DECOMMISSIONING REPORT

Avis SeaTac

18811 16th Avenue South

SeaTac, Washington

Prepared for:

Avis Rent A Car
Parsippany, New Jersey

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Project No. SE11160290

DECOMMISSIONING REPORT
Avis SeaTac
18811 16th Avenue South
SeaTac, Washington

June 26, 2012
Project No. SE11160290

This report was prepared by the staff of AMEC Environment & Infrastructure, Inc., under the supervision of the Hydrogeologist whose seal and signature appear hereon.

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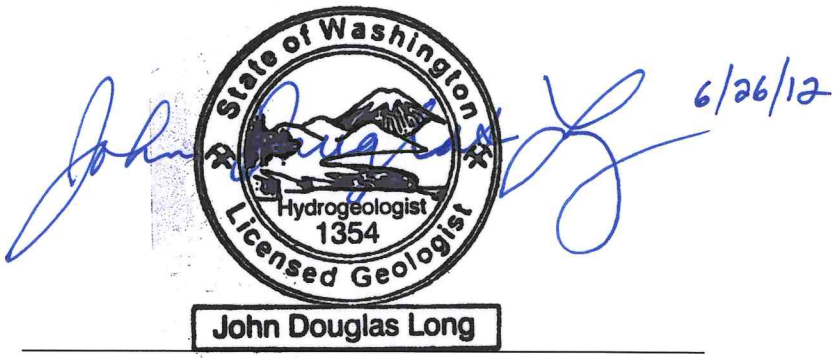

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Expiration Date: May 23, 2013

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DECOMMISSIONING REPORT

Avis SeaTac
18811 16th Avenue South
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1.0 INTRODUCTION

This report documents the decommissioning of a former rental car parking lot and vehicle maintenance property located at 18811 16th Avenue South in SeaTac, Washington (Figure 1). The site is currently registered with the Washington Department of Ecology (Ecology) as Underground Storage Tank (UST) Site 6132; it is also listed as a leaking UST (LUST) site 6132.

The site was used historically as a car rental and maintenance facility. The former car rental facility included an office, vehicle maintenance facility with hydraulic lifts, vehicle fueling facilities, a carwash, and associated facilities. Underground storage tanks (USTs) were present historically and used to store vehicle fuel, motor oil, and waste oil generated as part of vehicle maintenance. An historical gasoline tank and two smaller tanks used for motor oil and waste oil were removed in 1992. The fuel tank was replaced with a new similar-sized fuel tank in 1992. The new tank was located at nearly the same location as the original fuel tank that had been removed in 1992. Oil storage tanks removed in 1992 showed evidence of a release of motor oil.

In 2011, AMEC Environment & Infrastructure, Inc. (AMEC), conducted environmental investigations to assess the status of the site and determine the steps needed to remove the remaining tank and decommission the site. A site assessment and decommissioning activities were conducted in late 2011 through early 2012 and included removal of the remaining 12,000-gallon UST with associated piping and equipment, removal of hydraulic hoists, and cleanup of impacted soil discovered during removal of the hydraulic hoists.

This report documents removal of the UST and associated piping, hydraulic lifts, and impacted soil. In addition, this report summarizes the historic closures of USTs at the site, the results of environmental sampling associated with UST closure activities, results from preclosure soil and groundwater sampling, and results of the site assessment conducted in 2011 for the 12,000-gallon UST and associated piping.

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2.0 SITE IDENTIFICATION AND DESCRIPTION

This section presents a brief description of the site and its environmental setting, including the regulatory status, location and setting, topography, and geologic and hydrogeologic conditions.

2.1 REGULATORY STATUS

The site is listed in Ecology's Facility/Site Identification System (F/SID) as Underground Storage Tank (UST) Site 6132, and Leaking Underground Storage Tank (LUST) Site 6132. The overall F/SID site number is 32197393. Ecology's F/SID listing for the site identifies the following USTs:

- Tank 1, a former 12,000-gallon gasoline storage tank that was removed in 1991;
- Tanks 2 and 3, two former 500-gallon motor oil (waste and new motor oil) storage tanks installed adjacent to one another and removed in 1992;
- Tank 4, a 12,000-gallon unleaded gasoline storage tank installed in January 1992 within the tank cavity of Tank 1 and removed in February to March 2012 as part of decommissioning activities.

Information about the tanks is summarized in Table 1. Tanks 1 through 3 were removed from December 1991 to January 1992 (Section 4.1), and Tank 4 was removed in February 2012 as part of decommissioning activities described in this report.

The site is listed as a LUST site due to evidence for a suspected release of motor oil that was discovered during removal of Tank 2 and Tank 3 in January 1992 (Section 4.1.2). Although the release of oil to the soil was cleaned up in 1992, the site is still listed as a LUST site because a groundwater sample collected during the cleanup excavation contained detectable levels of total petroleum hydrocarbons (TPH) (see Section 4.1.2).

2.2 SITE AND PROPERTY LOCATION

The property is located in SeaTac, Washington, at 18811 16th Avenue South, southwest of the intersection of South 188th Street and 16th Avenue South (Figure 1). The property is in the southeast quarter of the southeast quarter of Section 32 of Township 23 North, Range 4 East and comprises King County Parcels 3223049089 and 3223049090.

2.3 NEIGHBORHOOD SETTING

The site is located at the corner of South 188th Street and 16th Avenue South, directly across South 188th Street from Seattle-Tacoma International Airport. Runways for the airport lie to the north and east; an airport maintenance facility is located directly across the street to the north. The surrounding properties are zoned for either Industrial or Aviation Operations. Buildings to the west

and south are a mix of office parks and light manufacturing, including an air conditioner maintenance facility, culinary supplier, and precision-tool manufacturing facility.

2.4 TOPOGRAPHIC SETTING

The property lies on the Des Moines Drift Upland, a glacially sculpted, north/south-trending upland plateau steeply bordered by Puget Sound to the west and the Duwamish River valley to the east (Aspect, 2005). The area around the property is generally flat, with a gradual slope to the southwest. Elevation contours for the site are illustrated on Figure 2. The elevation of the property itself ranges between approximately 290 and 305 feet above mean sea level, with a slope of approximately 5 to 7 degrees toward the southwest.

2.5 SITE GEOLOGY AND HYDROGEOLOGY

The property has been mapped as a recessional outwash deposit associated with the retreat of the Vashon ice sheet during the most recent glaciations (Aspect, 2005). Recessional outwash deposits are fluvial deposits consisting of sand, gravel, and silty sand. Brown poorly graded sand or brown silt was encountered during a push-probe investigation in December 2011 and during excavation of Tank 4 in February 2012, consistent with the expected recessional outwash deposits. The push-probe investigations encountered refusal at depths of approximately 16 feet below ground surface (bgs), likely representing the transition to the more indurated Vashon lodgement till deposits. Perched groundwater was encountered at a depth of around 12 feet bgs during the 2012 push probe investigation. Groundwater flow is most likely to the south, following the general surface topography, but could be locally variable.

3.0 PROPERTY DEVELOPMENT AND HISTORY

This section summarizes historic land uses and operations at the property and identifies potential sources of contamination from these historic site activities.

3.1 SITE USES AND FACILITIES

The site has been used historically as a parking lot and service area for rental vehicles (Figure 2). One 7,047-square-foot building is present on the property, which was used historically for office space and vehicle servicing, including car washing. A canopy to the southwest of the building covers two service islands formerly equipped with dispensers for vehicle fuel, motor oil, and windshield washer fluid. The main building contains a car wash and a maintenance bay. Prior to decommissioning the maintenance bay contained:

- Two motor oil aboveground storage tanks (AST), one for waste oil and one for new motor oil;
- One AST for windshield washer fluid;
- Four dispenser hose reels for motor oil, washer fluid, and water;
- One electric car hoist; and
- Two sub-grade hydraulic cylinder car hoists.

3.2 PROPERTY ZONING, UTILITIES, AND ACCESS

The property is zoned for industrial use. A Port of Seattle stormwater conveyance and easement runs north to south through the length of the property. The storm water conveyance is located approximately 12- to 15-feet in the subsurface below the fuel dispenser island canopy for the fuel dispenser islands (Figure 3). Utility lines for natural gas and three-phase electrical power from Puget Sound Energy (PSE) enter the property from along 16th Avenue South and run west to connect to the building. A sanitary sewer line runs along the same general course as the PSE utility lines, with a junction connecting it to an oil/water separator on the southeast corner of the building. Two storm sewer line conveyances collect stormwater runoff from the property. One storm sewer runs to the south from the canopy area in the southwest corner of the site. The other storm sewer consists of two lines encircling all but the northeast corner of the building, with the lines joining in the center-south of the property and running east to 16th Avenue South. Access to the site is provided from 16th Avenue South through two locked gates.

3.3 POTENTIAL SOURCES OF CONTAMINATION

This section summarizes potential sources or contamination at the property from historical activities at the site.

3.3.1 Historic Gasoline UST

Tank 1, a 12,000-gallon gasoline UST removed in 1991, had been used to supply fuel for the dispenser islands prior to 1992. The historical tank was located east of the fuel island and to the southwest of the building (Figure 3). The tank was registered with Ecology as Tank ID 40739. This historic 12,000-gallon gasoline UST was removed on December 10, 1991. This tank was located at the same approximate location as Tank 4, the recently removed 12,000-gallon UST (Figure 3).

3.3.2 Former Oil USTs

Tanks 2 and 3, two 500-gallon USTs for storage of motor oil and waste oil, were located outside the east wall near the southeast corner of the building (Figure 3). They were registered with Ecology as Tank ID 40704 and 40630, respectively, and removed on January 27, 1992.

3.3.3 12,000-Gallon UST and Fueling System

Tank 4 was a 12,000-gallon unleaded gasoline tank registered with Ecology as Tank ID 40652. It was installed in January 1992 by B & C Equipment Company (B&C) approximately 35 feet southwest of the main building in the approximate location of Tank 1 (Figure 3). The tank pump system was pressurized, with a spill bucket/box for spill prevention, an overfill alarm, corrosion-resistant flexible double-wall pipe, and automatic line leak detection. The tank was constructed of double-walled fiberglass, UL #38003 and a LAFD #40-90-1.

The primary tank release detection method was interstitial monitoring and annual pipe tightness tests. The tank was secured via four deadman anchors spaced evenly along the tank. The tank was current on inspections and was operational until July 7, 2011. The tank was pumped dry on July 7, 2011, and a permit to operate the tank was valid through January 31, 2013.

3.3.4 Hydraulic Lift Cylinders (Hoists)

Two hydraulic lift cylinders or hoists were located on the east side of the maintenance bay as shown in Figure 3. The hoists contained below-grade hydraulic cylinders with internal storage of hydraulic fluid; these types of cylinders are a potential release source because the cylinders can leak hydraulic fluid into the subsurface without being observed.

4.0 SUMMARY OF HISTORIC TANK REMOVAL AND ENVIRONMENTAL INVESTIGATIONS

This section summarizes historical tank removal activities conducted at the site that were performed prior to the more recent site decommissioning activities and describes results from environmental investigations conducted at the site. More recent tank removal activities conducted as part of site decommissioning are presented in Section 5.0.

4.1 1991 TO 1992 UST CLOSURE AND SAMPLING

In 1991, B&C was retained by Avis Rent A Car to remove Tanks 1 through 3 that were present at the facility at that time. B&C removed Tank 1, a 12,000-gallon UST located southwest of the main building, and Tanks 2 and 3, two smaller motor oil USTs located just east of the main building, as shown in Figure 3. A copy of the B&C report is presented in Appendix A. Removal of the gasoline tank and results of associated sampling are discussed in Section 4.2.1. Removal and cleanup of the motor oil tanks and results of associated sampling are discussed in Section 4.2.2.

4.1.1 Historic Gasoline UST

Tank 1, removed in 1991, was a 12,000-gallon gasoline tank that was used to fuel rental cars that were cleaned and serviced at the facility. This tank was a fiberglass tank that may have been installed when the facility was constructed in 1978. The tank was located approximately 35 feet southwest of the rental car service building, as shown in Figure 3.

When the historic 12,000-gallon gasoline UST was excavated and removed, soil samples were collected from two sidewalls and the bottom of the UST excavation for analysis of the following analytes:

- hydrocarbons by the NWTPH-Hydrocarbon Identification (HCID) method; and
- benzene, toluene, ethylbenzene, and xylenes (BTEX).

Table 2 presents the analytical results for these confirmation samples. All analytical results were below their respective reporting limits. No visible or olfactory indications of contamination in the excavation were reported (B&C, 1992). A new double-walled, 12,000-gallon fiberglass tank (Tank 4) was installed in the former tank cavity. Removal of Tank 4 is documented in Section 5.1.

4.1.2 Former Motor Oil USTs

Tanks 2 and 3 were 500-gallon historic motor oil USTs located adjacent to one another approximately 8 feet away from the eastern side of the main building, as shown in Figure 3. Tank 2 was used to store new motor oil, and Tank 3 was used to store waste motor oil. On January 27, 1992, B&C

removed the tanks from a common excavation. Four soil samples were collected from the excavation on January 27, 1992: one from the bottom of the tank at a depth of 9 feet, and one each from the west, north, and east sidewalls at approximately 7 feet in depth. No soil sample was collected from the south side of the excavation as this sidewall continued to collapse (B&C, 1992).

All four soil samples were analyzed for TPH as diesel (TPH-D), TPH as gasoline (TPH-G), and TPH as motor oil (TPH-MO). In addition, the bottom soil sample was also analyzed for the following constituents:

- Metals using the toxicity characteristic leaching procedure (TCLP);
- Polychlorinated biphenyls (PCBs) by EPA Method 8080; and
- Chlorinated volatile organic compounds (CVOCs) by EPA Method 8010.

Table 2 lists the TPH results for these samples. The bottom soil sample and the west sidewall soil sample contained TPH-diesel (TPH-D) and TPH-motor oil (TPH-MO) at concentrations exceeding the reporting limits. No metal exceeded TCLP regulatory limits (40 Code of Federal Regulations, Part 261), and no PCBs or CVOCs were detected in this soil sample above the reporting limits.

Due to evidence (Visual and laboratory analytical results) of petroleum-impacted soils, B&C remobilized to the site on March 5, 1992, to extend the excavation and remove impacted soil. The lateral extent of the excavation was extended by 2 feet on the west sidewall and 1 foot along the south sidewall, and the excavation was deepened by 2 feet. Three additional soil samples were collected from the bottom, from the south sidewall, and from the west sidewall of the excavation on March 5, 1992. In addition, one sample was collected from the excavated soil stockpile.

As shown in Table 2, all four samples were analyzed for both TPH-D using NWTPH-D and total petroleum hydrocarbons. All of the soil confirmation samples from the extended excavation were below the reporting limits for TPH-D and TPH. The stockpile sample contained 10,000 milligrams per kilogram (mg/kg) of TPH, and 5,800 mg/kg of TPH-D. Thirty cubic yards of stockpiled soil was eventually trucked off site to Rabanco's transfer station for eventual disposal at the Roosevelt Regional Landfill (B&C, 1992)

A visible sheen was observed on groundwater in the excavation. B&C subcontracted Burlington Environmental to use a vacuum truck to remove 3,500 gallons of groundwater from the excavation on March 12, 1992. A grab sample of groundwater from the excavation was collected and analyzed for TPH using EPA Method 418.1. This sample contained 9.9 milligrams per liter (mg/L) of TPH; the excavation was backfilled and paved after this sample was collected (B&C, 1992). Additional investigations performed in the area of these waste oil USTs in 2011 are described in Section 4.2.1.

4.2 PUSH-PROBE INVESTIGATION — DECEMBER 2012

On December 6, 2011, AMEC Environment & Infrastructure, Inc. (AMEC) conducted a push-probe investigation on the property using a Power Probe 9630 ProD Geoprobe drill rig. All locations were cleared with a One Call and a private utility locator, as well as air-knifed to 4 feet bgs to clear possible utility conflicts.

4.2.1 Soil and Groundwater near Former Waste Oil Tanks

Two borings (ASB1 and ASB2) were advanced to a depth of 16 feet in the vicinity of the former 500-gallon USTs (Figure 4). Boring location ASB1 was directly to the east of the former 500-gallon USTs and encountered groundwater at 12 feet. Boring location ASB2 was directly south of the former 500-gallon USTs and encountered groundwater at 11.5 feet. No sheen or odor was detected and no volatile organic compounds (VOCs) were detected in headspace using a photoionization detector (PID). Groundwater samples were collected through a temporary screen set from 12 to 16 feet bgs. Four soil and two groundwater samples were collected from these borings and analyzed for TPH using the NWTPH-HCID analytical method. None of the samples contained TPH-G, TPH-D, or TPH-Heavy Oil (TPH-HO) above reporting limits, as shown in Table 3. Copies of the boring logs are presented in Appendix B. Copies of the laboratory analytical data packages are contained in Appendix C.

4.2.2 Soil Near Gasoline UST

Two borings (ASC1x and ASC2) were advanced to depths of 16 feet bgs to the south of the 12,000-gallon UST and dispenser islands. A third planned boring nearer the tank was abandoned when the drillers encountered pea gravel fill and filter cloth. Boring ASC1x was located on the southern margin of the 12,000-gallon UST, and boring location ASC2 was just to the south of the fuel island (Figure 4). One soil sample was collected from each of these borings at a depth of approximately 14 feet bgs and analyzed for petroleum hydrocarbons by Method NWTPH-HCID. None of these samples contained TPH-G, TPH-D, or TPH-MO above reporting limits, as shown in Table 3.

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5.0 SITE DECOMMISSIONING, CLEANUP, AND RESTORATION

This section documents the decommissioning activities conducted in February to March 2012. To accomplish the site decommissioning, cleanup, and restoration, AMEC completed the following tasks:

- Removed the 12,000-gallon gasoline UST.
- Removed the two existing subgrade hydraulic cylinders associated with the vehicle lifts in the vehicle maintenance portion of the building at the site.
- Cleaned up a limited volume of soil affected by a release of hydraulic fluid from the northern hydraulic hoist.
- Cleaned the two oil/water separators, removed sludge from the separators, and inspected the condition of the separators and left both of the functional oil/water separators in place.
- Cleaned and removed sediment from a settling tank connected to the car wash and one of the oil/water separators.
- Cleaned and disposed of the two aboveground storage tanks (ASTs) from the dispenser islands, and three ASTs from inside the maintenance bay.
- Drained and disposed of unwanted motor oil and windshield washer fluid hose reels.
- Removed the gasoline dispensers and shipped them to other sites for re-use.
- Removed an abovegrade, electrically operated lift from inside the maintenance bay.
- Backfilled and repaved the areas disturbed during removal activities and recycled and/or disposed of miscellaneous metal debris and other refuse generated during decommissioning activities.

Photographs of the site decommissioning activities are included in Appendix D. Additional details concerning activities related to removal of the gasoline UST and hydraulic cylinders, cleaning of the oil/water separators, and asphalt and concrete repaving are provided in the sections below.

5.1 REMOVAL OF 12,000-GALLON GASOLINE UST

This section documents removal of the 12,000-gallon UST used to store gasoline used for vehicle refueling. Removal activities included permitting, removal of the tank, collection of samples from the tank excavation area, and laboratory testing of the samples.

5.1.1 Permitting

Prior to the start of any decommissioning activities, AMEC completed a State Environmental Policy Act (SEPA) checklist and submitted the checklist to the City of SeaTac (City). The City of SeaTac provided AMEC with a Notice of Application and a Determination of Non-Significance for the proposed

work at the site. AMEC erected the required SEPA Notice board as required by the City. A separate Grading and Drainage and Storage Tank permit were also required by the City of SeaTac prior to starting decommissioning activities. Copies of the SEPA notice materials, the Grading and Drainage Permit, and the Storage Tank permit are presented in Appendix E.

5.1.2 Removal of Tank and Supply Lines

On February 22, 2012, Wyser Construction Company (Wyser), under the direction of AMEC, removed and palletized the dispensers from the fuel island for future use at another facility. On February 27, Wyser's subcontractor Marvac flushed the product lines with water and collected using a vacuum truck and vacuumed sludge from the existing 12,000-gallon UST. On February 24 and February 28, Wyser removed first the concrete above the product lines leading to the dispensers, and then the product lines for the 12,000-gallon UST. No visible leaks or fouling were observed anywhere along the product lines leading to the tank.

On February 29, 2012, the tank was inerted and certified safe by a marine chemist, leading immediately to its excavation and removal by Wyser. The tank removal steps included:

- The pea gravel surrounding the tank was stockpiled on plastic next to the excavation;
- Because the UST had been installed in an existing excavation, pea gravel kept sloughing into the excavation as the tank was gradually uncovered;
- Due to the undermining, the existing asphalt collapsed into the excavation;
- The area surrounding the excavation was cordoned off with cones and warning tape;
- The excavation was deepened to approximately 14 feet in order to expose the UST;
- Once the tank was uncovered, the deadman anchors were severed to free the tank;
- The UST was secured and hoisted from the excavation using an excavator;
- The double-wall fiberglass UST was intact and in tank to be in good condition;
- The tank was then crushed on-site and the tank debris was hauled to the Allied Waste Renton Transfer Station as refuse; and
- Following receipt of clean analytical results for the stockpiled pea gravel, the tank cavity was backfilled with a combination of imported fill and the excavated pea gravel.

5.1.3 Soil Analytical Results

On February 28, 2012, AMEC collected six soil samples (AVIS18811-01-022812 through AVIS18811-06-022812) in the vicinity of the fuel dispensers and product lines that were to be removed. The samples were analyzed for petroleum hydrocarbons using the NWTPH-HCID method.

The samples were collected at approximately 2 feet depth, at the interface between the pea gravel fill and the native soil surface. The native soil consisted of brown (7.5YR 4/4) gravelly, silty medium-grained sand. One soil sample was collected for each dispenser removed, with another sample for every 20 feet of product line, resulting in a total of six samples (as shown on Figure 4).

On February 29, 2012, AMEC collected soil samples associated with the tank excavation for analysis of petroleum hydrocarbons by the NWTPH-HCID method. Five samples were taken from the stockpiled soil and three from the tank cavity itself, with one sample on the east side wall, one sample on the west side wall, and one sample from the bottom of the pit. None of the samples from the piping system or tank cavity contained any petroleum hydrocarbons above the respective reporting limits. Analytical results are summarized in Table 3.

Representatives from Ecology were present on site to observe the UST removal. The UST removal, soil confirmation sample analytical results and permanent closure were documented in a Site Assessment Report certified by Devin O'Reilly, a UST Site Inspector (ICC #8124953). This report was sent to Ecology in accordance with WAC 173-360-390. A copy of the Site Assessment report is included as Appendix F.

5.2 REMOVAL OF HYDRAULIC HOIST CYLINDER

As shown in Figure 4, two hydraulic hoist cylinders were located in the eastern side of the maintenance bay. The hydraulic cylinders were removed on February 23, 2012. The concrete floor surrounding each hoist was removed using a jack hammer and recycled at Renton Concrete Recycling. The cylinders were then excavated and removed from the excavation for inspection. Samples of soil adhering to each cylinder were collected at a depth of approximately 7 to 8 feet on February 23, 2012. The south cylinder appeared structurally sound, and the soil sample collected from the cylinder was not visibly impacted by hydrocarbons. The north cylinder was visibly rusted through and leaking. Soil in the area of the leak produced a sheen when tested.

Both soil samples were submitted to Friedman & Bruya, Inc., for analysis of petroleum hydrocarbons by Method NWTPH-HCID. The analytical results are shown in Table 3 (it should be noted that these two soil samples are not shown on Figure 4 as this soil was subsequently excavated). The sample from the north lift contained TPH-D at a concentration of 4,600 mg/kg, and TPH-MO at a concentration of 1,800 mg/kg. The sample from the south lift did not contain any petroleum hydrocarbons above the respective TPH-D or TPH-MO reporting limits (Table 3).

On March 1, 2012, John Long and Koorus Tahghighi, an AMEC senior civil engineer, directed Wyser in cleanup of affected soil from the north hydraulic cylinder excavation. Soil was removed from this excavation using a backhoe to gradually enlarge the hole. As shown on Figure 4, the excavation

measured 6 feet wide by 8 feet long. The excavation eventually reached a depth of 9 feet. Soil was removed and stockpiled inside of the maintenance area, and the excavation continued until clean soil was encountered on all sides as shown by the analytical results in Table 3. The native soils in the excavation were dense enough to support nearly vertical sides. Samples from the sidewalls and base of the excavation were checked for sheen, and confirmation samples were collected from each sidewall and from the base of the excavation. Once these samples were collected, the base of the excavation was filled with imported pea gravel.

A right-of-way permit was obtained from the City of SeaTac prior to the excavation to allow transport of contaminated soils via city streets. A copy of the permit is included in Appendix E. The contaminated soil was trucked to the Cemex facility in Everett, Washington, and 17.68 tons of Class 3 soil were disposed. A copy of the weight ticket is included in Appendix E.

5.3 CLEANUP OF OIL/WATER SEPARATOR

On February 27, 2012, Wyser's subcontractor Marvac jetted the lines leading to the oil/water separator and pressure washed the interior. Marvac pumped the sludge from the oil/water separator and transported it to their Seattle facility for disposal. The oil/water separator remains functional and in good condition. Therefore it was not plugged as originally planned, and instead was left in place and continues to function.

5.4 ASPHALT AND CONCRETE REPAVING

On March 7, 2012, Wyser's subcontractor, Miles Sand & Gravel, delivered and poured concrete to backfill the product line trenches on the fuel island. Wyser smoothed the poured concrete in place. Wyser also compacted the pea gravel using a walk-behind vibratory hammer and imported fill material in the tank cavity. On March 9, 2012, Wyser's subcontractor, Northwest Asphalt, paved over the backfilled tank cavity and product line trenches with new asphalt pavement.

6.0 SUMMARY AND CONCLUSIONS

This section summarizes the results of the decommissioning of the Avis facility located at 18811 16th Avenue South in SeaTac, Washington. The sections below describe activities and summarize existing conditions at the locations of the former gasoline USTs, the hydraulic hoists, and the former motor oil USTs.

6.1 HISTORIC AND RECENT GASOLINE USTS

The historic gasoline UST that was removed in 1991 and the soil confirmation samples collected at that time showed no evidence of a release from the former fueling system (B&C, 1991). The December 2011 push probe investigation confirmed that no releases had occurred from Tank 4, which that was installed in the cavity from which Tank 1 had been removed. The fuel dispensers, subgrade piping, and gasoline UST had no visible damage or holes when removed. Observations during field screening of soil indicated that there no releases from the fueling system had occurred. In addition, all of the soil confirmation analytical results were below reporting limits. The UST was removed in accordance with Ecology UST regulations, and there are no environmental issues associated with either of the former gasoline USTs.

6.2 NORTH HYDRAULIC HOIST CYLINDER CLEANUP

Field observations clearly showed that a release of hydraulic fluid from the corroded cylinder had occurred at the north hydraulic hoist cylinder. After excavation of approximately 17.7 tons of soil, soil confirmation samples from the four sidewalls and the bottom of the excavation showed that all soil affected by hydraulic fluid had been removed. No environmental issues remain that are associated with the north hoist cylinder release.

6.3 FORMER MOTOR OIL USTS

A historic release of motor oil to the subsurface was documented for the former motor oil USTs. Soil confirmation samples collected in 1992 indicated that the affected soil had been successfully cleaned up (B&C, 1992). At the time of the tank removal, a groundwater grab sample collected from the excavation still showed a visible sheen, and TPH was detected at a concentration of 9.9 mg/L. Because this single water sample had been collected nearly 20 years earlier, AMEC collected additional soil and groundwater samples in the area of these former USTs. The area where the USTs were located was still easily determined due to the location of the asphalt patch over the former excavation.

The soil and groundwater samples collected on the west and south sides of the former excavation had no reported sheens or elevated PID readings. The analytical results for these samples did not contain

TPH exceeding reporting levels. These data suggest that while the groundwater may have contained a sheen and reportable levels of hydrocarbons in 1992, removal of the TPH source by excavation and the passage of nearly 20 years have degraded the small amount of hydrocarbon remaining at this location. Since hydrocarbons were not detected in the soil and groundwater samples collected in December 2011, no source of hydrocarbons remains.

6.4 SITE DECOMMISSIONING AND CLOSURE CONCLUSIONS

All USTs have been removed from the site, and results from both the push-probe investigation and confirmation samples collected from the excavations show that no contaminated soil remains on site. All soil affected by hydraulic fluid near the northern hoist was removed and disposed.

The groundwater and soil samples collected near the former oil UST locations confirmed that no affected soil remains near these former USTs, and the groundwater no longer contains any residual TPH impacts resulting from the historic releases.

Therefore, AMEC recommends that UST site 6132 should be removed from Ecology's LUST list.

7.0 REFERENCES

Aspect (Aspect Consulting), 2005, Seattle-Tacoma International Airport Phase I Groundwater Study Report: Prepared for Port of Seattle, February 15.

B&C Equipment Co. (B&C), 1992, Environmental Site assessment for the property located at 18811 16th Avenue South, Seattle, WA. Prepared for Avis, June 1.

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TABLES

TABLE 1

FORMER UNDERGROUND STORAGE TANKS[1]
Avis SeaTac
SeaTac, Washington

Size (gallons)	Contents	Ecology Tank ID	Status	Install date[2]	Removal date
12,000	Gasoline	40739	Removed	1978	12/10/1991
500	Motor oil	40704	Removed	1978	1/27/1992
500	Waste oil	40630	Removed	1978	1/27/1992
12,000	Unleaded gasoline	40652	Removed	January 1992	2/29/2012

Notes
1. The site is listed on Ecology's UST and LUST databases as site #6132.
2. Install date of 1978 assumed for tanks installed during facility construction.

Abbreviations
Ecology = Washington State Department of Ecology
UST = underground storage tank
LUST = leaking underground storage tank

TABLE 2
HISTORICAL SOIL AND GROUNDWATER SAMPLES
Avis SeaTac
SeaTac, Washington

Former 12,000-gallon Gasoline UST			Soil Sample Analytical Results in mg/kg[1]						
Sample ID	**Date**	**Depth (ft)**	**TPH-G**	**TPH-D**	**TPH-Lube Oil**	**Benzene**	**Toluene**	**Ethylbenzene**	**Xylenes**
Bottom Center	12/10/1991	12	<20	<50	<100	<0.05	<0.05	<0.05	<0.05
West Wall		10	<20	<50	<100	<0.05	<0.05	<0.05	<0.05
East Wall		10	<20	<50	<100	<0.05	<0.05	<0.05	<0.05
Two 500-Gallon Motor Oil USTs			**Soil Sample Analytical Results in mg/kg[1]**						
Sample ID	**Date**	**Depth (ft)**	**TPH-G**	**TPH-D**	**TPH-Lube Oil**				
Bottom #1	1/27/1992	9	<25	3,800 [2]	54,000				
North Side #2		7	<24	<59	<120				
East Side #3		7	<23	<57	<110				
West Side #4		7	<23	39,000 [2]	380,000				
Sample ID	**Date**	**Depth (ft)**	**TPH-D**	**TPH [3]**					
Bottom #2	3/5/1992	11	<25	ND					
West #3		6	<25	ND					
South #4		6	<25	ND					
Stockpile #1		1	5,800 [2]	10,000					
Groundwater Sample Analytical Result [4]									
Sample ID	**Date**	**TPH (mg/L)**	**Benzene**	**Toluene**	**Ethylbenzene**	**Xylenes**			
Groundwater in Oil Tanks Excavation	3/12/1992	9.9	<1.0	<1.0	<1.0	<1.0			

Notes
1. Total Petroleum Hydrocarbons by Analytical Method NWTPH-HCID and EPA 8020 for aromatic hydrocarbons.
2. Although the sample was quantified as diesel, the chromatographic pattern is not characteristic of diesel.
3. Although the report stated these samples were analyzed by EPA Method 418.1, no laboratory data report was found to confirm these results.
4. The groundwater sample was collected from the open excavation after 3,500 gallons of water had been removed from the excavation; the sample was analyzed by EPA Method 418.1 for TPH, and EPA Method 8020 for aromatic hydrocarbons.

Abbreviations
< = Analyte was not detected equal to or above the laboratory reporting limit indicated.
ft = feet
kg = kilogram
L = liter
mg = milligram
TPH = total petroleum hydrocarbons
TPH-G = total petroleum hydrocarbons in gas
TPH-D = total petroleum hydrocarbons in diesel
TPH-Lube Oil = total petroleum hydrocarbons in lube oil

TABLE 3

DECOMMISSIONING ACTIVITIES FROM SITE ASSESSMENT AND ANALYTICAL RESULTS
Avis SeaTac
SeaTac, Washington

Push-Probe Investigation Soil Samples			Soil Sample Analytical Result in mg/kg[1]		
Sample ID	**Date**	**Depth (ft)**	**TPH-G**	**TPH-D**	**TPH-MO**
ASB1-001	12/6/2012	9	<20	<50	<250
ASB1-002		12	<20	<50	<250
ASB2-001		10	<20	<50	<250
ASB2-002		13	<20	<50	<250
ASC1x-001		14	<20	<50	<250
ASC2-001		14	<20	<50	<250
Push-Probe Investigation Soil Samples			**GW Sample Analytical Result in mg/L[1]**		
Sample ID	**Date**	**Depth (ft)**	**TPH-G**	**TPH-D**	**TPH-MO**
ASB1-003	12/6/2012	12-16	<0.2	<0.5	<0.5
ASB2-003		12-16	<0.2	<0.5	<0.5
Initial Hydraulic Hoist Soil Samples			**Soil Sample Analytical Result in mg/kg[2]**		
Sample ID	**Date**	**Depth (ft)**	**TPH-D**	**TPH-MO**	
South Hydraulic Hoist	2/23/2012	8.2	<25	<50	
North Hydraulic Hoist		7.3	4,600	1,800	
Fuel Island Soil Samples			**Soil Sample Analytical Result in mg/kg[1]**		
Sample ID	**Date**	**Depth (ft)**	**TPH-G**	**TPH-D**	**TPH-MO**
AVIS18811-01-022812	2/28/2012	2	<20	<50	<250
AVIS18811-02-022812		2	<20	<50	<250
AVIS18811-03-022812		2	<20	<50	<250
AVIS18811-04-022812		2	<20	<50	<250
AVIS18811-05-022812		2	<20	<50	<250
AVIS18811-06-022812		2	<20	<50	<250
Tank Cavity Samples			**Soil Sample Analytical Result in mg/kg[1]**		
Sample ID	**Date**	**Depth (ft)**	**TPH-G**	**TPH-D**	**TPH-MO**
AVIS18811-06-022912	2/29/2012	7	<20	<50	<250
AVIS18811-07-022912		7	<20	<50	<250
AVIS18811-08-022912		14	<20	<50	<250
Stockpile Samples			**Soil Sample Analytical Result in mg/kg[1]**		
Sample ID	**Date**	**Depth (ft)[3]**	**TPH-G**	**TPH-D**	**TPH-MO**
AVIS18811-01-022912	2/29/2012	1-14	<20	<50	<250
AVIS18811-02-022912		1-14	<20	<50	<250
AVIS18811-03-022912		1-14	<20	<50	<250
AVIS18811-04-022912		1-14	<20	<50	<250
AVIS18811-05-022912		1-14	<20	<50	<250

TABLE 3

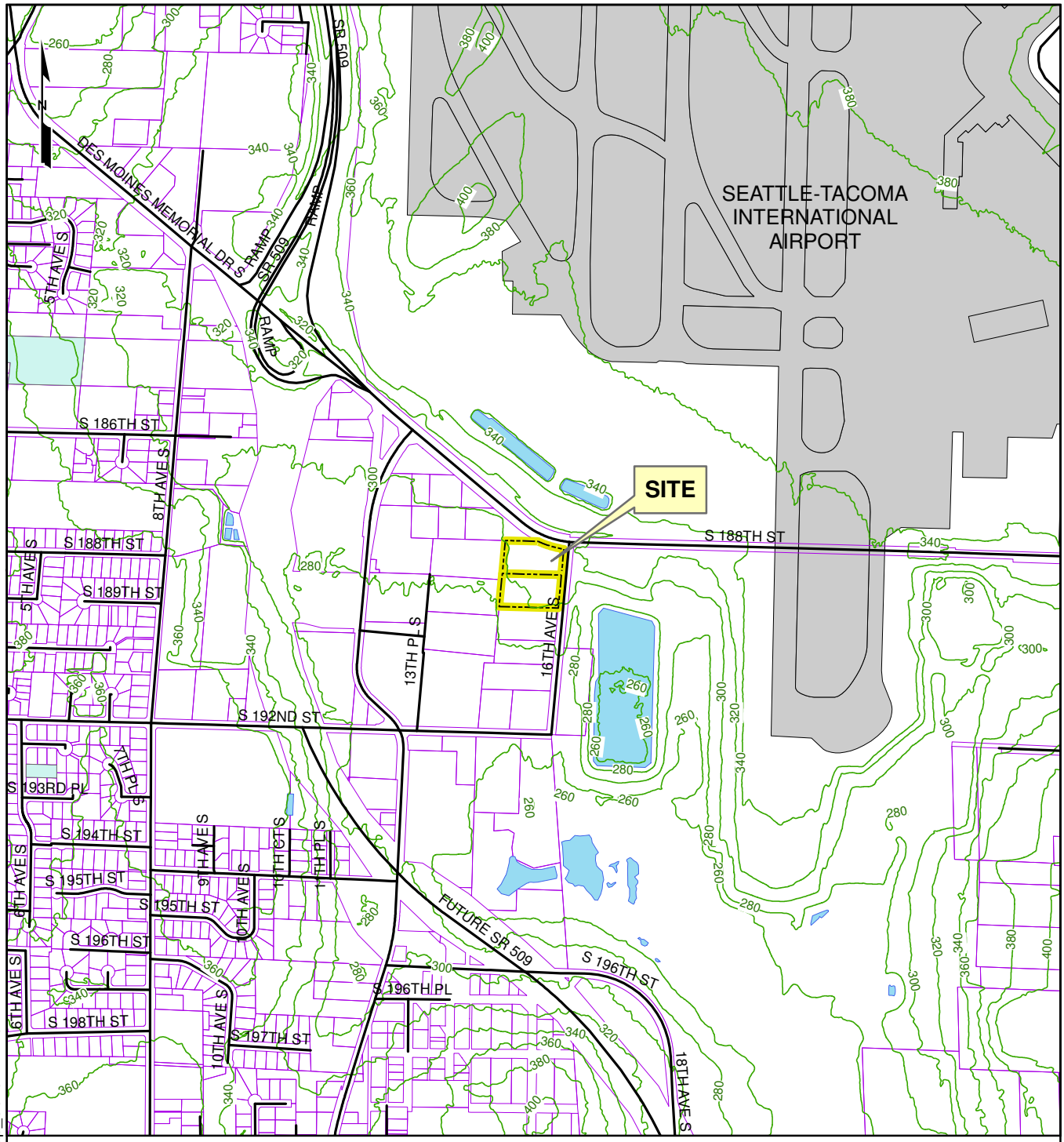
DECOMMISSIONING ACTIVITIES FROM SITE ASSESSMENT AND ANALYTICAL RESULTS
Avis SeaTac
SeaTac, Washington

North Lift Cleanup Confirmation Samples			Soil Sample Analytical Result in mg/kg[2]		
Sample ID	**Date**	**Depth (ft)**	**TPH-D**	**TPH-MO**	
ANH-1-8	3/2/2012	8	<50	<250	
ANH-2-8		8	<50	<250	
ANH-3-8		8	<50	<250	
ANH-4-8		8	<50	<250	
ANH-5-9		9	<50	<250	

Notes
1. All samples analyzed by Method NWTPH-HCID for TPH-gasoline range (C6 to C10) (TPH-G), TPH-diesel range (C10 to C25) (TPH-D), and TPH-heavy oil range (>C25) (TPH-MO).
2. All samples analyzed by Method NWTPH-Dx for TPH-D (C10 to C25) and TPH MO (C25 to C36).
3. Stockpiled soil samples were collected from soil removed during soil excavation and stockpiled on plastic. The samples therefore represent depths between approximately 1 and 14 feet (the limits of the excavation depth).

Abbreviations
< = Analyte was not detected equal to or above the laboratory reporting limit indicated.
ft = feet
kg = kilogram
L = liter
mg = milligram

FIGURES

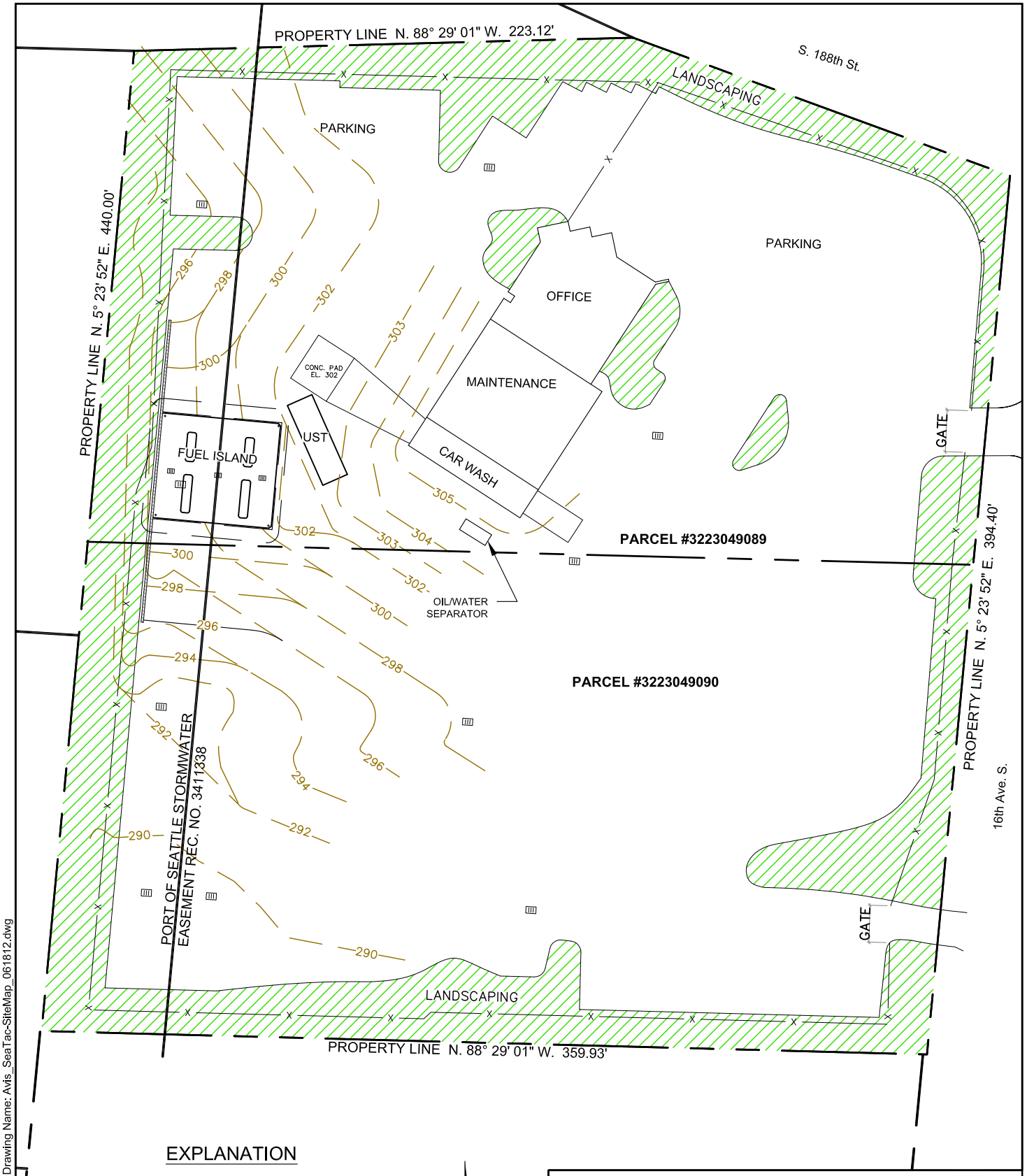


0 500 1,000 Feet

VICINITY MAP
Avis SeaTac
18811 16th Avenue South
SeaTac, Washington

By: APS	Date: 6/20/2012	Project No. SE11160290
amec		Figure 1

File path: S:\16029\001_SEPA\GIS\Avis-VicinityMap_062012.mxd



EXPLANATION

- PARCEL LINE
- FENCE LINE
- 296 TOPOGRAPHIC CONTOUR LINE
- LANDSCAPING

0 30 60

APPROXIMATE SCALE IN FEET

SITE PLAN
Avis SeaTac
18811 16th Avenue South
SeaTac, Washington

By: APS	Date: 06/22/12	Project No. SE11160290
amec		Figure 2

Plot Date: 06/22/12 - 4:46pm, Plotted by: adam.stenberg
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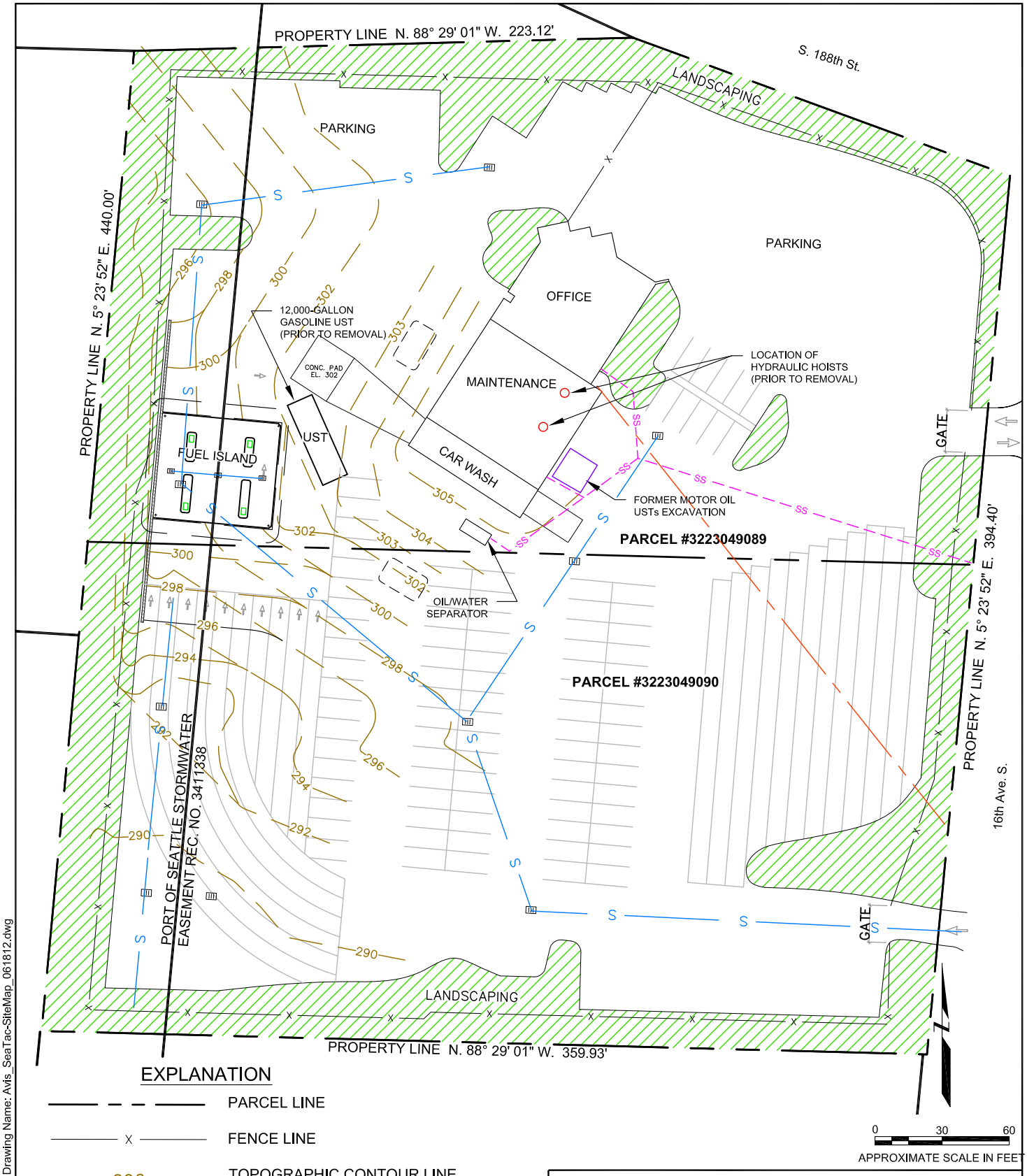

EXPLANATION

- PARCEL LINE
- FENCE LINE
- 296 TOPOGRAPHIC CONTOUR LINE
- LANDSCAPING
- S STORM SEWER
- STORM SEWER CATCH BASIN
- SS SANITARY SEWER
- 3-PHASE POWER

0 30 60

APPROXIMATE SCALE IN FEET

SITE DETAILS
Avis SeaTac
18811 16th Avenue South
SeaTac, Washington

By: APS	Date: 06/22/12	Project No. SE11160290
amec		Figure 3

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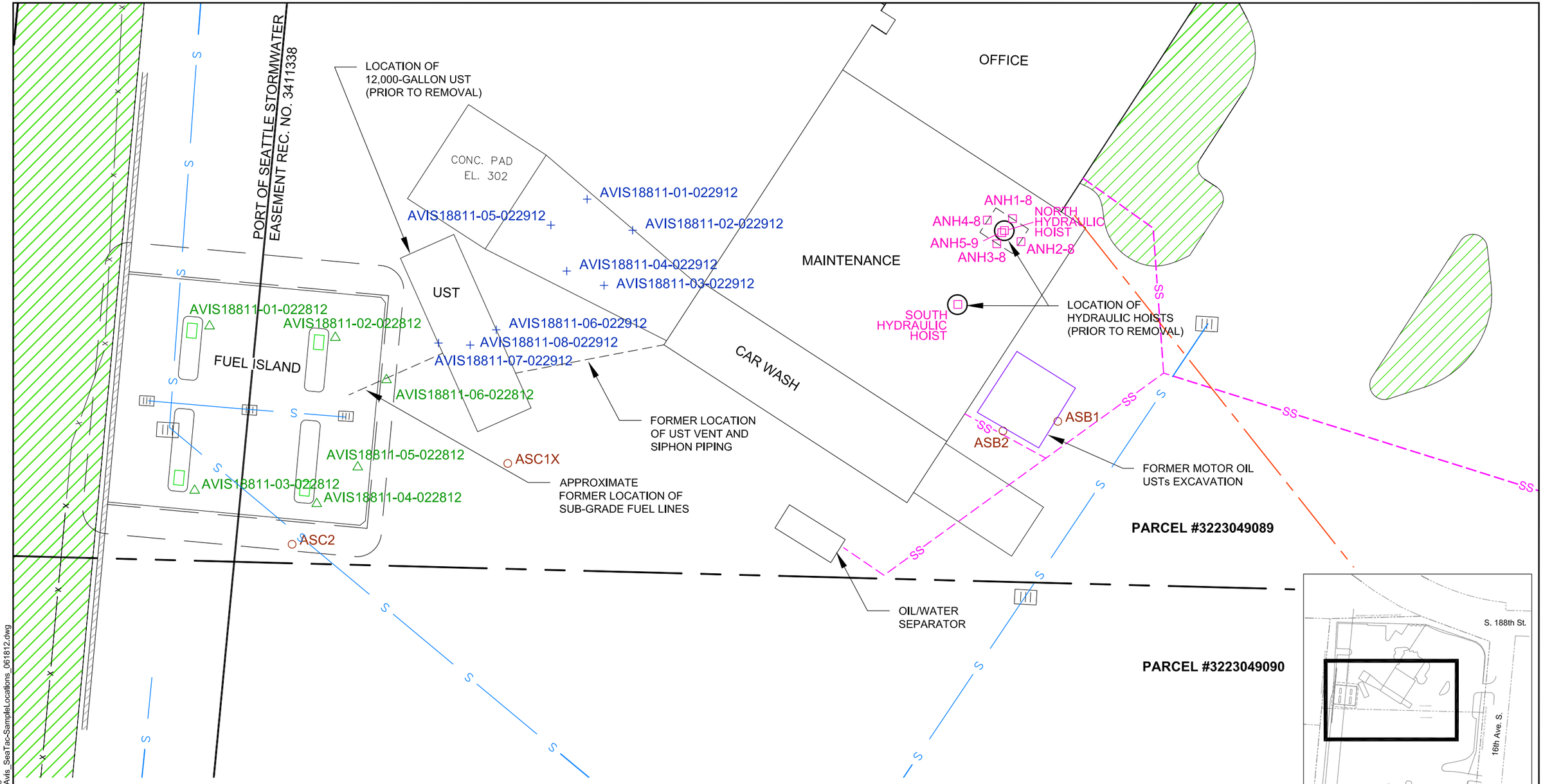

EXPLANATION

- PARCEL LINE
- FENCE LINE
- FORMER MOTOR OIL USTs
- DISPENSER
- HYDRAULIC HOISTS
- LANDSCAPING

UTILITIES LEGEND

- STORM SEWER
- STORM SEWER CATCH BASIN
- SANITARY SEWER
- 3-PHASE POWER

SAMPLING LEGEND

- BORING LOCATIONS FROM 12/6/2012 PUSH PROBE INVESTIGATION
- HYDRAULIC HOIST SAMPLING LOCATIONS
- PIPING REMOVAL SAMPLING LOCATIONS
- TANK REMOVAL SAMPLING LOCATIONS

0 10 20
APPROXIMATE SCALE IN FEET

SOIL AND GROUNDWATER SAMPLING LOCATIONS
Avis SeaTac
18811 16th Avenue South
SeaTac, Washington

By: APS	Date: 06/22/12	Project No. SE11160290
amec		Figure 4

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