



Shaw Environmental, Inc.

FINAL

MEMORANDUM

TO: Washington State Department of Transportation **DATE:** March 17, 2005

FROM: Piper Roelen and Lief Christenson **PROJECT:** 111731

SUBJECT: State Route 509 Freight and Congestion Relief Project, Background Document and Data Review for Soil Management Plan

On behalf of Washington State Department of Transportation (WSDOT) (per Agreement No. Y-8564, Task Agreement Document AA), Shaw Environmental, Inc. (Shaw) performed a background document and data review as part of activities leading up to and including development of a Soil Management Plan (SMP) for the proposed State Route (SR) 509 Freight and Congestion Relief Project. The study area is located from South 176th Street to South 216th Street within the SR 509 alignment and proposed right-of-way (ROW; Figure 1). The south access road to SeaTac International Airport north of the South 200th Street overpass was excluded from the study area at WSDOT's direction. This technical memorandum summarizes the findings of the review, provides recommendations for investigations to acquire sufficient information to complete an SMP, and estimates costs to conduct these investigations.

The initial effort in this task involved identifying and screening those sites within and near the SR 509 ROW that could potentially impact soil and/or groundwater within the project area. This was accomplished by screening the location and potential significance of sites identified in various database reports (Attachment A) and the SR 509 Environmental Impact Statement (EIS) Hazardous Waste Discipline Report (HWDR) and listing those sites that in Shaw's professional judgment (and with input from WSDOT personnel with site-specific knowledge) represent a potential soil management issue. The final list is included as Table 1. Shaw further scrutinized sites on the list by conducting a file review at the Washington State Department of Ecology (Ecology) central records office. Files and documents reviewed in this effort are identified in the References section of this memorandum and are divided by site. Not all the sites on the list had associated files at Ecology. Depending on the findings from the review (or the lack thereof), additional investigation is recommended to verify potential soil management concerns. Specific recommendations are included for each site described in the sections below and are summarized in Table 1.

Shaw also researched regional and area-wide environmental concerns, including the regional arsenic issue. Files reviewed for this aspect are also listed in the References section of this memorandum.

The following sections summarize Shaw's findings for each site from the document and data review. Site locations are shown on Figure 1 by alphanumeric designations that are listed on Table 1 and in the section headings below:

Battery Power Systems, Inc. – 2367 200th Street (Site #2)

This site is located within the ROW, south of the South 200th Street overpass leading to the South Airport Access Road. No Ecology files were available for this facility. Per the HWDR, the Battery Power Systems company formerly recycled batteries. Other businesses in the multi-tenant building may have included metal finishing, electrical, and freight operations. It was concluded that the various tenants may have potentially contaminated the site with heavy metals, solvents, and grease and oils.

Shaw recommends conducting a limited Phase I environmental site assessment (ESA) to determine whether evidence exists that would indicate a potential for the presence of contaminated soils at the site. If the ESA indicates the likely presence of soil or groundwater contamination, a Phase II subsurface investigation may be warranted.

Foreman's Welding/Hangar One Auto Rebuild – 18451 Des Moines Memorial Drive (Sites #7a & #7b)

These two sites are adjacent to one another and are located adjacent to and southeast of the proposed SR 509/Des Moines (South 188th) Way overpass/exit ramp diamond. The sites are also immediately to the north of the Hertz Corporation Car Rental site and adjacent to Jim's Detail Shop (see summary sections below). Ecology files were limited and included only an Ecology site summary sheet for Hangar One Auto Rebuild.

The Hangar One Auto Rebuild file indicated only that the facility has been a listed Resource Conservation and Recovery Act (RCRA) small quantity generator (SQG) of hazardous wastes since 1993.

Per the HWDR, the Foreman's Welding site is located on WSDOT-owned property and the site is potentially contaminated with heavy metals, oil, grease, and glycol/antifreeze.

Based on current construction designs that will be associated with the diamond, it appears that only filling activities will be conducted at these sites; therefore, no investigation activities are recommended for this site for the purposes of the SMP. A comprehensive investigation of these sites may be warranted in the future for the purpose determining potential environmental liability at the sites and/or for aiding with future site development plans and activities.

Jim's Detail Shop – 18429 Des Moines Way (Site #7c)

This site is adjacent to the southeast of the proposed SR 509/Des Moines (South 188th) Way overpass/exit ramp diamond. The site is adjacent to the Foreman's Welding/Hangar One Auto

rebuild site (see previous summary section). Ecology files were limited and included only an Ecology site summary sheet.

The Jim's Detail Shop file indicated that the site contains a 500-gallon fuel underground storage tank (UST) and a 500-gallon waste oil UST. The site is on Ecology's Leaking Underground Storage Tank (LUST) list, reportedly not because of leaking tanks, but from spills associated with the tanks. In February 1990, soils impacted by the spills were reportedly overexcavated toward the building. No reports or analytical data pertaining to the cleanup effort were available. Additionally, the file included several complaints from the facility owner that he had been required to build an oil/water separator for auto cleaning operations, when his neighbors (unspecified) were conducting similar operations, the wastewater from which was discharging to the storm sewer untreated.

Due to the construction activities that will be associated with the diamond, including ponds and pilings in the vicinity, Shaw recommends conducting a Phase II subsurface investigation focused on those areas where excavation will be performed at this site. A more comprehensive investigation can be performed if desired for the purpose of aiding with future site development activities.

Hertz Corp. Car Rental – 18624 Des Moines Way (Site #8)

The Hertz site is located adjacent to the east side of the proposed SR 509 ROW and adjacent to the south side of the Foreman's Welding, Hanger One Auto Rebuild, Jim's Detail Shop sites (see summary sections above). Ecology files included two reports (IT Corporation, 1994 and 1997) describing UST and hydraulic hoist replacement activities, and associated soil and groundwater investigations. The reports indicated that during the 1993 replacement of several USTs to the southwest of the main building, heavy soil and groundwater contamination was encountered. Remedial efforts included the excavation and disposal of approximately 2,400 tons of impacted soil, and pumping and disposal of 164,000 gallons of impacted water from the excavation. Installation and sampling of several groundwater monitoring wells in 1994, and subsequent sampling in 1997, indicated that soil and groundwater contamination was limited to a small on-site area, and it was concluded that natural attenuation was occurring. In 1997, several below-ground hydraulic hoists were removed from the service bays at the facility. Soil and groundwater in the immediate vicinity of the hoists were found to be impacted by hydraulic oil, but water samples collected from a downgradient observation well were not impacted. It was concluded that environmental impact was limited to a small area beneath the service bays.

In 1998, Hertz Corporation applied for a No Further Action (NFA) determination from Ecology under the Voluntary Cleanup Program (VCP) (Hertz, 1998). Ecology responded to the application with a letter (Ecology, 1999) requesting additional information in order to make a determination. No additional information was included in the file.

Based on review of proposed cuts for the SR 509 ROW that indicates that construction activities in this area may include excavations for stormwater drainage in the northwest corner of the property, and the documented presence of soil and groundwater contamination at the site, Shaw recommends conducting a Phase II subsurface investigation focused on those areas where excavation will be performed at this site. A more comprehensive investigation can be performed if desired for the purpose of aiding with future site development activities.

Midway Landfill (Site #12)

The Midway Landfill is a Superfund site located adjacent to the west side of Interstate 5 (I-5) near the southern end of the expansion portion of the SR 509 project. Based on the large number of files associated with the site, Shaw reviewed only a limited number of recent summary type files for the site (Parametrix, 2000a and 2000b; Environmental Protection Agency [EPA], 2000; and City of Seattle, 2003). Based on these files, the Midway landfill was operated as a municipal solid waste landfill from 1966 to 1983; however, industrial and demolition wastes were also known to have been disposed of at the site. The primary concerns associated with the site are organic and inorganic contamination of groundwater and methane migration. The EPA put the site on the National Priorities List in 1986. Remedial actions at the site from 1985 to 1992 included constructing a landfill cover, installing a gas extraction/flare system, constructing surface water drainage control systems, and instituting a monitoring program. It is reported that at present the migration of groundwater contaminants and methane from the site has been virtually eliminated.

Due to the extensive investigations that have been performed at this site, Shaw does not recommend any additional research or investigation at this location. Based on depth to groundwater (more than 50 feet below ground surface), groundwater is not expected to be encountered during construction. Methane gas, while reportedly no longer a problem outside the landfill boundaries, should be made a safety consideration for work being performed adjacent to the landfill. According to a letter from the City of Seattle to Ecology (City of Seattle, 2003), 12 perimeter gas extraction wells are located in the I-5 ROW, and widening activities planned in association with the SR 509 project will cover 11 of the 12 wells. The City of Seattle stated in the letter that, at present, negligible gas concentrations have been detected in these wells and requested Ecology's permission to remove/abandon the wells.

South 192nd Street Residential Property (Site #18)

This WSDOT-owned property is located within or adjacent to the SR 509 ROW, north of the South 192nd Street overpass. No Ecology files were available for this site. The HWDR indicates that dumping of garbage and 55-gallon drums of unknown material is documented at the site. Shaw also reviewed historical aerial photographs (1937, 1965, 1977, 1986, and 1990) of the site. The scale of the photographs is such that if dumping on the site has occurred, it is not visible in the photographs. A residential dwelling and an orchard were present on or adjacent to the site in

the 1965 aerial photograph. The orchard is no longer present in the 1977 photograph, and a number of buildings formerly located to the north of the site (approximately 200 feet north of 192nd Street) have been demolished. The site was relatively unchanged in the 1986 and 1990 aerial photographs. Based on the relatively unknown and suspect history of this site, Shaw recommends conducting a site reconnaissance to determine whether evidence exists of illegal dumping or other disposal on this property that would adversely impact soils at the site. Soil sampling may be warranted if there is any evidence of disposal or hazardous materials or petroleum products.

Alamo Rent-A-Car – 20636 Pacific Highway South (Site #29)

This site is located within the SR 509 ROW on the northeast corner of Pacific Highway and South 208th Street (also adjacent to the Unocal #3965 site – see summary section below). Ecology files included a baseline site conditions report and an application to the Ecology VCP for assistance (Farallon, 2004a and 2004b). The report and application indicated that the site contains a 10,000-gallon gasoline tank. Installation and sampling of four monitoring wells around the tank identified gasoline constituents in groundwater at concentrations well above Ecology Model Toxics Control Act (MTCA) cleanup levels. The VCP application requested assistance with determining how to proceed with the site.

Based on the site's location within and adjacent to the ROW, review of proposed cuts for the SR 509 ROW that indicates that a significant cut (an underpass beneath Pacific Highway South) will be excavated through the site, and the documented presence of significant groundwater contamination (soil contamination is also highly likely), it is likely that petroleum-impacted soil will be encountered during any excavation activities on or adjacent to this site. Shaw recommends that this site be specifically included in the SMP. Additionally, Shaw recommends conducting a Phase II subsurface investigation focused on those areas where excavation will be performed at this site. A more comprehensive investigation can be performed if desired for the purpose of aiding with future site development activities. When construction occurs, Shaw also recommends that an environmental health and safety professional observe excavation activities to assist with monitoring health and safety concerns and aiding with selective soil management.

Unocal 3965 – 20658 Pacific Highway South (Site #30)

This site is located within the SR 509 ROW on the northeast corner of Pacific Highway and South 208th Street (also adjacent to the Alamo Rent-A-Car site – see summary section above). Numerous reports have been prepared for this site (GeoEngineers, KHM, Delta, ENSR, RZA – see References). Based on these reports, between 1985 and 1990, 11 USTs were removed from the site. The USTs ranged in capacity from 250 to 12,000 gallons and contained waste oil, heating oil, gasoline, and septic waste. Soil and groundwater contamination has been documented around the former tank locations as well as around former hydraulic hoist locations and on adjacent properties to the west and east. Recent groundwater sampling results have

indicated that groundwater contamination in on-site wells is below MTCA cleanup levels. However, according to a communication from the City of SeaTac in September 2004, during excavation activities for a stormwater line along Pacific Highway, adjacent to the west side of the site, petroleum-impacted soils were encountered at approximately 9 feet below ground surface (Ecology, 2004).

Based on the site's location within and adjacent to the ROW, review of proposed cuts for the SR 509 ROW that indicates that a significant cut (an underpass beneath Pacific Highway South) will be excavated through the site, and the documented presence of soil and groundwater contamination, it is likely that petroleum-impacted soil will be encountered during any excavation activities on or adjacent to this site. Shaw recommends that this site be specifically included in the SMP. Additionally, Shaw recommends conducting a Phase II subsurface investigation focused on those areas where excavation will be performed at this site. A more comprehensive investigation can be performed if desired for the purpose of aiding with future site development activities. When construction occurs, Shaw also recommends that an environmental health and safety professional observe excavation activities to assist with monitoring health and safety concerns and aiding with selective soil management.

Regional/Area-Wide Arsenic and Lead (Site A)

Regional/area-wide arsenic and soil contamination within the Asarco smelter plume are well documented in a number of sources (see References). During operation of the Asarco smelter in Tacoma, Washington, the prevailing winds carried and deposited arsenic and lead over a significant portion of King County. As a result, arsenic and lead concentrations exceeding MTCA cleanup levels (20 parts per million [ppm] for arsenic and 250 ppm for lead) have been documented over a large area. Typically it has been shown that this contamination is limited to the top 6 inches of soil and is predominantly found on land that has historically been undisturbed and/or undeveloped (i.e., has not been mixed, diluted, or moved through development activities). Additionally, studies have shown that surface soils at former pear and apple orchards are likely to have elevated arsenic and lead levels due to a high probability of use of pesticides containing lead arsenate before 1947. Several reports (Hart Crowser, 1999 and 2001a and 2001b) pertaining to soil studies for SeaTac International Airport Borrow Areas 1, 3, and 4 (Figure 1) indicate that 8 of 10 surface soil horizon samples collected from Borrow Area 4 contained arsenic above MTCA cleanup levels. Approximately ¼-mile of the SR 509 ROW crosses Borrow Area 4.

Based on the findings from these reports and studies, Shaw recommends surface soil sampling in areas along the SR 509 ROW that have little or no evidence of historic development or disturbance (e.g., Borrow Area #4) and those areas that have been identified as having potentially contained orchards in the past (Figure 1).

Highline School District Maintenance, Operations, and Transportation Yard - 17919 8th Avenue South (Site B)

The Highline School District site is located adjacent to the northwest of the proposed SR 509/Des Moines (South 188th) Way overpass/exit ramp diamond. Ecology files included two reports (Shannon & Wilson, 1995 and 1997) that describe UST removals and site investigations. The reports indicate that five USTs were removed from the site in 1995. The USTs ranged in capacity from 250 to 12,000 gallons and contained used oil, diesel, and gasoline. Contaminated soil was encountered during the removals and overexcavated. Confirmation sampling indicated that residual gasoline-impacted soil remains at concentrations below MTCA cleanup levels, but used oil contamination remains at concentrations exceeding MTCA cleanup levels. In 1996, a follow-up investigation at the location of the former 250-gallon used oil tank was conducted that indicated that high concentrations of used oil remain in the soil around the former tank pit; however, no evidence of downward migration of contamination was encountered.

Based on review of proposed cuts for the SR 509 ROW, it appears that significant excavation will not be occurring near this property; therefore, Shaw does not recommend any further investigation or actions for this site.

Unocal 5149 – 18201 Des Moines Way (Site C)

This site is located to the west of the proposed SR 509/Des Moines (South 188th) Way overpass/exit ramp diamond on the southwest corner of Des Moines (South 188th) Way and 8th Avenue South. A number of reports have been prepared for this site (GeoEngineers, 1988 through 1997). These reports indicate that several monitoring wells were installed at the site in 1988. Samples from these wells indicated that groundwater was impacted with petroleum, but at concentrations less than MTCA cleanup levels. In 1990, four USTs were removed from the site. In 1992, two hydraulic hoists were removed from the site. In 1993, a subsurface investigation was conducted in the northern corner of the site at the former location of a Smith Brothers Oil facility. Soils were determined to be impacted at concentrations greater than MTCA Method A cleanup levels. In 1997, MTCA Method B cleanup levels were calculated for the site and an application was submitted to Ecology for an NFA determination based on the residual soil concentrations being below the calculated Method B levels. In 1998, Ecology granted an NFA determination for the site.

Based on review of proposed cuts for the SR 509 ROW, it appears that the ROW will not extend into the area where residual impact soils are present; therefore, Shaw does not recommend any additional investigation or evaluation of this site.

WSDOT Parcels 107299 and 107307 – 1515 and 1322 South 196th Place (Sites D & E)

WSDOT supplied Shaw with a UST removal and site assessment report (Clayton, 1997) that discussed both of these sites. The sites are both located less than 400 feet to the north of the South 200th Street off-ramp. In 1997, a 300-gallon heating oil UST was removed from each of

these sites. No evidence of leaks or releases from either tank was observed during removal activities.

Based on the findings of the report, there is no suspected contamination at either site; therefore, no further investigation or action is recommended for these sites.

WSDOT Parcel 107316 – 19414 Des Moines Memorial Way South (Site F)

WSDOT supplied Shaw with a UST removal, site assessment, and soil cleanup report (Clayton, 1996) that discussed this site. The site is located approximately 300 feet north of the Des Moines Memorial Way overpass. In 1996, a 300-gallon heating oil UST was removed from the site. During the removal, corrosion holes were observed in the tank and obvious petroleum contamination was observed in soils beneath the tank. Approximately 200 tons of visibly impacted soil was excavated from the tank pit. Confirmation sample results from the excavation walls and groundwater that seeped into the excavation all contained total petroleum hydrocarbon concentrations below the laboratory detection limit.

Based on the findings of the report, there is no suspected contamination remaining at the site; therefore, no further investigation or action is recommended for this site.

Estimated Costs

Estimated costs for additional and follow-up work for this project are summarized on the spreadsheets in Table 2. Per Shaw's original scope of work for this project, costs include estimates for completing a sampling and analysis plan (draft and final) and a health and safety plan for all proposed work. Project management costs, including two additional meetings with WSDOT, are also included.

Attachments: Figure 1 – Site Map/Areas of Interest
Table 1 – Sites with Potential Soil Management Issues
Table 2 – Cost Estimate
Attachment A – Environmental Data Resources (EDR) Report (compact disk)

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File

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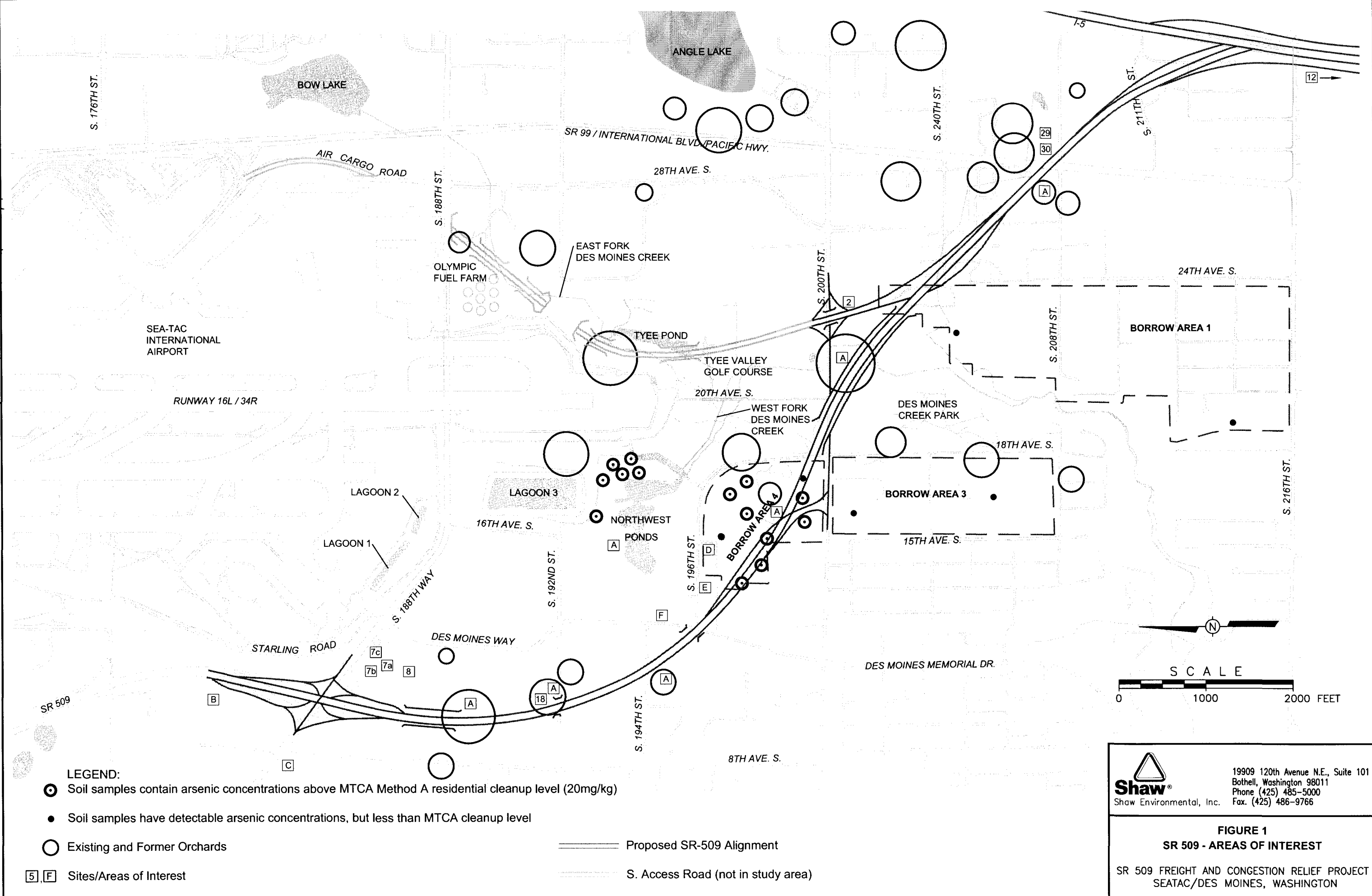
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FIGURE 1
SR 509 - AREAS OF INTEREST
SR 509 FREIGHT AND CONGESTION RELIEF PROJECT
SEATAC/DES MOINES, WASHINGTON

Table 1
SR 509 Freight and Congestion Relief Project – Sites with Potential Soil Management Issues

Hazmat Discipline Report No.	EDR Report No.	Map ID No.	Site Name	Site Address	Issue	Suggested Follow-up Action
2	A1	2	Battery Power Systems, Inc.	2367 S. 200 th Street	Suspect site history, RCRA SQG - possible metals, solvents, TPH contamination.	1. Phase I ESA 2. Phase II (as necessary)
7	AJ140	7a	Foreman's Welding	18451 Des Moines Memorial Dr.	Welding shop – possible metals, TPH, glycol/antifreeze contamination. RCRA SQG.	None – Area not disturbed by construction
—	—	7b	Hangar One Auto Rebuild	18400 Block Des Moines Memorial Drive	Auto repair shop – possible metals, TPH, glycol/antifreeze contamination. RCRA SQG.	None – Area not disturbed by construction
—	AJ141-143	7c	Jim's Detail Shop	18429 Des Moines Way	Gasoline and oil USTs, LUST site. Reported cleaned up; however, no support data.	Phase II subsurface investigation.
8	AH131/ 134 & AW201	8	Hertz Corp. Car Rental	18625/18634 Des Moines Memorial Drive	Documented soil and groundwater TPH contamination. Gasoline and oil UST/LUST.	Phase II subsurface investigation.
12	—	12	Midway Landfill	24800 Pacific Hwy. S.	Landfill, known contamination, possible contaminant migration	Include in SMP as potential health and safety issue (methane gas)
18	—	18	S. 192 nd Street Residential Property	1112 S. 192 nd Street	Unknown dumped materials	1. Site reconnaissance 2. Phase II (surface soil sampling – as necessary)
29	—	29	Alamo Rent-A-Car	20636 Pacific Hwy S.	Gasoline UST. Documented groundwater and suspected soil TPH contamination.	1. Include in SMP for petroleum contaminated soil management. 2. Options for investigation.
30	135	30	Unocal #3965	20658 Pacific Hwy S.	Gasoline/oil LUST site. Documented soil and groundwater TPH contamination.	1. Include in SMP for petroleum contaminated soil management 2. Options for investigation.
—	—	A	Regional Arsenic/Lead Issue – Asarco Smelter Plume/Historic Orchards	South King County	Arsenic and lead contaminated soil above MTCA Method A residential cleanup levels.	Sample surface soil horizon in historically undeveloped areas and orchards

Table 1
SR 509 Freight and Congestion Relief Project – Sites with Potential Soil Management Issues

Hazmat Discipline Report No.	EDR Report No.	Map ID No.	Site Name	Site Address	Issue	Suggested Follow-up Action
—	BA221 -223 & BC	B	Highline School District Maintenance	17919 8 th Avenue S.	RCRA SQG, gasoline, diesel, and oil USTs, LUST site impacting soil with TPH.	None – Area not disturbed by construction
—	AV 195/196 & 259	C	Unocal #5149	18201 Des Moines Way	Petroleum and oil USTs. Voluntary cleanup, NFA. Residual TPH impacted soil documented.	None – Area not disturbed by construction
—	31	D	WSDOT Parcel 107299	1515 S. 196 th Place	Heating Oil UST removed. No contamination reported.	None – outside of ROW and no contamination.
—	63	E	WSDOT Parcel 107307	1322 S. 196 th Place	Heating Oil UST removed. No contamination reported.	None – outside of ROW and no contamination.
—	139	F	WSDOT Parcel 107316	19414 Des Moines Way S.	Heating Oil UST removed. Contamination reportedly cleaned up.	None – outside of ROW and no remaining contamination.

— = not identified in the report.

Map ID No.: numeric values correspond to Hazmat Discipline Report site number; alphabetic values are additional sites of interest not identified in Hazmat Discipline Report.

Table 2

**Project Cost Estimate
Y-8564, TAD AA - SR509 Freight and Congestion Relief Project**

Resource	Rate	Task 1		Task 2		Task 3		Task 4		Task 5		Task 6		Task 7		Task 8		Task 9		Task 10		TOTAL	
		Hours	Amount	Hours	Amount	Hours	Amount	Hours	Amount	Hours	Amount	Hours	Amount	Hours	Amount	Hours	Amount	Hours	Amount	Hours	Amount	Hours	Amount
Labor																							
Executive Director	\$193	2	\$ 386		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	2	\$ 386
Program Manager	\$126	24	\$ 3,024	6	\$ 756	4	\$ 504	4	\$ 504	4	\$ 504	4	\$ 504	4	\$ 504	4	\$ 504	4	\$ 504	4	\$ 504	62	\$ 7,812
Senior Scientist II	\$95	12	\$ 1,140	2	\$ 190		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	14	\$ 1,330
Engineer II	\$84	40	\$ 3,360	48	\$ 4,032	8	\$ 672	12	\$ 1,008	8	\$ 672	8	\$ 672	8	\$ 672	16	\$ 1,344	8	\$ 672	8	\$ 672	164	\$ 13,776
H&S Officer	\$78		\$ -	24	\$ 1,872		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	24	\$ 1,872
Geologist/Field Technician	\$64	12	\$ 768	2	\$ 128	24	\$ 1,536	40	\$ 2,560	40	\$ 2,560	40	\$ 2,560	30	\$ 1,920	60	\$ 3,840	40	\$ 2,560	40	\$ 2,560	328	\$ 20,992
Procurement Specialist	\$77		\$ -		\$ -		\$ -	2	\$ 154	2	\$ 154	2	\$ 154		\$ -		\$ -	2	\$ 154	2	\$ 154	10	\$ 770
Drafting/CAD Operator	\$64		\$ -	12	\$ 768	2	\$ 128	4	\$ 256	4	\$ 256	4	\$ 256	2	\$ 128	6	\$ 384	4	\$ 256	4	\$ 256	42	\$ 2,688
Accounting	\$52	6	\$ 312	1	\$ 52	1	\$ 52	1	\$ 52	1	\$ 52	1	\$ 52	1	\$ 52	1	\$ 52	1	\$ 52	1	\$ 52	15	\$ 780
Word Processing	\$46	1	\$ 46	12	\$ 552	2	\$ 92	2	\$ 92	2	\$ 92	2	\$ 92	2	\$ 92	2	\$ 92	2	\$ 92	2	\$ 92	29	\$ 1,334
Clerical	\$46	2	\$ 92	1	\$ 46	1	\$ 46	1	\$ 46	1	\$ 46	1	\$ 46	1	\$ 46	1	\$ 46	1	\$ 46	1	\$ 46	11	\$ 506
Total Labor	Unit	99	\$ 9,128	108	\$ 8,396	42	\$ 3,030	66	\$ 4,672	62	\$ 4,336	62	\$ 4,336	48	\$ 3,414	90	\$ 6,262	62	\$ 4,336	62	\$ 4,336	701	\$ 52,246
Direct Costs																							
Vehicle	Day	2	\$ 110			1	\$ 55	1	\$ 55	2	\$ 110	2	\$ 110	1	\$ 55	2	\$ 110	2	\$ 110	2	\$ 110		\$ 825
Laboratory Analytical	Cost								\$ 3,500		\$ 2,000		\$ 2,000		\$ 500		\$ 2,000		\$ 3,500		\$ 3,500		\$ 17,000
Subcontractors (Drilling/Utility)	Cost								\$ 1,550		\$ 1,600		\$ 1,600				\$ 2,900		\$ 2,900		\$ 2,900		\$ 10,550
Communications	1.5%		\$ 137		\$ 126		\$ 45		\$ 70		\$ 65		\$ 65		\$ 51		\$ 94		\$ 65		\$ 65		\$ 784
Expendables/Equipment	Cost						\$ 90		\$ 145		\$ 150		\$ 150		\$ 164		\$ 90		\$ 290		\$ 290		\$ 1,369
Total Direct Costs			\$ 247		\$ 126		\$ 190		\$ 5,320		\$ 3,925		\$ 3,925		\$ 770		\$ 2,294		\$ 6,865		\$ 6,865		\$ 30,528
Total Project Costs			\$ 9,375		\$ 8,522		\$ 3,220		\$ 9,992		\$ 8,261		\$ 8,261		\$ 4,184		\$ 8,556		\$ 11,201		\$ 11,201		\$ 82,774

Task 1: Project Management and Meetings

Task 2: Sampling and Analysis Plans/Health and Safety Plans (3 Phase IIs - draft & final)

Task 3: Battery Power Systems - Modified Phase I

Task 4: Battery Power Systems - Phase II Subsurface Investigation (CONDITIONAL ON FINDINGS FROM TASK 3)

Task 5: Jim's Auto Detail Phase II Subsurface Investigation

Task 6: Hertz Car Rental Phase II Subsurface Investigation

Task 7: S. 192nd Street Property - Site Recon and Soil Sampling

Task 8: Arsenic Investigation

Task 9: Unocal 3965 Phase II Subsurface Investigation

Task 10: Alamo Rent-a-Car Phase II Subsurface Investigation