GP 16 AP 11/18/00 office

STA. PROJECT NO. 003-132/
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SHEET 1 OF 2
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PTH (FEET)	BORING METHOD	SOIL PROFILE	GRAPHIC LOG	USCS	SAMPLES				SAMPLE DESCRIPTION	NOTES PIEZOMETER STANDPIPE INSTALLATION
		SOIL PROFILE DESCRIPTION			NUMBER	TYPE	BLOWS/ 6 IN.	RECOVERY		
2	Direct Push STRATAPAGE				1				0-2 Asphalt 02-07 coarse brownish black unstratified L-C SAND 1/4" silt, trace gravel damp FILL 07-15 compact olive green to greenish gray sandy Silt trace gravel damp	1630 PTD readings HS at 2120 all 0.6 ppm or less like resistivity except? 18-20 no obs
4										1640
6					2				40-45 compact olive gray unstratified sandy silt to Silt with some clay 46-70 compact to dense olive gray unstratified Silt damp ()	1650 no obs
8									70-80 compact dark yellowish brown unstratified fine m. SAND trace gravel (thin (H. outwash))	1650 no obs
10					3				80-12 dense to compact dark yellowish brown (unstratified) fine sandy Silt trace gravel ()	sampled clim
12									120-15 compact to dense dark yellowish brown () unstratified silt L SAND little gravel (FILL)	no obs 1700
14					4				135-15 gravel increase to some sand	
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RECORD OF BOREHOLE #816

STA. PROJECT NO. 003-132/
INCLINATION 90°

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DRILLING DATE 12/13/00

SHEET 2 OF 2
DATUM
DRILL RIG
Stratoprobe

DEPTH SCALE (FEET)	BORING METHOD	SOIL PROFILE	GRAPHIC LOG	USCS	SAMPLES				SAMPLE DESCRIPTION	NOTES PIEZOMETER STANDPIPE INSTALLATION
		SOIL PROFILE DESCRIPTION			NUMBER	TYPE	BLOWS/ 6 IN.	RECOVERY		
70	Direct Push STRATOPROBE				6					
72										
74					7			5° 50°	same as above gravel decrease with depth	1740
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APPENDIX B
ANALYTICAL LABORATORY REPORTS

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

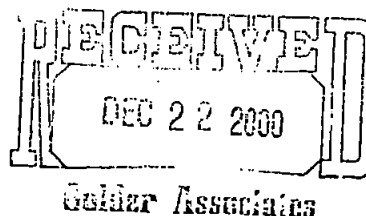
800 Sleater-Kinney SE, PMB #262
Lacey, Washington 98503-1127

Mobile Environmental Laboratories
Environmental Sampling Services

Telephone: 360-459-4670
Fax: 360-459-3432

December 20, 2000

Ted Norton
Golder Associates, Inc.
18300 NE Union Hill RD #200
Redmond, WA 98052-3333



Dear Mr. Norton:

Enclosed, please find an invoice for Direct Push Probe services provided at the SunReal/SeaTac Phase II Project site located at 16025 International Blvd. in SeaTac, Washington. Probe work was conducted on December 13, 2000.

TEG Northwest appreciates the opportunity to have provided geosampling services to Golder Associates, Inc. for this project. It was a pleasure working with you and we look forward to the next opportunity to work together.

Sincerely,

Michael A. Korosec
President

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

800 Sleater-Kinney SE, PMB #262
Lacey, Washington 98503-1127

Mobile Environmental Laboratories
Environmental Sampling Services

Telephone: 360-459-4670
Fax: 360-459-3432

December 20, 2000

Ted Norton
Golder Associates, Inc.
18300 NE Union Hill RD #200
Redmond, WA 98052-3333

Dear Mr. Norton:

Please find enclosed the analytical data report for the SunReal/SeaTac Phase II Project in SeaTac, Washington. Soil and water samples were analyzed for Diesel and Oil by NWTPH-Dx/Dx Extended, Gasoline by NWTPH-Gx, BTEX by Method 8021B, PAH's by Method 8100, and Metals on December 14 – 19, 2000.

The results of these analyses are summarized in the attached tables. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed.

TEG Northwest appreciates the opportunity to have provided analytical services to Golder Associates, Inc. for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,



Michael A. Korosec
President

TEG NW SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

TEG Job Number: S01214-1
Client: GOLDER ASSOCIATES
Client Job Name: SONREAL SEATAC
Client Job Number: 003-1321-800

Analytical Results

NWTPH-Gx / BTEX		MTH BLK	LCS	GP11-4-14	GP11-7-21	GP12-2-7
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	12/14/00	12/14/00	12/14/00	12/14/00	12/14/00
Date analyzed	Limits	12/14/00	12/14/00	12/14/00	12/14/00	12/14/00
Moisture, %				15%	15%	

NWTPH-Gx, mg/kg

Mineral spirits/Stoddard solvent	5.0	nd		nd	nd	nd
Gasoline	5.0	nd		440	320	nd

BTEX, µg/kg

Benzene	50	nd	99%	nd	nd	nd
Toluene	50	nd	93%	nd	270	nd
Ethylbenzene	50	nd		560	1,200	nd
Xylenes	50	nd		3,200	9,500	nd

Surrogate recoveries:

Trifluorotoluene	101%	103%	98%	101%	100%
Bromofluorobenzene	106%	108%	111%	C	102%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

TEG NW SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

TEG Job Number: S01214-1
Client: GOLDER ASSOCIATES
Client Job Name: SONREAL SEATAC
Client Job Number: 003-1321-800

Analytical Results		MS		MSD		RPD
NWTPH-Gx / BTEX		GP12-4-14	GP13-4-12	GP13-4-12	GP13-4-12	GP13-4-12
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	12/14/00	12/14/00	12/14/00	12/14/00	12/14/00
Date analyzed	Limits	12/14/00	12/14/00	12/14/00	12/14/00	12/14/00
Moisture, %						

NWTPH-Gx, mg/kg

Mineral spirits/Stoddard solvent	5.0	nd	nd			
Gasoline	5.0	nd	nd			

BTEX, µg/kg

Benzene	50	nd	nd	90%	76%	17%
Toluene	50	nd	nd	115%	117%	2%
Ethylbenzene	50	nd	nd			
Xylenes	50	nd	nd			

Surrogate recoveries:

Trifluorotoluene	96%	94%	92%	95%	
Bromofluorobenzene	96%	99%	97%	95%	

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

TEG NW SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

TEG Job Number: S01214-1
Client: GOLDER ASSOCIATES
Client Job Name: SONREAL SEATAC
Client Job Number: 003-1321-800

Analytical Results					DUPL
NWTPH-Gx / BTEX		GP14-4-14	GP15-6-16	GP16-6-18	GP16-6-18
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	12/14/00	12/14/00	12/14/00	12/14/00
Date analyzed	Limits	12/14/00	12/14/00	12/14/00	12/14/00
Moisture, %					

NWTPH-Gx, mg/kg

Mineral spirits/Stoddard solvent	5.0	nd	nd	nd	nd
Gasoline	5.0	nd	nd	nd	nd

BTEX, µg/kg

Benzene	50	nd	nd	nd	nd
Toluene	50	nd	nd	nd	nd
Ethylbenzene	50	nd	nd	nd	nd
Xylenes	50	nd	nd	nd	nd

Surrogate recoveries:

Trifluorotoluene	93%	92%	96%	91%
Bromofluorobenzene	97%	93%	103%	108%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

TEG NW SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

TEG Job Number: S01214-1
Client: GOLDER ASSOCIATES
Client Job Name: SONREAL SEATAC
Client Job Number: 003-1321-800

Analytical Results

NWTPH-Gx / BTEX		MTH BLK	LCS	GP12-GW
Matrix	Water	Water	Water	Water
Date extracted	Reporting	12/14/00	12/14/00	12/14/00
Date analyzed	Limits	12/14/00	12/14/00	12/14/00

NWTPH-Gx, mg/L

Mineral spirits/Stoddard solvent	0.10	nd		nd
Gasoline	0.10	nd		nd

BTEX, µg/L

Benzene	1.0	nd	99%	nd
Toluene	1.0	nd	93%	nd
Ethylbenzene	1.0	nd		nd
Xylenes	1.0	nd		2.5

Surrogate recoveries:

Trifluorotoluene	101%	103%	95%
Bromofluorobenzene	106%	108%	108%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

TEG NW SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

TEG Job Number: S01214-1
Client: GOLDER ASSOCIATES
Client Job Name: SONREAL SEATAC
Client Job Number: 003-1321-800

Analytical Results

NWTPH-Dx, mg/kg		MTH BLK	GP11-4-14	GP11-7-21	GP12-2-7	GP12-4-14
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	12/14/00	12/14/00	12/14/00	12/14/00	12/14/00
Date analyzed	Limits	12/14/00	12/14/00	12/14/00	12/14/00	12/14/00
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd
Diesel/Fuel oil	20	nd	nd	nd	nd	nd
Heavy oil	50	nd	nd	nd	nd	nd

Surrogate recoveries:

Fluorobiphenyl	90%	87%	86%	87%	87%
o-Terphenyl	84%	86%	83%	83%	85%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

TEG NW SEATTLE CHEMISTRY LABORATORY
 (425) 957-9872, fax (425) 957-9904

TEG Job Number: S01214-1
 Client: GOLDER ASSOCIATES
 Client Job Name: SONREAL SEATAC
 Client Job Number: 003-1321-800

DUPL

Analytical Results		GP13-4-12	GP14-4-14	GP15-6-16	GP16-6-18	GP16-6-18
NWTPH-Dx, mg/kg						
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	12/14/00	12/14/00	12/14/00	12/14/00	12/14/00
Date analyzed	Limits	12/14/00	12/14/00	12/14/00	12/14/00	12/14/00
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd
Diesel/Fuel oil	20	nd	nd	nd	nd	nd
Heavy oil	50	nd	nd	nd	nd	nd
Surrogate recoveries:						
Fluorobiphenyl		87%	87%	86%	88%	88%
o-Terphenyl		83%	83%	83%	86%	86%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

SEATTLE CHEMISTRY LABORATORY

957-9872, fax (425) 957-9904

Job Number: S01214-1
 Client: GOLDER ASSOCIATES
 Job Name: SONREAL SEATAC
 Job Number: 003-1321-800

Results	DUPL		RPD	
	MTH BLK	GP12-GW	GP12-GW	GP12-GW
-Dx, mg/l	Water	Water	Water	Water
Extracted	Reporting	12/14/00	12/14/00	12/14/00
Analyzed	Limits	12/14/00	12/14/00	12/14/00
Benzene/Jet fuel	0.20	nd	nd	nd
Jet fuel oil	0.20	nd	21	18
	0.50	nd	nd	nd

Spiked recoveries:			
Phenyl	89%	86%	87%
Enyl	86%	90%	89%

Qualifiers and Analytical Comments

- detected at listed reporting limits
- not analyzed
- Interference with sample peaks
- Matrix interference
- Estimated value
- Acceptable Recovery limits: 65% TO 135%
- Acceptable RPD limit: 35%

SOUND ANALYTICAL SERVICES, INC.

Lab ID:
Date Received:
Date Prepared:
Date Analyzed:
Dilution Factor

Method Blank - T082

12/18/00

12/18/00

1

Mercury by CVAA - USEPA Method 7470

Analyte	Result (mg/L)	PQL	Flags
Mercury	ND	0.0002	

SOUND ANALYTICAL SERVICES, INC.

Matrix Spike Report

Client Sample ID: GP12-GW
Lab ID: 94812-01
Date Prepared: 12/18/00
Date Analyzed: 12/18/00
QC Batch ID: T202

Metals by ICP - USEPA Method 6010

Parameter Name	Sample Result (mg/L)	Spike Amount (mg/L)	MS Result (mg/L)	MS % Rec.	Flag
Barium	0.016	4	3.63	90	
Chromium	0	0.4	0.38	95	
Selenium	0	4	3.96	99	
Silver	0	0.6	0.487	81	

SOUND ANALYTICAL SERVICES, INC.

Matrix Spike Report

Client Sample ID: GP12-GW
Lab ID: 94812-01
Date Prepared: 12/18/00
Date Analyzed: 12/18/00
QC Batch ID: T202

Metals by ICP-MS - USEPA Method 6020

Parameter Name	Sample Result (mg/L)	Spike Amount (mg/L)	MS Result (mg/L)	MS % Rec.	Flag
Arsenic	0.00146	4	4.02	101	
Cadmium	0	0.1	0.0958	96	
Lead	0	1	1.01	101	

SOUND ANALYTICAL SERVICES, INC.

Matrix Spike Report

Client Sample ID:	GP12-GW
Lab ID:	94812-01
Date Prepared:	12/18/00
Date Analyzed:	12/18/00
QC Batch ID:	T082

Mercury by CVAA - USEPA Method 7470

Parameter Name	Sample Result (mg/L)	Spike Amount (mg/L)	MS Result (mg/L)	MS % Rec.	Flag
Mercury	0	0.002	0.00205	102	

SOUND ANALYTICAL SERVICES, INC.

Duplicate Report

Client Sample ID: GP12-GW
Lab ID: 94812-01
Date Prepared: 12/18/00
Date Analyzed: 12/18/00
QC Batch ID: T202

Metals by ICP - USEPA Method 6010

Parameter Name	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD %	Flag
Barium	0.016	0.017	-6.1	
Chromium	0	0	NC	
Selenium	0	0	NC	
Silver	0	0	NC	

SOUND ANALYTICAL SERVICES, INC.

Duplicate Report

Client Sample ID:	GP12-GW
Lab ID:	94812-01
Date Prepared:	12/18/00
Date Analyzed:	12/18/00
QC Batch ID:	T202

Metals by ICP-MS - USEPA Method 6020

Parameter Name	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD %	Flag
Arsenic	0.0015	0.0015	0.0	
Cadmium	0	0	NC	
Lead	0	0	NC	

SOUND ANALYTICAL SERVICES, INC.

Duplicate Report

Client Sample ID: GP12-GW
Lab ID: 94812-01
Date Prepared: 12/18/00
Date Analyzed: 12/18/00
QC Batch ID: T082

Mercury by CVAA - USEPA Method 7470

Parameter Name	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD %	Flag
Mercury	0	0	NC	

CHAIN OF CUSTODY RECORD

[illegible]

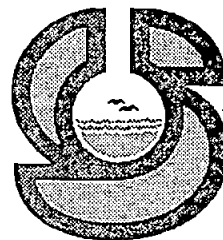
Sound Analytical Services, Inc.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 Pacific Hwy East o Tacoma, WA 98424

(253) 922-2310 o FAX (253) 922-5047

e-mail: info@saslab.com



DATA QUALIFIERS AND ABBREVIATIONS

- B1: This analyte was detected in the associated method blank. The analyte concentration was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
- B2: This analyte was detected in the associated method blank. The analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).
- C1: Second column confirmation was performed. The relative percent difference value (RPD) between the results on the two columns was evaluated and determined to be $\leq 40\%$.
- C2: Second column confirmation was performed. The RPD between the results on the two columns was evaluated and determined to be $> 40\%$. The higher result was reported unless anomalies were noted.
- M: GC/MS confirmation was performed. The result derived from the original analysis was reported.
- D: The reported result for this analyte was calculated based on a secondary dilution factor.
- E: The concentration of this analyte exceeded the instrument calibration range and should be considered an estimated quantity.
- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.
- MCL: Maximum Contaminant Level
- MDL: Method Detection Limit
- N: See analytical narrative.
- ND: Not Detected
- PQL: Practical Quantitation Limit
- X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be _____.
- X2: Contaminant does not appear to be "typical" product.
- X3: Identification and quantitation of the analyte or surrogate was complicated by matrix interference.
- X4: RPD for duplicates was outside advisory QC limits. The sample was re-analyzed with similar results. The sample matrix may be nonhomogeneous.
- X4a: RPD for duplicates outside advisory QC limits due to analyte concentration near the method practical quantitation limit/detection limit.
- X5: Matrix spike recovery was not determined due to the required dilution.
- X6: Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Sample was re-analyzed with similar results.
- X7: Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Matrix interference may be indicated based on acceptable blank spike recovery and/or RPD.
- X7a: Recovery and/or RPD values for this spiked analyte outside advisory QC limits due to high concentration of the analyte in the original sample.
- X8: Surrogate recovery was not determined due to the required dilution.
- X9: Surrogate recovery outside advisory QC limits due to matrix interference.