

**UPPER YARD INTERIM ACTION
AS-BUILT REPORT**

UNOCAL EDMONDS TERMINAL

EDMONDS, WA

VOLUME I

Prepared for

Unocal Corporation

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**Upper Yard Interim Action As-built Report
Unocal Edmonds Terminal
Edmonds, Washington**

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ACRONYMS AND ABBREVIATIONS

AL	action level
Bcy	banked cubic yards
Bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, xylenes
CMP	compliance monitoring plan
CUL	cleanup level
Cy	cubic yards
DRO	TPH as diesel range organics
EPH	extractable petroleum hydrocarbons
FS	feasibility study
GRO	TPH as gasoline range organics
HO	TPH as heavy oil range organics
mg/kg	milligram per kilogram
MLLW	mean lower low water
MTCA	Model Toxics Control Act
MW	monitoring well
PAHs	polycyclic aromatic hydrocarbons
POC	point of compliance
RI	remedial investigation
SAP	sampling and analysis plan
SEPA	State Environmental Policy Act
TP	test pit
TPH	total petroleum hydrocarbons
VPH	volatile petroleum hydrocarbons
WAC	Washington Administrative Code

1 INTRODUCTION

1.1 Purpose

This report summarizes and documents an interim remedial action performed at the Unocal Edmonds Terminal, Edmonds, Washington, from July 2002 to May 2003. The interim action was performed consistent with the Model Toxics Control Act (MTCA) regulations of WAC 173-340-430, and was conducted to meet final cleanup standards for the upper yard portion of the Unocal Edmonds Terminal.

1.2 Background

Union Oil Company of California, dba Unocal, entered into Agreed Order No. DE 92TC-N328 with the Washington Department of Ecology (Ecology) to conduct environmental investigations at the Unocal Edmonds Terminal (Terminal) located at 11720 Unoco Road in Edmonds, Washington (Figure 1-1). The scope of the Agreed Order, issued pursuant to MTCA, included a remedial investigation (RI) and a feasibility study (FS). The RI was performed between October 1994 and August 1996 and reported to Ecology [EMCON, 1996a and 1998; and Maul Foster & Alongi, Inc. (MFA), 2001a]. A preliminary FS was performed in 1996 and reported to Ecology (EMCON, 1996b). An updated and expanded FS will be conducted and reported to Ecology in 2003.

Unocal performed an interim remedial action in the upper yard of the Terminal to reduce the potential threats to human health or the environment posed by exposing contaminated surface and near surface soil after the 2001 dismantling and removal of the aboveground fuel storage tanks and lines, and to return that portion of the site to productive use by meeting final cleanup standards. Specifically, petroleum-contaminated soil and metals-contaminated surface soil (containing sand blast grit and paint chips) were removed from the upper yard and transported off site for treatment and disposal. During this work, Unocal also removed an asphalt/polyurethane coating material from the soil surface in several areas of the upper yard. This material had been used for erosion control.

As required by WAC 173-340-430, an Interim Action Report was prepared before performing the interim remedial action (MFA, 2001b). The report (a work plan) was issued for public

comment and was reviewed by Ecology. A State Environmental Policy Act (SEPA) checklist was prepared in conjunction with the work plan; copies of the SEPA checklist and the Determination of Nonsignificance are provided in the Interim Action Report. Ecology approval was required prior to initiating the upper yard interim action. Approval was granted by letter dated July 31, 2001.

1.3 Public Participation

The following public participation activities were performed: The Draft Interim Action Report was placed at four public repositories (Ecology's Northwest Regional Office, Edmonds Public Library, Mountlake Terrace Public Library, Lynnwood Public Library); a 30-day public comment period was held by Ecology for review of the draft document (June 11 through July 11, 2001); a public meeting was held in Edmonds on June 20, 2001; and notification letters were mailed to all property owners within a ½-mile radius of the Terminal on July 11, 2001 and July 15, 2002.

1.4 Report Organization

This report is organized as follows:

- Section 2 provides a description of the Terminal and supplemental work performed in conjunction with the remedial work;
- Section 3 describes the interim remedial action performed in the upper yard, including soil sampling and analysis procedures;
- A summary of the volumes of soil removed during the remedial work is provided in Section 4;
- Section 5 reports the soil sampling results and the determination of compliance with MTCA Method B cleanup standards;
- A summary of the remedial action is provided in Section 6; and
- The professional engineer's statement is provided in Section 7.

2 SITE DESCRIPTION AND ADDITIONAL SITE WORK

2.1 Site Description

The site comprises approximately 47 acres of land on and adjacent to the northern slope of a hillside, and lies within approximately 1,000 feet of the Puget Sound shoreline. At its nearest point (southwest corner of the site), the site boundary is approximately 160 feet from the Puget Sound shoreline. The site has two distinct areas, the upper yard (tank farm) area and the lower yard area (Figure 2-1).

The lower yard is approximately 22 acres in area, lying east of the Burlington Northern Santa Fe Railroad (BNSFRR) right-of-way, south of Union Oil Marsh, west of the Deer Creek Salmon Hatchery, and north of the upper yard. The lower yard elevation ranges from approximately 10 to 25 feet above the mean lower low water datum (MLLW). The lower yard consists of office buildings, two former truck bading racks, two underground (former vapor recovery) tanks, two underground vaults, two storm water detention basins, and an oil/water separator. Previous operations also included an air-blown asphalt plant, an asphalt packaging warehouse, and a railcar loading/unloading facility.

The upper yard is approximately 25 acres in area, located immediately south of the lower yard. Upper yard elevations range from approximately 25 to 150 feet MLLW. The upper yard consists of several former tank basins.

UNOCAL operated the Terminal from 1923 to 1991. Fuel was brought to the Terminal on ships, pumped to the storage tanks in the upper yard, and loaded from the tanks into railcars and trucks for delivery to customers. An asphalt plant operated on the site from 1953 to the late 1970s. Detailed descriptions of the Terminal facilities and historic activities are presented in the Background History Report (EMCON, 1994). The facility is currently used only for office purposes. All of the tanks and lines in the upper yard were cleaned and removed from the site in 2001.

2.2 Additional Site Work

2.2.1 Cultural Resources Survey

Prior to the interim action, a cultural resource survey was performed in March 2002 in the vegetated areas of the upper yard by Cascadia Archeology (Cascadia Archaeology, 2002). Survey methods included pedestrian transects combined with shovel probes. No potentially significant cultural material was found within the project area and no prehistoric cultural resources were encountered. A copy of the survey report is provided in Appendix A.

2.2.2 Additional Soil Borings and Test Pits

In June 2002, Cascade Drilling, Inc., drilled 14 soil borings (SB-236 through SB-249) in the upper yard. The borings were advanced to collect additional subsurface soil quality data at select locations in the upper yard. The borings were advanced to depths between 15 and 80 feet below ground surface (bgs). The work was performed following procedures specified in the site Sampling and Analysis Plan (SAP) (MFA, 2001c). Soil boring logs are provided in Appendix B.

During the interim action soil excavation work, which commenced in the western third of the upper yard, the petroleum hydrocarbon concentrations in the subsurface were highly variable. Total petroleum hydrocarbon (TPH) concentrations from the RI and post-RI sampling routinely varied from what was encountered in the excavations. Therefore, before commencing the excavation of TPH-contaminated soil in the middle and eastern thirds of the upper yard, numerous test pits were excavated in the remaining basins to refine the impacted soil volume estimates. The information obtained from the test pits was also used for soil management planning (e.g., loading, internal haul routes), contractor labor and equipment re-assessment, and scheduling. In December 2002, test pits were excavated in basins 2909, 2910, 2911, 2912, 2914, 3392/3393/33944, 4120, F410, and the area between basins 2911 and 2913 (“TPH Area K”). Test pits were also excavated in basin 263 (January 2003), at locations below basin 2605 (February 2003), and in basin 3716/3717 (March and April 2003).

The soil sample analytical results from the 14 soil borings and the test pits are displayed on Drawing B-1, TPH in Upper Yard, provided in Appendix B.

2.2.3 Monitoring Well Abandonment

Prior to excavation in the upper yard, Cascade Drilling, Inc. (Cascade) of Woodinville, Washington, abandoned the monitoring wells and piezometers (MW-5U, MW-10U, MW-11U, HA-5, HA-12, P-201S, P-201I, P-201D, P-203S, P-203I, and P-203D; Figure 2-1) located in the planned areas of excavation. These monitoring wells and piezometers were abandoned on June 28, 2002, pursuant to procedures described in Minimum Standards for Construction and Maintenance of Wells (WAC 173-160-310). Nested piezometers P-202S, P-202I, and P-202D, located south of basin 3392/3393/3394, were covered by sloughed/eroded soil several years ago and thus were not accessible during the abandonment activities in June 2002. The tops of the piezometers were inadvertently excavated when soil was removed from the area during the remedial work. A 1-inch-diameter casing of one of the piezometers was located and was abandoned by Cascade on April 29, 2003, by using bentonite grout tremmied to the bottom of the casing. The other two casings were not found, but the exposed portion of the nested piezometer area was completely filled with bentonite.

Following completion of excavation activities in the upper yard, Cascade abandoned monitoring wells MW-201, MW-202, MW-204, and MW-7U (Figure 2-1). The work was performed pursuant to procedures described in WAC 173-160-310. Currently, no monitoring wells or piezometers are present in the upper yard. The monitoring wells located near the eastern side road to the upper yard and the garage (MW-203 and MW-13U, respectively) were not abandoned. These wells were formerly considered to be upper yard wells but are not included in the currently designated area of the upper yard.

3 UPPER YARD INTERIM ACTION

3.1 Scope of Work

The scope of the upper yard interim action was based on the Interim Action Report (MFA, 2001b), the Compliance Monitoring Plan (CMP) (MFA, 2002a) and the Technical Specifications (MFA, 2002b). The report was approved by Ecology in a letter dated July 31, 2001 (Ecology, 2001). The Technical Specifications were reviewed and comments were provided by Ecology on June 6, 2002 (Ecology, 2002). The work was performed primarily between July 29, 2002 and May 31, 2003. The work was performed to meet the final MTCA Method B cleanup standards developed for the upper yard.

The remedial action consisted of the removal of petroleum-contaminated soil and metals-impacted surface soil (containing sand blast grit and paint chips). Additionally, Unocal removed an asphalt/polyurethane coating material from the surface of large areas of the upper yard. This material had been used for erosion control. To treat high suspended solids concentrations in storm water runoff from the upper yard during the excavation activities, Unocal installed additional storm water collection and separation equipment in the lower yard.

3.2 Cleanup Levels and Action Levels

MTCA Method B cleanup levels (CULs) were developed for the upper yard during the preparation of the CMP. Unocal also identified action levels (ALs) for TPH-impacted soil in the 0- to 15-foot bgs horizon. The action levels were used for purposes of making more conservative field decisions during soil excavation, such that average post-remedial TPH concentrations would be lower than Method B CULs. Method B CULs were used for the MTCA-specified compliance demonstration.

The action levels and Method B CULs, and associated soil horizon, are listed for each contaminant in the table on the following page.

Contaminant	Unocal Action Level (mg/kg)	Unocal Action Level (mg/kg)	Method B CUL (mg/kg)
	0 to 10 feet bgs	10 to 15 feet	0 to 15 feet bgs
TPH as GRO	100	--	200
TPH as DRO	200	--	460
TPH as HO	200	--	--
TPH (all ranges)	500	1,000	2,959
Arsenic	--	--	20
-- Not applicable. GRO = gasoline range organics. DRO = diesel range organics HO = heavy oil range organics.			

The derivation of the CULs is described in detail in the CMP, and is not repeated in this report.

3.3 Point of Compliance

The point of compliance (POC) is the point or points where the soil CULs must be attained. Per the CMP, POCs were specified for the following pathways:

- Direct human contact with soil
- Protection of groundwater
- Protection of terrestrial ecological receptors

For direct human contact with soil and for protection of terrestrial ecological receptors, the POC is established in soils throughout the site from ground surface to 15 feet bgs (WAC 173-340-740(6)(d) and -7490(4)(b))¹. This represents a reasonable estimate of the depth of soil that could be excavated and distributed at the soil surface as a result of future site development activities, resulting in exposure to human and ecological receptors. For protection of groundwater, the POC is established in soils throughout the site from the ground surface to the water table (WAC 173-340-740(6)(b)).

¹ For this interim action, “throughout the site” means throughout soil in the upper yard. Figure 2-1 shows the boundary of the upper yard.

3.4 Contractors

Wyser Construction, Inc. (Wyser) of Bothell, Washington, conducted the excavation, transportation, backfilling, grading, drainage system work, and utilities-related work. A Wyser subcontractor, IRS Environmental, removed the asbestos-containing piping that was encountered in a limited number of the basins. The piping was disposed at the Rabanco Regional Landfill in Roosevelt, Washington. Triad Associates, Inc., of Kirkland, Washington, performed pre- and post-excavation surveys. Laboratory analyses were performed by North Creek Analytical, Inc., of Bothell, Washington, and Columbia Analytical Services, Inc., of Kelso, Washington. Construction monitoring was performed by MFA. Thermal treatment of petroleum-contaminated soil and recycling of the asphalt/polyurethane coating were performed by Rinker Materials. Metals-contaminated soil and limited volumes of petroleum-contaminated soil were disposed at the Olympic View Sanitary Landfill located in Port Orchard, Washington.

The daily reports prepared by Wyser to document work performance have been submitted to Ecology under separate cover.

3.5 Mobilization

Air monitoring procedures were established and air monitoring was performed by MFA for the purposes of monitoring dust and petroleum odors, as necessary, during the excavation work. A sedimentation and erosion control plan was prepared by MFA.

3.6 Soil Excavation

3.6.1 Excavation Extents

TPH Excavation. Soil was excavated by using conventional excavation equipment. Excavations extended vertically and laterally until TPH-contaminated soil was not present in the excavation floor or sidewalls based on field screening, progress sampling, and/or performance sampling.

When additional soil removal was necessary as a result of a failing performance sample, soil was typically removed over an area from the sample location to half the lateral distance to each of the nearest clean sample locations. The depth (and in some cases the lateral extent) of additional soil removed was determined on a case-by-case basis based on the concentration of the failing sample. The minimum excavation depth was 0.5 feet below the original basin grade in basin 3716/3717, and the maximum excavation depth was approximately 23 feet below the original basin grade in basin 1749. Following the additional soil removal, a set of “secondary”

performance samples were collected and analyzed, per the CMP. These secondary samples were located to demonstrate that the lateral and vertical extent of the overexcavation was sufficient.

When a secondary sample result/location exceeded the CUL, the location of the failing sample was overexcavated, and the *entire* grid was re-sampled (not just the location of the failing sample). The new grid was offset from the original grid by randomly selecting a point of the compass and off-setting the grid five feet in the selected direction. The compliance evaluation was then conducted on the new data set.

Prior to backfilling, the contractor completed a survey of the vertical and horizontal extent of all TPH-impacted-soil excavations greater than 2 feet in depth. The survey was completed by a surveyor licensed in the State of Washington. The post-excavation survey drawing is provided in Appendix C.

Metals Excavation. Surface soil was excavated by using conventional excavation equipment. Metals-contaminated soil was excavated from the ground surface to approximately 0.5 to 1 foot bgs. Additional soil was removed if field screening, progress sampling, and/or performance (compliance) sampling indicated that contaminated soil was still present. In two areas of the upper yard (Metals Area 1B and 4), a vacuum truck was used to remove sandblast grit that had accumulated around piping, pipe supports, and a staircase.

When additional soil removal was necessary as a result of a failing performance sample, the excavation was typically extended an additional 0.5 feet in depth, over an area from the sample location to approximately half the lateral distance to each of the nearest clean sample locations.

Asphalt/Polyurethane Coating Excavation. The coating material was removed by using conventional excavation equipment. The coating and underlying soil was typically removed to depths of approximately 0.5 to 1 foot below the coating surface.

3.6.2 Sequence of Work

Excavation work began on July 29, 2002, and was completed on May 15, 2003. The work was sequenced such that the majority of the metals-contaminated surface soil was removed before removal of TPH-contaminated soil. Excavation of TPH-contaminated soil commenced in the western-most third of the upper yard and moved to the east. Basins 3716/3717 and 263 were used by the contractor as primary soil stockpiling/staging areas. The storm water drainage lines in the excavation areas were removed on a basin-by-basin basis during construction work. TPH excavations were surveyed after receipt of the final sampling results for the excavation area. Backfilling, grading and compaction was also sequenced, with this phase of work

commencing in January 2003 and continuing through May 2003. Storm water drainage lines and structures were replaced in a phased manner.

3.7 Sampling and Analysis

3.7.1 General

Soil samples were collected and analyzed using the procedures identified in the site SAP. Performance monitoring (i.e., sampling to confirm that CULs were attained) was performed consistent with the CMP.

Field screening and progress sampling were performed to direct field work during soil excavation. Field screening consisted of the use of TPH field indicators, including soil staining, odors, vapors, and sheen testing, to subjectively identify the presence or absence of TPH in screened soil. Progress sampling consisted of collecting biased samples from the floors and/or sidewalls of the soil removal areas during active excavation. Progress samples were submitted to the laboratory for analysis and the results were compared to Unocal ALs to evaluate whether additional soil removal in an excavation area was necessary. Progress samples were interim, biased samples. The progress sample results were not used to evaluate compliance with CULs.

After excavation, performance samples were collected to confirm that metals and TPH concentrations at the extent of the excavations met CULs. Samples typically were collected on 20-foot centers for TPH, and 40-foot centers for metals, in accordance with the procedures described in the CMP. In most basins, one grid was established for both TPH and metals (arsenic) sampling.

A total of over 1,200 TPH and arsenic progress samples were collected during the excavations. Over 800 TPH performance samples and 500 arsenic performance samples were collected to demonstrate compliance with the CULs. The TPH excavation areas are shown on Drawing No. 1 and the metals excavation areas are shown on Drawing No. 2. These drawings also show all of the performance sample locations.

3.7.2 TPH Excavation Areas

Per the CMP, soil sampling grid spacing (distance between nodes) was set at 20 feet. If a node fell outside the final excavation area and was located within 5 feet of the excavation, then the sampling location was moved to the excavation edge nearest the node. For excavation areas that were too small to accommodate a grid with 20-foot grid spacing, a smaller grid was used to generate a minimum of 5 samples.

Samples were collected at each TPH grid node in the excavation areas. The sampling interval was the soil surface to approximately 0.5 feet below the soil surface. As noted above, samples were collected from the base of each excavation. Depending on the excavation configuration, samples collected from the base of an excavation were located at several different elevations. In excavations greater than 4 feet deep, sidewall performance samples were collected. Noteworthy information about specific areas is provided below.

TPH Area E. Soil excavation was not performed as planned at TPH Area E, as field screening and progress sampling performed in three test trenches excavated at this location indicated that TPH was not present at concentrations above or near CULs and ALs.

Three trenches were excavated at and around the former test pit that defined Area E (UYTP-7), located north of basin 1749 (Drawing No. 1). The first (preliminary) trench was approximately 20 feet long and 4 feet deep, trending perpendicular (east-west) to the planned excavation area. No field indications of petroleum were noted and the trench was backfilled. Another trench was excavated ("Trench 1") trending north-south and located in the planned excavation area. This trench was approximately 15 feet long, 6 feet wide, and 8 feet deep. No field indications of petroleum were noted in this trench. "Trench 2" (trending east-west) was excavated south (uphill) of Trench 1 and trended perpendicularly (east-west) across the planned excavation area. This trench was approximately 30 feet long, 6 feet wide, and 10 feet deep. No field indications of petroleum were noted in this trench. A progress sample was collected from both Trench 1 and Trench 2, and the excavated soil was placed back in the trenches. TPH was detected in the progress sample from Trench 1; however, the concentrations were well below TPH CULs. TPH was not detected in the progress sample collected from Trench 2.

Additionally, two test pits (Z-TP-5 and Z-TP-6) were excavated near Area E/UYTP-7 to evaluate the soil quality north-northwest of the basin 2602/2603/2604 (Area F) berm. These test pits were located between approximately 10 and 30 feet from Trench 1 and Trench 2, respectively. No odors or visual evidence of petroleum contamination were noted in either test pit. One progress sample was collected from each test pit and the excavated soil was placed back in the test pits. The progress samples did not contain detectable TPH.

Based on field screening and progress sampling in the trenches and test pits, no additional work was performed in Area E.

TPH Area F. In basin 2602/2603/2604, petroleum contamination was found to extend across the basin. As such, the entire basin was considered TPH Area F (i.e., planned Areas F and G were combined into one basin-wide sampling grid and named Area F).

SS-204. Per the CMP, one soil sample was collected from the location of RI sample SS-204, located west of former Tank 1749 (Drawing No. 1). The sample results from this RI sampling

location exceeded TPH CULs. Based on its location (in an asphalt coating area and not associated with a pipeline or tank basin), the observed concentrations were suspected to be due to asphalt, rather than petroleum spills or leaks. Per the CMP, a sampling grid was not established around this point. After the asphalt coating was removed, location SS-204 was surveyed in and a soil sample was collected from the location and submitted for analysis of TPH as gasoline range organics (GRO), diesel range organics (DRO), and heavy oil range organics (HO), for benzene, toluene, ethylbenzene and xylenes (BTEX), and for polycyclic aromatic hydrocarbons (PAHs).

SS-201, SS-202, SS-205, SS-209, SS-212, SS-213. Certain metals sampling areas were also associated with surficial TPH contamination, as shown by samples collected during the RI. Per the CMP, the RI samples collected from certain metals excavation and sampling areas were also analyzed for GRO, DRO, HO, BTEX, and PAHs. Locations SS-202 and SS-209 in Metals Area 2 and location SS-213 in Metals Area 6C were analyzed for GRO, DRO, HO, BTEX, and PAHs. The sample from location SS-213 was also analyzed for volatile petroleum hydrocarbons (VPH) and extractable petroleum hydrocarbons (EPH). Following the removal of metals-contaminated soil, these RI sample locations were surveyed in and new samples were collected for TPH-related analyses.

The CMP also called for TPH-related analyses at locations SS-201, SS-205 and SS-212. However, these location-specific samples were not collected because they were located in areas extensively over-excavated (and subsequently gridded and sampled) for TPH (SS-201 and SS-212 in TPH Area U and SS-205 in TPH Area F) (Drawing No. 1).

New TPH Area SWL. Significant soil contamination was found in the drainage swale located between Area F (basin 2602/2603/2604) and Area I (basin 2913). Contamination appeared to have migrated from basin 2602/2603/2604 (through the northeast berm) as well as migrated down this drainage swale. Based on the contamination pattern and location, a new TPH Area “SWL” was established.

New TPH Areas ASWL1 and ASWL2. Given the findings at the bottom of the drainage swale (TPH Area SWL), where the soil around the catch basins and storm drain lines was contaminated with petroleum hydrocarbons, it was anticipated that the soil along the rest of the storm drain line may be similarly contaminated. An asphalt swale was constructed some time ago to collect and route surface water along a stretch of the upper yard, just above the tree line on the north side of the upper yard. During the excavation of TPH Area K (a drainage swale located between basins 2913 and 3392/3393/3394), contamination was found to extend to and along the asphalt swale as it traversed the bottom of Area K. New TPH Area “ASWL1” (for asphalt swale 1) and Area “ASWL2” (for asphalt swale 2) were established. TPH Area ASWL1 stretched from catch basin U17 to catch basin U19; TPH Area ASWL2 stretched from catch basin U19 to catch basin U27. All of the catch basins, the asphalt swale, and

underground storm drain pipe were removed during excavation of the petroleum-contaminated soil along these storm water conveyance structures.

TPH Area J (SS-211). TPH Area J was planned as a small area centered around RI sampling location SS-211. The area was excavated as planned. As noted above, petroleum contamination was found to extend laterally along the adjacent storm drain line. Therefore, Area J was incorporated into new TPH Area ASWL1 for subsequent gridding and performance sampling.

TPH Area T. Per the CMP, only a small area of this basin (3716/3717) was identified for excavation. To confirm previous investigation findings in this basin, 12 test pits were excavated in March and April 2003 to depths of approximately 8 to 15 feet bgs. Progress samples were collected from all of the test pits (see Drawing B-1 in Appendix B for test pit locations and sampling results). No odors or visible indications of petroleum were detected, except at 1 foot bgs in test pit TP1, where the bedding material around an exposed drain pipe had a slight petroleum odor. Samples collected at 1 foot and 5 feet bgs in TP1 were non-detect for TPH in all ranges. Slight hydrocarbon-like odors were detected near the surface at TP11 and TP12, and between 5 and 10 feet bgs in TP-12. Progress samples were collected at 2, 5, 10 and 15 feet in TP11 and at 5, 9 and 15 feet bgs in TP12. Results were non-detect for TPH in all ranges.

The 1-foot bgs sample from TP5 contained DRO and HO concentrations of 21.6 and 72.1 mg/kg, respectively. The 2-foot bgs sample in TP8 contained 13.8 mg/kg DRO. No action was taken because these concentrations were well below CULs and ALs.

Petroleum odors were noted between 2.5 and 6 feet bgs in TP9. TP9 was located near the former pipe connections to the western side of tank 3717. Four progress samples were collected with depth in TP9. Results were non-detect for TPH in all ranges except for the 2- and 3.5-foot samples, where GRO, DRO and HO were detected in concentrations up to 304 mg/kg. All detections were below the TPH CULs; however, a 4-foot-deep trench was excavated around TP9 for additional investigation. Based on sheen testing results and field observations, only a small pocket of contaminated soil was observed off the southwest side of the test pit. A progress sample was collected from this area at 2 feet bgs. GRO, DRO and HO were detected at concentrations of 149, 66 and 30.9 mg/kg, respectively. Soil was removed from an area of approximately 10 feet by 20 feet off of the west side of the test pit (including the area of the progress sample) to a depth of approximately 3 feet. Two additional progress samples were collected from the excavation floor and the results were less than 30 mg/kg TPH. After extensive sheen testing of the soil, TP9 was backfilled.

Based on the 12 additional test pits and the associated progress samples, sheen tests, and field observations, no further TPH excavations (beyond the Area T excavation) were performed in this basin.

New TPH Area U. Soil contamination in TPH Area P (basin 2912) was shallow; however, progress samples collected along the western berm edge were above Unocal ALs. Several test pits were then excavated and sampled in the area beyond the basin berm to the west (in a former pipeline corridor) to determine if the contamination along the western berm might be associated with this former pipeline area. Sample results indicated that the area west of the berm was contaminated at depths of approximately 2 to 6 feet bgs. Given these findings, the western boundary of basin 2912 was set and performance samples were collected. A new TPH Area (Area U) was established along a section of former pipeline corridor located west of basin 2912, between sampling locations SS-201 (former pipe manifold area) and SS-212 at the top of the hill.

New TPH Area V. Soil contamination in TPH Area Q (basin F410) was found to be shallow but extended into the northeastern berm. Progress samples collected at the easternmost section of the north berm showed TPH concentrations above Unocal ALs; however, additional soil was not removed in this direction as the contractor needed to evaluate potential storm drain modifications on the far side of the berm. The northeast berm area was surveyed so that it could be relocated for future additional excavation, and the balance of the basin was gridded and performance samples were collected in December 2002. In early April 2003, this area of the berm was removed. Contaminated soil extended to and around catch basin U38, which was removed at that time. The area was designated as TPH Area V, and performance samples were collected in accordance with CMP procedures.

Basin 3716/3717. Fewer TPH performance samples were collected in the Tank 3716/3717 basin than in most of the other TPH excavation areas. The ultimate location of performance sampling points was not based on a requirement to have a uniform distribution of sampling points across the upper yard, but rather reflected the results of comprehensive, basin-by-basin assessment work. The basis for the soil removal in the 3716/3717 basin was described in the CMP approved by Ecology prior to the start of the upper yard interim action. The excavation and performance sampling were conducted based on historical information about the basin (such as whether any releases were known to occur), knowledge of the types of problems typically encountered at sites such as this one (for example, contamination at piping elbows and junctions), and soil sample analytical data.

Soil samples were collected prior to the start of the upper yard excavation from seven test pits, two soil borings, and two 50-foot-long test trenches. Additional soil samples were collected from 12 test pits during the excavation activities to help direct construction activities. Consequently, a total of 77 soil samples from 23 locations were analyzed in a basin

approximately 80,000 square feet in size. These sample locations are shown on Figure B-1. The soil sample analytical results showed that there was no evidence of a significant release in the basin.

The 3716/3717 basin was used for soil stockpiling and equipment staging during the excavation activities. After removal of the soil stockpiles and equipment, MFA confirmed that potentially TPH-impacted soil had been removed from the basin using several methods. First, approximately 3 to 6 inches of soil was scraped off the entire 3716/3717 basin floor and hauled off-site, to remove any residual stockpiled soil and expose a fresh ground surface. During the surface scraping, MFA field screened the soil remaining in place using a combination of visual and olfactory observations, PID readings, and sheen testing. Any soil that appeared to have TPH impacts based on field screening was removed. Sheen testing of in-place soil was performed on an on-going basis after scraping.

Second, three progress samples were collected from the area where the impacted soil was stockpiled. Finally, field screening observations were recorded for every sample collected during systematic arsenic performance sampling in the basin. Over 30 arsenic samples were collected at 40-foot intervals across the floor of the entire 3716/3717 basin. Field screening indicated that no petroleum contamination was present in surface soil across the basin. The removal of potentially-impacted surface soil, the results of progress sampling, and the lack of any field screening evidence of TPH impacts to the basin floor during two comprehensive rounds of field screening indicated that TPH-impacted soil was not present on the 3716/3717 basin floor subsequent to use of the basin as a stockpiling and staging area.

Subsurface Structures. Subsurface structures in the upper yard consist of electrical lines, water lines, foam lines (for fire suppression), storm drain lines, and catch basins. The storm drain system consists of a series of catch basins connected by underground concrete pipes. These underground structures are typically located within approximately 3 feet of the ground surface. In addition, a French drain exists along the southern boundary of the upper yard from the Tank 263 basin to the Tank 3717 basin (construction drawings are not available); a branch of the French drain extending downhill between the Tank 2605 and Tank 2911 basins was overexcavated during the upper yard interim action.

When a subsurface structure was encountered, the soil near the structure was screened for the presence of petroleum-impacted soil. If screening indicated the presence of petroleum-impacted soil, the impacted soil was overexcavated until clean soil was encountered. Catch basins and the associated outflow piping, in particular, were evaluated in each tank basin as the excavations typically incorporated the catch basin vicinity. Where catch basins were not overexcavated, a test pit was advanced adjacent to the catch basin to evaluate soil quality. If the soil sample analytical results from a test pit indicated the presence of contaminant concentrations above MTCA Method B cleanup levels, the catch basin and the impacted soil were removed. As

noted above, the lower branch of the French drain was overexcavated as part of TPH Area K. The uphill portion of the French drain is reportedly located upgradient of any known contamination sources.

3.7.3 Metals Excavation Areas

At the metals excavation areas, grid spacing (distance between nodes) was typically set at 40 feet or 20 feet and samples were collected at the grid nodes. For elongated areas (linear areas such as under a former pipeline corridor), a standard grid was not established. Alternatively, approximately one third of the samples were collected in the excavation and one third collected on each side of the excavation. The sampling interval was the soil surface to approximately 0.5 feet below the soil surface. Noteworthy information about specific areas is provided below.

New Metals Area NPL. During the excavation of Area N (basin 2910), residual sandblast grit was found in and around an exposed water line trench that ran along the northeastern perimeter of the basin. Given the irregular shape of the excavation area, a new Metals Area NPL (for Area N pipeline) was established and performance samples were collected following CMP procedures. The Area N basin was also gridded and sampled.

Additional Sampling Between Metals-contaminated Areas. Per the CMP, additional samples were collected from areas between tank basins. Twenty sampling locations were randomly selected in the CMP. Fifteen of these locations (SS-214 through SS-228) were sampled. Five locations were not sampled because they were located in areas that already had been over-excavated.

Two Upper Yard Piping Runs. Performance samples were not collected from two short sections beneath former product piping in the upper yard: 1) the piping run located between the Basin 3716/3717 berm and SS-213, and 2) the area between the “west fork” of Metals Area 6C and SS-212. The product piping immediately north of Tank 3716 passed under the Basin 3716/3717 berm. Since underground piping would not have been sandblasted, metals contamination was not a concern and thus the area did not need to be assessed. This stretch of piping was less than 10 feet long, much less than the 40-foot spacing used for typical metals sampling areas in the upper yard.

Almost all of the area between the “west fork” of Metals Area 6C and SS-212 was overexcavated as part of the Area U TPH excavation. Only one small (less than 10 feet long) stretch of the piping was not excavated (the small area immediately south of the south edge of Area 4). This distance was not sampled because it was well within the 40-foot spacing used for typical metals sampling areas.

Metals Area 3. Metals Area 3, located in the lower yard (at the toe of the upper yard slope), was included in the CMP as part of metals removal activities. However, this area is not part of the upper yard certification, and the work will be conducted as part of a future interim action in the lower yard.

3.7.4 Laboratory Analyses

Per the CMP, the metals samples were submitted to the analytical laboratory for analysis of arsenic. The TPH samples were submitted for analysis of GRO, DRO, HO, BTEX, and PAHs. One sample from each TPH excavation area and from location SS-213 was also analyzed for VPH and EPH. VPH/EPH analyses were ultimately not performed for TPH Areas B, V, T and location SS-213. A VPH/EPH analysis was not performed for Area B or location SS-213 because TPH was not detected in any of the samples. A VPH/EPH sample was not collected from Area V, as this small area was an extension of an area (Area Q) that VPH/EPH results were already obtained. A VPH/EPH sample was not collected from Area T due to the small excavation area (10 feet by 10 feet) and the TPH results (15.6 mg/kg DRO and 71.7 mg/kg HO in one sample). The VPH/EPH analyses were performed to provide data in case a basin-specific CUL had to be developed during remediation. Basin-specific CULs were not needed; therefore, the VPH/EPH data were not used.

3.8 Area Restoration

When performance monitoring results indicated that soil removal was complete in an excavation area, the excavation was backfilled. In general, excavations were backfilled with clean, imported sand. Where standing water was present in an excavation, 2- to 4-inch rock was placed from the bottom of the excavation to the top of the standing water and a geotextile fabric was installed over the rock to provide separation between the rock and the remaining backfill material above it. Up to 2 feet bgs, the backfill was typically compacted to 90% of maximum density and the top 2 feet of backfill was compacted to 95% of maximum density. Measurement was per ASTM Method D698 (standard proctor).

A.A.R. Testing Laboratory, Inc. (A.A.R.) of Redmond, Washington, performed periodic testing to assess the compaction of fill materials placed in the excavation areas. HWA GeoSciences, Inc. (HWA) of Lynnwood, Washington, performed random, third-party compaction tests as part of construction monitoring. These compaction tests were performed in basins 263, 1749, 2604, 2910, 2911, and 2914. The A.A.R. and HWA test reports are provided in Appendix D.

Approximately 83,000 tons of clean imported material were used to backfill the excavations, and to construct, repair, and replace construction entrances and internal haul roads. The

majority of the imported material was supplied by Rinker Materials (Rinker). A summary of the imported materials from Rinker is provided in Appendix D. Unocal provided 6,000 cy of additional backfill material that was excavated from a private residence in nearby Woodway, Washington. Wyser Construction provided 800 cy of backfill material that was excavated from a site in Shoreline, Washington. Documentation regarding the sources of the fill material is provided in Appendix D. Weight tickets associated with the imported backfill material are on file at Unocal's office. Additionally, portions of the drainage system that were removed during the excavation work were replaced (drain lines and catch basins).

3.9 Unexpected Conditions and Events

Greater soil volumes were removed from the upper yard than estimated during preparation of the Interim Action Report (work plan) and the Technical Specifications. This was due to highly variable subsurface conditions and contamination present in unanticipated areas. An extended schedule and associated weather-related problems, and storm water and soil management procedures also impacted project implementation. A summary of these conditions is provided in Appendix E.

4 REMOVAL SUMMARY

4.1 Volumes/Areal Extent of Soil Removed

The areal extent of each TPH excavation area was surveyed by Triad Associates. The survey drawing is provided in Appendix C. TPH and metals excavation extents are also displayed on the data figures (see Section 5).

Using the post-excavation field survey data and a 1993 aerial topographic map, Triad Associates estimated that approximately 98,000 banked (in-place) cy of soil and asphalt material were removed from the upper yard basins and swale areas. Documentation for this estimate is provided in Appendix C. Triad did not estimate the non-TPH excavation areas (e.g., Metals Area 4).

4.2 Amount of TPH-contaminated Soil Transported Off Site

Approximately 94,650 tons of TPH-contaminated soil were received by Rinker Materials for thermal treatment at 6300 Glenwood Avenue, Everett, Washington. Approximately 16,408 tons of TPH-contaminated soil were received for disposal at Waste Management's Olympic View Landfill. The Olympic View Landfill is located at 10015 SW Barney White Road in Port Angeles, Washington. The soil was initially hauled to the Olympic View Landfill; however, due to logistical reasons (large soil volumes and scheduling constraints), Unocal opted to transport the soil to both Rinker Materials and the Olympic View Landfill. Lists of all shipments to Rinker Materials and Waste Management are provided in Appendix F. Weight tickets for these soil shipments are on file at Unocal's office and a set also has been transmitted to Ecology under separate cover. Bills of lading are on file at Wyser Construction's office.

4.3 Amount of Metals-contaminated Soil Transported Off Site

Approximately 7,320 tons of metals-contaminated soil were received for disposal at Waste Management's Olympic View Landfill. Lists of all shipments to Waste Management are provided in Appendix F. Weight tickets for these soil shipments are on file at Unocal's office

and a set has also been transmitted to Ecology under separate cover. Bills of lading are on file at Wyser Construction's office.

4.4 Amount of Asphalt/Polyurethane Coating Material Transported Off Site

Approximately 6,000 tons of asphalt/polyurethane coating material and associated soil were transported to the Rinker Materials facility in Everett, Washington, for recycling. Lists of these shipments to Rinker Materials are provided in Appendix F. Weight tickets for these shipments are on file at Unocal's office and a set has also been transmitted to Ecology under separate cover. Bills of lading are on file at Wyser Construction's office.

4.5 Amount of Debris Transported Off Site

A total of 19.4 cy of asbestos-containing pipe were shipped to Rabanco Regional Landfill in Roosevelt, Washington for disposal. The landfill is located at 500 Roosevelt Grade Road. Manifests for these shipments are provided in Appendix F.

Approximately 270 tons of concrete debris were removed from the upper yard. The debris was transported to the Rinker Materials facility in Everett, Washington, for recycling.

5 SAMPLING RESULTS AND COMPLIANCE DEMONSTRATION

Sampling was performed following procedures described in the CMP and in accordance with the SAP. The samples were analyzed and the data were validated per the SAP. Data validation reports and laboratory reports are on file at Unocal's office and a set has also been transmitted to Ecology under separate cover.

Results of extensive performance sampling demonstrated that MTCA Method B CULs were met during the upper yard remedial action. Three areas were excluded from the compliance demonstration for access reasons: the western-most former piping alignment that extended from the lower yard (up the wooded bank) to the upper yard; a section of the centrally-located former piping alignment that extended from the lower yard to the upper yard (ending near the northwest corner of Area L); and sections of the Pine Street easement (see Section 5.4 for additional discussion).

5.1 TPH Excavation Areas

5.1.1 TPH Sampling Results

After final excavation in each area, performance (compliance) soil samples were collected and analyzed as summarized in Section 3.7. GRO, DRO, and HO results for the performance samples are provided for the 23 TPH excavation areas in Tables 5-1 through 5-23. GRO, DRO and HO results are also displayed on Figures 5-1 (figure legend) through 5-25. Data tables for the associated BTEX, PAH, VPH and EPH results are provided in Appendix G. Results for these parameters are not part of the compliance demonstration but are included for the record. In some cases, VPH and EPH results may be provided for samples that were subsequently overexcavated. Corresponding performance sample TPH results for these samples are not presented on Tables 5-1 through 5-24 and Table 5-26, as the overexcavated samples do not represent the final conditions in the excavation area.

5.1.2 Compliance with MTCA Method B TPH CULs

The MTCA Method B TPH CULs for the upper yard were 200 mg/kg GRO, 460 mg/kg DRO, and 2,959 mg/kg (GRO, DRO and HO fractions summed). For each excavation area,

the performance sample data were compared directly to the CULs. If all contaminant concentrations were less than or equal to the CULs, the area complied with the CULs [WAC 173-340-740(9)(d)(iii)].

Where grid sampling is performed, Ecology guidance provides statistical procedures for use in determining whether the CUL has been met. Due to the high number of samples with no detectable TPH (>50% of the samples), the statistical procedures require that the upper 95% confidence limit on the true mean soil concentration (UCL95), calculated from the performance sampling data, defaults to the maximum detected TPH concentration. In practice, this meant that the compliance demonstration was based on a comparison of each sample result to the CULs rather than use of a UCL95 value.

All 842 TPH performance samples met the Method B CULs by direct comparison. The point of compliance was met in all cases. Noteworthy information about specific areas is provided below.

RI Sample Location SS-204. Per the CMP, one sample was collected from RI sampling location SS-204, located west of former Tank 1749 (Drawing No. 1). The RI sample results from this location exceeded TPH CULs when collected in 1995. Based on its location (in an asphalt coating area and not associated with a pipeline or tank basin), the observed concentrations were suspected to be due to asphalt rather than petroleum spills or leaks. After the asphalt coating was removed from this basin, the sample location was surveyed in and a new sample (SS-204-0) was collected and analyzed for BTEX, GRO, DRO, HO, and PAHs. Sample results are provided in Tables 5-24 and 5-25. The results for sample SS-204-0 and field observations demonstrated that the 1995 sample results were due to the asphalt coating and the area did not require additional sampling or excavation.

RI Sample Locations SS-202, SS-209, SS-213. Certain metals sampling areas were also associated with surficial TPH contamination, as shown by samples collected during the RI. Per the CMP, the RI samples collected from certain metals excavation and sampling areas were also analyzed for GRO, DRO, HO, BTEX, and PAHs. Locations SS-202 and SS-209 in Metals Area 2, and location SS-213 in Metals Area 6C were analyzed for GRO, DRO, HO, BTEX, and PAHs. Following the removal of metals-contaminated soil, these RI sample locations were surveyed in and new samples were collected for TPH-related analyses. All results were below the TPH CULs. The sample analytical results are presented in Tables 5-26 and 5-27.

The CMP also called for TPH-related analyses at SS-201, SS-205 and SS-212. These location-specific samples were not collected, as all were located in areas extensively over-excavated for TPH (and subsequently gridded and sampled for GRO, DRO, HO, BTEX and

PAHs). SS-201 and SS-212 were located in TPH Area U and SS-205 was located in TPH Area F.

5.1.3 Compliance with Unocal Action Levels

The Unocal ALs for TPH were 100 mg/kg GRO, 200 mg/kg DRO, and 200 mg/kg HO, for soil located from 0 to 10 feet bgs. The AL for the 10- to 15-foot horizon was 1,000 mg/kg (all fractions summed). Per the CMP, the decision on whether the grid (excavation) area complied with the Unocal AL was to be based on two criteria:

- The average soil concentration, calculated from the sampling data, was less than the AL;
- No single sample concentration was greater than two times the AL.

All but 12 of the 842 TPH performance samples directly met the more conservative Unocal ALs, without averaging the concentrations. One sample result from Area D that slightly exceeded the Unocal AL for GRO was collected below the 15-foot point of compliance (sample D1-B2wall-18, at an estimated concentration of 217 mg/kg GRO). Only in 6 of the 23 TPH areas were average TPH concentrations used to make the demonstration of compliance with the Unocal ALs. The TPH averages for these areas (Areas A, ASWL1, ASWL2, C, D and R) are provided on Tables 5-1, 5-2, 5-3, 5-5, 5-6 and 5-17, respectively. The highest average concentrations were 52.82 mg/kg DRO, 77.33 mg/kg HO, and 9.03 mg/kg GRO. In only one area (Area ASWL2) was a single performance sample concentration greater than two times the Unocal AL. Sample ASWL2-E3WALL-4 contained an HO concentration of 449 mg/kg. The individual sample results met the ALs in all of the other areas.

5.1.4 Areas Eliminated from Further Consideration

Limited areas of the upper yard were eliminated from further remedial consideration during development of the CMP. Areas were eliminated from further consideration based on one or more of the following data sources or conditions:

- Findings of the background history review (EMCON, 1994), including the nature of the operations and corresponding contaminant sources in the upper yard (eliminated areas were located away from bulk storage and transfer of product, releases from tanks and pipelines, and metals contamination associated with sandblasting to remove paint from tanks and pipes);
- Rationale presented in the RI Work Plan (EMCON, 1995), which reflected the findings of the background history report and detailed the areas of the upper yard identified for sampling during the remedial investigation;

- Locations of upper yard operations/equipment (eliminated areas were located away from all tank basins and pipeline corridors);
- Results of the remedial investigation of the upper yard (EMCON, 1998; MFA, 2001a), which indicated that petroleum hydrocarbons were not found in significant concentrations in random upper yard soil borings and that metals were not found in elevated concentrations in subsurface soil;
- Observations of soil conditions following removal of the tanks from the upper yard in 2001, which indicated areas within tank basins that did not appear to be impacted by petroleum hydrocarbons based on surface observations, (MFA, 2001c);
- Sampling data and observations collected during 58 test pit excavations performed in 2001/2002, which identified several areas that contained non-detectable to low petroleum hydrocarbon concentrations in subsurface soil (MFA, 2001c);
- Upper yard topography: Tank basin berms and roadways that were elevated above potential TPH contaminant sources and pathways were eliminated, as the soil in these areas could not be exposed to subsurface contamination. Areas along the southern boundary of the upper yard, which are elevated above the tank basins, were similarly eliminated.

In each of the areas excavated during the upper yard remedial action, the lateral and vertical extents of contamination were removed. The results of additional test pit excavations, over 1,200 progress samples, field observations, sheen testing, and over 800 performance samples collected during this remedial action, substantiated the removals in these areas. An evaluation of the upper yard sampling data and observations, including the effects of subsurface variability in the upper yard and the results of RI and post-RI activities, additional upper yard soil borings and test pits, and interim action progress and performance sampling, indicate that no further excavation in the upper yard is warranted.

5.2 Metals Excavation Areas

5.2.1 Arsenic Sampling Results

Arsenic was identified in the CMP as the indicator hazardous substance for metals contamination associated with the sandblast grit and paint chips. Samples were collected and analyzed as summarized in Section 3.7. Arsenic results are provided for the 21 metals areas in Tables 5-28 through 5-48. Arsenic results and excavation areas are also displayed on Figures 5-26 through 5-45.

5.2.2 Compliance with MTCA Method B Arsenic CUL

The MTCA Method B arsenic CUL for the upper yard was 20 mg/kg. For each metals excavation/sampling area, sample results were compared directly to the CUL. If all arsenic concentrations were less than or equal to 20 mg/kg, the area complied with the CUL.

With the exception of one sample (48.1 mg/kg arsenic) collected in Area N (basin 2910), all 500 metals performance samples met the 20 mg/kg Method B CUL for arsenic and the point of compliance was met. The one exceeding sample was associated with naturally occurring arsenic in the native soil exposed in the “ramp area” of basin 2910. A technical memorandum was prepared and submitted to Ecology documenting background concentrations of arsenic detected in the native soil exposed off the southeast edge of basin 2910 (MFA, 2003). The exposed, native soil in the ramp area measured approximately 20 feet wide by 30 feet long. A copy of the technical memorandum is provided in Appendix H.

5.3 Additional Sampling Between Metals-contaminated Areas

Per the CMP, additional metals samples were collected (0 to 0.5 bgs) from areas between tank basins. Twenty sampling locations were randomly selected in the CMP and 15 of these selected locations were sampled (SS-214 through SS-228). Five locations were not sampled because they occurred in areas that already had been over-excavated. Sample results are provided in Table 5-49; sampling locations and results are displayed on Figure 5-46. All 15 samples contained arsenic concentrations below the CUL.

5.4 Areas Excluded from the Compliance Demonstration

As previously noted, three areas were excluded from the compliance demonstration for access reasons: the western-most former piping alignment that extended from the lower yard (up the wooded bank) to the upper yard; the lower portion of the centrally-located former piping alignment that extended from the lower yard to the upper yard (ending near the northwest corner of Area L); and a section of the Pine Street easement.

Field observations and progress samples confirmed that sandblast grit/elevated arsenic concentrations exists under the rip rap at the top and bottom of the westernmost former pipeline tract, and likely extends its entire length. Due to the severe slope, this area (designated as Excluded Area #1) cannot be remediated using conventional techniques and was set aside for remediation at a future date. Progress sampling and an inspection was then performed along the centrally located former piping alignment that extended from the lower yard to the upper yard (ending near the northwest corner of Area L). Elevated arsenic concentrations were found only

in the lower portion of this tract. This area (designated as Excluded Area #2) was also set aside for remediation at a future date.

Petroleum-impacted soil was observed beneath and adjacent to a section of Pine Street during the remedial work in the upper yard. Due to the inability to shut down Pine Street and/or to shore Pine Street to pursue additional excavation or investigation, sections of the Pine Street easement adjacent to basins 2606 and 2605 (designated as Excluded Areas #3A, 3B, and 3C) were set aside for remediation at a future date.

The excluded areas are depicted on Figures 2-1 and 5-47, and on Drawings No.1 and No. 2. Legal descriptions of the excluded areas are provided in Appendix I. Unocal will address these three areas as a separate remedial action and they are excluded from the compliance demonstration.

5.5 Terrestrial Ecological Evaluation

A simplified terrestrial ecological evaluation (TEE) was performed for the upper yard in 2001 (MFA, 2001d). Per the evaluation conclusions and the CMP, no further TEE would be required if the following conditions were met at the conclusion of the upper yard remediation:

- Arsenic was remediated to concentrations at or below 20 mg/kg as Arsenic III within 15 feet bgs;
- TPH was remediated to concentrations at or below 200 mg/kg for GRO and 460 mg/kg for DRO within 15 feet bgs.

As described in the sections above, these conditions were met and no further TEE is required.

6 SUMMARY

The upper yard interim action consisted of the excavation of petroleum-impacted soil and metals-impacted surface soil (containing sand blast grit and paint chips). An asphalt/polyurethane coating material was also removed from the upper yard. This work was primarily performed between July 2002 and May 2003.

Approximately 113,034 tons of petroleum-impacted soil were excavated and transported off site for thermal treatment or disposal. Approximately 7,320 tons of metals-impacted soil were excavated and transported off site for disposal. Approximately 4,021 tons of asphalt/polyurethane coating and the underlying soil were removed and transported off site for recycling. Approximately 83,000 tons of clean imported soil were used to create and replace construction entrances and interior haul roads, and to backfill the excavations.

With the exception of one sample collected in Area N that contained an arsenic concentration of 48.1 mg/kg, all of the 500 metals performance samples met the 20 mg/kg Method B CUL for arsenic, and the point of compliance was met. The one exceeding sample was associated with naturally occurring arsenic in the native soil.

All of the 842 TPH performance samples met the Method B CULs: 200 mg/kg for GRO, 460 mg/kg for DRO, and a combined 2,959 mg/kg for TPH in all ranges (GRO, DRO and HO). All but 12 of the 842 TPH performance samples also met the more conservative Unocal ALs (100 mg/kg for GRO, 200 mg/kg for DRO, and 200 mg/kg for HO), without averaging the concentrations. Only in 6 of the 23 TPH areas were average TPH concentrations used to make the demonstration of compliance with the more conservative Unocal ALs, as prescribed by the CMP. In only one area (Area ASWL2) was a single performance sample concentration greater than two times the Unocal AL. Sample ASWL2-E3WALL-4 contained an HO concentration of 449 mg/kg. The individual sample results met the ALs in all of the other TPH areas in the upper yard.

Three areas of the upper yard were excluded from the compliance demonstration for access reasons. These excluded areas were the westernmost former piping alignment that extended from the lower yard (up the wooded bank) to the upper yard, the lower portion of the centrally located former piping alignment that extended from the lower yard to the upper yard (ending near the northwest corner of Area L), and sections of the Pine Street easement. Unocal will address these three areas as a separate remedial action.

7 PROFESSIONAL ENGINEER'S STATEMENT

As required by WAC 173-340-400 (b)(ii), the opinion of the professional engineer responsible for oversight of the upper yard interim action is provided below. The opinion covers only the work documented in this report and does not include the three areas described in Section 5.4 that will be addressed in the future. In cases where the work deviated from the original specifications due to weather, field modifications, or other reasons, the deviations and their effect on the opinion were considered in the context of whether the remedial action was completed with the original intent of the specifications.

Compliance with specified MTCA Method B CULs was demonstrated per the CMP. One performance sample, collected from Area N, exceeded the arsenic CUL due to naturally occurring arsenic in the native soil.

Based on the results of testing and inspections, it is my opinion that the remedial action was performed in substantial compliance with the plans, specifications, and related documents, as described in this report.

Steven P. Taylor, P.E.

LIMITATIONS

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

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APPENDIX B
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APPENDIX C
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APPENDIX E
UNEXPECTED CONDITIONS AND EVENTS

UNEXPECTED CONDITIONS AND EVENTS

Greater soil volumes were removed from the upper yard than estimated during preparation of the Interim Action Report (work plan) and the Technical Specifications. This was due to highly variable subsurface conditions and contamination that was present in unanticipated areas. An extended schedule and associated weather-related problems, and storm water and soil management procedures also impacted project implementation. A summary of these conditions is presented below.

E.1 Subsurface Variability

The lateral and/or vertical extents of the TPH excavations were greater than the estimated extents in virtually all excavation areas. Excavation of TPH-contaminated soil commenced in the western-most third of the upper yard, where it became evident that subsurface conditions were highly variable. As described in Section 2 of this report, numerous additional test pits were excavated in the central and eastern basins during the remedial action, so as to observe subsurface soil variability in this part of the upper yard and re-assess labor and equipment needs for the balance of the work. Useful information was obtained with these test pits, but subsurface contamination patterns were best discerned after larger areas were excavated.

Small- and large-scale variations in stratigraphy were encountered across the upper yard. The native Transitional Beds, which consist primarily of interlayered silt and sandy silt, frequently contain thin (less than 0.5-inch) laminations distinguishable by variations in color and/or grain size, interbeds and lenses of coarser-grained (generally sandy) material, and areas in which the sandy silt and sand are interlayered very finely to create a horizon that appears “mottled” when excavated. Horizons comprised primarily of stiff, massive to laminated silt are often fractured.

Field observations during the excavation work indicated that the fractures in the stiff silt and the sandy interbeds and lenses commonly created pathways that preferentially transmitted petroleum. In addition, the silt fraction in the “mottled” silt/sand horizons often preferentially contained petroleum. As a result, very small zones of contaminated soil were interspersed among large volumes of clean soil. The clean soil routinely had to be removed to “chase” the small zones of impacted soil.

One example of subsurface variability was TPH Area F (basin 2602/2603/2604). In this area, gray and brown mottled soil horizons were encountered frequently throughout the basin. The mottled horizons consisted of patches of siltier material (gray soil) adjacent to patches of sandier material (brown soil), with the change from silty to sandy soil occurring over 1 to 5 feet laterally and one to several inches vertically. The siltier soil contained TPH concentrations frequently above CULs, while the adjacent sandier soil was typically clean. Because of their proximity, the clean soil was routinely excavated to remove the contaminated soil.

In this same basin, a thin layer of product was found floating on a zone of perched groundwater exposed after the removal of several feet of soil. Sandy soil was exposed in the remainder of the basin, not yet excavated to the same depth. Over a period of weeks, the petroleum in the perched groundwater wicked up through the sandy soil via capillary forces. These patches of petroleum-contaminated soil ranged in size from several inches to 5 feet across, and all were less than 1/16 of an inch in thickness. Large areas of soil were repeatedly scraped to remove the patches.

Multiple phases of over-excavation and sampling occurred in Area F after the patches of petroleum-impacted soil were observed. During this time, between 2 and 8 feet of soil were removed from the floor of the Area F excavation. Several horizons of soil containing perched water were encountered during this work. A trench ranging from approximately 2.5 to 5 feet in depth was excavated and sump pumps were operated to control perched groundwater in the basin. MFA regularly monitored for the presence of floating product on the accumulated water. Discontinuous patches of product sheen were present commonly on the groundwater in the trench subsequent to excavation, but were observed with decreasing frequency as the excavation work continued. Small patches of light product sheen were observed on the water only occasionally during the weeks immediately prior to backfilling. Periodic observations of the water flowing to the storm drain system from Area F subsequent to backfilling did not indicate the presence of petroleum contamination.

MFA also regularly monitored the Area F excavation for the presence of petroleum-impacted patches of soil. Between the completion of the performance sampling in January 2003 and the start of backfilling in February 2003, no petroleum-impacted patches of soil were observed in the floor of the basin. Additionally, no petroleum-impacted patches of soil have been observed in backfill material currently present on the basin floor. MFA performed field screening to check for the presence of petroleum-impacted patches (using visual and olfactory observations and a PID) on August 21, 2003. The screening was performed systematically (screening on approximately 20-foot centers) throughout Area F. No petroleum-impacted patches were present.

In TPH Area SWL, layers of light brown, fractured silt (generally 1- to 3-feet thick) were present between thicker layers of sand and gray silt mixtures in parts of the excavation area. Petroleum-impacted water was present along the fracture zones in the light brown silt, and caused CUL exceedances in soil samples collected within the fractured silt. A large volume of clean overburden soil was excavated in order to remove the thin layers of fractured silt.

Soils in Basin 2606 consisted predominantly of very stiff laminated clayey silt, which normally acts as a permeability barrier to the downward vertical migration of petroleum. However, small fractures with slickensides (small fault zones) were observed in the laminated silt and acted as vertical pathways for the downward movement of petroleum, which accumulated in the fractures, bedding planes, and thin sandy layers in localized areas of the excavation. As these fractures were breached during the course of soil removal work, product dripped slowly into the excavation from the fractures and thin sandy layers over a period of one or more days. Soil in the excavation appeared to be clean and ready for performance sampling, and then patches of product were observed floating on accumulated rain water at the bottom of the excavation the next morning. In order to remove these minor product seeps, the basin was deepened.

In TPH Area B (basin 263), what appeared to be a stress fracture was observed in the silt unit beneath this basin floor. The fracture, which was filled with sandy soil, was approximately 3 inches wide by 12 feet deep, and extended laterally approximately 20 feet with several branches. Petroleum had reached the fracture and spread through its extent.

The examples above illustrate the subsurface variability encountered in the western and central portions of the upper yard. As noted, clean soil was routinely removed in association with the removal of localized seeps, veins, and patches of petroleum or petroleum-impacted soil in these areas. The interlayered silt and sandy silt and the gray and brown mottled soil observed in the western and central upper yard were present in the eastern part of the upper yard. However, in general, the soils exposed during the excavation work in the eastern upper yard were observed to be less variable and more coarse-grained than in the western and central portions of the upper yard.

E.2 Unanticipated Excavation Areas

The swale areas between the tank basins (Area SWL and Area K) were large soil-removal areas. Although soil impacts were known in swale Area K (location of a French drain), the actual extent of the contamination exceeded the anticipated area. A section of the French drain in Area K was unknowingly set in a sandy zone when constructed, resulting in petroleum migration both vertically and laterally over a large area. Contamination in the main swale (Area

SWL) that was uncovered while chasing contamination that emanated from basin 2602/2603/2604, extended into the woods north of the main storm water drainage line.

As previously noted, an asphalt swale existed along the northern edge of the upper yard, beginning at catch basin U13 (located north of the basin 2602/2603/2604 berm) and extending to catch basin U27 (located northeast of basin 2914). The main storm water drainage line serving the upper yard (and to which U13 and U27 were connected) was located directly below this asphalt swale. The asphalt swale tract was not anticipated to be an area of contamination, based on the good condition of the asphalt swale and the lack of detected petroleum in soil samples collected near drainage structures during the RI. Contamination was uncovered beneath the asphalt swale while excavating in Area SWL. While the asphalt swale tract north of basin 2913 was not found to be contaminated, the portion along the base of Area K and along the north side of basin 3392/3393/3394 was heavily contaminated (Areas ASWL1 and ASWL2). In the tract along basin 3392/3393/3394 (ASWL2), the original, corrugated-metal storm drain pipe was overlaid by relatively new, 12-inch plastic pipe. Soil surrounding the newer/shallower line was uncontaminated. The deeper soil along the metal pipe was heavily contaminated and several thousand tons of soil were removed from along the older drainage structure.

E.3 Weather Impacts and Storm Water Management

The tonnage of excavated soil was also greater than estimated due to additional water content, which increased due to excavating contaminated soil in perched groundwater; excavating contaminated soil along established site drainage/utility corridors; soil handling/loading during periods of heavy rain; lack of consistent stockpile coverage (especially small piles in isolated areas); and storm water in soil staging areas and excavation areas. Wet basin floors and excavation bottoms had to be re-scraped several times to remove tracked contamination and/or the effects of cross-contaminated storm water run-on and run-off prior to conducting performance sampling. Removing contaminated soil in the capillary fringe at the top of perched groundwater zones increased both the volume and tonnage of soil removed from several excavations (e.g., Area SWL).

When rain accumulated in the excavation areas, it was routinely mixed in with the soil so it could be removed from the excavation. Although pumps were used to remove large volumes of water from excavations, smaller pockets of water (less than 50 gallons) were commonly mixed in with the soil and removed using the excavator bucket. Wet soil removed from deep excavation areas after impounded water was pumped out was also disposed of as contaminated soil. Excavated soil was typically set on wet ground and picked up additional water each time it was handled. Stockpiled soil was not covered until the end of the work day, and runoff from haul

roads and basin berms added a significant volume of water to soil piles. In particular, the basin 263 soil staging area (where the top of the soil pile was just below the level of the haul road) was subjected to runoff from the haul road where trucks dumping soil into the basin left deep ruts.

Wet excavation floors were typically surface-scraped prior to being sampled, and the wet soil was handled as if it was contaminated. In some cases (e.g., TPH Area F), impounded water with a petroleum sheen spread over a wide area of the basin/excavation, requiring soil to be surface-scraped from the basin/excavation floor before sampling could be performed.

The excavation of TPH-contaminated soil in Area B (basin 263) began while the basin was still in use as a staging/stockpiling area. During rain events, stockpiled soil in the basin leached water with a petroleum sheen over the rest of the basin floor. With no outlet for the water (the storm drain system no longer functioned), the petroleum-impacted water contaminated the surface soil. The basin floor required scraping in order to remove the contaminated surface soil.

E.4 Soil Management

In several excavations where direct access to trucks was not practical (e.g., the northern extents of Areas SWL, ASLW1 and ASLW2), clean overburden soil and underlying TPH-contaminated soil were stockpiled together and transferred via trackhoe bucket to areas where it could be loaded into trucks. In order for stockpiling of relatively small amounts (i.e., less than 50 cubic yards) of clean soil to have been considered practical, the soil needed to be placed in a location where it would not be in the way of further excavation work. In some cases, this more than doubled the volume of soil that would normally have been removed from the excavations if the clean soil could have been segregated and stockpiled onsite for re-use.

In other areas, contaminated soil was relayed out of the excavation area by using multiple excavators. Soil was excavated and set outside the excavation area onto clean soil. When picked up by the next excavator, soil underlying the temporary stockpile was removed with it. Clean soil also was cross-contaminated in the staging areas (basin 3716/3717 and 263). The cross-contaminated soil was scraped and excavated out of the basins, adding to the total volume removed from the upper yard.

E.5 Piping with Asbestos-containing Materials

During the removal of the metals-contaminated surface soil, 4-inch-diameter piping made of asbestos containing material (ACM) was uncovered by the contractor in some of the basins.

The contractor retained an ACM removal subcontractor and a notification was submitted to Puget Sound Clean Air Agency. According to Unocal personnel, the piping was used for drain lines. The ACM piping was observed only within tank basins. ACM piping is not expected to be located in non-excavated areas of the upper yard. However, if any additional ACM piping is encountered in the future, it will be appropriately removed.

E.6 Pine Street

During the late February/early March repair of a small section of Pine Street, the contractor observed petroleum-contaminated soil beneath the asphalt pavement. The area being repaired was along the south side of Pine Street. The contamination was noted and left in place. The petroleum may be related to historical road oiling or to some other source. Petroleum was also noted near-surface when the fence posts were removed along the north side of Pine Street, adjacent basin 2606. Evidence of petroleum contamination was also observed along the southeastern excavation wall of Area H (basin 2605), located beneath Pine Street. Additional excavation could not be performed here without undermining the road. The area of observed soil contamination extended approximately 25 feet along the fence line and was approximately 3 to 4 feet deep.

Based on these observations and the inability to shut down Pine Street and/or to shore Pine Street to pursue additional excavation, sections of the Pine Street easement have been excluded from the upper yard remedial action. See Section 5.4 of this report for additional discussion.

APPENDIX F
OFF-SITE SHIPMENTS DOCUMENTATION

APPENDIX G
SUPPLEMENTAL SOIL SAMPLING DATA

APPENDIX H
BACKGROUND ARSENIC TECHNICAL MEMORANDUM

APPENDIX I
LEGAL DESCRIPTION OF EXCLUDED AREAS

EXCLUDED AREAS LEGAL DESCRIPTIONS

EDMONDS TANK FARM

TRIAD JOB NO. 93-253

JUNE 24, 2003

PARCEL DESCRIPTION: AREAS 1 AND 2

UPPER YARD EXCEPTION AREAS

THAT PORTION OF PARCEL B OF CITY OF EDMONDS LOT LINE ADJUSTMENT RECORDED UNDER AUDITOR FILE NUMBER 200202145001, RECORDS OF SNOHOMISH COUNTY, WASHINGTON; SITUATED IN GOVERNMENT LOT 1, SECTION 26, TOWNSHIP 27 NORTH, RANGE 3 EAST, W.M., IN SNOHOMISH COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

A STRIP OF LAND 70.00 FEET IN WIDTH, BEING 35.00 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

BEGINNING AT THE INTERSECTION OF THE SOUTHEASTERLY MARGIN OF THE BURLINGTON NORTHERN RAILROAD AND THE NORTHWESTERLY BOUNDARY OF SAID PARCEL B;
THENCE NORTH 59°01'17" EAST ALONG SAID BOUNDARY, FOR A DISTANCE OF 176.41 FEET TO THE **TRUE POINT OF BEGINNING** OF SAID CENTERLINE;
THENCE SOUTH 46°06'46" EAST, FOR A DISTANCE OF 130.00 FEET TO THE TERMINUS OF THIS CENTERLINE;

THE SIDELINES OF SAID STRIP TO BE EXTENDED OR SHORTENED TO MEET AT SAID BOUNDARY;

AND ALSO THAT PORTION OF PARCEL B OF CITY OF EDMONDS LOT LINE ADJUSTMENT RECORDED UNDER AUDITOR FILE NUMBER 200202145001, RECORDS OF SNOHOMISH COUNTY, WASHINGTON; SITUATED IN GOVERNMENT LOT 1, SECTION 26, TOWNSHIP 27 NORTH, RANGE 3 EAST, W.M., IN SNOHOMISH COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

A STRIP OF LAND 50.00 FEET IN WIDTH, BEING 25.00 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

BEGINNING AT THE INTERSECTION OF THE SOUTHEASTERLY MARGIN OF THE BURLINGTON NORTHERN RAILROAD AND THE NORTHWESTERLY BOUNDARY OF SAID PARCEL B;
THENCE NORTH 59°01'17" EAST ALONG SAID BOUNDARY, FOR A DISTANCE OF 688.92 FEET TO THE **TRUE POINT OF BEGINNING** OF SAID CENTERLINE;
THENCE SOUTH 19°34'24" EAST, FOR A DISTANCE OF 78.00 FEET TO THE TERMINUS OF THIS CENTERLINE;

THE SIDELINES OF SAID STRIP TO BE EXTENDED OR SHORTENED TO MEET AT SAID BOUNDARY.

WRITTEN BY: SEB

CHECKED BY: LEC

EDMONDS TANK FARM
TRIAD JOB NO. 93-253
JUNE 24, 2003
PARCEL DESCRIPTION: AREAS 3A, B AND C
UPPER YARD EXCEPTION AREAS

AREA 3A

THAT PORTION OF PARCEL B OF CITY OF EDMONDS LOT LINE ADJUSTMENT RECORDED UNDER AUDITOR FILE NO. 200202145001, RECORDS OF SNOHOMISH COUNTY WASHINGTON AND OF PINE STREET EXTENSION (216TH STREET SW) ADJOINING SAID PARCEL B, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE SOUTHERLY BOUNDARY OF SAID PARCEL B AND THE WESTERLY MARGIN OF SAID PINE STREET EXTENSION;
THENCE NORTH 21°35'00" WEST ALONG SAID WESTERLY MARGIN 109.54 FEET TO A POINT OF CURVE TO THE RIGHT HAVING A RADIUS OF 130.00 FEET;
THENCE NORTHERLY ALONG SAID WESTERLY MARGIN AND CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF 61°59'56" AN ARC DISTANCE OF 140.67 FEET TO A POINT OF COMPOUND CURVE TO THE RIGHT HAVING A RADIUS OF 215.00 FEET;
THEN CONTINUING NORTHERLY AND EASTERLY ALONG SAID MARGIN AND CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF 16°26'50" AN ARC DISTANCE OF 61.72 FEET TO THE **POINT OF BEGINNING**;
THENCE NORTH 15°46'11" WEST 21.21 FEET;
THENCE NORTH 67°45'50" EAST 18.56 FEET;
THENCE SOUTH 19°30'01" EAST 31.63 FEET;
THENCE SOUTH 63°21'58" WEST 20.88 FEET;
THENCE NORTH 15°46'11" WEST 12.20 FEET TO THE **POINT OF BEGINNING**.

AREA 3B

THAT PORTION OF PINE STREET EXTENSION (216TH STREET SW) ADJOINING PARCEL B OF CITY OF EDMONDS LOT LINE ADJUSTMENT RECORDED UNDER AUDITOR FILE NO. 200202145001, RECORDS OF SNOHOMISH COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE SOUTHERLY BOUNDARY OF SAID PARCEL B AND THE WESTERLY MARGIN OF SAID PINE STREET EXTENSION;

THENCE NORTH 21°35'00" WEST ALONG SAID WESTERLY MARGIN 109.54 FEET TO A POINT OF CURVE TO THE RIGHT HAVING A RADIUS OF 130.00 FEET;

THENCE NORTHERLY ALONG SAID WESTERLY MARGIN AND CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF 39°34'49" AN ARC DISTANCE OF 89.80 FEET;

THENCE LEAVING SAID MARGIN SOUTH 57°56'39" EAST 23.98 FEET TO THE **POINT OF BEGINNING**,

THENCE NORTH 31°25'27" EAST 61.15 FEET;

THENCE SOUTH 49°31'39" EAST 11.96 FEET;

THENCE SOUTH 27°55'49" WEST 59.55 FEET;

THENCE NORTH 57°56'39" WEST 15.38 FEET TO THE **POINT OF BEGINNING**.

AREA 3C

THAT PORTION OF PINE STREET EXTENSION (216TH STREET SW) ADJOINING PARCEL B OF CITY OF EDMONDS LOT LINE ADJUSTMENT RECORDED UNDER AUDITOR FILE NO. 200202145001, RECORDS OF SNOHOMISH COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE SOUTHERLY BOUNDARY OF SAID PARCEL B AND THE WESTERLY MARGIN OF SAID PINE STREET EXTENSION;

THENCE NORTH 21°35'00" WEST ALONG SAID WESTERLY MARGIN 79.74 FEET;

THENCE NORTH 70°53'29" EAST 7.28 FEET TO THE **POINT OF BEGINNING**;

THENCE NORTH 21°25'14" WEST 35.23 FEET;

THENCE NORTH 68°36'40" EAST 9.39 FEET;

THENCE SOUTH 21°01'18" EAST 35.59 FEET;

THENCE SOUTH 70°53'29" WEST 9.15 FEET TO THE **POINT OF BEGINNING**.

WRITTEN BY: LEC

CHECKED BY: LEC

**Table 5-1
TPH in Soil- Area A
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
A-A-2-13	12/24/02	13	<10.0	<25.0	<5.00
A-A2wall-4	12/24/02	4	<10.0	<25.0	<5.00
A-A2wall-8	12/24/02	8	<10.0	<25.0	<5.00
A-A-3-13	12/24/02	13	<10.0	<25.0	<5.00
A-A-4-16	12/24/02	16	<10.0	<25.0	<5.00
A-A-5-11	12/24/02	11	<10.0	<25.0	<5.00
A-AA-3-14	12/24/02	14	<10.0	<25.0	<5.00
A-AA3wall-4	12/24/02	4	<10.0	<25.0	<5.00
A-AA3wall-8	12/24/02	8	<10.0	<25.0	<5.00
A-B-1-10	12/24/02	10	18.7	<25.0	<5.00
A-B1wall-4	12/24/02	4	136	27.3	7.34 J
A-B1wall-8	12/24/02	8	61.1	<25.0	<5.00
A-B-2-13	12/24/02	13	<10.0	<25.0	<5.00
A-B-3-18	12/24/02	18	<10.0	<25.0	<5.00
A-B-4-18	12/24/02	18	<10.0	<25.0	<5.00
A-B-5-15	12/24/02	15	<10.0	<25.0	<5.00
A-B5wall-10	12/24/02	10	<10.0	<25.0	<5.00
A-B5wall-4	12/24/02	4	<10.0	<25.0	<5.00
A-C-1-8	12/24/02	8	<10.0	<25.0	<5.00
A-C1wall-4	12/24/02	4	35.3	<25.0	5.20
A-C-2-11	12/24/02	11	<10.0	<25.0	<5.00
A-C-3-17	12/24/02	17	<10.0	<25.0	<5.00

Table 5-1
TPH in Soil- Area A
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
A-C-4-10	12/24/02	10	<10.0	<25.0	<5.00
A-C4wall-4	12/24/02	4	<10.0	<25.0	<5.00
A-D-1-9	12/24/02	9	26.2	<25.0	<5.00
A-D1wall-5	12/24/02	5	<10.0	<25.0	<5.00
A-D-2-8	12/24/02	8	<10.0	<25.0	<5.00
A-D2wall-4	12/24/02	4	<10.0	<25.0	7.99
A-D-3-6	12/24/02	6	260	31.4	7.35 J
A-D3wall-3	12/24/02	3	11.0	<25.0	<5.00
A-D-4-6	12/24/02	6	15.0	<25.0	<5.00
A-D4wall-3	12/24/02	3	<10.0	<25.0	<5.00
AVERAGE concentration:			21.35	NA	NA
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result. NA = Not applicable.					

Table G-1
BTEX in Soil- Area A
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
A-A-2-13	12/24/02	13	<0.00514	<0.00900	<0.00433	<0.0250
A-A2wall-4	12/24/02	4	<0.00400	<0.00900	<0.00813	<0.0250
A-A2wall-8	12/24/02	8	0.00451 J	<0.00900	<0.00873	<0.0250
A-A-3-13	12/24/02	13	<0.00872	0.0103 J	<0.00965	0.0285 J
A-A-4-16	12/24/02	16	<0.00481	<0.00900	<0.0115	<0.0250
A-A-5-11	12/24/02	11	<0.00400	<0.00900	<0.00448	<0.0250
A-AA-3-14	12/24/02	14	0.00517 J	0.0157 J	<0.0148	<0.0701
A-AA3wall-4	12/24/02	4	0.0104 J	0.0144 J	<0.0339	<0.0718
A-AA3wall-8	12/24/02	8	0.005 J	<0.00900	<0.0136	<0.0353
A-B-1-10	12/24/02	10	<0.00400	<0.00900	<0.00784	<0.0250
A-B1wall-4	12/24/02	4	0.00612 J	<0.00900	<0.0145	<0.0291
A-B1wall-8	12/24/02	8	<0.00400	<0.00900	<0.00776	<0.0250
A-B-2-13	12/24/02	13	<0.00777	0.0115 J	<0.0121	0.0347 J
A-B-3-18	12/24/02	18	0.00827 J	0.0141 J	<0.0364	<0.0695
A-B-4-18	12/24/02	18	<0.0042	<0.00900	<0.0115	<0.0250
A-B-5-15	12/24/02	15	0.00407 J	<0.00900	<0.0084	<0.0250
A-B5wall-10	12/24/02	10	<0.00400	<0.00900	<0.00672	<0.0250
A-B5wall-4	12/24/02	4	0.0049 J	<0.00900	<0.008	<0.0250
A-C-1-8	12/24/02	8	<0.00400	0.0102 J	<0.0122	0.0319 J
A-C1wall-4	12/24/02	4	0.00494 J	0.0134 J	<0.0234	<0.0369
A-C-2-11	12/24/02	11	<0.00400	<0.00900	<0.00792	<0.0250
A-C-3-17	12/24/02	17	<0.00400	<0.00900	<0.00625	<0.0250

**Table G-1
BTEX in Soil- Area A
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
A-C-4-10	12/24/02	10	0.0109 J	<0.00900	<0.00863	<0.0250
A-C4wall-4	12/24/02	4	<0.00400	<0.00900	<0.00582	<0.0250
A-D-1-9	12/24/02	9	0.0084 J	0.0101 J	<0.0124	<0.0357
A-D1wall-5	12/24/02	5	0.00851 J	0.015 J	<0.0182	<0.0535
A-D-2-8	12/24/02	8	0.00496 J	<0.00900	<0.0109	<0.0285
A-D2wall-4	12/24/02	4	0.00557	0.00977	<0.0500	0.0267
A-D-3-6	12/24/02	6	0.00402 J	<0.00900	<0.0092	<0.0252
A-D3wall-3	12/24/02	3	0.00469 J	<0.00900	<0.00701	<0.0286
A-D-4-6	12/24/02	6	0.00606 J	<0.00900	<0.0103	<0.0252
A-D4wall-3	12/24/02	3	0.00941 J	0.0366 J	<0.0249	0.174

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

**Table G-2
PAHs in Soil- Area A
UNOCAL Edmonds Terminal**

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
A-A-2-13	12/24/02	0.0103	0.0103	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-A2wall-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-A2wall-8	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-A-3-13	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-A-4-16	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-A-5-11	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-AA-3-14	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-AA3wall-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-AA3wall-8	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B-1-10	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B1wall-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B1wall-8	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B-2-13	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B-3-18	12/24/02	<0.0100	0.0115	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B-4-18	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B-5-15	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B5wall-10	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B5wall-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-C-1-8	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-C1wall-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-C-2-11	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-C-3-17	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-C-4-10	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-C4wall-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D-1-9	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D1wall-5	12/24/02	0.0209	0.0209	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D-2-8	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D2-wall-4	12/24/02	0.0115	0.0503	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D-3-6	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D3wall-3	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D-4-6	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D4wall-3	12/24/02	<0.0100	0.0155	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-2
PAHs in Soil- Area A
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
A-A-2-13	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-A2wall-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-A2wall-8	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-A-3-13	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-A-4-16	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-A-5-11	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-AA-3-14	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-AA3wall-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-AA3wall-8	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B-1-10	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B1wall-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B1wall-8	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B-2-13	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B-3-18	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0115	<0.0100
A-B-4-18	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B-5-15	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B5wall-10	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B5wall-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-C-1-8	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-C1wall-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-C-2-11	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-C-3-17	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-C-4-10	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-C4wall-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D-1-9	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D1wall-5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.018	<0.0100	<0.0100
A-D-2-8	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D2-wall-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D-3-6	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D3wall-3	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D-4-6	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D4wall-3	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reportin.< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table 5-2
TPH in Soil- Area ASWL1
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	
ASWL1-I1WALL-1	03/20/03	1	<10.0	<25.0	<5.00
ASWL1-A-2-8	03/20/03	8	<10.0	<25.0	<5.00
ASWL1-A2WALL-4	03/20/03	4	<10.0	<25.0	<5.00
ASWL1-B1WALL-4	03/20/03	4	<10.0	<25.0	<5.00
ASWL1-B-2-6	03/20/03	6	<10.0	<25.0	<5.00
ASWL1-B-3-5	03/20/03	5	16.2	<25.0	<5.00
ASWL1-B3WALL-3	03/20/03	3	<10.0	<25.0	<5.00
ASWL1-C-2-6	03/20/03	6	<10.0	<25.0	<5.00
ASWL1-C-3-6	03/20/03	6	<10.0	<25.0	<5.00
ASWL1-C3WALL-4	03/20/03	4	<10.0	<25.0	<5.00
ASWL1-D1WALL-4	03/20/03	4	<10.0	<25.0	<5.00
ASWL1-D-2-6	03/20/03	6	<10.0	<25.0	<5.00
ASWL1-D-3-4	03/20/03	4	120	80.0	<5.00
ASWL1-D3WALL-2	03/20/03	2	209	112	<5.00
ASWL1-E1WALL-4	03/20/03	4	<10.0	<25.0	<5.00
ASWL1-E-2-7	03/20/03	7	<10.0	<25.0	<5.00
ASWL1-E2WALL-4	03/20/03	4	22.7	<25.0	<5.00
ASWL1-F-1-7	03/20/03	7	<10.0	<25.0	<5.00
ASWL1-F1WALL-4	03/20/03	4	<10.0	<25.0	<5.00
ASWL1-F-2-9	03/20/03	9	<10.0	<25.0	<5.00
ASWL1-F-3-8	03/20/03	8	216	39.5	13.0
ASWL1-F3WALL-5	03/20/03	5	<10.0	<25.0	<5.00

Table 5-2
TPH in Soil- Area ASWL1
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	
ASWL1-G-1-8	03/20/03	8	<10.0	<25.0	<5.00
ASWL1-G1WALL-4	03/20/03	4	<10.0	<25.0	<5.00
ASWL1-G-2-6	03/20/03	6	24.4	<25.0	<5.00
ASWL1-G-3-4	03/20/03	4	<10.0	<25.0	<5.00
ASWL1-H-2-6	03/20/03	6	<10.0	<25.0	<5.00
ASWL1-H2WALL-3	03/20/03	3	<10.0	<25.0	<5.00
ASWL1-H-3-6	03/20/03	6	<10.0	<25.0	<5.00
ASWL1-H3WALL-4	03/20/03	4	39.8	<25.0	<5.00
ASWL1-I-1-3	03/20/03	3	18.2	<25.0	<5.00
ASWL1-I-2-6	03/20/03	6	<10.0	<25.0	<5.00
ASWL1-I2WALL-3	03/20/03	3	<10.0	<25.0	<5.00
AVERAGE concentration:			23.98	NA	NA
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result. NA = Not applicable.					

**Table G-5
BTEX in Soil- Area ASWL1
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
ASWL1-I1WALL-1	03/20/03	1	0.00541 J	0.0144 J	0.00956 J	<0.0250
ASWL1-A-2-8	03/20/03	8	0.00514 J	0.0194 J	0.0206 J	0.035 J
ASWL1-A2WALL-4	03/20/03	4	0.00481 J	0.016 J	0.0119 J	<0.0250
ASWL1-B1WALL-4	03/20/03	4	0.00642 J	0.0194 J	0.016 J	0.0414 J
ASWL1-B-2-6	03/20/03	6	0.00665 J	0.0185 J	0.0191 J	0.0374 J
ASWL1-B-3-5	03/20/03	5	0.00651 J	0.0171 J	0.0122 J	0.0296 J
ASWL1-B3WALL-3	03/20/03	3	0.00695 J	0.0164 J	0.00957 J	<0.0250
ASWL1-C-2-6	03/20/03	6	0.00451 J	0.0145 J	0.0122 J	<0.0250
ASWL1-C-3-6	03/20/03	6	<0.00400	0.0143 J	0.00849 J	<0.0250
ASWL1-C3WALL-4	03/20/03	4	0.00532 J	0.0167 J	0.0156 J	0.0296 J
ASWL1-D1WALL-4	03/20/03	4	0.00502 J	0.0175 J	0.0113 J	0.0281 J
ASWL1-D-2-6	03/20/03	6	0.00443 J	0.0151 J	0.011 J	<0.0250
ASWL1-D-3-4	03/20/03	4	0.00634 J	0.0195 J	0.0107 J	0.0285 J
ASWL1-D3WALL-2	03/20/03	2	0.00464 J	0.0139 J	0.00748 J	<0.0250
ASWL1-E1WALL-4	03/20/03	4	0.00408 J	0.0162 J	0.00956 J	<0.0250
ASWL1-E-2-7	03/20/03	7	0.00544 J	0.0192 J	0.0187 J	0.0418 J
ASWL1-E2WALL-4	03/20/03	4	0.00499 J	0.0178 J	0.0166 J	0.0389 J
ASWL1-F-1-7	03/20/03	7	<0.00400	0.0139 J	0.00685 J	<0.0250
ASWL1-F1WALL-4	03/20/03	4	0.00497 J	0.0162 J	0.022 J	0.0307 J
ASWL1-F-2-9	03/20/03	9	<0.00400	0.0158 J	0.00742 J	<0.0250
ASWL1-F-3-8	03/20/03	8	<0.00400	0.0186 J	0.00851 J	0.0301 J
ASWL1-F3WALL-5	03/20/03	5	<0.00400	0.0156 J	0.0109 J	0.026 J

Table G-5
BTEX in Soil- Area ASWL1
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
ASWL1-G-1-8	03/20/03	8	<0.00400	0.0158 J	0.0104 J	0.0250
ASWL1-G1WALL-4	03/20/03	4	<0.00400	0.0178 J	0.0161 J	0.0382 J
ASWL1-G-2-6	03/20/03	6	<0.00400	0.0144 J	0.00766 J	<0.0250
ASWL1-G-3-4	03/20/03	4	<0.00400	0.0181 J	0.00945 J	0.0285 J
ASWL1-H-2-6	03/20/03	6	<0.00400	0.0127 J	0.00608 J	<0.0250
ASWL1-H2WALL-3	03/20/03	3	<0.00400	0.0136 J	0.00612 J	<0.0250
ASWL1-H-3-6	03/20/03	6	<0.00400	0.0148 J	0.00683 J	<0.0250
ASWL1-H3WALL-4	03/20/03	4	<0.00400	0.0123 J	0.00565 J	<0.0250
ASWL1-I-1-3	03/20/03	3	0.0049 J	0.015 J	0.00981 J	<0.0250
ASWL1-I-2-6	03/20/03	6	0.00496 J	0.018 J	0.00972 J	0.0264 J
ASWL1-I2WALL-3	03/20/03	3	0.00968 J	0.0187 J	0.0216 J	0.0355 J

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

**Table G-6
PAHs in Soil- Area ASWL1
UNOCAL Edmonds Terminal**

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
ASWL1-1WALL-1	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-A-2-8	03/20/03	0.0114	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-A2WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-B1WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-B-2-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.014	<0.0100	<0.0100
ASWL1-B-3-5	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-B3WALL-3	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-C-2-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-C-3-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-C3WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-D1WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-D-2-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0174	<0.0100	<0.0100
ASWL1-D-3-4	03/20/03	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
ASWL1-D3WALL-2	03/20/03	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
ASWL1-E1WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-E-2-7	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-E2WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-F-1-7	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-F1WALL-4	03/20/03	0.0136	0.0162	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-F-2-9	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-F-3-8	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-F3WALL-5	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-G-1-8	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-G1WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-G-2-6	03/20/03	0.0277	0.0313	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-G-3-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-H-2-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-H2WALL-3	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-H-3-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-H3WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-I-1-3	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-I-2-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-I2WALL-3	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-6
PAHs in Soil- Area ASWL1
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
ASWL1-1WALL-1	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-A-2-8	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0237	<0.0100	<0.0100
ASWL1-A2WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-B1WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-B-2-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-B-3-5	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-B3WALL-3	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-C-2-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-C-3-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-C3WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-D1WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-D-2-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-D-3-4	03/20/03	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
ASWL1-D3WALL-2	03/20/03	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
ASWL1-E1WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-E-2-7	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-E2WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-F-1-7	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-F1WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0111	<0.0100
ASWL1-F-2-9	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-F-3-8	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-F3WALL-5	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-G-1-8	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-G1WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-G-2-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0339	<0.0100	<0.0100
ASWL1-G-3-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-H-2-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0102	<0.0100	<0.0100
ASWL1-H2WALL-3	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-H-3-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-H3WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-I-1-3	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-I-2-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-I2WALL-3	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table 5-3
TPH in Soil- Area ASWL2
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
ASWL2-A-2-3	03/31/03	3	<10.0	<25.0	<5.00
ASWL2-A-3-5	03/31/03	5	<10.0	<25.0	<5.00
ASWL2-A-1-3	03/31/03	3	<10.0	<25.0	<5.00
ASWL2-B-2-5	04/01/03	5	10.4	<25.0	<5.00
ASWL2-B3WALL-4	03/31/03	4	<10.0	<25.0	<5.00
ASWL2-C-1-7	03/31/03	7	<10.0	<25.0	<5.00
ASWL2-C1WALL-4	04/07/03	4	<10.0	<25.0	<5.00
ASWL2-C1WALLB-4	04/07/03	4	<10.0	<25.0	<5.00
ASWL2-C1WALLD-4	04/07/03	4	<10.0	<25.0	<5.00
ASWL2-C-2-7	03/31/03	7	<10.0	<25.0	<5.00
ASWL2-C-3-7	03/31/03	7	60.2	<25.0	<5.00
ASWL2-C3WALL-4	04/07/03	4	<10.0	<25.0	<5.00
ASWL2-C3WALLB-4	04/07/03	4	<10.0	<25.0	<5.00
ASWL2-C3WALLD-4	04/07/03	4	23.4	<25.0	<5.00
ASWL2-D-1-1	03/31/03	1	<10.0	<25.0	<5.00
ASWL2-D-2-5	04/01/03	5	11.9	<25.0	<5.00
ASWL2-D3WALL-4	03/31/03	4	27.3	34.0	<5.00
ASWL2-E-1-0	03/31/03	0	<10.0	<25.0	<5.00
ASWL2-E-2-5	04/01/03	5	<10.0	<25.0	<5.00
ASWL2-E3WALL-4	03/31/03	4	276 D	449 D	<5.00
ASWL2-F-2-5	04/01/03	5	<10.0	<25.0	<5.00

Table 5-3
TPH in Soil- Area ASWL2
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
ASWL2-F3WALL-2	03/31/03	2	274	251	<5.00
ASWL2-G-2-5	04/01/03	5	<10.0	<25.0	<5.00
ASWL2-G3WALL-2	03/31/03	2	<10.0	<25.0	<5.00
ASWL2-H-1-5	03/31/03	5	<10.0	<25.0	<5.00
ASWL2-H1WALL-2	03/31/03	2	<10.0	<25.0	<5.00
ASWL2-H-2-6	03/31/03	6	<10.0	<25.0	<5.00
ASWL2-H3WALL-3	03/31/03	3	25.2	38.5	<5.00
ASWL2-I-1-5	03/31/03	5	118	156	<5.00
ASWL2-I1WALL-3	03/31/03	3	<10.0	<25.0	<5.00
ASWL2-I-2-6	03/31/03	6	<10.0	<25.0	<5.00
ASWL2-I3WALL-2	03/31/03	2	<10.0	<25.0	<5.00
ASWL2-J-1-6	03/31/03	6	<10.0	<25.0	<5.00
ASWL2-J-2-4	03/31/03	4	19.2	57.0	<5.00
ASWL2-K-1-6	03/31/03	6	<10.0	<25.0	<5.00
ASWL2-K1WALL-3	03/31/03	3	<10.0	<25.0	<5.00
ASWL2-K-2-7	03/31/03	7	<10.0	<25.0	<5.00
ASWL2-K3WALL-3	03/31/03	3	29.7	60.3	<5.00
ASWL2-L1WALL-6	03/31/03	6	<10.0	<25.0	<5.00
ASWL2-L-2-8	03/31/03	8	<10.0	<25.0	<5.00
ASWL2-L-3-8	03/31/03	8	<10.0	<25.0	<5.00
ASWL2-M-2-11	03/31/03	11	<23.3	<58.4	<11.7

Table 5-3
TPH in Soil- Area ASWL2
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
ASWL2-M2WALL-5	03/31/03	5	<10.0	<25.0	<5.00
ASWL2-M-3-10	03/31/03	10	<10.0	<25.0	<5.00
ASWL2-N-2-7	03/31/03	7	<10.0	<25.0	<5.00
ASWL2-N2WALL-4	03/31/03	4	<10.0	<25.0	<5.00
ASWL2-N-3-7	03/31/03	7	<10.0	<25.0	<5.00
AVERAGE concentration:			22.84	33.87	NA
<p>< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result. NA = Not applicable.</p>					

Table G-9
BTEX in Soil- Area ASWL2
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
ASWL2-A-2-3	03/31/03	3	<0.00400	<0.00900	0.00446 J	<0.0250
ASWL2-A-3-5	03/31/03	5	<0.00400	<0.00900	0.00425 J	<0.0250
ASWL2-A-1-3	03/31/03	3	<0.00400	<0.00900	0.00674 J	<0.0250
ASWL2-B-2-5	04/01/03	5	<0.00400	<0.00900	0.0113 J	<0.0250
ASWL2-B3WALL-4	03/31/03	4	<0.00400	<0.00900	0.00406 J	<0.0250
ASWL2-C-1-7	03/31/03	7	<0.00400	<0.00900	0.00656 J	<0.0250
ASWL2-C1WALL-4	04/07/03	4	0.0158 J	<0.00900	0.0147 J	0.025
ASWL2-C1WALLB-4	04/07/03	4	0.00476 J	<0.00900	0.0203 J	0.0317 J
ASWL2-C1WALLD-4	04/07/03	4	<0.00400	<0.00900	0.00892 J	<0.0250
ASWL2-C-2-7	03/31/03	7	0.0111 J	0.0173 J	0.0161 J	0.057 J
ASWL2-C-3-7	03/31/03	7	0.00616 J	<0.00900	0.0067 J	<0.0250
ASWL2-C3WALL-4	04/07/03	4	0.0119 J	0.0146 J	0.0273 J	0.036 J
ASWL2-C3WALLB-4	04/07/03	4	0.00624 J	<0.00900	0.017 J	0.0267 J
ASWL2-C3WALLD-4	04/07/03	4	0.00735 J	0.0121 J	0.013 J	0.0398 J
ASWL2-D-1-1	03/31/03	1	0.00744 J	<0.00900	0.0196 J	0.0392 J
ASWL2-D-2-5	04/01/03	5	0.0079 J	0.0101 J	0.024 J	0.0369 J
ASWL2-D3WALL-4	03/31/03	4	0.00539 J	<0.00900	0.018 J	0.0279 J
ASWL2-E-1-0	03/31/03	0	0.00639 J	<0.00900	0.0136 J	0.0267 J
ASWL2-E-2-5	04/01/03	5	0.00654 J	0.0149 J	0.0158 J	0.0456 J
ASWL2-E3WALL-4	03/31/03	4	0.00469 J	<0.00900	0.00993 J	<0.0250
ASWL2-F-2-5	04/01/03	5	0.00465 J	<0.00900	0.0131 J	<0.0250

**Table G-9
BTEX in Soil- Area ASWL2
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
ASWL2-F3WALL-2	03/31/03	2	0.00427 J	<0.00900	0.00811 J	<0.0250
ASWL2-G-2-5	04/01/03	5	<0.00400	<0.00900	0.00692 J	<0.0250
ASWL2-G3WALL-2	03/31/03	2	0.00612 J	<0.00900	0.00848 J	<0.0250
ASWL2-H-1-5	03/31/03	5	0.00479 J	<0.00900	0.00933 J	<0.0250
ASWL2-H1WALL-2	03/31/03	2	0.00507 J	<0.00900	0.00871 J	<0.0250
ASWL2-H-2-6	03/31/03	6	0.00662 J	0.00911 J	0.011 J	0.0319 J
ASWL2-H3WALL-3	03/31/03	3	0.00623 J	<0.00900	0.00996 J	<0.0250
ASWL2-I-1-5	03/31/03	5	0.00482 J	<0.00900	0.01 J	0.0284 J
ASWL2-I1WALL-3	03/31/03	3	0.00419 J	<0.00900	0.00927 J	<0.0250
ASWL2-I-2-6	03/31/03	6	0.00522 J	<0.00900	0.0113 J	<0.0250
ASWL2-I3WALL-2	03/31/03	2	<0.00400	<0.00900	0.00598 J	<0.0250
ASWL2-J-1-6	03/31/03	6	0.00429 J	<0.00900	0.00582 J	<0.0250
ASWL2-J-2-4	03/31/03	4	0.00522 J	<0.00900	0.00923 J	<0.0250
ASWL2-K-1-6	03/31/03	6	<0.00400	<0.00900	0.00726 J	<0.0250
ASWL2-K1WALL-3	03/31/03	3	<0.00400	<0.00900	0.0209 J	0.0347 J
ASWL2-K-2-7	03/31/03	7	<0.00400	<0.00900	0.00949 J	<0.0250
ASWL2-K3WALL-3	03/31/03	3	<0.00400	<0.00900	0.0132 J	0.0263 J
ASWL2-L1WALL-6	03/31/03	6	<0.00400	<0.00900	0.0072 J	<0.0250
ASWL2-L-2-8	03/31/03	8	<0.00400	<0.00900	0.0048 J	<0.0250
ASWL2-L-3-8	03/31/03	8	<0.00400	<0.00900	0.00829 J	<0.0250
ASWL2-M-2-11	03/31/03	11	<0.00934	<0.0210	0.0122 J	<0.0584

**Table G-9
BTEX in Soil- Area ASWL2
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
ASWL2-M2WALL-5	03/31/03	5	<0.00400	<0.00900	0.0047 J	<0.0250
ASWL2-M-3-10	03/31/03	10	<0.00400	<0.00900	0.00675 J	<0.0250
ASWL2-N-2-7	03/31/03	7	<0.00400	<0.00900	0.00802 J	<0.0250
ASWL2-N2WALL-4	03/31/03	4	<0.00400	<0.00900	0.00725 J	<0.0250
ASWL2-N-3-7	03/31/03	7	<0.00400	<0.00900	0.0145 J	0.0268 J

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-10
PAHs in Soil- Area ASWL2
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)
ASWL2-A-2-3	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-A-3-5	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-A-I-3	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-B-2-5	04/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-B3WALL-4	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C-1-7	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C1WALL-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C1WALLB-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C1WALLD-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C-2-7	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C-3-7	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C3WALL-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C3WALLB-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C3WALLD-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-D-1-1	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-D-2-5	04/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-D3WALL-4	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-E-1-0	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-E-2-5	04/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-E3WALL-4	03/31/03	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
ASWL2-F-2-5	04/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-F3WALL-2	03/31/03	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
ASWL2-G-2-5	04/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-G3WALL-2	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-H-1-5	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-10
PAHs in Soil- Area ASWL2
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)
ASWL2-H1WALL-2	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-H-2-6	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-H3WALL-3	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-I-1-5	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-I1WALL-3	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-I-2-6	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-I3WALL-2	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-J-1-6	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-J-2-4	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-K-1-6	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-K1WALL-3	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-K-2-7	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-K3WALL-3	03/31/03	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
ASWL2-L1WALL-6	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-L-2-8	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-L-3-8	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-M-2-11	03/31/03	<0.0233	<0.0233	<0.0233	<0.0233	<0.0233	<0.0233	<0.0233	<0.0233
ASWL2-M2WALL-5	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-M-3-10	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-N-2-7	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-N2WALL-4	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-N-3-7	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-10
PAHs in Soil- Area ASWL2
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(g,h,i) perylene (mg/kg)
ASWL2-A-2-3	03/31/03	<0.0100
ASWL2-A-3-5	03/31/03	<0.0100
ASWL2-A-I-3	03/31/03	<0.0100
ASWL2-B-2-5	04/01/03	<0.0100
ASWL2-B3WALL-4	03/31/03	<0.0100
ASWL2-C-1-7	03/31/03	<0.0100
ASWL2-C1WALL-4	04/07/03	<0.0100
ASWL2-C1WALLB-4	04/07/03	<0.0100
ASWL2-C1WALLD-4	04/07/03	<0.0100
ASWL2-C-2-7	03/31/03	<0.0100
ASWL2-C-3-7	03/31/03	<0.0100
ASWL2-C3WALL-4	04/07/03	<0.0100
ASWL2-C3WALLB-4	04/07/03	<0.0100
ASWL2-C3WALLD-4	04/07/03	<0.0100
ASWL2-D-1-1	03/31/03	<0.0100
ASWL2-D-2-5	04/01/03	<0.0100
ASWL2-D3WALL-4	03/31/03	<0.0100
ASWL2-E-1-0	03/31/03	<0.0100
ASWL2-E-2-5	04/01/03	<0.0100
ASWL2-E3WALL-4	03/31/03	<0.100
ASWL2-F-2-5	04/01/03	<0.0100
ASWL2-F3WALL-2	03/31/03	<0.100
ASWL2-G-2-5	04/01/03	<0.0100
ASWL2-G3WALL-2	03/31/03	<0.0100
ASWL2-H-1-5	03/31/03	<0.0100

Table G-10
PAHs in Soil- Area ASWL2
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(g,h,i) perylene (mg/kg)
ASWL2-H1WALL-2	03/31/03	<0.0100
ASWL2-H-2-6	03/31/03	<0.0100
ASWL2-H3WALL-3	03/31/03	<0.0100
ASWL2-I-1-5	03/31/03	<0.0100
ASWL2-I1WALL-3	03/31/03	<0.0100
ASWL2-I-2-6	03/31/03	<0.0100
ASWL2-I3WALL-2	03/31/03	<0.0100
ASWL2-J-1-6	03/31/03	<0.0100
ASWL2-J-2-4	03/31/03	<0.0100
ASWL2-K-1-6	03/31/03	<0.0100
ASWL2-K1WALL-3	03/31/03	<0.0100
ASWL2-K-2-7	03/31/03	<0.0100
ASWL2-K3WALL-3	03/31/03	<0.0500
ASWL2-L1WALL-6	03/31/03	<0.0100
ASWL2-L-2-8	03/31/03	<0.0100
ASWL2-L-3-8	03/31/03	<0.0100
ASWL2-M-2-11	03/31/03	<0.0233
ASWL2-M2WALL-5	03/31/03	<0.0100
ASWL2-M-3-10	03/31/03	<0.0100
ASWL2-N-2-7	03/31/03	<0.0100
ASWL2-N2WALL-4	03/31/03	<0.0100
ASWL2-N-3-7	03/31/03	<0.0100

< = Not detected at indicated reporting limit. --- = f

Table G-10
PAHs in Soil- Area ASWL2
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
ASWL2-A-2-3	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-A-3-5	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-A-I-3	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-B-2-5	04/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-B3WALL-4	03/31/03	<0.0100	0.0128	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C-1-7	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C1WALL-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C1WALLB-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C1WALLD-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C-2-7	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C-3-7	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C3WALL-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C3WALLB-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C3WALLD-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-D-1-1	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-D-2-5	04/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-D3WALL-4	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-E-1-0	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-E-2-5	04/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-E3WALL-4	03/31/03	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
ASWL2-F-2-5	04/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-F3WALL-2	03/31/03	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
ASWL2-G-2-5	04/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-G3WALL-2	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-H-1-5	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-10
PAHs in Soil- Area ASWL2
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
ASWL2-H1WALL-2	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-H-2-6	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-H3WALL-3	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-I-1-5	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-I1WALL-3	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-I-2-6	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-I3WALL-2	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-J-1-6	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-J-2-4	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-K-1-6	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-K1WALL-3	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-K-2-7	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-K3WALL-3	03/31/03	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
ASWL2-L1WALL-6	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-L-2-8	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-L-3-8	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-M-2-11	03/31/03	<0.0233	<0.0233	<0.0233	<0.0233	<0.0233	<0.0233	<0.0233	<0.0233	<0.0233
ASWL2-M2WALL-5	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-M-3-10	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-N-2-7	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-N2WALL-4	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-N-3-7	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = I < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table 5-4
TPH in Soil- Area B
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
B-B-4-1	01/31/03	1	<10.0	<25.0	<5.00
B-B-5-1	01/31/03	1	<10.0	<25.0	<5.00
B-C-3-2.5	01/31/03	2.5	<10.0	<25.0	<5.00
B-C-4-2	01/31/03	2	<10.0	<25.0	<5.00
B-C-5-2	01/31/03	2	<10.0	<25.0	<5.00
B-C-6-2	01/31/03	2	<10.0	<25.0	<5.00
B-C-7-2	01/31/03	2	<10.0	<25.0	<5.00
B-D-2-6	01/31/03	6	<10.0	<25.0	<5.00
B-D-2WALL-3	01/31/03	3	<10.0	<25.0	<5.00
B-D-3-2	01/31/03	2	<10.0	<25.0	<5.00
B-D-4-4	01/31/03	4	<10.0	<25.0	<5.00
B-D-5-6	01/31/03	6	<10.0	<25.0	<5.00
B-D-6-2	01/31/03	2	<10.0	<25.0	<5.00
B-D-7-5	01/31/03	5	<10.0	<25.0	<5.00
B-E-2-13	02/01/03	13	<10.0	<25.0	<5.00
B-E-2wall-2	02/03/03	2	<10.0	<25.0	<5.00
B-E-3-14	02/01/03	14	<10.0	<25.0	<5.00
B-E-4-7	01/31/03	7	<10.0	<25.0	<5.00
B-E-5-7	01/31/03	7	<10.0	<25.0	<5.00
B-E-6-6	01/31/03	6	<10.0	<25.0	<5.00
B-E-7-8	01/31/03	8	<10.0	<25.0	<5.00
B-E-8-13	02/03/03	13	<10.0	<25.0	<5.00

Table 5-4
TPH in Soil- Area B
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
B-E-8wall-4	02/03/03	4	<10.0	<25.0	<5.00
B-F-2-10	01/31/03	10	<10.0	<25.0	<5.00
B-F-2wall-3	02/03/03	3	<10.0	<25.0	<5.00
B-F-3-8	01/31/03	8	<10.0	<25.0	<5.00
B-F-4-3	01/31/03	3	<10.0	<25.0	<5.00
B-F-5-2	01/31/03	2	<10.0	<25.0	<5.00
B-F-6-3	01/31/03	3	<10.0	<25.0	<5.00
B-F-7-5	01/31/03	5	<10.0	<25.0	<5.00
B-F-8-0	01/31/03	0	<10.0	<25.0	<5.00
B-F-8wall-4	02/03/03	4	<10.0	<25.0	<5.00
B-G-2-4	01/31/03	4	<10.0	<25.0	<5.00
B-G-2WALL-2	01/31/03	2	<10.0	<25.0	<5.00
B-G-3-6	01/31/03	6	<10.0	<25.0	<5.00
B-G-4-5	01/31/03	5	<10.0	<25.0	<5.00
B-G-5-5	01/31/03	5	<10.0	<25.0	<5.00
B-G-6-9	01/31/03	9	<10.0	<25.0	<5.00
B-G6wall-6	02/03/03	6	<10.0	<25.0	<5.00
B-G-7-7	01/31/03	7	<10.0	<25.0	<5.00
B-G-8-0	01/31/03	0	<10.0	<25.0	<5.00
B-H-2-0	02/03/03	0	<10.0	<25.0	<5.00
B-H-3-6	01/31/03	6	<10.0	<25.0	<5.00
B-H-4-6	01/31/03	6	<10.0	<25.0	<5.00

Table 5-4
TPH in Soil- Area B
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
B-H-5-7	01/31/03	7	<10.0	<25.0	<5.00
B-H-6-5	01/31/03	5	<10.0	<25.0	<5.00
B-H-7-1	01/31/03	1	<10.0	<25.0	<5.00
B-I-3-1	02/03/03	1	<10.0	<25.0	<5.00
B-I-4-1	02/03/03	1	<10.0	<25.0	<5.00
B-I-5-6	02/03/03	6	<10.0	<25.0	<5.00
B-I-5wall-3	02/03/03	3	<10.0	<25.0	<5.00
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.					

Table G-13
BTEX in Soil- Area B
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
B-B-4-1	01/31/03	1	<0.00400	<0.00900	0.00886 J	<0.0250
B-B-5-1	01/31/03	1	<0.00400	<0.00900	0.0112 J	<0.0250
B-C-3-2.5	01/31/03	2.5	<0.00400	<0.00900	0.00761 J	<0.0250
B-C-4-2	01/31/03	2	<0.00400	<0.00900	0.00982 J	<0.0250
B-C-5-2	01/31/03	2	<0.00400	<0.00900	0.00762 J	<0.0250
B-C-6-2	01/31/03	2	<0.00400	<0.00900	0.00813 J	<0.0250
B-C-7-2	01/31/03	2	<0.00400	<0.00900	0.0165 J	0.027 J
B-D-2-6	01/31/03	6	<0.00400	<0.00900	0.00877 J	<0.0250
B-D-2WALL-3	01/31/03	3	<0.00400	<0.00900	0.00712 J	<0.0250
B-D-3-2	01/31/03	2	<0.00400	<0.00900	0.00831 J	<0.0250
B-D-4-4	01/31/03	4	<0.00400	<0.00900	0.00726 J	<0.0250
B-D-5-6	01/31/03	6	<0.00400	<0.00900	0.00954 J	<0.0250
B-D-6-2	01/31/03	2	<0.00400	<0.00900	0.00766 J	<0.0250
B-D-7-5	01/31/03	5	<0.00400	<0.00900	0.00856 J	<0.0250
B-E-2-13	02/01/03	13	<0.00400	<0.00900	0.0115 J	<0.0250
B-E-2wall-2	02/03/03	2	<0.00400	<0.00900	0.0118 J	<0.0250
B-E-3-14	02/01/03	14	<0.00400	<0.00900	0.00844 J	<0.0250
B-E-4-7	01/31/03	7	0.00622 J	0.0115 J	0.0121 J	<0.0250
B-E-5-7	01/31/03	7	0.00779 J	<0.00900	0.0241 J	0.0345 J
B-E-6-6	01/31/03	6	<0.00400	<0.00900	0.00985 J	<0.0250
B-E-7-8	01/31/03	8	<0.00400	<0.00900	0.00856 J	<0.0250
B-E-8-13	02/03/03	13	0.0045 J	<0.00900	0.0121 J	<0.0250

**Table G-13
BTEX in Soil- Area B
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
B-E-8wall-4	02/03/03	4	0.00554 J	0.00966 J	0.0125 J	0.0315 J
B-F-2-10	01/31/03	10	0.0049 J	0.0112 J	0.0113 J	0.0523 J
B-F-2wall-3	02/03/03	3	<0.00400	<0.00900	0.0122 J	<0.0250
B-F-3-8	01/31/03	8	0.00636 J	<0.00900	0.01 J	<0.0250
B-F-4-3	01/31/03	3	0.00565 J	<0.00900	0.0103 J	<0.0250
B-F-5-2	01/31/03	2	0.00701 J	<0.00900	0.0136 J	0.0266 J
B-F-6-3	01/31/03	3	0.0118 J	<0.00900	0.0164 J	<0.0250
B-F-7-5	01/31/03	5	0.00664 J	0.00933 J	0.0204 J	0.0396 J
B-F-8-0	01/31/03	0	0.00743 J	0.0109 J	0.0314 J	0.0419 J
B-F-8wall-4	02/03/03	4	<0.00400	<0.00900	0.00967 J	<0.0250
B-G-2-4	01/31/03	4	0.0372	<0.00900	0.014 J	<0.0250
B-G-2WALL-2	01/31/03	2	0.0594	0.0151 J	0.0147 J	<0.0250
B-G-3-6	01/31/03	6	<0.00400	<0.00900	0.0105 J	<0.0250
B-G-4-5	01/31/03	5	0.0061 J	<0.00900	0.0121 J	0.0265 J
B-G-5-5	01/31/03	5	0.00496 J	<0.00900	0.0122 J	<0.0250
B-G-6-9	01/31/03	9	<0.00400	<0.00900	0.0101 J	<0.0250
B-G6wall-6	02/03/03	6	<0.00400	<0.00900	0.00791 J	<0.0250
B-G-7-7	01/31/03	7	0.00542 J	<0.00900	0.0131 J	<0.0250
B-G-8-0	01/31/03	0	0.00514 J	<0.00900	0.0121 J	<0.0250
B-H-2-0	02/03/03	0	<0.00400	<0.00900	0.0107 J	0.0264 J
B-H-3-6	01/31/03	6	0.0058 J	<0.00900	0.0148 J	<0.0250
B-H-4-6	01/31/03	6	0.0056 J	<0.00900	0.0114 J	<0.0250

Table G-13
BTEX in Soil- Area B
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
B-H-5-7	01/31/03	7	<0.00400	<0.00900	0.00824 J	<0.0250
B-H-6-5	01/31/03	5	<0.00400	<0.00900	0.00819 J	<0.0250
B-H-7-1	01/31/03	1	<0.00400	<0.00900	0.0069 J	<0.0250
B-I-3-1	02/03/03	1	<0.00400	<0.00900	0.00842 J	<0.0250
B-I-4-1	02/03/03	1	<0.00400	<0.00900	0.00865 J	<0.0250
B-I-5-6	02/03/03	6	<0.00400	<0.00900	0.00889 J	<0.0250
B-I-5wall-3	02/03/03	3	<0.00400	<0.00900	0.00999 J	<0.0250
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.						

Table G-14
PAHs in Soil- Area B
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
B-B-4-1	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-B-5-1	01/31/03	0.0168	0.0191	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-C-3-2.5	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-C-4-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-C-5-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-C-6-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-C-7-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-D-2-6	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-D-2WALL-3	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0108
B-D-3-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-D-4-4	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-D-5-6	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-D-6-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-D-7-5	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-2-13	02/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-2wall-2	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-3-14	02/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-4-7	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-5-7	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-6-6	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0143	<0.0100
B-E-7-8	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-8-13	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-8wall-4	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-2-10	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-2wall-3	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-3-8	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-14
PAHs in Soil- Area B
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
B-F-4-3	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-5-2	01/31/03	0.0142	0.0183	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0208
B-F-6-3	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-7-5	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-8-0	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-8wall-4	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-2-4	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-2WALL-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-3-6	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-4-5	01/31/03	<0.0100	0.0187	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-5-5	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-6-9	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G6wall-6	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-7-7	01/31/03	0.017	0.0229	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0229
B-G-8-0	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-H-2-0	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-H-3-6	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-H-4-6	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-H-5-7	01/31/03	<0.0100	0.0104	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-H-6-5	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-H-7-1	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-I-3-1	02/03/03	0.0107	0.0139	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-I-4-1	02/03/03	0.0136	0.0195	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-I-5-6	02/03/03	<0.0100	0.013	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-I-5wall-3	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-14
PAHs in Soil- Area B
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
B-B-4-1	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-B-5-1	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-C-3-2.5	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-C-4-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-C-5-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-C-6-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-C-7-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-D-2-6	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-D-2WALL-3	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-D-3-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-D-4-4	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-D-5-6	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-D-6-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-D-7-5	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-2-13	02/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-2wall-2	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-3-14	02/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-4-7	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-5-7	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-6-6	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-7-8	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-8-13	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-8wall-4	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-2-10	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-2wall-3	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-3-8	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-14
PAHs in Soil- Area B
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
B-F-4-3	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-5-2	01/31/03	<0.0100	<0.0100	0.03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-6-3	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-7-5	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-8-0	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-8wall-4	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-2-4	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-2WALL-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-3-6	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-4-5	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0151	<0.0100	<0.0100
B-G-5-5	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-6-9	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G6wall-6	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-7-7	01/31/03	<0.0100	<0.0100	0.0306	<0.0100	<0.0100	<0.0100	<0.0100	0.011	<0.0100
B-G-8-0	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-H-2-0	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-H-3-6	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-H-4-6	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-H-5-7	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-H-6-5	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-H-7-1	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-I-3-1	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-I-4-1	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-I-5-6	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0104	<0.0100
B-I-5wall-3	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

**Table G-15
Volatile Petroleum Hydrocarbons in Soil- Area B
UNOCAL Edmonds Terminal**

SITE	DATE	Aliphatic C5-C6 (mg/kg)	Aliphatic C6-C8 (mg/kg)	Aliphatic C8-C10 (mg/kg)	Aliphatic C10-C12 (mg/kg)	Aromatic C8-C10 (mg/kg)	Aromatic C10-C12 (mg/kg)	Aromatic C12-C13 (mg/kg)	Total Volatile Petroleum Hydrocarbons (mg/kg)
Not applicable.									
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value. D = Sample diluted due to high analyte concentrations. R= Rejected value.									

Table G-16
Extractable Petroleum Hydrocarbons in Soil- Area B
UNOCAL Edmonds Terminal

SITE	DATE	Aliphatic C8-C10 (mg/kg)	Aliphatic C10-C12 (mg/kg)	Aliphatic C12-C16 (mg/kg)	Aliphatic C16-C21 (mg/kg)	Aliphatic C21-C34 (mg/kg)	Aromatic C10-C12 (mg/kg)	Aromatic C12-C16 (mg/kg)	Aromatic C16-C21 (mg/kg)	Aromatic C21-C34 (mg/kg)	Total Extractable Hydrocarbons (mg/kg)
Not applicable.											
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value. D = Sample diluted due to high analyte concentrations. R= Rejected value.											

Table 5-5
TPH in Soil- Area C
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
C-A-3-3	09/24/02	3	20.2	28.4	<5.00
C-B-2-3	09/24/02	3	<10.0	<25.0	<5.00
C-B-3-0	09/24/02	0	316	341	<5.00
C-B-4-3	09/24/02	3	11.3	31.4	<5.00
C-C-1-3	09/24/02	3	<10.0	40.0	<5.00
C-C-2-0	09/24/02	0	<10.0	<25.0	<5.00
C-C-3-0	09/24/02	0	29.4	36.6	<5.00
C-C-4-0	09/24/02	0	131	261	<5.00
C-D-2-0	09/24/02	0	48.7	127	<5.00
C-D-3-5	09/20/02	5	29.6	<25.0	<5.00
C-D3wall-5	09/24/02	5	27.6 J	<25.0	<5.00
C-D-4-3	09/24/02	3	<10.0	<25.0	<5.00
AVERAGE concentration:			52.82	77.33	NA
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result. NA = Not applicable.					

Table G-17
BTEX in Soil- Area C
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
C-A-3-3	09/24/02	3	<0.00400	<0.0122	<0.00799	<0.0250
C-B-2-3	09/24/02	3	<0.00400	<0.0121	<0.00926	<0.0250
C-B-3-0	09/24/02	0	<0.00400	<0.012	<0.00882	<0.0250
C-B-4-3	09/24/02	3	<0.00400	<0.012	<0.0103	<0.0250
C-C-1-3	09/24/02	3	<0.00400	<0.0114	<0.00995	<0.0250
C-C-2-0	09/24/02	0	<0.00400	<0.0123	<0.0103	<0.0250
C-C-3-0	09/24/02	0	<0.00400	<0.0115	<0.00901	<0.0250
C-C-4-0	09/24/02	0	<0.00400	<0.0125	<0.0133	<0.0250
C-D-2-0	09/24/02	0	<0.00400	<0.0126	<0.0107	<0.0250
C-D-3-5	09/20/02	5	--	--	--	--
C-D3wall-5	09/24/02	5	<0.00400	<0.0119	<0.00898	<0.0250
C-D-4-3	09/24/02	3	<0.00400	<0.0123	<0.00979	<0.0250

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-18
PAHs in Soil- Area C
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
C-A-3-3	09/24/02	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
C-B-2-3	09/24/02	<0.0100	0.0161	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
C-B-3-0	09/24/02	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
C-B-4-3	09/24/02	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
C-C-1-3	09/24/02	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
C-C-2-0	09/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
C-C-3-0	09/24/02	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
C-C-4-0	09/24/02	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
C-D-2-0	09/24/02	<0.0200	0.0267 D	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200
C-D-3-5	09/20/02	0.0117	0.0381	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
C-D3wall-5	09/24/02	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200
C-D-4-3	09/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-18
PAHs in Soil- Area C
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
C-A-3-3	09/24/02	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
C-B-2-3	09/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
C-B-3-0	09/24/02	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
C-B-4-3	09/24/02	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
C-C-1-3	09/24/02	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
C-C-2-0	09/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
C-C-3-0	09/24/02	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
C-C-4-0	09/24/02	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
C-D-2-0	09/24/02	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	0.0563 D	<0.0200	<0.0200
C-D-3-5	09/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.145	<0.0100	<0.0100
C-D3wall-5	09/24/02	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	0.0201 D	<0.0200	<0.0200
C-D-4-3	09/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0136	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-20
Extractable Petroleum Hydrocarbons in Soil- Area C
UNOCAL Edmonds Terminal

SITE	DATE	Aliphatic C8-C10 (mg/kg)	Aliphatic C10-C12 (mg/kg)	Aliphatic C12-C16 (mg/kg)	Aliphatic C16-C21 (mg/kg)	Aliphatic C21-C34 (mg/kg)	Aromatic C10-C12 (mg/kg)	Aromatic C12-C16 (mg/kg)	Aromatic C16-C21 (mg/kg)	Aromatic C21-C34 (mg/kg)	Total Extractable Hydrocarbons (mg/kg)
C-B-3-0	09/24/02	<10.0 J	<10.0 J	23.1 DJ	56.2 DJ	118 DJ	<10.0 J	<10.0 J	41.6 DJ	118 DJ	301 DJ

< = Not detected at indicated reporting limit. --- = Not analyzed.
J = Estimated value. D = Sample diluted due to high analyte concentrations. R= Rejected value.

Table 5-6
TPH in Soil- Area D
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
D1-A-1-25	10/23/02	25	35.5 J	<25.0	11.1
D1-A1wall-21	10/23/02	21	<10.0	<25.0	<5.00
D1-A1wall-8	10/23/02	8	<10.0	<25.0	<5.00
D1-A2wall-21	10/23/02	21	<10.0	<25.0	<5.00
D1-A2wall-23	10/23/02	23	<10.0	<25.0	<5.00
D1-A2wall-8	10/23/02	8	<10.0	<25.0	<5.00
D1-B-1-22	10/23/02	22	<10.0	<25.0	<5.00
D1-B1wall-19	10/23/02	19	<10.0	<25.0	<5.00
D1-B1wall-6	10/23/02	6	<10.0	<25.0	<5.00
D1-B2wall-18	10/23/02	18	19.5 J	<25.0	217 DJ
D1-B2wall-7	10/23/02	7	<10.0	<25.0	<5.00
D1-C-1-16	10/23/02	16	<10.0	<25.0	30.2
D1-C1wall-14	10/23/02	14	<10.0	<25.0	<5.00
D1-C1wall-7	10/23/02	7	<10.0	<25.0	<5.00
D1-C2wall-13	10/23/02	13	<10.0	<25.0	<5.00
D1-C2wall-7	10/23/02	7	<10.0	<25.0	<5.00
D1-D-1-13	10/22/02	13	<10.0	<25.0	23.3
D1-D1wall-10	10/22/02	10	<10.0	<25.0	<5.00
D1-D1wall-4	10/22/02	4	<10.0	<25.0	<5.00
D1-D-2-12.5	10/22/02	12.5	<10.0	<25.0	5.67
D1-D2Wall-11	10/22/02	11	21.3	<25.0	<5.00
D1-D2Wall-6	10/22/02	6	43.5 J	<25.0	77.0 J
D1-E-1-7	10/22/02	7	<10.0	<25.0	<5.00

Table 5-6
TPH in Soil- Area D
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
D2-A-5-6	11/22/02	6	<10.0	<25.0	<5.00
D2-A5WALL-3	11/22/02	3	<10.0	<25.0	<5.00
D2-B4WALL-4	11/22/02	4	<10.0	<25.0	<5.00
D2-B-5-15	12/05/02	15	<10.0	<25.0	<5.00
D2-B-5B-23	12/05/02	23	<10.0	<25.0	<5.00
D2-B-5C-8	12/05/02	8	<10.0	<25.0	<5.00
D2-B-5D-15	12/05/02	15	<10.0	<25.0	<5.00
D2-B-6-12	11/27/02	12	<10.0	<25.0	<5.00
D2-B-6B-12	12/03/02	12	<10.0	<25.0	<5.00
D2-B-6D-10	12/03/02	10	<10.0	<25.0	<5.00
D2-B6wall-2	11/27/02	2	<10.0	<25.0	<5.00
D2-C-4-20	11/22/02	20	<10.0	<25.0	<5.00
D2-C4WALL-12	11/22/02	12	<10.0	<25.0	<5.00
D2-C4WALL-5	11/22/02	5	<10.0	<25.0	<5.00
D2-C-5-9	11/22/02	9	<10.0	<25.0	<5.00
D2-C-6-8	11/22/02	8	<10.0	<25.0	<5.00
D2-C6WALL-2	11/22/02	2	<10.0	<25.0	<5.00
D2-D-1-7	11/22/02	7	<10.0	<25.0	5.31
D2-D1WALL-3	11/22/02	3	225	90	22.5
D2-D-4-8	11/22/02	8	<10.0	<25.0	<5.00
D2-D4WALL-4	11/22/02	4	<10.0	<25.0	<5.00
D2-D-5-18	11/21/02	18	<10.0	<25.0	<5.00
D2-D-6-9	11/22/02	9	<10.0	<25.0	10.9

Table 5-6
TPH in Soil- Area D
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
D2-D6WALL-4	11/22/02	4	<10.0	<25.0	<5.00
D2-E-2-4	11/22/02	4	<10.0	<25.0	<5.00
D2-E2WALL-9	11/22/02	9	<10.0	<25.0	<5.00
D2-E-3-8	11/22/02	8	<10.0	<25.0	<5.00
D2-E3WALL-5	11/22/02	5	<10.0	<25.0	<5.00
D2-E-4-4	11/22/02	4	<10.0	<25.0	<5.00
D2-E-5-7	11/22/02	7	<10.0	<25.0	<5.00
D2-E5WALL-4	11/22/02	4	<10.0	<25.0	<5.00
D2-F-2-8.5	12/02/02	8.5	<10.0	<25.0	33.1
D2-F-2A-11	12/02/02	11	<10.0	<25.0	<5.00
D2-F-2B-3	12/02/02	3	<10.0	<25.0	<5.00
D2-F-2C-4	12/02/02	4	<10.0	<25.0	<5.00
D2-F-2D-6.5	12/02/02	6.5	<10.0	<25.0	<5.00
D2-F-2DWALL-3	12/02/02	3	<10.0	<25.0	<5.00
D2-F-3-3	11/22/02	3	<10.0	<25.0	<5.00
D2-F-4-2	11/22/02	2	<10.0	<25.0	<5.00
D2-G-3-1	11/22/02	1	29.1	27.4	<5.00
AVERAGE concentration:			10.46	NA	9.03
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result. NA = Not applicable.					

Table G-21
BTEX in Soil- Area D
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
D1-A-1-25	10/23/02	25	0.103	0.484	0.647	1.87
D1-A1wall-21	10/23/02	21	<0.00400	<0.00900	<0.0125	<0.0250
D1-A1wall-8	10/23/02	8	<0.00400	<0.00900	<0.0122	<0.0250
D1-A2wall-21	10/23/02	21	0.0145 J	0.0401 J	<0.022	0.127
D1-A2wall-23	10/23/02	23	<0.00400	<0.00900	<0.00935	<0.0250
D1-A2wall-8	10/23/02	8	0.00595 J	<0.00900	<0.0113	<0.0250
D1-B-1-22	10/23/02	22	0.0104 J	<0.00900	<0.013	<0.0250
D1-B1wall-19	10/23/02	19	0.0103 J	0.00903 J	<0.0215	0.0331 J
D1-B1wall-6	10/23/02	6	<0.00400	<0.00900	<0.00662	<0.0250
D1-B2wall-18	10/23/02	18	<0.0363	0.128 J	<0.0307	0.44 D
D1-B2wall-7	10/23/02	7	0.0088 J	0.0166 J	<0.0144	0.052 J
D1-C-1-16	10/23/02	16	0.0395	0.236	0.052	0.702
D1-C1wall-14	10/23/02	14	0.00608 J	<0.00900	<0.0103	<0.0250
D1-C1wall-7	10/23/02	7	<0.00400	<0.00900	<0.00699	<0.0250
D1-C2wall-13	10/23/02	13	0.119	0.0594	<0.0129	0.0259 J
D1-C2wall-7	10/23/02	7	0.00434 J	<0.00900	<0.00878	<0.0250
D1-D-1-13	10/22/02	13	0.0578	0.126	<0.0134	0.441
D1-D1wall-10	10/22/02	10	0.0354	0.0317 J	<0.0114	0.0512 J
D1-D1wall-4	10/22/02	4	0.0194 J	0.0176 J	<0.0111	0.0335 J
D1-D-2-12.5	10/22/02	12.5	0.00953 J	0.0157 J	<0.00894	0.0371 J
D1-D2Wall-11	10/22/02	11	<0.00439	<0.00900	<0.00933	<0.0250
D1-D2Wall-6	10/22/02	6	0.00595 J	0.317	<0.00902	1.03
D1-E-1-7	10/22/02	7	<0.00400	<0.00900	<0.00854	<0.0250

Table G-21
BTEX in Soil- Area D
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
D2-A-5-6	11/22/02	6	<0.00400	<0.00900	0.0116 J	<0.0250
D2-A5WALL-3	11/22/02	3	<0.00400	<0.00900	0.0113 J	<0.0250
D2-B4WALL-4	11/22/02	4	<0.00400	<0.00900	0.0121 J	<0.0250
D2-B-5-15	12/05/02	15	<0.00400	<0.00900	0.00909 J	<0.0250
D2-B-5B-23	12/05/02	23	<0.00400	<0.00900	0.0079 J	<0.0250
D2-B-5C-8	12/05/02	8	<0.00400	<0.00900	0.0101 J	<0.0250
D2-B-5D-15	12/05/02	15	<0.00400	<0.00900	0.00682 J	<0.0250
D2-B-6-12	11/27/02	12	0.00822 J	<0.00900	0.0149 J	<0.0250
D2-B-6B-12	12/03/02	12	<0.00400	<0.00900	0.00787 J	<0.0250
D2-B-6D-10	12/03/02	10	<0.00400	<0.00900	0.00928 J	<0.0250
D2-B6wall-2	11/27/02	2	0.00592 J	<0.00900	0.0124 J	<0.0250
D2-C-4-20	11/22/02	20	0.0417	<0.00900	0.00707 J	<0.0250
D2-C4WALL-12	11/22/02	12	<0.00400	<0.00900	0.0112 J	0.0273 J
D2-C4WALL-5	11/22/02	5	<0.00400	<0.00900	0.0125 J	<0.0250
D2-C-5-9	11/22/02	9	<0.00400	<0.00900	0.00594 J	<0.0250
D2-C-6-8	11/22/02	8	0.00729 J	0.0107 J	0.0125 J	0.0356 J
D2-C6WALL-2	11/22/02	2	<0.00400	<0.00900	0.00576 J	<0.0250
D2-D-1-7	11/22/02	7	0.00644 J	0.0328 J	0.00742 J	0.0739 J
D2-D1WALL-3	11/22/02	3	<0.00400	<0.00900	0.012 J	0.0409 J
D2-D-4-8	11/22/02	8	<0.00400	<0.00900	0.0116 J	<0.0250
D2-D4WALL-4	11/22/02	4	<0.00400	<0.00900	0.017 J	<0.0250
D2-D-5-18	11/21/02	18	0.00547 J	<0.00900	0.0159 J	<0.0250
D2-D-6-9	11/22/02	9	0.00438 J	0.0234 J	0.00945 J	0.0399 J

Table G-21
BTEX in Soil- Area D
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
D2-D6WALL-4	11/22/02	4	0.00444 J	<0.00900	0.011 J	<0.0250
D2-E-2-4	11/22/02	4	<0.00400	<0.00900	0.00555 J	<0.0250
D2-E2WALL-9	11/22/02	9	<0.00400	<0.00900	0.00522 J	<0.0250
D2-E-3-8	11/22/02	8	0.059	<0.00900	0.00612 J	<0.0250
D2-E3WALL-5	11/22/02	5	0.0281 J	<0.00900	0.00673 J	<0.0250
D2-E-4-4	11/22/02	4	0.00496 J	<0.00900	0.0138 J	0.0282 J
D2-E-5-7	11/22/02	7	<0.00400	<0.00900	0.00918 J	<0.0250
D2-E5WALL-4	11/22/02	4	<0.00400	<0.00900	0.0082 J	<0.0250
D2-F-2-8.5	12/02/02	8.5	0.582	0.117	0.247	0.503
D2-F-2A-11	12/02/02	11	0.0441	0.0232 J	0.0145 J	0.0451 J
D2-F-2B-3	12/02/02	3	0.00846 J	<0.00900	0.017 J	<0.0250
D2-F-2C-4	12/02/02	4	0.00567 J	<0.00900	0.012 J	0.0294 J
D2-F-2D-6.5	12/02/02	6.5	0.00523 J	<0.00900	0.0128 J	0.0263 J
D2-F-2DWALL-3	12/02/02	3	0.0101 J	0.077	0.0127 J	0.0479 J
D2-F-3-3	11/22/02	3	<0.00400	<0.00900	0.00641 J	<0.0250
D2-F-4-2	11/22/02	2	0.0055 J	<0.00900	0.013 J	<0.0250
D2-G-3-1	11/22/02	1	<0.00400	<0.00900	0.0124 J	0.0342 J

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-22
PAHs in Soil- Area D
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
D1-A-1-25	10/23/02	0.0131	0.0331	<0.0100	<0.0100	<0.0100	<0.0100	0.0416	<0.0100	<0.0100
D1-A1wall-21	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-A1wall-8	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-A2wall-21	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-A2wall-23	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-A2wall-8	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-B-1-22	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-B1wall-19	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-B1wall-6	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-B2wall-18	10/23/02	0.12	0.341	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-B2wall-7	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-C-1-16	10/23/02	0.0469	0.129	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-C1wall-14	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-C1wall-7	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-C2wall-13	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-C2wall-7	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-D-1-13	10/22/02	<0.0100	0.019	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-D1wall-10	10/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-D1wall-4	10/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-D-2-12.5	10/22/02	<0.0100	0.0113	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-D2Wall-11	10/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-D2Wall-6	10/22/02	0.201	0.445	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-22
PAHs in Soil- Area D
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
D1-E-1-7	10/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-A-5-6	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-A5WALL-3	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B4WALL-4	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B-5-15	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B-5B-23	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B-5C-8	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B-5D-15	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B-6-12	11/27/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B-6B-12	12/03/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B-6D-10	12/03/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B6wall-2	11/27/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-C-4-20	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-C4WALL-12	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-C4WALL-5	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-C-5-9	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-C-6-8	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-C6WALL-2	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-D-1-7	11/22/02	0.0172	0.0469	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-D1WALL-3	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-D-4-8	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-D4WALL-4	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-D-5-18	11/21/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0294	<0.0100	0.0361	0.0109
D2-D-6-9	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-D6WALL-4	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-22
PAHs in Soil- Area D
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
D2-E-2-4	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-E2WALL-9	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-E-3-8	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-E3WALL-5	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-E-4-4	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-E-5-7	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-E5WALL-4	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-F-2-8.5	12/02/02	0.0387	0.0823	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-F-2A-11	12/02/02	<0.0100	0.0188	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-F-2B-3	12/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-F-2C-4	12/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-F-2D-6.5	12/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-F-2DWALL-3	12/02/02	<0.0100	0.0101	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-F-3-3	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-F-4-2	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-G-3-1	11/22/02	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-22
PAHs in Soil- Area D
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
D1-A-1-25	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.455	<0.0100	<0.0100
D1-A1wall-21	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-A1wall-8	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-A2wall-21	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.018	<0.0100	<0.0100
D1-A2wall-23	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-A2wall-8	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-B-1-22	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-B1wall-19	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-B1wall-6	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-B2wall-18	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.398 J9	<0.0100	<0.0100
D1-B2wall-7	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-C-1-16	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.164	<0.0100	<0.0100
D1-C1wall-14	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0103	<0.0100	<0.0100
D1-C1wall-7	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-C2wall-13	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0421	<0.0100	<0.0100
D1-C2wall-7	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-D-1-13	10/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0425	<0.0100	<0.0100
D1-D1wall-10	10/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0187	<0.0100	<0.0100
D1-D1wall-4	10/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0107	<0.0100	<0.0100
D1-D-2-12.5	10/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-D2Wall-11	10/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-D2Wall-6	10/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.119	<0.0100	<0.0100

Table G-22
PAHs in Soil- Area D
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
D1-E-1-7	10/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-A-5-6	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-A5WALL-3	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B4WALL-4	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B-5-15	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B-5B-23	12/05/02	<0.0100	0.061	<0.0100	0.0108	<0.0100	<0.0100	<0.0100	<0.0100	0.0108
D2-B-5C-8	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B-5D-15	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B-6-12	11/27/02	<0.0100	0.0637	<0.0100	0.013	<0.0100	<0.0100	<0.0100	<0.0100	0.013
D2-B-6B-12	12/03/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B-6D-10	12/03/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B6wall-2	11/27/02	<0.0100	0.0295	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-C-4-20	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0127	<0.0100	<0.0100
D2-C4WALL-12	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-C4WALL-5	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-C-5-9	11/22/02	<0.0100	0.0293	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-C-6-8	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-C6WALL-2	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-D-1-7	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0117	<0.0100	<0.0100
D2-D1WALL-3	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-D-4-8	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-D4WALL-4	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-D-5-18	11/21/02	0.026	0.189	<0.0100	0.0537	<0.0100	<0.0100	<0.0100	0.0117	0.0512
D2-D-6-9	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-D6WALL-4	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-22
PAHs in Soil- Area D
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
D2-E-2-4	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-E2WALL-9	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-E-3-8	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-E3WALL-5	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-E-4-4	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-E-5-7	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-E5WALL-4	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-F-2-8.5	12/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0573	<0.0100	<0.0100
D2-F-2A-11	12/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0102	<0.0100	<0.0100
D2-F-2B-3	12/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-F-2C-4	12/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-F-2D-6.5	12/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-F-2DWALL-3	12/02/02	<0.0100	0.0311	<0.0100	0.0135	<0.0100	<0.0100	0.0413	<0.0100	0.0135
D2-F-3-3	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-F-4-2	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-G-3-1	11/22/02	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500

< = Not detected at indicated reporting limit. -< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table 5-7
TPH in Soil- Area F
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
F-B-3-7	12/06/02	7	78.5	158	<5.00
F-B-3wall-1	10/02/02	1	<10.0	<25.0	<5.00
F-B-4-10	12/05/02	10	13.4	<25.0	<5.00
F-B-4wall-3	10/02/02	3	<10.0	<25.0	<5.00
F-B-5-10	12/05/02	10	<10.0	<25.0	<5.00
F-B-5wall-3	10/02/02	3	<10.0	<25.0	<5.00
F-B-6-10	12/06/02	10	<10.0	<25.0	<5.00
F-B-6wall-2	10/02/02	2	<10.0	<25.0	<5.00
F-C-2-7	12/05/02	7	<10.0	<25.0	<5.00
F-C-3-9	12/05/02	9	<10.0	<25.0	<5.00
F-C-4-10	12/05/02	10	<10.0	<25.0	<5.00
F-C-5-10	12/05/02	10	<10.0	<25.0	<5.00
F-C-6-11	12/05/02	11	<10.0	<25.0	<5.00
F-C-7-10	12/05/02	10	89.8	27.3	<5.00
F-C-7wall-4	10/02/02	4	<10.0	<25.0	<5.00
F-D-2-9	12/05/02	9	<10.0	<25.0	<5.00
F-D-3-10	12/05/02	10	14.1	<25.0	<5.00
F-D-4-10	12/05/02	10	<10.0	<25.0	<5.00
F-D-5-11	12/05/02	11	<10.0	<25.0	<5.00
F-D-6-10	12/05/02	10	<10.0	<25.0	<5.00
F-D-7-11	12/05/02	11	<10.0	<25.0	<5.00
F-D-7wall-4	10/02/02	4	<10.0	<25.0	<5.00
F-E-2-6	12/06/02	6	<10.0	<25.0	<5.00

**Table 5-7
TPH in Soil- Area F
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
F-E-3-6	12/06/02	6	<10.0	<25.0	<5.00
F-E-4-7	12/06/02	7	142	<25.0	<5.00
F-E-5-9	12/06/02	9	<10.0	<25.0	<5.00
F-E-6-6	12/06/02	6	<10.0	<25.0	<5.00
F-E-7-6	12/06/02	6	<10.0	<25.0	<5.00
F-E7wall-4	10/04/02	4	25.2	37.7	<5.00
F-F-2-7	12/06/02	7	<10.0	<25.0	<5.00
F-F-3-6	12/06/02	6	26.7	28.7	<5.00
F-F-4-6	12/06/02	6	37.7	<25.0	<5.00
F-F-5-6	12/06/02	6	<10.0	<25.0	<5.00
F-F-6-8	12/06/02	8	<10.0	<25.0	<5.00
F-F-7-7	12/06/02	7	<10.0	<25.0	<5.00
F-F7wall-4	10/04/02	4	13.9	<25.0	<5.00
F-F-8-15	01/09/03	15	<10.0	<25.0	<5.00
F-G-3-6	12/09/02	6	<10.0	<25.0	<5.00
F-G-4-6	12/09/02	6	<10.0	<25.0	<5.00
F-G-5-6	12/09/02	6	<10.0	<25.0	<5.00
F-G-6-8	12/09/02	8	<10.0	<25.0	<5.00
F-G-7-10	12/09/02	10	<10.0	<25.0	<5.00
F-G-8-8	12/09/02	8	<10.0	<25.0	<5.00
F-G-8Wall-8	10/18/02	8	<10.0	<25.0	<5.00
F-H-3-8	01/09/03	8	<10.0	<25.0	<5.00
F-H-4-14	01/09/03	14	<10.0	<25.0	<5.00

Table 5-7
TPH in Soil- Area F
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
F-H-5-15	01/09/03	15	<10.0	<25.0	<5.00
F-H-6-18	01/09/03	18	<10.0	<25.0	<5.00
F-H-7-10	12/09/02	10	11.8	<25.0	<5.00
F-H-8-10	12/09/02	10	<10.0	<25.0	<5.0
F-H-8Wall-7.5	10/18/02	7.5	30.9	<25.0	<5.00
F-I-4-8	01/09/03	8	<10.0	<25.0	<5.00
F-I-5-12	01/09/03	12	<10.0	<25.0	<5.00
F-I-5Wall-4	10/18/02	4	92.2	<25.0	5.85
F-I-6-14	01/09/03	14	<10.0	<25.0	<5.00
F-I-7-10	12/09/02	10	<10.0	<25.0	<5.00
F-I-7Wall-7.5	10/18/02	7.5	<10.0	<25.0	14.2
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.					

Table G-25
BTEX in Soil- Area F
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
F-B-3-7	12/06/02	7	<0.00400	<0.00900	0.0144 J	<0.0250
F-B-3wall-1	10/02/02	1	<0.00400	0.0124 J	0.0074 J	<0.0250
F-B-4-10	12/05/02	10	0.0103 J	0.00947 J	0.0208 J	0.0295 J
F-B-4wall-3	10/02/02	3	<0.00400	0.0131 J	0.00674 J	<0.0250
F-B-5-10	12/05/02	10	<0.00400	<0.00900	0.0107 J	<0.0250
F-B-5wall-3	10/02/02	3	<0.00400	0.0179 J	0.0204 J	0.0442 J
F-B-6-10	12/06/02	10	<0.00400	<0.00900	0.0143 J	<0.0250
F-B-6wall-2	10/02/02	2	<0.00400	0.0136 J	0.00766 J	<0.0250
F-C-2-7	12/05/02	7	<0.00400	<0.00900	0.00717 J	<0.0250
F-C-3-9	12/05/02	9	<0.00400	<0.00900	0.00657 J	<0.0250
F-C-4-10	12/05/02	10	<0.00400	<0.00900	0.00815 J	<0.0250
F-C-5-10	12/05/02	10	0.0102 J	0.0103 J	0.0371 J	0.0416 J
F-C-6-11	12/05/02	11	0.00452 J	0.011 J	0.0292 J	0.0562 J
F-C-7-10	12/05/02	10	<0.00400	<0.00900	0.00922 J	<0.0250
F-C-7wall-4	10/02/02	4	<0.00400	0.014 J	0.00757 J	<0.0250
F-D-2-9	12/05/02	9	0.00574 J	0.0115 J	0.0268 J	0.0459 J
F-D-3-10	12/05/02	10	0.00509 J	0.0111 J	0.0116 J	0.0349 J
F-D-4-10	12/05/02	10	<0.00400	<0.00900	0.00617 J	<0.0250
F-D-5-11	12/05/02	11	<0.00400	<0.00900	0.00685 J	<0.0250
F-D-6-10	12/05/02	10	<0.00400	<0.00900	0.0105 J	<0.0250
F-D-7-11	12/05/02	11	<0.00400	<0.00900	0.00969 J	<0.0250
F-D-7wall-4	10/02/02	4	<0.00400	0.0145 J	0.00856 J	<0.0250
F-E-2-6	12/06/02	6	<0.00400	<0.00900	0.0214 J	0.0389 J

**Table G-25
BTEX in Soil- Area F
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
F-E-3-6	12/06/02	6	0.0047 J	<0.00900	0.0105 J	0.0271 J
F-E-4-7	12/06/02	7	<0.00400	<0.00900	0.00598 J	<0.0250
F-E-5-9	12/06/02	9	0.00472 J	<0.00900	0.0142 J	0.0298 J
F-E-6-6	12/06/02	6	<0.00400	<0.00900	0.00568 J	<0.0250
F-E-7-6	12/06/02	6	<0.00400	<0.00900	0.00635 J	<0.0250
F-E7wall-4	10/04/02	4	0.00433 J	0.0195 J	0.0141 J	0.0354 J
F-F-2-7	12/06/02	7	<0.00400	<0.00900	0.00575 J	<0.0250
F-F-3-6	12/06/02	6	<0.00400	<0.00900	0.00741 J	<0.0250
F-F-4-6	12/06/02	6	<0.00400	<0.00900	0.00918 J	<0.0250
F-F-5-6	12/06/02	6	<0.00400	<0.00900	0.00887 J	<0.0250
F-F-6-8	12/06/02	8	<0.00400	<0.00900	0.00601 J	<0.0250
F-F-7-7	12/06/02	7	<0.00400	<0.00900	0.0104 J	<0.0250
F-F7wall-4	10/04/02	4	0.0045 J	0.0193 J	0.0117 J	0.0411 J
F-F-8-15	01/09/03	15	0.0051 J	<0.00900	0.00732 J	<0.0250
F-G-3-6	12/09/02	6	<0.00400	<0.00900	0.008 J	<0.0250
F-G-4-6	12/09/02	6	<0.00400	<0.00900	0.00699 J	<0.0250
F-G-5-6	12/09/02	6	<0.00400	<0.00900	0.00634 J	<0.0250
F-G-6-8	12/09/02	8	<0.00400	<0.00900	0.00652 J	<0.0250
F-G-7-10	12/09/02	10	<0.00400	<0.00900	0.0103 J	<0.0250
F-G-8-8	12/09/02	8	<0.00400	<0.00900	0.0106 J	<0.0250
F-G-8Wall-8	10/18/02	8	<0.00400	<0.00900	0.0188 J	<0.0250
F-H-3-8	01/09/03	8	0.00493 J	<0.00900	0.0113 J	0.0299 J
F-H-4-14	01/09/03	14	0.00429 J	<0.00900	0.00834 J	<0.0250

Table G-25
BTEX in Soil- Area F
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
F-H-5-15	01/09/03	15	0.00659 J	<0.00900	0.0103 J	0.0271 J
F-H-6-18	01/09/03	18	0.00435 J	<0.00900	0.00756 J	<0.0250
F-H-7-10	12/09/02	10	<0.00400	<0.00900	0.00946 J	<0.0250
F-H-8-10	12/09/02	10	<0.00400	<0.00900	0.00969	<0.0250
F-H-8Wall-7.5	10/18/02	7.5	<0.00400	<0.00900	0.00902 J	<0.0250
F-I-4-8	01/09/03	8	0.00866 J	<0.00900	0.0161 J	<0.0250
F-I-5-12	01/09/03	12	0.00812 J	<0.00900	0.0171 J	0.0278 J
F-I-5Wall-4	10/18/02	4	<0.00400	<0.00900	0.015 J	<0.0250
F-I-6-14	01/09/03	14	0.00824 J	<0.00900	0.0112 J	<0.0250
F-I-7-10	12/09/02	10	<0.00400	<0.00900	0.00881 J	<0.0250
F-I-7Wall-7.5	10/18/02	7.5	0.00531 J	0.00933 J	0.0243 J	0.0292 J

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-26
PAHs in Soil- Area F
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
F-B-3-7	12/06/02	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
F-B-3wall-1	10/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-B-4-10	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-B-4wall-3	10/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-B-5-10	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-B-5wall-3	10/02/02	<0.0100	0.0146	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-B-6-10	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-B-6wall-2	10/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-C-2-7	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-C-3-9	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-C-4-10	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-C-5-10	12/05/02	0.0204	0.051	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-C-6-11	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-C-7-10	12/05/02	0.0453	0.09	<0.0100	<0.0100	<0.0100	0.0283	<0.0100	0.0104	<0.0100
F-C-7wall-4	10/02/02	<0.0100	0.0113	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-D-2-9	12/05/02	0.0172	0.0375	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-D-3-10	12/05/02	0.0132	0.0319	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-D-4-10	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-D-5-11	12/05/02	0.0632	0.152	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-D-6-10	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-D-7-11	12/05/02	0.0166	0.0332	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-D-7wall-4	10/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-E-2-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-E-3-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-E-4-7	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-E-5-9	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-26
PAHs in Soil- Area F
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
F-E-6-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-E-7-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-E7wall-4	10/04/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-2-7	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-3-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-4-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-5-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-6-8	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-7-7	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F7wall-4	10/04/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0366	<0.0100	<0.0100
F-F-8-15	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-8-5	12/06/02	0.134	0.0136	<0.0100	<0.0100	<0.0100	0.103	<0.0100	<0.0100	<0.0100
F-G-3-6	12/09/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-G-4-6	12/09/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-G-5-6	12/09/02	<0.0100	0.0335	0.0127	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-G-6-8	12/09/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-G-7-10	12/09/02	0.0112	0.0367	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0112
F-G7wall-6	10/04/02	0.376	0.0382	0.036	0.0142	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-G-8-8	12/09/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-G-8Wall-8	10/18/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-H-3-8	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-H-4-14	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-H-5-15	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-H-6-18	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-H-7-10	12/09/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-H-8Wall-7.5	10/18/02	0.0568	0.0135	<0.0100	<0.0100	0.0172	<0.0100	<0.0100	<0.0100	<0.0100

Table G-26
PAHs in Soil- Area F
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
F-I-4-8	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-I-5-12	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-I-5Wall-4	10/18/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-I-6-14	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-I-7-10	12/09/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-I-7Wall-7.5	10/18/02	0.112 D	0.112 D	<0.100	2.4 D	0.481 D	0.781 D	0.378 D	0.807 D	0.799 D

Table G-26
PAHs in Soil- Area F
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
F-B-3-7	12/06/02	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	0.0505 D
F-B-3wall-1	10/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-B-4-10	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-B-4wall-3	10/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-B-5-10	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-B-5wall-3	10/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0199	<0.0100	<0.0100
F-B-6-10	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-B-6wall-2	10/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-C-2-7	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-C-3-9	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-C-4-10	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-C-5-10	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0165	<0.0100	<0.0100
F-C-6-11	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-C-7-10	12/05/02	<0.0100	0.0587	<0.0100	0.032	<0.0100	<0.0100	<0.0100	<0.0100	0.185
F-C-7wall-4	10/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0446	<0.0100	<0.0100
F-D-2-9	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-D-3-10	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-D-4-10	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-D-5-11	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-D-6-10	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-D-7-11	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-D-7wall-4	10/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0282	<0.0100	<0.0100
F-E-2-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-E-3-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-E-4-7	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0102
F-E-5-9	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-26
PAHs in Soil- Area F
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
F-E-6-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-E-7-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-E7wall-4	10/04/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-2-7	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-3-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-4-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-5-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-6-8	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-7-7	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F7wall-4	10/04/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-8-15	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-8-5	12/06/02	<0.0100	0.186	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.59	<0.0100
F-G-3-6	12/09/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-G-4-6	12/09/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-G-5-6	12/09/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0194	<0.0100	<0.0100
F-G-6-8	12/09/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-G-7-10	12/09/02	<0.0100	<0.0100	0.0247	<0.0100	<0.0100	0.0168	0.012	<0.0100	<0.0100
F-G7wall-6	10/04/02	<0.0100	0.0105	<0.0100	0.0135	0.0952	<0.0100	0.018	0.177	0.0285
F-G-8-8	12/09/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-G-8Wall-8	10/18/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0561	<0.0100	<0.0100
F-H-3-8	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-H-4-14	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-H-5-15	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-H-6-18	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-H-7-10	12/09/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-H-8Wall-7.5	10/18/02	<0.0100	<0.0100	<0.0100	<0.0100	0.0471	<0.0100	<0.0100	0.0524	0.0202

**Table G-26
PAHs in Soil- Area F
UNOCAL Edmonds Terminal**

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
F-I-4-8	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-I-5-12	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-I-5Wall-4	10/18/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-I-6-14	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-I-7-10	12/09/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-I-7Wall-7.5	10/18/02	1.06 D	1.57 D	0.301 D	1.07 D	<0.100	0.747 D	0.18 D	0.532 D	1.98 D
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.										

**Table 5-8
TPH in Soil- Area H
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
H-A-4-6	03/26/03	6	<10.0	<25.0	<5.00
H-A-4WALL-2	03/26/03	2	<10.0	<25.0	<5.00
H-B-4-6	03/26/03	6	<10.0	<25.0	<5.00
H-B-4WALL-2	03/26/03	2	<10.0	<25.0	<5.00
H-B-5-10	03/26/03	10	<10.0	<25.0	<5.00
H-B-6-13	03/27/03	13	15.2	<25.0	<5.00
H-B-6WALL-9	03/27/03	9	<10.0	<25.0	<5.00
H-C-4-4	03/26/03	4	<10.0	<25.0	<5.00
H-C-5-8	03/26/03	8	<10.0	<25.0	<5.00
H-C-6-13	03/27/03	13	<10.0	<25.0	<5.00
H-C-6WALL-9	03/27/03	9	<10.0	<25.0	<5.00
H-C-7-11	03/26/03	11	<10.0	<25.0	<5.00
H-C-8-11	03/26/03	11	<10.0	<25.0	<5.00
H-D-2-2	03/26/03	2	<10.0	<25.0	<5.00
H-D-3-5	03/26/03	5	<10.0	<25.0	<5.00
H-D-3WALL-2	03/26/03	2	<10.0	<25.0	<5.00
H-D-4-6	03/26/03	6	<10.0	<25.0	<5.00
H-D-5-8	03/26/03	8	<10.0	<25.0	<5.00
H-D-6-7	03/26/03	7	<10.0	<25.0	<5.00
H-D-7-8	03/26/03	8	<10.0	<25.0	<5.00
H-D-8-9	03/26/03	9	<10.0	<25.0	<5.00
H-D-9-11	03/26/03	11	<10.0	<25.0	<5.00
H-E-2-3	03/25/03	3	<10.0	<25.0	<5.00
H-E-3-6	03/25/03	6	<10.0	<25.0	<5.00

Table 5-8
TPH in Soil- Area H
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
H-E-4-8	03/25/03	8	<10.0	<25.0	<5.00
H-E-5-8	03/26/03	8	<10.0	<25.0	<5.00
H-E-6-8	03/26/03	8	<10.0	<25.0	<5.00
H-E-7-8	03/26/03	8	<10.0	<25.0	<5.00
H-E-8-6	03/26/03	6	<10.0	<25.0	<5.00
H-F-1-2	03/26/03	2	<10.0	<25.0	<5.00
H-F-2-4	03/25/03	4	<10.0	<25.0	<5.00
H-F-3-6	03/25/03	6	<10.0	<25.0	<5.00
H-F-4-7	03/25/03	7	<10.0	<25.0	<5.00
H-F-5-9	03/26/03	9	<10.0	<25.0	<5.00
H-F-6-9	03/26/03	9	<10.0	<25.0	<5.00
H-F-7-8	03/26/03	8	<10.0	<25.0	<5.00
H-F-8-6	03/26/03	6	40.6	<25.0	<5.00
H-G-1-2	03/26/03	2	<10.0	<25.0	<5.00
H-G-2-3	03/25/03	3	<10.0	<25.0	<5.00
H-G-3-3	03/25/03	3	26.1	<25.0	<5.00
H-G-4-7	03/25/03	7	<10.0	<25.0	<5.00
H-G-5-7	03/26/03	7	<10.0	<25.0	<5.00
H-G-6-8	03/26/03	8	<10.0	<25.0	<5.00
H-G-7-6	03/26/03	6	18.8	<25.0	<5.00
H-G-8-6	03/26/03	6	<10.0	<25.0	<5.00
H-H-2-2	03/26/03	2	<10.0	<25.0	<5.00
H-H-3-6	03/26/03	6	<10.0	<25.0	<5.00
H-H-4-7	03/26/03	7	<10.0	<25.0	<5.00

**Table 5-8
TPH in Soil- Area H
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
H-H-5-8	03/26/03	8	<10.0	<25.0	<5.00
H-H-6-7	03/26/03	7	<10.0	<25.0	<5.00
H-H-7-7	03/26/03	7	15.5	<25.0	<5.00
H-H-8-7	03/26/03	7	<10.0	<25.0	<5.00
H-H-9-13	03/26/03	13	<10.0	<25.0	<5.00
H-H-9WALL-10	03/26/03	10	<10.0	<25.0	<5.00
H-I-10-15	03/27/03	15	<10.0	<25.0	<5.00
H-I-10WALL-10	03/26/03	10	<10.0	<25.0	<5.00
H-I-11-14	03/27/03	14	<10.0	<25.0	<5.00
H-I-3-3	03/26/03	3	<10.0	<25.0	<5.00
H-I-4-8	03/26/03	8	<10.0	<25.0	<5.00
H-I-5-9	03/26/03	9	59.8	<25.0	35.0
H-I-6-6	03/26/03	6	105	<25.0	<5.00
H-I-7-8	03/26/03	8	<10.0	<25.0	<5.00
H-I-8-10	03/26/03	10	11.0	<25.0	<5.00
H-I-9-14	03/26/03	14	<10.0	<25.0	<5.00
H-I-9WALL-10	03/26/03	10	<10.0	<25.0	<5.00
H-I-WALL11-10	03/27/03	10	<10.0	<25.0	<5.00
H-J-10-18	03/27/03	18	<10.0	<25.0	<5.00
H-J-4-6	04/07/03	6	<10.0	<25.0	<5.00
H-J-5-4	03/27/03	4	<10.0	<25.0	<5.00
H-J-6-7	03/27/03	7	<10.0	<25.0	<5.00
H-J-7-9	03/27/03	9	<10.0	<25.0	<5.00
H-J-7WALL-12	03/27/03	12	<10.0	<25.0	<5.00
H-J-8-13	03/27/03	13	<10.0	<25.0	<5.00
H-J-8WALL-16	03/27/03	16	<10.0	<25.0	<5.00

**Table 5-8
TPH in Soil- Area H
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
H-J-9-17	03/27/03	17	<10.0	<25.0	<5.00
H-K-4-5	04/07/03	5	<10.0	<25.0	<5.00
H-K-5-4	03/27/03	4	<10.0	<25.0	<5.00
H-K-6-7	03/27/03	7	<10.0	<25.0	<5.00
H-K-7-10	03/27/03	10	<10.0	<25.0	<5.00
H-K-8-14	03/27/03	14	<10.0	<25.0	<5.00
H-K-9-17	03/27/03	17	<10.0	<25.0	<5.00
H-L-4-4	04/07/03	4	33.1	<25.0	<5.00
H-L-5-4	03/27/03	4	<10.0	<25.0	<5.00
H-L-6-9	03/27/03	9	<10.0	<25.0	<5.00
H-L-7-9	03/27/03	9	<10.0	<25.0	<5.00
H-L-8-14	03/27/03	14	<10.0	<25.0	<5.00
H-M-5-5	03/27/03	5	<10.0	<25.0	<5.00
H-M-6-5	03/27/03	5	18.8	<25.0	<5.00
H-M-7-5	03/27/03	5	<10.0	<25.0	<5.00
H-M-7WALL-8	03/27/03	8	<10.0	<25.0	<5.00
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.					

Table G-29
BTEX in Soil- Area H
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
H-A-4-6	03/26/03	6	0.00587 J	<0.00900	0.021 J	0.0304 J
H-A-4WALL-2	03/26/03	2	0.00512 J	<0.00900	0.00957 J	<0.0250
H-B-4-6	03/26/03	6	0.00496 J	<0.00900	0.00927 J	<0.0250
H-B-4WALL-2	03/26/03	2	0.00566 J	<0.00900	0.0115 J	<0.0250
H-B-5-10	03/26/03	10	0.00582 J	<0.00900	0.00928 J	<0.0250
H-B-6-13	03/27/03	13	0.00506 J	<0.00900	0.00867 J	<0.0250
H-B-6WALL-9	03/27/03	9	0.00609 J	<0.00900	0.00936 J	<0.0250
H-C-4-4	03/26/03	4	0.00549 J	<0.00900	0.0119 J	<0.0250
H-C-5-8	03/26/03	8	0.00434 J	<0.00900	0.00914 J	<0.0250
H-C-6-13	03/27/03	13	<0.00400	<0.00900	0.00864 J	<0.0250
H-C-6WALL-9	03/27/03	9	0.0059 J	<0.00900	0.0188 J	0.0288 J
H-C-7-11	03/26/03	11	0.0049 J	<0.00900	0.012 J	<0.0250
H-C-8-11	03/26/03	11	0.00494 J	<0.00900	0.0124 J	<0.0250
H-D-2-2	03/26/03	2	<0.00400	<0.00900	0.00842 J	<0.0250
H-D-3-5	03/26/03	5	<0.00400	<0.00900	0.00708 J	<0.0250
H-D-3WALL-2	03/26/03	2	<0.00400	<0.00900	0.00777 J	<0.0250
H-D-4-6	03/26/03	6	<0.00400	<0.00900	0.00894 J	<0.0250
H-D-5-8	03/26/03	8	0.00436 J	<0.00900	0.00927 J	<0.0250
H-D-6-7	03/26/03	7	<0.00400	<0.00900	0.00676 J	<0.0250
H-D-7-8	03/26/03	8	0.00739 J	<0.00900	0.0126 J	0.0261 J
H-D-8-9	03/26/03	9	0.00469 J	<0.00900	0.0104 J	<0.0250
H-D-9-11	03/26/03	11	0.00611 J	<0.00900	0.0099 J	<0.0250
H-E-2-3	03/25/03	3	<0.00400	<0.00900	0.0115 J	<0.0250
H-E-3-6	03/25/03	6	<0.00400	<0.00900	0.00462 J	<0.0250

Table G-29
BTEX in Soil- Area H
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
H-E-4-8	03/25/03	8	<0.00400	<0.00900	0.00509 J	<0.0250
H-E-5-8	03/26/03	8	<0.00400	<0.00900	0.00811 J	<0.0250
H-E-6-8	03/26/03	8	<0.00400	<0.00900	0.00718 J	<0.0250
H-E-7-8	03/26/03	8	<0.00400	<0.00900	0.00707 J	<0.0250
H-E-8-6	03/26/03	6	<0.00400	<0.00900	0.0111 J	<0.0250
H-F-1-2	03/26/03	2	<0.00400	<0.00900	0.00855 J	<0.0250
H-F-2-4	03/25/03	4	<0.00400	<0.00900	0.00939 J	<0.0250
H-F-3-6	03/25/03	6	0.00453 J	<0.00900	0.01 J	<0.0250
H-F-4-7	03/25/03	7	<0.00400	<0.00900	0.0102 J	<0.0250
H-F-5-9	03/26/03	9	<0.00400	<0.00900	0.01 J	<0.0250
H-F-6-9	03/26/03	9	<0.00400	<0.00900	0.00718 J	<0.0250
H-F-7-8	03/26/03	8	<0.00400	<0.00900	0.00667 J	<0.0250
H-F-8-6	03/26/03	6	<0.00400	<0.00900	0.0112 J	<0.0250
H-G-1-2	03/26/03	2	<0.00400	<0.00900	0.0111 J	<0.0250
H-G-2-3	03/25/03	3	0.00425 J	<0.00900	0.00637 J	<0.0250
H-G-3-3	03/25/03	3	<0.00400	<0.00900	0.00872 J	<0.0250
H-G-4-7	03/25/03	7	0.00429 J	<0.00900	0.00624 J	<0.0250
H-G-5-7	03/26/03	7	<0.00400	<0.00900	0.0068 J	<0.0250
H-G-6-8	03/26/03	8	<0.00400	<0.00900	0.0056 J	<0.0250
H-G-7-6	03/26/03	6	<0.00400	<0.00900	0.00646 J	<0.0250
H-G-8-6	03/26/03	6	<0.00400	<0.00900	0.00707 J	<0.0250
H-H-2-2	03/26/03	2	<0.00400	<0.00900	0.0111 J	<0.0250
H-H-3-6	03/26/03	6	<0.00400	<0.00900	0.00826 J	<0.0250
H-H-4-7	03/26/03	7	<0.00400	<0.00900	0.00898 J	<0.0250

Table G-29
BTEX in Soil- Area H
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
H-H-5-8	03/26/03	8	0.00665 J	0.011 J	0.034 J	0.0535 J
H-H-6-7	03/26/03	7	0.0085 J	0.0191 J	0.0175 J	0.0613 J
H-H-7-7	03/26/03	7	<0.00400	<0.00900	0.00576 J	<0.0250
H-H-8-7	03/26/03	7	0.00455 J	<0.00900	0.00873 J	<0.0250
H-H-9-13	03/26/03	13	0.00437 J	<0.00900	0.00665 J	<0.0250
H-H-9WALL-10	03/26/03	10	<0.00400	<0.00900	0.00702 J	<0.0250
H-I-10-15	03/27/03	15	<0.00400	<0.00900	0.00916 J	<0.0250
H-I-10WALL-10	03/26/03	10	<0.00400	<0.00900	0.00759 J	<0.0250
H-I-11-14	03/27/03	14	<0.00400	<0.00900	0.00511 J	<0.0250
H-I-3-3	03/26/03	3	0.00617 J	0.0136 J	0.0133 J	0.045 J
H-I-4-8	03/26/03	8	<0.00400	<0.00900	0.00716 J	<0.0250
H-I-5-9	03/26/03	9	<0.00800	<0.0180	0.0237 J	<0.0500
H-I-6-6	03/26/03	6	<0.00400	<0.00900	0.00723 J	<0.0250
H-I-7-8	03/26/03	8	<0.00400	<0.00900	0.00655 J	<0.0250
H-I-8-10	03/26/03	10	0.00543 J	0.0145 J	0.0119 J	0.0255 J
H-I-9-14	03/26/03	14	<0.00400	<0.00900	0.00952 J	<0.0250
H-I-9WALL-10	03/26/03	10	<0.00400	<0.00900	0.00895 J	<0.0250
H-I-WALL11-10	03/27/03	10	<0.00400	<0.00900	0.00604 J	<0.0250
H-J-10-18	03/27/03	18	<0.00400	<0.00900	0.0061 J	<0.0250
H-J-4-6	04/07/03	6	<0.00400	<0.00900	0.00663 J	<0.0250
H-J-5-4	03/27/03	4	0.00803 J	<0.00900	0.0144 J	0.0279 J
H-J-6-7	03/27/03	7	0.00713 J	0.0121 J	0.014 J	0.0389 J
H-J-7-9	03/27/03	9	0.00563 J	<0.00900	0.0143 J	<0.0250
H-J-7WALL-12	03/27/03	12	0.00863 J	<0.00900	0.0118 J	<0.0250
H-J-8-13	03/27/03	13	<0.00400	<0.00900	0.0076 J	<0.0250
H-J-8WALL-16	03/27/03	16	<0.00400	<0.00900	0.00569 J	<0.0250

Table G-29
BTEX in Soil- Area H
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
H-J-9-17	03/27/03	17	<0.00400	<0.00900	0.00537 J	<0.0250
H-K-4-5	04/07/03	5	<0.00400	<0.00900	0.00637 J	<0.0250
H-K-5-4	03/27/03	4	0.00579 J	<0.00900	0.0124 J	<0.0250
H-K-6-7	03/27/03	7	0.00608 J	0.0116 J	0.0165 J	0.0403 J
H-K-7-10	03/27/03	10	<0.00400	<0.00900	0.00533 J	<0.0250
H-K-8-14	03/27/03	14	<0.00400	<0.00900	0.00834 J	<0.0250
H-K-9-17	03/27/03	17	0.00529 J	<0.00900	0.0218 J	0.0324 J
H-L-4-4	04/07/03	4	0.00477 J	0.0104 J	0.00852 J	<0.0250
H-L-5-4	03/27/03	4	0.00767 J	<0.00900	0.0117 J	<0.0250
H-L-6-9	03/27/03	9	0.00427 J	<0.00900	0.00957 J	<0.0250
H-L-7-9	03/27/03	9	0.00446 J	<0.00900	0.00911 J	<0.0250
H-L-8-14	03/27/03	14	0.00402 J	<0.00900	0.00847 J	<0.0250
H-M-5-5	03/27/03	5	<0.00400	<0.00900	0.00854 J	<0.0250
H-M-6-5	03/27/03	5	0.0045 J	<0.00900	0.00964 J	<0.0250
H-M-7-5	03/27/03	5	0.00584 J	<0.00900	0.0117 J	0.0277 J
H-M-7WALL-8	03/27/03	8	0.00598 J	<0.00900	0.0188 J	0.0316 J

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-30
PAHs in Soil- Area H
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
H-A-4-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-A-4WALL-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-B-4-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-B-4WALL-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-B-5-10	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-B-6-13	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-B-6WALL-9	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-C-4-4	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-C-5-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-C-6-13	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-C-6WALL-9	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-C-7-11	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-C-8-11	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-2-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-3-5	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-3WALL-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-4-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-5-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-6-7	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-7-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-8-9	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-9-11	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-E-2-3	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-E-3-6	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-E-4-8	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-E-5-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-E-6-8	03/26/03	0.0134	0.016	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-30
PAHs in Soil- Area H
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
H-E-7-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-E-8-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-1-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-2-4	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-3-6	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-4-7	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-5-9	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-6-9	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-7-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-8-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-1-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-2-3	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-3-3	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-4-7	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-5-7	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-6-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-7-6	03/26/03	0.0146	0.0112	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-8-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-2-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-3-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-4-7	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-5-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-6-7	03/26/03	<0.0100	0.0117	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-7-7	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-8-7	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-9-13	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-9WALL-10	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-30
PAHs in Soil- Area H
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
H-I-10-15	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-10WALL-10	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-11-14	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-3-3	03/26/03	0.09	0.0553	0.0173	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-4-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-5-9	03/26/03	<0.0100	0.0376	<0.0100	<0.0100	<0.0100	0.011	<0.0100	<0.0100	<0.0100
H-I-6-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-7-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-8-10	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-9-14	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-9WALL-10	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-WALL11-10	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-10-18	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-4-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-5-4	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-6-7	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-7-9	03/27/03	0.0122	0.0191	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-7WALL-12	03/27/03	<0.0100	0.0123	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-8-13	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-8WALL-16	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-9-17	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-K-4-5	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-K-5-4	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-K-6-7	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-K-7-10	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-K-8-14	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-K-9-17	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-30
PAHs in Soil- Area H
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
H-L-4-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-L-5-4	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-L-6-9	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-L-7-9	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-L-8-14	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-M-5-5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-M-6-5	03/27/03	0.0841	0.146	<0.0100	<0.0100	0.013	<0.0100	<0.0100	<0.0100	<0.0100
H-M-7-5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-M-7WALL-8	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-30
PAHs in Soil- Area H
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
H-A-4-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-A-4WALL-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-B-4-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-B-4WALL-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-B-5-10	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-B-6-13	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-B-6WALL-9	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-C-4-4	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-C-5-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-C-6-13	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-C-6WALL-9	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-C-7-11	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-C-8-11	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-2-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-3-5	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-3WALL-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-4-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-5-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-6-7	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-7-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-8-9	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-9-11	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-E-2-3	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-E-3-6	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-E-4-8	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-E-5-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-E-6-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-30
PAHs in Soil- Area H
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
H-E-7-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-E-8-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-1-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-2-4	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-3-6	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-4-7	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-5-9	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-6-9	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-7-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-8-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-1-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-2-3	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-3-3	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-4-7	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-5-7	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-6-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-7-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0327	<0.0100
H-G-8-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-2-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-3-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-4-7	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-5-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-6-7	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0108	<0.0100
H-H-7-7	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-8-7	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-9-13	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-9WALL-10	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-30
PAHs in Soil- Area H
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
H-I-10-15	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-10WALL-10	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-11-14	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-3-3	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	0.0322	<0.0100	0.0537	<0.0100	<0.0100
H-I-4-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-5-9	03/26/03	<0.0100	0.0431	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-6-6	03/26/03	<0.0100	0.0107	<0.0100	<0.0100	0.0598	<0.0100	<0.0100	0.0223	<0.0100
H-I-7-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-8-10	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-9-14	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-9WALL-10	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.1	<0.0100	<0.0100
H-I-WALL11-10	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-10-18	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-4-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-5-4	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-6-7	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-7-9	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0165	<0.0100
H-J-7WALL-12	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-8-13	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-8WALL-16	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-9-17	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-K-4-5	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-K-5-4	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-K-6-7	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-K-7-10	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-K-8-14	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-K-9-17	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-30
PAHs in Soil- Area H
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
H-L-4-4	04/07/03	<0.0100	<0.0100	0.0113	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-L-5-4	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-L-6-9	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-L-7-9	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-L-8-14	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-M-5-5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-M-6-5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	0.0338	<0.0100	0.0451	0.0659	<0.0100
H-M-7-5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-M-7WALL-8	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table 5-9
TPH in Soil- Area I
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
I-B-2-0	10/31/02	0	137	140	<5.00
I-B2Wall-3	10/31/02	3	<10.0	<25.0	<5.00
I-B-3-5	10/31/02	5	45.4	27.5	11.5
I-B-4-3	10/31/02	3	26.0	53.4	<5.00
I-C-2-2	10/31/02	2	<10.0	<25.0	<5.00
I-C-3-4	10/31/02	4	119	<25.0	5.48
I-C-4-8	10/31/02	8	<10.0	<25.0	<5.00
I-C4Wall-4	10/31/02	4	51.7	36.6	<5.00
I-D-1-1	10/31/02	1	18.6	<25.0	<5.00
I-D-2-2	10/31/02	2	110	<25.0	14.2
I-D-3-4	10/31/02	4	<10.0	<25.0	<5.00
I-D-4-9	11/08/02	9	<10.0	<25.0	<5.00
I-D-4A-9	11/08/02	9	<10.0	<25.0	<5.00
I-D-4B-8.5	11/08/02	8.5	<10.0	<25.0	<5.00
I-D-4C-9	11/08/02	9	<10.0	<25.0	<5.00
I-D-4D-8.5	11/08/02	8.5	21.2	<25.0	<5.00
I-D4WALL-5	11/08/02	5	26.9	30.7	<5.00
I-E-3-1	10/31/02	1	<10.0	<25.0	14.8
I-E-4-2	10/31/02	2	73.6	137	<5.00
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.					

Table G-33
BTEX in Soil- Area I
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
I-B-2-0	10/31/02	0	<0.0300	<0.0500	<0.0500	<0.100
I-B2Wall-3	10/31/02	3	<0.0300	<0.0500	<0.0500	<0.100
I-B-3-5	10/31/02	5	<0.0300	<0.0500	<0.0500	<0.100
I-B-4-3	10/31/02	3	<0.0300	<0.0500	<0.0500	<0.100
I-C-2-2	10/31/02	2	<0.0300	<0.0500	<0.0500	<0.100
I-C-3-4	10/31/02	4	<0.0300	<0.0500	<0.0500	<0.100
I-C-4-8	10/31/02	8	<0.0300	<0.0500	<0.0500	<0.100
I-C4Wall-4	10/31/02	4	<0.0300	<0.0500	<0.0500	<0.100
I-D-1-1	10/31/02	1	<0.0300	<0.0500	<0.0500	<0.100
I-D-2-2	10/31/02	2	<0.0300	<0.0500	<0.0500	<0.100
I-D-3-4	10/31/02	4	<0.0300	<0.0500	<0.0500	<0.100
I-D-4-9	11/08/02	9	0.00774 J	0.00908 J	0.0134 J	0.0279 J
I-D-4A-9	11/08/02	9	0.00667 J	<0.00900	0.0113 J	<0.0250
I-D-4B-8.5	11/08/02	8.5	0.00457 J	<0.00900	0.0125 J	0.0278 J
I-D-4C-9	11/08/02	9	<0.00400	<0.00900	0.00649 J	<0.0250
I-D-4D-8.5	11/08/02	8.5	<0.00400	<0.00900	0.00678 J	<0.0250
I-D4WALL-5	11/08/02	5	<0.00400	<0.00900	0.00967 J	<0.0250
I-E-3-1	10/31/02	1	<0.0300	<0.0500	<0.0500	<0.100
I-E-4-2	10/31/02	2	<0.0300	<0.0500	<0.0500	<0.100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-34
PAHs in Soil- Area I
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)
I-B-2-0	10/31/02	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	0.0528 D	<0.0500
I-B2Wall-3	10/31/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-B-3-5	10/31/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-B-4-3	10/31/02	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
I-C-2-2	10/31/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-C-3-4	10/31/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0165	<0.0100
I-C-4-8	10/31/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-C4Wall-4	10/31/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D-1-1	10/31/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D-2-2	10/31/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D-3-4	10/31/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.011	<0.0100
I-D-4-9	11/08/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D-4A-9	11/08/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D-4B-8.5	11/08/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D-4C-9	11/08/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D-4D-8.5	11/08/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D4WALL-5	11/08/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-E-3-1	10/31/02	0.101	0.0883	<0.0100	<0.0100	<0.0100	<0.0100	0.0142	<0.0100
I-E-4-2	10/31/02	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

**Table G-34
PAHs in Soil- Area I
UNOCAL Edmonds Terminal**

SITE	DATE	Benzo(g,h,i) perylene (mg/kg)	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)
I-B-2-0	10/31/02	0.081 D	<0.0500	<0.0500	0.081 D	<0.0500	<0.0500	0.081 D	<0.0500	<0.0500
I-B2Wall-3	10/31/02	0.0107	<0.0100	<0.0100	0.0157	<0.0100	<0.0100	0.015	<0.0100	<0.0100
I-B-3-5	10/31/02	0.0132	<0.0100	<0.0100	0.0194	<0.0100	<0.0100	0.0185	<0.0100	<0.0100
I-B-4-3	10/31/02	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
I-C-2-2	10/31/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0116
I-C-3-4	10/31/02	0.011	<0.0100	<0.0100	0.0181	<0.0100	<0.0100	0.0165	<0.0100	<0.0100
I-C-4-8	10/31/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-C4Wall-4	10/31/02	0.0103	<0.0100	<0.0100	0.0162	<0.0100	<0.0100	0.0147	<0.0100	<0.0100
I-D-1-1	10/31/02	0.0107	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D-2-2	10/31/02	<0.0100	<0.0100	0.0101	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D-3-4	10/31/02	0.011	<0.0100	<0.0100	0.018	<0.0100	<0.0100	0.0165	<0.0100	<0.0100
I-D-4-9	11/08/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D-4A-9	11/08/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D-4B-8.5	11/08/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D-4C-9	11/08/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D-4D-8.5	11/08/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D4WALL-5	11/08/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-E-3-1	10/31/02	0.0142	<0.0100	<0.0100	<0.0100	<0.0100	0.0702	<0.0100	0.0104	0.139
I-E-4-2	10/31/02	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
< = Not detected at indicated reporting			< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.							

Table G-34
PAHs in Soil- Area I
UNOCAL Edmonds Terminal

SITE	DATE	Pyrene (mg/kg)
I-B-2-0	10/31/02	<0.0500
I-B2Wall-3	10/31/02	<0.0100
I-B-3-5	10/31/02	<0.0100
I-B-4-3	10/31/02	<0.100
I-C-2-2	10/31/02	<0.0100
I-C-3-4	10/31/02	<0.0100
I-C-4-8	10/31/02	<0.0100
I-C4Wall-4	10/31/02	<0.0100
I-D-1-1	10/31/02	<0.0100
I-D-2-2	10/31/02	<0.0100
I-D-3-4	10/31/02	<0.0100
I-D-4-9	11/08/02	<0.0100
I-D-4A-9	11/08/02	<0.0100
I-D-4B-8.5	11/08/02	<0.0100
I-D-4C-9	11/08/02	<0.0100
I-D-4D-8.5	11/08/02	<0.0100
I-D4WALL-5	11/08/02	<0.0100
I-E-3-1	10/31/02	<0.0100
I-E-4-2	10/31/02	<0.500
< = Not detected at indicated reporting		

Table G-35
Volatile Petroleum Hydrocarbons in Soil- Area I
UNOCAL Edmonds Terminal

SITE	DATE	Aliphatic C5-C6 (mg/kg)	Aliphatic C6-C8 (mg/kg)	Aliphatic C8-C10 (mg/kg)	Aliphatic C10-C12 (mg/kg)	Aromatic C8-C10 (mg/kg)	Aromatic C10-C12 (mg/kg)	Aromatic C12-C13 (mg/kg)	Total Volatile Petroleum Hydrocarbons (mg/kg)
I-B-3-5	10/31/02	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value. D = Sample diluted due to high analyte concentrations. R= Rejected value.									

Table G-36
Extractable Petroleum Hydrocarbons in Soil- Area I
UNOCAL Edmonds Terminal

SITE	DATE	Aliphatic C8-C10 (mg/kg)	Aliphatic C10-C12 (mg/kg)	Aliphatic C12-C16 (mg/kg)	Aliphatic C16-C21 (mg/kg)	Aliphatic C21-C34 (mg/kg)	Aromatic C10-C12 (mg/kg)	Aromatic C12-C16 (mg/kg)	Aromatic C16-C21 (mg/kg)	Aromatic C21-C34 (mg/kg)	Total Extractable Hydrocarbons (mg/kg)
I-B-3-5	10/31/02	<5.00	<5.00	<5.00	13.8	18.2	<5.00	<5.00	<5.00	<5.00	32

< = Not detected at indicated reporting limit. --- = Not analyzed.
 J = Estimated value. D = Sample diluted due to high analyte concentrations. R= Rejected value.

Table 5-10
TPH in Soil- Area K
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
K-A-2-4	02/05/03	4	<10.0	<25.0	<5.00
K-A-3-5	02/05/03	5	<10.0	<25.0	<5.00
K-B-1-3	02/05/03	3	<10.0	<25.0	<5.00
K-B-2-15	02/05/03	15	<10.0	<25.0	<5.00
K-B-3-15	02/05/03	15	<10.0	<25.0	<5.00
K-B-4-15	02/05/03	15	<10.0	<25.0	<5.00
K-C-1-4	02/05/03	4	<10.0	<25.0	<5.00
K-C-2-5	02/05/03	5	<10.0	<25.0	<5.00
K-C-3-6	02/05/03	6	<10.0	<25.0	<5.00
K-C-4-5	02/05/03	5	<10.0	<25.0	<5.00
K-C-5-10	02/05/03	10	<10.0	<25.0	<5.00
K-C-6-15	02/05/03	15	<10.0	<25.0	<5.00
K-D-1-6	02/05/03	6	<10.0	<25.0	<5.00
K-D-2-6	02/05/03	6	<10.0	<25.0	<5.00
K-D-3-8	02/05/03	8	10.2	<25.0	<5.00
K-D-4-6	02/05/03	6	<10.0	<25.0	<5.00
K-D-5-8	02/05/03	8	<10.0	<25.0	<5.00
K-D-6-6	02/05/03	6	<10.0	<25.0	<5.00
K-D-7-6	02/05/03	6	<10.0	<25.0	<5.00
K-D-8-6	02/05/03	6	<10.0	<25.0	<5.00
K-D-9-6	02/05/03	6	<10.0	<25.0	<5.00
K-E-1-0	02/05/03	0	<10.0	<25.0	<5.00
K-E-2-8	02/05/03	8	<10.0	<25.0	<5.00

**Table 5-10
TPH in Soil- Area K
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
K-E-3-0	02/05/03	0	<10.0	<25.0	<5.00
K-E-4-4	02/05/03	4	33.3	<25.0	<5.00
K-E-5-3	02/05/03	3	<10.0	<25.0	<5.00
K-E-6-3	02/05/03	3	17.9	<25.0	<5.00
K-E-7-3	02/05/03	3	<10.0	<25.0	<5.00
K-E-8-4	02/05/03	4	<10.0	<25.0	<5.00
K-E-9-4	02/05/03	4	<10.0	<25.0	<5.00
K-F-4-3	02/05/03	3	<10.0	<25.0	<5.00
K-F-4WALL-6	02/05/03	6	<10.0	<25.0	<5.00
K-F-5-4	02/05/03	4	20.3	<25.0	<5.00
K-F-6-5	02/05/03	5	<10.0	<25.0	<5.00
K-F-7-4	02/05/03	4	<10.0	<25.0	<5.00
K-F-8-3	02/05/03	3	<10.0	<25.0	<5.00
K-G-5-2	02/05/03	2	<10.0	<25.0	<5.00
K-G-6-4	02/05/03	4	155	53.9	<5.00
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.					

Table G-37
BTEX in Soil- Area K
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
K-A-2-4	02/05/03	4	0.00412 J	<0.00900	0.0218 J	0.0336 J
K-A-3-5	02/05/03	5	0.00566 J	0.00907 J	0.0141 J	<0.0250
K-B-1-3	02/05/03	3	<0.00400	<0.00900	0.0106 J	<0.0250
K-B-2-15	02/05/03	15	<0.00400	<0.00900	0.0133 J	<0.0250
K-B-3-15	02/05/03	15	<0.00400	<0.00900	0.00934 J	<0.0250
K-B-4-15	02/05/03	15	<0.00400	<0.00900	0.00787 J	<0.0250
K-C-1-4	02/05/03	4	<0.00400	<0.00900	0.00935 J	<0.0250
K-C-2-5	02/05/03	5	<0.00400	<0.00900	0.00937 J	<0.0250
K-C-3-6	02/05/03	6	<0.00400	<0.00900	0.00952 J	<0.0250
K-C-4-5	02/05/03	5	<0.00400	<0.00900	0.00943 J	<0.0250
K-C-5-10	02/05/03	10	<0.00400	<0.00900	0.0104 J	<0.0250
K-C-6-15	02/05/03	15	<0.00400	<0.00900	0.00975 J	<0.0250
K-D-1-6	02/05/03	6	<0.00400	<0.00900	0.0103 J	<0.0250
K-D-2-6	02/05/03	6	<0.00400	<0.00900	0.0119 J	<0.0250
K-D-3-8	02/05/03	8	<0.00400	<0.00900	0.00978 J	<0.0250
K-D-4-6	02/05/03	6	<0.00400	<0.00900	0.0102 J	<0.0250
K-D-5-8	02/05/03	8	0.00635 J	0.0131 J	0.0287 J	0.0401 J
K-D-6-6	02/05/03	6	0.00514 J	<0.00900	0.0168 J	0.034 J
K-D-7-6	02/05/03	6	0.00467 J	<0.00900	0.0109 J	<0.0250
K-D-8-6	02/05/03	6	0.0081 J	<0.00900	0.014 J	0.0275 J
K-D-9-6	02/05/03	6	0.0156	0.0159	<0.0500	0.0294
K-E-1-0	02/05/03	0	0.00932 J	<0.00900	0.0114 J	<0.0250
K-E-2-8	02/05/03	8	0.0171 J	0.0119 J	0.0318 J	0.0482 J

Table G-37
BTEX in Soil- Area K
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
K-E-3-0	02/05/03	0	0.00645 J	<0.00900	0.0137 J	0.0281 J
K-E-4-4	02/05/03	4	0.00645 J	<0.00900	0.0114 J	<0.0250
K-E-5-3	02/05/03	3	0.00584 J	<0.00900	0.0133 J	<0.0250
K-E-6-3	02/05/03	3	0.00593 J	<0.00900	0.0109 J	<0.0250
K-E-7-3	02/05/03	3	0.00513 J	<0.00900	0.0119 J	<0.0250
K-E-8-4	02/05/03	4	0.00854 J	<0.00900	0.0132 J	<0.0250
K-E-9-4	02/05/03	4	0.00534 J	<0.00900	0.0133 J	<0.0250
K-F-4-3	02/05/03	3	0.00513 J	<0.00900	0.0116 J	<0.0250
K-F-4WALL-6	02/05/03	6	0.00498 J	<0.00900	0.0111 J	<0.0250
K-F-5-4	02/05/03	4	0.00567 J	<0.00900	0.0136 J	<0.0250
K-F-6-5	02/05/03	5	0.00974 J	0.00903 J	0.027 J	0.0312 J
K-F-7-4	02/05/03	4	0.00599 J	<0.00900	0.0146 J	<0.0250
K-F-8-3	02/05/03	3	<0.00400	<0.00900	0.0109 J	<0.0250
K-G-5-2	02/05/03	2	<0.00400	<0.00900	0.00976 J	<0.0250
K-G-6-4	02/05/03	4	0.00438 J	<0.00900	0.0213 J	0.0347 J

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-38
PAHs in Soil- Area K
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
K-A-2-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-A-3-5	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-B-1-3	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-B-2-15	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-B-3-15	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-B-4-15	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-C-1-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-C-2-5	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-C-3-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-C-4-5	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-C-5-10	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-C-6-15	02/05/03	0.0155	0.0155	0.0124	0.0116	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-1-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-2-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-3-8	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.024	<0.0100	<0.0100
K-D-4-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-5-8	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-6-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-7-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-8-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-1-0	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-2-8	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-3-0	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-4-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-5-3	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-6-3	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-7-3	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-8-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-9-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-F-4-3	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-38
PAHs in Soil- Area K
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
K-F-4WALL-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-F-5-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-F-6-5	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-F-7-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-F-8-3	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-G-5.2	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-G-6-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-38
PAHs in Soil- Area K
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
K-A-2-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-A-3-5	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-B-1-3	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	0.0114	<0.0100	<0.0100	<0.0100	<0.0100
K-B-2-15	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-B-3-15	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-B-4-15	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-C-1-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-C-2-5	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-C-3-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-C-4-5	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-C-5-10	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-C-6-15	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0178	<0.0100	<0.0100
K-D-1-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-2-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-3-8	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-4-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-5-8	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-6-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-7-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-8-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-1-0	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-2-8	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-3-0	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-4-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-5-3	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-6-3	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-7-3	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-8-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-9-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-F-4-3	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-38
PAHs in Soil- Area K
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
K-F-4WALL-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-F-5-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-F-6-5	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-F-7-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-F-8-3	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-G-5.2	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-G-6-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. I < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-39
Volatile Petroleum Hydrocarbons in Soil- Area K
UNOCAL Edmonds Terminal

SITE	DATE	Aliphatic C5-C6 (mg/kg)	Aliphatic C6-C8 (mg/kg)	Aliphatic C8-C10 (mg/kg)	Aliphatic C10-C12 (mg/kg)	Aromatic C8-C10 (mg/kg)	Aromatic C10-C12 (mg/kg)	Aromatic C12-C13 (mg/kg)	Total Volatile Petroleum Hydrocarbons (mg/kg)
K-E-4-4	02/05/03	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value. D = Sample diluted due to high analyte concentrations. R= Rejected value.									

Table 5-11
TPH in Soil- Area L
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
L-A-2-4	02/21/03	4	<10.0	<25.0	<5.00
L-A-3-3	02/21/03	3	<10.0	<25.0	<5.00
L-A-4-5	02/21/03	5	<10.0	<25.0	<5.00
L-B-1-4	02/21/03	4	<10.0	<25.0	<5.00
L-B-2-5	02/21/03	5	<10.0	<25.0	<5.00
L-B-3-5	02/21/03	5	<10.0	<25.0	<5.00
L-B-4-5	02/21/03	5	<10.0	<25.0	<5.00
L-C-1-4	02/21/03	4	<10.0	<25.0	<5.00
L-C-2-4	02/21/03	4	<10.0	<25.0	<5.00
L-C-3-3	02/21/03	3	<10.0	<25.0	<5.00
L-C-4-6	02/21/03	6	10.4	<25.0	<5.00
L-D-1-4	02/21/03	4	<10.0	<25.0	<5.00
L-D-2-3	02/21/03	3	<10.0	<25.0	<5.00
L-D-3-4	02/21/03	4	<10.0	<25.0	<5.00
L-D-4-6	02/21/03	6	<10.0	<25.0	<5.00
L-E-1-4	02/21/03	4	<10.0	<25.0	<5.00
L-E-2-5	02/21/03	5	<10.0	<25.0	<5.00
L-E-3-4	02/21/03	4	<10.0	<25.0	<5.00
L-E-4-4	02/21/03	4	<10.0	<25.0	<5.00

**Table 5-11
TPH in Soil- Area L
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
L-F-1-4	02/21/03	4	<10.0	<25.0	<5.00
L-F-2-2.5	02/21/03	2.5	<10.0	<25.0	<5.00
L-F-3-2.5	02/21/03	2.5	<10.0	<25.0	<5.00
L-F-4-4	02/21/03	4	<10.0	<25.0	<5.00
L-G-1-4	02/21/03	4	<10.0	<25.0	<5.00
L-G-2-4	02/21/03	4	<10.0	<25.0	<5.00
L-G-3-3	02/21/03	3	<10.0	<25.0	<5.00
L-G-4-3	02/21/03	3	<10.0	<25.0	<5.00
L-H-1-4	02/21/03	4	<10.0	<25.0	<5.00
L-H-2-2	02/21/03	2	<10.0	<25.0	<5.00
L-H-3-5	02/21/03	5	<10.0	<25.0	<5.00
L-H-4-4	02/21/03	4	<10.0	<25.0	146
L-I-2-4	02/21/03	4	<10.0	<25.0	<5.00
L-I-3-0	02/21/03	0	<10.0	<25.0	<5.00
L-I-3WALL-3	02/21/03	3	<10.0	<25.0	<5.00
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.					

Table G-41
BTEX in Soil- Area L
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
L-A-2-4	02/21/03	4	0.00746 J	0.00921 J	0.0321 J	0.0359 J
L-A-3-3	02/21/03	3	0.00547 J	<0.00900	0.0131 J	<0.0250
L-A-4-5	02/21/03	5	0.00648 J	<0.00900	0.0158 J	<0.0250
L-B-1-4	02/21/03	4	0.00625 J	<0.00900	0.0151 J	0.026 J
L-B-2-5	02/21/03	5	0.0057 J	<0.00900	0.016 J	0.026 J
L-B-3-5	02/21/03	5	0.00624 J	<0.00900	0.0101 J	<0.0250
L-B-4-5	02/21/03	5	0.00765 J	0.0094 J	0.0139 J	0.0331 J
L-C-1-4	02/21/03	4	0.00594 J	<0.00900	0.0115 J	<0.0250
L-C-2-4	02/21/03	4	0.00541 J	<0.00900	0.00984 J	<0.0250
L-C-3-3	02/21/03	3	0.00561 J	<0.00900	0.00986 J	<0.0250
L-C-4-6	02/21/03	6	0.0077 J	<0.00900	0.00981 J	<0.0250
L-D-1-4	02/21/03	4	0.0518	0.0171 J	0.0141 J	0.0496 J
L-D-2-3	02/21/03	3	<0.00400	<0.00900	0.0123 J	<0.0250
L-D-3-4	02/21/03	4	0.00808 J	<0.00900	0.012 J	<0.0250
L-D-4-6	02/21/03	6	0.00679 J	<0.00900	0.0137 J	<0.0250
L-E-1-4	02/21/03	4	<0.00400	<0.00900	0.00928 J	<0.0250
L-E-2-5	02/21/03	5	<0.00400	<0.00900	0.0125 J	<0.0250
L-E-3-4	02/21/03	4	0.00507 J	<0.00900	0.012 J	<0.0250
L-E-4-4	02/21/03	4	<0.00400	<0.00900	0.00728 J	<0.0250

**Table G-41
BTEX in Soil- Area L
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
L-F-1-4	02/21/03	4	<0.00400	<0.00900	0.0111 J	<0.0250
L-F-2-2.5	02/21/03	2.5	0.0172 J	<0.00900	0.0117 J	<0.0250
L-F-3-2.5	02/21/03	2.5	<0.00400	<0.00900	0.0082 J	<0.0250
L-F-4-4	02/21/03	4	0.0069 J	0.00944 J	0.0203 J	0.0422 J
L-G-1-4	02/21/03	4	0.00603 J	<0.00900	0.012 J	<0.0250
L-G-2-4	02/21/03	4	0.00671 J	<0.00900	0.0125 J	<0.0250
L-G-3-3	02/21/03	3	<0.00400	<0.00900	0.0109 J	<0.0250
L-G-4-3	02/21/03	3	0.00631 J	<0.00900	0.0113 J	<0.0250
L-H-1-4	02/21/03	4	<0.00400	<0.00900	0.0101 J	<0.0250
L-H-2-2	02/21/03	2	<0.00400	<0.00900	0.00941 J	<0.0250
L-H-3-5	02/21/03	5	<0.00400	<0.00900	0.00696 J	<0.0250
L-H-4-4	02/21/03	4	<0.00400	0.05	0.0102 J	0.473
L-I-2-4	02/21/03	4	<0.00400	<0.00900	0.00931 J	<0.0250
L-I-3-0	02/21/03	0	<0.00400	<0.00900	0.00789 J	<0.0250
L-I-3WALL-3	02/21/03	3	<0.00400	<0.00900	0.0102 J	<0.0250

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-42
PAHs in Soil- Area L
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
L-A-2-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-A-3-3	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-A-4-5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-B-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0126	<0.0100	<0.0100	<0.0100
L-B-2-5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-B-3-5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-B-4-5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-C-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-C-2-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-C-3-3	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-C-4-6	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-D-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0708	<0.0100	<0.0100
L-D-2-3	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-D-3-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-D-4-6	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-E-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-E-2-5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-E-3-4	02/21/03	<0.0100	0.0103	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-E-4-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-F-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-F-2-2.5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-F-3-2.5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-F-4-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-G-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-G-2-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-G-3-3	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-G-4-3	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-42
PAHs in Soil- Area L
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
L-H-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-H-2-2	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-H-3-5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-H-4-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-I-2-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-I-3-0	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-I-3WALL-3	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-42
PAHs in Soil- Area L
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
L-A-2-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-A-3-3	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-A-4-5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-B-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0109	<0.0100
L-B-2-5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-B-3-5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-B-4-5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-C-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0101	<0.0100
L-C-2-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-C-3-3	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-C-4-6	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-D-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.011	<0.0100
L-D-2-3	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-D-3-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-D-4-6	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-E-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-E-2-5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-E-3-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-E-4-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	0.0209	<0.0100	<0.0100	<0.0100	<0.0100
L-F-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-F-2-2.5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-F-3-2.5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-F-4-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-G-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-G-2-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-G-3-3	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-G-4-3	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-42
PAHs in Soil- Area L
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
L-H-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0104	<0.0100
L-H-2-2	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-H-3-5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-H-4-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-I-2-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0113	<0.0100
L-I-3-0	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-I-3WALL-3	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-44
Extractable Petroleum Hydrocarbons in Soil- Area L
UNOCAL Edmonds Terminal

SITE	DATE	Aliphatic C8-C10 (mg/kg)	Aliphatic C10-C12 (mg/kg)	Aliphatic C12-C16 (mg/kg)	Aliphatic C16-C21 (mg/kg)	Aliphatic C21-C34 (mg/kg)	Aromatic C10-C12 (mg/kg)	Aromatic C12-C16 (mg/kg)	Aromatic C16-C21 (mg/kg)	Aromatic C21-C34 (mg/kg)	Total Extractable Hydrocarbons (mg/kg)
L-C-4-6	02/21/03	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00

< = Not detected at indicated reporting limit. --- = Not analyzed.
 J = Estimated value. D = Sample diluted due to high analyte concentrations. R= Rejected value.

Table 5-12
TPH in Soil- Area M
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
M-A-4-1	02/12/03	1	<10.0	<25.0	<5.00
M-A-5-2	02/12/03	2	<10.0	<25.0	<5.00
M-A-6-4	02/12/03	4	<10.0	<25.0	<5.00
M-A-7-6	02/12/03	6	<10.0	<25.0	<5.00
M-B-3-1	02/12/03	1	<10.0	<25.0	<5.00
M-B-3wall-6	02/13/03	0	<10.0	<25.0	<5.00
M-B-4-1	02/12/03	1	<10.0	<25.0	<5.00
M-B-5-2	02/12/03	2	<10.0	<25.0	<5.00
M-B-6-4	02/12/03	4	<10.0	<25.0	<5.00
M-B-7-5	02/12/03	5	<10.0	<25.0	<5.00
M-B-7wall-6	02/13/03	0	41.7	<25.0	<5.00
M-C-3-3	02/12/03	3	<10.0	<25.0	<5.00
M-C-3wall-6	02/13/03	0	<10.0	<25.0	<5.00
M-C-4-1	02/12/03	1	<10.0	<25.0	<5.00
M-C-5-2	02/12/03	2	<10.0	<25.0	<5.00
M-C-6-6	02/12/03	6	<10.0	<25.0	<5.00
M-C-7-1	02/12/03	1	39.5	<25.0	7.70
M-C-7wall-6	02/13/03	0	<10.0	<25.0	<5.00
M-D-3-2	02/12/03	2	<10.0	<25.0	<5.00
M-D-4-1	02/12/03	1	<10.0	<25.0	<5.00
M-D-5-1	02/12/03	1	<10.0	<25.0	<5.00
M-D-6-12	02/13/03	0	<10.0	<25.0	<5.00
M-D-7-12	02/13/03	0	<10.0	<25.0	<5.00

Table 5-12
TPH in Soil- Area M
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
M-D-7wall-6	02/13/03	0	<10.0	<25.0	<5.00
M-E-3-2	02/12/03	2	<10.0	<25.0	<5.00
M-E-4-0	02/12/03	0	<10.0	<25.0	<5.00
M-E-5-4	02/12/03	4	<10.0	<25.0	<5.00
M-E-6-2	02/12/03	2	<10.0	<25.0	<5.00
M-E-7-12	02/13/03	0	<10.0	<25.0	<5.00
M-F-6-2	02/19/03	0	<10.0	<25.0	<5.00
M-F-6A-5	02/19/03	0	<10.0	<25.0	<5.00
M-F-6B-0	02/20/03	0	<10.0	<25.0	<5.00
M-F-6C-5	02/19/03	5	<10.0	<25.0	<5.00
M-F-6D-6	02/19/03	6	<10.0	<25.0	<5.00
M-F-7-4	02/12/03	0	<10.0	<25.0	<5.00
M-G-8toe-12	02/13/03	0	<10.0	<25.0	<5.00
M-G-8wall-6	02/13/03	0	<10.0	<25.0	<5.00
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.					

Table G-45
BTEX in Soil- Area M
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
M-A-4-1	02/12/03	1	0.00455 J	<0.00900	0.0201 J	0.0294 J
M-A-5-2	02/12/03	2	<0.00400	<0.00900	0.0123 J	<0.0250
M-A-6-4	02/12/03	4	<0.00400	<0.00900	0.0118 J	<0.0250
M-A-7-6	02/12/03	6	<0.00400	<0.00900	0.0148 J	<0.0250
M-B-3-1	02/12/03	1	0.00405 J	<0.00900	0.0178 J	0.0263 J
M-B-3wall-6	02/13/03	0	0.0049 J	<0.00900	0.0115 J	<0.0250
M-B-4-1	02/12/03	1	<0.00400	<0.00900	0.016 J	<0.0250
M-B-5-2	02/12/03	2	<0.00400	<0.00900	0.0126 J	<0.0250
M-B-6-4	02/12/03	4	<0.00400	<0.00900	0.012 J	<0.0250
M-B-7-5	02/12/03	5	<0.00400	<0.00900	0.0139 J	<0.0250
M-B-7wall-6	02/13/03	0	0.00541 J	<0.00900	0.0125 J	<0.0250
M-C-3-3	02/12/03	3	<0.00400	<0.00900	0.0138 J	<0.0250
M-C-3wall-6	02/13/03	0	<0.00400	<0.00900	0.0102 J	<0.0250
M-C-4-1	02/12/03	1	<0.00400	<0.00900	0.0103 J	<0.0250
M-C-5-2	02/12/03	2	<0.00400	<0.00900	0.00991 J	<0.0250
M-C-6-6	02/12/03	6	<0.00400	<0.00900	0.0113 J	<0.0250
M-C-7-1	02/12/03	1	<0.00400	<0.00900	0.01 J	<0.0250
M-C-7wall-6	02/13/03	0	0.00755 J	<0.00900	0.0119 J	<0.0250
M-D-3-2	02/12/03	2	<0.00400	<0.00900	0.00962 J	<0.0250
M-D-4-1	02/12/03	1	0.0213 J	<0.00900	0.0298 J	<0.0250
M-D-5-1	02/12/03	1	<0.00400	<0.00900	0.011 J	<0.0250
M-D-6-12	02/13/03	0	0.00534 J	<0.00900	0.016 J	0.028 J
M-D-7-12	02/13/03	0	0.00859 J	0.0125 J	0.0181 J	0.04 J

Table G-45
BTEX in Soil- Area M
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
M-D-7wall-6	02/13/03	0	0.00549 J	<0.00900	0.0117 J	<0.0250
M-E-3-2	02/12/03	2	0.00416 J	<0.00900	0.0125 J	<0.0250
M-E-4-0	02/12/03	0	<0.00400	<0.00900	0.00874 J	<0.0250
M-E-5-4	02/12/03	4	0.0046 J	<0.00900	0.0101 J	<0.0250
M-E-6-2	02/12/03	2	0.00487 J	<0.00900	0.0115 J	<0.0250
M-E-7-12	02/13/03	0	0.0049 J	<0.00900	0.0279 J	0.0363 J
M-F-6-2	02/19/03	0	<0.00400	<0.00900	0.00684 J	<0.0250
M-F-6A-5	02/19/03	0	<0.00400	<0.00900	0.00806 J	<0.0250
M-F-6B-0	02/20/03	0	0.00557 J	<0.00900	0.0109 J	<0.0250
M-F-6C-5	02/19/03	5	<0.00400	0.0175 J	0.00849 J	0.0286 J
M-F-6D-6	02/19/03	6	<0.00400	<0.00900	0.0116 J	<0.0250
M-F-7-4	02/12/03	0	0.00406 J	<0.00900	0.0109 J	<0.0250
M-G-8toe-12	02/13/03	0	0.00436 J	<0.00900	0.014 J	<0.0250
M-G-8wall-6	02/13/03	0	0.0043 J	<0.00900	0.0137 J	0.0257 J
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.						

Table G-46
PAHs in Soil- Area M
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
M-A-4-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-A-5-2	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-A-6-4	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-A-7-6	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-3-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-3wall-6	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-4-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-5-2	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-6-4	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-7-5	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-7wall-6	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-C-3-3	02/12/03	<0.0100	0.0124	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-C-3wall-6	02/13/03	<0.0100	0.0107	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-C-4-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-C-5-2	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-C-6-6	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-C-7-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-C-7wall-6	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-D-3-2	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-D-4-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-D-5-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-D-6-12	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-D-7-12	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	0.0348	<0.0100	<0.0100	<0.0100	<0.0100
M-D-7wall-6	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-E-3-2	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-E-4-0	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-E-5-4	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-E-6-2	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-E-7-12	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-46
PAHs in Soil- Area M
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
M-F-6-2	02/19/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-F-6A-5	02/19/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-F-6B-0	02/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-F-6C-5	02/19/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-F-6D-6	02/19/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-F-7-4	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-G-8toe-12	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-G-8wall-6	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-46
PAHs in Soil- Area M
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
M-A-4-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-A-5-2	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-A-6-4	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-A-7-6	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-3-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-3wall-6	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-4-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-5-2	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-6-4	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-7-5	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-7wall-6	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-C-3-3	02/12/03	<0.0100	<0.0100	<0.0100	0.0168	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-C-3wall-6	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-C-4-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0106	<0.0100
M-C-5-2	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-C-6-6	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-C-7-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-C-7wall-6	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-D-3-2	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-D-4-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-D-5-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-D-6-12	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-D-7-12	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-D-7wall-6	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-E-3-2	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-E-4-0	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-E-5-4	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-E-6-2	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-E-7-12	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-46
PAHs in Soil- Area M
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
M-F-6-2	02/19/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-F-6A-5	02/19/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-F-6B-0	02/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-F-6C-5	02/19/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-F-6D-6	02/19/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-F-7-4	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-G-8toe-12	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-G-8wall-6	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table 5-13
TPH in Soil- Area N
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
N-A4WALL-2	01/24/03	2	11.3	<25.0	5.68
N-A5WALL-5	01/24/03	5	<10.0	<25.0	<5.00
N-A6WALL-3	01/24/03	3	<10.0	<25.0	<5.00
N-B-3-3	01/24/03	3	<10.0	<25.0	<5.00
N-B-4-7	01/24/03	7	<10.0	<25.0	<5.00
N-B-5-10	01/24/03	10	<10.0	<25.0	<5.00
N-B-6-9	01/24/03	9	<10.0	<25.0	<5.00
N-B7WALL-4	01/24/03	4	17.2	<25.0	48.2
N-C-2-3	01/24/03	3	<10.0	<25.0	<5.00
N-C-3-3	01/24/03	3	<10.0	<25.0	<5.00
N-C-4-11	01/24/03	11	<10.0	<25.0	<5.00
N-C-5-12	01/24/03	12	<10.0	<25.0	<5.00
N-C-6-10	01/24/03	10	<10.0	<25.0	<5.00
N-C-7-8	01/24/03	8	<10.0	<25.0	<5.00
N-D-1-3	01/24/03	3	<10.0	<25.0	<5.00
N-D-2-3	01/24/03	3	<10.0	<25.0	<5.00
N-D-3-11	01/24/03	11	<10.0	<25.0	<5.00
N-D-4-12	01/24/03	12	<10.0	<25.0	<5.00
N-D-5-13	01/24/03	13	<10.0	<25.0	<5.00
N-D-6-7	01/24/03	7	<10.0	<25.0	<5.00
N-D6WALL-3	01/24/03	3	20.0	<25.0	<5.00

Table 5-13
TPH in Soil- Area N
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
N-E-2-6	01/24/03	6	<10.0	<25.0	<5.00
N-E-3-8	01/24/03	8	<10.0	<25.0	<5.00
N-E-4-5	01/24/03	5	<10.0	<25.0	<5.00
N-E-5-8	01/24/03	8	<10.0	<25.0	<5.00
N-E-6-2	01/24/03	2	13.6	<25.0	<5.00
N-F-2-0	01/24/03	0	<10.0	<25.0	<5.00
N-F-3-6	01/24/03	6	<10.0	<25.0	<5.00
N-F-4-8	01/24/03	8	<10.0	<25.0	<5.00
N-F-5-5	01/24/03	5	<10.0	<25.0	<5.00
N-G-4-5	01/24/03	5	<10.0	<25.0	<5.00
N-G4WALL-3	01/24/03	3	<10.0	<25.0	<5.00
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.					

Table G-49
BTEX in Soil- Area N
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
N-A4WALL-2	01/24/03	2	0.00561 J	<0.00900	0.0144 J	<0.0250
N-A5WALL-5	01/24/03	5	0.00613 J	<0.00900	0.018 J	0.0257 J
N-A6WALL-3	01/24/03	3	0.00569 J	<0.00900	0.018 J	<0.0250
N-B-3-3	01/24/03	3	0.00768 J	<0.00900	0.0235 J	0.0409 J
N-B-4-7	01/24/03	7	0.00674 J	<0.00900	0.0218 J	0.031 J
N-B-5-10	01/24/03	10	0.00572 J	<0.00900	0.0138 J	<0.0250
N-B-6-9	01/24/03	9	0.0199 J	<0.00900	0.0377 J	0.0407 J
N-B7WALL-4	01/24/03	4	0.00489 J	<0.00900	0.0132 J	0.142
N-C-2-3	01/24/03	3	0.00671 J	<0.00900	0.0131 J	<0.0250
N-C-3-3	01/24/03	3	0.00628 J	<0.00900	0.015 J	0.0263 J
N-C-4-11	01/24/03	11	0.0119 J	<0.00900	0.0191 J	0.025
N-C-5-12	01/24/03	12	0.00616 J	<0.00900	0.0196 J	<0.0250
N-C-6-10	01/24/03	10	0.00813 J	<0.00900	0.0176 J	0.0286 J
N-C-7-8	01/24/03	8	0.00611 J	<0.00900	0.0163 J	0.0522 J
N-D-1-3	01/24/03	3	<0.00400	<0.00900	0.00937 J	<0.0250
N-D-2-3	01/24/03	3	<0.00400	<0.00900	0.0122 J	<0.0250
N-D-3-11	01/24/03	11	<0.00400	<0.00900	0.0101 J	<0.0250
N-D-4-12	01/24/03	12	<0.00400	<0.00900	0.0119 J	<0.0250
N-D-5-13	01/24/03	13	<0.00400	<0.00900	0.0127 J	<0.0250
N-D-6-7	01/24/03	7	0.00691 J	0.00985 J	0.0287 J	0.0358 J
N-D6WALL-3	01/24/03	3	0.00881 J	<0.00900	0.0102 J	<0.0250

Table G-49
BTEX in Soil- Area N
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
N-E-2-6	01/24/03	6	<0.00400	<0.00900	0.0115 J	<0.0250
N-E-3-8	01/24/03	8	<0.00400	<0.00900	0.0125 J	<0.0250
N-E-4-5	01/24/03	5	<0.00400	<0.00900	0.0155 J	0.0258 J
N-E-5-8	01/24/03	8	<0.00400	<0.00900	0.0105 J	<0.0250
N-E-6-2	01/24/03	2	<0.00400	<0.00900	0.00825 J	<0.0250
N-F-2-0	01/24/03	0	<0.00400	<0.00900	0.0132 J	<0.0250
N-F-3-6	01/24/03	6	<0.00400	<0.00900	0.0124 J	<0.0250
N-F-4-8	01/24/03	8	<0.00400	<0.00900	0.0103 J	<0.0250
N-F-5-5	01/24/03	5	<0.00400	<0.00900	0.0113 J	<0.0250
N-G-4-5	01/24/03	5	<0.00400	<0.00900	0.0127 J	<0.0250
N-G4WALL-3	01/24/03	3	<0.00400	<0.00900	0.0153 J	<0.0250
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.						

Table G-50
PAHs in Soil- Area N
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
N-A4WALL-2	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-A5WALL-5	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-A6WALL-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-B-3-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-B-4-7	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-B-5-10	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-B-6-9	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-B7WALL-4	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-C-2-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-C-3-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-C-4-11	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-C-5-12	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-C-6-10	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-C-7-8	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D-1-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D-2-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D-3-11	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D-4-12	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D-5-13	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D-6-7	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D6WALL-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-E-2-6	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-E-3-8	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-E-4-5	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-E-5-8	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-E-6-2	01/24/03	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
N-F-2-0	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-F-3-6	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-50
PAHs in Soil- Area N
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
N-F-4-8	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-F-5-5	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-G-4-5	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-G4WALL-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-50
PAHs in Soil- Area N
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
N-A4WALL-2	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-A5WALL-5	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-A6WALL-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-B-3-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-B-4-7	01/24/03	<0.0100	0.0111	<0.0100	<0.0100	<0.0100	<0.0100	0.0514	<0.0100	<0.0100
N-B-5-10	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-B-6-9	01/24/03	0.0123	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-B7WALL-4	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-C-2-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-C-3-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-C-4-11	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-C-5-12	01/24/03	0.0109	0.0139	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-C-6-10	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-C-7-8	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D-1-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D-2-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D-3-11	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D-4-12	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D-5-13	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D-6-7	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D6WALL-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-E-2-6	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0569	<0.0100	<0.0100
N-E-3-8	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-E-4-5	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-E-5-8	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-E-6-2	01/24/03	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
N-F-2-0	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-F-3-6	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-50
PAHs in Soil- Area N
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
N-F-4-8	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-F-5-5	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-G-4-5	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-G4WALL-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-51
Volatile Petroleum Hydrocarbons in Soil- Area N
UNOCAL Edmonds Terminal

SITE	DATE	Aliphatic C5-C6 (mg/kg)	Aliphatic C6-C8 (mg/kg)	Aliphatic C8-C10 (mg/kg)	Aliphatic C10-C12 (mg/kg)	Aromatic C8-C10 (mg/kg)	Aromatic C10-C12 (mg/kg)	Aromatic C12-C13 (mg/kg)	Total Volatile Petroleum Hydrocarbons (mg/kg)
N-D6WALL-3	01/24/03	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value. D = Sample diluted due to high analyte concentrations. R= Rejected value.									

Table G-52
Extractable Petroleum Hydrocarbons in Soil- Area N
UNOCAL Edmonds Terminal

SITE	DATE	Aliphatic C8-C10 (mg/kg)	Aliphatic C10-C12 (mg/kg)	Aliphatic C12-C16 (mg/kg)	Aliphatic C16-C21 (mg/kg)	Aliphatic C21-C34 (mg/kg)	Aromatic C10-C12 (mg/kg)	Aromatic C12-C16 (mg/kg)	Aromatic C16-C21 (mg/kg)	Aromatic C21-C34 (mg/kg)	Total Extractable Hydrocarbons (mg/kg)
N-D6WALL-3	01/24/03	<5.00	<5.00	<5.00	<5.00	8.11	<5.00	<5.00	<5.00	<5.00	8.11

Values represent total concentration unless noted. < = Not detected at indicated reporting limit.

Table 5-14
TPH in Soil- Area O
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
O-A-2-0.5	02/07/03	0.5	<10.0	<25.0	<5.00
O-A-3-0.5	02/07/03	0.5	<10.0	<25.0	<5.00
O-B-1-0.5	02/07/03	0.5	<10.0	<25.0	<5.00
O-B-2-6	02/07/03	6	23.0	<25.0	<5.00
O-B-3-5	02/07/03	5	16.5	<25.0	<5.00
O-B-4-4	02/07/03	4	<10.0	<25.0	<5.00
O-C-2-4	02/07/03	4	<10.0	<25.0	<5.00
O-C-3-3	02/07/03	3	<10.0	<25.0	<5.00
O-C-4-3	02/07/03	3	<10.0	<25.0	<5.00
<p>< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.</p>					

Table G-53
BTEX in Soil- Area O
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
O-A-2-0.5	02/07/03	0.5	0.00674 J	<0.00900	<0.018	<0.0250
O-A-3-0.5	02/07/03	0.5	<0.00400	<0.00900	<0.0117	<0.0250
O-B-1-0.5	02/07/03	0.5	0.00418 J	<0.00900	<0.0116	<0.0250
O-B-2-6	02/07/03	6	0.00473 J	<0.00900	<0.0118	<0.0250
O-B-3-5	02/07/03	5	<0.00400	<0.00900	<0.00823	<0.0250
O-B-4-4	02/07/03	4	0.00417 J	<0.00900	<0.0122	<0.0250
O-C-2-4	02/07/03	4	<0.00400	<0.00900	<0.0135	<0.0250
O-C-3-3	02/07/03	3	<0.00400	<0.00900	<0.00835	<0.0250
O-C-4-3	02/07/03	3	<0.00400	<0.00900	<0.0106	<0.0250

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-54
PAHs in Soil- Area O
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
O-A-2-0.5	02/07/03	0.0112	0.0164	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-A-3-0.5	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-B-1-0.5	02/07/03	0.0104	0.013	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-B-2-6	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-B-3-5	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-B-4-4	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-C-2-4	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-C-3-3	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-C-4-3	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

**Table G-54
PAHs in Soil- Area O
UNOCAL Edmonds Terminal**

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
O-A-2-0.5	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-A-3-0.5	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-B-1-0.5	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0113 J	<0.0100
O-B-2-6	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-B-3-5	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-B-4-4	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-C-2-4	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-C-3-3	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-C-4-3	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table 5-15
TPH in Soil- Area P
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
P-A-3-2	01/03/03	2	<10.0	<25.0	<5.00
P-B-2-2	01/03/03	2	<10.0	<25.0	<5.00
P-B-3-2	01/03/03	2	<10.0	<25.0	<5.00
P-B-4-1	01/03/03	1	<10.0	<25.0	<5.00
P-B-5-1	01/03/03	1	<10.0	<25.0	<5.00
P-C-2-3	01/03/03	3	<10.0	<25.0	<5.00
P-C-3-4	01/03/03	4	<10.0	<25.0	<5.00
P-C-4-5	01/03/03	5	<10.0	<25.0	<5.00
P-C-5-5	01/03/03	5	<10.0	<25.0	<5.00
P-D-2-2	01/03/03	2	<10.0	<25.0	<5.00
P-D-3-2	01/03/03	2	<10.0	<25.0	<5.00
P-D-4-4	01/03/03	4	<10.0	<25.0	<5.00
P-D-5-6	01/03/03	6	<10.0	<25.0	<5.00
P-D-6-4	01/03/03	4	<10.0	<25.0	<5.00
P-D-6-5	01/03/03	5	<10.0	<25.0	<5.00
P-E-2-1	01/03/03	1	<10.0	<25.0	<5.00
P-E-3-2	01/03/03	2	<10.0	<25.0	<5.00
P-E-4-3	01/03/03	3	<10.0	<25.0	<5.00
P-E-5-3	01/03/03	3	38.2	<25.0	29.7
P-E-6-4	01/03/03	4	<10.0	<25.0	<5.00
P-E-7-4	01/03/03	4	<10.0	<25.0	<5.00
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.					

Table G-57
BTEX in Soil- Area P
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
P-A-3-2	01/03/03	2	<0.00400	<0.00900	0.00621 J	<0.0250
P-B-2-2	01/03/03	2	0.00818 J	0.00903 J	0.0105 J	0.03 J
P-B-3-2	01/03/03	2	0.00525 J	<0.00900	0.00607 J	<0.0250
P-B-4-1	01/03/03	1	0.00516 J	<0.00900	0.00734 J	<0.0250
P-B-5-1	01/03/03	1	0.00428 J	<0.00900	0.00688 J	<0.0250
P-C-2-3	01/03/03	3	0.00636 J	<0.00900	0.0139 J	0.027 J
P-C-3-4	01/03/03	4	0.00954 J	<0.00900	0.0131 J	0.0309 J
P-C-4-5	01/03/03	5	0.0045 J	<0.00900	0.00775 J	<0.0250
P-C-5-5	01/03/03	5	0.00538 J	<0.00900	0.0182 J	0.0298 J
P-D-2-2	01/03/03	2	0.00637 J	<0.00900	0.00968 J	<0.0250
P-D-3-2	01/03/03	2	<0.00400	<0.00900	0.0184 J	0.0385 J
P-D-4-4	01/03/03	4	0.00557 J	0.0119 J	0.0104 J	0.0378 J
P-D-5-6	01/03/03	6	<0.00400	<0.00900	0.00639 J	<0.0250
P-D-6-4	01/03/03	4	<0.00400	<0.00900	0.00789 J	<0.0250
P-D-6-5	01/03/03	5	<0.00400	<0.00900	0.00625 J	<0.0250
P-E-2-1	01/03/03	1	<0.00400	<0.00900	0.0155 J	0.0313 J
P-E-3-2	01/03/03	2	0.00686 J	0.0118 J	0.0127 J	0.0375 J
P-E-4-3	01/03/03	3	0.0131 J	0.0106 J	0.00766 J	<0.0250
P-E-5-3	01/03/03	3	0.00498 J	0.00932 J	0.00543 J	0.107
P-E-6-4	01/03/03	4	0.00532 J	<0.00900	0.0127 J	0.0269 J
P-E-7-4	01/03/03	4	0.0111 J	0.0112 J	0.00725 J	<0.0250

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-58
PAHs in Soil- Area P
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
P-A-3-2	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-B-2-2	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-B-3-2	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-B-4-1	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-B-5-1	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-C-2-3	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-C-3-4	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-C-4-5	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-C-5-5	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-D-2-2	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-D-3-2	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-D-4-4	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-D-5-6	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-D-6-4	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-D-6-5	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-E-2-1	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-E-3-2	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-E-4-3	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-E-5-3	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0153	<0.0100	<0.0100	<0.0100
P-E-6-4	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-E-7-4	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-58
PAHs in Soil- Area P
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
P-A-3-2	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-B-2-2	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-B-3-2	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-B-4-1	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-B-5-1	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-C-2-3	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-C-3-4	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-C-4-5	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-C-5-5	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-D-2-2	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-D-3-2	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-D-4-4	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-D-5-6	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-D-6-4	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-D-6-5	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-E-2-1	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-E-3-2	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-E-4-3	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-E-5-3	01/03/03	<0.0100	0.0119	<0.0100	0.0153	<0.0100	<0.0100	<0.0100	<0.0100	0.011
P-E-6-4	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-E-7-4	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated rep< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table 5-16
TPH in Soil- Area Q
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
Q-A-3-0.5	12/24/02	0.5	<10.0	<25.0	<5.00
Q-A-4-1	12/24/02	1	<10.0	<25.0	<5.00
Q-A-5-2	12/24/02	2	<10.0	<25.0	<5.00
Q-A-6-3.5	12/24/02	3.5	<10.0	<25.0	<5.00
Q-A-7-2	12/24/02	2	14.9	<25.0	<5.00
Q-B-3-0.5	12/24/02	0.5	<10.0	<25.0	<5.00
Q-B-4-1	12/24/02	1	<10.0	<25.0	<5.00
Q-B-5-1	12/24/02	1	21.4	<25.0	<5.00
Q-B-6-1.5	12/24/02	1.5	<10.0	<25.0	<5.00
Q-B-7-1	12/24/02	1	44.7	<25.0	<5.00
Q-C-4-1	12/24/02	1	43.7	77.1	<5.00
Q-C-5-4	12/24/02	4	<10.0	<25.0	<5.00
Q-C-6-3.5	12/24/02	3.5	<10.0	<25.0	<5.00
Q-C-7-6	12/24/02	6	<10.0	<25.0	<5.00
Q-D-5-1.5	12/24/02	1.5	<10.0	<25.0	<5.00
Q-D-6-5	12/24/02	5	<10.0	<25.0	<5.00
Q-D6WALL-2.5	12/24/02	2.5	54.1	90.7	<5.00
Q-D-7-6	12/24/02	6	<10.0	<25.0	<5.00
Q-D7WALL-3	12/24/02	3	<10.0	<25.0	<5.00
Q-D8-7	12/24/02	7	<10.0	<25.0	<5.00
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.					

Table G-61
BTEX in Soil- Area Q
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
Q-A-3-0.5	12/24/02	0.5	<0.00400	<0.00900	0.00746 J	<0.0250
Q-A-4-1	12/24/02	1	0.00402 J	0.01 J	0.0101 J	0.031 J
Q-A-5-2	12/24/02	2	<0.00400	<0.00900	0.00405 J	<0.0250
Q-A-6-3.5	12/24/02	3.5	<0.00400	<0.00900	0.00401 J	<0.0250
Q-A-7-2	12/24/02	2	<0.00400	<0.00900	0.00459 J	<0.0250
Q-B-3-0.5	12/24/02	0.5	0.00563 J	0.0101 J	0.00971 J	0.035 J
Q-B-4-1	12/24/02	1	<0.00400	<0.00900	0.0141 J	0.0305 J
Q-B-5-1	12/24/02	1	<0.00400	<0.00900	0.00488 J	<0.0250
Q-B-6-1.5	12/24/02	1.5	<0.00400	<0.00900	<0.00400	<0.0250
Q-B-7-1	12/24/02	1	<0.00400	<0.00900	0.00479 J	<0.0250
Q-C-4-1	12/24/02	1	<0.00400	<0.00900	0.00622 J	<0.0250
Q-C-5-4	12/24/02	4	0.00443 J	<0.00900	0.0104 J	<0.0250
Q-C-6-3.5	12/24/02	3.5	0.00858 J	0.0124 J	0.023 J	0.0493 J
Q-C-7-6	12/24/02	6	0.00846 J	<0.00900	0.0065 J	<0.0250
Q-D-5-1.5	12/24/02	1.5	0.0115 J	<0.00900	0.00747 J	<0.0250
Q-D-6-5	12/24/02	5	<0.00400	<0.00900	0.00742 J	<0.0250
Q-D6WALL-2.5	12/24/02	2.5	<0.00400	<0.00900	0.00744 J	<0.0250
Q-D-7-6	12/24/02	6	<0.00400	<0.00900	0.00495 J	<0.0250
Q-D7WALL-3	12/24/02	3	0.00432 J	<0.00900	0.0544	<0.0250
Q-D8-7	12/24/02	7	<0.00400	0.00922 J	0.00825 J	0.0309 J

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-62
PAHs in Soil- Area Q
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
Q-A-3-0.5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-A-4-1	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0131	<0.0100	<0.0100	<0.0100
Q-A-5-2	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-A-6-3.5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-A-7-2	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-B-3-0.5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-B-4-1	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-B-5-1	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-B-6-1.5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-B-7-1	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-C-4-1	12/24/02	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
Q-C-5-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-C-6-3.5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-C-7-6	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-D-5-1.5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-D-6-5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-D6WALL-2.5	12/24/02	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
Q-D-7-6	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-D7WALL-3	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	0.0126	<0.0100	<0.0100	<0.0100	<0.0100
Q-D8-7	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-62
PAHs in Soil- Area Q
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
Q-A-3-0.5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-A-4-1	12/24/02	<0.0100	0.0131	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-A-5-2	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-A-6-3.5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-A-7-2	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-B-3-0.5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-B-4-1	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-B-5-1	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-B-6-1.5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-B-7-1	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-C-4-1	12/24/02	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
Q-C-5-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-C-6-3.5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-C-7-6	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-D-5-1.5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-D-6-5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-D6WALL-2.5	12/24/02	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
Q-D-7-6	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-D7WALL-3	12/24/02	0.0116	<0.0100	<0.0100	0.0107	<0.0100	<0.0100	<0.0100	0.0136	<0.0100
Q-D8-7	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table 5-17
TPH in Soil- Area R
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
R-B-4-2	03/05/03	2	<10.0	<25.0	<5.00
R-B-5-6	03/05/03	6	<10.0	<25.0	<5.00
R-B-6-2	03/05/03	2	<10.0	<25.0	<5.00
R-B-7-0	03/05/03	0	<10.0	<25.0	<5.00
R-C-3-3	03/05/03	3	<10.0	<25.0	<5.00
R-C-3WALL-5	03/05/03	5	<10.0	<25.0	<5.00
R-C-4-8	03/05/03	8	<10.0	<25.0	<5.00
R-C-4WALL-5	03/05/03	5	<10.0	<25.0	<5.00
R-C-5-4.5	03/05/03	4.5	<10.0	<25.0	<5.00
R-C-6-4	03/05/03	4	25.5	<25.0	<5.00
R-C-7-4	03/05/03	4	<10.0	<25.0	<5.00
R-C-8-1	03/05/03	1	<10.0	<25.0	<5.00
R-D-2-5	03/05/03	5	17.9	<25.0	<5.00
R-D-3-4	03/05/03	4	<10.0	<25.0	<5.00
R-D-3WALL-8	03/05/03	8	<10.0	<25.0	<5.00
R-D-4-3	03/05/03	3	<10.0	<25.0	<5.00
R-D-4WALL-5	03/05/03	5	<10.0	<25.0	<5.00
R-D-5-3	03/05/03	3	<10.0	<25.0	<5.00
R-D-6-4	03/05/03	4	<10.0	<25.0	<5.00
R-D-7-3	03/05/03	3	<10.0	<25.0	<5.00
R-D-8-4	03/05/03	4	<10.0	<25.0	<5.00
R-E-2-4	03/05/03	4	<10.0	<25.0	<5.00
R-E-3-4	03/05/03	4	<10.0	<25.0	<5.00

Table 5-17
TPH in Soil- Area R
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
R-E-4-4	03/05/03	4	<10.0	<25.0	<5.00
R-E-5-5	03/05/03	5	<10.0	<25.0	<5.00
R-E-6-4	03/05/03	4	<10.0	<25.0	<5.00
R-E-7-3	03/05/03	3	<10.0	<25.0	<5.00
R-E-8-4	03/05/03	0	<10.0	<25.0	<5.00
R-F-2-4	03/05/03	4	271	143	16.0
R-F-3-3	03/05/03	3	<10.0	<25.0	<5.00
R-F-4-4	03/05/03	4	<10.0	<25.0	<5.00
R-F-5-4	03/05/03	4	<10.0	<25.0	<5.00
R-F-6-4.5	03/05/03	4.5	<10.0	<25.0	<5.00
R-F-7-3	03/05/03	3	<10.0	<25.0	<5.00
R-F-8-5	03/05/03	5	<10.0	<25.0	<5.00
R-G-3-3	03/05/03	3	<10.0	<25.0	<5.00
R-G-4-5	03/05/03	5	<10.0	<25.0	<5.00
R-G-5-4	03/05/03	4	<10.0	<25.0	<5.00
R-G-6-5.5	03/05/03	5.5	<10.0	<25.0	<5.00
R-G-7-4	03/05/03	4	<10.0	<25.0	<5.00
R-G-8-2	03/05/03	2	<10.0	<25.0	<5.00
R-H-4-3	03/05/03	3	<10.0	<25.0	<5.00
R-H-5-5	03/05/03	5	<10.0	<25.0	<5.00
R-H-5WALL-1	03/05/03	1	<10.0	<25.0	<5.00
R-H-6-7	03/05/03	7	<10.0	<25.0	<5.00
R-H-6WALL-3	03/05/03	3	<10.0	<25.0	<5.00

Table 5-17
TPH in Soil- Area R
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
R-H-7-5	03/05/03	5	<10.0	<25.0	<5.00
R-H-7WALL-1	03/05/03	1	<10.0	<25.0	<5.00
AVERAGE concentration:			11.24	NA	NA
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result. NA = Not applicable.					

Table G-65
BTEX in Soil- Area R
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
R-B-4-2	03/05/03	2	0.00675 J	0.0108 J	0.0148 J	0.0328 J
R-B-5-6	03/05/03	6	0.00555 J	<0.00900	0.0142 J	0.0268 J
R-B-6-2	03/05/03	2	<0.00400	<0.00900	0.00553 J	<0.0250
R-B-7-0	03/05/03	0	<0.00400	<0.00900	0.00574 J	<0.0250
R-C-3-3	03/05/03	3	<0.00400	<0.00900	0.00513 J	<0.0250
R-C-3WALL-5	03/05/03	5	<0.00400	<0.00900	0.00451 J	<0.0250
R-C-4-8	03/05/03	8	<0.00400	<0.00900	0.00702 J	<0.0250
R-C-4WALL-5	03/05/03	5	0.00738 J	<0.00900	0.00978 J	<0.0250
R-C-5-4.5	03/05/03	4.5	<0.00400	<0.00900	0.00869 J	<0.0250
R-C-6-4	03/05/03	4	<0.00400	<0.00900	0.0063 J	<0.0250
R-C-7-4	03/05/03	4	<0.00400	<0.00900	0.00539 J	<0.0250
R-C-8-1	03/05/03	1	0.0044 J	0.0124 J	0.0136 J	0.0389 J
R-D-2-5	03/05/03	5	<0.00400	0.00973 J	0.00735 J	0.0301 J
R-D-3-4	03/05/03	4	<0.00400	<0.00900	0.00745 J	<0.0250
R-D-3WALL-8	03/05/03	8	<0.00400	<0.00900	0.00528 J	<0.0250
R-D-4-3	03/05/03	3	<0.00400	<0.00900	0.00723 J	<0.0250
R-D-4WALL-5	03/05/03	5	0.00437 J	<0.00900	0.0102 J	<0.0250
R-D-5-3	03/05/03	3	0.00468 J	<0.00900	0.00783 J	<0.0250
R-D-6-4	03/05/03	4	<0.00400	<0.00900	0.00634 J	<0.0250
R-D-7-3	03/05/03	3	<0.00400	<0.00900	0.00644 J	<0.0250
R-D-8-4	03/05/03	4	<0.00400	<0.00900	0.00615 J	<0.0250
R-E-2-4	03/05/03	4	<0.00400	0.0189 J	0.0128 J	0.0388 J
R-E-3-4	03/05/03	4	0.00527 J	0.0126 J	0.00917 J	0.0302 J

Table G-65
BTEX in Soil- Area R
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
R-E-4-4	03/05/03	4	<0.00400	<0.00900	0.00931 J	<0.0250
R-E-5-5	03/05/03	5	<0.00400	<0.00900	0.00864 J	<0.0250
R-E-6-4	03/05/03	4	<0.00400	<0.00900	0.00653 J	<0.0250
R-E-7-3	03/05/03	3	<0.00400	<0.00900	0.00831 J	<0.0250
R-E-8-4	03/05/03	0	0.00554 J	<0.00900	0.0075 J	<0.0250
R-F-2-4	03/05/03	4	<0.00400	<0.00900	0.00423 J	<0.0250
R-F-3-3	03/05/03	3	<0.00400	<0.00900	0.00491 J	<0.0250
R-F-4-4	03/05/03	4	0.00832 J	0.012 J	0.0363 J	0.0605 J
R-F-5-4	03/05/03	4	0.0048 J	<0.00900	0.0117 J	<0.0250
R-F-6-4.5	03/05/03	4.5	0.0046 J	<0.00900	0.0217 J	0.0318 J
R-F-7-3	03/05/03	3	<0.00400	<0.00900	0.00625 J	<0.0250
R-F-8-5	03/05/03	5	<0.00400	<0.00900	0.00838 J	<0.0250
R-G-3-3	03/05/03	3	<0.00400	0.0125 J	0.00695 J	<0.0250
R-G-4-5	03/05/03	5	0.00432 J	<0.00900	0.0189 J	0.0309 J
R-G-5-4	03/05/03	4	0.00404 J	<0.00900	0.00755 J	<0.0250
R-G-6-5.5	03/05/03	5.5	0.0116 J	0.0145 J	0.0213 J	0.053 J
R-G-7-4	03/05/03	4	<0.00400	<0.00900	0.00677 J	<0.0250
R-G-8-2	03/05/03	2	0.0086 J	<0.00900	0.00749 J	<0.0250
R-H-4-3	03/05/03	3	0.00448 J	<0.00900	0.00941 J	<0.0250
R-H-5-5	03/05/03	5	<0.00400	<0.00900	0.00992 J	<0.0250
R-H-5WALL-1	03/05/03	1	<0.00400	<0.00900	<0.00400	<0.0250
R-H-6-7	03/05/03	7	0.00407 J	<0.00900	0.00785 J	<0.0250
R-H-6WALL-3	03/05/03	3	0.0047 J	<0.00900	0.00862 J	<0.0250
R-H-7-5	03/05/03	5	<0.00400	<0.00900	0.0132 J	<0.0250
R-H-7WALL-1	03/05/03	1	<0.00400	<0.00900	0.00555 J	<0.0250

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-66
PAHs in Soil- Area R
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
R-B-4-2	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-B-5-6	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-B-6-2	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-B-7-0	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-3-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0278	<0.0100	<0.0100
R-C-3WALL-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0241	<0.0100	<0.0100
R-C-4-8	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-4WALL-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-5-4.5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-6-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-7-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-8-1	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-D-2-5	03/05/03	0.758	1.86 D	0.0212	<0.0100	<0.0100	<0.0100	0.0169	<0.0100	<0.0100
R-D-3-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0284	<0.0100	<0.0100
R-D-3WALL-8	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0266	<0.0100	<0.0100
R-D-4-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-D-4WALL-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.028	<0.0100	<0.0100
R-D-5-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-D-6-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-D-7-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-D-8-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-E-2-4	03/05/03	0.522	1.06	0.0146	<0.0100	<0.0100	<0.0100	0.0137	<0.0100	<0.0100
R-E-3-4	03/05/03	0.15	0.0306	<0.0100	<0.0100	<0.0100	<0.0100	0.0136	<0.0100	<0.0100
R-E-4-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-E-5-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-E-6-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-E-7-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-E-8-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-F-2-4	03/05/03	0.0907 D	0.0952 D	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
R-F-3-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0112	<0.0100	<0.0100

Table G-66
PAHs in Soil- Area R
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
R-F-4-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-F-5-4	03/05/03	<0.0100	0.0124	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-F-6-4.5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-F-7-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-F-8-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-G-3-3	03/05/03	0.0294	<0.0100	0.019	<0.0100	<0.0100	<0.0100	0.0113	<0.0100	<0.0100
R-G-4-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0297	<0.0100	<0.0100
R-G-5-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-G-6-5.5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-G-7-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-G-8-2	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-4-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-5-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-5WALL-1	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-6-7	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-6WALL-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-7-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-7WALL-1	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-66
PAHs in Soil- Area R
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
R-B-4-2	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-B-5-6	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-B-6-2	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-B-7-0	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-3-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-3WALL-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-4-8	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-4WALL-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-5-4.5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-6-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-7-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-8-1	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0169	<0.0100
R-D-2-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	0.0652	<0.0100	0.35	<0.0100	<0.0100
R-D-3-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-D-3WALL-8	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-D-4-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-D-4WALL-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-D-5-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-D-6-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-D-7-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-D-8-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-E-2-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	0.0533	<0.0100	0.343	<0.0100	<0.0100
R-E-3-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.103	<0.0100	<0.0100
R-E-4-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-E-5-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-E-6-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-E-7-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-E-8-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-F-2-4	03/05/03	<0.0500	0.0589 D	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	0.113 D	0.0862 D
R-F-3-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-66
PAHs in Soil- Area R
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
R-F-4-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-F-5-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-F-6-4.5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-F-7-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-F-8-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-G-3-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	0.0338	<0.0100	0.0121	<0.0100	<0.0100
R-G-4-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-G-5-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-G-6-5.5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-G-7-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-G-8-2	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-4-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-5-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-5WALL-1	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-6-7	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-6WALL-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-7-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-7WALL-1	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table 5-18
TPH in Soil- Area S
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
S-A4wall-2	03/21/03	2	<10.0	<25.0	<5.00
S-A-5-8	03/21/03	8	<10.0	<25.0	<5.00
S-A5wall-4	03/21/03	4	<10.0	<25.0	<5.00
S-A-6-6	03/21/03	6	<10.0	<25.0	<5.00
S-A6wall-2	03/21/03	2	<10.0	<25.0	<5.00
S-B-3-1	03/21/03	1	<10.0	<25.0	<5.00
S-B-4-3	03/21/03	3	<10.0	<25.0	<5.00
S-B-5-6	03/21/03	6	<10.0	<25.0	<5.00
S-B-6-7	03/21/03	7	<10.0	<25.0	<5.00
S-B-7-8	03/21/03	8	<10.0	<25.0	<5.00
S-B7wall-6	03/21/03	6	<10.0	<25.0	<5.00
S-C-2-1	03/21/03	1	<10.0	<25.0	<5.00
S-C-3-5	03/21/03	5	<10.0	<25.0	<5.00
S-C-4-6	03/21/03	6	<10.0	<25.0	<5.00
S-C-5-6	03/21/03	6	<10.0	<25.0	<5.00
S-C-6-7	03/21/03	7	<10.0	<25.0	<5.00
S-C-7-7	03/21/03	7	<10.0	<25.0	<5.00
S-C-8-8	03/21/03	8	<10.0	<25.0	<5.00
S-D-1-0.5	03/21/03	0.5	<10.0	<25.0	<5.00
S-D-2-3	03/21/03	3	<10.0	<25.0	<5.00
S-D-3-6	03/21/03	6	<10.0	<25.0	<5.00
S-D-4-7	03/21/03	7	<10.0	<25.0	<5.00

Table 5-18
TPH in Soil- Area S
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
S-D-5-8	03/21/03	8	<10.0	<25.0	<5.00
S-D-6-10	03/21/03	10	<10.0	<25.0	<5.00
S-D-7-8	03/21/03	8	<10.0	<25.0	<5.00
S-D-8-13	03/21/03	13	<10.0	<25.0	<5.00
S-D8wall-10	03/21/03	10	133	<25.0	22.3
S-E-2-3	03/21/03	3	<10.0	<25.0	<5.00
S-E-3-4	03/21/03	4	<10.0	<25.0	<5.00
S-E-4-5	03/21/03	5	<10.0	<25.0	<5.00
S-E-5-6	03/21/03	6	<10.0	<25.0	<5.00
S-E-6-7	03/21/03	7	<10.0	<25.0	<5.00
S-E-7-9	03/21/03	9	<10.0	<25.0	<5.00
S-E-8-14	03/21/03	14	<10.0	<25.0	<5.00
S-E8wall-12	03/21/03	12	<10.0	<25.0	<5.00
S-F-2-3	03/21/03	3	<10.0	<25.0	<5.00
S-F-3-5	03/21/03	5	<10.0	<25.0	<5.00
S-F-4-6	03/21/03	6	<10.0	<25.0	<5.00
S-F-5-7	03/21/03	7	<10.0	<25.0	<5.00
S-F-6-8	03/21/03	8	<10.0	<25.0	<5.00
S-F-7-10	03/21/03	10	<10.0	<25.0	<5.00
S-G-3-5	03/21/03	5	<10.0	<25.0	<5.00
S-G-4-6	03/21/03	6	<10.0	<25.0	<5.00

Table 5-18
TPH in Soil- Area S
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
S-G-5-7	03/21/03	7	<10.0	<25.0	<5.00
S-G-6-5	03/21/03	5	<10.0	<25.0	<5.00
S-G6wall-10	03/21/03	10	<10.0	<25.0	<5.00
S-G-7-10	03/21/03	10	11.1	32.5	<5.00
S-G7wall-8	03/21/03	8	<10.0	<25.0	<5.00
S-H-3-3	03/21/03	3	<10.0	<25.0	<5.00
S-H-4-4	03/21/03	4	<10.0	<25.0	<5.00
S-H-5-5	03/21/03	5	<10.0	<25.0	<5.00
S-H5wall-1	03/21/03	1	<10.0	<25.0	<5.00
S-I-3-5	03/21/03	5	<10.0	<25.0	<5.00
S-I3wall-3	03/21/03	3	<10.0	<25.0	<5.00
S-I-4-7	03/24/03	7	<10.0	<25.0	<5.00
S-I-4wall-4	03/24/03	4	<10.0	<25.0	<5.00
S-J2wall-4	03/21/03	4	<10.0	<25.0	<5.00
S-J-3-8	03/24/03	8	<10.0	<25.0	<5.00
S-J-3-wall-4	03/24/03	4	<10.0	<25.0	<5.00
S-K-2-6	03/24/03	6	<10.0	<25.0	<5.00
S-K-2wall-3	03/24/03	3	<10.0	<25.0	<5.00
S-K-3-7	03/24/03	7	<10.0	<25.0	<5.00
S-K-3wall-3	03/24/03	3	<10.0	<25.0	<5.00
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.					

Table G-69
BTEX in Soil- Area S
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
S-A4wall-2	03/21/03	2	<0.00400	<0.00900	0.00844 J	<0.0250
S-A-5-8	03/21/03	8	<0.00400	0.0148 J	0.0102 J	<0.0250
S-A5wall-4	03/21/03	4	<0.00400	0.0138 J	0.00609 J	<0.0250
S-A-6-6	03/21/03	6	0.00595 J	0.0181 J	0.0144 J	0.0333 J
S-A6wall-2	03/21/03	2	0.0114 J	0.026 J	0.014 J	0.0545 J
S-B-3-1	03/21/03	1	0.0207 J	0.0159 J	0.012 J	<0.0250
S-B-4-3	03/21/03	3	0.0315	0.0229 J	0.0223 J	0.0475 J
S-B-5-6	03/21/03	6	<0.00400	0.017 J	0.0123 J	0.0263 J
S-B-6-7	03/21/03	7	<0.00400	0.0159 J	0.0126 J	0.0250
S-B-7-8	03/21/03	8	<0.00400	0.0161 J	0.00744 J	<0.0250
S-B7wall-6	03/21/03	6	<0.00400	0.0138 J	0.00654 J	<0.0250
S-C-2-1	03/21/03	1	<0.00400	0.0151 J	0.00847 J	<0.0250
S-C-3-5	03/21/03	5	<0.00400	0.0158 J	0.00823 J	<0.0250
S-C-4-6	03/21/03	6	0.012 J	0.0189 J	0.0118 J	0.0286 J
S-C-5-6	03/21/03	6	0.00814 J	0.0154 J	0.0132 J	<0.0250
S-C-6-7	03/21/03	7	<0.00400	0.014 J	0.00663 J	<0.0250
S-C-7-7	03/21/03	7	<0.00400	0.0151 J	0.00698 J	<0.0250
S-C-8-8	03/21/03	8	<0.00400	0.014 J	0.00608 J	<0.0250
S-D-1-0.5	03/21/03	0.5	<0.00400	0.0138 J	0.00623 J	<0.0250
S-D-2-3	03/21/03	3	<0.00400	0.0149 J	0.00664 J	<0.0250
S-D-3-6	03/21/03	6	<0.00400	0.013 J	0.00574 J	<0.0250
S-D-4-7	03/21/03	7	<0.00400	0.016 J	0.0115 J	0.0262 J

Table G-69
BTEX in Soil- Area S
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
S-D-5-8	03/21/03	8	<0.00400	0.0173 J	0.00878 J	<0.0250
S-D-6-10	03/21/03	10	<0.00400	0.0131 J	0.00565 J	<0.0250
S-D-7-8	03/21/03	8	<0.00400	0.013 J	0.00549 J	<0.0250
S-D-8-13	03/21/03	13	<0.00400	0.0126 J	0.00589 J	<0.0250
S-D8wall-10	03/21/03	10	<0.00400	0.015 J	0.00927 J	<0.0250
S-E-2-3	03/21/03	3	<0.00400	0.0141 J	0.00517 J	<0.0250
S-E-3-4	03/21/03	4	<0.00400	0.0122 J	0.00487 J	<0.0250
S-E-4-5	03/21/03	5	<0.00400	0.015 J	0.00821 J	<0.0250
S-E-5-6	03/21/03	6	0.00411 J	0.0146 J	0.00743 J	<0.0250
S-E-6-7	03/21/03	7	0.00488 J	0.0163 J	0.0117 J	0.026 J
S-E-7-9	03/21/03	9	0.0064 J	0.0207 J	0.0137 J	0.0347 J
S-E-8-14	03/21/03	14	0.00613 J	0.0147 J	0.00796 J	<0.0250
S-E8wall-12	03/21/03	12	0.00429 J	0.0156 J	0.0143 J	0.027 J
S-F-2-3	03/21/03	3	0.00407 J	0.0165 J	0.0124 J	0.0285 J
S-F-3-5	03/21/03	5	0.00543 J	0.0152 J	0.00988 J	<0.0250
S-F-4-6	03/21/03	6	0.00424 J	0.0158 J	0.0102 J	<0.0250
S-F-5-7	03/21/03	7	<0.00400	0.0146 J	0.00768 J	<0.0250
S-F-6-8	03/21/03	8	0.0049 J	0.0151 J	0.00947 J	<0.0250
S-F-7-10	03/21/03	10	0.00417 J	0.0151 J	0.0069 J	<0.0250
S-G-3-5	03/21/03	5	<0.00400	0.0153 J	0.00712 J	<0.0250
S-G-4-6	03/21/03	6	<0.00400	0.0145 J	0.00956 J	<0.0250

Table G-69
BTEX in Soil- Area S
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
S-G-5-7	03/21/03	7	0.00409 J	<0.00900	0.00871 J	<0.0250
S-G-6-5	03/21/03	5	<0.00400	<0.00900	0.00816 J	<0.0250
S-G6wall-10	03/21/03	10	<0.00400	<0.00900	0.00897 J	<0.0250
S-G-7-10	03/21/03	10	0.00859 J	<0.00900	0.013 J	0.0284 J
S-G7wall-8	03/21/03	8	<0.00400	<0.00900	0.00855 J	<0.0250
S-H-3-3	03/21/03	3	0.00495 J	<0.00900	0.008 J	<0.0250
S-H-4-4	03/21/03	4	0.00401 J	<0.00900	0.00993 J	<0.0250
S-H-5-5	03/21/03	5	<0.00400	<0.00900	0.00936 J	<0.0250
S-H5wall-1	03/21/03	1	0.00781 J	0.0104 J	0.0294 J	0.0493 J
S-I-3-5	03/21/03	5	<0.00400	<0.00900	0.00609 J	<0.0250
S-I3wall-3	03/21/03	3	0.00971 J	0.0184 J	0.0175 J	0.0564 J
S-I-4-7	03/24/03	7	0.00607 J	<0.00900	0.014 J	<0.0250
S-I-4wall-4	03/24/03	4	<0.00400	<0.00900	0.00826 J	<0.0250
S-J2wall-4	03/21/03	4	<0.00400	<0.00900	0.00712 J	<0.0250
S-J-3-8	03/24/03	8	<0.00400	<0.00900	0.00876 J	<0.0250
S-J-3-wall-4	03/24/03	4	<0.00400	<0.00900	0.0106 J	<0.0250
S-K-2-6	03/24/03	6	<0.00400	<0.00900	0.0087 J	<0.0250
S-K-2wall-3	03/24/03	3	<0.00400	<0.00900	0.00492 J	<0.0250
S-K-3-7	03/24/03	7	<0.00400	<0.00900	0.00679 J	<0.0250
S-K-3wall-3	03/24/03	3	0.00599 J	<0.00900	0.0125 J	<0.0250

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-70
PAHs in Soil- Area S
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
S-A4wall-2	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-A-5-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-A5wall-4	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-A-6-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0136	<0.0100	<0.0100
S-A6wall-2	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-B-3-1	03/21/03	<0.0100	0.0108	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-B-4-3	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-B-5-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-B-6-7	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0179	<0.0100	<0.0100
S-B-7-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-B7wall-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-2-1	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-3-5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-4-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-5-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-6-7	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-7-7	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-8-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-1-0.5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-2-3	03/21/03	<0.0100	0.0104	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-3-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-4-7	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-5-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-6-10	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-7-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-8-13	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D8wall-10	03/21/03	0.0373	0.0105	<0.0100	<0.0100	0.0105	<0.0100	<0.0100	<0.0100	<0.0100
S-E-2-3	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-E-3-4	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-E-4-5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-E-5-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-E-6-7	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-70
PAHs in Soil- Area S
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
S-E-7-9	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-E-8-14	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-E8wall-12	03/21/03	<0.0100	0.0406	0.0156	0.0102	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-F-2-3	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-F-3-5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-F-4-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-F-5-7	03/21/03	<0.0100	0.168	0.0705	0.057	0.0111	<0.0100	<0.0100	<0.0100	<0.0100
S-F-6-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-F-7-10	03/21/03	<0.0100	0.0349	0.0153	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-G-3-5	03/21/03	<0.0100	0.0613	0.0256	0.0202	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-G-4-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-G-5-7	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-G-6-5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-G6wall-10	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-G-7-10	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-G7wall-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-H-3-3	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-H-4-4	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-H-5-5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-H5wall-1	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-I-3-5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-I3wall-3	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-I-4-7	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-I-4wall-4	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-J2wall-4	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-J-3-8	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-J-3-wall-4	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-K-2-6	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-K-2wall-3	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-K-3-7	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-K-3wall-3	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-70
PAHs in Soil- Area S
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
S-A4wall-2	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-A-5-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-A5wall-4	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-A-6-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-A6wall-2	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-B-3-1	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-B-4-3	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-B-5-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-B-6-7	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-B-7-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-B7wall-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-2-1	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-3-5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-4-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-5-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-6-7	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-7-7	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-8-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-1-0.5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-2-3	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-3-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-4-7	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-5-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-6-10	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-7-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-8-13	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D8wall-10	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	0.0543	<0.0100	<0.0100	0.0632	<0.0100
S-E-2-3	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-E-3-4	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-E-4-5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-E-5-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-E-6-7	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-70
PAHs in Soil- Area S
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
S-E-7-9	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-E-8-14	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-E8wall-12	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0438	<0.0100	<0.0100
S-F-2-3	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-F-3-5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-F-4-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-F-5-7	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	0.0443	<0.0100	0.136	0.0158	<0.0100
S-F-6-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-F-7-10	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0383	<0.0100	<0.0100
S-G-3-5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	0.0163	<0.0100	0.0566	<0.0100	<0.0100
S-G-4-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-G-5-7	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-G-6-5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-G6wall-10	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-G-7-10	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-G7wall-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-H-3-3	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-H-4-4	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-H-5-5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-H5wall-1	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-I-3-5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-I3wall-3	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-I-4-7	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-I-4wall-4	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-J2wall-4	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-J-3-8	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-J-3-wall-4	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-K-2-6	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-K-2wall-3	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-K-3-7	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-K-3wall-3	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

**Table 5-19
TPH in Soil- Area SWL
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
SWL-A-2-10	11/19/02	10	<10.0	<25.0	<5.00
SWL-A2wall-6	11/20/02	6	<10.0	<25.0	<5.00
SWL-B-1-5	11/19/02	5	<10.0	<25.0	<5.00
SWL-B1wall-3	11/19/02	3	<10.0	<25.0	<5.00
SWL-B-2-8.5	11/19/02	8.5	<10.0	<25.0	<5.00
SWL-B2wall-5	11/19/02	5	11.6	<25.0	<5.00
SWL-B-3-11	11/19/02	11	<10.0	<25.0	<5.00
SWL-B3WALL-5	02/07/03	5	<10.0	<25.0	<5.00
SWL-B3WALLA-5	02/07/03	5	<10.0	<25.0	<5.00
SWL-B3WALLC-5	02/07/03	5	<10.0	<25.0	<5.00
SWL-B-4-10	11/19/02	10	<10.0	<25.0	<5.00
SWL-B4toe-10	11/18/02	10	<10.0	<25.0	<5.00
SWL-B4wall-5	11/18/02	5	<10.0	<25.0	<5.00
SWL-B-5-10	11/18/02	10	<10.0	<25.0	<5.00
SWL-B5wall-2	11/18/02	2	183	<25.0	21.1
SWL-C-1-3	11/19/02	3	<10.0	<25.0	<5.00
SWL-C-2-2	11/20/02	2	<10.0	<25.0	<5.00
SWL-C-3-6.5	11/20/02	6.5	<10.0	<25.0	<5.00
SWL-C3wall-4	11/20/02	4	359	72.5	5.44
SWL-C-4-4	11/19/02	4	<10.0	<25.0	<5.00
SWL-C-5-6	11/19/02	6	<10.0	<25.0	<5.00
SWL-C-6-8	11/20/02	8	<10.0	<25.0	<5.00
SWL-C-7-3	11/21/02	3	<10.0	<25.0	<5.00

Table 5-19
TPH in Soil- Area SWL
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
SWL-D-3-3.5	11/20/02	3.5	11.8	<25.0	<5.00
SWL-D-4-4	11/20/02	4	<10.0	<25.0	<5.00
SWL-D-5-7	11/20/02	7	<10.0	<25.0	<5.00
SWL-D-6-6	11/20/02	6	<10.0	<25.0	<5.00
SWL-D-7-3	11/21/02	3	<10.0	<25.0	<5.00
SWL-E-3-0.2	11/20/02	0.2	278	124	<5.00
SWL-E-4-3	11/20/02	3	<10.0	<25.0	<5.00
SWL-E-5-6	11/20/02	6	<10.0	<25.0	<5.00
SWL-E-6-4	11/20/02	4	<10.0	<25.0	<5.00

Values represent total concentration unless noted. < = Not detected at indicated reporting limit.
 --- = Not analyzed. J = Estimated result.

Table G-73
BTEX in Soil- Area SWL
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
SWL-A-2-10	11/19/02	10	0.0149 J	0.0425 J	0.0336 J	0.148
SWL-A2wall-6	11/20/02	6	0.00701 J	0.0145 J	0.0169 J	0.0486 J
SWL-B-1-5	11/19/02	5	0.00407 J	<0.00900	0.00685 J	<0.0250
SWL-B1wall-3	11/19/02	3	<0.00400	<0.00900	0.00736 J	<0.0250
SWL-B-2-8.5	11/19/02	8.5	0.00447 J	<0.00900	0.0131 J	<0.0250
SWL-B2wall-5	11/19/02	5	<0.00400	<0.00900	0.00854 J	<0.0250
SWL-B-3-11	11/19/02	11	<0.00400	<0.00900	0.01 J	<0.0250
SWL-B3WALL-5	02/07/03	5	<0.00400	<0.00900	0.012 J	<0.0250
SWL-B3WALLA-5	02/07/03	5	<0.00400	<0.00900	0.0128 J	<0.0250
SWL-B3WALLC-5	02/07/03	5	<0.00400	<0.00900	0.0104 J	<0.0250
SWL-B-4-10	11/19/02	10	<0.00400	0.0121 J	0.00794 J	0.0254 J
SWL-B4toe-10	11/18/02	10	<0.00400	<0.00900	0.00825 J	<0.0250
SWL-B4wall-5	11/18/02	5	<0.00400	<0.00900	0.00608 J	<0.0250
SWL-B-5-10	11/18/02	10	<0.00400	<0.00900	0.00643 J	<0.0250
SWL-B5wall-2	11/18/02	2	0.00418 J	0.0301 J	0.0102 J	0.0767 J
SWL-C-1-3	11/19/02	3	0.00568 J	<0.00900	0.00856 J	<0.0250
SWL-C-2-2	11/20/02	2	<0.00400	0.00929 J	0.0276 J	0.0411 J
SWL-C-3-6.5	11/20/02	6.5	0.0122 J	0.0151 J	0.0389 J	0.0538 J
SWL-C3wall-4	11/20/02	4	<0.00400	<0.00900	0.0123 J	<0.0250
SWL-C-4-4	11/19/02	4	0.0042 J	<0.00900	0.0102 J	<0.0250
SWL-C-5-6	11/19/02	6	0.00672 J	<0.00900	0.0238 J	0.041 J
SWL-C-6-8	11/20/02	8	0.00438 J	<0.00900	0.0133 J	<0.0250
SWL-C-7-3	11/21/02	3	0.00459 J	<0.00900	0.0127 J	<0.0250

Table G-73
BTEX in Soil- Area SWL
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
SWL-D-3-3.5	11/20/02	3.5	0.00406 J	<0.00900	0.0151 J	<0.0250
SWL-D-4-4	11/20/02	4	0.00522 J	<0.00900	0.0184 J	0.0297 J
SWL-D-5-7	11/20/02	7	0.00426 J	<0.00900	0.00972 J	<0.0250
SWL-D-6-6	11/20/02	6	0.00422 J	<0.00900	0.0128 J	<0.0250
SWL-D-7-3	11/21/02	3	0.00463 J	<0.00900	0.0092 J	<0.0250
SWL-E-3-0.2	11/20/02	0.2	<0.00400	<0.00900	0.00669 J	<0.0250
SWL-E-4-3	11/20/02	3	0.00523 J	0.011 J	0.0158 J	0.0319 J
SWL-E-5-6	11/20/02	6	<0.00400	<0.00900	0.00896 J	<0.0250
SWL-E-6-4	11/20/02	4	<0.00400	<0.00900	0.00797 J	<0.0250

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-74
PAHs in Soil- Area SWL
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i) perylene (mg/kg)
SWL-A-2-10	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-A2wall-6	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B-1-5	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B1wall-3	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B-2-8.5	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B2wall-5	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B-3-11	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B3WALL-5	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B3WALLA-5	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B3WALLC-5	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B-4-10	11/19/02	0.0244	<0.0100	<0.0100	0.0219	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B4toe-10	11/18/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0145	<0.0100	0.0121	<0.0100
SWL-B4wall-5	11/18/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.023	<0.0100	0.0182	<0.0100
SWL-B-5-10	11/18/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0957	0.0216	0.0858	0.0183
SWL-B5wall-2	11/18/02	<0.0100	<0.0100	<0.0100	<0.0100	0.123	0.0755	0.0117	0.026	<0.0100
SWL-C-1-3	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-C-2-2	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-C-3-6.5	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-C3wall-4	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-C-4-4	11/19/02	<0.0100	<0.0100	<0.0100	0.0102	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-C-5-6	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-C-6-8	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	0.0105	0.0773	0.0185	0.0624	0.0176
SWL-C-7-3	11/21/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-D-3-3.5	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-D-4-4	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-D-5-7	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0745	0.0201	0.0862	0.0184
SWL-D-6-6	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0399	<0.0100	0.0293	<0.0100
SWL-D-7-3	11/21/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-E-3-0.2	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-E-4-3	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-E-5-6	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-E-6-4	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	0.0119	0.0855	0.0104	0.0476	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-74
PAHs in Soil- Area SWL
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
SWL-A-2-10	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-A2wall-6	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B-1-5	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B1wall-3	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B-2-8.5	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B2wall-5	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B-3-11	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0111	<0.0100	<0.0100
SWL-B3WALL-5	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B3WALLA-5	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B3WALLC-5	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B-4-10	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0406	0.017	<0.0100
SWL-B4toe-10	11/18/02	<0.0100	0.0855	<0.0100	0.0395	<0.0100	<0.0100	<0.0100	0.0105	0.0331
SWL-B4wall-5	11/18/02	0.0135	0.139	<0.0100	0.0633	<0.0100	<0.0100	<0.0100	0.0174	0.0546
SWL-B-5-10	11/18/02	0.045	0.693	<0.0100	0.125	<0.0100	0.0142	<0.0100	0.0275	0.123
SWL-B5wall-2	11/18/02	0.0126	0.277	<0.0100	0.124	0.171	<0.0100	0.0629	0.227	0.356
SWL-C-1-3	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-C-2-2	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-C-3-6.5	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-C3wall-4	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	0.0113	<0.0100	<0.0100	<0.0100	<0.0100
SWL-C-4-4	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-C-5-6	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-C-6-8	11/20/02	0.0466	0.624	<0.0100	0.192	<0.0100	0.0123	<0.0100	0.0395	0.192
SWL-C-7-3	11/21/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-D-3-3.5	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-D-4-4	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-D-5-7	11/20/02	0.0393	0.3	<0.0100	0.111	<0.0100	0.0134	<0.0100	0.026	0.102
SWL-D-6-6	11/20/02	0.0231	0.229	<0.0100	0.12	<0.0100	<0.0100	<0.0100	0.0417	0.105
SWL-D-7-3	11/21/02	<0.0100	0.0335	<0.0100	0.0184	<0.0100	<0.0100	<0.0100	<0.0100	0.0109
SWL-E-3-0.2	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-E-4-3	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-E-5-6	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-E-6-4	11/20/02	0.0282	0.222	<0.0100	0.269	<0.0100	<0.0100	<0.0100	0.0676	0.225
< = Not detected at indicated reporting limit. --			< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.							

Table G-75
Volatile Petroleum Hydrocarbons in Soil- Area SWL
UNOCAL Edmonds Terminal

SITE	DATE	Aliphatic C5-C6 (mg/kg)	Aliphatic C6-C8 (mg/kg)	Aliphatic C8-C10 (mg/kg)	Aliphatic C10-C12 (mg/kg)	Aromatic C8-C10 (mg/kg)	Aromatic C10-C12 (mg/kg)	Aromatic C12-C13 (mg/kg)	Total Volatile Petroleum Hydrocarbons (mg/kg)
SWL-E-3-0.2	11/20/02	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value. D = Sample diluted due to high analyte concentrations. R = Rejected value.									

Table 5-20
TPH in Soil- Area T
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
T-A-1-0.5	03/27/03	0	<10.0	<25.0	<5.00
T-A-1A-0.5	03/27/03	0	<10.0	<25.0	<5.00
T-A-1B-0.5	03/27/03	0	<10.0	<25.0	<5.00
T-A-1C-0.5	03/27/03	0	15.6	71.7	<5.00
T-A-1D-0.5	03/27/03	0	<10.0	<25.0	<5.00
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.					

Table G-77
BTEX in Soil- Area T
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
T-A-1-0.5	03/27/03	0	0.00633 J	0.00932 J	0.0224 J	0.0268 J
T-A-1A-0.5	03/27/03	0	0.00995 J	0.00994 J	0.0142 J	0.0313 J
T-A-1B-0.5	03/27/03	0	0.00695 J	<0.00900	0.0125 J	<0.0250
T-A-1C-0.5	03/27/03	0	0.00755 J	0.0146 J	0.0202 J	0.0518 J
T-A-1D-0.5	03/27/03	0	0.00483 J	<0.00900	0.0167 J	0.0323 J

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-78
PAHs in Soil- Area T
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
T-A-1-0.5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
T-A-1A-0.5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
T-A-1B-0.5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
T-A-1C-0.5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
T-A-1D-0.5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

**Table G-78
PAHs in Soil- Area T
UNOCAL Edmonds Terminal**

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
T-A-1-0.5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
T-A-1A-0.5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
T-A-1B-0.5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
T-A-1C-0.5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
T-A-1D-0.5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

**Table 5-21
TPH in Soil- Area U
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
U-A-5-5	04/04/03	5	<10.0	<25.0	<5.00
U-A-5WALL-2	04/04/03	2	23.8	<25.0	<5.00
U-A-6-4.5	04/04/03	4.5	<10.0	<25.0	<5.00
U-A-6WALL-2.5	04/04/03	2.5	<10.0	<25.0	<5.00
U-A-7-2.5	04/04/03	2.5	<10.0	<25.0	<5.00
U-B-2-5	04/07/03	5	<10.0	<25.0	<5.00
U-B-2WALL-8	04/07/03	8	<10.0	<25.0	<5.00
U-B-3-10	04/07/03	10	<10.0	<25.0	<5.00
U-B-3WALL-15	04/07/03	15	<10.0	<25.0	<5.00
U-B-4-20	04/04/03	20	<10.0	<25.0	<5.00
U-B-5-8	04/04/03	8	<10.0	<25.0	<5.00
U-B-5WALL-4	04/04/03	4	<10.0	<25.0	<5.00
U-B-6-5	04/04/03	5	<10.0	<25.0	<5.00
U-B-7-2.5	04/04/03	2.5	<10.0	<25.0	<5.00
U-B-8-0.5	04/04/03	0.5	42.7	<25.0	<5.00
U-C-1-6	04/07/03	6	<10.0	<25.0	<5.00
U-C-1-WALL-4	04/07/03	4	<10.0	<25.0	<5.00
U-C-2WALL-6	04/07/03	6	<10.0	<25.0	<5.00
U-C-3-10	04/07/03	10	<10.0	<25.0	<5.00
U-C-3WALL-15	04/07/03	15	<10.0	<25.0	<5.00
U-C-4-20	04/04/03	20	<10.0	<25.0	<5.00
U-C-5-5	04/04/03	5	<10.0	<25.0	<5.00
U-C-6-5	04/04/03	5	<10.0	<25.0	<5.00

Table 5-21
TPH in Soil- Area U
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
U-C-7-6	04/04/03	6	<10.0	<25.0	<5.00
U-C-8-7	04/04/03	7	<10.0	<25.0	<5.00
U-C-8WALL-3.5	04/04/03	3.5	<10.0	<25.0	<5.00
U-D-1-6	04/07/03	6	<10.0	<25.0	<5.00
U-D-2-3	04/07/03	3	<10.0	<25.0	<5.00
U-D-3-6	04/07/03	6	<10.0	<25.0	<5.00
U-D-3-WALL-6	04/07/03	6	<10.0	<25.0	<5.00
U-D-4-8	04/04/03	8	<10.0	<25.0	<5.00
U-D-5-3	04/04/03	3	<10.0	<25.0	<5.00
U-E-1-6	04/07/03	6	<10.0	<25.0	<5.00
U-F-1-7	04/07/03	7	<10.0	<25.0	<5.00
U-F-1WALL-3	04/07/03	3	<10.0	<25.0	<5.00
U-G-1-7	04/07/03	7	<10.0	<25.0	<5.00
U-G-1WALL-4	04/07/03	4	<10.0	<25.0	<5.00
U-G-2-3	04/07/03	3	<10.0	<25.0	<5.00
U-H-1-5	04/07/03	5	<10.0	<25.0	<5.00
U-H-1WALL-2	04/07/03	2	<10.0	<25.0	<5.00
U-H-2-3	04/07/03	3	<10.0	<25.0	<5.00
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.					

Table G-81
BTEX in Soil- Area U
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
U-A-5-5	04/04/03	5	0.0102 J	<0.00900	0.0123 J	0.0565 J
U-A-5WALL-2	04/04/03	2	<0.00400	<0.00900	0.00622 J	<0.0250
U-A-6-4.5	04/04/03	4.5	<0.00400	<0.00900	0.0074 J	<0.0250
U-A-6WALL-2.5	04/04/03	2.5	<0.00400	<0.00900	0.00875 J	<0.0250
U-A-7-2.5	04/04/03	2.5	<0.00400	<0.00900	0.00429 J	<0.0250
U-B-2-5	04/07/03	5	<0.00400	<0.00900	0.0072 J	<0.0250
U-B-2WALL-8	04/07/03	8	<0.00400	<0.00900	0.00602 J	<0.0250
U-B-3-10	04/07/03	10	0.00745 J	<0.00900	0.0105 J	<0.0250
U-B-3WALL-15	04/07/03	15	0.62	<0.00900	0.00563 J	<0.0250
U-B-4-20	04/04/03	20	0.00429 J	<0.00900	0.00664 J	<0.0250
U-B-5-8	04/04/03	8	0.00581 J	<0.00900	<0.00400	<0.0250
U-B-5WALL-4	04/04/03	4	0.005 J	<0.00900	<0.00400	<0.0250
U-B-6-5	04/04/03	5	<0.00400	<0.00900	0.00519 J	<0.0250
U-B-7-2.5	04/04/03	2.5	<0.00400	<0.00900	0.00826 J	0.0251 J
U-B-8-0.5	04/04/03	0.5	<0.00400	0.0109 J	0.0118 J	0.0409 J
U-C-1-6	04/07/03	6	<0.00400	<0.00900	0.00982 J	<0.0250
U-C-1-WALL-4	04/07/03	4	0.00842 J	<0.00900	0.0144 J	0.0253 J
U-C-2WALL-6	04/07/03	6	<0.00400	<0.00900	0.00629 J	<0.0250
U-C-3-10	04/07/03	10	0.014 J	0.011 J	0.0149 J	0.0696 J
U-C-3WALL-15	04/07/03	15	1.04	<0.00900	0.00713 J	<0.0250
U-C-4-20	04/04/03	20	<0.00400	<0.00900	0.00622 J	<0.0250
U-C-5-5	04/04/03	5	<0.00400	<0.00900	0.00427 J	<0.0250
U-C-6-5	04/04/03	5	0.0252 J	<0.00900	0.0115 J	0.0298 J

Table G-81
BTEX in Soil- Area U
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
U-C-7-6	04/04/03	6	<0.00400	<0.00900	0.0077 J	<0.0250
U-C-8-7	04/04/03	7	<0.00400	<0.00900	0.00923 J	0.0256 J
U-C-8WALL-3.5	04/04/03	3.5	0.00513 J	<0.00900	0.0169 J	0.0333 J
U-D-1-6	04/07/03	6	<0.00400	<0.00900	0.00626 J	<0.0250
U-D-2-3	04/07/03	3	0.00587 J	<0.00900	0.0108 J	<0.0250
U-D-3-6	04/07/03	6	<0.00400	<0.00900	0.00666 J	<0.0250
U-D-3-WALL-6	04/07/03	6	<0.00400	<0.00900	0.00749 J	<0.0250
U-D-4-8	04/04/03	8	0.127	<0.00900	0.0198 J	0.0633 J
U-D-5-3	04/04/03	3	<0.00400	<0.00900	0.00611 J	<0.0250
U-E-1-6	04/07/03	6	0.00612 J	<0.00900	0.0105 J	<0.0250
U-F-1-7	04/07/03	7	<0.00400	<0.00900	0.00812 J	<0.0250
U-F-1WALL-3	04/07/03	3	0.00406 J	<0.00900	0.00821 J	<0.0250
U-G-1-7	04/07/03	7	0.00995 J	<0.00900	0.0113 J	0.0522 J
U-G-1WALL-4	04/07/03	4	<0.00400	<0.00900	0.0123 J	<0.0250
U-G-2-3	04/07/03	3	0.00431 J	<0.00900	0.0103 J	<0.0250
U-H-1-5	04/07/03	5	0.00704 J	0.00957 J	0.0285 J	0.0443 J
U-H-1WALL-2	04/07/03	2	0.00591 J	0.015 J	0.0135 J	0.0471 J
U-H-2-3	04/07/03	3	<0.00400	<0.00900	0.0165 J	0.0262 J

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-82
PAHs in Soil- Area U
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)
U-A-5-5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0214	<0.0100
U-A-5WALL-2	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-A-6-4.5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-A-6WALL-2.5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-A-7-2.5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-2-5	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-2WALL-8	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-3-10	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-3WALL-15	04/07/03	0.0152	0.0144	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-4-20	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-5-8	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-5WALL-4	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-6-5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-7-2.5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-8-0.5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-1-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-1-WALL-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-2WALL-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-3-10	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-3WALL-15	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0163
U-C-4-20	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-5-5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-6-5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-7-6	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-8-7	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-8WALL-3.5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-D-1-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-D-2-3	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-D-3-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-82
PAHs in Soil- Area U
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)
U-D-3-WALL-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-D-4-8	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-D-5-3	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-E-1-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-F-1-7	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-F-1WALL-3	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-G-1-7	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-G-1WALL-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-G-2-3	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-H-1-5	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-H-1WALL-2	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-H-2-3	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-82
PAHs in Soil- Area U
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(g,h,i) perylene (mg/kg)	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
U-A-5-5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-A-5WALL-2	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-A-6-4.5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-A-6WALL-2.5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-A-7-2.5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-2-5	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-2WALL-8	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-3-10	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-3WALL-15	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0152	<0.0100
U-B-4-20	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-5-8	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-5WALL-4	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-6-5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-7-2.5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-8-0.5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-1-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-1-WALL-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-2WALL-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-3-10	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0136	<0.0100	<0.0100
U-C-3WALL-15	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-4-20	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-5-5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-6-5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-7-6	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-8-7	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-8WALL-3.5	04/04/03	<0.0100	<0.0100	<0.0100	0.0113	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-D-1-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-D-2-3	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-D-3-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-82
PAHs in Soil- Area U
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(g,h,i) perylene (mg/kg)	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
U-D-3-WALL-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-D-4-8	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-D-5-3	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-E-1-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-F-1-7	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-F-1WALL-3	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-G-1-7	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-G-1WALL-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-G-2-3	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-H-1-5	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-H-1WALL-2	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-H-2-3	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. Values represent total concentrations unless noted. < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value

Table 5-22
TPH in Soil- Area V
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
V-1-5	04/08/03	5	<10.0	<25.0	<5.00
V-2-3	04/08/03	3	<10.0	<25.0	<5.00
V-3-7	04/08/03	7	<10.0	<25.0	<5.00
V-4-4	04/08/03	4	<10.0	<25.0	<5.00
V-5-5	04/08/03	5	<10.0	<25.0	<5.00
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.					

Table G-85
BTEX in Soil- Area V
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
V-1-5	04/08/03	5	<0.00400	<0.00900	0.00712 J	<0.0250
V-2-3	04/08/03	3	0.00483 J	0.0114 J	0.0268 J	0.0541 J
V-3-7	04/08/03	7	0.00769 J	0.016 J	0.0155 J	0.0484 J
V-4-4	04/08/03	4	<0.00400	<0.00900	0.00567 J	<0.0250
V-5-5	04/08/03	5	<0.00400	0.00907 J	0.00968 J	0.0301 J

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-86
PAHs in Soil- Area V
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
V-1-5	04/08/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
V-2-3	04/08/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
V-3-7	04/08/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
V-4-4	04/08/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
V-5-5	04/08/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

**Table G-86
PAHs in Soil- Area V
UNOCAL Edmonds Terminal**

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
V-1-5	04/08/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
V-2-3	04/08/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
V-3-7	04/08/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
V-4-4	04/08/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
V-5-5	04/08/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table 5-23
TPH in Soil- Area 6B
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)
6B-A-4-1	09/13/02	1	<10.0	<25.0	<5.00
6B-A-5-0	09/13/02	0	126	<25.0	84.2
6B-A-6-0	09/13/02	0	<10.0	<25.0	<5.00
6B-B-3-3	09/13/02	3	<10.0	<25.0	<5.00
6B-B-4-3	09/13/02	3	<10.0	<25.0	<5.00
6B-B-6-6	09/13/02	6	<10.0	<25.0	<5.00
6B-B-7-3	09/13/02	3	<10.0	<25.0	<5.00
6B-C-2-0.5	09/13/02	0.5	<10.0	<25.0	<5.00
6B-C-3-0	09/13/02	0	<10.0	<25.0	<5.00
6B-C-5-3	09/13/02	3	<10.0	<25.0	<5.00
6B-C-6-6	09/13/02	6	<10.0	<25.0	<5.00
6B-D-5-5.5	09/13/02	5.5	<10.0	<25.0	<5.00
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.					

Table G-89
BTEX in Soil- Area 6B
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
6B-A-4-1	09/13/02	1	<0.00400	0.0143 J	0.00789 J	<0.0250
6B-A-5-0	09/13/02	0	<0.00400	0.0129 J	0.00853 J	<0.0250
6B-A-6-0	09/13/02	0	<0.00400	0.0123 J	0.00881 J	<0.0250
6B-B-3-3	09/13/02	3	<0.00400	0.0112 J	0.00828 J	<0.0250
6B-B-4-3	09/13/02	3	<0.00400	0.0127 J	0.00923 J	<0.0250
6B-B-6-6	09/13/02	6	<0.00400	0.0146 J	0.00894 J	<0.0250
6B-B-7-3	09/13/02	3	<0.00400	0.0131 J	0.00691 J	<0.0250
6B-C-2-0.5	09/13/02	0.5	<0.00400	0.0127 J	0.00801 J	<0.0250
6B-C-3-0	09/13/02	0	<0.00400	0.0141 J	0.00796 J	<0.0250
6B-C-5-3	09/13/02	3	<0.00400	0.013 J	0.00917 J	<0.0250
6B-C-6-6	09/13/02	6	<0.00400	0.0141 J	0.00808 J	<0.0250
6B-D-5-5.5	09/13/02	5.5	<0.00400	0.0128 J	0.00966 J	<0.0250
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.						

Table G-90
PAHs in Soil- Area 6B
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
6B-A-4-1	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-A-5-0	09/13/02	0.035	0.0186	<0.0100	<0.0100	<0.0100	<0.0100	0.0335	0.0127	0.0216
6B-A-6-0	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.016	<0.0100	<0.0100
6B-B-3-3	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-B-4-3	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-B-6-6	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-B-7-3	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0212	<0.0100	<0.0100
6B-C-2-0.5	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0206	<0.0100	<0.0100
6B-C-3-0	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-C-5-3	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-C-6-6	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-D-5-5.5	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-90
PAHs in Soil- Area 6B
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
6B-A-4-1	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-A-5-0	09/13/02	0.0209	0.0142	<0.0100	<0.0100	<0.0100	0.0149	<0.0100	<0.0100	<0.0100
6B-A-6-0	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-B-3-3	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-B-4-3	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-B-6-6	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-B-7-3	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-C-2-0.5	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-C-3-0	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-C-5-3	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-C-6-6	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-D-5-5.5	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicate < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table 5-24
TPH and BTEX in Soil- SS-204
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
SS-204-0	09/11/02	0	24.8	69.1	<5.00	<0.00400	0.0177 J	0.00998 J	0.032 J
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.									

Table 5-25
PAHs in Soil- SS-204
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
SS-204-0	09/11/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Values represent total concentrations unless noted. < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.										

Table 5-25
PAHs in Soil- SS-204
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
SS-204-0	09/11/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.										

Table 5-26
TPH and BTEX in Soil- SS-202, SS-209, and SS-213
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	TPH - DRO (mg/kg)	TPH - HO (mg/kg)	TPH - GRO (mg/kg)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
2-SS-202-0.5	04/18/03	0.5	38.6	47.6	<5.00	<0.00400	<0.00900	0.00648 J	<0.0250
2-SS-209-0.5	04/18/03	0.5	25.4	35.7	<5.00	<0.00400	<0.00900	0.011 J	0.0272 J
6C-SS213-0.5	04/18/03	0.5	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

**Table 5-27
PAHs in Soil- SS-202,
SS-209, and SS-213
UNOCAL Edmonds Terminal**

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)
2-SS-202-0.5	04/18/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0192	0.0207
2-SS-209-0.5	04/18/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0108	<0.0100
6C-SS213-0.5	04/18/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

**Table 5-27
PAHs in Soil- SS-202,
SS-209, and SS-213
UNOCAL Edmonds Terminal**

SITE	DATE	Benzo(g,h,i) perylene (mg/kg)
2-SS-202-0.5	04/18/03	0.0299
2-SS-209-0.5	04/18/03	0.0101
6C-SS213-0.5	04/18/03	<0.0100

**Table 5-27
PAHs in Soil- SS-202,
SS-209, and SS-213
UNOCAL Edmonds Terminal**

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
2-SS-202-0.5	04/18/03	0.0207	<0.0100	<0.0100	0.0406	<0.0100	0.0184	<0.0100	0.0245	0.0345
2-SS-209-0.5	04/18/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6C-SS213-0.5	04/18/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.										

**Table 5-28
Arsenic in Soil- Area 1A
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
1A-A-1-0	08/26/02	0	4.5
1A-A-2-0	08/26/02	0	19.3
1A-A-3-0	08/26/02	0	15.6
1A-A-4-0	08/26/02	0	7.9
1A-B-1-0	08/26/02	0	8.6
1A-B-2-0	08/26/02	0	8.1
1A-B-3-0	08/26/02	0	4.5
1A-B-4A-0	12/05/02	0	3.9 J
1A-B-4B-0	12/05/02	0	2.8 J
1A-C-1-0	08/26/02	0	6.3
1A-C-2-0	08/26/02	0	4.3
1A-C-3-0	08/26/02	0	7.5
1A-C-4A-0	12/05/02	0	10.7 J
1A-C-4B-0	12/05/02	0	3.3 J
1A-D-1-0	08/26/02	0	5.9
1A-D-2-0	08/26/02	0	5.1
1A-D-3-0	08/26/02	0	12.3
1A-D-4-0	08/26/02	0	11.3
<p>< = Not detected at indicated reporting limit. J = Estimated Value.</p>			

Table 5-29
Arsenic in Soil- Area 1B
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
1B-A-2-0	05/01/03	0	9.41
1B-A-3-0	05/12/03	0	2.82
1B-A-3A-0	05/12/03	0	5.16
1B-A-3C-0	05/12/03	0	4.29
1B-A-3D-0	05/15/03	0	5.50
1B-B-2-0	05/12/03	0	4.54
1B-B-2B-0	05/12/03	0	2.54
1B-B-2C-0	05/12/03	0	3.96
1B-B-2D-0	05/12/03	0	4.14
1B-B-3-0	05/12/03	0	3.71
1B-B-3A-0	05/12/03	0	9.13
1B-B-4-0	05/01/03	0	8.27
1B-C-1-0	05/01/03	0	6.04
1B-C-2-0	05/01/03	0	9.38
1B-C-3-0	05/12/03	0	4.70
1B-C-3A-0	05/12/03	0	11.0
1B-C-3B-0	05/12/03	0	17.3
1B-C-3C-0	05/12/03	0	4.80
<p>< = Not detected at indicated reporting limit. J = Estimated Value.</p>			

Table 5-30
Arsenic in Soil- Area 2
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
2-A-3-0	04/10/03	0	2.70
2-A-5-0	04/10/03	0	2.13
2-A-7-0	04/10/03	0	4.18
2-B-1-0	04/10/03	0	6.01
2-B-2-0	04/10/03	0	5.33
2-B-4-0	04/10/03	0	2.28
2-B-4-10	04/10/03	0	2.69
2-B-6-0	04/10/03	0	4.12
2-B-8-0	04/10/03	0	6.82
2-B-9-0	04/10/03	0	3.46
2-C-3-0	04/10/03	0	3.40
2-C-5-0	04/10/03	0	4.20
2-C-7-0	04/10/03	0	5.76
< = Not detected at indicated reporting limit. J = Estimated Value.			

Table 5-31
Arsenic in Soil- Area 4
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
4-D-10-0	05/09/03	0	2.50
4-E-1-0	08/30/02	0	5.1
4-E-2-0	08/30/02	0	5.9
4-E-3-0	08/30/02	0	3.0
4-E-4-0	08/30/02	0	4.2
4-E-8-0	04/30/03	0	3.77
4-E-9-0	05/09/03	0	2.57
4-E-10-0	05/09/03	0	2.06
4-F-1-0	08/30/02	0	4.5
4-F-2-0	08/30/02	0	16.2
4-F-3-0	08/30/02	0	< 2.3
4-F-4-0	08/30/02	0	3.1
4-F-5-0	08/30/02	0	4.8
4-F-8-0	04/15/03	0	4.35
4-F-9-0	05/09/03	0	2.40
4-F-10-0	05/09/03	0	1.51
4-G-1-0	08/30/02	0	6.0
4-G-2-0	08/30/02	0	8.0
4-G-3-0	08/30/02	0	5.5
4-G-4-0	08/30/02	0	4.6
4-G-5D-0	04/28/03	0	3.86
4-G-6-0	08/30/02	0	4.0
4-G-7-0	04/29/03	0	2.31
4-G-7A-0	04/29/03	0	2.31
4-G-7B-0	04/29/03	0	13.3
4-G-7D-0	04/29/03	0	9.93
4-G-8-0	04/15/03	0	2.92
4-G-9-0	05/09/03	0	1.68
4-G-10-0	05/09/03	0	1.77
4-H-6-0	04/15/03	0	4.51
4-H-7-0	04/15/03	0	3.11

**Table 5-31
Arsenic in Soil- Area 4
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
4-H-8-0	04/15/03	0	17.0
4-H-9-0	05/09/03	0	2.18
4-H-10-0	05/09/03	0	1.18
4-I-6-0	04/15/03	0	10.1
4-I-7-0	04/15/03	0	19.2
4-I-8-0	04/15/03	0	4.19
4-I-9-0	05/09/03	0	2.05
4-I-10-0	05/09/03	0	2.37
4-J-6-0	04/15/03	0	4.23
4-J-7-0	04/15/03	0	16.4
4-J-8-0	05/09/03	0	4.01
4-J-8A-0	04/28/03	0	8.20
4-J-8B-0	04/28/03	0	4.51
4-J-8C-0	04/28/03	0	7.91
4-J-8D-0	04/28/03	0	17.6
4-K-6-0	04/30/03	0	11.5
4-K-6A-0	04/30/03	0	3.37
4-K-6B-0	04/30/03	0	5.39
4-K-6C-0	04/30/03	0	7.62
4-K-6D-0	04/30/03	0	12.8
4-K-7-0	04/15/03	0	4.71
4-K-8-0	04/15/03	0	18.8
4-L-6-0	04/15/03	0	3.99
4-L-7-0	04/15/03	0	15.2
4-L-8-0	04/28/03	0	9.15
4-L-8A-0	04/28/03	0	7.75
4-L-8B-0	04/28/03	0	12.9
4-L-8C-0	05/09/03	0	7.24
4-M-6-0	04/15/03	0	3.47
4-M-7-0	04/15/03	0	17.9
4-M-8-0	04/28/03	0	6.01

**Table 5-31
Arsenic in Soil- Area 4
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
4-M-8A-0	04/28/03	0	7.78
4-M-8C-0	05/09/03	0	6.88
4-M-8D-0	04/28/03	0	9.18
4-N-6-0	04/15/03	0	2.46
4-N-7-0	04/25/03	0	13.5
4-N-7A-0	04/25/03	0	4.30
4-N-7B-0	04/25/03	0	3.63
4-N-7C-0	04/25/03	0	2.57
4-N-7D-0	04/25/03	0	3.78
4-N-8-0	04/15/03	0	11.8
4-O-6-0	04/15/03	0	4.04
4-O-7-0	04/25/03	0	5.97
4-O-7A-0	04/25/03	0	9.27
4-O-7C-0	04/25/03	0	5.52
4-O-7D-0	04/25/03	0	5.54
4-O-8-0	04/15/03	0	14.4
4-P-6-0	04/15/03	0	5.99
4-P-7-0	04/15/03	0	3.26
4-P-8-0	04/15/03	0	2.92
4-P-9-0	05/12/03	0	3.19
4-Q-6-0	05/01/03	0	10.1
4-Q-7-0	05/01/03	0	5.00
4-Q-8-0	05/01/03	0	14.8
4-Q-9-0	05/12/03	0	3.23
4-Q-9A-0	05/12/03	0	2.16
4-Q-9C-0	05/12/03	0	6.13
4-R-7-0	05/01/03	0	4.00
4-R-8-0	05/12/03	0	1.86
4-R-8A-0	05/12/03	0	2.61
4-R-8C-0	05/15/03	0	3.53
4-R-9-0	05/01/03	0	2.73

Table 5-31
Arsenic in Soil- Area 4
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
4-S-7-0	05/12/03	0	4.96
4-S-7A-0	05/12/03	0	8.47
4-S-7C-0	05/12/03	0	13.5
4-S-8-0	05/01/03	0	16.7
4-T-7-0	05/12/03	0	4.75
4-T-7A-0	05/12/03	0	4.71
4-T-7C-0	05/12/03	0	6.73
4-T-7D-0	05/12/03	0	4.62
< = Not detected at indicated reporting limit. J = Estimated Value.			

**Table 5-32
Arsenic in Soil- Area 6B
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
6B-A-1-0	09/16/02	0	5.59
6B-A-2-0	09/16/02	0	1.01
6B-A-3-0	09/16/02	0	2.81
6B-A-4-1	09/13/02	0	3.78
6B-A-5-0	09/13/02	0	3.07
6B-A-6-0	09/13/02	0	2.48
6B-A-7-0	09/16/02	0	3.94
6B-B-1-0	09/16/02	0	3.05
6B-B-2-0	09/13/02	0	2.88
6B-B-3-3	09/13/02	0	4.38
6B-B-4-3	09/13/02	0	7.76
6B-B-5-0	09/13/02	0	2.36
6B-B-6-6	09/13/02	0	2.71
6B-B-7-3	09/13/02	0	4.81
6B-C-1-0	09/16/02	0	2.51
6B-C-2-0.5	09/13/02	0	2.98
6B-C-3-0	09/13/02	0	2.62
6B-C-4-0	09/16/02	0	2.09
6B-C-5-3	09/13/02	0	6.35
6B-C-6-6	09/13/02	0	2.32
6B-C-7-0	09/16/02	0	9.91
6B-D-1-0	09/16/02	0	3.37
6B-D-2-0	09/16/02	0	2.73
6B-D-3-0	09/16/02	0	2.9
6B-D-4-0	09/16/02	0	2.09
6B-D-5-0	09/16/02	0	4.79
6B-D-5-5.5	09/13/02	0	3.03
6B-D-6-0	05/12/03	0	3.92
6B-D-7-0	04/09/03	0	3.78
6B-E-1-0	09/16/02	0	4.89
6B-E-2-0	09/16/02	0	4.62

Table 5-32
Arsenic in Soil- Area 6B
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
6B-E-3-0	09/16/02	0	4.3
6B-E-4-0	09/16/02	0	5.2
6B-E-5-0	04/09/03	0	3.98
6B-E-6-0	04/09/03	0	3.08

< = Not detected at indicated reporting limit.
J = Estimated Value.

**Table 5-33
Arsenic in Soil- Area 6C
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
6C-A-10-0	04/11/03	0	4.03
6C-A-12-0	04/11/03	0	11.5
6C-A-14-0	04/11/03	0	6.02
6C-A-16-0	04/11/03	0	4.03
6C-A-19-0	04/11/03	0	2.69
6C-A-21-0	04/11/03	0	4.82
6C-A-22-0	04/11/03	0	3.21
6C-A-4-0	04/11/03	0	2.32
6C-A-6-0	04/11/03	0	2.98
6C-A-8-0	04/11/03	0	1.72
6C-B-1-0	04/11/03	0	4.92
6C-B-11-0	04/11/03	0	2.84
6C-B-13-0	04/11/03	0	4.28
6C-B-15-0	04/11/03	0	3.19
6C-B-17-0	04/11/03	0	3.58
6C-B-18-0	04/11/03	0	4.79
6C-B-20-0	04/11/03	0	2.88
6C-B-22-0	04/11/03	0	3.93
6C-B-23-0	04/11/03	0	3.39
6C-B-3-0	04/11/03	0	1.73
6C-B-5-0	04/11/03	0	3.93
6C-B-7-0	04/11/03	0	4.61
6C-B-9-0	04/11/03	0	3.49
6C-C-10-0	04/11/03	0	3.75
6C-C-12-0	04/11/03	0	5.11
6C-C-14-0	04/11/03	0	4.24
6C-C-16-0	04/11/03	0	3.30
6C-C-19-0	04/11/03	0	1.96
6C-C-2-0	04/11/03	0	4.81

Table 5-33
Arsenic in Soil- Area 6C
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
6C-C-21-0	04/11/03	0	4.66
6C-C-22-0	04/11/03	0	5.59
6C-C-4-0	04/11/03	0	2.44
6C-C-6-0	04/11/03	0	3.10
6C-C-8-0	04/11/03	0	1.91

< = Not detected at indicated reporting limit.
J = Estimated Value.

Table 5-34
Arsenic in Soil- Area 8
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
8-A-3-0	01/03/03	0	6.8
8-C-1-0	01/03/03	0	8.6
8-C-3-0	01/03/03	0	6.5
8-C-5-0	01/03/03	0	4.3
8-E-1-0	01/03/03	0	9.0
8-E-3-0	01/03/03	0	6.3
8-E-5-0	01/03/03	0	8.1
8-E-7-0	01/03/03	0	5.8
8-G-3-0	01/03/03	0	9.7
8-G-5-0	01/03/03	0	6.2
8-G-7-0	01/03/03	0	3.7
8-I-3-0	01/03/03	0	6.4
8-I-5-0	01/03/03	0	15.2
8-I-7-0	01/03/03	0	3.2
< = Not detected at indicated reporting limit. J = Estimated Value.			

Table 5-35
Arsenic in Soil- Area B
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
B-A-3-0	01/31/03	0	4.07
B-A-5-0	01/31/03	0	11.2
B-A-7-0	02/11/03	0	6.67
B-C-1-0	02/03/03	0	6.59
B-C-3-0	01/31/03	0	5.77
B-C-5-0-1	01/31/03	0	5.18
B-C-7-0	01/31/03	0	11.5
B-E-1-0	02/03/03	0	4.10
B-E-3-0	02/01/03	0	6.27
B-E-5-0	01/31/03	0	4.31
B-E-7-0	01/31/03	0	4.58
B-E-9-0	02/03/03	0	6.85
B-G-1-0	02/03/03	0	8.60
B-G-3-0	01/31/03	0	6.49
B-G-5-0	01/31/03	0	5.48
B-G-7-0	01/31/03	0	4.85
B-G-9-0	02/03/03	0	7.45
B-I-3-0	02/03/03	0	4.10
B-I-5-0	02/03/03	0	4.42
B-I-7-0	02/03/03	0	8.57
< = Not detected at indicated reporting limit. J = Estimated Value.			

Table5-36
Arsenic in Soil- Area C
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
C-A-2-0	09/24/02	0	8.03
C-A-3-0	09/24/02	0	5.64
C-B-1-0	09/24/02	0	5.85
C-B-2-3	09/24/02	0	3.60
C-B-3-0	09/24/02	0	4.33
C-B-4-0	09/24/02	0	4.42
C-C-1-0	09/24/02	0	4.04
C-C-2-0	09/24/02	0	2.57
C-C-3-0	09/24/02	0	4.61
C-C-4-0	09/24/02	0	4.14
C-D-1-0	09/24/02	0	7.92
C-D-2-0	09/24/02	0	5.24
C-D-3-5	09/20/02	0	4.90
C-D-4-3	09/24/02	0	2.94
C-E-1-0	09/24/02	0	6.07
C-E-2-0	09/24/02	0	7.40
C-E-3-0	09/24/02	0	5.71
C-E-4-0	09/24/02	0	6.32

< = Not detected at indicated reporting limit.
J = Estimated Value.

**Table 5-37
Arsenic in Soil- Area F
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
F-B-2-0	10/25/02	0	2.80
F-B-3-6	10/02/02	0	4.39
F-B-4-8	10/02/02	0	3.12
F-B-5-9	10/02/02	0	3.13
F-B-6-9	10/02/02	0	6.91
F-C-2-2	10/18/02	0	2.56
F-C-3-7.5	10/02/02	0	2.57
F-C-4-7.5	10/02/02	0	2.19
F-C-5-7.5	10/02/02	0	4.82
F-C-6-8	10/02/02	0	5.59
F-C-7-8.5	10/02/02	0	3.46
F-D-2-2	10/18/02	0	2.51
F-D-3-7.5	10/02/02	0	4.48
F-D-4-6.5	10/02/02	0	3.77
F-D-5-6	10/02/02	0	3.12
F-D-6-6	10/04/02	0	3.13
F-D-7-9	10/04/02	0	3.05
F-E-1-0	10/25/02	0	3.58
F-E-2-2	10/18/02	0	2.85
F-E-3-2.5	10/18/02	0	3.09
F-E-4-5	10/18/02	0	2.08
F-E-5-6.5	10/18/02	0	2.02
F-E-6-8	10/04/02	0	3.31
F-E-7-8	10/04/02	0	2.48
F-F-2-0.5	10/18/02	0	2.25
F-F-3-3.5	10/18/02	0	2.00
F-F-4-4	10/18/02	0	2.58
F-F-5-3.5	10/18/02	0	2.55
F-F-6-6.5	10/04/02	0	2.05

Table 5-37
Arsenic in Soil- Area F
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
F-F-7-9	10/04/02	0	2.30
F-F-8-3	10/04/02	0	2.81
F-G-2-0	10/25/02	0	5.89
F-G-3-2	10/18/02	0	2.32
F-G-4-2.5	10/18/02	0	2.56
F-G-5-3	10/18/02	0	2.82
F-G-6-7.5	10/04/02	0	4.01
F-G-7-10	10/04/02	0	2.71
F-G-8-10	10/18/02	0	5.27
F-H-2-0	10/25/02	0	7.14
F-H-3-1	10/18/02	0	3.95
F-H-4-3.5	10/18/02	0	2.38
F-H-5-9	10/18/02	0	2.18
F-H-6-10	10/18/02	0	2.19
F-H-7-11	10/18/02	0	3.06
F-H-8-10	10/18/02	0	3.30
F-I-4-0	10/29/02	0	2.16
F-I-5-5	10/18/02	0	3.69
F-I-6-8.5	10/18/02	0	7.57
F-I-7-9	10/18/02	0	4.51
< = Not detected at indicated reporting limit. J = Estimated Value.			

**Table 5-38
Arsenic in Soil- Area H
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
H-C-3-0	03/26/03	0	5.61
H-C-5-0	03/26/03	0	18.2
H-C-7-0	03/26/03	0	6.89
H-E-1-0	03/26/03	0	5.81
H-E-3-0	03/25/03	0	5.15
H-E-5-0	03/26/03	0	4.00
H-E-7-0	03/26/03	0	8.37
H-G-1-0	03/26/03	0	10.6
H-G-3-0	03/25/03	0	3.33
H-G-5-0	03/26/03	0	4.65
H-G-7-0	03/28/03	0	6.44
H-I-11-0	03/27/03	0	16.6
H-I-3-0	03/26/03	0	4.96
H-I-5-0	03/26/03	0	12.7
H-I-7-0	03/26/03	0	6.94
H-I-9-0	03/26/03	0	3.25
H-K-5-0	03/27/03	0	7.62
H-K-7-0	03/27/03	0	10.3
H-K-9-0	03/27/03	0	4.61
H-M-5-0	03/27/03	0	8.00
H-M-7-0	03/27/03	0	3.53
< = Not detected at indicated reporting limit. J = Estimated Value.			

Table 5-39
Arsenic in Soil- Area I
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
I-A-3-0	10/31/02	0	4.94
I-B-1-0	10/31/02	0	2.81
I-B-2-0	10/31/02	0	4.31
I-B2Wall-3	10/31/02	0	1.55
I-B-3-0	10/31/02	0	6.37
I-B-4-3	10/31/02	0	6.29
I-C-1-0	10/31/02	0	6.58
I-C-2-2	10/31/02	0	5.88
I-C-3-4	10/31/02	0	6.23
I-C-4-8	10/31/02	0	3.47
I-C4Wall-4	10/31/02	0	2.76
I-C-5-0	10/31/02	0	10.5
I-D-1-1	10/31/02	0	4.73
I-D-2-2	10/31/02	0	6.31
I-D-3-4	10/31/02	0	5.04
I-D-4-8	10/31/02	0	3.88
I-D-5-0	10/31/02	0	9.81
I-E-2-0	10/31/02	0	3.63
I-E-3-0	10/31/02	0	7.19
I-E-4-2	10/31/02	0	3.39
I-E-5-0	10/31/02	0	5.92
I-F-3-0	10/31/02	0	5.32
I-F-4-0	10/31/02	0	7.68
< = Not detected at indicated reporting limit. J = Estimated Value.			

Table 5-40
Arsenic in Soil- Area K
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
K-A-3-0	03/03/03	0	3.57
K-A-3B-0	03/03/03	0	5.27
K-A-3C-0	03/03/03	0	6.49
K-C-1-0	02/05/03	0	13.8
K-C-3-0	02/05/03	0	5.60
K-C-5-0	02/05/03	0	4.43
K-E-1-0	03/13/03	0	8.14
K-E-3-0	03/13/03	0	12.4
K-E-5-0	03/21/03	0	7.87
K-E-7-0	03/21/03	0	5.68
K-E-9-0	03/13/03	0	3.55
K-G-5-0	03/13/03	0	14.0
< = Not detected at indicated reporting limit. J = Estimated Value.			

Table 5-41
Arsenic in Soil- Area L
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
L-A-2-0	02/21/03	0	11.0
L-A-4-0	02/21/03	0	6.99
L-C-2-0	02/21/03	0	7.00
L-C-4-0	02/21/03	0	2.16
L-E-2-0	02/21/03	0	10.2
L-E-4-0	02/21/03	0	8.74
L-G-2-0	02/21/03	0	7.45
L-G-4-0	02/21/03	0	9.26
L-I-2-0	02/21/03	0	6.88
L-I-4-0	02/26/03	0	9.12
<p>< = Not detected at indicated reporting limit. J = Estimated Value.</p>			

Table 5-42
Arsenic in Soil- Area M
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
M-A-3-0	02/12/03	0	5.93
M-A-5-2	02/12/03	0	3.94
M-A-7-6	02/12/03	0	12.5
M-C-1-0	02/12/03	0	5.25
M-C-3-3	02/12/03	0	7.33
M-C-5-2	02/12/03	0	8.45
M-C-7-1	02/12/03	0	9.57
M-E-1-0	02/12/03	0	4.36
M-E-3-2	02/12/03	0	6.46
M-E-5-4	02/12/03	0	2.21
M-E-7-12	02/13/03	0	8.37
<p>< = Not detected at indicated reporting limit. J = Estimated Value.</p>			

**Table 5-43
Arsenic in Soil- Area N
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
N-A-1-0	01/24/03	0	5.13
N-A-3-0	01/24/03	0	5.53
N-A-5-0	01/24/03	0	5.91
N-A-7-0	01/30/03	0	4.02
N-A-7A-0	01/30/03	0	10.4
N-A-7B-0	01/30/03	0	10.2
N-A-7C-0	01/30/03	0	9.44
N-A-7D-0	01/30/03	0	3.89
N-C-1-0	01/24/03	0	8.17
N-C-3-3	01/24/03	0	9.45
N-C-5-12	01/24/03	0	9.67
N-C-7-8	01/24/03	0	6.49
N-E-1-0	01/24/03	0	4.20
N-E-3-8	01/24/03	0	5.06
N-E-5-8	01/24/03	0	6.70
N-G-2-0	04/25/03	0	3.11
N-G-3-0	04/25/03	0	48.1
N-G-3A-0	01/30/03	0	21.8
N-G-3B-0	01/30/03	0	29.1
N-G-3D-0	01/30/03	0	17.1
<p>< = Not detected at indicated reporting limit. J = Estimated Value.</p>			

Table 5-44
Arsenic in Soil- Area NPL
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
NPL-1-0	02/20/03	0	9.22
NPL-1A-0	02/20/03	0	9.75
NPL-1B-0	02/20/03	0	3.84
NPL-2-0	02/20/03	0	3.66
NPL-2A-0	02/20/03	0	7.49
NPL-2B-0	02/20/03	0	4.44
NPL-3-0	02/20/03	0	7.75
NPL-3A-0	02/20/03	0	4.77
NPL-3B-0	02/20/03	0	11.4
NPL-4-0	02/20/03	0	10.1
<p>< = Not detected at indicated reporting limit. J = Estimated Value.</p>			

Table 5-45
Arsenic in Soil- Area O
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
O-A-1-0	02/07/03	0	14.6
O-A-2-0	02/07/03	0	9.33
O-A-3-0	02/07/03	0	5.12
O-B-1-0	02/07/03	0	10.6
O-B-2-0	02/07/03	0	3.21
O-B-3-0	02/07/03	0	2.48
O-B-4-0	02/07/03	0	1.86
O-C-1-0	02/07/03	0	9.0
O-C-2-0	02/07/03	0	3.04
O-C-3-0	02/07/03	0	2.05
O-C-4-0	02/07/03	0	2.86
O-D-2-0	02/07/03	0	2.77
O-D-3-0	02/07/03	0	6.88
< = Not detected at indicated reporting limit. J = Estimated Value.			

Table 5-46
Arsenic in Soil- Area R
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
R-A-3-0	03/05/03	0	9.03
R-A-5-0	03/05/03	0	2.03
R-C-1-0	03/05/03	0	6.93
R-C-3-0	03/05/03	0	7.52
R-C-5-0	03/05/03	0	3.13
R-C-7-0	03/05/03	0	2.21
R-E-1-0	03/05/03	0	8.51
R-E-3-0	03/05/03	0	3.57
R-E-5-0	03/05/03	0	2.21
R-E-7-0	03/05/03	0	2.23
R-G-1-0	03/05/03	0	4.31
R-G-3-0	03/05/03	0	3.07
R-G-5-0	03/05/03	0	3.63
R-G-7-0	03/05/03	0	3.11
R-I-3-0	03/05/03	0	3.11
R-I-5-0	03/05/03	0	2.78

< = Not detected at indicated reporting limit.
J = Estimated Value.

Table 5-47
Arsenic in Soil- Area S
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
S-C-3-0	03/21/03	0	2.53
S-C-5-0	03/21/03	0	3.93
S-E-1-0	03/21/03	0	3.39
S-E-3-0	03/21/03	0	4.73
S-E-5-0	03/21/03	0	2.24
S-G-1-0	03/21/03	0	3.31
S-G-3-0	03/21/03	0	2.69
S-G-5-0	03/21/03	0	3.11
< = Not detected at indicated reporting limit. J = Estimated Value.			

**Table 5-48
Arsenic in Soil- Area T
UNOCAL Edmonds Terminal**

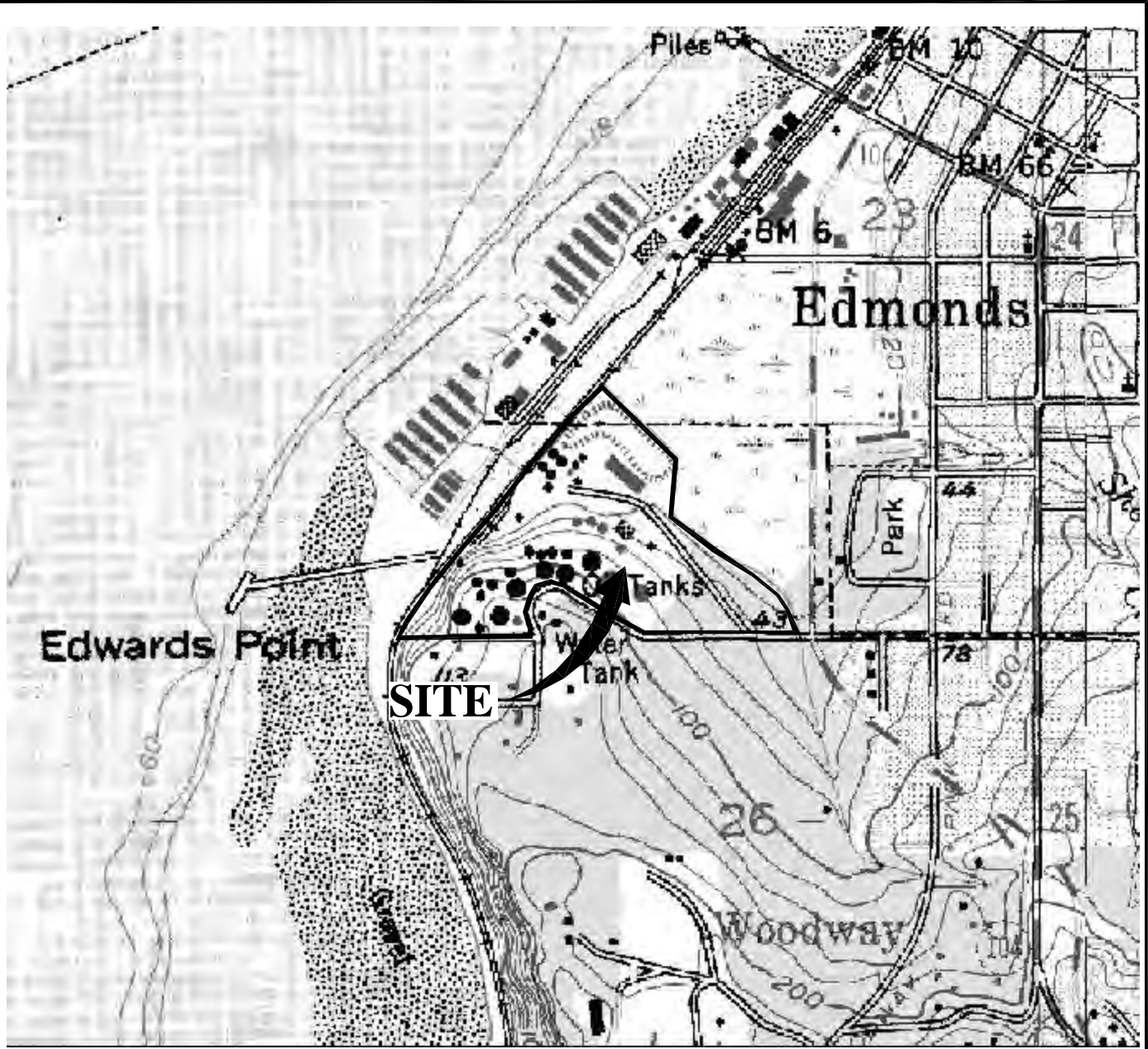
SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
T-A-2-0	04/08/03	0	12.4
T-A-3-0	04/08/03	0	7.54
T-A-4-0	04/08/03	0	1.48
T-B-1-0	04/08/03	0	7.02
T-B-2-0	04/08/03	0	8.00
T-B-3-0	04/08/03	0	8.09
T-B-4-0	04/08/03	0	5.59
T-B-5-0	04/08/03	0	5.77
T-B-6-0	04/08/03	0	4.43
T-C-1-0	04/08/03	0	10.1
T-C-2-0	04/08/03	0	3.90
T-C-3-0	04/08/03	0	7.16
T-C-4-0	04/08/03	0	3.06
T-C-5-0	04/08/03	0	9.24
T-C-6-0	04/08/03	0	3.85
T-D-1-0	04/08/03	0	4.76
T-D-2-0	04/08/03	0	5.08
T-D-3-0	04/08/03	0	11.2
T-D-4-0	04/08/03	0	2.32
T-D-5-0	04/08/03	0	3.67
T-D-6-0	04/08/03	0	4.17
T-E-1-0	04/08/03	0	4.12
T-E-2-0	04/08/03	0	4.63
T-E-3-0	04/08/03	0	6.61
T-E-4-0	04/08/03	0	10.9
T-E-5-0	04/08/03	0	4.43
T-E-6-0	04/08/03	0	3.59
T-F-1-0	04/09/03	0	2.72

**Table 5-48
Arsenic in Soil- Area T
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
T-F-2-0	04/09/03	0	8.12
T-F-3-0	04/09/03	0	2.68
T-F-4-0	04/09/03	0	4.08
T-F-5-0	04/09/03	0	4.00
T-F-6-0	04/09/03	0	3.24
T-G-1-0	04/09/03	0	5.61
T-G-2-0	04/09/03	0	2.31
T-G-3-0	04/10/03	0	5.83
T-G-4-0	04/10/03	0	7.54
T-G-5-0	04/10/03	0	4.53
T-G-6-0	04/10/03	0	4.31
T-H-1-0	04/10/03	0	4.23
T-H-2-0	04/10/03	0	5.57
T-H-3-0	04/10/03	0	1.89
T-H-4-0	04/10/03	0	4.61
T-H-5-0	04/10/03	0	3.89
T-H-6-0	04/10/03	0	2.38
T-I-1-0	04/10/03	0	3.24
T-I-2-0	04/10/03	0	8.31
T-I-3-0	04/10/03	0	3.02
T-I-4-0	04/10/03	0	3.65
T-I-5-0	04/10/03	0	3.53
T-I-6-0	04/10/03	0	4.03
T-J-3-0	04/10/03	0	3.91
T-J-4-0	04/10/03	0	2.27
T-J-5-0	04/10/03	0	17.8
< = Not detected at indicated reporting limit. J = Estimated Value.			

Table 5-49
Arsenic in Soil- Additional (Area-wide)
Metals Sample Locations
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Arsenic (mg/kg)
SS-214-0	04/21/03	0	7.60
SS-215-0	04/23/03	0	5.06
SS-216-0	04/23/03	0	6.79
SS-217-0	04/23/03	0	4.72
SS-218-0	04/23/03	0	2.21
SS-219-0	04/23/03	0	1.67
SS-220-0	04/21/03	0	2.86
SS-221-0	04/21/03	0	8.28
SS-222-0	04/23/03	0	5.86
SS-223-0	05/01/03	0	2.85
SS-224-0	04/21/03	0	5.66
SS-225-0	04/21/03	0	6.62
SS-226-0	04/21/03	0	9.56
SS-227-0	04/23/03	0	7.69
SS-228-0	04/21/03	0	5.43
< = Not detected at indicated reporting limit. J = Estimated Value.			



Base map prepared from DeLorme 3-D TopoQuads (1999).

0 1000 2000



SCALE IN FEET



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Portland:
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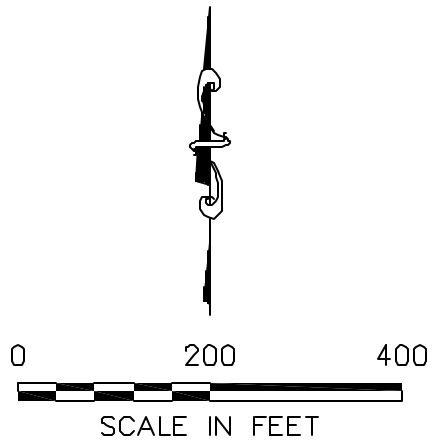
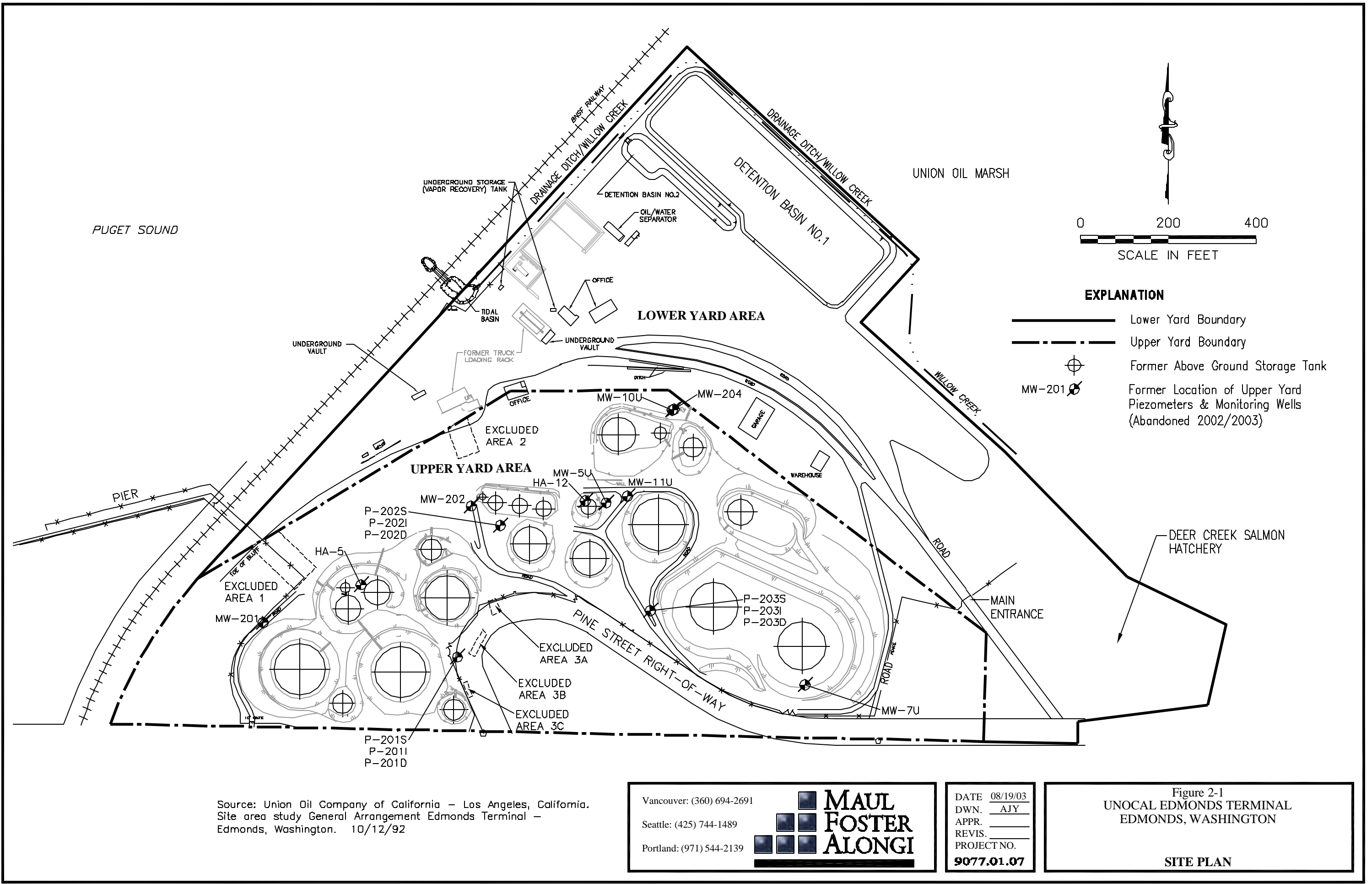
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Figure 1-1
UNOCAL EDMONDS TERMINAL
EDMONDS, WASHINGTON

SITE LOCATION MAP

File: G:\9000\9077-01_UNOCAL-EDMONDS\07_EXCAVATION\001-SITE PLAN.DWG Last edited: AUG. 26, 2003 @ 09:34 a.m. by: ayoung Xrefs: none black/white



- EXPLANATION**
- Lower Yard Boundary
 - - - Upper Yard Boundary
 - ⊕ Former Above Ground Storage Tank
 - MW-201 ⊕ Former Location of Upper Yard Piezometers & Monitoring Wells (Abandoned 2002/2003)

Source: Union Oil Company of California - Los Angeles, California.
Site area study General Arrangement Edmonds Terminal -
Edmonds, Washington. 10/12/92

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Figure 2-1
UNOCAL EDMONDS TERMINAL
EDMONDS, WASHINGTON

SITE PLAN

LEGEND:

----- UPPER YARD BOUNDARY

----- TPH EXCAVATION AREA

● FORMER SOIL BORING LOCATION

▣ FORMER TEST PIT LOCATION

● PERFORMANCE SAMPLE LOCATION

D-D1WALL-2 ● LOCATION AND DESIGNATION FOR NON-NODE SAMPLE

ANALYTICAL RESULTS (mg/kg):

11.7 = TPH AS GASOLINE RANGE ORGANICS (GRO) CONCENTRATION

8.2 = TPH AS DIESEL RANGE ORGANICS (DRO) CONCENTRATION

10.1 = TPH AS HEAVY OIL RANGE ORGANICS (HO) CONCENTRATION

ND = NOT DETECTED AT METHOD REPORTING LIMIT (MRL)

J = ESTIMATED VALUE

NOTES:

1) PRE-EXCAVATION TOPOGRAPHY IS SHOWN.

2) ALL CONCENTRATIONS ARE IN MILLIGRAMS PER KILOGRAM (mg/kg).

3) ANALYTICAL RESULTS FOR PERFORMANCE SAMPLES COLLECTED AT EACH GRID NODE ARE LISTED TO THE SIDE OF THE NODE LOCATION, UNLESS OTHERWISE NOTED.

4) MRL FOR GRO = 5.00 mg/kg
MRL FOR DRO = 10.00 mg/kg
MRL FOR HO = 25.00 mg/kg

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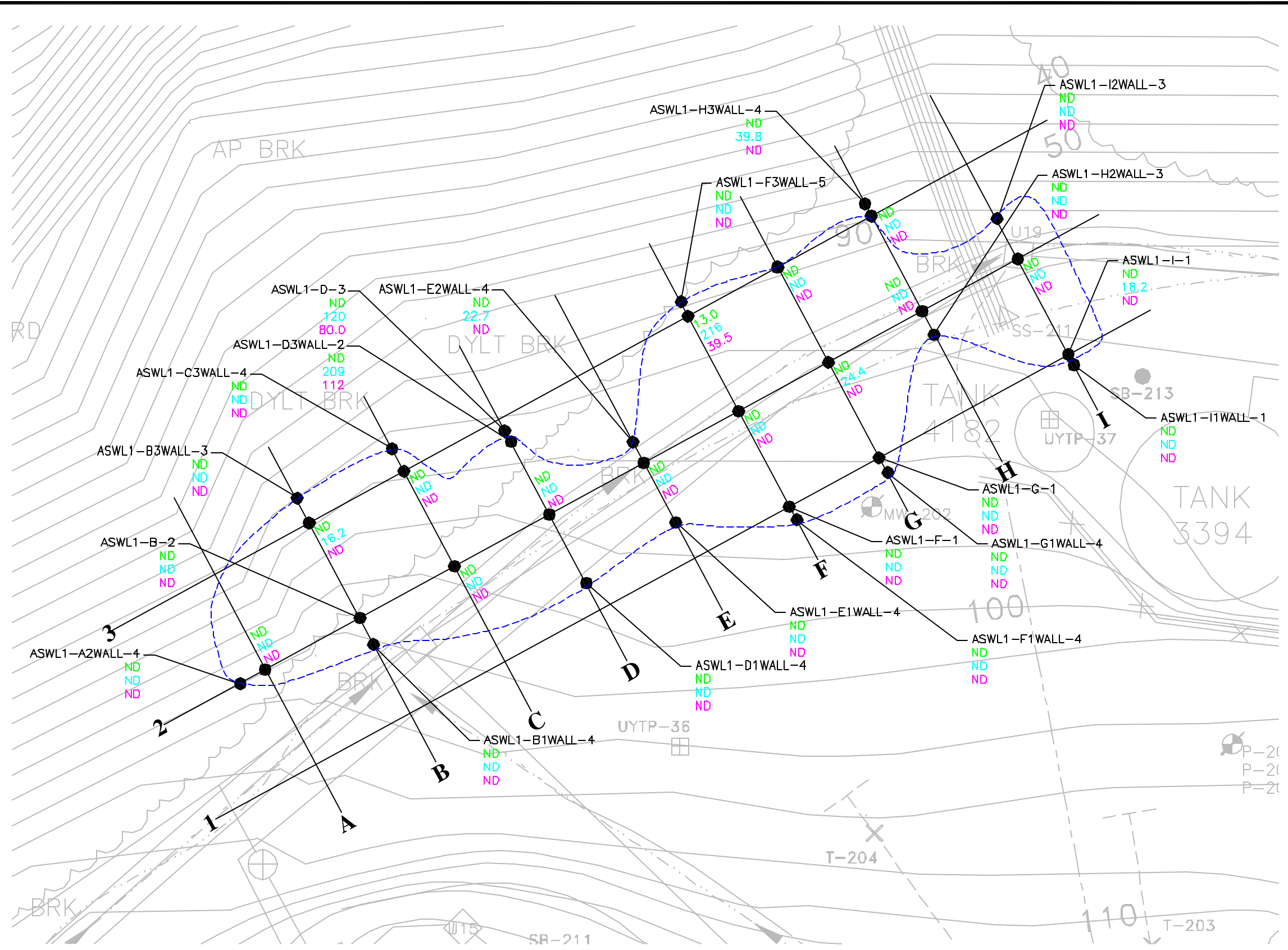
Portland: (971) 544-2139



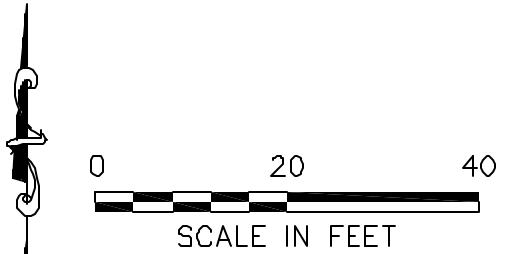
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Figure 5-1
UNOCAL EDMONDS TERMINAL
EDMONDS, WASHINGTON

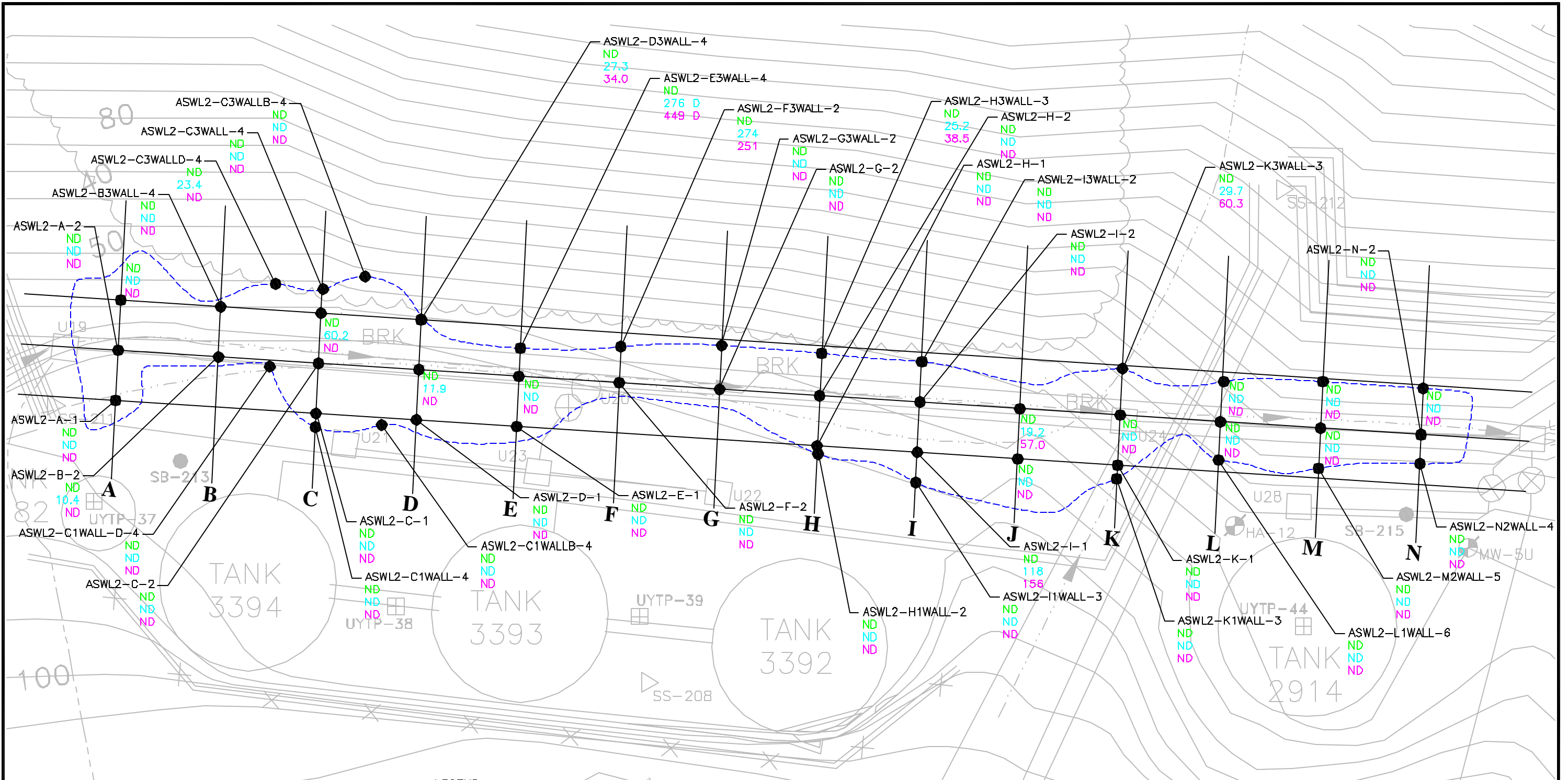
LEGEND & NOTES



LEGEND:
 --- TPH EXCAVATION AREA
ANALYTICAL RESULTS (mg/kg):
 11.7 = TPH AS GASOLINE RANGE ORGANICS (GRO) CONCENTRATION
 8.2 = TPH AS DIESEL RANGE ORGANICS (DRO) CONCENTRATION
 10.1 = TPH AS HEAVY OIL RANGE ORGANICS (HO) CONCENTRATION
 ND = NOT DETECTED

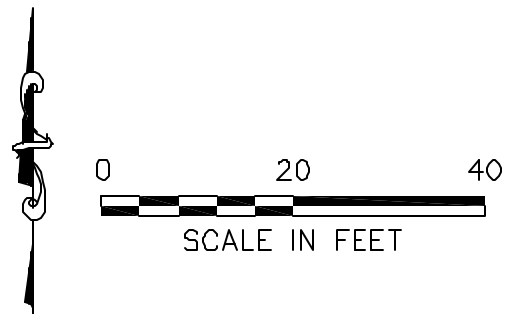


Vancouver: (360) 694-2691		DATE 03/26/03	Figure 5-3 UNOCAL EDMONDS TERMINAL EDMONDS, WASHINGTON TPH AREA ASWL1 (ASPHALT SWALE 1)
Edmonds: (425) 744-1489		DWN. AJY	
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	REVIS. _____		
	PROJECT NO. 9077.01.07		



LEGEND:

- TPH EXCAVATION AREA
- ANALYTICAL RESULTS (mg/kg):**
- 11.7 = TPH AS GASOLINE RANGE ORGANICS (GRO) CONCENTRATION
- 8.2 = TPH AS DIESEL RANGE ORGANICS (DRO) CONCENTRATION
- 10.1 = TPH AS HEAVY OIL RANGE ORGANICS (HO) CONCENTRATION
- ND = NOT DETECTED



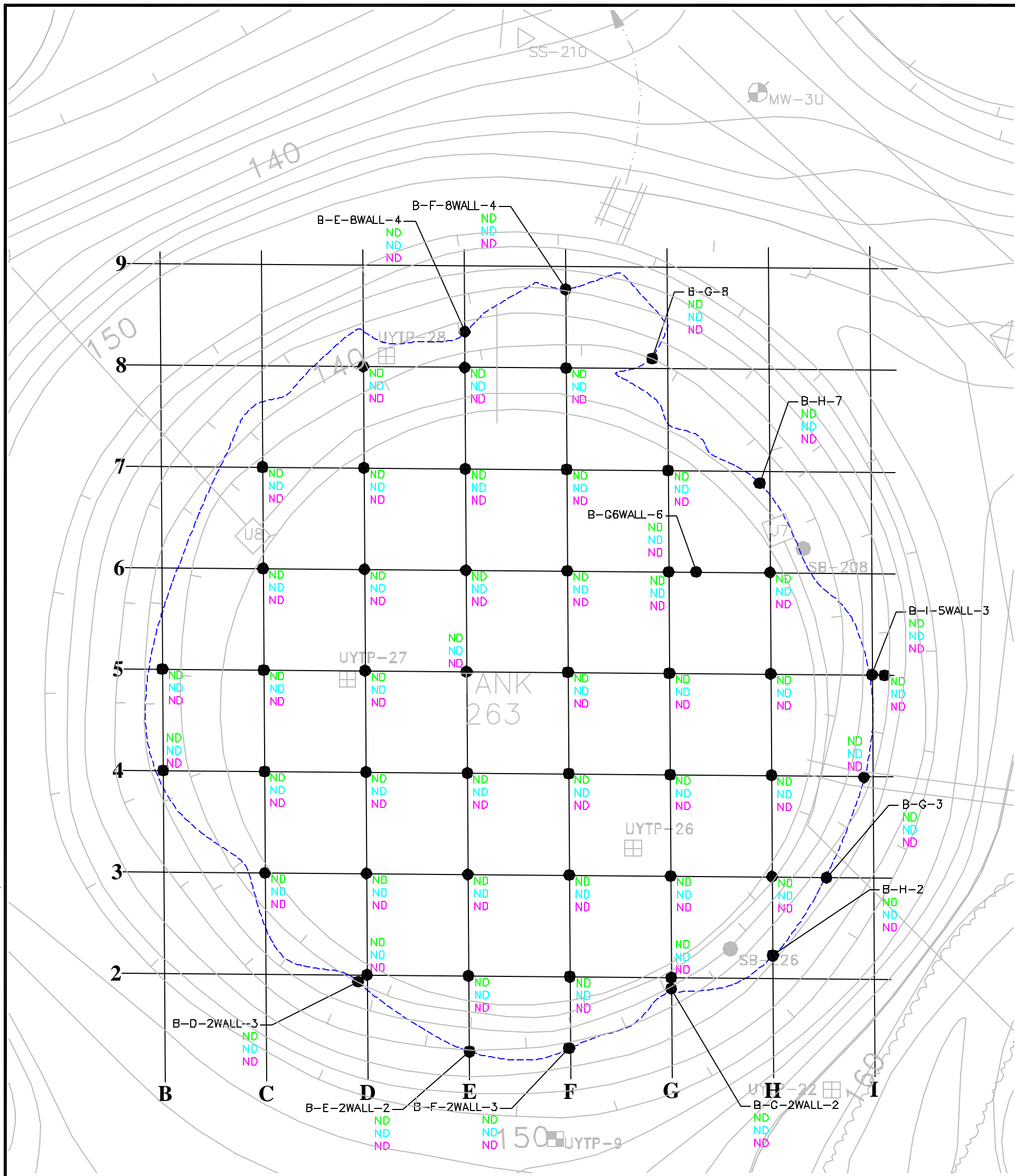
Vancouver: (360) 694-2691
 Edmonds: (425) 744-1489
 Portland: (971) 544-2139

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Figure 5-4
 UNOCAL EDMONDS TERMINAL
 EDMONDS, WASHINGTON

TPH AREA ASWL2 (ASPHALT SWALE 2)



LEGEND:

--- TPH EXCAVATION AREA

ANALYTICAL RESULTS (mg/kg):

11.7 = TPH AS GASOLINE RANGE ORGANICS (GRO) CONCENTRATION

8.2 = TPH AS DIESEL RANGE ORGANICS (DRO) CONCENTRATION

10.1 = TPH AS HEAVY OIL RANGE ORGANICS (HORO) CONCENTRATION

ND = NOT DETECTED



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Figure 5-5
 UNOCAL EDMONDS TERMINAL
 EDMONDS, WASHINGTON

TPH AREA B (BASIN 263)

LEGEND:

--- TPH EXCAVATION AREA

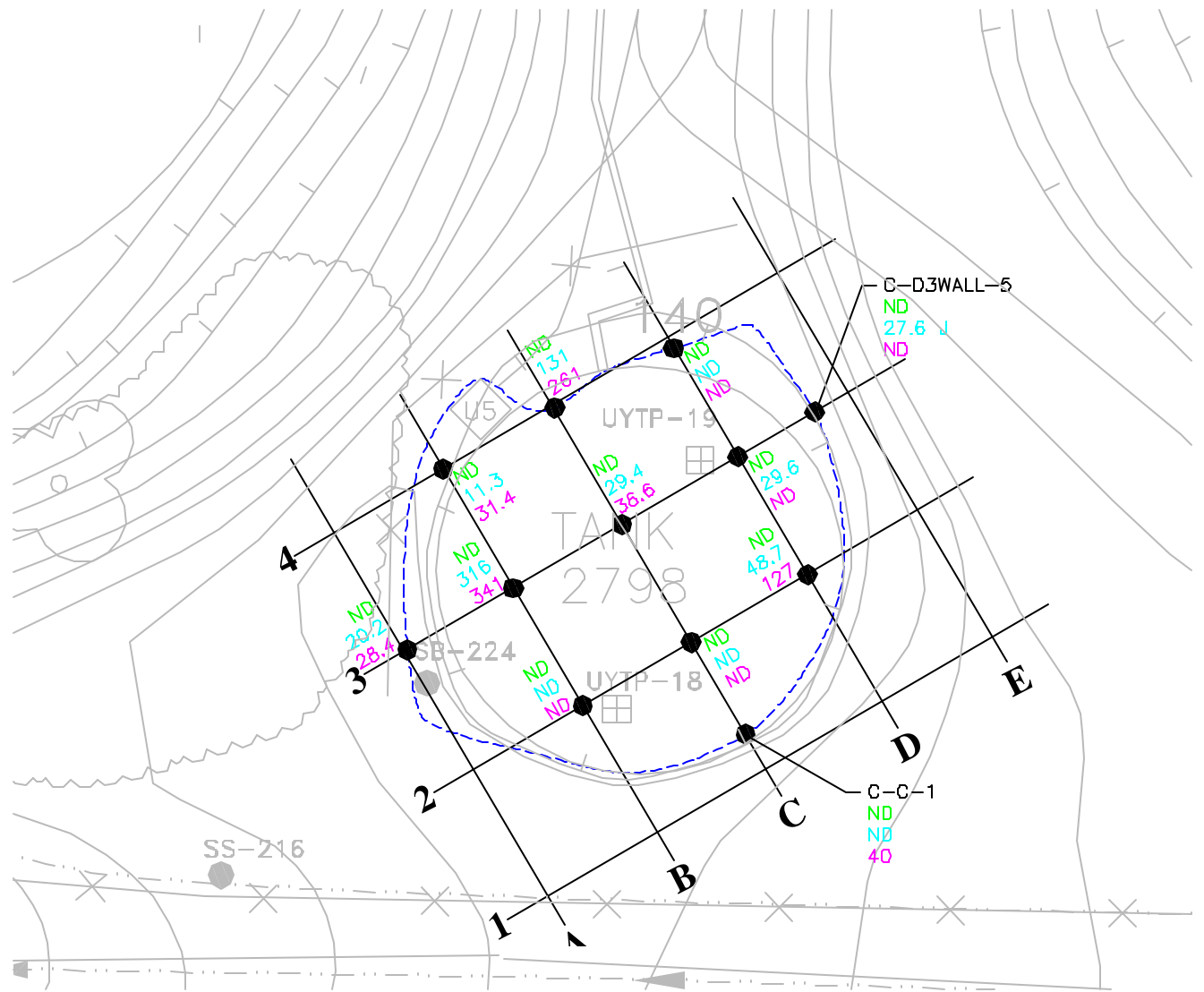
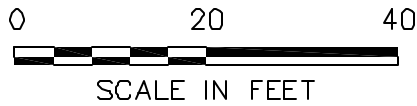
ANALYTICAL RESULTS (mg/kg):

11.7 = TPH AS GASOLINE RANGE ORGANICS (GRO) CONCENTRATION

8.2 = TPH AS DIESEL RANGE ORGANICS (DRO) CONCENTRATION

10.1 = TPH AS HEAVY OIL RANGE ORGANICS (HO) CONCENTRATION

ND = NOT DETECTED



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Figure 5-6
 UNOCAL EDMONDS TERMINAL
 EDMONDS, WASHINGTON

TPH AREA C (BASIN 2798)

LEGEND:

--- TPH EXCAVATION AREA

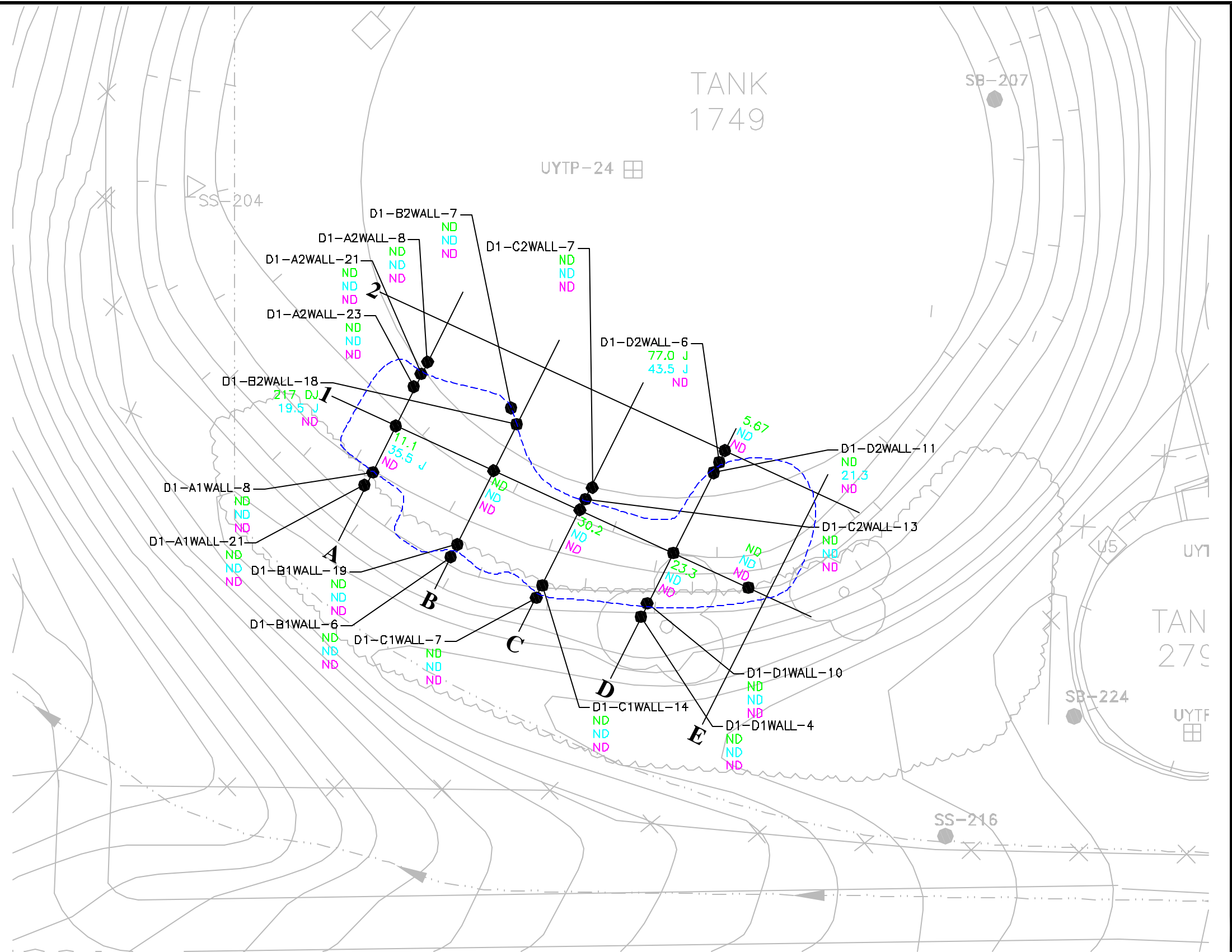
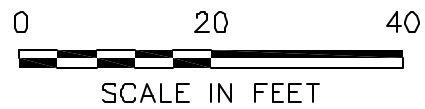
ANALYTICAL RESULTS (mg/kg):

11.7 = TPH AS GASOLINE RANGE ORGANICS (GRO) CONCENTRATION

8.2 = TPH AS DIESEL RANGE ORGANICS (DRO) CONCENTRATION

10.1 = TPH AS HEAVY OIL RANGE ORGANICS (HORO) CONCENTRATION

ND = NOT DETECTED

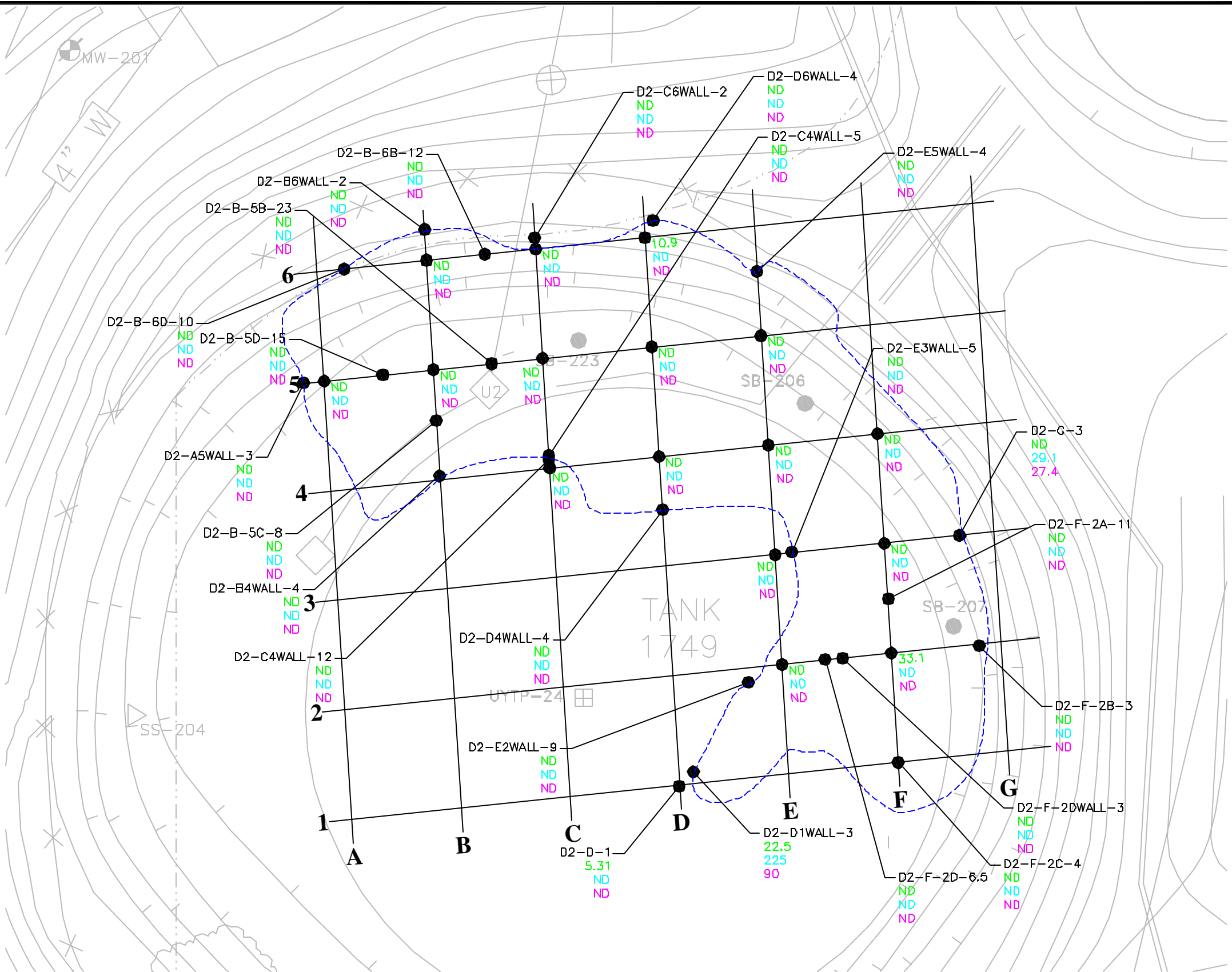
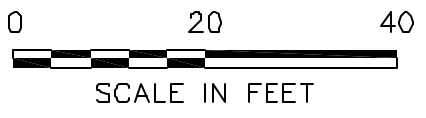


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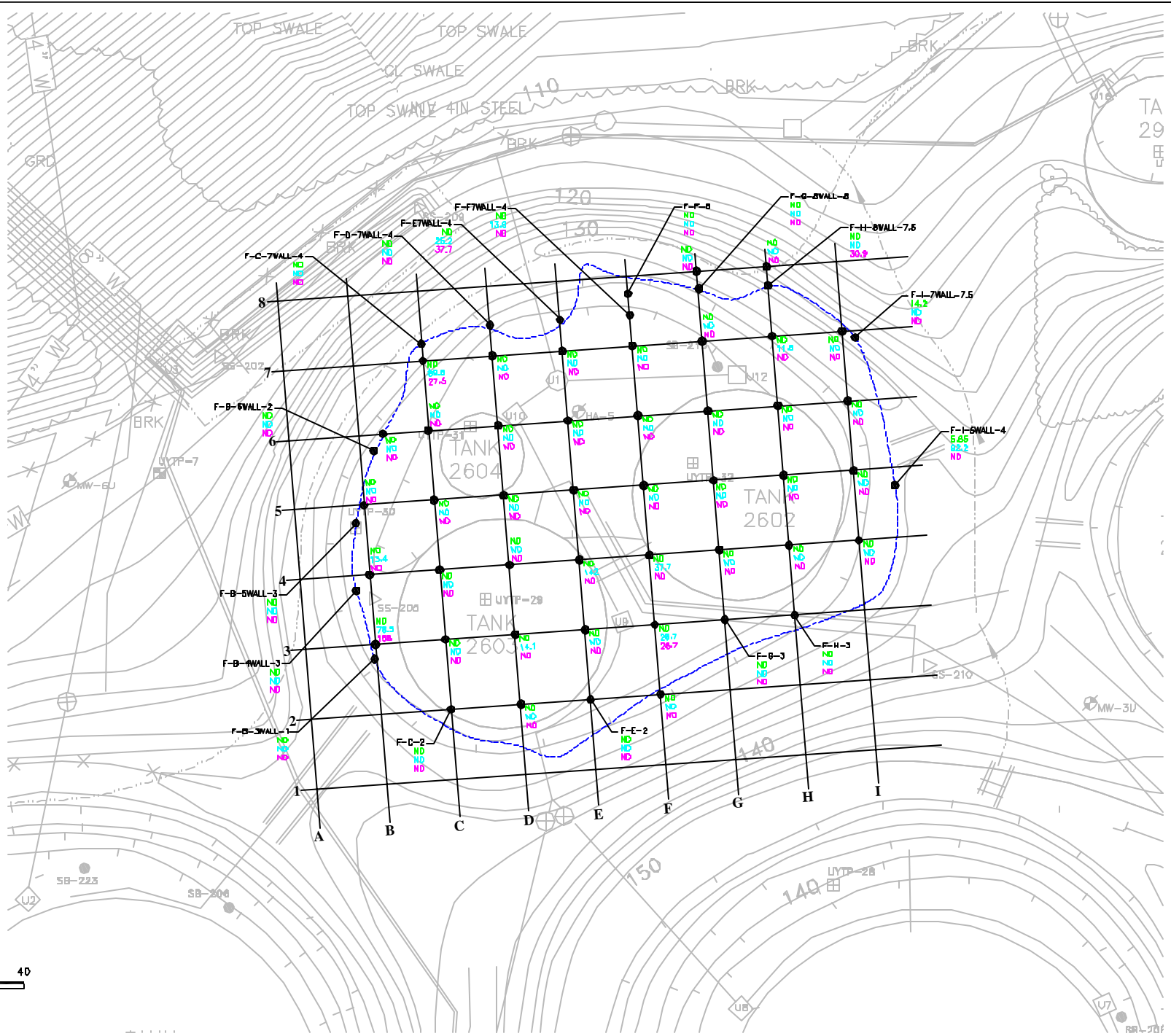
Figure 5-7
UNOCAL EDMONDS TERMINAL
EDMONDS, WASHINGTON
TPH AREA D1 (BASIN 1749)

LEGEND:
 --- TPH EXCAVATION AREA
ANALYTICAL RESULTS (mg/kg):
 11.7 = TPH AS GASOLINE RANGE ORGANICS (GRO) CONCENTRATION
 8.2 = TPH AS DIESEL RANGE ORGANICS (DRO) CONCENTRATION
 10.1 = TPH AS HEAVY OIL RANGE ORGANICS (HO) CONCENTRATION
 ND = NOT DETECTED



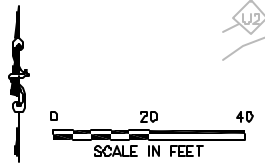
Vancouver: (360) 694-2691		DATE 03/26/03	Figure 5-8 UNOCAL EDMONDS TERMINAL EDMONDS, WASHINGTON TPH AREA D2 (BASIN 1749)
Edmonds: (425) 744-1489		DWN. AJY	
Portland: (971) 544-2139		APPR. _____	
	REVIS. _____		
		PROJECT NO. 9077.01.07	

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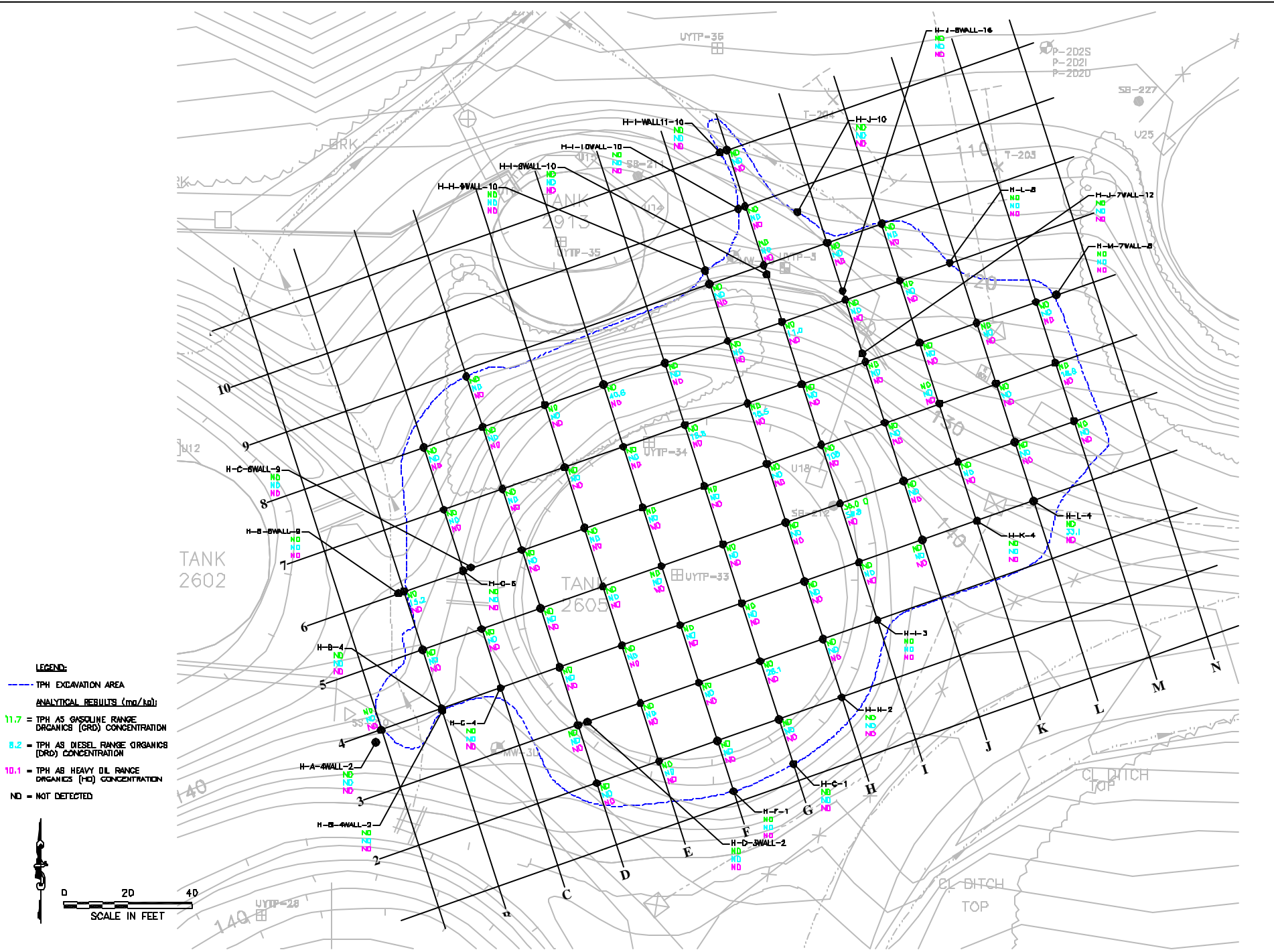
LEGEND:

- TPH EXCAVATION AREA
- ANALYTICAL RESULTS (mg/kg)
- 11.7 = TPH AS GASOLINE RANGE ORGANICS (GRO) CONCENTRATION
- 6.2 = TPH AS DIESEL RANGE ORGANICS (DRO) CONCENTRATION
- 10.1 = TPH AS HEAVY OIL RANGE ORGANICS (HRO) CONCENTRATION
- ND = NOT DETECTED



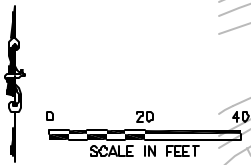
Vancouver: (360) 694-2691		DATE: 04/03/03	Figure 5-9 UNOCAL EDMONDS TERMINAL EDMONDS, WASHINGTON TPH AREA F (BASINS 2602, 2603 & 2604)
Edmonds: (425) 744-1489		DWN: AJY	
Portland: (971) 544-2139		APPR:	
		REVIS:	
		PROJECT NO. 9077.01.04	

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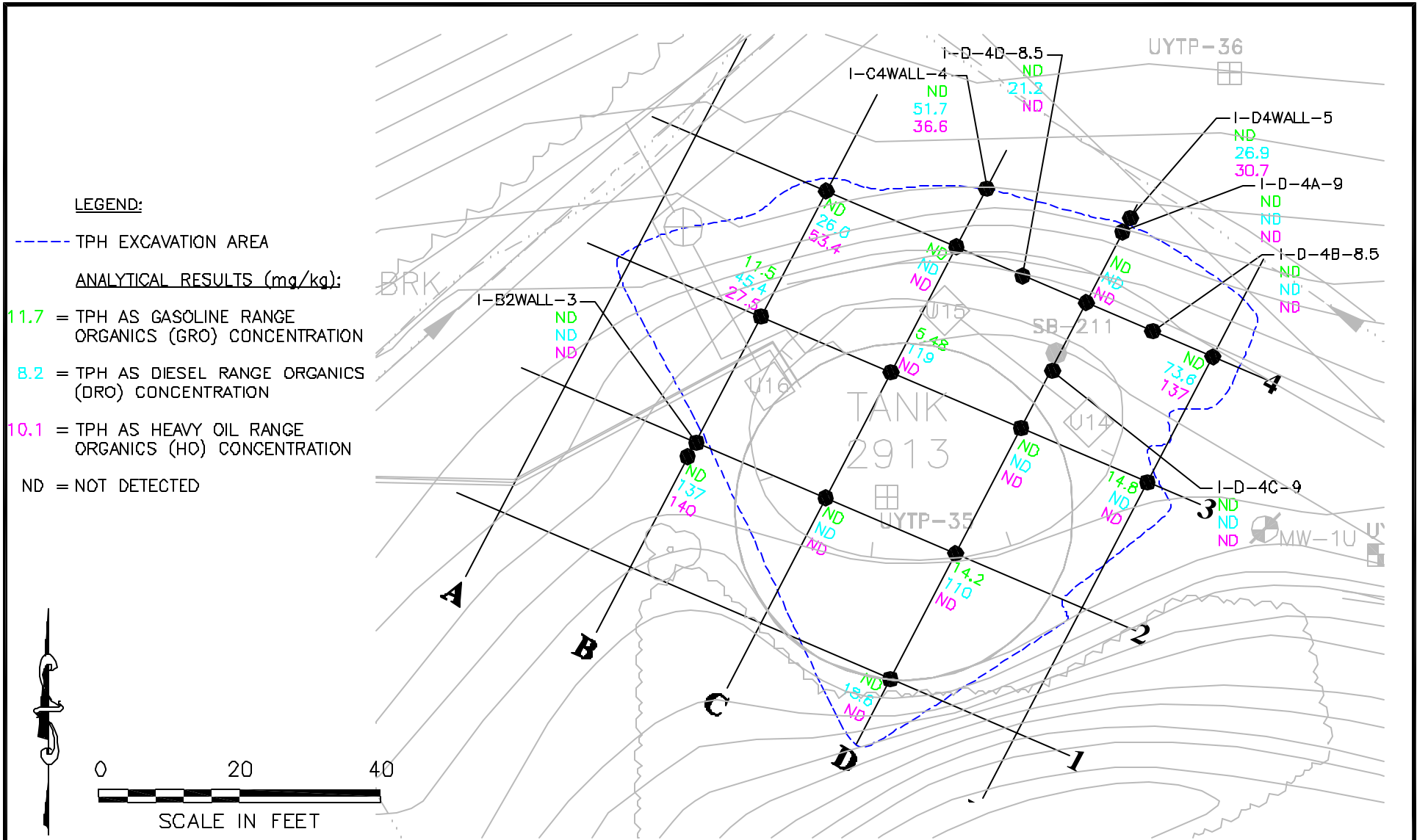


LEGEND:

- TPH EXCAVATION AREA
- ANALYTICAL RESULTS (mg/kg):**
- 11.7 = TPH AS GASOLINE RANGE ORGANICS (GRO) CONCENTRATION
- 11.2 = TPH AS DIESEL RANGE ORGANICS (DRO) CONCENTRATION
- 10.1 = TPH AS HEAVY OIL RANGE ORGANICS (HORO) CONCENTRATION
- ND = NOT DETECTED**



<p>Vancouver: (360) 694-2691 Edmonds: (425) 744-1489 Portland: (971) 544-2139</p>		<p>DATE: 040503 DWN: AJY APPR: _____ REVIS: _____ PROJECT NO. 9077.01.04</p>	<p>Figure 5-10 UNOCAL EDMONDS TERMINAL EDMONDS, WASHINGTON</p> <p>TPH AREA H (BASIN 2605)</p>
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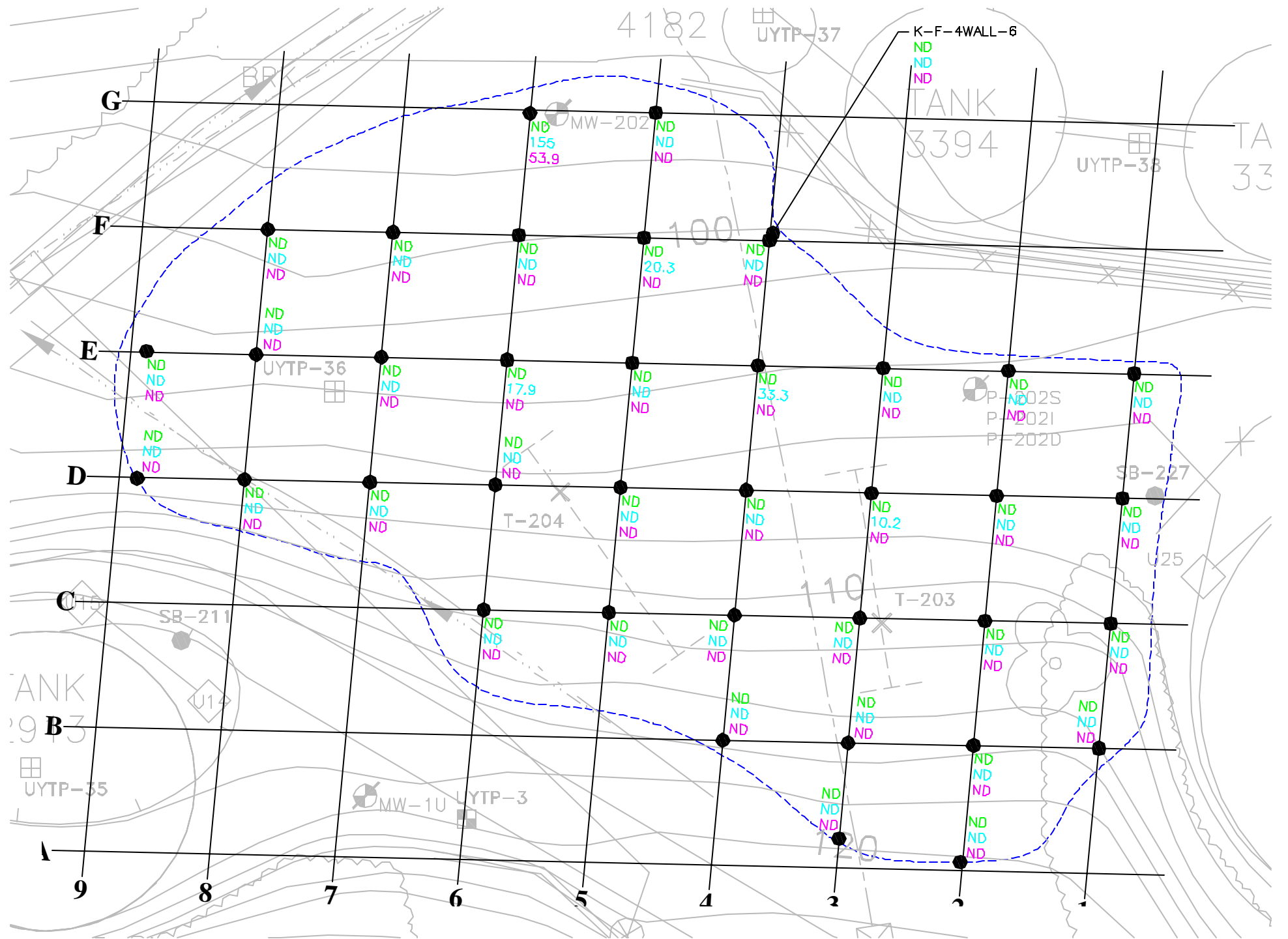
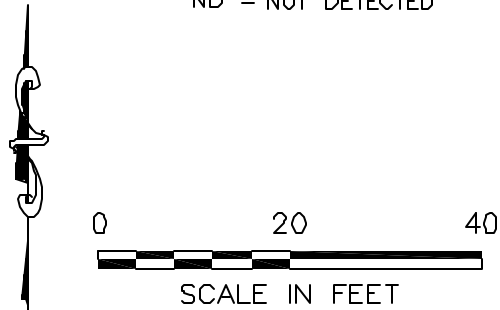
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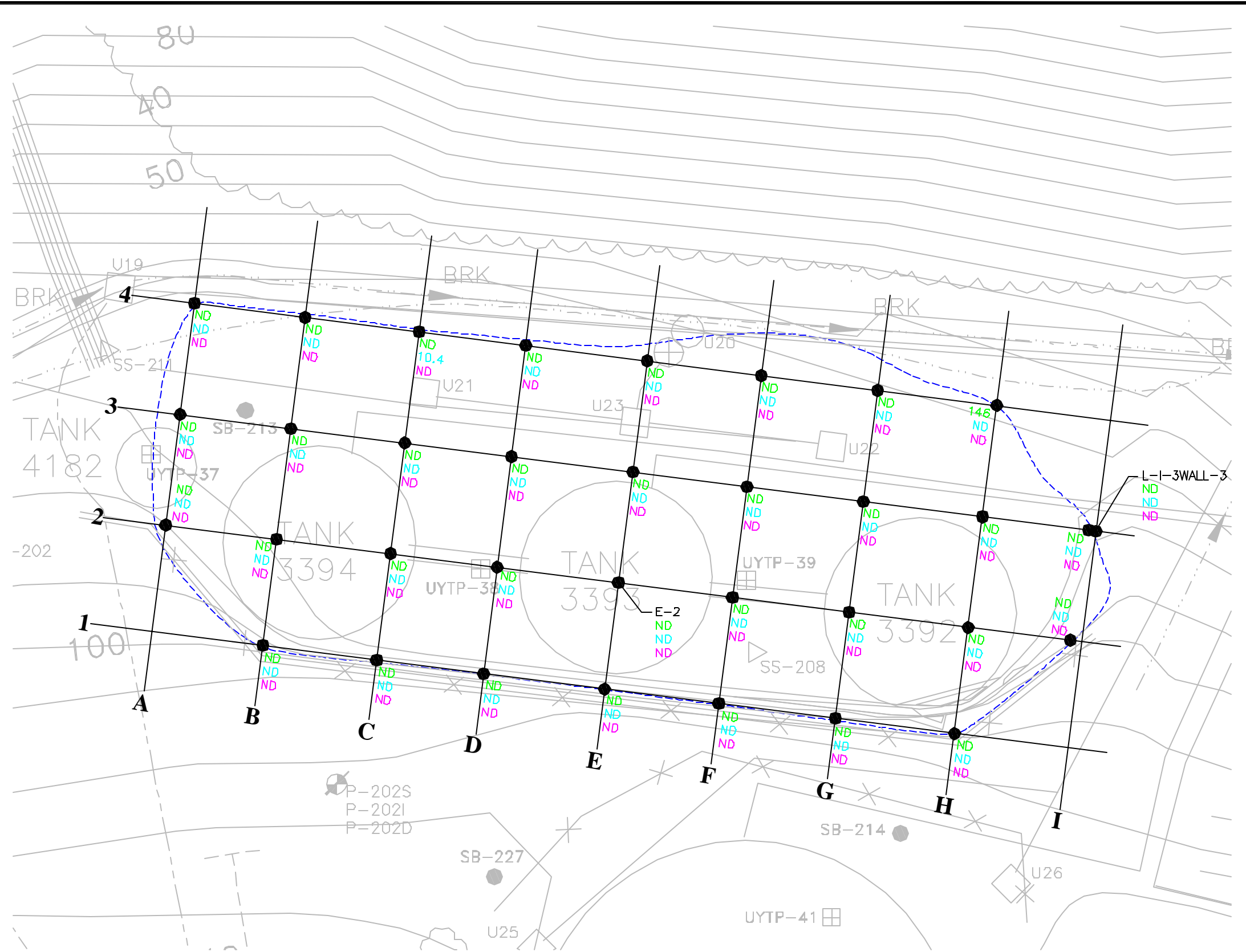
Figure 5-11
 UNOCAL EDMONDS TERMINAL
 EDMONDS, WASHINGTON

TPH AREA I (BASIN 2913)

LEGEND:
 --- TPH EXCAVATION AREA
ANALYTICAL RESULTS (mg/kg):
 11.7 = TPH AS GASOLINE RANGE ORGANICS (GRO) CONCENTRATION
 8.2 = TPH AS DIESEL RANGE ORGANICS (DRO) CONCENTRATION
 10.1 = TPH AS HEAVY OIL RANGE ORGANICS (HO) CONCENTRATION
 ND = NOT DETECTED

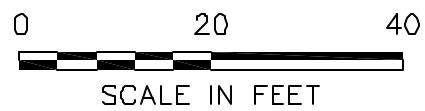


Vancouver: (360) 694-2691		DATE 04/03/03	Figure 5-12 UNOCAL EDMONDS TERMINAL EDMONDS, WASHINGTON TPH AREA K (T-203 SWALE)
Edmonds: (425) 744-1489		DWN. AJY	
Portland: (971) 544-2139		APPR. _____	
	REVIS. _____		
		PROJECT NO. 9077.01.07	



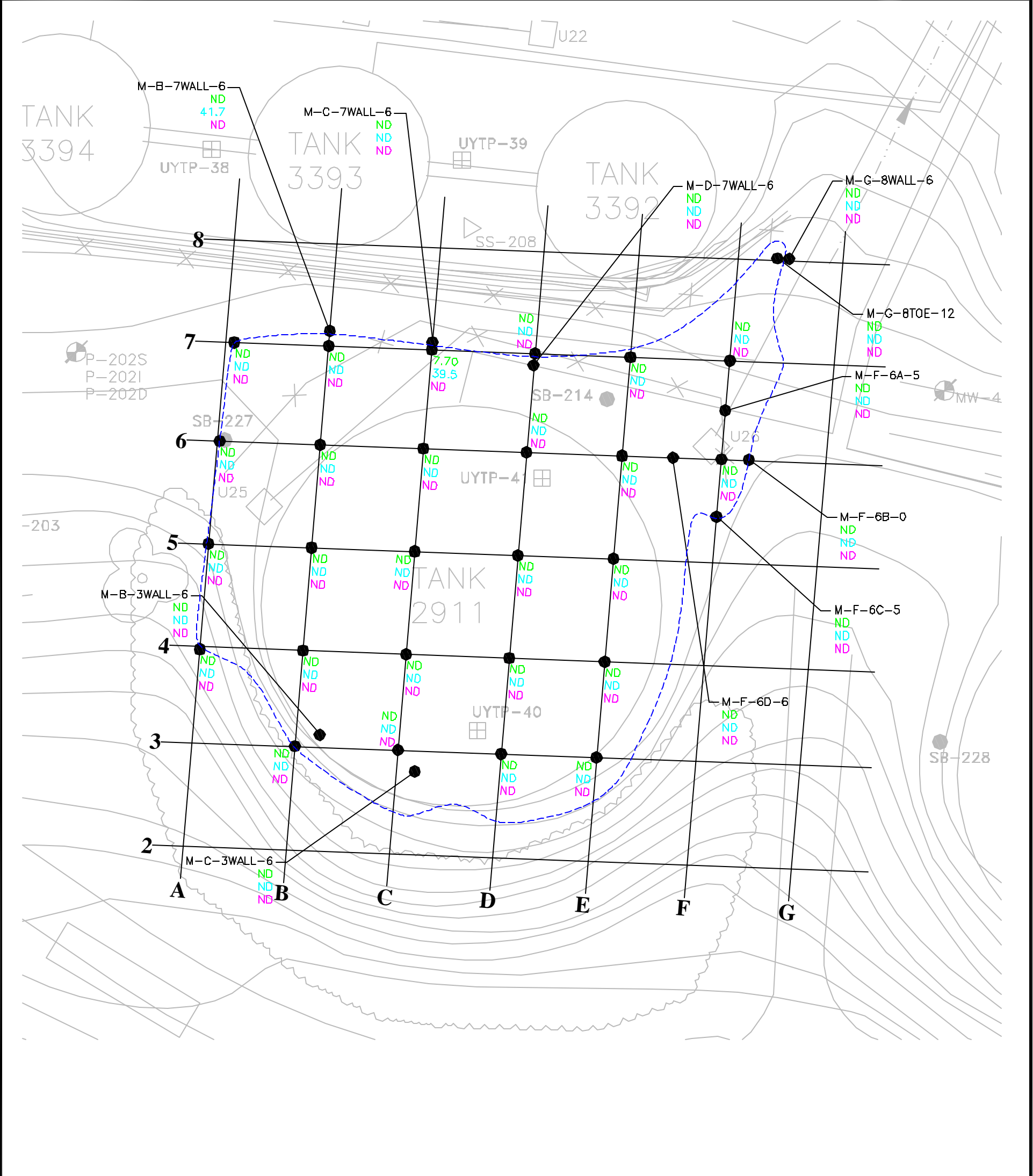
LEGEND:

- TPH EXCAVATION AREA
- ANALYTICAL RESULTS (mg/kg):**
- 11.7 = TPH AS GASOLINE RANGE ORGANICS (GRO) CONCENTRATION
- 8.2 = TPH AS DIESEL RANGE ORGANICS (DRO) CONCENTRATION
- 10.1 = TPH AS HEAVY OIL RANGE ORGANICS (HO) CONCENTRATION
- ND = NOT DETECTED



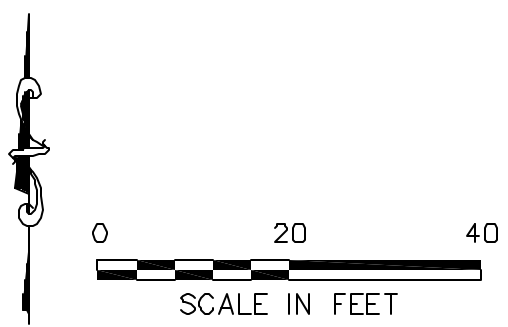
Vancouver: (360) 694-2691 Edmonds: (425) 744-1489 Portland: (971) 544-2139		DATE 03/26/03 DWN. AJY APPR. _____ REVIS. _____ PROJECT NO. 9077.01.07	Figure 5-13 UNOCAL EDMONDS TERMINAL EDMONDS, WASHINGTON TPH AREA L (BASINS 3392, 3393, 3394 & 4182)
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LEGEND:

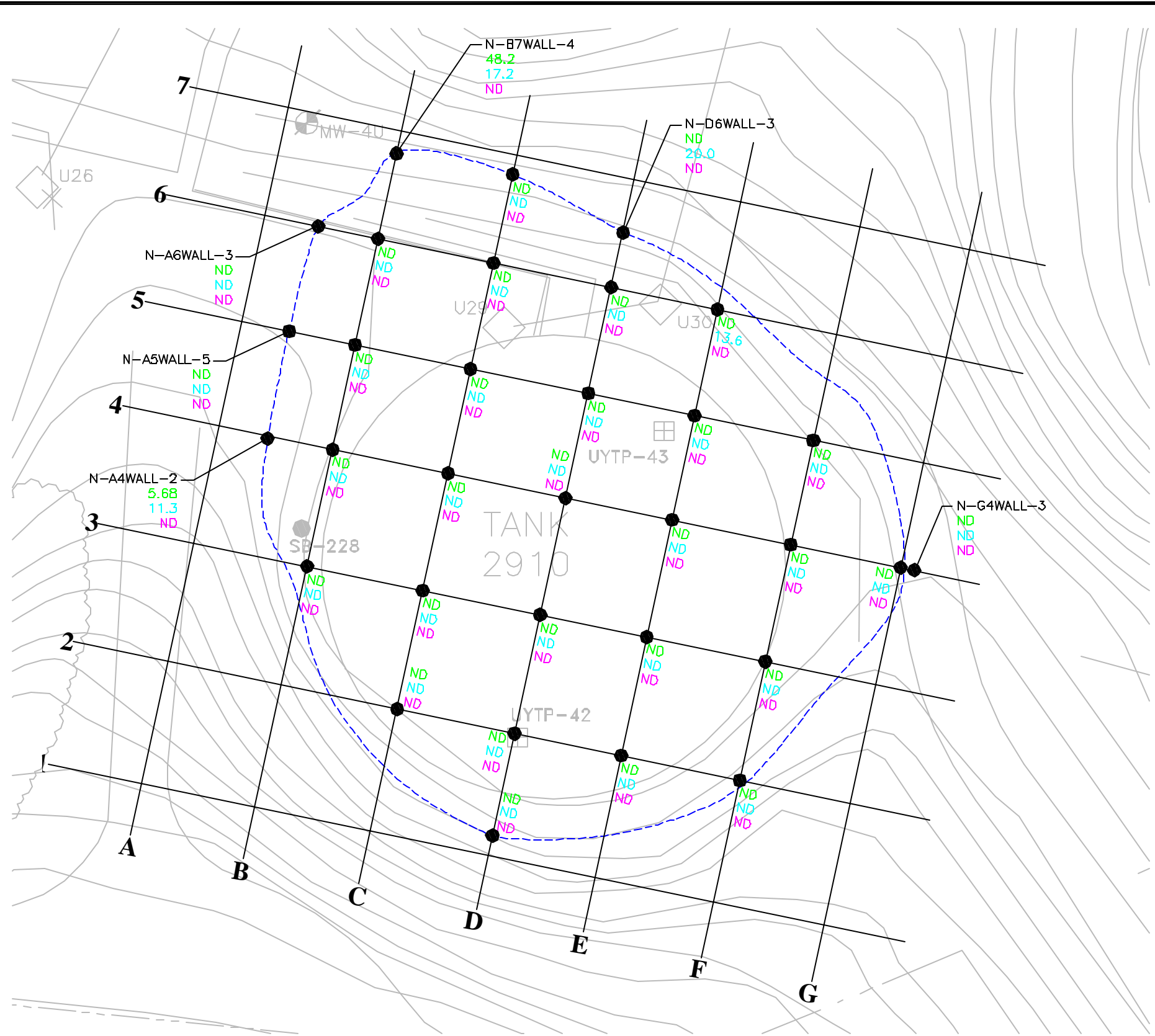
- TPH EXCAVATION AREA
- ANALYTICAL RESULTS (mg/kg):**
- 11.7 = TPH AS GASOLINE RANGE ORGANICS (GRO) CONCENTRATION
- 8.2 = TPH AS DIESEL RANGE ORGANICS (DRO) CONCENTRATION
- 10.1 = TPH AS HEAVY OIL RANGE ORGANICS (HO) CONCENTRATION
- ND = NOT DETECTED



Vancouver: (360) 694-2691	
Edmonds: (425) 744-1489	
Portland: (971) 544-2139	

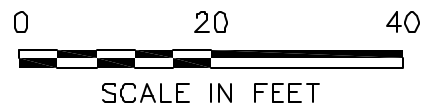
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REVIS.	_____
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<p>Figure 5-14 UNOCAL EDMONDS TERMINAL EDMONDS, WASHINGTON</p> <p>TPH AREA M (BASIN 2911)</p>
--

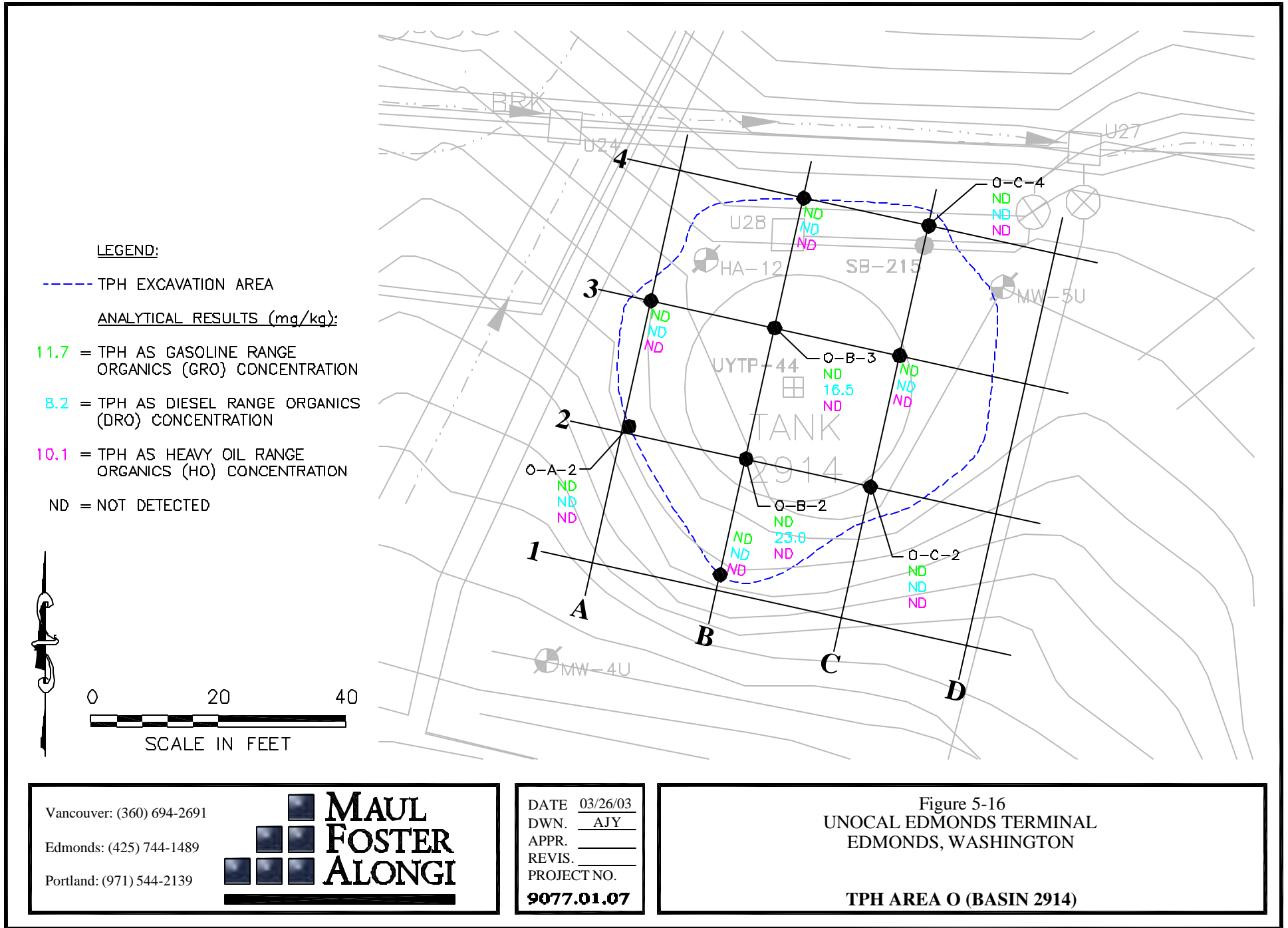


LEGEND:

- TPH EXCAVATION AREA
- ANALYTICAL RESULTS (mg/kg):**
- 11.7 = TPH AS GASOLINE RANGE ORGANICS (GRO) CONCENTRATION
- 8.2 = TPH AS DIESEL RANGE ORGANICS (DRO) CONCENTRATION
- 10.1 = TPH AS HEAVY OIL RANGE ORGANICS (HO) CONCENTRATION
- ND = NOT DETECTED



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Figure 5-15 UNOCAL EDMONDS TERMINAL EDMONDS, WASHINGTON TPH AREA N (BASIN 2910)		



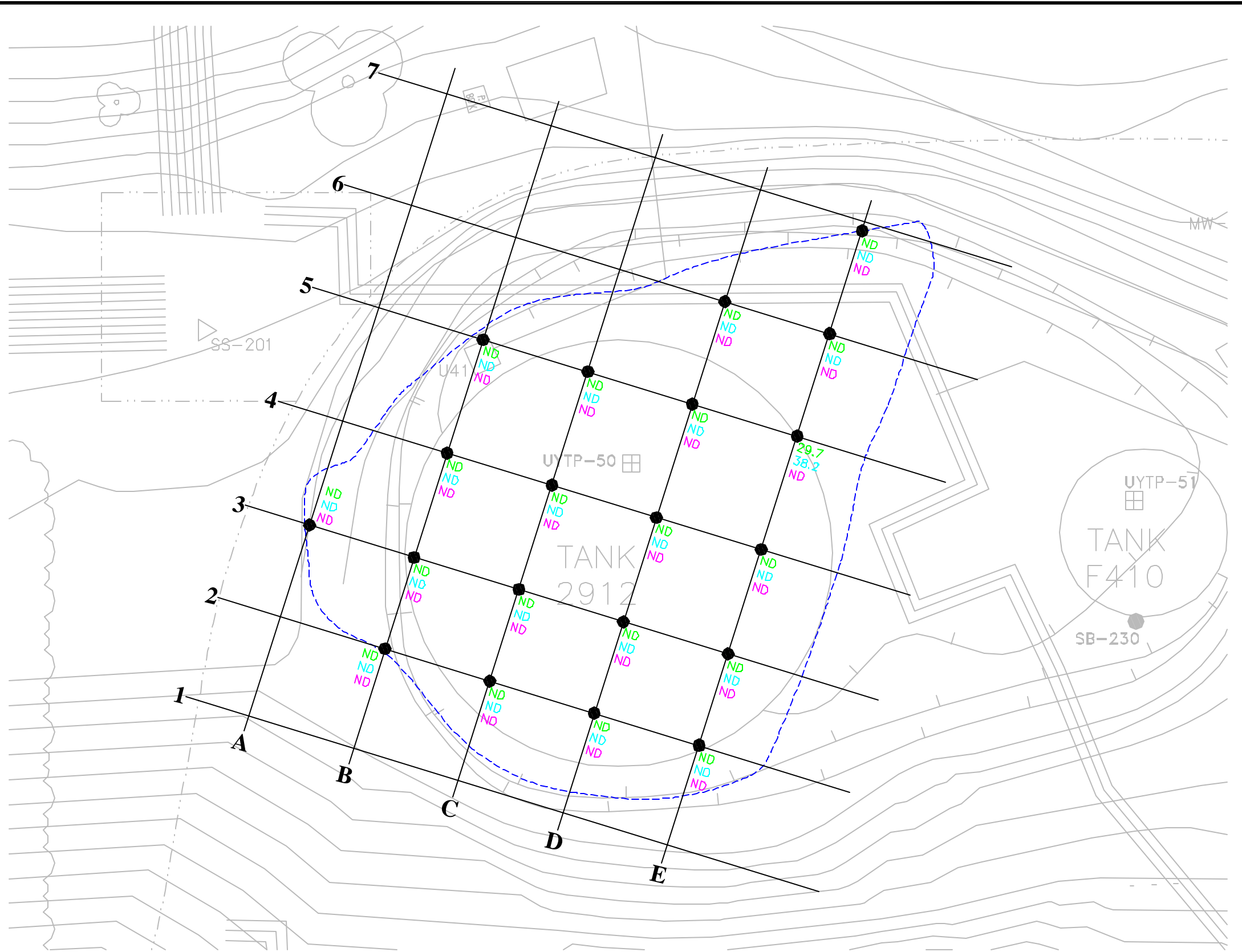
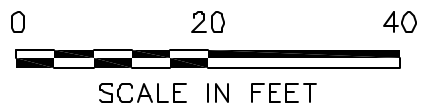
Vancouver: (360) 694-2691
 Edmonds: (425) 744-1489
 Portland: (971) 544-2139

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Figure 5-16
 UNOCAL EDMONDS TERMINAL
 EDMONDS, WASHINGTON

TPH AREA O (BASIN 2914)

- LEGEND:**
- TPH EXCAVATION AREA
 - ANALYTICAL RESULTS (mg/kg):**
 - 11.7 = TPH AS GASOLINE RANGE ORGANICS (GRO) CONCENTRATION
 - 8.2 = TPH AS DIESEL RANGE ORGANICS (DRO) CONCENTRATION
 - 10.1 = TPH AS HEAVY OIL RANGE ORGANICS (HO) CONCENTRATION
 - ND = NOT DETECTED



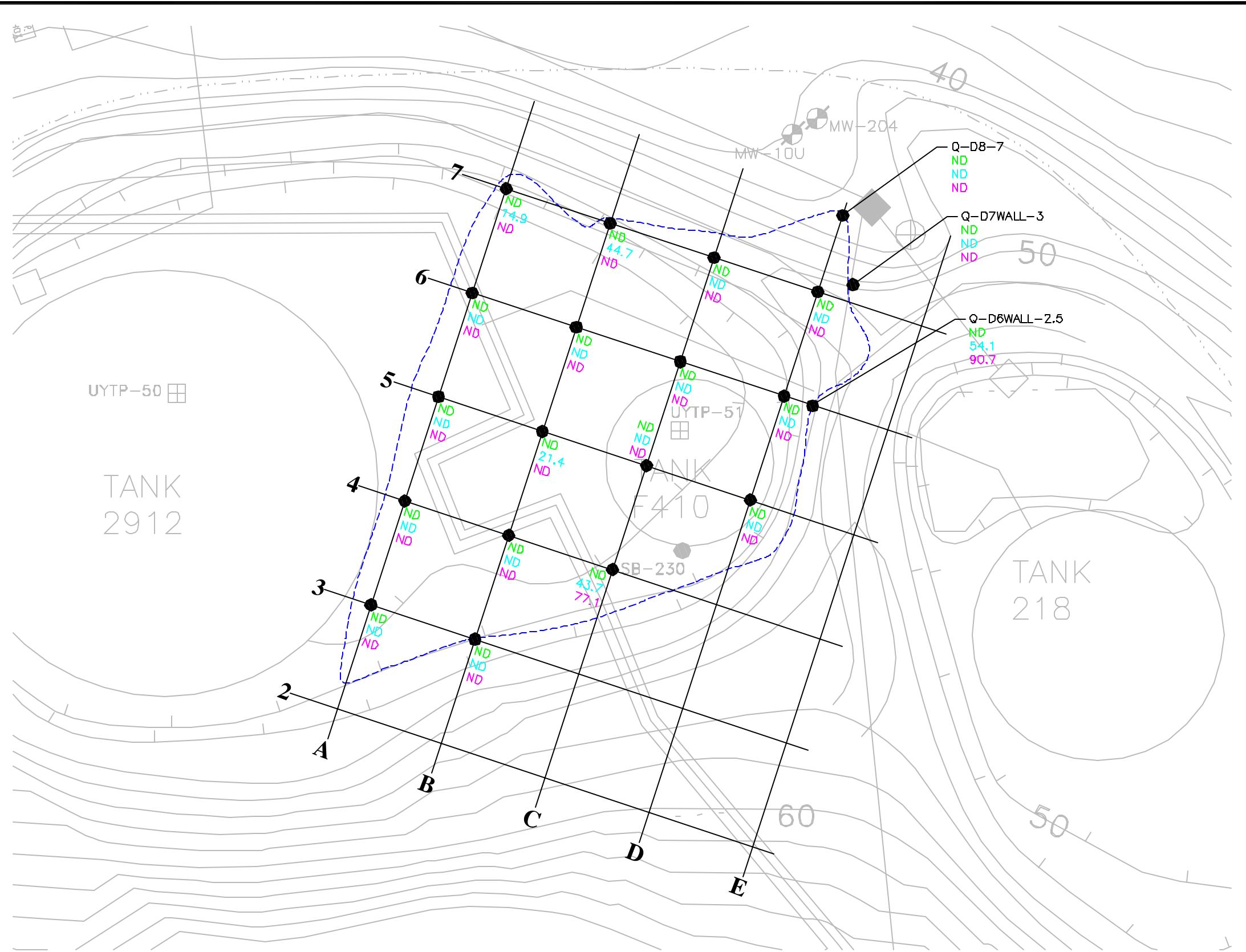
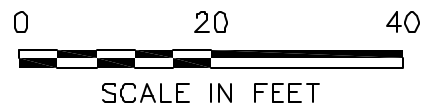
Vancouver: (360) 694-2691
Edmonds: (425) 744-1489
Portland: (971) 544-2139

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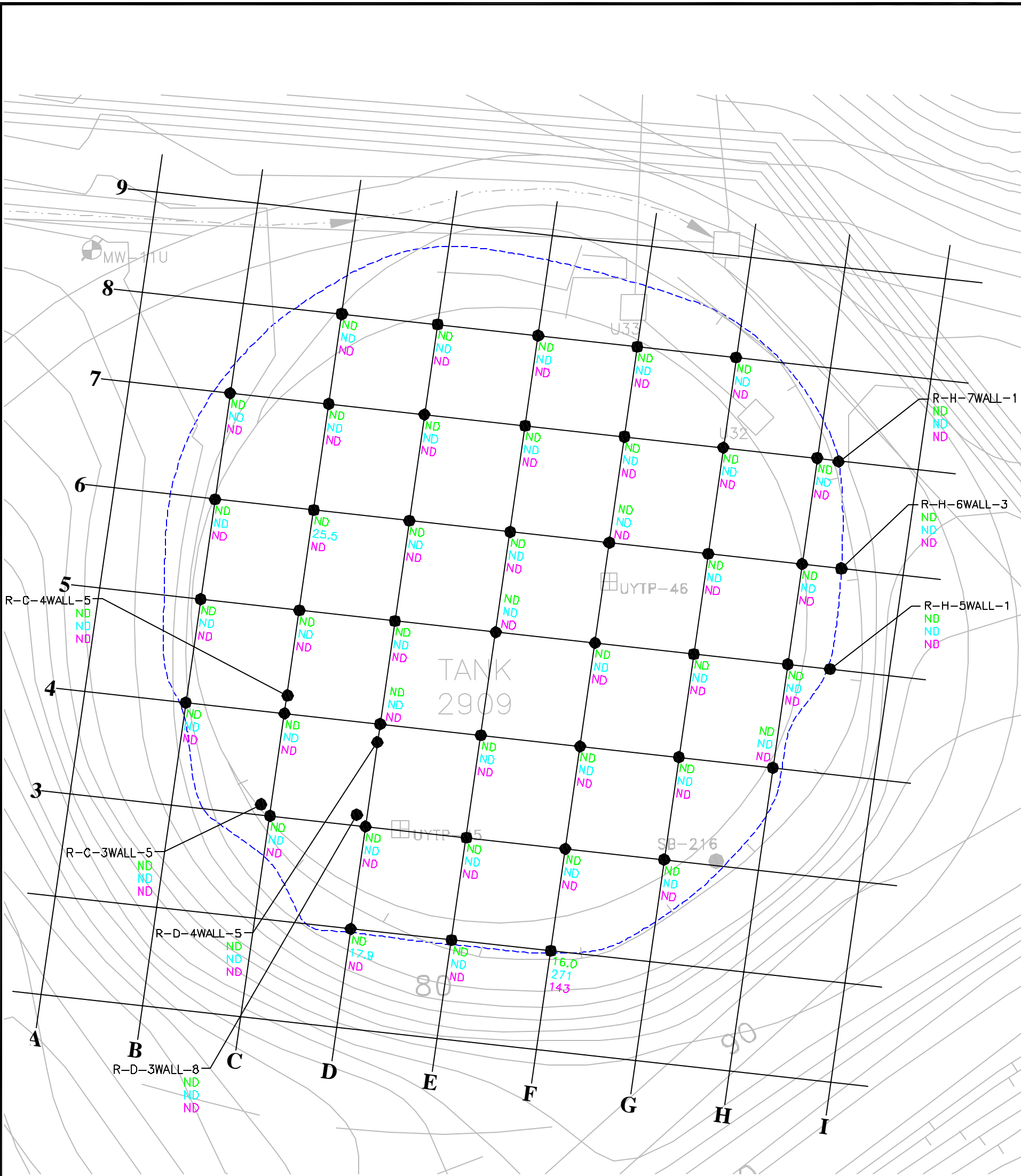
Figure 5-17
UNOCAL EDMONDS TERMINAL
EDMONDS, WASHINGTON

TPH AREA P (BASIN 2912)

- LEGEND:**
- TPH EXCAVATION AREA
 - ANALYTICAL RESULTS (mg/kg):**
 - 11.7 = TPH AS GASOLINE RANGE ORGANICS (GRO) CONCENTRATION
 - 8.2 = TPH AS DIESEL RANGE ORGANICS (DRO) CONCENTRATION
 - 10.1 = TPH AS HEAVY OIL RANGE ORGANICS (HO) CONCENTRATION
 - ND = NOT DETECTED



Vancouver: (360) 694-2691		DATE 03/26/03	Figure 5-18 UNOCAL EDMONDS TERMINAL EDMONDS, WASHINGTON TPH AREA Q (BASIN F410)
Edmonds: (425) 744-1489		DWN. AJY	
Portland: (971) 544-2139		APPR. _____	
	REVIS. _____		
	PROJECT NO. 9077.01.07		



LEGEND:

--- TPH EXCAVATION AREA

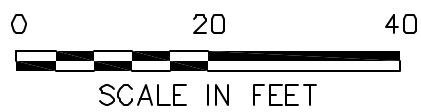
ANALYTICAL RESULTS (mg/kg):

11.7 = TPH AS GASOLINE RANGE ORGANICS (GRO) CONCENTRATION

8.2 = TPH AS DIESEL RANGE ORGANICS (DRO) CONCENTRATION

10.1 = TPH AS HEAVY OIL RANGE ORGANICS (HO) CONCENTRATION

ND = NOT DETECTED



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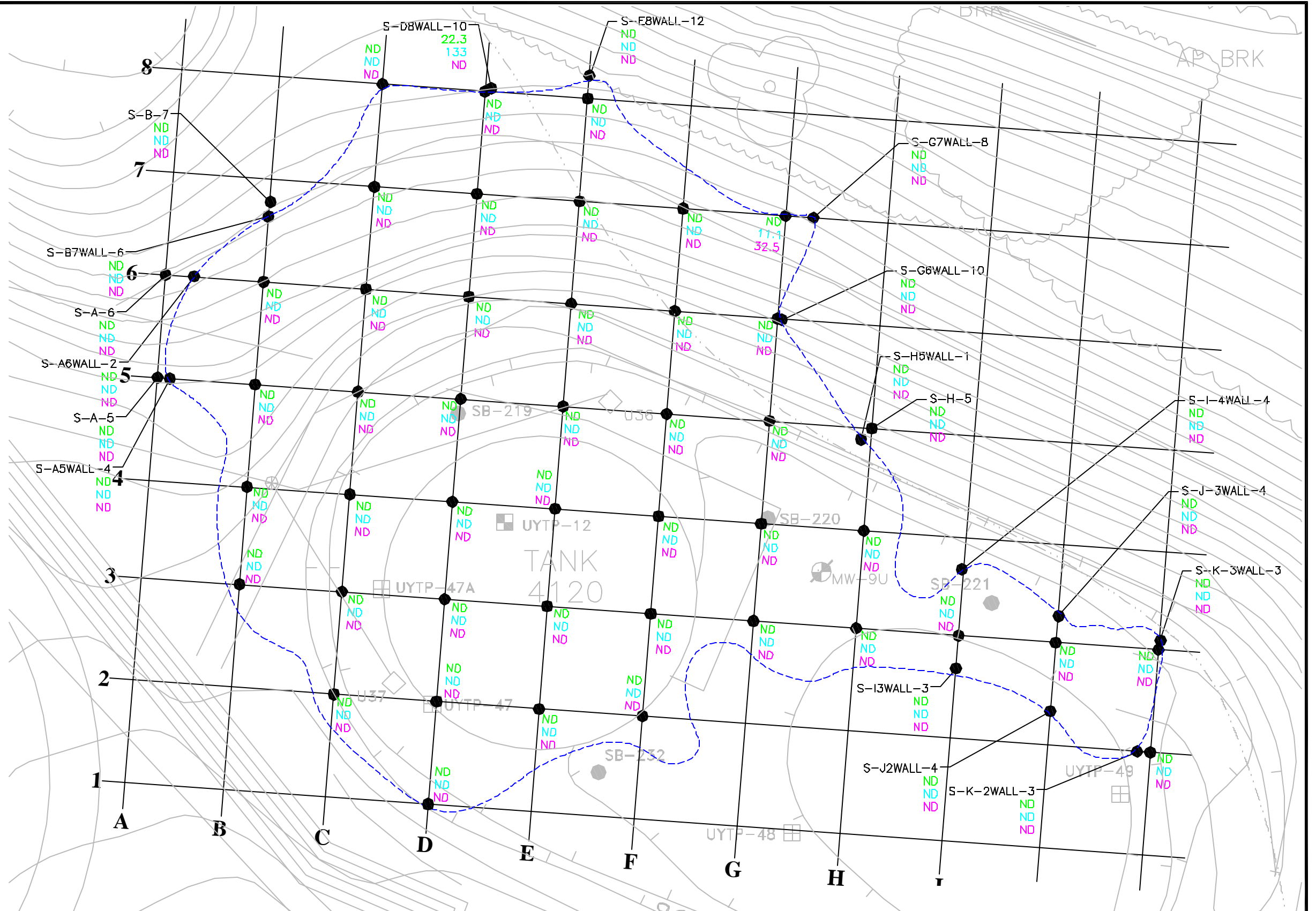
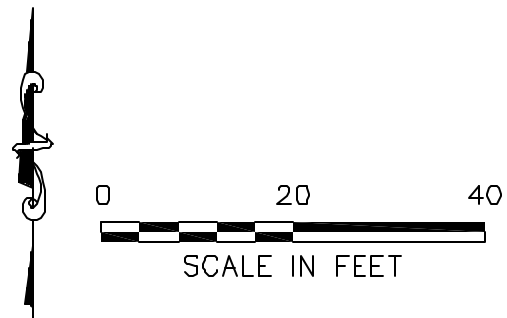


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Figure 5-19
 UNOCAL EDMONDS TERMINAL
 EDMONDS, WASHINGTON

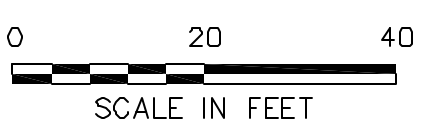
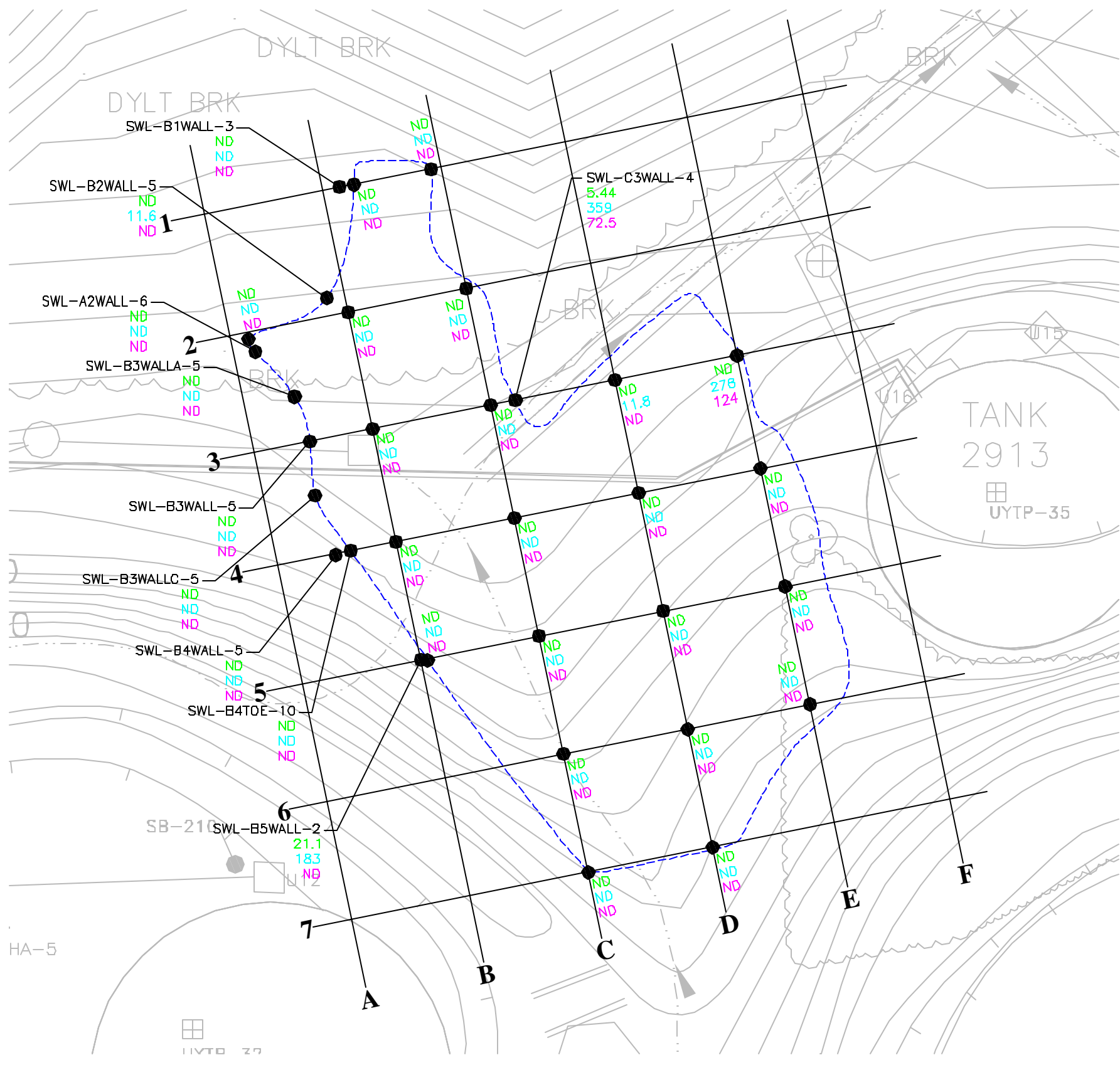
TPH AREA R (BASIN 2909)

LEGEND:
 --- TPH EXCAVATION AREA
 ANALYTICAL RESULTS (mg/kg):
 11.7 = TPH AS GASOLINE RANGE ORGANICS (GRO) CONCENTRATION
 8.2 = TPH AS DIESEL RANGE ORGANICS (DRO) CONCENTRATION
 10.1 = TPH AS HEAVY OIL RANGE ORGANICS (HO) CONCENTRATION
 ND = NOT DETECTED



Vancouver: (360) 694-2691		DATE 03/26/03	Figure 5-20 UNOCAL EDMONDS TERMINAL EDMONDS, WASHINGTON TPH AREA S (BASIN 4120)
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LEGEND:

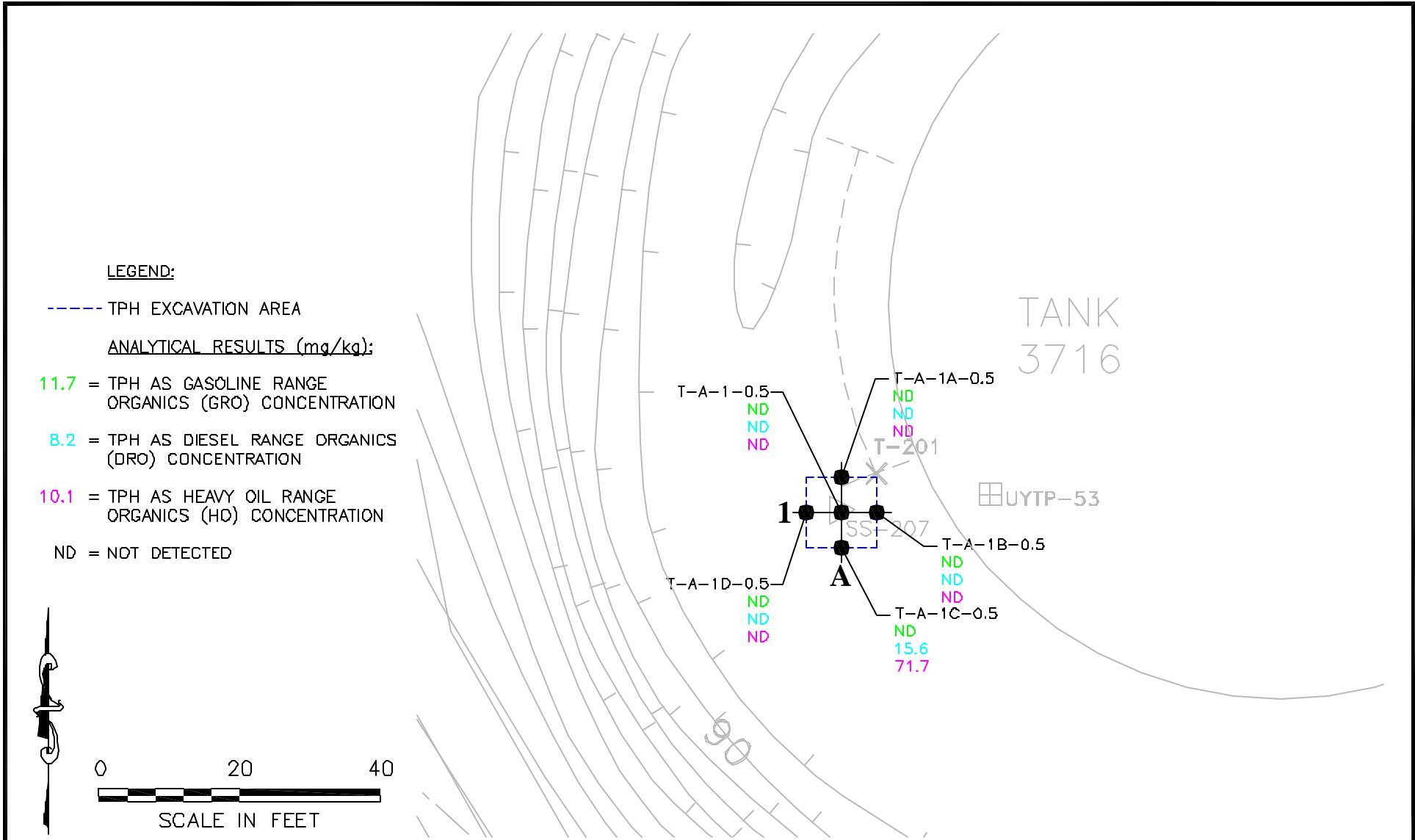
- TPH EXCAVATION AREA
- ANALYTICAL RESULTS (mg/kg):**
- 11.7 = TPH AS GASOLINE RANGE ORGANICS (GRO) CONCENTRATION
- 8.2 = TPH AS DIESEL RANGE ORGANICS (DRO) CONCENTRATION
- 10.1 = TPH AS HEAVY OIL RANGE ORGANICS (HO) CONCENTRATION
- ND = NOT DETECTED

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Figure 5-21
UNOCAL EDMONDS TERMINAL
EDMONDS, WASHINGTON

TPH AREA SWL (SWALE WEST OF BASIN 2913)

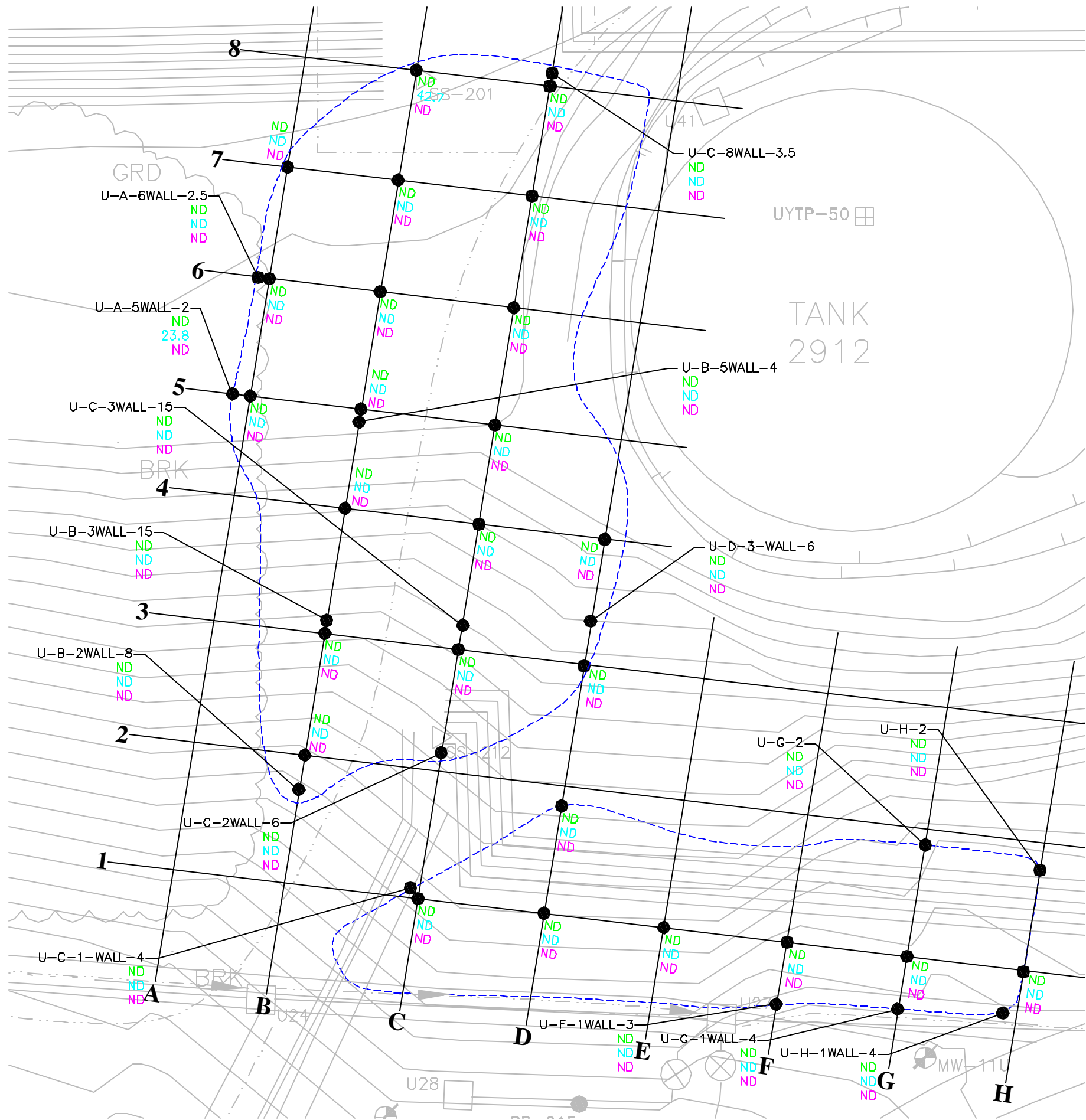


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Figure 5-22
 UNOCAL EDMONDS TERMINAL
 EDMONDS, WASHINGTON

TPH AREA T (BASIN 3716)



LEGEND:

- TPH EXCAVATION AREA
- ANALYTICAL RESULTS (mg/kg):**
- 11.7 = TPH AS GASOLINE RANGE ORGANICS (GRO) CONCENTRATION
- 8.2 = TPH AS DIESEL RANGE ORGANICS (DRO) CONCENTRATION
- 10.1 = TPH AS HEAVY OIL RANGE ORGANICS (HO) CONCENTRATION
- ND = NOT DETECTED

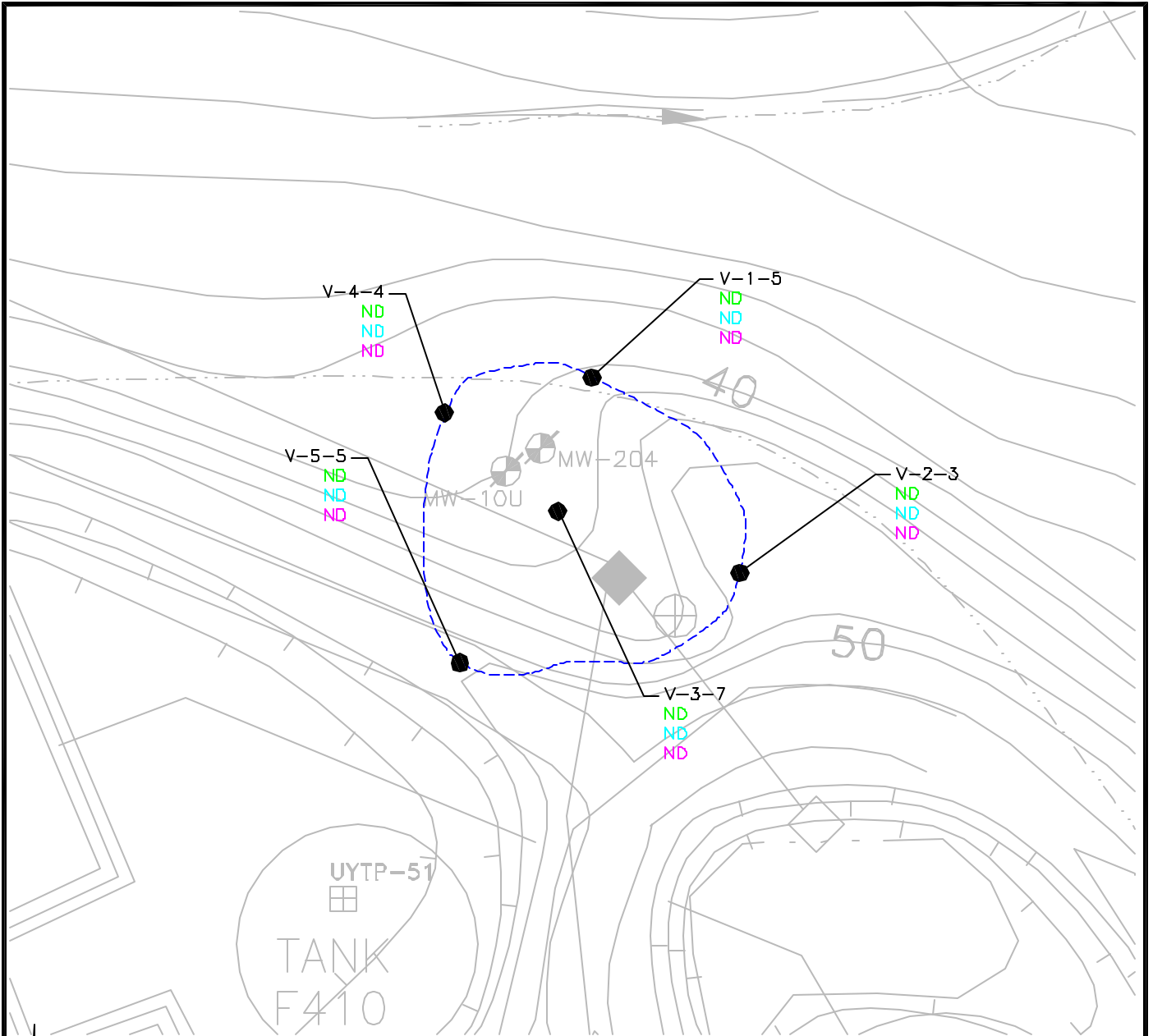
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Figure 5-23
 UNOCAL EDMONDS TERMINAL
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TPH AREA U (PIPE RUN, WEST OF BASIN 2912)



LEGEND:

--- TPH EXCAVATION AREA

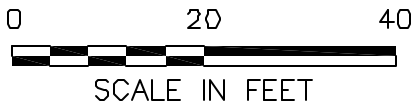
ANALYTICAL RESULTS (mg/kg):

11.7 = TPH AS GASOLINE RANGE ORGANICS (GRO) CONCENTRATION

8.2 = TPH AS DIESEL RANGE ORGANICS (DRO) CONCENTRATION

10.1 = TPH AS HEAVY OIL RANGE ORGANICS (HO) CONCENTRATION

ND = NOT DETECTED



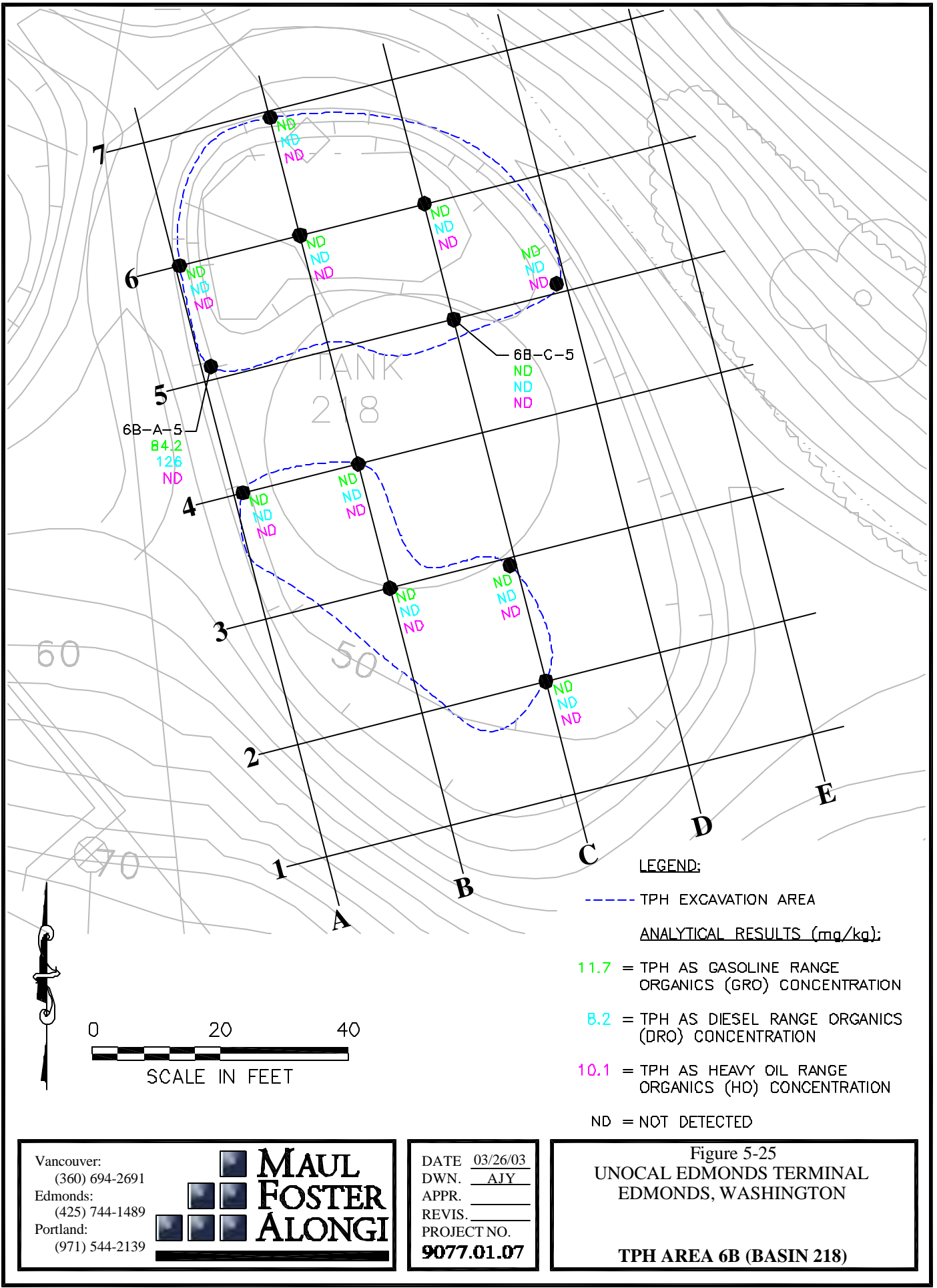
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Figure 5-24
UNOCAL EDMONDS TERMINAL
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TPH AREA V (MW-204 AREA)



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Figure 5-25
UNOCAL EDMONDS TERMINAL
EDMONDS, WASHINGTON

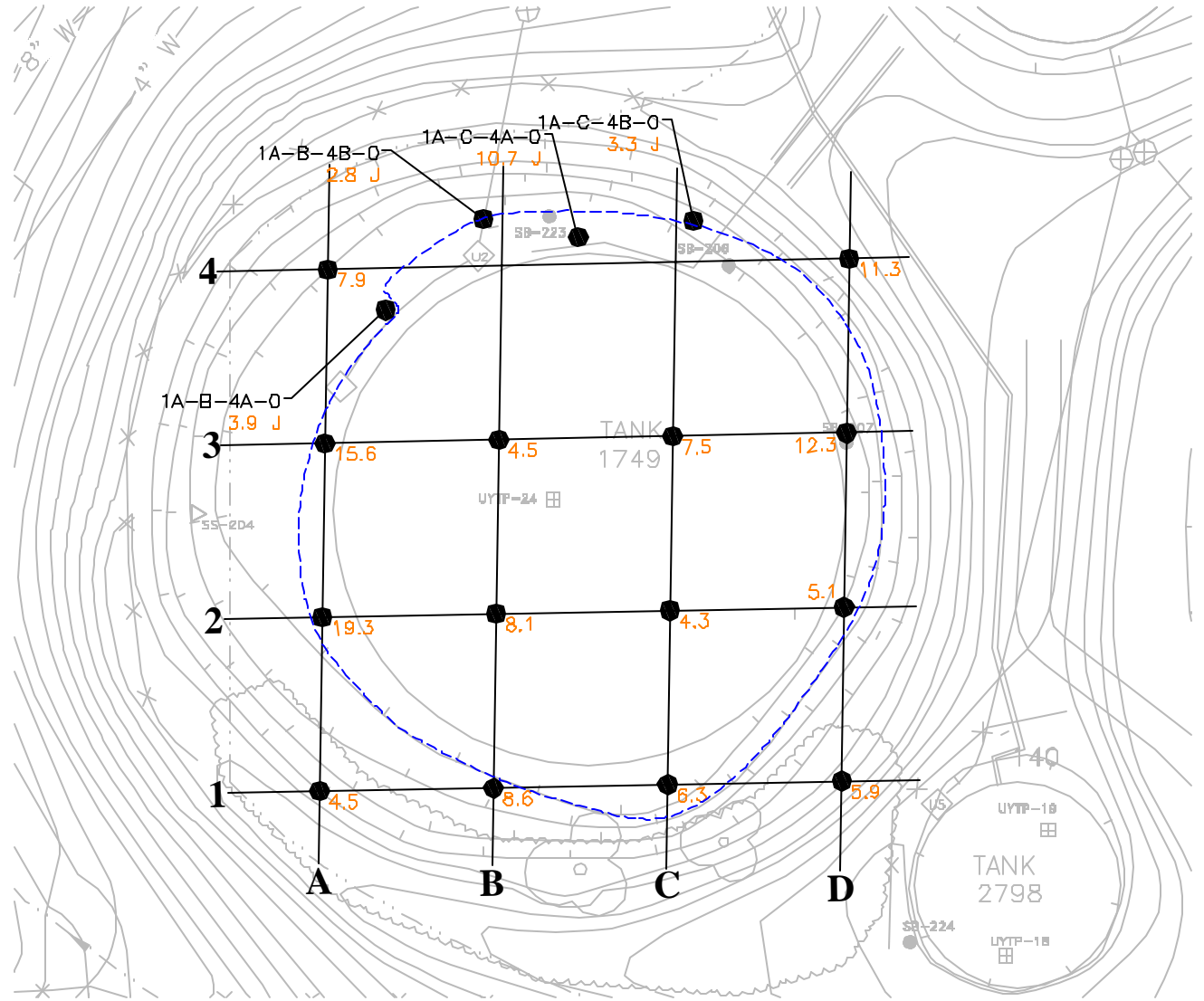
TPH AREA 6B (BASIN 218)

LEGEND:

--- METALS EXCAVATION AREA

ANALYTICAL RESULTS (mg/kg):

11.7 = ARSENIC CONCENTRATION



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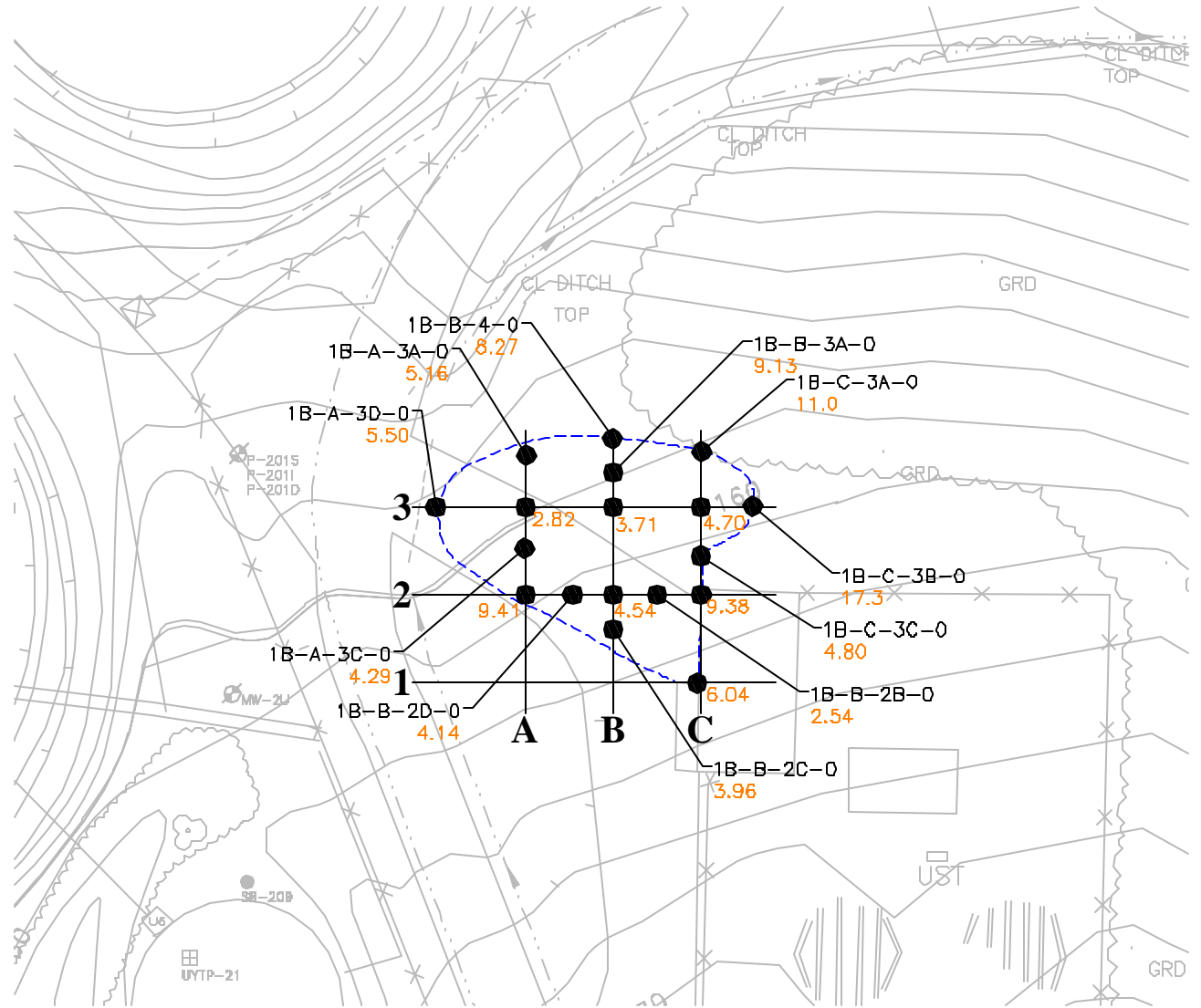
Figure 5-26
 UNOCAL EDMONDS TERMINAL
 EDMONDS, WASHINGTON
METALS AREA 1A (BASIN 1749)

LEGEND:

--- METALS EXCAVATION AREA

ANALYTICAL RESULTS (mg/kg):

11.7 = ARSENIC CONCENTRATION



0 40 80

SCALE IN FEET

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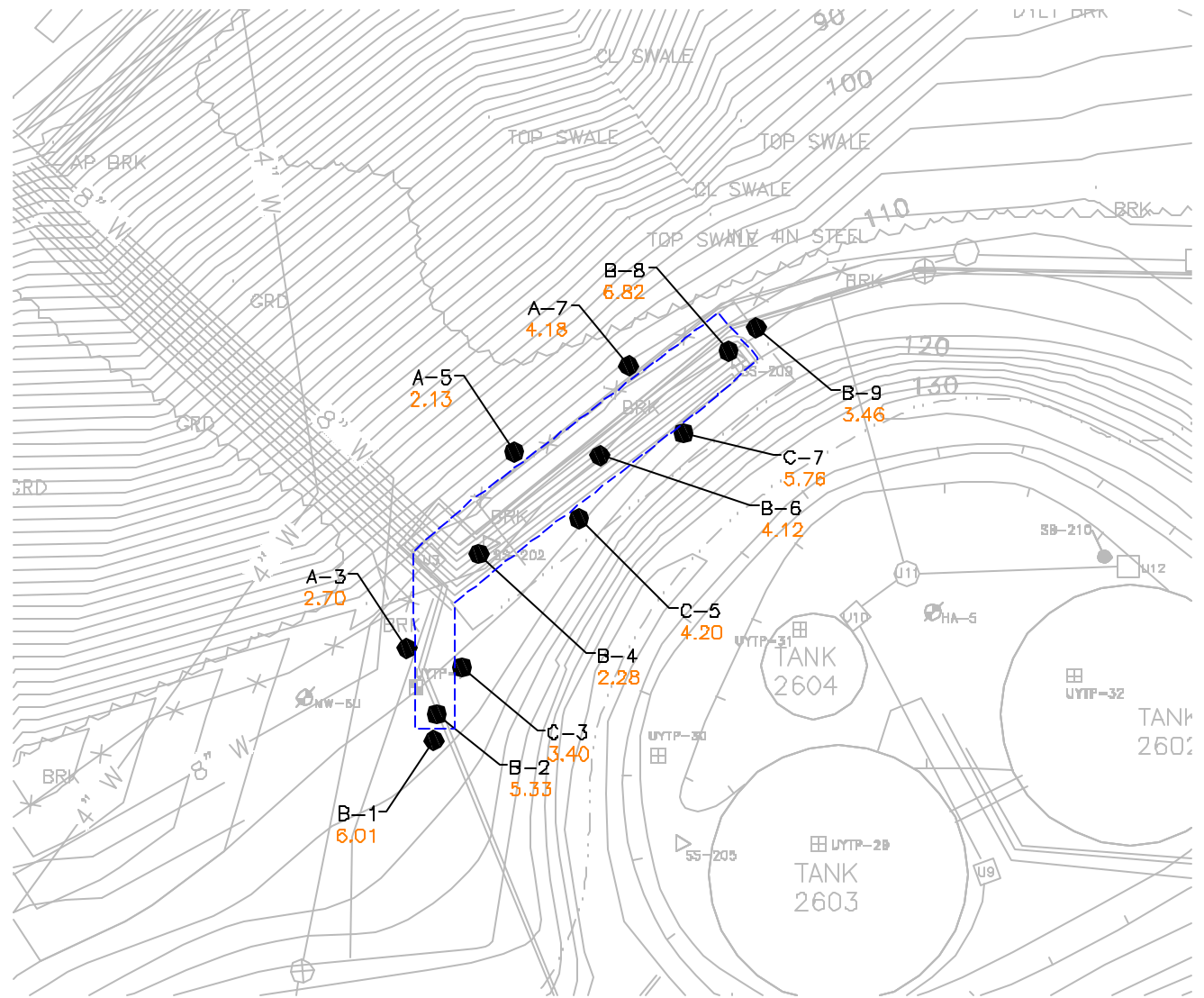
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Figure 5-27
 UNOCAL EDMONDS TERMINAL
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METALS AREA 1B

LEGEND:

- METALS EXCAVATION AREA
- ANALYTICAL RESULTS (mg/kg):
- 11.7 = ARSENIC CONCENTRATION



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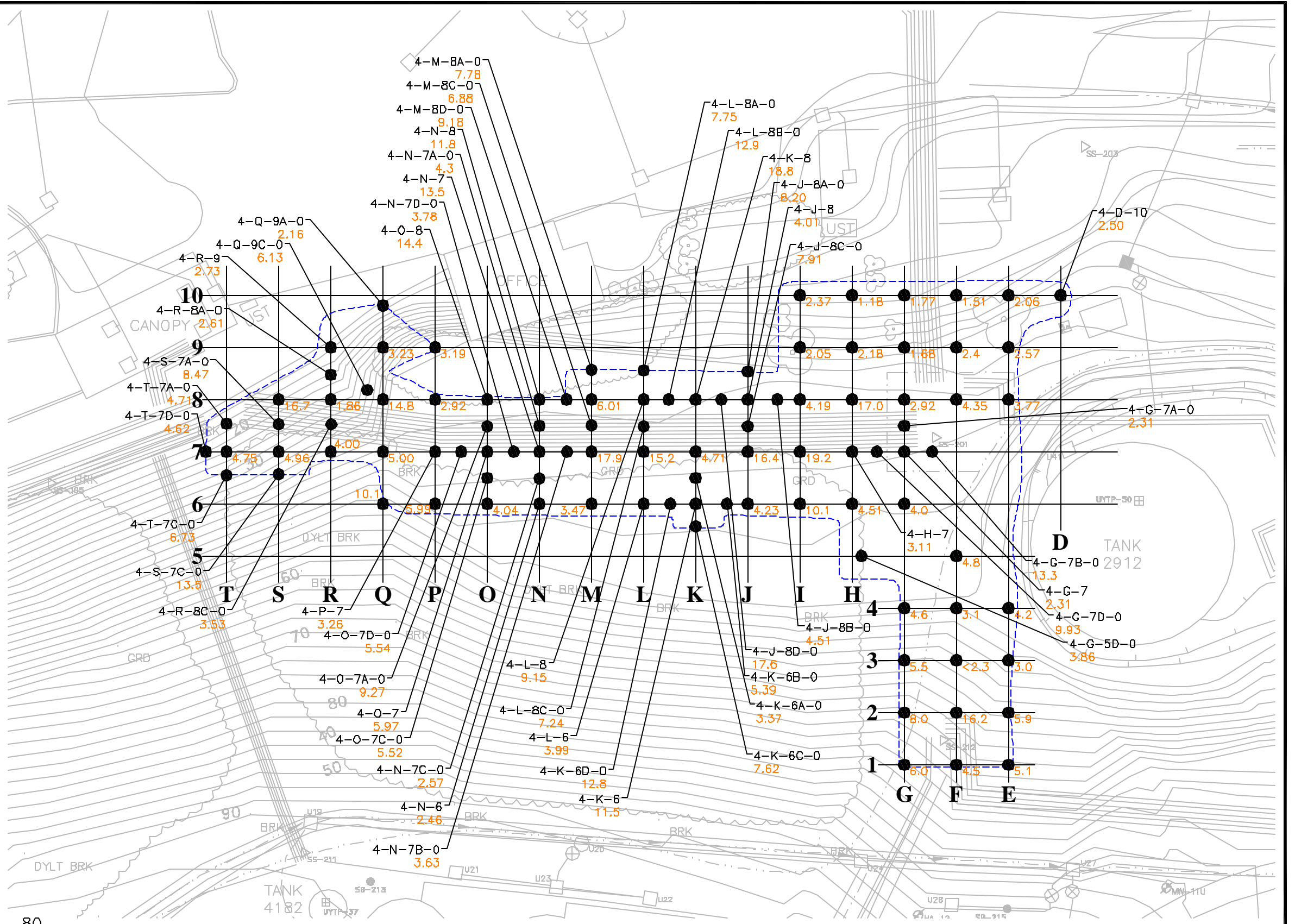
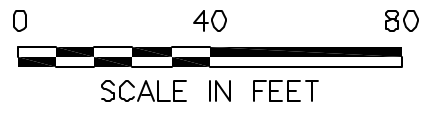
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Figure 5-28
UNOCAL EDMONDS TERMINAL
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METALS AREA 2

LEGEND:

- METALS EXCAVATION AREA
- ANALYTICAL RESULTS (mg/kg):**
- 11.7 = ARSENIC CONCENTRATION



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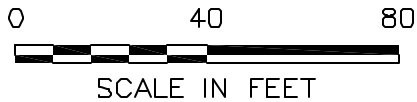
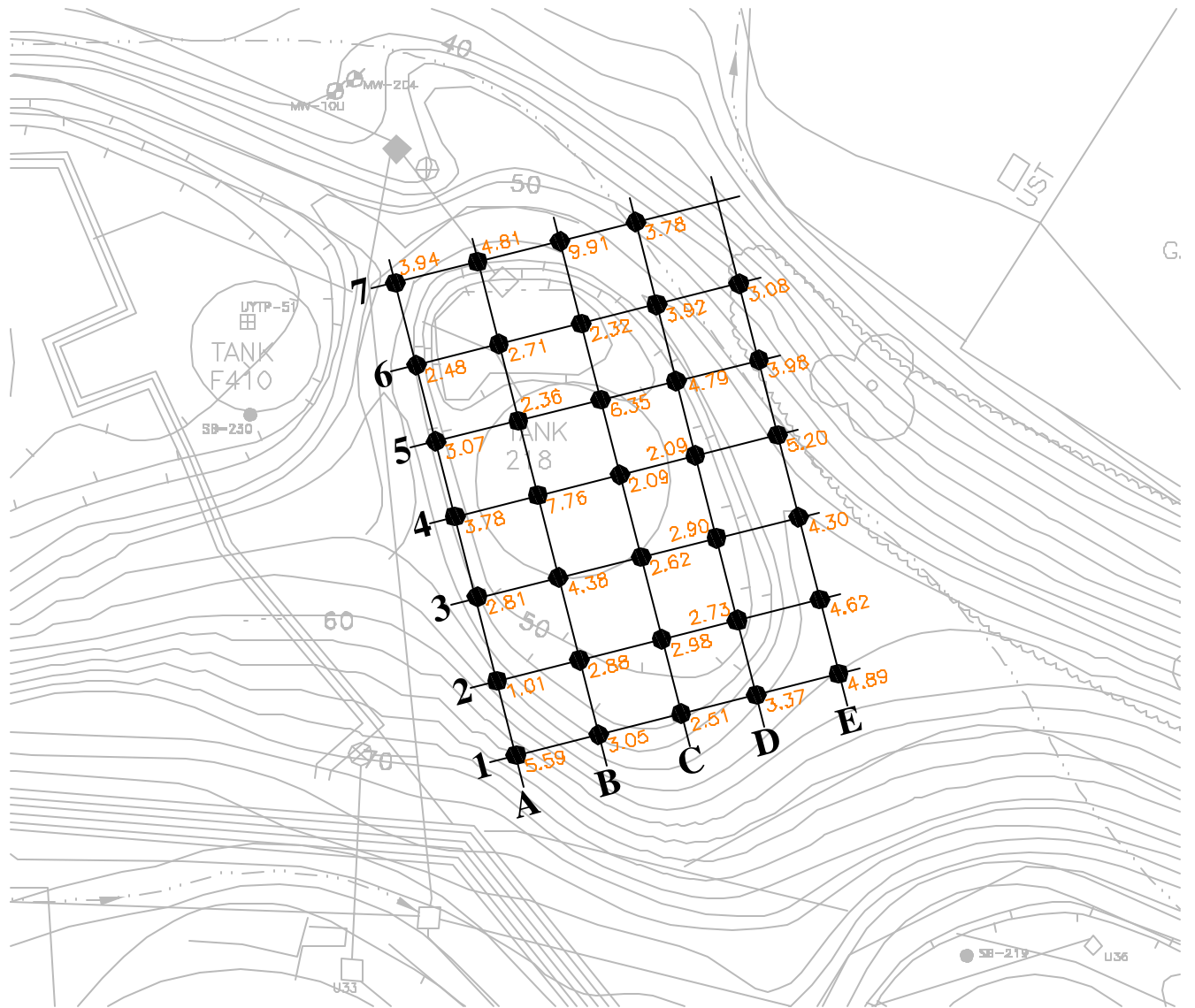
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Figure 5-29
 UNOCAL EDMONDS TERMINAL
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METALS AREA 4

ANALYTICAL RESULTS (mg/kg):

11.7 = ARSENIC CONCENTRATION



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Figure 5-30
 UNOCAL EDMONDS TERMINAL
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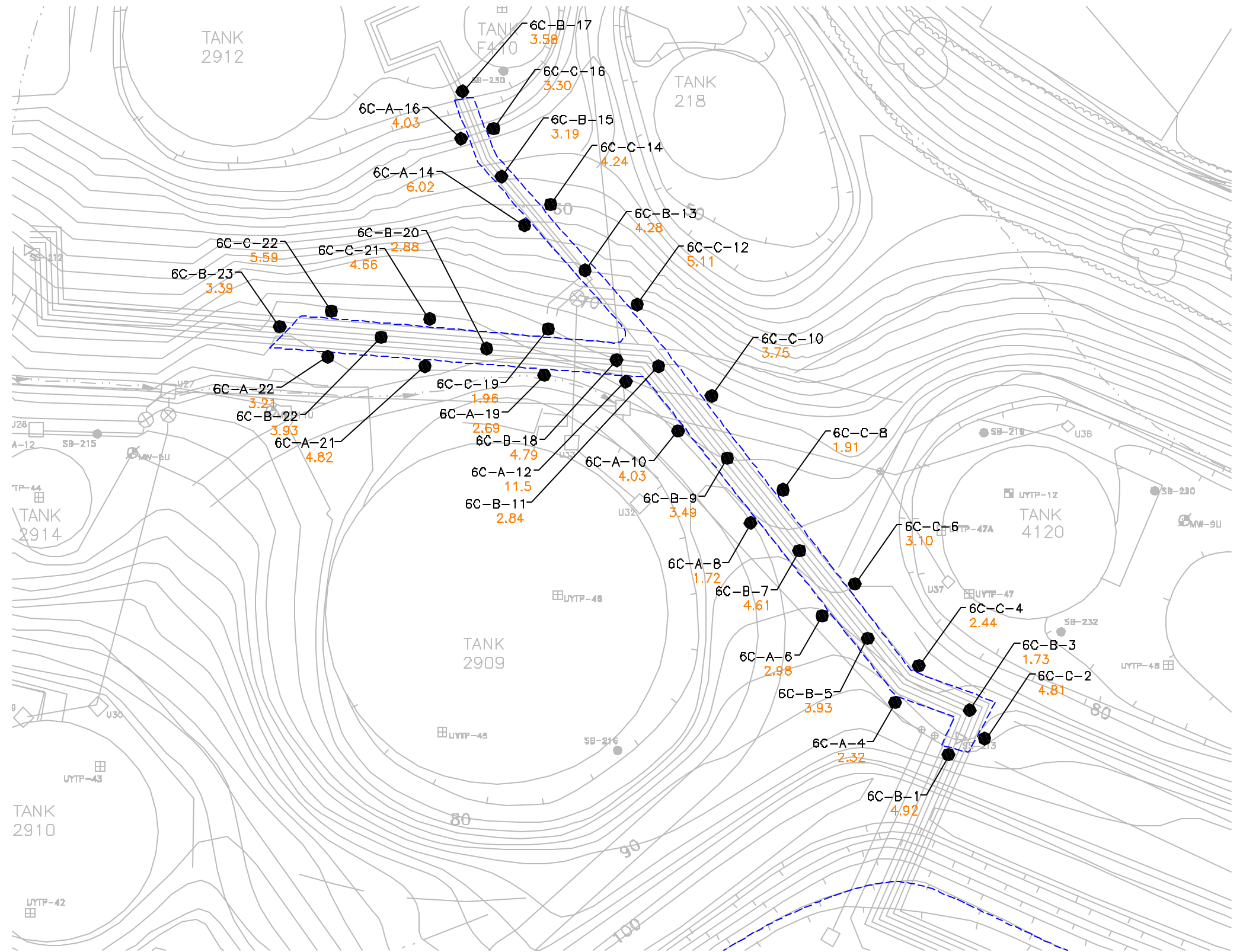
METALS AREA 6B (BASIN 218)

LEGEND:

--- METALS EXCAVATION AREA

ANALYTICAL RESULTS (mg/kg):

11.7 = ARSENIC CONCENTRATION



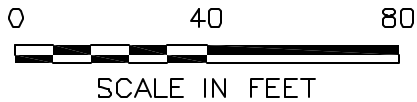
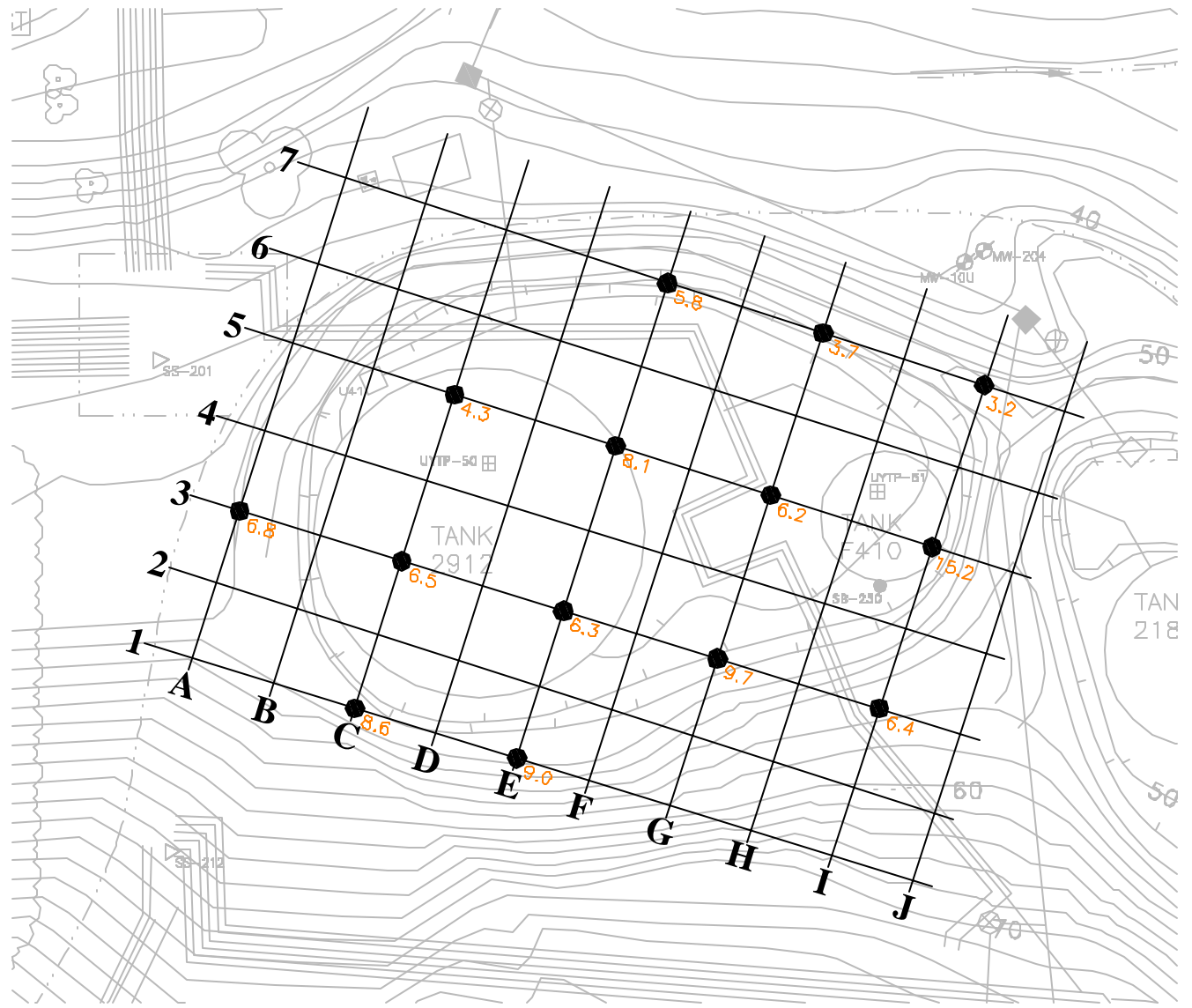
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Figure 5-31
 UNOCAL EDMONDS TERMINAL
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METALS AREA 6C

ANALYTICAL RESULTS (mg/kg):

11.7 = ARSENIC CONCENTRATION



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Figure 5-32
 UNOCAL EDMONDS TERMINAL
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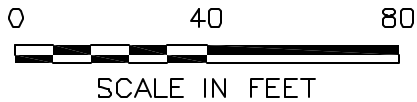
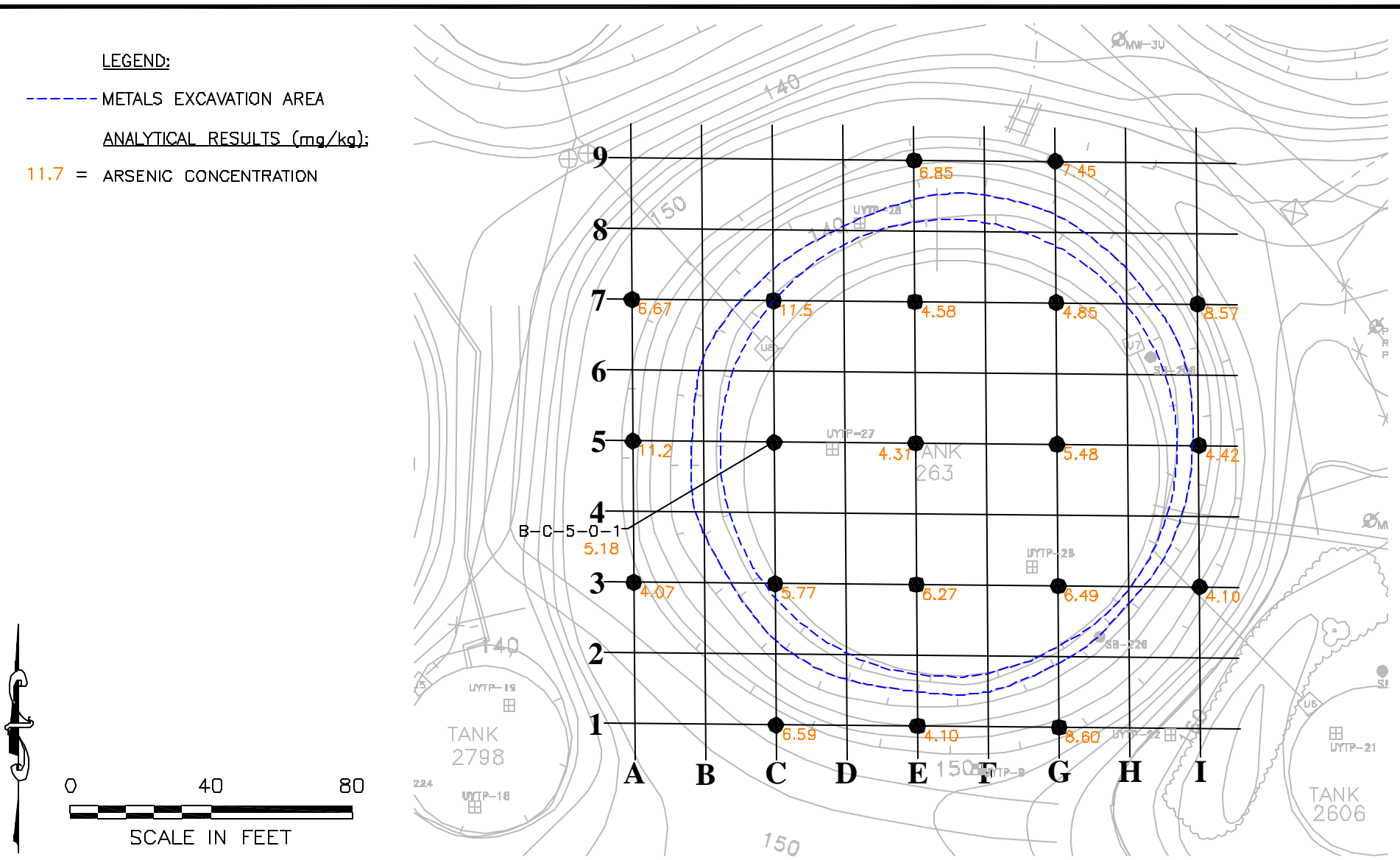
METALS AREA 8 (BASINS 2912 & F410)

LEGEND:

--- METALS EXCAVATION AREA

ANALYTICAL RESULTS (mg/kg):

11.7 = ARSENIC CONCENTRATION

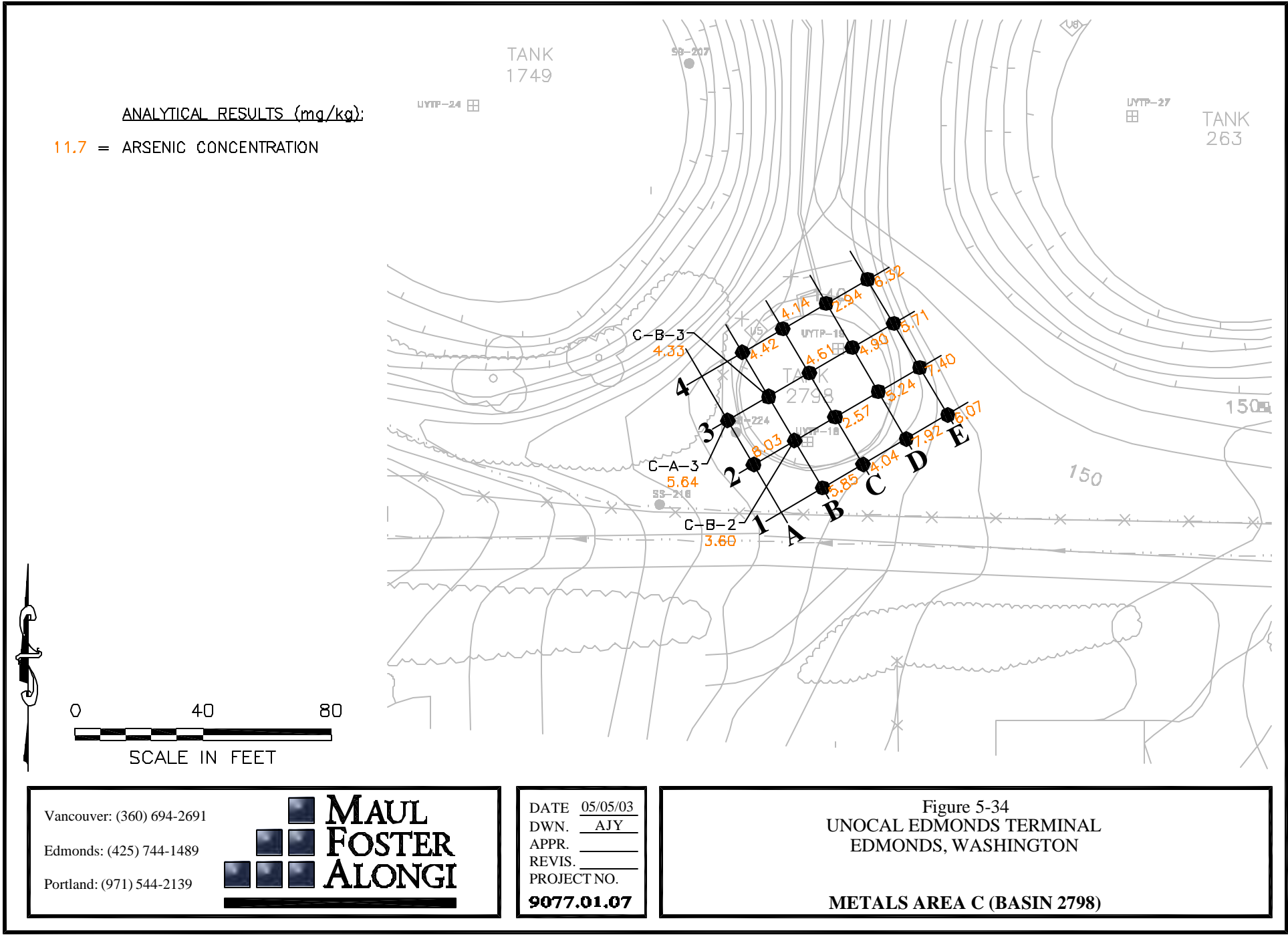


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Figure 5-33
UNOCAL EDMONDS TERMINAL
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METALS AREA B (BASIN 263)



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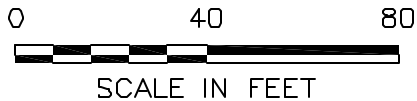
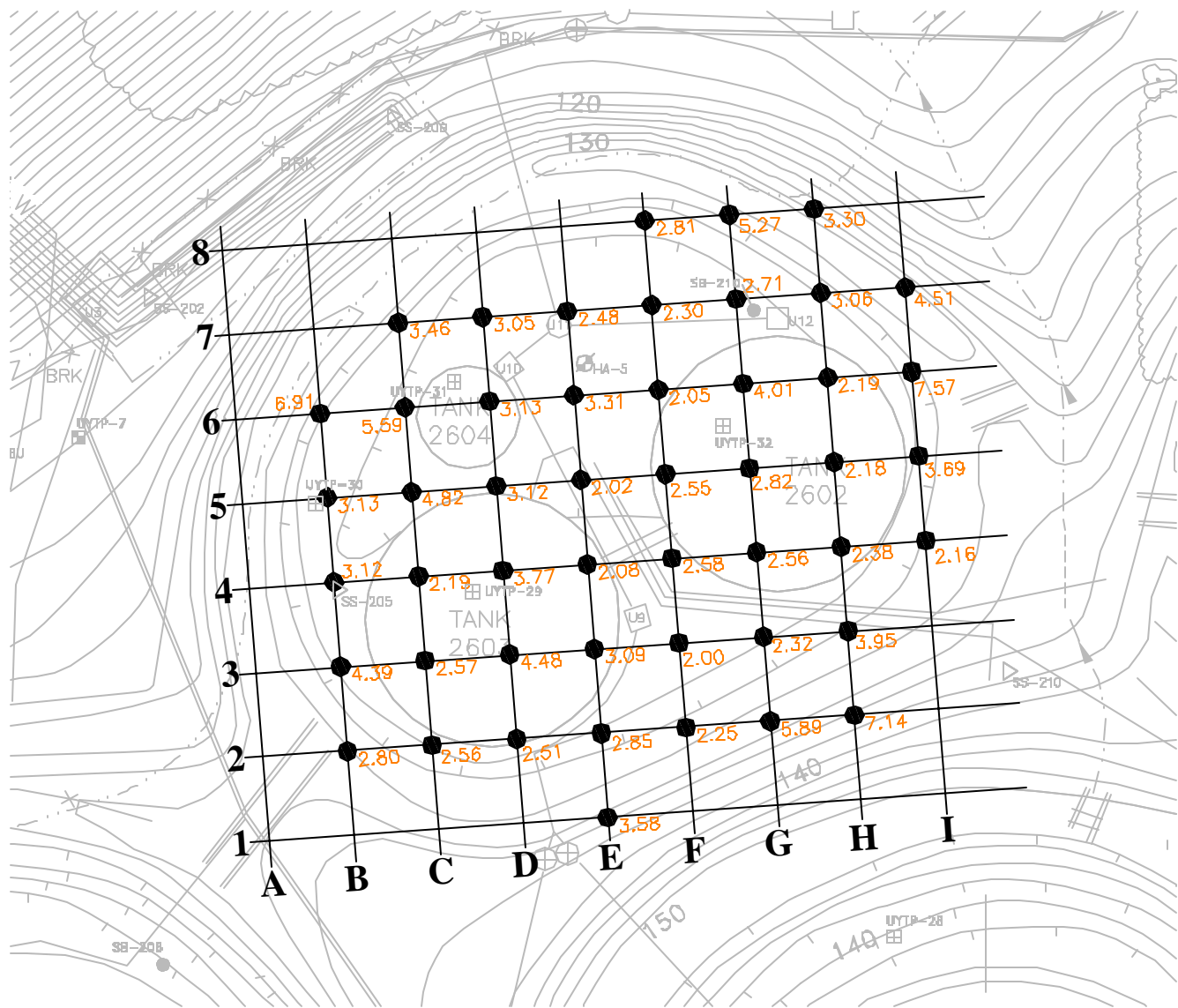
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Figure 5-34
 UNOCAL EDMONDS TERMINAL
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METALS AREA C (BASIN 2798)

ANALYTICAL RESULTS (mg/kg):

11.7 = ARSENIC CONCENTRATION



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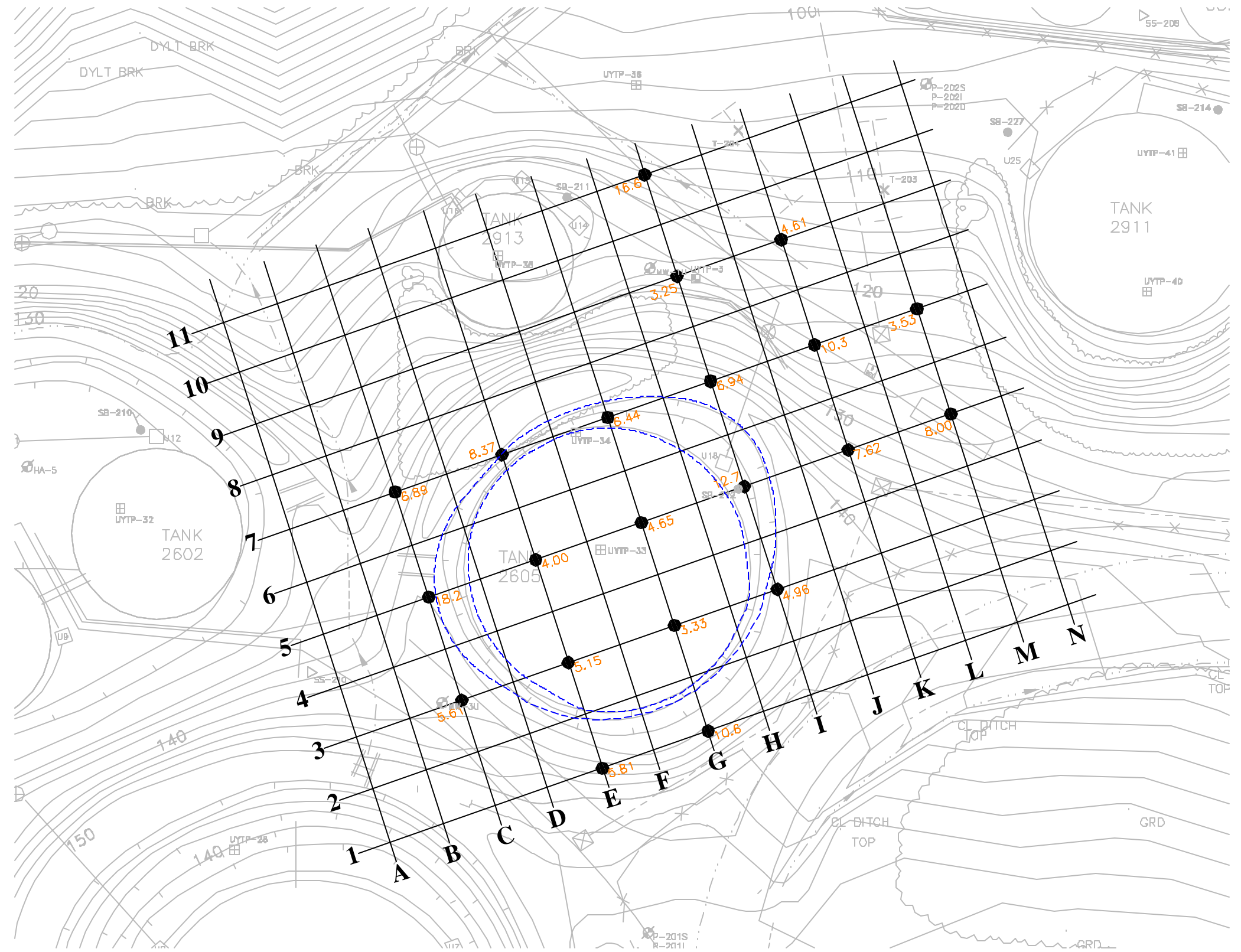
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Figure 5-35
UNOCAL EDMONDS TERMINAL
EDMONDS, WASHINGTON

METALS AREA F (BASINS 2602, 2603 & 2604)

LEGEND:

- METALS EXCAVATION AREA
- ANALYTICAL RESULTS (mg/kg):**
- 11.7 = ARSENIC CONCENTRATION



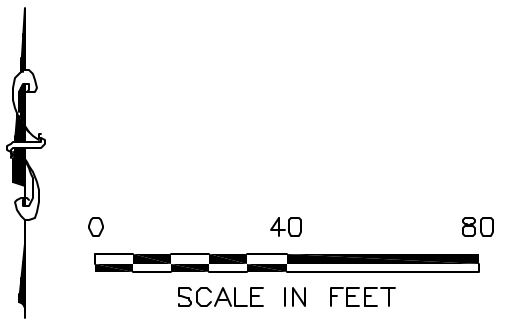
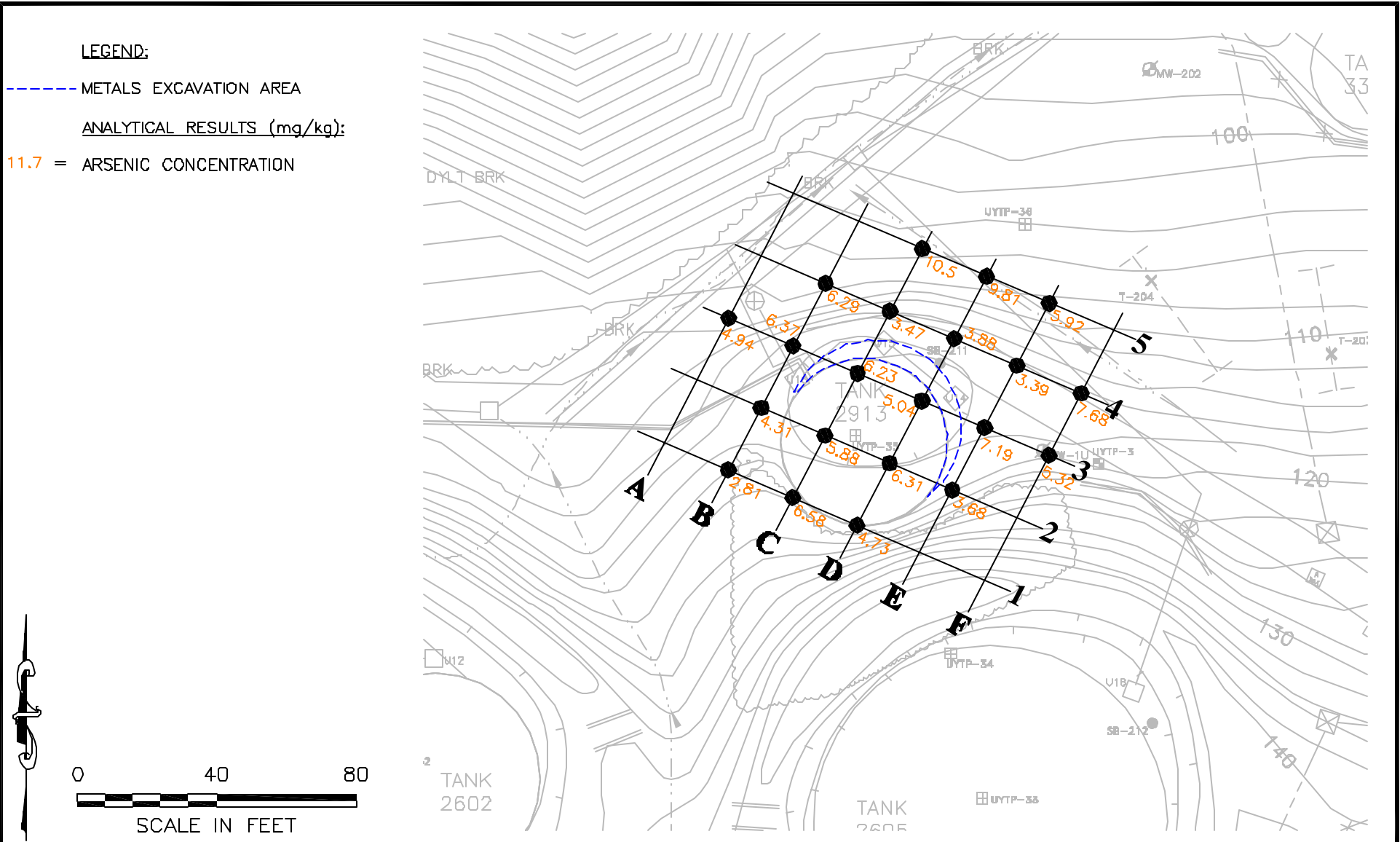
Vancouver: (360) 694-2691
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Figure 5-36
 UNOCAL EDMONDS TERMINAL
 EDMONDS, WASHINGTON

METALS AREA H (BASIN 2605)

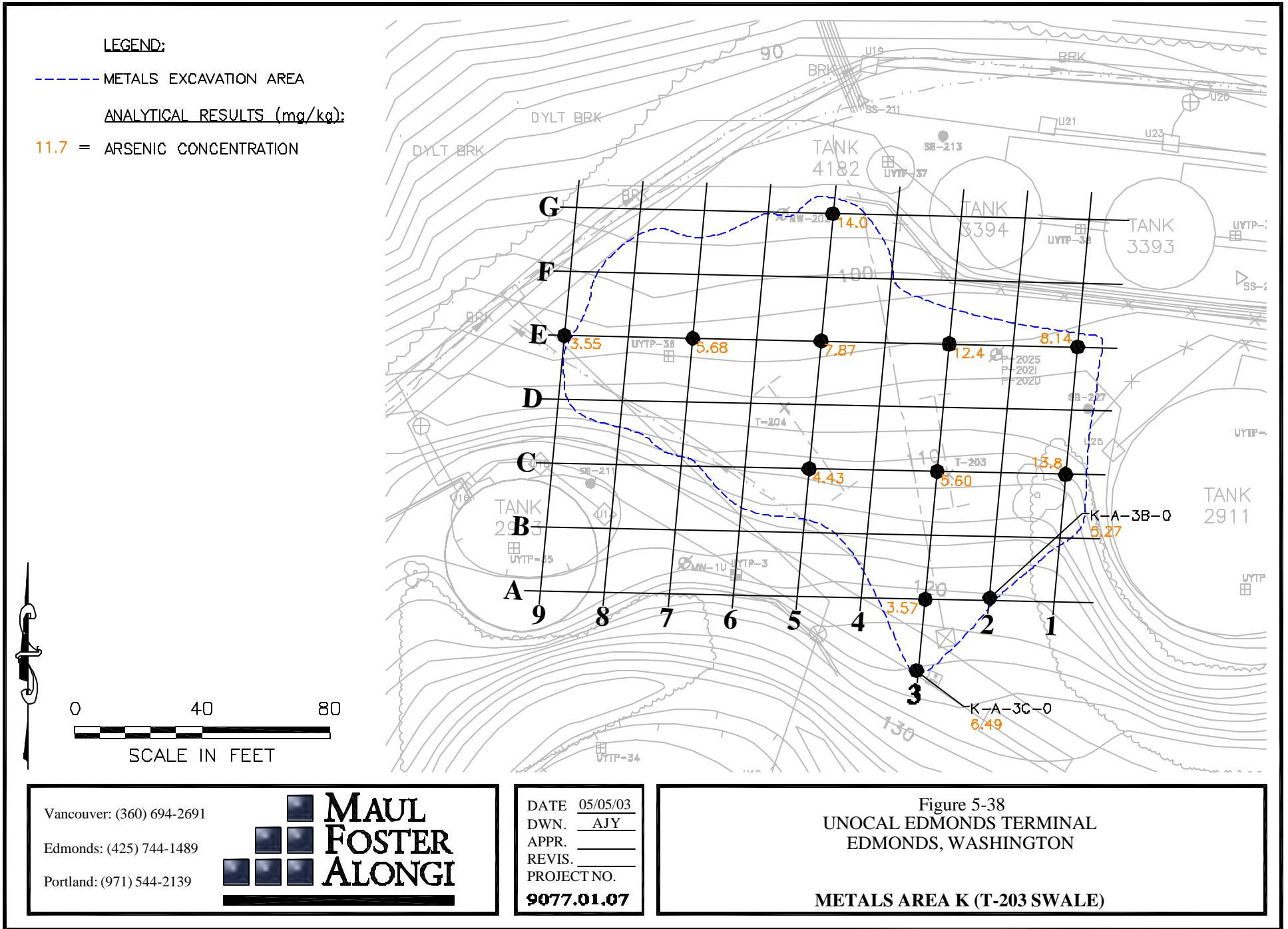


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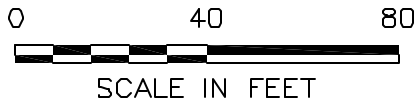
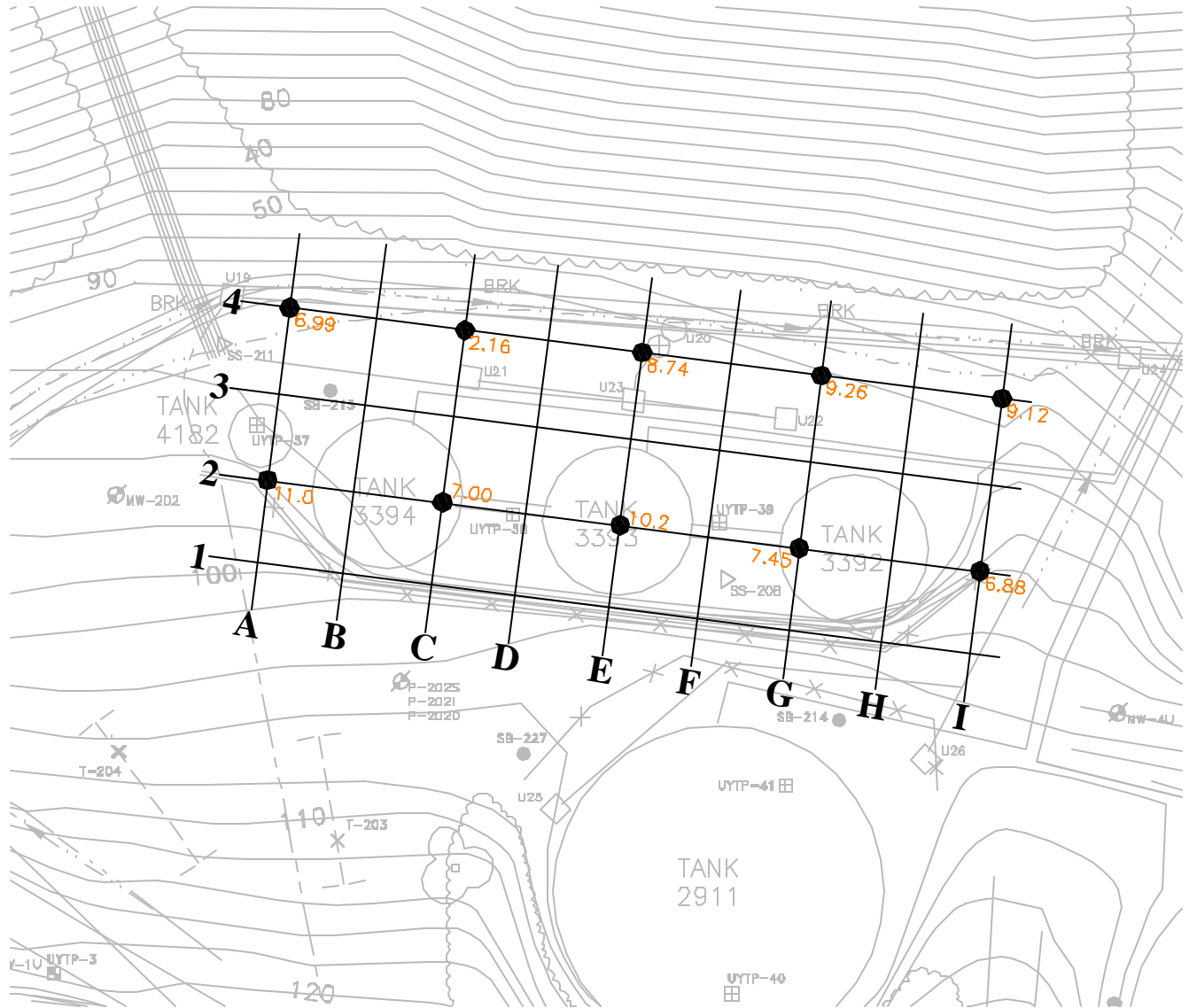
Figure 5-37
UNOCAL EDMONDS TERMINAL
EDMONDS, WASHINGTON

METALS AREA I (BASIN 2913)



ANALYTICAL RESULTS (mg/kg):

11.7 = ARSENIC CONCENTRATION



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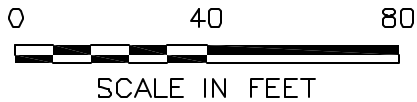
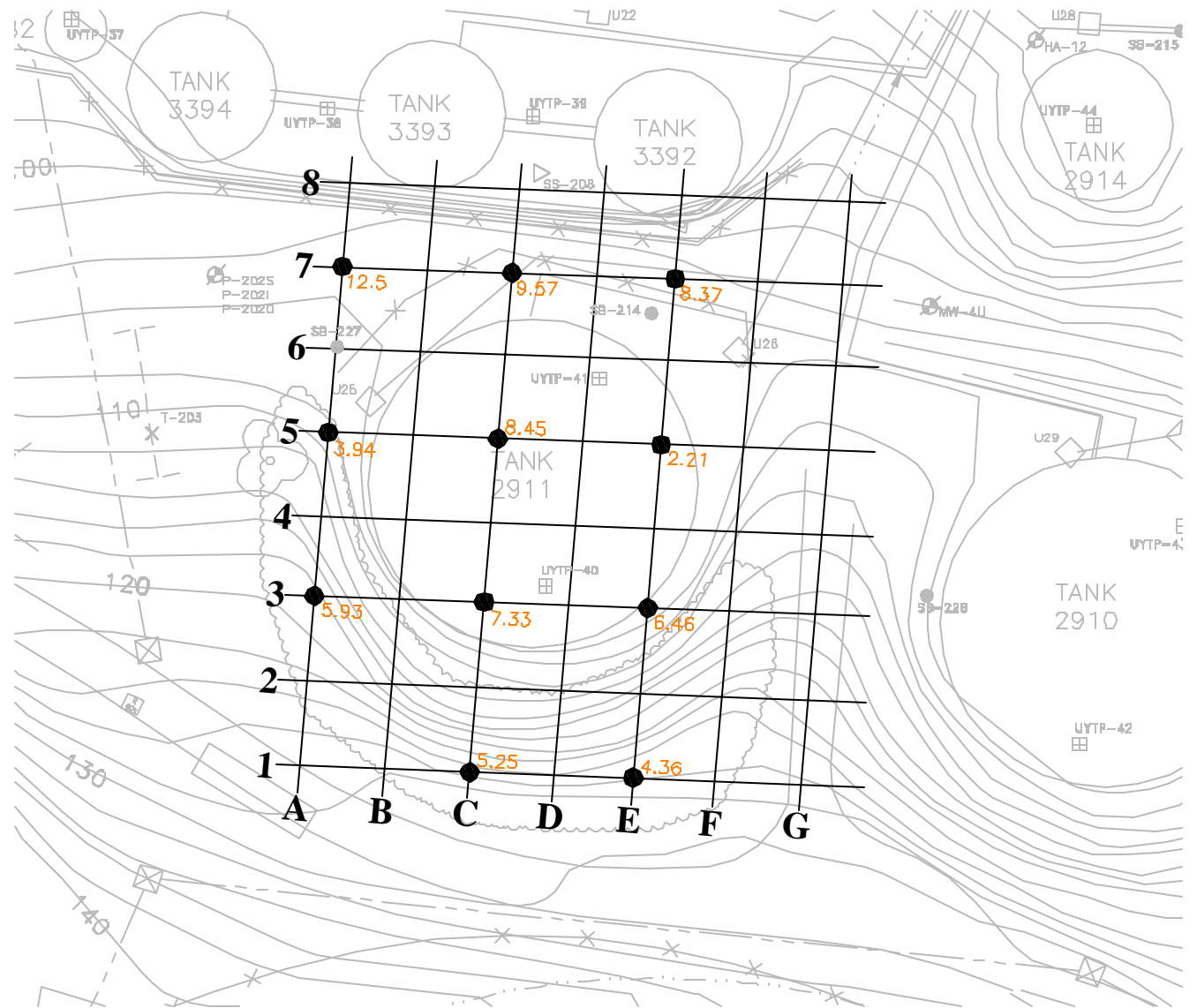
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Figure 5-39
 UNOCAL EDMONDS TERMINAL
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METALS AREA L (BASINS 3392, 3393, 3394 & 4182)

ANALYTICAL RESULTS (mg/kg):

11.7 = ARSENIC CONCENTRATION



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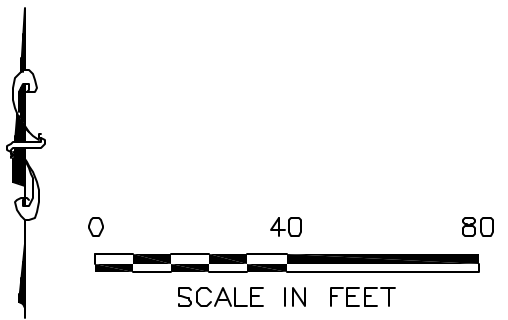
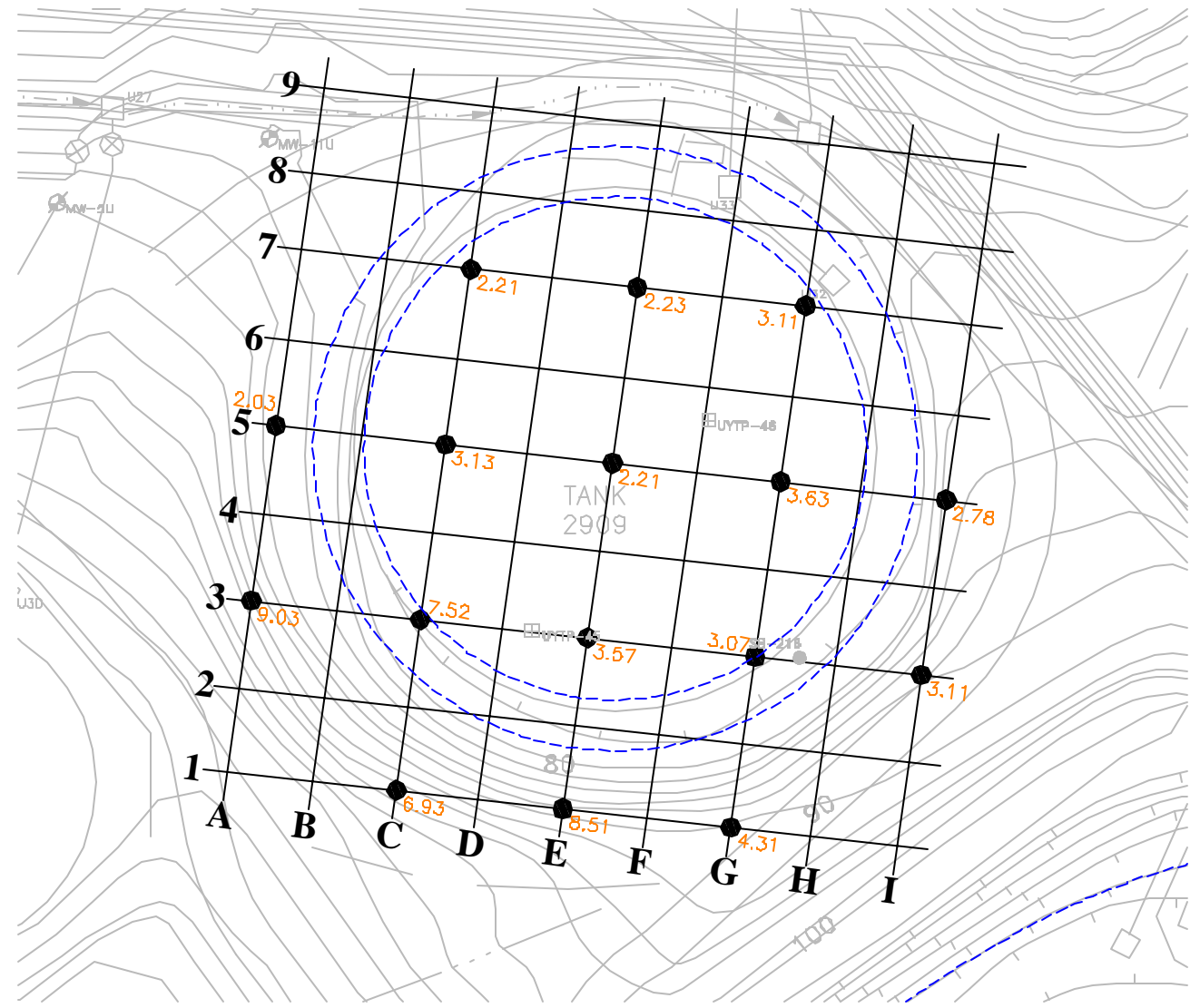
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Figure 5-40
 UNOCAL EDMONDS TERMINAL
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METALS AREA M (BASIN 2911)

LEGEND:

- - - METALS EXCAVATION AREA
- ANALYTICAL RESULTS (mg/kg):
- 11.7 = ARSENIC CONCENTRATION



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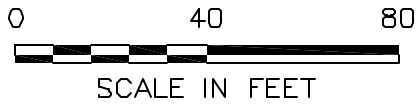
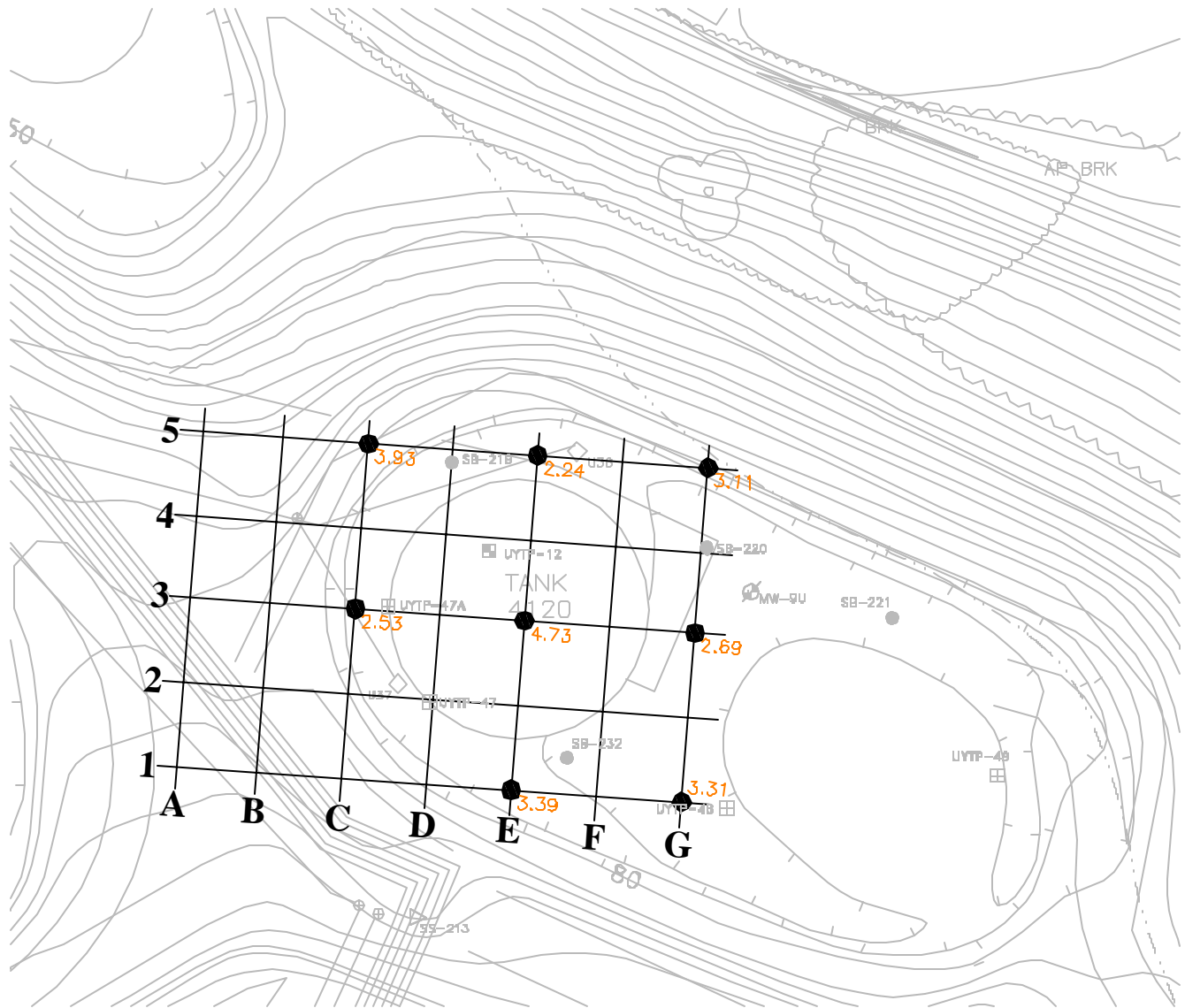
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Figure 5-43
UNOCAL EDMONDS TERMINAL
EDMONDS, WASHINGTON

METALS AREA R (BASIN 2909)

ANALYTICAL RESULTS (mg/kg):

11.7 = ARSENIC CONCENTRATION

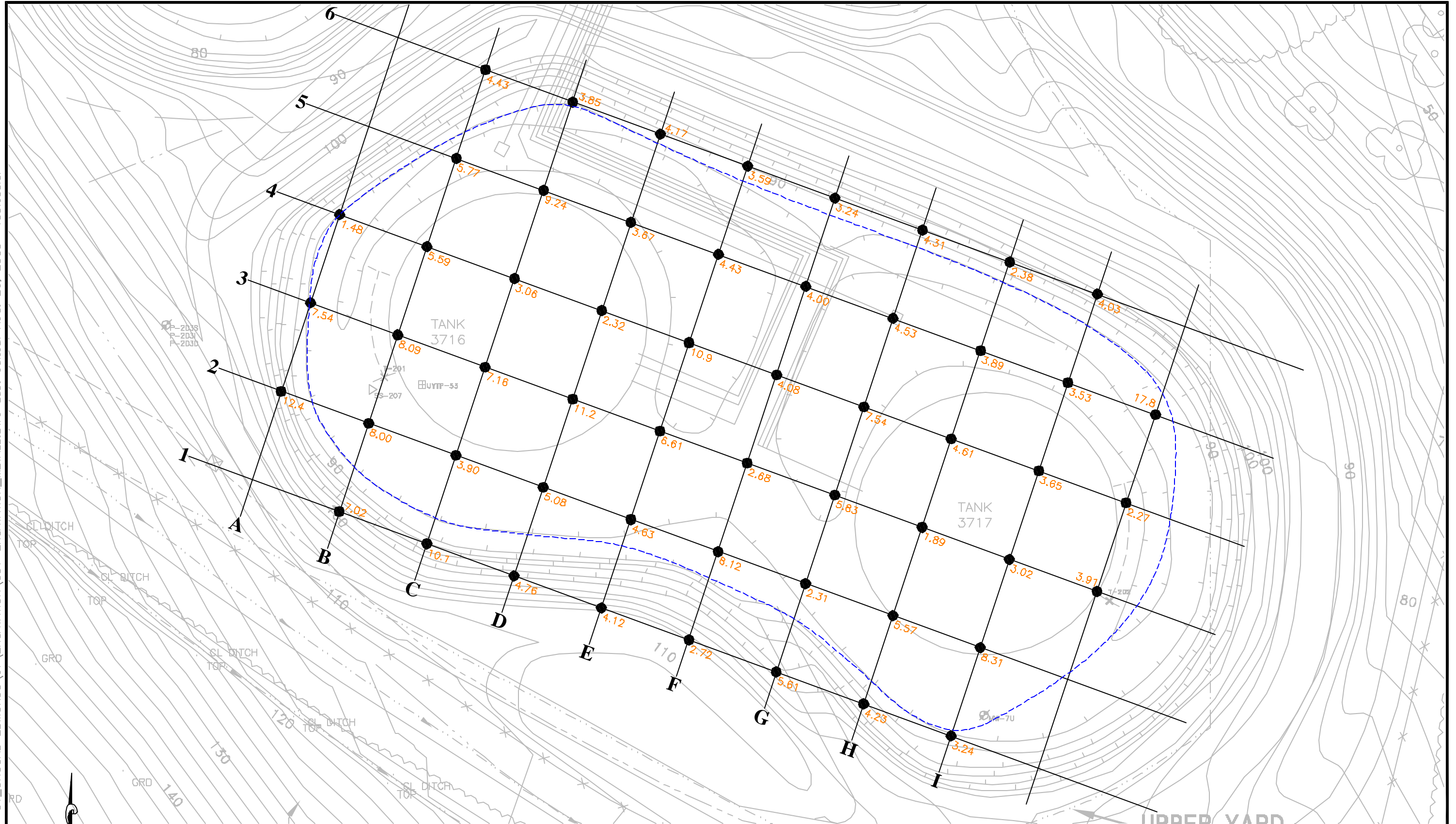


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Figure 5-44
 UNOCAL EDMONDS TERMINAL
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METALS AREA S (BASIN 4120)

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LEGEND:

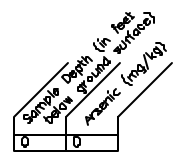
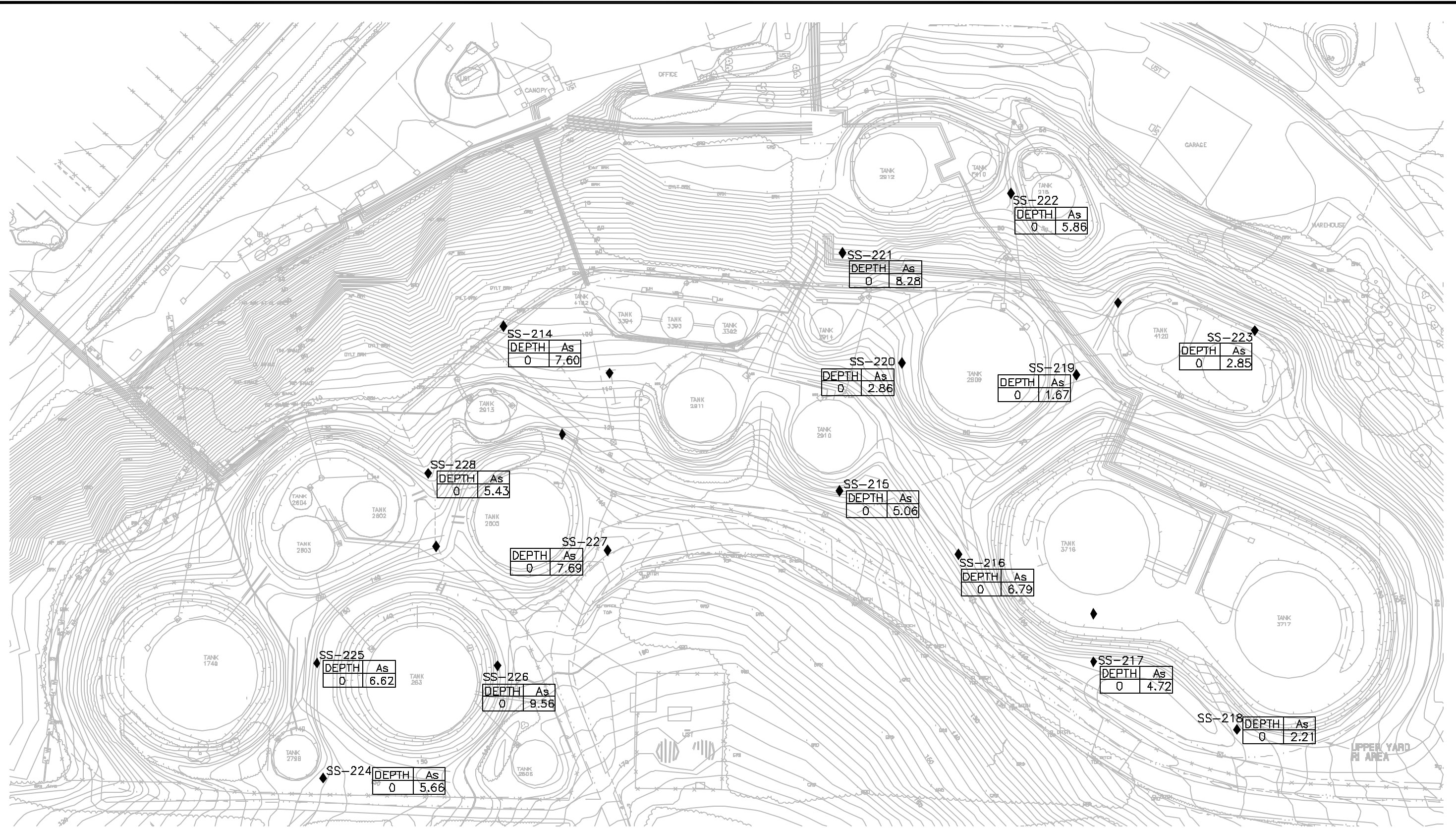
- METALS EXCAVATION AREA
- ANALYTICAL RESULTS (mg/kg):
- 11.7 = ARSENIC CONCENTRATION

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Figure 5-45
 UNOCAL EDMONDS TERMINAL
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METALS AREA T (BASINS 3716 & 3717)



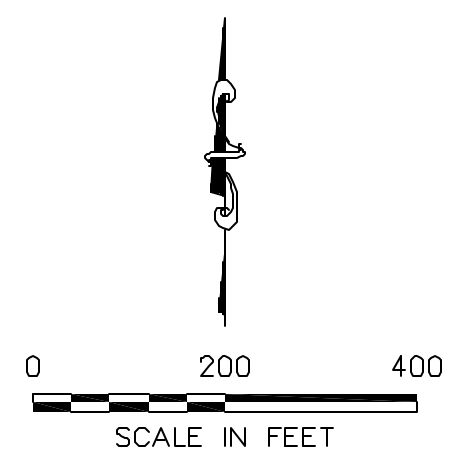
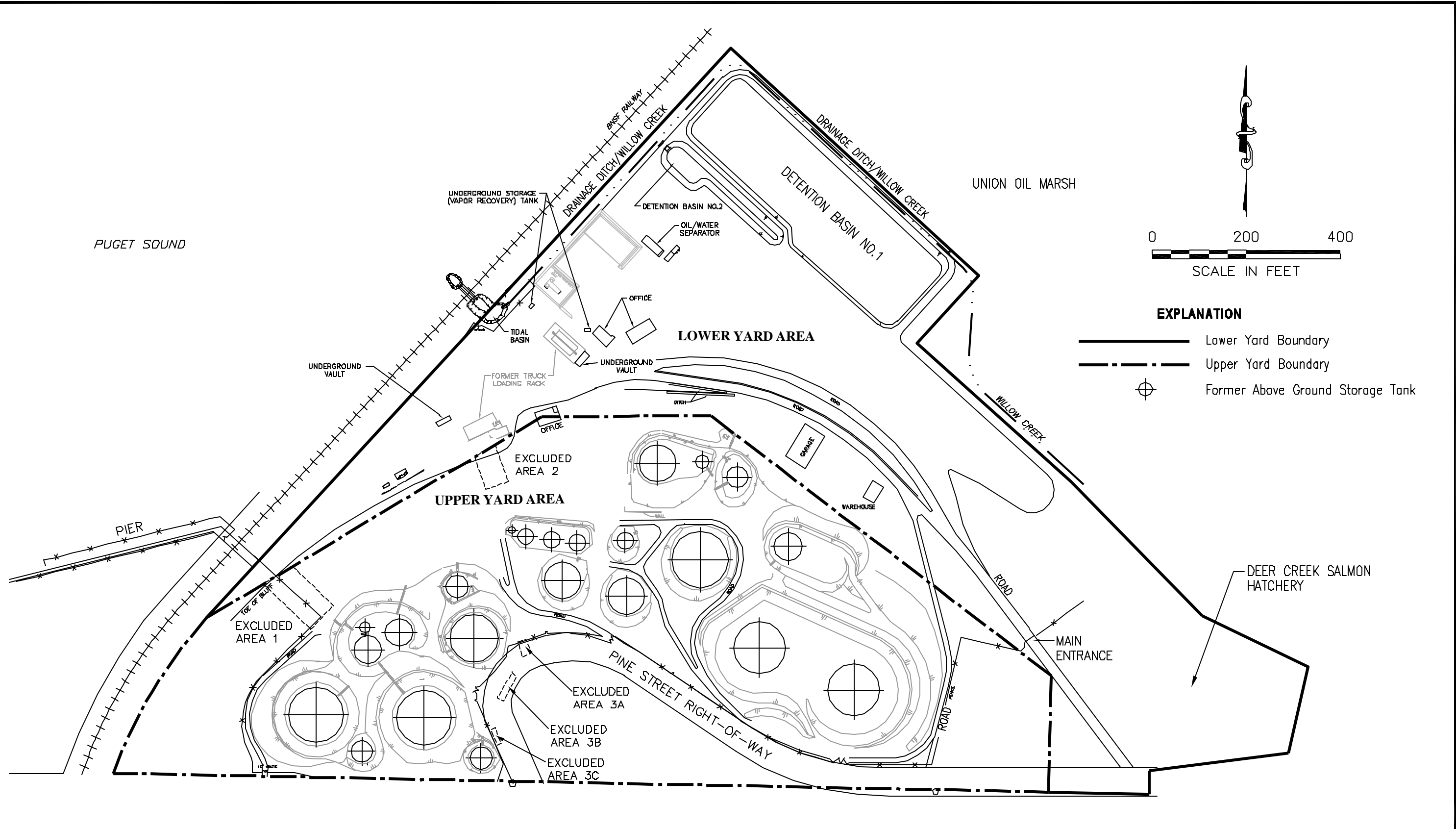
◆ RANDOMLY - SELECTED SAMPLE LOCATION

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Figure 5-46
 UNOCAL EDMONDS TERMINAL
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ADDITIONAL METALS SAMPLE LOCATIONS

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EXPLANATION

	Lower Yard Boundary
	Upper Yard Boundary
	Former Above Ground Storage Tank

Source: Union Oil Company of California - Los Angeles, California.
Site area study General Arrangement Edmonds Terminal -
Edmonds, Washington. 10/12/92

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Seattle: (425) 744-1489
Portland: (971) 544-2139

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Figure 5-47
UNOCAL EDMONDS TERMINAL
EDMONDS, WASHINGTON

**AREAS EXCLUDED
FROM COMPLIANCE DEMONSTRATION**

**UPPER YARD INTERIM ACTION
AS-BUILT REPORT**

UNOCAL EDMONDS TERMINAL

EDMONDS, WA

VOLUME II APPENDICES

Prepared for
Unocal Corporation
August 25, 2003

Prepared by
Maul Foster & Alongi, Inc.
19401 40th Avenue West
Suite 310
Lynnwood, Washington 98036

Project # 9077.01.07

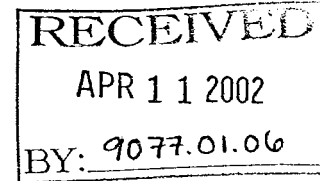
APPENDIX A
CULTURAL RESOURCE SURVEY

CASCADIA
ARCHAEOLOGY

P.O. Box 51058 Seattle, WA 98115-1058
206-366-0337 Fax: 206-363-5303

March 27, 2002

Linda Dawson
Principal Scientist
Maul, Foster, & Alongi, Inc.
1717 Bothell Way NE #264
Seattle, WA 98155



Re: Archaeological Survey at the Unocal Bulk Facility (Edmonds)

Dear Ms. Dawson:

This letter report describes the results of Cascadia Archaeology's cultural resource survey of the vegetated areas in the upper yard of the Unocal Edmonds Terminal (Contract 9077.01.04). Letter reports, *Archaeological Monitoring at the Unocal Bulk Facility (Edmonds), Lower Yard* and *Archaeological Monitoring at the Unocal Bulk Facility (Edmonds), Upper Yard*, submitted by Stephen C. Cole in February 2002, present the previous the results of cultural resources monitoring. Located in Sections 23 and 26, Township 27 north, Range 3 east, the terminal's upper yard occupies the area above Point Edwards, in Edmonds, Washington. At this time, several options remain viable for this section of the project area including potential construction, clearing for SR104 alignment, and clearing or thinning for view purposes. For this segment, work was carried out on March 18th, 21st, and 26th, 2002.

Methods

Several survey methods were applied to the project area depending upon the type of terrain and density of the vegetation encountered. Area A (see attached map), the vegetated area located adjacent to the entrance road, was examined using 10-meter pedestrian transects combined with shovel probes placed every 20 meters along the survey transects. Area B, the vegetated area between the lower and upper yard, mainly consisted of steep slopes up to 50 degrees. This area was examined by using pedestrian contour transects excluding shovel probes except for level areas at the top of the slope. The third area (area C), located in the upper parcel south of Pine Street, contained dense areas of intrusive blackberries, Indian plum, and salmon berry that required some clearing to penetrate. This area was examined using 20 meter pedestrian transects combined with shovel probes located every 20 meters along each survey transect.

Results

Twelve transects running north/south and 51 shovel probes were used to examine Area A east of the interior road. The small vegetated area west of the interior road had up to 50 percent visibility and was pedestrian surveyed using four small transects. Other than old-growth stumps exhibiting spring board notches, no cultural material was observed. Many of the shovel probes produced charcoal, some in large quantities associated with burnt wood and soils, but no associated artifacts were recovered. Potentially, the burning could be related to logging or road construction. An additional shovel probe was added in the lower northeast corner, in one of these heavily burned areas close to the road, but again, no cultural material was recovered.

Area B was broken up into three sub-areas: east of the upper yard piping system, west of the upper yard piping system, and the southeast corner bench. The east and west subdivision occurred because of an impassible chain-link fence running west of the upper yard piping system. Four contour transects running perpendicular to the incline and three shovel probes were used to examine the eastern section. The shovel probes were placed on three prominent flat areas on the bench above the high incline area approximately 30 to 40 meters apart. No prehistoric archaeological material was observed. Modern refuse (i.e., light bulbs, corrugated tin sheet fragments) was observed along the surface of the upper portion of the incline in proximity to the tank platforms and an isolated 14-in diameter, 1-in thick, 3.25-in wide very oxidized steel ring was located near the upper yard piping system, possibly related to an older pipeline. No other historical material was observed.

The western section, also a steep incline area, was examined using three contour transects. Shovel probes were placed in the upper level area (see below). Again no prehistoric or concentrated historic material was detected. Modern refuse was observed along with a possible old metal brake fluid container between the platforms for tanks 1749 and 2603, but there was no additional historical material.

The southwestern bench area directly above the area of steep slope was surveyed using shovel probes located at 20 meter intervals along two transects running north/south and a perpendicular transect running to the west. A total of twelve shovel probes was excavated, recovering creosote material related to the tank platforms and a single piece of light brown glass exhibiting manufacturing-related bubbles from the most westerly probe. Other modern refuse was observed on the surface, but no additional historic or prehistoric materials were noted.

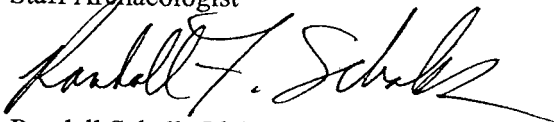
Eleven transects running north/south and 30 shovel probes were placed in Area C. Sections of this area, especially the western third, have very little topsoil (possibly removed during the road or building construction) and the northwest corner has been heavily used for modern dumping. Charcoal was present throughout the area, but was not associated with any cultural material. The northern tip of this area did produce a rich, very dark brown soil containing a heat spall and small fire-modified rock. Two additional probes were placed 2.5 meters east and 3 meters northwest of the original probe. An additional heat spall was recovered, but no other cultural material was observed. At the eastern-most point of this portion of the project area near the road, at least three glass milk bottles were found. These may have been dumped fairly recently. The eastern half of the land parcel did contain examples of old-growth stumps displaying spring-board notches. However no associated cultural material was observed.

In conclusion, this survey failed to identify any potentially significant cultural material within the project area. Scattered historical isolates were closely associated with modern refuse, and did not appear to be elements of larger concentrations of historical materials. No prehistoric cultural resources were encountered. It is, therefore, our opinion that future ground disturbances within the Upper Yard will have no adverse effect on cultural resources.

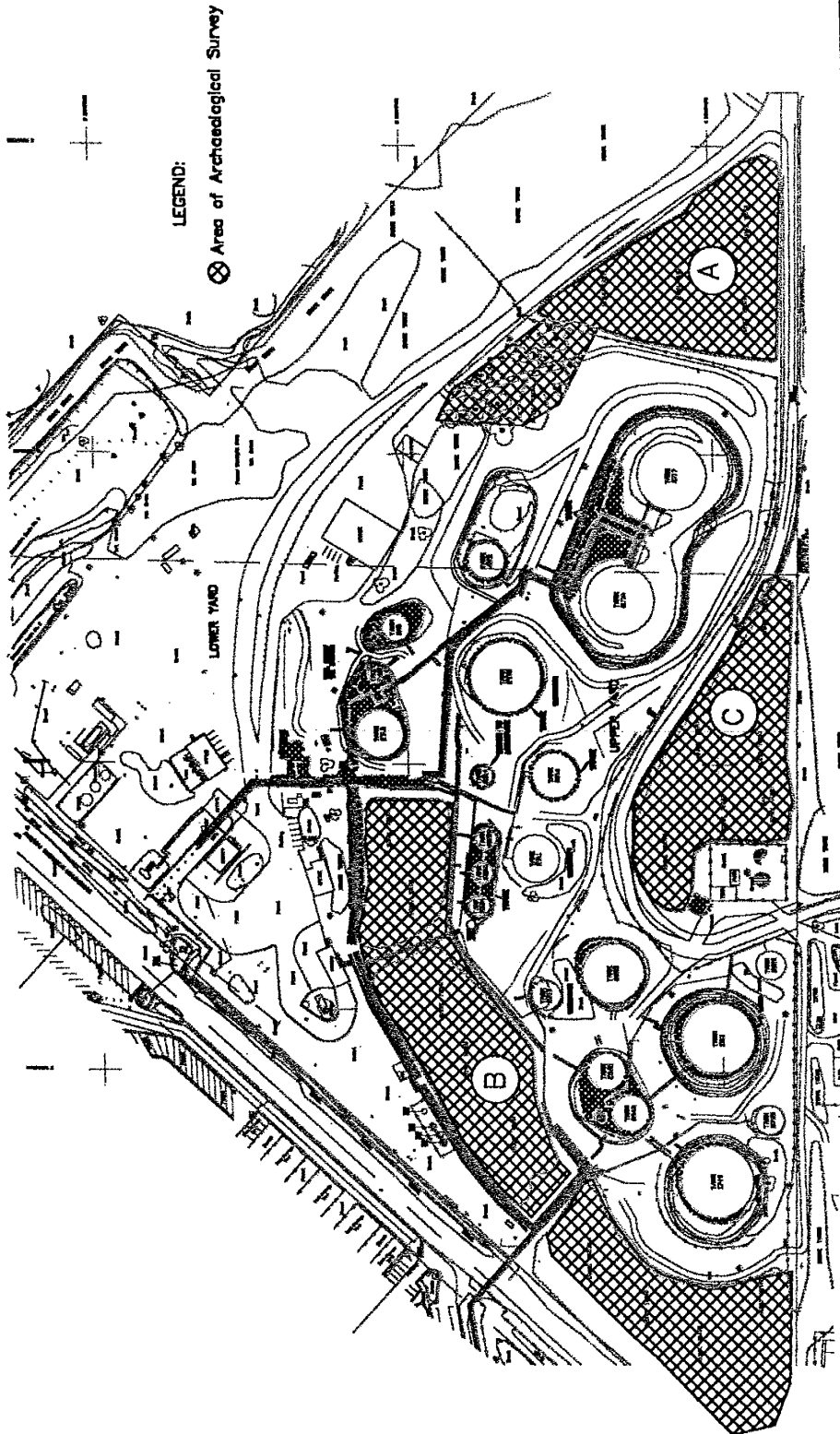
Sincerely



Renee Schwarzmiller
Staff Archaeologist



Randall Schalk, Ph.D.
Principal Archaeologist



ARCHAEOLOGICAL SURVEY AREAS OF
THE UNOCAL EDMONDS TERMINAL
EDMONDS, WASHINGTON

MAP PROVIDED BY
MAUL FOSTER & ALONGI, INC.

APPENDIX B
SOIL BORING AND TEST PIT DATA

Geologic Borehole Log/Well Construction

Maul Foster & Alongi, Inc.

Project Number
9077.01.07

Boring Number
SB-236

Sheet
1 of 2

Project Name **Unocal Edmonds Terminal**
 Project Location **Edmonds, Washington**
 Start/End Date **6/26/02 to 6/26/02**
 Driller/Equipment **Cascade Drilling, Inc./Hollow-stem Auger**
 Geologist/Engineer **H. Corner**
 Sample Method **Split-spoon sampler**

TOC Elevation (feet above MSL)
 Surface Elevation (feet above MSL)
 Northing
 Easting
 Hole Depth **35.0-feet**
 Outer Hole Diam **8-inch**

Depth (feet, BGS)	Well Details	Sample Data					Lithologic Column	Soil Description	
		Interval	Percent Recovery	Blow Counts	Type	Name			PID (ppm)
1	Well Details							0 to 2.5 feet: SAND WITH SILT (SP-SM); brown; fine; few to little organic material (wood roots); few fines; trace fine, subangular gravel; moist; no odor noted.	
2									
3								2.5 to 8.0 feet: GRAVELLY CLAYEY SILT (MH); light green-gray with abundant orange mottling; medium plasticity; firm to stiff; little fine to medium subrounded gravel; moist; no odor noted. (TRANSITIONAL BEDS)	
4									
5									
6				10		SS		0.0	
7				14					
8				15					
9									8.0 to 17.5 feet: SAND WITH SILT (SP-SM); brown; fine; trace to few fines; moist; no odor noted. Very uniform. (TRANSITIONAL BEDS)
10									
11				8		SS		8.1	
12				16					
13				31					
14									
15									@ 15.0 feet: moist to slightly wet.
16				12		SS		3.1	
17				33					
18				40					
19									17.5 to 35.0 feet: SAND (SP); brown with orange staining; medium; moist; no odor noted. (TRANSITIONAL BEDS/WHIDBEY FORMATION)
20									

NOTES: (1) SS = Split-spoon sampler.
 (2) NR = Not recorded.
 (3) NRY = No recovery.

Depth (feet, BGS)	Well Details	Sample Data						Soil Description
		Interval	Percent Recovery	Blow Counts	Type	Name	P/D (ppm)	

21				21 50/5"	SS		4.8		17.5 to 35.0 feet: SAND (SP), continued.
22									
23									
24									
25									
26				12 38 49	SS		1.1		
27									
28									
29									
30									
31				19 35 43	SS		1.6		
32									
33									
34									
35									

21
24 SS SB-236- 1.5
50/5" 35

Total Depth Drilled = 35.0 feet.
Total Depth Sampled = 36.5 feet.
Boring backfilled with bentonite chips.

GBLWC-2 C:\PROGRAMS\1GINTW\F\PROJECTS\UNOCAL\GPJ 3/5/03

NOTES: (1) SS = Split-spoon sampler.
(2) NR = Not recorded.
(3) NRY = No recovery.

Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number
9077.01.07

Boring Number
SB-237

Sheet
1 of 2

Project Name **Unocal Edmonds Terminal**
 Project Location **Edmonds, Washington**
 Start/End Date **6/26/02 to 6/26/02**
 Driller/Equipment **Cascade Drilling, Inc./Hollow-stem Auger**
 Geologist/Engineer **H. Corner**
 Sample Method **Split-spoon sampler**

TOC Elevation (feet above MSL)
 Surface Elevation (feet above MSL)
 Northing
 Easting
 Hole Depth **35.0-feet**
 Outer Hole Diam **8-inch**

Depth (feet, BGS)	Well Details	Sample Data					Lithologic Column	Soil Description
		Interval	Percent Recovery	Blow Counts	Type	Name		
1								0 to 0.75 foot: GRAVELLY SAND (SP); brown; fine to medium; some fine to medium, subangular, gravel; moist; no odor noted. (FILL)
2								0.75 to 4.8 feet: CLAYEY SILT (MH); gray; medium plasticity; soft; trace fine to medium, subangular gravel; moist; slight hydrocarbon-like odor. (FILL)
3								
4								
5								4.8 to 6.5 feet: SAND (SP); brown; medium; moist; no odor noted. (FILL)
6								
7								6.5 to 13.0 feet: SILTY SAND (SM); gray; fine to medium; few low to medium plasticity fines; moist; no odor noted. (FILL/TRANSITIONAL BEDS)
8								
9								
10								
11								@ 11.0 feet: little to some fines.
12								
13								
14								13.0 to 19.0 feet: SILTY SAND (SM); dark gray to brown; fine to medium; few fines; few organics (roots, wood); trace medium to coarse, subrounded gravel. (FILL/TRANSITIONAL BEDS)
15					14			
16					15	SS		NRY
17					12			
18					NR	SS		1.4
19								@ 18.0 feet: organic horizon.
20								19.0 to 23.5 feet: GRAVELLY SILTY SAND (SM); gray; fine to medium; few to little fine to medium, subrounded gravel; few

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NOTES: (1) SS = Split-spoon sampler.
 (2) NR = Not recorded.
 (3) NRY = No recovery.

Water level at time of drilling.

Depth (feet, BGS)	Well Details	Sample Data					Lithologic Column	Soil Description
		Interval	Percent Recovery	Blow Counts	Type	Name		
21				6				medium plasticity fines; moist to slightly wet; no odor noted. (FILL/TRANSITIONAL BEDS)
22				12	SS		0.8	
23				12				
24								23.5 to 33.0 feet: SAND (SP); brown; fine to medium; trace fines; moist; no odor noted. Occasional grain-size partings. (TRANSITIONAL BEDS)
25				17				
26				35	SS		1.4	
27				50/5"				
28								
29								
30				19				@ 30.0 feet: fine sand, slightly wet.
31			28	SS	SB-237-30	0.8		
32			37					
33							33.0 to 35.0 feet: SAND WITH SILT (SP-SM); gray; fine to medium; few fines; wet; no odor noted. Occasional small (up to 10 mm) lenses of sandy silt. (TRANSITIONAL BEDS)	
34								
35								

NR SS

Total Depth Drilled = 35.0 feet.
Total Depth Sampled = 36.5 feet.

Boring backfilled with bentonite chips.

- NOTES: (1) SS = Split-spoon sampler.
(2) NR = Not recorded.
(3) NRY = No recovery.

Water level at time of drilling.

Geologic Borehole Log/Well Construction

Project Number
9077.01.07

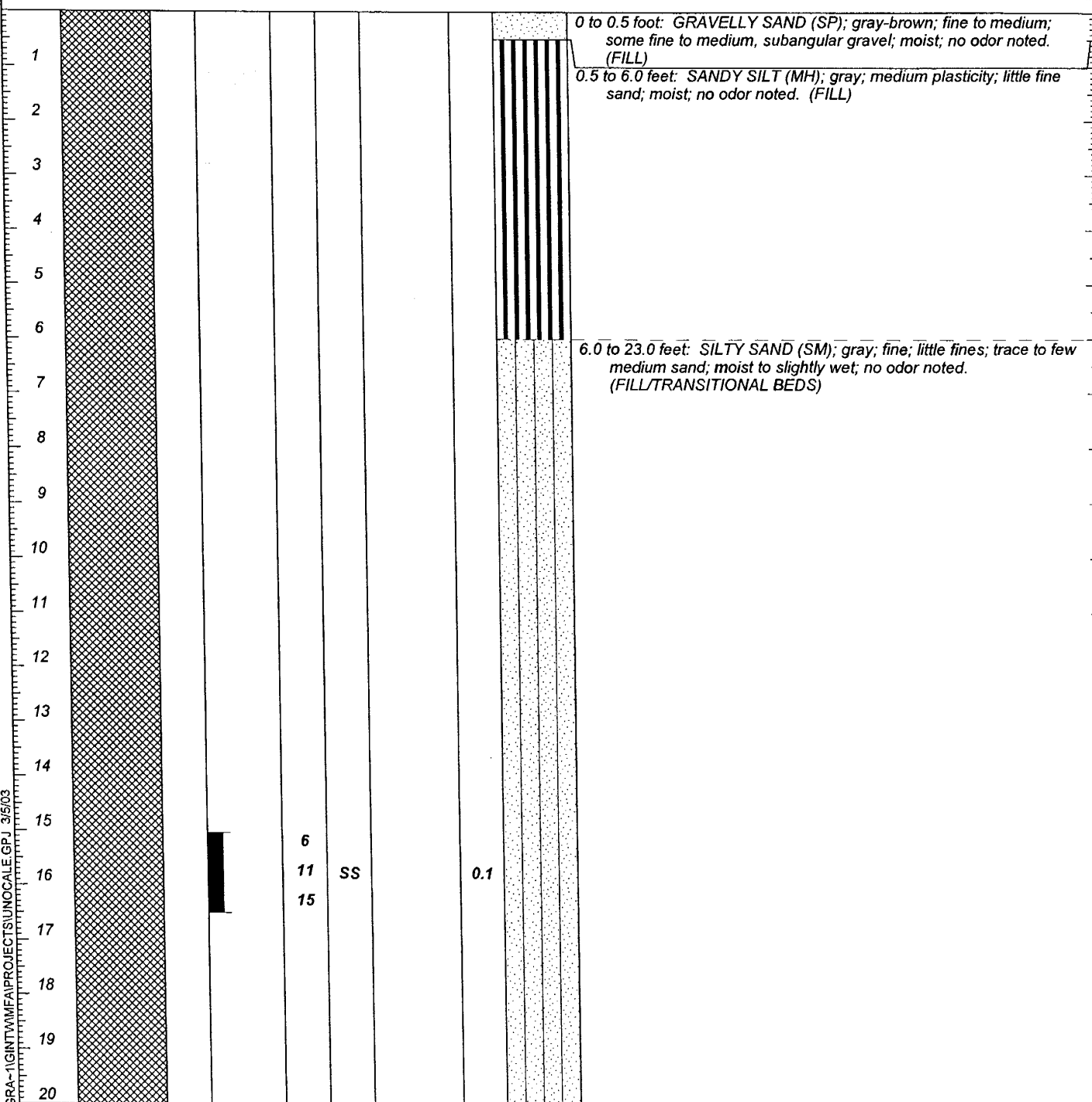
Boring Number
SB-238

Sheet
1 of 2

Project Name **Unocal Edmonds Terminal**
 Project Location **Edmonds, Washington**
 Start/End Date **6/26/02 to 6/26/02**
 Driller/Equipment **Cascade Drilling, Inc./Hollow-stem Auger**
 Geologist/Engineer **H. Corner**
 Sample Method **Split-spoon sampler**

TOC Elevation (feet above MSL)
 Surface Elevation (feet above MSL)
 Northing
 Easting
 Hole Depth **35.0-feet**
 Outer Hole Diam **8-inch**

Depth (feet, BGS)	Well Details	Sample Data					Lithologic Column	Soil Description
		Interval	Percent Recovery	Blow Counts	Type	Name		



NOTES: (1) SS = Split-spoon sampler.
 (2) NR = Not recorded.
 (3) NRY = No recovery.

Depth (feet, BGS)	Well Details	Interval	Percent Recovery	Sample Data			PID (ppm)	Lithologic Column	Soil Description
				Blow Counts	Type	Name			
21		[Interval bar]		11			NRY		6.0 to 23.0 feet: SILTY SAND (SM), continued.
22				15	SS				
23				24					
24		[Interval bar]		11			0.1		23.0 to 29.0 feet: SAND (SP); brown; fine to medium; moist; no odor noted; very uniform. (TRANSITIONAL BEDS)
25				31	SS	28-238-25			
26				47					
27		[Interval bar]		19			0.2		29.0 to 35.0 feet: SILTY SAND (SM); brown with orange staining; fine; few fines; trace to few medium sand; moist to wet; no odor noted. (TRANSITIONAL BEDS)
28				37	SS	28-238-30			
29				50/6"					
30		[Interval bar]		20			0.2		Total Depth Drilled = 35.0 feet. Total Depth Sampled = 36.5 feet. Boring backfilled with bentonite chips.
31				33	SS				
32				33					

NOTES: (1) SS = Split-spoon sampler.
(2) NR = Not recorded.
(3) NRY = No recovery.

Geologic Borehole Log/Well Construction

Project Number
9077.01.07

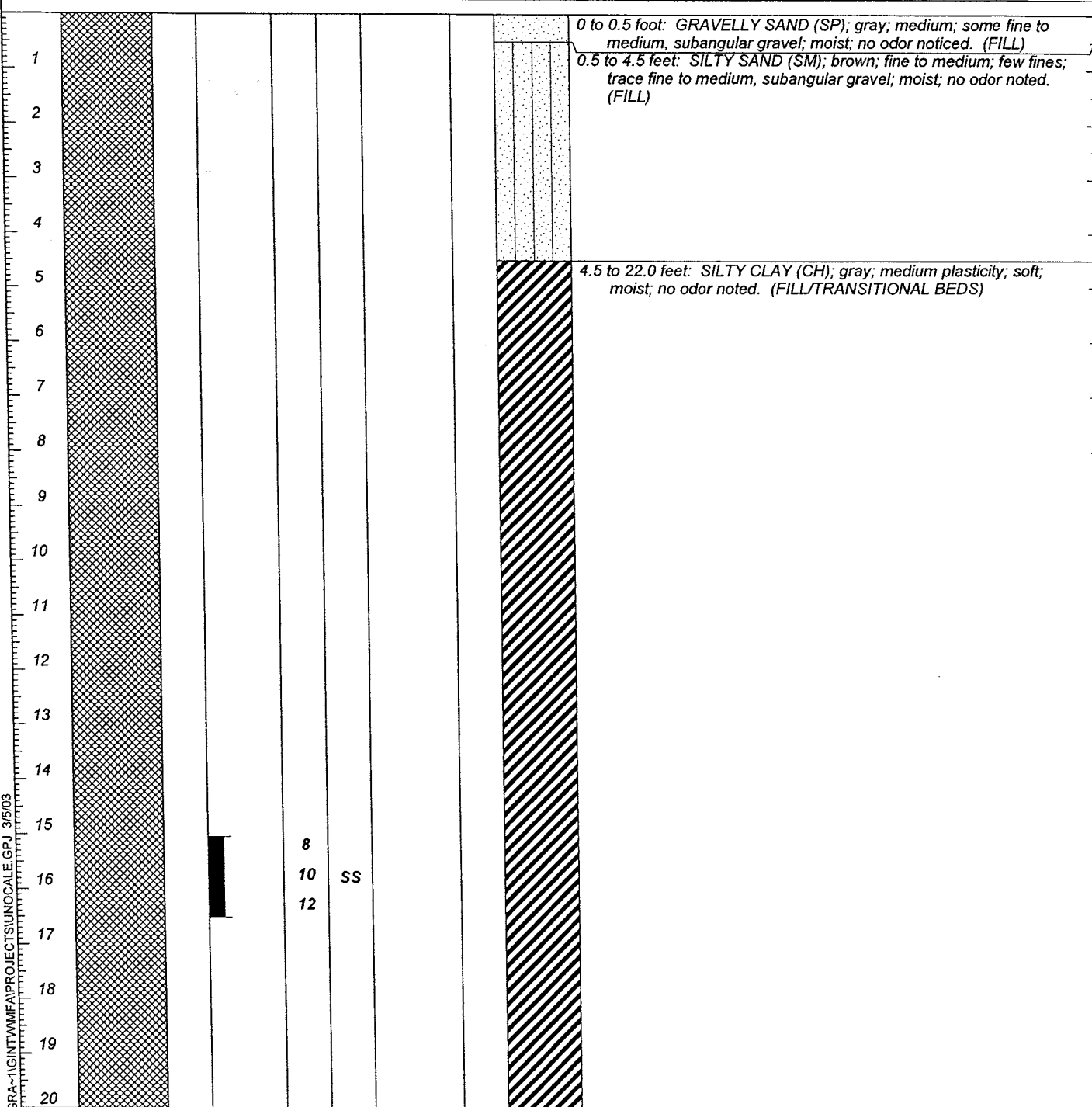
Boring Number
SB-239

Sheet
1 of 2

Project Name **Unocal Edmonds Terminal**
 Project Location **Edmonds, Washington**
 Start/End Date **6/26/02 to 6/27/02**
 Driller/Equipment **Cascade Drilling, Inc./Hollow-stem Auger**
 Geologist/Engineer **H. Corner**
 Sample Method **Split-spoon sampler**

TOC Elevation (feet above MSL)
 Surface Elevation (feet above MSL)
 Northing
 Easting
 Hole Depth **35.0-feet**
 Outer Hole Diam **8-inch**

Depth (feet, BGS)	Well Details	Sample Data						Lithologic Column	Soil Description
		Interval	Percent Recovery	Blow Counts	Type	Name	PID (ppm)		



NOTES: (1) SS = Split-spoon sampler.
 (2) NR = Not recorded.
 (3) NRY = No recovery.

Depth (feet, BGS)	Well Details	Sample Data					Lithologic Column	Soil Description
		Interval	Percent Recovery	Blow Counts	Type	Name		
21				8				4.5 to 22.0 feet: SILTY CLAY (CH), continued.
22				11	SS			
23				12				
24				10				22.0 to 28.0 feet: SAND (SP); brown; fine to medium; trace fines; moist; no odor noted. (TRANSITIONAL BEDS)
25				32	SS			
26				50				
27				18				28.0 to 35.0 feet: SAND WITH SILT (SP-SM); brown with some orange mottling; fine to medium; few fines; moist; no odor noted. (TRANSITIONAL BEDS)
28				22	SS			
29				20				
30								
31								
32								
33								
34								
35								

NR SS SB-239-30

Total Depth Drilled = 35.0 feet.
Total Depth Sampled = 36.5 feet.

Boring backfilled with bentonite chips.

NOTES: (1) SS = Split-spoon sampler.
(2) NR = Not recorded.
(3) NRY = No recovery.

Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number
9077.01.07

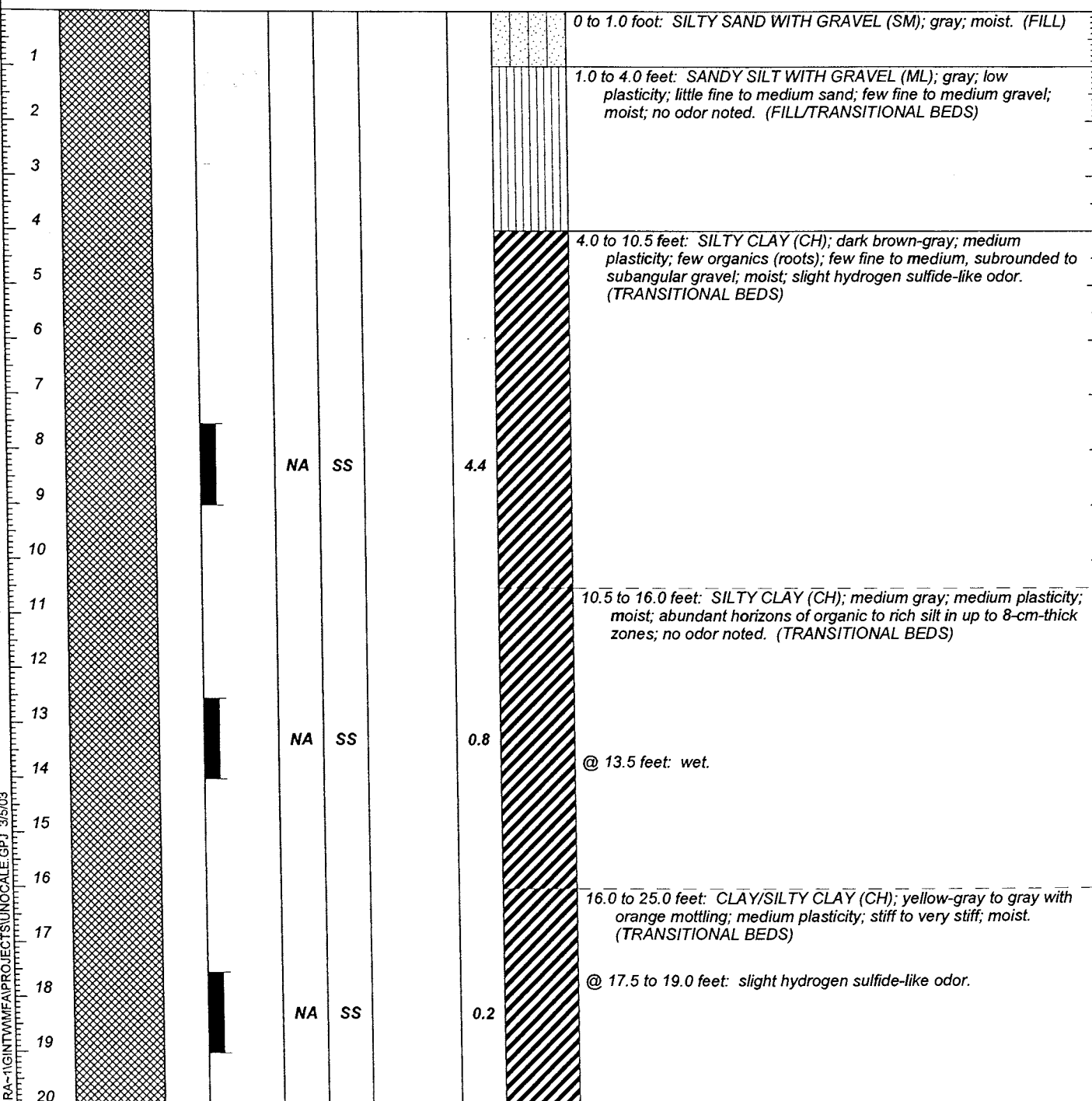
Boring Number
SB-240

Sheet
1 of 2

Project Name **Unocal Edmonds Terminal**
 Project Location **Edmonds, Washington**
 Start/End Date **6/27/02 to 6/27/02**
 Driller/Equipment **Cascade Drilling, Inc./Hollow-stem Auger**
 Geologist/Engineer **H. Corner**
 Sample Method **Split-spoon sampler**

TOC Elevation (feet above MSL)
 Surface Elevation (feet above MSL)
 Northing
 Easting
 Hole Depth **37.5-feet**
 Outer Hole Diam **8-inch**

Depth (feet, BGS)	Well Details	Sample Data					Lithologic Column	Soil Description
		Interval	Percent Recovery	Blow Counts	Type	Name		



- NOTES:**
- (1) SS = Split-spoon sampler.
 - (2) NR = Not recorded.
 - (3) NRY = No recovery.
 - (4) This boring was angle-drilled; blow counts are not applicable.
 - (5) NA = Not applicable.
 - (6) SB-240 was drilled at an angle of 45 degrees from horizontal.

Depth (feet, BGS)	Well Details	Sample Data					Lithologic Column	Soil Description		
		Interval/ Percent Recovery	Blow Counts	Type	Name	PID (ppm)				
21								16.0 to 25.0 feet: CLAY/SILTY CLAY (CH), continued.		
22										
23										
24				NA	SS			0.0		@ 22.5 to 25.0 feet: massive clay.
25										
26										25.0 to 37.5 feet: CLAYEY SILT (ML); gray; low plasticity; stiff; moist; no odor noted; occasional grain size partings (up to 5-mm thick) of fine sand and silt. Rare lenses of orange to brown sandy silt.
27										
28				NA	SS			0.0		
29										
30										
31										
32										
33										@ 32.5 to 34.0 feet: laminated.
34				NA	SS			0.1		
35										
36										
37										

Total Depth Drilled = 37.5 feet.
Total Depth Sampled = 39.0 feet.

Boring backfilled with bentonite chips.

NA SS SB-240-
37.5 NM

- NOTES:
- (1) SS = Split-spoon sampler.
 - (2) NR = Not recorded.
 - (3) NRY = No recovery.
 - (4) This boring was angle-drilled; blow counts are not applicable.
 - (5) NA = Not applicable.
 - (6) SB-240 was drilled at an angle of 45 degrees from horizontal.

Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

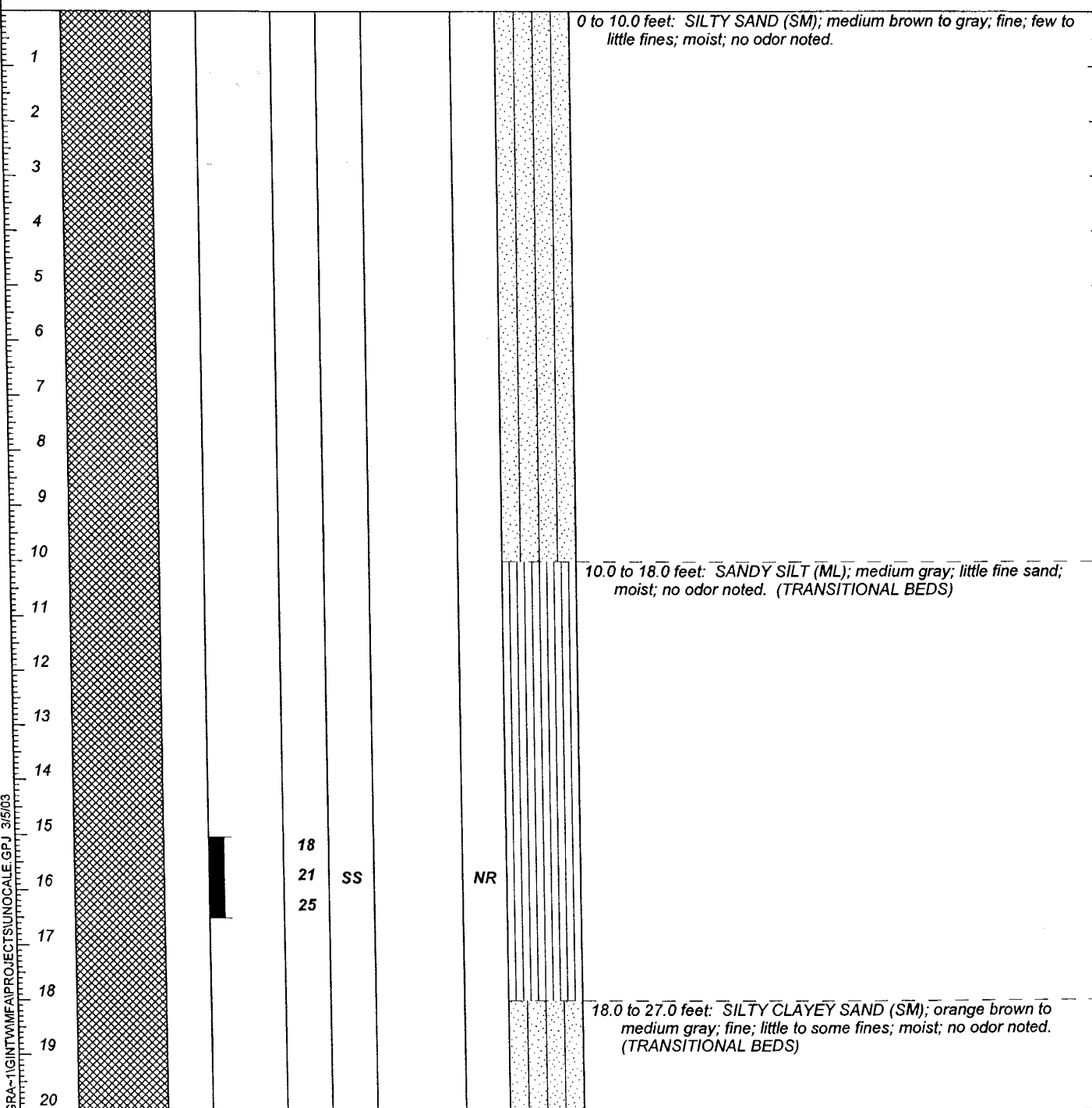
Project Number
9077.01.07

Boring Number
SB-241

Sheet
1 of 3

Project Name	Unocal Edmonds Terminal	TOC Elevation (feet above MSL)	
Project Location	Edmonds, Washington	Surface Elevation (feet above MSL)	
Start/End Date	6/27/02 to 6/27/02	Northing	
Driller/Equipment	Cascade Drilling, Inc./Hollow-stem Auger	Easting	
Geologist/Engineer	E. Silver	Hole Depth	45.0-feet
Sample Method	Split-spoon sampler	Outer Hole Diam	8-inch

Depth (feet, BGS)	Well Details	Sample Data					Lithologic Column	Soil Description
		Interval	Percent Recovery	Blow Counts	Type	Name		



NOTES: (1) SS = Split-spoon sampler.
 (2) NR = Not recorded.
 (3) NRY = No recovery.

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Depth (feet, BGS)	Well Details	Sample Data					Lithologic Column	Soil Description		
		Interval	Percent Recovery	Blow Counts	Type	Name			PID (ppm)	
21				16				18.0 to 27.0 feet: SILTY CLAYEY SAND (SM), continued.		
22				16	SS			12.0		
23				17					@ 23.0 feet: wet.	
24										
25				15						
26				15	SS				28	
27				16						
28										27.0 to 34.0 feet: SAND (SP); gray; fine; trace silt; hard; moist; no odor noted. (TRANSITIONAL BEDS)
29										
30				12						
31				20	SS				18	
32				23						
33										@ 33.0 feet: very moist.
34										
35				11						34.0 to 45.0 feet: CLAY WITH SILT (CL); light to medium gray; few to little silt; very hard; moist; no odor noted. (TRANSITIONAL BEDS)
36				15	SS				6.9	
37				18						
38										
39										
40				10						
41				24	SS				0.1	
42				26						

NOTES: (1) SS = Split-spoon sampler.
 (2) NR = Not recorded.
 (3) NRY = No recovery.

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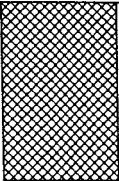
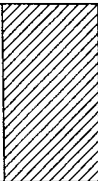
Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number
9077.01.07

Boring Number
SB-241

Sheet
3 of 3

Depth (feet, BGS)	Well Details	Sample Data						Lithologic Column	Soil Description
		Interval	Percent Recovery	Blow Counts	Type	Name	PID (ppm)		
43								CLAY WITH SILT (CL), continued.	
44									
45									

23
50/6" SS SB-241- 0
45

Total Depth Drilled = 45.0 feet.
Total Depth Sampled = 46.5 feet.
Boring backfilled with bentonite chips.

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NOTES: (1) SS = Split-spoon sampler.
(2) NR = Not recorded.
(3) NRY = No recovery.

Geologic Borehole Log/Well Construction

Project Number
9077.01.07

Boring Number
SB-242

Sheet
1 of 2

Project Name **Unocal Edmonds Terminal**

TOC Elevation (feet above MSL)

Project Location **Edmonds, Washington**

Surface Elevation (feet above MSL)

Start/End Date **6/28/02 to 6/28/02**

Northing

Driller/Equipment **Cascade Drilling, Inc./Hollow-stem Auger**

Easting

Geologist/Engineer **H. Corner/E. Silver**

Hole Depth

40.0-feet

Sample Method **Split-spoon sampler**

Outer Hole Diam

8-inch

Depth (feet, BGS)	Well Details	Sample Data						Lithologic Column	Soil Description
		Interval	Percent Recovery	Blow Counts	Type	Name	PID (ppm)		
1								0 to 10.0 feet: SILT WITH SAND (MH); gray-brown; medium plasticity; few fine sand; moist; slight hydrogen sulfide-like odor. (FILL)	
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									10.0 to 14.0 feet: CLAY (CH); gray; moderate plasticity; soft; moist; no odor noted. (TRANSITIONAL BEDS)
12									
13									14.0 to 40.0 feet: INTERBEDDED SANDY SILT AND SILT (ML); gray; few to little fine sand, laminated (2- to 5-mm laminae) to massive; laminae are predominantly fine to medium sand; dark gray; moist; no odor noted. Occasional lenses of fine to medium brown sand. (TRANSITIONAL BEDS)
14									
15									
16									
17									
18									
19									
20									

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NOTES: (1) SS = Split-spoon sampler.
 (2) NR = Not recorded.
 (3) NRY = No recovery.

Depth (feet, BGS)	Well Details	Sample Data						Soil Description	
		Interval	Percent Recovery	Blow Counts	Type	Name	PID (ppm)		Lithologic Column
21				8				14.0 to 40.0 feet: INTERBEDDED SANDY SILT AND SILT (ML), continued.	
22				9	SS		0.3		
23				12					
24									
25				6					
26				8	SS		0.3		
27				10					
28									
29									
30				6					
31				14	SS		0.1		
32				17					
33									
34									
35				6					
36				22	SS		3.9		
37				28					
38									
39									
40				22					
				50/6" SS	SB-242-40	2.6			

Total Depth Drilled = 40.0 feet.
Total Depth Sampled = 41.5 feet.

Boring backfilled with bentonite chips.

NOTES: (1) SS = Split-spoon sampler.
(2) NR = Not recorded.
(3) NRY = No recovery.

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Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number
9077.01.07

Boring Number
SB-243

Sheet
1 of 3

Project Name **Unocal Edmonds Terminal**

Project Location **Edmonds, Washington**

Start/End Date **6/27/02 to 6/27/02**

Driller/Equipment **Cascade Drilling, Inc./Hollow-stem Auger**

Geologist/Engineer **E. Silver**

Sample Method **Split-spoon sampler**

TOC Elevation (feet above MSL)

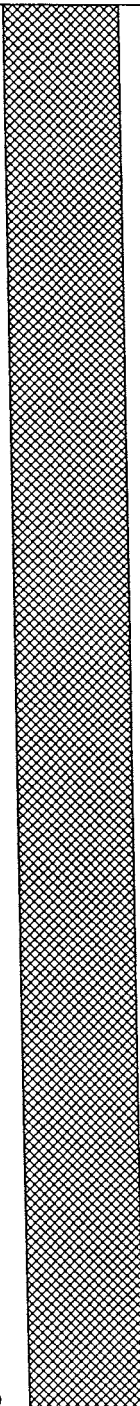
Surface Elevation (feet above MSL)

Northing

Easting

Hole Depth **45.0-feet**

Outer Hole Diam **8-inch**

Depth (feet, BGS)	Well Details	Sample Data						Lithologic Column	Soil Description	
		Interval	Percent Recovery	Blow Counts	Type	Name	PID (ppm)			
1								<i>0 to 18.0 feet: SILTY SAND (SM); medium gray; fine; some silt; trace iron nodules; stiff; slightly moist; slight hydrogen-sulfide-like odor. (FILL)</i>		
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16					13					
17					20	SS			1.2	
18					23					
19										<i>18.0 to 23.0 feet: CLAYEY SAND (SM); medium to light gray; some fines; very stiff; dry; no odor noted. (TRANSITIONAL BEDS)</i>
20										

NOTES: (1) SS = Split-spoon sampler.
 (2) NR = Not recorded.
 (3) NRY = No recovery.

Depth (feet, BGS)	Well Details	Interval	Percent Recovery	Sample Data			PID (ppm)	Lithologic Column	Soil Description
				Blow Counts	Type	Name			
21				12					18.0 to 23.0 feet: CLAYEY SAND (SM), continued.
				15	SS		0.9		
				18					
22									23.0 to 25.0 feet: SAND (SP); gray; fine; very moist; no odor noted. (TRANSITIONAL BEDS)
23									
24									25.0 to 41.0 feet: CLAY WITH SAND AND SILT (CL); medium gray; very stiff; grain partings on a 1/8-inch scale; dry; no odor noted. Gradational contact with underlying clayey sand. (TRANSITIONAL BEDS)
25				16			0.8		
26				24	SS				
27				25					
28									
29									
30				12			0.6		
31				16	SS				
32				20					
33									
34									
35				15			0.9		
36				23	SS				
37				28					
38									@ 40.0 to 41.5 feet: light gray nodules, iron oxidation.
39									
40				12			1.1		
41				18	SS				
42				25					41.0 to 45.0 feet: CLAYEY SAND (SM); medium gray to tan; fine; little clay; moist; no odor noted. (TRANSITIONAL BEDS)

NOTES: (1) SS = Split-spoon sampler.
(2) NR = Not recorded.
(3) NRY = No recovery.

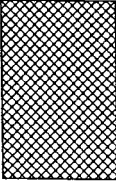
Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number
9077.01.07

Boring Number
SB-243

Sheet
3 of 3

Depth (feet, BGS)	Well Details	Sample Data						Lithologic Column	Soil Description
		Interval	Percent Recovery	Blow Counts	Type	Name	PI/D (ppm)		
43								25.0 to 41.0 feet: CLAY WITH SAND AND SILT (CL), continued. @ 43.0 to 45.0 feet: grades into silty clay; medium gray; very stiff.	
44									
45									

	8				
	15	SS	SB-243-	1.0	
	16		45		

Total Depth Drilled = 45.0 feet.
Total Depth Sampled = 46.5 feet.
Boring backfilled with bentonite chips.

NOTES: (1) SS = Split-spoon sampler.
(2) NR = Not recorded.
(3) NRY = No recovery.

Geologic Borehole Log/Well Construction

Project Number
9077.01.07

Boring Number
SB-244

Sheet
1 of 2

Project Name **Unocal Edmonds Terminal**
 Project Location **Edmonds, Washington**
 Start/End Date **6/27/02 to 6/27/02**
 Driller/Equipment **Cascade Drilling, Inc./Hollow-stem Auger**
 Geologist/Engineer **H. Corner**
 Sample Method **Split-spoon sampler**

TOC Elevation (feet above MSL)
 Surface Elevation (feet above MSL)
 Northing
 Easting
 Hole Depth **32.5-feet**
 Outer Hole Diam **8-inch**

Depth (feet, FGS)	Well Details	Sample Data					Lithologic Column	Soil Description		
		Interval	Percent Recovery	Blow Counts	Type	Name				
1								0 to 12.0 feet: SAND WITH SILT (SP-SM); gray-brown; fine to medium; trace to few fines; moist; no odor noted. (FILL/TRANSITIONAL BEDS)		
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										12.0 to 17.0 feet: SAND WITH SILT (SP-SM); gray; fine to medium; few fines; common interbedded sandy silt, laminated; trace organic material; wet; no odor noted. (FILL/TRANSITIONAL BEDS)
14					NA	SS			0.9	
15										
16										
17										
18										17.0 to 22.0 feet: SAND (SP); gray with orange-brown mottling; medium; trace fine, subangular gravel; moist; no odor noted. (FILL/TRANSITIONAL BEDS)
19					NA	SS			0.4	
20										

- NOTES:**
- (1) SS = Split-spoon sampler.
 - (2) NR = Not recorded.
 - (3) NRY = No recovery.
 - (4) This boring was angle-drilled; blow counts are not applicable.
 - (5) NA = Not applicable.
 - (6) SB-244 was drilled at an angle of 65 degrees from horizontal.

Depth (feet, BGS)	Well Details	Sample Data					Lithologic Column	Soil Description	
		Interval	Percent Recovery	Blow Counts	Type	Name			PID (ppm)
21								17.0 to 22.0 feet: SAND (SP)	
22								22.0 to 27.0 feet: SAND WITH SILT (SP-SM); gray; fine; few fines; trace organic material; medium and dark gray laminations 2- to 8-mm thick. (FILL/TRANSITIONAL BEDS)	
23									
24					NA	SS	0.1		
25									
26									
27									
28									27.0 to 32.5 feet: SILTY CLAY (CL); gray; stiff; massive; moist; no odor noted. (TRANSITIONAL BEDS)
29					NA	SS	NR		
30									
31									
32									

Total Depth Drilled = 32.5 feet.
Total Depth Sampled = 34.0 feet.

Boring backfilled with bentonite chips.

NA SS SB-244- 0.0
32.5

- NOTES:**
- (1) SS = Split-spoon sampler.
 - (2) NR = Not recorded.
 - (3) NRY = No recovery.
 - (4) This boring was angle-drilled; blow counts are not applicable.
 - (5) NA = Not applicable.
 - (6) SB-244 was drilled at an angle of 65 degrees from horizontal.

Geologic Borehole Log/Well Construction

Project Number
9077.01.07

Boring Number
SB-245

Sheet
1 of 2

Project Name **Unocal Edmonds Terminal**
 Project Location **Edmonds, Washington**
 Start/End Date **6/27/02 to 6/27/02**
 Driller/Equipment **Cascade Drilling, Inc./Hollow-stem Auger**
 Geologist/Engineer **H. Corner**
 Sample Method **Split-spoon sampler**

TOC Elevation (feet above MSL)
 Surface Elevation (feet above MSL)
 Northing
 Easting
 Hole Depth **30.0-feet**
 Outer Hole Diam **8-inch**

Depth (feet, BGS)	Well Details	Sample Data					PID (ppm)	Lithologic Column	Soil Description
		Interval	Percent Recovery	Blow Counts	Type	Name			
1								0 to 12.0 feet: SAND (SP); gray; fine to medium; trace fines; trace fine to medium gravel; moist; no odor noted. (FILL/TRANSITIONAL BEDS)	
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14				NA	SS	0.4			
15								18.0 to 23.0 feet: SILTY CLAY (CH); gray; medium plasticity; massive; stiff; rare fine to medium sand partings; moist; slight hydrogen-sulfide-like odor. (TRANSITIONAL BEDS)	
16									
17									
18									
19									
20									

- NOTES:**
- (1) SS = Split-spoon sampler.
 - (2) NR = Not recorded.
 - (3) NRY = No recovery.
 - (4) This boring was angle-drilled; blow counts are not applicable.
 - (5) NA = Not applicable.
 - (6) SB-245 was drilled at an angle of 65 degrees from horizontal.

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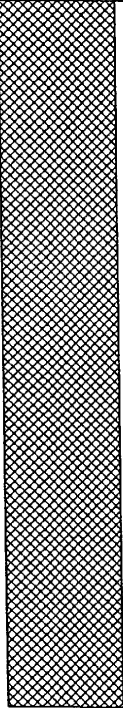
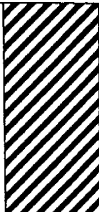
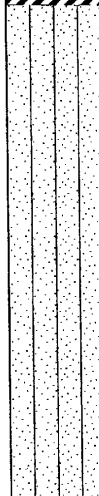
Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number
9077.01.07

Boring Number
SB-245

Sheet
2 of 2

Depth (feet, BGS)	Well Details	Sample Data						Soil Description
		Interval	Percent Recovery	Blow Counts	Type	Name	P/D (ppm)	
21				NA	SS		0.4	 18.0 to 23.0 feet: SILTY CLAY (CH), continued.
22								
23								 23.0 to 30.0 feet: SILTY SAND (SM); gray; fine; little to some fines; stiff; moist; no odor noted. Occasional horizons of fine sand. (TRANSITIONAL BEDS)
24								
25								
26				NA	SS		0.3	
27								
28								
29								
30								

Total Depth Drilled = 30.0 feet.
Total Depth Sampled = 31.5 feet.
Boring backfilled with bentonite chips.

NA SS SB-245-30 0.4

- NOTES:**
- (1) SS = Split-spoon sampler.
 - (2) NR = Not recorded.
 - (3) NRY = No recovery.
 - (4) This boring was angle-drilled; blow counts are not applicable.
 - (5) NA = Not applicable.
 - (6) SB-245 was drilled at an angle of 65 degrees from horizontal.

Geologic Borehole Log/Well Construction

Project Number
9077.01.07

Boring Number
SB-246

Sheet
1 of 4

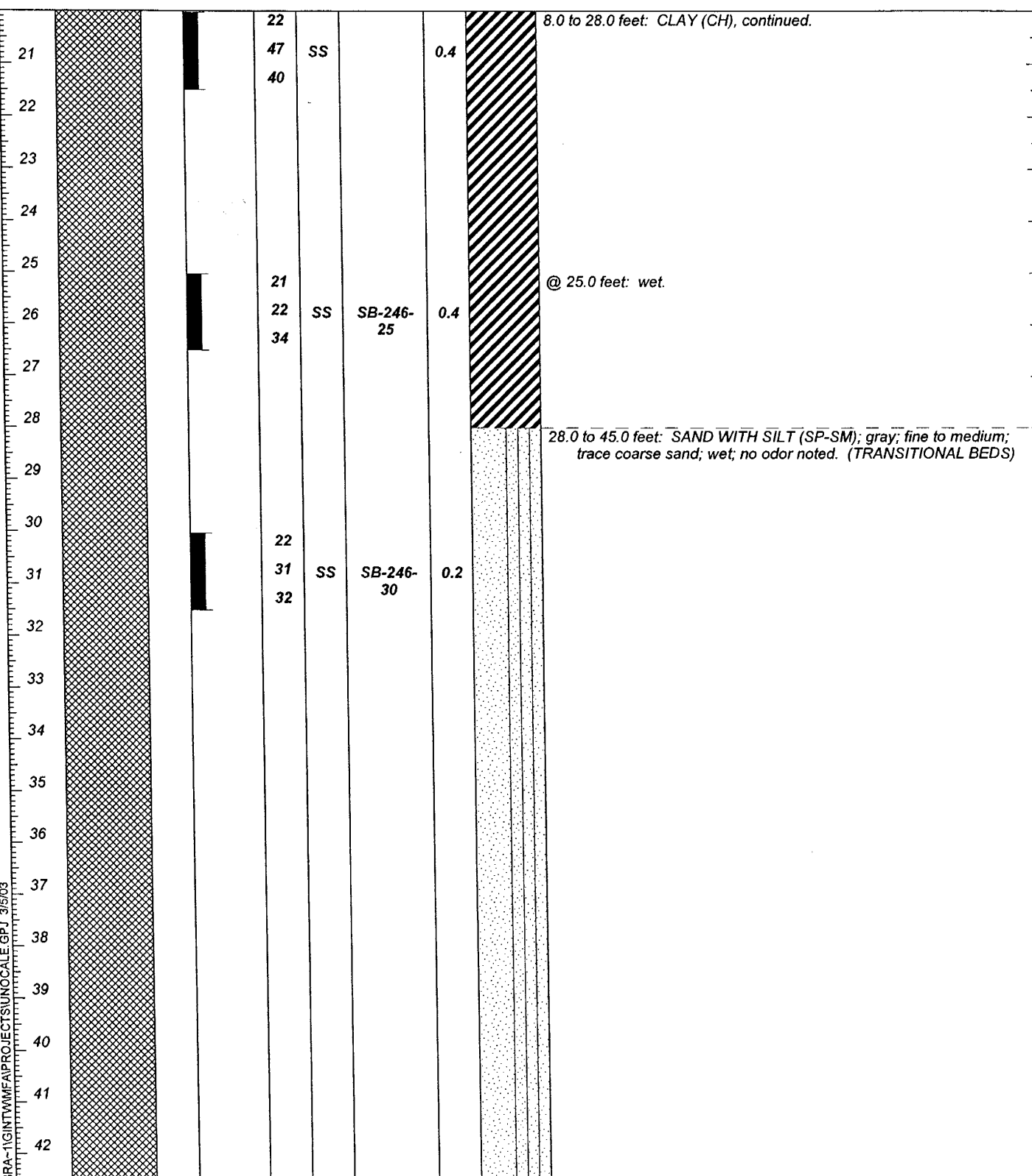
Project Name **Unocal Edmonds Terminal**
 Project Location **Edmonds, Washington**
 Start/End Date **6/27/02 to 6/28/02**
 Driller/Equipment **Cascade Drilling, Inc./Hollow-stem Auger**
 Geologist/Engineer **H. Corner**
 Sample Method **Split-spoon sampler**

TOC Elevation (feet above MSL)
 Surface Elevation (feet above MSL)
 Northing
 Easting
 Hole Depth **80.0-feet**
 Outer Hole Diam **8-inch**

Depth (feet, BGS)	Well Details	Sample Data						Lithologic Column	Soil Description
		Interval	Percent Recovery	Blow Counts	Type	Name	PID (ppm)		
1								0 to 8.0 feet: SAND (SP); gray; fine to medium; trace fines; trace gravel; moist; no odor noted. (FILL/TRANSITIONAL BEDS)	
2									
3									
4									
5									
6									
7									
8									
9								8.0 to 28.0 feet: CLAY (CH); gray; medium to high plasticity; silty; dense; generally massive but with occasional horizons or lenses of fine to medium silty sand; moist; no odor noted. (TRANSITIONAL BEDS)	
10									
11									
12									
13									
14									
15									
16				22		SS	0.6		
17				30					
18				39					
19									
20									

NOTES: (1) SS = Split-spoon sampler.
 (2) NR = Not recorded.
 (3) NRY = No recovery.

Depth (feet, BGS)	Well Details	Sample Data						Soil Description
		Interval	Percent Recovery	Blow Counts	Type	Name	PI/D (ppm)	



NOTES: (1) SS = Split-spoon sampler.
 (2) NR = Not recorded.
 (3) NRY = No recovery.

Depth (feet, BGS)	Well Details	Sample Data					Lithologic Column	Soil Description	
		Interval	Percent Recovery	Blow Counts	Type	Name			
43								28.0 to 45.0 feet: SAND WITH SILT (SP-SM), continued.	
44									
45									
46									45.0 to 75.0 feet: INTERBEDDED SILTY SAND AND SANDY SILT (SM/ML); gray; moist; no odor noted. SILTY SAND is fine; little to some fines. SANDY SILT is low plasticity; stiff; few to some fine sand; laminated. Common horizons of massive silt with occasional fine to medium sand laminae 1- to 2-mm thick. (TRANSITIONAL BEDS)
47									
48									
49									
50									
51				30					0.4
52				31	SS				
53				31					
54									
55									
56									
57									
58									
59									
60									
61				30					0.2
62				34	SS				
63			50/2"						
64									
65									

NOTES: (1) SS = Split-spoon sampler.
 (2) NR = Not recorded.
 (3) NRY = No recovery.

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Depth (feet, BGS)	Well Details	Sample Data					Lithologic Column	Soil Description
		Interval	Percent Recovery	Blow Counts	Type	Name		
66								45.0 to 75.0 feet: INTERBEDDED SILTY SAND AND SANDY SILT (SM/ML), continued.
67								
68								
69								
70								
71				41	50/4"	SS	0.3	
72								
73								
74								
75								
76								
77								
78								
79								
80								

Total Depth Drilled = 80.0 feet.
Total Depth Sampled = 81.5 feet.

Boring backfilled with bentonite chips.

- NOTES: (1) SS = Split-spoon sampler.
(2) NR = Not recorded.
(3) NRY = No recovery.

Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number
9077.01.07

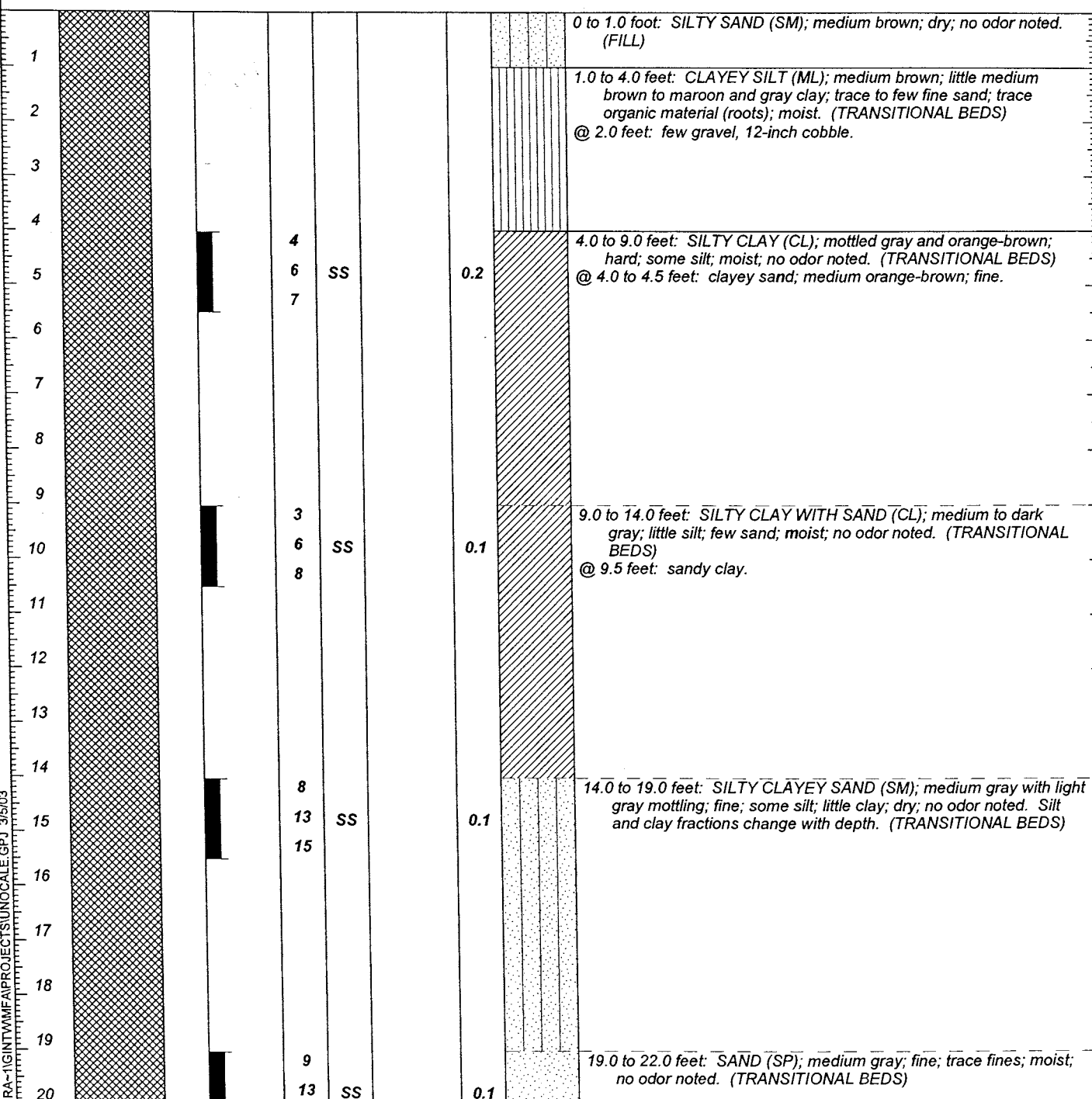
Boring Number
SB-247

Sheet
1 of 2

Project Name **Unocal Edmonds Terminal**
 Project Location **Edmonds, Washington**
 Start/End Date **6/28/02 to 6/28/02**
 Driller/Equipment **Cascade Drilling, Inc./Hollow-stem Auger**
 Geologist/Engineer **E. Silver**
 Sample Method **Split-spoon sampler**

TOC Elevation (feet above MSL)
 Surface Elevation (feet above MSL)
 Northing
 Easting
 Hole Depth **35.0-feet**
 Outer Hole Diam **8-inch**

Depth (feet, BGS)	Well Details	Sample Data						Lithologic Column	Soil Description
		Interval	Percent Recovery	Blow Counts	Type	Name	PID (ppm)		



- NOTES:**
- (1) SS = Split-spoon sampler.
 - (2) NR = Not recorded.
 - (3) NRY = No recovery.
 - (4) * Duplicated 35' sample as SB-247-40 at 12:35 (false time).

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Depth (feet, BGS)	Well Details	Sample Data					Lithologic Column	Soil Description
		Interval	Percent Recovery	Blow Counts	Type	Name		
21				16				19.0 to 22.0 feet: SAND (SP), continued.
22								22.0 to 27.0 feet: SILTY SAND WITH CLAY (SM); light to medium gray; fine; some silt; few clay; hard; dry; no odor noted. Silt and clay fractions vary with depth. (TRANSITIONAL BEDS)
23								
24								
25				9	SS		0.2	
26				9				
27				12				
28								27.0 to 35.0 feet: SANDY CLAY (CL); medium gray with some light gray; some silt partings; hard; dry; no odor noted. (TRANSITIONAL BEDS)
29								
30				14				
31				17	SS		0.2	
32				19				
33								
34								
35				16				
				20	SS	*SB-247-	0.1	
				20		35		

Total Depth Drilled = 35.0 feet.
Total Depth Sampled = 35.5 feet.

Boring backfilled with bentonite chips.

- NOTES: (1) SS = Split-spoon sampler.
(2) NR = Not recorded.
(3) NRY = No recovery.
(4) * Duplicated 35' sample as SB-247-40 at 12:35 (false time).

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Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number
9077.01.07

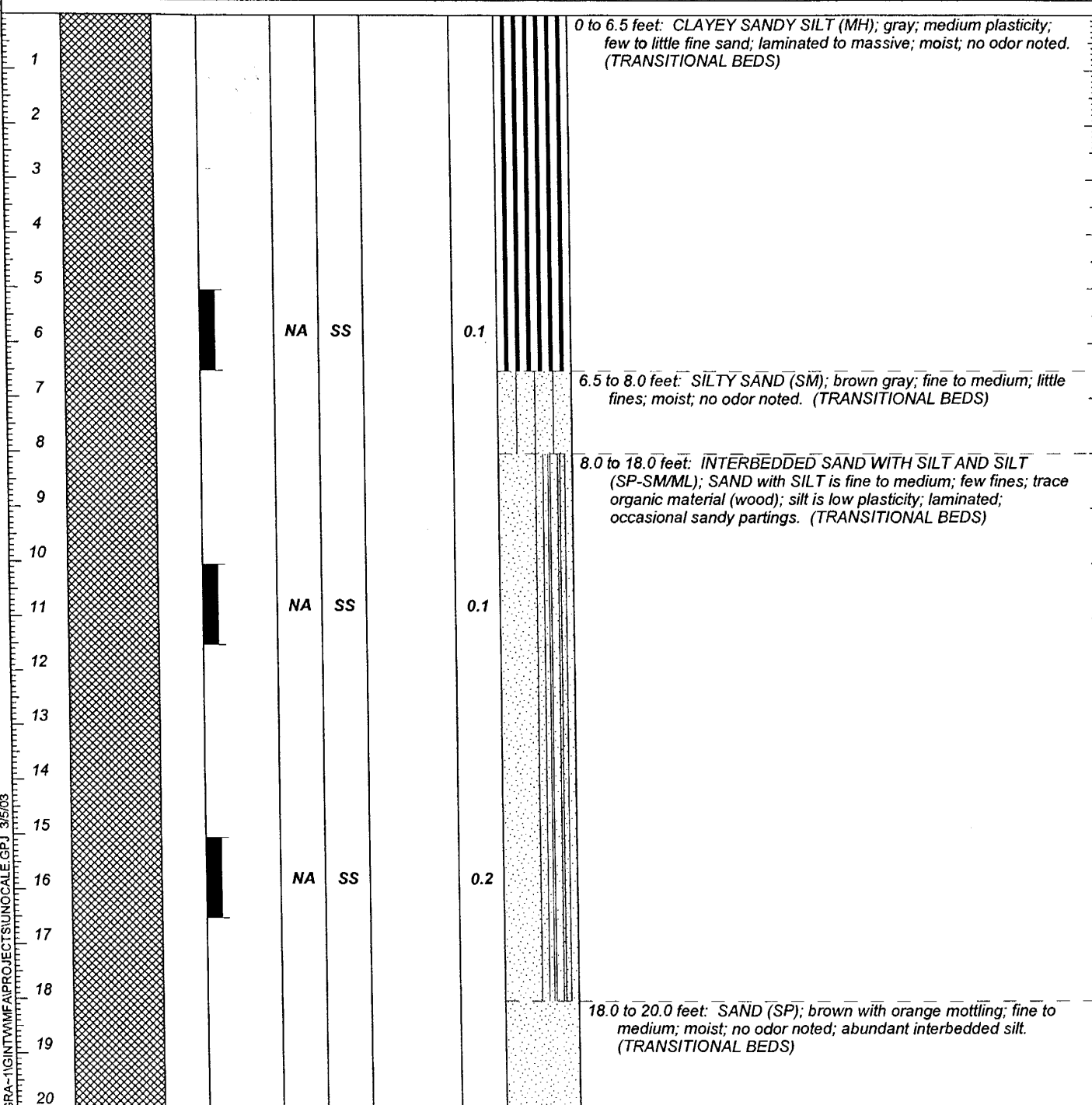
Boring Number
SB-248

Sheet
1 of 2

Project Name **Unocal Edmonds Terminal**
 Project Location **Edmonds, Washington**
 Start/End Date **6/28/02 to 6/28/02**
 Driller/Equipment **Cascade Drilling, Inc./Hollow-stem Auger**
 Geologist/Engineer **H. Corner**
 Sample Method **Split-spoon sampler**

TOC Elevation (feet above MSL)
 Surface Elevation (feet above MSL)
 Northing
 Easting
 Hole Depth **20.0-feet**
 Outer Hole Diam **8-inch**

Depth (feet, BGS)	Well Details	Sample Data					PID (ppm)	Lithologic Column	Soil Description
		Interval	Percent Recovery	Blow Counts	Type	Name			



- NOTES:**
- (1) SS = Split-spoon sampler.
 - (2) NR = Not recorded.
 - (3) NRY = No recovery.
 - (4) * Duplicated 20' sample as SB-248-25.
 - (5) This boring was angle-drilled; blow counts are not applicable.
 - (6) NA = Not applicable.
 - (7) SB-248 was drilled at an angle of 75 degrees from horizontal.

Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number
9077.01.07

Boring Number
SB-248

Sheet
2 of 2

Depth (feet, BGS)	Well Details	Sample Data					Lithologic Column	Soil Description
		Interval	Percent Recovery	Blow Counts	Type	Name		
				NA	SS	*SB-248-20		Total Depth Drilled = 20.0 feet. Total Depth Sampled = 21.5 feet. Boring backfilled with bentonite chips.

GBLW-2 C:\PROGRAMS\1GINT\WMA\PROJECTS\UNOCAL\GPJ_3/5/03

- NOTES:**
- (1) SS = Split-spoon sampler.
 - (2) NR = Not recorded.
 - (3) NRY = No recovery.
 - (4) * Duplicated 20' sample as SB-248-25.
 - (5) This boring was angle-drilled; blow counts are not applicable.
 - (6) NA = Not applicable.
 - (7) SB-248 was drilled at an angle of 75 degrees from horizontal.

Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number
9077.01.07

Boring Number
SB-249

Sheet
1 of 1

Project Name **Unocal Edmonds Terminal**
 Project Location **Edmonds, Washington**
 Start/End Date **6/28/02 to 6/28/02**
 Driller/Equipment **Cascade Drilling, Inc./Hollow-stem Auger**
 Geologist/Engineer **H. Corner**
 Sample Method **Split-spoon sampler**

TOC Elevation (feet above MSL)
 Surface Elevation (feet above MSL)
 Northing
 Easting
 Hole Depth **15.0-feet**
 Outer Hole Diam **8-inch**

Depth (feet, BGS)	Well Details	Sample Data					Lithologic Column	Soil Description	
		Interval	Percent Recovery	Blow Counts	Type	Name			
1								0 to 2.0 feet: CLAYEY SANDY SILT (MH); gray; medium plasticity; few to little fine sand; massive; moist; no odor noted. (TRANSITIONAL BEDS)	
2								2.0 to 3.0 feet: SILTY SAND (SM); brown-gray; fine to medium; little fines; moist; no odor noted. (TRANSITIONAL BEDS)	
3								3.0 to 8.0 feet: SILTY CLAY (CH); gray; medium plasticity; massive; very stiff; moist; no odor noted; rare sandy silt partings with trace organics. (TRANSITIONAL BEDS)	
4									
5									
6					NA	SS	0.1		
7									
8									
9									8.0 to 13.0 feet: CLAYEY SILT (ML); gray; nonplastic to low plasticity; friable; moist; no odor noted. (TRANSITIONAL BEDS)
10									
11					NA	SS	0.1		
12									
13									
14									13.0 to 15.0 feet: INTERBEDDED SAND WITH SILT AND SILT (SP-SM/ML); moist; no odor noted. Sand with silt is brownish-gray; fine to medium; few fines; silt is gray-brown; laminated. (TRANSITIONAL BEDS)
15									

Total Depth Drilled = 15.0 feet.
 Total Depth Sampled = 16.5 feet.
 Boring backfilled with bentonite chips.

NA SS SB-249- 0.4
 15

- NOTES:**
- (1) SS = Split-spoon sampler.
 - (2) NR = Not recorded.
 - (3) NRY = No recovery.
 - (4) This boring was angle-drilled; blow counts are not applicable.
 - (5) NA = Not applicable.
 - (6) SB-249 was drilled at an angle of 75 degrees from horizontal.

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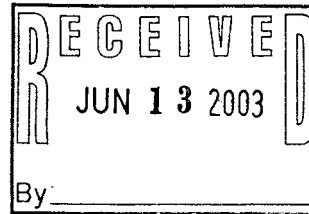
APPENDIX C

**YARDAGE ESTIMATE AND POST EXCAVATION
SURVEY DRAWING**

MEMORANDUM



Date: June 12, 2003 (revised)
To: Linda Dawson (MFA, Inc.)
From: Lonnie Carlson
Re: Unocal Edmonds (Upper Yard)
Triad Job No.: 02-187
Copies To: Gus Osterback (Triad)



11814 115th Avenue NE
Kirkland, WA 98034-6923
425.821.8448
425.821.3481 fax
800.488.0756 toll free
www.triadassoc.com

The following lists the excavated yardages within noted areas.

BASIN AREA	YARDAGE
Area "K"	4350 cu.yds.
SWL	1950 cu.yds.
ASWL 1	1100 cu.yds.
Area "U"	2400 cu.yds.
ASWL 2	1800 cu.yds.
Basin 218	2125 cu.yds.
Basin 2605	13,250 cu.yds.
Basin 3392-3394	1,675 cu.yds.
Basin 2911	3500 cu.yds.
Basin 2910	2850 cu.yds.
Basin 2909	5350 cu.yds.
Basin 4120	8700 cu.yds.
Basin 2912/F410	4950 cu.yds.
Basin 1749	11,500 cu.yds.
Basin 2798	585 cu.yds.
Basin 263	14,050 cu.yds.
Basin 2606	3,000 cu.yds.
Basin 2602/2603/2604	13,500 cu.yds.
Basin 2913	900 cu.yds.
Basin 2914	450 cu.yds.

Note: Estimated yardage based on comparison of collected field survey data (circa. 2002-2003) to existing condition survey compiled from 1993 aerial topographic mapping of the Unocal site.

APPENDIX D
BACKFILL AND COMPACTION DOCUMENTATION

Edmonds Bulk Terminal

Rinker Materials Company

Date	Product	Quantity (tons)	Acc Total (tons)
------	---------	-----------------	------------------

12/16/02	2" Ballast	55.68	55.68
02/14/03	2" Ballast	58.83	114.51
07/23/02	2x4	91.96	91.96
07/24/02	2x4	120.90	212.86
07/25/02	2x4	59.85	272.71
07/26/02	2x4	92.40	365.11
09/04/02	2x4	31.40	396.51
09/17/02	2x4	31.11	427.62
10/04/02	2x4	31.18	458.80
10/10/02	2x4	30.17	488.97
11/06/02	2x4	31.56	520.53
11/25/02	2x4	154.26	674.79
11/25/02	2x4	64.23	739.02
11/27/02	2x4	62.69	801.71
12/02/02	2x4	346.57	1148.28
12/03/02	2x4	258.79	1407.07
12/04/02	2x4	249.60	1656.67
12/05/02	2x4	154.56	1811.23
12/10/02	2x4	64.97	1876.20
12/13/02	2x4	245.71	2121.91
12/16/02	2x4	403.01	2524.92
12/17/02	2x4	417.75	2942.67
12/18/02	2x4	653.13	3595.80
12/19/02	2x4	776.78	4372.58
12/20/02	2x4	738.73	5111.31
12/23/02	2x4	284.68	5395.99
01/02/03	2x4	505.90	5901.89
01/03/03	2x4	123.05	6024.94
01/10/03	2x4	29.34	6054.28
01/13/03	2x4	369.92	6424.20
01/14/03	2x4	112.04	6536.24
01/15/03	2x4	332.27	6868.51
01/17/03	2x4	61.85	6930.36
01/22/03	2x4	232.88	7163.24
01/23/03	2x4	435.26	7598.50

Summary of materials imported from Rinker to Edmonds Terminal during UYIA.

Imported Material

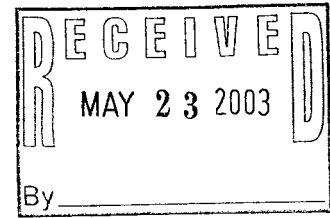
01/24/03	2x4	29.71	7628.21
02/03/03	2x4	237.17	7865.38
02/04/03	2x4	33.09	7898.47
02/06/03	2x4	273.99	8172.46
02/07/03	2x4	234.09	8406.55
02/10/03	2x4	307.40	8713.95
02/13/03	2x4	244.33	8958.28
02/14/03	2x4	347.17	9305.45
02/17/03	2x4	335.24	9640.69
02/17/03	2x4	58.96	9699.65
02/20/03	2x4	123.27	9822.92
02/21/03	2x4	280.31	10103.23
02/24/03	2x4	62.92	10166.15
02/25/03	2x4	450.00	10616.15
02/26/03	2x4	361.39	10977.54
03/10/03	2x4	209.84	11187.38
03/13/03	2x4	121.47	11308.85
03/15/03	2x4	64.82	11373.67
03/17/03	2x4	30.27	11403.94
03/20/03	2x4	62.42	11466.36
03/21/03	2x4	93.68	11560.04
03/24/03	2x4	62.70	11622.74
03/25/03	2x4	94.52	11717.26
03/26/03	2x4	28.47	11745.73
03/27/03	2x4	26.92	11772.65
05/05/03	2x4	91.67	11864.32
05/15/03	2x4	13.17	11877.49
08/28/02	4x8	62.46	62.46
08/29/02	4x8	30.99	93.45
10/03/02	4x8	31.88	125.33
11/06/02	4x8	65.44	190.77
11/26/02	4x8	308.74	499.51
11/26/02	4x8	61.44	560.95
12/13/02	4x8	120.35	681.30
08/28/02	Asphalt/Soil disp	65.12	65.12
09/04/02	Asphalt/Soil disp	95.50	160.62
09/10/02	Asphalt/Soil disp	43.20	203.82
09/17/02	Asphalt/Soil disp	79.81	283.63
09/19/02	Asphalt/Soil disp	53.54	337.17
09/20/02	Asphalt/Soil disp	56.83	394.00

10/17/02	Asphalt/Soil disp	25.75	419.75
03/07/03	Conc Dump	51.62	51.62
03/10/03	Conc Dump	173.25	224.87
03/27/03	Conc Dump	-62.35	162.52
05/20/03	Conc Dump	77.94	240.46
05/21/03	Conc Dump	29.47	269.93
02/03/03	Dirt Dump	22.46	22.46
04/01/03	Asphalt/Soil disp	665.81	665.81
04/02/03	Asphalt/Soil disp	1076.54	1742.35
04/03/03	Asphalt/Soil disp	32.00	1774.35
04/10/03	Asphalt/Soil disp	362.78	2137.13
04/11/03	Asphalt/Soil disp	514.46	2651.59
04/14/03	Asphalt/Soil disp	260.34	2911.93
05/21/03	Asphalt/Soil disp	63.46	2975.39
05/27/03	Asphalt/Soil disp	164.52	3139.91
05/28/03	Asphalt/Soil disp	160.20	3300.11
05/29/03	Asphalt/Soil disp	148.35	3448.46
05/30/03	Asphalt/Soil disp	152.39	3600.85
10/30/02	Base Course	16.20	16.20
12/10/02	Base Course	31.43	47.63
12/11/02	Base Course	35.32	82.95
02/05/03	Base Course	17.49	100.44
02/14/03	Base Course	30.03	130.47
02/20/03	Base Course	59.56	190.03
05/21/03	Base Course	63.58	253.61
01/17/03	3/4" Washed	19.65	19.65
01/22/03	3/4" Washed	17.58	37.23
02/07/03	3/4" Washed	60.35	97.58
02/10/03	3/4" Washed	31.16	128.74
03/13/03	3/4" Washed	13.56	142.30
05/13/03	1 1/4" Washed	16.51	16.51
05/27/03	1 1/4" Washed	58.99	58.99
05/28/03	1 1/4" Washed	59.24	59.24
05/30/03	1 1/4" Washed	30.56	30.56
04/01/03	Washed Sand	1241.33	1241.33
04/01/03	Washed Sand	1341.73	2583.06
04/01/03	Washed Sand	1466.55	4049.61

04/01/03	Washed Sand	1072.89	5122.50
04/01/03	Washed Sand	1024.51	6147.01
04/01/03	Washed Sand	1329.92	7476.93
04/01/03	Washed Sand	1294.20	8771.13
04/02/03	Washed Sand	1487.19	10258.32
04/03/03	Washed Sand	1810.20	12068.52
04/04/03	Washed Sand	31.42	12099.94
09/26/02	Pit Sand	471.76	471.76
09/27/02	Pit Sand	640.24	1112.00
09/28/02	Pit Sand	771.06	1883.06
10/04/02	Pit Sand	1010.76	2893.82
10/05/02	Pit Sand	1222.72	4116.54
10/08/02	Pit Sand	71.56	4188.10
10/09/02	Pit Sand	91.50	4279.60
10/10/02	Pit Sand	89.07	4368.67
10/11/02	Pit Sand	119.51	4488.18
10/14/02	Pit Sand	99.81	4587.99
10/15/02	Pit Sand	120.76	4708.75
10/16/02	Pit Sand	120.76	4829.51
10/17/02	Pit Sand	30.17	4859.68
12/05/02	Pit Sand	252.42	5112.10
12/06/02	Pit Sand	408.83	5520.93
12/09/02	Pit Sand	538.98	6059.91
12/10/02	Pit Sand	401.63	6461.54
12/11/02	Pit Sand	795.10	7256.64
12/12/02	Pit Sand	803.53	8060.17
12/13/02	Pit Sand	503.29	8563.46
12/16/02	Pit Sand	135.53	8698.99
01/02/03	Pit Sand	30.30	8729.29
01/03/03	Pit Sand	656.17	9385.46
01/06/03	Pit Sand	1048.48	10433.94
01/07/03	Pit Sand	294.29	10728.23
01/08/03	Pit Sand	209.62	10937.85
01/09/03	Pit Sand	604.89	11542.74
01/10/03	Pit Sand	647.98	12190.72
01/13/03	Pit Sand	328.95	12519.67
01/14/03	Pit Sand	383.08	12902.75
01/15/03	Pit Sand	150.45	13053.20
01/16/03	Pit Sand	504.68	13557.88
01/17/03	Pit Sand	857.26	14415.14
01/20/03	Pit Sand	1335.31	15750.45

01/21/03	Pit Sand	1042.54	16792.99
01/23/03	Pit Sand	32.81	16825.80
01/27/03	Pit Sand	59.37	16885.17
01/28/03	Pit Sand	159.83	17045.00
01/29/03	Pit Sand	122.11	17167.11
01/30/03	Pit Sand	816.85	17983.96
01/31/03	Pit Sand	707.14	18691.10
02/03/03	Pit Sand	797.12	19488.22
02/04/03	Pit Sand	1207.69	20695.91
02/05/03	Pit Sand	751.57	21447.48
02/06/03	Pit Sand	958.87	22406.35
02/07/03	Pit Sand	928.37	23334.72
02/10/03	Pit Sand	878.54	24213.26
02/11/03	Pit Sand	1181.53	25394.79
02/12/03	Pit Sand	1155.44	26550.23
02/13/03	Pit Sand	969.35	27519.58
02/14/03	Pit Sand	747.50	28267.08
02/17/03	Pit Sand	1055.15	29322.23
02/18/03	Pit Sand	1352.36	30674.59
02/19/03	Pit Sand	1285.45	31960.04
02/20/03	Pit Sand	90.03	32050.07
02/21/03	Pit Sand	93.22	32143.29
02/24/03	Pit Sand	1126.27	33269.56
02/25/03	Pit Sand	909.19	34178.75
02/26/03	Pit Sand	1028.88	35207.63
02/27/03	Pit Sand	1504.10	36711.73
02/28/03	Pit Sand	1175.61	37887.34
03/03/03	Pit Sand	1346.11	39233.45
03/04/03	Pit Sand	400.66	39634.11
03/05/03	Pit Sand	430.72	40064.83
03/06/03	Pit Sand	676.44	40741.27
03/15/03	Pit Sand	1344.99	42086.26
03/17/03	Pit Sand	1499.86	43586.12
03/18/03	Pit Sand	819.36	44405.48
03/19/03	Pit Sand	640.06	45045.54
03/20/03	Pit Sand	153.95	45199.49
03/21/03	Pit Sand	723.20	45922.69
04/04/03	Pit Sand	1730.82	47653.51

Updated 6/4



**SUMMARY REPORT
COMPACTION TESTING
Unocal Edmonds Terminal
HWA Job No. 2002-156-23**

**Prepared for
Maul Foster & Alongi, Inc.**

May 22, 2003



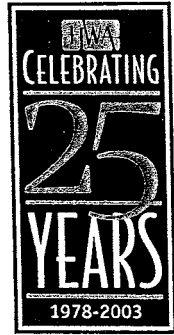
HWA GEOSCIENCES INC.

- *Geotechnical Engineering*
- *Hydrogeology*
- *Geoenvironmental Services*
- *Inspection & Testing*



HWA GEOSCIENCES INC.

Geotechnical Engineering • Hydrogeology • Geoenvironmental Services • Inspection & Testing



May 22, 2003

HWA Project No. 2002-156-23

Maul Foster & Alongi, Inc.
17171 Bothell Way NE, #264
Seattle, Washington 98155

Attention: Linda Dawson

Subject: **SUMMARY REPORT – COMPACTION TESTING**
Unocal Edmonds Terminal
Your Project 9077.01.07/4
Edmonds, Washington

Dear Ms. Dawson:

As requested, HWA GEOSCIENCES INC (HWA) has performed periodic quality assurance testing to assess the compaction of fill materials placed within Basin excavations on this project. Field compaction tests were carried out periodically on a 'call out' basis. Full time monitoring of fill placement was not provided. Specific details of the testing carried out are provided on the attached Field Reports (Report No.s 1 to 4).

At the clients request, compaction test results were based on a Proctor value established by AAR Testing (the contractors QC laboratory). A copy of the AAR testing 'Compaction Test Report' is attached for reference. HWA carried out a confirmatory one-point Proctor test (see Figure 1).

To the best of our knowledge, all locations tested were in accordance with the project requirements. To our knowledge there are no outstanding deficiencies.

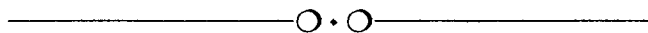
We appreciate the opportunity to be of service on this project. Should you have any additional requirements, please contact our office.

19730 - 64th Avenue W.
Suite 200
Lynnwood, WA 98036.5957

Tel: 425.774.0106
Fax: 425.774.2714

www.hwageosciences.com

May 22, 2003
HWA Project No. 2002-156-23



Sincerely,

HWA GEOSCIENCES INC.

A handwritten signature in black ink, appearing to read "Richard McKinley".

Richard McKinley
Manager, Lab and Inspection Group

RWM:PJP:rwm

COMPACTION TEST REPORT

Curve No.: 011

Project No.: 03-100

Date: 1/10/03

Project: Unical Edmonds

Location:

Elev./Depth:

Sample No. 1 of 2

Remarks: tested/calculated by m.holtz
reviewed by a. hale

MATERIAL DESCRIPTION

Description: fine silty sand w/ minimal agg

Classifications -

USCS:

AASHTO:

Nat. Moist. =

Sp.G. = 2.64

Liquid Limit =

Plasticity Index =

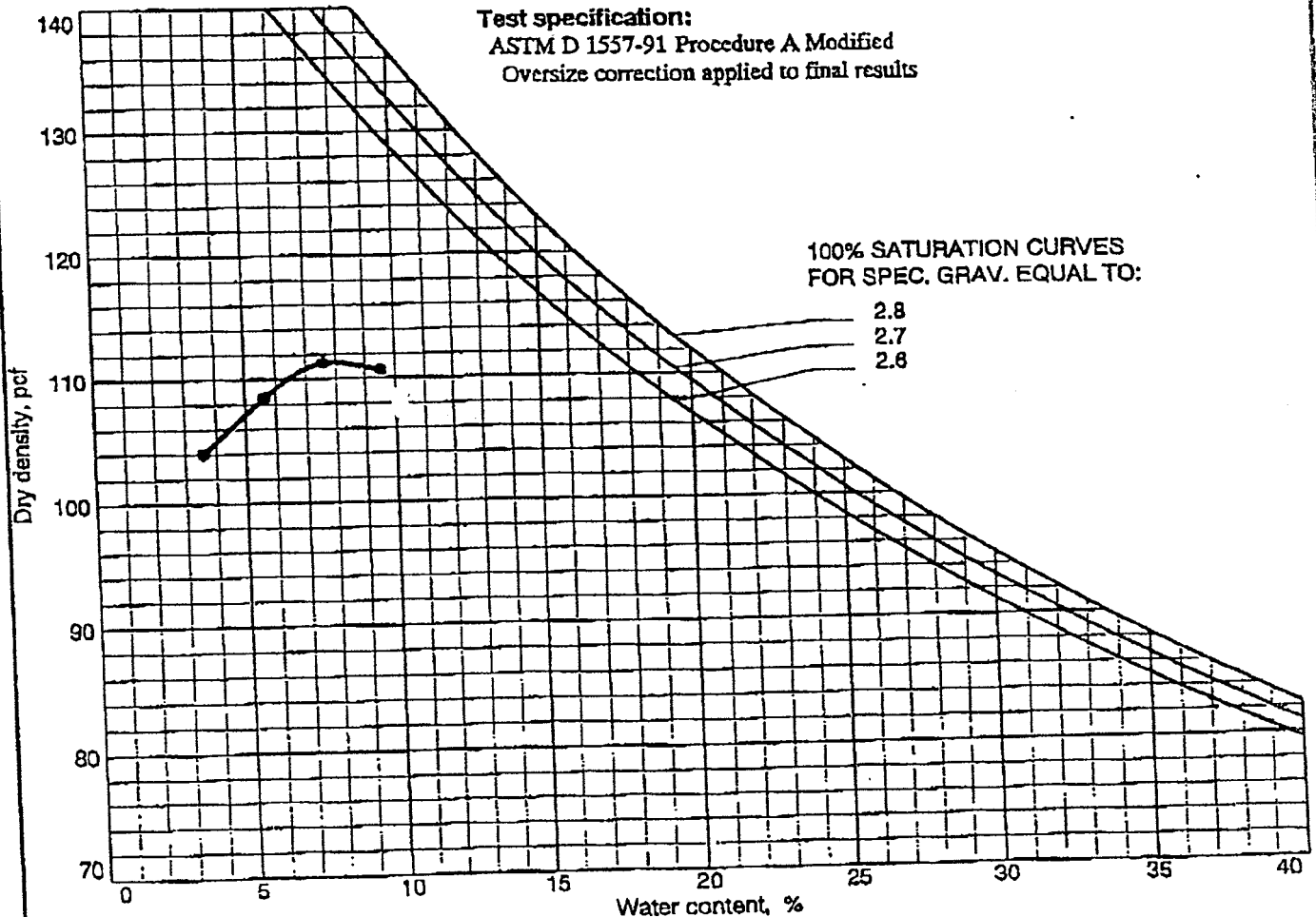
% > No.4 = 3.0 %

% < No.200 = 0.0 %

TEST RESULTS

Maximum dry density = 112.4 pcf

Optimum moisture = 7.6 %



A.A.R. Testing Laboratory, Inc.

LABORATORY COMPACTION CHARACTERISTICS OF SOIL

(ASTM D 698, ASTM D 1557, ASTM D 4718)



HWA GEOSCIENCES INC.

CLIENT: Maul Foster and Alongi, Inc.

PROJECT: Unocal Edmonds Terminal

SAMPLE ID: S-1

PROJECT NO: 2002-156-23

Sampled By: HWA/J.C.

Tested By: E.B.

Date Sampled: 2/14/2003

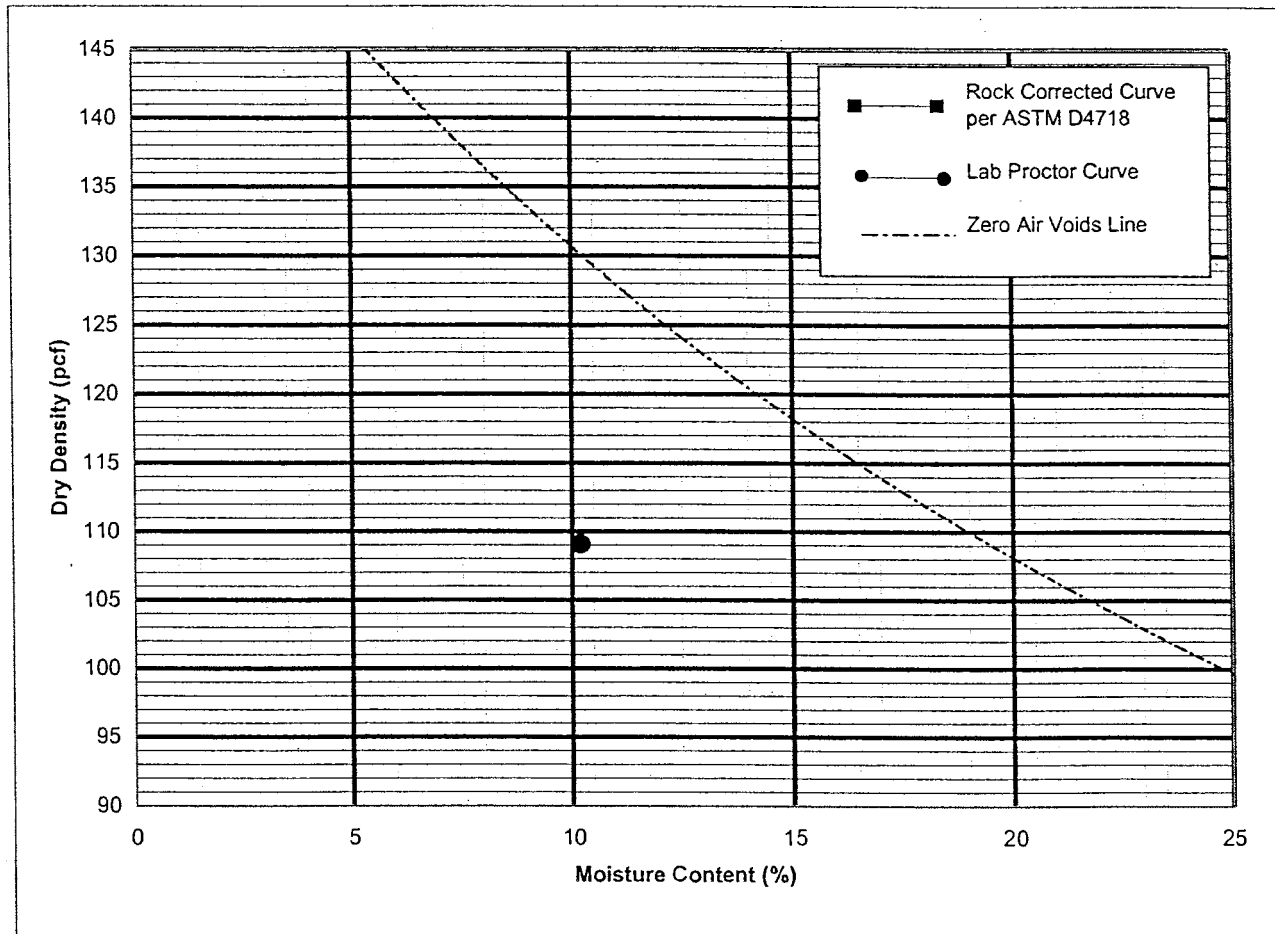
Date Received: 2/4/2003

Date Tested: 2/15/2003

MATERIAL TYPE OR DESCRIPTION: fine grained SAND
 SAMPLE LOCATION AND DEPTH:
 COMMENTS: one point Proctor to confirm values provided by Contractors QC testing; point matches with AAR Testing Laboratory's Curve No. 11

Standard: D698 D1557 Natural Moisture Content: 10.2 %
 Method: A B C Oversize: 0 % retained on: 3/4 in.
 Preparation: Dry Moist Rammer: Auto Manual Assumed S.G.: 2.65

Test Data				
Dry Density (pcf)	109.1			
Moisture Content (%)	10.2			



Data Summary*	
Percent Oversize	<5%
Max. Dry Density (pcf)*	112.4
Optimum Moisture (%)*	7.6

Test Values At Other Oversize Percentages						
0.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%
112.4	114.2	116.1	118.1	120.1	122.2	124.4
7.6	7.3	6.9	6.6	6.3	6.0	5.6

* values corrected for oversize material per ASTM D4718, using assumed Specific Gravity shown and oversize moisture content of 1%

Reviewed By: [Signature]

FIGURE 1

FIELD REPORT



19730-64th Avenue West
Lynnwood, WA 98036
Tel. 425-774-0106
Fax. 425-774-2714

		Job No. 2002-156-23	Page No. 1 of 2
		Report No. 001	Date February 12, 2003
Project Name Unocal Edmonds Terminal		Location or Address Edmonds, WA	Day of the Week Wednesday
Owner Unocal		Permit No.	Weather Temp. (F) Foggy 40 ⁰
Client Maul Foster & Alongi, Inc		Client Rep. Linda Dawson	HWA Project Engineer Richard McKinley
Contractor Wyser Construction		Contractor Rep. Dan Reynolds	HWA Field Rep. John H. (Jack) Carlock

WE NOTED THE FOLLOWING: (Contractor Activities, HWA Activities, Outstanding Issues, and Resolutions)

Start Travel: 08:50 Arrived at Site: 09:05 Departed Site: 11:50 End Travel: 12:00

Jack Carlock on site at the request of Linda Dawson to provide periodic quality assurance testing of compaction of the fine-grained sand being placed as backfill in Basins (excavations at former tank sites).

Backfill of the basins is being carried out using imported fine-grained sand placed in allowable maximum lifts of 2' thickness. Specified minimum compaction requirements are 90% of Modified Proctor (ASTM D1557), increasing to 95% of Modified Proctor for the uppermost 2' of fill. A.A.R. Testing Laboratory, Inc is providing quality control testing for the contractor and their field representative was on site at the time of our visit. Compaction test results were based on a proctor value established for the fill materials by A.A.R. Testing Laboratory (Curve #11).

Basin 1749

It is understood that six lifts of fine-grained sand fill had been placed and compacted prior to our arrival. At the time of testing, the fill was 1' below final grade. HWA perform three field density tests in the southern portion of the basin (tests 1 to 3 on page two). Testing indicated compaction meeting the specified minimum requirement of 95 % of Modified Proctor.

HWA observed the placement and compaction of the final lift, consisting of approximately 50 cubic yards of sand. HWA performed three nuclear field density tests in this area (tests 4 to 6 on page two). Testing indicated compaction meeting the specified minimum requirement of 95 % of Modified Proctor.

Basin 2604

It is our understanding that the backfill of this basin had only just begun (first lift). The fill in Basin 2604 appeared to have a higher fines content and have a higher percentage of rock visible than material placed in Basin 1749. HWA perform three nuclear field density tests along an axis running from the northeastern to the southwestern corners of this basin (tests 6 to 9 on page two). Testing indicated compaction meeting the specified minimum requirement of 90 % of Modified Proctor.

HWA returned a five-gallon bucket of the sand to our laboratory for confirmatory Proctor testing.

Compaction testing for this project has been requested on a call-out basis only. Full time inspection of fill placement or compaction was not requested or provided. A compaction test provides data only for a specific test location and only for the limited depth of the test. Achieving the specified degree of compaction for all project materials remains the responsibility of the contractor.

Signed: *A - H Carlock*

Reviewed: *[Signature]*

FIELD DENSITY TEST REPORT - NUCLEAR METHOD



WSDOT TM7

ASTM D 2922 and ASTM D 3017

AASHTO T238 and AASHTO T239

PROJECT NO.: 2002156-23 DATE: 2.12.03

CLIENT: Maul Foster & Alongi, Inc.

PROJECT: Unocal Edmonds Terminal MATERIAL BEING PLACED: Fine Sand

PROJECT IMPROVEMENT TESTED: Backfill of Basins 1749 and 2604

Test No.	Detailed Test Location	Elev. or Depth (ft)	Probe Depth (in)	Over-Size (%)	Lab Control* (Proctor Information)		Field Values		Relative Compaction	
					Sample I.D.	Density (pcf) Moisture%	Wet Dens (pcf) Moisture%	Dry Dens (pcf) Moisture%	Field %	Spec %
1	Basin 1749, 20' north of south face of basin, 15' northwest of face of the southeast corner of the basin. Sixth lift.	1'	8"	0	Curve #011	112.4 7.6	123.9 111.7 12.2 10.9	99	95	
2	Basin 1749, 15' north of south face of basin, 45' west of face of the southeast corner of the basin. Sixth lift.	1'	8"	0	Curve #011	112.4 7.6	121.4 109.4 12.0 11.0	97	95	
3	Basin 1749, 18' north of south face of basin, 55' west of face of the southeast corner of the basin. Sixth lift.	1'	8"	0	Curve #011	112.4 7.6	121.0 109.6 11.4 10.4	98	95	
4	Basin 1749, 15' north of south face of basin, 15' northwest of face of the southeast corner of the basin. Seventh lift.	Grade	8"	0	Curve #011	112.4 7.6	121.3 109.2 12.1 11.1	97	95	
5	Basin 1749, 15' north of south face of basin, 40' northwest of face of the southeast corner of the basin. Seventh lift.	Grade	8"	0	Curve #011	112.4 7.6	118.6 107.1 11.5 10.7	95	95	
6	Basin 1749, 15' north of south face of basin, 50' northwest of face of the southeast corner of the basin. Seventh lift.	Grade	8"	0	Curve #011	112.4 7.6	122.1 110.0 12.1 11.0	98	95	
7	Basin 2604, 40' north of toe of the ramp. First lift	12'	8"	0	Curve #011	112.4 7.6	118.9 106.2 12.7 12.0	94	90	
8	Basin 2604, center of the basin. First lift.	12'	8"	0	Curve #011	112.4 7.6	129.9 115.9 14.0 12.1	103	90	
9	Basin 2604, 45' northeast of southwest corner of basin. First lift.	12'	8"	0	Curve #011	112.4 7.6	120.2 107.1 13.1 12.2	95	90	

Densometer: Troxler 3411-B CPN MC1-DR-P Other

*Lab Control: ASTM D 1557, Modified Proctor AASHTO T-180, Modified Proctor

Serial #: 12216 Dens. Stnd.: 2799 Moist. Stnd.: 671

COMMENTS: Moisture/Density Value established by A.A.R. Testing Laboratory, Inc. Elevations and locations are approximate.

Completed By: John H. (Jack) Carlock Reviewed By: [Signature] Page 2 of 2

FIELD REPORT



19730-64th Avenue West
Lynnwood, WA 98036
Tel. 425-774-0106
Fax. 425-774-2714

		Job No. 2002-156-23	Page No. 1 of 3
		Report No. 002	Date February 24, 2003
Project Name Unocal Edmonds Terminal	Location or Address Edmonds, WA		Day of the Week Monday
Owner Unocal	Permit No.		Weather Sunny
			Temp. (F) 35 ⁰
Client Maul Foster & Alongi, Inc	Client Rep. Linda Dawson		HWA Project Engineer Richard McKinley
Contractor Wyser Construction	Contractor Rep. Dan Reynolds		HWA Field Rep. John H. (Jack) Carlock

WE NOTED THE FOLLOWING: (Contractor Activities, HWA Activities, Outstanding Issues, and Resolutions)

Start Travel: 07:50 Arrived at Site: 08:00 Departed Site: 10:50 End Travel: 11:00

Jack Carlock on site at the request of Linda Dawson to provide periodic quality assurance testing of compaction of the fine-grained sand being placed as backfill in Basins (excavations at former tank sites).

Backfill of the basins is being carried out using imported fine-grained sand placed in allowable maximum lifts of 2' thickness. Specified minimum compaction requirements are 90% of Modified Proctor (ASTM D1557), increasing to 95% of Modified Proctor for the uppermost 2' of fill. A.A.R. Testing Laboratory, Inc is providing quality control testing for the contractor and their field representative was on site at the time of our visit. Compaction test results were based on a proctor value established for the fill materials by A.A.R. Testing Laboratory (Curve #11).

Basin 263

It is our understanding that finished grade of the sand fill will equal the elevation of the catch basin located in the northeastern quadrant of Basin 263. It was observed that in the northern two thirds of Basin 263, sand fill had been placed and compacted to approximately 0.5 feet below grade. Placement and compaction of the sand in the southern third of the basin was completed to 3.5 to 4.0 feet below grade. HWA performed four field density tests in this basin. See tests 1 to 4 on page three of this report for locations and test values. Testing indicated compaction meeting the specified minimum requirements. It is our understanding that placement and compaction of fill will continue later today.

Basin 2604

It is our understanding that the bulk of the sand fill within this basin is approximately 4' to 6' below proposed grade. HWA performed two nuclear field density tests and testing indicated that compaction of the material met the specified minimum requirements. See test numbers 5 and 6 on page three.

The area immediately adjacent to the catch basin located in the central southern portion of the basin is approximately 1 feet below grade. HWA performed one nuclear field density test and testing indicated that compaction of the material failed to meet the specified minimum requirements of 95% of Modified Proctor. See test number 7 on page three. Tests results were discussed and compared with A.A.R. Testing Laboratory's Technician on site. It is our understanding that the failed test was confirmed by A.A.R. Testing Laboratory. We further understand that directions for recompaction of the material at this location were given to the contractor by A.A.R. Testing Laboratory.

Signed: _____
Reviewed: _____

Basin 2914

It was observed that the fill sand within Basin 2914 had been placed and compacted to approximately 4' below proposed grade of sand. HWA perform two nuclear field density tests in this basin. Testing indicated compaction meeting the specified minimum requirements of 90 % of Modified Proctor. (See test numbers 8 and 9 on page three).

Compaction testing for this project has been requested on a call-out basis only. Full time inspection of fill placement or compaction was not requested or provided. A compaction test provides data only for a specific test location and only for the limited depth of the test. Achieving the specified degree of compaction for all project materials remains the responsibility of the contractor.

Signed: _____

Reviewed: _____

[Handwritten signature]
[Handwritten signature]



HWA GEOSCIENCES INC.

FIELD DENSITY TEST REPORT - NUCLEAR METHOD

ASTM D 2922 and ASTM D 3017

AAASHTO T238 and AAASHTO T239

WSDOT TM7

DATE: 2.24.03

PROJECT NO.: 2002156-23

CLIENT: Maul Foster & Alongi, Inc.

MATERIAL BEING PLACED: Fine Sand

PROJECT: Unocal Edmonds Terminal

PROJECT IMPROVEMENT TESTED: Backfill of Basins 263, 2604, and 2914

Table with columns: Test No., Detailed Test Location, Elev. or Depth (ft), Probe Depth (in), Over-Size (%), Lab Control* (Sample I.D., Density (pcf), Moisture%), Field Values (Wet Dens (pcf), Moisture (pcf), Dry Dens (pcf), Moisture%), Relative Compaction (Field %, Spec %)

Densometer: [X] Troxler 3411-B [] CPN MC1-DR-P [] Other []
*Lab Control: [] ASTM D698, Standard Proctor [] AAASHTO T-99, Standard Proctor []
Serial #: 12216 Dens. Std.: 2799 Moist. Std.: 671

COMMENTS: Moisture/Density Value established by A.A.R. Testing Laboratory, Inc. Elevations and locations are approximate.

Completed By: John H. (Jack) Carlock Reviewed By: [Signature] Page 3 of 3

FIELD REPORT



HWA GEOSCIENCES INC.

19730-64th Avenue West
Lynnwood, WA 98036
Tel. 425-774-0106
Fax. 425-774-2714

		Job No. 2002-156-23	Page No. 1 of 3
		Report No. 003	Date February 27, 2003
Project Name Unocal Edmonds Terminal	Location or Address Edmonds, WA		Day of the Week Thursday
Owner Unocal	Permit No.		Weather Temp. (F) Sunny 50 ^o
Client Maul Foster & Alongi, Inc	Client Rep. Linda Dawson		HWA Project Engineer Richard McKinley
Contractor Wyser Construction	Contractor Rep. Dan Reynolds		HWA Field Rep. John H. (Jack) Carlock

WE NOTED THE FOLLOWING: (Contractor Activities, HWA Activities, Outstanding Issues, and Resolutions)

Start Travel: 09:50 Arrived at Site: 10:00 Departed Site: 11:20 End Travel: 11:30

Jack Carlock on site at the request of Linda Dawson to provide periodic quality assurance testing of compaction of the fine-grained sand being placed as backfill in Basins (excavations at former tank sites).

Backfill of the basins is being carried out using imported fine-grained sand placed in allowable maximum lifts of 2' thickness. Specified minimum compaction requirements are 90% of Modified Proctor (ASTM D1557), increasing to 95% of Modified Proctor for the uppermost 2' of fill. A.A.R. Testing Laboratory, Inc is providing quality control testing for the contractor and their field representative was on site at the time our visit was ending. Compaction test results were based on a proctor value established for the fill materials by A.A.R. Testing Laboratory (Curve #11).

Basin 263

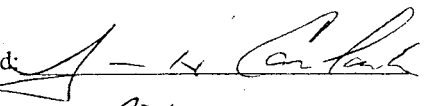
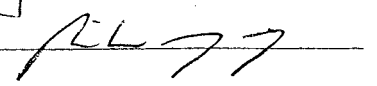
It is our understanding that finished grade of the sand fill will equal the elevation of the catch basin located in the northeastern quadrant of Basin 263. It was observed that in the northern two thirds of Basin 263, a fine-grained sand fill had been placed and compacted to the elevation of grade of sand minus approximately 0.5 feet. Placement and compaction of the sand in the southern third of this basin remained 3.5 to 4.0 feet below proposed grade of sand. The elevations at which today's tests were performed mirror those of the testing performed during our previous visit to the site (see HWA Field Report #002). It is our understanding that no new sand fill has been placed in this basin since our previous visit, but the sand had been subjected to further compaction efforts.

HWA performed two field density tests in this basin. (See tests 1 and 2 on page three of this report for locations and test values.) Testing indicated compaction meeting the specified minimum requirement 95 % of Modified Proctor.

Basin 2911

It is our understanding that backfill operation had just begun in Basin 2911, and that the bulk of the sand fill within this basin is approximately 6' below grade.

HWA perform three nuclear field density tests within this basin. Testing indicated that compaction of the sand fill met the specified minimum requirement.. (See test numbers 3 to 5 page three).

Signed: 
Reviewed: 

Compaction testing for this project has been requested on a call-out basis only. Full time inspection of fill placement or compaction was not requested or provided. A compaction test provides data only for a specific test location and only for the limited depth of the test. Achieving the specified degree of compaction for all project materials remains the responsibility of the contractor.

Signed: A. H. Carter

Reviewed: PLG

FIELD DENSITY TEST REPORT - NUCLEAR METHOD

ASTM D 2922 and ASTM D 3017 AASHTO T238 and AASHTO T239

WSDOT TM7



HWA GEOSCIENCES INC.

CLIENT: Maul Foster & Alongi, Inc.

PROJECT NO.: 2002156-23

DATE: 2.27.03

PROJECT: Unocal Edmonds Terminal

MATERIAL BEING PLACED: Fine Sand

PROJECT IMPROVEMENT TESTED: Backfill of Basins 263 and 2911

Test No.	Detailed Test Location	Elev. or Depth (ft)	Probe Depth (in)	Over-Size (%)	Lab Control* (Proctor Information)		Field Values		Relative Compaction	
					Sample I.D.	Density (pcf) Moisture%	Wet Dens (pcf) Moisture%	Dry Dens (pcf) Moisture%	Field %	Spec %
1	Basin 236, SE Quadrant, 70' southeast of Catch Basin located in the northwestern quadrant of the basin.	Grade - 4ft	8"	0	Curve #011	112.4 7.6	118.4 10.5	107.9 9.7	96	95
2	Basin 236, SW Quadrant, 40' south of Catch Basin located in the northeastern quadrant of the basin.	Grade - 4ft	8"	0	Curve #011	112.4 7.6	116.7 9.7	107.0 9.1	95	95
3	Basin 2911, SE Quadrant, First Lift.	Grade - 6ft	8"	0	Curve #011	112.4 7.6	113.5 10.3	103.2 10.0	90	90
4	Basin 2911, NW Quadrant, 30' south of retaining wall, First Lift.	Grade - 6ft	8"	0	Curve #011	112.4 7.6	118.4 10.3	108.1 9.5	96	90
5	Basin 2911, NE Quadrant, 45' south of SW corner of retaining wall, First Lift.	Grade - 6ft	8"	0	Curve #011	112.4 7.6	120.4 10.2	110.2 9.3	98	90

Densometer: Troxler 3411-B CPN MC1-DR-P Other

Serial #: 12216 Dens. Stnd.: 2815 Moist. Stnd.: 673

*Lab Control: ASTM D698, Standard Proctor AASHTO T-99, Standard Proctor

ASTM D 1557, Modified Proctor AASHTO T-180, Modified Proctor

COMMENTS: Moisture/Density Value established by A.A.R. Testing Laboratory, Inc. Elevations and locations are approximate.

Completed By: John H. (Jack) Carlock Reviewed By: [Signature] Page 3 of 3

This report applies only to the items tested, and may be reproduced in full, with written approval of HWA GEOSCIENCES INC. Revised 7/01

FIELD REPORT



19730-64th Avenue West
Lynnwood, WA 98036
Tel. 425-774-0106
Fax. 425-774-2714

Project Name Unocal Edmonds Terminal		Job No. 2002-156-23		Page No. 1 of 3	
		Report No. 004		Date May 21, 2003	
Location or Address Edmonds, WA		Day of the Week Wednesday		Permit No.	
Owner Unocal		Weather Sunny		Temp. (F) 50⁰	
Client Maul Foster & Alongi, Inc		Client Rep. Linda Dawson		HWA Project Engineer Richard McKinley	
Contractor Wyser Construction		Contractor Rep. Dan Reynolds		HWA Field Rep. John H. (Jack) Carlock	

WE NOTED THE FOLLOWING: (Contractor Activities, HWA Activities, Outstanding Issues, and Resolutions)

Start Travel: 07:50 Arrived at Site: 08:00 Departed Site: 09:45 End Travel: 10:00

Jack Carlock on site at the request of Linda Dawson to provide periodic quality assurance testing of compaction of the fine-grained sand being placed as backfill in Basins (excavations at former tank sites).

Backfill of the basins is being carried out using imported fine-grained sand placed in allowable maximum lifts of 2' thickness. Specified minimum compaction requirements are 90% of Modified Proctor (ASTM D1557), increasing to 95% of Modified Proctor for the uppermost 2' of fill. A.A.R. Testing Laboratory, Inc is providing quality control testing for the contractor and their field representative was on site at the time our visit was ending. Compaction test results were based on a proctor value established for the fill materials by A.A.R. Testing Laboratory (Curve #11).

ASWL #3

It is our understanding that the sand fill had been placed and compacted to finished grade. It was observed that an indeterminable amount of the low permeability capping material (Woodway Soil) had been (inadvertently) mixed with the fill sand in some areas of this basin. Generally, the fill sand appeared to be well compacted.

HWA performed one field density tests in this basin. (See test 1 on page three of this report for location and test values.) Testing indicated compaction meeting the specified minimum requirement 95 % of Modified Proctor.

Basin 2910

It is our understanding that the sand fill had been placed finished grade. It was observed that an indeterminable amount of what appeared to be 2 to 4 inch-crushed rock was mixed in with the fill sand. It is our understanding that a layer of this rock had been placed near the finished grade of the sand. Compaction efforts within this basin were still underway during our visit. Generally, the fill sand appeared to be well compacted.

After performing several nuclear field density tests that were unduly influenced by the inclusion of the 2" to 4" rock, HWA located rock free areas in which to test. Two nuclear field density tests were performed within this basin. Testing indicated that compaction of the sand fill met the specified minimum requirement. (See test numbers 2 and 3 on page three).

Signed: *John H. Carlock*

Reviewed: _____

Basin 2911

It is our understanding that the sand fill had been placed and compacted to finished grade. Generally, the fill sand appeared to be well compacted.

HWA perform two nuclear field density tests within this basin. Testing indicated that compaction of the sand fill met the specified minimum requirement. (See test numbers 4 and 5 on page three).

Compaction testing for this project has been requested on a call-out basis only. Full time inspection of fill placement or compaction was not requested or provided. A compaction test provides data only for a specific test location and only for the limited depth of the test. Achieving the specified degree of compaction for all project materials remains the responsibility of the contractor.

Signed: _____

Reviewed: _____

FIELD DENSITY TEST REPORT - NUCLEAR METHOD

ASTM D 2922 and ASTM D 3017 AASHTO T238 and AASHTO T239

WSDOT TM7



HWA GEOSCIENCES INC.

CLIENT: Maul Foster & Alongi, Inc.

PROJECT NO.: 2002156-23

DATE: 5.21.03

PROJECT: Unocal Edmonds Terminal

MATERIAL BEING PLACED: Fine Sand

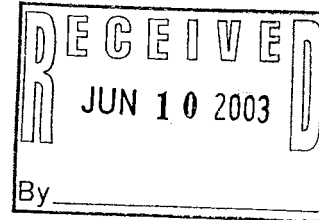
PROJECT IMPROVEMENT TESTED: Backfill of Basins 263 and 2911

Test No.	Detailed Test Location	Elev. or Depth (ft)	Probe Depth (in)	Over-Size (%)	Lab Control* (Proctor Information)		Field Values			Relative Compaction			
					Sample I.D.	Density (pcf)	Moisture%	Wet Dens (pcf)	Dry Dens (pcf)	Moisture%	Field %	Spec %	
1	ASWL #3, Center point of the basin.	At Grade	8"	3.0	Curve #011	112.4	7.6	123.9	11.8	112.1	10.5	99	95
2	Basin 2910, NW quadrant, 40' south of the retaining wall north of basin, 20' east of western edge of basin.	At Grade	8"	3.0	Curve #011	112.4	7.6	115.3	6.9	108.4	6.4	96	95
3	Basin 2911, NE quadrant, 30' south of the retaining wall north of basin, 25' west of eastern edge of basin.	At Grade	8"	3.0	Curve #011	112.4	7.6	115.4	6.4	109.0	5.9	97	90
4	Basin 2910, NW quadrant, 30' W of catch basin in the NE quadrant of retaining wall, First Lift.	At Grade	8"	3.0	Curve #011	112.4	7.6	114.6	7.5	107.1	7.0	95	90
5	Basin 2910, SE Quadrant, 45' south of catch basin in the NW quadrant of the basin.	At Grade	8"	3.0	Curve #011	112.4	7.6	114.7	7.1	107.6	6.6	96	90

Densometer: Troxler 3411-B CPN MC1-DR-P Other
 *Lab Control: ASTM D698, Standard Proctor ASTM D 1557, Modified Proctor
 AASHTO T-99, Standard Proctor AASHTO T-180, Modified Proctor

Serial #: 18734 Dens. Stnd.: 2725 Moist. Stnd.: 701
 COMMENTS: Moisture/Density Value established by A.A.R. Testing Laboratory, Inc. Elevations and locations are approximate.

Completed By: John H. (Jack) Carlock Reviewed By: _____ Page 3 of 3



To: Dan Reynolds
Wyser Construction Company

Fr: Kurt Siegfried/PG
Rinker Materials Company

Re: Backfill Materials for the
UNOCAL Edmonds Bulk
Terminal Remediation Project

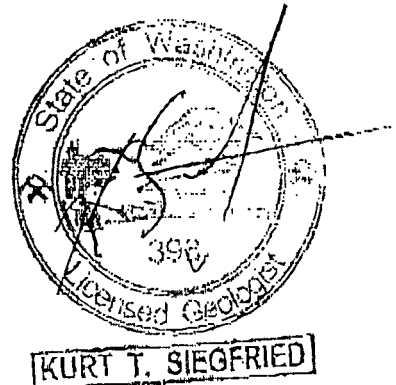
In regard to the backfill materials supplied by Rinker Materials please accept this letter as a certificate of non-contamination for all materials supplied to Wyser Construction for backfill at the UNOCAL Edmonds site. Specifically all, Course Washed Sand, Pit Sand, 3/4" & 1-1/4" Washed Rock and all 1-1/4" Base Course from our Everett Washington Pit were mined from a depth of approximately 35' below surface elevation from native undisturbed glacial outwash. All 2" Ballast Rock, 2" X 4" Crushed Stone and 4" X 8" Crushed Stone are mined from our Granite Falls Pit which is located in a remote rural area comprised of second growth forest land with no development within 7 miles.

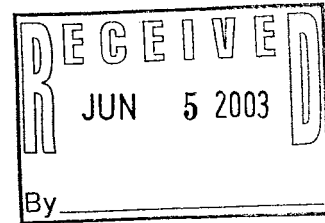
Due to the depth of the aggregate source and nature of the surrounding sub-surface conditions at both the Everett site & Granite Falls site there is no possibility of petroleum hydrocarbon contamination.

Should you have any questions please do not hesitate to contact me.

Regards,

Kurt Siegfried- PG
Rinker Materials Company
Technical Services Dept.





6/05/03

Dr. Mark Brearley
Unocal Corporation
P.O. Box 399
Edmonds, WA. 98020

Re: Unocal Upper Yard Remediation
Maul Foster & Alongi, Inc Memo dated 6/3/03

Subject: Soil Source Identification Request: "King County/Ballinger Soils"

Dear Dr. Brearley:

The intent of this letter is to identify the "King County/Ballinger Soils" as requested in the attached referenced memo. The soil was excavated from our King County Housing Authority Ballinger Homes project, located at 2200 NE 201st Place Shoreline, Washington. Approximately 800 yards of gravel borrow was excavated from the Ballinger site and then placed at the Unocal site. The soils contained no organics or contamination and appeared to be adequate fill for the Edmonds site.

Should you require any additional information regarding this matter, please contact me at 425.742.0898. Thank You.

Sincerely,

WYSER CONSTRUCTION, INC.

Dan Reynolds
Sr. Project Coordinator

Cc Linda Dawson, Maul Foster & Alongi



HWA GEOSCIENCES INC.

19730-64TH AVE. W., SUITE 200
LYNNWOOD, WA 98036-5957
TEL. 425-774-0106
FAX. 425-774-2714
www.hwageosciences.com

June 12, 2002

HWA Project No. 2002-101-22

Maul Foster Alongi, Inc.

17171 Bothell Way NE, Ste 264

Seattle, Washington 98155

Attention: Ms. Linda Dawson

Subject: **Soil Laboratory Testing Report**
Soil Stockpile Assessment
22430 Dogwood Lane, Woodway, WA

Dear Ms. Dawson:

In accordance with your request, HWA GeoSciences Inc. (HWA) performed laboratory testing for the above referenced project. Herein we present the results of our laboratory analyses, which are summarized on the attached reports, as well as a discussion of the suitability for use of this material as construction fill. The laboratory testing program was performed in general accordance with your instructions and appropriate ASTM Standards as outlined below.

BACKGROUND: It is understood that this material is under consideration for use as fill material at the Unocal site in Edmonds. Consequently, it was requested that we perform grain size analyses to characterize the material. A Modified Proctor test was carried out to assess the moisture-density relationship characteristics of the soil. The workscope for the testing program was developed in accordance with our discussions with the client.

SAMPLE INFORMATION: Four bulk samples were obtained from the subject stockpile on June 4, 2002, by Mr. Bernie McCarthy of HWA. The samples were designated as samples S-1, S-2, S-3, and S-4, and were taken from the NW, SW, SE, and NE quadrants of the stockpile respectively.

PARTICLE SIZE ANALYSIS OF SOILS: Each of the four samples was tested to determine the particle distribution of material retained above the #200 sieve, in general accordance with ASTM D422. The results are summarized on the attached Sieve Analysis of Soil

★
GEOLOGY
GEOENVIRONMENTAL SERVICES
HYDROGEOLOGY
GEOTECHNICAL ENGINEERING
TESTING & INSPECTION

June 12, 2002

HWA Project No. 2001101

and Aggregate reports, which also provide information regarding the ASTM classification of the samples and the moisture contents at the time of testing.

LABORATORY COMPACTION CHARACTERISTICS OF SOIL (PROCTOR TEST): A composite of samples S-1, S-2 and S-3 was tested using method ASTM D 1557 (Modified Proctor). The test results are summarized on the attached Laboratory Compaction Characteristics of Soil report.

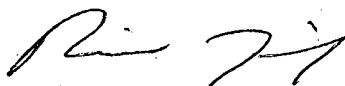
DISCUSSION: Based on the test results, the material in the stockpile material is classified as a silty sand (SM). Due to the high silt content, this material will be poorly draining, and should not be placed where free draining characteristics are required. Otherwise, the material is considered suitable for use as fill, including structural fill, provided that the required compaction can be achieved. Based on the test results, the moisture content of the material is currently about 1% to 2% above the optimum moisture for compaction, which is considered to be a suitable moisture content for compaction. We caution that this material is considered to be moisture sensitive, and that compaction to typical density requirements (i.e. 95% of Modified Proctor) will not likely be feasible at moisture contents greater than 3% above or below optimum. Consequently, placement of this material is not recommended during wet weather conditions.

CLOSURE: The testing described above was conducted utilizing generally accepted laboratory procedures. The conclusions presented above are based on the information from the four sample locations. Experience has shown that test values derived by these standard methods vary with each representative sample. In addition, it is typical for the engineering properties of soils to vary over small distances of lateral and vertical extent. HWA's knowledge of the stockpile is limited to the information from the sample locations, and we cannot be held responsible for undiscovered conditions within the pile. If a greater degree of certainty is required, additional testing can be performed.

We appreciate the opportunity to provide laboratory testing services on this project. Should you have any questions or comments, or if we may be of further service, please contact our office.

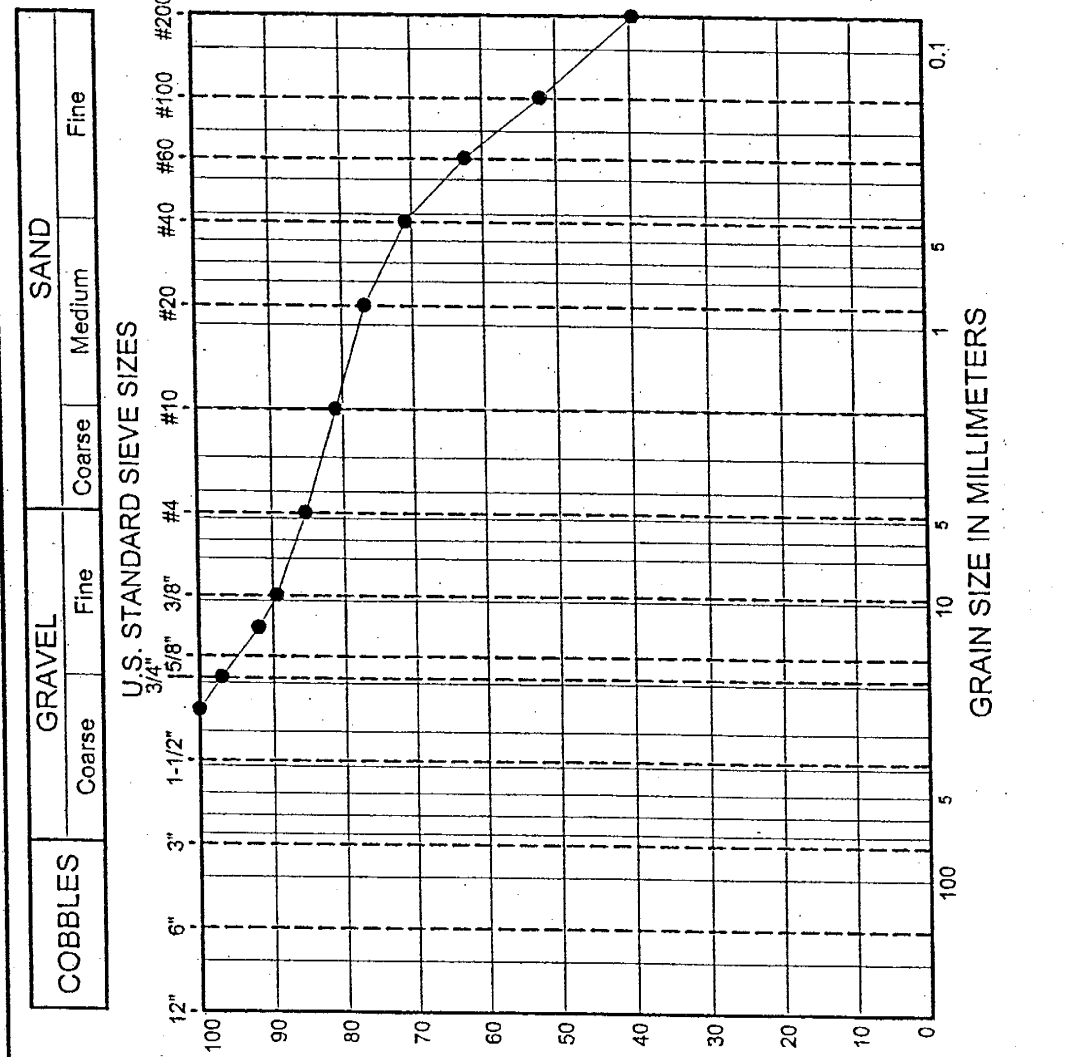
Sincerely,

HWA GEOSCIENCES INC.



Richard McKinley
Manager, Materials & Construction Services Group
RM:rm

Sieve Size	Percent Passing	Specification Limits
8 Inch		
7 Inch		
6 Inch		
5 Inch		
4 Inch		
3 Inch		
2 1/2 Inch		
2 Inch		
1 1/2 Inch		
1 1/4 Inch		
1 Inch	100.0%	
3/4 Inch	96.9%	
5/8 Inch		
1/2 Inch	91.9%	
3/8 Inch	89.3%	
1/4 Inch		
No. 4	85.3%	
No. 8		
No. 10	81.0%	
No. 16		
No. 20	76.7%	
No. 30		
No. 40	70.8%	
No. 50		
No. 60	62.4%	
No. 80		
No. 100	52.1%	
No. 200	39.5%	



SAMPLE ID	DATE SAMPLED	SAMPLED FROM	MATERIAL CLASSIFICATION / DESCRIPTION	Moisture %	L.A. Equiv. Abrasi	Deg'n Ratio	Dust Sound	P.I.	Fracture %
S-1	6/4/2002	NW Quadrant of Stockpile	(SM) grayish-brown, silty sand	13.5					

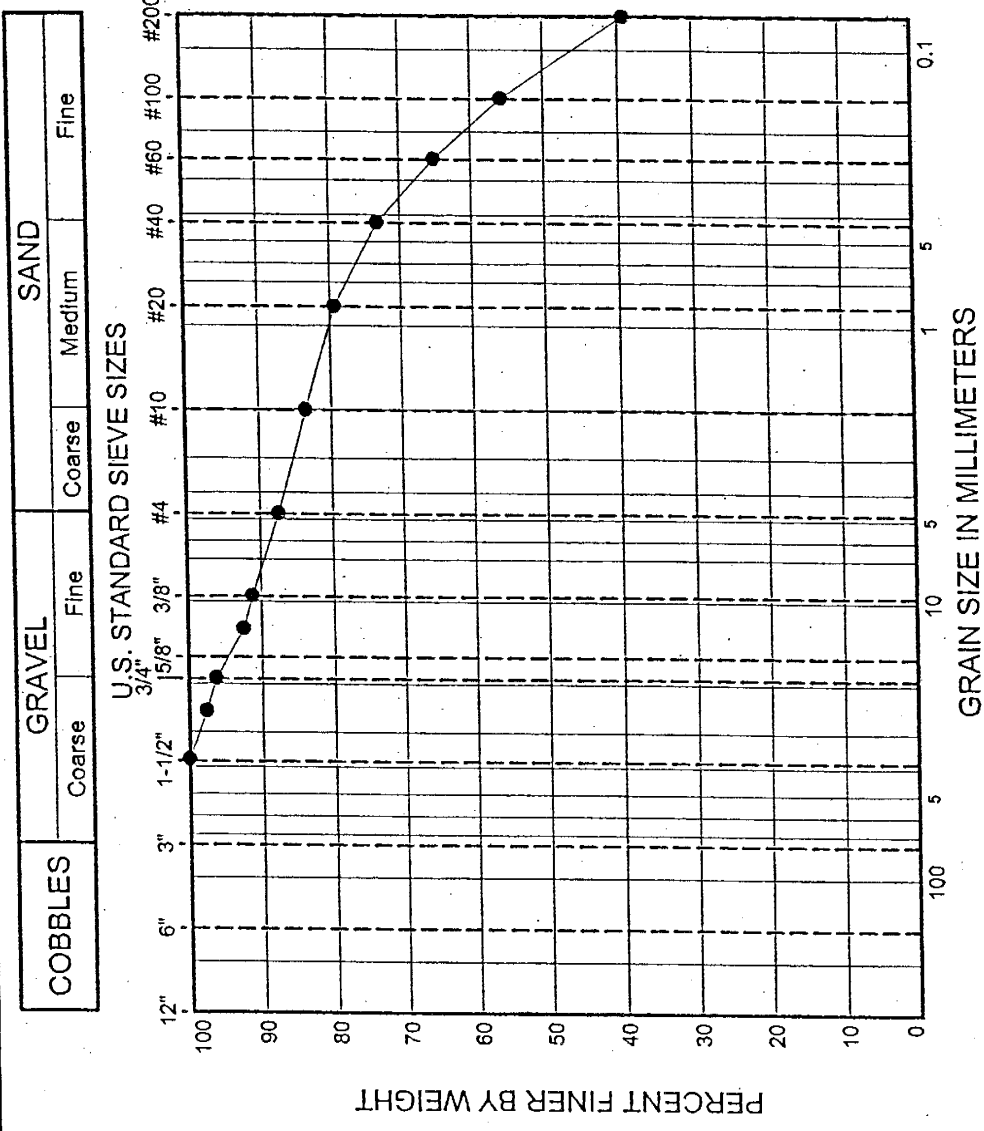
SIEVE ANALYSIS OF
SOIL / AGGREGATE
Aggregates-ASTM C136
Soils-ASTM D422

Soil Stockpile Located At
22430 Dogwood Lane, Woodway, WA
Assessment for Potential Use As Backfill
Unocal Site, Edmonds



HWA GEOSCIENCES INC.

Sieve Size	Percent Passing	Specification Limits
8 Inch		
7 Inch		
6 Inch		
5 Inch		
4 Inch		
3 Inch		
2 1/2 Inch		
2 Inch		
1 1/2 Inch	100.0%	
1 1/4 Inch		
1 Inch	97.6%	
3/4 Inch	96.3%	
5/8 Inch		
1/2 Inch	92.4%	
3/8 Inch	91.2%	
1/4 Inch		
No. 4	87.4%	
No. 8		
No. 10	83.5%	
No. 16		
No. 20	79.3%	
No. 30		
No. 40	73.2%	
No. 50		
No. 60	65.1%	
No. 80		
No. 100	55.7%	
No. 200	39.3%	



SAMPLE ID	DATE SAMPLED	SAMPLED FROM	MATERIAL CLASSIFICATION / DESCRIPTION	Moisture %	L.A. Equiv.	Sand Abras	Deg'n	Dust Ratio	Sound	P.I.	Fracture %
S-2	6/4/2002	SW Quadrant of Stockpile	(SM) dark-grayish-brown, silty SAND	13.8							

SIEVE ANALYSIS OF SOIL / AGGREGATE
 Aggregates-ASTM C136
 Soils-ASTM D422

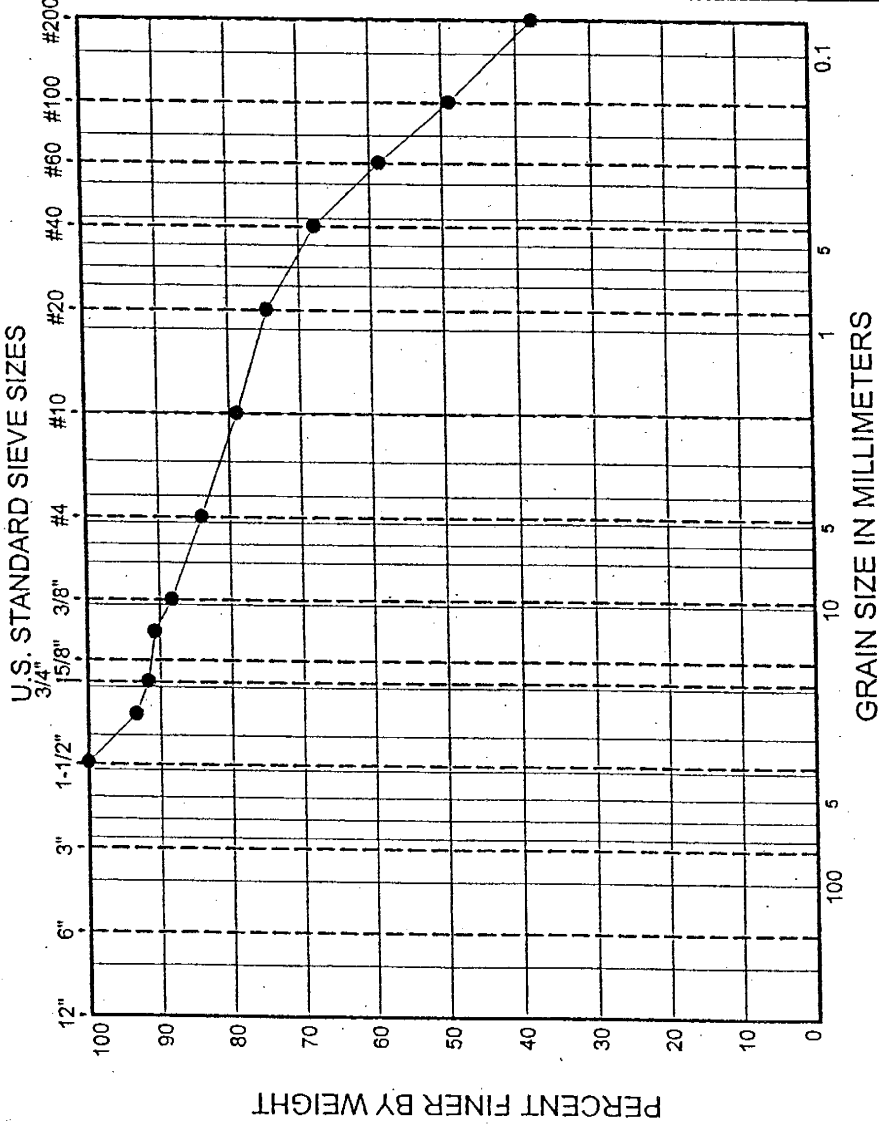
Soil Stockpile Located At
 22430 Dogwood Lane, Woodway, WA
 Assessment for Potential Use As Backfill
 Unocal Site, Edmonds



HWA GEOSCIENCES INC.

Sieve Size	Percent Passing	Specification Limits
8 inch		
7 inch		
6 inch		
5 inch		
4 inch		
3 inch		
2 1/2 inch		
2 inch		
1 1/2 inch	100.0%	
1 1/4 inch		
1 inch	93.3%	
3/4 inch	91.6%	
5/8 inch		
1/2 inch	90.6%	
3/8 inch	88.2%	
1/4 inch		
No. 4	83.9%	
No. 8		
No. 10	78.9%	
No. 16		
No. 20	74.5%	
No. 30		
No. 40	67.7%	
No. 50		
No. 60	58.6%	
No. 80		
No. 100	49.0%	
No. 200	37.8%	

COBBLES		GRAVEL			SAND			Fine		
12"	6"	3"	1-1/2"	3/4"	15/8"	3/8"	Coarse	Coarse	Medium	Fine



SAMPLE ID	DATE SAMPLED	SAMPLED FROM	MATERIAL CLASSIFICATION / DESCRIPTION	Moisture %	Sand Equiv.	L.A. Abras	Degr'n Ratio	Dust Sound	P.I.	Fracture %

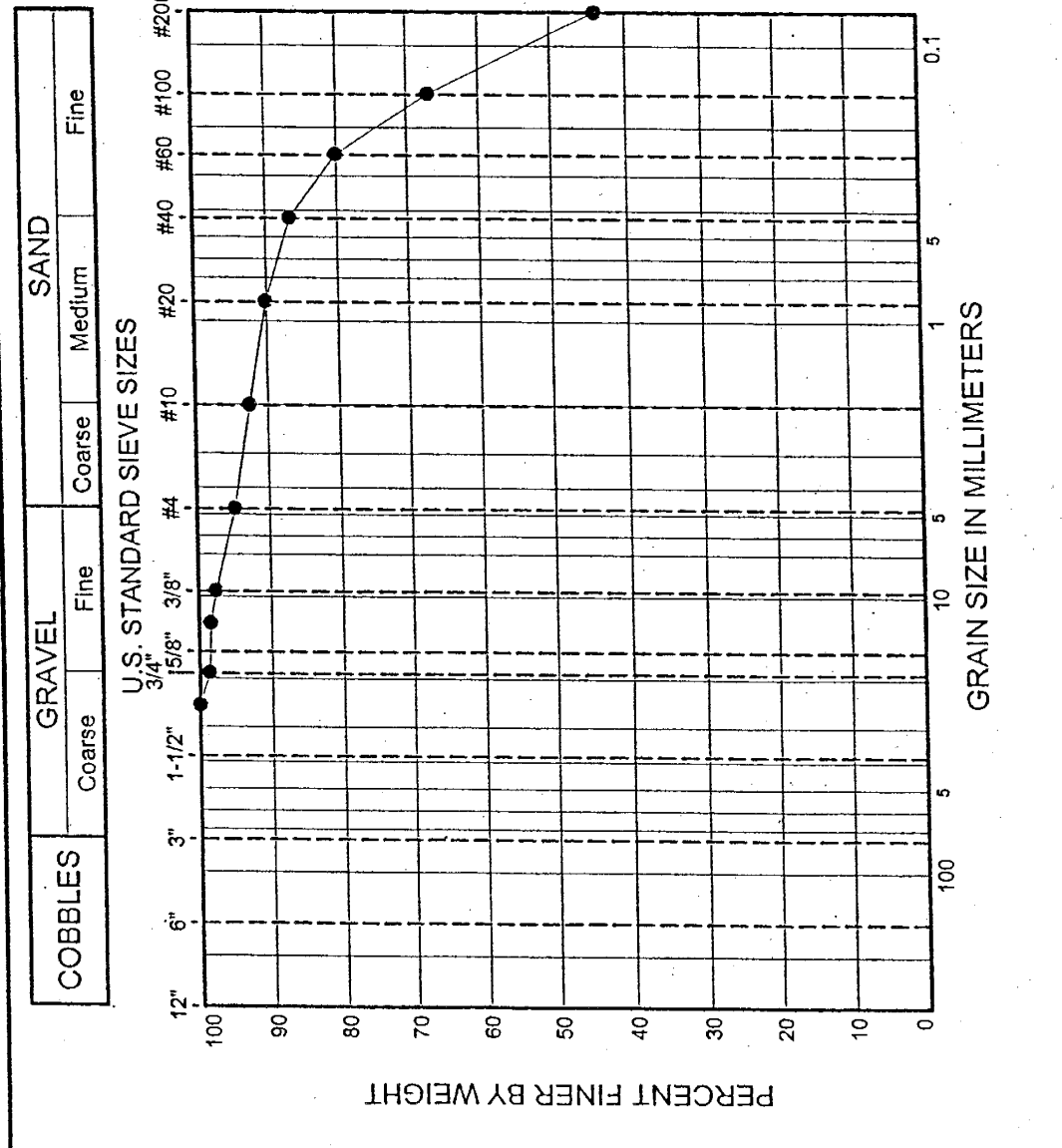
SIEVE ANALYSIS OF
SOIL / AGGREGATE
Aggregates-ASTM C136
Soils-ASTM D422

Soil Stockpile Located At
22430 Dogwood Lane, Woodway, WA
Assessment for Potential Use As Backfill
Unocal Site, Edmonds



HWA GEOSCIENCES INC.

Sieve Size	Percent Passing	Specification Limits
8 Inch		
7 Inch		
6 Inch		
5 Inch		
4 Inch		
3 Inch		
2 1/2 Inch		
2 Inch		
1 1/2 Inch		
1 1/4 Inch		
1 Inch	100.0%	
3/4 Inch	98.6%	
5/8 Inch		
1/2 Inch	98.4%	
3/8 Inch	97.6%	
1/4 Inch		
No. 4	94.8%	
No. 8		
No. 10	92.5%	
No. 16		
No. 20	90.1%	
No. 30		
No. 40	86.6%	
No. 50		
No. 60	80.0%	
No. 80		
No. 100	67.0%	
No. 200	43.9%	



SAMPLE ID	DATE SAMPLED	SAMPLED FROM	MATERIAL CLASSIFICATION / DESCRIPTION	Moisture Sand		Dust	Sound	P.I.	Fracture %
				%	L.A. Equiv. Abras				
S-4	6/4/2002	NE Quadrant of Stockpile	(SM) grayish-brown, silty SAND	12.2					

SIEVE ANALYSIS OF
SOIL / AGGREGATE
Aggregates- ASTM C136
Soils-ASTM D422

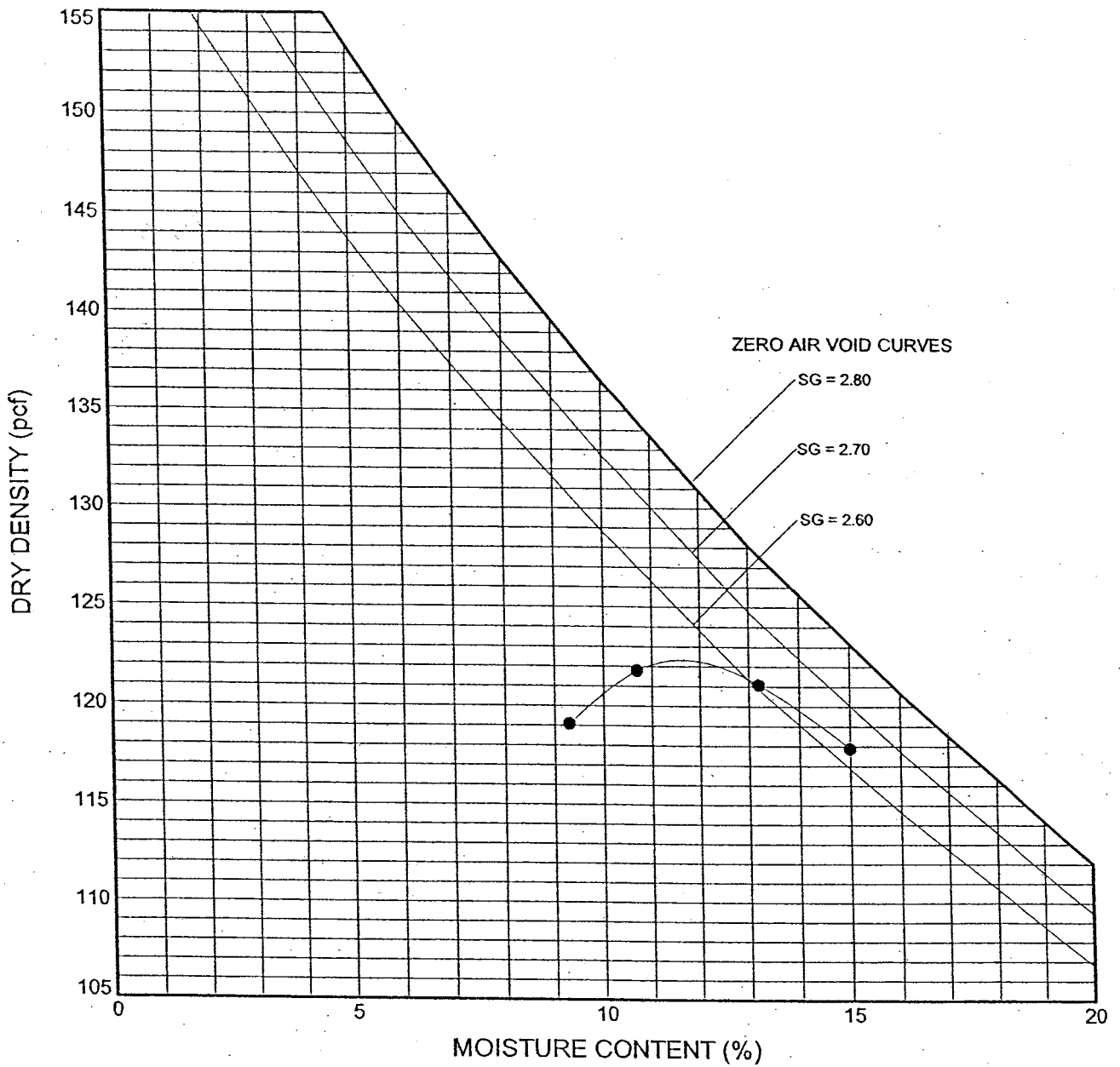
Soil Stockpile Located At
22430 Dogwood Lane, Woodway, WA
Assessment for Potential Use As Backfill
Unocal Site, Edmonds



HWA GEOSCIENCES INC.

PROJECT NO.: 2002-101-22 FIGURE: 4

SAMPLE	DEPTH (ft)	CLASSIFICATION
S-1&2&3		(SM) silty SAND (composite sample)

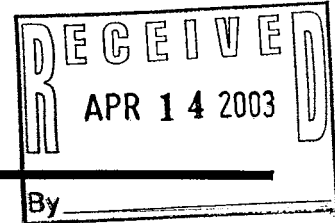


TEST METHOD: ASTM D 1557C	
MAXIMUM DRY DENSITY (pcf)	122.3
OPTIMUM MOISTURE CONTENT (%)	11.7
INITIAL MOISTURE CONTENT (%)	

9077.01.07

FACSIMILE COVER SHEET

A.A.R. TESTING LABORATORY INC.
(DWBE-D2F470831)



7126 180th Ave NE #C-101
PO Box 2523
Redmond WA 98073-2523

TO: Linda Dawson

FIRM: MSA

PROJECT: Edmonds Unical

TELEPHONE: _____

FAX: (425) 744-0919

FROM: Mike Holtz - Laboratory Technician

TELEPHONE: (425) 881-5812

FAX: (425) 881-5441

DATE: 4/14/03

TOTAL PAGES (Including cover page): 1

MESSAGE: Sieve test results as per your request.

RE: 800 cy
Shneline/Ballinger/
KC Soil

MAILED: YES NO X

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9077.01.07

FACSIMILE COVER SHEET

A.A.R. TESTING LABORATORY INC.
(DWBE-D2F470831)

7126 180th Ave NE #C-101
PO Box 2523
Redmond WA 98073-2523

TO: Linda Dawson
FIRM: MSA
PROJECT: Edmonds Unical
TELEPHONE:
FAX: (425) 744-0919

FROM: Mike Holtz - Laboratory Technician
TELEPHONE: (425) 881-5812
FAX: (425) 881-5441
DATE: 4/2/03

TOTAL PAGES (Including cover page): 2

MESSAGE: Proctor test results as per your request.

4/2/03 Call to Mike Holtz (on behalf of Wyser)
to advise that Wyser also needs to
run a particle size analysis.

MAILED: YES NO X

THE INFORMATION IN THIS FAX MESSAGE IS PRIVILEGED AND CONFIDENTIAL. IT IS INTENDED ONLY FOR THE USE OF THE RECIPIENT NAMED ABOVE (OR THE EMPLOYEE OR AGENT RESPONSIBLE TO DELIVER IT TO THE INTENDED RECIPIENT). IF YOU RECEIVED THIS IN ERROR, YOU ARE HEREBY NOTIFIED THAT ANY DISSEMINATION, DISTRIBUTION OR COPYING OF THIS COMMUNICATION IS STRICTLY PROHIBITED. IF YOU HAVE RECEIVED THIS MESSAGE IN ERROR, PLEASE NOTIFY US BY TELEPHONE IMMEDIATELY AND RETURN THE ORIGINAL MESSAGE TO US AT THE ABOVE ADDRESS VIA THE U.S. POSTAL SERVICE.

COMPACTION TEST REPORT

Curve No.: 101

Project No.: 03-100

Date: 4/2/03

Project: Unical Edmonds

Location:

Elev./Depth:

Sample No. 1

Remarks: tested/calculated by m.holtz
reviewed by a. hale

MATERIAL DESCRIPTION

Description: import drk med sand w/ 1 1/2" agg

Classifications -

USCS:

AASHTO:

Nat. Moist. =

Sp.G. = 2.64

Liquid Limit =

Plasticity Index =

% > No.4 = 11.8 %

% < No.200 = 0.0 %

TEST RESULTS

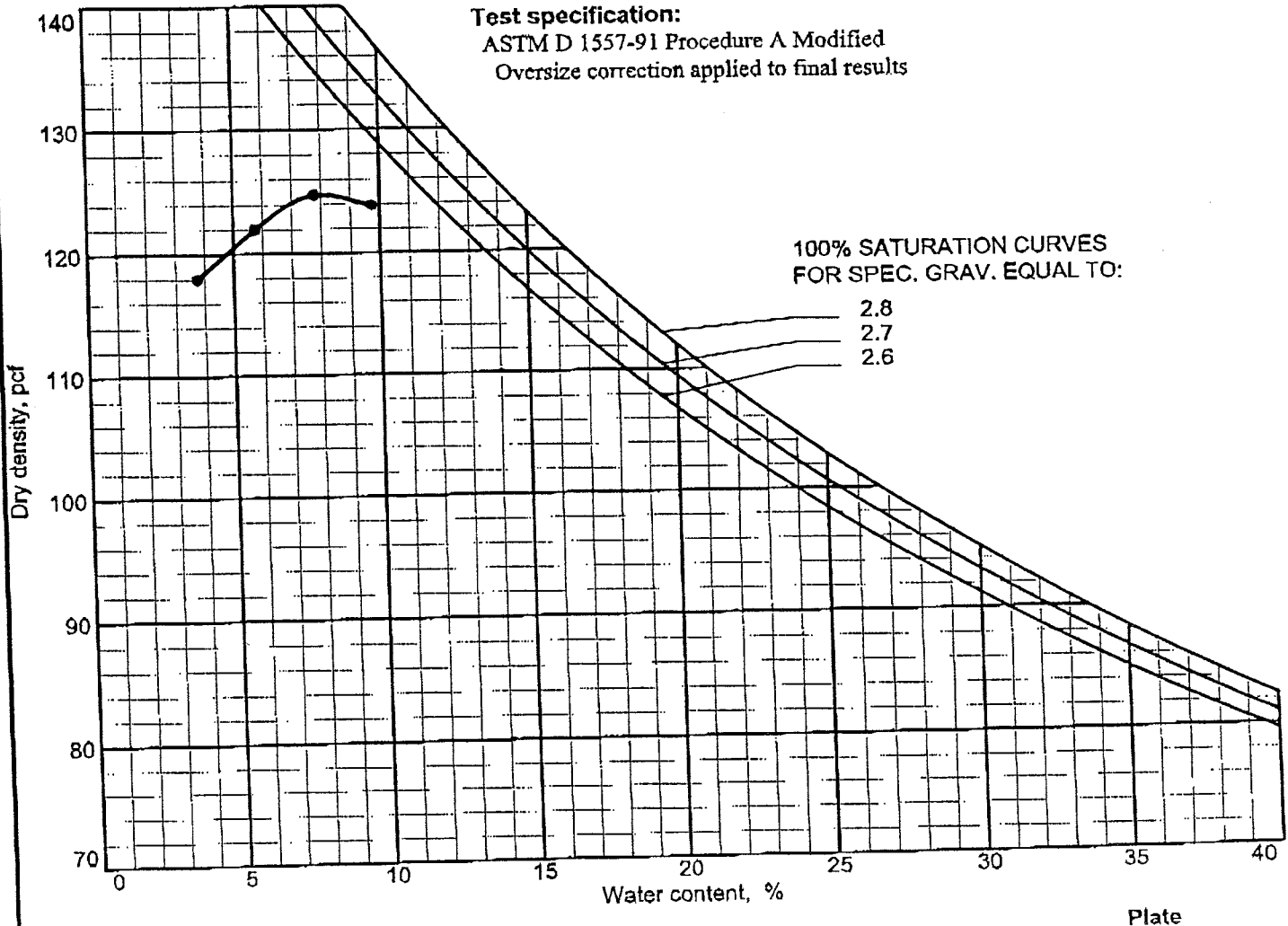
Maximum dry density = 128.4 pcf

Optimum moisture = 7.1 %

Test specification:

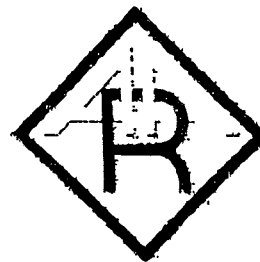
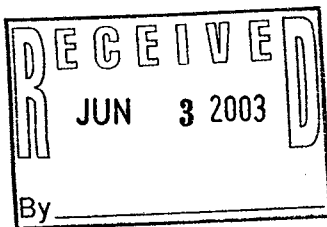
ASTM D 1557-91 Procedure A Modified

Oversize correction applied to final results



Fireproofing
 Aggregates
 Shotcrete
 Concrete
 Masonry
 Asphalt
 Roofing
 Piling
 Steel
 Soils
 Wood

May 30th 2003



A.A.R. TESTING
 LABORATORY, INC.

CONSTRUCTION INSPECTION AND MATERIAL TESTING
 NATIONALLY ACCEPTED LABORATORY

Wyser Construction
 1720 100th Place SE, Suite 101
 Everett, WA 98208

Attn: Randy

Project: Edmonds Unocal
 Subject: On Site Nuclear Density Testing

This is to advise you that A.A.R. Testing Laboratory was on site at the Edmonds Unocal for periodic nuclear density testing per the request of Wyser Construction. Modified proctors were ran for different materials tested including clay materials, which ended up not being used for back fill. Please refer to the table on page 2 for proctor information. The majority of material tested was sand, supplied by Rinker Materials. All noted nuclear density test locations were found to be in conformance with a 90% compaction requirement and 95% compaction requirement for final lifts. Please reference the reports from the following table.

1/7/03	4954
1/8/03	4955
1/9/03	4842
1/10/03	3005
1/13/03	4844
2/7/03	4935
2/10/03	4218
2/12/03	4989
2/17/03	4936
2/21/03	3027
2/24/03	4959, 4961, 4960, 3037
2/25/03	3032
2/27/03	4970, 3034, 3035, 5000
2/28/03	4963, 4962, 3039
3/5/03	3097, 3096
3/31/03	3087
4/1/03	4185, 3003
4/2/03	3089
4/8/03	3118
4/9/03	3072

4/10/03	3095
4/11/03	3117, 3116
4/14/03	3119
4/15/03	3111, 3121, 3122, 3110
4/18/03	3192, 3195, 3194
4/21/03	3188, 3186, 3187
4/22/03	3136, 3123, 3120
4/23/03	3177, 3189
4/25/03	3198
4/28/03	3137
5/2/03	3138, 3139
5/5/03	3212
5/7/03	3202
5/12/03	3216, 3217
5/15/03	3201, 3200
5/21/03	3126, 3125, 3124

Sand with minimal aggregate	112.4 @ 7.6%	011
Brown Clay soil mix	127.0 @ 10.4%	012
Fine Sand	105.2 @ 6.0%	018
Dark medium sand w/ 1 1/2" aggregate	128.4 @ 7.1%	101
Fine silty sand w/minimal aggregate	116.8 @ 6.5%	104
Brown Clay	114.4 @ 17.0%	135
Dark grayish Clay	111.7 @ 17.8%	136

A.A.R. Testing Laboratory, Inc.



Jerry Andersen
 Technical Director

A.A.R. TESTING LABORATORY, INC.

Field Density Report - Nuclear Method

Report Number 3217

AAR Testing Laboratory, Inc. 20110017 Ave. NE, P.O. Box 180, Suite C101, Redmond, WA 98052 Phone: 509-881-5800 Fax: 509-881-5400

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
 Bothell, WA 98012
Date: 5/12/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 10:30:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2236 **Moisture Count:** 650

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Top of water main See sketch	118.9	9.7	108.4	112.4	96%
2	↓	117.5	8.6	108.2	112.4	96%
3	↓	118.8	9.2	108.8	112.4	97%

Compaction Requirements: 95 % Conformance Non Conformance

Remarks/Specifications
 Final Lift. Drawing not to scale.

- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3216

AAR Testing Laboratory, Inc. 12618th Ave NE Park 130 Suite 100 Redmond, WA
98072-4111 Phone: (206) 881-5740

Client: Wyser Construction

Project Number: 03-100

Contact:

Project Name: Edmonds Unocal

Address: 17125 Sunset Road
Bothell, WA 98012

Address: Pine Street

Permit Number: NA

Date: 5/12/03

Time: 7:35:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

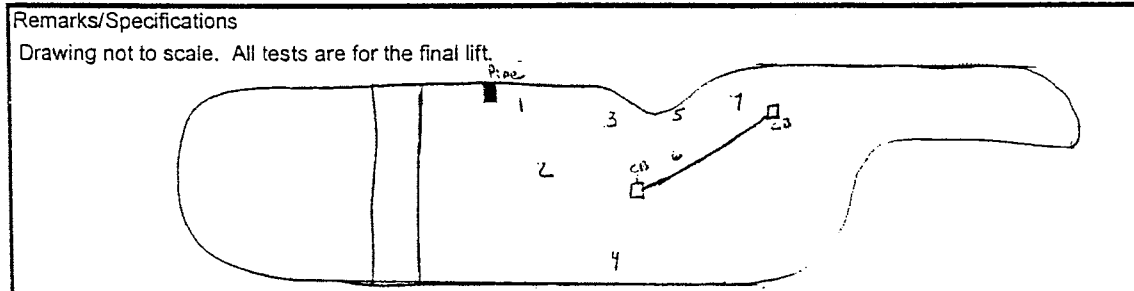
Modified Proctor ASTM D1557

Standard Count

Density Count: 2236 Moisture Count: 650

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	North half of pit #2604 Final grade See sketch	114.6	6.9	107.2	112.4	95%
2		115.4	8	106.9	112.4	95%
3		116.6	7.5	108.5	112.4	97%
4		116	8	107.4	112.4	96%
5		South half of pit 2604 top of CB See sketch	114.5	6.8	107.2	112.4

Compaction Requirements: 95% Conformance Non Conformance



- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3216

A.A.R. Testing Laboratory, Inc. 17400 Sunset Ave. NE, Park 180, Suite C101, Redmond, WA
98052 Phone: 425-881-5812 Fax: 425-881-5111

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
Bothell, WA 98012
Date: 5/12/03

Project Number 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 7:35:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

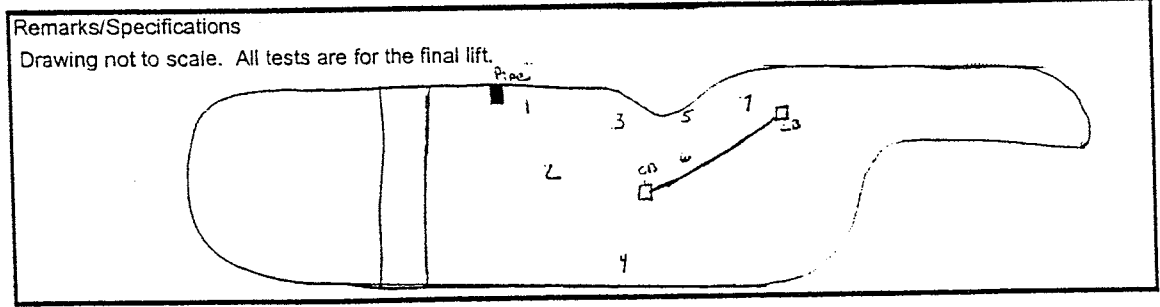
Modified Proctor ASTM D1557

Standard Count

Density Count: 2236 Moisture Count: 650

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	↓	115.6	7.2	107.8	112.4	96%
7	↓	111.7	4.9	106.5	112.4	95%

Compaction Requirements: 95 % Conformance Non Conformance



- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Haie, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Report

Report Number: 34664

A.A.R. Testing Laboratory, Inc. 7125 160th Ave NE, Park 150, Suite C101, Redmond, WA
98052 Phone 425.881.5612 Fax 425.881.5441

Client: Wyser Construction
17125 Sunset Road
Bothell, WA 98012

Project Number: 03-100
Permit #: NA
Project Name: Edmonds Unocal
Address: Pine Street

Contact:

Date: 5/5/03

Time: 12:30:00 PM

Temperature: 50

Arrived onsite at 7:30 AM for scheduled compaction testing. Contractor notified me that testing was not suppose to be until the next day but he would have some other material to test in about 2 hours. I drove to lab and returned to job site at 10:00 AM. Waited onsite until 12:30 PM without taken any tests and then was dispatched to another job.

Distribution: Distribute Client Distribute Contractor
 Distribute Engineer Distribute Owner
 Distribute Municipality Distribute Other
 Distribute Architect Distribute Other

Inspector: Flint, Sean FLI 90 4238

Reviewed by: Kim Anderson

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Field Density Report - Nuclear Method

Report Number 3202

AAR Testing Laboratory, Inc. 12618th Ave NW, Park 180, Suite 100, Redmond, WA 98052
 800-521-2100, 509-881-1111, 509-881-1911

Client: Wyser Construction

Project Number: 03-100

Contact:

Project Name: Edmonds Unocal

Address: 17125 Sunset Road
 Bothell, WA 98012

Address: Pine Street

Permit Number: NA

Date: 5/7/03

Time:

Material Data

Material Description: Dark brown sand with
 Layer Thickness: Unknown
 Source: Import from Ballinger
 Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: CPN MC1DR MD11000507
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Counts

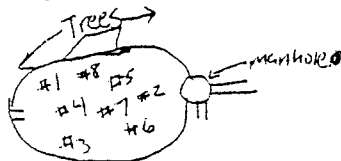
Density Count: 39205 Moisture Count: 10654

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	% Compaction
1	Birm for 2604 Swail 4th Lift	139.4	10.4	126.2	128.4	98%
2	↓	138.5	10.8	125	128.4	97%
3	↓	138.8	10.5	125.6	128.4	98%
4	↓ 6th Lift	139.3	10.7	125.8	128.4	98%
5	↓	138.8	10.9	125.1	128.4	97%

Compaction Requirements: 95 % Conformance Non Conformance

Remarks/Specifications

Observed hydraulic pumping during rolling. Material was thoroughly compacted in small lifts. Optimum moisture is 7.1%.



Drawing not to scale.
 N →

- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
 Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3202

AAR Testing Laboratory, Inc. 4126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone: 425-881-5900 Fax: 425-881-5901

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 5/7/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time:

Material Data

Material Description: Dark brown sand with
 Layer Thickness: Unknown
 Source: Import from Ballinger
 Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: CPN MC1DR MD11000507
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

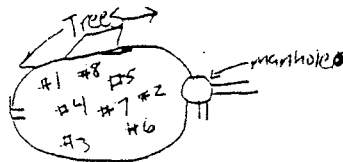
Density Count: 39205 Moisture Count: 10654

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	Birm for 2604 Swail 8th Lift	139.5	10.3	126.5	128.4	99%
7	↓	139.2	10.4	126	128.4	98%
8	↓	140	10.8	126.3	128.4	98%

Compaction Requirements: 95 % Conformance Non Conformance

Remarks/Specifications

Observed hydraulic pumping during rolling. Material was thoroughly compacted in small lifts. Optimum moisture is 7.1%.



Drawing not to scale.
N →

- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Reviewed By: Hale, Alan
 Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3126a

**A.A.R. Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA
98052 Phone 425.881.5812 Fax 425.881.5441**

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
Bothell, WA 98012
Date: 5/21/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 10:30:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

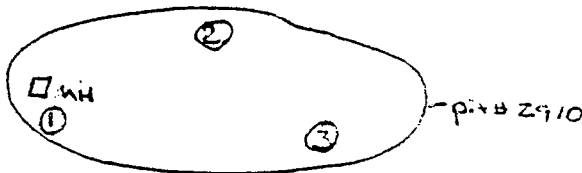
Standard Count

Density Count: 2240 Moisture Count: 655

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Pit 2910 Final Grade	120.1	7.4	111.8	112.4	99%
2	↓	116.2	9.3	106.3	112.4	95%
3	↓	121.6	8.7	111.8	112.4	99%

Compaction Requirements: 95 % Conformance Non Conformance

Remarks/Specifications
Drawing not to scale.



- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3125a

A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA
98052 Phone: 425-881-5812 Fax: 425-881-5441

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
Bothell, WA 98012
Date: 5/21/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 10:00:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

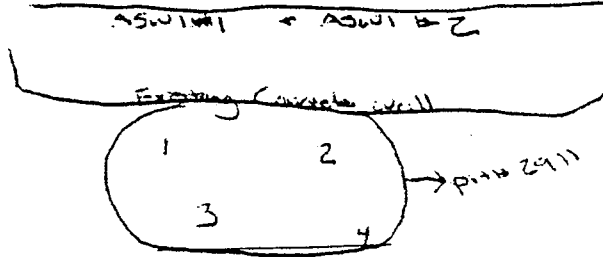
Standard Count

Density Count: 2240 Moisture Count: 655

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Pit #2911 Final grade	123.9	11.9	110.7	112.4	98%
2	↓	123.8	10.6	112	112.4	100%
3		121.6	8.7	111.8	112.4	99%
4		120.4	7.5	112	112.4	100%

Compaction Requirements: 95 % Conformance Non Conformance

Remarks/Specifications
Drawing not to scale.



- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3124

**A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA
98052 Phone 425.881.5812 Fax 425.881.5441**

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
Bothell, WA 98012
Date: 5/21/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 8:00:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

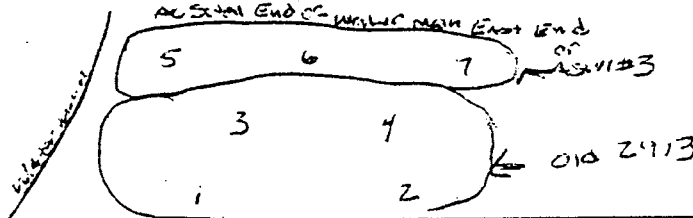
Density Count: 2240 Moisture Count: 655

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Old 2913 South of ASW #3 Final grade	117.5	10.1	106.7	112.4	95%
2	↓	119.3	10.5	108	112.4	96%
3		121.6	8.7	111.8	112.4	99%
4		120.4	7.5	112	112.4	100%
5		North of the AWSI #3 Old pit #2913	120.2	8	111.2	112.4

Compaction Requirements: 95 % Conformance Non Conformance

Remarks/Specifications

Noticed there was some clay mixed with sand which is believed to be the cause of high moisture content. Sand appeared firm and unyielding.



- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3124

**A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA
98052. Phone 425.881.5812 Fax 425.881.5441**

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
Bothell, WA 98012
Date: 5/21/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 8:00:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2240 Moisture Count: 655

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	↓	131.9	17.8	111.9	112.4	100%
7	↓	132.8	18.6	111.1	112.4	99%

Compaction Requirements: 95 % Conformance Non Conformance

Remarks/Specifications

Noticed there was some clay mixed with sand which is believed to be the cause of high moisture content. Sand appeared firm and unyielding.

- Distribute Client Distribute Other 1
 Distribute Engineer Distribute Other 2
 Distribute Municipality Distribute Other 3
 Distribute Contractor
 Distribute Architect

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3201a

**A.A.R Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA
98052 Phone: 425.881.5812 Fax: 425.881.5441**

Client: Wyser Construction

Project Number: 03-100

Contact:

Project Name: Edmonds Unocal

Address: 17125 Sunset Road
Bothell, WA 98012

Address: Pine Street

Permit Number: NA

Date: 5/15/03

Time: 10:00:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: 2'
Source: Rinker/Ballinger
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2657 **Moisture Count:** 633

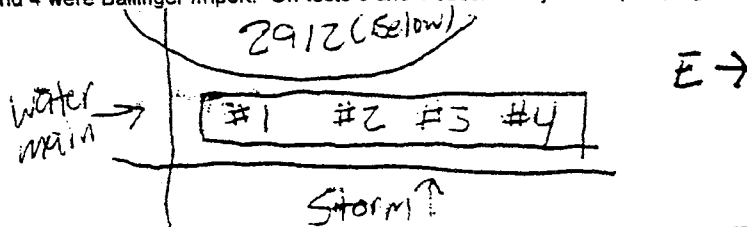
Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	AC Swale East of water main	117.5	6.4	110.4	112.4	98%
2		116.1	6.8	108.7	112.4	97%
3		134.6	13.8	118.3	128.4	92%
4		138.3	13.9	121.4	128.4	95%



Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications

Tests 1 and 2 were on sand and 3 and 4 were Ballinger Import. On tests 3 and 4 observed hydraulic pumping during rolling. Drawing not to scale



- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3200a

AAR Testing Laboratory, Inc. 1725180th Ave. NE, P.O. Box 101, Suite C101, Redmond, WA 98052
 Phone: 206-881-2500 Fax: 206-881-2501

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
 Bothell, WA 98012
Date: 5/15/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 10:00:00 AM

Material Data

Material Description: Import
Layer Thickness: Unknown
Source: Ballinger
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

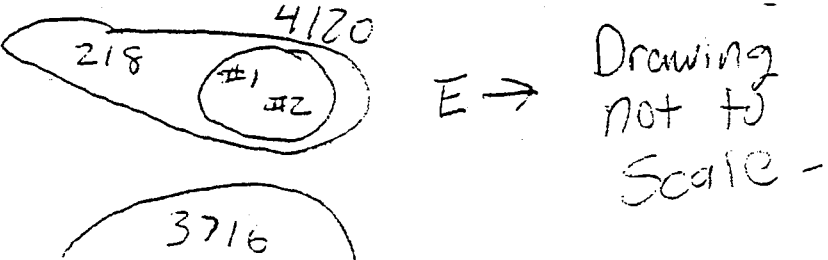
Standard Count

Density Count: 2657 Moisture Count: 633

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Final Lift Pit 4120	134	7.4	124.7	128.4	97%
2	↓	136.6	7.4	127.1	128.4	99%

Compaction Requirements: 95 % Conformance Non Conformance

Remarks/Specifications



- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Report

Report Number: 34664

A.A.R. Testing Laboratory, Inc. 7126 180th Ave. NE, Park 180, Suite C101, Redmond, WA
98052 Phone 425.881.5812 Fax 425.881.5441

Client: Wyser Construction

17125 Sunset Road

Bothell, WA 98012

Contact:

Project Number: 03-100

Permit #: NA

Project Name: Edmonds Unocal

Address: Pine Street

Date: 5/5/03

Time: 12:30:00 PM

Temperature: 50

Arrived onsite at 7:30 AM for scheduled compaction testing. Contractor notified me that testing was not suppose to be until the next day but he would have some other material to test in about 2 hours. I drove to lab and returned to job site at 10:00 AM. Waited onsite until 12:30 PM without taken any tests and then was dispatched to another job.

Distribution: Distribute Client Distribute Contractor
 Distribute Engineer Distribute Owner
 Distribute Municipality Distribute Other
 Distribute Architect Distribute Other

Inspector: Flint, Sean FLI 90 4238

Reviewed by: Kim Anderson

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Field Density Report - Nuclear Method

Report Number 3217

AAR Testing Laboratory, Inc. 2125 180th Ave. N.E. Park 150 Suite C101, Redmond, WA
98072 Phone: 253-861-2222 Fax: 253-861-5441

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 5/12/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 10:30:00 AM

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Unknown
 Source: Rinker
 Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2236 Moisture Count: 650

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Top of water main See sketch	118.9	9.7	108.4	112.4	96%
2	↓	117.5	8.6	108.2	112.4	96%
3	↓	118.8	9.2	108.8	112.4	97%

Compaction Requirements: 95 % Conformance Non Conformance

Remarks/Specifications
 Final Lift. Drawing not to scale.

- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Reviewed By: Hale, Alan
 Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3216

A.A.R. Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone: 425-881-5821 Fax: 425-881-5441

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 5/12/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 7:35:00 AM

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Unknown
 Source: Rinker
 Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

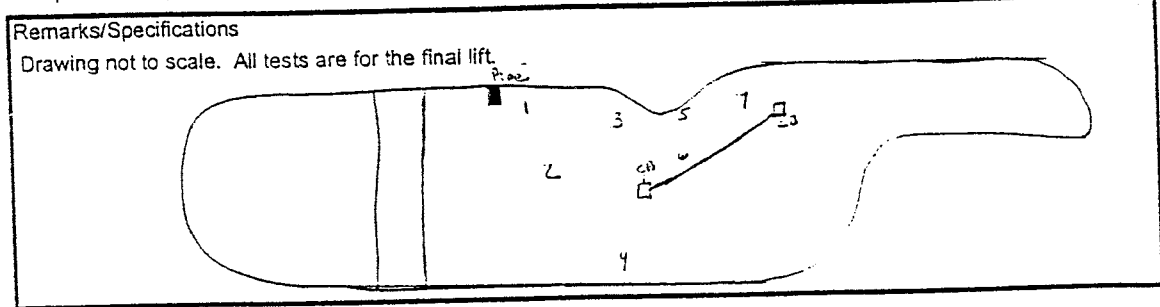
Modified Proctor ASTM D1557

Standard Count

Density Count: 2236 Moisture Count: 650

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	North half of pit #2604 Final grade See sketch	114.6	6.9	107.2	112.4	95%
2		115.4	8	106.9	112.4	95%
3		116.6	7.5	108.5	112.4	97%
4		116	8	107.4	112.4	96%
5	South half of pit 2604 top of CB See sketch	114.5	6.8	107.2	112.4	95%

Compaction Requirements: 95% Conformance Non Conformance



- Distribute Client Distribute Other 1 Reviewed By: Hale, Alan
- Distribute Engineer Distribute Other 2 Tested By: Norgar, Jason NO
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3216

A. A. R. Testing Laboratory, Inc. 7126 180th Ave. NE, Park 180, Suite C101, Redmond, WA 98052 Phone 425-881-5312 Fax 425-881-5441

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 5/12/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 7:35:00 AM

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Unknown
 Source: Rinker
 Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

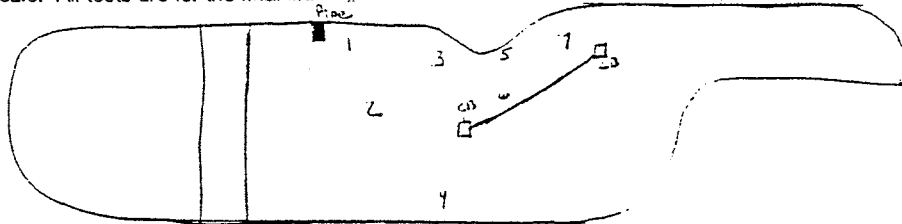
Density Count: 2236 Moisture Count: 650

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	↓	115.6	7.2	107.8	112.4	96%
7		111.7	4.9	106.5	112.4	95%

Compaction Requirements: 95 % Conformance Non Conformance

Remarks/Specifications

Drawing not to scale. All tests are for the final lift.



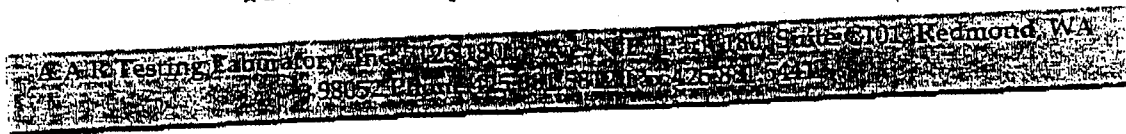
- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Reviewed By: Hale, Alan
 Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3202



Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 5/7/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time:

Material Data

Material Description: Dark brown sand with
 Layer Thickness: Unknown
 Source: Import from Ballinger
 Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: CPN MC1DR MD11000507
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Soil Data

Modified Proctor ASTM D1557

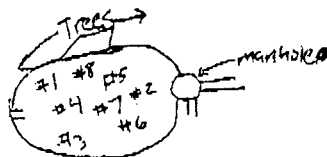
Density Count: 39205 Moisture Count: 10654

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	% Compaction
1	Birm for 2604 Swall 4th Lift	139.4	10.4	126.2	128.4	98%
2		138.5	10.8	125	128.4	97%
3		138.8	10.5	125.3	128.4	98%
4		139.3	10.7	125.8	128.4	98%
5		138.8	10.9	125.1	128.4	97%

Compaction Requirements: 95 % Conformance Non Conformance

Remarks/Specifications

Observed hydraulic pumping during rolling. Material was thoroughly compacted in small lifts. Optimum moisture is 7.1%.



Drawing Not to Scale.
 N →

- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
 Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3202

AAR Testing Laboratory, Inc. 7126 180th Ave NW, Box 180, Suite C101, Redmond, WA 98052 Phone: 253-881-2588 Fax: 253-881-5441

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
Bothell, WA 98012
Date: 5/7/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time:

Material Data

Material Description: Dark brown sand with
Layer Thickness: Unknown
Source: Import from Ballinger
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: CPN MC1DR MD11000507
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Standard Test Method

Modified Proctor ASTM D1557

Standard Count

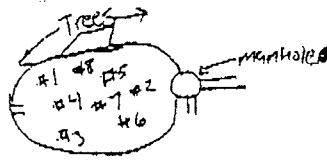
Density Count: 39205 Moisture Count: 10654

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	Blrm for 2604 Swall 8th Lift	139.5	10.3	126.5	128.4	99%
7	↓	139.2	10.4	126	128.4	98%
8	↓	140	10.8	126.3	128.4	98%

Compaction Requirements: 95 % Conformance Non Conformance

Remarks/Specifications

Observed hydraulic pumping during rolling. Material was thoroughly compacted in small lifts. Optimum moisture is 7.1%.



Drawing NOT to Scale.
N →

- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

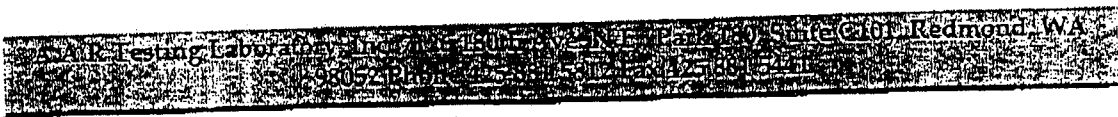
Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3212



Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 5/5/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 2:40:00 PM

Material Data

Material Description: Dark Brown Pit Run M
 Layer Thickness: Unknown
 Source: Import from Ballinger
 Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Sample Count

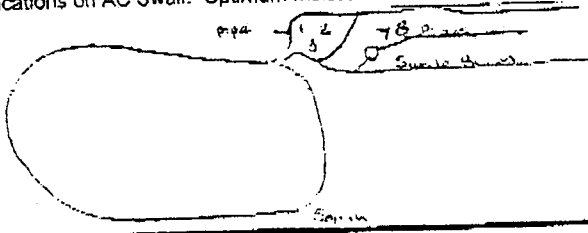
Density Count: 2267 Moisture Count: 641

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction	
1	1st Lift for the Swail Birm See Sketch	139.8	9.1	128.1	128.4	100%	
2		137.6	9.8	125.3	128.4	98%	
3		137.5	9.5	123.9	128.4	96%	
4		2nd Lift for the Swail Birm	135.7	9.5	123.9	128.4	96%
5			134.9	9.8	122.9	128.4	96%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications

No specifications on AC Swail. Optimum moisture is 7.1%.



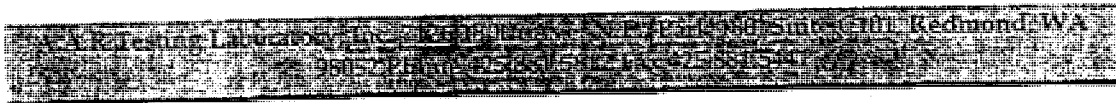
- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
 Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3212



Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 5/5/03

Project Number 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 2:40:00 PM

Material Data

Material Description: Dark Brown Pit Run M
 Layer Thickness: Unknown
 Source: Import from Ballinger
 Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Counts

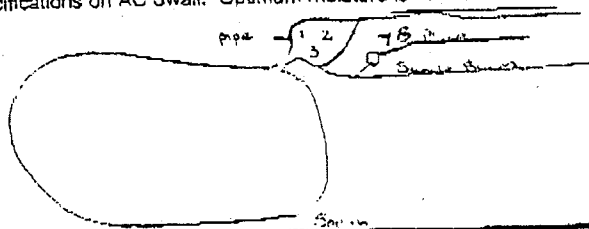
Density Count: 2267 Moisture Count: 641

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	2nd Lift for the Swail Berm	136.6	9.6	124.8	128.4	97%
7	1st Lift for pipe into manhole	121.7	10.1	110.5	112.4	98%
8	↓	119.6	10.6	108.1	112.4	96%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications

No specifications on AC Swail. Optimum moisture is 7.1%.



Unusually low to dense

- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
 Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3139a

AAR Testing Laboratory, Inc. 10000 15th Ave NE, Suite C101, Redmond, WA 98052 Phone: 509-881-4255

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 5/2/03

Project Number: 03-100
 Project Name: Edmonds Uncol
 Address: Pine Street
 Permit Number: NA
 Time: 8:15:00 AM

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Various
 Source: Rinker
 Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test

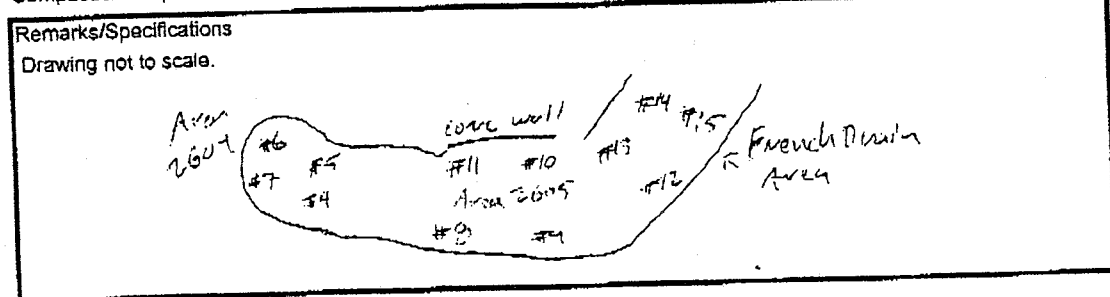
Modified Proctor ASTM D1557

Standard Counts

Density Count: 2673 Moisture Count: 635

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	% Compaction
1	Area 2604 See Sketch Below	114.7	7.3	106.9	112.4	95%
2		115.8	4.5	110.8	112.4	99%
3		113.1	4.5	108.2	112.4	96%
4		113.4	4.7	108.3	112.4	96%
5	Area 2605 See Sketch Below	118.3	5.9	111.7	112.4	99%

Compaction Requirements: 95 % Conformance Non Conformance



- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

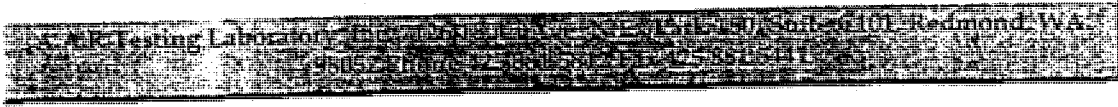
Reviewed By: Hale, Alan
 Tested By: Flint, Sean FLI 90

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3139a



Client: Wyser Construction	Project Number: 03-100
Contact:	Project Name: Edmonds Unocal
Address: 17125 Sunset Road	Address: Pine Street
Bothell, WA 98012	Permit Number: NA
Date: 5/2/03	Time: 8:15:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Various
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

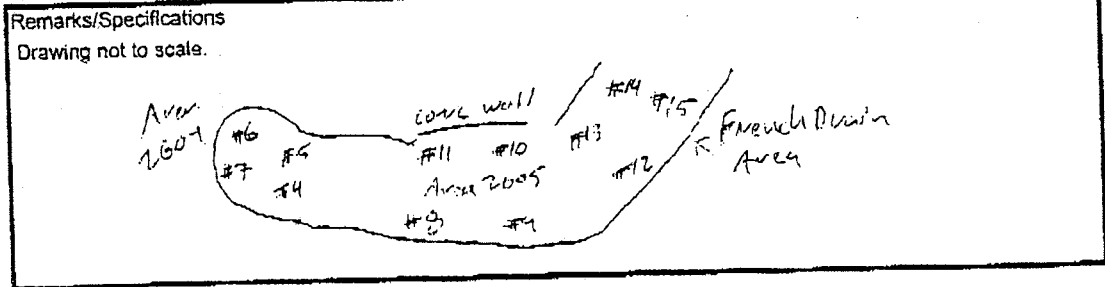
Modified Proctor ASTM D1557

Standard Conditions

Density Count: 2673 **Moisture Count:** 635

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	Area 2605 See Sketch Below	116.1	5.5	110.1	112.4	98%
7	↓ French Drain Area ↓	114.9	5.1	109.3	112.4	97%
8		116.8	6.2	109.9	112.4	98%
9		117.9	6.5	110.7	112.4	98%
10		115.4	6.5	108.4	112.4	96%

Compaction Requirements: 95 % Conformance Non Conformance



Distribute Client Distribute Other 1
 Distribute Engineer Distribute Other 2
 Distribute Municipality Distribute Other 3
 Distribute Contractor
 Distribute Architect

Reviewed By: Hale, Alan
Tested By: Flint, Sean FLI 90

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3139a

AAR Testing Laboratory 9805 25th Ave NE, Suite 100, Redmond, WA 98052-2505

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
Bothell, WA 98012
Date: 5/2/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 8:15:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Various
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Standard/Code

Modified Proctor ASTM D1557

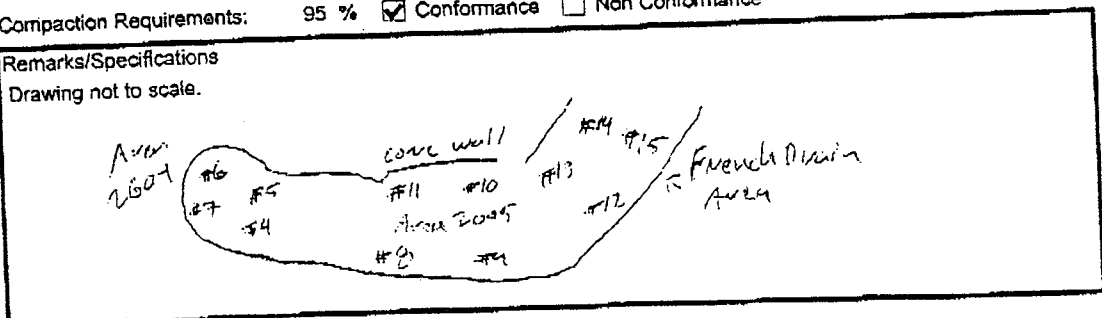
Standard/Code

Density Count: 2673 Moisture Count: 635

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	% Compaction
11	↓	113.9	6.8	106.6	112.4	95%
12	↓	116.3	7.1	108.6	112.4	97%

Compaction Requirements: 95 % Conformance Non Conformance

Remarks/Specifications
Drawing not to scale.



- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

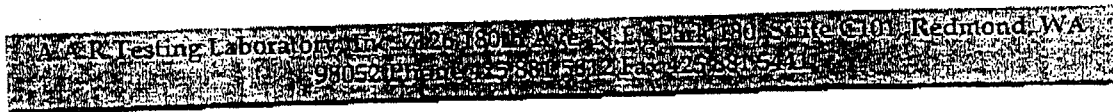
Reviewed By: Hale, Alan
Tested By: Flint, Sean FLI 90

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3138a



Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 5/2/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 8:00:00 AM

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Various
 Source: Rinker
 Compaction Method: 95

Test Device

Nuclear Gauge: Troxler 3430 28462
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Compaction

Density Count: 2673 Moisture Count: 635

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Pit 263 See Sketch Below	117.3	7.4	109.2	112.4	97%
2		116.1	7.4	108.1	112.4	96%
3		117.8	7.1	110	112.4	98%

Compaction Requirements: 95 % Conformance Non Conformance

Remarks/Specifications
 All Tests taken at top of sub-grade. Drawing not to scale.

- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
 Tested By: Flint, Sean FLI 90

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3137a

AAR Testing Laboratory, Inc. 726 180th Ave. N.E. Park Bldg. Suite C101 Redmond, WA
 98052 Phone: 425 881-5812 Fax: 425 881-5411

Client: Wyser Construction

Project Number: 03-100

Contact:

Project Name: Edmonds Unocal

Address: 17125 Sunset Road
 Bothell, WA 98012

Address: Pine Street

Permit Number: NA

Date: 4/28/03

Time: 2:30:00 AM

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Varies
 Source: Rinker
 Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2667 Moisture Count: 644

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	See Sketch Below	119.6	9.6	108.6	112.4	97%
2		119	8.7	109.5	112.4	97%
3		117.9	8.3	108.9	112.4	97%
4		121	9	111	112.4	99%
5		120.5	9.9	109.7	112.4	98%

Compaction Requirements: 95 % Conformance Non Conformance

Remarks/Specifications
 Drawing not to scale. All tests were taken at the top of sub grade over the drainage spine.

- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
 Tested By: Flint, Sean FLI 90

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3137a

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C100, Redmond, WA 98052
 Phone: 425-881-5112 Fax: 425-881-5111

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
 Bothell, WA 98012
Date: 4/28/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 2:30:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Varies
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

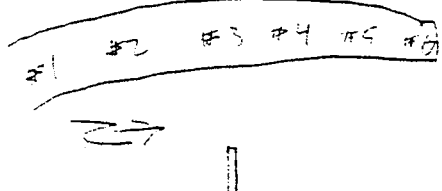
Density Count: 2667 **Moisture Count:** 644

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	See Sketch Below	119.8	10	108.9	112.4	97%

Compaction Requirements: 95 % Conformance Non Conformance

Remarks/Specifications

Drawing not to scale. All tests were taken at the top of sub grade over the drainage spine.



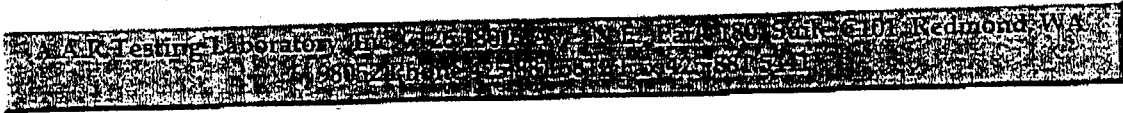
- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Flint, Sean FLI 90

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3198



Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 4/25/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time:

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Unknown
 Source: Rinker
 Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: CPN MC1DR MD11000507
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Test Results

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	% Compaction
1	Parrell to French Drain Area NE half 8th Lift See Sketch	122.9	10.8	110.9	112.4	99%
2		117	10	106.4	112.4	95%
3		115.6	10.3	104.8	112.4	93%
4	SE half of French Drain 80' from Wall	116.4	10.6	105.3	112.4	94%

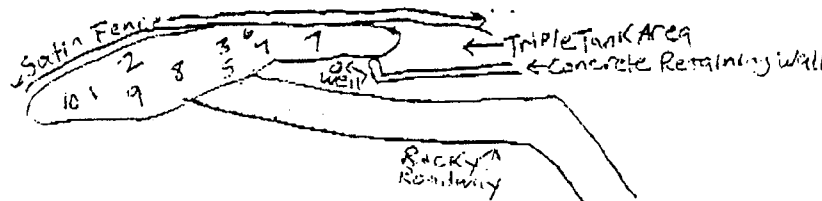
Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications

Drawing not to scale.

NT

Area 2913



- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
 Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3198

AAR Testing Laboratory, 22000 1st Avenue, Suite 101, Redmond, WA 98053

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
 Bothell, WA 98012
Date: 4/25/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time:

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: CPN MC1DR MD11000507
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Standard Test Method

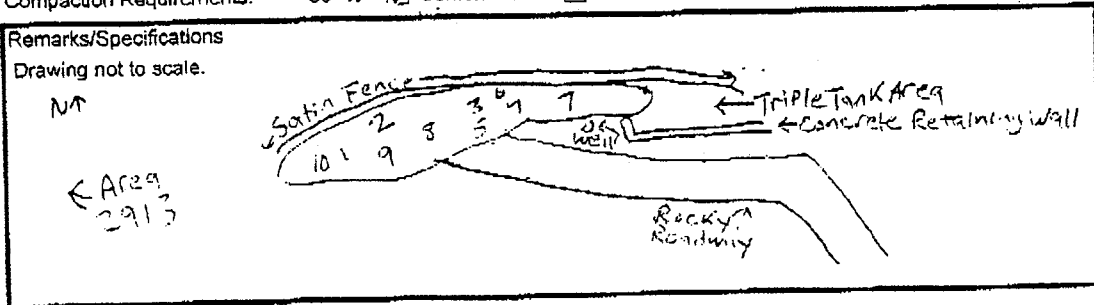
Modified Proctor ASTM D1557

Standard Counts

Density Count: 39203 **Moisture Count:** 10656

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
5	SE half of French Drain 80' from Well	119.8	11.7	107.2	112.4	95%
6	↓	117.7	11.54	105.6	112.4	94%
7	Triple Tank Area See Sketch	118.8	11.2	106.8	112.4	95%
8	NE half of French Drain Area	120.3	10.8	108.6	112.4	97%
9	NE half parallel to French Drain 12th Lift	120.4	10.6	108.9	112.4	97%

Compaction Requirements: 90 % Conformance Non Conformance



- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

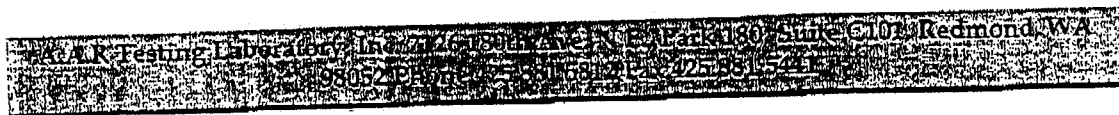
Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3198



Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 4/25/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time:

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Unknown
 Source: Rinker
 Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: CPN MC1DR MD11000507
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Proctor Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 39203 Moisture Count: 10656

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
10	NE half parrell to French Drain 12 Lift	119.6	11.3	107.5	112.4	98%

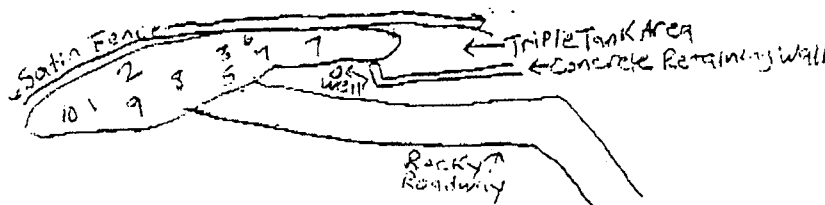
Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications

Drawing not to scale.

MT

Area 2913



- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
 Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3189a



Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
 Bothell, WA 98012
Date: 4/23/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 12:20:00 PM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Hoe Pack

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory

Modified Proctor ASTM D1557

Standard Counts

Density Count: 2671 Moisture Count: 646

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	AC Swail Pit French Drain 2nd Lift See Sketch	110.9	8.8	101.9	112.4	91%
2	↓	110	9.1	100.8	112.4	90%
3		111.3	9.5	101.7	112.4	90%
4		114.1	10.4	103.5	112.4	92%
5		AC Swail French Drain 2nd Lift See Map	114.3	10.4	103.5	112.4

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
 No compaction specifications for AC swail.

- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

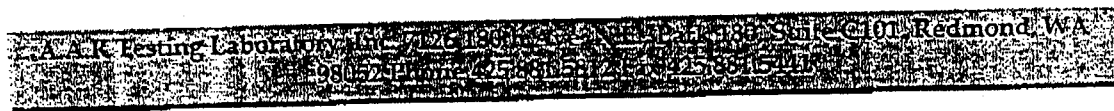
Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3189a



Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 4/23/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 12:20:00 PM

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Unknown
 Source: Rinker
 Compaction Method: Hoe Pack

Test Device

Nuclear Gauge: Troxler 3430 21240
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Standard Count

Modified Proctor ASTM D1557

Density Count: 2671 Moisture Count: 646

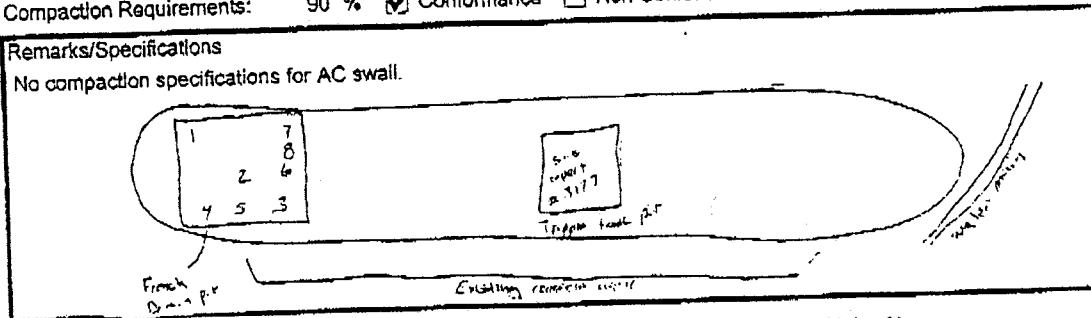
Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	AC Swail French Drain 3rd Lift See Map	113.6	10.1	103.2	112.4	92%
7		117.3	9.8	106.8	112.4	95%
8		113.7	10	103.4	112.4	92%



Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications

No compaction specifications for AC swail.



- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
 Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3177a



Client: Wyser Construction

Project Number: 03-100

Contact:

Project Name: Edmonds Unocal

Address: 17125 Sunset Road
Bothell, WA 98012

Address: Pine Street

Permit Number: NA

Date: 4/23/03

Time: 8:30:00 AM

Material Data

Material Description: Sand with minimal
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Hoe Pack

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

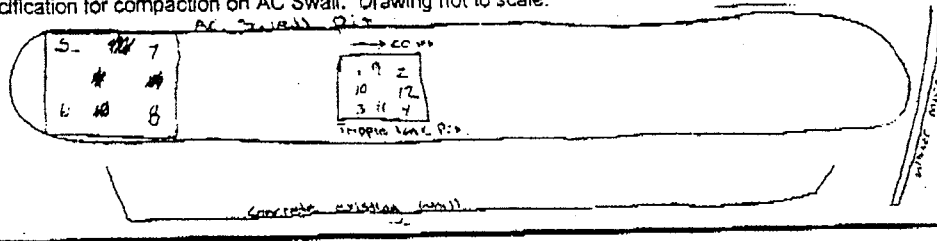
Density Count: 2671 **Moisture Count:** 646

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	AC Swail Pit Triple Tank Farm 1st Lift	120.5	17.8	102.3	112.4	91%
2		122.7	14.6	107.1	112.4	95%
3		122.3	16.9	104.6	112.4	93%
4		118.2	14.4	103.3	112.4	92%
5	AC Swail Pit French Drain 1st Lift	115.1	12.3	102.5	112.4	91%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications

No specification for compaction on AC Swail. Drawing not to scale.



- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

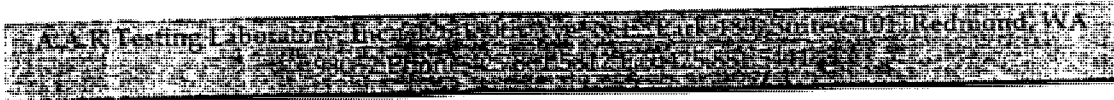
Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3177a



Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
 Bothell, WA 98012
Date: 4/23/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 8:30:00 AM

Material Data

Material Description: Sand with minimal
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Hoe Pack

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

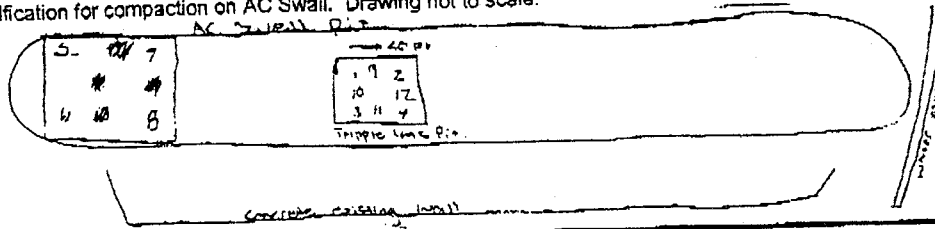
Density Count: 2671 **Moisture Count:** 646

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	Ac Swail Pit French Drain 1st Lift	119.6	12.9	105.9	112.4	94%
7		117.9	13	104.3	112.4	93%
8		120	14.1	105.2	112.4	94%
9	AC Swail Triple Tank Farm 2nd Lift	121.6	15.2	105.6	112.4	94%
10		120.7	16.1	103.9	112.4	92%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications

No specification for compaction on AC Swail. Drawing not to scale.



- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3177a

AAR Testing Laboratory, 1100 126th Ave NE, Park 180, Suite 610, Redmond, WA 98052, Phone: 253-881-2581, Fax: 253-881-5111

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 4/23/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 8:30:00 AM

Material Data

Material Description: Sand with minimal
 Layer Thickness: Unknown
 Source: Rinkar
 Compaction Method: Hoe Pack

Test Device

Nuclear Gauge: Troxler 3430 28462
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Specification

Modified Proctor ASTM D1557

Standard Counts

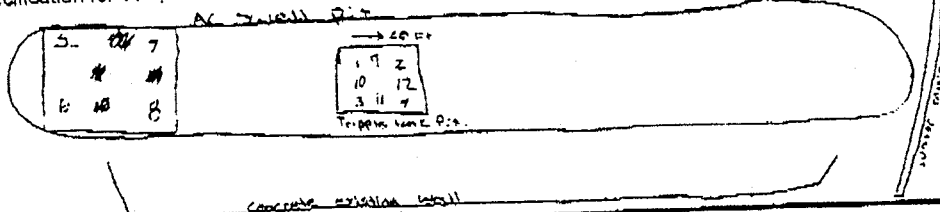
Density Count: 2671 Moisture Count: 646

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
11	↓	122.9	16.2	105.8	112.4	94%
12		122.1	15.6	105.6	112.4	94%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications

No specification for compaction on AC Swail. Drawing not to scale.



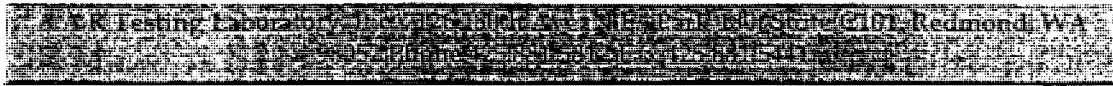
- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
 Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3136a



Client: Wyser Construction

Project Number: 03-100

Contact:

Project Name: Edmonds Unocal

Address: 17125 Sunset Road
Bothell, WA 98012

Address: Pine Street

Permit Number: NA

Date: 4/22/03

Time: 11:00:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Import from Ballinger
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

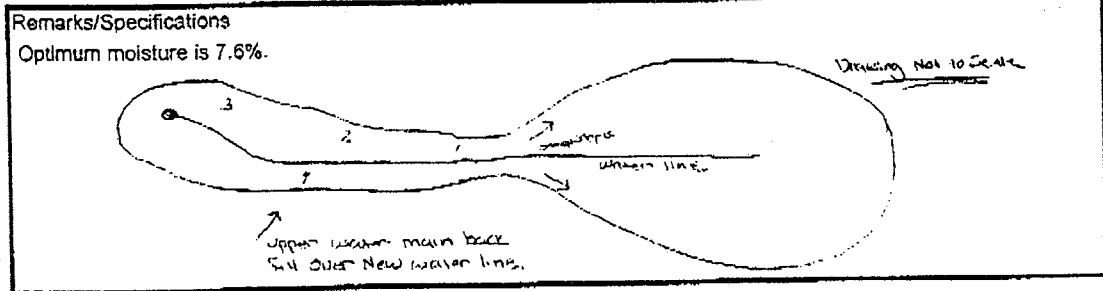
Standard Count

Density Count: 2653 Moisture Count: 646

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Upper Water Line 1st Lift 1 1/2' over pipe	114.2	10	103.8	112.4	92%
2		113.9	9.5	104	112.4	93%
3		111.1	8.5	102.4	112.4	91%
4		112.3	9.7	102.4	112.4	91%



Compaction Requirements: 90 % Conformance Non Conformance



- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

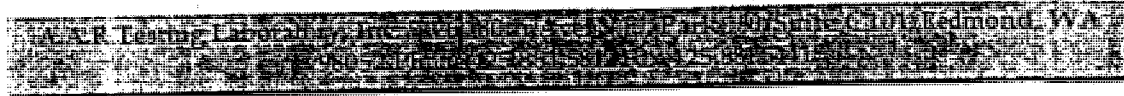
Reviewed By: Male, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3120a



Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 4/22/03

Project Number 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 9:00:00 AM

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Unknown
 Source: Rinker
 Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

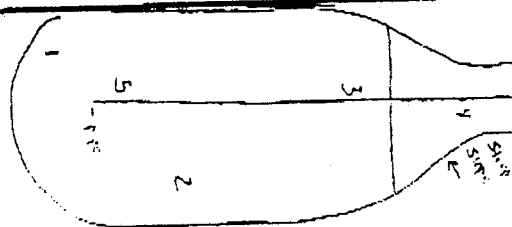
Standard Count

Density Count: 0 Moisture Count: 0

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	3rd Lift over Water Main Line	113.5	10.1	103.1	112.4	92%
2		111.9	9.6	102.1	112.4	91%
3		113.2	10.1	102.8	112.4	91%
4		113.5	9.4	103.7	112.4	92%
5		112.7	9.3	103.1	112.4	92%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
 Drawing not to scale.



- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

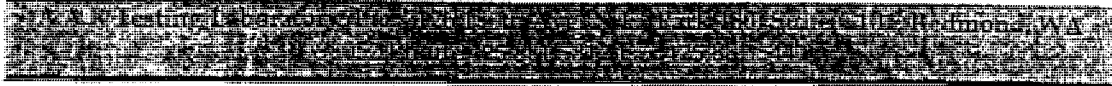
Reviewed By: Hale, Alan
 Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3187a



Client: Wyser Construction

Project Number: 03-100

Contact:

Project Name: Edmonds Unocal

Address: 17125 Sunset Road
Bothell, WA 98012

Address: Pine Street

Permit Number: NA

Date: 4/21/03

Time: 11:00:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: 90

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Modified Proctor ASTM D1557

Modified Proctor ASTM D1557

Density Count

Density Count: 2668 Moisture Count: 649

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Water Main Line 2nd Lift	117.7	9.8	107.2	112.4	95%
2	↓	115.8	11.5	103.9	112.4	92%
3		116.9	10.2	105.3	112.4	94%
4		116.5	9.9	106	112.4	94%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
Optimum Moisture is 7.6%.

Drawing Not to Scale

- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3123a



Client: Wyser Construction

Project Number: 03-100

Contact:

Project Name: Edmonds Unocal

Address: 17125 Sunset Road
Bothell, WA 98012

Address: Pine Street

Permit Number: NA

Date: 4/22/03

Time: 10:15:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Proctor Method

Modified Proctor ASTM D1557

Test Results

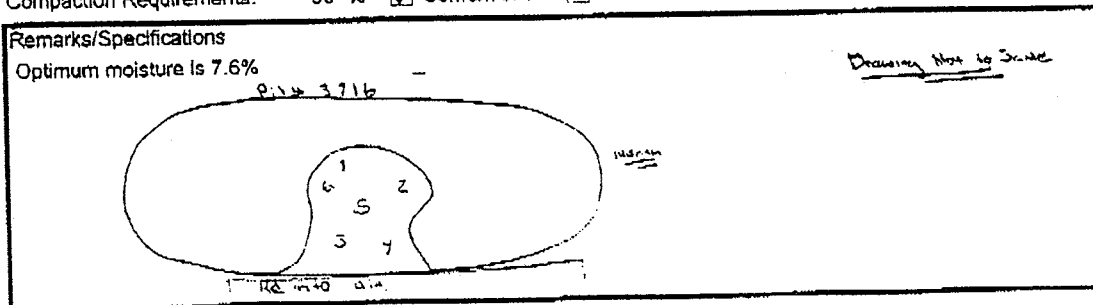
Density Count: 2653 Moisture Count: 646

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	1st Lift for Pit #3716 Middle section Only See Map	112.1	8.9	102.9	112.4	92%
2		113.7	9.5	103.8	112.4	92%
3		113.9	9.3	104.2	112.4	93%
4	2nd Lift Pit #3716	112.7	10	102.5	112.4	91%
5		114.2	10.3	103.5	112.4	92%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications

Optimum moisture is 7.6%



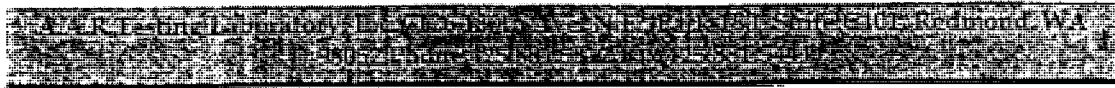
- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3123a



Client: Wyser Construction

Project Number 03-100

Contact:

Project Name: Edmonds Unocal

Address: 17125 Sunset Road
Bothell, WA 98012

Address: Pine Street

Permit Number: NA

Date: 4/22/03

Time: 10:15:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Standard Test Method

Modified Proctor ASTM D1557

Standard Count

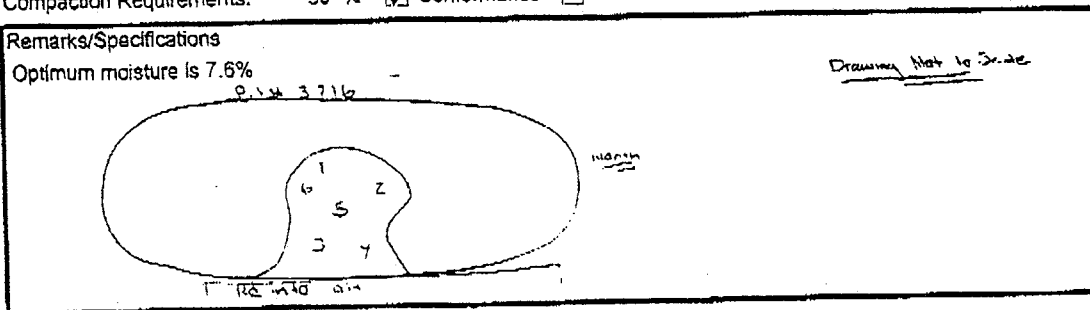
Density Count: 2653 Moisture Count: 646

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	2nd Lift Pit #3716	115	10.7	103.9	112.4	92%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications

Optimum moisture is 7.6%



- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3186a

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 100, Suite C101, Redmond, WA 98052
 Phone: 425-881-5812 Fax: 425-881-7011

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
 Bothell, WA 98012
Date: 4/21/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 8:30:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device


Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

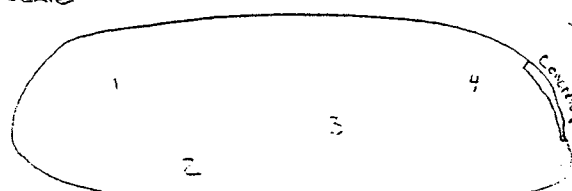
Standard Count

Density Count: 2668 **Moisture Count:** 649

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Pit #2909 East Half 3rd Lift	117.8	10.6	106.4	112.4	95%
2		117.2	9.8	106.8	112.4	95%
3		116.8	9.7	106.5	112.4	95%
4		119.3	10.6	107.9	112.4	96%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
 Optimum Moisture is 7.6%.
Drawing Not to Scale



WATER

- | | |
|--|--|
| <input checked="" type="checkbox"/> Distribute Client
<input type="checkbox"/> Distribute Engineer
<input type="checkbox"/> Distribute Municipality
<input type="checkbox"/> Distribute Contractor
<input type="checkbox"/> Distribute Architect | <input type="checkbox"/> Distribute Other 1
<input type="checkbox"/> Distribute Other 2
<input type="checkbox"/> Distribute Other 3
Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted. |
|--|--|

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

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Field Density Report - Nuclear Method

Report Number 3188a

AAR Testing Laboratory, Inc. 7126 180th Ave NE, Park 180, Suite C107, Redmond, WA
 98052 Phone: 425-881-5812 Fax: 425-881-5813

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
 Bothell, WA 98012
Date: 4/21/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time:

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557


Standard Count

Density Count: 2668 Moisture Count: 649

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	U38 Excavation for the Storm Catch Basin, 8th Lift	120.2	13.1	106.3	112.4	95%
2	↓	120.3	12.8	106.6	112.4	95%
3	↓	119.3	10.6	107.9	112.4	96%

Compaction Requirements: 95 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture is 7.6%.



Drawn not to Scale.

- | | | |
|---|---|-----------------------------|
| <input checked="" type="checkbox"/> Distribute Client | <input type="checkbox"/> Distribute Other 1 | Reviewed By: Hale, Alan |
| <input type="checkbox"/> Distribute Engineer | <input type="checkbox"/> Distribute Other 2 | Tested By: Norgar, Jason NO |
| <input type="checkbox"/> Distribute Municipality | <input type="checkbox"/> Distribute Other 3 | |
| <input type="checkbox"/> Distribute Contractor | | |
| <input type="checkbox"/> Distribute Architect | | |
- Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3195

A.A.R. Testing Laboratory, Inc. 4125 180th Ave. N.E. Park 180, Suite C101, Redmond, WA
98052 Phone 425.851.5812 Fax 425.851.5411

Client: Wyser Construction-
Contact:
Address: 17125 Sunset Road
Bothell, WA 98012
Date: 4/18/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 12:00:00 PM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2284 Moisture Count: 584

Test #	Locations/Elevations			Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Pit 2909	East half	1st Lift	117.1	12	104.5	112.4	93%
2				117.7	11.5	105.6	112.4	94%
3				120.1	12.9	106.3	112.4	95%
4	Pit 2909	East half	2nd Lift	120.3	12.8	106.6	112.4	95%
5				119.8	11.8	107.2	112.4	95%

Compaction Requirements: 95 % Conformance Non Conformance

Remarks/Specifications
2nd Lift requires 95% compaction, which was achieved.

- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3195

A.A.R. Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 130 Suite C101 Redmond, WA 98052 Phone 425 881 5812 Fax 425 881 5811

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
Bothell, WA 98012
Date: 4/18/03

Project Number 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 12:00:00 PM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2284 Moisture Count: 584

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	↓ ↓ ↓	120	12.3	106.8	112.4	95%

Compaction Requirements: 95 % Conformance Non Conformance

Remarks/Specifications
2nd Lift requires 95% compaction, which was achieved.

- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Haie, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3194

AAR Testing Laboratory, Inc. 2126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425-881-5812 Fax 425-881-5441

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 4/18/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 12:00:00 PM

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Unknown
 Source: Rinker
 Compaction Method: Hoe Pack

Test Device

Nuclear Gauge: Troxler 3430 21240
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2284 Moisture Count: 584

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Water Main Line	114.5	11	103.2	112.4	92%
2	↓	120.2	13.1	106.2	112.4	94%
3		120.4	12.8	106.7	112.4	95%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture is 7.6%.

- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
 Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3192

A.A.R. Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA
98052 Phone 425.881.5812 Fax 425.881.5441

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 4/18/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 12:00:00 PM

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Unknown
 Source: Rinker
 Compaction Method: Hoe Pack

Test Device

Nuclear Gauge: Troxler 3430 21240
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2284 Moisture Count: 584

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Receiving Storm Catch Basin 1st Lift	114.4	10.9	103.2	112.4	92%
2	↓	115.2	11.1	103.6	112.4	92%
3	↓ 2nd Lift	115.9	10.8	104.6	112.4	93%
4	↓	115.2	12.2	102.7	112.4	91%
5	↓ 3rd Lift	113.4	11	102.2	112.4	91%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture is 7.6%.

- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Reviewed By: Hale, Alan
 Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3192

A.A.R. Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180 Suite C101 Redmond, WA
94052 Phone: 425.881.5312 Fax: 425.881.5441

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 4/18/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 12:00:00 PM

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Unknown
 Source: Rinker
 Compaction Method: Hoe Pack

Test Device

Nuclear Gauge: Troxler 3430 21240
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2284 Moisture Count: 584

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction	
6		112.8	11.8	100.9	112.4	90%	
7		↓	114.3	11.5	102.5	112.4	91%
8		↓	113.9	11.3	102.3	112.4	91%
9		↓	116.2	11.4	104.5	112.4	93%
10		↓	116.5	10.9	105	112.4	93%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture is 7.6%.

- | | | |
|---|---|---------------------------|
| <input checked="" type="checkbox"/> Distribute Client | <input type="checkbox"/> Distribute Other 1 | Reviewed By: Hale, Alan |
| <input type="checkbox"/> Distribute Engineer | <input type="checkbox"/> Distribute Other 2 | Tested By: Randolph, Tara |
| <input type="checkbox"/> Distribute Municipality | <input type="checkbox"/> Distribute Other 3 | |
| <input type="checkbox"/> Distribute Contractor | Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted. | |
| <input type="checkbox"/> Distribute Architect | | |

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Field Density Report - Nuclear Method

Report Number 3192

AAR Testing Laboratory, Inc. 2126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone: 425-891-5512 Fax: 425-891-5411

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
 Bothell, WA 98012
Date: 4/18/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 12:00:00 PM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Hoe Pack

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2284 Moisture Count: 584

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
11	↓	6th Lift	115.7	10.7	104.5	112.4 93%
12		↓	114.9	11.2	103.3	112.4 92%
13		7th Lift	116.6	11.1	104.9	112.4 93%
14		↓	116.5	12.3	103.7	112.4 92%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture is 7.6%.

- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

All reports are considered confidential and are the property of the client and AAR Testing Laboratory Inc. .Reproduction except in full, without the written consent of AAR Testing is strictly forbidden.

Field Density Report - Nuclear Method

Report Number 3027

**A.A.R. Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA
98052 Phone: 425-881-5812 Fax: 425-881-5441**

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 2/21/03

Project Number: 03-100
 Project Name: Edmonds Unical
 Address: Pine Street
 Permit Number: NA
 Time: 12:30:00 PM

Material Data

Material Description: Fine Silty Sand w/Agg.
 Layer Thickness: 1'
 Source:
 Compaction Method: Roller

Test Device


Nuclear Gauge: Troxler 3430 21240
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

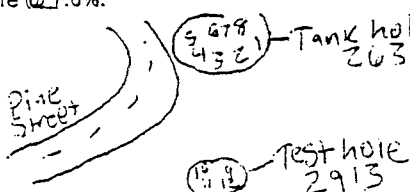
Standard Count

Density Count: 2266 Moisture Count: 644

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	% Compaction
1	Tank hole 263 upper section/See sketch below	119.2	9.2	109.1	112.4	97%
2		118.9	9.7	108.4	112.4	96%
3		116.3	10	105.7	112.4	94%
4		114.9	10.9	103.6	112.4	92%
5		112.8	11.9	100.8	112.4	90%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture @ 7.6%.



Drawing not to scale
N →

- | | | | |
|---|---|--------------|--------------------|
| <input checked="" type="checkbox"/> Distribute Client | <input type="checkbox"/> Distribute Other 1 | Reviewed By: | Alan Hale |
| <input type="checkbox"/> Distribute Engineer | <input type="checkbox"/> Distribute Other 2 | Tested By: | Tara Randolph Pfaf |
| <input type="checkbox"/> Distribute Municipality | <input type="checkbox"/> Distribute Other 3 | | |
| <input type="checkbox"/> Distribute Contractor | | | |
| <input type="checkbox"/> Distribute Architect | | | |
- Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3037

AAR Testing Laboratory, Inc. 2126 180th Ave NE, Park 130, Suite C101, Redmond, WA
98052 Phone 425-881-5141 Fax 425-881-5141

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 2/24/03

Project Number 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 1:00:00 PM

Material Data

Material Description: Fine Silty Sand w/Min.
 Layer Thickness: Unknown
 Source: Import/Rinker
 Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

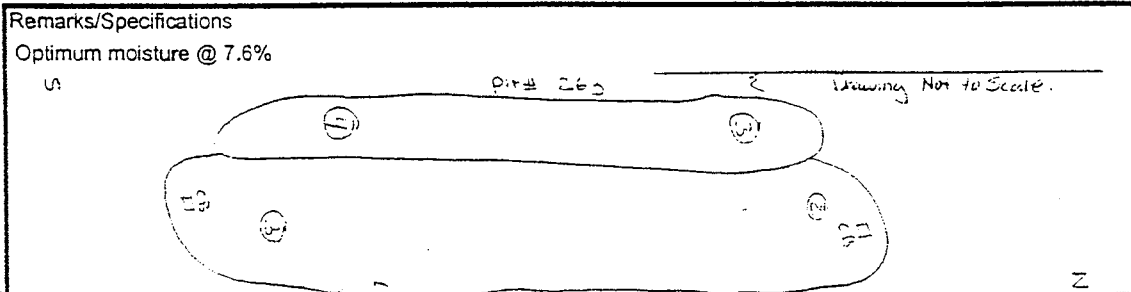
Modified Proctor ASTM D1557

Standard Count

Density Count: 2296 Moisture Count: 651

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	% Compaction
1	Trench Back fill @ grade/See sketch for locations	117.6	9.6	107.3	112.4	95%
2	Trench back fill @ grade	119.7	9.7	109.1	112.4	97%
3	Trench back fill -4 1/2' below grade	110.9	8	102.7	112.4	91%
4	Trench back fill -4 1/2' below grade	113.6	8.1	105.1	112.4	94%

Compaction Requirements: 90 % Conformance Non Conformance



- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Reviewed By: Alan Hale
 Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 4959

A.A.R. Testing Laboratory, Inc. 1105 184th Ave NE, Park, WA, Suite C101, Redmond, WA
 98052 Phone: (253) 881-5441 Fax: (253) 881-5441

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 2/24/03

Project Number 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 1:07:00 PM

Material Data

Material Description: Fine Silty Sand w/Min.
 Layer Thickness: Unknown
 Source: Import/Rinker
 Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

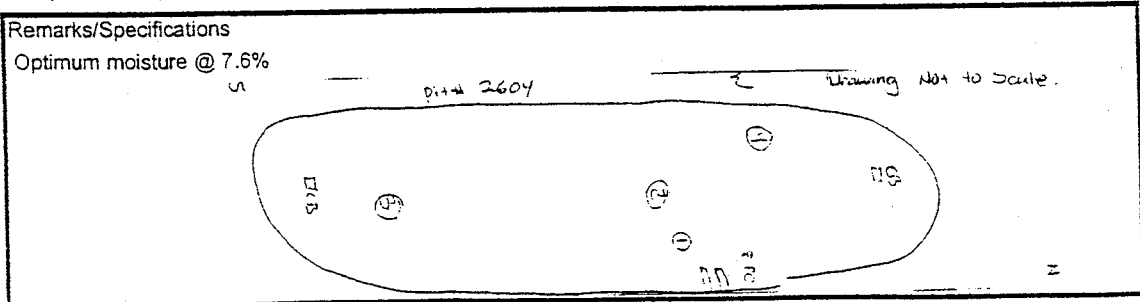
Density Count: 2296 Moisture Count: 651

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Pit #2604 Back fill/See sketch below for locations/-6'	116.6	9	106.9	112.4	95%
2	-5'	115.9	8.7	106.6	112.4	95%
3	-4'	112.7	8.5	103.9	112.4	92%
4	-4'	114.6	9	105.1	112.4	94%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications

Optimum moisture @ 7.6%



- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Alan Hale
 Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 4960

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA
98052 Phone 425-881-5912 Fax 425-881-5441

Client: Wyser Construction

Project Number 03-100

Contact:

Project Name: Edmonds Unocal

Address: 17125 Sunset Road
Bothell, WA 98012

Address: Pine Street

Permit Number: NA

Date: 2/24/03

Time: 2:00:00 PM

Material Data

Material Description: Fine Silty Sand w/Min.
Layer Thickness: Unknown
Source: Import/Rinker
Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2296 Moisture Count: 651

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	-18'	117.1	9.7	106.8	112.4	95%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
Optimum moisture @ 7.4%

- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Reviewed By: Alan Hale
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 4960

AAR Testing Laboratory, Inc. 1126 190th Ave. N.E. Park 180 Suite C101 Redmond, WA
 98052 Phone: (253)831-5121 Fax: (253)831-5441

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
 Bothell, WA 98012
Date: 2/24/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 2:00:00 PM

Material Data

Material Description: Fine Silty Sand w/Min.
Layer Thickness: Unknown
Source: Import/Rinker
Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

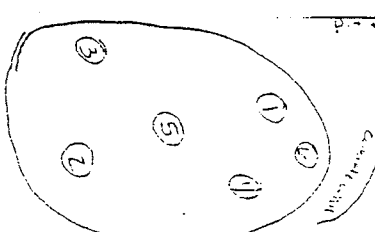
Density Count: 2296 Moisture Count: 651

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Pit #2914 Trench back fill/See sketch below for locations/-4'	115.6	8.1	106.9	112.4	95%
2	-4'	112.5	8.7	103.4	112.4	92%
3	-3'	121.4	10.2	110.1	112.4	98%
4	-2.5'	120.1	11	108.2	112.4	96%
5	-1'	118.7	9.6	108.3	112.4	96%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture @ 7.4%

Pit # 2914 Drawing Not to Scale



- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Alan Hale
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 4961

AAR Testing Laboratory, Inc. 4126 180th Avenue NE, Park 180, Suite C101, Redmond, WA
 Phone: 509-881-5412 Fax: 509-881-5411

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 2/24/03

Project Number 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 2:40:00 PM

Material Data

Material Description: Fine Silty Sand w/Min.
 Layer Thickness: Unknown
 Source: Import/Rinker
 Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2296 Moisture Count: 651

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Pit #2798 Trench Back fill -3'/See sketch below for locations	111.3	9.9	101.3	112.4	90%
2	-3'	112.5	8.7	103.4	112.4	92%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture @ 7.6%

- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Alan Hale
 Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3032

AAR Testing Laboratory, Inc. 2126 180th Ave. N.E. Park #80, Suite C101, Redmond, WA
 98052 Phone: (253)881-5311 Fax: (253)881-5441

Client: Wyser Construction Contact: Address: 17125 Sunset Road Bothell, WA 98012 Date: 2/25/03	Project Number: 03-100 Project Name: Edmonds Unical Address: Pine Street Permit Number: NA Time: 1:00:00 PM
--	--

Material Data

Material Description: Sand w/Min. Agg.
 Layer Thickness: 1'
 Source: Rinker
 Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2271 Moisture Count: 640

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
11	2914	120.6	9.8	109.9	112.4	98%
12	↓	121.5	10.1	110.3	112.4	98%

Compaction Requirements: 95 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture @ 7.6%

<input checked="" type="checkbox"/> Distribute Client <input type="checkbox"/> Distribute Other 1 <input type="checkbox"/> Distribute Engineer <input type="checkbox"/> Distribute Other 2 <input type="checkbox"/> Distribute Municipality <input type="checkbox"/> Distribute Other 3 <input type="checkbox"/> Distribute Contractor <input type="checkbox"/> Distribute Architect	Reviewed By: Alan Hale Tested By: Tara Randolph Pfaf Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.
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Field Density Report - Nuclear Method

Report Number 3032

AAR Testing Laboratory, Inc. 2126 180th Ave. N.E. Park 170, Suite C1111 Redmond, WA 98052 Phone: 425-881-5811 Fax: 425-881-5101

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 2/25/03

Project Number 03-100
 Project Name: Edmonds Unical
 Address: Pine Street
 Permit Number: NA
 Time: 1:00:00 PM

Material Data

Material Description: Sand w/Min. Agg.
 Layer Thickness: 1'
 Source: Rinker
 Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2271 Moisture Count: 640

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	2798	116.9	9.4	106.9	112.4	95%
7	↓	116.7	7.9	108.1	112.4	96%
8	1749, last lift	119	9.6	108.5	112.4	97%
9	↓	117.6	9.5	107.4	112.4	96%
10	↓	118.1	7	110.4	112.4	98%

Compaction Requirements: 95 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture @ 7.6%

- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Reviewed By: Alan Hale
 Tested By: Tara Randolph Pfaf

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3032

AAR Testing Laboratory, Inc. 1126-180th Avenue NE, Pad. 180, Suite 101, Redmond, WA 98072, Phone: (253) 815-3121 Fax: (253) 815-3131

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 2/25/03

Project Number: 03-100
 Project Name: Edmonds Unical
 Address: Pine Street
 Permit Number: NA
 Time: 1:00:00 PM

Material Data

Material Description: Sand w/Min. Agg.
 Layer Thickness: 1'
 Source: Rinker
 Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2271 Moisture Count: 640

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	263 Upper section/See sketch below	115.8	9	106.3	112.4	95%
2	↓	117.7	9.3	107.7	112.4	96%
3	↓	120.9	8.7	111.3	112.4	99%
4	263 lower section	123.7	10.1	112.3	112.4	100%
5	↓	122.9	9.8	111.9	112.4	100%

Compaction Requirements: 95 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture @ 7.6%

- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect

- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Alan Hale
 Tested By: Tara Ranolph Pfaf

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 4970

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA
98052 Phone 425.881.5512 Fax 425.881.5447

Client: Wyser Construction

Project Number: 03-100

Contact:

Project Name: Edmonds Unocal

Address: 17125 Sunset Road
Bothell, WA 98012

Address: Pine Street

Permit Number: NA

Date: 2/27/03

Time: 9:30:00 AM

Material Data

Material Description: Sand
Layer Thickness: Unknown
Source: Import
Compaction Method: Roller/Hoe Pack

Test Device

Nuclear Gauge: CPN MC1DR MD0069642
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 33077 **Moisture Count:** 8299

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	Backfill Pit #2604/-2'	118.9	10.6	107.5	112.4	96%
7	Backfill Pit #2604/-3'	116.8	10.5	105.7	112.4	94%
8	Backfill Pit #2604/-3'	117.3	10.5	106.2	112.4	94%
9	Backfill Pit #2910/ 1st lift/-6'	116.9	10.1	106.2	112.4	94%
10	Backfill Pit #2910/1st lift/-6'	117.1	10	106.4	112.4	95%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
90% compaction specification @ -4'
95% compaction specification @ Grade
Optimum moisture @ 7.6%

- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Reviewed By: Alan Hale
Tested By: Kent, Gena KEN 2

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 4970

AAR Testing Laboratory, Inc. 7125 180th Ave. N.E., Park 180, Suite C101, Redmond, WA
98052 Phone 425.881.5812 Fax 425.881.5441

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
Bothell, WA 98012
Date: 2/27/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 9:30:00 AM

Material Data

Material Description: Sand
Layer Thickness: Unknown
Source: Import
Compaction Method: Roller/Hoe Pack

Test Device

Nuclear Gauge: CPN MC1DR MD0069642
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 33077 **Moisture Count:** 8299

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Backfill Pit #263/-4'	119.8	10.5	108.4	112.4	96%
2	Backfill Pit #263/-3'	122.7	10.9	110.6	112.4	98%
3	Backfill Pit #263/-1'	118.2	9.4	108	112.4	96%
4	Backfill Pit #263/-1'	119	9.5	108.6	112.4	97%
5	Backfill Pit #2604/-2'	118.1	10.2	107.2	112.4	95%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
90% compaction specification @ -4'
95% compaction specification @ Grade
Optimum moisture @ 7.6%

- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Reviewed By: Alan Hale
Tested By: Kent, Gena KEN 2

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3035

AAR Testing Laboratory, Inc. 4125 180th Ave. NE, Park 180, Suite C107, Redmond, WA 98052
 Phone: 425-881-5441 Fax: 425-881-5441

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 2/27/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 11:30:00 AM

Material Data

Material Description: Fine Sand w/Min. Agg.
 Layer Thickness: 1'
 Source: Rinker
 Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2267 Moisture Count: 644

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	2911/-5' See sketch below for locations	113.8	10	103.5	112.4	92%
2	2911/Against Concrete barrier	111.4	10.9	105	112.4	93%
3	2910/2nd lift	116.4	10.9	105	112.4	93%
4	2910/2nd lift	115.8	10.7	104.6	112.4	93%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture @ 7.6%

- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Reviewed By: Alan Hale
 Tested By: Tara Randolph Pfaf

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 5000

AAR Testing Laboratory, Inc. 2126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA
 98052 Phone: 125-880-5812 Fax: 125-881-5411

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 2/27/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 12:40:00 PM

Material Data

Material Description: Fine Sand w/Min. Agg.
 Layer Thickness: 1'
 Source: Rinker
 Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2267 Moisture Count: 644

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	2604/-5'	114.8	9.9	104.4	112.4	93%
2	↓	115.4	9.8	105.1	112.4	94%
3		113.7	9.6	103.7	112.4	92%
4		2604/-2'	115.9	9.1	106.2	112.4

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications

Optimum moisture @ 7.6%.
 Specification requirement is 90% and 95% for -2'

#1 #2 2604
 #4 #5

- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Alan Hale
 Tested By: Tara Randolph Pfaf

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3034

AAR Testing Laboratory, Inc. 7125 180th Avenue NE, Bldg 100, Suite C100, Redmond, WA 98052 Phone: 425-881-5312 Fax: 425-881-5418

Client: Wyser Construction

Project Number: 03-100

Contact:

Project Name: Edmonds Unocal

Address: 17125 Sunset Road
Bothell, WA 98012

Address: Pine Street

Permit Number: NA

Date: 2/27/03

Time: 2:30:00 PM

Material Data

Material Description: Sand w/Min.Agg.
Layer Thickness: 1'
Source: Rinker
Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2267 Moisture Count: 644

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	2911/-4'	115.6	12.6	102.7	112.4	91%
2	↓	119.3	9.5	109	112.4	97%
3		114.4	12.2	102	112.4	91%
4		113.5	11.9	101.4	112.4	90%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
Optimum moisture @ 7.6%

- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Alan Hale
Tested By: Tara Randolph Pfaf

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 4962

AAR Testing Laboratory, Inc. 7125 130th Ave NE, Park 180, Suite C101, Redmond, WA 98052
 Phone: 425-881-5812 Fax: 425-881-5101

Client: Wyser Construction

Project Number: 03-100

Contact:

Project Name: Edmonds Unocal

Address: 17125 Sunset Road
Bothell, WA 98012

Address: Pine Street

Permit Number: NA

Date: 2/28/03

Time: 10:00:00 AM

Material Data

Material Description: Fine Silty Sand w/ Agg
Layer Thickness: Unknown
Source: Import/Rinker
Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

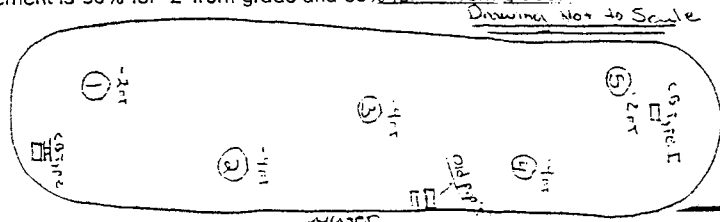
Density Count: 2659 **Moisture Count:** 635

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Trench pit back fill for Pit #2604/-2' See sketch below for locations	119.9	11.1	107.9	112.4	96%
2	-4'	117.3	12.3	104.4	112.4	93%
3	-4'	115.7	11.4	103.8	112.4	92%
4	-4'	114.2	11	102.9	112.4	92%
5	-2'	118.6	10.7	107.1	112.4	95%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications

Optimum moisture @ 7.4%
 Specification requirement is 90% for -2' from grade and 95% for -4' from grade.



- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Reviewed By: Alan Hale
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 4963

AAR Testing Laboratory, Inc. 2125 180th Ave. NE, Park 180, Suite C101, Redmond, WA
98052 Phone: 425-881-5112 Fax: 425-881-5111

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
Bothell, WA 98012
Date: 2/28/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 10:40:00 AM

Material Data

Material Description: Fine Silty Sand w/Min.
Layer Thickness: Unknown
Source: Import/Rinker
Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2659 Moisture Count: 635

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Trench pit back fill for Pit #2910/-3' See sketch below for locations	110.1	9.5	100.5	112.4	89%
2	↓	112.6	11.4	101.1	112.4	90%
3		111.6	10.9	100.6	112.4	90%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
Optimum moisture @ 7.4%

Drawing Not to Scale

- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Alan Hale
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3039

AAR Testing Laboratory, Inc. 7126 180th Ave. NE, Park 180, Suite C101, Redmond, WA
98052 Phone: 425-881-5812 Fax: 425-881-5441

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
Bothell, WA 98012
Date: 2/28/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 11:20:00 AM

Material Data

Material Description: Fine Silty Sand w/Agg.
Layer Thickness: Unknown
Source: Import/Rinker
Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

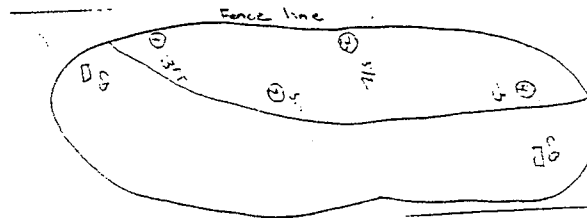
Standard Count

Density Count: 2659 Moisture Count: 635

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Trench pit back fill for Pit #263/-3' See sketch below for locations	113.7	9.6	103.7	112.4	92%
2	-3'	112.7	10	102.5	112.4	91%
3	-3 1/2'	115.8	9.8	105.5	112.4	94%
4	-3'	114.6	9.9	104.3	112.4	93%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
Optimum moisture @ 7.4%



- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Reviewed By: Alan Hale
Tested By: Norgar, Jason NC

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3096

AAR Testing Laboratory, Inc. 12619 190th Ave. N.E. Park 180, Suite C101, Redmond, WA 98072
 Phone: 425-881-5812 Fax: 425-881-5441

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 3/5/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 10:00:00 AM

Material Data

Material Description: Fine Sand w/Min. Agg.
 Layer Thickness: 1'
 Source: Rinker
 Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2289 Moisture Count: 654

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	263 South end/-1' See sketch below for locations	119.2	8.4	110	112.4	98%
2	↓	118.1	7.9	109.5	112.4	97%
3		120.2	8.3	110.9	112.4	99%

Compaction Requirements: 95 % Conformance Non Conformance

Remarks/Specifications

- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Reviewed By: Alan Hale
 Tested By: Tara Randolph Pfaf

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3097

AAR Testing Laboratory, Inc. 6925 180th Ave. N.E. Park 160, Suite C101, Redmond, WA 98052
 Phone: 425-881-5812 Fax: 425-881-5440

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
 Bothell, WA 98012
Date: 3/5/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 11:15:00 AM

Material Data

Material Description: Sand w/Min. Agg.
Layer Thickness: 1'
Source: Rinker
Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

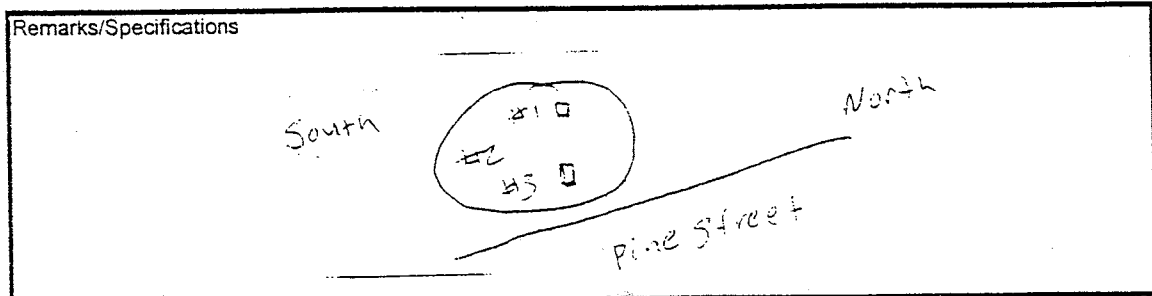
Modified Proctor ASTM D1557

Standard Count

Density Count: 2289 Moisture Count: 654

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	263 South end, last lift See sketch below for locations	119.2	9.2	109.1	112.4	97%
2	↓	116.3	9.1	106.5	112.4	95%
3		113.9	6.8	106.6	112.4	95%

Compaction Requirements: 95 % Conformance Non Conformance



- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect:

Reviewed By: Alan Haie
Tested By: Tara Randolph Pfaf

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3087

AAR Testing Laboratory, Inc. 7176 180th Avenue NE, Park 180, Suite C101, Redmond, WA 98052
 Phone: 425-881-5912 Fax: 425-881-5911

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
 Bothell, WA 98012
Date: 3/31/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 8:45:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2259 Moisture Count: 648

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	-3' 2nd Lift	117	9.5	106.8	112.4	95%
7	-3'	118.8	12	106.1	112.4	94%
8	-3 1/2'	115.5	10.1	104.8	112.4	93%
9	-3 1/2'	117.6	9.6	107.3	112.4	95%

Compaction Requirements: 92 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture is 7.6%

- | | | |
|---|---|-----------------------------|
| <input checked="" type="checkbox"/> Distribute Client | <input type="checkbox"/> Distribute Other 1 | Reviewed By: Haie, Alan |
| <input type="checkbox"/> Distribute Engineer | <input type="checkbox"/> Distribute Other 2 | Tested By: Norgar, Jason NO |
| <input type="checkbox"/> Distribute Municipality | <input type="checkbox"/> Distribute Other 3 | |
| <input type="checkbox"/> Distribute Contractor | Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted. | |
| <input type="checkbox"/> Distribute Architect | | |

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Field Density Report - Nuclear Method

Report Number 3087

AAR Testing Laboratory, Inc. 3126 130th Ave. N.E. (Park Rd.) Suite C101, Redmond, WA 98052 Phone: 253-891-5911 Fax: 253-891-5411

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 3/31/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 8:45:00 AM

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Unknown
 Source: Rinker
 Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

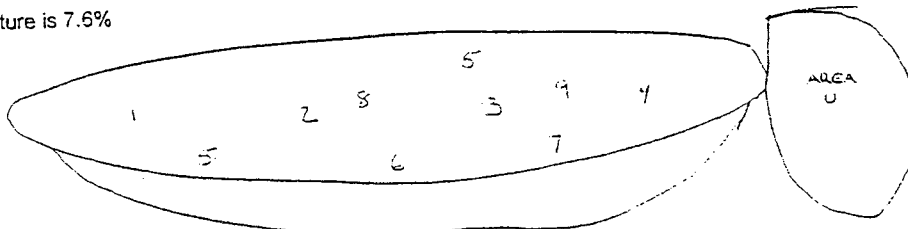
Standard Count

Density Count: 2259 Moisture Count: 648

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Pit #2912 See Sketch -4'	111.8	7.8	103.7	112.4	92%
2	-4'	113	9	103.6	112.4	92%
3	-4 1/2'	113.9	7.8	105.7	112.4	94%
4	-4'	115.8	9.2	106	112.4	94%
5	-4 1/2'	109.1	6	102.9	112.4	92%

Compaction Requirements: 92 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture is 7.6%



- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
 Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3003

A.A.R. Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA
98052 Phone 425.881.5412 Fax 425.881.5441

Client: Wyser Construction	Project Number: 03-100
Contact:	Project Name: Edmonds Unocal
Address: 17125 Sunset Road	Address: Pine Street
Bothell, WA 98012	Permit Number: NA
Date: 4/1/03	Time: 2:30:00 PM

Material Data

Material Description: Sand with aggregate
 Layer Thickness: Unknown
 Source: Rinker
 Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2276 Moisture Count: 654

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	% Compaction
6	↓	130.2	11.6	116.7	116.8	100%
7	↓	120.9	10.5	109.4	116.8	94%
8	↓	127.6	11	114.9	116.8	98%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
 Observed some oversize aggregate in the sand and believe it's the cause of 100+ compaction. Obtained a sample to have an aggregate correction factor ran. Sample was obtained from underneath the gauge from test #8. The results on this report is with the aggregate correction applied.

<input checked="" type="checkbox"/> Distribute Client <input type="checkbox"/> Distribute Engineer <input type="checkbox"/> Distribute Municipality <input type="checkbox"/> Distribute Contractor <input type="checkbox"/> Distribute Architect	<input type="checkbox"/> Distribute Other 1 <input type="checkbox"/> Distribute Other 2 <input type="checkbox"/> Distribute Other 3 Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.	Reviewed By: Hale, Alan Tested By: Randolph, Tara
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Field Density Report - Nuclear Method

Report Number 3003

A.A.R. Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 190, Suite C101 - Redmond, WA
98052 Phone 425.881.5812 Fax 425.891.5411

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
Bothell, WA 98012
Date: 4/1/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 2:30:00 PM

Material Data

Material Description: Sand with aggregate
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2276 **Moisture Count:** 654

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Test Hole 2912 2nd Lift	126.1	10.5	114.1	116.8	98%
2	↓	128	11.2	115.1	116.8	99%
3	↓	118	9.9	107.4	116.8	92%
4	↓	126.9	10.3	115	116.8	98%
5	Test Hole 2912 3rd Lift	125.3	10.8	113.1	116.8	97%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
Observed some oversize aggregate in the sand and believe it's the cause of 100+ compaction. Obtained a sample to have an aggregate correction factor ran. Sample was obtained from underneath the gauge from test #8. The results on this report is with the aggregate correction applied.

- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 4185

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5312 Fax 425.881.5411

Client: Wyser Construction

Project Number 03-100

Contact:

Project Name: Edmonds Unocal

Address: 17125 Sunset Road
Bothell, WA 98012

Address: Pine Street

Date: 4/1/03

Permit Number: NA

Time: 2:30:00 PM

Material Data

Material Description: Sand with minimal Ag
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2276 Moisture Count: 654

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Test Hole 4120, 1st lift	113.9	7.3	106.1	112.4	94%
2	↓	116.3	7.9	107.8	112.4	96%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications

- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3089

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180 Suite C101 Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client: Wyser Construction	Project Number: 03-100
Contact:	Project Name: Edmonds Unocal
Address: 17125 Sunset Road Bothell, WA 98012	Address: Pine Street
Date: 4/2/03	Permit Number: NA
	Time: 11:40:00 AM

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Unknown
 Source: Rinker
 Compaction Method: 95

Test Device

Nuclear Gauge: Troxler 3430 019274
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

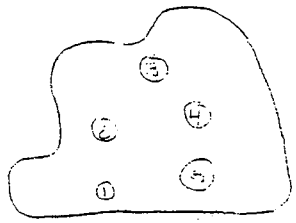
Standard Count

Density Count: 2262 Moisture Count: 646

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Final Lift for Test pit #4120	117	8.1	108.2	112.4	96%
2		116.2	9.2	106.4	112.4	95%
3		116.7	9.4	106.7	112.4	95%
4		114.6	7.6	106.5	112.4	95%
5		114.8	6.9	107.4	112.4	96%

Compaction Requirements: 95 % Conformance Non Conformance

Remarks/Specifications
 Optimum Moisture is 7.6%



Drawing Not to Scale

- | | | |
|---|---|-----------------------------|
| <input checked="" type="checkbox"/> Distribute Client | <input type="checkbox"/> Distribute Other 1 | Reviewed By: Hale, Alan |
| <input type="checkbox"/> Distribute Engineer | <input type="checkbox"/> Distribute Other 2 | Tested By: Norgar, Jason NO |
| <input type="checkbox"/> Distribute Municipality | <input type="checkbox"/> Distribute Other 3 | |
| <input type="checkbox"/> Distribute Contractor | Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted. | |
| <input type="checkbox"/> Distribute Architect | | |

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COMPACTION TEST REPORT

Curve No.: 101

Date: 4/2/03

Project No.: 03-100

Project: Unical Edmonds

Location:

Elev./Depth:

Sample No. 1

Remarks: tested/calculated by m.holtz
reviewed by a. hale

MATERIAL DESCRIPTION

Description: import drk med sand w/ 1 1/2" agg

Classifications -

USCS:

AASHTO:

Nat. Moist. =

Sp.G. = 2.64

Liquid Limit =

Plasticity Index =

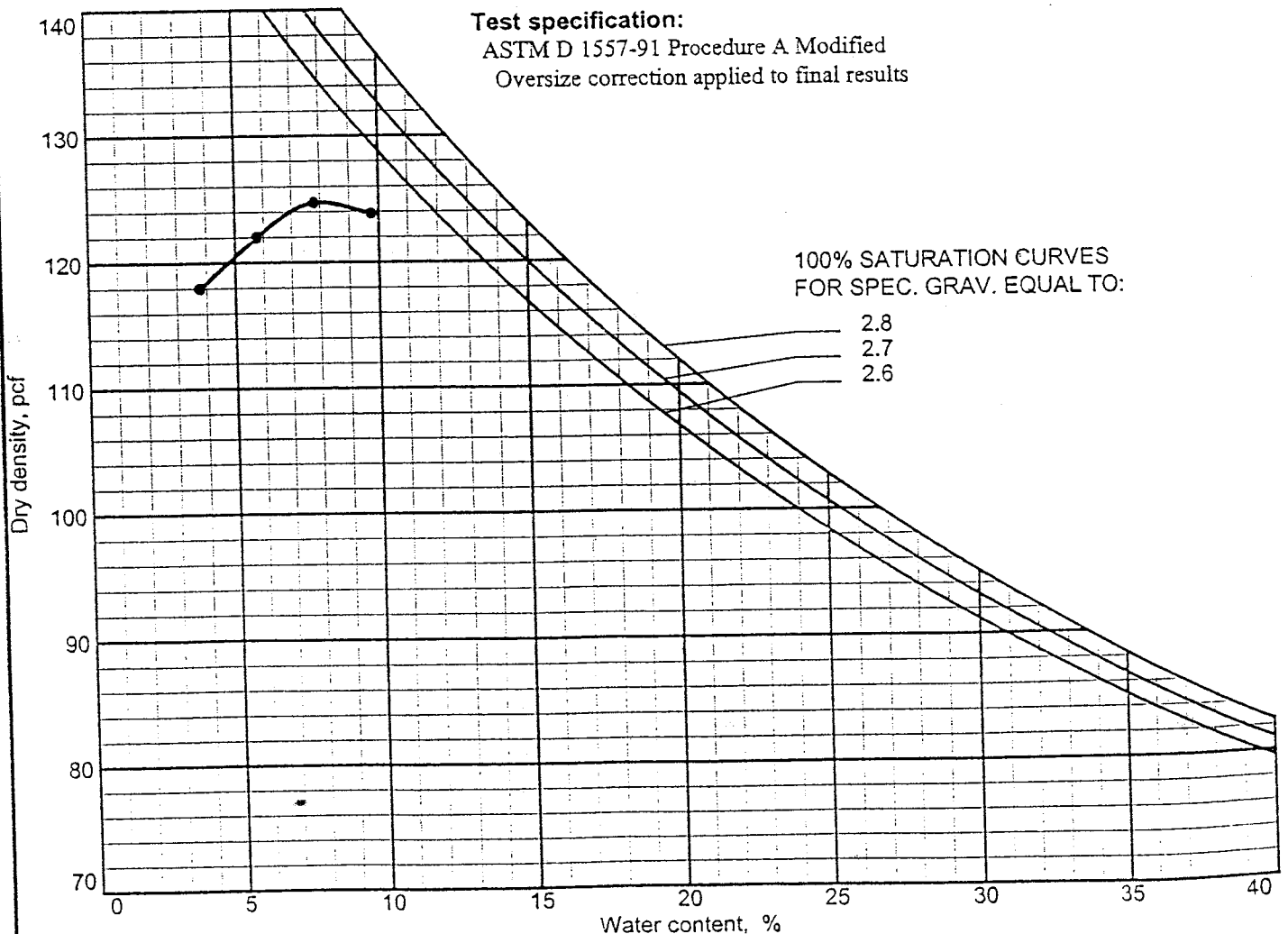
% > No.4 = 11.8 %

% < No.200 = 0.0 %

TEST RESULTS

Maximum dry density = 128.4 pcf

Optimum moisture = 7.1 %



COMPACTION TEST REPORT

Curve No.: 104

Date: 4/8/03

Project No.: 03-100

Project: Unical Edmonds

Location:

Elev./Depth:

Sample No. 1

Remarks: tested/calculated by m.holtz
reviewed by a. hale

MATERIAL DESCRIPTION

Description: fine silty sand w/ minimal agg

Classifications -

USCS:

AASHTO:

Nat. Moist. =

Sp.G. = 2.64

Liquid Limit =

Plasticity Index =

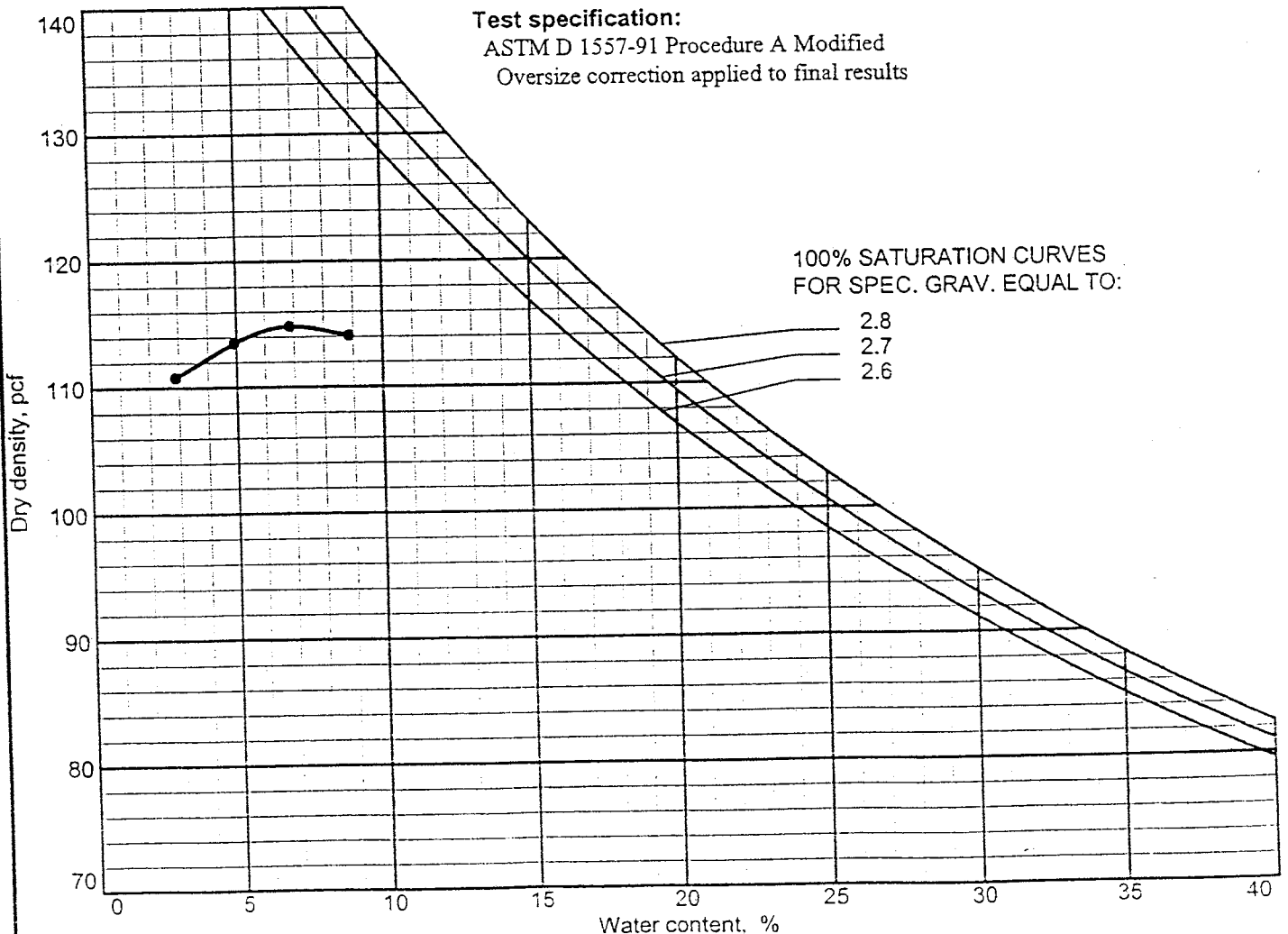
% > No.4 = 5.5 %

% < No.200 = 0.0 %

TEST RESULTS

Maximum dry density = 116.8 pcf

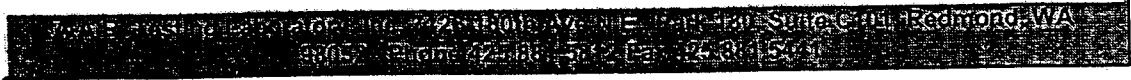
Optimum moisture = 6.5 %



Plate

Field Report

Report Number: 34644



Client: Wyser Construction
17125 Sunset Road
Bothell, WA 98012

Project Number: 03-100
Permit #: NA
Project Name: Edmonds Unocal
Address: Pine Street

Contact:

Date: 4/8/03

Time: 9:00:00 AM

Temperature:

On site for compaction for pit #218. Due to high moisture from rain, the edges and lower section is pumping. Contractor removed saturated material, put down filter fabric and 2"-4" rock, then put dryer material in. Will be ready for compaction testing tomorrow.

Distribution:

- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Architect
- Distribute Contractor
- Distribute Owner
- Distribute Other
- Distribute Other

Inspector: Norgar, Jason NOR 06 5854

Reviewed by: Kim Anderson

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Field Density Report - Nuclear Method

Report Number 3118a

AAR Testing Laboratory, Inc. 17275 150th Ave. N.E. Park 100 Suite C101, Redmond, WA
98052 Phone: 206-881-5872 Fax: 206-881-5477

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
Bothell, WA 98012
Date: 4/8/03

Project Number 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 9:30:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2661 Moisture Count: 619

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Final Lift for Pit #218	120.3	13.1	106.4	112.4	95%
2	↓	121.4	13	107.4	112.4	96%
3	↓	119.9	12.7	106.4	112.4	95%

Compaction Requirements: 95 % Conformance Non Conformance

Remarks/Specifications
Optimum moisture is 7.6%
See Sand report # 34644
Drawing Not to Scale.

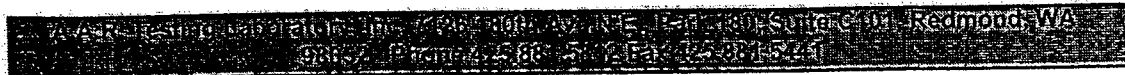
- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Report

Report Number: 34612



Client: Wyser Construction
17125 Sunset Road
Bothell, WA 98012

Project Number: 03-100
Permit #: NA
Project Name: Edmonds Unocal
Address: Pine Street

Contact:

Date: 4/9/03

Time:

Temperature:

On site for compaction for pit #218. Due to high moisture around the edge of the pit, where water had no where to drain, Contractor removed saturated material by digging out a trench approximately 6' width and 4' in depth. Filter fabric was placed with 2" to 4" rock for drainage. Due to overnight rain, moisture readings were high, ranging from 10% to 13%. However, material appeared firm and unyielding after rolling. Please refer to report #3071, for compaction results.

- Distribution:
- Distribute Client
 - Distribute Engineer
 - Distribute Municipality
 - Distribute Architect
 - Distribute Contractor
 - Distribute Owner
 - Distribute Other
 - Distribute Other

Inspector: Norgar, Jason NOR 06 5854
Reviewed by: Kim Anderson

Field Density Report - Nuclear Method

Report Number 3072

AAR Testing Laboratory, Inc. 2126 150th Ave. N.E. Park Blvd. Suite 610E, Redmond, WA
98052 Phone: 360-881-5172 Fax: 360-881-5151

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
Bothell, WA 98012
Date: 4/9/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 9:00:00 AM

Material Data

Material Description: Sand with 2'-4' aggreg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2720 **Moisture Count:** 644

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
11	↓	123.7	11.6	110.8	116.6	95%
12	↓	123.8	10.7	111.8	116.6	96%

Compaction Requirements: 92 % Conformance Non Conformance

Remarks/Specifications
Optimum moisture is 6.4%. Drawing not to scale. Tests #9 through #12 have a 95% compaction requirement.

- | | | |
|---|---|------------------------------------|
| <input checked="" type="checkbox"/> Distribute Client | <input type="checkbox"/> Distribute Other 1 | Reviewed By: Hale, Alan |
| <input type="checkbox"/> Distribute Engineer | <input type="checkbox"/> Distribute Other 2 | Tested By: Norgar, Jason NO |
| <input type="checkbox"/> Distribute Municipality | <input type="checkbox"/> Distribute Other 3 | |
| <input type="checkbox"/> Distribute Contractor | Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted. | |
| <input type="checkbox"/> Distribute Architect | | |

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Field Density Report - Nuclear Method

Report Number 3072

AAR Testing Laboratory, 1145 27th Ave NE, Everett, WA 98203, Suite C101, Redmond, WA 98052
 Phone: 425-881-5812 Fax: 425-881-5411

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 4/9/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 9:00:00 AM

Material Data

Material Description: Sand with 2'-4' aggreg
 Layer Thickness: Unknown
 Source: Rinker
 Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 019274
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

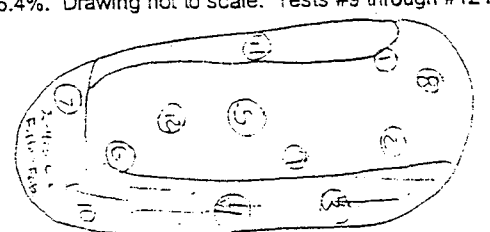
Standard Count

Density Count: 2720 Moisture Count: 644

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	% Compaction
6	Pit #218, 2nd Lift, See sketch for locations	124	11.7	111.5	116.6	96%
7	↓	122.8	10.9	110.5	116.6	95%
8		120.7	10.8	108.7	116.6	93%
9		Pit #218, 3rd Lift, See sketch for locations	123.1	11.1	110.8	116.6
10	↓	123.2	11.7	110.2	116.6	95%

Compaction Requirements: 92 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture is 6.4%. Drawing not to scale. Tests #9 through #12 have a 95% compaction requirement.



- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
 Tested By: Norgar, Jason NC

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3072

AAR Testing Laboratory, Inc. 2121 130th Ave. N.E. Box 210, Suite C101, Redmond, WA 98073
 Phone: 206-881-1211 Fax: 206-881-1112

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
 Bothell, WA 98012
Date: 4/9/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 9:00:00 AM

Material Data

Material Description: Sand with 2'-4' aggreg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device


Nuclear Gauge: Troxler 3430 019274
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

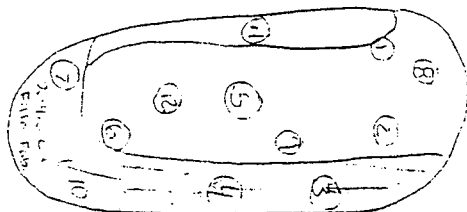
Standard Count

Density Count: 2720 Moisture Count: 644

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Pit #218, 1st lift, See Sketch for locations	121.7	10.6	110.1	116.6	94%
2		120.5	13	106.6	116.6	91%
3		119.1	11.4	106.9	116.6	92%
4		123.9	11	111.6	116.6	96%
5		121.1	12.9	107.2	116.6	92%

Compaction Requirements: 92 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture is 6.4%. Drawing not to scale. Tests #9 through #12 have a 95% compaction requirement.



- | | | |
|---|---|------------------------------------|
| <input checked="" type="checkbox"/> Distribute Client | <input type="checkbox"/> Distribute Other 1 | Reviewed By: Hale, Alan |
| <input type="checkbox"/> Distribute Engineer | <input type="checkbox"/> Distribute Other 2 | Tested By: Norgar, Jason NO |
| <input type="checkbox"/> Distribute Municipality | <input type="checkbox"/> Distribute Other 3 | |
| <input type="checkbox"/> Distribute Contractor | Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted. | |
| <input type="checkbox"/> Distribute Architect | | |

Field Density Report - Nuclear Method

Report Number 3095

AAR Testing Laboratory, Inc. 7706 15th Ave NE, Park 180, Suite C101, Redmond, WA
 98052 Phone: 425-881-5912 Fax: 425-881-5411

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
 Bothell, WA 98012
Date: 4/10/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 12:07:00 PM

Material Data

Material Description: Sand with minimal Ag
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

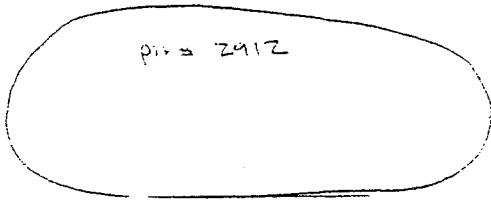
Standard Count

Density Count: 2654 Moisture Count: 636

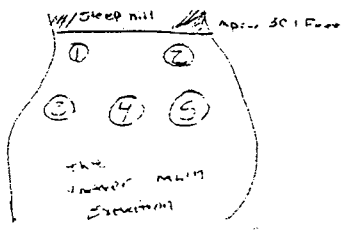
Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Water Main Trench, Pit #U, 1st Lift	112.8	9.2	103.3	112.4	92%
2		111.4	7.7	103.4	112.4	92%
3		111.1	8.2	102.7	112.4	91%
4		112.8	8.5	104	112.4	93%
5		112.8	8.6	103.9	112.4	92%

Compaction Requirements: 92 % Conformance Non Conformance

Remarks/Specifications
 Drawing not to scale.



Pit # 2912



Water Main Trench
Excavation

- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3117

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180 Suite C101 Redmond, WA
 98052 Phone 425 887 5072 Fax 425 881 5411

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
 Bothell, WA 98012
Date: 4/11/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 7:15:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2666 Moisture Count: 622

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Pit P 1st Lift See Sketch	116.7	10	105.1	112.4	94%
2		114.7	9	105.2	112.4	94%
3	Pit P 2nd Lift See Sketch	112.2	8.9	103.1	112.4	92%
4		113.6	9	104.2	112.4	93%
5	Pit P 3rd Lift See Sketch	111.8	8	103.5	112.4	92%

Compaction Requirements: 92 % Conformance Non Conformance

Remarks/Specifications
 Tests 9 and 10 have a 95% compaction requirement. Optimum moisture is 7.6%

29.12

5
4
3
2
1
Pit

- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3116

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA
 98052 Phone: 425-871-5821 Fax: 425-871-5911

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 4/11/03

Project Number 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 9:50:00 AM

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Unknown
 Source: Rinker
 Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

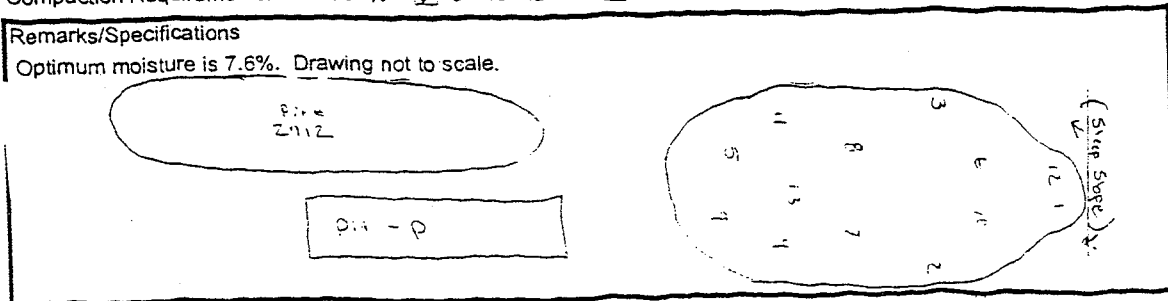
Density Count: 2666 Moisture Count: 622

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
11	↓	113.7	9.5	103.8	112.4	92%
12		112.7	7.9	104.4	112.4	93%
13		112.8	8	104.4	112.4	93%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications

Optimum moisture is 7.6%. Drawing not to scale.



- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
 Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3116

A. A. P. Testing Laboratory, Inc. 1725 180th Avenue, Park 180, Suite C101, Redmond, WA 98052, Phone: 253-891-5812, Fax: 253-891-5811

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
 Bothell, WA 98012
Date: 4/11/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 9:50:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2666 Moisture Count: 622

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	3rd Lift	114.9	8.3	106	112.4	94%
7		114.6	8.4	105.7	112.4	94%
8		112.8	7.2	105.2	112.4	94%
9		112.5	8.1	104	112.4	93%
10		4th Lift	110.9	8	102.7	112.4

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture is 7.6%. Drawing not to scale.

- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3116

AAR Testing Laboratory, Inc. 2126 180th Ave. NE, Suite 101, Redmond, WA 98052 Phone: (206) 891-6612 Fax: (206) 891-5411

Client: Wyser Construction	Project Number: 03-100
Contact:	Project Name: Edmonds Unocal
Address: 17125 Sunset Road Bothell, WA 98012	Address: Pine Street
Date: 4/11/03	Permit Number: NA
	Time: 9:50:00 AM

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Unknown
 Source: Rinker
 Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2666 Moisture Count: 622

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	2nd Lift for Water Main Pit, Area U See Sketch	112.8	9.1	103.4	112.4	92%
2		115.1	9.3	105.4	112.4	94%
3		111.8	7.7	103.8	112.4	92%
4		113.3	8	104.9	112.4	93%
5		115	8.7	105.9	112.4	94%



Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture is 7.6%. Drawing not to scale.

<input checked="" type="checkbox"/> Distribute Client	<input type="checkbox"/> Distribute Other 1	Reviewed By: Hale, Alan
<input type="checkbox"/> Distribute Engineer	<input type="checkbox"/> Distribute Other 2	Tested By: Norgar, Jason NO
<input type="checkbox"/> Distribute Municipality	<input type="checkbox"/> Distribute Other 3	
<input type="checkbox"/> Distribute Contractor	Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.	
<input type="checkbox"/> Distribute Architect		

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Field Density Report - Nuclear Method

Report Number 3117

AAR Testing Laboratory, Inc. 2126 130th Ave NE, Park 100, Suite G101, Redmond, WA 98052
 Phone: 425-881-5912 Fax: 425-881-5411

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
 Bothell, WA 98012
Date: 4/11/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 7:15:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2666 Moisture Count: 622

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6		112.7	7.9	104.4	112.4	93%
7	Pit P 4th Lift See Sketch	112.5	7.8	104.4	112.4	93%
8	↓	112.8	9.3	103.2	112.4	92%
9	Pit P Final Lift See Sketch	117.5	9	107.8	112.4	96%
10	↓	116.4	8.6	107.2	112.4	95%

Compaction Requirements: 92 % Conformance Non Conformance

Remarks/Specifications
 Tests 9 and 10 have a 95% compaction requirement. Optimum moisture is 7.6%

- | | | |
|---|---|------------------------------------|
| <input checked="" type="checkbox"/> Distribute Client | <input type="checkbox"/> Distribute Other 1 | Reviewed By: Hale, Alan |
| <input type="checkbox"/> Distribute Engineer | <input type="checkbox"/> Distribute Other 2 | Tested By: Norgar, Jason NO |
| <input type="checkbox"/> Distribute Municipality | <input type="checkbox"/> Distribute Other 3 | |
| <input type="checkbox"/> Distribute Contractor | Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted. | |
| <input type="checkbox"/> Distribute Architect | | |

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Field Density Report - Nuclear Method

Report Number 3117

A.A.R. Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425 881 5812 Fax 425 881 5441

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 4/11/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 7:15:00 AM

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Unknown
 Source: Rinker
 Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

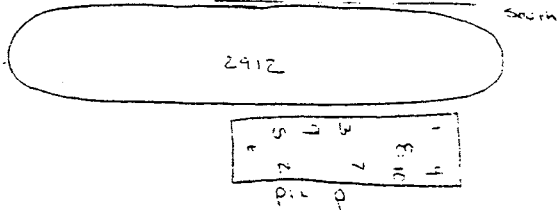
Density Count: 2666 Moisture Count: 622

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Pit P 1st Lift See Sketch	116.7	10	105.1	112.4	94%
2		114.7	9	105.2	112.4	94%
3	Pit P 2nd Lift See Sketch	112.2	8.9	103.1	112.4	92%
4		113.6	9	104.2	112.4	93%
5	Pit P 3rd Lift See Sketch	111.8	8	103.5	112.4	92%

Compaction Requirements: 92 % Conformance Non Conformance

Remarks/Specifications

Tests 9 and 10 have a 95% compaction requirement. Optimum moisture is 7.6%



- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
 Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3116

AAR Testing Laboratory, Inc. 2126 18th Avenue NE, Park Park, Suite C101, Redmond, WA 98052 Phone: 425-881-5812 Fax: 425-881-5911

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 4/11/03

Project Number 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 9:50:00 AM

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Unknown
 Source: Rinker
 Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

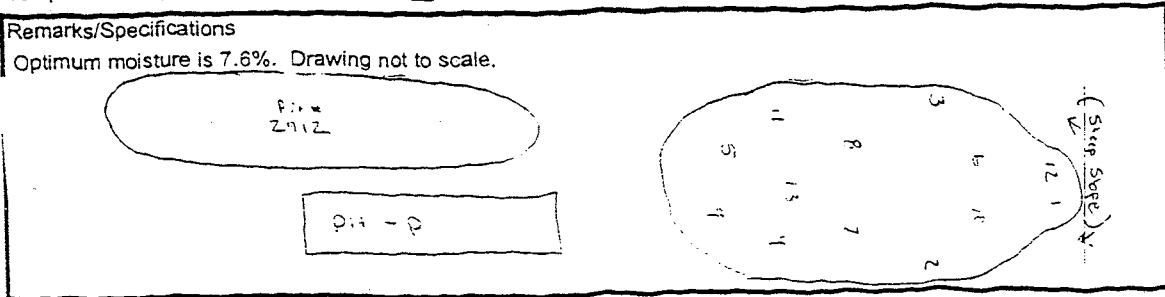
Density Count: 2666 Moisture Count: 622

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
11	↓	113.7	9.5	103.8	112.4	92%
12		112.7	7.9	104.4	112.4	93%
13		112.8	8	104.4	112.4	93%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications

Optimum moisture is 7.6%. Drawing not to scale.



- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
 Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3116

A.A.R. Testing Laboratory, Inc. 2126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone: 425-881-5812 Fax: 425-881-5441

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
 Bothell, WA 98012
Date: 4/11/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 9:50:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2666 Moisture Count: 622

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	3rd Lift	114.9	8.3	106	112.4	94%
7		114.6	8.4	105.7	112.4	94%
8		112.8	7.2	105.2	112.4	94%
9		112.5	8.1	104	112.4	93%
10		4th Lift	110.9	8	102.7	112.4

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture is 7.6%. Drawing not to scale.

- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3116

AAR Testing Laboratory, Inc. 7125 150th Ave NE, Park 390 Sunn Gl D, Redmond, WA 98052 Phone: 425-881-5872 Fax: 425-881-5801

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 4/11/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 9:50:00 AM

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Unknown
 Source: Rinker
 Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

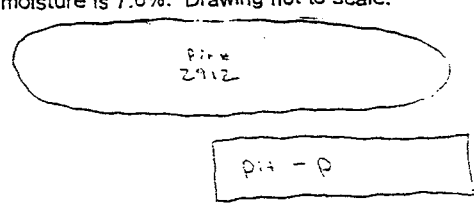
Standard Count

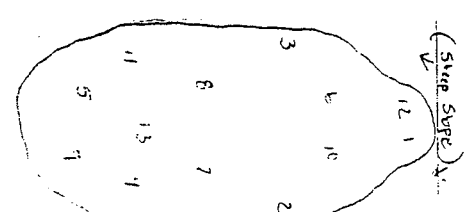
Density Count: 2665 Moisture Count: 622

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	2nd Lift for Water Main Pit, Area U See Sketch	112.8	9.1	103.4	112.4	92%
2	↓	115.1	9.3	105.4	112.4	94%
3		111.8	7.7	103.8	112.4	92%
4		113.3	8	104.9	112.4	93%
5		115	8.7	105.9	112.4	94%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture is 7.6%. Drawing not to scale.





(Site Map)

- | | | |
|---|---|-----------------------------|
| <input checked="" type="checkbox"/> Distribute Client | <input type="checkbox"/> Distribute Other 1 | Reviewed By: Hale, Alan |
| <input type="checkbox"/> Distribute Engineer | <input type="checkbox"/> Distribute Other 2 | Tested By: Norgar, Jason NO |
| <input type="checkbox"/> Distribute Municipality | <input type="checkbox"/> Distribute Other 3 | |
| <input type="checkbox"/> Distribute Contractor | Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted. | |
| <input type="checkbox"/> Distribute Architect | | |

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Field Density Report - Nuclear Method

Report Number 3119

A. A. R. Testing Laboratory, Inc. 2126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone: 425.881.5812 Fax: 425.881.5441

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 4/14/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 11:50:00 AM

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Unknown
 Source: Rinker
 Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

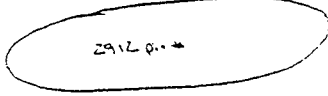
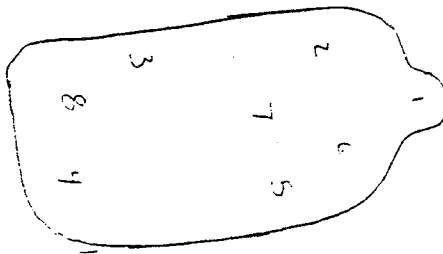
Standard Count

Density Count: 2668 Moisture Count: 598

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	6th Lift	115.1	9.6	105	112.4	93%
7		113.7	9.9	103.5	112.4	92%
8		114.2	9.8	104	112.4	93%
9		115	9.9	104.6	112.4	93%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture is 7.6%. Drawing not to scale.

- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
 Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3119

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA
 98052 Phone 425-881-5812 Fax 425-881-5441

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 4/14/03

Project Number 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 11:50:00 AM

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Unknown
 Source: Rinker
 Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2568 Moisture Count: 598

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	5th Lift for Pit U-Water Main See Sketch	114.7	8.5	105.7	112.4	94%
2		112.9	9	103.6	112.4	92%
3		114.8	8.7	105.6	112.4	94%
4		113.7	8.6	104.7	112.4	93%
5		113.5	8.4	104.7	112.4	93%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture is 7.1

- | | |
|--|--|
| <input checked="" type="checkbox"/> Distribute Client
<input type="checkbox"/> Distribute Engineer
<input type="checkbox"/> Distribute Municipality
<input type="checkbox"/> Distribute Contractor
<input type="checkbox"/> Distribute Architect | <input type="checkbox"/> Distribute Other 1
<input type="checkbox"/> Distribute Other 2
<input type="checkbox"/> Distribute Other 3
Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted. |
|--|--|

Reviewed By: Hale, Alan
 Tested By: Norgar, Jason NO

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Field Density Report - Nuclear Method

Report Number 3110

AAR Testing Laboratory, Inc. 226-180th Ave. N.E. Park 180 Suite C101 Redmond, WA 98052
 Phone: 425-891-5912 Fax: 425-891-5100

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 4/15/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 7:30:00 AM

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Unknown
 Source: Rinker
 Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

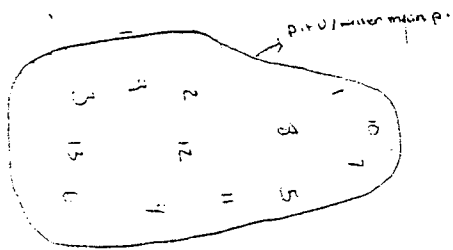
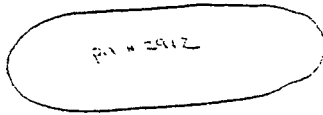
Density Count: 2641 Moisture Count: 630

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
11	↓	114.9	9.6	104.8	112.4	93%
12		114.6	8.3	105.8	112.4	94%
13		113.7	8.9	104.4	112.4	93%

Compaction Requirements: 92 % Conformance Non Conformance

Remarks/Specifications

Optimum moisture is 7.6%



- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Haie, Alan
 Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3110

AAR Testing Laboratory, Inc. 2126 180th Ave. N.E. Park 180 Suite C101 Redmond, WA
 Phone: (206) 881-5812 Fax: (206) 881-5411

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 4/15/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 7:30:00 AM

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Unknown
 Source: Rinker
 Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

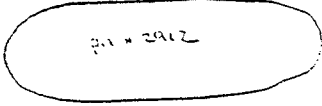
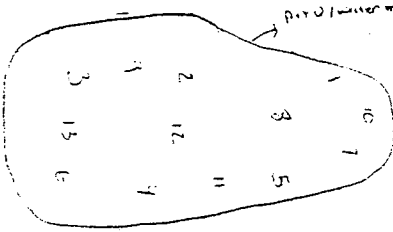
Standard Count

Density Count: 2641 Moisture Count: 630

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	8th Lift for Pit U/Water Main See Sketch	112.7	9.5	102.9	112.4	92%
7		113.6	9.4	103.8	112.4	92%
8		114	10.1	103.5	112.4	92%
9		112.5	8.9	103.3	112.4	92%
10		9th Lift for Pit U/Water Main See Sketch	115.2	11.2	103.6	112.4

Compaction Requirements: 92 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture is 7.6%

- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
 Tested By: Norgar, Jason NC

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3110

AAR Testing Laboratory, Inc. 7220 180th Ave. N.E. Park 180, Suite 6105 Redmond, WA 98052 Phone: (206) 881-5412 Fax: (206) 881-5411

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
 Bothell, WA 98012
Date: 4/15/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 7:30:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

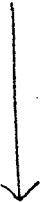
Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

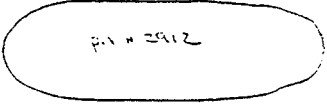
Standard Count

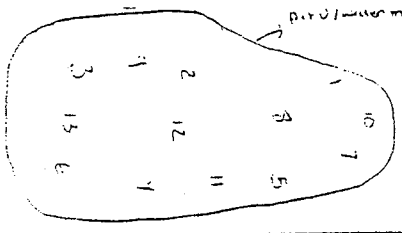
Density Count: 2641 Moisture Count: 630

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	7th Lift for Pit U/Water Main See Sketch	113.6	9	104.2	112.4	93%
2		112.7	9.1	103.3	112.4	92%
3		112.9	9.3	103.3	112.4	92%
4		114.1	10	103.7	112.4	92%
5		113.2	9	103.9	112.4	92%

Compaction Requirements: 92 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture is 7.6%





- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Reviewed By: Hale, Alan
Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 3111

A.A.R. Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180 Suite C101, Redmond, WA
98052 Phone: 425.881.5812 Fax: 425.881.5411

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
Bothell, WA 98012
Date: 4/15/03

Project Number: 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 10:30:00 AM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2641 Moisture Count: 630

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6		115.4	10.1	104.8	112.4	93%
7	4th Lift	114.9	10.2	104.2	112.4	93%
8		115.4	11.1	103.8	112.4	92%
9		115.1	9.9	104.7	112.4	93%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
Optimum moisture is 7.6%. Drawing not to scale.

Distribute Client Distribute Other 1 Reviewed By: Hale, Alan
 Distribute Engineer Distribute Other 2 Tested By: Norgar, Jason NO
 Distribute Municipality Distribute Other 3
 Distribute Contractor Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.
 Distribute Architect:

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Field Density Report - Nuclear Method

Report Number 3111

AAR Testing Laboratory, Inc. 126 180th Ave. N.E. Park Blvd. Suite C101, Redmond, WA 98052 Phone 425-881-5812 Fax 425-881-5111

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 4/15/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 10:30:00 AM

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Unknown
 Source: Rinker
 Compaction Method: Vibratory Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2641 Moisture Count: 630

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	1st Lift over filter fabric See sketch	114.2	11.4	102.5	112.4	91%
2	↓	113.7	9.7	103.6	112.4	92%
3	2nd Lift	113.9	9.2	104.3	112.4	93%
4	↓	114	9.5	104.1	112.4	93%
5	3rd Lift	113.7	9.2	104.1	112.4	93%
	↓					

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture is 7.6%. Drawing not to scale.

- | | | |
|---|---|-----------------------------|
| <input checked="" type="checkbox"/> Distribute Client | <input type="checkbox"/> Distribute Other 1 | Reviewed By: Hale, Alan |
| <input type="checkbox"/> Distribute Engineer | <input type="checkbox"/> Distribute Other 2 | Tested By: Norgar, Jason NO |
| <input type="checkbox"/> Distribute Municipality | <input type="checkbox"/> Distribute Other 3 | |
| <input type="checkbox"/> Distribute Contractor | | |
| <input type="checkbox"/> Distribute Architect | | |
- Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3192

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone: 425-881-5442 Fax: 425-881-5441

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 4/18/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 12:00:00 PM

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Unknown
 Source: Rinker
 Compaction Method: Hoe Pack

Test Device

Nuclear Gauge: Troxler 3430 21240
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2284 Moisture Count: 584

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
11	↓	115.7	10.7	104.5	112.4	93%
12		114.9	11.2	103.3	112.4	92%
13		116.6	11.1	104.9	112.4	93%
14		116.5	12.3	103.7	112.4	92%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture is 7.6%.

- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
 Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3192

AAR Testing Laboratory, Inc. 4126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA 98052 Phone 425-881-5012 Fax 425-881-5411

Client: Wyser Construction
 Contact:
 Address: 17125 Sunset Road
 Bothell, WA 98012
 Date: 4/18/03

Project Number: 03-100
 Project Name: Edmonds Unocal
 Address: Pine Street
 Permit Number: NA
 Time: 12:00:00 PM

Material Data

Material Description: Sand with minimal agg
 Layer Thickness: Unknown
 Source: Rinker
 Compaction Method: Hoe Pack

Test Device

Nuclear Gauge: Troxler 3430 21240
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2284 Moisture Count: 584

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
6	↓	112.8	11.8	100.9	112.4	90%
7		114.3	11.5	102.5	112.4	91%
8		113.9	11.3	102.3	112.4	91%
9		116.2	11.4	104.5	112.4	93%
10		116.5	10.9	105	112.4	93%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
 Optimum moisture is 7.6%.

- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Reviewed By: Hale, Alan
 Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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Field Density Report - Nuclear Method

Report Number 3192

AAR Testing Laboratory, Inc. 7126 180th Ave. N.E. Park 180, Suite C101, Redmond, WA
98052 Phone 425-881-5412 Fax 425-881-5441

Client: Wyser Construction
Contact:
Address: 17125 Sunset Road
Bothell, WA 98012
Date: 4/18/03

Project Number 03-100
Project Name: Edmonds Unocal
Address: Pine Street
Permit Number: NA
Time: 12:00:00 PM

Material Data

Material Description: Sand with minimal agg
Layer Thickness: Unknown
Source: Rinker
Compaction Method: Hoe Pack

Test Device

Nuclear Gauge: Troxler 3430 21240
Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2284 Moisture Count: 584

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Receiving Storm Catch Basin 1st Lift	114.4	10.9	103.2	112.4	92%
2	↓	115.2	11.1	103.6	112.4	92%
3	↓ 2nd Lift	115.9	10.8	104.6	112.4	93%
4	↓	115.2	12.2	102.7	112.4	91%
5	↓ 3rd Lift	113.4	11	102.2	112.4	91%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications
Optimum moisture is 7.6%.

- Distribute Client
- Distribute Engineer
- Distribute Municipality
- Distribute Contractor
- Distribute Architect
- Distribute Other 1
- Distribute Other 2
- Distribute Other 3

Reviewed By: Hale, Alan
Tested By: Randolph, Tara

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

Field Density Report - Nuclear Method

Report Number 4954

A.A.R. Testing Laboratory, Inc. 7126 180th Ave. N.E., Park 180, Suite C101, Redmond, WA 98052 Phone 425.881.5812 Fax 425.881.5441

Client: Wyser Construction	Project Number: 03-100
Contact:	Project Name: Edmonds Unical
Address: 17125 Sunset Road	Address: Pine Street
Bothell, WA 98012	Permit Number: NA
Date: 1/7/03	Time: 9:00:00 AM

Material Data

Material Description: Import pit sand
 Layer Thickness: 12" lifts, approximate
 Source: Rinker-Everett
 Compaction Method: Roller

Test Device

Nuclear Gauge: Troxler 3430 28462
 Test Methods: Soil ASTM D2922, ASTM D3017
 Direct Transmission Back Scatter

Laboratory Test Method

Modified Proctor ASTM D1557

Standard Count

Density Count: 2690 Moisture Count: 643

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	-4' from grade/See Field Report for locations	120.3	12.4	107.1	118	91%
2	-4' from grade	120	12.4	106.8	118	91%
3	-2' from grade	122.1	11.7	109.3	118	93%

Compaction Requirements: 90 % Conformance Non Conformance

Remarks/Specifications

Proctor supplied by Rinker
 See Field Report #33828 for map
 Optimum moisture @ 8.0%

- Distribute Client Distribute Other 1
- Distribute Engineer Distribute Other 2
- Distribute Municipality Distribute Other 3
- Distribute Contractor
- Distribute Architect

Reviewed By: Alan Hale
 Tested By: Norgar, Jason NO

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

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APPENDIX E
UNEXPECTED CONDITIONS AND EVENTS

UNEXPECTED CONDITIONS AND EVENTS

Greater soil volumes were removed from the upper yard than estimated during preparation of the Interim Action Report (work plan) and the Technical Specifications. This was due to highly variable subsurface conditions and contamination that was present in unanticipated areas. An extended schedule and associated weather-related problems, and storm water and soil management procedures also impacted project implementation. A summary of these conditions is presented below.

E.1 Subsurface Variability

The lateral and/or vertical extents of the TPH excavations were greater than the estimated extents in virtually all excavation areas. Excavation of TPH-contaminated soil commenced in the western-most third of the upper yard, where it became evident that subsurface conditions were highly variable. As described in Section 2 of this report, numerous additional test pits were excavated in the central and eastern basins during the remedial action, so as to observe subsurface soil variability in this part of the upper yard and re-assess labor and equipment needs for the balance of the work. Useful information was obtained with these test pits, but subsurface contamination patterns were best discerned after larger areas were excavated.

Small- and large-scale variations in stratigraphy were encountered across the upper yard. The native Transitional Beds, which consist primarily of interlayered silt and sandy silt, frequently contain thin (less than 0.5-inch) laminations distinguishable by variations in color and/or grain size, interbeds and lenses of coarser-grained (generally sandy) material, and areas in which the sandy silt and sand are interlayered very finely to create a horizon that appears “mottled” when excavated. Horizons comprised primarily of stiff, massive to laminated silt are often fractured.

Field observations during the excavation work indicated that the fractures in the stiff silt and the sandy interbeds and lenses commonly created pathways that preferentially transmitted petroleum. In addition, the silt fraction in the “mottled” silt/sand horizons often preferentially contained petroleum. As a result, very small zones of contaminated

soil were interspersed among large volumes of clean soil. The clean soil routinely had to be removed to “chase” the small zones of impacted soil.

One example of subsurface variability was TPH Area F (basin 2602/2603/2604). In this area, gray and brown mottled soil horizons were encountered frequently throughout the basin. The mottled horizons consisted of patches of siltier material (gray soil) adjacent to patches of sandier material (brown soil), with the change from silty to sandy soil occurring over 1 to 5 feet laterally and one to several inches vertically. The siltier soil contained TPH concentrations frequently above CULs, while the adjacent sandier soil was typically clean. Because of their proximity, the clean soil was routinely excavated to remove the contaminated soil.

In this same basin, a thin layer of product was found floating on a zone of perched groundwater exposed after the removal of several feet of soil. Sandy soil was exposed in the remainder of the basin, not yet excavated to the same depth. Over a period of weeks, the petroleum in the perched groundwater wicked up through the sandy soil via capillary forces. These patches of petroleum-contaminated soil ranged in size from several inches to 5 feet across, and all were less than 1/16 of an inch in thickness. Large areas of soil were repeatedly scraped to remove the patches.

Multiple phases of over-excavation and sampling occurred in Area F after the patches of petroleum-impacted soil were observed. During this time, between 2 and 8 feet of soil were removed from the floor of the Area F excavation. Several horizons of soil containing perched water were encountered during this work. A trench ranging from approximately 2.5 to 5 feet in depth was excavated and sump pumps were operated to control perched groundwater in the basin. MFA regularly monitored for the presence of floating product on the accumulated water. Discontinuous patches of product sheen were present commonly on the groundwater in the trench subsequent to excavation, but were observed with decreasing frequency as the excavation work continued. Small patches of light product sheen were observed on the water only occasionally during the weeks immediately prior to backfilling. Periodic observations of the water flowing to the storm drain system from Area F subsequent to backfilling did not indicate the presence of petroleum contamination.

MFA also regularly monitored the Area F excavation for the presence of petroleum-impacted patches of soil. Between the completion of the performance sampling in January 2003 and the start of backfilling in February 2003, no petroleum-impacted patches of soil were observed in the floor of the basin. Additionally, no petroleum-impacted patches of soil have been observed in backfill material currently present on the basin floor. MFA performed field screening to check for the presence of petroleum-impacted patches (using visual and olfactory observations and a PID) on August

21, 2003. The screening was performed systematically (screening on approximately 20-foot centers) throughout Area F. No petroleum-impacted patches were present.

In TPH Area SWL, layers of light brown, fractured silt (generally 1- to 3-feet thick) were present between thicker layers of sand and gray silt mixtures in parts of the excavation area. Petroleum-impacted water was present along the fracture zones in the light brown silt, and caused CUL exceedances in soil samples collected within the fractured silt. A large volume of clean overburden soil was excavated in order to remove the thin layers of fractured silt.

Soils in Basin 2606 consisted predominantly of very stiff laminated clayey silt, which normally acts as a permeability barrier to the downward vertical migration of petroleum. However, small fractures with slickensides (small fault zones) were observed in the laminated silt and acted as vertical pathways for the downward movement of petroleum, which accumulated in the fractures, bedding planes, and thin sandy layers in localized areas of the excavation. As these fractures were breached during the course of soil removal work, product dripped slowly into the excavation from the fractures and thin sandy layers over a period of one or more days. Soil in the excavation appeared to be clean and ready for performance sampling, and then patches of product were observed floating on accumulated rain water at the bottom of the excavation the next morning. In order to remove these minor product seeps, the basin was deepened.

In TPH Area B (basin 263), what appeared to be a stress fracture was observed in the silt unit beneath this basin floor. The fracture, which was filled with sandy soil, was approximately 3 inches wide by 12 feet deep, and extended laterally approximately 20 feet with several branches. Petroleum had reached the fracture and spread through its extent.

The examples above illustrate the subsurface variability encountered in the western and central portions of the upper yard. As noted, clean soil was routinely removed in association with the removal of localized seeps, veins, and patches of petroleum or petroleum-impacted soil in these areas. The interlayered silt and sandy silt and the gray and brown mottled soil observed in the western and central upper yard were present in the eastern part of the upper yard. However, in general, the soils exposed during the excavation work in the eastern upper yard were observed to be less variable and more coarse-grained than in the western and central portions of the upper yard.

E.2 Unanticipated Excavation Areas

The swale areas between the tank basins (Area SWL and Area K) were large soil-removal areas. Although soil impacts were known in swale Area K (location of a French drain), the actual extent of the contamination exceeded the anticipated area. A section of the French drain in Area K was unknowingly set in a sandy zone when constructed, resulting in petroleum migration both vertically and laterally over a large area. Contamination in the main swale (Area SWL) that was uncovered while chasing contamination that emanated from basin 2602/2603/2604, extended into the woods north of the main storm water drainage line.

As previously noted, an asphalt swale existed along the northern edge of the upper yard, beginning at catch basin U13 (located north of the basin 2602/2603/2604 berm) and extending to catch basin U27 (located northeast of basin 2914). The main storm water drainage line serving the upper yard (and to which U13 and U27 were connected) was located directly below this asphalt swale. The asphalt swale tract was not anticipated to be an area of contamination, based on the good condition of the asphalt swale and the lack of detected petroleum in soil samples collected near drainage structures during the RI. Contamination was uncovered beneath the asphalt swale while excavating in Area SWL. While the asphalt swale tract north of basin 2913 was not found to be contaminated, the portion along the base of Area K and along the north side of basin 3392/3393/3394 was heavily contaminated (Areas ASWL1 and ASWL2). In the tract along basin 3392/3393/3394 (ASWL2), the original, corrugated-metal storm drain pipe was overlaid by relatively new, 12-inch plastic pipe. Soil surrounding the newer/shallower line was uncontaminated. The deeper soil along the metal pipe was heavily contaminated and several thousand tons of soil were removed from along the older drainage structure.

E.3 Weather Impacts and Storm Water Management

The tonnage of excavated soil was also greater than estimated due to additional water content, which increased due to excavating contaminated soil in perched groundwater; excavating contaminated soil along established site drainage/utility corridors; soil handling/loading during periods of heavy rain; lack of consistent stockpile coverage (especially small piles in isolated areas); and storm water in soil staging areas and excavation areas. Wet basin floors and excavation bottoms had to be re-scraped several times to remove tracked contamination and/or the effects of cross-contaminated storm water run-on and run-off prior to conducting performance sampling. Removing contaminated soil in the capillary fringe at the top of perched groundwater zones

increased both the volume and tonnage of soil removed from several excavations (e.g., Area SWL).

When rain accumulated in the excavation areas, it was routinely mixed in with the soil so it could be removed from the excavation. Although pumps were used to remove large volumes of water from excavations, smaller pockets of water (less than 50 gallons) were commonly mixed in with the soil and removed using the excavator bucket. Wet soil removed from deep excavation areas after impounded water was pumped out was also disposed of as contaminated soil. Excavated soil was typically set on wet ground and picked up additional water each time it was handled. Stockpiled soil was not covered until the end of the work day, and runoff from haul roads and basin berms added a significant volume of water to soil piles. In particular, the basin 263 soil staging area (where the top of the soil pile was just below the level of the haul road) was subjected to runoff from the haul road where trucks dumping soil into the basin left deep ruts.

Wet excavation floors were typically surface-scraped prior to being sampled, and the wet soil was handled as if it was contaminated. In some cases (e.g., TPH Area F), impounded water with a petroleum sheen spread over a wide area of the basin/excavation, requiring soil to be surface-scraped from the basin/excavation floor before sampling could be performed.

The excavation of TPH-contaminated soil in Area B (basin 263) began while the basin was still in use as a staging/stockpiling area. During rain events, stockpiled soil in the basin leached water with a petroleum sheen over the rest of the basin floor. With no outlet for the water (the storm drain system no longer functioned), the petroleum-impacted water contaminated the surface soil. The basin floor required scraping in order to remove the contaminated surface soil.

E.4 Soil Management

In several excavations where direct access to trucks was not practical (e.g., the northern extents of Areas SWL, ASLW1 and ASWL2), clean overburden soil and underlying TPH-contaminated soil were stockpiled together and transferred via trackhoe bucket to areas where it could be loaded into trucks. In order for stockpiling of relatively small amounts (i.e., less than 50 cubic yards) of clean soil to have been considered practical, the soil needed to be placed in a location where it would not be in the way of further excavation work. In some cases, this more than doubled the volume of soil that would normally have been removed from the excavations if the clean soil could have been segregated and stockpiled onsite for re-use.

APPENDIX F

OFF-SITE SHIPMENTS DOCUMENTATION

Edmonds Bulk Terminal

Rinker Materials Company

Summary of Materials
Hauled off-site to
Rinker Mat'ls Company

Date	Product	Quantity (tons)	Acc Total (tons)
09/25/02	Class 3	32.22	32.22
09/26/02	Class 3	467.03	499.25
09/27/02	Class 3	723.13	1222.38
09/28/02	Class 3	959.32	2181.70
10/04/02	Class 3 ^a	940.52	3122.22
10/05/02	Class 3 ^b	1090.79	4213.01
10/08/02	Class 3	81.28	4294.29
10/09/02	Class 3 ^b	85.57	4379.86
10/10/02	Class 3	115.21	4495.07
10/11/02	Class 3 ^b	119.88	4614.95
10/14/02	Class 3 ^b	112.37	4727.32
10/15/02	Class 3 ^b	109.55	4836.87
10/16/02	Class 3 ^b	114.99	4951.86
11/25/02	Class 3	228.35	5180.21
11/26/02	Class 3	374.72	5554.93
11/27/02	Class 3	376.72	5931.65
12/02/02	Class 3	400.77	6332.42
12/03/02	Class 3	334.47	6666.89
12/04/02	Class 3	383.76	7050.65
12/05/02	Class 3	457.34	7507.99
12/06/02	Class 3	477.39	7985.38
12/09/02	Class 3	523.33	8508.71
12/10/02	Class 3	539.78	9048.49
12/11/02	Class 3	851.47	9899.96
12/12/02	Class 3	811.77	10711.73
12/13/02	Class 3	853.07	11564.80
12/16/02	Class 3	588.29	12153.09
12/17/02	Class 3	413.18	12566.27
12/18/02	Class 3	629.58	13195.85
12/19/02	Class 3	802.91	13998.76
12/20/02	Class 3	749.71	14748.47
12/23/02	Class 3	1178.27	15926.74
12/24/02	Class 3	713.92	16640.66
12/26/02	Class 3	1228.14	17868.80

12/27/02	Class 3	902.83	18771.63
01/02/03	Class 3	1071.42	19843.05
01/03/03	Class 3	450.37	20293.42
01/06/03	Class 3	924.95	21218.37
01/07/03	Class 3	552.05	21770.42
01/08/03	Class 3	322.78	22093.20
01/09/03	Class 3	522.39	22615.59
01/10/03	Class 3	693.75	23309.34
01/13/03	Class 3	1246.55	24555.89
01/14/03	Class 3	1293.88	25849.77
01/15/03	Class 3	1281.45	27131.22
01/16/03	Class 3	1252.13	28383.35
01/17/03	Class 3	1420.61	29803.96
01/20/03	Class 3	1276.14	31080.10
01/21/03	Class 3	1016.34	32096.44
01/22/03	Class 3	683.55	32779.99
01/23/03	Class 3	1074.61	33854.60
01/24/03	Class 3	1280.99	35135.59
01/27/03	Class 3	1275.59	36411.18
01/28/03	Class 3	1527.93	37939.11
01/29/03	Class 3	1153.44	39092.55
01/30/03	Class 3	1295.90	40388.45
01/31/03	Class 3	833.09	41221.54
02/03/03	Class 3	1136.44	42357.98
02/04/03	Class 3	1403.06	43761.04
02/05/03	Class 3	847.15	44608.19
02/06/03	Class 3	1432.59	46040.78
02/07/03	Class 3	1391.52	47432.30
02/10/03	Class 3	1248.45	48680.75
02/11/03	Class 3	1306.94	49987.69
02/12/03	Class 3	1302.46	51290.15
02/13/03	Class 3	1303.29	52593.44
02/14/03	Class 3	1341.56	53935.00
02/17/03	Class 3	1488.20	55423.20
02/18/03	Class 3	1533.77	56956.97
02/19/03	Class 3	1323.54	58280.51
02/20/03	Class 3	239.30	58519.81
02/21/03	Class 3	424.07	58943.88
02/24/03	Class 3	1240.73	60184.61
02/25/03	Class 3	1469.00	61653.61
02/26/03	Class 3	1418.63	63072.24
02/27/03	Class 3	1715.52	64787.76

02/28/03	Class 3	1354.60	66142.36
03/03/03	Class 3	1474.33	67616.69
03/04/03	Class 3	721.69	68338.38
03/05/03	Class 3	395.76	68734.14
03/06/03	Class 3	718.40	69452.54
03/07/03	Class 3	968.17	70420.71
03/10/03	Class 3	1474.62	71895.33
03/11/03	Class 3	838.47	72733.80
03/12/03	Class 3	1249.65	73983.45
03/13/03	Class 3	1256.17	75239.62
03/14/03	Class 3	1694.49	76934.11
Credit 1/8	Class 3	-90.64	76843.47
03/15/03	Class 3	1439.45	78282.92
03/17/03	Class 3	1480.51	79763.43
03/18/03	Class 3	1147.01	80910.44
03/19/03	Class 3	1420.76	82331.20
03/20/03	Class 3	1468.62	83799.82
03/21/03	Class 3	1463.25	85263.07
03/24/03	Class 3	1648.16	86911.23
03/25/03	Class 3	1643.55	88554.78
03/26/03	Class 3	1513.50	90068.28
03/27/03	Class 3	1398.37	91466.65
03/28/03	Class 3	1291.87	92758.52
03/31/03	Class 3	1303.26	94061.78
04/01/03	Class 3	670.08	94731.86
04/02/03	Class 3	489.17	95221.03
04/03/03	Class 3	155.13	95376.16
04/04/03	Class 3	561.42	95937.58
04/14/03	Class 3	224.20	96161.78
04/14/03	Class 3	-64.42	96097.36
04/15/03	Class 3	146.62	96243.98
04/16/03	Class 3	130.30	96374.28
04/17/03	Class 3	130.91	96505.19
05/05/03	Class 3	93.36	96598.55
05/21/03	Class 3	27.38	96625.93

- 1976.15 tons asphalt/soil
= 94,649.78 tons

Updated 6/4

Class 3 = petroleum contaminated soil

^aEst 286 cy (13 loads @ 22cy/load) x 1.2 tons/cy = 343 tons of screened asphalt/soil

^b Screened asphalt/soil

Edmonds Bulk Terminal

Rinker Materials Company

Date	Product	Quantity (tons)	Acc Total (tons)
12/16/02	2" Ballast	55.68	55.68
02/14/03	2" Ballast	58.83	114.51
07/23/02	2x4	91.96	91.96
07/24/02	2x4	120.90	212.86
07/25/02	2x4	59.85	272.71
07/26/02	2x4	92.40	365.11
09/04/02	2x4	31.40	396.51
09/17/02	2x4	31.11	427.62
10/04/02	2x4	31.18	458.80
10/10/02	2x4	30.17	488.97
11/06/02	2x4	31.56	520.53
11/25/02	2x4	154.26	674.79
11/25/02	2x4	64.23	739.02
11/27/02	2x4	62.69	801.71
12/02/02	2x4	346.57	1148.28
12/03/02	2x4	258.79	1407.07
12/04/02	2x4	249.60	1656.67
12/05/02	2x4	154.56	1811.23
12/10/02	2x4	64.97	1876.20
12/13/02	2x4	245.71	2121.91
12/16/02	2x4	403.01	2524.92
12/17/02	2x4	417.75	2942.67
12/18/02	2x4	653.13	3595.80
12/19/02	2x4	776.78	4372.58
12/20/02	2x4	738.73	5111.31
12/23/02	2x4	284.68	5395.99
01/02/03	2x4	505.90	5901.89
01/03/03	2x4	123.05	6024.94
01/10/03	2x4	29.34	6054.28
01/13/03	2x4	369.92	6424.20
01/14/03	2x4	112.04	6536.24
01/15/03	2x4	332.27	6868.51
01/17/03	2x4	61.85	6930.36
01/22/03	2x4	232.88	7163.24
01/23/03	2x4	435.26	7598.50

Imported Material

01/24/03	2x4	29.71	7628.21
02/03/03	2x4	237.17	7865.38
02/04/03	2x4	33.09	7898.47
02/06/03	2x4	273.99	8172.46
02/07/03	2x4	234.09	8406.55
02/10/03	2x4	307.40	8713.95
02/13/03	2x4	244.33	8958.28
02/14/03	2x4	347.17	9305.45
02/17/03	2x4	335.24	9640.69
02/17/03	2x4	58.96	9699.65
02/20/03	2x4	123.27	9822.92
02/21/03	2x4	280.31	10103.23
02/24/03	2x4	62.92	10166.15
02/25/03	2x4	450.00	10616.15
02/26/03	2x4	361.39	10977.54
03/10/03	2x4	209.84	11187.38
03/13/03	2x4	121.47	11308.85
03/15/03	2x4	64.82	11373.67
03/17/03	2x4	30.27	11403.94
03/20/03	2x4	62.42	11466.36
03/21/03	2x4	93.68	11560.04
03/24/03	2x4	62.70	11622.74
03/25/03	2x4	94.52	11717.26
03/26/03	2x4	28.47	11745.73
03/27/03	2x4	26.92	11772.65
05/05/03	2x4	91.67	11864.32
05/15/03	2x4	13.17	11877.49
08/28/02	4x8	62.46	62.46
08/29/02	4x8	30.99	93.45
10/03/02	4x8	31.88	125.33
11/06/02	4x8	65.44	190.77
11/26/02	4x8	308.74	499.51
11/26/02	4x8	61.44	560.95
12/13/02	4x8	120.35	681.30
08/28/02	Asphalt/Soil disp	65.12	65.12
09/04/02	Asphalt/Soil disp	95.50	160.62
09/10/02	Asphalt/Soil disp	43.20	203.82
09/17/02	Asphalt/Soil disp	79.81	283.63
09/19/02	Asphalt/Soil disp	53.54	337.17
09/20/02	Asphalt/Soil disp	56.83	394.00

Imported
Material

7
Exported
material

10/17/02	Asphalt/Soil disp	25.75	419.75
03/07/03	Conc Dump	51.62	51.62
03/10/03	Conc Dump	173.25	224.87
03/27/03	Conc Dump	-62.35	162.52
05/20/03	Conc Dump	77.94	240.46
05/21/03	Conc Dump	29.47	269.93
02/03/03	Dirt Dump	22.46	22.46
04/01/03	Asphalt/Soil disp	665.81	665.81
04/02/03	Asphalt/Soil disp	1076.54	1742.35
04/03/03	Asphalt/Soil disp	32.00	1774.35
04/10/03	Asphalt/Soil disp	362.78	2137.13
04/11/03	Asphalt/Soil disp	514.46	2651.59
04/14/03	Asphalt/Soil disp	260.34	2911.93
05/21/03	Asphalt/Soil disp	63.46	2975.39
05/27/03	Asphalt/Soil disp	164.52	3139.91
05/28/03	Asphalt/Soil disp	160.20	3300.11
05/29/03	Asphalt/Soil disp	148.35	3448.46
05/30/03	Asphalt/Soil disp	152.39	3600.85
10/30/02	Base Course	16.20	16.20
12/10/02	Base Course	31.43	47.63
12/11/02	Base Course	35.32	82.95
02/05/03	Base Course	17.49	100.44
02/14/03	Base Course	30.03	130.47
02/20/03	Base Course	59.56	190.03
05/21/03	Base Course	63.58	253.61
01/17/03	3/4" Washed	19.65	19.65
01/22/03	3/4" Washed	17.58	37.23
02/07/03	3/4" Washed	60.35	97.58
02/10/03	3/4" Washed	31.16	128.74
03/13/03	3/4" Washed	13.56	142.30
05/13/03	1 1/4" Washed	16.51	16.51
05/27/03	1 1/4" Washed	58.99	58.99
05/28/03	1 1/4" Washed	59.24	59.24
05/30/03	1 1/4" Washed	30.56	30.56
04/01/03	Washed Sand	1241.33	1241.33
04/01/03	Washed Sand	1341.73	2583.06
04/01/03	Washed Sand	1466.55	4049.61

Imported Material

Exported Material

Imported Material

Summary of Materials
Hauled off-site to
Olympic View Landfill



WASTE MANAGEMENT

OLYMPIC VIEW SANITARY LANDFILL

9300 SW Barney White RD

PORT ORCHARD WA 98367

PHONE: (360)415-2754

FAX: (360) 674-7138

Date: 05-22-2003

To: Randy

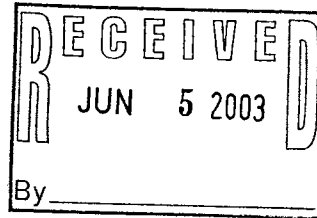
Company: Wyser Construction

Fax #: 425-486-3202

From: Sherry Rockman

Re: Tonnage July 2002 through 5-22-2003

Comments: please call if you have questions



Randy Please call me regarding
the hauling detail - do you need it
as well?

TOTAL PAGES (Including this sheet) 26

If you have any questions or do not receive all pages of this fax, please contact us at the above numbers.

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Report Print Date
RpOrgWs.rpt

5/22/03

TICKET REPORT BY PERMIT/WASTE

Page 1

Transactions from 07/01/2002 through 05/22/2003

	Date	Permit	Ticket	Waste	Yards	Units	Tons	Pretax	Tax	Amount
m	7/31/02	2002-087	219653	CNTSL	0.00	0.00	30.39	205.13	46.80	\$251.93
m	7/31/02	2002-087	219654	CNTSL	0.00	0.00	34.40	232.20	52.98	\$285.18
m	7/31/02	2002-087	219655	CNTSL	0.00	0.00	30.40	205.20	46.82	\$252.02
m	7/31/02	2002-087	219658	CNTSL	0.00	0.00	33.62	226.94	51.77	\$278.71
m	8/1/02	2002-087	219672	CNTSL	0.00	0.00	36.10	245.68	55.59	\$299.27
m	8/1/02	2002-087	219673	CNTSL	0.00	0.00	34.48	232.74	53.30	\$285.84
m	8/1/02	2002-087	219674	CNTSL	0.00	0.00	28.53	192.58	43.93	\$236.51
m	8/1/02	2002-087	219680	CNTSL	0.00	0.00	31.49	212.56	48.49	\$261.05
m	8/1/02	2002-087	219681	CNTSL	0.00	0.00	34.67	234.02	53.39	\$287.41
m	8/2/02	2002-087	219683	CNTSL	0.00	0.00	32.58	219.92	50.17	\$270.09
m	8/2/02	2002-087	219684	CNTSL	0.00	0.00	32.75	221.06	50.44	\$271.50
m	8/2/02	2002-087	219685	CNTSL	0.00	0.00	34.02	229.64	52.39	\$282.03
m	8/2/02	2002-087	219686	CNTSL	0.00	0.00	33.61	226.87	51.76	\$278.63
m	8/2/02	2002-087	219688	CNTSL	0.00	0.00	31.95	215.66	49.21	\$264.87
m	8/2/02	2002-087	219691	CNTSL	0.00	0.00	32.91	222.14	50.68	\$272.82
m	8/2/02	2002-087	219692	CNTSL	0.00	0.00	27.39	184.88	42.18	\$227.06
m	8/2/02	2002-087	219693	CNTSL	0.00	0.00	32.85	221.74	50.59	\$272.33
m	8/2/02	2002-087	219694	CNTSL	0.00	0.00	35.03	236.45	53.95	\$290.40
m	8/2/02	2002-087	219695	CNTSL	0.00	0.00	29.46	198.86	45.36	\$244.22
m	8/5/02	2002-087	219696	CNTSL	0.00	0.00	31.61	213.37	48.68	\$262.05
m	8/5/02	2002-087	219697	CNTSL	0.00	0.00	33.27	224.57	51.24	\$275.81
m	8/5/02	2002-087	219698	CNTSL	0.00	0.00	34.20	230.85	52.67	\$283.52
m	8/5/02	2002-087	219699	CNTSL	0.00	0.00	31.66	213.71	48.76	\$262.46
m	8/5/02	2002-087	219700	CNTSL	0.00	0.00	32.89	222.01	50.65	\$272.66
m	8/5/02	2002-087	219701	CNTSL	0.00	0.00	34.14	230.45	52.57	\$283.02
m	8/7/02	2002-087	219702	CNTSL	0.00	0.00	35.84	241.92	55.19	\$297.11
m	8/7/02	2002-087	219703	CNTSL	0.00	0.00	34.61	233.62	53.30	\$286.92
m	8/7/02	2002-087	219704	CNTSL	0.00	0.00	32.57	219.85	50.16	\$270.01
m	8/7/02	2002-087	219705	CNTSL	0.00	0.00	36.17	244.15	55.70	\$299.85
m	8/7/02	2002-087	219706	CNTSL	0.00	0.00	35.08	236.79	54.02	\$290.81
m	8/7/02	2002-087	219707	CNTSL	0.00	0.00	33.29	224.71	51.26	\$275.97
m	8/7/02	2002-087	219708	CNTSL	0.00	0.00	35.21	237.67	54.22	\$291.89

1,057.17

Report Print Date
RpOrgWsrpt

5/22/03

TICKET REPORT BY PERMIT/WASTE

Page 2

Transactions from 07/01/2002 through 05/22/2003

	Date	Permit	Ticket	Waste	Yards	Units	Tons	Pretax	Tax	Amount
M	8/7/02	2002-087	219709	CNTSL	0.00	0.00	33.86	228.56	52.14	\$280.70
M	8/7/02	2002-087	219712	CNTSL	0.00	0.00	32.97	222.55	50.77	\$273.32
M	8/7/02	2002-087	219713	CNTSL	0.00	0.00	35.76	241.38	55.07	\$296.45
M	8/7/02	2002-087	219715	CNTSL	0.00	0.00	33.55	226.46	51.67	\$278.13
M	8/7/02	2002-087	219722	CNTSL	0.00	0.00	34.16	230.58	52.61	\$283.19
M	8/7/02	2002-087	219725	CNTSL	0.00	0.00	35.29	238.21	54.34	\$292.55
M	8/7/02	2002-087	219726	CNTSL	0.00	0.00	31.08	209.79	47.36	\$257.65
M	8/7/02	2002-087	219727	CNTSL	0.00	0.00	30.80	207.90	47.43	\$255.33
M	8/7/02	2002-087	219729	CNTSL	0.00	0.00	35.24	237.87	54.27	\$292.14
M	8/8/02	2002-087	219731	CNTSL	0.00	0.00	33.27	224.57	51.24	\$275.81
M	8/8/02	2002-087	219732	CNTSL	0.00	0.00	33.69	227.41	51.38	\$279.29
M	8/8/02	2002-087	219733	CNTSL	0.00	0.00	31.77	214.45	48.92	\$263.37
M	8/8/02	2002-087	219735	CNTSL	0.00	0.00	34.88	235.44	53.72	\$289.16
M	8/8/02	2002-087	219749	CNTSL	0.00	0.00	34.71	234.29	53.46	\$287.75
M	8/8/02	2002-087	219750	CNTSL	0.00	0.00	33.65	227.14	51.82	\$278.96
M	8/8/02	2002-087	219751	CNTSL	0.00	0.00	36.69	247.66	56.50	\$304.16
M	8/8/02	2002-087	219755	CNTSL	0.00	0.00	35.15	237.26	54.13	\$291.39
M	8/9/02	2002-087	219758	CNTSL	0.00	0.00	34.23	231.05	52.72	\$283.77
M	8/9/02	2002-087	219760	CNTSL	0.00	0.00	34.59	233.48	53.27	\$286.75
M	8/9/02	2002-087	219761	CNTSL	0.00	0.00	31.19	210.53	48.04	\$258.57
M	8/9/02	2002-087	219762	CNTSL	0.00	0.00	34.99	236.18	53.89	\$290.07
M	8/9/02	2002-087	219766	CNTSL	0.00	0.00	34.97	236.05	53.35	\$289.90
M	8/9/02	2002-087	219768	CNTSL	0.00	0.00	31.85	214.99	49.05	\$264.04
M	8/9/02	2002-087	219770	CNTSL	0.00	0.00	33.75	227.81	51.98	\$279.79
M	8/9/02	2002-087	219771	CNTSL	0.00	0.00	34.62	233.69	53.31	\$287.00
M	8/12/02	2002-087	219775	CNTSL	0.00	0.00	33.36	225.18	51.37	\$276.55
M	8/12/02	2002-087	219776	CNTSL	0.00	0.00	33.85	228.49	52.13	\$280.62
M	8/12/02	2002-087	219779	CNTSL	0.00	0.00	29.57	199.60	45.54	\$245.14
M	8/12/02	2002-087	219780	CNTSL	0.00	0.00	33.79	228.08	52.04	\$280.12
M	8/12/02	2002-087	219785	CNTSL	0.00	0.00	32.96	222.48	50.76	\$273.24
M	8/12/02	2002-087	219786	CNTSL	0.00	0.00	33.05	223.09	50.39	\$273.98
M	8/12/02	2002-087	219787	CNTSL	0.00	0.00	37.12	250.56	57.16	\$307.72

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M	8/12/02	2002-087	219788	CNTSL	0.00	0.00	34.56	233.28	53.22	\$286.50
M	8/13/02	2002-087	219790	CNTSL	0.00	0.00	35.44	239.22	54.58	\$293.80
M	8/13/02	2002-087	219791	CNTSL	0.00	0.00	31.77	214.45	48.92	\$263.37
M	8/13/02	2002-087	219792	CNTSL	0.00	0.00	30.78	207.77	47.40	\$255.17
M	8/13/02	2002-087	219793	CNTSL	0.00	0.00	32.08	216.54	49.40	\$265.94
M	8/13/02	2002-087	219794	CNTSL	0.00	0.00	33.12	223.56	51.00	\$274.56
M	8/13/02	2002-087	219795	CNTSL	0.00	0.00	34.96	235.98	53.84	\$289.82
M	8/13/02	2002-087	219796	CNTSL	0.00	0.00	33.62	226.94	51.77	\$278.71
M	8/13/02	2002-087	219797	CNTSL	0.00	0.00	34.22	230.99	52.69	\$283.68
M	8/14/02	2002-087	219803	CNTSL	0.00	0.00	32.13	216.88	49.48	\$266.36
M	8/14/02	2002-087	219804	CNTSL	0.00	0.00	34.53	233.08	53.17	\$286.25
M	8/14/02	2002-087	219805	CNTSL	0.00	0.00	35.39	238.88	54.50	\$293.38
M	8/14/02	2002-087	219806	CNTSL	0.00	0.00	34.31	231.59	52.84	\$284.43
M	8/14/02	2002-087	219807	CNTSL	0.00	0.00	29.21	197.17	44.98	\$242.15
M	8/15/02	2002-087	219810	CNTSL	0.00	0.00	33.45	225.79	51.51	\$277.30
M	8/15/02	2002-087	219812	CNTSL	0.00	0.00	33.06	223.16	50.91	\$274.07
M	8/15/02	2002-087	219813	CNTSL	0.00	0.00	34.67	234.02	53.39	\$287.41
M	8/15/02	2002-087	219815	CNTSL	0.00	0.00	34.99	236.18	53.89	\$290.07
M	8/15/02	2002-087	219817	CNTSL	0.00	0.00	35.62	240.44	54.85	\$295.29
M	8/15/02	2002-087	219818	CNTSL	0.00	0.00	33.77	227.95	52.00	\$279.95
M	8/15/02	2002-087	219820	CNTSL	0.00	0.00	35.15	237.26	54.13	\$291.39
M	8/16/02	2002-087	219822	CNTSL	0.00	0.00	32.97	222.55	50.77	\$273.32
M	8/16/02	2002-087	219823	CNTSL	0.00	0.00	32.60	220.05	50.20	\$270.25
M	8/16/02	2002-087	219826	CNTSL	0.00	0.00	32.22	217.49	49.61	\$267.10
M	8/16/02	2002-087	219827	CNTSL	0.00	0.00	31.16	210.33	47.99	\$258.32
M	8/19/02	2002-087	219833	CNTSL	0.00	0.00	33.77	227.95	52.00	\$279.95
M	8/19/02	2002-087	219834	CNTSL	0.00	0.00	34.67	234.02	53.39	\$287.41
M	8/19/02	2002-087	219835	CNTSL	0.00	0.00	33.30	224.78	51.28	\$276.06
M	8/19/02	2002-087	219836	CNTSL	0.00	0.00	33.76	227.88	51.99	\$279.87
M	8/19/02	2002-087	219842	CNTSL	0.00	0.00	32.56	219.78	50.14	\$269.92
M	8/19/02	2002-087	219843	CNTSL	0.00	0.00	32.64	220.32	50.27	\$270.59
M	8/19/02	2002-087	219844	CNTSL	0.00	0.00	34.34	231.80	52.88	\$284.68

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M	8/19/02	2002-087	219845	CNTSL	0.00	0.00	32.47	219.17	50.01	\$269.18
M	8/20/02	2002-087	219853	CNTSL	0.00	0.00	33.67	227.27	51.85	\$279.12
M	8/20/02	2002-087	219855	CNTSL	0.00	0.00	35.34	238.55	54.42	\$292.97
M	8/20/02	2002-087	219862	CNTSL	0.00	0.00	29.12	196.56	44.84	\$241.40
M	8/23/02	2002-087	219935	CNTSL	0.00	0.00	26.07	175.97	40.15	\$216.12
M	8/23/02	2002-087	219937	CNTSL	0.00	0.00	29.60	199.80	45.58	\$245.38
M	8/26/02	2002-087	219939	CNTSL	0.00	0.00	27.12	183.06	41.76	\$224.82
M	8/26/02	2002-087	219942	CNTSL	0.00	0.00	34.51	232.94	53.15	\$286.09
M	8/26/02	2002-087	219945	CNTSL	0.00	0.00	29.69	200.41	45.72	\$246.13
M	8/26/02	2002-087	219947	CNTSL	0.00	0.00	39.88	269.19	61.42	\$330.61
M	8/26/02	2002-087	219953	CNTSL	0.00	0.00	37.81	255.22	58.22	\$313.44
M	8/26/02	2002-087	219954	CNTSL	0.00	0.00	32.36	218.43	49.83	\$268.26
M	8/27/02	2002-087	219961	CNTSL	0.00	0.00	34.25	231.19	52.74	\$283.93
M	8/27/02	2002-087	219964	CNTSL	0.00	0.00	35.54	239.90	54.73	\$294.63
M	8/27/02	2002-087	219965	CNTSL	0.00	0.00	33.30	224.78	51.28	\$276.06
M	8/27/02	2002-087	219968	CNTSL	0.00	0.00	38.67	261.02	59.55	\$320.57
M	8/27/02	2002-087	219969	CNTSL	0.00	0.00	36.09	243.61	55.58	\$299.19
M	8/27/02	2002-087	219973	CNTSL	0.00	0.00	35.34	238.55	54.42	\$292.97
M	8/28/02	2002-087	219978	CNTSL	0.00	0.00	34.54	233.15	53.19	\$286.34
M	8/28/02	2002-087	219980	CNTSL	0.00	0.00	35.81	241.72	55.14	\$296.86
M	8/28/02	2002-087	219996	CNTSL	0.00	0.00	30.63	206.75	47.17	\$253.92
M	8/29/02	2002-087	220001	CNTSL	0.00	0.00	31.40	211.95	48.36	\$260.31
M	8/29/02	2002-087	220002	CNTSL	0.00	0.00	33.72	227.61	51.93	\$279.54
M	8/29/02	2002-087	220014	CNTSL	0.00	0.00	33.52	226.26	51.62	\$277.88
M	8/29/02	2002-087	220016	CNTSL	0.00	0.00	33.38	225.32	51.40	\$276.72
M	8/30/02	2002-087	220029	CNTSL	0.00	0.00	34.38	232.07	52.94	\$285.01
M	8/30/02	2002-087	220030	CNTSL	0.00	0.00	35.16	237.33	54.15	\$291.48
TPH	9/3/02	2002-087	220049	CNTSL	0.00	0.00	36.27	244.82	55.86	\$300.68
	9/3/02	2002-087	220050	CNTSL	0.00	0.00	33.89	228.76	52.19	\$280.95
	9/3/02	2002-087	220063	CNTSL	0.00	0.00	37.56	253.53	57.84	\$311.37
	9/3/02	2002-087	220065	CNTSL	0.00	0.00	32.96	222.48	50.76	\$273.24
	9/4/02	2002-087	220082	CNTSL	0.00	0.00	34.00	229.50	52.36	\$281.86

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9/4/02	2002-087	220084	CNTSL	0.00	0.00	35.57	240.10	54.78	\$294.88
9/4/02	2002-087	220098	CNTSL	0.00	0.00	34.86	235.31	53.68	\$288.99
9/4/02	2002-087	220100	CNTSL	0.00	0.00	34.19	230.78	52.66	\$283.44
9/5/02	2002-087	220109	CNTSL	0.00	0.00	39.11	263.99	60.23	\$324.22
9/5/02	2002-087	220112	CNTSL	0.00	0.00	36.59	246.98	56.35	\$303.33
9/5/02	2002-087	220113	CNTSL	0.00	0.00	35.71	241.04	55.00	\$296.04
9/5/02	2002-087	220115	CNTSL	0.00	0.00	35.84	241.92	55.19	\$297.11
9/5/02	2002-087	220119	CNTSL	0.00	0.00	33.38	225.32	51.40	\$276.72
9/5/02	2002-087	220124	CNTSL	0.00	0.00	32.45	219.04	49.97	\$269.01
9/5/02	2002-087	220125	CNTSL	0.00	0.00	33.89	228.76	52.19	\$280.95
9/5/02	2002-087	220126	CNTSL	0.00	0.00	33.68	227.34	51.87	\$279.21
9/6/02	2002-087	220132	CNTSL	0.00	0.00	35.61	240.37	54.84	\$295.21
9/6/02	2002-087	220133	CNTSL	0.00	0.00	34.64	233.82	53.35	\$287.17
9/6/02	2002-087	220134	CNTSL	0.00	0.00	29.21	197.17	44.98	\$242.15
9/6/02	2002-087	220135	CNTSL	0.00	0.00	31.99	215.93	49.27	\$265.20
9/6/02	2002-087	220141	CNTSL	0.00	0.00	34.04	229.77	52.42	\$282.19
9/6/02	2002-087	220142	CNTSL	0.00	0.00	35.40	238.95	54.52	\$293.47
9/6/02	2002-087	220143	CNTSL	0.00	0.00	32.50	219.38	50.05	\$269.43
9/6/02	2002-087	220145	CNTSL	0.00	0.00	35.02	236.39	53.93	\$290.32
9/9/02	2002-087	220149	CNTSL	0.00	0.00	33.73	227.68	51.94	\$279.62
9/9/02	2002-087	220151	CNTSL	0.00	0.00	34.14	230.45	52.57	\$283.02
9/9/02	2002-087	220153	CNTSL	0.00	0.00	35.26	238.01	54.30	\$292.31
9/9/02	2002-087	220158	CNTSL	0.00	0.00	33.94	229.10	52.26	\$281.36
9/9/02	2002-087	220165	CNTSL	0.00	0.00	35.90	242.33	55.28	\$297.61
9/9/02	2002-087	220167	CNTSL	0.00	0.00	35.22	237.74	54.23	\$291.97
9/9/02	2002-087	220170	CNTSL	0.00	0.00	34.69	234.16	53.42	\$287.58
9/9/02	2002-087	220171	CNTSL	0.00	0.00	32.23	217.55	49.64	\$267.19
9/10/02	2002-087	220193	CNTSL	0.00	0.00	33.84	228.42	52.11	\$280.53
9/10/02	2002-087	220194	CNTSL	0.00	0.00	34.08	230.04	52.48	\$282.52
9/10/02	2002-087	220196	CNTSL	0.00	0.00	33.92	228.96	52.24	\$281.20
9/10/02	2002-087	220198	CNTSL	0.00	0.00	32.91	222.14	50.68	\$272.82
9/11/02	2002-087	220237	CNTSL	0.00	0.00	32.73	220.93	50.40	\$271.33

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PA 9/11/02	2002-087	220239	CNTSL	0.00	0.00	35.76	241.38	55.07	\$296.45
9/11/02	2002-087	220240	CNTSL	0.00	0.00	34.05	229.84	52.43	\$282.27
9/11/02	2002-087	220242	CNTSL	0.00	0.00	33.99	229.43	52.34	\$281.78
9/11/02	2002-087	220257	CNTSL	0.00	0.00	34.68	234.09	53.41	\$287.50
9/11/02	2002-087	220258	CNTSL	0.00	0.00	31.82	214.79	49.00	\$263.79
9/11/02	2002-087	220259	CNTSL	0.00	0.00	35.75	241.31	55.06	\$296.37
9/11/02	2002-087	220260	CNTSL	0.00	0.00	33.98	229.37	52.32	\$281.69
9/12/02	2002-087	220276	CNTSL	0.00	0.00	36.38	245.57	56.03	\$301.59
9/12/02	2002-087	220278	CNTSL	0.00	0.00	33.05	223.09	50.89	\$273.98
9/12/02	2002-087	220280	CNTSL	0.00	0.00	35.32	238.41	54.39	\$292.80
9/12/02	2002-087	220284	CNTSL	0.00	0.00	34.45	232.54	53.05	\$285.59
9/12/02	2002-087	220293	CNTSL	0.00	0.00	36.50	246.38	56.21	\$302.59
9/12/02	2002-087	220295	CNTSL	0.00	0.00	33.50	226.13	51.59	\$277.72
9/12/02	2002-087	220296	CNTSL	0.00	0.00	35.18	237.47	54.17	\$291.64
9/12/02	2002-087	220297	CNTSL	0.00	0.00	31.90	215.33	49.12	\$264.45
9/13/02	2002-087	220316	CNTSL	0.00	0.00	34.13	230.38	52.56	\$282.94
9/13/02	2002-087	220321	CNTSL	0.00	0.00	34.80	234.90	53.59	\$288.49
9/13/02	2002-087	220337	CNTSL	0.00	0.00	33.46	225.86	51.52	\$277.38
9/13/02	2002-087	220339	CNTSL	0.00	0.00	35.81	241.72	55.14	\$296.86
9/16/02	2002-087	220348	CNTSL	0.00	0.00	33.92	228.96	52.24	\$281.20
9/16/02	2002-087	220349	CNTSL	0.00	0.00	34.44	232.47	53.04	\$285.51
9/19/02	2002-087	220356	CNTSL	0.00	0.00	32.79	221.33	50.50	\$271.83
9/19/02	2002-087	220357	CNTSL	0.00	0.00	36.27	244.82	55.86	\$300.68
9/19/02	2002-087	220358	CNTSL	0.00	0.00	34.73	234.43	53.48	\$287.91
9/19/02	2002-087	220359	CNTSL	0.00	0.00	34.22	230.99	52.69	\$283.68
9/19/02	2002-087	220360	CNTSL	0.00	0.00	28.72	193.86	44.23	\$238.09
9/19/02	2002-087	220361	CNTSL	0.00	0.00	32.85	221.74	50.59	\$272.33
9/20/02	2002-087	220364	CNTSL	0.00	0.00	35.33	238.48	54.41	\$292.89
9/20/02	2002-087	220367	CNTSL	0.00	0.00	31.76	214.38	48.91	\$263.29
9/20/02	2002-087	220373	CNTSL	0.00	0.00	35.89	242.26	55.27	\$297.53
9/20/02	2002-087	220374	CNTSL	0.00	0.00	30.65	206.89	47.20	\$254.09
9/21/02	2002-087	220395	CNTSL	0.00	0.00	32.47	219.17	50.01	\$269.18

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DH 9/21/02	2002-087	220396	CNTSL	0.00	0.00	32.02	216.14	49.31	\$265.45
9/21/02	2002-087	220397	CNTSL	0.00	0.00	33.93	229.03	52.25	\$281.28
9/21/02	2002-087	220398	CNTSL	0.00	0.00	34.75	234.56	53.52	\$288.08
9/21/02	2002-087	220399	CNTSL	0.00	0.00	34.61	233.62	53.30	\$286.92
9/21/02	2002-087	220400	CNTSL	0.00	0.00	34.33	231.73	52.87	\$284.60
9/21/02	2002-087	220401	CNTSL	0.00	0.00	33.12	223.56	51.00	\$274.56
9/21/02	2002-087	220402	CNTSL	0.00	0.00	35.84	241.92	55.19	\$297.11
9/21/02	2002-087	220403	CNTSL	0.00	0.00	34.43	232.40	53.02	\$285.42
9/21/02	2002-087	220404	CNTSL	0.00	0.00	30.42	205.34	46.84	\$252.18
9/21/02	2002-087	220406	CNTSL	0.00	0.00	25.43	171.65	39.16	\$210.81
9/21/02	2002-087	220407	CNTSL	0.00	0.00	32.67	220.52	50.31	\$270.83
9/21/02	2002-087	220408	CNTSL	0.00	0.00	37.11	250.49	57.15	\$307.64
9/21/02	2002-087	220409	CNTSL	0.00	0.00	34.77	234.70	53.54	\$288.24
9/21/02	2002-087	220410	CNTSL	0.00	0.00	35.43	239.15	54.56	\$293.71
9/21/02	2002-087	220411	CNTSL	0.00	0.00	32.63	220.25	50.25	\$270.50
9/23/02	2002-087	220413	CNTSL	0.00	0.00	34.74	234.50	53.49	\$287.99
9/21/02	2002-087	220414	CNTSL	0.00	0.00	24.57	165.85	37.84	\$203.69
9/23/02	2002-087	220415	CNTSL	0.00	0.00	35.11	236.99	54.07	\$291.06
9/23/02	2002-087	220416	CNTSL	0.00	0.00	31.95	215.66	49.21	\$264.87
9/23/02	2002-087	220418	CNTSL	0.00	0.00	32.47	219.17	50.01	\$269.18
9/23/02	2002-087	220422	CNTSL	0.00	0.00	34.55	233.21	53.21	\$286.42
9/23/02	2002-087	220423	CNTSL	0.00	0.00	36.50	246.38	56.21	\$302.59
9/23/02	2002-087	220424	CNTSL	0.00	0.00	31.67	213.77	48.77	\$262.54
9/23/02	2002-087	220425	CNTSL	0.00	0.00	30.23	201.05	46.56	\$250.61
9/23/02	2002-087	220426	CNTSL	0.00	0.00	32.46	219.11	49.99	\$269.09
9/23/02	2002-087	220427	CNTSL	0.00	0.00	32.84	221.67	50.57	\$272.24
9/23/02	2002-087	220428	CNTSL	0.00	0.00	31.16	210.33	47.99	\$258.32
9/23/02	2002-087	220429	CNTSL	0.00	0.00	34.26	231.26	52.76	\$284.02
9/23/02	2002-087	220430	CNTSL	0.00	0.00	31.85	214.99	49.05	\$264.04
9/24/02	2002-087	220433	CNTSL	0.00	0.00	32.84	221.67	50.57	\$272.24
9/24/02	2002-087	220437	CNTSL	0.00	0.00	29.09	196.36	44.80	\$241.16
9/24/02	2002-087	220443	CNTSL	0.00	0.00	34.26	231.26	52.76	\$284.02

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TPH 9/24/02	2002-087	220444	CNTSL	0.00	0.00	31.69	213.91	48.80	\$262.71
9/24/02	2002-087	220447	CNTSL	0.00	0.00	34.03	229.70	52.41	\$282.11
9/24/02	2002-087	220451	CNTSL	0.00	0.00	33.69	227.41	51.38	\$279.29
9/24/02	2002-087	220452	CNTSL	0.00	0.00	35.63	240.50	54.37	\$295.37
9/24/02	2002-087	220453	CNTSL	0.00	0.00	25.27	170.57	38.92	\$209.49
9/24/02	2002-087	220455	CNTSL	0.00	0.00	31.21	210.67	48.06	\$258.73
9/24/02	2002-087	220457	CNTSL	0.00	0.00	33.92	228.96	52.24	\$281.20
9/24/02	2002-087	220460	CNTSL	0.00	0.00	33.23	224.30	51.18	\$275.48
10/4/02	2002-087	220656	CNTSL	0.00	0.00	29.81	201.22	45.90	\$247.12
10/4/02	2002-087	220657	CNTSL	0.00	0.00	30.45	205.54	46.89	\$252.43
10/4/02	2002-087	220658	CNTSL	0.00	0.00	28.53	192.58	43.94	\$235.68
10/4/02	2002-087	220660	CNTSL	0.00	0.00	34.08	230.04	52.48	\$281.69
10/4/02	2002-087	220661	CNTSL	0.00	0.00	31.35	211.61	48.28	\$259.89
10/4/02	2002-087	220664	CNTSL	0.00	0.00	26.75	180.56	41.20	\$221.76
10/4/02	2002-087	220665	CNTSL	0.00	0.00	27.42	185.09	42.23	\$227.06
10/5/02	2002-087	220737	CNTSL	0.00	0.00	27.81	187.72	42.82	\$230.54
10/9/02	2002-087	220913	CNTSL	0.00	0.00	32.29	217.96	49.72	\$267.68
10/9/02	2002-087	220914	CNTSL	0.00	0.00	32.28	217.89	49.71	\$267.60
10/9/02	2002-087	220915	CNTSL	0.00	0.00	30.95	208.91	47.67	\$256.58
10/9/02	2002-087	220918	CNTSL	0.00	0.00	29.27	197.57	45.08	\$242.65
10/9/02	2002-087	220921	CNTSL	0.00	0.00	31.11	209.99	47.91	\$257.90
10/10/02	2002-087	220950	CNTSL	0.00	0.00	31.68	213.84	48.79	\$262.63
10/10/02	2002-087	220952	CNTSL	0.00	0.00	33.50	226.13	51.59	\$277.72
10/10/02	2002-087	220953	CNTSL	0.00	0.00	28.39	191.63	43.72	\$235.35
10/10/02	2002-087	220954	CNTSL	0.00	0.00	32.00	216.00	49.28	\$270.34
10/10/02	2002-087	220955	CNTSL	0.00	0.00	31.15	210.26	47.97	\$258.23
10/10/02	2002-087	220957	CNTSL	0.00	0.00	31.51	212.69	48.53	\$261.22
10/10/02	2002-087	220958	CNTSL	0.00	0.00	29.84	201.42	45.95	\$247.37
10/10/02	2002-087	220959	CNTSL	0.00	0.00	30.67	207.02	47.23	\$254.25
10/10/02	2002-087	220960	CNTSL	0.00	0.00	28.80	194.40	44.35	\$238.75
10/10/02	2002-087	220962	CNTSL	0.00	0.00	31.80	214.65	48.97	\$263.62
10/10/02	2002-087	220963	CNTSL	0.00	0.00	32.07	216.47	49.39	\$265.86

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10/10/02	2002-087	220966	CNTSL	0.00	0.00	33.02	222.89	50.85	\$273.74
10/10/02	2002-087	220967	CNTSL	0.00	0.00	31.22	210.74	48.07	\$258.81
10/10/02	2002-087	220968	CNTSL	0.00	0.00	28.92	195.21	44.54	\$239.75
10/10/02	2002-087	220969	CNTSL	0.00	0.00	27.23	183.80	41.94	\$225.74
10/10/02	2002-087	220970	CNTSL	0.00	0.00	31.97	215.80	49.23	\$265.03
10/10/02	2002-087	220971	CNTSL	0.00	0.00	32.21	217.42	49.60	\$267.02
10/10/02	2002-087	220972	CNTSL	0.00	0.00	26.85	181.24	41.35	\$222.59
10/10/02	2002-087	220973	CNTSL	0.00	0.00	33.05	223.09	50.90	\$274.81
10/10/02	2002-087	220976	CNTSL	0.00	0.00	28.43	191.90	43.78	\$235.68
10/10/02	2002-087	220977	CNTSL	0.00	0.00	27.66	186.71	42.59	\$229.30
10/10/02	2002-087	220978	CNTSL	0.00	0.00	28.53	192.58	43.93	\$236.51
10/10/02	2002-087	220979	CNTSL	0.00	0.00	30.36	204.93	46.75	\$251.68
10/10/02	2002-087	220980	CNTSL	0.00	0.00	31.41	212.02	48.37	\$260.39
10/10/02	2002-087	220981	CNTSL	0.00	0.00	27.81	187.72	42.82	\$230.54
10/10/02	2002-087	220982	CNTSL	0.00	0.00	29.61	199.87	45.60	\$245.47
10/10/02	2002-087	220984	CNTSL	0.00	0.00	29.94	202.10	46.10	\$248.20
10/10/02	2002-087	220985	CNTSL	0.00	0.00	33.23	224.30	51.18	\$275.48
10/10/02	2002-087	220986	CNTSL	0.00	0.00	30.11	203.24	46.37	\$249.61
10/10/02	2002-087	220987	CNTSL	0.00	0.00	27.71	187.04	42.68	\$229.72
10/10/02	2002-087	220989	CNTSL	0.00	0.00	30.80	207.90	47.43	\$255.33
10/10/02	2002-087	220990	CNTSL	0.00	0.00	30.98	209.12	47.70	\$256.82
10/11/02	2002-087	221013	CNTSL	0.00	0.00	28.61	193.12	44.06	\$237.18
10/11/02	2002-087	221014	CNTSL	0.00	0.00	32.20	217.35	49.59	\$266.94
10/11/02	2002-087	221015	CNTSL	0.00	0.00	32.80	221.40	50.51	\$271.91
10/11/02	2002-087	221016	CNTSL	0.00	0.00	29.51	199.19	45.45	\$244.39
10/11/02	2002-087	221018	CNTSL	0.00	0.00	30.12	203.31	46.38	\$249.69
10/11/02	2002-087	221019	CNTSL	0.00	0.00	29.15	196.76	44.89	\$241.65
10/11/02	2002-087	221020	CNTSL	0.00	0.00	31.23	210.80	48.09	\$258.90
10/11/02	2002-087	221021	CNTSL	0.00	0.00	30.67	207.02	47.23	\$254.25
10/11/02	2002-087	221022	CNTSL	0.00	0.00	29.84	201.42	45.95	\$247.37
10/11/02	2002-087	221023	CNTSL	0.00	0.00	29.84	201.42	45.95	\$247.37
10/11/02	2002-087	221024	CNTSL	0.00	0.00	30.44	205.47	46.88	\$252.35

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PH 10/11/02	2002-087	221025	CNTSL	0.00	0.00	31.75	214.31	48.90	\$263.21
10/11/02	2002-087	221026	CNTSL	0.00	0.00	29.70	200.48	45.73	\$246.21
10/11/02	2002-087	221027	CNTSL	0.00	0.00	29.62	199.94	45.61	\$245.55
10/11/02	2002-087	221029	CNTSL	0.00	0.00	32.44	218.97	49.96	\$268.93
10/11/02	2002-087	221030	CNTSL	0.00	0.00	30.85	208.24	47.51	\$255.75
10/11/02	2002-087	221031	CNTSL	0.00	0.00	30.02	202.64	46.23	\$248.87
10/11/02	2002-087	221032	CNTSL	0.00	0.00	32.22	217.49	49.61	\$267.10
10/11/02	2002-087	221033	CNTSL	0.00	0.00	30.00	202.50	46.20	\$250.36
10/11/02	2002-087	221034	CNTSL	0.00	0.00	30.69	207.16	47.26	\$254.42
10/11/02	2002-087	221035	CNTSL	0.00	0.00	29.18	196.97	44.93	\$241.90
10/11/02	2002-087	221036	CNTSL	0.00	0.00	32.33	218.23	49.79	\$268.02
10/11/02	2002-087	221037	CNTSL	0.00	0.00	29.45	198.79	45.35	\$244.14
10/11/02	2002-087	221038	CNTSL	0.00	0.00	29.98	202.37	46.16	\$248.53
10/11/02	2002-087	221039	CNTSL	0.00	0.00	30.51	205.94	46.99	\$252.93
10/11/02	2002-087	221040	CNTSL	0.00	0.00	30.58	206.42	47.09	\$253.51
10/11/02	2002-087	221041	CNTSL	0.00	0.00	29.38	198.32	45.24	\$243.56
10/11/02	2002-087	221042	CNTSL	0.00	0.00	30.73	207.43	47.32	\$254.75
10/11/02	2002-087	221043	CNTSL	0.00	0.00	29.29	197.71	45.10	\$242.81
10/11/02	2002-087	221047	CNTSL	0.00	0.00	35.04	236.52	53.96	\$290.48
10/11/02	2002-087	221048	CNTSL	0.00	0.00	32.57	219.85	50.16	\$270.01
10/11/02	2002-087	221050	CNTSL	0.00	0.00	28.14	189.95	43.33	\$233.28
10/11/02	2002-087	221051	CNTSL	0.00	0.00	29.38	198.32	45.24	\$243.56
10/11/02	2002-087	221053	CNTSL	0.00	0.00	29.03	195.95	44.71	\$240.66
10/11/02	2002-087	221055	CNTSL	0.00	0.00	30.47	205.67	46.93	\$252.60
10/11/02	2002-087	221059	CNTSL	0.00	0.00	28.34	191.30	43.64	\$234.86
10/11/02	2002-087	221060	CNTSL	0.00	0.00	28.68	193.59	44.17	\$237.76
10/11/02	2002-087	221061	CNTSL	0.00	0.00	28.75	194.06	44.28	\$238.09
10/11/02	2002-087	221062	CNTSL	0.00	0.00	30.74	207.50	47.33	\$254.83
10/11/02	2002-087	221064	CNTSL	0.00	0.00	31.15	210.26	47.97	\$258.23
10/14/02	2002-087	221077	CNTSL	0.00	0.00	30.25	204.19	46.58	\$250.77
10/14/02	2002-087	221078	CNTSL	0.00	0.00	34.38	232.07	52.94	\$285.01
10/14/02	2002-087	221084	CNTSL	0.00	0.00	30.81	207.97	47.44	\$255.41

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PH	10/14/02	2002-087	221085	CNTSL	0.00	0.00	31.64	213.57	48.73	\$262.30
	10/14/02	2002-087	221086	CNTSL	0.00	0.00	31.04	209.52	47.80	\$257.32
	10/14/02	2002-087	221087	CNTSL	0.00	0.00	28.41	191.77	43.75	\$235.52
	10/14/02	2002-087	221088	CNTSL	0.00	0.00	31.83	214.85	49.02	\$263.87
	10/14/02	2002-087	221089	CNTSL	0.00	0.00	35.15	237.26	54.13	\$291.39
	10/14/02	2002-087	221090	CNTSL	0.00	0.00	32.04	216.27	49.34	\$265.61
	10/14/02	2002-087	221091	CNTSL	0.00	0.00	31.47	212.42	48.17	\$260.89
	10/14/02	2002-087	221092	CNTSL	0.00	0.00	29.11	196.49	44.83	\$241.32
	10/14/02	2002-087	221093	CNTSL	0.00	0.00	32.61	220.12	50.22	\$270.34
	10/14/02	2002-087	221096	CNTSL	0.00	0.00	31.18	210.47	48.01	\$258.48
	10/14/02	2002-087	221098	CNTSL	0.00	0.00	32.76	221.13	50.45	\$271.58
	10/14/02	2002-087	221100	CNTSL	0.00	0.00	30.22	203.99	46.53	\$250.52
	10/14/02	2002-087	221101	CNTSL	0.00	0.00	34.31	231.59	52.84	\$284.43
	10/14/02	2002-087	221102	CNTSL	0.00	0.00	30.01	202.57	46.21	\$248.78
	10/14/02	2002-087	221103	CNTSL	0.00	0.00	31.31	211.34	48.22	\$259.56
	10/14/02	2002-087	221104	CNTSL	0.00	0.00	32.81	221.47	50.52	\$271.99
	10/14/02	2002-087	221105	CNTSL	0.00	0.00	32.90	222.08	50.66	\$272.74
	10/14/02	2002-087	221106	CNTSL	0.00	0.00	28.04	189.27	43.18	\$232.45
	10/14/02	2002-087	221107	CNTSL	0.00	0.00	28.47	192.17	43.85	\$236.02
	10/14/02	2002-087	221108	CNTSL	0.00	0.00	30.27	204.32	46.52	\$250.94
	10/14/02	2002-087	221109	CNTSL	0.00	0.00	28.31	191.09	43.60	\$234.69
	10/14/02	2002-087	221110	CNTSL	0.00	0.00	30.31	204.59	46.68	\$251.27
	10/14/02	2002-087	221111	CNTSL	0.00	0.00	28.02	189.14	43.15	\$232.29
	10/14/02	2002-087	221112	CNTSL	0.00	0.00	32.20	217.35	49.59	\$266.94
	10/14/02	2002-087	221113	CNTSL	0.00	0.00	24.41	164.77	37.59	\$202.36
10/14/02	2002-087	221114	CNTSL	0.00	0.00	32.29	217.96	49.72	\$267.68	
10/14/02	2002-087	221115	CNTSL	0.00	0.00	28.66	193.46	44.13	\$237.59	
10/14/02	2002-087	221116	CNTSL	0.00	0.00	32.09	216.61	49.42	\$266.03	
10/14/02	2002-087	221120	CNTSL	0.00	0.00	29.27	197.57	45.08	\$242.65	
10/14/02	2002-087	221121	CNTSL	0.00	0.00	30.23	204.05	46.56	\$250.61	
10/14/02	2002-087	221122	CNTSL	0.00	0.00	30.04	202.77	46.26	\$249.03	
10/14/02	2002-087	221123	CNTSL	0.00	0.00	32.35	218.36	49.82	\$268.18	

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PH	10/14/02	2002-087	221130	CNTSL	0.00	0.00	27.70	186.98	42.65	\$229.63
	10/15/02	2002-087	221150	CNTSL	0.00	0.00	25.24	170.37	38.87	\$209.24
	10/15/02	2002-087	221151	CNTSL	0.00	0.00	28.42	191.84	43.76	\$235.60
	10/15/02	2002-087	221152	CNTSL	0.00	0.00	28.24	190.62	43.49	\$234.11
	10/15/02	2002-087	221153	CNTSL	0.00	0.00	28.52	192.51	43.92	\$236.43
	10/15/02	2002-087	221154	CNTSL	0.00	0.00	33.28	224.64	51.25	\$275.89
	10/15/02	2002-087	221155	CNTSL	0.00	0.00	30.50	205.88	46.97	\$252.85
	10/15/02	2002-087	221156	CNTSL	0.00	0.00	27.29	184.21	42.02	\$226.23
	10/15/02	2002-087	221157	CNTSL	0.00	0.00	28.13	189.88	45.32	\$233.20
	10/15/02	2002-087	221177	CNTSL	0.00	0.00	29.74	200.75	45.79	\$246.54
	10/16/02	2002-087	221187	CNTSL	0.00	0.00	28.84	194.67	44.41	\$239.08
	10/16/02	2002-087	221188	CNTSL	0.00	0.00	30.92	208.71	47.62	\$256.33
	10/16/02	2002-087	221189	CNTSL	0.00	0.00	24.35	164.36	37.50	\$201.86
	10/16/02	2002-087	221190	CNTSL	0.00	0.00	30.68	207.09	47.25	\$254.34
	10/16/02	2002-087	221191	CNTSL	0.00	0.00	30.91	208.64	47.60	\$256.24
	10/16/02	2002-087	221193	CNTSL	0.00	0.00	28.77	194.20	44.30	\$238.50
	10/16/02	2002-087	221194	CNTSL	0.00	0.00	29.65	200.14	45.66	\$245.80
	10/16/02	2002-087	221209	CNTSL	0.00	0.00	32.00	216.00	49.28	\$265.28
	10/16/02	2002-087	221210	CNTSL	0.00	0.00	30.46	205.61	46.90	\$252.51
	10/16/02	2002-087	221211	CNTSL	0.00	0.00	29.43	198.65	45.32	\$243.97
	10/16/02	2002-087	221212	CNTSL	0.00	0.00	29.92	201.96	46.08	\$248.04
	10/16/02	2002-087	221213	CNTSL	0.00	0.00	31.67	213.77	48.77	\$262.54
	10/16/02	2002-087	221214	CNTSL	0.00	0.00	28.39	191.63	43.72	\$235.35
	10/16/02	2002-087	221215	CNTSL	0.00	0.00	28.62	193.19	44.07	\$237.26
	10/16/02	2002-087	221216	CNTSL	0.00	0.00	29.08	196.29	44.78	\$241.07
	10/16/02	2002-087	221229	CNTSL	0.00	0.00	29.94	202.10	46.10	\$248.20
	10/16/02	2002-087	221230	CNTSL	0.00	0.00	27.28	184.14	42.01	\$226.15
	10/16/02	2002-087	221237	CNTSL	0.00	0.00	28.84	194.67	44.41	\$239.08
	10/16/02	2002-087	221238	CNTSL	0.00	0.00	28.70	193.73	44.19	\$237.92
	10/16/02	2002-087	221239	CNTSL	0.00	0.00	29.58	199.67	45.55	\$245.22
	10/16/02	2002-087	221240	CNTSL	0.00	0.00	28.27	190.82	43.54	\$234.36
✓	10/16/02	2002-087	221241	CNTSL	0.00	0.00	27.84	187.92	42.87	\$230.79

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PH 10/16/02	2002-087	221242	CNTSL	0.00	0.00	27.83	187.85	42.36	\$230.71
10/17/02	2002-087	221275	CNTSL	0.00	0.00	28.12	189.81	43.30	\$233.11
10/17/02	2002-087	221276	CNTSL	0.00	0.00	27.58	186.17	42.47	\$228.64
10/17/02	2002-087	221277	CNTSL	0.00	0.00	31.56	213.03	48.60	\$261.63
10/17/02	2002-087	221282	CNTSL	0.00	0.00	31.36	211.68	48.29	\$259.97
10/17/02	2002-087	221283	CNTSL	0.00	0.00	31.73	214.18	48.86	\$263.04
10/17/02	2002-087	221284	CNTSL	0.00	0.00	29.98	202.37	46.16	\$248.53
10/17/02	2002-087	221285	CNTSL	0.00	0.00	28.34	191.30	43.64	\$234.94
10/17/02	2002-087	221286	CNTSL	0.00	0.00	30.44	205.47	46.38	\$252.35
10/17/02	2002-087	221300	CNTSL	0.00	0.00	26.89	181.51	41.41	\$222.92
10/17/02	2002-087	221301	CNTSL	0.00	0.00	26.93	181.78	41.47	\$223.25
10/17/02	2002-087	221302	CNTSL	0.00	0.00	27.00	182.25	41.38	\$223.83
10/17/02	2002-087	221304	CNTSL	0.00	0.00	30.50	205.88	46.97	\$252.85
10/17/02	2002-087	221305	CNTSL	0.00	0.00	29.76	200.88	45.83	\$246.71
10/17/02	2002-087	221309	CNTSL	0.00	0.00	26.96	181.98	41.52	\$223.50
10/17/02	2002-087	221310	CNTSL	0.00	0.00	30.23	204.05	46.56	\$250.61
10/17/02	2002-087	221311	CNTSL	0.00	0.00	32.48	219.24	50.02	\$269.26
10/18/02	2002-087	221381	CNTSL	0.00	0.00	27.90	188.33	42.96	\$231.29
10/18/02	2002-087	221383	CNTSL	0.00	0.00	27.32	184.41	42.07	\$226.48
10/18/02	2002-087	221385	CNTSL	0.00	0.00	37.64	254.07	57.97	\$312.04
10/18/02	2002-087	221386	CNTSL	0.00	0.00	25.88	174.69	39.36	\$214.55
10/18/02	2002-087	221387	CNTSL	0.00	0.00	29.06	196.16	44.75	\$240.91
10/18/02	2002-087	221388	CNTSL	0.00	0.00	28.97	195.55	44.61	\$240.16
10/18/02	2002-087	221389	CNTSL	0.00	0.00	29.38	198.32	45.24	\$243.56
10/18/02	2002-087	221391	CNTSL	0.00	0.00	27.19	183.53	41.38	\$225.41
10/18/02	2002-087	221394	CNTSL	0.00	0.00	31.42	212.09	48.38	\$260.47
10/18/02	2002-087	221395	CNTSL	0.00	0.00	26.44	178.47	40.72	\$219.19
10/18/02	2002-087	221396	CNTSL	0.00	0.00	28.98	195.62	44.62	\$240.24
10/18/02	2002-087	221399	CNTSL	0.00	0.00	28.49	192.31	43.37	\$236.18
10/18/02	2002-087	221400	CNTSL	0.00	0.00	26.33	177.73	40.55	\$218.28
10/18/02	2002-087	221401	CNTSL	0.00	0.00	29.87	201.62	46.00	\$247.62
10/18/02	2002-087	221402	CNTSL	0.00	0.00	28.42	191.84	43.76	\$235.60

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PH	10/18/02	2002-087	221403	CNTSL	0.00	0.00	31.06	209.66	47.33	\$257.49
	10/18/02	2002-087	221404	CNTSL	0.00	0.00	31.13	210.13	47.94	\$258.07
	10/21/02	2002-087	221433	CNTSL	0.00	0.00	31.58	213.17	48.53	\$261.80
	10/21/02	2002-087	221434	CNTSL	0.00	0.00	28.29	190.96	43.56	\$234.52
	10/21/02	2002-087	221435	CNTSL	0.00	0.00	26.72	180.36	41.15	\$221.51
	10/21/02	2002-087	221436	CNTSL	0.00	0.00	28.57	192.85	44.00	\$236.85
	10/21/02	2002-087	221437	CNTSL	0.00	0.00	27.09	182.86	41.72	\$224.58
	10/21/02	2002-087	221438	CNTSL	0.00	0.00	29.79	201.08	45.88	\$246.96
	10/21/02	2002-087	221439	CNTSL	0.00	0.00	28.37	191.50	43.69	\$235.19
	10/21/02	2002-087	221441	CNTSL	0.00	0.00	27.74	187.25	42.71	\$229.96
	10/21/02	2002-087	221442	CNTSL	0.00	0.00	33.12	223.56	51.00	\$274.56
	10/21/02	2002-087	221443	CNTSL	0.00	0.00	29.78	201.02	45.86	\$246.88
	10/21/02	2002-087	221452	CNTSL	0.00	0.00	35.85	241.99	55.21	\$297.20
	10/21/02	2002-087	221461	CNTSL	0.00	0.00	35.94	242.60	55.34	\$297.94
	10/21/02	2002-087	221465	CNTSL	0.00	0.00	29.44	198.72	45.34	\$244.06
	10/21/02	2002-087	221466	CNTSL	0.00	0.00	30.85	208.24	47.51	\$255.75
	10/21/02	2002-087	221470	CNTSL	0.00	0.00	30.44	205.47	46.88	\$252.35
	10/21/02	2002-087	221473	CNTSL	0.00	0.00	30.64	206.82	47.19	\$254.01
	10/21/02	2002-087	221474	CNTSL	0.00	0.00	29.78	201.02	45.86	\$246.88
	10/21/02	2002-087	221475	CNTSL	0.00	0.00	31.66	213.71	48.76	\$262.46
	10/21/02	2002-087	221479	CNTSL	0.00	0.00	32.88	221.94	50.64	\$272.58
	10/22/02	2002-087	221491	CNTSL	0.00	0.00	31.58	213.17	48.63	\$261.80
	10/22/02	2002-087	221507	CNTSL	0.00	0.00	28.87	194.87	44.46	\$239.33
	10/22/02	2002-087	221508	CNTSL	0.00	0.00	30.46	205.61	46.90	\$252.51
	10/22/02	2002-087	221509	CNTSL	0.00	0.00	31.24	210.87	48.11	\$258.98
	10/22/02	2002-087	221512	CNTSL	0.00	0.00	30.26	201.26	46.60	\$250.86
	10/22/02	2002-087	221513	CNTSL	0.00	0.00	27.76	187.38	42.75	\$230.13
	10/22/02	2002-087	221514	CNTSL	0.00	0.00	28.16	190.08	43.37	\$233.45
	10/22/02	2002-087	221515	CNTSL	0.00	0.00	27.61	186.37	42.52	\$228.89
	10/22/02	2002-087	221517	CNTSL	0.00	0.00	26.60	179.55	40.96	\$220.51
	10/22/02	2002-087	221518	CNTSL	0.00	0.00	25.27	170.57	38.92	\$209.49
	10/22/02	2002-087	221524	CNTSL	0.00	0.00	29.52	199.26	45.46	\$244.72

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10/22/02	2002-087	221530	CNTSL	0.00	0.00	30.54	206.15	47.03	\$253.18
10/22/02	2002-087	221531	CNTSL	0.00	0.00	32.69	220.66	50.34	\$271.00
10/22/02	2002-087	221532	CNTSL	0.00	0.00	30.39	205.13	46.80	\$251.93
10/22/02	2002-087	221535	CNTSL	0.00	0.00	27.23	183.80	41.94	\$225.74
10/22/02	2002-087	221538	CNTSL	0.00	0.00	33.31	224.84	51.30	\$276.14
10/22/02	2002-087	221539	CNTSL	0.00	0.00	31.07	209.72	47.85	\$257.57
10/22/02	2002-087	221540	CNTSL	0.00	0.00	30.94	208.85	47.64	\$256.49
10/22/02	2002-087	221541	CNTSL	0.00	0.00	30.18	203.72	46.47	\$250.19
10/22/02	2002-087	221542	CNTSL	0.00	0.00	31.79	214.58	48.96	\$263.54
10/23/02	2002-087	221557	CNTSL	0.00	0.00	28.24	190.62	43.49	\$234.11
10/23/02	2002-087	221563	CNTSL	0.00	0.00	32.27	217.82	49.70	\$267.52
10/23/02	2002-087	221564	CNTSL	0.00	0.00	29.12	196.56	44.84	\$241.40
10/23/02	2002-087	221565	CNTSL	0.00	0.00	29.83	201.35	45.94	\$247.29
10/23/02	2002-087	221566	CNTSL	0.00	0.00	30.22	203.99	46.53	\$250.52
10/23/02	2002-087	221567	CNTSL	0.00	0.00	31.80	214.65	48.97	\$263.62
10/23/02	2002-087	221568	CNTSL	0.00	0.00	34.53	233.08	53.17	\$286.25
10/23/02	2002-087	221569	CNTSL	0.00	0.00	31.68	213.84	48.79	\$262.63
10/23/02	2002-087	221570	CNTSL	0.00	0.00	33.66	227.21	51.33	\$279.04
10/23/02	2002-087	221573	CNTSL	0.00	0.00	29.03	195.95	44.71	\$240.66
10/23/02	2002-087	221581	CNTSL	0.00	0.00	27.93	188.53	43.01	\$231.54
10/23/02	2002-087	221583	CNTSL	0.00	0.00	30.54	206.15	47.03	\$253.18
10/23/02	2002-087	221584	CNTSL	0.00	0.00	27.92	188.46	43.00	\$231.46
10/23/02	2002-087	221586	CNTSL	0.00	0.00	27.13	183.13	41.78	\$224.91
10/23/02	2002-087	221587	CNTSL	0.00	0.00	30.63	206.75	47.17	\$253.92
10/23/02	2002-087	221588	CNTSL	0.00	0.00	30.72	207.36	47.31	\$254.67
10/23/02	2002-087	221590	CNTSL	0.00	0.00	35.83	241.85	55.18	\$297.03
10/24/02	2002-087	221600	CNTSL	0.00	0.00	30.61	206.62	47.14	\$253.76
10/24/02	2002-087	221601	CNTSL	0.00	0.00	33.08	223.29	50.94	\$274.23
10/24/02	2002-087	221605	CNTSL	0.00	0.00	32.02	216.14	49.31	\$265.45
10/24/02	2002-087	221606	CNTSL	0.00	0.00	33.51	226.19	51.61	\$277.80
10/24/02	2002-087	221607	CNTSL	0.00	0.00	30.29	204.46	46.64	\$251.10
10/24/02	2002-087	221608	CNTSL	0.00	0.00	31.97	215.80	49.23	\$265.03



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10/24/02	2002-087	221609	CNTSL	0.00	0.00	31.90	215.33	49.12	\$264.45
10/24/02	2002-087	221610	CNTSL	0.00	0.00	30.86	208.31	47.52	\$255.83
10/24/02	2002-087	221611	CNTSL	0.00	0.00	29.68	200.34	45.71	\$246.05
10/24/02	2002-087	221612	CNTSL	0.00	0.00	30.04	202.77	46.26	\$249.03
10/24/02	2002-087	221619	CNTSL	0.00	0.00	31.34	211.55	48.26	\$259.81
10/24/02	2002-087	221634	CNTSL	0.00	0.00	30.13	203.38	46.40	\$249.78
10/24/02	2002-087	221635	CNTSL	0.00	0.00	29.75	200.81	45.82	\$246.63
10/24/02	2002-087	221636	CNTSL	0.00	0.00	28.16	190.08	43.37	\$233.45
10/24/02	2002-087	221637	CNTSL	0.00	0.00	28.69	193.66	44.18	\$237.84
10/24/02	2002-087	221638	CNTSL	0.00	0.00	28.42	191.84	43.76	\$235.60
10/24/02	2002-087	221639	CNTSL	0.00	0.00	30.64	206.82	47.19	\$254.01
10/24/02	2002-087	221640	CNTSL	0.00	0.00	31.06	209.66	47.33	\$257.49
10/24/02	2002-087	221641	CNTSL	0.00	0.00	29.33	197.98	45.17	\$243.15
10/25/02	2002-087	221653	CNTSL	0.00	0.00	29.56	199.53	45.52	\$245.05
10/25/02	2002-087	221654	CNTSL	0.00	0.00	31.48	212.49	48.18	\$260.97
10/25/02	2002-087	221658	CNTSL	0.00	0.00	29.64	200.07	45.55	\$245.72
10/25/02	2002-087	221659	CNTSL	0.00	0.00	30.71	207.29	47.30	\$254.59
10/25/02	2002-087	221661	CNTSL	0.00	0.00	29.92	201.96	46.38	\$248.04
10/25/02	2002-087	221662	CNTSL	0.00	0.00	31.39	211.88	48.34	\$260.22
10/25/02	2002-087	221664	CNTSL	0.00	0.00	31.38	211.82	48.32	\$260.14
10/25/02	2002-087	221669	CNTSL	0.00	0.00	30.17	203.65	46.46	\$250.11
10/25/02	2002-087	221670	CNTSL	0.00	0.00	27.00	182.25	41.58	\$223.83
10/25/02	2002-087	221671	CNTSL	0.00	0.00	28.08	189.54	43.24	\$232.78
10/25/02	2002-087	221673	CNTSL	0.00	0.00	28.62	193.19	44.07	\$237.26
10/25/02	2002-087	221674	CNTSL	0.00	0.00	26.12	176.31	40.22	\$216.53
10/25/02	2002-087	221675	CNTSL	0.00	0.00	29.05	196.09	44.73	\$240.82
10/25/02	2002-087	221678	CNTSL	0.00	0.00	29.21	197.17	44.08	\$242.15
10/28/02	2002-087	221701	CNTSL	0.00	0.00	34.20	230.85	52.57	\$283.52
10/28/02	2002-087	221702	CNTSL	0.00	0.00	29.01	195.82	44.57	\$240.49
10/28/02	2002-087	221703	CNTSL	0.00	0.00	28.22	190.49	43.15	\$233.94
10/28/02	2002-087	221704	CNTSL	0.00	0.00	30.12	203.31	46.38	\$249.69
10/28/02	2002-087	221706	CNTSL	0.00	0.00	29.89	201.76	46.03	\$247.79

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10/28/02	2002-087	221707	CNTSL	0.00	0.00	29.83	201.35	45.94	\$247.29
10/28/02	2002-087	221708	CNTSL	0.00	0.00	27.91	188.39	42.98	\$231.37
10/28/02	2002-087	221709	CNTSL	0.00	0.00	29.71	200.54	45.76	\$246.30
10/28/02	2002-087	221713	CNTSL	0.00	0.00	27.64	186.57	42.57	\$229.14
10/28/02	2002-087	221714	CNTSL	0.00	0.00	29.89	201.76	46.03	\$247.79
10/28/02	2002-087	221716	CNTSL	0.00	0.00	29.88	201.69	46.02	\$247.71
10/28/02	2002-087	221718	CNTSL	0.00	0.00	30.48	205.74	46.94	\$252.68
10/28/02	2002-087	221719	CNTSL	0.00	0.00	31.43	212.15	48.40	\$260.55
10/28/02	2002-087	221720	CNTSL	0.00	0.00	27.94	188.60	43.02	\$231.62
10/28/02	2002-087	221723	CNTSL	0.00	0.00	29.42	198.59	45.30	\$243.89
10/28/02	2002-087	221724	CNTSL	0.00	0.00	31.61	213.37	48.58	\$262.05
10/29/02	2002-087	221730	CNTSL	0.00	0.00	30.07	202.97	46.31	\$249.28
10/29/02	2002-087	221731	CNTSL	0.00	0.00	29.73	200.68	45.78	\$246.46
10/29/02	2002-087	221732	CNTSL	0.00	0.00	33.50	226.13	51.59	\$277.72
10/29/02	2002-087	221735	CNTSL	0.00	0.00	32.21	217.42	49.30	\$267.02
10/29/02	2002-087	221736	CNTSL	0.00	0.00	30.19	203.78	46.50	\$250.28
10/29/02	2002-087	221737	CNTSL	0.00	0.00	29.23	197.30	45.02	\$242.32
10/29/02	2002-087	221738	CNTSL	0.00	0.00	31.47	212.42	48.47	\$260.89
10/29/02	2002-087	221739	CNTSL	0.00	0.00	28.87	194.87	44.16	\$239.33
10/29/02	2002-087	221740	CNTSL	0.00	0.00	29.59	199.73	45.57	\$245.30
10/29/02	2002-087	221744	CNTSL	0.00	0.00	28.17	190.15	43.38	\$233.53
10/29/02	2002-087	221745	CNTSL	0.00	0.00	29.76	200.88	45.33	\$246.71
10/29/02	2002-087	221746	CNTSL	0.00	0.00	28.30	191.03	43.38	\$234.61
10/29/02	2002-087	221749	CNTSL	0.00	0.00	30.85	208.24	47.51	\$255.75
10/29/02	2002-087	221750	CNTSL	0.00	0.00	27.85	187.99	42.39	\$230.88
10/29/02	2002-087	221751	CNTSL	0.00	0.00	28.57	192.85	44.00	\$236.85
10/30/02	2002-087	221758	CNTSL	0.00	0.00	30.79	207.83	47.42	\$255.25
10/30/02	2002-087	221764	CNTSL	0.00	0.00	27.55	185.96	42.43	\$228.39
10/30/02	2002-087	221765	CNTSL	0.00	0.00	26.65	179.89	41.04	\$220.93
10/30/02	2002-087	221767	CNTSL	0.00	0.00	30.76	207.63	47.37	\$255.00
10/30/02	2002-087	221768	CNTSL	0.00	0.00	29.42	198.59	45.30	\$243.89
10/30/02	2002-087	221769	CNTSL	0.00	0.00	26.91	181.64	41.44	\$223.08

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10/30/02	2002-087	221770	CNTSL	0.00	0.00	27.55	184.61	42.12	\$226.73
10/30/02	2002-087	221771	CNTSL	0.00	0.00	28.65	193.39	44.12	\$237.51
10/30/02	2002-087	221772	CNTSL	0.00	0.00	30.22	203.99	46.53	\$250.52
10/30/02	2002-087	221776	CNTSL	0.00	0.00	27.73	187.18	42.70	\$229.88
10/30/02	2002-087	221777	CNTSL	0.00	0.00	26.49	178.81	40.79	\$219.60
10/30/02	2002-087	221782	CNTSL	0.00	0.00	23.65	159.64	36.42	\$196.06
10/30/02	2002-087	221783	CNTSL	0.00	0.00	26.61	179.62	40.98	\$220.60
10/30/02	2002-087	221785	CNTSL	0.00	0.00	25.26	170.51	38.90	\$209.41
10/30/02	2002-087	221786	CNTSL	0.00	0.00	27.36	184.68	42.13	\$226.81
10/30/02	2002-087	221787	CNTSL	0.00	0.00	28.99	195.68	44.65	\$240.33
10/30/02	2002-087	221788	CNTSL	0.00	0.00	26.76	180.63	41.21	\$221.84
10/30/02	2002-087	221789	CNTSL	0.00	0.00	27.90	188.33	42.96	\$231.29
10/30/02	2002-087	221798	CNTSL	0.00	0.00	25.97	175.30	39.99	\$215.29
10/31/02	2002-087	221801	CNTSL	0.00	0.00	31.34	211.55	48.20	\$259.81
10/31/02	2002-087	221803	CNTSL	0.00	0.00	30.02	202.64	46.25	\$248.87
10/31/02	2002-087	221805	CNTSL	0.00	0.00	28.14	189.95	43.31	\$233.28
10/31/02	2002-087	221806	CNTSL	0.00	0.00	27.59	186.23	42.49	\$228.72
10/31/02	2002-087	221807	CNTSL	0.00	0.00	28.39	191.63	43.71	\$235.35
10/31/02	2002-087	221809	CNTSL	0.00	0.00	29.57	199.60	45.54	\$245.14
10/31/02	2002-087	221811	CNTSL	0.00	0.00	27.30	184.28	42.04	\$226.32
10/31/02	2002-087	221812	CNTSL	0.00	0.00	28.74	194.00	44.23	\$238.25
10/31/02	2002-087	221813	CNTSL	0.00	0.00	28.00	189.00	43.12	\$232.12
10/31/02	2002-087	221814	CNTSL	0.00	0.00	29.87	201.62	46.00	\$247.62
10/31/02	2002-087	221815	CNTSL	0.00	0.00	26.65	179.89	41.04	\$220.93
10/31/02	2002-087	221816	CNTSL	0.00	0.00	28.63	193.25	44.09	\$237.34
10/31/02	2002-087	221817	CNTSL	0.00	0.00	30.75	207.56	47.56	\$254.92
10/31/02	2002-087	221818	CNTSL	0.00	0.00	28.16	190.08	43.57	\$233.45
10/31/02	2002-087	221819	CNTSL	0.00	0.00	25.91	174.89	39.90	\$214.79
10/31/02	2002-087	221829	CNTSL	0.00	0.00	25.39	171.38	39.00	\$210.48
11/1/02	2002-087	221837	CNTSL	0.00	0.00	27.15	183.26	41.31	\$225.07
11/1/02	2002-087	221839	CNTSL	0.00	0.00	27.72	187.11	42.59	\$229.80
11/1/02	2002-087	221840	CNTSL	0.00	0.00	26.30	177.53	40.50	\$218.03

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11/1/02	2002-087	221841	CNTSL	0.00	0.00	29.15	196.76	44.89	\$241.65
11/1/02	2002-087	221842	CNTSL	0.00	0.00	29.99	202.43	46.19	\$248.62
11/1/02	2002-087	221845	CNTSL	0.00	0.00	23.24	156.87	35.79	\$192.66
11/1/02	2002-087	221852	CNTSL	0.00	0.00	29.71	200.54	45.76	\$246.30
11/1/02	2002-087	221863	CNTSL	0.00	0.00	31.90	215.33	49.12	\$264.45
11/1/02	2002-087	221864	CNTSL	0.00	0.00	30.04	202.77	46.26	\$249.03
11/1/02	2002-087	221865	CNTSL	0.00	0.00	30.19	203.78	46.50	\$250.28
11/1/02	2002-087	221866	CNTSL	0.00	0.00	29.56	199.53	45.52	\$245.05
11/1/02	2002-087	221868	CNTSL	0.00	0.00	29.20	197.10	44.97	\$242.07
11/4/02	2002-087	221870	CNTSL	0.00	0.00	29.47	198.92	45.39	\$244.31
11/4/02	2002-087	221871	CNTSL	0.00	0.00	30.25	204.19	46.58	\$250.77
11/4/02	2002-087	221874	CNTSL	0.00	0.00	33.11	223.49	50.99	\$274.48
11/4/02	2002-087	221875	CNTSL	0.00	0.00	31.93	215.53	49.17	\$264.70
11/4/02	2002-087	221876	CNTSL	0.00	0.00	29.68	200.34	45.77	\$246.05
11/4/02	2002-087	221877	CNTSL	0.00	0.00	30.99	209.18	47.77	\$256.91
11/4/02	2002-087	221878	CNTSL	0.00	0.00	29.03	195.95	44.77	\$240.66
11/4/02	2002-087	221879	CNTSL	0.00	0.00	29.02	195.89	44.69	\$240.58
11/4/02	2002-087	221880	CNTSL	0.00	0.00	25.39	171.38	39.10	\$210.48
11/4/02	2002-087	221881	CNTSL	0.00	0.00	32.16	217.08	49.53	\$266.61
11/4/02	2002-087	221882	CNTSL	0.00	0.00	26.90	181.58	41.41	\$223.00
11/4/02	2002-087	221883	CNTSL	0.00	0.00	28.99	195.68	44.65	\$240.33
11/4/02	2002-087	221884	CNTSL	0.00	0.00	27.65	186.64	42.53	\$229.22
11/4/02	2002-087	221885	CNTSL	0.00	0.00	28.42	191.84	43.75	\$235.60
11/5/02	2002-087	221907	CNTSL	0.00	0.00	28.20	190.35	43.43	\$233.78
11/5/02	2002-087	221909	CNTSL	0.00	0.00	30.79	207.83	47.42	\$255.25
11/5/02	2002-087	221912	CNTSL	0.00	0.00	28.32	191.16	43.61	\$234.77
11/5/02	2002-087	221913	CNTSL	0.00	0.00	33.53	226.33	51.64	\$277.96
11/5/02	2002-087	221914	CNTSL	0.00	0.00	28.30	191.03	43.58	\$234.61
11/5/02	2002-087	221915	CNTSL	0.00	0.00	31.04	209.52	47.80	\$257.32
11/5/02	2002-087	221919	CNTSL	0.00	0.00	32.87	221.87	50.62	\$272.49
11/5/02	2002-087	221921	CNTSL	0.00	0.00	31.63	213.50	48.71	\$262.21
11/5/02	2002-087	221929	CNTSL	0.00	0.00	31.57	213.10	48.62	\$261.72

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PH 11/5/02	2002-087	221930	CNTSL	0.00	0.00	29.50	199.13	45.43	\$244.56
11/5/02	2002-087	221932	CNTSL	0.00	0.00	29.17	196.90	44.92	\$241.82
11/5/02	2002-087	221933	CNTSL	0.00	0.00	27.65	186.64	42.58	\$229.22
11/5/02	2002-087	221934	CNTSL	0.00	0.00	30.31	204.59	46.68	\$251.27
11/5/02	2002-087	221936	CNTSL	0.00	0.00	28.75	194.06	44.28	\$238.34
11/5/02	2002-087	221940	CNTSL	0.00	0.00	28.58	192.92	44.01	\$236.93
11/5/02	2002-087	221941	CNTSL	0.00	0.00	29.52	199.26	45.46	\$244.72
11/6/02	2002-087	221960	CNTSL	0.00	0.00	26.61	179.62	40.98	\$220.60
11/6/02	2002-087	221961	CNTSL	0.00	0.00	29.06	196.16	44.75	\$240.91
11/6/02	2002-087	221967	CNTSL	0.00	0.00	24.86	167.81	38.28	\$206.09
11/6/02	2002-087	221968	CNTSL	0.00	0.00	24.99	168.68	38.49	\$207.17
11/6/02	2002-087	221969	CNTSL	0.00	0.00	27.87	188.12	42.92	\$231.04
11/6/02	2002-087	221972	CNTSL	0.00	0.00	27.59	186.23	42.49	\$228.72
11/6/02	2002-087	221981	CNTSL	0.00	0.00	27.87	188.12	42.92	\$231.04
11/6/02	2002-087	221983	CNTSL	0.00	0.00	25.16	169.83	38.75	\$208.58
11/6/02	2002-087	221984	CNTSL	0.00	0.00	25.82	174.29	39.70	\$214.05
11/7/02	2002-087	221989	CNTSL	0.00	0.00	24.42	164.84	37.60	\$202.44
11/7/02	2002-087	221990	CNTSL	0.00	0.00	30.41	205.27	46.81	\$252.10
11/7/02	2002-087	221994	CNTSL	0.00	0.00	27.66	186.71	42.59	\$229.30
11/7/02	2002-087	221997	CNTSL	0.00	0.00	27.24	183.87	41.96	\$225.82
11/7/02	2002-087	221998	CNTSL	0.00	0.00	26.65	179.89	41.04	\$220.93
11/7/02	2002-087	221999	CNTSL	0.00	0.00	25.53	172.33	39.31	\$211.64
11/7/02	2002-087	222000	CNTSL	0.00	0.00	24.20	163.35	37.27	\$200.62
11/7/02	2002-087	222003	CNTSL	0.00	0.00	24.20	163.35	37.27	\$200.62
11/7/02	2002-087	222011	CNTSL	0.00	0.00	32.38	218.57	49.85	\$268.43
11/7/02	2002-087	222012	CNTSL	0.00	0.00	29.51	199.19	45.45	\$244.64
11/7/02	2002-087	222013	CNTSL	0.00	0.00	29.40	198.45	45.23	\$243.73
11/7/02	2002-087	222014	CNTSL	0.00	0.00	32.13	216.88	49.48	\$266.36
11/7/02	2002-087	222015	CNTSL	0.00	0.00	28.16	190.08	43.37	\$233.45
11/7/02	2002-087	222016	CNTSL	0.00	0.00	27.22	183.74	41.91	\$225.65
11/7/02	2002-087	222017	CNTSL	0.00	0.00	28.42	191.84	43.76	\$235.60
11/8/02	2002-087	222022	CNTSL	0.00	0.00	28.91	195.14	44.52	\$239.66

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PH 11/8/02	2002-087	222025	CNTSL	0.00	0.00	28.47	192.17	43.85	\$236.02
11/8/02	2002-087	222026	CNTSL	0.00	0.00	28.51	192.44	43.91	\$236.35
11/8/02	2002-087	222029	CNTSL	0.00	0.00	29.67	200.27	45.69	\$245.96
11/8/02	2002-087	222030	CNTSL	0.00	0.00	28.50	192.38	43.89	\$236.27
11/8/02	2002-087	222031	CNTSL	0.00	0.00	32.15	217.01	49.51	\$266.52
11/8/02	2002-087	222033	CNTSL	0.00	0.00	32.76	221.13	50.45	\$271.58
11/8/02	2002-087	222034	CNTSL	0.00	0.00	27.78	187.52	42.78	\$230.30
11/8/02	2002-087	222036	CNTSL	0.00	0.00	29.22	197.24	44.99	\$242.23
11/8/02	2002-087	222052	CNTSL	0.00	0.00	30.58	206.42	47.09	\$253.51
11/8/02	2002-087	222056	CNTSL	0.00	0.00	29.39	198.38	45.20	\$243.64
11/8/02	2002-087	222057	CNTSL	0.00	0.00	29.69	200.41	45.72	\$246.13
11/8/02	2002-087	222059	CNTSL	0.00	0.00	26.50	178.88	40.81	\$219.69
11/8/02	2002-087	222061	CNTSL	0.00	0.00	27.88	188.19	42.90	\$231.13
11/8/02	2002-087	222064	CNTSL	0.00	0.00	30.68	207.09	47.25	\$254.34
11/8/02	2002-087	222065	CNTSL	0.00	0.00	26.83	181.10	41.30	\$222.42
11/8/02	2002-087	222067	CNTSL	0.00	0.00	30.29	204.46	46.64	\$251.10
11/8/02	2002-087	222068	CNTSL	0.00	0.00	29.76	200.88	45.83	\$246.71
11/13/02	2002-087	222106	CNTSL	0.00	0.00	26.78	180.77	41.24	\$222.01
11/13/02	2002-087	222107	CNTSL	0.00	0.00	25.93	175.03	39.93	\$214.96
11/13/02	2002-087	222108	CNTSL	0.00	0.00	29.84	201.42	45.95	\$247.37
11/13/02	2002-087	222109	CNTSL	0.00	0.00	29.49	199.06	45.41	\$244.47
PH 11/13/02	2002-087	222110	CNTSL	0.00	0.00	26.32	177.66	40.53	\$218.19
M 3/4/03	2002-087	222986	CNTSL	0.00	0.00	23.30	157.28	35.88	\$193.16
3/4/03	2002-087	222988	CNTSL	0.00	0.00	28.19	190.28	43.42	\$233.70
3/4/03	2002-087	222989	CNTSL	0.00	0.00	26.18	176.72	40.31	\$217.03
3/4/03	2002-087	222990	CNTSL	0.00	0.00	24.21	163.42	37.28	\$200.70
3/4/03	2002-087	222991	CNTSL	0.00	0.00	21.80	147.15	33.27	\$180.72
3/4/03	2002-087	222992	CNTSL	0.00	0.00	27.20	183.60	41.19	\$225.49
3/4/03	2002-087	222993	CNTSL	0.00	0.00	25.94	175.10	39.94	\$215.04
3/4/03	2002-087	222994	CNTSL	0.00	0.00	25.48	171.99	39.24	\$211.23
3/4/03	2002-087	222995	CNTSL	0.00	0.00	25.62	172.94	39.45	\$212.39
M 3/4/03	2002-087	222996	CNTSL	0.00	0.00	22.68	153.09	34.73	\$188.02

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3/4/03	2002-087	222997	CNTSL	0.00	0.00	24.23	163.55	37.32	\$200.87
3/4/03	2002-087	222998	CNTSL	0.00	0.00	17.17	115.90	26.44	\$142.34
3/5/03	2002-087	222999	CNTSL	0.00	0.00	29.31	197.84	45.14	\$242.98
3/5/03	2002-087	223000	CNTSL	0.00	0.00	28.93	195.28	44.55	\$239.83
3/5/03	2002-087	223001	CNTSL	0.00	0.00	27.58	186.17	42.47	\$228.64
3/5/03	2002-087	223002	CNTSL	0.00	0.00	21.80	147.15	33.57	\$180.72
3/5/03	2002-087	223003	CNTSL	0.00	0.00	24.61	166.12	37.90	\$204.02
3/5/03	2002-087	223004	CNTSL	0.00	0.00	26.05	175.84	40.11	\$215.95
3/5/03	2002-087	223005	CNTSL	0.00	0.00	23.96	161.73	36.90	\$198.63
3/5/03	2002-087	223006	CNTSL	0.00	0.00	23.36	157.68	35.97	\$193.65
3/5/03	2002-087	223007	CNTSL	0.00	0.00	26.13	176.38	40.24	\$216.62
3/5/03	2002-087	223008	CNTSL	0.00	0.00	25.94	175.10	39.94	\$215.04
3/5/03	2002-087	223009	CNTSL	0.00	0.00	21.45	144.79	33.00	\$177.82
3/6/03	2002-087	223011	CNTSL	0.00	0.00	27.35	184.61	42.10	\$226.73
3/6/03	2002-087	223012	CNTSL	0.00	0.00	34.78	234.77	53.56	\$288.33
3/6/03	2002-087	223013	CNTSL	0.00	0.00	34.30	231.53	52.81	\$284.35
3/6/03	2002-087	223014	CNTSL	0.00	0.00	26.35	177.86	40.53	\$218.44
3/6/03	2002-087	223015	CNTSL	0.00	0.00	28.14	189.95	43.33	\$233.28
3/6/03	2002-087	223016	CNTSL	0.00	0.00	31.85	214.99	49.05	\$264.04
3/6/03	2002-087	223017	CNTSL	0.00	0.00	29.41	198.52	45.29	\$243.81
3/6/03	2002-087	223018	CNTSL	0.00	0.00	28.21	190.42	43.44	\$233.86
3/6/03	2002-087	223019	CNTSL	0.00	0.00	26.67	180.02	41.07	\$221.09
3/6/03	2002-087	223020	CNTSL	0.00	0.00	26.10	176.18	40.19	\$216.37
3/7/03	2002-087	223023	CNTSL	0.00	0.00	31.21	210.67	48.06	\$258.73
3/7/03	2002-087	223024	CNTSL	0.00	0.00	32.25	217.69	49.66	\$267.35
3/7/03	2002-087	223025	CNTSL	0.00	0.00	30.29	204.46	46.04	\$251.10
3/7/03	2002-087	223026	CNTSL	0.00	0.00	30.22	203.99	46.53	\$250.52
3/7/03	2002-087	223027	CNTSL	0.00	0.00	28.92	195.21	44.54	\$239.75
3/7/03	2002-087	223028	CNTSL	0.00	0.00	30.96	208.98	47.68	\$256.66
3/7/03	2002-087	223029	CNTSL	0.00	0.00	27.19	183.53	41.88	\$225.41
3/7/03	2002-087	223030	CNTSL	0.00	0.00	31.55	212.96	48.59	\$261.55
3/7/03	2002-087	223031	CNTSL	0.00	0.00	27.26	184.01	41.08	\$225.99

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3/7/03	2002-087	223032	CNTSL	0.00	0.00	32.07	216.47	49.39	\$265.86
3/7/03	2002-087	223033	CNTSL	0.00	0.00	32.50	219.38	50.05	\$269.43
3/10/03	2002-087	223043	CNTSL	0.00	0.00	31.40	211.95	48.36	\$260.31
3/11/03	2002-087	223045	CNTSL	0.00	0.00	26.27	177.32	40.46	\$217.78
3/11/03	2002-087	223046	CNTSL	0.00	0.00	32.08	216.54	49.40	\$265.94
3/11/03	2002-087	223047	CNTSL	0.00	0.00	32.56	219.78	50.14	\$269.92
3/11/03	2002-087	223048	CNTSL	0.00	0.00	31.43	212.15	48.40	\$260.55
3/11/03	2002-087	223049	CNTSL	0.00	0.00	28.60	193.05	44.04	\$237.09
3/11/03	2002-087	223050	CNTSL	0.00	0.00	33.03	222.95	50.87	\$273.82
3/11/03	2002-087	223051	CNTSL	0.00	0.00	32.88	221.94	50.64	\$272.58
3/11/03	2002-087	223052	CNTSL	0.00	0.00	28.77	194.20	44.30	\$238.50
3/11/03	2002-087	223053	CNTSL	0.00	0.00	29.51	199.19	45.45	\$244.64
3/11/03	2002-087	223054	CNTSL	0.00	0.00	30.94	208.85	47.64	\$256.49
3/11/03	2002-087	223055	CNTSL	0.00	0.00	32.49	219.31	50.03	\$269.34
3/12/03	2002-087	223056	CNTSL	0.00	0.00	25.96	175.23	39.93	\$215.21
3/12/03	2002-087	223057	CNTSL	0.00	0.00	25.91	174.89	39.93	\$214.79
3/12/03	2002-087	223058	CNTSL	0.00	0.00	27.12	183.06	41.76	\$224.82
3/12/03	2002-087	223059	CNTSL	0.00	0.00	28.76	194.13	44.29	\$238.42
3/12/03	2002-087	223060	CNTSL	0.00	0.00	33.63	227.00	51.79	\$278.79
3/12/03	2002-087	223061	CNTSL	0.00	0.00	32.49	219.31	50.03	\$269.34
3/12/03	2002-087	223062	CNTSL	0.00	0.00	28.61	193.12	44.06	\$237.18
3/12/03	2002-087	223063	CNTSL	0.00	0.00	27.23	183.80	41.94	\$225.74
3/12/03	2002-087	223064	CNTSL	0.00	0.00	32.73	220.93	50.00	\$271.33
3/12/03	2002-087	223065	CNTSL	0.00	0.00	28.29	190.96	43.56	\$234.52
3/12/03	2002-087	223066	CNTSL	0.00	0.00	27.12	183.06	41.76	\$224.82
3/18/03	2002-087	223071	CNTSL	0.00	0.00	28.70	193.73	44.19	\$237.92
3/18/03	2002-087	223072	CNTSL	0.00	0.00	27.52	185.76	42.38	\$228.14
3/18/03	2002-087	223073	CNTSL	0.00	0.00	25.65	173.14	39.50	\$212.64
3/18/03	2002-087	223074	CNTSL	0.00	0.00	30.00	202.50	46.20	\$248.70
3/18/03	2002-087	223075	CNTSL	0.00	0.00	25.28	170.64	38.93	\$209.57
3/18/03	2002-087	223076	CNTSL	0.00	0.00	30.13	203.38	46.40	\$249.78
3/18/03	2002-087	223077	CNTSL	0.00	0.00	28.34	191.30	43.64	\$234.94

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M 3/18/03	2002-087	223078	CNTSL	0.00	0.00	29.78	201.02	45.86	\$246.88
3/18/03	2002-087	223079	CNTSL	0.00	0.00	19.74	133.25	30.40	\$163.64
3/18/03	2002-087	223080	CNTSL	0.00	0.00	25.03	168.95	38.55	\$207.50
3/18/03	2002-087	223081	CNTSL	0.00	0.00	22.27	150.32	34.30	\$184.62
3/18/03	2002-087	223082	CNTSL	0.00	0.00	23.49	158.56	36.17	\$194.73
4/15/03	2002-087	223253	CNTSL	0.00	0.00	29.34	198.05	45.18	\$243.23
4/16/03	2002-087	223254	CNTSL	0.00	0.00	32.27	217.82	49.70	\$267.52
4/30/03	2002-087	223658	CNTSL	0.00	0.00	27.43	185.15	42.24	\$227.39
4/30/03	2002-087	223659	CNTSL	0.00	0.00	25.38	171.32	39.08	\$210.40
5/1/03	2002-087	223669	CNTSL	0.00	0.00	32.16	217.08	49.55	\$266.61
5/1/03	2002-087	223670	CNTSL	0.00	0.00	30.88	208.44	47.56	\$256.00
5/1/03	2002-087	223682	CNTSL	0.00	0.00	29.75	200.81	45.85	\$246.63
5/1/03	2002-087	223683	CNTSL	0.00	0.00	29.48	198.99	45.40	\$244.39
5/2/03	2002-087	223695	CNTSL	0.00	0.00	31.53	212.83	48.55	\$261.38
5/2/03	2002-087	223696	CNTSL	0.00	0.00	26.33	177.73	40.55	\$218.28
5/2/03	2002-087	223704	CNTSL	0.00	0.00	32.36	218.43	49.83	\$268.26
5/2/03	2002-087	223705	CNTSL	0.00	0.00	29.47	198.92	45.39	\$244.31
5/12/03	2002-087	223928	CNTSL	0.00	0.00	28.92	195.21	44.54	\$239.75
5/12/03	2002-087	223941	CNTSL	0.00	0.00	30.34	204.80	46.72	\$251.52
5/12/03	2002-087	223942	CNTSL	0.00	0.00	26.52	179.01	40.84	\$219.85
5/13/03	2002-087	223948	CNTSL	0.00	0.00	25.26	170.51	38.90	\$209.41
5/13/03	2002-087	223950	CNTSL	0.00	0.00	29.89	201.76	46.03	\$247.79
5/13/03	2002-087	223960	CNTSL	0.00	0.00	27.66	186.71	42.59	\$229.30
5/13/03	2002-087	223962	CNTSL	0.00	0.00	30.21	203.92	46.52	\$250.44
5/14/03	2002-087	223970	CNTSL	0.00	0.00	28.30	191.03	43.58	\$234.61
5/14/03	2002-087	223971	CNTSL	0.00	0.00	30.82	208.04	47.16	\$255.50
5/14/03	2002-087	223996	CNTSL	0.00	0.00	24.77	167.20	38.14	\$205.34
5/14/03	2002-087	223997	CNTSL	0.00	0.00	29.69	200.41	45.72	\$246.13
5/15/03	2002-087	224007	CNTSL	0.00	0.00	21.09	142.36	32.48	\$174.84
5/15/03	2002-087	224010	CNTSL	0.00	0.00	19.58	132.17	30.15	\$162.32
5/15/03	2002-087	224019	CNTSL	0.00	0.00	22.87	154.37	35.22	\$189.59
5/15/03	2002-087	224020	CNTSL	0.00	0.00	24.11	162.74	37.13	\$199.87

876.72

Report Print Date: 5/22/03
 RpOrgWaste.rpt

TICKET REPORT BY PERMIT/WASTE
 Transactions from 07/01/2002 through 05/22/2003

Date	Permit	Ticket	Waste	Yards	Units	Tons	Price	Tax	Amount
M 5/16/03	2002-087	224029	CNTSL	0.00	0.00	24.87	167.87	38.30	\$206.17
5/16/03	2002-087	224031	CNTSL	0.00	0.00	26.89	181.51	41.40	\$222.92
5/16/03	2002-087	224044	CNTSL	0.00	0.00	29.13	196.63	44.86	\$241.49
5/16/03	2002-087	224046	CNTSL	0.00	0.00	30.89	208.51	47.50	\$256.08
5/19/03	2002-087	224070	CNTSL	0.00	0.00	23.74	160.25	36.55	\$196.80
5/19/03	2002-087	224071	CNTSL	0.00	0.00	28.80	194.40	44.30	\$238.75
5/19/03	2002-087	224077	CNTSL	0.00	0.00	28.24	190.62	43.49	\$234.11
5/19/03	2002-087	224079	CNTSL	0.00	0.00	29.58	199.67	45.50	\$245.22
5/20/03	2002-087	224094	CNTSL	0.00	0.00	27.29	184.21	42.00	\$226.23
						299.43			
<u>Contaminated Soil</u>				<u>0.00</u>	<u>0.00</u>	<u>23,727.87</u>	<u>160,164.01</u>	<u>36,540.16</u>	<u>196,709.16</u>

TOTALS:

7/31/02 to 8/30/02	<u>METALS</u>	<u>TPH</u>
9/3/02 to 11/13/02	4,111.77	Ø
3/4/03 to 5/20/03	Ø	16,407.82
	3,208.28	Ø
	<u>7,320.05</u>	<u>16,407.82</u>
		TONS

Summary of AEM
Hauled off-site

IRS ENVIRONMENTAL

ASBESTOS * LEAD * CLEAN INTERIOR DEMOLITION * FLOOR PREPARATION
P.O. BOX 16188 SEATTLE, WA. 98116 *PH (206) 932-0944 *FAX 932-5953 *www.irseviro.com

FAX COVER SHEET

DATE: 5/20/03

TO: Wyser Construction, Inc.

ATTN: Dan Reynolds

RE: Unocal - Waste Manifest

FROM: Steve Ness

NO. OF PAGES: 9 Pages Including Cover

MESSAGE:

FAX TO: 425-486-3202

NOTE: If any of these fax copies are illegible or you do not receive the same number of pages as stated above, please contact us immediately at (206) 932-0944.

RABANCO

WASTE SHIPMENT RECORD

Cont #

G E N E R A T O R	1. Waste Generated Site Name and Address: UMCAL CORPORATION 17720 WILCOX RR. BLDG C EDMUNDS WA 98020		Owner's Name: UMCAL CORPORATION		Owner's Phone No.:	
	2. Operator's Name and Address: IRS ENVIRONMENTAL E 18445 TRENT SPOKANE WA 99216		Operator's Phone No.:		1-509-927 7867	
	3. Waste Disposal Site (WDS) Name, Address, and Physical Site Location: RABANCO REGIONAL LANDFILL 500 Roosevelt Grade Rd. Roosevelt, WA 99356		WDS Phone No.:		1-800-927-5641	
	4. Responsible Local, State or EPA Agency Name and Address:		PSAPCA 110 Union Street Seattle, WA 98101			
T R A N S P O R T E R	5. Description of Waste Materials: Asbestos Containing Materials		6. Containers No. Type 38 530A		7. Total Quantity m ³ (yd ³) 3.8	
	8. Special Handling Instructions and Additional Information: <p style="text-align: center;">DOUBLE BAGGED & LABELED</p>					
	9. OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.					
Printed/Typed Name Brian Brankin		Signature <i>[Signature]</i>		Month 9	Day 21	Year 02
10. Transporter 1 Acknowledgment of Receipt of Materials Printed/Typed Name Brian Brankin		Signature <i>[Signature]</i>		Month 9	Day 21	Year 02
11. Transporter 2 Acknowledgment of Receipt of Materials Printed/Typed Name Rabanco Transfer 2733 3rd Ave. S. Seattle, WA 206-646-2565		Signature <i>[Signature]</i>		Month 9	Day 24	Year 02
12. Discrepancy Indication Space Waste Disposal RRLC						
13. Authorized Waste Disposal Site Owner or Operator: Certification of receipt of asbestos materials covered by this manifest except as noted in item 12						
Printed/Typed Name		Signature		Month	Day	Year



WHITE: Return to Operator

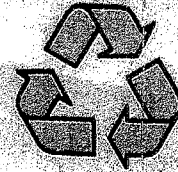
YELLOW: Waste Site

PINK: Transporter

WHITE: Operator



RABANCO RECYCLING
 A DIVISION OF RABANCO COMPANIES
 2733 3rd Avenue South
 Seattle, Washington 98134
 (206) 623-4080



TICKET NUMBER

1656433

DATE: 09/24/02
 TIME: 14:36

10277 - IRB ENVIRONMENTAL

IRB W5642

TRUCK #: 1 VAN

PLACE: EDMONDS

PRODUCT: Asbestos

	WEIGHT	SCALE	DATE	SCALE	
GROSS:	16077.40 LBS	IRB W5642	09/24/02	IN	
TARE:	14917.00 LBS	IRB W5642	09/24/02	IN	
					NET LBS: 1140
					NET TONS: 0.570
					RATE PER TON: \$ 180.00
					AMOUNT: \$ 102.60
					REFUSE TAX 3.60%: 3.69
					TOTAL AMOUNT: \$ 106.29

No X-master - Fee

B. Brinkley

CUSTOMER SIGNATURE

I HAVE READ AND AGREE TO THE CONDITIONS ON THE REVERSE SIDE



RABANCO

WASTE SHIPMENT RECORD

Cont #

GENERATOR	1. Waste Generated Site Name and Address: UNION HL CORP 11730 UNION KK BLVD LYNNWOODS WA 98020		Owner's Name: UNICAL CORPORATION		Owner's Phone No.:		
	2. Operator's Name and Address: EPC ENVIRONMENTAL 13415 TRENT SPOKANE WA 99216		Operator's Phone No.:		1-509-927-7267		
	3. Waste Disposal Site (WDS) Name, Address, and Physical Site Location: RABANCO REGIONAL LANDFILL 500 Roosevelt Grade Rd. Roosevelt, WA 99356				WDS Phone No.:		
	4. Responsible Local, State or EPA Agency Name and Address: PSAPCA 110 Union Street Seattle, WA 98101						
	5. Description of Waste Materials:		6. Containers		7. Total Quantity		
	TRIASITE PIPE, P.I., TYVECK Asbestos Containing Materials		No. Type		m ³ (yd ³)		
			87 BAG		8.6		
	8. Special Handling Instructions and Additional Information: DOUBLE BAGGED & LABELED						
	9. OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.						
Printed/Typed Name SUPERVISOR Bethany Beardsky		Signature Bethany Beardsky		Month	Day	Year	
				10	21	02	
TRANSPORTER	10. Transporter 1 Acknowledgment of Receipt of Materials						
	Printed/Typed Name		Signature		Month	Day	Year
	Bethany Beardsky		Bethany Beardsky		10	25	02
	11. Transporter 2 Acknowledgment of Receipt of Materials						
	Printed/Typed Name		Signature		Month	Day	Year
Rabanco Transfer 2733 3rd Ave. S. Seattle, WA 206-646-2565		Kyril Hada		10	15	10	
12. Discrepancy Indication Space Waste Disposal RRLC							
13. Authorized Waste Disposal Site Owner or Operator: Certification of receipt of asbestos materials covered by this manifest except as noted in item 12							
Printed/Typed Name		Signature		Month	Day	Year	



WHITE: Return to Operator

YELLOW: Waste Site

PINK: Transporter

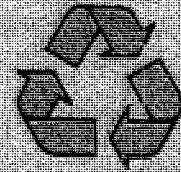
WHITE: Operator



RABANCO RECYCLING CO.

A DIVISION OF FREEMAN CO. COMPANIES

2733 9th Avenue South
Seattle, Washington, 98134
(206) 823-4080



TICKET NUMBER 4473039

DATE: 10/25/82
TIME: 10:40

18077 - THE ENVIRONMENTAL

IRS - ENVIRO

TRUCK #: 1

VAN

W5817

PLADE: EDWARDS

PRODUCT: asbestos

	WEIGHT	TIME	DATE	SCALE
GROSS:	7540 LBS	10:19	10/25/82	TR
TARE:	6000 LBS	10:40	10/25/82	DUF

NET LBS: 1540

NET TONS: 6.79

RATE PER TON: 4 180.00

AMOUNT: 1 145.20

REFUSE TAX (3.60%): 5.10

TOTAL AMOUNT: 1 147.30

We ~~X~~ *John Edwards*

BY SIGNATURE
I HAVE READ AND AGREE TO THE CONDITIONS ON THE REVERSE SIDE

24/5 NO PERMIT IS REQUIRED!

RABANCO

WASTE SHIPMENT RECORD

Cont # 100001

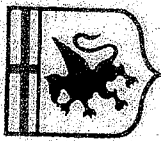
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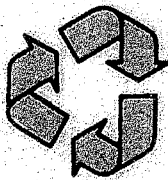
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1. Waste Generated Site Name and Address: <i>UNION ST SEATTLE 11720 UNION ST SEATTLE E 11720 UNION ST SEATTLE</i>		Owner's Name: <i>UNION ST SEATTLE</i>		Owner's Phone No.:	
2. Operator's Name and Address: <i>UNION ST SEATTLE E 11720 UNION ST SEATTLE</i>		Operator's Phone No.:		<i>206-466-1100</i>	
3. Waste Disposal Site (WDS) Name, Address, and Physical Site Location: RABANCO REGIONAL LANDFILL 500 Roosevelt Grade Rd. Roosevelt, WA 99356				WDS Phone No.: 1-800-927-5641	
4. Responsible Local, State or EPA Agency Name and Address: PSAPCA 110 Union Street Seattle, WA 98101					
5. Description of Waste Materials: <i>Asbestos Containing Materials</i>		6. Containers No. Type	7. Total Quantity m ³ (yd ³)		
		<i>1 Bag</i>	<i>6</i>		
8. Special Handling Instructions and Additional Information: <p style="text-align: center;">DOUBLE BAGGED & LABELED</p>					
9. OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.					
Printed/Typed Name: <i>Frank</i>		Signature: <i>[Signature]</i>		Month: <i>11</i>	Day: <i>11</i>
10. Transporter 1 Acknowledgment of Receipt of Materials		Printed/Typed Name: <i>Frank</i>		Signature: <i>[Signature]</i>	
				Month: <i>2</i>	Day: <i>17</i>
11. Transporter 2 Acknowledgment of Receipt of Materials		Printed/Typed Name: Rabanco Transfer 2733 3rd Ave. S. Seattle, WA 206-646-2565		Signature: <i>[Signature]</i>	
				Month: <i>2</i>	Day: <i>17</i>
12. Discrepancy Indication Space Waste Disposal RRLC					
13. Authorized Waste Disposal Site Owner or Operator: Certification of receipt of asbestos materials covered by this manifest except as noted in item 12					
Printed/Typed Name:		Signature:		Month:	Day:



RABANCO RECYCLING CO.
 A DIVISION OF RABANCO COMPANIES
 2733 3rd Avenue South
 Seattle, Washington 98134
 (206) 623-4080



TICKET NUMBER 1721501

DATE: 02/17/03
 TIME: 12:26

10277 - IRS ENVIRONMENTAL
 IRS CORP. W5817
 TRUCK # 1 VAN
 PRODUCE: 0.50000

PLACE: A SEATTLE

GROSS: 7440 LBS
 TARE: 6220 LBS

TIME DATE SCALE
 12:16 02/17/03 IN
 12:27 02/17/03 OUT

NET LBS: 1220
 NET TONS: 0.559
 RATE PER TON: \$ 210.00

AMOUNT: \$ 118.10
 REFUSE TAX 3.60% 4.61

TOTAL AMOUNT: \$ 132.71

Manifest Fee

CUSTOMER SIGNATURE

Deborah

I HAVE READ AND AGREE TO THE CONDITIONS ON THE REVERSE SIDE



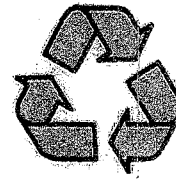
Recycled



RABANCO RECYCLING CO

A DIVISION OF RABANCO COMPANIES

2733 3rd Avenue South
Seattle, Washington 98134
(206) 623-4080



TICKET NUMBER 1757898

DATE: 04/09/03

W5817

TIME: 12:29

10277 - IRS ENVIRONMENTAL Job:MI

IRS ENVIRO

TRUCK #: 1 VAN

PLACE: A SEATTLE

PRODUCT: Asbestos

	WEIGHT	TIME	DATE	SCALE
GROSS:	12000 LBS	12:20	04/09/03	IN
TARE:	11720 LBS	12:29	04/09/03	OUT

NET LBS: 280
 QUANTITY: 1.00
 RATE: \$ 60.00

AMOUNT: \$ 60.00 **
 REFUSE TAX 3.60%: 2.16

** MINIMUM CHARGE

TOTAL AMOUNT: \$ 62.16

We Xmaster - FEE

F. Boanik

CUSTOMER SIGNATURE

BY SIGNING AND ACCEPTING THIS RECEIPT YOU AGREE TO THE CONDITIONS ON THE REVERSE SIDE



Recycled

APPENDIX G
SUPPLEMENTAL SOIL SAMPLING DATA

**Table G-1
BTEX in Soil- Area A
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
A-A-2-13	12/24/02	13	<0.00514	<0.00900	<0.00433	<0.0250
A-A2wall-4	12/24/02	4	<0.00400	<0.00900	<0.00813	<0.0250
A-A2wall-8	12/24/02	8	0.00451 J	<0.00900	<0.00873	<0.0250
A-A-3-13	12/24/02	13	<0.00872	0.0103 J	<0.00965	0.0285 J
A-A-4-16	12/24/02	16	<0.00481	<0.00900	<0.0115	<0.0250
A-A-5-11	12/24/02	11	<0.00400	<0.00900	<0.00448	<0.0250
A-AA-3-14	12/24/02	14	0.00517 J	0.0157 J	<0.0148	<0.0701
A-AA3wall-4	12/24/02	4	0.0104 J	0.0144 J	<0.0339	<0.0718
A-AA3wall-8	12/24/02	8	0.005 J	<0.00900	<0.0136	<0.0353
A-B-1-10	12/24/02	10	<0.00400	<0.00900	<0.00784	<0.0250
A-B1wall-4	12/24/02	4	0.00612 J	<0.00900	<0.0145	<0.0291
A-B1wall-8	12/24/02	8	<0.00400	<0.00900	<0.00776	<0.0250
A-B-2-13	12/24/02	13	<0.00777	0.0115 J	<0.0121	0.0347 J
A-B-3-18	12/24/02	18	0.00827 J	0.0141 J	<0.0364	<0.0695
A-B-4-18	12/24/02	18	<0.0042	<0.00900	<0.0115	<0.0250
A-B-5-15	12/24/02	15	0.00407 J	<0.00900	<0.0084	<0.0250
A-B5wall-10	12/24/02	10	<0.00400	<0.00900	<0.00672	<0.0250
A-B5wall-4	12/24/02	4	0.0049 J	<0.00900	<0.008	<0.0250
A-C-1-8	12/24/02	8	<0.00400	0.0102 J	<0.0122	0.0319 J
A-C1wall-4	12/24/02	4	0.00494 J	0.0134 J	<0.0234	<0.0369
A-C-2-11	12/24/02	11	<0.00400	<0.00900	<0.00792	<0.0250
A-C-3-17	12/24/02	17	<0.00400	<0.00900	<0.00625	<0.0250

**Table G-1
BTEX in Soil- Area A
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
A-C-4-10	12/24/02	10	0.0109 J	<0.00900	<0.00863	<0.0250
A-C4wall-4	12/24/02	4	<0.00400	<0.00900	<0.00582	<0.0250
A-D-1-9	12/24/02	9	0.0084 J	0.0101 J	<0.0124	<0.0357
A-D1wall-5	12/24/02	5	0.00851 J	0.015 J	<0.0182	<0.0535
A-D-2-8	12/24/02	8	0.00496 J	<0.00900	<0.0109	<0.0285
A-D2wall-4	12/24/02	4	0.00557	0.00977	<0.0500	0.0267
A-D-3-6	12/24/02	6	0.00402 J	<0.00900	<0.0092	<0.0252
A-D3wall-3	12/24/02	3	0.00469 J	<0.00900	<0.00701	<0.0286
A-D-4-6	12/24/02	6	0.00606 J	<0.00900	<0.0103	<0.0252
A-D4wall-3	12/24/02	3	0.00941 J	0.0366 J	<0.0249	0.174

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

**Table G-2
PAHs in Soil- Area A
UNOCAL Edmonds Terminal**

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
A-A-2-13	12/24/02	0.0103	0.0103	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-A2wall-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-A2wall-8	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-A-3-13	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-A-4-16	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-A-5-11	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-AA-3-14	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-AA3wall-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-AA3wall-8	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B-1-10	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B1wall-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B1wall-8	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B-2-13	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B-3-18	12/24/02	<0.0100	0.0115	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B-4-18	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B-5-15	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B5wall-10	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B5wall-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-C-1-8	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-C1wall-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-C-2-11	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-C-3-17	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-C-4-10	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-C4wall-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D-1-9	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D1wall-5	12/24/02	0.0209	0.0209	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D-2-8	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D2-wall-4	12/24/02	0.0115	0.0503	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D-3-6	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D3wall-3	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D-4-6	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D4wall-3	12/24/02	<0.0100	0.0155	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

**Table G-2
PAHs in Soil- Area A
UNOCAL Edmonds Terminal**

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
A-A-2-13	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-A2wall-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-A2wall-8	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-A-3-13	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-A-4-16	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-A-5-11	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-AA-3-14	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-AA3wall-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-AA3wall-8	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B-1-10	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B1wall-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B1wall-8	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B-2-13	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B-3-18	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0115	<0.0100
A-B-4-18	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B-5-15	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B5wall-10	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-B5wall-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-C-1-8	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-C1wall-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-C-2-11	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-C-3-17	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-C-4-10	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-C4wall-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D-1-9	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D1wall-5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.018	<0.0100	<0.0100
A-D-2-8	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D2-wall-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D-3-6	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D3wall-3	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D-4-6	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
A-D4wall-3	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated report | < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-4
Extractable Petroleum Hydrocarbons in Soil- Area A
UNOCAL Edmonds Terminal

SITE	DATE	Aliphatic C8-C10 (mg/kg)	Aliphatic C10-C12 (mg/kg)	Aliphatic C12-C16 (mg/kg)	Aliphatic C16-C21 (mg/kg)	Aliphatic C21-C34 (mg/kg)	Aromatic C10-C12 (mg/kg)	Aromatic C12-C16 (mg/kg)	Aromatic C16-C21 (mg/kg)	Aromatic C21-C34 (mg/kg)	Total Extractable Hydrocarbons (mg/kg)
A-A2WALLA-5	12/06/02	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00

Values represent total concentration unless noted. < = Not detected at indicated reporting limit. --- = Not analyzed.
 J = Estimated value. D = Sample diluted due to high analyte concentrations. R= Rejected value.

Table G-5
BTEX in Soil- Area ASWL1
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
ASWL1-I1WALL-1	03/20/03	1	0.00541 J	0.0144 J	0.00956 J	<0.0250
ASWL1-A-2-8	03/20/03	8	0.00514 J	0.0194 J	0.0206 J	0.035 J
ASWL1-A2WALL-4	03/20/03	4	0.00481 J	0.016 J	0.0119 J	<0.0250
ASWL1-B1WALL-4	03/20/03	4	0.00642 J	0.0194 J	0.016 J	0.0414 J
ASWL1-B-2-6	03/20/03	6	0.00665 J	0.0185 J	0.0191 J	0.0374 J
ASWL1-B-3-5	03/20/03	5	0.00651 J	0.0171 J	0.0122 J	0.0296 J
ASWL1-B3WALL-3	03/20/03	3	0.00695 J	0.0164 J	0.00957 J	<0.0250
ASWL1-C-2-6	03/20/03	6	0.00451 J	0.0145 J	0.0122 J	<0.0250
ASWL1-C-3-6	03/20/03	6	<0.00400	0.0143 J	0.00849 J	<0.0250
ASWL1-C3WALL-4	03/20/03	4	0.00532 J	0.0167 J	0.0156 J	0.0296 J
ASWL1-D1WALL-4	03/20/03	4	0.00502 J	0.0175 J	0.0113 J	0.0281 J
ASWL1-D-2-6	03/20/03	6	0.00443 J	0.0151 J	0.011 J	<0.0250
ASWL1-D-3-4	03/20/03	4	0.00634 J	0.0195 J	0.0107 J	0.0285 J
ASWL1-D3WALL-2	03/20/03	2	0.00464 J	0.0139 J	0.00748 J	<0.0250
ASWL1-E1WALL-4	03/20/03	4	0.00408 J	0.0162 J	0.00956 J	<0.0250
ASWL1-E-2-7	03/20/03	7	0.00544 J	0.0192 J	0.0187 J	0.0418 J
ASWL1-E2WALL-4	03/20/03	4	0.00499 J	0.0178 J	0.0166 J	0.0389 J
ASWL1-F-1-7	03/20/03	7	<0.00400	0.0139 J	0.00685 J	<0.0250
ASWL1-F1WALL-4	03/20/03	4	0.00497 J	0.0162 J	0.022 J	0.0307 J
ASWL1-F-2-9	03/20/03	9	<0.00400	0.0158 J	0.00742 J	<0.0250
ASWL1-F-3-8	03/20/03	8	<0.00400	0.0186 J	0.00851 J	0.0301 J
ASWL1-F3WALL-5	03/20/03	5	<0.00400	0.0156 J	0.0109 J	0.026 J

Table G-5
BTEX in Soil- Area ASWL1
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
ASWL1-G-1-8	03/20/03	8	<0.00400	0.0158 J	0.0104 J	0.0250
ASWL1-G1WALL-4	03/20/03	4	<0.00400	0.0178 J	0.0161 J	0.0382 J
ASWL1-G-2-6	03/20/03	6	<0.00400	0.0144 J	0.00766 J	<0.0250
ASWL1-G-3-4	03/20/03	4	<0.00400	0.0181 J	0.00945 J	0.0285 J
ASWL1-H-2-6	03/20/03	6	<0.00400	0.0127 J	0.00608 J	<0.0250
ASWL1-H2WALL-3	03/20/03	3	<0.00400	0.0136 J	0.00612 J	<0.0250
ASWL1-H-3-6	03/20/03	6	<0.00400	0.0148 J	0.00683 J	<0.0250
ASWL1-H3WALL-4	03/20/03	4	<0.00400	0.0123 J	0.00565 J	<0.0250
ASWL1-I-1-3	03/20/03	3	0.0049 J	0.015 J	0.00981 J	<0.0250
ASWL1-I-2-6	03/20/03	6	0.00496 J	0.018 J	0.00972 J	0.0264 J
ASWL1-I2WALL-3	03/20/03	3	0.00968 J	0.0187 J	0.0216 J	0.0355 J

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

**Table G-6
PAHs in Soil- Area ASWL1
UNOCAL Edmonds Terminal**

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
ASWL1-1WALL-1	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-A-2-8	03/20/03	0.0114	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-A2WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-B1WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-B-2-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.014	<0.0100	<0.0100
ASWL1-B-3-5	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-B3WALL-3	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-C-2-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-C-3-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-C3WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-D1WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-D-2-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0174	<0.0100	<0.0100
ASWL1-D-3-4	03/20/03	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
ASWL1-D3WALL-2	03/20/03	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
ASWL1-E1WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-E-2-7	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-E2WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-F-1-7	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-F1WALL-4	03/20/03	0.0136	0.0162	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-F-2-9	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-F-3-8	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-F3WALL-5	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-G-1-8	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-G1WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-G-2-6	03/20/03	0.0277	0.0313	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-G-3-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

**Table G-6
PAHs in Soil- Area ASWL1
UNOCAL Edmonds Terminal**

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
ASWL1-H-2-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-H2WALL-3	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-H-3-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-H3WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-I-1-3	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-I-2-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-I2WALL-3	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-6
PAHs in Soil- Area ASWL1
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
ASWL1-1WALL-1	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-A-2-8	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0237	<0.0100	<0.0100
ASWL1-A2WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-B1WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-B-2-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-B-3-5	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-B3WALL-3	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-C-2-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-C-3-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-C3WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-D1WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-D-2-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-D-3-4	03/20/03	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
ASWL1-D3WALL-2	03/20/03	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
ASWL1-E1WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-E-2-7	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-E2WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-F-1-7	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-F1WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0111	<0.0100
ASWL1-F-2-9	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-F-3-8	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-F3WALL-5	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-G-1-8	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-G1WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-G-2-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0339	<0.0100	<0.0100
ASWL1-G-3-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

**Table G-6
PAHs in Soil- Area ASWL1
UNOCAL Edmonds Terminal**

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
ASWL1-H-2-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0102	<0.0100	<0.0100
ASWL1-H2WALL-3	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-H-3-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-H3WALL-4	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-I-1-3	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-I-2-6	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL1-I2WALL-3	03/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-7
Volatile Petroleum Hydrocarbons in Soil- Area ASWL1
UNOCAL Edmonds Terminal

SITE	DATE	Aliphatic C5-C6 (mg/kg)	Aliphatic C6-C8 (mg/kg)	Aliphatic C10 (mg/kg)	Aliphatic C8 Aliphatic C10-C12 (mg/kg)	Aromatic C8-C10 (mg/kg)	Aromatic C10-C12 (mg/kg)	Aromatic C12-C13 (mg/kg)	Total Volatile Petroleum Hydrocarbons (mg/kg)
ASWL1-D-3-4	03/20/03	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00

< = Not detected at indicated reporting limit. --- = Not analyzed.
J = Estimated value. D = Sample diluted due to high analyte concentrations. R= Rejected value.

**Table G-9
BTEX in Soil- Area ASWL2
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
ASWL2-A-2-3	03/31/03	3	<0.00400	<0.00900	0.00446 J	<0.0250
ASWL2-A-3-5	03/31/03	5	<0.00400	<0.00900	0.00425 J	<0.0250
ASWL2-A-1-3	03/31/03	3	<0.00400	<0.00900	0.00674 J	<0.0250
ASWL2-B-2-5	04/01/03	5	<0.00400	<0.00900	0.0113 J	<0.0250
ASWL2-B3WALL-4	03/31/03	4	<0.00400	<0.00900	0.00406 J	<0.0250
ASWL2-C-1-7	03/31/03	7	<0.00400	<0.00900	0.00656 J	<0.0250
ASWL2-C1WALL-4	04/07/03	4	0.0158 J	<0.00900	0.0147 J	0.025
ASWL2-C1WALLB-4	04/07/03	4	0.00476 J	<0.00900	0.0203 J	0.0317 J
ASWL2-C1WALLD-4	04/07/03	4	<0.00400	<0.00900	0.00892 J	<0.0250
ASWL2-C-2-7	03/31/03	7	0.0111 J	0.0173 J	0.0161 J	0.057 J
ASWL2-C-3-7	03/31/03	7	0.00616 J	<0.00900	0.0067 J	<0.0250
ASWL2-C3WALL-4	04/07/03	4	0.0119 J	0.0146 J	0.0273 J	0.036 J
ASWL2-C3WALLB-4	04/07/03	4	0.00624 J	<0.00900	0.017 J	0.0267 J
ASWL2-C3WALLD-4	04/07/03	4	0.00735 J	0.0121 J	0.013 J	0.0398 J
ASWL2-D-1-1	03/31/03	1	0.00744 J	<0.00900	0.0196 J	0.0392 J
ASWL2-D-2-5	04/01/03	5	0.0079 J	0.0101 J	0.024 J	0.0369 J
ASWL2-D3WALL-4	03/31/03	4	0.00539 J	<0.00900	0.018 J	0.0279 J
ASWL2-E-1-0	03/31/03	0	0.00639 J	<0.00900	0.0136 J	0.0267 J
ASWL2-E-2-5	04/01/03	5	0.00654 J	0.0149 J	0.0158 J	0.0456 J
ASWL2-E3WALL-4	03/31/03	4	0.00469 J	<0.00900	0.00993 J	<0.0250
ASWL2-F-2-5	04/01/03	5	0.00465 J	<0.00900	0.0131 J	<0.0250

**Table G-9
BTEX in Soil- Area ASWL2
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
ASWL2-F3WALL-2	03/31/03	2	0.00427 J	<0.00900	0.00811 J	<0.0250
ASWL2-G-2-5	04/01/03	5	<0.00400	<0.00900	0.00692 J	<0.0250
ASWL2-G3WALL-2	03/31/03	2	0.00612 J	<0.00900	0.00848 J	<0.0250
ASWL2-H-1-5	03/31/03	5	0.00479 J	<0.00900	0.00933 J	<0.0250
ASWL2-H1WALL-2	03/31/03	2	0.00507 J	<0.00900	0.00871 J	<0.0250
ASWL2-H-2-6	03/31/03	6	0.00662 J	0.00911 J	0.011 J	0.0319 J
ASWL2-H3WALL-3	03/31/03	3	0.00623 J	<0.00900	0.00996 J	<0.0250
ASWL2-I-1-5	03/31/03	5	0.00482 J	<0.00900	0.01 J	0.0284 J
ASWL2-I1WALL-3	03/31/03	3	0.00419 J	<0.00900	0.00927 J	<0.0250
ASWL2-I-2-6	03/31/03	6	0.00522 J	<0.00900	0.0113 J	<0.0250
ASWL2-I3WALL-2	03/31/03	2	<0.00400	<0.00900	0.00598 J	<0.0250
ASWL2-J-1-6	03/31/03	6	0.00429 J	<0.00900	0.00582 J	<0.0250
ASWL2-J-2-4	03/31/03	4	0.00522 J	<0.00900	0.00923 J	<0.0250
ASWL2-K-1-6	03/31/03	6	<0.00400	<0.00900	0.00726 J	<0.0250
ASWL2-K1WALL-3	03/31/03	3	<0.00400	<0.00900	0.0209 J	0.0347 J
ASWL2-K-2-7	03/31/03	7	<0.00400	<0.00900	0.00949 J	<0.0250
ASWL2-K3WALL-3	03/31/03	3	<0.00400	<0.00900	0.0132 J	0.0263 J
ASWL2-L1WALL-6	03/31/03	6	<0.00400	<0.00900	0.0072 J	<0.0250
ASWL2-L-2-8	03/31/03	8	<0.00400	<0.00900	0.0048 J	<0.0250
ASWL2-L-3-8	03/31/03	8	<0.00400	<0.00900	0.00829 J	<0.0250
ASWL2-M-2-11	03/31/03	11	<0.00934	<0.0210	0.0122 J	<0.0584

Table G-9
BTEX in Soil- Area ASWL2
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
ASWL2-M2WALL-5	03/31/03	5	<0.00400	<0.00900	0.0047 J	<0.0250
ASWL2-M-3-10	03/31/03	10	<0.00400	<0.00900	0.00675 J	<0.0250
ASWL2-N-2-7	03/31/03	7	<0.00400	<0.00900	0.00802 J	<0.0250
ASWL2-N2WALL-4	03/31/03	4	<0.00400	<0.00900	0.00725 J	<0.0250
ASWL2-N-3-7	03/31/03	7	<0.00400	<0.00900	0.0145 J	0.0268 J

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-10
PAHs in Soil- Area ASWL2
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
ASWL2-A-2-3	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-A-3-5	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-A-I-3	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-B-2-5	04/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-B3WALL-4	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C-1-7	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C1WALL-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C1WALLB-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C1WALLD-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C-2-7	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C-3-7	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C3WALL-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C3WALLB-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C3WALLD-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-D-1-1	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-D-2-5	04/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-D3WALL-4	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-E-1-0	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-E-2-5	04/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-E3WALL-4	03/31/03	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
ASWL2-F-2-5	04/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-F3WALL-2	03/31/03	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
ASWL2-G-2-5	04/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-G3WALL-2	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-H-1-5	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-10
PAHs in Soil- Area ASWL2
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benz(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
ASWL2-H1WALL-2	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-H-2-6	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-H3WALL-3	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-I-1-5	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-I1WALL-3	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-I-2-6	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-I3WALL-2	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-J-1-6	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-J-2-4	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-K-1-6	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-K1WALL-3	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-K-2-7	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-K3WALL-3	03/31/03	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
ASWL2-L1WALL-6	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-L-2-8	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-L-3-8	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-M-2-11	03/31/03	<0.0233	<0.0233	<0.0233	<0.0233	<0.0233	<0.0233	<0.0233	<0.0233	<0.0233
ASWL2-M2WALL-5	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-M-3-10	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-N-2-7	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-N2WALL-4	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-N-3-7	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-10
PAHs in Soil- Area ASWL2
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
ASWL2-A-2-3	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-A-3-5	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-A-I-3	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-B-2-5	04/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-B3WALL-4	03/31/03	<0.0100	0.0128	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C-1-7	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C1WALL-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C1WALLB-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C1WALLD-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C-2-7	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C-3-7	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C3WALL-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C3WALLB-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-C3WALLD-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-D-1-1	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-D-2-5	04/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-D3WALL-4	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-E-1-0	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-E-2-5	04/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-E3WALL-4	03/31/03	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
ASWL2-F-2-5	04/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-F3WALL-2	03/31/03	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
ASWL2-G-2-5	04/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-G3WALL-2	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-H-1-5	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-10
PAHs in Soil- Area ASWL2
UNOCAL Edmonds Terminal

SITE	DATE	Benzof(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
ASWL2-H1WALL-2	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-H-2-6	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-H3WALL-3	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-I-1-5	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-I1WALL-3	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-I-2-6	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-I3WALL-2	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-J-1-6	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-J-2-4	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-K-1-6	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-K1WALL-3	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-K-2-7	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-K3WALL-3	03/31/03	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
ASWL2-L1WALL-6	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-L-2-8	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-L-3-8	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-M-2-11	03/31/03	<0.0233	<0.0233	<0.0233	<0.0233	<0.0233	<0.0233	<0.0233	<0.0233	<0.0233
ASWL2-M2WALL-5	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-M-3-10	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-N-2-7	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-N2WALL-4	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
ASWL2-N-3-7	03/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-12
Extractable Petroleum Hydrocarbons in Soil- Area ASWL2
UNOCAL Edmonds Terminal

SITE	DATE	Aliphatic C8-C10 (mg/kg)	Aliphatic C10-C12 (mg/kg)	Aliphatic C16 (mg/kg)	Aliphatic C12 Aliphatic C16-C21 (mg/kg)	Aliphatic C21-C34 (mg/kg)	Aromatic C10-C12 (mg/kg)	Aromatic C12-C16 (mg/kg)	Aromatic C16-C21 (mg/kg)	Aromatic C21-C34 (mg/kg)	Total Extractable Hydrocarbons (mg/kg)
ASWL2-J-2-4	03/31/03	<5.00	<5.00	<5.00	<5.00	9.48	<5.00	<5.00	<5.00	10.2	19.7

< = Not detected at indicated reporting limit. --- = Not analyzed.

J = Estimated value. D = Sample diluted due to high analyte concentrations. R= Rejected value.

**Table G-13
BTEX in Soil- Area B
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
B-B-4-1	01/31/03	1	<0.00400	<0.00900	0.00886 J	<0.0250
B-B-5-1	01/31/03	1	<0.00400	<0.00900	0.0112 J	<0.0250
B-C-3-2.5	01/31/03	2.5	<0.00400	<0.00900	0.00761 J	<0.0250
B-C-4-2	01/31/03	2	<0.00400	<0.00900	0.00982 J	<0.0250
B-C-5-2	01/31/03	2	<0.00400	<0.00900	0.00762 J	<0.0250
B-C-6-2	01/31/03	2	<0.00400	<0.00900	0.00813 J	<0.0250
B-C-7-2	01/31/03	2	<0.00400	<0.00900	0.0165 J	0.027 J
B-D-2-6	01/31/03	6	<0.00400	<0.00900	0.00877 J	<0.0250
B-D-2WALL-3	01/31/03	3	<0.00400	<0.00900	0.00712 J	<0.0250
B-D-3-2	01/31/03	2	<0.00400	<0.00900	0.00831 J	<0.0250
B-D-4-4	01/31/03	4	<0.00400	<0.00900	0.00726 J	<0.0250
B-D-5-6	01/31/03	6	<0.00400	<0.00900	0.00954 J	<0.0250
B-D-6-2	01/31/03	2	<0.00400	<0.00900	0.00766 J	<0.0250
B-D-7-5	01/31/03	5	<0.00400	<0.00900	0.00856 J	<0.0250
B-E-2-13	02/01/03	13	<0.00400	<0.00900	0.0115 J	<0.0250
B-E-2wall-2	02/03/03	2	<0.00400	<0.00900	0.0118 J	<0.0250
B-E-3-14	02/01/03	14	<0.00400	<0.00900	0.00844 J	<0.0250
B-E-4-7	01/31/03	7	0.00622 J	0.0115 J	0.0121 J	<0.0250
B-E-5-7	01/31/03	7	0.00779 J	<0.00900	0.0241 J	0.0345 J
B-E-6-6	01/31/03	6	<0.00400	<0.00900	0.00985 J	<0.0250
B-E-7-8	01/31/03	8	<0.00400	<0.00900	0.00856 J	<0.0250
B-E-8-13	02/03/03	13	0.0045 J	<0.00900	0.0121 J	<0.0250

**Table G-13
BTEX in Soil- Area B
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
B-E-8wall-4	02/03/03	4	0.00554 J	0.00966 J	0.0125 J	0.0315 J
B-F-2-10	01/31/03	10	0.0049 J	0.0112 J	0.0113 J	0.0523 J
B-F-2wall-3	02/03/03	3	<0.00400	<0.00900	0.0122 J	<0.0250
B-F-3-8	01/31/03	8	0.00636 J	<0.00900	0.01 J	<0.0250
B-F-4-3	01/31/03	3	0.00565 J	<0.00900	0.0103 J	<0.0250
B-F-5-2	01/31/03	2	0.00701 J	<0.00900	0.0136 J	0.0266 J
B-F-6-3	01/31/03	3	0.0118 J	<0.00900	0.0164 J	<0.0250
B-F-7-5	01/31/03	5	0.00664 J	0.00933 J	0.0204 J	0.0396 J
B-F-8-0	01/31/03	0	0.00743 J	0.0109 J	0.0314 J	0.0419 J
B-F-8wall-4	02/03/03	4	<0.00400	<0.00900	0.00967 J	<0.0250
B-G-2-4	01/31/03	4	0.0372	<0.00900	0.014 J	<0.0250
B-G-2WALL-2	01/31/03	2	0.0594	0.0151 J	0.0147 J	<0.0250
B-G-3-6	01/31/03	6	<0.00400	<0.00900	0.0105 J	<0.0250
B-G-4-5	01/31/03	5	0.0061 J	<0.00900	0.0121 J	0.0265 J
B-G-5-5	01/31/03	5	0.00496 J	<0.00900	0.0122 J	<0.0250
B-G-6-9	01/31/03	9	<0.00400	<0.00900	0.0101 J	<0.0250
B-G6wall-6	02/03/03	6	<0.00400	<0.00900	0.00791 J	<0.0250
B-G-7-7	01/31/03	7	0.00542 J	<0.00900	0.0131 J	<0.0250
B-G-8-0	01/31/03	0	0.00514 J	<0.00900	0.0121 J	<0.0250
B-H-2-0	02/03/03	0	<0.00400	<0.00900	0.0107 J	0.0264 J
B-H-3-6	01/31/03	6	0.0058 J	<0.00900	0.0148 J	<0.0250
B-H-4-6	01/31/03	6	0.0056 J	<0.00900	0.0114 J	<0.0250

**Table G-13
BTEX in Soil- Area B
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
B-H-5-7	01/31/03	7	<0.00400	<0.00900	0.00824 J	<0.0250
B-H-6-5	01/31/03	5	<0.00400	<0.00900	0.00819 J	<0.0250
B-H-7-1	01/31/03	1	<0.00400	<0.00900	0.0069 J	<0.0250
B-I-3-1	02/03/03	1	<0.00400	<0.00900	0.00842 J	<0.0250
B-I-4-1	02/03/03	1	<0.00400	<0.00900	0.00865 J	<0.0250
B-I-5-6	02/03/03	6	<0.00400	<0.00900	0.00889 J	<0.0250
B-I-5wall-3	02/03/03	3	<0.00400	<0.00900	0.00999 J	<0.0250

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-14
PAHs in Soil- Area B
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
B-B-4-1	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-B-5-1	01/31/03	0.0168	0.0191	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-C-3-2.5	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-C-4-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-C-5-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-C-6-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-C-7-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-D-2-6	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-D-2WALL-3	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0108
B-D-3-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-D-4-4	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-D-5-6	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-D-6-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-D-7-5	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-2-13	02/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-2wall-2	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-3-14	02/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-4-7	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-5-7	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-6-6	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0143	<0.0100
B-E-7-8	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-8-13	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-8wall-4	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-2-10	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-2wall-3	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-3-8	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-14
PAHs in Soil- Area B
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
B-F-4-3	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-5-2	01/31/03	0.0142	0.0183	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0208
B-F-6-3	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-7-5	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-8-0	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-8wall-4	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-2-4	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-2WALL-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-3-6	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-4-5	01/31/03	<0.0100	0.0187	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-5-5	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-6-9	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G6wall-6	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-7-7	01/31/03	0.017	0.0229	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0229
B-G-8-0	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-H-2-0	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-H-3-6	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-H-4-6	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-H-5-7	01/31/03	<0.0100	0.0104	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-H-6-5	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-H-7-1	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-I-3-1	02/03/03	0.0107	0.0139	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-I-4-1	02/03/03	0.0136	0.0195	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-I-5-6	02/03/03	<0.0100	0.013	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-I-5wall-3	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-14
PAHs in Soil- Area B
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
B-B-4-1	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-B-5-1	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-C-3-2.5	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-C-4-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-C-5-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-C-6-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-C-7-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-D-2-6	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-D-2WALL-3	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-D-3-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-D-4-4	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-D-5-6	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-D-6-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-D-7-5	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-2-13	02/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-2wall-2	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-3-14	02/01/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-4-7	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-5-7	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-6-6	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-7-8	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-8-13	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-E-8wall-4	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-2-10	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-2wall-3	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-3-8	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

**Table G-14
PAHs in Soil- Area B
UNOCAL Edmonds Terminal**

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenz(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
B-F-4-3	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-5-2	01/31/03	<0.0100	<0.0100	0.03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-6-3	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-7-5	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-8-0	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-F-8wall-4	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-2-4	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-2WALL-2	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-3-6	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-4-5	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0151	<0.0100	<0.0100
B-G-5-5	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-6-9	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-6wall-6	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-G-7-7	01/31/03	<0.0100	<0.0100	0.0306	<0.0100	<0.0100	<0.0100	<0.0100	0.011	<0.0100
B-G-8-0	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-H-2-0	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-H-3-6	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-H-4-6	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-H-5-7	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-H-6-5	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-H-7-1	01/31/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-I-3-1	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-I-4-1	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-I-5-6	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
B-I-5wall-3	02/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0104	<0.0100

< = Not detected at indicated reporting limit. --- = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-17
BTEX in Soil- Area C
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
C-A-3-3	09/24/02	3	<0.00400	<0.0122	<0.00799	<0.0250
C-B-2-3	09/24/02	3	<0.00400	<0.0121	<0.00926	<0.0250
C-B-3-0	09/24/02	0	<0.00400	<0.012	<0.00882	<0.0250
C-B-4-3	09/24/02	3	<0.00400	<0.012	<0.0103	<0.0250
C-C-1-3	09/24/02	3	<0.00400	<0.0114	<0.00995	<0.0250
C-C-2-0	09/24/02	0	<0.00400	<0.0123	<0.0103	<0.0250
C-C-3-0	09/24/02	0	<0.00400	<0.0115	<0.00901	<0.0250
C-C-4-0	09/24/02	0	<0.00400	<0.0125	<0.0133	<0.0250
C-D-2-0	09/24/02	0	<0.00400	<0.0126	<0.0107	<0.0250
C-D-3-5	09/20/02	5	--	--	--	--
C-D3wall-5	09/24/02	5	<0.00400	<0.0119	<0.00898	<0.0250
C-D-4-3	09/24/02	3	<0.00400	<0.0123	<0.00979	<0.0250

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-18
PAHs in Soil- Area C
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
C-A-3-3	09/24/02	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
C-B-2-3	09/24/02	<0.0100	0.0161	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
C-B-3-0	09/24/02	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
C-B-4-3	09/24/02	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
C-C-1-3	09/24/02	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
C-C-2-0	09/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
C-C-3-0	09/24/02	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
C-C-4-0	09/24/02	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
C-D-2-0	09/24/02	<0.0200	0.0267 D	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200
C-D-3-5	09/20/02	0.0117	0.0381	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
C-D3wall-5	09/24/02	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200
C-D-4-3	09/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-18
PAHs in Soil- Area C
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
C-A-3-3	09/24/02	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
C-B-2-3	09/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
C-B-3-0	09/24/02	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
C-B-4-3	09/24/02	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
C-C-1-3	09/24/02	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
C-C-2-0	09/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
C-C-3-0	09/24/02	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
C-C-4-0	09/24/02	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
C-D-2-0	09/24/02	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	0.0563 D	<0.0200	<0.0200
C-D-3-5	09/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.145	<0.0100	<0.0100
C-D3wall-5	09/24/02	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	0.0201 D	<0.0200	<0.0200
C-D-4-3	09/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0136	<0.0100	<0.0100

< = Not detected at indicated reportin < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-20
 Extractable Petroleum Hydrocarbons in Soil- Area C
 UNOCAL Edmonds Terminal

SITE	DATE	Aliphatic C8-C10 (mg/kg)	Aliphatic C10-C12 (mg/kg)	Aliphatic C12-C16 (mg/kg)	Aliphatic C16-C21 (mg/kg)	Aliphatic C21-C34 (mg/kg)	Aromatic C10-C12 (mg/kg)	Aromatic C12-C16 (mg/kg)	Aromatic C16-C21 (mg/kg)	Aromatic C21-C34 (mg/kg)	Total Extractable Hydrocarbons (mg/kg)
C-B-3-0	09/24/02	<10.0 J	<10.0 J	23.1 DJ	56.2 DJ	118 DJ	<10.0 J	<10.0 J	41.6 DJ	118 DJ	301 DJ

< = Not detected at indicated reporting limit. --- = Not analyzed.

J = Estimated value. D = Sample diluted due to high analyte concentrations. R= Rejected value.

Table G-21
BTEX in Soil- Area D
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
D1-A-1-25	10/23/02	25	0.103	0.484	0.647	1.87
D1-A1wall-21	10/23/02	21	<0.00400	<0.00900	<0.0125	<0.0250
D1-A1wall-8	10/23/02	8	<0.00400	<0.00900	<0.0122	<0.0250
D1-A2wall-21	10/23/02	21	0.0145 J	0.0401 J	<0.022	0.127
D1-A2wall-23	10/23/02	23	<0.00400	<0.00900	<0.00935	<0.0250
D1-A2wall-8	10/23/02	8	0.00595 J	<0.00900	<0.0113	<0.0250
D1-B-1-22	10/23/02	22	0.0104 J	<0.00900	<0.013	<0.0250
D1-B1wall-19	10/23/02	19	0.0103 J	0.00903 J	<0.0215	0.0331 J
D1-B1wall-6	10/23/02	6	<0.00400	<0.00900	<0.00662	<0.0250
D1-B2wall-18	10/23/02	18	<0.0363	0.128 J	<0.0307	0.44 D
D1-B2wall-7	10/23/02	7	0.0088 J	0.0166 J	<0.0144	0.052 J
D1-C-1-16	10/23/02	16	0.0395	0.236	0.052	0.702
D1-C1wall-14	10/23/02	14	0.00608 J	<0.00900	<0.0103	<0.0250
D1-C1wall-7	10/23/02	7	<0.00400	<0.00900	<0.00699	<0.0250
D1-C2wall-13	10/23/02	13	0.119	0.0594	<0.0129	0.0259 J
D1-C2wall-7	10/23/02	7	0.00434 J	<0.00900	<0.00878	<0.0250
D1-D-1-13	10/22/02	13	0.0578	0.126	<0.0134	0.441
D1-D1wall-10	10/22/02	10	0.0354	0.0317 J	<0.0114	0.0512 J
D1-D1wall-4	10/22/02	4	0.0194 J	0.0176 J	<0.0111	0.0335 J
D1-D-2-12.5	10/22/02	12.5	0.00953 J	0.0157 J	<0.00894	0.0371 J
D1-D2Wall-11	10/22/02	11	<0.00439	<0.00900	<0.00933	<0.0250
D1-D2Wall-6	10/22/02	6	0.00595 J	0.317	<0.00902	1.03

**Table G-21
BTEX in Soil- Area D
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
D1-E-1-7	10/22/02	7	<0.00400	<0.00900	<0.00854	<0.0250
D2-A-5-6	11/22/02	6	<0.00400	<0.00900	0.0116 J	<0.0250
D2-A5WALL-3	11/22/02	3	<0.00400	<0.00900	0.0113 J	<0.0250
D2-B4WALL-4	11/22/02	4	<0.00400	<0.00900	0.0121 J	<0.0250
D2-B-5-15	12/05/02	15	<0.00400	<0.00900	0.00909 J	<0.0250
D2-B-5B-23	12/05/02	23	<0.00400	<0.00900	0.0079 J	<0.0250
D2-B-5C-8	12/05/02	8	<0.00400	<0.00900	0.0101 J	<0.0250
D2-B-5D-15	12/05/02	15	<0.00400	<0.00900	0.00682 J	<0.0250
D2-B-6-12	11/27/02	12	0.00822 J	<0.00900	0.0149 J	<0.0250
D2-B-6B-12	12/03/02	12	<0.00400	<0.00900	0.00787 J	<0.0250
D2-B-6D-10	12/03/02	10	<0.00400	<0.00900	0.00928 J	<0.0250
D2-B6wall-2	11/27/02	2	0.00592 J	<0.00900	0.0124 J	<0.0250
D2-C-4-20	11/22/02	20	0.0417	<0.00900	0.00707 J	<0.0250
D2-C4WALL-12	11/22/02	12	<0.00400	<0.00900	0.0112 J	0.0273 J
D2-C4WALL-5	11/22/02	5	<0.00400	<0.00900	0.0125 J	<0.0250
D2-C-5-9	11/22/02	9	<0.00400	<0.00900	0.00594 J	<0.0250
D2-C-6-8	11/22/02	8	0.00729 J	0.0107 J	0.0125 J	0.0356 J
D2-C6WALL-2	11/22/02	2	<0.00400	<0.00900	0.00576 J	<0.0250
D2-D-1-7	11/22/02	7	0.00644 J	0.0328 J	0.00742 J	0.0739 J
D2-D1WALL-3	11/22/02	3	<0.00400	<0.00900	0.012 J	0.0409 J
D2-D-4-8	11/22/02	8	<0.00400	<0.00900	0.0116 J	<0.0250
D2-D4WALL-4	11/22/02	4	<0.00400	<0.00900	0.017 J	<0.0250

**Table G-21
BTEX in Soil- Area D
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
D2-D-5-18	11/21/02	18	0.00547 J	<0.00900	0.0159 J	<0.0250
D2-D-6-9	11/22/02	9	0.00438 J	0.0234 J	0.00945 J	0.0399 J
D2-D6WALL-4	11/22/02	4	0.00444 J	<0.00900	0.011 J	<0.0250
D2-E-2-4	11/22/02	4	<0.00400	<0.00900	0.00555 J	<0.0250
D2-E2WALL-9	11/22/02	9	<0.00400	<0.00900	0.00522 J	<0.0250
D2-E-3-8	11/22/02	8	0.059	<0.00900	0.00612 J	<0.0250
D2-E3WALL-5	11/22/02	5	0.0281 J	<0.00900	0.00673 J	<0.0250
D2-E-4-4	11/22/02	4	0.00496 J	<0.00900	0.0138 J	0.0282 J
D2-E-5-7	11/22/02	7	<0.00400	<0.00900	0.00918 J	<0.0250
D2-E5WALL-4	11/22/02	4	<0.00400	<0.00900	0.0082 J	<0.0250
D2-F-2-8.5	12/02/02	8.5	0.582	0.117	0.247	0.503
D2-F-2A-11	12/02/02	11	0.0441	0.0232 J	0.0145 J	0.0451 J
D2-F-2B-3	12/02/02	3	0.00846 J	<0.00900	0.017 J	<0.0250
D2-F-2C-4	12/02/02	4	0.00567 J	<0.00900	0.012 J	0.0294 J
D2-F-2D-6.5	12/02/02	6.5	0.00523 J	<0.00900	0.0128 J	0.0263 J
D2-F-2DWALL-3	12/02/02	3	0.0101 J	0.077	0.0127 J	0.0479 J
D2-F-3-3	11/22/02	3	<0.00400	<0.00900	0.00641 J	<0.0250
D2-F-4-2	11/22/02	2	0.0055 J	<0.00900	0.013 J	<0.0250
D2-G-3-1	11/22/02	1	<0.00400	<0.00900	0.0124 J	0.0342 J

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

**Table G-22
PAHs in Soil- Area D
UNOCAL Edmonds Terminal**

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
D1-A-1-25	10/23/02	0.0131	0.0331	<0.0100	<0.0100	<0.0100	<0.0100	0.0416	<0.0100	<0.0100
D1-A1wall-21	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-A1wall-8	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-A2wall-21	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-A2wall-23	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-A2wall-8	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-B-1-22	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-B1wall-19	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-B1wall-6	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-B2wall-18	10/23/02	0.12	0.341	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-B2wall-7	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-C-1-16	10/23/02	0.0469	0.129	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-C1wall-14	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-C1wall-7	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-C2wall-13	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-C2wall-7	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-D-1-13	10/22/02	<0.0100	0.019	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-D1wall-10	10/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-D1wall-4	10/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-D-2-12.5	10/22/02	<0.0100	0.0113	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-D2Wall-11	10/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-D2Wall-6	10/22/02	0.201	0.445	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-22
PAHs in Soil- Area D
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
D1-E-1-7	10/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-A-5-6	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-A5WALL-3	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B4WALL-4	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B-5-15	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B-5B-23	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B-5C-8	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B-5D-15	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B-6-12	11/27/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B-6B-12	12/03/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B-6D-10	12/03/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B6wall-2	11/27/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-C-4-20	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-C4WALL-12	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-C4WALL-5	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-C-5-9	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-C-6-8	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-C6WALL-2	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-D-1-7	11/22/02	0.0172	0.0469	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-D1WALL-3	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-D-4-8	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-D4WALL-4	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-D-5-18	11/21/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0294	<0.0100	0.0361	0.0109
D2-D-6-9	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-D6WALL-4	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

**Table G-22
PAHs in Soil- Area D
UNOCAL Edmonds Terminal**

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
D2-E-2-4	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-E2WALL-9	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-E-3-8	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-E3WALL-5	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-E-4-4	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-E-5-7	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-E5WALL-4	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-F-2-8.5	12/02/02	0.0387	0.0823	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-F-2A-11	12/02/02	<0.0100	0.0188	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-F-2B-3	12/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-F-2C-4	12/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-F-2D-6.5	12/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-F-2DWALL-3	12/02/02	<0.0100	0.0101	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-F-3-3	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-F-4-2	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-G-3-1	11/22/02	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-22
PAHs in Soil- Area D
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenz(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
D1-A-1-25	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.455	<0.0100	<0.0100
D1-A1wall-21	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-A1wall-8	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-A2wall-21	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.018	<0.0100	<0.0100
D1-A2wall-23	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-A2wall-8	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-B-1-22	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-B1wall-19	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-B1wall-6	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-B2wall-18	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.398 J9	<0.0100	<0.0100
D1-B2wall-7	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-C-1-16	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.164	<0.0100	<0.0100
D1-C1wall-14	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0103	<0.0100	<0.0100
D1-C1wall-7	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-C2wall-13	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0421	<0.0100	<0.0100
D1-C2wall-7	10/23/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-D-1-13	10/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0425	<0.0100	<0.0100
D1-D1wall-10	10/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0187	<0.0100	<0.0100
D1-D1wall-4	10/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0107	<0.0100	<0.0100
D1-D-2-12.5	10/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-D2Wall-11	10/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D1-D2Wall-6	10/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.119	<0.0100	<0.0100

Table G-22
PAHs in Soil- Area D
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenz(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
D1-E-1-7	10/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-A-5-6	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-A5WALL-3	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B4WALL-4	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B-5-15	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B-5B-23	12/05/02	<0.0100	0.061	<0.0100	0.0108	<0.0100	<0.0100	<0.0100	<0.0100	0.0108
D2-B-5C-8	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B-5D-15	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B-6-12	11/27/02	<0.0100	0.0637	<0.0100	0.013	<0.0100	<0.0100	<0.0100	<0.0100	0.013
D2-B-6B-12	12/03/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B-6D-10	12/03/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-B6wall-2	11/27/02	<0.0100	0.0295	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-C-4-20	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0127	<0.0100	<0.0100
D2-C4WALL-12	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-C4WALL-5	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-C-5-9	11/22/02	<0.0100	0.0293	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-C-6-8	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-C6WALL-2	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-D-1-7	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0117	<0.0100	<0.0100
D2-D1WALL-3	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-D-4-8	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-D4WALL-4	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-D-5-18	11/21/02	0.026	0.189	<0.0100	0.0537	<0.0100	<0.0100	<0.0100	0.0117	0.0512
D2-D-6-9	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-D6WALL-4	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-22
PAHs in Soil- Area D
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenz(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
D2-E-2-4	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-E2WALL-9	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-E-3-8	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-E3WALL-5	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-E-4-4	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-E-5-7	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-E5WALL-4	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-F-2-8.5	12/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0573	<0.0100	<0.0100
D2-F-2A-11	12/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0102	<0.0100	<0.0100
D2-F-2B-3	12/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-F-2C-4	12/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-F-2D-6.5	12/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-F-2DWALL-3	12/02/02	<0.0100	0.0311	<0.0100	0.0135	<0.0100	<0.0100	0.0413	<0.0100	0.0135
D2-F-3-3	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-F-4-2	11/22/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
D2-G-3-1	11/22/02	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500

< = Not detected at indicated reporting limit. - < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-24
 Extractable Petroleum Hydrocarbons in Soil- Area D
 UNOCAL Edmonds Terminal

SITE	DATE	Aliphatic C8-C10 (mg/kg)	Aliphatic C10-C12 (mg/kg)	Aliphatic C12-C16 (mg/kg)	Aliphatic C16-C21 (mg/kg)	Aliphatic C21-C34 (mg/kg)	Aromatic C10-C12 (mg/kg)	Aromatic C12-C16 (mg/kg)	Aromatic C16-C21 (mg/kg)	Aromatic C21-C34 (mg/kg)	Total Extractable Hydrocarbons (mg/kg)
D1-C-1-16	10/23/02	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	20.2	20.2

< = Not detected at indicated reporting limit. --- = Not analyzed.

J = Estimated value. D = Sample diluted due to high analyte concentrations. R= Rejected value.

**Table G-25
BTEX in Soil- Area F
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
F-B-3-7	12/06/02	7	<0.00400	<0.00900	0.0144 J	<0.0250
F-B-3wall-1	10/02/02	1	<0.00400	0.0124 J	0.0074 J	<0.0250
F-B-4-10	12/05/02	10	0.0103 J	0.00947 J	0.0208 J	0.0295 J
F-B-4wall-3	10/02/02	3	<0.00400	0.0131 J	0.00674 J	<0.0250
F-B-5-10	12/05/02	10	<0.00400	<0.00900	0.0107 J	<0.0250
F-B-5wall-3	10/02/02	3	<0.00400	0.0179 J	0.0204 J	0.0442 J
F-B-6-10	12/06/02	10	<0.00400	<0.00900	0.0143 J	<0.0250
F-B-6wall-2	10/02/02	2	<0.00400	0.0136 J	0.00766 J	<0.0250
F-C-2-7	12/05/02	7	<0.00400	<0.00900	0.00717 J	<0.0250
F-C-3-9	12/05/02	9	<0.00400	<0.00900	0.00657 J	<0.0250
F-C-4-10	12/05/02	10	<0.00400	<0.00900	0.00815 J	<0.0250
F-C-5-10	12/05/02	10	0.0102 J	0.0103 J	0.0371 J	0.0416 J
F-C-6-11	12/05/02	11	0.00452 J	0.011 J	0.0292 J	0.0562 J
F-C-7-10	12/05/02	10	<0.00400	<0.00900	0.00922 J	<0.0250
F-C-7wall-4	10/02/02	4	<0.00400	0.014 J	0.00757 J	<0.0250
F-D-2-9	12/05/02	9	0.00574 J	0.0115 J	0.0268 J	0.0459 J
F-D-3-10	12/05/02	10	0.00509 J	0.0111 J	0.0116 J	0.0349 J
F-D-4-10	12/05/02	10	<0.00400	<0.00900	0.00617 J	<0.0250
F-D-5-11	12/05/02	11	<0.00400	<0.00900	0.00685 J	<0.0250
F-D-6-10	12/05/02	10	<0.00400	<0.00900	0.0105 J	<0.0250
F-D-7-11	12/05/02	11	<0.00400	<0.00900	0.00969 J	<0.0250
F-D-7wall-4	10/02/02	4	<0.00400	0.0145 J	0.00856 J	<0.0250
F-E-2-6	12/06/02	6	<0.00400	<0.00900	0.0214 J	0.0389 J

**Table G-25
BTEX in Soil- Area F
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
F-E-3-6	12/06/02	6	0.0047 J	<0.00900	0.0105 J	0.0271 J
F-E-4-7	12/06/02	7	<0.00400	<0.00900	0.00598 J	<0.0250
F-E-5-9	12/06/02	9	0.00472 J	<0.00900	0.0142 J	0.0298 J
F-E-6-6	12/06/02	6	<0.00400	<0.00900	0.00568 J	<0.0250
F-E-7-6	12/06/02	6	<0.00400	<0.00900	0.00635 J	<0.0250
F-E7wall-4	10/04/02	4	0.00433 J	0.0195 J	0.0141 J	0.0354 J
F-F-2-7	12/06/02	7	<0.00400	<0.00900	0.00575 J	<0.0250
F-F-3-6	12/06/02	6	<0.00400	<0.00900	0.00741 J	<0.0250
F-F-4-6	12/06/02	6	<0.00400	<0.00900	0.00918 J	<0.0250
F-F-5-6	12/06/02	6	<0.00400	<0.00900	0.00887 J	<0.0250
F-F-6-8	12/06/02	8	<0.00400	<0.00900	0.00601 J	<0.0250
F-F-7-7	12/06/02	7	<0.00400	<0.00900	0.0104 J	<0.0250
F-F7wall-4	10/04/02	4	0.0045 J	0.0193 J	0.0117 J	0.0411 J
F-F-8-15	01/09/03	15	0.0051 J	<0.00900	0.00732 J	<0.0250
F-G-3-6	12/09/02	6	<0.00400	<0.00900	0.008 J	<0.0250
F-G-4-6	12/09/02	6	<0.00400	<0.00900	0.00699 J	<0.0250
F-G-5-6	12/09/02	6	<0.00400	<0.00900	0.00634 J	<0.0250
F-G-6-8	12/09/02	8	<0.00400	<0.00900	0.00652 J	<0.0250
F-G-7-10	12/09/02	10	<0.00400	<0.00900	0.0103 J	<0.0250
F-G-8-8	12/09/02	8	<0.00400	<0.00900	0.0106 J	<0.0250
F-G-8Wall-8	10/18/02	8	<0.00400	<0.00900	0.0188 J	<0.0250
F-H-3-8	01/09/03	8	0.00493 J	<0.00900	0.0113 J	0.0299 J
F-H-4-14	01/09/03	14	0.00429 J	<0.00900	0.00834 J	<0.0250

Table G-25
BTEX in Soil- Area F
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
F-H-5-15	01/09/03	15	0.00659 J	<0.00900	0.0103 J	0.0271 J
F-H-6-18	01/09/03	18	0.00435 J	<0.00900	0.00756 J	<0.0250
F-H-7-10	12/09/02	10	<0.00400	<0.00900	0.00946 J	<0.0250
F-H-8-10	12/09/02	10	<0.00400	<0.00900	0.00969	<0.0250
F-H-8Wall-7.5	10/18/02	7.5	<0.00400	<0.00900	0.00902 J	<0.0250
F-I-4-8	01/09/03	8	0.00866 J	<0.00900	0.0161 J	<0.0250
F-I-5-12	01/09/03	12	0.00812 J	<0.00900	0.0171 J	0.0278 J
F-I-5Wall-4	10/18/02	4	<0.00400	<0.00900	0.015 J	<0.0250
F-I-6-14	01/09/03	14	0.00824 J	<0.00900	0.0112 J	<0.0250
F-I-7-10	12/09/02	10	<0.00400	<0.00900	0.00881 J	<0.0250
F-I-7Wall-7.5	10/18/02	7.5	0.00531 J	0.00933 J	0.0243 J	0.0292 J

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

**Table G-26
PAHs in Soil- Area F
UNOCAL Edmonds Terminal**

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
F-B-3-7	12/06/02	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
F-B-3wall-1	10/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-B-4-10	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-B-4wall-3	10/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-B-5-10	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-B-5wall-3	10/02/02	<0.0100	0.0146	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-B-6-10	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-B-6wall-2	10/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-C-2-7	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-C-3-9	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-C-4-10	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-C-5-10	12/05/02	0.0204	0.051	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-C-6-11	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-C-7-10	12/05/02	0.0453	0.09	<0.0100	<0.0100	<0.0100	0.0283	<0.0100	0.0104	<0.0100
F-C-7wall-4	10/02/02	<0.0100	0.0113	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-D-2-9	12/05/02	0.0172	0.0375	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-D-3-10	12/05/02	0.0132	0.0319	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-D-4-10	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-D-5-11	12/05/02	0.0632	0.152	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-D-6-10	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-D-7-11	12/05/02	0.0166	0.0332	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-D-7wall-4	10/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-E-2-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-E-3-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-E-4-7	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-E-5-9	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

**Table G-26
PAHs in Soil- Area F
UNOCAL Edmonds Terminal**

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
F-E-6-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-E-7-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-E7wall-4	10/04/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-2-7	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-3-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-4-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-5-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-6-8	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-7-7	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F7wall-4	10/04/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0366	<0.0100	<0.0100
F-F-8-15	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-8-5	12/06/02	0.134	0.0136	<0.0100	<0.0100	<0.0100	0.103	<0.0100	<0.0100	<0.0100
F-G-3-6	12/09/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-G-4-6	12/09/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-G-5-6	12/09/02	<0.0100	0.0335	0.0127	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-G-6-8	12/09/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-G-7-10	12/09/02	0.0112	0.0367	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0112
F-G7wall-6	10/04/02	0.376	0.0382	0.036	0.0142	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-G-8-8	12/09/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-G-8Wall-8	10/18/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-H-3-8	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-H-4-14	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-H-5-15	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-H-6-18	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-H-7-10	12/09/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-H-8Wall-7.5	10/18/02	0.0568	0.0135	<0.0100	<0.0100	0.0172	<0.0100	<0.0100	<0.0100	<0.0100

**Table G-26
PAHs in Soil- Area F
UNOCAL Edmonds Terminal**

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
F-I-4-8	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-I-5-12	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-I-5Wall-4	10/18/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-I-6-14	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-I-7-10	12/09/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-I-7Wall-7.5	10/18/02	0.112 D	0.112 D	<0.100	2.4 D	0.481 D	0.781 D	0.378 D	0.807 D	0.799 D

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

**Table G-26
PAHs in Soil- Area F
UNOCAL Edmonds Terminal**

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
F-B-3-7	12/06/02	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	0.0505 D
F-B-3wall-1	10/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-B-4-10	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-B-4wall-3	10/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-B-5-10	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-B-5wall-3	10/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0199	<0.0100	<0.0100
F-B-6-10	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-B-6wall-2	10/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-C-2-7	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-C-3-9	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-C-4-10	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-C-5-10	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0165	<0.0100	<0.0100
F-C-6-11	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-C-7-10	12/05/02	<0.0100	0.0587	<0.0100	0.032	<0.0100	<0.0100	<0.0100	<0.0100	0.185
F-C-7wall-4	10/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0446	<0.0100	<0.0100
F-D-2-9	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-D-3-10	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-D-4-10	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-D-5-11	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-D-6-10	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-D-7-11	12/05/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-D-7wall-4	10/02/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0282	<0.0100	<0.0100
F-E-2-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-E-3-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-E-4-7	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0102
F-E-5-9	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-26
PAHs in Soil- Area F
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
F-E-6-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-E-7-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-E7wall-4	10/04/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-2-7	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-3-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-4-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-5-6	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-6-8	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-7-7	12/06/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F7wall-4	10/04/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-8-15	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-F-8-5	12/06/02	<0.0100	0.186	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.59	<0.0100
F-G-3-6	12/09/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-G-4-6	12/09/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-G-5-6	12/09/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0194	<0.0100	<0.0100
F-G-6-8	12/09/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-G-7-10	12/09/02	<0.0100	<0.0100	0.0247	<0.0100	<0.0100	0.0168	0.012	<0.0100	<0.0100
F-G7wall-6	10/04/02	<0.0100	0.0105	<0.0100	0.0135	0.0952	<0.0100	0.018	0.177	0.0285
F-G-8-8	12/09/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-G-8Wall-8	10/18/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0561	<0.0100	<0.0100
F-H-3-8	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-H-4-14	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-H-5-15	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-H-6-18	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-H-7-10	12/09/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-H-8Wall-7.5	10/18/02	<0.0100	<0.0100	<0.0100	<0.0100	0.0471	<0.0100	<0.0100	0.0524	0.0202

Table G-26
PAHs in Soil- Area F
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
F-I-4-8	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-I-5-12	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-I-5Wall-4	10/18/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-I-6-14	01/09/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-I-7-10	12/09/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
F-I-7Wall-7.5	10/18/02	1.06 D	1.57 D	0.301 D	1.07 D	<0.100	0.747 D	0.18 D	0.532 D	1.98 D

< = Not detected at indicated reporting level | < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-27
Volatile Petroleum Hydrocarbons in Soil- Area F
UNOCAL Edmonds Terminal

SITE	DATE	Aliphatic C5-C6 (mg/kg)	Aliphatic C6-C8 (mg/kg)	Aliphatic C8-C10 (mg/kg)	Aliphatic C10-C12 (mg/kg)	Aromatic C8-C10 (mg/kg)	Aromatic C10-C12 (mg/kg)	Aromatic C12-C13 (mg/kg)	Total Volatile Petroleum Hydrocarbons (mg/kg)
F-E-6-8	10/04/02	<100	<100	<100	<100	<100	152 D	771 D	923 D

< = Not detected at indicated reporting limit. --- = Not analyzed.

J = Estimated value. D = Sample diluted due to high analyte concentrations. R= Rejected value.

Table G-28
 Extractable Petroleum Hydrocarbons in Soil- Area F
 UNOCAL Edmonds Terminal

SITE	DATE	Aliphatic C8-C10 (mg/kg)	Aliphatic C10-C12 (mg/kg)	Aliphatic C12-C16 (mg/kg)	Aliphatic C16-C21 (mg/kg)	Aliphatic C21-C34 (mg/kg)	Aromatic C10-C12 (mg/kg)	Aromatic C12-C16 (mg/kg)	Aromatic C16-C21 (mg/kg)	Aromatic C21-C34 (mg/kg)	Total Extractable Hydrocarbons (mg/kg)
F-E-6-8	10/04/02	<5.00	<5.00	90.8	92.6	39.2	<5.00	24	72.5	12.6	332

Values represent total concentration unless noted. < = Not detected at indicated reporting limit. --- = Not analyzed.
 J = Estimated value. D = Sample diluted due to high analyte concentrations. R= Rejected value.

**Table G-29
BTEX in Soil- Area H
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
H-A-4-6	03/26/03	6	0.00587 J	<0.00900	0.021 J	0.0304 J
H-A-4WALL-2	03/26/03	2	0.00512 J	<0.00900	0.00957 J	<0.0250
H-B-4-6	03/26/03	6	0.00496 J	<0.00900	0.00927 J	<0.0250
H-B-4WALL-2	03/26/03	2	0.00566 J	<0.00900	0.0115 J	<0.0250
H-B-5-10	03/26/03	10	0.00582 J	<0.00900	0.00928 J	<0.0250
H-B-6-13	03/27/03	13	0.00506 J	<0.00900	0.00867 J	<0.0250
H-B-6WALL-9	03/27/03	9	0.00609 J	<0.00900	0.00936 J	<0.0250
H-C-4-4	03/26/03	4	0.00549 J	<0.00900	0.0119 J	<0.0250
H-C-5-8	03/26/03	8	0.00434 J	<0.00900	0.00914 J	<0.0250
H-C-6-13	03/27/03	13	<0.00400	<0.00900	0.00864 J	<0.0250
H-C-6WALL-9	03/27/03	9	0.0059 J	<0.00900	0.0188 J	0.0288 J
H-C-7-11	03/26/03	11	0.0049 J	<0.00900	0.012 J	<0.0250
H-C-8-11	03/26/03	11	0.00494 J	<0.00900	0.0124 J	<0.0250
H-D-2-2	03/26/03	2	<0.00400	<0.00900	0.00842 J	<0.0250
H-D-3-5	03/26/03	5	<0.00400	<0.00900	0.00708 J	<0.0250
H-D-3WALL-2	03/26/03	2	<0.00400	<0.00900	0.00777 J	<0.0250
H-D-4-6	03/26/03	6	<0.00400	<0.00900	0.00894 J	<0.0250
H-D-5-8	03/26/03	8	0.00436 J	<0.00900	0.00927 J	<0.0250
H-D-6-7	03/26/03	7	<0.00400	<0.00900	0.00676 J	<0.0250
H-D-7-8	03/26/03	8	0.00739 J	<0.00900	0.0126 J	0.0261 J
H-D-8-9	03/26/03	9	0.00469 J	<0.00900	0.0104 J	<0.0250
H-D-9-11	03/26/03	11	0.00611 J	<0.00900	0.0099 J	<0.0250
H-E-2-3	03/25/03	3	<0.00400	<0.00900	0.0115 J	<0.0250
H-E-3-6	03/25/03	6	<0.00400	<0.00900	0.00462 J	<0.0250

Table G-29
BTEX in Soil- Area H
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
H-E-4-8	03/25/03	8	<0.00400	<0.00900	0.00509 J	<0.0250
H-E-5-8	03/26/03	8	<0.00400	<0.00900	0.00811 J	<0.0250
H-E-6-8	03/26/03	8	<0.00400	<0.00900	0.00718 J	<0.0250
H-E-7-8	03/26/03	8	<0.00400	<0.00900	0.00707 J	<0.0250
H-E-8-6	03/26/03	6	<0.00400	<0.00900	0.0111 J	<0.0250
H-F-1-2	03/26/03	2	<0.00400	<0.00900	0.00855 J	<0.0250
H-F-2-4	03/25/03	4	<0.00400	<0.00900	0.00939 J	<0.0250
H-F-3-6	03/25/03	6	0.00453 J	<0.00900	0.01 J	<0.0250
H-F-4-7	03/25/03	7	<0.00400	<0.00900	0.0102 J	<0.0250
H-F-5-9	03/26/03	9	<0.00400	<0.00900	0.01 J	<0.0250
H-F-6-9	03/26/03	9	<0.00400	<0.00900	0.00718 J	<0.0250
H-F-7-8	03/26/03	8	<0.00400	<0.00900	0.00667 J	<0.0250
H-F-8-6	03/26/03	6	<0.00400	<0.00900	0.0112 J	<0.0250
H-G-1-2	03/26/03	2	<0.00400	<0.00900	0.0111 J	<0.0250
H-G-2-3	03/25/03	3	0.00425 J	<0.00900	0.00637 J	<0.0250
H-G-3-3	03/25/03	3	<0.00400	<0.00900	0.00872 J	<0.0250
H-G-4-7	03/25/03	7	0.00429 J	<0.00900	0.00624 J	<0.0250
H-G-5-7	03/26/03	7	<0.00400	<0.00900	0.0068 J	<0.0250
H-G-6-8	03/26/03	8	<0.00400	<0.00900	0.0056 J	<0.0250
H-G-7-6	03/26/03	6	<0.00400	<0.00900	0.00646 J	<0.0250
H-G-8-6	03/26/03	6	<0.00400	<0.00900	0.00707 J	<0.0250
H-H-2-2	03/26/03	2	<0.00400	<0.00900	0.0111 J	<0.0250
H-H-3-6	03/26/03	6	<0.00400	<0.00900	0.00826 J	<0.0250
H-H-4-7	03/26/03	7	<0.00400	<0.00900	0.00898 J	<0.0250

Table G-29
BTEX in Soil- Area H
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
H-H-5-8	03/26/03	8	0.00665 J	0.011 J	0.034 J	0.0535 J
H-H-6-7	03/26/03	7	0.0085 J	0.0191 J	0.0175 J	0.0613 J
H-H-7-7	03/26/03	7	<0.00400	<0.00900	0.00576 J	<0.0250
H-H-8-7	03/26/03	7	0.00455 J	<0.00900	0.00873 J	<0.0250
H-H-9-13	03/26/03	13	0.00437 J	<0.00900	0.00665 J	<0.0250
H-H-9WALL-10	03/26/03	10	<0.00400	<0.00900	0.00702 J	<0.0250
H-I-10-15	03/27/03	15	<0.00400	<0.00900	0.00916 J	<0.0250
H-I-10WALL-10	03/26/03	10	<0.00400	<0.00900	0.00759 J	<0.0250
H-I-11-14	03/27/03	14	<0.00400	<0.00900	0.00511 J	<0.0250
H-I-3-3	03/26/03	3	0.00617 J	0.0136 J	0.0133 J	0.045 J
H-I-4-8	03/26/03	8	<0.00400	<0.00900	0.00716 J	<0.0250
H-I-5-9	03/26/03	9	<0.00800	<0.0180	0.0237 J	<0.0500
H-I-6-6	03/26/03	6	<0.00400	<0.00900	0.00723 J	<0.0250
H-I-7-8	03/26/03	8	<0.00400	<0.00900	0.00655 J	<0.0250
H-I-8-10	03/26/03	10	0.00543 J	0.0145 J	0.0119 J	0.0255 J
H-I-9-14	03/26/03	14	<0.00400	<0.00900	0.00952 J	<0.0250
H-I-9WALL-10	03/26/03	10	<0.00400	<0.00900	0.00895 J	<0.0250
H-I-WALL11-10	03/27/03	10	<0.00400	<0.00900	0.00604 J	<0.0250
H-J-10-18	03/27/03	18	<0.00400	<0.00900	0.0061 J	<0.0250
H-J-4-6	04/07/03	6	<0.00400	<0.00900	0.00663 J	<0.0250
H-J-5-4	03/27/03	4	0.00803 J	<0.00900	0.0144 J	0.0279 J
H-J-6-7	03/27/03	7	0.00713 J	0.0121 J	0.014 J	0.0389 J
H-J-7-9	03/27/03	9	0.00563 J	<0.00900	0.0143 J	<0.0250
H-J-7WALL-12	03/27/03	12	0.00863 J	<0.00900	0.0118 J	<0.0250

Table G-29
BTEX in Soil- Area H
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
H-J-8-13	03/27/03	13	<0.00400	<0.00900	0.0076 J	<0.0250
H-J-8WALL-16	03/27/03	16	<0.00400	<0.00900	0.00569 J	<0.0250
H-J-9-17	03/27/03	17	<0.00400	<0.00900	0.00537 J	<0.0250
H-K-4-5	04/07/03	5	<0.00400	<0.00900	0.00637 J	<0.0250
H-K-5-4	03/27/03	4	0.00579 J	<0.00900	0.0124 J	<0.0250
H-K-6-7	03/27/03	7	0.00608 J	0.0116 J	0.0165 J	0.0403 J
H-K-7-10	03/27/03	10	<0.00400	<0.00900	0.00533 J	<0.0250
H-K-8-14	03/27/03	14	<0.00400	<0.00900	0.00834 J	<0.0250
H-K-9-17	03/27/03	17	0.00529 J	<0.00900	0.0218 J	0.0324 J
H-L-4-4	04/07/03	4	0.00477 J	0.0104 J	0.00852 J	<0.0250
H-L-5-4	03/27/03	4	0.00767 J	<0.00900	0.0117 J	<0.0250
H-L-6-9	03/27/03	9	0.00427 J	<0.00900	0.00957 J	<0.0250
H-L-7-9	03/27/03	9	0.00446 J	<0.00900	0.00911 J	<0.0250
H-L-8-14	03/27/03	14	0.00402 J	<0.00900	0.00847 J	<0.0250
H-M-5-5	03/27/03	5	<0.00400	<0.00900	0.00854 J	<0.0250
H-M-6-5	03/27/03	5	0.0045 J	<0.00900	0.00964 J	<0.0250
H-M-7-5	03/27/03	5	0.00584 J	<0.00900	0.0117 J	0.0277 J
H-M-7WALL-8	03/27/03	8	0.00598 J	<0.00900	0.0188 J	0.0316 J

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-30
PAHs in Soil- Area H
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
H-A-4-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-A-4WALL-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-B-4-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-B-4WALL-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-B-5-10	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-B-6-13	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-B-6WALL-9	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-C-4-4	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-C-5-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-C-6-13	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-C-6WALL-9	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-C-7-11	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-C-8-11	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-2-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-3-5	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-3WALL-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-4-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-5-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-6-7	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-7-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-8-9	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-9-11	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-E-2-3	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-E-3-6	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-E-4-8	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-E-5-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-E-6-8	03/26/03	0.0134	0.016	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-30
PAHs in Soil- Area H
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
H-E-7-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-E-8-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-1-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-2-4	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-3-6	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-4-7	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-5-9	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-6-9	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-7-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-8-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-1-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-2-3	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-3-3	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-4-7	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-5-7	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-6-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-7-6	03/26/03	0.0146	0.0112	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-8-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-2-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-3-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-4-7	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-5-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-6-7	03/26/03	<0.0100	0.0117	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-7-7	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-8-7	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-9-13	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-9WALL-10	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

**Table G-30
PAHs in Soil- Area H
UNOCAL Edmonds Terminal**

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
H-I-10-15	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-10WALL-10	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-11-14	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-3-3	03/26/03	0.09	0.0553	0.0173	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-4-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-5-9	03/26/03	<0.0100	0.0376	<0.0100	<0.0100	<0.0100	0.011	<0.0100	<0.0100	<0.0100
H-I-6-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-7-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-8-10	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-9-14	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-9WALL-10	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-WALL11-10	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-10-18	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-4-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-5-4	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-6-7	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-7-9	03/27/03	0.0122	0.0191	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-7WALL-12	03/27/03	<0.0100	0.0123	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-8-13	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-8WALL-16	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-9-17	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-K-4-5	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-K-5-4	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-K-6-7	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-K-7-10	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-K-8-14	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-K-9-17	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-30
PAHs in Soil- Area H
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
H-L-4-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-L-5-4	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-L-6-9	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-L-7-9	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-L-8-14	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-M-5-5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-M-6-5	03/27/03	0.0841	0.146	<0.0100	<0.0100	0.013	<0.0100	<0.0100	<0.0100	<0.0100
H-M-7-5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-M-7WALL-8	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-30
PAHs in Soil- Area H
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
H-A-4-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-A-4WALL-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-B-4-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-B-4WALL-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-B-5-10	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-B-6-13	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-B-6WALL-9	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-C-4-4	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-C-5-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-C-6-13	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-C-6WALL-9	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-C-7-11	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-C-8-11	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-2-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-3-5	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-3WALL-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-4-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-5-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-6-7	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-7-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-8-9	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-D-9-11	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-E-2-3	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-E-3-6	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-E-4-8	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-E-5-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-E-6-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-30
PAHs in Soil- Area H
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
H-E-7-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-E-8-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-1-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-2-4	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-3-6	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-4-7	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-5-9	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-6-9	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-7-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-F-8-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-1-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-2-3	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-3-3	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-4-7	03/25/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-5-7	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-6-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-G-7-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0327	<0.0100
H-G-8-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-2-2	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-3-6	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-4-7	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-5-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-6-7	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0108	<0.0100
H-H-7-7	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-8-7	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-9-13	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-H-9WALL-10	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-30
PAHs in Soil- Area H
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
H-I-10-15	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-10WALL-10	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-11-14	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-3-3	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	0.0322	<0.0100	0.0537	<0.0100	<0.0100
H-I-4-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-5-9	03/26/03	<0.0100	0.0431	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-6-6	03/26/03	<0.0100	0.0107	<0.0100	<0.0100	0.0598	<0.0100	<0.0100	0.0223	<0.0100
H-I-7-8	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-8-10	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-9-14	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-I-9WALL-10	03/26/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.1	<0.0100	<0.0100
H-I-WALL11-10	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-10-18	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-4-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-5-4	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-6-7	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-7-9	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0165	<0.0100
H-J-7WALL-12	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-8-13	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-8WALL-16	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-J-9-17	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-K-4-5	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-K-5-4	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-K-6-7	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-K-7-10	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-K-8-14	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-K-9-17	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

**Table G-30
PAHs in Soil- Area H
UNOCAL Edmonds Terminal**

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
H-L-4-4	04/07/03	<0.0100	<0.0100	0.0113	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-L-5-4	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-L-6-9	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-L-7-9	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-L-8-14	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-M-5-5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-M-6-5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	0.0338	<0.0100	0.0451	0.0659	<0.0100
H-M-7-5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
H-M-7WALL-8	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

**Table G-33
BTEX in Soil- Area I
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
I-B-2-0	10/31/02	0	<0.0300	<0.0500	<0.0500	<0.100
I-B2Wall-3	10/31/02	3	<0.0300	<0.0500	<0.0500	<0.100
I-B-3-5	10/31/02	5	<0.0300	<0.0500	<0.0500	<0.100
I-B-4-3	10/31/02	3	<0.0300	<0.0500	<0.0500	<0.100
I-C-2-2	10/31/02	2	<0.0300	<0.0500	<0.0500	<0.100
I-C-3-4	10/31/02	4	<0.0300	<0.0500	<0.0500	<0.100
I-C-4-8	10/31/02	8	<0.0300	<0.0500	<0.0500	<0.100
I-C4Wall-4	10/31/02	4	<0.0300	<0.0500	<0.0500	<0.100
I-D-1-1	10/31/02	1	<0.0300	<0.0500	<0.0500	<0.100
I-D-2-2	10/31/02	2	<0.0300	<0.0500	<0.0500	<0.100
I-D-3-4	10/31/02	4	<0.0300	<0.0500	<0.0500	<0.100
I-D-4-9	11/08/02	9	0.00774 J	0.00908 J	0.0134 J	0.0279 J
I-D-4A-9	11/08/02	9	0.00667 J	<0.00900	0.0113 J	<0.0250
I-D-4B-8.5	11/08/02	8.5	0.00457 J	<0.00900	0.0125 J	0.0278 J
I-D-4C-9	11/08/02	9	<0.00400	<0.00900	0.00649 J	<0.0250
I-D-4D-8.5	11/08/02	8.5	<0.00400	<0.00900	0.00678 J	<0.0250
I-D4WALL-5	11/08/02	5	<0.00400	<0.00900	0.00967 J	<0.0250
I-E-3-1	10/31/02	1	<0.0300	<0.0500	<0.0500	<0.100
I-E-4-2	10/31/02	2	<0.0300	<0.0500	<0.0500	<0.100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

**Table G-34
PAHs in Soil- Area I
UNOCAL Edmonds Terminal**

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
I-B-2-0	10/31/02	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	0.0528 D	<0.0500	0.081 D
I-B2Wall-3	10/31/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0107
I-B-3-5	10/31/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0132
I-B-4-3	10/31/02	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
I-C-2-2	10/31/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-C-3-4	10/31/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0165	<0.0100	0.011
I-C-4-8	10/31/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-C4Wall-4	10/31/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0103
I-D-1-1	10/31/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0107
I-D-2-2	10/31/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D-3-4	10/31/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.011	<0.0100	0.011
I-D-4-9	11/08/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D-4A-9	11/08/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D-4B-8.5	11/08/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D-4C-9	11/08/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D-4D-8.5	11/08/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D4WALL-5	11/08/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-E-3-1	10/31/02	0.101	0.0883	<0.0100	<0.0100	<0.0100	<0.0100	0.0142	<0.0100	0.0142
I-E-4-2	10/31/02	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

**Table G-34
PAHs in Soil- Area I
UNOCAL Edmonds Terminal**

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
I-B-2-0	10/31/02	<0.0500	<0.0500	0.081 D	<0.0500	<0.0500	0.081 D	<0.0500	<0.0500	<0.0500
I-B2Wall-3	10/31/02	<0.0100	<0.0100	0.0157	<0.0100	<0.0100	0.015	<0.0100	<0.0100	<0.0100
I-B-3-5	10/31/02	<0.0100	<0.0100	0.0194	<0.0100	<0.0100	0.0185	<0.0100	<0.0100	<0.0100
I-B-4-3	10/31/02	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
I-C-2-2	10/31/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0116	<0.0100
I-C-3-4	10/31/02	<0.0100	<0.0100	0.0181	<0.0100	<0.0100	0.0165	<0.0100	<0.0100	<0.0100
I-C-4-8	10/31/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-C4Wall-4	10/31/02	<0.0100	<0.0100	0.0162	<0.0100	<0.0100	0.0147	<0.0100	<0.0100	<0.0100
I-D-1-1	10/31/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D-2-2	10/31/02	<0.0100	0.0101	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D-3-4	10/31/02	<0.0100	<0.0100	0.018	<0.0100	<0.0100	0.0165	<0.0100	<0.0100	<0.0100
I-D-4-9	11/08/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D-4A-9	11/08/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D-4B-8.5	11/08/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D-4C-9	11/08/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D-4D-8.5	11/08/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-D4WALL-5	11/08/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
I-E-3-1	10/31/02	<0.0100	<0.0100	<0.0100	<0.0100	0.0702	<0.0100	0.0104	0.139	<0.0100
I-E-4-2	10/31/02	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500

< = Not detected at indicated reportin --- = Not analyzed. J = Estimated value.

**Table G-37
BTEX in Soil- Area K
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
K-A-2-4	02/05/03	4	0.00412 J	<0.00900	0.0218 J	0.0336 J
K-A-3-5	02/05/03	5	0.00566 J	0.00907 J	0.0141 J	<0.0250
K-B-1-3	02/05/03	3	<0.00400	<0.00900	0.0106 J	<0.0250
K-B-2-15	02/05/03	15	<0.00400	<0.00900	0.0133 J	<0.0250
K-B-3-15	02/05/03	15	<0.00400	<0.00900	0.00934 J	<0.0250
K-B-4-15	02/05/03	15	<0.00400	<0.00900	0.00787 J	<0.0250
K-C-1-4	02/05/03	4	<0.00400	<0.00900	0.00935 J	<0.0250
K-C-2-5	02/05/03	5	<0.00400	<0.00900	0.00937 J	<0.0250
K-C-3-6	02/05/03	6	<0.00400	<0.00900	0.00952 J	<0.0250
K-C-4-5	02/05/03	5	<0.00400	<0.00900	0.00943 J	<0.0250
K-C-5-10	02/05/03	10	<0.00400	<0.00900	0.0104 J	<0.0250
K-C-6-15	02/05/03	15	<0.00400	<0.00900	0.00975 J	<0.0250
K-D-1-6	02/05/03	6	<0.00400	<0.00900	0.0103 J	<0.0250
K-D-2-6	02/05/03	6	<0.00400	<0.00900	0.0119 J	<0.0250
K-D-3-8	02/05/03	8	<0.00400	<0.00900	0.00978 J	<0.0250
K-D-4-6	02/05/03	6	<0.00400	<0.00900	0.0102 J	<0.0250
K-D-5-8	02/05/03	8	0.00635 J	0.0131 J	0.0287 J	0.0401 J
K-D-6-6	02/05/03	6	0.00514 J	<0.00900	0.0168 J	0.034 J
K-D-7-6	02/05/03	6	0.00467 J	<0.00900	0.0109 J	<0.0250
K-D-8-6	02/05/03	6	0.0081 J	<0.00900	0.014 J	0.0275 J
K-D-9-6	02/05/03	6	0.0156	0.0159	<0.0500	0.0294
K-E-1-0	02/05/03	0	0.00932 J	<0.00900	0.0114 J	<0.0250

Table G-37
BTEX in Soil- Area K
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
K-E-2-8	02/05/03	8	0.0171 J	0.0119 J	0.0318 J	0.0482 J
K-E-3-0	02/05/03	0	0.00645 J	<0.00900	0.0137 J	0.0281 J
K-E-4-4	02/05/03	4	0.00645 J	<0.00900	0.0114 J	<0.0250
K-E-5-3	02/05/03	3	0.00584 J	<0.00900	0.0133 J	<0.0250
K-E-6-3	02/05/03	3	0.00593 J	<0.00900	0.0109 J	<0.0250
K-E-7-3	02/05/03	3	0.00513 J	<0.00900	0.0119 J	<0.0250
K-E-8-4	02/05/03	4	0.00854 J	<0.00900	0.0132 J	<0.0250
K-E-9-4	02/05/03	4	0.00534 J	<0.00900	0.0133 J	<0.0250
K-F-4-3	02/05/03	3	0.00513 J	<0.00900	0.0116 J	<0.0250
K-F-4WALL-6	02/05/03	6	0.00498 J	<0.00900	0.0111 J	<0.0250
K-F-5-4	02/05/03	4	0.00567 J	<0.00900	0.0136 J	<0.0250
K-F-6-5	02/05/03	5	0.00974 J	0.00903 J	0.027 J	0.0312 J
K-F-7-4	02/05/03	4	0.00599 J	<0.00900	0.0146 J	<0.0250
K-F-8-3	02/05/03	3	<0.00400	<0.00900	0.0109 J	<0.0250
K-G-5-2	02/05/03	2	<0.00400	<0.00900	0.00976 J	<0.0250
K-G-6-4	02/05/03	4	0.00438 J	<0.00900	0.0213 J	0.0347 J

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

**Table G-38
PAHs in Soil- Area K
UNOCAL Edmonds Terminal**

SITE	DATE	1-Methyl- naphthalene (mg/kg)	2-Methyl- naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a) anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b) fluoranthene (mg/kg)	Benzo(g,h,i) perylene (mg/kg)
K-A-2-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-A-3-5	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-B-1-3	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-B-2-15	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-B-3-15	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-B-4-15	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-C-1-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-C-2-5	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-C-3-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-C-4-5	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-C-5-10	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-C-6-15	02/05/03	0.0155	0.0155	0.0124	0.0116	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-1-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-2-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-3-8	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.024	<0.0100	<0.0100
K-D-4-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-5-8	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-6-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-7-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-8-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-1-0	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-2-8	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-3-0	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-4-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-5-3	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-6-3	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-7-3	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-8-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-9-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-F-4-3	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-38
PAHs in Soil- Area K
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
K-F-4WALL-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-F-5-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-F-6-5	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-F-7-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-F-8-3	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-G-5-2	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-G-6-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-38
PAHs in Soil- Area K
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
K-A-2-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-A-3-5	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-B-1-3	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	0.0114	<0.0100	<0.0100	<0.0100	<0.0100
K-B-2-15	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-B-3-15	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-B-4-15	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-C-1-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-C-2-5	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-C-3-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-C-4-5	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-C-5-10	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-C-6-15	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0178	<0.0100	<0.0100
K-D-1-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-2-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-3-8	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-4-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-5-8	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-6-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-7-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-D-8-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-1-0	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-2-8	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-3-0	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-4-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-5-3	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-6-3	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-7-3	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-8-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-E-9-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-F-4-3	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-38
PAHs in Soil- Area K
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
K-F-4WALL-6	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-F-5-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-F-6-5	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-F-7-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-F-8-3	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-G-5-2	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
K-G-6-4	02/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

**Table G-41
BTEX in Soil- Area L
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
L-A-2-4	02/21/03	4	0.00746 J	0.00921 J	0.0321 J	0.0359 J
L-A-3-3	02/21/03	3	0.00547 J	<0.00900	0.0131 J	<0.0250
L-A-4-5	02/21/03	5	0.00648 J	<0.00900	0.0158 J	<0.0250
L-B-1-4	02/21/03	4	0.00625 J	<0.00900	0.0151 J	0.026 J
L-B-2-5	02/21/03	5	0.0057 J	<0.00900	0.016 J	0.026 J
L-B-3-5	02/21/03	5	0.00624 J	<0.00900	0.0101 J	<0.0250
L-B-4-5	02/21/03	5	0.00765 J	0.0094 J	0.0139 J	0.0331 J
L-C-1-4	02/21/03	4	0.00594 J	<0.00900	0.0115 J	<0.0250
L-C-2-4	02/21/03	4	0.00541 J	<0.00900	0.00984 J	<0.0250
L-C-3-3	02/21/03	3	0.00561 J	<0.00900	0.00986 J	<0.0250
L-C-4-6	02/21/03	6	0.0077 J	<0.00900	0.00981 J	<0.0250
L-D-1-4	02/21/03	4	0.0518	0.0171 J	0.0141 J	0.0496 J
L-D-2-3	02/21/03	3	<0.00400	<0.00900	0.0123 J	<0.0250
L-D-3-4	02/21/03	4	0.00808 J	<0.00900	0.012 J	<0.0250
L-D-4-6	02/21/03	6	0.00679 J	<0.00900	0.0137 J	<0.0250
L-E-1-4	02/21/03	4	<0.00400	<0.00900	0.00928 J	<0.0250
L-E-2-5	02/21/03	5	<0.00400	<0.00900	0.0125 J	<0.0250
L-E-3-4	02/21/03	4	0.00507 J	<0.00900	0.012 J	<0.0250
L-E-4-4	02/21/03	4	<0.00400	<0.00900	0.00728 J	<0.0250

Table G-41
BTEX in Soil- Area L
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
L-F-1-4	02/21/03	4	<0.00400	<0.00900	0.0111 J	<0.0250
L-F-2-5	02/21/03	2.5	0.0172 J	<0.00900	0.0117 J	<0.0250
L-F-3-2.5	02/21/03	2.5	<0.00400	<0.00900	0.0082 J	<0.0250
L-F-4-4	02/21/03	4	0.0069 J	0.00944 J	0.0203 J	0.0422 J
L-G-1-4	02/21/03	4	0.00603 J	<0.00900	0.012 J	<0.0250
L-G-2-4	02/21/03	4	0.00671 J	<0.00900	0.0125 J	<0.0250
L-G-3-3	02/21/03	3	<0.00400	<0.00900	0.0109 J	<0.0250
L-G-4-3	02/21/03	3	0.00631 J	<0.00900	0.0113 J	<0.0250
L-H-1-4	02/21/03	4	<0.00400	<0.00900	0.0101 J	<0.0250
L-H-2-2	02/21/03	2	<0.00400	<0.00900	0.00941 J	<0.0250
L-H-3-5	02/21/03	5	<0.00400	<0.00900	0.00696 J	<0.0250
L-H-4-4	02/21/03	4	<0.00400	0.05	0.0102 J	0.473
L-I-2-4	02/21/03	4	<0.00400	<0.00900	0.00931 J	<0.0250
L-I-3-0	02/21/03	0	<0.00400	<0.00900	0.00789 J	<0.0250
L-I-3WALL-3	02/21/03	3	<0.00400	<0.00900	0.0102 J	<0.0250

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-42
PAHs in Soil- Area L
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
L-A-2-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-A-3-3	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-A-4-5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-B-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0126	<0.0100	<0.0100	<0.0100
L-B-2-5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-B-3-5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-B-4-5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-C-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-C-2-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-C-3-3	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-C-4-6	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-D-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0708	<0.0100	<0.0100
L-D-2-3	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-D-3-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-D-4-6	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-E-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-E-2-5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-E-3-4	02/21/03	<0.0100	0.0103	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-E-4-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-F-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-F-2-2.5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-F-3-2.5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-F-4-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-G-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-G-2-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-G-3-3	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-G-4-3	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-42
PAHs in Soil- Area L
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
L-H-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-H-2-2	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-H-3-5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-H-4-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-I-2-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-I-3-0	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-I-3WALL-3	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-42
PAHs in Soil- Area L
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
L-A-2-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-A-3-3	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-A-4-5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-B-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0109	<0.0100
L-B-2-5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-B-3-5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-B-4-5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-C-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0101	<0.0100
L-C-2-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-C-3-3	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-C-4-6	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-D-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.011	<0.0100
L-D-2-3	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-D-3-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-D-4-6	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-E-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-E-2-5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-E-3-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-E-4-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	0.0209	<0.0100	<0.0100	<0.0100	<0.0100
L-F-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-F-2-2.5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-F-3-2.5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-F-4-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-G-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-G-2-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-G-3-3	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-G-4-3	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-42
PAHs in Soil- Area L
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
L-H-1-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0104	<0.0100
L-H-2-2	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-H-3-5	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-H-4-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-1-2-4	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0113	<0.0100
L-1-3-0	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
L-1-3WALL-3	02/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporti < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-43
Volatile Petroleum Hydrocarbons in Soil- Area L
UNOCAL Edmonds Terminal

SITE	DATE	Aliphatic C5-C6 (mg/kg)	Aliphatic C6-C8 (mg/kg)	Aliphatic C8-C10 (mg/kg)	Aliphatic C10-C12 (mg/kg)	Aromatic C8-C10 (mg/kg)	Aromatic C10-C12 (mg/kg)	Aromatic C12-C13 (mg/kg)	Total Volatile Petroleum Hydrocarbons (mg/kg)
L-C-4-6	02/21/03	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00

< = Not detected at indicated reporting limit. --- = Not analyzed.

J = Estimated value. D = Sample diluted due to high analyte concentrations. R= Rejected value.

Table G-45
BTEX in Soil- Area M
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
M-A-4-1	02/12/03	1	0.00455 J	<0.00900	0.0201 J	0.0294 J
M-A-5-2	02/12/03	2	<0.00400	<0.00900	0.0123 J	<0.0250
M-A-6-4	02/12/03	4	<0.00400	<0.00900	0.0118 J	<0.0250
M-A-7-6	02/12/03	6	<0.00400	<0.00900	0.0148 J	<0.0250
M-B-3-1	02/12/03	1	0.00405 J	<0.00900	0.0178 J	0.0263 J
M-B-3wall-6	02/13/03	0	0.0049 J	<0.00900	0.0115 J	<0.0250
M-B-4-1	02/12/03	1	<0.00400	<0.00900	0.016 J	<0.0250
M-B-5-2	02/12/03	2	<0.00400	<0.00900	0.0126 J	<0.0250
M-B-6-4	02/12/03	4	<0.00400	<0.00900	0.012 J	<0.0250
M-B-7-5	02/12/03	5	<0.00400	<0.00900	0.0139 J	<0.0250
M-B-7wall-6	02/13/03	0	0.00541 J	<0.00900	0.0125 J	<0.0250
M-C-3-3	02/12/03	3	<0.00400	<0.00900	0.0138 J	<0.0250
M-C-3wall-6	02/13/03	0	<0.00400	<0.00900	0.0102 J	<0.0250
M-C-4-1	02/12/03	1	<0.00400	<0.00900	0.0103 J	<0.0250
M-C-5-2	02/12/03	2	<0.00400	<0.00900	0.00991 J	<0.0250
M-C-6-6	02/12/03	6	<0.00400	<0.00900	0.0113 J	<0.0250
M-C-7-1	02/12/03	1	<0.00400	<0.00900	0.01 J	<0.0250
M-C-7wall-6	02/13/03	0	0.00755 J	<0.00900	0.0119 J	<0.0250
M-D-3-2	02/12/03	2	<0.00400	<0.00900	0.00962 J	<0.0250
M-D-4-1	02/12/03	1	0.0213 J	<0.00900	0.0298 J	<0.0250
M-D-5-1	02/12/03	1	<0.00400	<0.00900	0.011 J	<0.0250
M-D-6-12	02/13/03	0	0.00534 J	<0.00900	0.016 J	0.028 J

Table G-45
BTEX in Soil- Area M
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
M-D-7-12	02/13/03	0	0.00859 J	0.0125 J	0.0181 J	0.04 J
M-D-7wall-6	02/13/03	0	0.00549 J	<0.00900	0.0117 J	<0.0250
M-E-3-2	02/12/03	2	0.00416 J	<0.00900	0.0125 J	<0.0250
M-E-4-0	02/12/03	0	<0.00400	<0.00900	0.00874 J	<0.0250
M-E-5-4	02/12/03	4	0.0046 J	<0.00900	0.0101 J	<0.0250
M-E-6-2	02/12/03	2	0.00487 J	<0.00900	0.0115 J	<0.0250
M-E-7-12	02/13/03	0	0.0049 J	<0.00900	0.0279 J	0.0363 J
M-F-6-2	02/19/03	0	<0.00400	<0.00900	0.00684 J	<0.0250
M-F-6A-5	02/19/03	0	<0.00400	<0.00900	0.00806 J	<0.0250
M-F-6B-0	02/20/03	0	0.00557 J	<0.00900	0.0109 J	<0.0250
M-F-6C-5	02/19/03	5	<0.00400	0.0175 J	0.00849 J	0.0286 J
M-F-6D-6	02/19/03	6	<0.00400	<0.00900	0.0116 J	<0.0250
M-F-7-4	02/12/03	0	0.00406 J	<0.00900	0.0109 J	<0.0250
M-G-8toe-12	02/13/03	0	0.00436 J	<0.00900	0.014 J	<0.0250
M-G-8wall-6	02/13/03	0	0.0043 J	<0.00900	0.0137 J	0.0257 J

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-46
PAHs in Soil- Area M
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
M-A-4-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-A-5-2	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-A-6-4	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-A-7-6	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-3-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-3wall-6	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-4-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-5-2	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-6-4	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-7-5	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-7wall-6	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-C-3-3	02/12/03	<0.0100	0.0124	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-C-3wall-6	02/13/03	<0.0100	0.0107	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-C-4-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-C-5-2	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-C-6-6	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-C-7-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-C-7wall-6	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-D-3-2	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-D-4-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-D-5-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-D-6-12	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-D-7-12	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	0.0348	<0.0100	<0.0100	<0.0100	<0.0100
M-D-7wall-6	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-E-3-2	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-E-4-0	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-E-5-4	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-E-6-2	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-E-7-12	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

**Table G-46
PAHs in Soil- Area M
UNOCAL Edmonds Terminal**

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
M-F-6-2	02/19/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-F-6A-5	02/19/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-F-6B-0	02/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-F-6C-5	02/19/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-F-6D-6	02/19/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-F-7-4	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-G-8toe-12	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-G-8wall-6	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-46
PAHs in Soil- Area M
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
M-A-4-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-A-5-2	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-A-6-4	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-A-7-6	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-3-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-3wall-6	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-4-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-5-2	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-6-4	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-7-5	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-B-7wall-6	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-C-3-3	02/12/03	<0.0100	<0.0100	<0.0100	0.0168	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-C-3wall-6	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-C-4-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0106	<0.0100
M-C-5-2	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-C-6-6	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-C-7-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-C-7wall-6	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-D-3-2	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-D-4-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-D-5-1	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-D-6-12	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-D-7-12	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-D-7wall-6	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-E-3-2	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-E-4-0	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-E-5-4	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-E-6-2	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-E-7-12	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

**Table G-46
PAHs in Soil- Area M
UNOCAL Edmonds Terminal**

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
M-F-6-2	02/19/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-F-6A-5	02/19/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-F-6B-0	02/20/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-F-6C-5	02/19/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-F-6D-6	02/19/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-F-7-4	02/12/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-G-8toe-12	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
M-G-8wall-6	02/13/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reportin < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-48

Extractable Petroleum Hydrocarbons in Soil- Area M

UNOCAL Edmonds Terminal

SITE	DATE	Aliphatic C8-C10 (mg/kg)	Aliphatic C10-C12 (mg/kg)	Aliphatic C12-C16 (mg/kg)	Aliphatic C16-C21 (mg/kg)	Aliphatic C21-C34 (mg/kg)	Aromatic C10-C12 (mg/kg)	Aromatic C12-C16 (mg/kg)	Aromatic C16-C21 (mg/kg)	Aromatic C21-C34 (mg/kg)	Total Extractable Hydrocarbons (mg/kg)
M-C-7-1	02/12/03	<5.00	<5.00	<5.00	<5.00	5.49	<5.00	<5.00	<5.00	<5.00	5.49

< = Not detected at indicated reporting limit. --- = Not analyzed.

J = Estimated value. D = Sample diluted due to high analyte concentrations. R= Rejected value.

Table G-49
BTEX in Soil- Area N
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
N-A4WALL-2	01/24/03	2	0.00561 J	<0.00900	0.0144 J	<0.0250
N-A5WALL-5	01/24/03	5	0.00613 J	<0.00900	0.018 J	0.0257 J
N-A6WALL-3	01/24/03	3	0.00569 J	<0.00900	0.018 J	<0.0250
N-B-3-3	01/24/03	3	0.00768 J	<0.00900	0.0235 J	0.0409 J
N-B-4-7	01/24/03	7	0.00674 J	<0.00900	0.0218 J	0.031 J
N-B-5-10	01/24/03	10	0.00572 J	<0.00900	0.0138 J	<0.0250
N-B-6-9	01/24/03	9	0.0199 J	<0.00900	0.0377 J	0.0407 J
N-B7WALL-4	01/24/03	4	0.00489 J	<0.00900	0.0132 J	0.142
N-C-2-3	01/24/03	3	0.00671 J	<0.00900	0.0131 J	<0.0250
N-C-3-3	01/24/03	3	0.00628 J	<0.00900	0.015 J	0.0263 J
N-C-4-11	01/24/03	11	0.0119 J	<0.00900	0.0191 J	0.025
N-C-5-12	01/24/03	12	0.00616 J	<0.00900	0.0196 J	<0.0250
N-C-6-10	01/24/03	10	0.00813 J	<0.00900	0.0176 J	0.0286 J
N-C-7-8	01/24/03	8	0.00611 J	<0.00900	0.0163 J	0.0522 J
N-D-1-3	01/24/03	3	<0.00400	<0.00900	0.00937 J	<0.0250
N-D-2-3	01/24/03	3	<0.00400	<0.00900	0.0122 J	<0.0250
N-D-3-11	01/24/03	11	<0.00400	<0.00900	0.0101 J	<0.0250
N-D-4-12	01/24/03	12	<0.00400	<0.00900	0.0119 J	<0.0250
N-D-5-13	01/24/03	13	<0.00400	<0.00900	0.0127 J	<0.0250
N-D-6-7	01/24/03	7	0.00691 J	0.00985 J	0.0287 J	0.0358 J
N-D6WALL-3	01/24/03	3	0.00881 J	<0.00900	0.0102 J	<0.0250

Table G-49
BTEX in Soil- Area N
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
N-E-2-6	01/24/03	6	<0.00400	<0.00900	0.0115 J	<0.0250
N-E-3-8	01/24/03	8	<0.00400	<0.00900	0.0125 J	<0.0250
N-E-4-5	01/24/03	5	<0.00400	<0.00900	0.0155 J	0.0258 J
N-E-5-8	01/24/03	8	<0.00400	<0.00900	0.0105 J	<0.0250
N-E-6-2	01/24/03	2	<0.00400	<0.00900	0.00825 J	<0.0250
N-F-2-0	01/24/03	0	<0.00400	<0.00900	0.0132 J	<0.0250
N-F-3-6	01/24/03	6	<0.00400	<0.00900	0.0124 J	<0.0250
N-F-4-8	01/24/03	8	<0.00400	<0.00900	0.0103 J	<0.0250
N-F-5-5	01/24/03	5	<0.00400	<0.00900	0.0113 J	<0.0250
N-G-4-5	01/24/03	5	<0.00400	<0.00900	0.0127 J	<0.0250
N-G4WALL-3	01/24/03	3	<0.00400	<0.00900	0.0153 J	<0.0250

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-50
PAHs in Soil- Area N
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
N-A4WALL-2	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-A5WALL-5	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-A6WALL-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-B-3-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-B-4-7	01/24/03	<0.0100	0.0111	<0.0100	<0.0100	<0.0100	<0.0100	0.0514	<0.0100	<0.0100
N-B-5-10	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-B-6-9	01/24/03	0.0123	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-B7WALL-4	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-C-2-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-C-3-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-C-4-11	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-C-5-12	01/24/03	0.0109	0.0139	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-C-6-10	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-C-7-8	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D-1-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D-2-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D-3-11	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D-4-12	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D-5-13	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D-6-7	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D6WALL-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-E-2-6	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0569	<0.0100	<0.0100
N-E-3-8	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-E-4-5	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-E-5-8	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-E-6-2	01/24/03	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
N-F-2-0	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-F-3-6	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

**Table G-50
PAHs in Soil- Area N
UNOCAL Edmonds Terminal**

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
N-F-4-8	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-F-5-5	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-G-4-5	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-G4WALL-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-50
PAHs in Soil- Area N
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
N-A4WALL-2	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-A5WALL-5	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-A6WALL-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-B-3-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-B-4-7	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-B-5-10	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-B-6-9	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-B7WALL-4	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-C-2-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-C-3-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-C-4-11	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-C-5-12	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-C-6-10	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-C-7-8	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D-1-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D-2-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D-3-11	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D-4-12	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D-5-13	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D-6-7	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-D6WALL-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-E-2-6	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-E-3-8	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-E-4-5	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-E-5-8	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-E-6-2	01/24/03	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
N-F-2-0	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-F-3-6	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

**Table G-50
PAHs in Soil- Area N
UNOCAL Edmonds Terminal**

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
N-F-4-8	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-F-5-5	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-G-4-5	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
N-G4WALL-3	01/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting li < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-53
BTEX in Soil- Area O
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
O-A-2-0.5	02/07/03	0.5	0.00674 J	<0.00900	<0.018	<0.0250
O-A-3-0.5	02/07/03	0.5	<0.00400	<0.00900	<0.0117	<0.0250
O-B-1-0.5	02/07/03	0.5	0.00418 J	<0.00900	<0.0116	<0.0250
O-B-2-6	02/07/03	6	0.00473 J	<0.00900	<0.0118	<0.0250
O-B-3-5	02/07/03	5	<0.00400	<0.00900	<0.00823	<0.0250
O-B-4-4	02/07/03	4	0.00417 J	<0.00900	<0.0122	<0.0250
O-C-2-4	02/07/03	4	<0.00400	<0.00900	<0.0135	<0.0250
O-C-3-3	02/07/03	3	<0.00400	<0.00900	<0.00835	<0.0250
O-C-4-3	02/07/03	3	<0.00400	<0.00900	<0.0106	<0.0250

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

**Table G-54
PAHs in Soil- Area O
UNOCAL Edmonds Terminal**

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
O-A-2-0.5	02/07/03	0.0112	0.0164	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-A-3-0.5	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-B-1-0.5	02/07/03	0.0104	0.013	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-B-2-6	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-B-3-5	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-B-4-4	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-C-2-4	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-C-3-3	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-C-4-3	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

**Table G-54
PAHs in Soil- Area O
UNOCAL Edmonds Terminal**

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
O-A-2-0.5	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-A-3-0.5	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-B-1-0.5	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0113 J	<0.0100
O-B-2-6	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-B-3-5	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-B-4-4	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-C-2-4	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-C-3-3	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
O-C-4-3	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated rep < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-56
Extractable Petroleum Hydrocarbons in Soil- Area O
UNOCAL Edmonds Terminal

SITE	DATE	Aliphatic C8-C10 (mg/kg)	Aliphatic C10-C12 (mg/kg)	Aliphatic C12-C16 (mg/kg)	Aliphatic C16-C21 (mg/kg)	Aliphatic C21-C34 (mg/kg)	Aromatic C10-C12 (mg/kg)	Aromatic C12-C16 (mg/kg)	Aromatic C16-C21 (mg/kg)	Aromatic C21-C34 (mg/kg)	Total Extractable Hydrocarbons (mg/kg)
O-B-2-6	02/07/03	<5.00	<5.00	<5.00	6.38	<5.00	<5.00	<5.00	<5.00	<5.00	6.38

< = Not detected at indicated reporting limit. --- = Not analyzed.

J = Estimated value. D = Sample diluted due to high analyte concentrations. R= Rejected value.

Table G-57
BTEX in Soil- Area P
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
P-A-3-2	01/03/03	2	<0.00400	<0.00900	0.00621 J	<0.0250
P-B-2-2	01/03/03	2	0.00818 J	0.00903 J	0.0105 J	0.03 J
P-B-3-2	01/03/03	2	0.00525 J	<0.00900	0.00607 J	<0.0250
P-B-4-1	01/03/03	1	0.00516 J	<0.00900	0.00734 J	<0.0250
P-B-5-1	01/03/03	1	0.00428 J	<0.00900	0.00688 J	<0.0250
P-C-2-3	01/03/03	3	0.00636 J	<0.00900	0.0139 J	0.027 J
P-C-3-4	01/03/03	4	0.00954 J	<0.00900	0.0131 J	0.0309 J
P-C-4-5	01/03/03	5	0.0045 J	<0.00900	0.00775 J	<0.0250
P-C-5-5	01/03/03	5	0.00538 J	<0.00900	0.0182 J	0.0298 J
P-D-2-2	01/03/03	2	0.00637 J	<0.00900	0.00968 J	<0.0250
P-D-3-2	01/03/03	2	<0.00400	<0.00900	0.0184 J	0.0385 J
P-D-4-4	01/03/03	4	0.00557 J	0.0119 J	0.0104 J	0.0378 J
P-D-5-6	01/03/03	6	<0.00400	<0.00900	0.00639 J	<0.0250
P-D-6-4	01/03/03	4	<0.00400	<0.00900	0.00789 J	<0.0250
P-D-6-5	01/03/03	5	<0.00400	<0.00900	0.00625 J	<0.0250
P-E-2-1	01/03/03	1	<0.00400	<0.00900	0.0155 J	0.0313 J
P-E-3-2	01/03/03	2	0.00686 J	0.0118 J	0.0127 J	0.0375 J
P-E-4-3	01/03/03	3	0.0131 J	0.0106 J	0.00766 J	<0.0250
P-E-5-3	01/03/03	3	0.00498 J	0.00932 J	0.00543 J	0.107
P-E-6-4	01/03/03	4	0.00532 J	<0.00900	0.0127 J	0.0269 J
P-E-7-4	01/03/03	4	0.0111 J	0.0112 J	0.00725 J	<0.0250

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-58
PAHs in Soil- Area P
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
P-A-3-2	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-B-2-2	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-B-3-2	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-B-4-1	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-B-5-1	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-C-2-3	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-C-3-4	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-C-4-5	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-C-5-5	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-D-2-2	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-D-3-2	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-D-4-4	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-D-5-6	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-D-6-4	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-D-6-5	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-E-2-1	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-E-3-2	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-E-4-3	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-E-5-3	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0153	<0.0100	<0.0100	<0.0100
P-E-6-4	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-E-7-4	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-58
PAHs in Soil- Area P
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
P-A-3-2	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-B-2-2	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-B-3-2	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-B-4-1	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-B-5-1	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-C-2-3	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-C-3-4	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-C-4-5	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-C-5-5	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-D-2-2	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-D-3-2	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-D-4-4	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-D-5-6	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-D-6-4	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-D-6-5	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-E-2-1	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-E-3-2	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-E-4-3	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-E-5-3	01/03/03	<0.0100	0.0119	<0.0100	0.0153	<0.0100	<0.0100	<0.0100	<0.0100	0.011
P-E-6-4	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
P-E-7-4	01/03/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated re < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-60
 Extractable Petroleum Hydrocarbons in Soil- Area P
 UNOCAL Edmonds Terminal

SITE	DATE	Aliphatic C8-C10 (mg/kg)	Aliphatic C10-C12 (mg/kg)	Aliphatic C12-C16 (mg/kg)	Aliphatic C16-C21 (mg/kg)	Aliphatic C21-C34 (mg/kg)	Aromatic C10-C12 (mg/kg)	Aromatic C12-C16 (mg/kg)	Aromatic C16-C21 (mg/kg)	Aromatic C21-C34 (mg/kg)	Total Extractable Hydrocarbons (mg/kg)
P-E-5-3	01/03/03	<5.00	<5.00	7.46	28.7	25.3	<5.00	<5.00	13.6	26.2	101

< = Not detected at indicated reporting limit. --- = Not analyzed.

J = Estimated value. D = Sample diluted due to high analyte concentrations. R= Rejected value.

**Table G-61
BTEX in Soil- Area Q
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
Q-A-3-0.5	12/24/02	0.5	<0.00400	<0.00900	0.00746 J	<0.0250
Q-A-4-1	12/24/02	1	0.00402 J	0.01 J	0.0101 J	0.031 J
Q-A-5-2	12/24/02	2	<0.00400	<0.00900	0.00405 J	<0.0250
Q-A-6-3.5	12/24/02	3.5	<0.00400	<0.00900	0.00401 J	<0.0250
Q-A-7-2	12/24/02	2	<0.00400	<0.00900	0.00459 J	<0.0250
Q-B-3-0.5	12/24/02	0.5	0.00563 J	0.0101 J	0.00971 J	0.035 J
Q-B-4-1	12/24/02	1	<0.00400	<0.00900	0.0141 J	0.0305 J
Q-B-5-1	12/24/02	1	<0.00400	<0.00900	0.00488 J	<0.0250
Q-B-6-1.5	12/24/02	1.5	<0.00400	<0.00900	<0.00400	<0.0250
Q-B-7-1	12/24/02	1	<0.00400	<0.00900	0.00479 J	<0.0250
Q-C-4-1	12/24/02	1	<0.00400	<0.00900	0.00622 J	<0.0250
Q-C-5-4	12/24/02	4	0.00443 J	<0.00900	0.0104 J	<0.0250
Q-C-6-3.5	12/24/02	3.5	0.00858 J	0.0124 J	0.023 J	0.0493 J
Q-C-7-6	12/24/02	6	0.00846 J	<0.00900	0.0065 J	<0.0250
Q-D-5-1.5	12/24/02	1.5	0.0115 J	<0.00900	0.00747 J	<0.0250
Q-D-6-5	12/24/02	5	<0.00400	<0.00900	0.00742 J	<0.0250
Q-D6WALL-2.5	12/24/02	2.5	<0.00400	<0.00900	0.00744 J	<0.0250
Q-D-7-6	12/24/02	6	<0.00400	<0.00900	0.00495 J	<0.0250
Q-D7WALL-3	12/24/02	3	0.00432 J	<0.00900	0.0544	<0.0250
Q-D8-7	12/24/02	7	<0.00400	0.00922 J	0.00825 J	0.0309 J

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-62
PAHs in Soil- Area Q
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
Q-A-3-0.5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-A-4-1	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0131	<0.0100	<0.0100	<0.0100
Q-A-5-2	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-A-6-3.5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-A-7-2	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-B-3-0.5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-B-4-1	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-B-5-1	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-B-6-1.5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-B-7-1	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-C-4-1	12/24/02	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
Q-C-5-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-C-6-3.5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-C-7-6	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-D-5-1.5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-D-6-5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-D6WALL-2.5	12/24/02	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
Q-D-7-6	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-D7WALL-3	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	0.0126	<0.0100	<0.0100	<0.0100	<0.0100
Q-D8-7	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-62
PAHs in Soil- Area Q
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
Q-A-3-0.5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-A-4-1	12/24/02	<0.0100	0.0131	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-A-5-2	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-A-6-3.5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-A-7-2	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-B-3-0.5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-B-4-1	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-B-5-1	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-B-6-1.5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-B-7-1	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-C-4-1	12/24/02	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
Q-C-5-4	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-C-6-3.5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-C-7-6	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-D-5-1.5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-D-6-5	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-D6WALL-2.5	12/24/02	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
Q-D-7-6	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Q-D7WALL-3	12/24/02	0.0116	<0.0100	<0.0100	0.0107	<0.0100	<0.0100	<0.0100	0.0136	<0.0100
Q-D8-7	12/24/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting li < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-65
BTEX in Soil- Area R
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
R-B-4-2	03/05/03	2	0.00675 J	0.0108 J	0.0148 J	0.0328 J
R-B-5-6	03/05/03	6	0.00555 J	<0.00900	0.0142 J	0.0268 J
R-B-6-2	03/05/03	2	<0.00400	<0.00900	0.00553 J	<0.0250
R-B-7-0	03/05/03	0	<0.00400	<0.00900	0.00574 J	<0.0250
R-C-3-3	03/05/03	3	<0.00400	<0.00900	0.00513 J	<0.0250
R-C-3WALL-5	03/05/03	5	<0.00400	<0.00900	0.00451 J	<0.0250
R-C-4-8	03/05/03	8	<0.00400	<0.00900	0.00702 J	<0.0250
R-C-4WALL-5	03/05/03	5	0.00738 J	<0.00900	0.00978 J	<0.0250
R-C-5-4.5	03/05/03	4.5	<0.00400	<0.00900	0.00869 J	<0.0250
R-C-6-4	03/05/03	4	<0.00400	<0.00900	0.0063 J	<0.0250
R-C-7-4	03/05/03	4	<0.00400	<0.00900	0.00539 J	<0.0250
R-C-8-1	03/05/03	1	0.0044 J	0.0124 J	0.0136 J	0.0389 J
R-D-2-5	03/05/03	5	<0.00400	0.00973 J	0.00735 J	0.0301 J
R-D-3-4	03/05/03	4	<0.00400	<0.00900	0.00745 J	<0.0250
R-D-3WALL-8	03/05/03	8	<0.00400	<0.00900	0.00528 J	<0.0250
R-D-4-3	03/05/03	3	<0.00400	<0.00900	0.00723 J	<0.0250
R-D-4WALL-5	03/05/03	5	0.00437 J	<0.00900	0.0102 J	<0.0250
R-D-5-3	03/05/03	3	0.00468 J	<0.00900	0.00783 J	<0.0250
R-D-6-4	03/05/03	4	<0.00400	<0.00900	0.00634 J	<0.0250
R-D-7-3	03/05/03	3	<0.00400	<0.00900	0.00644 J	<0.0250
R-D-8-4	03/05/03	4	<0.00400	<0.00900	0.00615 J	<0.0250
R-E-2-4	03/05/03	4	<0.00400	0.0189 J	0.0128 J	0.0388 J

**Table G-65
BTEX in Soil- Area R
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
R-E-3-4	03/05/03	4	0.00527 J	0.0126 J	0.00917 J	0.0302 J
R-E-4-4	03/05/03	4	<0.00400	<0.00900	0.00931 J	<0.0250
R-E-5-5	03/05/03	5	<0.00400	<0.00900	0.00864 J	<0.0250
R-E-6-4	03/05/03	4	<0.00400	<0.00900	0.00653 J	<0.0250
R-E-7-3	03/05/03	3	<0.00400	<0.00900	0.00831 J	<0.0250
R-E-8-4	03/05/03	0	0.00554 J	<0.00900	0.0075 J	<0.0250
R-F-2-4	03/05/03	4	<0.00400	<0.00900	0.00423 J	<0.0250
R-F-3-3	03/05/03	3	<0.00400	<0.00900	0.00491 J	<0.0250
R-F-4-4	03/05/03	4	0.00832 J	0.012 J	0.0363 J	0.0605 J
R-F-5-4	03/05/03	4	0.0048 J	<0.00900	0.0117 J	<0.0250
R-F-6-4.5	03/05/03	4.5	0.0046 J	<0.00900	0.0217 J	0.0318 J
R-F-7-3	03/05/03	3	<0.00400	<0.00900	0.00625 J	<0.0250
R-F-8-5	03/05/03	5	<0.00400	<0.00900	0.00838 J	<0.0250
R-G-3-3	03/05/03	3	<0.00400	0.0125 J	0.00695 J	<0.0250
R-G-4-5	03/05/03	5	0.00432 J	<0.00900	0.0189 J	0.0309 J
R-G-5-4	03/05/03	4	0.00404 J	<0.00900	0.00755 J	<0.0250
R-G-6-5.5	03/05/03	5.5	0.0116 J	0.0145 J	0.0213 J	0.053 J
R-G-7-4	03/05/03	4	<0.00400	<0.00900	0.00677 J	<0.0250
R-G-8-2	03/05/03	2	0.0086 J	<0.00900	0.00749 J	<0.0250
R-H-4-3	03/05/03	3	0.00448 J	<0.00900	0.00941 J	<0.0250
R-H-5-5	03/05/03	5	<0.00400	<0.00900	0.00992 J	<0.0250
R-H-5WALL-1	03/05/03	1	<0.00400	<0.00900	<0.00400	<0.0250

Table G-65
BTEX in Soil- Area R
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
R-H-6-7	03/05/03	7	0.00407 J	<0.00900	0.00785 J	<0.0250
R-H-6WALL-3	03/05/03	3	0.0047 J	<0.00900	0.00862 J	<0.0250
R-H-7-5	03/05/03	5	<0.00400	<0.00900	0.0132 J	<0.0250
R-H-7WALL-1	03/05/03	1	<0.00400	<0.00900	0.00555 J	<0.0250

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

**Table F-66
PAHs in Soil- Area R
UNOCAL Edmonds Terminal**

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
R-B-4-2	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-B-5-6	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-B-6-2	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-B-7-0	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-3-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0278	<0.0100	<0.0100
R-C-3WALL-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0241	<0.0100	<0.0100
R-C-4-8	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-4WALL-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-5-4.5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-6-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-7-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-8-1	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-D-2-5	03/05/03	0.758	1.86 D	0.0212	<0.0100	<0.0100	<0.0100	0.0169	<0.0100	<0.0100
R-D-3-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0284	<0.0100	<0.0100
R-D-3WALL-8	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0266	<0.0100	<0.0100
R-D-4-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-D-4WALL-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.028	<0.0100	<0.0100
R-D-5-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-D-6-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-D-7-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-D-8-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-E-2-4	03/05/03	0.522	1.06	0.0146	<0.0100	<0.0100	<0.0100	0.0137	<0.0100	<0.0100
R-E-3-4	03/05/03	0.15	0.0306	<0.0100	<0.0100	<0.0100	<0.0100	0.0136	<0.0100	<0.0100
R-E-4-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-E-5-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-E-6-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-E-7-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-E-8-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-F-2-4	03/05/03	0.0907 D	0.0952 D	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
R-F-3-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0112	<0.0100	<0.0100

**Table F-66
PAHs in Soil- Area R
UNOCAL Edmonds Terminal**

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
R-F-4-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-F-5-4	03/05/03	<0.0100	0.0124	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-F-6-4.5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-F-7-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-F-8-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-G-3-3	03/05/03	0.0294	<0.0100	0.019	<0.0100	<0.0100	<0.0100	0.0113	<0.0100	<0.0100
R-G-4-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0297	<0.0100	<0.0100
R-G-5-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-G-6-5.5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-G-7-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-G-8-2	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-4-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-5-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-5WALL-1	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-6-7	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-6WALL-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-7-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-7WALL-1	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

**Table F-66
PAHs in Soil- Area R
UNOCAL Edmonds Terminal**

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
R-B-4-2	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-B-5-6	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-B-6-2	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-B-7-0	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-3-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-3WALL-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-4-8	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-4WALL-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-5-4.5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-6-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-7-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-C-8-1	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0169	<0.0100
R-D-2-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	0.0652	<0.0100	0.35	<0.0100	<0.0100
R-D-3-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-D-3WALL-8	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-D-4-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-D-4WALL-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-D-5-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-D-6-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-D-7-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-D-8-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-E-2-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	0.0533	<0.0100	0.343	<0.0100	<0.0100
R-E-3-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.103	<0.0100	<0.0100
R-E-4-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-E-5-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-E-6-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-E-7-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-E-8-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-F-2-4	03/05/03	<0.0500	0.0589 D	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	0.113 D	0.0862 D
R-F-3-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

**Table F-66
PAHs in Soil- Area R
UNOCAL Edmonds Terminal**

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
R-F-4-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-F-5-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-F-6-4.5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-F-7-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-F-8-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-G-3-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	0.0338	<0.0100	0.0121	<0.0100	<0.0100
R-G-4-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-G-5-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-G-6-5.5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-G-7-4	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-G-8-2	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-4-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-5-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-5WALL-1	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-6-7	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-6WALL-3	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-7-5	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
R-H-7WALL-1	03/05/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting level | < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-68
Extractable Petroleum Hydrocarbons in Soil- Area R
UNOCAL Edmonds Terminal

SITE	DATE	Aliphatic C8-C10 (mg/kg)	Aliphatic C10-C12 (mg/kg)	Aliphatic C12-C16 (mg/kg)	Aliphatic C16-C21 (mg/kg)	Aliphatic C21-C34 (mg/kg)	Aromatic C10-C12 (mg/kg)	Aromatic C12-C16 (mg/kg)	Aromatic C16-C21 (mg/kg)	Aromatic C21-C34 (mg/kg)	Total Extractable Hydrocarbons (mg/kg)
R-C-6-4	03/05/03	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00

< = Not detected at indicated reporting limit. --- = Not analyzed.

J = Estimated value. D = Sample diluted due to high analyte concentrations. R= Rejected value.

Table G-69
BTEX in Soil- Area S
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
S-A4wall-2	03/21/03	2	<0.00400	<0.00900	0.00844 J	<0.0250
S-A-5-8	03/21/03	8	<0.00400	0.0148 J	0.0102 J	<0.0250
S-A5wall-4	03/21/03	4	<0.00400	0.0138 J	0.00609 J	<0.0250
S-A-6-6	03/21/03	6	0.00595 J	0.0181 J	0.0144 J	0.0333 J
S-A6wall-2	03/21/03	2	0.0114 J	0.026 J	0.014 J	0.0545 J
S-B-3-1	03/21/03	1	0.0207 J	0.0159 J	0.012 J	<0.0250
S-B-4-3	03/21/03	3	0.0315	0.0229 J	0.0223 J	0.0475 J
S-B-5-6	03/21/03	6	<0.00400	0.017 J	0.0123 J	0.0263 J
S-B-6-7	03/21/03	7	<0.00400	0.0159 J	0.0126 J	0.0250
S-B-7-8	03/21/03	8	<0.00400	0.0161 J	0.00744 J	<0.0250
S-B7wall-6	03/21/03	6	<0.00400	0.0138 J	0.00654 J	<0.0250
S-C-2-1	03/21/03	1	<0.00400	0.0151 J	0.00847 J	<0.0250
S-C-3-5	03/21/03	5	<0.00400	0.0158 J	0.00823 J	<0.0250
S-C-4-6	03/21/03	6	0.012 J	0.0189 J	0.0118 J	0.0286 J
S-C-5-6	03/21/03	6	0.00814 J	0.0154 J	0.0132 J	<0.0250
S-C-6-7	03/21/03	7	<0.00400	0.014 J	0.00663 J	<0.0250
S-C-7-7	03/21/03	7	<0.00400	0.0151 J	0.00698 J	<0.0250
S-C-8-8	03/21/03	8	<0.00400	0.014 J	0.00608 J	<0.0250
S-D-1-0.5	03/21/03	0.5	<0.00400	0.0138 J	0.00623 J	<0.0250
S-D-2-3	03/21/03	3	<0.00400	0.0149 J	0.00664 J	<0.0250
S-D-3-6	03/21/03	6	<0.00400	0.013 J	0.00574 J	<0.0250
S-D-4-7	03/21/03	7	<0.00400	0.016 J	0.0115 J	0.0262 J

Table G-69
BTEX in Soil- Area S
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
S-D-5-8	03/21/03	8	<0.00400	0.0173 J	0.00878 J	<0.0250
S-D-6-10	03/21/03	10	<0.00400	0.0131 J	0.00565 J	<0.0250
S-D-7-8	03/21/03	8	<0.00400	0.013 J	0.00549 J	<0.0250
S-D-8-13	03/21/03	13	<0.00400	0.0126 J	0.00589 J	<0.0250
S-D8wall-10	03/21/03	10	<0.00400	0.015 J	0.00927 J	<0.0250
S-E-2-3	03/21/03	3	<0.00400	0.0141 J	0.00517 J	<0.0250
S-E-3-4	03/21/03	4	<0.00400	0.0122 J	0.00487 J	<0.0250
S-E-4-5	03/21/03	5	<0.00400	0.015 J	0.00821 J	<0.0250
S-E-5-6	03/21/03	6	0.00411 J	0.0146 J	0.00743 J	<0.0250
S-E-6-7	03/21/03	7	0.00488 J	0.0163 J	0.0117 J	0.026 J
S-E-7-9	03/21/03	9	0.0064 J	0.0207 J	0.0137 J	0.0347 J
S-E-8-14	03/21/03	14	0.00613 J	0.0147 J	0.00796 J	<0.0250
S-E8wall-12	03/21/03	12	0.00429 J	0.0156 J	0.0143 J	0.027 J
S-F-2-3	03/21/03	3	0.00407 J	0.0165 J	0.0124 J	0.0285 J
S-F-3-5	03/21/03	5	0.00543 J	0.0152 J	0.00988 J	<0.0250
S-F-4-6	03/21/03	6	0.00424 J	0.0158 J	0.0102 J	<0.0250
S-F-5-7	03/21/03	7	<0.00400	0.0146 J	0.00768 J	<0.0250
S-F-6-8	03/21/03	8	0.0049 J	0.0151 J	0.00947 J	<0.0250
S-F-7-10	03/21/03	10	0.00417 J	0.0151 J	0.0069 J	<0.0250
S-G-3-5	03/21/03	5	<0.00400	0.0153 J	0.00712 J	<0.0250
S-G-4-6	03/21/03	6	<0.00400	0.0145 J	0.00956 J	<0.0250

Table G-69
BTEX in Soil- Area S
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
S-G-5-7	03/21/03	7	0.00409 J	<0.00900	0.00871 J	<0.0250
S-G-6-5	03/21/03	5	<0.00400	<0.00900	0.00816 J	<0.0250
S-G6wall-10	03/21/03	10	<0.00400	<0.00900	0.00897 J	<0.0250
S-G-7-10	03/21/03	10	0.00859 J	<0.00900	0.013 J	0.0284 J
S-G7wall-8	03/21/03	8	<0.00400	<0.00900	0.00855 J	<0.0250
S-H-3-3	03/21/03	3	0.00495 J	<0.00900	0.008 J	<0.0250
S-H-4-4	03/21/03	4	0.00401 J	<0.00900	0.00993 J	<0.0250
S-H-5-5	03/21/03	5	<0.00400	<0.00900	0.00936 J	<0.0250
S-H5wall-1	03/21/03	1	0.00781 J	0.0104 J	0.0294 J	0.0493 J
S-I-3-5	03/21/03	5	<0.00400	<0.00900	0.00609 J	<0.0250
S-I3wall-3	03/21/03	3	0.00971 J	0.0184 J	0.0175 J	0.0564 J
S-I-4-7	03/24/03	7	0.00607 J	<0.00900	0.014 J	<0.0250
S-I-4wall-4	03/24/03	4	<0.00400	<0.00900	0.00826 J	<0.0250
S-J2wall-4	03/21/03	4	<0.00400	<0.00900	0.00712 J	<0.0250
S-J-3-8	03/24/03	8	<0.00400	<0.00900	0.00876 J	<0.0250
S-J-3-wall-4	03/24/03	4	<0.00400	<0.00900	0.0106 J	<0.0250
S-K-2-6	03/24/03	6	<0.00400	<0.00900	0.0087 J	<0.0250
S-K-2wall-3	03/24/03	3	<0.00400	<0.00900	0.00492 J	<0.0250
S-K-3-7	03/24/03	7	<0.00400	<0.00900	0.00679 J	<0.0250
S-K-3wall-3	03/24/03	3	0.00599 J	<0.00900	0.0125 J	<0.0250

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-70
PAHs in Soil- Area S
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
S-A4wall-2	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-A-5-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-A5wall-4	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-A-6-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0136	<0.0100	<0.0100	<0.0100
S-A6wall-2	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-B-3-1	03/21/03	<0.0100	0.0108	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-B-4-3	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-B-5-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-B-6-7	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-B-7-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0179	<0.0100	<0.0100
S-B7wall-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-2-1	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-3-5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-4-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-5-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-6-7	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-7-7	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-8-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-1-0.5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-2-3	03/21/03	<0.0100	0.0104	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-3-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-4-7	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-5-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-6-10	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-7-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-8-13	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D8wall-10	03/21/03	0.0373	0.0105	<0.0100	<0.0100	0.0105	<0.0100	<0.0100	<0.0100	<0.0100
S-E-2-3	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-E-3-4	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-E-4-5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-E-5-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-E-6-7	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-70
PAHs in Soil- Area S
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
S-E-7-9	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-E-8-14	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-E8wall-12	03/21/03	<0.0100	0.0406	0.0156	0.0102	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-F-2-3	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-F-3-5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-F-4-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-F-5-7	03/21/03	<0.0100	0.168	0.0705	0.057	0.0111	<0.0100	<0.0100	<0.0100	<0.0100
S-F-6-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-F-7-10	03/21/03	<0.0100	0.0349	0.0153	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-G-3-5	03/21/03	<0.0100	0.0613	0.0256	0.0202	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-G-4-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-G-5-7	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-G-6-5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-G6wall-10	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-G-7-10	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-G7wall-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-H-3-3	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-H-4-4	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-H-5-5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-H5wall-1	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-I-3-5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-I3wall-3	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-I-4-7	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-I-4wall-4	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-J2wall-4	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-J-3-8	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-J-3-wall-4	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-K-2-6	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-K-2wall-3	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-K-3-7	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-K-3wall-3	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-70
PAHs in Soil- Area S
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
S-A4wall-2	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-A-5-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-A5wall-4	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-A-6-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-A6wall-2	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-B-3-1	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-B-4-3	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-B-5-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-B-6-7	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-B-7-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-B7wall-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-2-1	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-3-5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-4-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-5-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-6-7	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-7-7	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-C-8-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-1-0.5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-2-3	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-3-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-4-7	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-5-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-6-10	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-7-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D-8-13	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-D8wall-10	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	0.0543	<0.0100	<0.0100	0.0632	<0.0100
S-E-2-3	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-E-3-4	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-E-4-5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-E-5-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-E-6-7	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-70
PAHs in Soil- Area S
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
S-E-7-9	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-E-8-14	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-E8wall-12	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0438	<0.0100	<0.0100
S-F-2-3	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-F-3-5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-F-4-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-F-5-7	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	0.0443	<0.0100	0.136	0.0158	<0.0100
S-F-6-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-F-7-10	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0383	<0.0100	<0.0100
S-G-3-5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	0.0163	<0.0100	0.0566	<0.0100	<0.0100
S-G-4-6	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-G-5-7	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-G-6-5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-G6wall-10	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-G-7-10	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-G7wall-8	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-H-3-3	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-H-4-4	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-H-5-5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-H5wall-1	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-I-3-5	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-I3wall-3	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-I-4-7	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-I-4wall-4	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-I2wall-4	03/21/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-J-3-8	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-J-3-wall-4	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-K-2-6	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-K-2wall-3	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-K-3-7	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
S-K-3wall-3	03/24/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-72
Extractable Petroleum Hydrocarbons in Soil- Area S
UNOCAL Edmonds Terminal

SITE	DATE	Aliphatic C8-C10 (mg/kg)	Aliphatic C10-C12 (mg/kg)	Aliphatic C12-C16 (mg/kg)	Aliphatic C16-C21 (mg/kg)	Aliphatic C21-C34 (mg/kg)	Aromatic C10-C12 (mg/kg)	Aromatic C12-C16 (mg/kg)	Aromatic C16-C21 (mg/kg)	Aromatic C21-C34 (mg/kg)	Total Extractable Hydrocarbons (mg/kg)
S-G-7-10	03/21/03	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00

Values represent total concentration unless noted. < = Not detected at indicated reporting limit.

Table G-73
BTEX in Soil- Area SWL
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
SWL-A-2-10	11/19/02	10	0.0149 J	0.0425 J	0.0336 J	0.148
SWL-A2wall-6	11/20/02	6	0.00701 J	0.0145 J	0.0169 J	0.0486 J
SWL-B-1-5	11/19/02	5	0.00407 J	<0.00900	0.00685 J	<0.0250
SWL-B1wall-3	11/19/02	3	<0.00400	<0.00900	0.00736 J	<0.0250
SWL-B-2-8.5	11/19/02	8.5	0.00447 J	<0.00900	0.0131 J	<0.0250
SWL-B2wall-5	11/19/02	5	<0.00400	<0.00900	0.00854 J	<0.0250
SWL-B-3-11	11/19/02	11	<0.00400	<0.00900	0.01 J	<0.0250
SWL-B3WALL-5	02/07/03	5	<0.00400	<0.00900	0.012 J	<0.0250
SWL-B3WALLA-5	02/07/03	5	<0.00400	<0.00900	0.0128 J	<0.0250
SWL-B3WALLC-5	02/07/03	5	<0.00400	<0.00900	0.0104 J	<0.0250
SWL-B-4-10	11/19/02	10	<0.00400	0.0121 J	0.00794 J	0.0254 J
SWL-B4toe-10	11/18/02	10	<0.00400	<0.00900	0.00825 J	<0.0250
SWL-B4wall-5	11/18/02	5	<0.00400	<0.00900	0.00608 J	<0.0250
SWL-B-5-10	11/18/02	10	<0.00400	<0.00900	0.00643 J	<0.0250
SWL-B5wall-2	11/18/02	2	0.00418 J	0.0301 J	0.0102 J	0.0767 J
SWL-C-1-3	11/19/02	3	0.00568 J	<0.00900	0.00856 J	<0.0250
SWL-C-2-2	11/20/02	2	<0.00400	0.00929 J	0.0276 J	0.0411 J
SWL-C-3-6.5	11/20/02	6.5	0.0122 J	0.0151 J	0.0389 J	0.0538 J
SWL-C3wall-4	11/20/02	4	<0.00400	<0.00900	0.0123 J	<0.0250
SWL-C-4-4	11/19/02	4	0.0042 J	<0.00900	0.0102 J	<0.0250
SWL-C-5-6	11/19/02	6	0.00672 J	<0.00900	0.0238 J	0.041 J
SWL-C-6-8	11/20/02	8	0.00438 J	<0.00900	0.0133 J	<0.0250

Table G-73
BTEX in Soil- Area SWL
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
SWL-C-7-3	11/21/02	3	0.00459 J	<0.00900	0.0127 J	<0.0250
SWL-D-3-3.5	11/20/02	3.5	0.00406 J	<0.00900	0.0151 J	<0.0250
SWL-D-4-4	11/20/02	4	0.00522 J	<0.00900	0.0184 J	0.0297 J
SWL-D-5-7	11/20/02	7	0.00426 J	<0.00900	0.00972 J	<0.0250
SWL-D-6-6	11/20/02	6	0.00422 J	<0.00900	0.0128 J	<0.0250
SWL-D-7-3	11/21/02	3	0.00463 J	<0.00900	0.0092 J	<0.0250
SWL-E-3-0.2	11/20/02	0.2	<0.00400	<0.00900	0.00669 J	<0.0250
SWL-E-4-3	11/20/02	3	0.00523 J	0.011 J	0.0158 J	0.0319 J
SWL-E-5-6	11/20/02	6	<0.00400	<0.00900	0.00896 J	<0.0250
SWL-E-6-4	11/20/02	4	<0.00400	<0.00900	0.00797 J	<0.0250

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

**Table G-74
PAHs in Soil- Area SWL
UNOCAL Edmonds Terminal**

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)	Benzo(k)fluoranthene (mg/kg)
SWL-A-2-10	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-A2wall-6	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B-1-5	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B1wall-3	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B-2-8.5	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B2wall-5	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B-3-11	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B3WALL-5	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B3WALLA-5	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B3WALLC-5	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B-4-10	11/19/02	0.0244	<0.0100	<0.0100	0.0219	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B4toe-10	11/18/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0145	<0.0100	0.0121	<0.0100	<0.0100
SWL-B4wall-5	11/18/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.023	<0.0100	0.0182	<0.0100	<0.0100
SWL-B-5-10	11/18/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0957	0.0216	0.0858	0.0183	0.045
SWL-B5wall-2	11/18/02	<0.0100	<0.0100	<0.0100	<0.0100	0.123	0.0755	0.0117	0.026	<0.0100	0.0126
SWL-C-1-3	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-C-2-2	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-C-3-6.5	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-C3wall-4	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-C-4-4	11/19/02	<0.0100	<0.0100	<0.0100	0.0102	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-C-5-6	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-C-6-8	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	0.0105	0.0773	0.0185	0.0624	0.0176	0.0466
SWL-C-7-3	11/21/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-D-3-3.5	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-D-4-4	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-D-5-7	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0745	0.0201	0.0862	0.0184	0.0393
SWL-D-6-6	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0399	<0.0100	0.0293	<0.0100	0.0231
SWL-D-7-3	11/21/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-E-3-0.2	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-E-4-3	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-E-5-6	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-E-6-4	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	0.0119	0.0855	0.0104	0.0476	<0.0100	0.0282

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-74
PAHs in Soil- Area SWL
UNOCAL Edmonds Terminal

SITE	DATE	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
SWL-A-2-10	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-A2wall-6	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B-1-5	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B1wall-3	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B-2-8.5	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B2wall-5	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B-3-11	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0111	<0.0100	<0.0100
SWL-B3WALL-5	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B3WALLA-5	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B3WALLC-5	02/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-B-4-10	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0406	0.017	<0.0100
SWL-B4toe-10	11/18/02	0.0855	<0.0100	0.0395	<0.0100	<0.0100	<0.0100	0.0105	0.0331
SWL-B4wall-5	11/18/02	0.139	<0.0100	0.0633	<0.0100	<0.0100	<0.0100	0.0174	0.0546
SWL-B-5-10	11/18/02	0.693	<0.0100	0.125	<0.0100	0.0142	<0.0100	0.0275	0.123
SWL-B5wall-2	11/18/02	0.277	<0.0100	0.124	0.171	<0.0100	0.0629	0.227	0.356
SWL-C-1-3	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-C-2-2	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-C-3-6.5	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-C3wall-4	11/20/02	<0.0100	<0.0100	<0.0100	0.0113	<0.0100	<0.0100	<0.0100	<0.0100
SWL-C-4-4	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-C-5-6	11/19/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-C-6-8	11/20/02	0.624	<0.0100	0.192	<0.0100	0.0123	<0.0100	0.0395	0.192
SWL-C-7-3	11/21/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-D-3-3.5	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-D-4-4	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-D-5-7	11/20/02	0.3	<0.0100	0.111	<0.0100	0.0134	<0.0100	0.026	0.102
SWL-D-6-6	11/20/02	0.229	<0.0100	0.12	<0.0100	<0.0100	<0.0100	0.0417	0.105
SWL-D-7-3	11/21/02	0.0335	<0.0100	0.0184	<0.0100	<0.0100	<0.0100	<0.0100	0.0109
SWL-E-3-0.2	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-E-4-3	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-E-5-6	11/20/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SWL-E-6-4	11/20/02	0.222	<0.0100	0.269	<0.0100	<0.0100	<0.0100	0.0676	0.225

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-77
BTEX in Soil- Area T
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
T-A-1-0.5	03/27/03	0	0.00633 J	0.00932 J	0.0224 J	0.0268 J
T-A-1A-0.5	03/27/03	0	0.00995 J	0.00994 J	0.0142 J	0.0313 J
T-A-1B-0.5	03/27/03	0	0.00695 J	<0.00900	0.0125 J	<0.0250
T-A-1C-0.5	03/27/03	0	0.00755 J	0.0146 J	0.0202 J	0.0518 J
T-A-1D-0.5	03/27/03	0	0.00483 J	<0.00900	0.0167 J	0.0323 J

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

**Table G-78
PAHs in Soil- Area T
UNOCAL Edmonds Terminal**

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
T-A-1-0.5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
T-A-1A-0.5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
T-A-1B-0.5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
T-A-1C-0.5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
T-A-1D-0.5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-78
PAHs in Soil- Area T
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
T-A-1-0.5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
T-A-1A-0.5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
T-A-1B-0.5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
T-A-1C-0.5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
T-A-1D-0.5	03/27/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting li < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

**Table G-81
BTEX in Soil- Area U
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
U-A-5-5	04/04/03	5	0.0102 J	<0.00900	0.0123 J	0.0565 J
U-A-5WALL-2	04/04/03	2	<0.00400	<0.00900	0.00622 J	<0.0250
U-A-6-4.5	04/04/03	4.5	<0.00400	<0.00900	0.0074 J	<0.0250
U-A-6WALL-2.5	04/04/03	2.5	<0.00400	<0.00900	0.00875 J	<0.0250
U-A-7-2.5	04/04/03	2.5	<0.00400	<0.00900	0.00429 J	<0.0250
U-B-2-5	04/07/03	5	<0.00400	<0.00900	0.0072 J	<0.0250
U-B-2WALL-8	04/07/03	8	<0.00400	<0.00900	0.00602 J	<0.0250
U-B-3-10	04/07/03	10	0.00745 J	<0.00900	0.0105 J	<0.0250
U-B-3WALL-15	04/07/03	15	0.62	<0.00900	0.00563 J	<0.0250
U-B-4-20	04/04/03	20	0.00429 J	<0.00900	0.00664 J	<0.0250
U-B-5-8	04/04/03	8	0.00581 J	<0.00900	<0.00400	<0.0250
U-B-5WALL-4	04/04/03	4	0.005 J	<0.00900	<0.00400	<0.0250
U-B-6-5	04/04/03	5	<0.00400	<0.00900	0.00519 J	<0.0250
U-B-7-2.5	04/04/03	2.5	<0.00400	<0.00900	0.00826 J	0.0251 J
U-B-8-0.5	04/04/03	0.5	<0.00400	0.0109 J	0.0118 J	0.0409 J
U-C-1-6	04/07/03	6	<0.00400	<0.00900	0.00982 J	<0.0250
U-C-1-WALL-4	04/07/03	4	0.00842 J	<0.00900	0.0144 J	0.0253 J
U-C-2WALL-6	04/07/03	6	<0.00400	<0.00900	0.00629 J	<0.0250
U-C-3-10	04/07/03	10	0.014 J	0.011 J	0.0149 J	0.0696 J
U-C-3WALL-15	04/07/03	15	1.04	<0.00900	0.00713 J	<0.0250
U-C-4-20	04/04/03	20	<0.00400	<0.00900	0.00622 J	<0.0250
U-C-5-5	04/04/03	5	<0.00400	<0.00900	0.00427 J	<0.0250

**Table G-81
BTEX in Soil- Area U
UNOCAL Edmonds Terminal**

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
U-C-6-5	04/04/03	5	0.0252 J	<0.00900	0.0115 J	0.0298 J
U-C-7-6	04/04/03	6	<0.00400	<0.00900	0.0077 J	<0.0250
U-C-8-7	04/04/03	7	<0.00400	<0.00900	0.00923 J	0.0256 J
U-C-8WALL-3.5	04/04/03	3.5	0.00513 J	<0.00900	0.0169 J	0.0333 J
U-D-1-6	04/07/03	6	<0.00400	<0.00900	0.00626 J	<0.0250
U-D-2-3	04/07/03	3	0.00587 J	<0.00900	0.0108 J	<0.0250
U-D-3-6	04/07/03	6	<0.00400	<0.00900	0.00666 J	<0.0250
U-D-3-WALL-6	04/07/03	6	<0.00400	<0.00900	0.00749 J	<0.0250
U-D-4-8	04/04/03	8	0.127	<0.00900	0.0198 J	0.0633 J
U-D-5-3	04/04/03	3	<0.00400	<0.00900	0.00611 J	<0.0250
U-E-1-6	04/07/03	6	0.00612 J	<0.00900	0.0105 J	<0.0250
U-F-1-7	04/07/03	7	<0.00400	<0.00900	0.00812 J	<0.0250
U-F-1WALL-3	04/07/03	3	0.00406 J	<0.00900	0.00821 J	<0.0250
U-G-1-7	04/07/03	7	0.00995 J	<0.00900	0.0113 J	0.0522 J
U-G-1WALL-4	04/07/03	4	<0.00400	<0.00900	0.0123 J	<0.0250
U-G-2-3	04/07/03	3	0.00431 J	<0.00900	0.0103 J	<0.0250
U-H-1-5	04/07/03	5	0.00704 J	0.00957 J	0.0285 J	0.0443 J
U-H-1WALL-2	04/07/03	2	0.00591 J	0.015 J	0.0135 J	0.0471 J
U-H-2-3	04/07/03	3	<0.00400	<0.00900	0.0165 J	0.0262 J

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-82
PAHs in Soil- Area U
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)
U-A-5-5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0214	<0.0100
U-A-5WALL-2	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-A-6-4.5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-A-6WALL-2.5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-A-7-2.5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-2-5	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-2WALL-8	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-3-10	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-3WALL-15	04/07/03	0.0152	0.0144	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-4-20	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-5-8	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-5WALL-4	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-6-5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-7-2.5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-8-0.5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-1-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-1-WALL-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-2WALL-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-3-10	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-3WALL-15	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0163
U-C-4-20	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-5-5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-6-5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-7-6	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-8-7	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-8WALL-3.5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-D-1-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-D-2-3	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-D-3-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

**Table G-82
PAHs in Soil- Area U
UNOCAL Edmonds Terminal**

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)
U-D-3-WALL-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-D-4-8	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-D-5-3	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-E-1-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-F-1-7	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-F-1WALL-3	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-G-1-7	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-G-1WALL-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-G-2-3	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-H-1-5	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-H-1WALL-2	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-H-2-3	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-82
PAHs in Soil- Area U
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(g,h,i) perylene (mg/kg)	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
U-A-5-5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-A-5WALL-2	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-A-6-4.5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-A-6WALL-2.5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-A-7-2.5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-2-5	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-2WALL-8	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-3-10	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-3WALL-15	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0152	<0.0100
U-B-4-20	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-5-8	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-5WALL-4	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-6-5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-7-2.5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-B-8-0.5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-1-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-1-WALL-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-2WALL-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-3-10	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0136	<0.0100	<0.0100
U-C-3WALL-15	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-4-20	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-5-5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-6-5	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-7-6	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-8-7	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-C-8WALL-3.5	04/04/03	<0.0100	<0.0100	<0.0100	0.0113	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-D-1-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-D-2-3	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-D-3-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

Table G-82
PAHs in Soil- Area U
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(g,h,i) perylene (mg/kg)	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
U-D-3-WALL-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-D-4-8	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-D-5-3	04/04/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-E-1-6	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-F-1-7	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-F-1WALL-3	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-G-1-7	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-G-1WALL-4	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-G-2-3	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-H-1-5	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-H-1WALL-2	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
U-H-2-3	04/07/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit Values represent total concentrations unless noted. < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value

Table G-85
BTEX in Soil- Area V
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
V-1-5	04/08/03	5	<0.00400	<0.00900	0.00712 J	<0.0250
V-2-3	04/08/03	3	0.00483 J	0.0114 J	0.0268 J	0.0541 J
V-3-7	04/08/03	7	0.00769 J	0.016 J	0.0155 J	0.0484 J
V-4-4	04/08/03	4	<0.00400	<0.00900	0.00567 J	<0.0250
V-5-5	04/08/03	5	<0.00400	0.00907 J	0.00968 J	0.0301 J

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

Table G-86
PAHs in Soil- Area V
UNOCAL Edmonds Terminal

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
V-1-5	04/08/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
V-2-3	04/08/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
V-3-7	04/08/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
V-4-4	04/08/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
V-5-5	04/08/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-86
PAHs in Soil- Area V
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
V-1-5	04/08/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
V-2-3	04/08/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
V-3-7	04/08/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
V-4-4	04/08/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
V-5-5	04/08/03	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated re < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-89
BTEX in Soil- Area 6B
UNOCAL Edmonds Terminal

SAMPLE ID	DATE	DEPTH (feet)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Total xylenes (mg/kg)
6B-A-4-1	09/13/02	1	<0.00400	0.0143 J	0.00789 J	<0.0250
6B-A-5-0	09/13/02	0	<0.00400	0.0129 J	0.00853 J	<0.0250
6B-A-6-0	09/13/02	0	<0.00400	0.0123 J	0.00881 J	<0.0250
6B-B-3-3	09/13/02	3	<0.00400	0.0112 J	0.00828 J	<0.0250
6B-B-4-3	09/13/02	3	<0.00400	0.0127 J	0.00923 J	<0.0250
6B-B-6-6	09/13/02	6	<0.00400	0.0146 J	0.00894 J	<0.0250
6B-B-7-3	09/13/02	3	<0.00400	0.0131 J	0.00691 J	<0.0250
6B-C-2-0.5	09/13/02	0.5	<0.00400	0.0127 J	0.00801 J	<0.0250
6B-C-3-0	09/13/02	0	<0.00400	0.0141 J	0.00796 J	<0.0250
6B-C-5-3	09/13/02	3	<0.00400	0.013 J	0.00917 J	<0.0250
6B-C-6-6	09/13/02	6	<0.00400	0.0141 J	0.00808 J	<0.0250
6B-D-5-5.5	09/13/02	5.5	<0.00400	0.0128 J	0.00966 J	<0.0250

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated result.

**Table G-90
PAHs in Soil- Area 6B
UNOCAL Edmonds Terminal**

SITE	DATE	1-Methyl-naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)
6B-A-4-1	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-A-5-0	09/13/02	0.035	0.0186	<0.0100	<0.0100	<0.0100	<0.0100	0.0335	0.0127	0.0216
6B-A-6-0	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.016	<0.0100	<0.0100
6B-B-3-3	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-B-4-3	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-B-6-6	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-B-7-3	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0212	<0.0100	<0.0100
6B-C-2-0.5	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0206	<0.0100	<0.0100
6B-C-3-0	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-C-5-3	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-C-6-6	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-D-5-5.5	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-90
PAHs in Soil- Area 6B
UNOCAL Edmonds Terminal

SITE	DATE	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
6B-A-4-1	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-A-5-0	09/13/02	0.0209	0.0142	<0.0100	<0.0100	<0.0100	0.0149	<0.0100	<0.0100	<0.0100
6B-A-6-0	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-B-3-3	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-B-4-3	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-B-6-6	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-B-7-3	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-C-2-0.5	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-C-3-0	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-C-5-3	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-C-6-6	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
6B-D-5-5.5	09/13/02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100

< = Not detected at indicate < = Not detected at indicated reporting limit. --- = Not analyzed. J = Estimated value.

Table G-92
Extractable Petroleum Hydrocarbons in Soil- Area 6B
UNOCAL Edmonds Terminal

SITE	DATE	Aliphatic C8-C10 (mg/kg)	Aliphatic C10-C12 (mg/kg)	Aliphatic C12-C16 (mg/kg)	Aliphatic C16-C21 (mg/kg)	Aliphatic C21-C34 (mg/kg)	Aromatic C10-C12 (mg/kg)	Aromatic C12-C16 (mg/kg)	Aromatic C16-C21 (mg/kg)	Aromatic C21-C34 (mg/kg)	Total Extractable Hydrocarbons (mg/kg)
6B-A-5-0	09/13/02	<5.00	32.1	73.7	<5.00	<5.00	<5.00	12.9	<5.00	<5.00	119

< = Not detected at indicated reporting limit. --- = Not analyzed.

J = Estimated value. D = Sample diluted due to high analyte concentrations. R= Rejected value.

APPENDIX H
BACKGROUND ARSENIC TECHNICAL MEMORANDUM

MEMORANDUM

TO: File DATE: May 27, 2003
PROJECT: 9077.01.07

FROM: Linda Dawson, Maul Foster & Alongi

RE: Unocal Edmonds Upper Yard Interim Action
BACKGROUND ARSENIC DETECTED IN RAMP AREA, BASIN 2910

Over 500 performance (compliance) samples were collected across the upper yard for purposes of demonstrating compliance with the arsenic cleanup level of 20 mg/kg. One (1) of these compliance samples was over the cleanup level, with a concentration of 48.1 mg/kg arsenic. As discussed below, this concentration reflects naturally occurring arsenic, observed in native silt in an area off the southeast side of basin 2910.

WORK SEQUENCE AND SAMPLING RESULTS

Excavation of basin 2910 began on January 10 and continued through January 21, 2003. The area was gridded and 44 TPH performance samples and 12 arsenic performance samples were collected on January 24. All TPH samples met cleanup levels (CULs). Two of twelve arsenic samples (nodes A-7 and G-3) failed the 20 mg/kg arsenic CUL at 42.9 and 29.8 mg/kg, respectively. The two node areas were over-excavated on January 30, by removing additional soil 10 feet in all directions from each failing node and to a minimum of 6 inches in depth. Soil in the area of node A-7 (outside the basin, off the northwest side) was fill material that had not been surface-scraped prior to sample collection on January 24. The areas were then re-sampled per the Compliance Monitoring Plan on January 30.

Although the freshly exposed soil was undisturbed, native soil, sample results showed additional arsenic exceedances at and around node G-3. Node G-3 was located outside the basin in a temporary ramp area located off the southeast side (Figure 1). The "ramp area" was approximately 20 feet wide by 30 feet long and was part of a road created and used as access through the basin during the 2001 removal of the tanks from the upper yard (Photo 1). Failing secondary sampling results at/around G-3 ranged from 21.8 to 149 mg/kg arsenic (Table 1).

The entire area was inspected again. Residual sandblast grit was found in/around an exposed water line along the basin edge (to the north/northeast of the ramp area). The water line alignment was scraped again by excavator to remove the residual grit. The

ramp area was also re-scraped, to ensure that any potentially tracked grit was removed. Numerous additional rounds of progress sampling and re-scraping were performed between February 5 and 17 and showed elevated arsenic concentrations in the ramp area (Table 1). Arsenic concentrations along the pipe alignment ranged from 12.3 to 15.9 mg/kg. The February 13 samples were collected 8 inches below the exposed soil surface in the ramp area and still showed elevated arsenic concentrations. On February 17, more samples were collected using a hand auger. At four locations, samples were collected at 1- and 2-feet below the ramp surface in undisturbed, native soil. Arsenic concentrations in these samples ranged from 94.6 to 120 mg/kg (Table 1). Even at 2 feet below surface in native undisturbed soil, arsenic concentrations of 94.6 and 108 mg/kg were detected.

Based on these results, which clearly demonstrated that the arsenic in the ramp area was not associated with sandblast grit, MFA gridded and sampled the former pipe alignment along the basin edge to the north/northeast of the ramp area (as Metals Area NPL). Ten performance samples were collected on February 20. All 10 samples met the arsenic CUL, with concentrations ranging from 3.66 to 12.4 mg/kg.

Two more samples were collected from the exposed native soil in the ramp area on February 25, to supplement the data set for a background arsenic demonstration. Additionally, the grid nodes were re-established and performance samples were collected, since the area had been re-excavated several times. The arsenic concentration in the exposed soil at G-2 (a dark gray sand with trace silt) was 3.11 mg/kg. Node G-2 was located in the exposed wall above the ramp. The arsenic concentration in the exposed soil at G-3 (gray and tan mottled, slightly sandy silt) was 48.1 mg/kg. The contractor placed filter fabric and rock on the ramp area to prevent tracking and no additional investigation was performed at this time.

The sampling data were studied to discern any pattern between the arsenic concentrations and the soil characteristics. The ramp area was comprised of native, undisturbed soil that transitioned from a gray, interbedded silt to a tan silt (Photos 2 and 3). While there was some variability in the soil descriptions recorded by different field personnel, the elevated arsenic concentrations were primarily associated with tan or tan and gray silt (Table 1).

At MFA's request, the rock and fabric were removed from the ramp area at the end of April. At least 1 additional foot of native soil was removed from the ramp after removal of the rock and fabric. Three more samples of the exposed native soil were collected on May 5. Samples of the native silt, where it transitioned from gray to tan, were collected

from the ramp area with the intent of obtaining high arsenic concentrations. The May 5 sample results were 101, 54.7 and 76.9 mg/kg arsenic (Table 1).

The elevation of Node G-3 was surveyed after the final soil removal event at the end of April. The measured elevation was 101.6 MLLW. The pre-excavation elevation of the ramp area was 106. These elevations correspond with MFA's field notes, which showed at least 4 feet of native soil were removed from the ramp area.

SUMMARY AND DISCUSSION

In response to the detection of elevated arsenic concentrations, a minimum of 4 feet of native soil were removed from the basin 2910 ramp area during a sequence of excavation and sampling events performed between January 10 and May 5, 2003. The ramp area was comprised of native, undisturbed soil that transitioned from a gray silt to a tan silt. Soil samples collected from the ramp area showed arsenic concentrations ranging from 12.8 mg/kg (gray and trace of tan, sandy interbedded silt) to 149 mg/kg (tan and gray mottled, very sandy interbedded silt). One sample, recorded as gray interbedded sandy silt, contained 155 mg/kg arsenic.

The only known anthropogenic sources of arsenic in the upper yard were paint used on the tanks and piping, and sandblast grit used to remove the paint. Neither source could be responsible for arsenic concentrations in native, undisturbed soil located over 4 feet below ground surface. Twenty-one samples, collected to depths of at least 4 feet below ground surface in native, undisturbed silt, demonstrate that the arsenic occurs naturally in the ramp area. The exposed, native soil in the ramp area measured approximately 20 feet wide by 30 feet long.

Attachments: Figure 1: Metals Area N (basin 2910)
Table 1: Summary of Basin 2910 Ramp Area Sampling
Photo 1: Aerial photo of site
Photos 2, 3: Photos of ramp area, gray/tan silt

Table 1
Summary of Basin 2910 Ramp Area Sampling
UNOCAL Edmonds Terminal

SAMPLING EVENT	DATE	Location	As (mg/kg)	Description
Primary	01/24/03	G-3	29.8	Medium stiff, tan sandy silt (interbedded)
Secondary	01/30/03	G-3	149	Tan and gray mottled, very sandy, silt, interbedded
		G-3A	21.8	Tan, slightly clayey, sandy silt
		G-3B	29.1	Tan, slightly clayey, sandy silt
		G-3D	17.1	Gray, interbedded sandy silt
Progress	02/05/03	N-Floor 2-3	21.9	Tan/gray mottled silt with sand
		N-Floor 3-5	112	Tan/gray mottled silt with sand
Progress	02/11/03	N-Floor 2-5	42.0	Interbedded tan silt and gray sand
		N-Floor 3-2	52.0	Tan silt with sand
		N-Floor 4-1	1.97	Brown mottled sand with silt
Progress	02/13/03	N-As-2 ^a	28.2	8 inches bes; gray interbedded sandy silt
		N-As-3	155	8 inches bes; gray interbedded sandy silt
		N-As-1 ^b	49.5	8 inches bes; tan and gray mottled interbedded sandy silt
Progress	02/17/03	N-As-1A-1	120	1 foot bes; thinly interbedded gray/tan silt with gray fine sand
		N-As-1B-2	94.6	2 feet bes; thinly interbedded gray/tan silt with gray fine sand
		N-As-2A-1	117	1 foot bes; thinly interbedded gray/tan silt with gray fine sand
		N-As-2B-2	108	2 feet bes; thinly interbedded gray/tan silt with gray fine sand
Progress	02/25/03	N-As-3A	24.3	6 inches bes; tan, sandy, fractured/interbedded silt
		N-As-4A	12.8	6 inches bes; gray and trace of tan, sandy interbedded silt
Primary	02/25/03	G-2	3.11	Dark gray sand with trace of silt
		G-3	48.1	Gray and tan mottled, slightly sandy silt, with occasional fractures

Table 1
Summary of Basin 2910 Ramp Area Sampling
UNOCAL Edmonds Terminal

SAMPLING EVENT	DATE	Location	As (mg/kg)	Description
Additional	05/05/03	N-G-3E5	101	Gray and tan mottled, slightly sandy fractured and interbedded silt
		N-G-3N5	54.7	Gray and tan mottled, slightly sandy fractured and interbedded silt
		N-G-3NE5	76.9	Gray and tan mottled, sands, fractured and interbedded silt
Ecology	06/06/03	N-UJEECY-01-2	11.1	Tan with light gray mottling, massive, stiff clayey silt
Samples		N-UJEECY-02-2	11.4	Light gray, massive, stiff silt/clayey silt
		N-UJEECY-03-1.9	12.8	Light gray, very stiff silt with brown mottling and occasional fractures
		N-UJEECY-04-2	10.3	Light gray, massive, stiff silt with slight brown mottling
		N-UJEECY-05-3	9.80	Gray and brown mottled, stiff silt and laminated gray and brown, very stiff silt
		N-UJEECY-06-3	11.2	Grayish-tan, massive, stiff silt/clayey silt with interbedded laminated silt
		N-UJEECY-07-2.8	16.3	Tan, stiff silt with trace gray laminations
		N-UJEECY-08-3	19.5	Light gray and brown mottled, massive clayey silt
		N-UJEECY-09-2.5	61.0	Light gray, stiff silt with sand, with occasional fractures and sand interbeds
		N-UJEECY-10-3.5	32.8	Medium to dark brown, stiff silt with occasional gray laminations
		N-UJEECY-11-2.5	55.6	Brownish-gray, stiff silt with sand, with interbedded gray f-m sand
		N-UJEECY-12-4	19.5	Blue-gray, massive, stiff silt with 30% tan and gray laminated silt
		N-UJEECY-13-4	76.2	Gray to brown-gray, massive, very stiff silt with trace to few fine sand
		N-UJEECY-14-4	13.4	Brown and gray laminated silt/silt with sand with rare white laminations
		N-UJEECY-15-2.5	22.0	Light gray, stiff silt with few brown laminations

bes = below exposed ground surface

Except where noted, samples were collected at the soil surface, in the ramp area.

Node G-2 was located 20 feet to the SE of G-3, on the wall above the ramp, during 2/25/03 sampling event.

Node G-4 was located 20 feet to the NE of G-3.

^a Sample collected within 1 foot of N-Floor 2-5.

^b Sample collected within 1 foot of N-Floor 3-2.

APPENDIX I

LEGAL DESCRIPTION OF EXCLUDED AREAS

EXCLUDED AREAS LEGAL DESCRIPTIONS

EDMONDS TANK FARM
TRIAD JOB NO. 93-253
JUNE 24, 2003

PARCEL DESCRIPTION: AREAS 1 AND 2
UPPER YARD EXCEPTION AREAS

THAT PORTION OF PARCEL B OF CITY OF EDMONDS LOT LINE ADJUSTMENT RECORDED UNDER AUDITOR FILE NUMBER 200202145001, RECORDS OF SNOHOMISH COUNTY, WASHINGTON; SITUATED IN GOVERNMENT LOT 1, SECTION 26, TOWNSHIP 27 NORTH, RANGE 3 EAST, W.M., IN SNOHOMISH COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

A STRIP OF LAND 70.00 FEET IN WIDTH, BEING 35.00 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

BEGINNING AT THE INTERSECTION OF THE SOUTHEASTERLY MARGIN OF THE BURLINGTON NORTHERN RAILROAD AND THE NORTHWESTERLY BOUNDARY OF SAID PARCEL B;
THENCE NORTH 59°01'17" EAST ALONG SAID BOUNDARY, FOR A DISTANCE OF 176.41 FEET TO THE **TRUE POINT OF BEGINNING** OF SAID CENTERLINE;
THENCE SOUTH 46°06'46" EAST, FOR A DISTANCE OF 130.00 FEET TO THE TERMINUS OF THIS CENTERLINE;

THE SIDELINES OF SAID STRIP TO BE EXTENDED OR SHORTENED TO MEET AT SAID BOUNDARY;

AND ALSO THAT PORTION OF PARCEL B OF CITY OF EDMONDS LOT LINE ADJUSTMENT RECORDED UNDER AUDITOR FILE NUMBER 200202145001, RECORDS OF SNOHOMISH COUNTY, WASHINGTON; SITUATED IN GOVERNMENT LOT 1, SECTION 26, TOWNSHIP 27 NORTH, RANGE 3 EAST, W.M., IN SNOHOMISH COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

A STRIP OF LAND 50.00 FEET IN WIDTH, BEING 25.00 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

BEGINNING AT THE INTERSECTION OF THE SOUTHEASTERLY MARGIN OF THE BURLINGTON NORTHERN RAILROAD AND THE NORTHWESTERLY BOUNDARY OF SAID PARCEL B;
THENCE NORTH 59°01'17" EAST ALONG SAID BOUNDARY, FOR A DISTANCE OF 688.92 FEET TO THE **TRUE POINT OF BEGINNING** OF SAID CENTERLINE;
THENCE SOUTH 19°34'24" EAST, FOR A DISTANCE OF 78.00 FEET TO THE TERMINUS OF THIS CENTERLINE;

THE SIDELINES OF SAID STRIP TO BE EXTENDED OR SHORTENED TO MEET AT SAID BOUNDARY.

WRITTEN BY: SEB
CHECKED BY: LEC

EDMONDS TANK FARM
TRIAD JOB NO. 93-253
JUNE 24, 2003
PARCEL DESCRIPTION: AREAS 3A, B AND C
UPPER YARD EXCEPTION AREAS

AREA 3A

THAT PORTION OF PARCEL B OF CITY OF EDMONDS LOT LINE ADJUSTMENT RECORDED UNDER AUDITOR FILE NO. 200202145001, RECORDS OF SNOHOMISH COUNTY WASHINGTON AND OF PINE STREET EXTENSION (216TH STREET SW) ADJOINING SAID PARCEL B, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE SOUTHERLY BOUNDARY OF SAID PARCEL B AND THE WESTERLY MARGIN OF SAID PINE STREET EXTENSION;
THENCE NORTH 21°35'00" WEST ALONG SAID WESTERLY MARGIN 109.54 FEET TO A POINT OF CURVE TO THE RIGHT HAVING A RADIUS OF 130.00 FEET;
THENCE NORTHERLY ALONG SAID WESTERLY MARGIN AND CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF 61°59'56" AN ARC DISTANCE OF 140.67 FEET TO A POINT OF COMPOUND CURVE TO THE RIGHT HAVING A RADIUS OF 215.00 FEET;
THEN CONTINUING NORTHERLY AND EASTERLY ALONG SAID MARGIN AND CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF 16°26'50" AN ARC DISTANCE OF 61.72 FEET TO THE **POINT OF BEGINNING**;
THENCE NORTH 15°46'11" WEST 21.21 FEET;
THENCE NORTH 67°45'50" EAST 18.56 FEET;
THENCE SOUTH 19°30'01" EAST 31.63 FEET;
THENCE SOUTH 63°21'58" WEST 20.88 FEET;
THENCE NORTH 15°46'11" WEST 12.20 FEET TO THE **POINT OF BEGINNING**.

AREA 3B

THAT PORTION OF PINE STREET EXTENSION (216TH STREET SW) ADJOINING PARCEL B OF CITY OF EDMONDS LOT LINE ADJUSTMENT RECORDED UNDER AUDITOR FILE NO. 200202145001, RECORDS OF SNOHOMISH COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE SOUTHERLY BOUNDARY OF SAID PARCEL B AND THE WESTERLY MARGIN OF SAID PINE STREET EXTENSION;

THENCE NORTH 21°35'00" WEST ALONG SAID WESTERLY MARGIN 109.54 FEET TO A POINT OF CURVE TO THE RIGHT HAVING A RADIUS OF 130.00 FEET;
THENCE NORTHERLY ALONG SAID WESTERLY MARGIN AND CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF 39°34'49" AN ARC DISTANCE OF 89.80 FEET;
THENCE LEAVING SAID MARGIN SOUTH 57°56'39" EAST 23.98 FEET TO THE **POINT OF BEGINNING**,
THENCE NORTH 31°25'27" EAST 61.15 FEET;
THENCE SOUTH 49°31'39" EAST 11.96 FEET;
THENCE SOUTH 27°55'49" WEST 59.55 FEET;
THENCE NORTH 57°56'39" WEST 15.38 FEET TO THE **POINT OF BEGINNING**.

AREA 3C

THAT PORTION OF PINE STREET EXTENSION (216TH STREET SW) ADJOINING PARCEL B OF CITY OF EDMONDS LOT LINE ADJUSTMENT RECORDED UNDER AUDITOR FILE NO. 200202145001, RECORDS OF SNOHOMISH COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE SOUTHERLY BOUNDARY OF SAID PARCEL B AND THE WESTERLY MARGIN OF SAID PINE STREET EXTENSION;
THENCE NORTH 21°35'00" WEST ALONG SAID WESTERLY MARGIN 79.74 FEET;
THENCE NORTH 70°53'29" EAST 7.28 FEET TO THE **POINT OF BEGINNING**;
THENCE NORTH 21°25'14" WEST 35.23 FEET;
THENCE NORTH 68°36'40" EAST 9.39 FEET;
THENCE SOUTH 21°01'18" EAST 35.59 FEET;
THENCE SOUTH 70°53'29" WEST 9.15 FEET TO THE **POINT OF BEGINNING**.

WRITTEN BY: LEC
CHECKED BY: LEC