

FINAL REPORT

- Before closure is recommended,
- ① Sample well MW-6 and MW-7 for TPH₂, TPH₄, BTEX, MTBE. (Analyzed by W.O. pt?)
 - ② Building over contains is for storage of equipment

TANK CLOSURE REPORT

VEHICLE MAINTENANCE GARAGE, TRACY PUMPING PLANT AND SUBSTATION

TRACY, CALIFORNIA

Prepared for



U. S. Department of the Interior
Bureau of Reclamation
2800 Cottage Way
Sacramento, CA 95825

July 1997

Woodward-Clyde



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July 31, 1997

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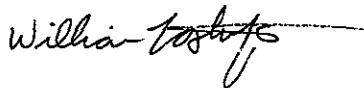
Subject: Tank Closure Report, Vehicle Maintenance Garage UST Site
Tracy Pumping Plant and Substation Facility
16550 Kelso Road, Tracy, California
Project No. S96203

Dear Ms. Chu:

Woodward-Clyde is pleased to provide you with the enclosed Tank Closure Report describing underground storage tank removal and associated soil remediation activities conducted at the Vehicle Maintenance Garage site, Tracy Pumping Plant and Substation Facility, 16550 Kelso Road in Tracy, California. Woodward-Clyde was contracted by the U. S. Department of the Interior, Bureau of Reclamation to conduct the UST removal and soil remediation activities. If you have any questions regarding the TCR please don't hesitate to call me or Jay Kamine at (916) 368-0988.

Very truly yours,

WOODWARD-CLYDE



William Loskutoff
Assistant Project Geologist

Enclosure: Tank Closure Report, Vehicle Maintenance Garage, Tracy Pumping
Plant and Substation Facility

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This Tank Closure Report (TCR) describes activities conducted by Woodward-Clyde Federal Services (Woodward-Clyde) in May 1997. Woodward-Clyde was contracted by U. S. Department of the Interior, Bureau of Reclamation (USBR) under Delivery Order 1424-96-CA-20-0341B/00003 of Contract Number 6-CA-20-0341B to conduct underground storage tank (UST) removal activities adjacent to the Vehicle Maintenance Garage, and soil excavation and confirmation sampling activities where three former storage sheds were located along the north side of the Department of Energy, Western Area Power Administration warehouse building at the Tracy Pumping Plant and Substation Facility near Byron, California. The tank removal activities were conducted in accordance with the UST Closure Plan submitted to Alameda County, Department of Environmental Health (ACDEH) on April 4, 1997, and approved by ACDEH on April 9, 1997. This TCR describes tank removal and soil sampling activities at the Vehicle Maintenance Garage site that were conducted on May 12 through 17, 1997. In addition, this TCR describes the soil excavation and confirmation sampling activities at Western Area Power Administration Former Storage Shed area that were conducted on May 13, 1997.

1.1 BACKGROUND

The Tracy Pumping Plant and Substation (TPPS) facility is located in northeastern Alameda County approximately 10 miles northwest of Tracy, California within the northwest corner of the intersection of Mountain House and Kelso roads (Figure 1-1). The TPPS facility operates an electrical substation and large pumping plant that delivers water southward for the Delta-Mendota Canal. USBR manages the pumping plant operations and the Department of Energy, Western Area Power Administration (Western) manages the electrical substation operations. The substation provides electrical power transmission from hydroelectric dams to electric consumers in central California.

The TPPS facility occupies approximately 64 acres that includes the pumping plant, an associated intake canal, the electrical substation, and a maintenance yard. USBR began operations at the facility in 1948. Prior to 1948 the area was agricultural land used for growing crops. The substation and maintenance yard are fenced, and access to these areas is controlled. The TPPS facility is generally flat with gravel in the substation, and gravel, dirt and asphalt in the 3.2 acre maintenance yard area. The pumping plant, substation, and maintenance yard are located along the southern boundary of the facility. Three abandoned landfills are located near the western side of the pumping station. The area surrounding the TPPS facility is agricultural.

In 1978, Western acquired the substation area of the TPPS facility from USBR, and in 1990 began expansion of electrical plant operations north of and within the northern portion of the maintenance yard. The expansion included the upgrading of a 230 kv facility to a 500 kv facility. Past operation of the 230 kv facility involved use of an underground pipeline that was used to transfer transformer oil from the transformer units to an oil cleaning and maintenance house. While no transformer oil containing polychlorinated biphenyls (PCBs) is currently used at the facility, past operation involved use of oil that may have contained PCBs. The underground pipeline was decommissioned in the early 1970's and was replaced with an aboveground pipeline.

Previous investigations by CH2M Hill, Roy F. Weston, Chen Northern, Inc., U. S. Pollution Control, Inc. (USPCI), Cottle Engineering, Clearwater Group, Inc., USBR, and U. S. Army Corps of Engineers, Sacramento District (USACE) have been conducted at the TPPS facility. The investigations conducted by Chen Northern and USPCI concentrated on the expansion areas north of the maintenance yard, and USACE concentrated in the area where the underground pipeline was located within the upgraded 500 kv facility. CH2M Hill and Roy F. Weston conducted preliminary assessments of the TPPS facility for the land transfer prior to expansion activities. Activities within the UST area in the maintenance yard were conducted by Cottle Engineering (UST removal), USBR (groundwater monitoring well installation), and Clearwater Group (diesel overfill spill investigation).

Investigations conducted along the north side of the Western Area Power Administration warehouse building were performed by Western personnel. Activities conducted at the UST area of the Vehicle Maintenance Garage site and a Former Storage Shed area along the north side of the Department of Energy, Western Area Power Administration warehouse building at the TPPS facility are described in detail in Sections 1.1.1 and 1.1.2 respectively. Excerpts of investigations conducted at the TPPS facility that relate to the Vehicle Maintenance Garage site and Former Storage Shed area are briefly described below.

In April 1990, CH2M Hill prepared a Preliminary Assessment of the TPPS facility for Western. The assessment was performed to ascertain the potential of hazardous substances, pollutants, or contaminants to exist at the site and to determine if a site investigation was needed. CH2M Hill identified 11 areas within the substation expansion and 3 areas outside the expansion area as potential contamination source areas. One of the three areas identified by CH2M Hill outside of the expansion area was an underground storage tank area at the west end of the garage building (Vehicle Maintenance Garage site). CH2M Hill reported that one or more gasoline/diesel USTs were removed from the area in 1976 because of a leak. The amount of product lost was not known, however, employees interviewed during the preliminary assessment recall a strong petroleum odor around the excavation. A new tank was reportedly installed in the same excavation (see Section 1.1.1).

A dispensing area within three storage sheds was also identified by CH2M Hill in the expansion area on the north side of a warehouse operated by Western. During the preliminary assessment site visit, CH2M Hill observed four 55-gallon drums on horizontal racks with dispensing taps. Stained asphalt and gravel were also noted during the site visit. Employees interviewed during the preliminary assessment stated that small spills had occurred in this area. This dispensing area (Former Storage Shed area) historically had been used for storing motor oil and kerosene.

Concurrent with the CH2M Hill preliminary assessment, Roy F. Weston, Inc. (Weston) conducted a site investigation involving the advancement of nine soil borings to collect soil and groundwater samples. One soil boring (90-TPPS-1) was advanced approximately 140-feet northwest of the Vehicle Maintenance Garage UST area. One soil sample and one grab groundwater sample were collected from boring 90-TPPS-1. The soil sample, a composite collected from three different depths, was analyzed for total extractable petroleum hydrocarbons (TEPH) using EPA Method 418.1. A detectable concentration of 11 mg/Kg (parts per million-ppm) TEPH was reported for the composite soil sample from boring 90-TPPS-1.

Weston collected a grab groundwater sample from boring 90-TPPS-1 and analyzed it for TEPH using EPA Method 418.1 and California Title 22 Metals (unfiltered). Laboratory analysis of the grab groundwater sample from boring 90-TPPS-1 showed TEPH, silver, arsenic, cadmium, selenium and thallium were not detected above the analytical reporting limit. Analytical laboratory analysis indicated low levels (0.0633 mg/L) beryllium, (1.74 mg/L) chromium, (1.8 mg/L) copper, (0.0032 mg/L) mercury, (2.21 mg/L) nickel, (0.186 mg/L) lead, (1.9 mg/L) antimony, and (4.77 mg/L) zinc in the unfiltered grab groundwater sample collected from boring 90-TPPS-1.

In the fall of 1990, Chen Northern, Inc. conducted a site investigation that included the collection of near-surface soil samples, backhoe trench soil samples, test pit soil samples and installation of six groundwater monitoring wells. The near-surface, trench, and test pit sampling activities concentrated on areas identified by CH2M Hill within the planned expansion area. The six groundwater monitoring wells were installed to assess the groundwater quality and flow direction below the maintenance yard and expansion areas of the TPPS facility. Wells MW-1 and MW-2 were located north of the substation and well MW-3 was located in the expansion area. Well MW-4 was located approximately 480-feet north-northwest of the Vehicle Maintenance Garage UST site.

Groundwater monitoring well MW-5 located northeast of Western's warehouse building is approximately 425-feet northeast of the Vehicle Maintenance Garage site. Well MW-6 is located approximately 225-feet south of the Vehicle Maintenance Garage along the south side of the southernmost vehicle storage shed (Figure 1-2). Well MW-1 was completed to a depth of 50-feet bgs. The total depths of wells MW-2 through MW-6 ranged from 21 to 27-feet below ground surface (bgs). The groundwater flow direction was assessed to be towards the north in the area of the maintenance yard.

In October 1992, four of the six monitoring wells installed by Chen Northern (MW-1 through MW-4) were decommissioned in accordance with Zone 7, Alameda County Flood Control and Water Conservation District regulations (Cottle Engineering, 1994). Wells MW-5 and MW-6 remain at the site (Figure 1-2).

1.1.1 Vehicle Maintenance Garage UST Site

The Vehicle Maintenance Garage site is located along the western boundary of the 3.2 acre maintenance yard (Figure 1-3). Up to five underground storage tanks (USTs) have been known to exist at the site since 1948. In 1976, a UST was removed from an area west of the garage building and another UST was placed in the same excavation (CH2M Hill, 1990). From 1976 to 1994, four USTs were utilized at the Vehicle Maintenance Garage. In 1994, two USTs (1-waste oil and 1-leaded gasoline) were removed from the site (Cottle Engineering, 1994). In June 1994, one groundwater monitoring well (MW-7) was installed at the UST area at the request of ACDEH. MW-7 was monitored and sampled quarterly for one year following its installation (USBR inter-departmental memo, 1994). From March 1994 to May 1997, two USTs (1-unleaded gasoline and 1-diesel) located west and northwest of the garage (respectively) remained at the site and are the subjects of this TCR.

On February 8, 1994, a 1,000-gallon fiberglass waste oil UST located at the southeast corner of the garage building, and a 2,000-gallon steel leaded gasoline UST located near the northwest corner of the Vehicle Maintenance Garage building were removed from the site by Cottle Engineering of Antioch, California. The tanks and product lines were reported in good condition. The USTs were transported to Erickson, Inc. in Richmond, California under uniform hazardous waste manifest number 44964. The residual product and tank rinsate were transported by Sea View Industries of Oakland, California to Refineries Service in Patterson, California.

Two soil samples were collected from the leaded gasoline UST excavation. Samples RG-1 and RG-2, were analyzed for total petroleum hydrocarbon (TPH) as gasoline using modified EPA Method 8015; benzene, toluene, ethylbenzene, xylenes (BTEX) using EPA Method 8020; and total lead using EPA Method 7420. Sample RG-1 collected from the east end of the excavation from a depth of 11 feet below ground surface (bgs), contained detectable concentration of 3.1 mg/Kg TPH as gasoline and non-detectable concentrations of BTEX and total lead. Sample RG-2 was collected from the west end (fill end) of the excavation from a depth of 12 feet bgs and contained detectable concentrations of 130 mg/Kg TPH as gasoline, 0.16 mg/Kg toluene, 0.76 mg/Kg ethylbenzene, 1.9 mg/Kg xylenes, 5.7 mg/Kg total lead, and non-detectable concentration of benzene (Table 1-1). No groundwater was encountered in the leaded gasoline UST excavation. Approximately 53 cubic yards of contaminated soil was removed during the 1994 UST removal activities and stockpiled onsite.

One soil sample (WO-1) was collected from the waste oil tank excavation from an unknown depth. The sample was analyzed for TPH as diesel and TPH as gasoline using modified EPA Method 8015; BTEX using EPA Method 8020; LUFT metals (cadmium, lead, chromium, nickel, zinc) using EPA Method 7000 series; total recoverable petroleum hydrocarbons (TRPH) as oil and grease using EPA Method 418.1; volatile organic compounds (VOCs) using EPA Method 8240; and semi-VOCs using EPA Method 8270. The results for sample WO-1 indicated detectable concentrations of 0.019 mg/Kg total xylenes (detected by 8240 Method), 5.1 mg/Kg total lead, 41 mg/Kg chromium, 28 mg/Kg nickel, 36 mg/Kg zinc, and non-detectable concentrations of all other constituents analyzed (Table 1-1). No groundwater was encountered during the excavation activities. It is our understanding that Cottle Engineering installed one groundwater monitoring well at the east end of the waste oil UST excavation following the UST removal. The well was installed to monitor groundwater conditions at the UST area. ? NO.

In a letter dated March 2, 1994 from ACDEH to USBR, ACDEH approved the backfilling of the waste oil excavation, overexcavation of the leaded gasoline pit, and requested additional investigation to assess the presence and extent of petroleum hydrocarbons in soil and groundwater near the gasoline excavation. The groundwater investigation was to comply with the Regional Water Quality Control Board (RWQCB), Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites (August, 1990), and Article 11 of Title 23 California Code of Regulations. ACDEH requested quarterly monitoring and reporting of the groundwater conditions at the Vehicle Maintenance Garage UST site.

In April 1994, Cottle Engineering prepared a "Preliminary Site Assessment and Work Plan for Installation of Monitoring Well". The site assessment portion described the UST removal activities and sampling results, and the work plan proposed the installation of one monitoring

well northwest of the former leaded gasoline excavation, overexcavating the leaded gasoline UST excavation, and treating the stockpiled contaminated soil by aeration procedures. Cottle Engineering estimated that approximately 75 cubic yards of additional contaminated soil would need to be removed from the leaded gasoline UST excavation. The work plan also stated that a groundwater monitoring well was to be installed by USBR personnel. The location of the well was approved by ACDEH.

On June 23, 1994, USBR Geology Section staff advanced one soil boring located approximately 40-feet north and 8 feet west of the northwest corner of the Vehicle Maintenance Garage building (Figure 1-3) and constructed a groundwater monitoring well (MW-7) in the boring. Two soil samples were collected during the advancement of the soil boring to a depth of approximately 20 feet bgs (USBR, 1994). The soil samples were analyzed for TPH as gasoline using modified EPA Method 8015 and BTEX using EPA Method 8020. Laboratory analysis results for the soil samples indicated no TPH as gasoline, toluene, ethylbenzene, or xylenes were reported above the laboratory reporting limits. A detectable concentration of 0.02 mg/Kg (detection limit) of benzene was reported for the sample collected from a depth of 10-feet bgs (Table 1-2). All soil cuttings were added to the existing stockpile from the UST excavations.

Groundwater was first encountered in the boring at a depth of approximately 10-feet bgs. Groundwater monitoring well MW-7 was constructed with 2-inch diameter schedule 40 polyvinyl chloride (PVC) well casing fitted with threaded ends. The well perforation consisted of 0.010-inch machine slotted section from a depth of approximately 19.3-feet bgs to approximately 7.2-feet bgs. Non-perforated solid riser well casing was placed from approximately 7.2-feet depth to approximately 0.5 feet bgs. A Monterey #2 sand filter pack was placed from a depth of approximately 19.5 feet bgs to about 5.2-feet bgs, then a bentonite pellet environmental seal was placed above the sand pack from 5.2 to 3.2-feet bgs. A cement grout seal was placed from the bentonite pellet seal to surface level. A locking well cap was placed at the top of the well and the well was enclosed in a tamper-resistant traffic box set level with the surface of the surrounding asphalt.

Depth to groundwater in MW-7 was measured to be around 12-feet bgs 14 hours following installation. On June 27, 1994, USBR developed MW-7 using a centrifugal pump and had removed approximately fifty gallons of groundwater at the completion of the development procedure. On June 30, 1994 a groundwater sample was collected from MW-7 following the development procedures. Groundwater sample MW7003 was analyzed for TPH as gasoline and BTEX. Laboratory results indicate the TPH as gasoline and BTEX were below the laboratory reporting limits for the initial sampling event. Depth to groundwater in MW-7 following the development and sampling procedures was measured to be approximately 11.5-feet bgs.

In September and December 1994, and March 1995, USBR collected a groundwater sample from MW-7 and analyzed the samples for TPH as gasoline and BTEX constituents each sampling event. Laboratory analysis results of the samples collected from MW-7 during the three sampling events indicated TPH as gasoline and BTEX were below the laboratory reporting limits for all constituents (Table 1-2).

On October 2, 1995 approximately 25 gallons of diesel fuel spilled during filling of the diesel UST. Initial emergency response actions were performed by San Luis & Delta-Mendota Water

Authority personnel. The extent of the spill was across the pavement and onto the native soil through an asphalt/concrete construction seam south of the diesel UST fill pipe. Asphalt was removed and approximately 4 cubic yards of soil was excavated from the impacted areas. Two confirmation soil samples were collected by One Earth Environmental, Inc., from a depth of approximately 1-foot from the bottom of the excavated area and analyzed for TPH as diesel using modified EPA Method 8015 and BTEX using EPA Method 8020. Sample SS-1 collected from the east-central portion of the excavation contained detectable concentrations of 2,860 mg/Kg TPH as diesel, 0.332 mg/Kg benzene, 3.9 mg/Kg toluene, 0.302 mg/Kg ethylbenzene, 24.1 mg/Kg m,p-xylene, and 12.4 mg/Kg o-xylene. Sample SS-2 was collected from the west-central portion of the 1-foot depth excavation. Laboratory analysis results for SS-2 indicated a detectable concentration of 8.5 mg/Kg TPH as diesel and below the reporting limit for BTEX compounds (Table 1-3).

On October 19, 1995, Clearwater Group, Inc. of Alameda, California was contracted by the party responsible for the spill to supervise limited additional excavation and collect confirmation samples. Upon arrival at the site, Clearwater Group personnel noted that a repaired dispensing line from the diesel UST was leaking at the repair joints. The leakage produced surface staining along the length of the repaired interval. The line was constructed with one-inch diameter PVC pipe. The soil near the dispensing line leakage area was hand excavated to assess the extent of the surface staining. During the hand excavation, a vent line was discovered. The vent line was also constructed of PVC and the joints for both the dispensing line and vent line were loose, likely the result of PVC cement degradation by diesel. Based on Clearwater Group's observations, it was not known how long the entire piping system may have been leaking.

Two areas of soil contamination associated with the diesel spill were identified: (1) a linear area one foot by 30-feet long, and (2) an area adjacent to a utility box near the diesel UST (Figure 1-3). A total of approximately 2 cubic yards of soil was excavated from the two areas and four confirmation samples were collected and analyzed for TPH as diesel using modified EPA Method 8015. The samples collected from the linear trench (SS-3-1 and SS-4-1) contained concentrations of 7 mg/Kg and 25 mg/Kg TPH as diesel respectively. Sample SS-5-1 was collected near the utility box and Sample SS-6-3.5 was collected from the sidewall of the piping trench. Laboratory analysis results indicated that samples SS-5-1 and SS-6-3.5 did not contain concentrations above the laboratory reporting limit (Table 1-3). The additional excavation apparently removed the majority of diesel contaminated soil from the site. It is our understanding that the diesel UST PVC piping was decommissioned on October 19, 1995 (Clearwater Group, 1995), and that a temporary hand pump was used to remove the remaining diesel fuel as needed. The area of the shallow excavations remained open at that time and were to be backfilled in conjunction with the removal of the 6 cubic yards of stockpiled soil and 4 cubic yards of asphalt. The diesel UST was planned to be removed sometime in 1996. It is our understanding that the shallow excavations were backfilled and the excavated soil was removed from the site in early 1996. *need documentation*

1.1.2 Western Area Power Administration Former Storage Shed Area

Three storage sheds were located along the north side of the Western Area Power Administration warehouse building within the dispensing area identified by CH2M Hill in 1990 where mineral oil

contaminated soil was reportedly exposed in an area. The three sheds were demolished in the fall of 1996. Two sheds (Tracy Shed and Tracy Warehouse Back) were built with wooden flooring. The third shed (Tracy Warehouse) was built directly on soil. Oil stains observed by Western personnel within the sheds were likely the result of oil leaking from equipment or containers stored within the shed. To evaluate the presence or absence of contamination within these areas, Western personnel collected four samples in June 1996 and analyzed them for total petroleum hydrocarbon by modified EPA Method 8015 and PCBs by EPA Method 8080.

Two of the samples were collected from stain areas of the soil floor (Tracy Warehouse #1 and Tracy Warehouse #2). The other two samples were collected from small stain areas (less than a foot in diameter) of material located on the wooden floor (Tracy Shed #3 and Tracy Warehouse Back). Three of the four samples (Tracy Warehouse #2, Tracy Shed #3, and Tracy Warehouse Back) contained detectable concentrations of TPH as mineral oil ranging from 243 mg/Kg to 3,930 mg/Kg. One of the four samples (Tracy Warehouse #2) detected PCB at the detection limit of the analysis (1 mg/Kg; Table 1-3).

1.2 GEOLOGY AND HYDROGEOLOGY

The following section presents a summary of the geology and hydrogeology of the region and the local geology and hydrogeology of the TPPS facility. The regional geology and hydrogeology is summarized from reports by: CH2M Hill (1990); Chen Northern (1990); and studies by: Davis et al (1959); Hotchkiss and Balding (1971); Huey (1948); and Page (1986). The local geology and hydrogeology is summarized from studies conducted at the site by: Chen Northern (1990); Cottle Engineering (1994); Reiche (1949); USBR (1994) and Weston (1990).

1.2.1 Regional Geology and Hydrogeology

The TPPS facility is located in Alameda County near the western edge of the San Joaquin Valley, near the border of the Coast Range and Great Valley geomorphic provinces. Major surface water bodies near the TPPS facility include the Clifton Court forebay, the Delta-Mendota Canal, the California Aqueduct, and the Bethany Reservoir. The Old River is northeast of the facility and flows around the east side of the Clifton Court forebay.

The Great Valley province is a structural basin about 400 miles long and averaging about 50 miles wide. It is bounded by the Sierra Nevada on the east and the Coast Ranges on the west, and has been filled with as much as 10 vertical miles of sediments eroded from these two mountain ranges. The San Joaquin Valley constitutes the southern two-thirds of the Great Valley; the Sacramento Valley constitutes the northern one third. The San Joaquin Valley is largely drained by the San Joaquin River, which joins the Sacramento River just east of Suisun Bay and flows to the Pacific Ocean. The low-lying region near the confluence of the two rivers is known as the Sacramento-San Joaquin Delta. The TPPS facility lies on the northwest corner of the San Joaquin Valley on the edge of the Delta.

The Coast Ranges are composed of several parallel longitudinal ranges that trend northwest. The range to the west of the TPPS facility is the Diablo Range. These ranges have resulted from the folding and faulting of intra-basin sediments during Miocene to Pleistocene time. The Diablo Range is an assemblage of anticlinal folds composed largely of Cretaceous-Jurassic age

Franciscan Formation marine sedimentary rocks. Few streams flow into the valley from the Diablo Range, and drainage tends to be catastrophic and intermittent. These conditions favor the building of alluvial fans.

Geologic mapping conducted in conjunction with the USBR excavations of the intake canal, pump station and delivery canal have identified two lithologic units in the region of the facility (Reiche, 1949). The older of the two units is the Tulare Formation which outcrops near the northwest corner of the facility west of the Delta-Mendota Canal, and a younger unit consisting of Recent age sediments (alluvial fans) of which the facility is situated on.

The Pliocene to Pleistocene age Tulare Formation forms a narrow strip of valley-fill sediments along the west margin of the San Joaquin Valley. It is composed of a heterogeneous and interbedded sequence of clay, silt, sand, and gravel. The sediments are consolidated to semiconsolidated, oxidized, and exhibit different hues of brown. The source of the sediment is from the Franciscan Formation and Tertiary sedimentary rocks of the Diablo Range. Within the Tulare Formation lies the Corcoran Clay Member, a blue diatomaceous clay that is widespread in the San Joaquin Valley and serves as a confining bed for groundwater.

The Tulare Formation is overlain by a thin veneer of Recent age sediments composed of gray and tan clay, silt, sand and gravel. These alluvial fan sediments are unconsolidated, well to poorly sorted and very similar in appearance to the underlying Tulare. The source of the sediment is Jurassic to Pleistocene sediments of the Diablo Range. The Recent sediments cover the entire facility except for the pump station where the Tulare Formation outcrops.

Groundwater in the San Joaquin Valley generally occurs in two general hydrogeologic units: (1) an unconfined aquifer situated above the Corcoran Clay Member in the upper Tulare Formation and lower alluvial fan units, and (2) a confined aquifer situated below the Corcoran Clay. A well survey conducted by CH2M Hill (1990) reported the principal aquifers for shallow groundwater underlying the facility are flat lying alluvial fan deposits of sand and gravel. CH2M Hill also speculated that the Corcoran Clay Member probably extends beneath the facility.

Alluvial aquifers are complex and extremely difficult to characterize. Groundwater movement through these aquifers is noted for its heterogeneity and anisotropy. Because sediments are deposited horizontally and presence of layers of fine-grained clays and silts, permeability tends to be greater horizontally than vertically. Regionally, groundwater in the upper aquifers near the TPPS facility moves northeasterly from the Diablo Range toward the Central Valley and Delta.

The quality of groundwater above the Corcoran Clay is variable. Quality can be impacted by agricultural activity, incursions of Delta water, and poor quality water from the Coast Ranges. The shallow groundwater typically contains high concentrations of total dissolved solids, chloride, sulfide, and boron. Groundwater is generally of better quality in the units immediately below the Corcoran Clay.

1.2.2 Local Geology and Hydrogeology

Soil and groundwater investigations conducted at the site by Chen Northern (1990), Cottle Engineering (1994), USBR (1994), and Weston (1990) were used to present the local geologic

and hydrogeologic characteristics of the TPPS facility. Soil boring logs, groundwater flow calculations, and water quality assessments were reviewed for the following summary.

The TPPS facility is situated on a low gradient alluvial fan approximately one quarter mile northeast of the dissected foothills of the Diablo Range. The alluvial fan is part of several coalescing alluvial fans that occur along the east margin of the foothills. The fans are generally composed of fluvial sediments and flash flood deposits. The largest alluvial fan in the area is the Mountain House Creek fan located two miles south of the facility.

The soils encountered below the asphalt and road base aggregate at the TPPS facility include up to 1.5-feet of very dark brown clayey silt topsoil, that is underlain by 5 to 7-feet of dark to medium brown organic rich silty clay, that is underlain by 5 to 10 feet of tan clayey silty sand. The tan clayey silty sand is underlain by 1 to 2-feet of dark brown poorly graded sand, that is underlain by 2.5 to 3-feet of yellowish brown sandy clay, that is underlain by a sandy silt. These sediments are representative of the alluvial fan deposits described above.

First water table groundwater occurs in the clayey silty sand unit from depths ranging from 11 to 16 feet bgs. A groundwater contour map (Figure 6; Chen Northern, 1990) shows that groundwater in the area of the maintenance yard flows north then moves northwest towards points of discharge in the Delta-Mendota Canal below the pumping station. At the Vehicle Maintenance Garage UST area groundwater is shown to flow northward.

1.3 PROJECT OBJECTIVES

Field activities described in this TCR were conducted in two areas: one located near the former USBR Vehicle Maintenance Garage; and another north of the warehouse operated by Western that was identified as a lubricant dispensing area within a former storage shed area.

Underground storage tank removal activities were conducted by Woodward-Clyde at the Vehicle Maintenance Garage site. Soil excavation was conducted along the north side of Western's warehouse where the Former Storage Shed area was located. The UST removal activities included the removal of a fuel pump dispenser island, two fuel storage tanks, and confirmation sampling. The shallow soil excavation activities along the north side of Western's warehouse included excavation of surface soils, inspection for staining, and confirmation soil sampling.

1.4 REPORT ORGANIZATION

This Tank Closure Report presents data collected from field activities conducted by Woodward-Clyde Federal Services at the Vehicle Maintenance Garage UST site and along the north side of Western's warehouse at the Former Storage Shed area in May 1997.

This TCR is organized into the following sections:

- Section 1.0 presents the Introduction of this report, including a description of: Background of Vehicle Maintenance Garage UST site and Western Area Power Administration Former Storage Shed area; Geology and Hydrogeology; Project Objectives; and Report Organization.
- Section 2.0 presents Field Activities, including a description of: Tank Removal Activities; Overexcavation/Remedial Activities; Stockpile Sampling and Soil Disposal; Excavation

Backfilling; and Western Area Power Administration Former Storage Shed Area Soil Removal Activities.

- Section 3.0 presents Analytical Results, including a description of: Tank Removal Soil Results; Overexcavation/Remedial Activities Soil Results; Water Sampling Results; Stockpile Sampling Results; and Western Area Power Administration Former Storage Shed Area Soil Results.
- Section 4.0 presents the Summary and Conclusions which include a discussion of: Vehicle Maintenance Garage UST Site; and Western Area Power Administration Former Storage Shed Area.
- Section 5.0 presents our Recommendations for the Vehicle Maintenance Garage UST Site and Western Area Power Administration Former Storage Shed Area.
- Section 6.0 presents the Limitations of field investigation.
- Section 7.0 cites the References used for background of this investigation.

This section of the TCR describes the activities conducted by Woodward-Clyde Federal Services at the Vehicle Maintenance Garage UST site (Figure 1-3), and Western's Former Storage Shed area where mineral oil contaminated soil was reported to exist within the TPPS facility. The UST activities consisted of underground storage tank removal and overexcavation, soil and water sampling, stockpile sampling and disposal, and backfilling of all excavations. The tank removal and initial soil sampling activities were directed by ACDEH. Further excavation, confirmation soil and water sampling, and excavation backfilling were conducted under verbal approval by ACDEH. The UST removal permit was granted to Woodward-Clyde on April 9, 1997. ACDEH and Alameda County Fire Department (ACFD) were onsite during the removal of the USTs from the Vehicle Maintenance Garage site.

Excavation of mineral oil contaminated soil and associated confirmation sampling activities were conducted along the north side of Western's warehouse building in the area where three storage sheds used as a lubricant dispensing area were formerly located. This section first describes the activities conducted at the Vehicle Maintenance Garage site then describes the activities conducted at the Former Storage Shed area where mineral oil contaminated soil existed.

2.1 TANK REMOVAL ACTIVITIES

On May 13, 1997, Woodward-Clyde observed the removal of two 2,000-gallon steel USTs from the Vehicle Maintenance Garage site at the TPPS facility. The two 2,000-gallon USTs reportedly contained diesel and unleaded gasoline. The unleaded gasoline UST was reportedly installed in an excavation that previously contained a leaded gasoline tank that was removed in 1976. The tank removal and soil sampling activities were directed by ACDEH. The tank removal activities were performed by Valenzuela Engineering, Inc. (Valenzuela) of Santa Maria, California, under contract to Woodward-Clyde.

Three pump dispensers (unleaded gasoline, diesel, and leaded gasoline) and associated product piping were located just south of the unleaded gasoline UST (Figure 1-3). The fuel pump island base had been constructed in two phases. It is our understanding that the second (younger) phase was constructed at the time the unleaded gasoline UST was installed in the excavation of the former leaded gasoline UST which had been removed in 1976. The second phase construction included the placement of concrete piers at each end of the pump island to support an awning. The awning was removed in 1994.

No visible holes were observed in the two-inch diameter product piping lines that were connected to the pump dispensers. No product piping was found to be connected to the diesel UST. The piping leading to the diesel fuel dispenser was found to be made of polyvinyl chloride (PVC). The piping leading from the UST to the unleaded gasoline dispenser was made of steel. The pump dispensers were operated by suction. No cathodic protection devices were observed for the tanks or their appurtenances.

A total of approximately 100-gallons of product and water were removed from both of the fuel tanks prior to tank inerting. To help minimize the volume of waste generated during UST removals, ACDEH gave verbal approval on May 12, 1997 for eliminating triple-rinsing of the USTs. The approval was granted based on the understanding that the procedure to inert the tanks would be able to attain the required lower explosivity limit (LEL) and oxygen levels by the

inerting procedures only. The product and water rinseate was transported off-site on May 12, 1997 by Clearwater Environmental of Benicia, California to Alviso Independent Oil in Alviso, California, as oily water non-RCRA hazardous waste liquid under uniform hazardous waste manifest number 96726016.

The USTs were inerted with dry ice prior to their removal from the excavation. The tanks were measured for percent LEL and percent oxygen using a combustible gas indicator. The LEL values and percent oxygen readings were evaluated by ACDEH and Alameda County Fire Department (ACFD) personnel. Authorization for the removal of the USTs from their excavations was granted by ACDEH and ACFD. Both of the 2,000-gallon steel tanks had a diameter of 6-feet and a length of 9-feet. The USTs, piping, and fuel dispensers were transported by McCormick Demcon, Incorporated to their Santa Maria, California facility and were disposed in accordance with local, state, and federal regulations. A copy of the tank disposal certificate and tank rinseate manifest are provided in Appendix A.

Upon removal of the two USTs, the tanks were inspected for holes and condition. The USTs appeared to be in good condition with no apparent holes or corrosion. The unleaded gasoline and diesel UST bottoms were located at depths of approximately 9.5 and 9-feet below ground surface (bgs) respectively. The unleaded gasoline UST was found to be placed above a layer of pea gravel. The pea gravel exhibited a strong petroleum hydrocarbon-like odor. The pea gravel was likely placed in the excavation following the removal of the leaded gasoline UST in 1976, and prior to the installation of the unleaded gasoline UST. No groundwater was observed in the two excavations during the tank removal activities.

2.1.1 General Soil Sample Collection Procedures

Two soil samples were collected from below each of the two fuel USTs. Samples collected from below the diesel UST were analyzed for Total Petroleum Hydrocarbons (TPH) as diesel using modified EPA Method 8015; and Methyl Tertiary Butyl Ether (MTBE) and benzene, toluene, ethylbenzene, xylenes (BTEX) using EPA Method 8020. Samples collected below the gasoline UST were analyzed for TPH as gasoline using modified EPA Method 8015; MTBE and BTEX using EPA Method 8020; and lead using EPA Method 6010. Two soil samples were collected from below the product piping lines and were analyzed for TPH as gasoline, BTEX, MTBE, and lead. The tank removal activities soil samples were analyzed on a 24-hour turnaround time basis by Intertek Testing Services (ITS) Environmental Laboratory in San Jose, California.

The general soil sampling procedures were conducted in the following manner. Soil samples were collected by Woodward-Clyde at the direction of Ms. Eva Chu of ACDEH after the tank removal activities. A backhoe was used to collect the soil samples from the bottom of the fuel USTs excavation below the former location of each tank end. Soil samples were collected by scraping away 5 to 10-inches in the area of the backhoe teeth, at a chosen "most representative" sample point. Samples were collected by pushing a clean brass liner into the sample point area until full, then placing a Teflon sheeting and plastic endcap over each end, labeling it with sample number, time and date, then placing in a resealable plastic bag and, placed on ice in an ice chest until the samples could be transported under chain of custody procedures to ITS.

Soil sample BRTTD-1 was collected beneath the east end of the former location of the diesel UST at a depth of 10.5 feet bgs. Sample locations are shown in Figure 2-1. Soil sample BRTTD-2 was collected from beneath the west end of the former location of the diesel UST at a depth of 10 feet bgs. Soil sample BRTTG-1 was collected from beneath the south end of the former location of the gasoline UST at a depth of 10.5 feet bgs. Soil sample BRTTG-2 was collected from beneath the north end of the former location of gasoline UST at a depth of 11 feet bgs.

Soil samples BRTP-1 and BRTP-2 were collected from beneath the former fuel product piping of the gasoline and diesel pump dispensers at depths of 3.5 and 3 feet bgs respectively. Sample BRTP-1 was collected from the north end of the excavated trench, and BRTP-2 was collected from the south end below the former pump island (Figure 2-1). Approximately 120 cubic yards of soil was removed from the two excavations during the tank removal activities and stockpiled onsite for later handling.

Based on the analytical results of sample BRTTG-1 and BRTTD-2 (Table 3-1) the USBR technical manager decided to conduct remedial activities at the former UST area using excavation methods. The two excavations were separated by an area approximately 15-feet wide (Figure 2-1 and Photograph 5; Appendix B). Lateral limitations existed for both excavations. The north wall of the diesel UST excavation contained an underground concrete conduit which houses four high voltage power lines from the substation (Photograph 3; Appendix B). The east wall of the gasoline UST excavation was approximately 10 feet from the west-facing side of the Vehicle Maintenance Garage building. To the west of both excavations is an underground utility fire protection water line that was reportedly at a distance of approximately 35 feet from the west-facing side of the garage building. On May 15, 1997 activities to remove the contaminated soil from the two excavations was initiated by Valenzuela.

2.2 OVEREXCAVATION/REMEDIAL ACTIVITIES

On May 15, 16, and 17, 1997, Woodward-Clyde observed the removal of contaminated soil within the gasoline and diesel UST excavations. The overexcavation activities were conducted using a track-mounted backhoe provided by Valenzuela. A total of 620 tons of petroleum hydrocarbon contaminated soil had been removed at the completion of the remedial activities. The contaminated soil was transported to TPS Technologies in Richmond, California by Manley and Sons Trucking, Inc. of Sacramento.

During overexcavation activities of the gasoline UST on May 15, 1997, the fire protection water line was found to be 4-feet closer to the garage building and coincidentally broken, filling the gasoline UST excavation with water from the pipe (Photograph 8; Appendix B). The water was sampled on May 15, 1997 to aid in the management of handling the water. This water sample was analyzed on a 24-hour turnaround time basis by Chromalab, Incorporated in Pleasanton, California. On the morning of May 16, 1997 the amount of water within the gasoline UST excavation had settled leaving approximately 1,500-gallons remaining for handling (Photograph 9; Appendix B). The water from the ruptured fire protection line was pumped into a vacuum truck supplied by DeltaTech of Benicia, California.

Soil excavation activities continued following the removal of the water from the gasoline UST excavation. During remedial activities of the diesel UST, piping and trash was observed

extruding from the south wall of the diesel UST excavation which consisted of loose backfill material (Photograph 13). Residual product was found in the discovered piping. Discolored soil exhibiting petroleum hydrocarbon-like odors was observed surrounding the piping (Photographs 12 and 13; Appendix B). The polygonal shaped concrete pad south of the diesel UST excavation was removed on May 16, 1997. The discolored petroleum hydrocarbon contaminated soil surrounding the piping was traced in the direction toward the north-facing side of the Vehicle Maintenance Garage building. During removal of petroleum hydrocarbon contaminated soil that was found surrounding the piping where the former leaded gasoline UST (removed in 1994) excavation was located, discolored soil was observed to extend from a depth of 7 feet to 14.5 feet bgs below the north and west facing sides of the garage building (Photographs 16, 17, and 18; Appendix B).

The unleaded gasoline and diesel UST excavations were enlarged into one excavation on May 16, 1997. Overexcavation activities were terminated at the southern extent of the diesel UST portion (believed to be the former leaded gasoline UST backfill) of the excavation approximately 2.5 feet from the north-facing side of the garage building, and at the eastern extent of the unleaded gasoline UST portion of the excavation approximately 4.5 feet from the west-facing side of the garage building (Figure 2-2). The excavation activities were terminated in those directions to prevent undermining of the garage building foundation and possible collapse of the structure.

Overexcavation activities were terminated on the north by the presence of the underground high voltage utility conduit and to the west by the underground fire protection water utility line. The southernmost extent of the excavation activities was terminated approximately 25-feet south of the northwest corner of the garage building where the former fuel pump dispenser island was located (Figure 2-2). The vertical extent of the petroleum hydrocarbon contaminated soil was observed to be approximately 14.5 feet bgs. A total of 620 tons of petroleum hydrocarbon contaminated soil was removed during overexcavation activities. Groundwater was encountered in the enlarged excavation at a depth of approximately 11 feet bgs (Photograph 19; Appendix B) within a brown clayey silty sand.

2.2.1 Soil Sample Collection

Six soil samples were collected from the enlarged excavation and analyzed for TPH as diesel and TPH as gasoline using modified EPA Method 8015; MTBE and BTEX using EPA Method 8020; and total lead using EPA Method 6010. In addition to the petroleum hydrocarbon, BTEX, MTBE, and lead analysis, sample BRTTG-4 collected from the discolored soil that remains in place below the northwest corner of the Vehicle Maintenance Garage building, was also analyzed for polynuclear aromatic hydrocarbons (PAHs) using EPA Method 8270. The six soil samples collected during overexcavation activities were analyzed by ITS Environmental Laboratory in Richardson, Texas.

Soil samples BRTTD-3, BRTTD-4, and BRTTD-5 were collected from the diesel UST portion of the enlarged excavation at depths of 11, 10.5, and 10.5 feet bgs respectively. Sample locations are shown in Figure 2-2. Sample BRTTD-3 was collected from the east end of the diesel UST excavation, and BRTTD-4 was collected from the west end. Sample BRTTD-5 was collected from the north wall of the diesel excavation approximately 6.5-feet below the underground high

voltage line concrete conduit and approximately 1-foot above static groundwater (Photograph 19).

Soil samples BRTTG-3, BRTTG-4, and BRTTG-5 were collected from the unleaded gasoline UST portion of the enlarged excavation at depths of 10, 9.5, and 13 feet respectively. Sample BRTTG-3 was collected from the western extent of the enlarged excavation and exhibited a light greenish-gray discoloration. Sample BRTTG-4 was collected from the eastern extent of the enlarged excavation within the center of the blue-green discolored soil which remains in place north and west of the northwest corner of the garage building. Sample BRTTG-5 was collected at a depth of 13 feet bgs (before groundwater was observed seeping into the excavation) from the southern extent of the overexcavation activities below the former pump dispenser island (Figure 2-2).

2.2.2 Water Sample Collection

Two water samples were collected during the overexcavation activities. Both of the water samples were collected by lowering a new disposable Teflon bailer into the ponded water and retrieving it, then decanting the sample into the laboratory provided containers. One water sample (BRT-W) was collected from the gasoline UST excavation following the fire protection water pipe rupture. Water sample BRT-W was collected from the unleaded gasoline UST excavation on May 15, 1997 and was analyzed for TPH as gasoline and TPH as diesel using modified EPA Method 8015; BTEX and MTBE using EPA Method 8020; and total lead using EPA Method 6010A by Chromalab, Inc. of Pleasanton, California. Sample BRT-W was collected primarily for waste management purposes. The enlargement of the two excavations into one excavation was not commenced until the water from the pipe rupture was removed from the unleaded gasoline UST excavation on May 16, 1997 by DeltaTech of Benicia, California (Photograph 11; Appendix B). Approximately 1,500-gallons of water was transported to Pacific Custom Materials, Inc., in Port Costa, California under non-hazardous materials hauling manifest ticket number 15057-1 (Appendix A).

Groundwater was encountered in the enlarged excavation at a depth of approximately 11-feet bgs. One groundwater sample (BRT-W2) was collected on May 17, 1997 and analyzed for TPH as diesel and TPH as gasoline using modified EPA Method 8015; MTBE and BTEX using EPA Method 8020; and total lead using EPA Method 6010. Sample BRT-W2 was collected from the enlarged excavation following static water level equilibration (Photograph 19), and analyzed by ITS of Richardson, Texas. Groundwater sample BRT-W2 was collected in accordance with the ACDEH approved UST Closure Plan/Permit dated April 4, 1997.

2.3 STOCKPILE SAMPLING AND SOIL DISPOSAL

A total of approximately 120 cubic yards of soil was removed during the initial UST removal activities. Three separate stockpiles were formed: one from the unleaded gasoline UST excavation; one from the diesel UST excavation; and one of soil from areas not expected to contain petroleum hydrocarbons. Two stockpile samples were collected on May 13, 1997 for waste characterization purposes. Soil sample DSTP-1 was collected from the approximately 30 cubic yards of petroleum hydrocarbon contaminated soil removed from the diesel UST

excavation. Sample GSTP-1 was collected from the approximately 60 cubic yards of petroleum hydrocarbon contaminated soil removed from the unleaded gasoline UST excavation. Approximately 30 cubic yards of soil not expected to contain petroleum hydrocarbons was separated from the two petroleum hydrocarbon contaminated soil stockpiles. This stockpile was used for excavation backfilling purposes described in Section 2.4.

Approximately 90 cubic yards of petroleum hydrocarbon contaminated soil initially removed from the excavations was part of the 620 tons transported to TPS Technologies in Richmond, California by Manley and Sons Trucking, Inc. of Sacramento, California (Hazardous Waste Hauler Registration number 2843) under TPS Technologies Soil Recycling Non-Hazardous Soils Manifest Number 00136, loads 1 through 30. Copies of the soil transporting TPS Manifests are included in Appendix A. The contaminated soil was thermally treated and recycled by TPS Technologies.

2.4 EXCAVATION BACKFILLING

The enlarged excavation was backfilled on May 19, 1997 with imported pea gravel rock and 30 cubic yards of soil removed from the excavation at areas not expected to contain petroleum hydrocarbons. Verbal approval to backfill the excavation was granted by ACDEH on May 13, 1997. The imported rock was transported from Teichert Aggregates in Tracy, California to the site by MacDonald and Son Trucking, Inc. of Tracy, California and D. H. Winn Trucking, Inc. of Lockeford, California. Copies of several imported rock weighmaster certificates of clean fill brought to the site are provided in Appendix A. The enlarged excavation was backfilled from the bottom of the excavation to approximately 3.5 feet bgs with the imported pea gravel rock. The remainder of the backfill material was soil that was removed from the excavation (Photograph 22). The soil used for backfilling was brought to a level of approximately 6-inches bgs.

The Vehicle Maintenance Garage site was finished to grade with asphaltic concrete. A four-inch aggregate base was placed over the backfilled excavation and used to level out the area to be paved with a 2-inch asphaltic concrete finish (Photographs 23 and 24). An area approximately 45-feet wide by 60-feet long was finished to surface with asphaltic concrete (Photograph 25).

2.5 WESTERN AREA POWER ADMINISTRATION FORMER STORAGE SHED AREA SOIL REMOVAL ACTIVITIES

On May 13, 1997, Woodward-Clyde supervised surface soil removal on the north side of the Western Area Power Administration warehouse building where mineral oil contaminated soil was reportedly exposed in an area where three former storage sheds were located. The area had been graded prior to May 13, 1997 and stockpiled soil was observed west of the warehouse building. A 5 cubic yard area approximately 6-feet in width by 20-feet in length was excavated to a depth of approximately 1-foot bgs. The excavated area was located 60 feet east of the northwest corner of the warehouse building where two of the former Tracy sheds were located adjacent to (west of) an asphalt covered area (Figure 2-3, Photograph 26). ACDEH was informed of the location of the samples and the graded condition of the area prior to surface soil removal activities (Photograph 27; Appendix B). The sample locations and backfilling of the excavated area were approved by ACDEH on May 13, 1997.

2.5.1 Soil Sample Collection

Three soil samples were collected from the excavated area and analyzed for TPH as motor oil using modified EPA Method 8015. The samples were analyzed by ITS of San Jose, California. The sample locations are shown in Figure 2-3. Soil samples BRTMO-1, BRTMO-2, and BRTMO-3 were collected from depths of 1, 1.5, and 1.5 feet bgs respectively.

Samples BRTMO-1, BRTMO-2, and BRTMO-3 were collected from the excavated area approximately 55-feet east of the northwest corner of the warehouse and six feet, 12-feet, and 18-feet north (respectively) of the north-facing side of the warehouse building (Figure 2-3 and Photograph 28; Appendix B).

2.5.2 Backfilling of Excavated Area

Following the sample collection activities the excavated area was backfilled to its original level by replacing the removed soil. The backfilling of the excavation was granted by ACDEH on May 13, 1997. The area was restored to its original state following backfilling.

A total of fourteen (14) soil samples and two (2) water samples were collected during the field activities at the Vehicle Maintenance Garage UST site. Three (3) soil samples were collected during the soil removal activities at Western's Former Storage Shed area. The soil and water samples collected from the Vehicle Maintenance Garage site were analyzed for total petroleum hydrocarbons (TPH) as gasoline and TPH as diesel using modified EPA Method 8015; benzene, toluene, ethylbenzene, xylenes (BTEX) and Methyl Tertiary Butyl Ether (MTBE) using EPA Method 8020; and total lead using EPA Method 6010A (for samples where gasoline was suspected). One soil sample (BRTTG-4) was also analyzed for polynuclear aromatic hydrocarbons (PAHs) using EPA Method 8270. Table 3-1 summarizes the results of all samples collected from the Vehicle Maintenance Garage UST site during this investigation. The three soil samples collected following the soil removal activities at the Former Storage Shed area along the north side of Western Area Power Administration warehouse building were analyzed for TPH as motor oil using modified EPA Method 8015. Copies of the Analytical Laboratory Reports are provided in Appendix C.

Six soil samples were initially collected during the tank removal activities at the Vehicle Maintenance Garage site. Four of the six were collected from the two tank excavations and the remaining two were collected from the fuel piping trench and below the former pump dispenser island. A total of four soil samples were collected from the two stockpiles of contaminated soil (1-unleaded gasoline and 1-diesel). Prior to analysis, the analytical laboratory composited the two sets of two sample liners collected from the respective stockpiles into two separate samples (one for the unleaded gasoline stockpile and one for the diesel stockpile). The two stockpile samples were analyzed for waste characterization purposes.

Six additional soil samples were collected from the enlarged excavation following remedial activities at the Vehicle Maintenance Garage UST site. Two water samples were collected from the excavations at the garage site. One water sample was collected from water within the unleaded gasoline UST excavation following a pipe rupture. This sample was collected for waste management purposes. One groundwater sample was collected from seepage into the enlarged excavation prior to backfilling. This water sample was collected for site characterization purposes.

3.1 TANK REMOVAL SOIL RESULTS

Laboratory analysis of sample BRTTD-1 collected from the diesel UST excavation showed concentrations of BTEX, MTBE and TPH as gasoline were not detected above the analytical laboratory reporting limit. Detectable concentration of 48 mg/Kg (parts per million-ppm) TPH as diesel was reported in sample BRTTD-1. Laboratory analysis of sample BRTTD-2 also collected from the diesel UST excavation showed detectable concentrations of 700 mg/Kg TPH as diesel, 390 mg/Kg TPH as gasoline, 0.65 mg/Kg MTBE, 0.71 mg/Kg benzene, 1.3 mg/Kg toluene, 2.5 mg/Kg ethylbenzene, and 5.1 mg/Kg xylenes (Table 3-1).

Laboratory analysis of sample BRTTG-1 collected from the unleaded gasoline UST excavation showed concentrations of MTBE was not detected above the analytical laboratory reporting limit. Detectable concentrations of 1900 mg/Kg TPH as gasoline, 20 mg/Kg benzene, 31 mg/Kg toluene,

23 mg/Kg ethylbenzene, 113 mg/Kg xylenes, and 7.1 mg/Kg total lead were reported in sample BRTTG-1.

Laboratory analysis of sample BRTTG-2 also collected from the unleaded gasoline UST excavation showed concentrations of TPH as gasoline, MTBE, and benzene were not detected above the analytical laboratory reporting limit. Detectable concentrations of 0.09 mg/Kg toluene, 0.25 mg/Kg ethylbenzene, 0.23 mg/Kg xylenes, and 8.3 mg/Kg total lead were reported in sample BRTTG-2 (Table 3-1).

Laboratory analysis of sample BRTP-1 collected from the fuel piping trench showed concentrations of TPH as gasoline, MTBE, and BTEX were not detected above the analytical laboratory reporting limit. A detectable concentration of 8.8 mg/Kg total lead was reported in sample BRTP-1. Detectable concentrations of 0.1 mg/Kg TPH as gasoline, 0.46 mg/Kg benzene, 0.83 mg/Kg toluene, 1.5 mg/Kg ethylbenzene, 0.23 mg/Kg xylenes, 0.15 mg/Kg MTBE, and 8.5 mg/Kg total lead were reported for sample BRTP-2 collected from below the former fuel pump dispenser portion of the piping trench.

3.2 OVEREXCAVATION/REMEDIAL ACTIVITIES SOIL RESULTS

Samples BRTTD-3 and BRTTD-4 collected from the east and west ends of the enlarged diesel UST portion of the excavation (respectively) contained non-detectable concentrations of TPH as diesel, TPH as gasoline, and BTEX. Sample BRTTD-3 contained detectable concentration of 6.33 mg/Kg total lead and non-detectable concentration of MTBE. Sample BRTTD-4 contained detectable concentrations of 7.46 mg/Kg total lead and 0.405 mg/Kg MTBE (Table 3-1). Sample BRTTD-5 collected below the utility conduit along the north wall of the enlarged diesel UST portion of the excavation contained detectable concentrations of 18.6 mg/Kg TPH as diesel, 1.05 mg/Kg TPH as gasoline, and 6.9 mg/Kg total lead. Laboratory analysis of sample BRTTD-5 showed concentrations of BTEX and MTBE were not detected above the analytical laboratory reporting limit.

Sample BRTTG-3 collected from the west wall of the enlarged unleaded gasoline UST portion of the excavation, contained detectable concentrations of 9.4 mg/Kg TPH as diesel and 7.2 mg/Kg total lead. Laboratory analysis of sample BRTTG-3 showed concentrations of TPH as gasoline, MTBE, and BTEX were not detected above the analytical laboratory reporting limit (Table 3-1). Soil sample BRTTG-4 collected from the center of the blue-green discolored soil which remains in place below the northwest corner of the Vehicle Maintenance Garage building contained detectable concentrations of 3300 mg/Kg TPH as diesel, 150 mg/Kg TPH as gasoline, 0.119 mg/Kg benzene, 0.695 mg/Kg toluene, 1.95 mg/Kg ethylbenzene, 17.1 mg/Kg xylenes, and 7.61 mg/Kg total lead. Laboratory analysis of sample BRTTG-4 showed concentrations of toluene, MTBE, and PAHs were not detected above the analytical laboratory reporting limit (Table 3-1 and Appendix C).

Soil sample BRTTG-5 collected at a depth of 13 feet bgs from the floor-wall interface (before groundwater equilibrated to its static level of 11 feet bgs in the enlarged excavation) contained a detectable concentration of 6 mg/Kg total lead. Laboratory analysis of sample BRTTG-5 showed concentrations of TPH as diesel, TPH as gasoline, MTBE, and BTEX were not detected above the analytical laboratory reporting limit (Table 3-1).

3.3 WATER SAMPLING RESULTS

Laboratory analysis of sample BRT-W collected following the pipe rupture showed concentrations of TPH as diesel, benzene, MTBE, and total lead were not detected above the analytical laboratory reporting limit. Detectable concentrations of 0.11 mg/L TPH as gasoline, 0.0011 mg/L toluene, 0.0015 mg/L ethylbenzene, and 0.017 mg/L xylenes were reported in sample BRT-W.

Groundwater sample BRT-W2 collected from seepage into the enlarged excavation prior to backfilling contained detectable concentrations of 3.32 mg/L TPH as diesel, 7.04 mg/L TPH as gasoline, 0.45 mg/L benzene, 0.274 mg/L toluene, 0.442 mg/L ethylbenzene, 2.27 mg/L xylenes, and 1.05 mg/L MTBE. Laboratory analysis of sample BRT-W2 showed concentration of total lead was not detected above the analytical laboratory reporting limit (Table 3-1).

3.4 STOCKPILE SAMPLING RESULTS

Prior to analysis, samples DSTP-1 and GSTP-1 were each composited by the laboratory from two sample liners collected from each stockpile. Laboratory analysis of sample DSTP-1 showed concentrations of benzene were not detected above the analytical laboratory reporting limit. Detectable concentrations of 680 mg/Kg TPH as diesel, 12 mg/Kg TPH as gasoline, 9.2 mg/Kg toluene, 6.7 mg/Kg ethylbenzene, 15 mg/Kg xylenes, and 16 mg/Kg MTBE were reported in sample DSTP-1. Sample GSTP-1 contained detectable concentration of 9.4 mg/Kg total lead. Laboratory analysis of sample GSTP-1 showed concentrations of TPH as gasoline, MTBE, and BTEX were not detected above the analytical laboratory reporting limit (Table 3-1).

3.5 WESTERN AREA POWER ADMINISTRATION FORMER STORAGE SHED AREA SOIL RESULTS

Laboratory analysis of sample BRTMO-1 collected from the south end of the mineral oil soil removal excavation showed no TPH as motor oil at or above the laboratory reporting limit (<10 mg/Kg). Laboratory analysis of samples BRTMO-2 and BRTMO-3 collected from the center and northern end of the mineral oil soil removal excavation respectively, showed no TPH as motor oil at or above the laboratory reporting limit (Appendix C).

This section of the TCR presents a summary of field observations and analytical results of samples collected during activities described in the previous sections at the Vehicle Maintenance Garage UST site and Western Area Power Administration Former Storage Shed area.

4.1 VEHICLE MAINTENANCE GARAGE

Activities completed and analytical results from samples collected at the Vehicle Maintenance Garage site during this investigation include:

- Two 2000-gallon steel USTs were removed from the site,
- Six soil samples were collected from the UST excavation and analyzed for TPH as diesel, TPH as gasoline, MTBE and BTEX, and total lead,
- Results showed detectable concentrations of TPH as diesel, benzene, and TPH as gasoline existed in soil near the former USTs,
- Overexcavation and removal of 620 tons of petroleum hydrocarbon contaminated soil from the area near the former USTs was conducted as remedial activities,
- Six soil and two water samples were collected from an enlarged excavation and analyzed for TPH as diesel, TPH as gasoline, MTBE and BTEX, and total lead. One soil sample was also analyzed for polynuclear aromatic hydrocarbons (PAHs),
- Results showed detectable concentrations of TPH as diesel, TPH as gasoline, benzene, ethylbenzene, and xylenes exist in soil which remains in place below the northwest corner of the garage building, and detectable concentrations of TPH as diesel, TPH as gasoline, BTEX and MTBE are present in groundwater collected from seepage into the enlarged excavation,
- Results also showed that the soil samples collected north, south, and west of the former USTs did not detect TPH as diesel, TPH as gasoline, and BTEX above the reporting limit of the analyses. The vertical extent of soil contamination was observed to be to a depth of approximately 14.5 feet bgs,
- The enlarged excavation was backfilled with pea gravel rock and finished to surface grade with asphaltic concrete,
- A total of 620 tons of petroleum hydrocarbon contaminated soil was transported offsite and treated at a thermal recycling facility, and approximately 20 cubic yards of petroleum hydrocarbon contaminated soil remains in place below the northwest corner of the Vehicle Maintenance Garage building.

Based on the activities completed, analytical results, and observations of the physical distribution of the soil contamination discovered during the field activities, it appears that the source of the petroleum hydrocarbon contamination was predominantly from abandoned piping (assumed to be from the former diesel UST) located within the backfill of the former leaded gasoline UST (See Photographs 12 through 16; Appendix B). This former leaded gasoline UST was removed in 1994. Based on analytical laboratory results of soil samples collected during this investigation from the north, west, and south extents of the enlarged excavation, petroleum hydrocarbon contamination in soil has been successfully removed in those directions. Based on our

observation of the discolored soil which remains in place and our observations of the overall physical distribution of the discolored soil removed during overexcavation activities, we estimate that the petroleum hydrocarbon contamination in soil remaining in place extends to the east approximately 7-feet and to the south approximately 10-feet from the southeastern edge corner of the former excavation (Figure 2-2 and Photographs 17 and 18; Appendix B). This area of petroleum hydrocarbon contaminated soil remaining in place exists from depths of approximately 7 to 14.5 feet bgs along the east extent of the former enlarged excavation north, west, and below the northwest corner of the Vehicle Maintenance Garage building (Figure 2-2). Using the above values, the amount of petroleum hydrocarbon contaminated soil that remains in place below the Vehicle Maintenance Garage building is approximately 20 cubic yards (or 30 tons). Laboratory results of one groundwater sample collected from seepage into the expanded excavation also indicate that petroleum hydrocarbons are present in groundwater in the area of the former USTs.

4.2 WESTERN AREA POWER ADMINISTRATION FORMER STORAGE SHED AREA

Activities completed and analytical results from samples collected during this investigation where a Former Storage Shed area was located along the north side of Western Area Power Administration warehouse building include:

- Excavation of approximately 5 cubic yards of soil in area of former mineral oil spills,
- Three soil samples were collected from the south, middle and north portions of the excavated area, and
- Analytical results of samples collected from native soil below former mineral oil spill area show no detectable concentrations of TPH as motor oil exists in that area.

Field observations and laboratory results indicate that mineral oil contaminated soil was successfully removed from the area north of the Western Area Power Administration warehouse building where the Former Storage Shed area was located.

The following section is a compilation of previous investigations results (presented in Sections 1.1 and 1.1.1) and field observations and laboratory analysis of soil and groundwater samples collected by Woodward-Clyde during this investigation. The information from previous investigations used to assess the conditions at and surrounding the TPPS facility is provided in Appendix D. Only the selected information from the previous investigations used to develop our recommendations are provided. Woodward-Clyde presents the following evaluations and recommendations for the Vehicle Maintenance Garage site and Western Area Power Administration Former Storage Shed area.

5.1 VEHICLE MAINTENANCE GARAGE

Based upon previous work by CH2M Hill, Chen Northern, Weston, USBR and soil remediation and sampling and analysis activities conducted during this investigation, Woodward-Clyde believes the amount of petroleum hydrocarbon contaminated soil remaining below the northwest corner of the garage building and the magnitude of concentrations of petroleum hydrocarbons existing in groundwater near the former USTs, would qualify the Vehicle Maintenance Garage site as a Low Risk Fuel Site (State of California, 1996). Using results from previous investigations and results presented in this TCR, the following sections present our data to support our request for placing the Vehicle Maintenance Garage UST site under the low risk groundwater case category.

5.1.1 Evaluation of Soil Conditions at the Vehicle Maintenance Garage Site

Following UST removal activities, petroleum hydrocarbon contamination in soil was observed beneath the USTs. Overexcavation of this soil resulted in the removal of a total of 620 tons of petroleum hydrocarbon contaminated soil from the Vehicle Maintenance Garage site. During the remedial activities no free product was observed in soil removed from near the former USTs. The lateral extent of petroleum hydrocarbon contaminated soil north, south, and west of the former USTs was successfully removed during overexcavation/remedial activities. The location of discolored petroleum hydrocarbon contaminated soil observed surrounding a pipe that was discovered during overexcavation activities was assumed to be associated with either the former leaded gasoline UST that was removed in 1994, or the diesel UST removed during this investigation. During this investigation no fuel product piping was observed to be connected to the diesel UST (Section 2.1 and Photograph 3; Appendix B). However, in 1995, Clearwater Group reported that the steel product pipes from the diesel UST were decommissioned and replaced with PVC piping sometime before October 1995 (Section 1.1.1). The piping discovered during this investigation then, could most likely represent the decommissioned diesel UST product lines that were left in place and subsequently covered over.

We estimate that there is approximately 20 cubic yards of petroleum hydrocarbon contaminated soil remaining in place below the northwest corner of the garage building (Figure 2-2). This approximation is based on the eastern and southern extent of discolored soil observed within the north-facing and west-facing former excavation edges near the northwest corner of the garage building. We also estimate that the petroleum hydrocarbon contaminated soil remaining in place extends laterally from and below the northwest corner of the Vehicle Maintenance Garage building

approximately 5-feet to the southeast (Figure 2-2). Since sample BRTTG-4 was collected near the center of the stained area, we have assumed that this sample represents the highest concentrations of contaminants that remain in place. No toluene, MTBE, or PAHs are present above laboratory detection limits in this sample. Detectable concentrations of TPH as diesel, TPH as gasoline, benzene, ethylbenzene, and xylene (Table 3-1) were reported for this sample. Using the average concentrations of contaminants detected in sample BRTTG-4 and the estimated amount of contaminated soil remaining at the site is 30 tons, we have calculated that approximately 100 pounds of TPH as diesel, 5 pounds of TPH as gasoline, 0.004 pounds of benzene, 0.06 pounds of ethylbenzene, and 0.5 pounds of total xylenes remain in silty clay soil below the northwest corner of the Vehicle Maintenance Garage building.

The vertical extent of discolored soil that was removed was observed to extend below the water table to a depth of approximately 14.5 feet bgs. First occurrence of groundwater near the former USTs was at a depth of approximately 11 feet bgs in a clayey silty sand unit that underlies the silty clay unit. The next section evaluates the groundwater conditions at the Vehicle Maintenance Garage UST site using information gathered by Chen Northern (1990), USBR (1994, 1995), and Woodward-Clyde (this investigation).

5.1.2 Evaluation of Groundwater Conditions at the Vehicle Maintenance Garage Site

As part of a preliminary site assessment conducted by Chen Northern, six groundwater monitoring wells were installed at the TPPS facility in 1990. Three of those wells were installed in the maintenance yard area of the facility. Using the data gathered by Chen Northern, the groundwater flow direction at the Vehicle Maintenance Garage site is northward (Chen Northern, 1990, Figure 6; Appendix D). Following the removal of the leaded gasoline and waste oil USTs in 1994 by Cottle Engineering, ACDEH requested that a soil and groundwater investigation be completed at the Vehicle Maintenance Garage site. In response to that request, USBR installed one monitoring well (MW-7) approximately 45-feet north-northwest of the northwest corner of the garage building. The location was approved by ACDEH as a monitoring point downgradient of the USTs. USBR monitored MW-7 by collecting groundwater samples for chemical analysis for a period of one year (Table 1-2 and USBR 1995; Appendix D).

Petroleum hydrocarbons were not detected at or above the laboratory detection limits in groundwater samples collected from MW-7 during the four quarters (June, September, December 1994, and March 1995). Review of well construction specifications for MW-7 indicate that the well screen extends from depths of approximately 7.3 to 19-feet bgs (USBR 1994; Appendix D). MW-7 is screened across the zone that includes the clayey silty sand that underlies the petroleum hydrocarbon affected silty clay below the northwest corner of the garage building. MW-7 was placed just beyond the underground utility concrete conduit that houses the 4 high voltage electrical power lines, hence, it is the most optimum downgradient monitoring point to evaluate groundwater conditions near the former USTs at the Vehicle Maintenance Garage site.

The location of MW-7 is less than 20-feet northward from the northernmost extent of excavation reached during remedial activities and approximately 25-feet from the location of groundwater sample BRT-W2 collected from the excavation pit by Woodward-Clyde. Detectable concentrations of TPH as diesel, TPH as gasoline, BTEX and MTBE were reported for sample BRT-W2 (Table 3-1). Using the data collected from MW-7 by USBR in 1994 and 1995, the

petroleum hydrocarbon affected groundwater assessed during this investigation does not extend downgradient from the former USTs more than 20-feet. The downgradient extent of petroleum hydrocarbons in groundwater then is less than 20-feet from the former USTs as shown by the monitoring of MW-7 (Table 1-2 and USBR 1995; Appendix D).

According to studies conducted by Chen Northern and USBR the subsurface stratigraphy in the area of the TPPS facility consists of alluvial fan deposits (which MW-7 is constructed in) that are underlain by an impervious blue-clay body called the Corcoran Clay Member of the Tulare Formation. The vertical migration of petroleum hydrocarbon contamination in groundwater in the area of the former USTs would be impeded by the Corcoran Clay Member reportedly at a depth of approximately 35 to 40-feet bgs in the area below the TPPS facility.

5.1.3 Summary of Regional Hydrogeology and Groundwater Quality Surrounding the TPPS Facility

A well survey conducted by CH2M Hill in 1992 as part of a Preliminary Endangerment Assessment Report for the USBR Landfill sites, indicated that the majority of private wells surrounding the facility utilize groundwater from below the Corcoran Clay. A review conducted by Woodward-Clyde of Department of Water Resources, Water Well Drillers logs presented in CH2M Hill's preliminary assessment report (CH2M Hill, 1990) indicate that the distinctive blue colored Corcoran Clay Member can be found at depths as shallow as 25 feet bgs in private wells installed on properties within 3 miles of the TPPS facility. The quality of the water from wells completed in the alluvial fan deposits above the Corcoran Clay are reportedly high in total dissolved solids (TDS) and salts (chloride, boron, and sulfides). No water supply wells were found to be located within 1 mile downgradient of the vehicle maintenance garage UST site (reproduced as Figure 5; Cottle Engineering, 1994, Appendix D). There are no known private or public water supply wells within 1 mile that utilize the poor quality water that is documented to be within the alluvial sediments found at shallow depths surrounding the TPPS facility.

5.1.4 Recommendation for Vehicle Maintenance Garage Site

Woodward-Clyde used the following conclusions to develop our recommendation for the Vehicle Maintenance Garage site:

- The petroleum hydrocarbon source has been removed to the extent possible due to existing site conditions,
- The vertical and lateral extents of petroleum hydrocarbons in soil has been characterized to the extent possible due to existing site conditions,
- The downgradient extent of petroleum hydrocarbons in groundwater has been assessed using data from one groundwater monitoring well (MW-7),
- The dissolved petroleum hydrocarbon in groundwater has not migrated spatially more than 20-feet from the suspected source area and contaminant concentrations have not increased over time as shown by monitoring of MW-7,

- No contaminant migration to a deep aquifer is anticipated due to the spatially widespread occurrence of a regional impervious layer (Corcoran Clay member of Tulare Formation),
- No change in use of the site is planned for the future (currently industrial),
- The first occurring groundwater at the TPPS facility is not planned to be used in the future. In addition, natural attenuation by passive biodegradation will occur, which will eventually complete the cleanup of the site, and
- Sensitive receptors (private wells surrounding the facility) have been identified and are not projected to be adversely impacted.

The following site characteristics classify the Vehicle Maintenance Garage site as a Low Risk Groundwater case:

- Depth to groundwater at the garage site is less than 50 feet (11 feet bgs),
- The site is paved which would impede any percolation of surface water through the vadose zone in the area of the northwest corner of the Vehicle Maintenance Garage building,
- No water supply wells screened in the shallow water zone are located within 250-feet of the garage site,
- No surface water or other receptors are likely to be impacted by the petroleum hydrocarbons that remain in soil below the northwest corner of the Vehicle Maintenance Garage building,
- The petroleum hydrocarbons in groundwater do not appear to be migrating, and
- Latest monitoring results show that the petroleum hydrocarbons affecting the groundwater at the Vehicle Maintenance Garage site are stable and degrading naturally.

Based on the conclusions and site characteristics presented above, Woodward-Clyde recommends no further action at this site, and on behalf of USBR, we request ACDEH written approval of closure for the Vehicle Maintenance Garage UST site at the TPPS facility in Tracy, California.

5.2 WESTERN AREA POWER ADMINISTRATION FORMER STORAGE SHED AREA

Based on historical information, previous investigations, and Woodward-Clyde's field activities along the north side of Western Area Power Administration warehouse building where three former storage sheds were located, we recommend no further action be conducted and on behalf of USBR request ACDEH written approval of closure for the Former Storage Shed area at the TPPS facility in Tracy, California.

This report describes our interpretations of the data collected during our field investigation on May 12 through 17, 1997 and results of previous investigations performed by other parties. The investigation was limited to evaluating the extent of subsurface petroleum hydrocarbon contamination emanating from the area of former underground storage tanks at the Vehicle Maintenance Garage, and mineral oil soil contamination along the north side of Western's warehouse building where a Former Storage Shed area was located at the Tracy Pumping Plant and Substation facility, 16650 Kelso Road, Tracy, California. Our interpretation and conclusions concerning these data are limited by the degree to which the samples collected are representative of actual site conditions and the reliability of previous workers results.

Soil conditions and the behavior of contaminants in the subsurface are highly variable in nature. The results obtained in this investigation are based upon limited sampling and analyses. The services we provided and the judgements we rendered on this project are presented within the limits prescribed by the client and meet current professional standards at the time the investigation was performed. No other warranty or guarantee is either expressed or implied.

- CH2M Hill, April 1990, *Preliminary Assessment-Tracy Pumping Plant and Substation Facility*
- Chen Northern, Inc., October 1990, *Draft Environmental Site Investigation, Tracy Pumping Plant and Substation Facility*
- Chen Northern, Inc., December 1990, *Interim Remedial Action Plan, Tracy Pumping Plant and Substation Facility*
- Clearwater Group, Inc., November 1995, *Diesel Overfill, San Luis and Delta-Mendota Water Authority Pumping Station, Byron, California.*
- Cottle Engineering, April 1994, *Preliminary Site Assessment and Work Plan for Installation of Monitoring Well, Tracy Pumping Station and Substation, Mountain House and Kelso Roads, Alameda County, California.*
- Davis, G. H., et al, 1959, *Groundwater Conditions and Storage Capacity in the San Joaquin Valley, California.* U. S. Geological Survey Water Supply Paper 1469.
- Hotchkiss, W. R. and Blanding, G. O., 1971, *Geology, Hydrology and Water Resources of the Tracy-Dos Palos Rea, San Joaquin Valley, California.* U. S. Geological Survey Open File Report.
- Huey, A. S., 1948, *Geology of the Telsa Quadrangle, California.* California Division of Mines and Geology Bulletin 140, 75 pages.
- Page, R. W., 1986, *Geology of the Fresh Groundwater Basin of the Central Valley, California, with Texture Maps and Sections.* U. S. Geological Survey Professional Paper 1401-C.
- Reiche, P., 1949, *Geology of Part of the Delta-Mendota Canal near Tracy, California.* California Division of Mines and Geology Special Report 2, 12 pages.
- State of California, January 5, 1996, *Supplemental Instructions to State Water Board December 8, 1995, Interim Guidance on Required Cleanup at Low Risk Fuel Sites,* prepared by California Regional Water Quality Control Board, San Francisco Bay Region.
- U. S. Army Corps of Engineers, Sacramento District, November 1991, *Final Technical Report-Soil Removal Tracy Substation, Tracy, California.*
- U. S. Army Corps of Engineers, Sacramento District, July 9, 1993, *Western Area Power Administration Site Assessment, Sampling Work Plan and Chemical Data Acquisition Plan*
- U. S. Bureau of Reclamation, Regional Geology Section, Inter-Office Memorandum, August 31, 1994, *Installation of Monitoring Well MW-7 and Results of Testing for Groundwater Contamination, Vehicle Maintenance Facility, Tracy Pumping Plant, Central Valley Project, California.*
- U. S. Bureau of Reclamation, Regional Geology Section, Inter-Office Files, 1995, *Monitoring Well MW-7 Sampling Results*
- Western Area Power Administration, Sierra Nevada Region, Inter-Agency Memorandum, 1996, *FAX Transmittal from Bruce Thomas (Western) to Elizabeth Partridge (USBR) regarding sampling and analysis at Tracy Storage Sheds north of the warehouse building,* 3 pages

SECTION SEVEN

References

Weston Managers, Designers, Consultants, March 19, 1990, *Preliminary Site Investigation Report, Tracy Pumping Plant and Substation, Tracy, California.*

Table 1-1

Analytical Results of Soil Samples Collected During Tank Removal Activities, February 1994, Vehicle Maintenance Garage.

Sample Number	Location	Depth in ft. bgs	TEPH as diesel (1)	TPH as gasoline (2)	Benzene (3)	Toluene (3)	Ethyl-benzene (3)	Xylenes (3)	Total Lead (4)	TRPH as oil & grease (5)	SVOC (6) VOC (6)
<u>Leaded Gasoline UST Removal February 1994</u>											
RG-1	east end of excavation	11	NA	3.1	<0.005 (7)	<0.005	<0.005	<0.005	<4.0	NA	NA/NA
RG-2	west (fill) end of excavation	12	NA	130	<0.025	0.16	0.76	1.9	5.7	NA	NA/NA
<u>Waste Oil UST Removal February 1994</u>											
WO-1	center of excavation	unknown	<10	<1.0	<0.005	<0.005	<0.005	<0.005	5.1	<50	ND/0.019#
<u>Stockpile Sampling February 1994</u>											
RG-Comp	gas stockpile		NA	94	0.006	0.062	0.01	0.98	10	NA	NA/NA
WO-Comp	waste oil stockpile		<10	<1.0	<0.005	<0.005	<0.005	<0.005	<1.0	56	NA/NA

Data source. Cottle Engineering, 1994

All results are in mg/Kg (parts per million-ppm).

- (1) Total Extractable Petroleum Hydrocarbons (TEPH) as diesel using modified EPA Method 8015.
- (2) Total Petroleum Hydrocarbon (TPH) as gasoline using modified EPA Method 8015.
- (3) Benzene, toluene, ethylbenzene, xylenes (BTEX) using EPA Method 8020.
- (4) Total Lead using EPA Method 6010
- (5) Total Recoverable Petroleum Hydrocarbons (TRPH) as oil and grease using EPA Method 418.1.
- (6) Semi-volatile organic compounds using EPA Method 8270/volatile organic compounds using EPA Method 8240.
- (7) Not detected at or above Analytical Laboratory Reporting Limit.

NA = not analyzed

ND = Not detected at or above Analytical Laboratory Reporting Limit for all constituents analyzed.

= detectable concentration of 0.019 mg/Kg xylenes by EPA Method 8240

Shaded areas are results detected above analytical laboratory reporting limits.

Table 1-2

Analytical Results of Soil and Groundwater Samples Collected from Monitoring Well MW-7, Vehicle Maintenance Garage.

Sample Number	Location	Depth (1)	Date Sample Collected	TPH as gasoline (2)	Benzene (3)	Toluene (3)	Ethylbenzene (3)	Xylenes (3)
<u>Soil Samples Collected during Installation of MW-7</u>								
MW7001#	Soil boring MW-7	4.8-5.2	6/22/94	<1.0 (4)	<0.02	<0.02	<0.02	<0.02
MW7002#	"	9.5-10	"	<1.0	0.02	<0.02	<0.02	<0.02
<u>Groundwater Samples Collected Quarterly</u>								
MW7003#	Monitoring Well MW-7		6/30/94	<0.02	<0.0005	<0.0005	<0.0005	<0.0005
MW7003*	"		9/23/94	<0.02	<0.0005	<0.0005	<0.0005	<0.0005
MW7004#	"		12/29/94	<0.02	<0.0005	<0.0005	<0.0005	<0.0005
MW7004##	"		3/28/95	<0.05	<0.0003	<0.0003	<0.0003	<0.0003

Data source: USBR Inter-office memoranda, 1994, 1995

NOTES:

(1) Depth in feet below ground surface (bgs)

(2) Total Petroleum Hydrocarbon as gasoline using modified EPA Method 8015.

(3) Benzene, toluene, ethylbenzene, xylenes (BTEX) using EPA Method 8020.

(4) Not detected at or above Analytical Laboratory Reporting Limit.

= Samples analyzed by Agriculture and Priority Pollutants Laboratories, Inc., (Certified Lab #1312), Fresno, California

* = Sample analyzed by Anlab Analytical Laboratory, (Certified Lab #1468), Sacramento, California.

= Sample analyzed by Western Environmental Science and Technology Laboratory, (Certified Lab #1346), Davis, California.

Soil results are mg/Kg (parts per million-ppm) and water results are mg/L (ppm).

Table 1-3

Analytical Results of Soil Samples Collected Following Diesel Spill, and at Western's Former Storage Shed Area

Sample Number	Location	Depth (1)	TPH as					
			diesel (2)	Benzene (3)	Toluene (3)	Ethylbenzene (3)	m,p-Xylene (3)	o-Xylene (3)
SAMPLING CONDUCTED FOLLOWING DIESEL SPILL ON OCTOBER 2, 1995. Data source: Clearwater Group, Inc., 1995								
<u>Soil Samples Collected October 2, 1995 - - Analyzed by Delta Environmental Laboratories, Benicia, California</u>								
SS-1	east-central portion of trench	1	2860	0.332	4	0.302	24.1	12.4
SS-2	west-central portion of trench	1	8.5	<0.005 (6)	<0.005	<0.005	<0.005	<0.005
<u>Soil Samples Collected October 19, 1995 - - Analyzed by American Environmental Network, Pleasanton, California</u>								
SS-3-1	south end of linear trench	1	7	NA	NA	NA	NA	NA
SS-4-1	north end of linear trench	1	25	NA	NA	NA	NA	NA
SS-5-1	near utility box	1	<1	NA	NA	NA	NA	NA
SS-6-3.5'	sidewall of piping trench	3.5	<5	NA	NA	NA	NA	NA
SAMPLING CONDUCTED IN JUNE 1996 AT WESTERN'S FORMER STORAGE SHED AREA. Data source: Western Area Power Administration, 1996								
				TPH as	TPH as	TPH as	PCB (5)	
				kerosene (4)	mineral oil (4)	fuel oil (4)		
Tracy Warehouse #1	near wall crack	unknown	<1	<1	<100	<1	<1	NA
Tracy Warehouse #2	#2 middle rack	unknown	<1	<1	2,650	<1	1	NA
Tracy Shed #3	shed, from rack and floor	unknown	<1	<1	3,930	<1	<1	NA
Tracy Warehouse Back	spill on wooden floor	unknown	<1	<1	243	<1	<1	NA

(1) Depth in feet below ground surface (bgs)

(2) Total Petroleum Hydrocarbon as diesel using modified EPA Method 8015.

(3) Benzene, toluene, ethylbenzene, xylenes (BTEX) using EPA Method 8020.

(4) Total Petroleum Hydrocarbons as kerosene, as mineral oil, and as fuel oil using modified EPA Method 8015.

(5) Polychlorinated biphenyls (PCBs) using EPA Method 8080.

(6) Not detected at or above Analytical Laboratory Reporting Limit.

All results are in mg/Kg (parts per million-ppm)

Samples collected June 1996 analyzed by Analytical ChemTech International, Inc., Sacramento, California

NA = not analyzed

Table 3-1

Analytical Results of Samples Collected During Tank Removal and Remedial Activities, May 1997, Vehicle Maintenance Garage.

Sample Number	Location	Depth (1)	TPH as diesel (2)	TPH as gasoline (2)	Benzene (3)	Toluene (3)	Ethylbenzene (3)	Xylenes (3)	Total Lead (4)	MTBE (3)
Tank Removal Samples		May 13, 1997								
BRTTD-1	east end diesel UST	10.5	48	<0.5 (5)	<0.005	<0.005	<0.005	<0.005	NA	<0.005
BRTTD-2	west end diesel UST	10	700	390	0.71	1.3	2.5	5.1	NA	0.65
BRTTG-1	south end gasoline UST	10.5	NA	1900	20	31	23	113	7.1	<2.5
BRTTG-2	north end gasoline UST	11	NA	<2.5	<0.025	0.09	0.25	0.23	8.3	<0.025
B RTP-1	product pipeline	3.5	NA	<0.5	<0.005	<0.005	<0.005	<0.005	8.8	<0.005
B RTP-2	pump island, pipeline	3	NA	0.1	0.46	0.83	1.5	3	8.5	0.15
Overexcavation Samples		May 16 and 17, 1997								
BRTTD-3	east wall diesel excavation	11	<10	<0.05	<0.002	<0.002	<0.002	<0.002	6.33	<0.010
BRTTD-4	west wall of diesel excavation	10.5	<9	<0.05	<0.002	<0.002	<0.002	<0.002	7.46	0.405
BRTTD-5	north wall of diesel excavation	10.5	18.6	1.05	<0.002	<0.002	<0.002	<0.002	6.9	<0.010
BRTTG-3	west wall of gas excavation	10	<9	<0.05	<0.002	<0.002	<0.002	<0.002	7.2	<0.010
BRTTG-4#	east wall of gas excavation	9.5	3300	150	0.119	<0.05	1.95	17.1	7.61	<0.25
BRTTG-5	south end of gas excavation	13	<10	<0.05	<0.002	<0.002	<0.002	<0.002	5.75	<0.010
Stockpile Samples		May 13, 1997								
DSTP-1	diesel stockpile		680	12	<0.005	9.2	6.7	15	NA	16
GSTP-1	gas stockpile		NA	<0.5	<0.005	<0.005	<0.005	<0.005	9.4	<0.005
Water Samples		May 15 and 17, 1997								
BRT-W	gas excavation-pipe break		<0.05	0.11	<0.0005	0.0011	0.0015	0.017	<0.005	<0.005
BRT-W2	enlarged excavation seepage		3.32	7.04	0.45	0.274	0.442	2.27	<0.005	1.08

Sample BRTTG-4 was also analyzed for PAHs using EPA Method 8270. Results indicate non-detect for all analytes tested (see Analytical Reports, Appendix C).

(1) Depth in feet below ground surface (bgs).

(2) Total Petroleum Hydrocarbon as diesel and as gasoline using modified EPA Method 8015.

(3) Benzene, toluene, ethylbenzene, xylenes (BTEX) and Methyl tertiary Butyl Ether (MTBE) using EPA Method 8020

(4) Total Lead using EPA Method 6010.

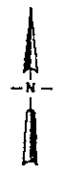
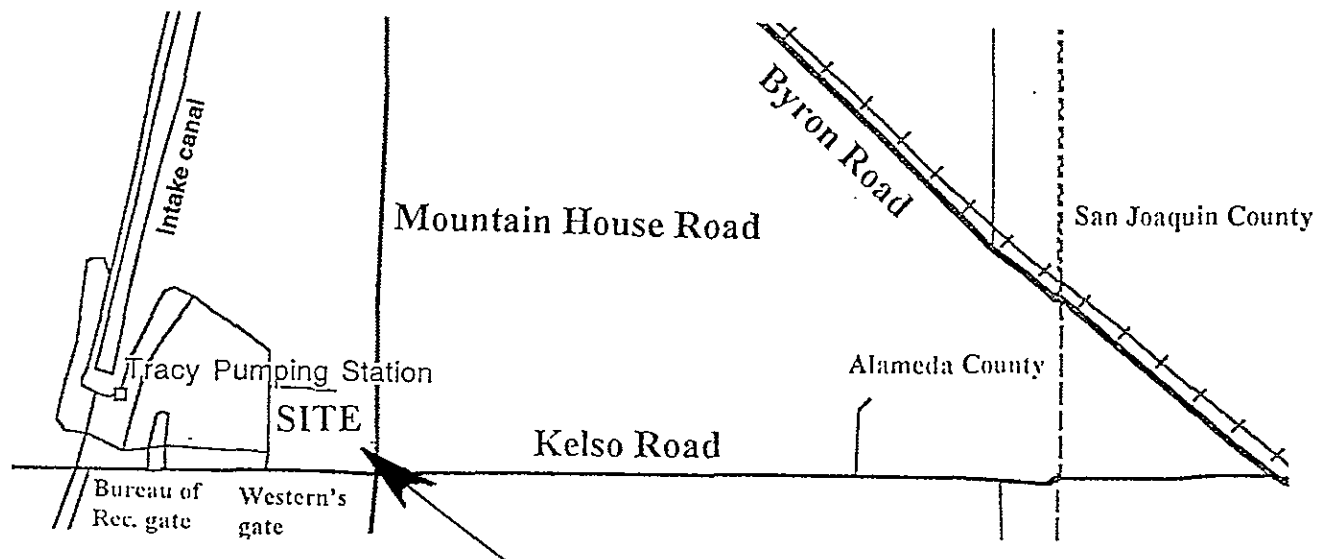
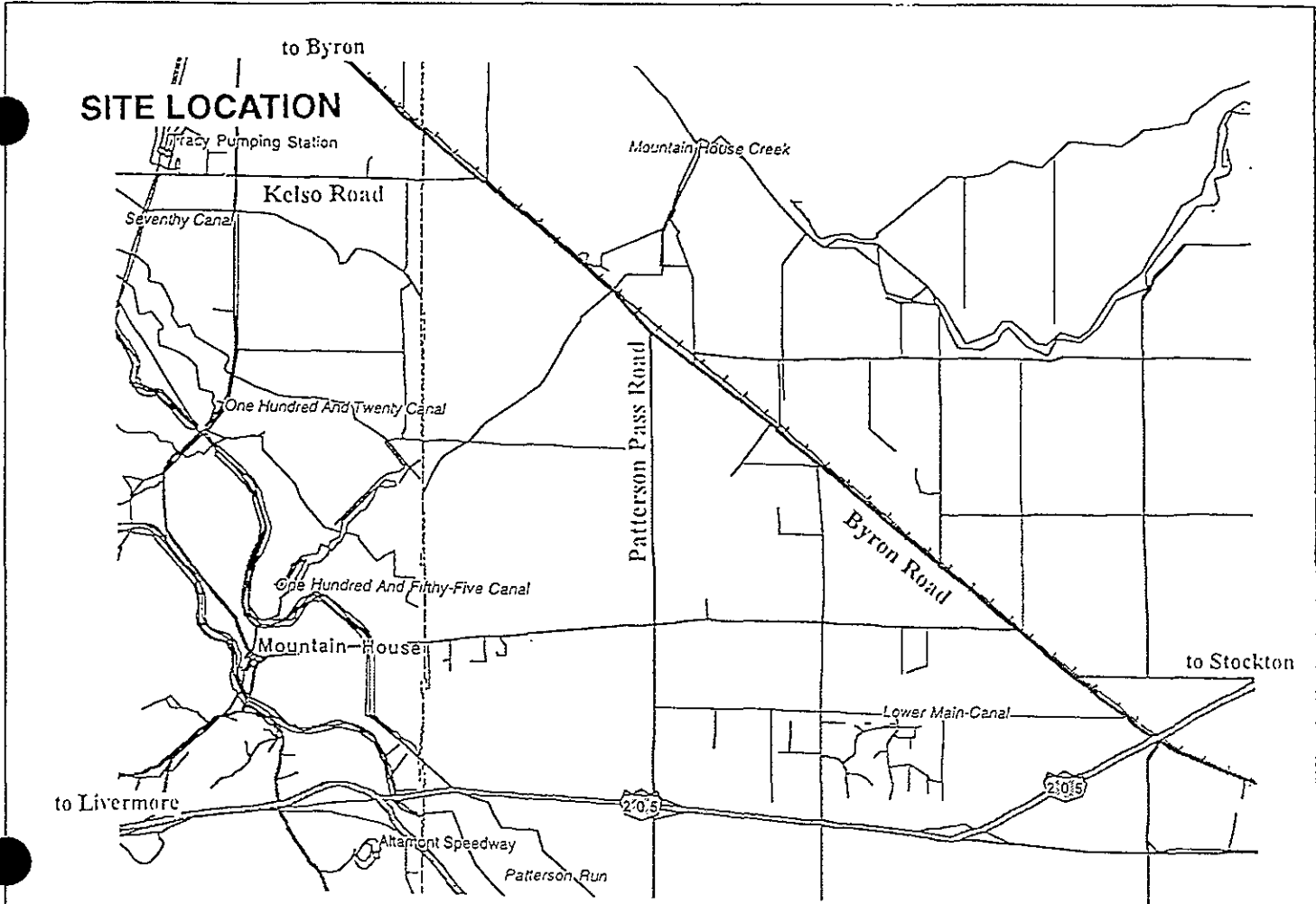
(5) Not detected at or above Analytical Laboratory Reporting Limit.

Soil results are in mg/Kg (parts per million-ppm).

Water results are in mg/L (ppm).

NA = not analyzed

Shaded areas are results detected above analytical laboratory reporting limit



not to scale

Area of Figure 1-2

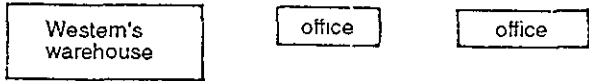
Project No. S96203	Bureau of Reclamation	LOCATION MAP TRACY PUMPING PLANT AND SUBSTATION FACILITY	Figure 1-1
Woodward-Clyde			

Northern Expansion Area

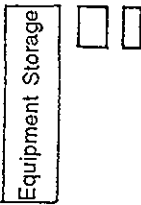
fence

MW-5

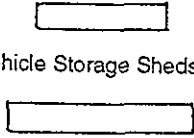
Former Storage Shed Area



Vehicle Maintenance Garage

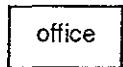


Vehicle Storage Sheds



MW-6

Maintenance Yard Area



Electrical Substation

Access road

to USBR offices

Mountain House Road

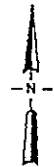
Western's entrance gate

Kelso Road

LEGEND

MW-6

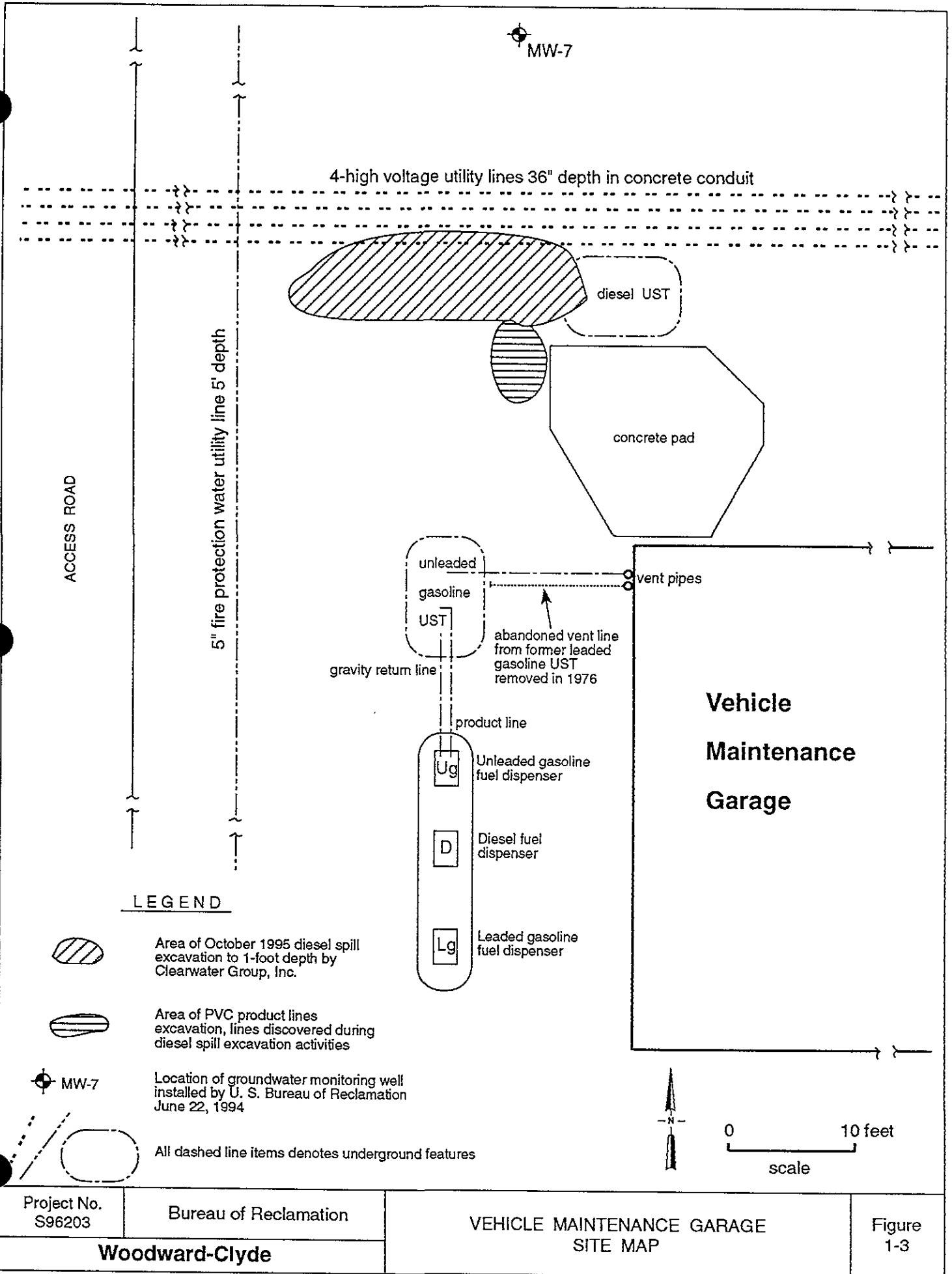
Location of groundwater monitoring wells installed by Chen Northern in 1990



Source: Chen Northern, 1990, figure 5

approximate scale: 1 inch = 200 feet

Project No. S96203	Bureau of Reclamation	MAINTENANCE YARD AREA SOUTHEAST CORNER OF TPPS FACILITY	Figure 1-2
Woodward-Clyde			



LEGEND



Area of October 1995 diesel spill excavation to 1-foot depth by Clearwater Group, Inc.



Area of PVC product lines excavation, lines discovered during diesel spill excavation activities



MW-7

Location of groundwater monitoring well installed by U. S. Bureau of Reclamation June 22, 1994



All dashed line items denotes underground features

Project No. S96203

Bureau of Reclamation

Woodward-Clyde

**VEHICLE MAINTENANCE GARAGE
SITE MAP**

Figure 1-3

4-high voltage utility lines 36" depth in concrete conduit

fill pipe

diesel UST

BRTTD-2

BRTTD-1

concrete pad

Approximate location of former leaded gasoline UST removed in 1994

Approximate extent of 5/15/97 excavation edge

fill pipe

BRT-W

unleaded gasoline UST

BRTTG-2

BRTTG-1

BRTP-1

BRTP-2

Vehicle Maintenance Garage

ACCESS ROAD

5" fire protection water utility line 5' depth

Ug

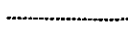
D

Lg

LEGEND



Underground Storage Tank



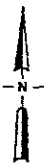
Excavation extent 5/13/97



BRTTG-1 Soil sample location with designation



BRT-W Water sample location with designation



0 10 feet scale

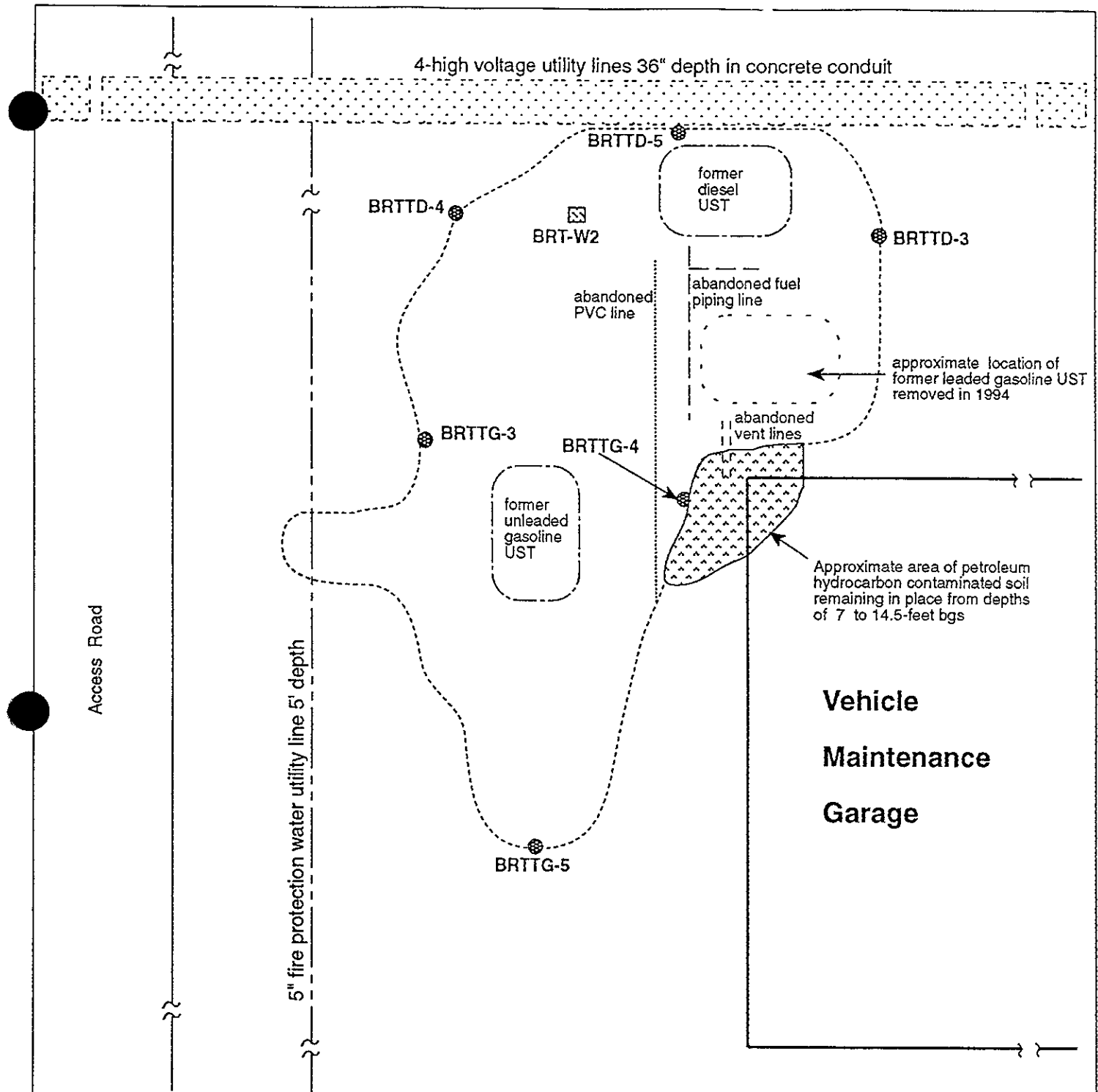
Project No. S96203

Bureau of Reclamation

Woodward-Clyde

UST REMOVAL SAMPLE LOCATION MAP May 13, 1997

Figure 2-1



approximate location of former leaded gasoline UST removed in 1994

Approximate area of petroleum hydrocarbon contaminated soil remaining in place from depths of 7 to 14.5-foot bgs

**Vehicle
Maintenance
Garage**

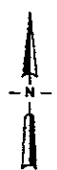
LEGEND

- Extent of excavation 5/17/97
- BRTTD-3 Soil sample location with designation
- BRT-W2 Groundwater sample location with designation

Access Road

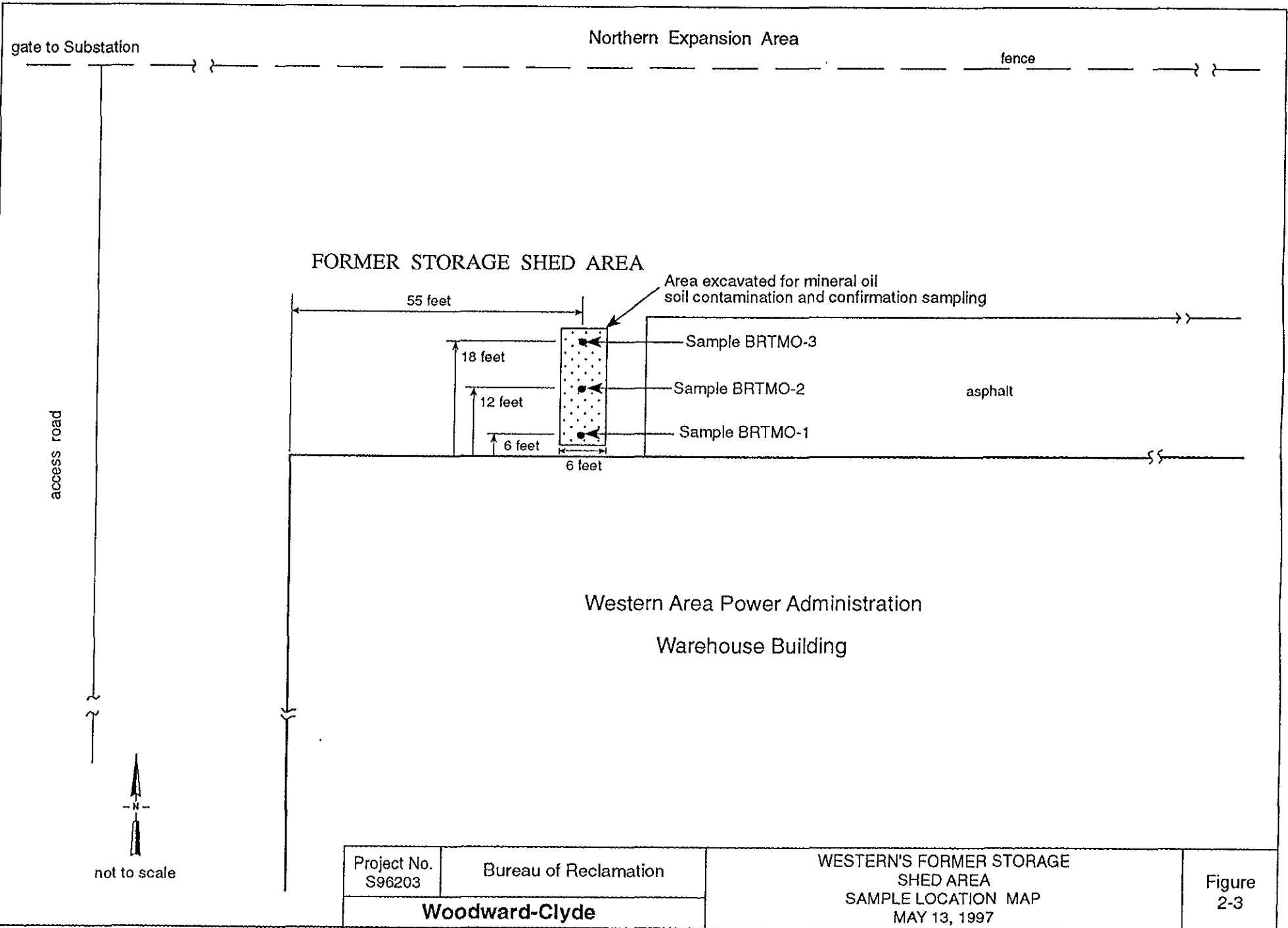
5" fire protection water utility line 5' depth

4-high voltage utility lines 36" depth in concrete conduit



0 10 feet
scale

Project No. S96203	Bureau of Reclamation	OVEREXCAVATION / REMEDIAL ACTIVITIES SAMPLE LOCATION MAP May 16 and 17, 1997	Figure 2-2
Woodward-Clyde			



Project No. S96203	Bureau of Reclamation
Woodward-Clyde	

WESTERN'S FORMER STORAGE
SHED AREA
SAMPLE LOCATION MAP
MAY 13, 1997

Figure
2-3

Appendix A
UST REMOVAL AND SOIL DISPOSAL DOCUMENTATION

MCCORMICK DEMCON, INC.
MIKE McCORMICK

2053 "A" STREET
SANTA MARIA, CA 93454
(805) 349-0314 OFFICE AND FAX
(805) 680-0755 CELLULAR
LICENSE #543830

TANK DISPOSAL CERTIFICATION

This is to certify that McCormick Demcon, Inc. has in accordance with applicable local, state and federal rules and regulations properly disposed of the following.

CUSTOMER BUREAU OF RECLAMATION
2666 NORTH GROVE INDUSTRIAL DRIVE, SUITE 106
FRESNO, CA 93727-1551

EXCAVATION LOCATION TRACY PUMPING PLANT AND GARAGE
16800 KELSO ROAD, TRACY, CA 95376

TANK IDENTIFICATION N/A

IDENTIFICATION NUMBER N/A

SIZE TWO 2,000 GALLON TANKS, ASSOCIATED PIPING AND 2 DISPENSERS

CONSTRUCTION SINGLEWALL STEEL

PRODUCT GASOLINE

OTHER N/A

I certify that this document and all attachments were prepared under my direction and supervision to assure that qualified personnel properly disposed of the above noted tank or tanks. Based on my inquiry of the person or persons who managed the program assignments, the above information is true, accurate and complete to the best of my knowledge.

Mike McCormick
MIKE McCORMICK, PRESIDENT
McCORMICK DEMCON, INC.

5-13-97
DATE

96726016
 IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-852-7601

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. <i>CAL00011065304261016</i>	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address <i>Tracy Pump Plant, PO Box RR1 Box 35, 16650 Kelso Road, Tracy, CA 95378</i>			A. State Manifest Document Number <i>96726016</i>		
4. Generator's Phone <i>909 487-5112</i>			B. State Generator's ID <i>ET 00001</i>		
5. Transporter 1 Company Name <i>Cleanwater Environmental Management Inc</i>		6. US EPA ID Number <i>CAL000007013</i>		C. State Transporter's ID <i>ET 00001</i>	
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone <i>510-797-8511</i>	
9. Designated Facility Name and Site Address <i>Alviso Independent Oil, 5002 Archer Street, Alviso, CA 95002</i>		10. US EPA ID Number <i>CAL0000048571</i>		E. State Facility's ID <i>CAL0000048571</i>	
				H. Facility's Phone <i>408-262-2715</i>	
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers	13. Total Quantity	14. Unit Wt/Vol	15. Waste Number
a. <i>DILY WATER, NON HCPA HAZARDOUS WASTE LIQUID OR TITANIC</i>		No. Type			State <i>263</i>
b.					EPA/Other <i>ADP06</i>
c.					State
d.					EPA/Other
16. GENERATOR'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 national government regulations.		K. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information <i>Wear Protective Gear, Emergency Contact 510-797-8511 ATTN Kirk Hayward</i>		a. <i>14</i>		b. <i>ERS #171</i>	
		c.		d. <i>site 16650 Kelso Road Tracy</i>	
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature <i>James C. Scully</i>		Month <i>05</i>	Day <i>12</i>
Printed/Typed Name <i>JAMES C. SCULLY</i>		Signature <i>James C. Scully</i>		Year <i>96</i>	
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature <i>Steven R. Stone</i>		Month <i>05</i>	Day <i>12</i>
Printed/Typed Name <i>STEVEN R. STONE</i>		Signature <i>Steven R. Stone</i>		Year <i>96</i>	
19. Discrepancy Indication Space					
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.					
Printed/Typed Name <i>Kirk D. Hayward</i>		Signature <i>Kirk D. Hayward</i>		Month <i>05</i>	Day <i>12</i>
				Year <i>96</i>	

DO NOT WRITE BELOW THIS LINE.

Yellow: TSDS SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.
 (Generators who submit hazardous waste for transport out-of-state, produce completed copy of this copy and send to DTSC within 30 days.)

05-19-97 01 56PM FROM MAIL BOXES ETC. 1098

B/L #15057-1
PW 4051-1

NON-HAZARDOUS MATERIALS HAULING MANIFEST

C O N T A I N E R	NAME	<u>ECOLOGIX</u>	PHONE NO.	<u>916-347-2070</u>
	ADDRESS	<u>PO BOX 756</u>	FAX NO.	<u>916-347-2050</u>
	CITY, STATE, ZIP	<u>CHICO, CA 95921</u>		
S I T E	NAME	<u>USBR</u>	WASTE DESCRIPTION:	<u>WATER WITH-G</u>
	ADDRESS	<u>1550 REISD RD</u>	GENERATING PROCESS:	<u>BROKEN WATER LINE</u>
	CITY, STATE, ZIP	<u>TRAVIS, CA</u>		<u>DURING EXCAVATION</u>
	COMPONENTS OF WASTE		COMPONENTS OF WASTE	<u>TPH-G 110 PPH</u>
	BY	<u>[Signature]</u>	DATE	<u>5-19-97</u>
	SIGNATURE	PRINT OR TYPE FULL NAME		
G E N E R A T O R	NAME	<u>USBR #106</u>	PHONE NO.	<u>916-979-2475</u>
	ADDRESS	<u>2005 N. GROVE IND. DRIVE</u>	FAX NO.	
	CITY, STATE, ZIP	<u>FRESNO, CA 93727</u>		
	GENERATOR/OWNER CERTIFIES THIS WASTE AS DESCRIBED IS 100% NON-HAZARDOUS			
	BY	<u>[Signature]</u>	DATE	<u>5-19-97</u>
	SIGNATURE	PRINT OR TYPE FULL NAME		
H A U L E R	NAME	<u>DELTA TRAK</u>	PHONE NO.	<u>745-2080 (707)</u>
	ADDRESS	<u>CHAMBERL RD.</u>	SERVICE ORDER NO.	
	CITY, STATE, ZIP	<u>BENICIA, CA 94500</u>	PICK UP DATE	<u>5-16-97</u>
	TRUCK I.D. NO.	<u>7-12</u>	TRAILER NO.	<u>027</u> LOAD NO. <u>1</u> OF <u>1</u>
	DRIVER	<u>G. GARCIA</u>	DATE	<u>5-19-97</u>
P R E S E N T E R	PACIFIC CUSTOM MATERIALS, INC		I hereby certify that the above material was received.	
	9000 CARQUINEZ SCENIC DRIVE		<u>[Signature]</u>	
	PORT COSTA, CA 94569		SIGNATURE	
	610/787-0150	DATE		



Pacific Custom Materials, Inc.

DATE	ORG/PLANT	ORDER NO.	CUSTOMER NO.	LOCATION/SILO	TICKET NO
5-19-97	390	PN4051-01	PLM14000	Tank	15057-1

SOLD TO: Ecologix Environmental Service
P.O. NO.: P.O. Box 7856
CHILD, CA 95927-7586
CUSTOMER JOB NO.:

SHIP TO: Site: USBK
16650 Kelso Rd
Tracy, CA 95376
MAPSCO:

OWNER PROJECT NO.:

Acceptance of material (indicated by signature below) releases Pacific Custom Materials, Inc., and/or its divisions and subsidiaries from any and all liability, damage, loss claims, demands and actions of any nature whatsoever for use of these materials. (Materials to include all materials supplied by Pacific Custom Materials, Inc.) [See specific disclaimers and warnings on the reverse side hereof.]
Customer and/or carrier (not to include Pacific Custom Materials, Inc., owned and operated vehicles), shall not be deemed for any purpose to be an agent, servant or representative of Pacific Custom Materials, Inc., in the transportation and delivery of the product(s) covered by this order. Customer and/or carrier represents that materials purchased are for delivery and/or use at the destination set forth in the delivery address.

WEIGH MASTER:		CARRIER SIGNATURE	CUSTOMER SIGNATURE
LEWIS WILKINS	<i>[Signature]</i>	BUSGARCIA <i>[Signature]</i>	<i>[Signature]</i>
TIME - IN	TIME - OUT	ELAPSED TIME	VEHICLE ID
4:00pm		71 Carrier	T12 Delta Tech

PRODUCT

UOM

product code
1060

Gal

NET = 12,620 #

GR WT

GR #

= 1512.39 gal

GROSS: 48980

TARE: 36360

NET: 12,620 #

WEIGHMASTER CERTIFICATE

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

ORIGINAL

FORM NO. 002107

Customer Job Report

Gross & Tare Weight Codes: M=Manual; S=Scale; T=Trk File

Job Number Name	SiteAddress	SiteCity	State	ZipCode
A04 -- 00136 US Bureau of Reclamation	16650 Kelso Road	Tracy	CA	95376

Load #	Date & Time Out	Transporter #	Truck & Trailer Number	Gross (lb)	Tare (lb)	Net (lb)	Net Wt (tons)
1	05/16/97 06:47	1002487	M97 -- T97	79,780M	29,780M	50,000	25.00
3	05/16/97 06:49	1002487	S27 -- T27	69,180M	32,980M	36,200	18.10
2	05/16/97 06:52	1002487	M26 -- T26	76,560M	31,640M	44,920	22.46
9	05/16/97 15:06	1002487	s30 -- t30	67,940M	31,680M	36,260	18.13
8	05/16/97 15:16	1002487	m21 -- t21	83,500M	30,260M	53,240	26.62
10	05/16/97 15:17	1002487	t83 -- s83	80,960M	33,200M	47,760	23.88
11	05/17/97 07:35	1002487	M97 -- T97	81,700M	29,780M	51,920	25.96
12	05/17/97 07:40	1002487	M14 -- T14	82,300M	31,780M	50,520	25.26
14	05/17/97 07:42	1002487	M17 -- T17	82,100M	30,540M	51,560	25.78
13	05/17/97 07:43	1002487	M21 -- T21	83,400M	30,360M	53,040	26.52
20	05/17/97 08:03	1002487	M11 -- T11	72,680M	32,520M	40,160	20.08
19	05/17/97 08:20	1002487	M18 -- T18	79,880M	30,040M	49,840	24.92
21	05/17/97 08:22	1002487	S47 -- T47	68,680M	28,100M	40,580	20.29
15	05/17/97 10:52	1002487	m14 -- t14	79,980M	31,780M	48,200	24.10
18	05/17/97 10:56	1002487	M97 -- T97	83,300M	29,780M	53,520	26.76
16	05/17/97 11:22	1002487	M17 -- T17	76,280M	30,540M	45,740	22.87
17	05/17/97 11:48	1002487	m21 -- T21	76,360M	30,360M	46,000	23.00
23	05/17/97 11:51	1002487	M18 -- T18	78,900M	30,040M	48,860	24.43
22	05/17/97 11:57	1002487	M11 -- T11	74,880M	32,520M	42,360	21.18
24	05/17/97 11:59	1002487	S47 -- T47	68,260M	28,100M	40,160	20.08
26	05/19/97 10:12	1002487	M97 -- T97	76,280M	29,720M	46,560	23.28
25	05/19/97 10:15	1002487	M14 -- T14	84,300M	31,680M	52,620	26.31
27	05/19/97 10:20	1002487	M17 -- T17	76,320M	30,580M	45,740	22.87
28	05/19/97 13:43	1002487	M14 -- T14	72,540M	31,680M	40,860	20.43
29	05/19/97 13:51	1002487	m97 -- t97	56,660M	29,720M	26,940	13.47
4	05/19/97 14:07	1002487	M97 -- T97	80,260M	29,780M	50,480	25.24
5	05/19/97 14:07	1002487	M26 -- T26	76,060M	31,640M	44,420	22.21

Completed Loads 90.00%	Manifests Received 27	Completed Weight 206.40%	Estimated Weight 300.00(tons)	TOTAL Net Wt: 619.23 (tons)
---------------------------	--------------------------	-----------------------------	----------------------------------	--------------------------------

Manifest

TPS Technologies Soil Recycling

Non-Hazardous Soils

Manifest # 00136

Date of Shipment: 5-16-97	Responsible for Payment: Consultant	Transporter Truck #: M97+T97	Facility #: A04	Given by TPS: 00136	Load #: 001
------------------------------	--	---------------------------------	--------------------	------------------------	----------------

Generator's Name and Billing Address: US Bureau of Reclamation 2666 N. Grove Industrial Dr. #106 Fresno, CA 93727 USA	Generator's Phone #: (916) 979-2475	Generator's US EPA ID No.
	Person to Contact: Jim Scullin	
	FAX#:	Customer Account Number with TPS: 405BURE

Consultant's Name and Billing Address: Ecologix Environmental Services P.O. Box 7856 Chico, CA 95927 USA	Consultant's Phone #: (916) 342-3020	
	Person to Contact: Jon Staats	
	FAX#: (916) 342-2050	Customer Account Number with TPS: 1002426

Generation Site (Transport from): (name & address) US Bureau of Reclamation 16650 Kelso Road Tracy, CA 95376 USA	Site Phone #: (209) 836-6261	BTEX Levels
	Person to Contact: Jim Scullin	TPH Levels
	FAX#:	AVG. Levels

Designated Facility (Transport to): (name & address) TPS TECHNOLOGIES INC. 20 Recycling Lane Richmond, CA 94801 USA	Facility Phone #: 510-235-8778	Facility Permit Numbers
	Person to Contact: D. Murashima/C. Rice	
	FAX#: 510-231-4154	

Transporter Name and Mailing Address: Manley and Sons 8896 Elder Creek Road Sacramento, CA 95882 USA	Transporter's Phone #: (916) 381-6864	Transporter's US EPA ID No.:
	Person to Contact: Tim Manley	Transporter's DOT No.:
	FAX#:	Customer Account Number with TPS: 1002487

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0-10% <input type="checkbox"/> 10-20% <input type="checkbox"/> 20%-over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>			77730	29780	51,000
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0-10% <input type="checkbox"/> 10-20% <input type="checkbox"/> 20%-over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>					25.1

List any exception to items listed above:

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name:	Generator <input checked="" type="checkbox"/> Consultant <input type="checkbox"/>	Signature and date:	Month	Day	Year
		<i>Signature</i>			

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name:	Signature and date:	Month	Day	Year
<i>Air + Fischer</i>	<i>Signature</i>	5	16	97

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:				
Print or Type Name:	Signature and date:			
<i>C. Rice</i>	<i>Signature</i>			8-5-16-97

Generator and/or Consultant

Transporter

Recycling Facility

Manifest

TPS Technologies Soil Recycling

Non-Hazardous Soils

Manifest # 1

Date of Shipment: 5-16-97	Responsible for Payment: Consultant	Transporter Truck #: M26 / F26	Facility #: A04	Given by TPS: 00136	Load #: 002
------------------------------	--	-----------------------------------	--------------------	------------------------	----------------

Generator's Name and Billing Address: US Bureau of Reclamation 2666 N. Grove Industrial Dr. #106 Fresno, CA 93727 USA	Generator's Phone #: (916) 979-2475	Generator's US EPA ID No.
	Person to Contact: Jim Scullin	
	FAX#:	Customer Account Number with TPS: 4USBURE

Consultant's Name and Billing Address: Ecologix Environmental Services P.O. Box 7856 Chico, CA 95927 USA	Consultant's Phone #: (916) 342-3020	
	Person to Contact: Jon Staats	
	FAX#: (916) 342-2050	Customer Account Number with TPS: 1002426

Generation Site (Transport from): (name & address) US Bureau of Reclamation 16650 Kelso Road Tracy, CA 95376 USA	Site Phone #: (209) 836-6261	BTEX Levels
	Person to Contact: Jim Scullin	TPH Levels
	FAX#:	AVG. Levels

Designated Facility (Transport to): (name & address) TPS TECHNOLOGIES INC. 20 Recycling Lane Richmond, CA 94801 USA	Facility Phone #: 510-235-8778	Facility Permit Numbers
	Person to Contact: D. Murashima/C. Rice	
	FAX#: 510-231-4154	

Transporter Name and Mailing Address: Manley and Sons 8896 Elder Creek Road Sacramento, CA 95882 USA	Transporter's Phone #: (916) 381-6864	Transporter's US EPA ID No.:
	Person to Contact: Tim Manley	Transporter's DOT No.:
	FAX#:	Customer Account Number with TPS: 1002487

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>			76 540	31640	44,900
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>					39.46

List any exception to items listed above:

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name:	Generator <input type="checkbox"/> Consultant <input type="checkbox"/>	Signature and date:	Month	Day	Year
		Signature on file			

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name:	Signature and date:	Month	Day	Year
KEN LYONS	Ken Lyons	5	16	97

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name:	Signature and date:	
C. Rice	C. Rice	5-16-97

Generator and/or Consultant

Transporter

Recycling Facility

Manifest

TPS Technologies Soil Recycling

Non-Hazardous Soils

Manifest #

Date of Shipment: 5-16-97	Responsible for Payment: Consultant	Transporter Truck #: -27/T27	Facility #: A03	Given by TPS: 00138	Lead #: 1083
------------------------------	--	---------------------------------	--------------------	------------------------	-----------------

Generator's Name and Billing Address: US Bureau of Reclamation 2666 N. Grove Industrial Dr. #106 Fresno, CA 93727 USA	Generator's Phone #: (916) 979-2475	Generator's US EPA ID No.
	Person to Contact: Jim Scullin	
	FAX#:	Customer Account Number with TPS: 405BURE

Consultant's Name and Billing Address: Ecologix Environmental Services P.O. Box 7856 Chico, CA 95927 USA	Consultant's Phone #: (916) 342-3020	
	Person to Contact: Jon Staats	
	FAX#: (916) 342-2050	Customer Account Number with TPS: 1002426

Generation Site (Transport from): (name & address) US Bureau of Reclamation 16650 Kelso Road Tracy, CA 95376 USA	Site Phone #: (209) 836-6261	BTEX Levels
	Person to Contact: Jim Scullin	TPH Levels
	FAX#:	AVG. Levels

Designated Facility (Transport to): (name & address) TPS TECHNOLOGIES INC. 20 Recycling Lane Richmond, CA 94801 USA	Facility Phone #: 510-235-8778	Facility Permit Numbers
	Person to Contact: D. Murashima/C. Rice	
	FAX#: 510-231-4154	

Transporter Name and Mailing Address: Manley and Sons 8896 Elder Creek Road Sacramento, CA 95882 USA	Transporter's Phone #: (916) 381-6864	Transporter's US EPA ID No.:
	Person to Contact: Tim Manley	Transporter's DOT No.:
	FAX#:	Customer Account Number with TPS: 1002487

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>			67150	325180	16200
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>					18.10

List any exception to items listed above:

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name:	Generator <input checked="" type="checkbox"/> Consultant <input type="checkbox"/>	Signature and date:	Month	Day	Year
		<i>Signature on file</i>			

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name:	Signature and date:	Month	Day	Year
<i>Beth Marshall</i>	<i>Beth Marshall</i>	5	16	97

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name:	Signature and date:
<i>C. Rice</i>	<i>C. Rice</i> 5-16-97

Generator and/or Consultant

Transporter

Recycling Facility

Manifest

TPS Technologies Soil Recycling

Non-Hazardous Soils

Manifest #

Date of Shipment:	Responsible for Payment: Consultant	Transporter Truck #: M97 & T97	Facility #: A04	Given by TPS: 00136	Load #: 004
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Generator's Name and Billing Address: US Bureau of Reclamation 2666 N. Grove Industrial Dr. #106 Fresno, CA 93727 USA	Generator's Phone #: (916) 979-2475	Generator's US EPA ID No.
	Person to Contact: Jim Scullin	
	FAX#:	Customer Account Number with TPS: 4USBURE

Consultant's Name and Billing Address: Ecologix Environmental Services P.O. Box 7856 Chico, CA 95927 USA	Consultant's Phone #: (916) 342-3020	
	Person to Contact: Jon Staats	
	FAX#: (916) 342-2050	Customer Account Number with TPS: 1002426

Generation Site (Transport from): (name & address) US Bureau of Reclamation 16650 Kelso Road Tracy, CA 95376 USA	Site Phone #: (209) 836-6261	BTEX Levels
	Person to Contact: Jim Scullin	TPH Levels
	FAX#:	AVG. Levels

Designated Facility (Transport to): (name & address) TPS TECHNOLOGIES INC. 20 Recycling Lane Richmond, CA 94801 USA	Facility Phone #: 510-235-8778	Facility Permit Numbers
	Person to Contact: D. Murashima/C. Rice	
	FAX#: 510-231-4154	

Transporter Name and Mailing Address: Manley and Sons 8896 Elder Creek Road Sacramento, CA 95882 USA	Transporter's Phone #: (916) 381-6864	Transporter's US EPA ID No.:
	Person to Contact: Tim Manley	Transporter's DOT No.:
	FAX#:	Customer Account Number with TPS: 1002487

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/>	0 - 10% <input type="checkbox"/>	Gas <input type="checkbox"/>					
Clay <input type="checkbox"/> Other <input type="checkbox"/>	10 - 20% <input type="checkbox"/>	Diesel <input type="checkbox"/>					
	20% - over <input type="checkbox"/>	Other <input type="checkbox"/>					
Sand <input type="checkbox"/> Organic <input type="checkbox"/>	0 - 10% <input type="checkbox"/>	Gas <input type="checkbox"/>					
Clay <input type="checkbox"/> Other <input type="checkbox"/>	10 - 20% <input type="checkbox"/>	Diesel <input type="checkbox"/>					
	20% - over <input type="checkbox"/>	Other <input type="checkbox"/>					25.24

List any exception to items listed above:

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name:	Generator <input checked="" type="checkbox"/> Consultant <input type="checkbox"/>	Signature and date:	Month	Day	Year
		<i>Signature</i>			

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name:	Signature and date:	Month	Day	Year
<i>A. J. Fisch</i>	<i>Signature</i>	5	16	97

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:	
Print or Type Name:	Signature and date:
<i>C. Rice</i>	

Generator and/or Consultant

Transporter

Recycling Facility

Manifest

TPS Technologies Soil Recycling

Non-Hazardous Soils

Manifest

Date of Shipment: 5/16/97
 Responsible for Payment: Consultant
 Transporter Truck #: M-26
 Facility #: A04
 Generator ID #: 00138
 Manifest #: 1005

Generator's Name and Billing Address:
 US Bureau of Reclamation
 2666 N. Grove Industrial Dr. #106
 Fresno, CA 93727 USA

Generator's Phone #: (916) 979-2475
 Person to Contact: Jim Scullin
 FAX#:
 Generator's US EPA ID No.:
 Customer Account Number with TPS: 405BURE

Consultant's Name and Billing Address:
 Ecologix Environmental Services
 P.O. Box 7856
 Chico, CA 95927 USA

Consultant's Phone #: (916) 342-3020
 Person to Contact: Jon Staats
 FAX#:
 Consultant's Phone #: (916) 342-2050
 Customer Account Number with TPS: 1002426

Generation Site (Transport from): (name & address)
 US Bureau of Reclamation
 16650 Kelso Road
 Tracy, CA 95376 USA

Site Phone #: (209) 836-6261
 Person to Contact: Jim Scullin
 FAX#:
 BTEX Levels
 TPH Levels
 AVG. Levels

Designated Facility (Transport to): (name & address)
 TPS TECHNOLOGIES INC.
 20 Recycling Lane
 Richmond, CA 94801 USA

Facility Phone #: 510-235-8778
 Person to Contact: D. Murashima/C. Rice
 FAX# 510-231-4154
 Facility Permit Numbers

Transporter Name and Mailing Address:
 Manley and Sons
 8896 Elder Creek Road
 Sacramento, CA 95882 USA

Transporter's Phone #: (916) 381-6864
 Person to Contact: Tim Manley
 FAX#:
 Transporter's US EPA ID No.:
 Transporter's DOT No.:
 Customer Account Number with TPS: 1002487

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>					22.21
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>					

List any exception to items listed above:

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: Generator Consultant Signature and date: [Signature] [Date] Month Day Year

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: [Signature] Signature and date: [Signature] [Date] Month Day Year

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name: [Signature] Signature and date: [Signature] [Date] Month Day Year

Generator and/or Consultant

Transporter

Recycling Facility

Manifest

TPS Technologies Soil Recycling

Non-Hazardous Soils

Manifest

Date of Shipment:	Responsible for Payment: Consultant	Transporter Truck #:	Facility #: A04	Given by TPS: 00136	Load #: 006
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Generator's Name and Billing Address: US Bureau of Reclamation 2666 N. Grove Industrial Dr. #106 Fresno, CA 93727 USA	Generator's Phone #: (916) 979-2475	Generator's US EPA ID No.
	Person to Contact: Jim Scullin	
	FAX#:	Customer Account Number with TPS: 4USBURE

Consultant's Name and Billing Address: Ecologix Environmental Services P.O. Box 7856 Chico, CA 95927 USA	Consultant's Phone #: (916) 342-3020	
	Person to Contact: Jon Staats	
	FAX#: (916) 342-2050	Customer Account Number with TPS: 1002426

Generation Site (Transport from): (name & address) US Bureau of Reclamation 16650 Kelso Road Tracy, CA 95376 USA	Site Phone #: (209) 836-6261	BTEX Levels
	Person to Contact: Jim Scullin	TPH Levels
	FAX#:	AVG. Levels

Designated Facility (Transport to): (name & address) TPS TECHNOLOGIES INC. 20 Recycling Lane Richmond, CA 94801 USA	Facility Phone #: 510-235-8778	Facility Permit Numbers
	Person to Contact: D. Murashima/C. Rice	
	FAX#: 510-231-4154	

Transporter Name and Mailing Address: Manley and Sons 8896 Elder Creek Road Sacramento, CA 95882 USA	Transporter's Phone #: (916) 381-6864	Transporter's US EPA ID No.:
	Person to Contact: Tim Manley	Transporter's DOT No.:
	FAX#:	Customer Account Number with TPS: 1002487

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/>	0 - 10% <input type="checkbox"/>	Gas <input type="checkbox"/>					
Clay <input type="checkbox"/> Other <input type="checkbox"/>	10 - 20% <input type="checkbox"/>	Diesel <input type="checkbox"/>					
	20% - over <input type="checkbox"/>	Other <input type="checkbox"/>					
Sand <input type="checkbox"/> Organic <input type="checkbox"/>	0 - 10% <input type="checkbox"/>	Gas <input type="checkbox"/>					
Clay <input type="checkbox"/> Other <input type="checkbox"/>	10 - 20% <input type="checkbox"/>	Diesel <input type="checkbox"/>					
	20% - over <input type="checkbox"/>	Other <input type="checkbox"/>					

List any exception to items listed above:

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name:	Generator <input type="checkbox"/> Consultant <input type="checkbox"/>	Signature and date:	Month	Day	Year
		<i>Signature on file</i>			

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name:	Signature and date:	Month	Day	Year

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name:	Signature and date:

Generator and/or Consultant
Transporter
Recycling Facility

Manifest

TPS Technologies Soil Recycling
Non-Hazardous Soils

↓ Manifest # ↓

Date of Shipment: _____ Responsible for Payment: **Consultant** Transporter Truck #: _____ Facility #: **A04** Given by TPS: **00136** Lead: **001**

Generator's Name and Billing Address:
US Bureau of Reclamation
2666 N. Grove Industrial Dr. #106
Fresno, CA 93727 USA

Generator's Phone #: **(916) 979-2475**
Person to Contact: **Jim Scullin**
FAX#: _____

Generator's US EPA ID No: _____
Customer Account Number with TPS: **4058URE**

Consultant's Name and Billing Address:
Ecologix Environmental Services
P.O. Box 7856
Chico, CA 95927 USA

Consultant's Phone #: **(916) 342-3020**
Person to Contact: **Jon Staats**
FAX#: **(916) 342-2050**

Customer Account Number with TPS: **1002426**

Generation Site (Transport from) (name & address):
US Bureau of Reclamation
16650 Kelso Road
Tracy, CA 95376 USA

Site Phone #: **(209) 836-6261**
Person to Contact: **Jim Scullin**
FAX#: _____

BTEX Levels: _____
TMI Levels: _____
AVG Levels: _____

Designated Facility (Transport to) (name & address):
TPS TECHNOLOGIES INC.
20 Recycling Lane
Richmond, CA 94801 USA

Facility Phone #: **510-235-8778**
Person to Contact: **D. Murashima/C. Rice**
FAX#: **510-231-4154**

Facility Permit Numbers: _____

Transporter Name and Mailing Address:
Manley and Sons
8896 Elder Creek Road
Sacramento, CA 95882 USA

Transporter's Phone #: **(916) 381-6864**
Person to Contact: **Tim Manley**
FAX#: _____

Transporter's US EPA ID No: _____
Transporter's DOT No: _____
Customer Account Number with TPS: **1002487**

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/>	0 - 10% <input type="checkbox"/>	Gas <input type="checkbox"/>					
Clay <input type="checkbox"/> Other <input type="checkbox"/>	10 - 20% <input type="checkbox"/>	Diesel <input type="checkbox"/>					
	20% - over <input type="checkbox"/>	Other <input type="checkbox"/>					
Sand <input type="checkbox"/> Organic <input type="checkbox"/>	0 - 10% <input type="checkbox"/>	Gas <input type="checkbox"/>					20.08
Clay <input type="checkbox"/> Other <input type="checkbox"/>	10 - 20% <input type="checkbox"/>	Diesel <input type="checkbox"/>					
	20% - over <input type="checkbox"/>	Other <input type="checkbox"/>					

List any exception to items listed above: _____

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: **JAMES C SCULLIN** Generator Consultant Signature and date: *James C Scullin* Month: **5** Day: **16** Year: **97**

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: _____ Signature and date: _____ Month: _____ Day: _____ Year: _____

Recycling Facility
Discrepancies: _____
Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above.

Print or Type Name: _____ Signature and date: _____

Please print or type. _____

Manifest

TPS Technologies Soil Recycling Non-Hazardous Soils

↓ Manifest # ↓

Date of Shipment:		Responsible for Payment: Consultant		Transporter Truck #:		Facility #: A04		Given by TPS: 00136		Lot #: 001		
Generator's Name and Billing Address: US Bureau of Reclamation 2666 N. Grove Industrial Dr. #106 Fresno, CA 93727 USA				Generator's Phone #: (916) 979-2475		Generator's US EPA ID No:						
				Person to Contact: Jim Scullin								
				FAX#:		Customer Account Number with TPS: 40SBURE						
Consultant's Name and Billing Address: Ecologix Environmental Services P.O. Box 7856 Chico, CA 95927 USA				Consultant's Phone #: (916) 342-3020								
				Person to Contact: Jon Staats								
				FAX#: (916) 342-2050		Customer Account Number with TPS: 1002426						
Generation Site (Transport from): (Name & Address): US Bureau of Reclamation 16650 Kelso Road Tracy, CA 95376 USA				Site Phone #: (209) 836-6261		BTEX Levels:						
				Person to Contact: Jim Scullin		TMI Levels:						
				FAX#:		AVG Levels:						
Designated Facility (Transport to): (Name & Address): TPS TECHNOLOGIES INC. 20 Recycling Lane Richmond, CA 94801 USA				Facility Phone #: 510-235-8778		Facility Permit Numbers:						
				Person to Contact: D. Murashima/C. Rice								
				FAX#: 510-231-4154								
Transporter Name and Mailing Address: Manley and Sons 8896 Elder Creek Road Sacramento, CA 95882 USA				Transporter's Phone #: (916) 381-6864		Transporter's US EPA ID No.:						
				Person to Contact: Tim Manley		Transporter's DOT No.:						
				FAX#:		Customer Account Number with TPS: 1002487						
Description of Soil		Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery		Gross Weight	Tare Weight	Net Weight			
Sand <input type="checkbox"/>	Organic <input type="checkbox"/>	0-10% <input type="checkbox"/>	Gas <input type="checkbox"/>									
Clay <input type="checkbox"/>	Other <input type="checkbox"/>	10-20% <input type="checkbox"/>	Diesel <input type="checkbox"/>									
		20% - over <input type="checkbox"/>	Other <input type="checkbox"/>									
Sand <input type="checkbox"/>	Organic <input type="checkbox"/>	0-10% <input type="checkbox"/>	Gas <input type="checkbox"/>						23.87			
Clay <input type="checkbox"/>	Other <input type="checkbox"/>	10-20% <input type="checkbox"/>	Diesel <input type="checkbox"/>									
		20% - over <input type="checkbox"/>	Other <input type="checkbox"/>									
List any exception to items listed above:												
Generator's and/or consultant's certification: <i>If We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.</i>												
Print or Type Name:		Generator <input type="checkbox"/>	Consultant <input type="checkbox"/>	Signature and date:				Month	Day	Year		
JAMES C SCULLIN				<i>James C Scullin</i>				5	16	97		
Transporter's certification: <i>If We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. If We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.</i>												
Print or Type Name:		Signature and date:				Month	Day	Year				
WICKI D MARSHALL		<i>Wicki Marshall</i>				5	16	97				
Discrepancies:												
Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:												
Print or Type Name:				Signature and date:								

Generator and/or Consultant

Transporter

Recycling Facility

Please print or type.

Manifest

TPS Technologies Soil Recycling

Non-Hazardous Soils

↓ Manifest # ↓

Date of Shipment:	Responsible for Payment: Consultant	Transporter Truck #:	Facility #: A04	Given by IIS: 00136	Lot #: 001
Generator's Name and Billing Address: US Bureau of Reclamation 2666 N. Grove Industrial Dr. #106 Fresno, CA 93727 USA		Generator's Phone #: (916) 979-2475		Generator's US EPA ID No:	
		Person to Contact: Jim Scullin			
		FAX#:		Customer Account Number with IIS: 40SBURE	
Consultant's Name and Billing Address: Ecologix Environmental Services P.O. Box 7856 Chico, CA 95927 USA		Consultant's Phone #: (916) 342-3020			
		Person to Contact: Jon Staats			
		FAX# (916) 342-2050		Customer Account Number with IIS: 1002426	
Generation Site (Transport from): (name & address) US Bureau of Reclamation 16650 Kelso Road Tracy, CA 95376 USA		Site Phone #: (209) 836-6261		BLEX Levels:	
		Person to Contact: Jim Scullin		TRI Levels:	
		FAX#:		AVG Levels:	
Designated Facility (Transport to): (name & address) TPS TECHNOLOGIES INC. 20 Recycling Lane Richmond, CA 94801 USA		Facility Phone #: 510-235-8778		Facility Permit Numbers:	
		Person to Contact: D. Murahima/C. Rice			
		FAX#: 510-231-4154			
Transporter Name and Mailing Address: Manley and Sons 8896 Elder Creek Road Sacramento, CA 95882 USA		Transporter's Phone #: (916) 381-6864		Transporter's US EPA ID No.:	
		Person to Contact: Tim Manley		Transporter's DOT No.:	
		FAX#:		Customer Account Number with IIS: 1002487	

Generator and/or Consultant

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>					
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>					18.13

List any exception to items listed above

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: Generator Consultant Signature and date: *James C Scullin* Month: 5 Day: 16 Year: 97

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: *MANLEY & SONS* Signature and date: *Jeff Wood* Month: 5 Day: 16 Year: 97

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name: Signature and date:

Transporter
Recycling Facility

Please print or type.

Manifest

TPS Technologies Soil Recycling
Non-Hazardous Soils

↓ Manifest # ↓

Date of Shipment:	Responsible for Payment Consultant	Transporter Truck #:	Facility # A04	Given by TPS: 00135	001
Generator's Name and Billing Address US Bureau of Reclamation 2666 N. Grove Industrial Dr. #106 Fresno, CA 93727 USA		Generator's Phone # (916) 979-2475		Generator's US EPA ID No.	
		Person to Contact Jim Scullin			
		FAX#		Customer Account Number with TPS 40SBURE	
Consultant's Name and Billing Address Ecologix Environmental Services P.O. Box 7856 Chico, CA 95927 USA		Consultant's Phone # (916) 342-3020			
		Person to Contact Jon Staats			
		FAX# (916) 342-2050		Customer Account Number with TPS 1002426	
Generation Site (Transport from) (name & address) US Bureau of Reclamation 16650 Kelso Road Tracy, CA 95376 USA		Site Phone # (209) 836-6261		BTEX Levels	
		Person to Contact Jim Scullin		PHI Levels	
		FAX#		AVC Levels	
Designated Facility (Transport to) (name & address) TPS TECHNOLOGIES INC. 20 Recycling Lane Richmond, CA 94801 USA		Facility Phone # 510-235-8778		Facility Permit Numbers	
		Person to Contact D. Murashima/C. Rice			
		FAX# 510-231-4154			
Transporter Name and Mailing Address Manley and Sons 8896 Elder Creek Road Sacramento, CA 95882 USA		Transporter's Phone # (916) 381-6864		Transporter's US EPA ID No.:	
		Person to Contact Tim Manley		Transporter's DOT No.:	
		FAX#		Customer Account Number with TPS 1002487	

Generator and/or Consultant

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0-10% <input type="checkbox"/> 10-20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>					
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0-10% <input type="checkbox"/> 10-20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>					26.62

List any exceptions to items listed above:

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: Generator Consultant Signature and date: James C. Scullin Month: 5 Day: 16 Year: 97

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same manner as described above without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: Duke V. Lee Signature and date: [Signature] Month: 5 Day: 16 Year: 97

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name: Signature and date:

Please print or type.

Manifest

TPS Technologies Soil Recycling

Non-Hazardous Soils

Manifest # **100138**

Date of Shipment: **5-17-97** Responsible for Payment: **Consultant** Transporter Truck #: **M97 T97** Facility #: **1001** Given by TPS: **100138** Lot # **1011**

Generator's Name and Billing Address: **US Bureau of Reclamation**
2666 N. Grove Industrial Dr. #106
Fresno, CA 93727 **USA**

Generator's Phone #: **(916) 979-2475** Generator's US EPA ID No.:

Person to Contact: **Jim Scullin**

FAX#: Customer Account Number with TPS: **40USBURE**

Consultant's Name and Billing Address: **Ecologix Environmental Services**
P.O. Box 7856
Chico, CA 95927 **USA**

Consultant's Phone #: **(916) 342-3020**

Person to Contact: **Jon Staats**

FAX#: **(916) 342-2050** Customer Account Number with TPS: **1002426**

Generation Site (Transport from): (name & address)
US Bureau of Reclamation
16650 Kelso Road
Tracy, CA 95376 **USA**

Site Phone #: **(209) 836-6261** BTEX Levels

Person to Contact: **Jim Scullin** TPH Levels

FAX#: AVG. Levels

Designated Facility (Transport to): (name & address)
TPS TECHNOLOGIES INC.
20 Recycling Lane
Richmond, CA 94801 **USA**

Facility Phone #: **510-235-8778** Facility Permit Numbers

Person to Contact: **D. Murashima/C. Rice**

FAX#: **510-231-4154**

Transporter Name and Mailing Address:
Manley and Sons
8896 Elder Creek Road
Sacramento, CA 95882 **USA**

Transporter's Phone #: **(916) 381-6864** Transporter's US EPA ID No.:

Person to Contact: **Tim Manley** Transporter's DOT No.:

FAX#: Customer Account Number with TPS: **1002487**

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>			81700	59780	51990
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>					25.96

List any exception to items listed above:

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: Generator Consultant Signature and date: **Signature on file** Month: Day: Year:

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: **Ant Fischer** Signature and date: **[Signature]** Month: **5** Day: **17** Year: **97**

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name: **C. Rice** Signature and date: **[Signature]** **5/17/97**

Generator and/or Consultant

Transporter

Recycling Facility

Manifest

TPS Technologies Soil Recycling

Non-Hazardous Soils

Manifest #

Date of Shipment 5-17-97	Responsible for Payment: Consultant	Transporter, Truck #: M14/T14	Facility #: A04	Given by TPS: 00136	Load # 012
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Generator's Name and Billing Address: US Bureau of Reclamation 2666 N. Grove Industrial Dr. #106 Fresno, CA 93727 USA	Generator's Phone #: (916) 979-2475	Generator's US EPA ID No.
	Person to Contact: Jim Scullin	
	FAX#:	Customer Account Number with TPS: 4USBURE

Consultant's Name and Billing Address: Ecologix Environmental Services P.O. Box 7856 Chico, CA 95927 USA	Consultant's Phone #: (916) 342-3020	
	Person to Contact: Jon Staats	
	FAX#: (916) 342-2050	Customer Account Number with TPS: 1002426

Generation Site (Transport from): (name & address) US Bureau of Reclamation 16650 Kelso Road Tracy, CA 95376 USA	Site Phone #: (209) 836-6261	BTEX Levels
	Person to Contact: Jim Scullin	TPH Levels
	FAX#:	AVG. Levels

Designated Facility (Transport to): (name & address) TPS TECHNOLOGIES INC. 20 Recycling Lane Richmond, CA 94801 USA	Facility Phone #: 510-235-8778	Facility Permit Numbers
	Person to Contact: D. Murashima/C. Rice	
	FAX#: 510-231-4154	

Transporter Name and Mailing Address: Manley and Sons 8896 Elder Creek Road Sacramento, CA 95882 USA	Transporter's Phone #: (916) 381-6864	Transporter's US EPA ID No.:
	Person to Contact: Tim Manley	Transporter's DOT No.:
	FAX#:	Customer Account Number with TPS: 1002487

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>			82200	31400	50520
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>					2526

List any exception to items listed above:

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: Signature on file	Generator <input type="checkbox"/> Consultant <input type="checkbox"/>	Signature and date: Signature on file	Month Day Year 5 17 97
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Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: Jim Mosley	Signature and date: J. Mosley	Month Day Year 5 17 97
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Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name: C Rice	Signature and date: C Rice	Month Day Year 5-17-97
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Generator and/or Consultant

Transporter

Recycling Facility

Manifest

TPS Technologies Soil Recycling

Non-Hazardous Soils

Manifest #

Date of Shipment: 5-17-97	Responsible for Payment: Consultant	Transporter Truck #: M21721	Facility #: A04	Given by TPS: 00136	Load #: 013
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Generator's Name and Billing Address: US Bureau of Reclamation 2666 N. Grove Industrial Dr. #106 Fresno, CA 93727 USA	Generator's Phone #: (916) 979-2475	Generator's US EPA ID No.:
	Person to Contact: Jim Scullin	
	FAX#:	Customer Account Number with TPS: 4USBURE

Consultant's Name and Billing Address: Ecologix Environmental Services P.O. Box 7856 Chico, CA 95927 USA	Consultant's Phone #: (916) 342-3020	
	Person to Contact: Jon Staats	
	FAX#: (916) 342-2050	Customer Account Number with TPS: 1002426

Generation Site (Transport from): (name & address) US Bureau of Reclamation 16650 Kelso Road Tracy, CA 95376 USA	Site Phone #: (209) 836-6261	BTEX Levels
	Person to Contact: Jim Scullin	TPH Levels
	FAX#:	AVG. Levels

Designated Facility (Transport to): (name & address) TPS TECHNOLOGIES INC. 20 Recycling Lane Richmond, CA 94801 USA	Facility Phone #: 510-235-8778	Facility Permit Numbers
	Person to Contact: D. Murashima/C. Rice	
	FAX#: 510-231-4154	

Transporter Name and Mailing Address: Manley and Sons 8896 Elder Creek Road Sacramento, CA 95882 USA	Transporter's Phone #: (916) 381-6864	Transporter's US EPA ID No.:
	Person to Contact: Tim Manley	Transporter's DOT No.:
	FAX#:	Customer Account Number with TPS: 1002487

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>			83400	30740	52660
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>					26.56

List any exception to items listed above:

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: _____ Generator Consultant Signature and date: **Signature Am file** Month _____ Day _____ Year _____

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: **Duke Velaz** Signature and date: **Duke Velaz** Month **5** Day **17** Year **97**

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:
Print or Type Name: **C Rice** Signature and date: **C Rice** **5-17-97**

Generator and/or Consultant
Transporter
Recycling Facility

Manifest

TPS Technologies Soil Recycling

Non-Hazardous Soils

Manifest #

Date of Shipment: 5-17-97	Responsible for Payment: Consultant	Transporter Truck #: 117-T17	Facility #: A04	Given by TPS: 00136	Load #: 014
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Generator's Name and Billing Address: US Bureau of Reclamation 2666 N. Grove Industrial Dr. #106 Fresno, CA 93727 USA	Generator's Phone #: (916) 979-2475	Generator's US EPA ID No.:
	Person to Contact: Jim Scullin	
	FAX#:	Customer Account Number with TPS: 4USBURE

Consultant's Name and Billing Address: Ecologix Environmental Services P.O. Box 7856 Chico, CA 95927 USA	Consultant's Phone #: (916) 342-3020	
	Person to Contact: Jon Staats	
	FAX#: (916) 342-2050	Customer Account Number with TPS: 1002426

Generation Site (Transport from): (name & address) US Bureau of Reclamation 16650 Kelso Road Tracy, CA 95376 USA	Site Phone #: (209) 836-6261	BTEX Levels
	Person to Contact: Jim Scullin	TPH Levels
	FAX#:	AVG. Levels

Designated Facility (Transport to): (name & address) TPS TECHNOLOGIES INC. 20 Recycling Lane Richmond, CA 94801 USA	Facility Phone #: 510-235-8778	Facility Permit Numbers
	Person to Contact: D. Murashima/C. Rice	
	FAX#: 510-231-4154	

Transporter Name and Mailing Address: Manley and Sons 8896 Elder Creek Road Sacramento, CA 95882 USA	Transporter's Phone #: (916) 381-6864	Transporter's US EPA ID No.:
	Person to Contact: Tim Manley	Transporter's DOT No.:
	FAX#:	Customer Account Number with TPS: 1002487

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>			82100	30540	51560
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>					25.76

List any exception to items listed above:

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: **Signature on file** Generator Consultant Signature and date: _____ Month Day Year: _____

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: **Jim Ripke** Signature and date: **Jim Ripke** Month Day Year: **5 17 97**

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name: **C Rice** Signature and date: **C Rice** **5-17-97**

Generator and/or Consultant

Transporter

Recycling Facility

Manifest

TPS Technologies Soil Recycling

Non-Hazardous Soils

Manifest #

Date of Shipment:	Responsible for Payment: Consultant	Transporter Truck #: M-14	Facility #: A04	Given by TPS: 00136	Load #: 013
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Generator's Name and Billing Address: US Bureau of Reclamation 2666 N. Grove Industrial Dr. #106 Fresno, CA 93727 USA		Generator's Phone #: (916) 979-2475	Generator's US EPA ID No.:
		Person to Contact: Jim Scullin	
		FAX#:	Customer Account Number with TPS: 40USBURE

Consultant's Name and Billing Address: Ecologix Environmental Services P.O. Box 7856 Chico, CA 95927 USA		Consultant's Phone #: (916) 342-3020	
		Person to Contact: Jon Staats	
		FAX#: (916) 342-2050	Customer Account Number with TPS: 1002426

Generation Site (Transport from): (name & address) US Bureau of Reclamation 16650 Kelso Road Tracy, CA 95376 USA		Site Phone #: (209) 836-6261	BTEX Levels
		Person to Contact: Jim Scullin	TPH Levels
		FAX#:	AVG. Levels

Designated Facility (Transport to): (name & address) TPS TECHNOLOGIES INC. 20 Recycling Lane Richmond, CA 94801 USA		Facility Phone #: 510-235-8778	Facility Permit Numbers
		Person to Contact: D. Murashima/C. Rice	
		FAX#: 510-231-4154	

Transporter Name and Mailing Address: Manley and Sons 8896 Elder Creek Road Sacramento, CA 95882 USA		Transporter's Phone #: (916) 381-6864	Transporter's US EPA ID No.:
		Person to Contact: Tim Manley	Transporter's DOT No.:
		FAX#:	Customer Account Number with TPS: 1002487

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/>	0 - 10% <input type="checkbox"/>	Gas <input type="checkbox"/>					
Clay <input type="checkbox"/> Other <input type="checkbox"/>	10 - 20% <input type="checkbox"/>	Diesel <input type="checkbox"/>					
	20% - over <input type="checkbox"/>	Other <input type="checkbox"/>					
Sand <input type="checkbox"/> Organic <input type="checkbox"/>	0 - 10% <input type="checkbox"/>	Gas <input type="checkbox"/>					24.10
Clay <input type="checkbox"/> Other <input type="checkbox"/>	10 - 20% <input type="checkbox"/>	Diesel <input type="checkbox"/>					
	20% - over <input type="checkbox"/>	Other <input type="checkbox"/>					

List any exception to items listed above:

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name:	Generator <input type="checkbox"/> Consultant <input checked="" type="checkbox"/>	Signature and date:	Month	Day	Year
		<i>Signature</i>			

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name:	Signature and date:	Month	Day	Year
<i>Jim Mosley</i>	<i>J. Mosley</i>	5	17	97

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name:	Signature and date:

Generator and/or Consultant

Transporter

Recycling Facility

Manifest

TPS Technologies Soil Recycling

Non-Hazardous Soils

Manifest

Date of Shipment:	Responsible for Payment: Consultant	Transporter Truck #:	Facility #: A04	Given by TPS: 00136	Load #: 016
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Generator's Name and Billing Address: US Bureau of Reclamation 2666 N. Grove Industrial Dr. #106 Fresno, CA 93727 USA	Generator's Phone #: (916) 979-2475	Generator's US EPA ID No.:
	Person to Contact: Jim Scullin	Customer Account Number with TPS: 4116819F
	FAX#:	

Consultant's Name and Billing Address: Ecologix Environmental Services P.O. Box 7856 Chico, CA 95927 USA	Consultant's Phone #: (916) 342-3020	Customer Account Number with TPS: 1002426
	Person to Contact: Jon Staats	
	FAX#: (916) 342-2050	

Generation Site (Transport from): (name & address) US Bureau of Reclamation 16650 Kelso Road Tracy, CA 95276 USA	Site Phone #: (209) 836-6261	BTEX Levels
	Person to Contact: Jim Scullin	TPH Levels
	FAX#:	AVG. Levels

Designated Facility (Transport to): (name & address) TPS TECHNOLOGIES INC. 20 Recycling Lane Richmond, CA 94801 USA	Facility Phone #: 510-235-8778	Facility Permit Numbers
	Person to Contact: D. Muraehima/C. Rice	
	FAX#: 510-231-4154	

Transporter Name and Mailing Address: Manley and Sons 8896 Elder Creek Road Sacramento, CA 95882 USA	Transporter's Phone #: (916) 381-6864	Transporter's US EPA ID No.:
	Person to Contact: Jim Manley	Transporter's DOT No.:
	FAX#:	Customer Account Number with TPS: 1002487

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/>	0 - 10% <input type="checkbox"/>	Gas <input type="checkbox"/>					
Clay <input type="checkbox"/> Other <input type="checkbox"/>	10 - 20% <input type="checkbox"/>	Diesel <input type="checkbox"/>					
	20% - over <input type="checkbox"/>	Other <input type="checkbox"/>					
Sand <input type="checkbox"/> Organic <input type="checkbox"/>	0 - 10% <input type="checkbox"/>	Gas <input type="checkbox"/>					
Clay <input type="checkbox"/> Other <input type="checkbox"/>	10 - 20% <input type="checkbox"/>	Diesel <input type="checkbox"/>					
	20% - over <input type="checkbox"/>	Other <input type="checkbox"/>					22.87

List any exception to items listed above:

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: Generator Consultant Signature and date: *Signature on file* Month: Day: Year:

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: **Jim Ripke** Signature and date: *Jim Ripke* Month: **5** Day: **17** Year: **97**

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name: Signature and date:

Generator and/or Consultant

Transporter

Recycling Facility

TPS Technologies Soil Recycling

Non-Hazardous Soils

Manifest

Manifest # **017**

Date of Shipment:	Responsible for Payment: Consultant	Transporter Truck #:	Facility #: A04	Given by TPS: 00136	Load #: 017
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Generator's Name and Billing Address: US Bureau of Reclamation 2666 N. Grove Industrial Dr. #106 Fresno, CA 93727 USA	Generator's Phone #: (916) 979-2475 Person to Contact: Jim Scullin FAX#:	Generator's US EPA ID No.: Customer Account Number with TPS: 4UCBURE
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Consultant's Name and Billing Address: Ecologix Environmental Services P.O. Box 7856 Chico, CA 95927 USA	Consultant's Phone #: (916) 342-3020 Person to Contact: Jon Staats FAX#:	Consultant's US EPA ID No.: Customer Account Number with TPS: 1002126
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Generation Site (Transport from): (name & address) US Bureau of Reclamation 16650 Kelso Road Tracy, CA 95376 USA	Site Phone #: (209) 836-6261 Person to Contact: Jim Scullin FAX#:	BTEX Levels: TPH Levels: AVG. Levels:
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Designated Facility (Transport to): (name & address) TPS TECHNOLOGIES INC. 20 Recycling Lane Richmond, CA 94801 USA	Facility Phone #: 510-235-8778 Person to Contact: D. Murashima/C. Rice FAX#:	Facility Permit Numbers:
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Transporter Name and Mailing Address: Manley and Sons 8896 Elder Creek Road Sacramento, CA 95882 USA	Transporter's Phone #: (916) 381-6864 Person to Contact: Jim Manley FAX#:	Transporter's US EPA ID No.: Transporter's DOT No.: Customer Account Number with TPS: 1002487
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Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>					23.00

List any exception to items listed above:

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name:	Generator <input type="checkbox"/> Consultant <input checked="" type="checkbox"/>	Signature and date: <i>Signature on file</i>	Month: Day: Year:
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Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name:	Signature and date: <i>D. J. Velazquez</i>	Month: Day: Year: 5 17 97
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Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name:	Signature and date:
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Generator and/or Consultant

Transporter

Recycling Facility

Manifest

TPS Technologies Soil Recycling

Non-Hazardous Soils

Manifest #

Date of Shipment:	Responsible for Payment: Consultant	Transporter Truck #: W197+T97	Facility #: A04	Given by TPS: 00136	Load #: 018
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Generator's Name and Billing Address: US Bureau of Reclamation 2666 N. Grove Industrial Dr. #106 Fresno, CA 93727 USA	Generator's Phone #: (916) 979-2475	Generator's US EPA ID No.:
	Person to Contact: Jim Scullin	Customer Account Number with TPS: 4115BIURE
	FAX#:	

Consultant's Name and Billing Address: Ecologix Environmental Services P.O. Box 7856 Chico, CA 95927 USA	Consultant's Phone #: (916) 342-3020	Customer Account Number with TPS:
	Person to Contact: Jon Steate	1002426
	FAX#: (916) 342-2050	

Generation Site (Transport from). (name & address) US Bureau of Reclamation 16650 Kelso Road Tracy, CA 95276 USA	Site Phone #: (209) 836-6261	BTEX Levels
	Person to Contact: Jim Scullin	TPH Levels
	FAX#:	AVG. Levels

Designated Facility (Transport to): (name & address) TPS TECHNOLOGIES INC. 20 Recycling Lane Richmond, CA 94801 USA	Facility Phone #: 510-235-8778	Facility Permit Numbers
	Person to Contact: D. Murashima/C. Rice	
	FAX#: 510-231-4154	

Transporter Name and Mailing Address: Manley and Sons 8896 Elder Creek Road Sacramento, CA 95882 USA	Transporter's Phone #: (916) 381-6864	Transporter's US EPA ID No.:
	Person to Contact: Tim Manley	Transporter's DOT No.:
	FAX#:	Customer Account Number with TPS: 1002487

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/>	0 - 10% <input type="checkbox"/>	Gas <input type="checkbox"/>					
Clay <input type="checkbox"/> Other <input type="checkbox"/>	10 - 20% <input type="checkbox"/>	Diesel <input type="checkbox"/>					
	20% - over <input type="checkbox"/>	Other <input type="checkbox"/>					
Sand <input type="checkbox"/> Organic <input type="checkbox"/>	0 - 10% <input type="checkbox"/>	Gas <input type="checkbox"/>					26.76
Clay <input type="checkbox"/> Other <input type="checkbox"/>	10 - 20% <input type="checkbox"/>	Diesel <input type="checkbox"/>					
	20% - over <input type="checkbox"/>	Other <input type="checkbox"/>					

List any exception to items listed above:

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: Generator <input type="checkbox"/> Consultant <input checked="" type="checkbox"/>	Signature and date: <i>Signature</i> AM 1/10	Month	Day	Year
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Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: Art Fisch	Signature and date: <i>Signature</i> 5/17/97	Month	Day	Year
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Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name:	Signature and date:
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Generator and/or Consultant

Transporter

Recycling Facility

Manifest

TPS Technologies Soil Recycling

Non-Hazardous Soils

Manifest #

Date of Shipment 5-17-97	Responsible for Payment Consultant	Transporter Truck #: M10-T18	Facility #: A04	Given by TPS: 00136	Load # 019
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Generator's Name and Billing Address: US Bureau of Reclamation 2666 N. Grove Industrial Dr. #106 Fresno, CA 93727 USA	Generator's Phone #: (916) 979-2475	Generator's US EPA ID No.
	Person to Contact: Jim Scullin	Customer Account Number with TPS: 4UGBURE
	FAX#:	

Consultant's Name and Billing Address: Ecologix Environmental Services P.O. Box 7856 Chico, CA 95927 USA	Consultant's Phone #: (916) 342-3020	Customer Account Number with TPS:
	Person to Contact: Jon Staats	Customer Account Number with TPS: 1002426
	FAX#: (916) 342-2050	

Generation Site (Transport from): (name & address) US Bureau of Reclamation 16650 Kelso Road Tracy, CA 95376 USA	Site Phone #: (916) 836-6261	BTEX Levels
	Person to Contact: Jim Scullin	TPH Levels
	FAX#:	AVG. Levels

Designated Facility (transport to): (name & address) TPS TECHNOLOGIES INC. 20 Recycling Lane Richmond, CA 94801 USA	Facility Phone #: 510-235-8778	Facility Permit Numbers
	Person to Contact: D. Murashima/C. Rice	
	FAX#:	

Transporter Name and Mailing Address: Manley and Sons 8896 Elder Creek Road Sacramento, CA 95827 USA	Transporter's Phone #: (916) 381-6864	Transporter's US EPA ID No.:
	Person to Contact: Jim Manley	Transporter's DOT No.:
	FAX#:	Customer Account Number with TPS: 1002487

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/>	0 - 10% <input type="checkbox"/>	Gas <input type="checkbox"/>			79800	30040	49840
Clay <input type="checkbox"/> Other <input type="checkbox"/>	10 - 20% <input type="checkbox"/>	Diesel <input type="checkbox"/>					
	20% - over <input type="checkbox"/>	Other <input type="checkbox"/>					
Sand <input type="checkbox"/> Organic <input type="checkbox"/>	0 - 10% <input type="checkbox"/>	Gas <input type="checkbox"/>					24.92
Clay <input type="checkbox"/> Other <input type="checkbox"/>	10 - 20% <input type="checkbox"/>	Diesel <input type="checkbox"/>					
	20% - over <input type="checkbox"/>	Other <input type="checkbox"/>					

List any exception to items listed above:

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: _____ Generator Consultant Signature and date: *Signature on file* Month _____ Day _____ Year _____

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: _____ Signature and date: _____ Month _____ Day _____ Year _____

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name: *C. Rice* Signature and date: *C. Rice* 5-17-97

Generator and/or Consultant

Transporter

Recycling Facility

Manifest

TPS Technologies Soil Recycling

Non-Hazardous Soils

Manifest #

Date of Shipment: 5-17-97	Responsible for Payment: Consultant	Transporter Truck #: M11-T11	Facility #: A04	Given by TPS: 00136	Load #: 020
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Generator's Name and Billing Address: US Bureau of Reclamation 2666 N. Grove Industrial Dr. #106 Fresno, CA 93727 USA	Generator's Phone #: (916) 979-2475	Generator's US EPA ID No.:
	Person to Contact: Jim Scullin	
	FAX#:	Customer Account Number with TPS: 411SRUEP

Consultant's Name and Billing Address: Ecologix Environmental Services P.O. Box 7856 Chico, CA 95927 USA	Consultant's Phone #: (916) 342-3020	
	Person to Contact: Jon Staats	
	FAX#: (916) 342-2050	Customer Account Number with TPS: 1002426

Generation Site (Transport from): (name & address) US Bureau of Reclamation 16650 Kelso Road Tracy, CA 95276 USA	Site Phone #: (209) 836-6261	BTEX Levels
	Person to Contact: Jim Scullin	TPH Levels
	FAX#:	AVG. Levels

Designated Facility (Transport to): (name & address) TPS TECHNOLOGIES INC. 20 Recycling Lane Richmond, CA 94801 USA	Facility Phone #: 510 235 8778	Facility Permit Numbers
	Person to Contact: D. Murashima/C. Rice	
	FAX#: 510 231 4154	

Transporter Name and Mailing Address: Manley and Sons 8896 Elder Creek Road Sacramento, CA 95862 USA	Transporter's Phone #: (916) 381 6864	Transporter's US EPA ID No.:
	Person to Contact: Tim Manley	Transporter's DOT No.:
	FAX#:	Customer Account Number with TPS: 1002487

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>			79600	37520	40160
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>					70.00

List any exception to items listed above:

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: Signature on file	Generator <input type="checkbox"/> Consultant <input type="checkbox"/>	Signature and date: [Signature]	Month Day Year: [] [] []
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Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: THOMAS F. CRAYTON	Signature and date: [Signature]	Month Day Year: 5/17/97
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Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name: C. Rice	Signature and date: [Signature]	Month Day Year: 5-17-97
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Generator and/or Consultant

Transporter

Recycling Facility

Manifest

TPS Technologies Soil Recycling

Non-Hazardous Soils

Manifest

Date of Shipment: 5-17-97	Responsible for Payment: Consultant	Transporter Truck #: 5A7-T47	Facility #: A04	Given by TPS: 00136	Load #: 021
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Generator's Name and Billing Address: US Bureau of Reclamation 2666 N. Grove Industrial Dr. #106 Fresno, CA 93727 USA	Generator's Phone #: (916) 979-2475	Generator's US EPA ID No.:
	Person to Contact: Jim Scullin	Customer Account Number with TPS: 415BURE
	FAX#:	

Consultant's Name and Billing Address: Ecologix Environmental Services P.O. Box 7856 Chico, CA 95927 USA	Consultant's Phone #: (916) 342-3020	Customer Account Number with TPS:
	Person to Contact: Jon Staats	
	FAX#: (916) 342-2050	1002426

Generation Site (Transport from): (name & address) US Bureau of Reclamation 16650 Kelso Road Tracy, CA 95376 USA	Site Phone #: (209) 836-6261	BTEX Levels
	Person to Contact: Jim Scullin	TPH Levels
	FAX#:	AVG. Levels

Designated Facility (Transport to): (name & address) TPS TECHNOLOGIES INC. 20 Recycling Lane Richmond, CA 94801 USA	Facility Phone #: 510 235 8778	Facility Permit Numbers
	Person to Contact: D. Murashima/C. Rice	
	FAX#:	

Transporter Name and Mailing Address: Manley and Sons 8896 Elder Creek Road Sacramento, CA 95882 USA	Transporter's Phone #: (916) 381-6864	Transporter's US EPA ID No.:
	Person to Contact: Jim Manley	Transporter's DOT No.:
	FAX#:	Customer Account Number with TPS: 1002487

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>					
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>			60600	28100	40580
							20.89

List any exception to items listed above:

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: Signature on file	Generator <input type="checkbox"/> Consultant <input type="checkbox"/>	Signature and date:	Month Day Year:
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Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: Mike Williams	Signature and date:	Month Day Year:
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Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name: C Rice	Signature and date:
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Generator and/or Consultant
Transporter
Recycling Facility

Manifest

TPS Technologies Soil Recycling

Non-Hazardous Soils

Manifest #

Date of Shipment:	Responsible for Payment:	Transporter Truck #:	Facility #:	Given by TPS:	Load #:
	Consultant		A04	00135	022

Generator's Name and Billing Address: US Bureau of Reclamation 2666 N. Grove Industrial Dr. #106 Fresno, CA 93727 USA	Generator's Phone #:	Generator's US EPA ID No.
	Person to Contact: (916) 979-2475	
	FAX #: Jim Scullin	Customer Account Number with TPS:

Consultant's Name and Billing Address: Ecologix Environmental Services P.O. Box 7856 Chico, CA 95927 USA	Consultant's Phone #:	4USBUKE
	Person to Contact: (916) 342-3020	
	FAX #: Jon Staats	Customer Account Number with TPS:

Generation Site (Transport from): (name & address) US Bureau of Reclamation 16650 Kelso Road Marysville, CA 95976 USA	Site Phone #:	1002425
	Person to Contact: (916) 542-2650	BTEX Levels
	FAX #: Jim Scullin	TPH Levels

Designated Facility (transport to): (name & address) TPS TECHNOLOGIES INC. 20 Recycling Lane Richmond, CA 94861 USA	Facility Phone #:	Facility Permit Numbers
	Person to Contact: 510-235-8778	
	FAX #: D. Murashima/C. Rice	

Transporter Name and Mailing Address: Manley and Sons 8896 Elder Creek Road Sacramento, CA 95882 USA	Transporter's Phone #:	Transporter's US EPA ID No.:
	Person to Contact: (916) 381-6854	Transporter's DOT No.:
	FAX #: Jim Manley	Customer Account Number with TPS: 1002487

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/>	0 - 10% <input type="checkbox"/>	Gas <input type="checkbox"/>					
Clay <input type="checkbox"/> Other <input type="checkbox"/>	10 - 20% <input type="checkbox"/>	Diesel <input type="checkbox"/>					
	20% - over <input type="checkbox"/>	Other <input type="checkbox"/>					
Sand <input type="checkbox"/> Organic <input type="checkbox"/>	0 - 10% <input type="checkbox"/>	Gas <input type="checkbox"/>					
Clay <input type="checkbox"/> Other <input type="checkbox"/>	10 - 20% <input type="checkbox"/>	Diesel <input type="checkbox"/>					
	20% - over <input type="checkbox"/>	Other <input type="checkbox"/>					21.18

List any exception to items listed above:

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: Generator Consultant Signature and date: *Signature on file* Month Day Year

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: THOMAS F. CRAYTON Signature and date: *Thomas F. Crayton* Month Day Year: 5 17 97

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name: Signature and date:

Generator and/or Consultant

Transporter

Recycling Facility

Manifest

TPS Technologies Soil Recycling

Non-Hazardous Soils

Manifest #

Date of Shipment	Responsible for Payment Consultant	Transporter Truck #	Facility # A04	Given by TPS: 00136	Load # 023
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Generator's Name and Billing Address:
 US Bureau of Reclamation
 2666 N. Grove Industrial Dr. #106
 Fresno, CA 93727
 USA

Generator's Phone #:
(916) 979-2475
 Person to Contact:
Jim Scullin
 FAX#:
 Generator's US EPA ID No.
 Customer Account Number with TPS:
AUSRIPE

Consultant's Name and Billing Address:
 Ecologix Environmental Services
 P.O. Box 7856
 Chico, CA 95927
 USA

Consultant's Phone #:
(916) 342-3020
 Person to Contact:
Jon Staats
 FAX#:
 Customer Account Number with TPS:
1002426

Generation Site (Transport from): (name & address)
 US Bureau of Reclamation
 16650 Kelso Road
 Tracy, CA 95376
 USA

Site Phone #:
(209) 836-6261
 Person to Contact:
Jim Scullin
 FAX#:
 BTEX Levels
 TPH Levels
 AVG. Levels

Designated Facility (Transport to): (name & address)
 TPS TECHNOLOGIES INC.
 20 Recycling Lane
 Richmond, CA 94801
 USA

Facility Phone #:
510-235-8778
 Person to Contact:
D. Murashima/C. Rice
 FAX#:
 Facility Permit Numbers

Transporter Name and Mailing Address:
 Manley and Sons
 8896 Elder Creek Road
 Sacramento, CA 95882
 USA

Transporter's Phone #:
(916) 381-6864
 Person to Contact:
Jim Manley
 FAX#:
 Transporter's US EPA ID No.:
 Transporter's DOT No.:
 Customer Account Number with TPS:
1002487

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/>	0 - 10% <input type="checkbox"/>	Gas <input type="checkbox"/>					
Clay <input type="checkbox"/> Other <input type="checkbox"/>	10 - 20% <input type="checkbox"/>	Diesel <input type="checkbox"/>					
	20% - over <input type="checkbox"/>	Other <input type="checkbox"/>					
Sand <input type="checkbox"/> Organic <input type="checkbox"/>	0 - 10% <input type="checkbox"/>	Gas <input type="checkbox"/>					
Clay <input type="checkbox"/> Other <input type="checkbox"/>	10 - 20% <input type="checkbox"/>	Diesel <input type="checkbox"/>					24.43
	20% - over <input type="checkbox"/>	Other <input type="checkbox"/>					

List any exception to items listed above:

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: Generator Consultant Signature and date: *Signature on file* Month Day Year

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: Signature and date: Month Day Year

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name: Signature and date:

Print or Type Name:

Manifest

TPS Technologies Soil Recycling

Non-Hazardous Soils

Manifest #

Date of Shipment: 5-19-97	Responsible for Payment: Consultant	Transporter Truck #: UA/TM	Facility #: A04	Given by TPS: 00136	Load #: 025
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Generator's Name and Billing Address: US Bureau of Reclamation 2666 N. Grove Industrial Dr. #106 Fresno, CA 93727 USA	Generator's Phone #: (916) 979-2475	Generator's US EPA ID No.:
	Person to Contact: Jim Scullin	
	FAX#:	Customer Account Number with TPS: 4HSBIURE

Consultant's Name and Billing Address: Ecologix Environmental Services P.O. Box 7856 Chico, CA 95927 USA	Consultant's Phone #: (916) 342-3020	
	Person to Contact: Jon Staats	
	FAX#: (916) 342-2050	Customer Account Number with TPS: 1002426

Generation Site (Transport from): (name & address) US Bureau of Reclamation 16650 Kelso Road Tracy, CA 95376 USA	Site Phone #: (209) 836-6261	BTEX Levels
	Person to Contact: Jim Scullin	TPH Levels
	FAX#:	AVG. Levels

Designated Facility (Transport to): (name & address) TPS TECHNOLOGIES INC. 20 Recycling Lane Richmond, CA 94801 USA	Facility Phone #: 510-235-8778	Facility Permit Numbers
	Person to Contact: D. Murashima/C. Rice	
	FAX#: 510-231-4154	

Transporter Name and Mailing Address: Manley and Sons 8896 Elder Creek Road Sacramento, CA 95882 USA	Transporter's Phone #: (916) 381-6864	Transporter's US EPA ID No.:
	Person to Contact: Tim Manley	Transporter's DOT No.:
	FAX#:	Customer Account Number with TPS: 1002487

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/>	0 - 10% <input type="checkbox"/>	Gas <input type="checkbox"/>			84300	31680	52620
Clay <input type="checkbox"/> Other <input type="checkbox"/>	10 - 20% <input type="checkbox"/>	Diesel <input type="checkbox"/>					
	20% - over <input type="checkbox"/>	Other <input type="checkbox"/>					
Sand <input type="checkbox"/> Organic <input type="checkbox"/>	0 - 10% <input type="checkbox"/>	Gas <input type="checkbox"/>					26.31
Clay <input type="checkbox"/> Other <input type="checkbox"/>	10 - 20% <input type="checkbox"/>	Diesel <input type="checkbox"/>					
	20% - over <input type="checkbox"/>	Other <input type="checkbox"/>					

List any exception to items listed above:

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: Generator Consultant Signature and date: *Signature on file* Month: Day: Year:

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: *Jim Manley* Signature and date: *J. Manley* Month: **5** Day: **19** Year: **97**

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:
Print or Type Name: *C. Rice* Signature and date: *C. Rice* **5-19-97**

Generator and/or Consultant

Transporter

Recycling Facility

Manifest

TPS Technologies Soil Recycling

Non-Hazardous Soils

Manifest #

Date of Shipment: 5-19-97	Responsible for Payment: Consultant	Transporter Truck #: U07-T97	Facility #: A04	Given by TPS: 00136	Load #: 026
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Generator's Name and Billing Address: US Bureau of Reclamation 2666 N. Grove Industrial Dr. #106 Fresno, CA 93727 USA	Generator's Phone #: (916) 979-2475	Generator's US EPA ID No.:
	Person to Contact: Jim Scullin	
	FAX#:	Customer Account Number with TPS: 4115BURE

Consultant's Name and Billing Address: Ecologix Environmental Services P.O. Box 7856 Chico, CA 95927 USA	Consultant's Phone #: (916) 342-3020	
	Person to Contact: Jon Staats	
	FAX#: (916) 342-2050	Customer Account Number with TPS: 1002A26

Generation Site (Transport from): (name & address) US Bureau of Reclamation 16650 Kelso Road Tracy, CA 95276 USA	Site Phone #: (209) 836-6261	BTEX Levels
	Person to Contact: Jim Scullin	TPH Levels
	FAX#:	AVG. Levels

Designated Facility (Transport to): (name & address) TPS TECHNOLOGIES INC. 20 Recycling Lane Richmond, CA 94801 USA	Facility Phone #: 510-235-8778	Facility Permit Numbers
	Person to Contact: D. Muraahima/C. Rice	
	FAX#: 510-221-4154	

Transporter Name and Mailing Address: Manley and Sons 8896 Elder Creek Road Sacramento, CA 95862 USA	Transporter's Phone #: (916) 381-6864	Transporter's US EPA ID No.:
	Person to Contact: Tim Manley	Transporter's DOT No.:
	FAX#:	Customer Account Number with TPS: 1002487

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>			7600	3170	4450
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>					27.00

List any exception to items listed above:

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: Generator Consultant Signature and date: _____ Month _____ Day _____ Year _____

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: **Art Fischer** Signature and date: _____ Month **5** Day **19** Year **97**

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name: **C Rice** Signature and date: **C Rice** **5-19-97**

Generator and/or Consultant

Transporter

Recycling Facility

Manifest **TPS Technologies Soil Recycling** **Non-Hazardous Soils** **Manifest #**

of Shipment: **-19-97** Responsible for Payment: **Consultant** Transporter Truck #: **H17/T17** Facility #: **A04** Given by TPS: **00136** Load #: **027**

Generator's Name and Billing Address: **US Bureau of Reclamation**
666 N. Grove Industrial Dr. #106
Fresno, CA 93727 USA
 Generator's Phone #: **(916) 979-2475**
 Person to Contact: **Jim Scullin**
 FAX#: **[blank]**
 Generator's US EPA ID No.: **[blank]**
 Customer Account Number with TPS: **41USBURE**

Consultant's Name and Billing Address: **Ecologix Environmental Services**
P.O. Box 7856
Fresno, CA 95927 USA
 Consultant's Phone #: **(916) 342-3020**
 Person to Contact: **Jon Staate**
 FAX#: **[blank]**
 Customer Account Number with TPS: **[blank]**

Generation Site (Transport from): (name & address)
US Bureau of Reclamation
6650 Kelso Road
Fresno, CA 95276 USA
 Site Phone #: **(209) 836-6261**
 Person to Contact: **Jim Scullin**
 FAX#: **[blank]**
 BTEX Levels: **[blank]**
 TPH Levels: **[blank]**
 AVG. Levels: **[blank]**

Designated Facility (Transport to): (name & address)
TPS TECHNOLOGIES INC.
Soil Recycling Lane
Fresno, CA 94801 USA
 Facility Phone #: **510-235-8778**
 Person to Contact: **D. Murashima/C. Rice**
 FAX#: **[blank]**
 Facility Permut Numbers: **[blank]**

Transporter Name and Mailing Address:
Manley and Sons
196 Elder Creek Road
Grass Valley, CA 95882 USA
 Transporter's Phone #: **(916) 381-6864**
 Person to Contact: **Tim Manley**
 FAX#: **[blank]**
 Transporter's US EPA ID No.: **[blank]**
 Transporter's DOT No.: **[blank]**
 Customer Account Number with TPS: **1002487**

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
<input type="checkbox"/> Organic <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>					
<input type="checkbox"/> Organic <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>			76370	40560	45140
							24.87

exception to items listed above:

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Type Name: Generator Consultant Signature and date: **Signature on file** Month: **[blank]** Day: **[blank]** Year: **[blank]**

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Type Name: **Jim Ripke** Signature and date: **Jim Ripke** Month: **5** Day: **14** Year: **97**

Designated Facility certifies the receipt of the soil covered by this manifest except as noted above:

Type Name: **C. Rice** Signature and date: **[Signature]** **7-19-97**

Manifest

TPS Technologies Soil Recycling

Non-Hazardous Soils

Manifest #

Date of Shipment:	Responsible for Payment: Consultant	Transporter Truck #:	Facility #: A04	Given by TPS: 00136	Load #: 028
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Generator's Name and Billing Address: US Bureau of Reclamation 2666 N. Grove Industrial Dr. #106 Fresno, CA 93727 USA	Generator's Phone #: (916) 979-2475	Generator's US EPA ID No.:
	Person to Contact: Jim Scullin	Customer Account Number with TPS: 4AUSRIPE
	FAX#:	

Consultant's Name and Billing Address: Ecologix Environmental Services P.O. Box 7856 Chico, CA 95927 USA	Consultant's Phone #: (916) 342-3020	Customer Account Number with TPS:
	Person to Contact: Jon Staats	
	FAX#: (916) 342-2050	1002426

Generation Site (Transport from): (name & address) US Bureau of Reclamation 16650 Kelso Road Tracy, CA 95376 USA	Site Phone #: (209) 836-6261	BTEX Levels
	Person to Contact: Jim Scullin	TPH Levels
	FAX#:	AVG. Levels

Designated Facility (Transport to): (name & address) TPS TECHNOLOGIES INC. 20 Recycling Lane Richmond, CA 94801 USA	Facility Phone #: 510-235-8778	Facility Permit Numbers
	Person to Contact: D. Murashima/C. Rice	
	FAX#:	

Transporter Name and Mailing Address: Manley and Sons 8896 Elder Creek Road Sacramento, CA 95882 USA	Transporter's Phone #: (916) 381-6864	Transporter's US EPA ID No.:
	Person to Contact: Tim Manley	Transporter's DOT No.:
	FAX#:	Customer Account Number with TPS: 1002487

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/>	0 - 10% <input type="checkbox"/>	Gas <input type="checkbox"/>					
Clay <input type="checkbox"/> Other <input type="checkbox"/>	10 - 20% <input type="checkbox"/>	Diesel <input type="checkbox"/>					
	20% - over <input type="checkbox"/>	Other <input type="checkbox"/>					
Sand <input type="checkbox"/> Organic <input type="checkbox"/>	0 - 10% <input type="checkbox"/>	Gas <input type="checkbox"/>					
Clay <input type="checkbox"/> Other <input type="checkbox"/>	10 - 20% <input type="checkbox"/>	Diesel <input type="checkbox"/>					
	20% - over <input type="checkbox"/>	Other <input type="checkbox"/>					20.43

List any exception to items listed above:

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name:	Generator <input type="checkbox"/> Consultant <input type="checkbox"/>	Signature and date:	Month	Day	Year
---------------------	--	---------------------	-------	-----	------

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name:	Signature and date:	Month	Day	Year
Jim Manley	<i>[Signature]</i>	5	19	97

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name:	Signature and date:
---------------------	---------------------

Generator and/or Consultant

Transporter

Recycling Facility

Manifest

TPS Technologies Soil Recycling

Non-Hazardous Soils

Manifest

Date of Shipment:	Responsible for Payment: Consultant	Transporter Truck #: M97 + T97	Facility #: A04	Given by TPS: 00136	Load #: 029
-------------------	---	--	---------------------------	-------------------------------	-----------------------

Generator's Name and Billing Address: US Bureau of Reclamation 2666 N. Grove Industrial Dr. #106 Fresno, CA 93727 USA	Generator's Phone #: (916) 979-2475 Person to Contact: Jim Scullin FAX#:	Generator's US EPA ID No. Customer Account Number with TPS: 41BSRIRE
---	--	---

Consultant's Name and Billing Address: Ecologix Environmental Services P.O. Box 7856 Chico, CA 95927 USA	Consultant's Phone #: (916) 342-3020 Person to Contact: Jon Staats FAX#: (916) 342-2050	Customer Account Number with TPS: 1002426
--	---	---

Generation Site (Transport from): (name & address) US Bureau of Reclamation 16650 Kelso Road Tracy, CA 95276 USA	Site Phone #: (209) 836-6261 Person to Contact: Jim Scullin FAX#:	BTEX Levels TPH Levels AVG. Levels
--	---	--

Designated Facility (Transport to): (name & address) TPS TECHNOLOGIES INC. 20 Recycling Lane Richmond, CA 94801 USA	Facility Phone #: 510-235-8778 Person to Contact: D. Murashima/C. Rice FAX#: 510-221-4154	Facility Permit Numbers
---	---	-------------------------

Transporter Name and Mailing Address: Manley and Sons 8896 Elder Creek Road Sacramento, CA 95882 USA	Transporter's Phone #: (916) 381-6864 Person to Contact: Tim Manley FAX#:	Transporter's US EPA ID No. Transporter's DOT No. Customer Account Number with TPS: 1002487
--	---	---

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>					
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>					13.47

List any exception to items listed above:

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: SIGNATURE ON FILE	Generator <input type="checkbox"/> Consultant <input type="checkbox"/>	Signature and date: [Signature]	Month: 5 Day: 19 Year: 1997
---	--	---	--

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: ALT FISCHER	Signature and date: [Signature]	Month: 5 Day: 19 Year: 1997
---	---	--

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:	
Print or Type Name:	Signature and date:

Generator and/or Consultant

Transporter

Recycling Facility

whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by law (commencing with Section 12700) of Division 6 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

JOB COPY

065657

MATERIAL RECEIPT

TEICHERT AGGREGATES

PLANT OFFICE: PERKINS... (916) 388-8900 MISS. BAR... (916) 988-2489
 HALLWOOD... (916) 749-8820 TRACY... (209) 832-4160 MARTIS VALLEY... (916) 587-3811
 WOODLAND... (916) 881-4290 ESPARTO... (916) 688-6538

DATE WEIGHED	TIME	PRODUCT DESCRIPTION	NET TONS	NET TONS	NET TONS	NET TONS	NET TONS	TRUCK NUMBER
05/16/97	12:05	DTG	36.02	16.58	19.44	19.44	TON	195457
SOLD TO (CUSTOMER, JOB, AND DELIVERY ADDRESS)		TRUCK ID	TLR ID	TLR ID	TLR ID	TLR ID	TLR ID	TLR ID
19694 McDonald & Son Trucking		M79						
TRACY PUMPING PLANT 16800 KELSO RD								
TRACY								
pea gravel in concrete out		19694	101719	1/11	8 1			
PICK UP		Tracy Roc	131	Deana Thomas				DEPUTY

ALL NEW 1/98

whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

JOB COPY

065975



TEICHERT AGGREGATES

MATERIAL RECEIPT

PLANT OFFICE: PERKINS... (916) 386-6900 MISS. BAR... (916) 988-2468
 HALLWOOD... (916) 749-8620 TRACY... (209) 832-4150 MARTIS VALLEY... (916) 587-3811
 WOODLAND... (916) 661-4290 ESPARTO... (916) 666-6538

DATE WEIGHED	TIME	ORG	GROSS TONS	TARE TONS	NET TONS	TRUCK NUMBER	TKT QTY
05/19/97	08:50	DPG	39.80	15.16	24.64	24.64 TON	65975
SOLD TO (CUSTOMER, JOB, AND DELIVERY ADDRESS):			TRUCK NUMBER		TRUCK ID.	TLR ID.	TOT QTY
19904 PetroCon Inc			N21		3L96514	1UK3337	193.62
TRACY PUMPING STATION			YOUR ORDER NUMBER		LOAD NO.	TOTAL TONS	
					8		
CUSTOMER NO.			JOB REF. NO.		PROD. CODE	TRK TYPE & ZONE	
19904			101720		1711	E 2	
UNIT PRICE			AMOUNT		TAX AMT.	AMOUNT DUE	
WEIGHED AT			TEICHERT AGGREGATES-WEIGHMASTER				
PICK UP			Tracy Roc 131		Julie Range		DEPUTY

WEIGHMASTER CERTIFICATE

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

JOB COPY

066045



TEICHERT AGGREGATES

MATERIAL RECEIPT

PLANT OFFICE: PERKINS... (916) 386-6900 MISS. BAR... (916) 988-2468
 HALLWOOD... (916) 749-8620 TRACY... (209) 832-4150 MARTIS VALLEY... (916) 587-3811
 WOODLAND... (916) 661-4290 ESPARTO... (916) 666-6538

DATE WEIGHED	TIME	ORG	GROSS TONS	TARE TONS	NET TONS	TRUCK NUMBER	TKT QTY
05/19/97	09:56	DPG	39.80	15.16	24.64	24.64 TON	66045
SOLD TO (CUSTOMER, JOB, AND DELIVERY ADDRESS):			TRUCK NUMBER		TRUCK ID.	TLR ID.	TOT QTY
19904 PetroCon Inc			N21		3L96514	1UK3337	330.60
TRACY PUMPING STATION			YOUR ORDER NUMBER		LOAD NO.	TOTAL TONS	
					14		
CUSTOMER NO.			JOB REF. NO.		PROD. CODE	TRK TYPE & ZONE	
19904			101720		1711	E 2	
UNIT PRICE			AMOUNT		TAX AMT.	AMOUNT DUE	
WEIGHED AT			TEICHERT AGGREGATES-WEIGHMASTER				
PICK UP			Tracy Roc 131		Julie Range		DEPUTY

RECEIVED ON JOB BY (PLEASE SIGN ABOVE) * SEE REVERSE FOR PLANT LOCATION DRIVER ON TRUCK FOR ALL WEIGHS
 TERMS OF SALE: Late Charges and Attorney's Fees, Customer / Buyer agrees to pay late charges on all past due accounts at the rate of eighteen percent and to pay Teichert Aggregates' reasonable attorneys fees and costs incurred if legal action is commenced to collect amounts not paid when due or to enforce any other condition of the terms of sale.
 DRIVER SIGN HERE

JOB COPY

065840

MATERIAL RECEIPT

TEICHERT AGGREGATES

PLANT OFFICE: PERKINS... (916) 388-6900 MISS. BAR... (916) 988-2469
 HALLWOOD... (916) 749-8620 TRACY... (209) 832-4150 MARTIS VALLEY... (916) 587-3811
 WOODLAND... (916) 661-4290 ESPARTO... (916) 666-6538

DATE WEIGHED	TIME	PRODUCT DESCRIPTION	GROSS TONS	TARE TONS	NET TONS	TKT QTY	TRUCK NUMBER	TRUCK LD.	TRUCK LD.	TRUCK LD.	TRUCK LD.	
05/19/97	06:24	DRG	39.57	15.16	24.51	24.51 TON	65840					
SOLD TO (CUSTOMER, JOB, AND DELIVERY ADDRESS)			TRUCK NUMBER		TRUCK LD.		TRUCK LD.		TRUCK LD.		TRUCK LD.	
19904 PetroCon Inc			W28		4447508		11U7223					
TRACY PUMPING STATION			YOUR ORDER NUMBER		LOAD NO.		TOTAL TONS		TKT QTY		TRUCK LD.	
					2		24.51		24.51			
PICK UP			CUSTOMER NO.		JOB REF. NO.		PROD. CODE		TRK. TYPE & ZONE		TRUCK LD.	
			19904		101720		1711		8 2			
			UNIT PRICE		AMOUNT		TAX AMT.		AMOUNT/DWG		TRUCK LD.	
WEIGHED AT			TEICHERT AGGREGATES-WEIGHMASTER									
Tracy Roc			131		Deana Thomas		DEPUTY					

TERMS OF SALE
 Late Charges and Attorney's Fees: Customer/ Buyer agrees to pay late charges on all past due accounts at the rate of eighteen percent and to pay Teichert Aggregate's reasonable attorney's fees and costs incurred if legal action is commenced to collect amounts not paid when due or to enforce any other provision of the terms of sale.
 CUSTOMER/BUYER HAS READ AND AGREES TO THE TERMS OF SALE

WEIGHMASTER CERTIFICATE

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

JOB COPY

065842

MATERIAL RECEIPT

TEICHERT AGGREGATES

PLANT OFFICE: PERKINS... (916) 388-6900 MISS. BAR... (916) 988-2469
 HALLWOOD... (916) 749-8620 TRACY... (209) 832-4150 MARTIS VALLEY... (916) 587-3811
 WOODLAND... (916) 661-4290 ESPARTO... (916) 666-6538

DATE WEIGHED	TIME	PRODUCT DESCRIPTION	GROSS TONS	TARE TONS	NET TONS	TKT QTY	TRUCK NUMBER	TRUCK LD.	TRUCK LD.	TRUCK LD.	TRUCK LD.	
05/19/97	06:26	DRG	39.84	15.45	24.39	24.39 TON	65842					
SOLD TO (CUSTOMER, JOB, AND DELIVERY ADDRESS)			TRUCK NUMBER		TRUCK LD.		TRUCK LD.		TRUCK LD.		TRUCK LD.	
19904 PetroCon Inc			W28		4447508		11U7223					
TRACY PUMPING STATION			YOUR ORDER NUMBER		LOAD NO.		TOTAL TONS		TKT QTY		TRUCK LD.	
					2		24.39		24.39			
PICK UP			CUSTOMER NO.		JOB REF. NO.		PROD. CODE		TRK. TYPE & ZONE		TRUCK LD.	
			19904		101720		1711		8 2			
			UNIT PRICE		AMOUNT		TAX AMT.		AMOUNT/DWG		TRUCK LD.	
WEIGHED AT			TEICHERT AGGREGATES-WEIGHMASTER									
Tracy Roc			131		Deana Thomas		DEPUTY					

RECEIVED ON JOB BY (PLEASE SIGN ABOVE) * SEE REVERSE FOR PLANT LOCATION DRIVER ON TRUCK FOR ALL WEIGHTS
 TERMS OF SALE
 Late Charges and Attorney's Fees: Customer/ Buyer agrees to pay late charges on all past due accounts at the rate of eighteen percent and to pay Teichert Aggregate's reasonable attorney's fees and costs incurred if legal action is commenced to collect amounts not paid when due or to enforce any other provision of the terms of sale.
 CUSTOMER/BUYER HAS READ AND AGREES TO THE TERMS OF SALE

DRIVER SIGN HERE
John

AIA NEW 17/96

AIA NEW 17/96

UNDERGROUND STORAGE TANK REMOVAL AND SOIL EXCAVATION
TRACY PUMPING PLANT AND SUBSTATION FACILITY
TRACY, CALIFORNIA
MAY 1997

Photograph Descriptions

Vehicle Maintenance Garage UST Site

<u>Photograph</u>	<u>Description</u>
1.	Former pump dispenser island area, view looking north. Note the three fuel dispensers and PVC piping.
2.	Pump dispenser island northern concrete pier and piping trench, view looking north from south end of pump dispenser island toward product pipeline trench excavation and unleaded gasoline UST.
3.	Diesel UST, view looking northwest showing fill pipe and no product piping configuration emanating from it. Also note proximity of high voltage utility concrete conduit 3-feet below surface grade.
4.	Unleaded gasoline UST, view looking west showing fill pipe, product piping, gravity return line, and vent pipe.
5.	Vehicle Maintenance Garage UST excavations, view looking west-southwest towards substation, with shadow of northwest corner of garage building in left-center of photograph. Note diesel UST excavation in foreground with concrete pad and unpaved gravel backfill trench along west side of concrete pad. The gravel filled trench is assumed to be product piping excavation area described by Clearwater Group in 1995 following diesel spill excavation activities.
6.	Removal of unleaded gasoline UST, view looking north from former dispenser island.
7.	Removal of diesel UST, view looking west towards substation.
8.	Inundated unleaded gasoline UST excavation following pipe rupture May 15, 1997, view looking west-southwest.
9.	Level of water in inundated gasoline UST excavation the morning of May 16, 1997, view looking west-northwest.
10.	Repaired water pipe along west edge of unleaded gasoline UST excavation, view looking west.
11.	Unleaded gasoline UST excavation, view looking west following removal of water generated from pipe rupture, afternoon of May 16, 1997.
12.	First view of soil discoloration surrounding piping that was discovered within south wall of diesel UST excavation approximately 14-feet north of northwest corner of garage building following removal of concrete pad, view looking southwest.

Appendix B

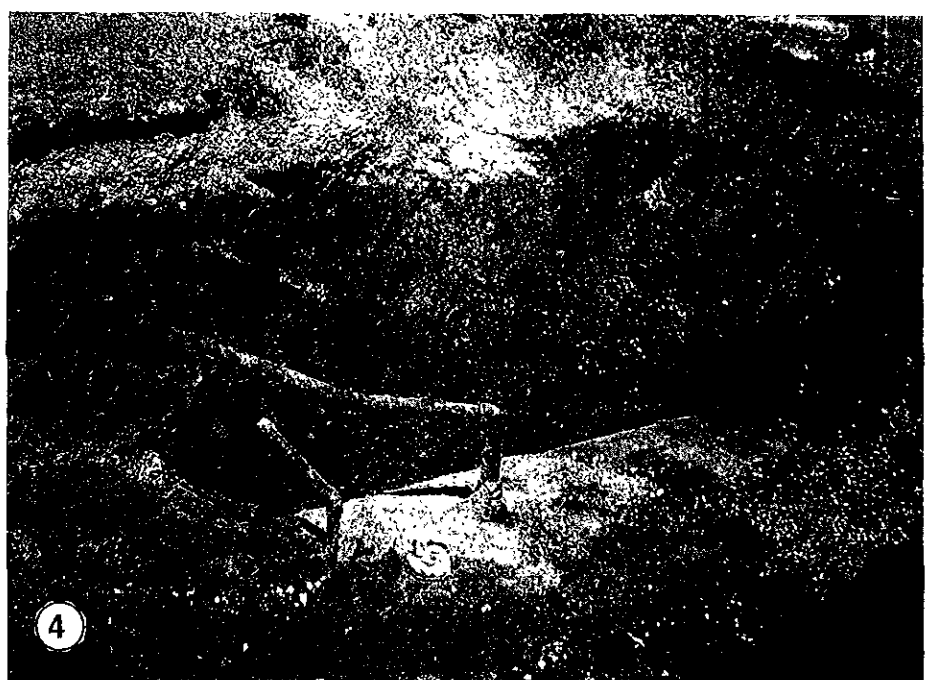
PHOTOGRAPHIC LOG AND PHOTOGRAPHS

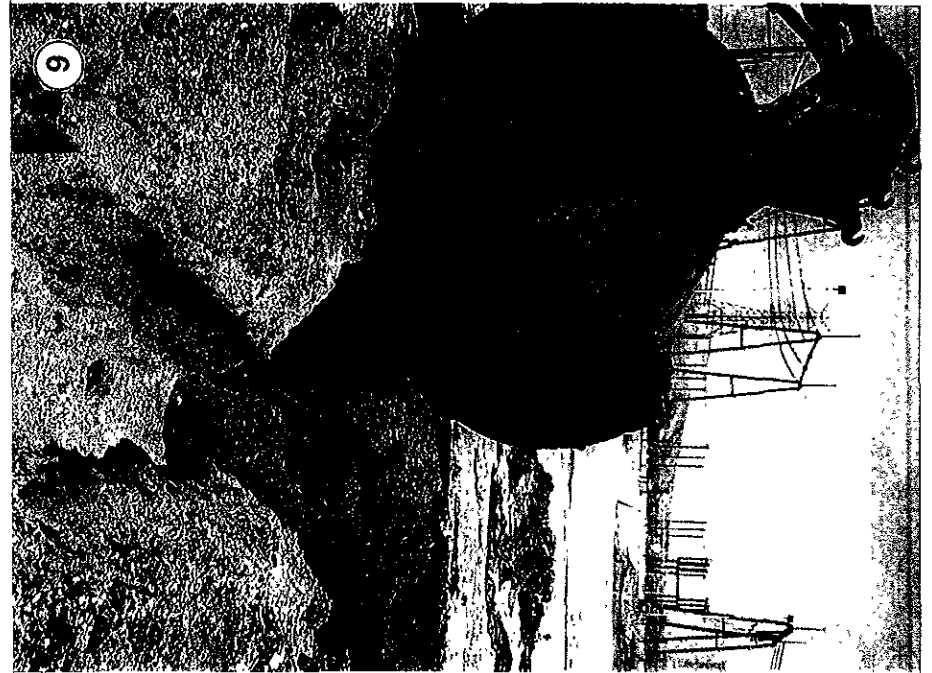
13. Another view of soil discoloration surrounding piping discovered within south wall of diesel UST excavation, view looking southwest. Notice backfill material contains yellow flagging trash debris.
14. Further excavation of piping along southwest corner and south face of diesel UST excavation, view looking southwest. The PVC pipe was assumed to be the diesel UST product piping that replaced the decommissioned steel piping. Note repaired water pipe in unleaded gasoline UST excavation in background, center-top of photograph. Operator Mike McCormick for scale.
15. Closeup view of hole in endcap of piping that was discovered within south wall of diesel UST excavation. Residual product was found to be still in the piping.
16. First view of vertical extent of soil discoloration emanating from piping discovered south of diesel UST, view looking south. Piping was bent upward to prevent spillage of residual product found to be remaining in piping.
17. View southwest looking at soil discoloration along north facing edge of enlarged excavation. Note loosely compacted backfill material with vent piping lines from former leaded gasoline UST removed in 1994, abandoned 4" wash-basin drain line, and the groundwater seepage in floor of excavation.
18. View south-southeast looking at soil discoloration along west facing edge of enlarged excavation. Note vent lines from former leaded gasoline UST, PVC piping used for diesel product line, and groundwater seepage into floor of excavation. Afternoon of May 16, 1997.
19. Northern extent of enlarged excavation showing sample locations BRTTD-3 along easternmost extent of diesel UST portion, and sample BRTTD-5 location below underground utility concrete conduit along the northernmost extent of diesel UST portion. View is to the northeast. Note groundwater level in excavation. Afternoon of May 17, 1997.
20. Valenzuela Engineering loading contaminated soil for transport to TPS Technologies in Richmond, California. View looking north.
21. Beginning of excavation backfilling with pea gravel rock. View looking northwest.
22. Placing soil on pea gravel rock, view looking southeast at northwest corner of Vehicle Maintenance Garage.
23. Preparing Vehicle Maintenance Garage former UST area for paving with asphaltic concrete, view looking north.
24. Vehicle Maintenance Garage UST site prior to paving with asphaltic concrete, view looking north toward Western Area Power Administration warehouse.
25. Vehicle Maintenance Garage UST site following asphalt paving, view is to the east-southeast. Afternoon of May 21, 1997.

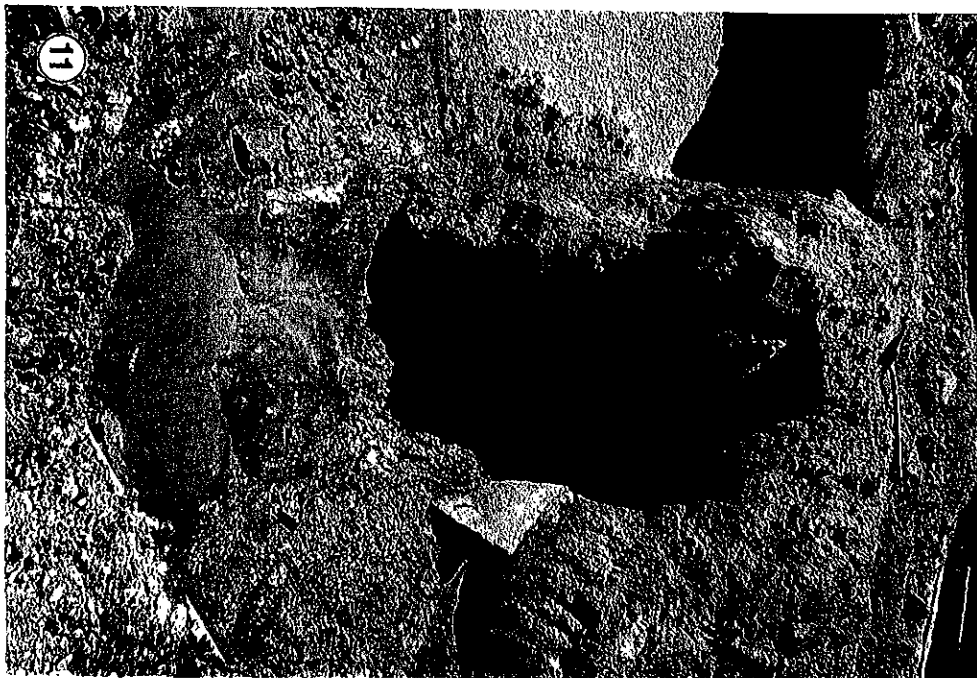
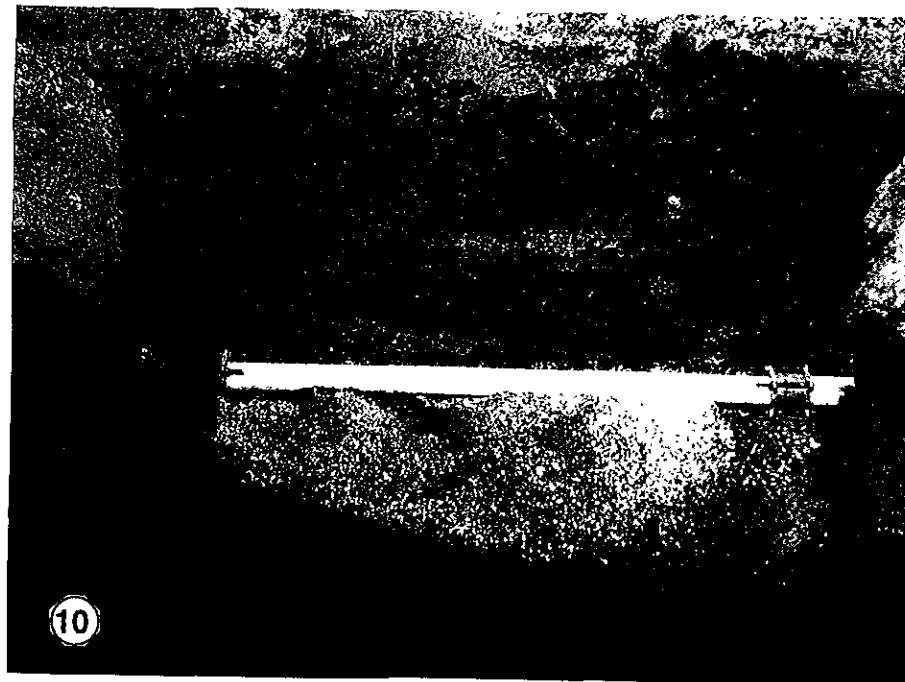
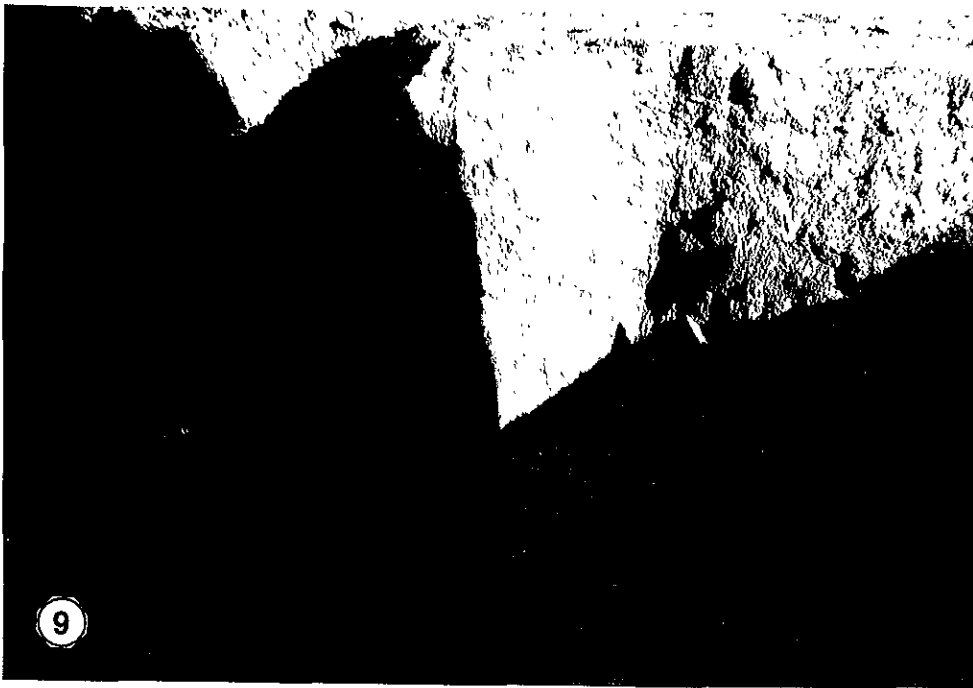
Appendix B
PHOTOGRAPHIC LOG AND PHOTOGRAPHS

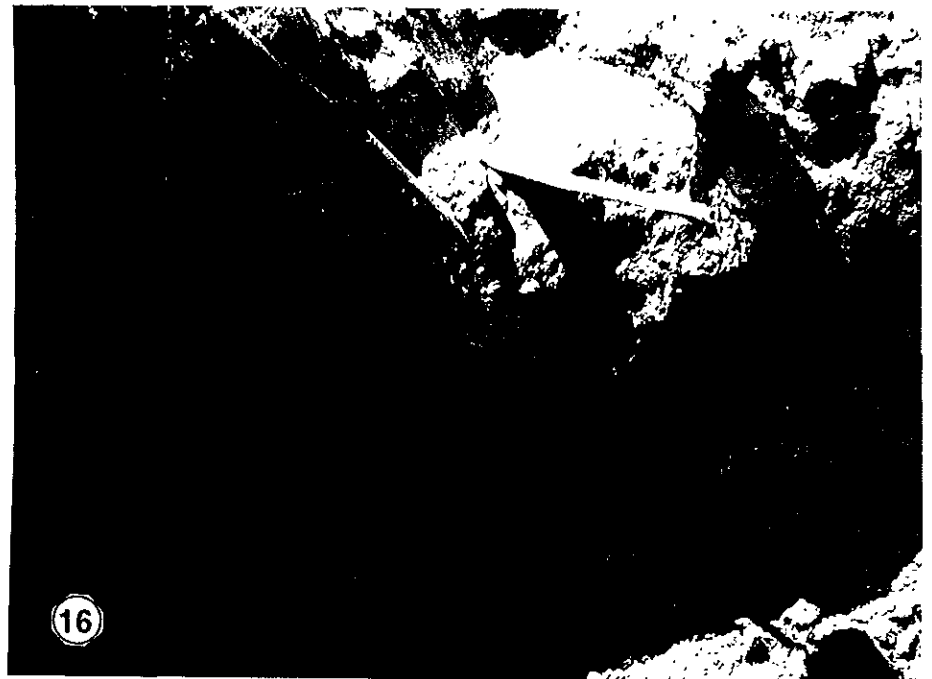
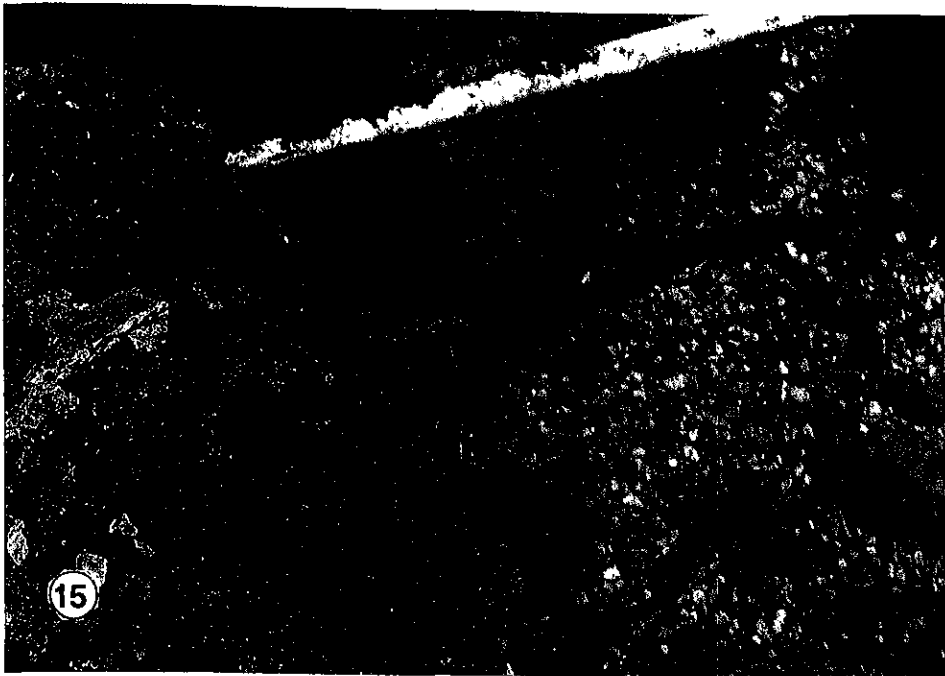
Western Area Power Administration Former Storage Shed Area

26. Mineral oil soil removal activities along north side of Western Area Power Administration warehouse, view looking east-northeast at expanded 500 kv substation. Note graded surfaces north of excavation area.
27. Excavated area showing location of sample BRTMO-2, view looking west. Note stockpiles in background and graded surface west and northwest of excavated area.
28. Excavated area showing location of samples BRTMO-1, BRTMO-2, and BRTMO-3, view looking northeast.















Appendix C
ANALYTICAL LABORATORY REPORTS



Intertek Testing Services Environmental Laboratories

JAY KAMINE
WOODWARD-CLYDE CONSULTANTS
10370 OLD PLACERVILLE ROAD, SUITE #104
SACRAMENTO CA 95827

ITS Group # : 604
Date Received: 05/13/97
Project ID : S96203-2000

The following samples were received at Intertek for analysis :

ITS ID	CLIENT SAMPLE ID
97050803	BRTMO-1
97050804	BRTMO-2
97050805	BRTMO-3
97050806	BRTP-2
97050807	BRTTG-1
97050808	BRTTG-2
97050809	BRTTD-1
97050810	BRTTD-2
97050811	BRTP-1
97050812	DSTP-1A
97050813	GSTP-1A

This report is organized in sections according to the specific Intertek laboratory group which performed the analysis(es) and generated the data.

The results contained within this report relate to only the sample(s) tested. Additionally, these data should be considered in their entirety and Intertek cannot be responsible for the detachment, separation, or otherwise partial use of this report.

Intertek is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234.

If you have any further questions or comments on this report, please call your project manager as soon as possible. Thank you for using Intertek Testing Services.

Project Manager

06/12/97
Date

This report consists of 31 pages

CASE NARRATIVE

S.D.G. No. N/A

GROUP No. 604

QUALITY CONTROL PROBLEMS:

GCTPH

- All holding times have been met for the analyses reported in this section.
- The surrogate was diluted out for samples BRTTG-1 and BRTTD-2.
- The difference between the responses from the DB-624 and the DB-5 columns was greater than 25% for the following :
 - Toluene in sample BRTP-2.
 - Ethylbenzene in sample BRTP-2.
 - In all the cases the lower value from the DB-5 column has been reported.

M. Hosseinian
Sia Hosseinian
Organic Group Director

6/11/97
Date

**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE WITH BTEX
INCHCAPE TESTING SERVICES/ ENVIRONMENTAL LABORATORIES
(408) 432-8192**

DATA SUMMARY FORM

Laboratory ID:	604-97050806	Client Project ID:	S96203-2000
Matrix:	SOIL	Client Sample ID:	BRTP-2
Date Sampled:	5/13/97	Instrument ID:	HP4
Date Analyzed:	5/14/97	Surrogate Recovery:	145%
Date Released:	6/6/97	Concentration Units:	mg/Kg

<u>COMPOUND</u>	<u>Dilution Factor</u>	<u>Reporting Limit</u>	<u>Amount Found</u>
MTBE	50	0.025	ND
Benzene	50	0.025	ND
Toluene	50	0.025	0.056
Ethylbenzene	50	0.025	ND
Total Xylenes	50	0.025	0.160
Gasoline	50	2.50	5.2

ND: Not detected at or above the reporting limit for the method.

TPHg: Total Petroleum Hydrocarbons as gasoline is determined by GC/FID (modified EPA Method 8015) following sample purge and trap by EPA Method 5030

BTEX: BTEX as Benzene, Toluene, Ethylbenzene, and Total Xylenes is determined by GC/PID (modified EPA Method 8021) following sample purge and trap by EPA Method 5030.

Reporting limits are determined by dividing the dilution factor by 10 to generate an RLMF (reporting limit multiplication factor) which is then multiplied by the reporting limit for an undiluted sample. RLMFs of less than one are rounded up to one.

Surrogate recovery quality control limits for p-Bromofluorobenzene are 53-147%.

**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE WITH BTEX
INCHCAPE TESTING SERVICES/ ENVIRONMENTAL LABORATORIES
(408) 432-8192**

DATA SUMMARY FORM

Laboratory ID:	604-97050807	Client Project ID:	S96203-2000
Matrix:	SOIL	Client Sample ID:	BRTTG-1
Date Sampled:	5/13/97	Instrument ID:	HP4
Date Analyzed:	5/14/97	Surrogate Recovery:	N/A
Date Released:	6/6/97	Concentration Units:	mg/Kg

<u>COMPOUND</u>	<u>Dilution Factor</u>	<u>Reporting Limit</u>	<u>Amount Found</u>
MTBE	5000	2.5	ND
Benzene	5000	2.5	20
Toluene	5000	2.5	31
Ethylbenzene	5000	2.5	23
Total Xylenes	5000	2.5	110
Gasoline	5000	250	1900

ND: Not detected at or above the reporting limit for the method.

TPHg: Total Petroleum Hydrocarbons as gasoline is determined by GC/FID (modified EPA Method 8015) following sample purge and trap by EPA Method 5030

BTEX: BTEX as Benzene, Toluene, Ethylbenzene, and Total Xylenes is determined by GC/PID (modified EPA Method 8021) following sample purge and trap by EPA Method 5030.

Reporting limits are determined by dividing the dilution factor by 10 to generate an RLMF (reporting limit multiplication factor) which is then multiplied by the reporting limit for an undiluted sample. RLMFs of less than one are rounded up to one.

Surrogate recovery quality control limits for p-Bromofluorobenzene are 53-147%.

TOTAL PETROLEUM HYDROCARBONS AS GASOLINE WITH BTEX
INCHCAPE TESTING SERVICES/ ENVIRONMENTAL LABORATORIES
(408) 432-8192

DATA SUMMARY FORM

Laboratory ID:	604-97050808	Client Project ID:	S96203-2000
Matrix:	SOIL	Client Sample ID:	BRTTG-2
Date Sampled:	5/13/97	Instrument ID:	HP4
Date Analyzed:	5/14/97	Surrogate Recovery:	73%
Date Released:	6/6/97	Concentration Units:	mg/Kg

<u>COMPOUND</u>	<u>Dilution</u> <u>Factor</u>	<u>Reporting</u> <u>Limit</u>	<u>Amount</u> <u>Found</u>
MTBE	100	0.05	0.15
Benzene	100	0.05	0.33
Toluene	100	0.05	0.39
Ethylbenzene	100	0.05	0.64
Total Xylenes	100	0.05	2.8
Gasoline	100	5.00	99

ND: Not detected at or above the reporting limit for the method.

TPHg: Total Petroleum Hydrocarbons as gasoline is determined by GC/FID (modified EPA Method 8015) following sample purge and trap by EPA Method 5030

BTEX: BTEX as Benzene, Toluene, Ethylbenzene, and Total Xylenes is determined by GC/PID (modified EPA Method 8021) following sample purge and trap by EPA Method 5030.

Reporting limits are determined by dividing the dilution factor by 10 to generate an RLMF (reporting limit multiplication factor) which is then multiplied by the reporting limit for an undiluted sample. RLMFs of less than one are rounded up to one.

Surrogate recovery quality control limits for p-Bromofluorobenzene are 53-147%.

**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE WITH BTEX
INCHCAPE TESTING SERVICES/ ENVIRONMENTAL LABORATORIES
(408) 432-8192**

DATA SUMMARY FORM

Laboratory ID:	604-97050809	Client Project ID:	S96203-2000
Matrix:	SOIL	Client Sample ID:	BRTTD-1
Date Sampled:	5/13/97	Instrument ID:	HP4
Date Analyzed:	5/14/97	Surrogate Recovery:	104%
Date Released:	6/6/97	Concentration Units:	mg/Kg

<u>COMPOUND</u>	<u>Dilution Factor</u>	<u>Reporting Limit</u>	<u>Amount Found</u>
MTBE	2	0.005	ND
Benzene	2	0.005	ND
Toluene	2	0.005	ND
Ethylbenzene	2	0.005	ND
Total Xylenes	2	0.005	ND

ND: Not detected at or above the reporting limit for the method.

TPHg: Total Petroleum Hydrocarbons as gasoline is determined by GC/FID (modified EPA Method 8015) following sample purge and trap by EPA Method 5030

BTEX: BTEX as Benzene, Toluene, Ethylbenzene, and Total Xylenes is determined by GC/PID (modified EPA Method 8021) following sample purge and trap by EPA Method 5030.

Reporting limits are determined by dividing the dilution factor by 10 to generate an RLMF (reporting limit multiplication factor) which is then multiplied by the reporting limit for an undiluted sample. RLMFs of less than one are rounded up to one.

Surrogate recovery quality control limits for p-Bromofluorobenzene are 53-147%.

All testing procedures follow California Department of Health Services

**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE WITH BTEX
INCHCAPE TESTING SERVICES/ ENVIRONMENTAL LABORATORIES
(408) 432-8192**

DATA SUMMARY FORM

Laboratory ID:	604-97050810	Client Project ID:	S96203-2000
Matrix:	SOIL	Client Sample ID:	BRTTD-2
Date Sampled:	5/13/97	Instrument ID:	HP4
Date Analyzed:	5/14/97	Surrogate Recovery:	0%
Date Released:	6/6/97	Concentration Units:	mg/Kg

<u>COMPOUND</u>	<u>Dilution Factor</u>	<u>Reporting Limit</u>	<u>Amount Found</u>
MTBE	500	0.25	0.65
Benzene	500	0.25	ND
Toluene	500	0.25	ND
Ethylbenzene	500	0.25	ND
Total Xylenes	500	0.25	0.88

ND: Not detected at or above the reporting limit for the method.

TPHg: Total Petroleum Hydrocarbons as gasoline is determined by GC/FID (modified EPA Method 8015) following sample purge and trap by EPA Method 5030

BTEX: BTEX as Benzene, Toluene, Ethylbenzene, and Total Xylenes is determined by GC/PID (modified EPA Method 8021) following sample purge and trap by EPA Method 5030.

Reporting limits are determined by dividing the dilution factor by 10 to generate an RLMF (reporting limit multiplication factor) which is then multiplied by the reporting limit for an undiluted sample. RLMFs of less than one are rounded up to one.

Surrogate recovery quality control limits for p-Bromofluorobenzene are 53-147%.

All testing procedures follow California Department of Health Services

**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE WITH BTEX
INCHCAPE TESTING SERVICES/ ENVIRONMENTAL LABORATORIES**

(408) 432-8192

DATA SUMMARY FORM

Laboratory ID:	604-97050811	Client Project ID:	S96203-2000
Matrix:	SOIL	Client Sample ID:	BRTP-1
Date Sampled:	5/13/97	Instrument ID:	HP4
Date Analyzed:	5/14/97	Surrogate Recovery:	105%
Date Released:	6/6/97	Concentration Units:	mg/Kg

<u>COMPOUND</u>	<u>Dilution Factor</u>	<u>Reporting Limit</u>	<u>Amount Found</u>
MTBE	2	0.005	ND
Benzene	2	0.005	ND
Toluene	2	0.005	ND
Ethylbenzene	2	0.005	ND
Total Xylenes	2	0.005	ND
Gasoline	2	0.005	ND

ND: Not detected at or above the reporting limit for the method.

TPHg: Total Petroleum Hydrocarbons as gasoline is determined by GC/FID (modified EPA Method 8015) following sample purge and trap by EPA Method 5030

BTEX: BTEX as Benzene, Toluene, Ethylbenzene, and Total Xylenes is determined by GC/PID (modified EPA Method 8021) following sample purge and trap by EPA Method 5030.

Reporting limits are determined by dividing the dilution factor by 10 to generate an RLMF (reporting limit multiplication factor) which is then multiplied by the reporting limit for an undiluted sample. RLMFs of less than one are rounded up to one.

Surrogate recovery quality control limits for p-Bromofluorobenzene are 53-147%.

All testing procedures follow California Department of Health Services

**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE WITH BTEX
INCHCAPE TESTING SERVICES/ ENVIRONMENTAL LABORATORIES**

(408) 432-8192

DATA SUMMARY FORM

Laboratory ID:	604-97050812	Client Project ID:	S96203-2000
Matrix:	SOIL	Client Sample ID:	DSTP-1A
Date Sampled:	5/13/97	Instrument ID:	HP4
Date Analyzed:	5/14/97	Surrogate Recovery:	100%
Date Released:	6/6/97	Concentration Units:	mg/Kg

<u>COMPOUND</u>	<u>Dilution Factor</u>	<u>Reporting Limit</u>	<u>Amount Found</u>
MTBE	2	0.005	ND
Benzene	2	0.005	ND
Toluene	2	0.005	ND
Ethylbenzene	2	0.005	ND
Total Xylenes	2	0.005	ND

ND: Not detected at or above the reporting limit for the method.

TPHg: Total Petroleum Hydrocarbons as gasoline is determined by GC/FID (modified EPA Method 8015) following sample purge and trap by EPA Method 5030

BTEX: BTEX as Benzene, Toluene, Ethylbenzene, and Total Xylenes is determined by GC/PID (modified EPA Method 8021) following sample purge and trap by EPA Method 5030.

Reporting limits are determined by dividing the dilution factor by 10 to generate an RLMF (reporting limit multiplication factor) which is then multiplied by the reporting limit for an undiluted sample. RLMFs of less than one are rounded up to one.

Surrogate recovery quality control limits for p-Bromofluorobenzene are 53-147%.

All testing procedures follow California Department of Health Services

**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE WITH BTEX
INCHCAPE TESTING SERVICES/ ENVIRONMENTAL LABORATORIES
(408) 432-8192**

DATA SUMMARY FORM

Laboratory ID:	604-97050813	Client Project ID:	S96203-2000
Matrix:	SOIL	Client Sample ID:	GSTP-1A
Date Sampled:	5/13/97	Instrument ID:	HP4
Date Analyzed:	5/14/97	Surrogate Recovery:	122%
Date Released:	6/6/97	Concentration Units:	mg/Kg

<u>COMPOUND</u>	<u>Dilution Factor</u>	<u>Reporting Limit</u>	<u>Amount Found</u>
MTBE	2	0.005	ND
Benzene	2	0.005	ND
Toluene	2	0.005	ND
Ethylbenzene	2	0.005	ND
Total Xylenes	2	0.005	ND
Gasoline	2	0.5	ND

ND: Not detected at or above the reporting limit for the method.

TPHg: Total Petroleum Hydrocarbons as gasoline is determined by GC/FID (modified EPA Method 8015) following sample purge and trap by EPA Method 5030

BTEX: BTEX as Benzene, Toluene, Ethylbenzene, and Total Xylenes is determined by GC/PID (modified EPA Method 8021) following sample purge and trap by EPA Method 5030.

Reporting limits are determined by dividing the dilution factor by 10 to generate an RLMF (reporting limit multiplication factor) which is then multiplied by the reporting limit for an undiluted sample. RLMFs of less than one are rounded up to one.

Surrogate recovery quality control limits for p-Bromofluorobenzene are 53-147%.

**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE WITH BTEX
INCHCAPE TESTING SERVICES/ ENVIRONMENTAL LABORATORIES
(408) 432-8192**

DATA SUMMARY FORM

Laboratory ID:	BY1301E1	Client Project ID:	S96203-2000
Matrix:	SOIL	Client Sample ID:	SAND BLANK
Date Sampled:	N/A	Instrument ID:	HP4
Date Analyzed:	5/13/97	Surrogate Recovery:	104%
Date Released:	6/6/97	Concentration Units:	mg/Kg

<u>COMPOUND</u>	<u>Dilution Factor</u>	<u>Reporting Limit</u>	<u>Amount Found</u>
MTBE	1	0.005	ND
Benzene	1	0.005	ND
Toluene	1	0.005	ND
Ethylbenzene	1	0.005	ND
Total Xylenes	1	0.005	ND
Gasoline	1	0.5	ND

ND: Not detected at or above the reporting limit for the method.

TPHg: Total Petroleum Hydrocarbons as gasoline is determined by GC/FID (modified EPA Method 8015) following sample purge and trap by EPA Method 5030

BTEX: BTEX as Benzene, Toluene, Ethylbenzene, and Total Xylenes is determined by GC/PID (modified EPA Method 8021) following sample purge and trap by EPA Method 5030.

Reporting limits are determined by dividing the dilution factor by 10 to generate an RLMF (reporting limit multiplication factor) which is then multiplied by the reporting limit for an undiluted sample. RLMFs of less than one are rounded up to one.

Surrogate recovery quality control limits for p-Bromofluorobenzene are 53-147%.

**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE WITH BTEX
INCHCAPE TESTING SERVICES/ ENVIRONMENTAL LABORATORIES
(408) 432-8192**

DATA SUMMARY FORM

Laboratory ID:	BY1302E1	Client Project ID:	S96203-2000
Matrix:	SOIL	Client Sample ID:	MEOH BLANK
Date Sampled:	NA	Instrument ID:	HP4
Date Analyzed:	5/14/97	Surrogate Recovery:	101%
Date Released:	6/6/97	Concentration Units:	mg/Kg

<u>COMPOUND</u>	<u>Dilution Factor</u>	<u>Reporting Limit</u>	<u>Amount Found</u>
Benzene	50	0.025	ND
Toluene	50	0.025	ND
Ethylbenzene	50	0.025	ND
Total Xylenes	50	0.025	ND
Gasoline	50	2.5	ND

ND: Not detected at or above the reporting limit for the method.

TPHg: Total Petroleum Hydrocarbons as gasoline is determined by GC/FID (modified EPA Method 8015) following sample purge and trap by EPA Method 5030

BTEX: BTEX as Benzene, Toluene, Ethylbenzene, and Total Xylenes is determined by GC/PID (modified EPA Method 8021) following sample purge and trap by EPA Method 5030.

Reporting limits are determined by dividing the dilution factor by 10 to generate an RLMF (reporting limit multiplication factor) which is then multiplied by the reporting limit for an undiluted sample. RLMFs of less than one are rounded up to one.

Surrogate recovery quality control limits for p-Bromofluorobenzene are 53-147%.

TOTAL PETROLEUM HYDROCARBONS AS GASOLINE WITH BTEX
INCHCAPE TESTING SERVICES/ ENVIRONMENTAL LABORATORIES
(408) 432-8192

DATA SUMMARY FORM

Laboratory ID:	BY1402E1	Client Project ID:	S96203-2000
Matrix:	SOIL	Client Sample ID:	MEOH BLANK
Date Sampled:	N/A	Instrument ID:	HP4
Date Analyzed:	5/14/97	Surrogate Recovery:	101%
Date Released:	6/6/97	Concentration Units:	mg/Kg

<u>COMPOUND</u>	<u>Dilution</u> <u>Factor</u>	<u>Reporting</u> <u>Limit</u>	<u>Amount</u> <u>Found</u>
MTBE	50	0.025	ND
Benzene	50	0.025	ND
Toluene	50	0.025	ND
Ethylbenzene	50	0.025	ND
Total Xylenes	50	0.025	ND
Gasoline	50	2.5	ND

ND: Not detected at or above the reporting limit for the method.

TPHg: Total Petroleum Hydrocarbons as gasoline is determined by GC/FID (modified EPA Method 8015) following sample purge and trap by EPA Method 5030

BTEX: BTEX as Benzene, Toluene, Ethylbenzene, and Total Xylenes is determined by GC/PID (modified EPA Method 8021) following sample purge and trap by EPA Method 5030.

Reporting limits are determined by dividing the dilution factor by 10 to generate an RLMF (reporting limit multiplication factor) which is then multiplied by the reporting limit for an undiluted sample. RLMFs of less than one are rounded up to one.

Surrogate recovery quality control limits for p-Bromofluorobenzene are 53-147%.

TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
INCHCAPE TESTING SERVICES/ENVIRONMENTAL LABORATORIES
(408) 432-8192

LABORATORY CONTROL SAMPLE REPORT

Client Project ID:	S96203-2000	Laboratory ID:	MY1301E1
Matrix:	SOIL	Date Released:	6/10/97
Date Analyzed:	5/13/97	Instrument ID:	HP4
		Concentration Units:	mg/Kg

<u>COMPOUND</u> <u>NAME</u>	<u>SPIKE</u> <u>AMT</u>	<u>LCS</u> <u>CONC</u>	<u>%REC</u> <u>LCS</u>
Gasoline	20	23	115%
p-Bromofluorobenzene			99%

Quality control limits for LCS recovery are 58-130%.

Quality control limits for p-Bromofluorobenzene recovery are 53-147%.

TOTAL PETROLEUM HYDROCARBONS AS GASOLINE WITH BTEX
INCHCAPE TESTING SERVICES/ ENVIRONMENTAL LABORATORIES
(408) 432-8192

LABORATORY CONTROL SAMPLE REPORT

Client Project ID: S96203-2000	Laboratory ID: NY1301E3
Matrix: SOIL	Date Released: 6/10/97
Date Analyzed: 5/13/97	Instrument ID: HP4
	Concentration Units: mg/Kg

<u>COMPOUND</u> <u>NAME</u>	<u>SPIKE</u> <u>AMT</u>	<u>LCS</u> <u>CONC</u>	<u>%REC</u> <u>LCS</u>
<u>MTBE</u>	<u>2.5</u>	2.3	<u>109%</u>
Benzene	0.500	0.460	92%
Toluene	0.500	0.530	106%
Ethylbenzene	0.500	0.512	102%
Total Xylenes	0.500	0.490	98%
 p-Bromofluorobenzene			 105%

Quality control limits for LCS recovery are 52-133% for benzene,
57-136% for toluene, 56-139% for ethylbenzene, and 56-141% for total xylenes.

Quality control limits for p-Bromofluorobenzene recovery are 53-147%.

TOTAL PETROLEUM HYDROCARBONS AS GASOLINE WITH BTEX
INCHCAPE TESTING SERVICES/ ENVIRONMENTAL LABORATORIES
(408) 432-8192

LABORATORY CONTROL SAMPLE REPORT

Client Project ID: S96203-2000	Laboratory ID: NY1301E3
Matrix: SOIL	Date Released: 6/10/97
Date Analyzed: 5/13/97	Instrument ID: HP4
	Concentration Units: mg/Kg

<u>COMPOUND</u> <u>NAME</u>	<u>SPIKE</u> <u>AMT</u>	<u>LCS</u> <u>CONC</u>	<u>%REC</u> <u>LCS</u>
Benzene	0.500	0.460	92%
Toluene	0.500	0.530	106%
Ethylbenzene	0.500	0.512	102%
Total Xylenes	0.500	0.490	98%
p-Bromofluorobenzene			105%

Quality control limits for LCS recovery are 52-133% for benzene,
57-136% for toluene, 56-139% for ethylbenzene, and 56-141% for total xylenes.

Quality control limits for p-Bromofluorobenzene recovery are 53-147%.

TOTAL PETROLEUM HYDROCARBONS AS GASOLINE WITH BTEX
INCHCAPE TESTING SERVICES/ ENVIRONMENTAL LABORATORIES
(408) 432-8192

LABORATORY CONTROL SAMPLE REPORT

Client Project ID: S96203-2000	Laboratory ID: M/NY1302E1
Matrix: SOIL	Date Released: 6/10/97
Date Analyzed: 5/13/97	Instrument ID: HP4
	Concentration Units: mg/Kg

COMPOUND <u>NAME</u>	SPIKE <u>AMT</u>	LCS <u>CONC</u>	% REC <u>LCS</u>	LCSD <u>CONC</u>	%REC <u>LCSD</u>	<u>RPD</u>
Gasoline	0.40	0.44	110%	0.46	115%	4%
p-Bromofluorobenzene			100%		99%	

Quality control limits for LCS/LCSD recovery are 58-130%.

Quality control limits for RPD(relative percent difference) are +/- 30%.

Quality control limits for p-Bromofluorobenzene recovery are 53-147%.

TOTAL PETROLEUM HYDROCARBONS AS GASOLINE WITH BTEX
INTERTEK TESTING SERVICES/ ENVIRONMENTAL LABORATORIES
(408) 432-8192

LABORATORY CONTROL SAMPLE REPORT

Client Project ID: S96203-2000	Laboratory ID: M/NY1303E1
Date Analyzed: 5/13/97	Date Released: 5/10/97
Matrix: SOIL	Instrument ID: HP4
Concentration Units: mg/Kg	

<u>COMPOUND</u> <u>NAME</u>	<u>SPIKE</u> <u>AMT</u>	<u>LCS</u> <u>CONC</u>	<u>% REC</u> <u>LCS</u>	<u>LCSD</u> <u>CONC</u>	<u>%REC</u> <u>LCSD</u>	<u>RPD</u>
MTBE	0.0500	0.0460	92%	0.0430	86%	7%
Benzene	0.0100	0.0092	92%	0.0090	90%	0%
Toluene	0.0100	0.0110	110%	0.0101	101%	8%
Ethylbenzene	0.0100	0.0103	103%	0.0096	96%	7%
Total Xylenes	0.0100	0.0100	100%	0.0092	92%	9%
 p-Bromofluorobenzene			 98%		 97%	

Quality control limits for LCS/LCSD recovery are 52-133% for benzene, 57-136% for toluene, 56-139% for ethylbenzene, and 56-141% for total xylenes.

Quality control limits for RPD(relative percent difference) are +/- 30%.

Quality control limits for p-Bromofluorobenzene recovery are 53-147%.

TOTAL PETROLEUM HYDROCARBONS AS GASOLINE WITH BTEX
INTERTEK TESTING SERVICES/ ENVIRONMENTAL LABORATORIES
(408) 432-8192

LABORATORY CONTROL SAMPLE REPORT

Client Project ID:	S96203-2000	Laboratory ID:	M/NY1303E1
Date Analyzed:	5/13/97	Date Released:	5/10/97
Matrix:	SOIL	Instrument ID:	HP4
Concentration Units:	mg/Kg		

<u>COMPOUND</u> <u>NAME</u>	<u>SPIKE</u> <u>AMT</u>	<u>LCS</u> <u>CONC</u>	<u>% REC</u> <u>LCS</u>	<u>LCSD</u> <u>CONC</u>	<u>%REC</u> <u>LCSD</u>	<u>RPD</u>
Benzene	0.0100	0.0092	92%	0.0090	90%	0%
Toluene	0.0100	0.0110	110%	0.0101	101%	8%
Ethylbenzene	0.0100	0.0103	103%	0.0096	96%	7%
Total Xylenes	0.0100	0.0100	100%	0.0092	92%	9%
p-Bromofluorobenzene			98%		97%	

Quality control limits for LCS/LCSD recovery are 52-133% for benzene, 57-136% for toluene, 56-139% for ethylbenzene, and 56-141% for total xylenes.

Quality control limits for RPD(relative percent difference) are +/- 30%.

Quality control limits for p-Bromofluorobenzene recovery are 53-147%.

TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
INCHCAPE TESTING SERVICES/ENVIRONMENTAL LABORATORIES
(408) 432-8192

LABORATORY CONTROL SAMPLE REPORT

Client Project ID:	S96203-2000	Laboratory ID:	MY1401E1
Matrix:	SOIL	Date Released:	6/10/97
Date Analyzed:	5/14/97	Instrument ID:	HP4
		Concentration Units:	mg/Kg

<u>COMPOUND</u> <u>NAME</u>	<u>SPIKE</u> <u>AMT</u>	<u>LCS</u> <u>CONC</u>	<u>%REC</u> <u>LCS</u>
Gasoline	20	22	110%
p-Bromofluorobenzene			91%

Quality control limits for LCS recovery are 58-130%.

Quality control limits for p-Bromofluorobenzene recovery are 53-147%.

TOTAL PETROLEUM HYDROCARBONS AS GASOLINE WITH BTEX
INCHCAPE TESTING SERVICES/ ENVIRONMENTAL LABORATORIES
(408) 432-8192

LABORATORY CONTROL SAMPLE REPORT

Client Project ID: S96203-2000	Laboratory ID: NY1401E1
Matrix: SOIL	Date Released: 6/10/97
Date Analyzed: 5/14/97	Instrument ID: HP4
	Concentration Units: mg/Kg

<u>COMPOUND</u> <u>NAME</u>	<u>SPIKE</u> <u>AMT</u>	<u>LCS</u> <u>CONC</u>	<u>%REC</u> <u>LCS</u>
<u>MTBE</u>	<u>2.5</u>	<u>2.3</u>	<u>109%</u>
Benzene	0.500	0.480	96%
Toluene	0.500	0.570	114%
Ethylbenzene	0.500	0.530	106%
Total Xylenes	0.500	0.510	102%
 p-Bromofluorobenzene			 97%

Quality control limits for LCS recovery are 52-133% for benzene,
57-136% for toluene, 56-139% for ethylbenzene, and 56-141% for total xylenes.

Quality control limits for p-Bromofluorobenzene recovery are 53-147%.

CASE NARRATIVE

S.D.G. No. N/A

GROUP No. 604

QUALITY CONTROL PROBLEMS:

GCTPH

- All holding times have been met for the All analyses reported in this section.

Peggie Dawson (for)
Sia Hosseinian
Organic Group Director

6/12/97
Date

TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL
INCHCAPE TESTING SERVICES/ENVIRONMENTAL LABORATORIES
(408) 432-8192

DATA SUMMARY FORM

Laboratory Group #:	604	Client Project ID:	S96203-20000
Matrix:	SOIL	Date Released:	5/12/97
Date Extracted:	5/14/97	Concentration Units:	mg/Kg
Instrument ID:	HP9		

<u>Laboratory ID</u>	<u>Client ID</u>	<u>Date Sampled</u>	<u>Date Analyzed</u>	<u>Dilution Factor</u>	<u>Reporting Limit</u>	<u>Amount Found</u>	<u>Surrogate Recovery</u>
97050803	BRTMO-1	5/13/97	5/20/97	1	10	ND	85%
97050804	BRTMO-2	5/13/97	5/20/97	1	10	ND	89%
97050805	BRTMO-3	5/13/97	5/20/97	1	10	ND	88%
BP0186	Method Blank	N/A	5/24/97	1	10	ND	93%

ND: Not detected at or above the reporting limit for the method.

TPHd: Total Petroleum Hydrocarbons as motor oil is determined by GC/FID (modified EPA Method 8015) following sample extraction by EPA Method 3550. Surrogate recovery quality control limits for o-terphenyl are 75-117%.

All testing procedures follow California Department of Health Services approved methods.

TOTAL PETROLEUM HYDROCARBONS AS DIESEL
INCHCAPE TESTING SERVICES/ENVIRONMENTAL LABORATORIES
(408) 432-8192

DATA SUMMARY FORM

Laboratory Group #:	604	Client Project ID:	S96203-2000
Matrix:	SOIL	Date Released:	6/12/97
Date Extracted:	5/13/97	Concentration Units:	mg/Kg
Instrument ID:	HP27		

<u>Laboratory ID</u>	<u>Client ID</u>	<u>Date Sampled</u>	<u>Date Analyzed</u>	<u>Dilution Factor</u>	<u>Reporting Limit</u>	<u>Amount Found</u>	<u>Surrogate Recovery</u>
97050809	BRTTD-1	5/13/97	5/14/97	1	10	48	104%
97050810	BRTTD-2	5/13/97	5/14/97	10	100	710	90%
97050812	DSTP-1A	5/13/97	5/14/97	10	100	680	87%
BP0181	Method Blank	N/D	5/14/97	1	10	ND	98%

ND: Not detected at or above the reporting limit for the method.
TPHd: Total Petroleum Hydrocarbons as motor oil is determined by GC/FID (modified EPA Method 8015) following sample extraction by EPA Method 3550. Surrogate recovery quality control limits for o-terphenyl are 75-117%.
All testing procedures follow California Department of Health Services approved methods.

TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL
INCHCAPE TESTING SERVICES/ ENVIRONMENTAL LABORATORIES
(408) 432-8192

LABORATORY CONTROL SAMPLE REPORT

Laboratory Group	604	Laboratory ID:	M/NP0186B
Matrix:	SOIL	Date Released:	5/12/97
Date Extracted:	5/14/97	Instrument ID:	HP9
Date Analyzed:	5/20/97	Concentration Units:	mg/Kg

<u>COMPOUND</u> <u>NAME</u>	<u>SPIKE</u> <u>AMT</u>	<u>LCS</u> <u>CONC</u>	<u>% REC</u> <u>LCS</u>	<u>LCSD</u> <u>CONC</u>	<u>%REC</u> <u>LCSD</u>	<u>RPD</u>
Motor Oil	62.5	67.9	109%	61.0	98%	-11%
o-Terphenyl			92%		85%	

Quality control limits for LCS/LCSD recovery are 60-130%

Quality control limits for RPD(relative percent difference) are +/- 30%.

Quality control limits for o-terphenyl recovery are 75-117%

TOTAL PETROLEUM HYDROCARBONS AS DIESEL
INCHCAPE TESTING SERVICES/ ENVIRONMENTAL LABORATORIES
(408) 432-8192

LABORATORY CONTROL SAMPLE REPORT

Laboratory Group	604	Laboratory ID:	M/NP0181
Matrix:	SOIL	Date Released:	5/12/97
Date Extracted:	5/13/97	Instrument ID:	HP27
Date Analyzed:	5/14/97	Concentration Units:	mg/Kg

<u>COMPOUND</u> <u>NAME</u>	<u>SPIKE</u> <u>AMT</u>	<u>LCS</u> <u>CONC</u>	<u>% REC</u> <u>LCS</u>	<u>LCSD</u> <u>CONC</u>	<u>%REC</u> <u>LCSD</u>	<u>RPD</u>
Diesel	62.5	67.2	108%	60.0	96%	-11%
o-Terphenyl			107%		102%	

Quality control limits for LCS/LCSD recovery are 60-130%

Quality control limits for RPD(relative percent difference) are +/- 30%.

Quality control limits for o-terphenyl recovery are 75-117%

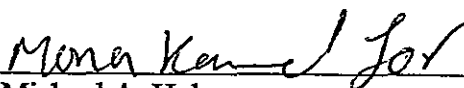
CASE NARRATIVE

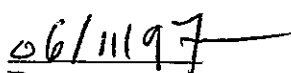
GROUP No.604

PROJECT No. 596203-2000

QUALITY CONTROL PROBLEMS:

- All holding times have been met for the analyses reported in this section.


Michael A. Hoban
Inorganics Manager


Date

**INCHCAPE TESTING SERVICES
SAN JOSE LABORATORIES
(408) 432-8192
DATA REPORT**

Analyte-Method: **Lead-6010A**
 Client Project Number: **596203-2000**
 Matrix - Units: **SOLID - mg/Kg**
 Group #: **604**

SDG #: **N/A**
 Prep. Batch: **M0175**
 Analyst: *[Signature]*
 Supervisor: *[Signature]*

ITS-SJ Sample ID	Client Sample ID	Prep. Method	Instr. ID	Date Sampled	Date Prepared	Date Analyzed	D.F.	Reporting Limit	Results	Q
97050806	B RTP-2	3050A	ICP3	05/13/97	05/15/97	05/15/97	1	0.30	8.5	
97050807	B RTTG-1	3050A	ICP3	05/13/97	05/15/97	05/15/97	1	0.30	7.1	
97050808	B RTTG-2	3050A	ICP3	05/13/97	05/15/97	05/15/97	1	0.30	8.3	
97050811	B RTP-1	3050A	ICP3	05/13/97	05/15/97	05/15/97	1	0.30	8.8	
97050813	G STP-1A	3050A	ICP3	05/13/97	05/15/97	05/15/97	1	0.30	9.4	
BY157SA	BLANK	3050A	ICP3	N/A	05/15/97	05/15/97	1	0.30	ND	

COMMENTS:

**INCHCAPE TESTING SERVICES
SAN JOSE LABORATORIES
(408) 432-8192
LABORATORY CONTROL SAMPLE REPORT**

ITS-SJ Sample ID: LY157SA
 Client Sample ID: N/A
 Group #: 604
 Client Project Number: 596203-2000
 Matrix: **SOLID**

SDG #: N/A
 Prep. Batch: M0175
 Analyst: *[Signature]*
 Supervisor: *[Signature]*

Analyte	Prep. Method	Analytical Method	Instr. ID	Date Prepared	Date Analyzed	Dil. Factor	Units	Spike Amount	LCS Results	% Recovery	Q
Lead	3050A	6010A	ICP3	05/15/97	05/15/97	1	mg/Kg	50.0	49.8	99.6	

COMMENTS:

Woodward-Clyde Consultants

10370 Old Placerville Rd., Suite 104, Sacramento, CA 95827
Tel. (916) 368-0988 Fax (916) 368-0967

Chain of Custody Record

PROJECT NO. S96203-2000			ANALYSES							Number of Containers	REMARKS (Sample preservation, handling procedures, etc.)
SAMPLERS: (Signature) Bill Loskutoff			Sample Matrix (Soil, Water, Air)	EPA Method 8015M-Motor Oil	EPA Method 8015M-GAS	EPA Method 8015M-Diesel	EPA Method 8020-BTE	5/13/97 8015	Total lead		
DATE	TIME	SAMPLE NUMBER									
5/13/97	0915	BRTMO-1	S	X					97050803	1	8015M-Motor Oil All samples in 2 1/2" x 6" brass liners -24 hr TAT 97050812 Composite into 1 sample call it DSTP-1A 97050813 Composite into 1 sample call it GSTP-1A Composites also 24 hr TAT Motor Oil results Standard TAT FAX 24 hr TAT results to Bill Loskutoff (916) 368-0988 All samples on ice in ice chest
	0930	BRTMO-2	S	X					97050804	1	
	0935	BRTMO-3	S	X					97050805	1	
	1145	BRTTP-2	S		X	X		X	97050806	1	
	1230	BRTTG-1	S		X	X		X	97050807	1	
	1240	BRTTG-2	S		X	X		X	97050808	1	
	1255	BRTTD-1	S			X	X		97050809	1	
	1315	BRTTD-2	S			X	X		97050810	1	
	1410	BRTTP-1	S		X		X	X	97050811	1	
	1420	BRT-DSTP-1	S			X	X		97050812	1	
	1420	BRT-DSTP-2	S			X	X		97050812	1	
	1430	BRT-GSTP-1	S		X		X	X	97050814	1	
	1430	BRT-GSTP-2	S		X		X	X	97050815	1	
TOTAL Pb RESULTS BY 5/19/97 4 DAY TAT PER CLIENT. MM 5/14/97 2 RESULTS RECEIVED BY 5/16/97, 3 DAY TAT, MM 5/17/97											
									TOTAL NUMBER OF CONTAINERS	13	
RELINQUISHED BY: (Signature) Bill Loskutoff		DATE/TIME 5/13/97 1450	RECEIVED BY: (Signature) [Signature]		DATE/TIME 5/13/97 1450	RELINQUISHED BY: (Signature) [Signature]		DATE/TIME 5/13/97 1602	RECEIVED BY: (Signature) [Signature]		
METHOD OF SHIPMENT: Lab Courier-Pick-up @SITE			SHIPPED BY: (Signature)		COURIER: (Signature)		RECEIVED FOR LAB BY: (Signature) [Signature]		DATE/TIME 5/12/97 1602		



Intertek Testing Services Environmental Laboratories

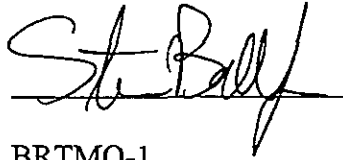
SAMPLE RECEIVING CHECKLIST		
Workorder Number: <u>604</u>	Client Project ID: <u>S26203-2000</u>	Quote Number:
<i>Cooler</i>		
Shipping documentation present? If YES, enter Carrier and Airbill #:	YES	NO <u>(N/A)</u>
Custody Seal on the outside of cooler? Condition: Intact Broken	YES	NO <u>(N/A)</u>
Temperature of sample(s) within range? List temperatures of cooler(s): <u>4°C</u> Note: If all samples taken within previous 4 hr, circle N/A and place in sample storage area as soon as possible.	<u>(YES)</u>	NO N/A IR-1 Temp Blank
<i>Samples</i>		
Chain of custody seal present for each container? Condition: Intact Broken	YES	NO <u>(N/A)</u>
Samples arrived within holding time?	<u>(YES)</u>	NO N/A
Samples in proper containers for methods requested? Condition of containers: <u>(Intact)</u> Broken If NO, were samples transferred to proper container(s)? Yes No	<u>(YES)</u>	NO
VOA containers received with zero headspace or bubbles < 6 mm?	YES	NO <u>(N/A)</u>
Container labels complete? (ID, date, time, preservative)	<u>(YES)</u>	NO N/A
Samples properly preserved? If NO, was the preservative added at time of receipt? Yes No	YES	NO <u>(N/A)</u>
pH check of samples required at time of receipt? (volatiles checked at analysis) If YES, pH checked and recorded by:	YES	<u>(NO)</u>
Sufficient amount of sample received for methods requested? If NO, has the client or PM been notified? Yes No	<u>(YES)</u>	NO
Field blanks received with sample batch?	YES	NO <u>(N/A)</u>
Trip blanks received with sample batch?	YES	NO <u>(N/A)</u>
<i>Chain of Custody</i>		
Chain of custody form received with samples?	<u>(YES)</u>	NO
Has it been filled out completely and in ink?	<u>(YES)</u>	NO
Sample IDs on chain of custody form agree with labels?	<u>(YES)</u>	NO
Number of containers on chain agree with number received?	<u>(YES)</u>	NO
Analysis methods specified?	<u>(YES)</u>	NO
Sampling date and time indicated?	<u>(YES)</u>	NO
Proper signatures of sampler, courier and custodian in appropriate spaces? With time and date? <u>(Yes)</u> No	<u>(YES)</u>	NO
Turnaround time? Standard <u>(Rush)</u>		

Any NO responses and/or any BROKEN that was checked must be detailed in a Corrective Action Form.

Sample Custodian: JP Date: 5-14-97 Project Manager: Nikhil Date: 5/15/97 030

LABORATORY DATA REVIEW - SDG 604

Data Reviewed by:



Date: 27 June 1997

Samples in SDG 604: BRTMO-1
BRTMO-2
BRTMO-3
BRTP-2
BRTTG-1
BRTTG-2
BRTTD-1
BRTTD-2
BRTP-1
DSTP-1A
GSTP-1A

Field QC samples in this
SDG: none

1.0 General Comments

Samples as indicated on the chain-of-custody were submitted to Intertek Testing Services, Inc., in Sacramento, California. Samples BRTMO-1, BRTM-2, and BRTMO-3 were analyzed for total petroleum hydrocarbons (TPH) as motor oil using modified EPA Method 8015. Samples BRTTD-1, BRTTD-2, DSTP-1, and DSTP-2 were analyzed for total petroleum hydrocarbons as diesel (TPH-d) using modified EPA Method 8015, and benzene, toluene, ethyl benzene, and total xylenes (BTEX) with methyl tert-butyl ether (MtBE) using EPA Method 8020. Samples BRTP-2, BRTTG-1, BRTTG-2, BRTP-1, GSTP-1, and GSTP-2 were analyzed for total petroleum hydrocarbons as gasoline (TPH-g) using modified EPA Method 8015, benzene, toluene, ethyl benzene, and total xylenes (BTEX) with methyl tert-butyl ether (MtBE) using EPA Method 8020, and total lead using EPA Method 6010A. Samples were received at 4° C, accurately logged in, and the cooler receipt forms indicated compliance with established project protocols for sample documentation and shipping.

The case narrative for Sample Delivery Group (SDG) 640, reported that the diesel analysis surrogates for samples BRTTG-1 and BRTTD-2 diluted out. Also for diesel analysis, the difference between the responses from the DB-624 and DB-5 columns was greater than 25% for toluene and ethylbenzene in sample BRTP-2. In all diesel analysis cases, the lower value from the DB-5 column has been reported.

1.1 Holding Times

The holding times for the analyses in this SDG were evaluated by examination of the chain-of-custody form and sample analysis sheets. Extractions/analyses in this SDG were performed within the prescribed holding times.

1.2 Blank Contamination

Blank results were reviewed to assess contamination emanating from laboratory activities. Method blanks were analyzed at the required frequency of one per analytical batch. The method blank associated with each analysis had nondetect results reported. In general, the blank results indicated acceptable performance with respect to laboratory contamination.

1.3 Spike Frequency and Recovery

1.3.1 Matrix Spikes (MS)

Matrix spike analyses were not conducted for this SDG.

1.3.2 Surrogates

Surrogate compounds were added to samples prior to analysis for TPH as motor oil, TPH as diesel, TPH as gasoline, and BTEX. Surrogate recoveries were used to assess analytical accuracy on a per sample basis. The laboratory used p-bromofluorobenzene for TPH as gasoline and BTEX analyses and o-terphenyl for TPH as diesel analysis. Surrogate recoveries reported were within the laboratory generated evaluation criterion (53% to 147% for TPH-gasoline and BTEX, 75% to 117% for TPH-diesel). Surrogates for TPH as gasoline samples BRTTG-1 and BRTTD-2 were diluted out.

1.3.3 Laboratory Control Samples (LCS)

The accuracy of the analytical methods was assessed using laboratory control sample (LCS) recoveries. LCS recoveries for the TPH as motor oil, TPH as diesel, TPH as gasoline, and BTEX analyses met the laboratory generated evaluation criterion (60% to 130% for motor oil, gasoline, and diesel, and approximately 55% to 140% for BTEX). LCS recoveries for lead analyses met the evaluation criterion of 80% to 120%.

1.3.4 Blank Spikes (BS)

Blank spikes were not analyzed as part of this SDG.

1.4 Duplicate Analysis Precision

1.4.1 Field Duplicates

Field duplicates were not collected as part of this SDG.

1.4.2 Matrix Spike Duplicates (MSD)

Matrix spike duplicates (MSD) were not analyzed as part of this SDG.

1.4.3 Laboratory Control Sample Duplicates (LCSD)

The precision of the analytical methods TPH as motor oil, TPH as diesel, TPH as gasoline, and BTEX was assessed using laboratory control sample duplicates (LCSD) RPD values. TPH as motor oil, TPH as diesel, TPH as gasoline, and BTEX analyses met the laboratory generated evaluation criterion (60% to 130% for motor oil, gasoline, and diesel, and approximately 55% to 140% for BTEX). The LCSD RPD values for each analysis met the laboratory generated evaluation criterion of $\pm 30\%$.

1.4.4 Blank Spike Duplicates (BSD)

Blank spike duplicates (BSD) were not analyzed as part of this SDG.

1.5 Analytical Sensitivity

Reporting limits were reviewed against the method reporting limits. The reporting limits in the SDG were acceptable with the exception of sample BRTTG-1 and BRTTD-2 for BTEX analysis. Sample BRTTG-1 was analyzed at a 1:5000 dilution, in which MtBE was found to be nondetect at the dilution derived elevated reporting limit. Sample BRTTD-2 was analyzed at a 1:500 dilution, in which benzene, toluene, and ethylbenzene were found to be nondetect at the dilution derived elevated reporting limit. Based on professional judgment, concentrations for these analytes in both samples would probably be detected at lower reporting limits. The nondetects should therefore, be considered as estimated and be flagged with the "UJ" data qualifier indicating a nondetected estimated value.

1.6 Completeness of Data Package

Completeness is defined as the percentage of valid sample results divided by the total number of sample results. Based on this data review, the data were 100% percent complete.

1.7 Overall Assessment of Data

Calibration standards were not evaluated during this review. Overall accuracy and precision were acceptable for the data in the SDG with the qualifications noted herein. The data reported are acceptable for their intended use.

CHROMALAB, INC.

Environmental Services (SDB)

May 21, 1997

Submission #: 9705225

WOODWARD-CLYDE SACRAMENTO
10370 Old Placerville Rd Suite 104
Sacramento, CA 95827

Attn: Bill Loskutoff

RE: Analysis for project S96203-2000, number S96203-2000.

REPORTING INFORMATION

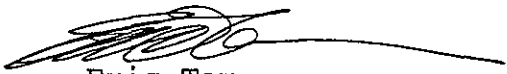
Samples were received with discrepancies noted below on May 15, 1997. They were refrigerated upon receipt and analyzed as described in the attached report. ChromaLab followed EPA or equivalent methods for all testing reported.

Deviation from standard conditions was found in the following:

- No MS/MSD for Diesel analysis due to limited sample. BS/BSD verified batch precision and accuracy.
- Samples received at 15.0 degrees Celsius.

<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date collected</u>	<u>Sample #</u>
BRT-W	WTR	May 15, 1997	132111


Jill Thomas *fm*
Quality Assurance Manager


Eric Tam
Laboratory Director

CHROMALAB, INC.

Environmental Services (SDB)

May 16, 1997

Submission #: 9705225

WOODWARD-CLYDE SACRAMENTO

Atten: Bill Loskutoff

Project: S96203-2000
Received: May 15, 1997

Project#: S96203-2000

re: One sample for Gasoline BTEX MTBE analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: BRT-W

Spl#: 132111

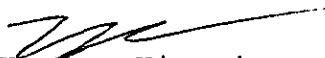
Matrix: WATER


Sampled: May 15, 1997

Run#: 6881

Analyzed: May 15, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	110	50	N.D.	84	1
MTBE	N.D.	5.0	N.D.	106	1
BENZENE	N.D.	0.50	N.D.	106	1
TOLUENE	1.1	0.50	N.D.	110	1
ETHYL BENZENE	1.5	0.50	N.D.	108	1
XYLENES	17	0.50	N.D.	111	1


Kayvan Kimyai
Chemist


Marianne Alexander
Gas/BTEX Supervisor

916-368-0967

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096
Federal ID #68-0140157

LEVEL 2
GC V132 O: BTEXQC02
KAYVAN 08:4

CHROMALAB, INC.

Environmental Services (SDB)

May 16, 1997

Submission #: 9705225

WOODWARD-CLYDE SACRAMENTO

Atten: Bill Loskutoff

Project: S96203-2000
Received: May 15, 1997

Project#: S96203-2000

re: **Matrix spike** report for Gasoline BTEX MTBE analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Matrix: WATER
Lab Run#: 6881

Instrument: 3400-4

Analyzed: May 16, 1997

Analyte	Spiked		Amt Found		Spike Recov		Control Limits	% RPD	% Lim	
	Sample Amount (ug/L)	Spike Amt MS MSD (ug/L)	MS MSD (ug/L)	MS MSD (%)	MS MSD (%)					
MTBE	N.D.	20.0	20.0	20.5	21.3	102	106	65-135	5.50	20
BENZENE	N.D.	20.0	20.0	20.3	19.6	102	98.0	65-135	10.6	20
TOLUENE	1.1	20.0	20.0	21.6	20.4	102	96.5	65-135	13.1	20
ETHYL BENZENE	1.5	20.0	20.0	22.1	20.9	103	97.0	65-135	12.6	20
XYLENES	17	60.0	60.0	77.3	74.3	100	95.5	65-135	14.1	20

Sample Spiked: 132111

Submission #: 9705225

Client Sample ID: BRT-W

CHROMALAB, INC.

Environmental Services (SDB)

May 16, 1997

Submission #: 9705225

WOODWARD-CLYDE SACRAMENTO

Atten: Bill Loskutoff

Project: S96203-2000
Received: May 15, 1997

Project#: S96203-2000

re: **Surrogate** report for 1 sample for Gasoline BTEX MTBE analysis.
Method: SW846 8020A Nov 1990 / 8015Mod
Lab Run#: 6881
Matrix: WATER

<u>Sample#</u>	<u>Client Sample ID</u>	<u>Surrogate</u>	<u>% Recovered</u>	<u>Recovery Limits</u>
132111-1	BRT-W	TRIFLUOROTOLUENE	107	65-135
132111-1	BRT-W	4-BROMOFLUOROBENZENE	95.0	65-135

<u>Sample#</u>	<u>QC Sample Type</u>	<u>Surrogate</u>	<u>% Recovered</u>	<u>Recovery Limits</u>
132123-1	Reagent blank (MDB)	TRIFLUOROTOLUENE	98.4	65-135
132123-1	Reagent blank (MDB)	4-BROMOFLUOROBENZENE	89.1	65-135
132124-1	Spiked blank (BSP)	TRIFLUOROTOLUENE	104	65-135
132124-1	Spiked blank (BSP)	4-BROMOFLUOROBENZENE	120	65-135
132126-1	Matrix spike (MS)	TRIFLUOROTOLUENE	113	65-135
132126-1	Matrix spike (MS)	4-BROMOFLUOROBENZENE	104	65-135
132127-1	Matrix spike duplicate (MSD)	TRIFLUOROTOLUENE	99.6	65-135
132127-1	Matrix spike duplicate (MSD)	4-BROMOFLUOROBENZENE	93.6	65-135

V132
QCSURR1229 KAYVAN 16-May-97 1

CHROMALAB, INC.

Environmental Services (SDB)

May 16, 1997

Submission #: 9705225

WOODWARD-CLYDE SACRAMENTO

Atten: Bill Loskutoff


Project: S96203-2000
Received: May 15, 1997

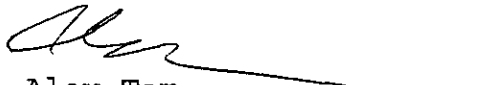
Project#: S96203-2000

re: 1 sample for TPH - Diesel analysis.
Method: EPA 8015M

Sampled: May 15, 1997 Matrix: WATER Extracted: May 16, 1997
Run#: 6891 Analyzed: May 16, 1997

Spl#	CLIENT SPL ID	DIESEL (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
132111	BRT-W	N.D.	50	N.D.	85.0	1


Bruce Havlik
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

May 16, 1997

Submission #: 9705225

WOODWARD-CLYDE SACRAMENTO

Atten: Bill Loskutoff

Project: S96203-2000
Received: May 15, 1997

Project#: S96203-2000

re: **Blank spike and duplicate** report for TPH - Diesel analysis.

Method: EPA 8015M

Matrix: WATER
Lab Run#: 6891

Analyzed: May 16, 1997

Analyte	Spike Amount		Spike Amount Found		Spike Recov		Control Limits	% RPD	% RPD Lim
	BSP (ug/L)	Dup	BSP (ug/L)	Dup	BSP (%)	Dup (%)			
DIESEL	200	200	170	165	85.0	82.5	60-130	2.98	25

* MS/MSD not performed due to limited sample.

CHROMALAB, INC.

Environmental Services (SDB)

May 16, 1997

Submission #: 9705225

WOODWARD-CLYDE SACRAMENTO

Atten: Bill Loskutoff

Project: S96203-2000
Received: May 15, 1997

Project#: S96203-2000

re: **Surrogate** report for 1 sample for TPH - Diesel analysis.

Method: EPA 8015M

Lab Run#: 6891

Matrix: WATER

<u>Sample#</u>	<u>Client Sample ID</u>	<u>Surrogate</u>	<u>% Recovered</u>	<u>Recovery Limits</u>
132111-1	BRT-W	O-TERPHENYL	102	60-130

<u>Sample#</u>	<u>QC Sample Type</u>	<u>Surrogate</u>	<u>% Recovered</u>	<u>Recovery Limits</u>
132187-1	Reagent blank (MDB)	O-TERPHENYL	94.0	60-130
132188-1	Spiked blank (BSP)	O-TERPHENYL	99.3	60-130
132189-1	Spiked blank duplicate (BSD)	O-TERPHENYL	96.2	60-130

S005
QCSURR1229 YT 16-May-97 17:05:0

CHROMALAB, INC.

Environmental Services (SDB)

May 16, 1997

Submission #: 9705225

WOODWARD-CLYDE SACRAMENTO

Atten: Bill Loskutoff

Project: S96203-2000
Received: May 15, 1997

Project#: S96203-2000

re: One sample for Miscellaneous Metals analysis.
Method: EPA 3010A/6010A Nov 1990

Client Sample ID: BRT-W

Spl#: 132111

Sampled: May 15, 1997

Matrix: WATER

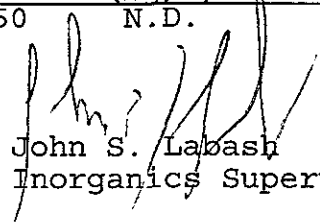
Run#: 6883

Extracted: May 15, 1997

Analyzed: May 15, 1997

<u>ANALYTE</u>	<u>RESULT</u> (mg/L)	<u>REPORTING</u> <u>LIMIT</u> (mg/L)	<u>BLANK</u> <u>RESULT</u> (mg/L)	<u>BLANK</u> <u>SPIKE</u> (%)	<u>DILUTION</u> <u>FACTOR</u>
LEAD	N.D.	0.0050	N.D.	99.6	1


Shafi Barekzai
Chemist


John S. Labash
Inorganics Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

May 16, 1997

Submission #: 9705225

WOODWARD-CLYDE SACRAMENTO

Atten: Bill Loskutoff

Project: S96203-2000
Received: May 15, 1997

Project#: S96203-2000

re: **Matrix spike** report for Miscellaneous Metals analysis.

Method: EPA 3010A/6010A Nov 1990

Matrix: WATER
Lab Run#: 6883

Extracted: May 15, 1997
Analyzed: May 15, 1997

Instrument:

Spiked

Analyte	Sample Amount (mg/L)	Spike Amt (mg/L)		Amt Found (mg/L)		Spike Recov (%)		Control Limits	% RPD	Lim
		MS	MSD	MS	MSD	MS	MSD			
LEAD	ND	0.500	0.500	0.505	0.499	101	99.8	80-120	1.20	20

Sample Spiked: 131751

Submission #: 9705184

Client Sample ID: NLF-6-051297

225/13211 Bureau of Rec/Trocy

Chromalab 33726

33727

Woodward-Clyde Consultants

10370 Old Placerville Rd., Suite 104, Sacramento, CA 95827
Tel. (916) 368-0988 Fax (916) 368-0967

Chain of Custody Record

PROJECT NO. 396203-2000			ANALYSES					Number of Containers	REMARKS (Sample preservation, handling procedures, etc.)
SAMPLERS: (Signature) Bill Loskutoff			Sample Matrix (S)oil, (W)ater, (A)ir	EPA Method 8020-BTEX	EPA Method 8015-TPH-gas	EPA Method 8015-TPH-Diesel	EPA Method		
DATE	TIME	SAMPLE NUMBER						Total Lead	
5/17/97	1415	BRT-W	W	X	X			3	40ml VOA's w/ HCL amber glass vials 500ml plastic w/ HNO3 (Filtered in field)
		BRT-W	W		X			2	
		BRT-W	W				X	1	
JRN #: 9705225 REP: GCLEVE CLIENT: W&C-SJ JE: 05/16/97 EF #: 33727									
RUSH									

24 hr TAT

Send results to
Bill Loskutoff
(916) 368-0967 FAX

All samples on ice
in ice chest

TOTAL NUMBER OF CONTAINERS
6

RELINQUISHED BY: (Signature) Bill Loskutoff	DATE/TIME 5/15/97 1540	RECEIVED BY: (Signature) Mike Naranyo	DATE/TIME 5/15/97	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
METHOD OF SHIPMENT: Hand delivered		SHIPPED BY: (Signature) Mike Naranyo	COURIER: (Signature)	RECEIVED FOR LAB BY: (Signature)	DATE/TIME	

CHROMALAB, INC.

Environmental Service (SDB)

Sample Receipt Checklist

Client Name: WOODWARD-CLYDE SACRAMENTO

Date/Time Received: 05/15/97 | 1540

Reference/Submis: 33727 | 9705225

Received by: MN

Checklist completed by: Chris Lowley
Signature

Date: 5/16/97

Reviewed by: MN 5/16
Initials | Date

Matrix: H₂O

Carrier name: Client C/L

Shipping container/cooler in good condition?

Yes No Not Present

Custody seals intact on shipping container/cooler?

Yes No Not Present

Custody seals intact on sample bottles?

Yes No Not Present

Chain of custody present?

Yes No

Chain of custody signed when relinquished and received?

Yes No

Chain of custody agrees with sample labels?

Yes No

Samples in proper container/bottle?

Yes No

Sample containers intact?

Yes No

Sufficient sample volume for indicated test?

Yes No

All samples received within holding time?

Yes No

Container/Temp Blank temperature in compliance?

Temp: 15.0°C Yes No

Water - VOA vials have zero headspace?

No VOA vials submitted Yes No

Water - pH acceptable upon receipt? YES

Adjusted? Checked by CR
chemist for VOAs

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted: _____ Date contacted: _____ Person contacted: _____

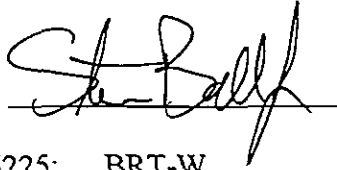
Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action: _____

LABORATORY DATA REVIEW - SDG 9705225

Data Reviewed by:



Date: 26 June 1997

Samples in SDG 9705225: BRT-W

Field QC samples in this
SDG: none

1.0 General Comments

One sample as indicated on the chain-of-custody was submitted to Chromalab, Inc., in Sacramento, California. The single sample (BRT-W) was analyzed for total petroleum hydrocarbons (TPH) as diesel using modified EPA Method 8015, total petroleum hydrocarbons (TPH) as gasoline using modified EPA Method 8015, methyl tert-butyl ether (MtBE), benzene, toluene, ethyl benzene, and total xylenes (BTEX) using EPA Method 8020, and total lead using EPA Method 6010A. Samples were received at 15° C, accurately logged in, and the cooler receipt forms indicated compliance with established project protocols for sample documentation and shipping. Considering samples were submitted to the laboratory approximately one (1) hour after sampling, temperature measurement does not appear to be accurate, as it reportedly was gauged on the plastic container identified for metals analysis instead of the the more appropriate glass containers identified for volatile analysis

The case narrative for SDG 9705225, reported that the diesel analysis did not contain a MS/MSD due to limited sample. However, the BS/BSD verified batch precision and accuracy.

1.1 Holding Times

The holding times for the analyses in this sample delivery group (SDG) were evaluated by examination of the chain-of-custody form and sample analysis sheets. Extractions/analyses in this SDG were performed within the prescribed holding times.

1.2 Blank Contamination

Blank results were reviewed to assess contamination emanating from laboratory activities. Method blanks were analyzed at the required frequency of one per analytical batch. The method blank associated with each analysis had nondetect results reported. In general, the blank results indicated acceptable performance with respect to laboratory contamination.

1.3 Spike Frequency and Recovery

1.3.1 Matrix Spikes (MS)

Accuracy within the sample matrix was assessed using MS recoveries for BTEX and lead analysis. Sample BRT-W was analyzed as an MS sample for BTEX analysis while a non-project sample was analyzed as an MS sample for lead analysis. The BTEX MS recoveries were within the evaluation 65% to 135%. The lead MS recovery was within the evaluation criterion of 80% to 120%.

1.3.2 Surrogates

Surrogate compounds were added to sample BRT-W prior to analysis for TPH as diesel, TPH as gasoline, and BTEX. Surrogate recoveries were used to assess analytical accuracy on a per sample basis. The laboratory used 4-bromofluorobenzene and trifluorotoluene for TPH as gasoline and BTEX analyses and o-terphenyl for TPH as diesel analysis. Surrogate recoveries reported were within the evaluation criterion (65% to 135% for TPH-gasoline and BTEX, 60% to 130% for TPH-diesel).

1.3.3 Laboratory Control Samples (LCS)

LCS samples were not analyzed as part of this SDG.

1.3.4 Blank Spikes (BS)

The accuracy of the analytical methods was assessed using blank spike (BS) recoveries. BS recoveries for TPH-gasoline and BTEX analyses met the evaluation criterion of 65% to 135%. TPH-diesel analysis met the evaluation criterion of 60% to 130%. Lead analysis met the evaluation criterion of 80% to 120%.

1.4 Duplicate Analysis Precision

1.4.1 Field Duplicates

Field duplicates were not collected as part of this SDG.

1.4.2 Matrix Spike Duplicates (MSD)

Matrix spike duplicate (MSD) results were used to assess laboratory precision within the sample matrix by evaluating the relative percent difference (RPD) between the MS and MSD sample recoveries. Sample BRT-W was analyzed as an MSD sample for BTEX analysis while a non-project sample was analyzed as an MSD sample for lead analysis. The BTEX MSD recoveries were within the evaluation 65% to 135%. The lead MSD recovery was within the evaluation criterion of 80% to 120%. RPDs between the MS and MSD sample recoveries met the evaluation criterion of 20% for both analyses.

1.4.3 Laboratory Control Sample Duplicates (LCSD)

LCSD samples were not analyzed as part of this SDG.

1.4.4 Blank Spike Duplicates (BSD)

Blank spike duplicate (BSD) results were used to assess laboratory analytical precision by evaluating the relative percent difference (RPD) between the BS and BSD sample recoveries. BSD recovery for TPH as diesel met the evaluation criterion of 60% to 130%. The RPD between the BS and the BSD was within the evaluation criterion of $\pm 25\%$.

1.5 Analytical Sensitivity

Reporting limits were reviewed against the method reporting limits. The reporting limits in the SDG were acceptable.

1.6 Completeness of Data Package

Completeness is defined as the percentage of valid sample results divided by the total number of sample results. Based on this data review, the data were 100% percent complete.

1.7 Overall Assessment of Data

Calibration standards were not evaluated during this review. Overall accuracy and precision were acceptable for the data in the SDG with the qualifications noted herein. The data reported are acceptable for their intended use.

ITS Intertek Testing Services
Environmental Laboratories

June 12, 1997

Mr. Jay Kamine
Woodward-Clyde Consultants
10370 Old Placerville Road, Suite #104
Sacramento, CA 95827

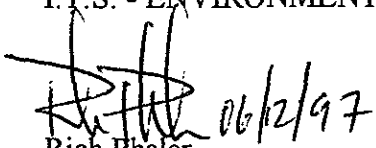
Dear Mr. Kamine,

Enclosed are the analytical results for your Project ID: S96203-2000, received on May 17, 1997. The enclosed work was performed by a laboratory subcontracted by I.T.S - Environmental Laboratories.

If you have any questions regarding this workorder, please give me a call at (408) 432-8192.

Best Regards,

I.T.S. - ENVIRONMENTAL LABORATORIES


Rich Phaler
Project Manager



Intertek Testing Services Environmental Laboratories

ANALYTICAL REPORT

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149

REPORT DATE : 29-MAY-1997

ATTENTION : Michael Malveda
SAMPLE SUBMITTED BY : ITS/San Jose
ADDRESS : 1961 Concourse Dr., Ste. E
: San Jose, CA 95131

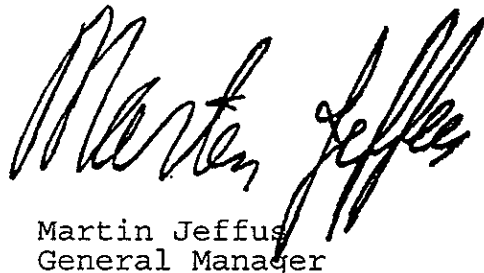
PROJECT : 661 S96203-2000
PURCHASE ORDER NO : 661

Included in this data package are the analytical results for the sample group which you have submitted to Intertek Testing Services for analysis. These results are representative of the samples as received by the laboratory.

The information contained herein has undergone extensive review and is deemed accurate and complete. Sample analysis and quality control were performed in accordance with all applicable protocols. Please refrain from reproducing this report except in its entirety.

If you have any questions regarding this report and its associated materials please call your Project Manager at (972) 238-5591.

We appreciate the opportunity to serve you and look forward to providing continued service in the future.



Martin Jeffus
General Manager



Intertek Testing Services
Environmental Laboratories

DATE RECEIVED: 20-MAY-1997

REPORT NUMBER: D97-6149

REPORT DATE: 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
ADDRESS : 1961 Concourse Dr., Suite E
San Jose, Ca 95131
ATTENTION : Mr. Michael Malveda
PROJECT : 661 S96203-2000

CASE NARRATIVE COMMENTS:

EPA Method 8270 Semivolatile Organics Analysis

Matrix Spike Analysis

For the nonaqueous matrix spike analysis of sample D97-6121-1, all spike compounds were outside of QC limits due to matrix interference. Since the blank spike and blank spike duplicate were within QC limits, the results were authorized.

No other issues were noted during the sample analysis for this task.

If you have any questions, please feel free to call Mr. John (J.T.) Todd at (972) 238-5591.

Gregory K. Horton
Data Review



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-1

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : BRTTD-3
 : 97051277
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 16-MAY-1997
 ANALYSIS METHOD : EPA 8020 /1
 ANALYZED BY : MKS
 ANALYZED ON : 22-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO : 27-052297

BTEX ANALYSIS			
TEST REQUESTED	DETECTION LIMIT		RESULTS
Benzene	2.0	µg/Kg	< 2.0 µg/Kg
Toluene	2.0	µg/Kg	< 2.0 µg/Kg
Ethyl benzene	2.0	µg/Kg	< 2.0 µg/Kg
Xylenes	2.0	µg/Kg	< 2.0 µg/Kg
BTEX (total)			< 2.0 µg/Kg #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE RECOVERED	
Bromofluorobenzene (SS)	110	%

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-1

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : BRTTD-3
 : 97051277
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 16-MAY-1997
 ANALYSIS METHOD : EPA 8020 /1
 ANALYZED BY : MKS
 ANALYZED ON : 22-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO : 27-052297M

METHYL TERTIARY BUTYL ETHER		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Methyl Tertiary Butyl Ether	10.0 $\mu\text{g/Kg}$	< 10.0 $\mu\text{g/Kg}$

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE RECOVERED	
4-Bromofluorobenzene (SS)	110	%



Intertek Testing Services

Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-1

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : BRTTD-3
 : 97051277
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 16-MAY-1997
 PREPARATION METHOD : EPA 3550A
 PREPARED BY : CLT
 PREPARED ON : 20-MAY-1997
 ANALYSIS METHOD : EPA 8015M /1
 ANALYZED BY : VHL
 ANALYZED ON : 21-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO. : AC094-81

TPH BY GC (EXTRACTABLE)		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	10.0 mg/Kg	< 10.0 mg/Kg

QUALITY CONTROL DATA	
SURROGATE COMPOUND	SPIKE RECOVERED
Triacontane (SS)	96.3 %



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-1

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : BRTTD-3
 : 97051277
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 16-MAY-1997
 ANALYSIS METHOD : EPA 5030/8015M /1
 ANALYZED BY : MKS
 ANALYZED ON : 22-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO : 28-052297

TPH BY GC (VOLATILE)		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	50 $\mu\text{g/Kg}$	< 50 $\mu\text{g/Kg}$

QUALITY CONTROL DATA	
SURROGATE COMPOUND	SPIKE RECOVERED
Fluorobenzene	90.5 %



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-1

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : BRTTD-3
 : 97051277
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 16-MAY-1997

TOTAL METALS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Lead /1	0.50 mg/Kg	6.33 mg/Kg
Dilution Factor : 1 Prepared using EPA 3051 on 22-MAY-1997 by HMR Analyzed using EPA 6010A on 22-MAY-1997 by GAY QC Batch No : 17149		

ITS Intertek Testing Services
Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-1

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
ADDRESS : 1961 Concourse Dr., Ste. E
: San Jose, CA 95131
ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
ID MARKS : BRTTD-3
: 97051277
PROJECT : 661 S96203-2000
PURCHASE ORDER NO : 661
DATE SAMPLED : 16-MAY-1997

MISCELLANEOUS ANALYSES		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Solids /1	0.01 %	81.5 %
Analyzed using ASTM D2216 mod. on 27-MAY-1997 by SAB QC Batch No : 106062D		



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-2
REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
ADDRESS : 1961 Concourse Dr., Ste. E
: San Jose, CA 95131
ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
ID MARKS : BRTTD-4
: 97051278
PROJECT : 661 S96203-2000
PURCHASE ORDER NO : 661
DATE SAMPLED : 16-MAY-1997
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : MKS
ANALYZED ON : 22-MAY-1997
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 27-052297

BTEX ANALYSIS				
TEST REQUESTED	DETECTION LIMIT		RESULTS	
Benzene	2.0	µg/Kg	<	2.0 µg/Kg
Toluene	2.0	µg/Kg	<	2.0 µg/Kg
Ethyl benzene	2.0	µg/Kg	<	2.0 µg/Kg
Xylenes	2.0	µg/Kg	<	2.0 µg/Kg
BTEX (total)			<	2.0 µg/Kg #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE RECOVERED	
Bromofluorobenzene (SS)	124	%

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.



Intertek Testing Services
Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-2

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : BRTTD-4
 : 97051278
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 16-MAY-1997
 ANALYSIS METHOD : EPA 8020 /1
 ANALYZED BY : MKS
 ANALYZED ON : 23-MAY-1997
 DILUTION FACTOR : 5
 METHOD FACTOR : 1
 QC BATCH NO : 27-052297AM

METHYL TERTIARY BUTYL ETHER		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Methyl Tertiary Butyl Ether	50.0 µg/Kg	405 µg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE RECOVERED	
4-Bromofluorobenzene (SS)	112	%



Intertek Testing Services

Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-2

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : BRTTD-4
 : 97051278
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 16-MAY-1997
 PREPARATION METHOD : EPA 3550A
 PREPARED BY : CLT
 PREPARED ON : 20-MAY-1997
 ANALYSIS METHOD : EPA 8015M /1
 ANALYZED BY : VHL
 ANALYZED ON : 21-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 0.9
 QC BATCH NO : AC094-81

TPH BY GC (EXTRACTABLE)		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	9.00 mg/Kg	< 9.00 mg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE RECOVERED	
Triacontane (SS)	101	%

ITS Intertek Testing Services
Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-2

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
ADDRESS : 1961 Concourse Dr., Ste. E
: San Jose, CA 95131
ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
ID MARKS : BRTTD-4
: 97051278
PROJECT : 661 S96203-2000
PURCHASE ORDER NO : 661
DATE SAMPLED : 16-MAY-1997
ANALYSIS METHOD : EPA 5030/8015M /1
ANALYZED BY : MKS
ANALYZED ON : 22-MAY-1997
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 28-052297

TPH BY GC (VOLATILE)		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	50 $\mu\text{g/Kg}$	< 50 $\mu\text{g/Kg}$

QUALITY CONTROL DATA	
SURROGATE COMPOUND	SPIKE RECOVERED
Fluorobenzene	81.9 %

ITS Intertek Testing Services
Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-2
REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
ADDRESS : 1961 Concourse Dr., Ste. E
: San Jose, CA 95131
ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
ID MARKS : BRTTD-4
: 97051278
PROJECT : 661 S96203-2000
PURCHASE ORDER NO : 661
DATE SAMPLED : 16-MAY-1997

TOTAL METALS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Lead /1	0.50 mg/Kg	7.46 mg/Kg
Dilution Factor : 1 Prepared using EPA 3051 on 22-MAY-1997 by HMR Analyzed using EPA 6010A on 22-MAY-1997 by GAY QC Batch No : 17149		

ITS Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-2

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
ADDRESS : 1961 Concourse Dr., Ste. E
: San Jose, CA 95131
ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
ID MARKS : BRTTD-4
: 97051278
PROJECT : 661 S96203-2000
PURCHASE ORDER NO : 661
DATE SAMPLED : 16-MAY-1997

MISCELLANEOUS ANALYSES		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Solids /1	0.01 %	81.6 %
Analyzed using ASTM D2216 mod. on 27-MAY-1997 by SAB QC Batch No : 106062D		



Intertek Testing Services

Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-3

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : BRTTG-3
 : 97051279
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 17-MAY-1997
 ANALYSIS METHOD : EPA 8020 /1
 ANALYZED BY : MKS
 ANALYZED ON : 22-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO : 27-052297

BTEX ANALYSIS			
TEST REQUESTED	DETECTION LIMIT		RESULTS
Benzene	2.0	µg/Kg	< 2.0 µg/Kg
Toluene	2.0	µg/Kg	< 2.0 µg/Kg
Ethyl benzene	2.0	µg/Kg	< 2.0 µg/Kg
Xylenes	2.0	µg/Kg	< 2.0 µg/Kg
BTEX (total)			< 2.0 µg/Kg #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE RECOVERED	
Bromofluorobenzene (SS)	116	%

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.



Intertek Testing Services

Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-3

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : BRTTG-3
 : 97051279
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 17-MAY-1997
 ANALYSIS METHOD : EPA 8020 /1
 ANALYZED BY : MKS
 ANALYZED ON : 22-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO : 27-052297M

METHYL TERTIARY BUTYL ETHER		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Methyl Tertiary Butyl Ether	10.0 µg/Kg	< 10.0 µg/Kg

QUALITY CONTROL DATA	
SURROGATE COMPOUND	SPIKE RECOVERED
4-Bromofluorobenzene (SS)	116 %



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-3

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : BRTTG-3
 : 97051279
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 17-MAY-1997
 PREPARATION METHOD : EPA 3550A
 PREPARED BY : CLT
 PREPARED ON : 20-MAY-1997
 ANALYSIS METHOD : EPA 8015M /1
 ANALYZED BY : VHL
 ANALYZED ON : 21-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 0.9
 QC BATCH NO : AC094-81

TPH BY GC (EXTRACTABLE)		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	9.00 mg/Kg	< 9.00 mg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND		SPIKE RECOVERED
Triacontane (SS)		94.8 %



Intertek Testing Services

Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-3
 REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : BRTTG-3
 : 97051279
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 17-MAY-1997
 ANALYSIS METHOD : EPA 5030/8015M /1
 ANALYZED BY : MKS
 ANALYZED ON : 22-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO : 28-052297

TPH BY GC (VOLATILE)		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	50 $\mu\text{g/Kg}$	< 50 $\mu\text{g/Kg}$

QUALITY CONTROL DATA	
SURROGATE COMPOUND	SPIKE RECOVERED
Fluorobenzene	82.8 %



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-3

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
ADDRESS : 1961 Concourse Dr., Ste. E
: San Jose, CA 95131
ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
ID MARKS : BRTTG-3
: 97051279
PROJECT : 661 S96203-2000
PURCHASE ORDER NO : 661
DATE SAMPLED : 17-MAY-1997

TOTAL METALS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Lead /1	0.50 mg/Kg	7.20 mg/Kg
Dilution Factor : 1 Prepared using EPA 3051 on 22-MAY-1997 by HMR Analyzed using EPA 6010A on 22-MAY-1997 by GAY QC Batch No : 17149		



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-3

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
ADDRESS : 1961 Concourse Dr., Ste. E
: San Jose, CA 95131
ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
ID MARKS : BRTTG-3
: 97051279
PROJECT : 661 S96203-2000
PURCHASE ORDER NO : 661
DATE SAMPLED : 17-MAY-1997

MISCELLANEOUS ANALYSES		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Solids /1	0.01 %	81.8 %
Analyzed using ASTM D2216 mod. on 27-MAY-1997 by SAB QC Batch No : 1060620		



Intertek Testing Services

Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-4
REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
ADDRESS : 1961 Concourse Dr., Ste. E
: San Jose, CA 95131
ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
ID MARKS : BRTTG-4
: 97051280
PROJECT : 661 S96203-2000
PURCHASE ORDER NO : 661
DATE SAMPLED : 17-MAY-1997
PREPARATION METHOD : EPA 3550A
PREPARED BY : CLT
PREPARED ON : 20-MAY-1997
ANALYSIS METHOD : EPA 8270B /1
ANALYZED BY : TC
ANALYZED ON : 23-MAY-1997
DILUTION FACTOR : 10
METHOD FACTOR : 1
QC BATCH NO : AC094-79

POLYNUCLEAR AROMATIC HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Acenaphthene	3.30 mg/Kg	< 3.30 mg/Kg
Acenaphthylene	3.30 mg/Kg	< 3.30 mg/Kg
Anthracene	3.30 mg/Kg	< 3.30 mg/Kg
Benzo(a)anthracene	3.30 mg/Kg	< 3.30 mg/Kg
Benzo(b)fluoranthene	3.30 mg/Kg	< 3.30 mg/Kg
Benzo(k)fluoranthene	3.30 mg/Kg	< 3.30 mg/Kg
Benzo(g,h,i)perylene	3.30 mg/Kg	< 3.30 mg/Kg
Benzo(a)pyrene	3.30 mg/Kg	< 3.30 mg/Kg
Chrysene	3.30 mg/Kg	< 3.30 mg/Kg
Dibenz(a,h)anthracene	3.30 mg/Kg	< 3.30 mg/Kg
Fluoranthene	3.30 mg/Kg	< 3.30 mg/Kg
Fluorene	3.30 mg/Kg	< 3.30 mg/Kg
Indeno(1,2,3-cd)pyrene	3.30 mg/Kg	< 3.30 mg/Kg

ITS Intertek Testing Services
Environmental Laboratories

REPORT NUMBER : D97-6149-4
ANALYSIS METHOD : EPA 8270B /1

PAGE 2

POLYNUCLEAR AROMATIC HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Naphthalene	3.30 mg/Kg	< 3.30 mg/Kg
Phenanthrene	3.30 mg/Kg	< 3.30 mg/Kg
Pyrene	3.30 mg/Kg	< 3.30 mg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND		SPIKE RECOVERED
Nitrobenzene-d5 (SS)		61.1 %
2-Fluorobiphenyl (SS)		81.4 %
Terphenyl-d14 (SS)		73.7 %



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-4

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : BRTTG-4
 : 97051280
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 17-MAY-1997
 ANALYSIS METHOD : EPA 8020 /1
 ANALYZED BY : MKS
 ANALYZED ON : 22-MAY-1997
 DILUTION FACTOR : 25
 METHOD FACTOR : 1
 QC BATCH NO : 27-052297

BTEX ANALYSIS			
TEST REQUESTED	DETECTION LIMIT		RESULTS
Benzene	50	µg/Kg	119 µg/Kg
Toluene	50	µg/Kg	< 50 µg/Kg
Ethyl benzene	50	µg/Kg	1950 µg/Kg
Xylenes	50	µg/Kg	17100 µg/Kg
BTEX (total)			19200 µg/Kg #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE RECOVERED	
Bromofluorobenzene (SS)	112	%

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-4

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : BRTTG-4
 : 97051280
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 17-MAY-1997
 ANALYSIS METHOD : EPA 8020 /1
 ANALYZED BY : MKS
 ANALYZED ON : 22-MAY-1997
 DILUTION FACTOR : 25
 METHOD FACTOR : 1
 QC BATCH NO : 27-052297M

METHYL TERTIARY BUTYL ETHER		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Methyl Tertiary Butyl Ether	250 $\mu\text{g/Kg}$	< 250 $\mu\text{g/Kg}$

QUALITY CONTROL DATA		
SURROGATE COMPOUND		SPIKE RECOVERED
4-Bromofluorobenzene (SS)		112 %



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-4

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : BRTTG-4
 : 97051280
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 17-MAY-1997
 PREPARATION METHOD : EPA 3550A
 PREPARED BY : CLT
 PREPARED ON : 20-MAY-1997
 ANALYSIS METHOD : EPA 8015M /1
 ANALYZED BY : VHL
 ANALYZED ON : 22-MAY-1997
 DILUTION FACTOR : 10
 METHOD FACTOR : 1
 QC BATCH NO : AC094-81

TPH BY GC (EXTRACTABLE)		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	100 mg/Kg	3300 mg/Kg

QUALITY CONTROL DATA	
SURROGATE COMPOUND	SPIKE RECOVERED
Triacontane (SS)	66.9 %



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-4

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : BRTTG-4
 : 97051280
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 17-MAY-1997
 ANALYSIS METHOD : EPA 5030/8015M /1
 ANALYZED BY : MKS
 ANALYZED ON : 22-MAY-1997
 DILUTION FACTOR : 100
 METHOD FACTOR : 1
 QC BATCH NO : 28-052297

TPH BY GC (VOLATILE)		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	5000 $\mu\text{g/Kg}$	150000 $\mu\text{g/Kg}$

QUALITY CONTROL DATA		
SURROGATE COMPOUND		SPIKE RECOVERED
Fluorobenzene		92.3 %



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-4

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
ADDRESS : 1961 Concourse Dr., Ste. E
: San Jose, CA 95131
ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
ID MARKS : BRTTG-4
: 97051280
PROJECT : 661 S96203-2000
PURCHASE ORDER NO : 661
DATE SAMPLED : 17-MAY-1997

TOTAL METALS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Lead /1	0.50 mg/Kg	7.61 mg/Kg
Dilution Factor : 1 Prepared using EPA 3051 on 22-MAY-1997 by HMR Analyzed using EPA 6010A on 22-MAY-1997 by GAY QC Batch No : 17149		



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-4

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
ADDRESS : 1961 Concourse Dr., Ste. E
: San Jose, CA 95131
ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
ID MARKS : BRTTG-4
: 97051280
PROJECT : 661 S96203-2000
PURCHASE ORDER NO : 661
DATE SAMPLED : 17-MAY-1997

MISCELLANEOUS ANALYSES		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Solids /1	0.01 %	83.4 %
Analyzed using ASTM D2216 mod. on 27-MAY-1997 by SAB QC Batch No : 106062D		



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-5

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : BRTTD-5
 : 97051281
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 17-MAY-1997
 ANALYSIS METHOD : EPA 8020 /1
 ANALYZED BY : MKS
 ANALYZED ON : 22-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO : 27-052297

BTEX ANALYSIS			
TEST REQUESTED	DETECTION LIMIT		RESULTS
Benzene	2.0	µg/Kg	< 2.0 µg/Kg
Toluene	2.0	µg/Kg	< 2.0 µg/Kg
Ethyl benzene	2.0	µg/Kg	< 2.0 µg/Kg
Xylenes	2.0	µg/Kg	< 2.0 µg/Kg
BTEX (total)			< 2.0 µg/Kg #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE RECOVERED	
Bromofluorobenzene (SS)	108	%

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.

ITS Intertek Testing Services
Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-5
REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
ADDRESS : 1961 Concourse Dr., Ste. E
: San Jose, CA 95131
ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
ID MARKS : BRTTD-5
: 97051281
PROJECT : 661 S96203-2000
PURCHASE ORDER NO : 661
DATE SAMPLED : 17-MAY-1997
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : MKS
ANALYZED ON : 22-MAY-1997
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 27-052297M

METHYL TERTIARY BUTYL ETHER		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Methyl Tertiary Butyl Ether	10.0 µg/Kg	< 10.0 µg/Kg

QUALITY CONTROL DATA	
SURROGATE COMPOUND	SPIKE RECOVERED
4-Bromofluorobenzene (SS)	108 %



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-5

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : BRTTD-5
 : 97051281
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 17-MAY-1997
 PREPARATION METHOD : EPA 3550A
 PREPARED BY : CLT
 PREPARED ON : 20-MAY-1997
 ANALYSIS METHOD : EPA 8015M /1
 ANALYZED BY : VHL
 ANALYZED ON : 21-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 0.9
 QC BATCH NO : AC094-81

TPH BY GC (EXTRACTABLE)		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	9.00 mg/Kg	18.6 mg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND		SPIKE RECOVERED
Triacontane (SS)		85.7 %



Intertek Testing Services

Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-5

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : BRTTD-5
 : 97051281
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 17-MAY-1997
 ANALYSIS METHOD : EPA 5030/8015M /1
 ANALYZED BY : MKS
 ANALYZED ON : 22-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO : 28-052297

TPH BY GC (VOLATILE)		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	50 $\mu\text{g/Kg}$	1050 $\mu\text{g/Kg}$

QUALITY CONTROL DATA	
SURROGATE COMPOUND	SPIKE RECOVERED
Fluorobenzene	91.9 %



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-5

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : BRTTD-5
 : 97051281
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 17-MAY-1997

TOTAL METALS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Lead /1	0.50 mg/Kg	6.90 mg/Kg
Dilution Factor : 1 Prepared using EPA 3051 on 22-MAY-1997 by HMR Analyzed using EPA 6010A on 22-MAY-1997 by GAY QC Batch No : 17149		



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-5
REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
ADDRESS : 1961 Concourse Dr., Ste. E
: San Jose, CA 95131
ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
ID MARKS : BRTTD-5
: 97051281
PROJECT : 661 S96203-2000
PURCHASE ORDER NO : 661
DATE SAMPLED : 17-MAY-1997

MISCELLANEOUS ANALYSES		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Solids /1	0.01 %	86.6 %
Analyzed using ASTM D2216 mod. on 27-MAY-1997 by SAB QC Batch No : 106062D		



Intertek Testing Services

Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-6

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Water
 ID MARKS : BRT-W2
 : 97051282
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 17-MAY-1997
 ANALYSIS METHOD : EPA 8020 /1
 ANALYZED BY : CNA
 ANALYZED ON : 24-MAY-1997
 DILUTION FACTOR : 10
 METHOD FACTOR : 1
 QC BATCH NO : 30-052397

BTEX ANALYSIS			
TEST REQUESTED	DETECTION LIMIT		RESULTS
Benzene	10	µg/L	450 µg/L
Toluene	10	µg/L	274 µg/L
Ethyl benzene	10	µg/L	442 µg/L
Xylenes	10	µg/L	2270 µg/L
BTEX (total)			3440 µg/L #

QUALITY CONTROL DATA		
SURROGATE COMPOUND		SPIKE RECOVERED
Bromofluorobenzene		90.8 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-6
REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
ADDRESS : 1961 Concourse Dr., Ste. E
: San Jose, CA 95131
ATTENTION : Michael Malveda

SAMPLE MATRIX : Water
ID MARKS : BRT-W2
: 97051282
PROJECT : 661 S96203-2000
PURCHASE ORDER NO : 661
DATE SAMPLED : 17-MAY-1997
ANALYSIS METHOD : EPA 8020 /1
ANALYZED BY : CNA
ANALYZED ON : 24-MAY-1997
DILUTION FACTOR : 10
METHOD FACTOR : 1
QC BATCH NO : 30-052397M

METHYL TERTIARY BUTYL ETHER		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Methyl Tertiary Butyl Ether	100 $\mu\text{g/L}$	1080 $\mu\text{g/L}$

QUALITY CONTROL DATA		
SURROGATE COMPOUND		SPIKE RECOVERED
4-Bromofluorobenzene (SS)		90.8 %



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-6
REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
ADDRESS : 1961 Concourse Dr., Ste. E
: San Jose, CA 95131
ATTENTION : Michael Malveda

SAMPLE MATRIX : Water
ID MARKS : BRT-W2
: 97051282
PROJECT : 661 S96203-2000
PURCHASE ORDER NO : 661
DATE SAMPLED : 17-MAY-1997
PREPARATION METHOD : EPA 3520B
PREPARED BY : TAP
PREPARED ON : 21-MAY-1997
ANALYSIS METHOD : EPA 8015M /1
ANALYZED BY : VHL
ANALYZED ON : 22-MAY-1997
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : AC094-90

TPH BY GC (EXTRACTABLE)		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	0.50 mg/L	3.32 mg/L

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE RECOVERED	
Triacontane (SS)	124	%



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-6

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Water
 ID MARKS : BRT-W2
 : 97051282
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 17-MAY-1997
 ANALYSIS METHOD : EPA 5030/8015M /1
 ANALYZED BY : VHT
 ANALYZED ON : 24-MAY-1997
 DILUTION FACTOR : 10
 METHOD FACTOR : 1
 QC BATCH NO : 29-052397

TPH BY GC (VOLATILE)		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	500 $\mu\text{g/L}$	7040 $\mu\text{g/L}$

QUALITY CONTROL DATA		
SURROGATE COMPOUND		SPIKE RECOVERED
Fluorobenzene (SS)		105 %



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-6

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Water
 ID MARKS : BRT-W2
 : 97051282
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 17-MAY-1997

TOTAL METALS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Lead /1	0.005 mg/L	< 0.005 mg/L
Dilution Factor : 1 Prepared using NPDES MW on 21-MAY-1997 by CEL Analyzed using EPA 6010A on 22-MAY-1997 by MPE QC Batch No : 17278		



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-7

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : BRTG-5
 : 97051283
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 17-MAY-1997
 ANALYSIS METHOD : EPA 8020 /1
 ANALYZED BY : MKS
 ANALYZED ON : 22-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO : 27-052297

BTEX ANALYSIS			
TEST REQUESTED	DETECTION LIMIT		RESULTS
Benzene	2.0	µg/Kg	< 2.0 µg/Kg
Toluene	2.0	µg/Kg	< 2.0 µg/Kg
Ethyl benzene	2.0	µg/Kg	< 2.0 µg/Kg
Xylenes	2.0	µg/Kg	< 2.0 µg/Kg
BTEX (total)			< 2.0 µg/Kg #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE RECOVERED	
Bromofluorobenzene (SS)	118	%

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.



Intertek Testing Services Environmental Laboratories

REPORT DATE : 6-JUN-1997

REPORT NUMBER : D97-6149

SAMPLE SUBMITTED BY : ITS/San Jose
ATTENTION : Michael Malveda

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Methyl tertiary butyl ether	Methyl tertiary butyl ether	Methyl tertiary butyl ether
BATCH NO.	30-052797M	27-052297AM	27-052297M
LCS LOT NO.	AC033-16A	AC033-16A	AC033-16A
PREP METHOD	---	---	---
PREPARED BY	---	---	---
ANALYSIS METHOD	EPA 8020	EPA 8020	EPA 8020
ANALYZED BY	VHT	MKS	MKS
UNITS	µg/L	µg/Kg	µg/Kg
METHOD BLANK	< 10.0	< 10.0	< 10.0
SPIKE LEVEL	500	50.0	50.0
SPK REC LIMITS	75.0 - 125	70.0 - 130	70.0 - 130
SPK RPD LIMITS	25.0	25.0	25.0
MS RESULT	577	79.2	57.9
MS RECOVERY %	115	131 B	116
MSD RESULT	532	65.1	52.8
MSD RECOVERY %	106	103 B	106
MS/MSD RPD %	8.12	24.1 B	9.21
BS RESULT	NA	NA	NA
BS RECOVERY %	NA	NA	NA
BSD RESULT	NA	NA	NA
BSD RECOVERY %	NA	NA	NA
BS/BSD RPD %	NA	NA	NA
DUP RPD LIMITS	---	---	---
DUPLICATE RPD %	NA	NA	NA
LCS LEVEL	50.0	50.0	50.0
LCS REC LIMITS	75.0 - 125	70.0 - 130	70.0 - 130
LCS RESULT	53.4	46.4	53.8
LCS RECOVERY %	107	92.8	108
SPIKE SAMPLE ID	6092-3	6223-7	6149-7
SAMPLE VALUE	< 10.0	13.7	< 10.0
DUP SAMPLE ID	---	---	---
DUP SAMPLE VAL/1	---	---	---
DUP SAMPLE VAL/2	---	---	---

NA
_B

Not applicable
Not applicable due to matrix interference in the QC Sample.



Intertek Testing Services Environmental Laboratories

REPORT DATE : 6-JUN-1997

REPORT NUMBER : D97-6149

SAMPLE SUBMITTED BY : ITS/San Jose
ATTENTION : Michael Malveda

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Total Petroleum Hydrocarbon	Total Petroleum Hydrocarbon	Total Petroleum Hydrocarbon
BATCH NO.	AC094-90	AC094-81	29-052397
LCS LOT NO.	AB988-80	AB988-80	AC033-16A
PREP METHOD	EPA 3520B	EPA 3550A	---
PREPARED BY	TAP	CLT	---
ANALYSIS METHOD	EPA 8015M	EPA 8015M	EPA 5030/8015M
ANALYZED BY	VHL	VHL	VHT
UNITS	mg/L	mg/Kg	µg/L
METHOD BLANK	< 0.500	< 10.0	< 50.0
SPIKE LEVEL	2.50	83.3	5000
SPK REC LIMITS	35.0 - 115	30.0 - 150	75.0 - 125
SPK RPD LIMITS	25.0	25.0	25.0
MS RESULT	NA	F	3780
MS RECOVERY %	NA	F	75.6
MSD RESULT	NA	F	3760
MSD RECOVERY %	NA	F	75.2
MS/MSD RPD %	NA	F	0.53
BS RESULT	2.70	75.2	NA
BS RECOVERY %	108	90.3	NA
BSD RESULT	2.69	63.2	NA
BSD RECOVERY %	108	75.9	NA
BS/BSD RPD %	0.37	17.3	NA
DUP RPD LIMITS	---	---	---
DUPLICATE RPD %	NA	NA	NA
LCS LEVEL	---	---	500
LCS REC LIMITS	---	---	75.0 - 125
LCS RESULT	SEE_BS	SEE_BS	557
LCS RECOVERY %	SEE_BS	SEE_BS	111
SPIKE SAMPLE ID	---	6119-6	5999-7
SAMPLE VALUE	---	---	< 50.0
DUP SAMPLE ID	---	---	---
DUP SAMPLE VAL/1	---	---	---
DUP SAMPLE VAL/2	---	---	---

NA
SEE_BS
F

Not applicable
LCS and LCS Duplicate reported as BS and BSD.
Not applicable due to high analyte concentration in the QC sample.



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-7

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : BRTG-5
 : 97051283
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 17-MAY-1997
 ANALYSIS METHOD : EPA 8020 /1
 ANALYZED BY : MKS
 ANALYZED ON : 22-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO : 27-052297M

METHYL TERTIARY BUTYL ETHER		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Methyl Tertiary Butyl Ether	10.0 µg/Kg	< 10.0 µg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND		SPIKE RECOVERED
4-Bromofluorobenzene (SS)		118 %



Intertek Testing Services Environmental Laboratories

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REPORT NUMBER : D97-6149-7

REPORT DATE : 29-MAY-1997

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 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : BRTG-5
 : 97051283
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 17-MAY-1997
 PREPARATION METHOD : EPA 3550A
 PREPARED BY : CLT
 PREPARED ON : 20-MAY-1997
 ANALYSIS METHOD : EPA 8015M /1
 ANALYZED BY : VHL
 ANALYZED ON : 21-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO : AC094-81

TPH BY GC (EXTRACTABLE)		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	10.0 mg/Kg	< 10.0 mg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND		SPIKE RECOVERED
Triacontane (SS)		92.7 %



Intertek Testing Services Environmental Laboratories

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REPORT NUMBER : D97-6149-7

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : BRTG-5
 : 97051283
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 17-MAY-1997
 ANALYSIS METHOD : EPA 5030/8015M /1
 ANALYZED BY : MKS
 ANALYZED ON : 22-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO : 28-052297

TPH BY GC (VOLATILE)		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	50 $\mu\text{g/Kg}$	< 50 $\mu\text{g/Kg}$

QUALITY CONTROL DATA		
SURROGATE COMPOUND		SPIKE RECOVERED
Fluorobenzene		85.1 %



Intertek Testing Services

Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-7

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : BRTG-5
 : 97051283
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 17-MAY-1997

TOTAL METALS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Lead /1	0.50 mg/Kg	5.75 mg/Kg
Dilution Factor : 1 Prepared using EPA 3051 on 22-MAY-1997 by HMR Analyzed using EPA 6010A on 22-MAY-1997 by GAY QC Batch No : 17149		



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-7

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
ADDRESS : 1961 Concourse Dr., Ste. E
: San Jose, CA 95131
ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
ID MARKS : BRTG-5
: 97051283
PROJECT : 661 S96203-2000
PURCHASE ORDER NO : 661
DATE SAMPLED : 17-MAY-1997

MISCELLANEOUS ANALYSES		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Solids /1	0.01 %	83.0 %
Analyzed using ASTM D2216 mod. on 27-MAY-1997 by SAB QC Batch No : 106062D		



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-8

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Water
 ID MARKS : Trip Blank
 : 97051284
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 17-MAY-1997
 ANALYSIS METHOD : EPA 8020 /1
 ANALYZED BY : VHT
 ANALYZED ON : 27-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO : 30-052797

BTEX ANALYSIS			
TEST REQUESTED	DETECTION LIMIT		RESULTS
Benzene	1.0	µg/L	< 1.0 µg/L
Toluene	1.0	µg/L	< 1.0 µg/L
Ethyl benzene	1.0	µg/L	< 1.0 µg/L
Xylenes	1.0	µg/L	< 1.0 µg/L
BTEX (total)			< 1.0 µg/L #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE RECOVERED	
Bromofluorobenzene	102	%

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-8

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Water
 ID MARKS : Trip Blank
 : 97051284
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 17-MAY-1997
 ANALYSIS METHOD : EPA 8020 /1
 ANALYZED BY : VHT
 ANALYZED ON : 27-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO : 30-052797M

METHYL TERTIARY BUTYL ETHER		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Methyl Tertiary Butyl Ether	10.0 µg/L	< 10.0 µg/L

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE RECOVERED	
4-Bromofluorobenzene (SS)	102	%



Intertek Testing Services Environmental Laboratories

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SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Water
 ID MARKS : Trip Blank
 : 97051284
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 17-MAY-1997
 ANALYSIS METHOD : EPA 5030/8015M /1
 ANALYZED BY : VHT
 ANALYZED ON : 27-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO : 29-052797

TPH BY GC (VOLATILE)		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	50.0 $\mu\text{g/L}$	< 50.0 $\mu\text{g/L}$

QUALITY CONTROL DATA		
SURROGATE COMPOUND		SPIKE RECOVERED
Fluorobenzene (SS)		93.5 %

ITS Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-9
REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
ADDRESS : 1961 Concourse Dr., Ste. E
: San Jose, CA 95131
ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
ID MARKS : LABQC
: MB
PROJECT : 661 S96203-2000
PURCHASE ORDER NO : 661
DATE SAMPLED : 20-MAY-1997
PREPARATION METHOD : EPA 3550A
PREPARED BY : CLT
PREPARED ON : 20-MAY-1997
ANALYSIS METHOD : EPA 8270B /1
ANALYZED BY : TC
ANALYZED ON : 21-MAY-1997
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : AC094-79

POLYNUCLEAR AROMATIC HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Acenaphthene	0.330 mg/Kg	< 0.330 mg/Kg
Acenaphthylene	0.330 mg/Kg	< 0.330 mg/Kg
Anthracene	0.330 mg/Kg	< 0.330 mg/Kg
Benzo(a)anthracene	0.330 mg/Kg	< 0.330 mg/Kg
Benzo(b)fluoranthene	0.330 mg/Kg	< 0.330 mg/Kg
Benzo(k)fluoranthene	0.330 mg/Kg	< 0.330 mg/Kg
Benzo(g,h,i)perylene	0.330 mg/Kg	< 0.330 mg/Kg
Benzo(a)pyrene	0.330 mg/Kg	< 0.330 mg/Kg
Chrysene	0.330 mg/Kg	< 0.330 mg/Kg
Dibenz(a,h)anthracene	0.330 mg/Kg	< 0.330 mg/Kg
Fluoranthene	0.330 mg/Kg	< 0.330 mg/Kg
Fluorene	0.330 mg/Kg	< 0.330 mg/Kg
Indeno(1,2,3-cd)pyrene	0.330 mg/Kg	< 0.330 mg/Kg



Intertek Testing Services Environmental Laboratories

REPORT NUMBER : D97-6149-9
ANALYSIS METHOD : EPA 8270B /1

PAGE 2

POLYNUCLEAR AROMATIC HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Naphthalene	0.330 mg/Kg	< 0.330 mg/Kg
Phenanthrene	0.330 mg/Kg	< 0.330 mg/Kg
Pyrene	0.330 mg/Kg	< 0.330 mg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND		SPIKE RECOVERED
Nitrobenzene-d5 (SS)		67.1 %
2-Fluorobiphenyl (SS)		68.9 %
Terphenyl-d14 (SS)		77.3 %



Intertek Testing Services

Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-9

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : LABQC
 : MB
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 20-MAY-1997
 ANALYSIS METHOD : EPA 8020 /1
 ANALYZED BY : MKS
 ANALYZED ON : 22-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO : 27-052297

BTEX ANALYSIS			
TEST REQUESTED	DETECTION LIMIT		RESULTS
Benzene	2.0	µg/Kg	< 2.0 µg/Kg
Toluene	2.0	µg/Kg	< 2.0 µg/Kg
Ethyl benzene	2.0	µg/Kg	< 2.0 µg/Kg
Xylenes	2.0	µg/Kg	< 2.0 µg/Kg
BTEX (total)			< 2.0 µg/Kg #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE RECOVERED	
Bromofluorobenzene (SS)	112	%

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-9

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : LABQC
 : MB
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 20-MAY-1997
 ANALYSIS METHOD : EPA 8020 /1
 ANALYZED BY : MKS
 ANALYZED ON : 22-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO : 27-052297M

METHYL TERTIARY BUTYL ETHER		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Methyl Tertiary Butyl Ether	10.0 µg/Kg	< 10.0 µg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND		SPIKE RECOVERED
4-Bromofluorobenzene (SS)		112 %



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-9

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : LABQC
 : MB
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 20-MAY-1997
 ANALYSIS METHOD : EPA 8020 /2
 ANALYZED BY : MKS
 ANALYZED ON : 22-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO : 27-052297AM

METHYL TERTIARY BUTYL ETHER		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Methyl Tertiary Butyl Ether	10.0 $\mu\text{g/Kg}$	< 10.0 $\mu\text{g/Kg}$

QUALITY CONTROL DATA		
SURROGATE COMPOUND		SPIKE RECOVERED
4-Bromofluorobenzene (SS)		108 %



Intertek Testing Services

Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-9

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : LABQC
 : MB
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 20-MAY-1997
 PREPARATION METHOD : EPA 3550A
 PREPARED BY : CLT
 PREPARED ON : 20-MAY-1997
 ANALYSIS METHOD : EPA 8015M /1
 ANALYZED BY : VHL
 ANALYZED ON : 21-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO : AC094-81

TPH BY GC (EXTRACTABLE)		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	10.0 mg/Kg	< 10.0 mg/Kg

QUALITY CONTROL DATA	
SURROGATE COMPOUND	SPIKE RECOVERED
Triacotane (SS)	64.0 %



Intertek Testing Services

Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-9

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Soil
 ID MARKS : LABQC
 : MB
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 20-MAY-1997
 ANALYSIS METHOD : EPA 5030/8015M /1
 ANALYZED BY : MKS
 ANALYZED ON : 22-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO : 28-052297

TPH BY GC (VOLATILE)		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	50 $\mu\text{g/Kg}$	< 50 $\mu\text{g/Kg}$

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE RECOVERED	
Fluorobenzene	90.0 %	



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-10

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Liquid
 ID MARKS : LABQC
 : MB
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 20-MAY-1997
 ANALYSIS METHOD : EPA 8020 /1
 ANALYZED BY : CNA
 ANALYZED ON : 23-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO : 30-052397

BTEX ANALYSIS			
TEST REQUESTED	DETECTION LIMIT		RESULTS
Benzene	1.0	µg/L	< 1.0 µg/L
Toluene	1.0	µg/L	< 1.0 µg/L
Ethyl benzene	1.0	µg/L	< 1.0 µg/L
Xylenes	1.0	µg/L	< 1.0 µg/L
BTEX (total)			< 1.0 µg/L #

QUALITY CONTROL DATA		
SURROGATE COMPOUND		SPIKE RECOVERED
Bromofluorobenzene		95.5 %

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-10

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Liquid

ID MARKS : LABQC

: MB

PROJECT : 661 S96203-2000

PURCHASE ORDER NO : 661

DATE SAMPLED : 20-MAY-1997

ANALYSIS METHOD : EPA 8020 /2

ANALYZED BY : VHT

ANALYZED ON : 27-MAY-1997

DILUTION FACTOR : 1

METHOD FACTOR : 1

QC BATCH NO : 30-052797

BTEX ANALYSIS			
TEST REQUESTED	DETECTION LIMIT	RESULTS	
Benzene	1.0 µg/L	<	1.0 µg/L
Toluene	1.0 µg/L	<	1.0 µg/L
Ethyl benzene	1.0 µg/L	<	1.0 µg/L
Xylenes	1.0 µg/L	<	1.0 µg/L
BTEX (total)		<	1.0 µg/L #

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE RECOVERED	
Bromofluorobenzene	96.5 %	

Based upon Good Laboratory Practice, the result is rounded to the appropriate number of significant figures.



Intertek Testing Services Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-10

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Liquid
 ID MARKS : LABQC
 : MB
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 20-MAY-1997
 ANALYSIS METHOD : EPA 8020 /1
 ANALYZED BY : CNA
 ANALYZED ON : 23-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO : 30-052397M

METHYL TERTIARY BUTYL ETHER		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Methyl Tertiary Butyl Ether	10.0 μ g/L	< 10.0 μ g/L

QUALITY CONTROL DATA		
SURROGATE COMPOUND		SPIKE RECOVERED
4-Bromofluorobenzene (SS)		95.5 %



Intertek Testing Services

Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-10

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Liquid
 ID MARKS : LABQC
 : MB
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 20-MAY-1997
 ANALYSIS METHOD : EPA 8020 /2
 ANALYZED BY : VHT
 ANALYZED ON : 27-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO : 30-052797M

METHYL TERTIARY BUTYL ETHER		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Methyl Tertiary Butyl Ether	10.0 µg/L	< 10.0 µg/L

QUALITY CONTROL DATA	
SURROGATE COMPOUND	SPIKE RECOVERED
4-Bromofluorobenzene (SS)	96.5 %



Intertek Testing Services

Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-10

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Liquid
 ID MARKS : LABQC
 : MB
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 20-MAY-1997
 PREPARATION METHOD : EPA 3520B
 PREPARED BY : TAP
 PREPARED ON : 21-MAY-1997
 ANALYSIS METHOD : EPA 8015M /1
 ANALYZED BY : VHL
 ANALYZED ON : 22-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO : AC094-90

TPH BY GC (EXTRACTABLE)		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	0.50 mg/L	< 0.50 mg/L

QUALITY CONTROL DATA		
SURROGATE COMPOUND		SPIKE RECOVERED
Triacontane (SS)		116 %



Intertek Testing Services

Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-10

REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Liquid
 ID MARKS : LABQC
 : MB
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 20-MAY-1997
 ANALYSIS METHOD : EPA 5030/8015M /1
 ANALYZED BY : VHT
 ANALYZED ON : 23-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO : 29-052397

TPH BY GC (VOLATILE)		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	50.0 µg/L	< 50.0 µg/L

QUALITY CONTROL DATA		
SURROGATE COMPOUND		SPIKE RECOVERED
Fluorobenzene (SS)		106 %



Intertek Testing Services

Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-10
 REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Liquid
 ID MARKS : LABQC
 : MB
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 20-MAY-1997
 ANALYSIS METHOD : EPA 5030/8015M /2
 ANALYZED BY : VHT
 ANALYZED ON : 27-MAY-1997
 DILUTION FACTOR : 1
 METHOD FACTOR : 1
 QC BATCH NO : 29-052797

TPH BY GC (VOLATILE)		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	50.0 µg/L	< 50.0 µg/L

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE RECOVERED	
Fluorobenzene (SS)	103	%



Intertek Testing Services

Environmental Laboratories

DATE RECEIVED : 20-MAY-1997

REPORT NUMBER : D97-6149-10
 REPORT DATE : 29-MAY-1997

SAMPLE SUBMITTED BY : ITS/San Jose
 ADDRESS : 1961 Concourse Dr., Ste. E
 : San Jose, CA 95131
 ATTENTION : Michael Malveda

SAMPLE MATRIX : Liquid
 ID MARKS : LABQC
 : MB
 PROJECT : 661 S96203-2000
 PURCHASE ORDER NO : 661
 DATE SAMPLED : 20-MAY-1997

TOTAL METALS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Lead /1	0.005 mg/L	< 0.005 mg/L
Dilution Factor : 1 Prepared using EPA 3015 on 21-MAY-1997 by CEL Analyzed using EPA 6010A on 22-MAY-1997 by MPE QC Batch No : 17278		



Intertek Testing Services Environmental Laboratories

REPORT DATE : 6-JUN-1997

REPORT NUMBER : D97-6149

SAMPLE SUBMITTED BY : ITS/San Jose
ATTENTION : Michael Malveda

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Phenol	2-Chlorophenol	1,4-Dichlorobenzene	N-Nitroso-Di-N-propylamine
BATCH NO.	AC094-79	AC094-79	AC094-79	AC094-79
LCS LOT NO.	AB988-88	AB988-88	AB988-88	AB988-88
PREP METHOD	EPA 3550A	EPA 3550A	EPA 3550A	EPA 3550A
PREPARED BY	CLT	CLT	CLT	CLT
ANALYSIS METHOD	EPA 8270B	EPA 8270B	EPA 8270B	EPA 8270B
ANALYZED BY	TC	TC	TC	TC
UNITS	mg/Kg	mg/Kg	mg/Kg	mg/Kg
METHOD BLANK	< 0.330	< 0.330	< 0.330	< 0.330
SPIKE LEVEL	3.33	3.33	3.33	3.33
SPK REC LIMITS	5.00 - 112	23.0 - 134	20.0 - 124	10.0 - 230
SPK RPD LIMITS	23.0	29.0	32.0	55.0
MS RESULT	SEE_CN	SEE_CN	SEE_CN	SEE_CN
MS RECOVERY %	SEE_CN	SEE_CN	SEE_CN	SEE_CN
MSD RESULT	SEE_CN	SEE_CN	SEE_CN	SEE_CN
MSD RECOVERY %	SEE_CN	SEE_CN	SEE_CN	SEE_CN
MS/MSD RPD %	SEE_CN	SEE_CN	SEE_CN	SEE_CN
BS RESULT	2.16	2.29	2.15	2.05
BS RECOVERY %	64.9	68.8	64.6	61.6
BSD RESULT	2.19	2.33	2.02	2.26
BSD RECOVERY %	65.8	70.0	60.7	67.9
BS/BSD RPD %	1.38	1.73	6.24	9.74
DUP RPD LIMITS	---	---	---	---
DUPLICATE RPD %	NA	NA	NA	NA
LCS LEVEL	3.33	3.33	3.33	3.33
LCS REC LIMITS	5.00 - 112	23.0 - 134	20.0 - 124	10.0 - 230
LCS RESULT	SEE_BS	SEE_BS	SEE_BS	SEE_BS
LCS RECOVERY %	SEE_BS	SEE_BS	SEE_BS	SEE_BS
SPIKE SAMPLE ID	6121-1	6121-1	6121-1	6121-1
SAMPLE VALUE	---	---	---	---
DUP SAMPLE ID	---	---	---	---
DUP SAMPLE VAL/1	---	---	---	---
DUP SAMPLE VAL/2	---	---	---	---

SEE_CN
SEE_BS
NA

Refer to Case Narrative for further information.
LCS and LCS Duplicate reported as BS and BSD.
Not applicable



Intertek Testing Services Environmental Laboratories

REPORT DATE : 6-JUN-1997

REPORT NUMBER : D97-6149

SAMPLE SUBMITTED BY : ITS/San Jose
ATTENTION : Michael Malveda

LABORATORY QUALITY CONTROL REPORT

ANALYTE	1,2,4-Trichlorobenzene	4-Chloro-3-methylphenol	Acenaphthene	4-Nitrophenol
BATCH NO.	AC094-79	AC094-79	AC094-79	AC094-79
LCS LOT NO.	AB988-88	AB988-88	AB988-88	AB988-88
PREP METHOD	EPA 3550A	EPA 3550A	EPA 3550A	EPA 3550A
PREPARED BY	CLT	CLT	CLT	CLT
ANALYSIS METHOD	EPA 8270B	EPA 8270B	EPA 8270B	EPA 8270B
ANALYZED BY	TC	TC	TC	TC
UNITS	mg/Kg	mg/Kg	mg/Kg	mg/Kg
METHOD BLANK	< 0.330	< 0.650	< 0.330	< 0.800
SPIKE LEVEL	3.33	3.33	3.33	3.33
SPK REC LIMITS	44.0 - 142	22.0 - 147	47.0 - 145	10.0 - 132
SPK RPD LIMITS	28.0	37.0	28.0	47.0
MS RESULT	SEE_CN	SEE_CN	SEE_CN	SEE_CN
MS RECOVERY %	SEE_CN	SEE_CN	SEE_CN	SEE_CN
MSD RESULT	SEE_CN	SEE_CN	SEE_CN	SEE_CN
MSD RECOVERY %	SEE_CN	SEE_CN	SEE_CN	SEE_CN
MS/MSD RPD %	SEE_CN	SEE_CN	SEE_CN	SEE_CN
BS RESULT	2.23	2.33	2.44	2.50
BS RECOVERY %	67.0	70.0	73.3	75.1
BSD RESULT	2.30	2.37	2.44	2.67
BSD RECOVERY %	69.1	71.2	73.3	80.2
BS/BSD RPD %	3.09	1.70	0.00	6.58
DUP RPD LIMITS	---	---	---	---
DUPLICATE RPD %	NA	NA	NA	NA
LCS LEVEL	3.33	3.33	3.33	3.33
LCS REC LIMITS	44.0 - 142	22.0 - 147	47.0 - 145	10.0 - 132
LCS RESULT	SEE_BS	SEE_BS	SEE_BS	SEE_BS
LCS RECOVERY %	SEE_BS	SEE_BS	SEE_BS	SEE_BS
SPIKE SAMPLE ID	6121-1	6121-1	6121-1	6121-1
SAMPLE VALUE	---	---	---	---
DUP SAMPLE ID	---	---	---	---
DUP SAMPLE VAL/1	---	---	---	---
DUP SAMPLE VAL/2	---	---	---	---

SEE_CN
SEE_BS
NA

Refer to Case Narrative for further information.
LCS and LCS Duplicate reported as BS and BSD.
Not applicable



Intertek Testing Services Environmental Laboratories

REPORT DATE : 6-JUN-1997

REPORT NUMBER : D97-6149

SAMPLE SUBMITTED BY : ITS/San Jose
ATTENTION : Michael Malveda

LABORATORY QUALITY CONTROL REPORT

ANALYTE	2,4-Dinitrotoluene	Pentachlorophenol	Pyrene	Benzene	Ethylbenzene
BATCH NO.	AC094-79	AC094-79	AC094-79	30-052397	30-052397
LCS LOT NO.	AB988-88	AB988-88	AB988-88	AC033-16A	AC033-16A
PREP METHOD	EPA 3550A	EPA 3550A	EPA 3550A	---	---
PREPARED BY	CLT	CLT	CLT	---	---
ANALYSIS METHOD	EPA 8270B	EPA 8270B	EPA 8270B	EPA 8020	EPA 8020
ANALYZED BY	TC	TC	TC	CNA	CNA
UNITS	mg/Kg	mg/Kg	mg/Kg	µg/L	µg/L
METHOD BLANK	< 0.330	< 1.65	< 0.330	< 1.00	< 1.00
SPIKE LEVEL	3.33	3.33	3.33	500	500
SPK REC LIMITS	39.0 - 139	14.0 - 176	52.0 - 115	75.0 - 125	75.0 - 125
SPK RPD LIMITS	22.0	49.0	25.0	20.0	20.0
MS RESULT	SEE_CN	SEE_CN	SEE_CN	547	540
MS RECOVERY %	SEE_CN	SEE_CN	SEE_CN	109	108
MSD RESULT	SEE_CN	SEE_CN	SEE_CN	530	526
MSD RECOVERY %	SEE_CN	SEE_CN	SEE_CN	106	105
MS/MSD RPD %	SEE_CN	SEE_CN	SEE_CN	3.16	2.63
BS RESULT	2.60	1.49	2.60	NA	NA
BS RECOVERY %	78.1	44.7	78.1	NA	NA
BSD RESULT	2.51	1.64	3.14	NA	NA
BSD RECOVERY %	75.4	49.2	94.3	NA	NA
BS/BSD RPD %	3.52	9.58	18.8	NA	NA
DUP RPD LIMITS	---	---	---	---	---
DUPLICATE RPD %	NA	NA	NA	NA	NA
LCS LEVEL	3.33	3.33	3.33	50.0	50.0
LCS REC LIMITS	39.0 - 139	14.0 - 176	52.0 - 115	75.0 - 125	75.0 - 125
LCS RESULT	SEE_BS	SEE_BS	SEE_BS	53.8	54.7
LCS RECOVERY %	SEE_BS	SEE_BS	SEE_BS	108	109
SPIKE SAMPLE ID	6121-1	6121-1	6121-1	5999-7	5999-7
SAMPLE VALUE	---	---	---	< 1.00	< 1.00
DUP SAMPLE ID	---	---	---	---	---
DUP SAMPLE VAL/1	---	---	---	---	---
DUP SAMPLE VAL/2	---	---	---	---	---

SEE_CN
SEE_BS
NA

Refer to Case Narrative for further information.
LCS and LCS Duplicate reported as BS and BSD.
Not applicable

ITS Intertek Testing Services Environmental Laboratories

REPORT DATE : 6-JUN-1997

REPORT NUMBER : D97-6149

SAMPLE SUBMITTED BY : ITS/San Jose
ATTENTION : Michael Malveda

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Benzene	Ethylbenzene	Benzene	Ethylbenzene	Methyl tertiary butyl ether
BATCH NO.	30-052797	30-052797	27-052297	27-052297	30-052397M
LCS LOT NO.	AC033-16A	AC033-16A	AC033-16A	AC033-16A	AC033-16A
PREP METHOD	---	---	---	---	---
PREPARED BY	---	---	---	---	---
ANALYSIS METHOD	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8020
ANALYZED BY	VHT	VHT	MKS	MKS	CNA
UNITS	µg/L	µg/L	µg/Kg	µg/Kg	µg/L
METHOD BLANK	< 1.00	< 1.00	< 2.00	< 2.00	< 10.0
SPIKE LEVEL	500	500	50.0	50.0	500
SPK REC LIMITS	75.0 - 125	75.0 - 125	70.0 - 130	70.0 - 130	75.0 - 125
SPK RPD LIMITS	20.0	20.0	25.0	25.0	25.0
MS RESULT	525	524	55.9	55.1	551
MS RECOVERY %	105	105	112	110	110
MSD RESULT	515	517	51.7	50.7	519
MSD RECOVERY %	103	103	103	101	104
MS/MSD RPD %	1.92	1.34	7.81	8.32	5.98
BS RESULT	NA	NA	NA	NA	NA
BS RECOVERY %	NA	NA	NA	NA	NA
BSD RESULT	NA	NA	NA	NA	NA
BSD RECOVERY %	NA	NA	NA	NA	NA
BS/BSD RPD %	NA	NA	NA	NA	NA
DUP RPD LIMITS	---	---	---	---	---
DUPLICATE RPD %	NA	NA	NA	NA	NA
LCS LEVEL	50.0	50.0	50.0	50.0	50.0
LCS REC LIMITS	75.0 - 125	75.0 - 125	70.0 - 130	70.0 - 130	75.0 - 125
LCS RESULT	53.1	53.8	46.0	46.4	54.2
LCS RECOVERY %	106	108	92.0	92.8	108
SPIKE SAMPLE ID	6092-3	6092-3	6149-7	6149-7	5999-7
SAMPLE VALUE	< 1.00	< 1.00	< 2.00	< 2.00	< 10.0
DUP SAMPLE ID	---	---	---	---	---
DUP SAMPLE VAL/1	---	---	---	---	---
DUP SAMPLE VAL/2	---	---	---	---	---

NA Not applicable



Intertek Testing Services Environmental Laboratories

REPORT DATE : 6-JUN-1997

REPORT NUMBER : D97-6149

SAMPLE SUBMITTED BY : ITS/San Jose
ATTENTION : Michael Malveda

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Total Petroleum Hydrocarbon	Total Petroleum Hydrocarbon	Lead	Lead
BATCH NO.	29-052797	28-052297	17278	17149
LCS LOT NO.	AC033-16A	AC033-16A	AB300-72,74	AB300-72,74
PREP METHOD	---	---	NPDES MW	EPA 3051
PREPARED BY	---	---	CEL	HMR
ANALYSIS METHOD	EPA 5030/8015M	EPA 5030/8015M	EPA 6010A	EPA 6010A
ANALYZED BY	VHT	MKS	MPE	GAY
UNITS	µg/L	µg/Kg	mg/L	mg/Kg
METHOD BLANK	< 50.0	< 50.0	< 0.00500	< 0.500
SPIKE LEVEL	5000	500	1.11	100
SPK REC LIMITS	75.0 - 125	70.0 - 130	80.0 - 120	75.0 - 125
SPK RPD LIMITS	25.0	25.0	20.0	25.0
MS RESULT	5260	549	1.32	96.5
MS RECOVERY %	105	110	119	96.5
MSD RESULT	4980	504	1.33	97.1
MSD RECOVERY %	99.6	101	120	97.1
MS/MSD RPD %	5.47	8.55	0.75	0.62
BS RESULT	NA	NA	NA	NA
BS RECOVERY %	NA	NA	NA	NA
BSD RESULT	NA	NA	NA	NA
BSD RECOVERY %	NA	NA	NA	NA
BS/BSD RPD %	NA	NA	NA	NA
DUP RPD LIMITS	---	---	---	---
DUPLICATE RPD %	NA	NA	NC	NC
LCS LEVEL	500	500	1.11	100
LCS REC LIMITS	75.0 - 125	70.0 - 130	80.0 - 120	75.0 - 125
LCS RESULT	551	462	1.31	93.7
LCS RECOVERY %	110	92.4	118	93.7
SPIKE SAMPLE ID	6092-3	6149-7	D97-6092-3	6149-1
SAMPLE VALUE	< 50.0	< 50.0	< 0.00500	< 0.500
DUP SAMPLE ID	---	---	D97-6092-3	6149-1
DUP SAMPLE VAL/1	---	---	---	---
DUP SAMPLE VAL/2	---	---	---	---

NA Not applicable
NC Not calculable



CHAIN-OF-CUSTODY RECORD

PROJECT NUMBER		PROJECT NAME				Number of Entrrs	Type of Containers	Type of Analysis				Condition of Samples	Initial
6661		S96203-2000						TPH	TPHd	Total Pb	PAH's by 8270		
Send Report Attention of:		Report Due	Verbal Due		Sample Number	Date	Time	Comp	Matrix	Station Location	Type	Condition of Samples	Initial
Michael Malveda		6/2/97	1/1										
BRTTD-3	5/16/97	1345		S	97051277	1	BL	X	X	X		6149	-1
BRTTD-4	↓	1440			97051278	↓		X	X	X			2
BRTTG-3	5/17/97	0800			97051279	↓		X	X	X			3
BRTTG-4		0810			97051280	↓		X	X	X	X		4
BRTTD-5		0820	↓		97051281	↓	↓	X	X	X			5
BRT-W2		0930		W	97051282	6	3xVDA 2xLHM 1xPCLY	X	X	X			6
BRTG-5		1100		S	97051283		BL	X	X	X			7
Triobknk	↓			W	97051284		VER	X	X	X			8
											COOLER TEMPERATURE WHEN RECEIVED		
											4 °C		
Relinquished by: (Signature)		Date/Time	Received by: (Signature)		Date/Time	Remarks:							
<i>[Signature]</i>		5-18-97	<i>[Signature]</i>		5-20 12:45	PLEASE SEND RAW DATA AND ORIGINAL CHAIN OF CUSTODY ALONG WITH THE REPORT. Hold samples for 45 days after report is mailed. Subbed to Dallas							
Relinquished by: (Signature)		Date/Time	Received by: (Signature)		Date/Time								
Relinquished by: (Signature)		Date/Time	Received by Lab:		Date/Time	COMPANY: INCHCAPE TESTING SERVICES ADDRESS: 1961 CONCOURSE DRIVE, SUITE E SAN JOSE, CA 95131 PHONE: (408) 432 8192 FAX: (408) 432 8198							

072

Woodward-Clyde Consultants

10370 Old Placerville Rd., Suite 104, Sacramento, CA 95827
Tel. (916) 368-0988 Fax (916) 368-0967

Chain of Custody Record

PROJECT NO.
S96203-2000

SAMPLERS: (Signature)
Bill Loskutoff

DATE TIME SAMPLE NUMBER

Sample Matrix (S)oil, (W)ater, (A)ir, (S)olid
EPA Method 8220 - BTEX w/MSM
EPA Method 8253M - G04
EPA Method 8015 - Diesel

ANALYSES

Total Lead
PAH's by 8270

Number of Containers

REMARKS
(Sample preservation, handling procedures, etc.)

5/14/97	1345	BRTTD-3	S	X	X	X	X	97051277	1	2 1/2" x 6" brass liners
↓	1440	BRTTD-4	S	X	X	X	X	97051278	1	
5/17/97	0800	BRTTG-3	S	X	X	X	X	97051279	1	8270-PNA ² (PAH's) only
	0810	BRTTG-4	S	X	X	X	X	97051280	1	
	0820	BRTTD-5	S	X	X	X	X	97051281	1	40ml Vials w/HCL amber glass liners plastic SDO w/HANDS
	0930	BRT-W2	W	X	X			97051282	3	
	0930	BRT-W2	W			X			2	
	0930	BRT-W2	W				X	1		
↓	1100	BRTTG-5	S	X	X	X	X	97051283	1	2 1/2" x 6" brass
		Trip blank	W	X	X			97051284	1	

5 DAY TAT
per client
5/20/97 MM

~~Standard TAT~~

Send results to
Bill Loskutoff
(916) 368-0967 FAX

All samples on ice
in ice chest

TOTAL NUMBER OF CONTAINERS **13**

RELINQUISHED BY: (Signature) <i>Bill Loskutoff</i>	DATE/TIME 5/17/97 12:55	RECEIVED BY: (Signature) <i>[Signature]</i>	DATE/TIME 5/17/97 12:55	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
METHOD OF SHIPMENT: Hand delivered		SKIPPED BY: (Signature)	COURIER: (Signature)	RECEIVED FOR LAB BY: (Signature)	DATE/TIME	



Intertek Testing Services Environmental Laboratories

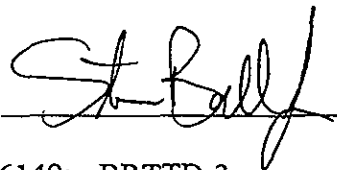
SAMPLE RECEIVING CHECKLIST		
Workorder Number: <u>661</u>	Client Project ID: <u>S96203-2000</u>	Quote Number:
<i>Cooler</i>		
Shipping documentation present? If YES, enter Carrier and Airbill #:	YES NO <u>N/A</u>	
Custody Seal on the outside of cooler? Condition: Intact Broken	YES NO <u>N/A</u>	
Temperature of sample(s) within range? List temperatures of cooler(s): <u>4°C</u> Note: If all samples taken within previous 4 hr, circle N/A and place in sample storage area as soon as possible.	<u>YES</u> NO N/A IR-1 Temp Blank	
<i>Samples</i>		
Chain of custody seal present for each container? Condition: Intact Broken	YES NO <u>N/A</u>	
Samples arrived within holding time?	<u>YES</u> NO N/A	
Samples in proper containers for methods requested? Condition of containers: <u>Intact</u> Broken If NO, were samples transferred to proper container(s)? Yes No	<u>YES</u> NO	
VOA containers received with zero headspace or bubbles < 6 mm?	<u>YES</u> NO N/A	
Container labels complete? (ID, date, time, preservative)	<u>YES</u> NO N/A	
Samples properly preserved? If NO, was the preservative added at time of receipt? Yes No	<u>YES</u> NO N/A	
pH check of samples required at time of receipt?(volatiles checked at analysis) If YES, pH checked and recorded by: <u>MM</u>	<u>YES</u> NO	
Sufficient amount of sample received for methods requested? If NO, has the client or PM been notified? Yes No	<u>YES</u> NO	
Field blanks received with sample batch?	YES NO <u>N/A</u>	
Trip blanks received with sample batch?	<u>YES</u> NO N/A	
<i>Chain of Custody</i>		
Chain of custody form received with samples?	<u>YES</u> NO	
Has it been filled out completely and in ink?	<u>YES</u> NO	
Sample IDs on chain of custody form agree with labels?	<u>YES</u> NO	
Number of containers on chain agree with number received?	<u>YES</u> NO	
Analysis methods specified?	<u>YES</u> NO	
Sampling date and time indicated?	<u>YES</u> NO	
Proper signatures of sampler, courier and custodian in appropriate spaces? With time and date? <u>Yes</u> No	<u>YES</u> NO	
Turnaround time? <u>Standard</u> <u>Rush</u>		

Any NO responses and/or any BROKEN that was checked must be detailed in a Corrective Action Form.

Sample Custodian: JT Date: 5-20-97 Project Manager: [Signature] Date: 5/21/97

LABORATORY DATA REVIEW - SDG D97-6149

Data Reviewed by:



Date: 28 June 1997

Samples in SDG D97-6149: BRTTD-3
BRTTD-4
BRTTG-3
BRTTG-4
BRTTD-5
BRT-W2
BRTTG-5

Field QC samples in this
SDG: Trip Blank

1.0 General Comments

Samples as indicated on the chain-of-custody were submitted to Intertek Testing Services, Inc., in San Jose, California on May 17, 1997. Samples BRTTD-3, BRTTD-4, BRTTG-3, BRTTG-4, BRTTD-5, BRTTG-5, and BRT-W2 were analyzed for total petroleum hydrocarbons as diesel (TPH-d) using modified EPA Method 8015, total petroleum hydrocarbons as gasoline (TPH-g) using modified EPA Method 8015, benzene, toluene, ethyl benzene, and total xylenes (BTEX) with methyl tert-butyl ether (MtBE) using EPA Method 8020, and total lead using EPA Method 6010A. Sample BRTTG-4 was additionally analyzed for semivolatile organic compounds (SVOCs) using EPA Method 8270 and a trip blank was analyzed for BTEX and TPH-g. Samples were received at 4° C, accurately logged in, and the cooler receipt forms indicated compliance with established project protocols for sample documentation and shipping.

The case narrative for Sample Delivery Group (SDG) D97-6149 reported that for the nonaqueous matrix spike analysis of SVOC sample D97-6121-1 (a non-project sample), all spike compounds were outside of QC limits due to matrix interference. Since the laboratory control sample and laboratory control sample duplicate (reported as blank spike and blank spike duplicate within the QC report) were within QC limits, the results were authorized.

1.1 Holding Times

The holding times for the analyses in this SDG were evaluated by examination of the chain-of-custody form and sample analysis sheets. Extractions/analyses in this SDG were performed within the prescribed holding times.

1.2 Blank Contamination

Blank results were reviewed to assess contamination emanating from laboratory activities. Method blanks were analyzed at the required frequency of one per analytical batch. The method blank associated with each analysis had nondetect results reported. In general, the blank results indicated acceptable performance with respect to laboratory contamination.

A trip blank was analyzed for BTEX and TPH as gasoline within this SGG. The trip blank resulted with nondetect concentrations for both analyses. Therefore, according to the trip blank, the samples in this SDG were not exposed to excessive contamination during storage or shipment.

1.3 Spike Frequency and Recovery

1.3.1 Matrix Spikes (MS)

Accuracy within the sample matrix was assessed using MS recoveries for TPH-g, BTEX, and lead analyses. Sample BRTTG-5 was analyzed as a MS sample for TPH-g soil analyses and a non-project sample was analyzed for water analyses. The TPH-g MS recoveries were within the laboratory generated evaluation criterion of 75% to 125% for water samples and 70 to 130% for soil samples. Sample BRTTG-5 was analyzed as a MS sample for BTEX soil analyses and a non-project sample was analyzed for water analyses. The BTEX MS recoveries were within the laboratory generated evaluation criterion of 75% to 125%. Sample BRTTD-3 was analyzed as a MS sample for lead soil analyses and a non-project sample was analyzed for water analyses. The lead MS recoveries were within the laboratory generated evaluation criterion of 80% to 120% for water samples and 75% to 125% for soil samples. According to the case narrative, all SVOC MS recoveries were outside of QC limits due to matrix interference.

1.3.2 Surrogates

Surrogate compounds were added to samples prior to analysis for TPH as diesel, TPH as gasoline, BTEX, and SVOCs. Surrogate recoveries were used to assess analytical accuracy on a per sample basis. The laboratory used fluorobenzene for TPH as gasoline analyses, bromofluorobenzene for BTEX analyses, triacontane for TPH as diesel analyses, and nitrobenzene-d5, 2-fluorobiphenyl, and terphenyl-d14 for semivolatile analyses. Surrogate recoveries for all analyses were within the laboratory generated evaluation criterion, however the limits were not reported in the data package.

1.3.3 Laboratory Control Samples (LCS)

The accuracy of the analytical methods was assessed using laboratory control sample (LCS) recoveries. LCS recoveries for the TPH as diesel, TPH as gasoline, and BTEX analyses met the laboratory generated evaluation (75% to 125% for water samples and 70 to 130% for soil samples for TPH-g, TPH-d, and BTEX). LCS recoveries for lead

analyses met the evaluation criterion of 80% to 120% for water samples and 75% to 125% for soil samples. LCS recoveries for the SVOC analysis met the laboratory generated evaluation criterion (quality control limits vary for each analyte).

1.3.4 Blank Spikes (BS)

Blank spikes were not analyzed as part of this SDG. However, in the QC reports, LCS data is reported as BS.

1.4 **Duplicate Analysis Precision**

1.4.1 Field Duplicates

Field duplicates were not collected as part of this SDG.

1.4.2 Matrix Spike Duplicates (MSD)

Matrix spike duplicate (MSD) results were used to assess laboratory precision within the sample matrix by evaluating the relative percent difference (RPD) between the MS and MSD sample recoveries. Sample BRTTG-5 was analyzed as a MSD sample for TPH-g and BTEX soil analyses and a non-project sample was analyzed for water analyses. Sample BRTTD-3 was analyzed as a MSD sample for lead soil analyses and a non-project sample was analyzed for water analyses. The RPDs between TPH-g, BTEX, and lead MS and MSD sample recoveries met the laboratory generated evaluation criterion of $\pm 25\%$.

1.4.3 Laboratory Control Sample Duplicates (LCSD)

The SVOC MSD recoveries were within the laboratory generated evaluation criterion (quality control limits vary for each analyte). SVOC RPDs between the MS and MSD sample recoveries met the laboratory generated evaluation criterion (quality control limits vary for each analyte).

1.4.4 Blank Spike Duplicates (BSD)

Blank spike duplicates were not analyzed as part of this SDG. However, in the QC reports, LCSD data is reported as BSD.

1.5 **Analytical Sensitivity**

Reporting limits were reviewed against the method blank reporting limits. The reporting limits in the SDG were acceptable with the exception of SVOC sample BRTTG-4. In this sample a 1:10 dilution was performed thereby raising the detection limits to 3.3 mg/Kg. However, these limits exceed the U.S. EPA PRGs for six of the analytes (benzo(a)anthracene [0.61 mg/Kg], benzo(b)fluoranthene [0.61 mg/Kg], benzo(k)fluoranthene [0.61 mg/Kg], benzo(a)pyrene [0.061 mg/Kg],

dibenz(a,h)anthracene [0.061 mg/Kg], and indeno(1,2,3-cd)pyrene [0.61 mg/Kg]. Because these analytes were found to be nondetect at this reporting limit, it is unknown if these compounds are present at concentrations above the PRGs below the reporting limits. Therefore use of this data for preliminary risk based assessment is not recommended. BTEX, TPH-g, and TPH-d analyses for sample BRTTG-4 required varied dilutions for likely due to matrix interference.

1.6 Completeness of Data Package

Completeness is defined as the percentage of valid sample results divided by the total number of sample results. Based on this data review, the data were 100% percent complete.

1.7 Overall Assessment of Data

Calibration standards, instrument tuning, and confirmation column were not evaluated during this review. Overall accuracy and precision were acceptable for the data in the SDG with the qualifications noted herein. The data reported are acceptable for their intended use(s) with the exceptions noted above.

Appendix D
EXCERPTS FROM PREVIOUS INVESTIGATIONS

CH2M HILL
1990

Preliminary Assessment

Tracy Pumping Plant
and
Substation Facility

Prepared for

Western Area Power
Administration

CH2M HILL

April 1990

WELL INVENTORY RECORDS

ALAMEDA COUNTY

CONTRA COSTA COUNTY

SAN JOAQUIN COUNTY

CHEN NORTHERN, INC.
1990

Chen Northern, Inc.

Consulting Engineers and Scientists

350 W. 2700 S.
Salt Lake City Utah 84115

801-467-3661
801-467-0963 Facsimile

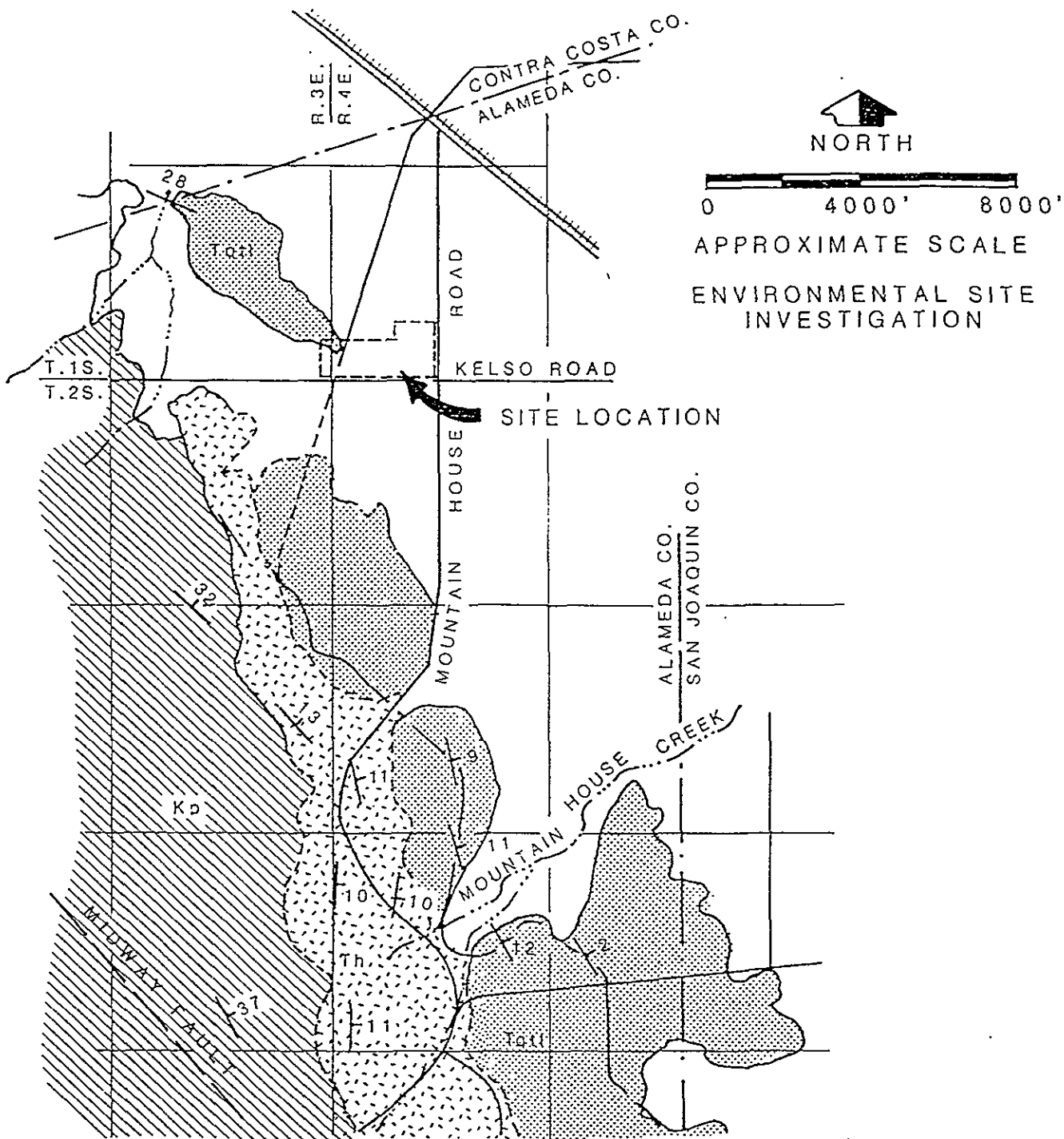
Prepared For:
WESTERN AREA POWER ADMINISTRATION
1825 BELL STREET, SUITE 105
SACRAMENTO, CALIFORNIA 95825



DRAFT
ENVIRONMENTAL SITE INVESTIGATION
TRACY PUMPING PLANT AND
SUBSTATION FACILITY

By:
CHEN-NORTHERN, INC.
350 WEST 2700 SOUTH
SALT LAKE CITY, UTAH 84115

Job No. 5-459-90



October 10, 1990




 NORTH

 0 4000' 8000'
 APPROXIMATE SCALE
 ENVIRONMENTAL SITE INVESTIGATION

ADOPTED FROM REICHE, 1949

LEGEND

<p>QUATERNARY</p> <p>Plis. Pleist.</p> <p>and Recent</p>	<div style="border: 1px solid black; width: 30px; height: 20px; margin: 0 auto;"></div>	Alluvium		Attitude of beds
<p>TERTIARY</p> <p>Upper Miocene</p>	<div style="border: 1px solid black; width: 30px; height: 20px; background-color: #cccccc; margin: 0 auto;"></div>	Tulare formation (continental)		Fault (Approximate location)
<p>Upper Cretaceous</p>	<div style="border: 1px solid black; width: 30px; height: 20px; background-image: linear-gradient(to right, transparent 49%, black 49%, black 51%, transparent 51%); background-size: 4px 4px; margin: 0 auto;"></div>	Neroly formation (Continental ashy sands and bentonitic clays)		
	<div style="border: 1px solid black; width: 30px; height: 20px; background-image: linear-gradient(to top right, transparent 49%, black 49%, black 51%, transparent 51%); background-size: 4px 4px; margin: 0 auto;"></div>	Panoche formation (Marine shales and sandstone)		

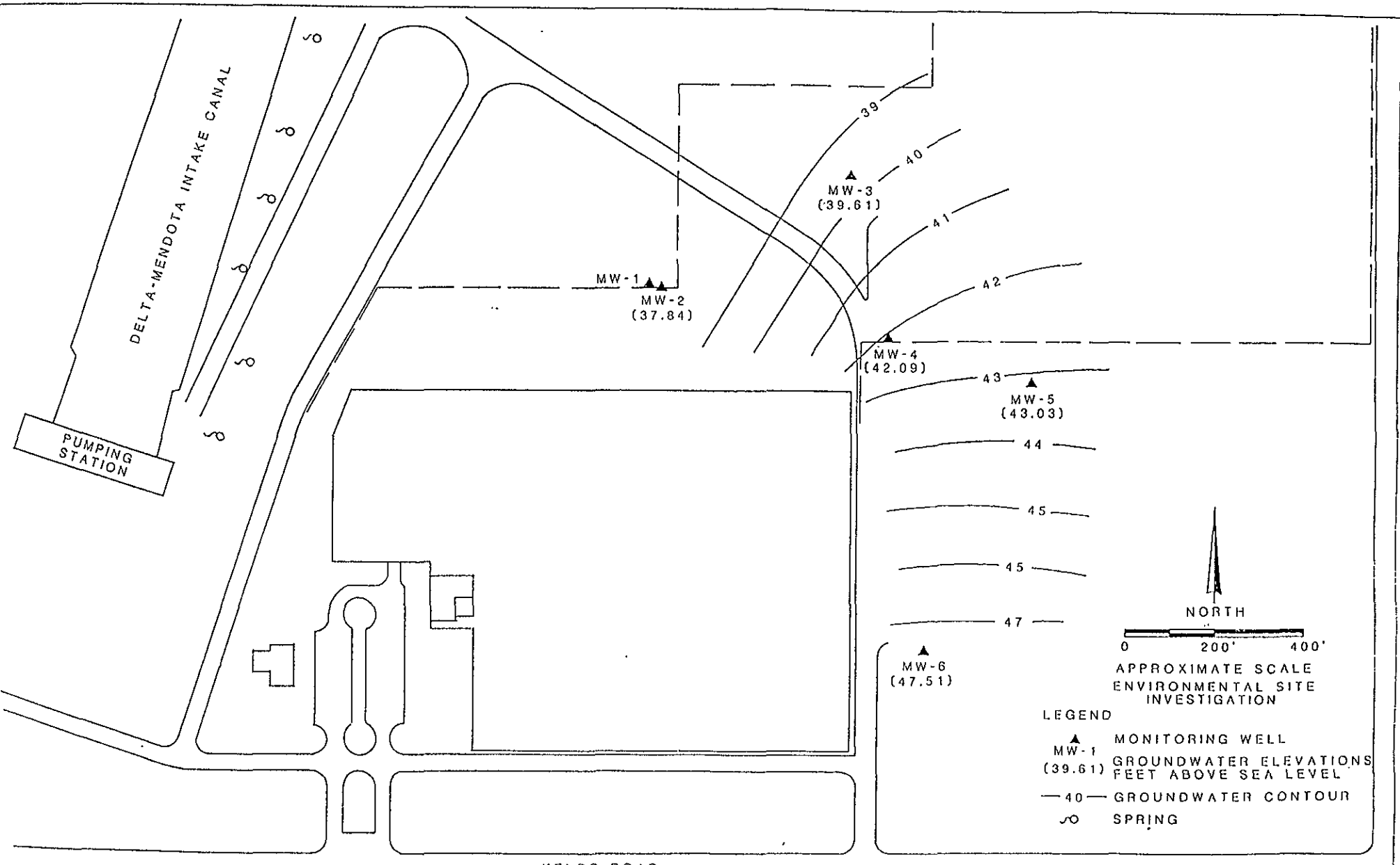


TABLE 3: SUMMARY OF SOIL ANALYSES FOR
 PRIORITY POLLUTANT METALS
 (all results in mg/kg or ppm; ND=not detected)

Sample Number	As	Cd	Cu	Cr	Pb	Ni	Zn
SB-4	ND	ND	16	ND	8	30	ND
SB-5	ND	ND	18	ND	8	30	ND
SB-6	ND	ND	16	ND	8	26	ND
SB-7	ND	0.6	18	ND	7	32	ND
SB-8	ND	ND	18	ND	7	32	ND
SB-9	ND	ND	18	ND	7	32	ND
SB-10	ND	ND	20	ND	7	30	ND
SB-11	3	ND	24	ND	7	28	ND
SB-12	3	ND	24	ND	9	36	ND
SB-13	3	ND	26	ND	11	38	ND
SB-14	ND	ND	30	ND	10	38	ND
SB-15	ND	ND	26	ND	8	34	ND
SB-16	ND	ND	20	ND	10	32	ND
SB-17	ND	ND	18	ND	8	32	ND
Monitor Well Samples							
MW-1 42.5 ft	ND	ND	ND	ND	6	14	ND
MW-2 4.5 ft	ND	ND	18	ND	9	34	ND
MW-2 18 ft	ND	ND	26	ND	10	22	ND
MW-3 4.5 ft	ND	ND	22	ND	8	26	ND
MW-3 15 ft	ND	ND	10	ND	6	14	ND
MW-4 4.5 ft	ND	ND	20	ND	8	40	ND
MW-4 10.5 ft	ND	0.8	20	ND	9	38	ND
MW-5 4.5 ft	ND	ND	20	ND	7	32	ND
MW-5 10.5 ft	ND	ND	20	ND	7	30	ND
MW-6 4.5 ft	ND	ND	20	ND	9	38	ND
MW-6 13.5 ft	ND	ND	14	ND	5	25	ND

EXPLORATION LOG

Project Name: WAPA Tracy Pumping Plant	Boring/Well Number: MW-5
	Boring/Well Location: Yard north of warehouse
Project Number: 5-459-90	Reference Elevation (ft): 55.9
	Reference Point: Top of PVC Casing
Date Drilled: 8/29/90	Drilling Contractor: Westex
Logged By: R. Giraud	Drilling Method: Hollow stem auger
Depth to Ground Water (ft): 12.28	Boring Depth (ft): 24.0
Date Measured: 09/05/90	Well Depth (ft): 24.0
	Boring Diameter (in): 10.25

Sample Loc.	Blows/6-inch	OVM/OVA (ppm)	Depth in Feet	Lithology	LITHOLOGIC DESCRIPTION AND OBSERVATIONS	WELL CONSTRUCTION
					Multi-colored pit run, washed gravel, mostly gray and green sandstone, gravel and cobbles	
15-16-47	0				OL, dark brown, topsoil, clay and silt with sand, organics and roots, lighter in color and less organics downward.	4" Schedule 40 PVC with neat cement grout
6-8-11	0					
5-9-15	0		5		SM, tan, sand with silt and clay, grain and matrix supported textures, poorly-moderately sorted, medium fine-coarse grained, angular-subrounded sand grains	1/4" Bentonite seal
9-13-21	0					
7-10-17	0					
7-12-16	0					
			10		SW, tan, black and white, sand with minor silt and clay, moderately sorted, grain supported, medium fine-coarse grained, angular-subrounded sand, approximately 70% quartz sand	
4-5-8	0					
6-14-18	0					
5-10-14	0				CL, tan, clay and silt with minor sand, clay has waxy luster, lacks stratification	
5-7-8	0		15			
4-4-7	0					
5-12-14	0					
6-10-13	0		20			
2-7-8	0					
7-14-16	0				SM, tan, sand with clay and silt, both grain and matrix supported textures, medium fine-coarse grained sand, poorly sorted.	0.02 inch slots
					CL, tan, clay and silt with minor sand, massive, lacks stratification	
Bottom of Boring 23 feet						

EXPLORATION LOG

Project Name: WAPA Tracy Pumping Plant	Boring/Well Number: MW-6
	Boring/Well Location: Between WAPA garage USBR garage
Project Number: 5-459-90	Reference Elevation (ft): 59.7
	Reference Point: Top of PVC Casing
Date Drilled: 8/28/90	Drilling Contractor: Westex
Logged By: R. Giraud	Drilling Method: Hollow stem auger
Depth to Ground Water (ft): 12.20	Boring Depth (ft): 24.0 Well Depth (ft): 24.0
Date Measured: 08/28/90	Boring Diameter (in): 10.25

Sample Loc.	Blows/6-inch	QVM/QVA (ppm)	Depth in Feet	Lithology	LITHOLOGIC DESCRIPTION AND OBSERVATIONS	WELL CONSTRUCTION
				OL	OL, dark brown and black, topsoil, clay, silt and sand, roots present, poorly sorted	
8-13-17			7	SM	SM, tan and brown, sand with some silt and clay, moderately sorted, grain supported texture with clay and silt in matrix, sand fine to coarse grained, angular to subangular sand	4" Schedule 40 PVC with neat cement grout
6-10-14			7	SM		
			5	SM	SM, tan and brown, sand with some silt and clay, moderately sorted, grain supported texture with clay and silt in matrix, sand fine to coarse grained, angular to subangular sand	1/4" Bentonite pellet seal
10-7-11			2	SM		
5-11-13			0	SM	SM, tan and brown, sand with some silt and clay, moderately sorted, grain supported texture with clay and silt in matrix, sand fine to coarse grained, angular to subangular sand	2/12 RMC Lonestar
3-8-10				SM		
5-12-16			10	SW	SW, tan, sand, fine to medium fine grained, clay and silt matrix, grained supported texture, well sorted	.02 Machine slotted PVC
4-7-9				CL	CL, tan, clay and silt with minor sand, matrix supported grains, sand fine to medium grained, rare coarse sand and very fine gravel pebbles (subrounded)	
5-11-16				CL	SM, tan, sand with silt and clay, sand fine to coarse grained, both grain and matrix supported texture depends on amount of clay and silt, clay and silt matrix, fine pebble gravel at 18-18.5' CL, tan, clay and silt with minor sand, matrix supported sand grains, massive	
5-13-18			15	CL		
6-13-19				SM	SM, tan, sand with silt and clay, sand fine to coarse grained, both grain and matrix supported texture depends on amount of clay and silt, clay and silt matrix, fine pebble gravel at 18-18.5' CL, tan, clay and silt with minor sand, matrix supported sand grains, massive	
12-18-19			20	SM		
6-9-15				SM	SM, tan, sand with silt and clay, minor thin gravel layers and thin clay layers interbedded, both grain and matrix supported textures, fine to coarse grained sand	
6-11-13				SM		
8-11-12				SM		
					Bottom of boring 24 feet	

CLEARWATER GROUP, INC.
1995

1:25 FROM USER-SCCAD

TO

MAIN OFF SACTO P.02

CLEARWATER

GROUP, INC.

RECEIVED
MAIL ROOM
JAN 27 8 55 AM '97

BUREAU OF ENVIRONMENTAL
FRESHWATER (LVP)
FRESNO, CALIFORNIA

November 2, 1995

Mr. Chuck Bryant
201 Hospital Road
Sonora, CA 95370

Re: Diesel Overfill
San Luis and Delta-Mendota Water Authority Pumping Station
Byron, CA

~~Dear Mr. Bryant,~~

This letter report presents a summary of remedial actions implemented by Clearwater Group, Inc. (Clearwater) on behalf of C.L. Bryant, Inc. following a diesel release at the referenced site. On October 2, 1995 date, personnel of C.L. Bryant, Inc. overfilled a diesel underground storage tank and approximately 25 gallons of diesel spilled on the surface.

Background

Initial emergency response actions were performed by on-site San Luis & Delta-Mendota Water Authority (SLDMWA) personnel following the spill. Apparently, the diesel moved across the pavement and entered the subsurface via the asphalt/concrete seam south of the fill pipe and an unpaved backfilled utility trench north and northwest of the fill pipe (Figure 1). The asphalt was removed to these areas and limited excavation occurred in areas where soil appeared stained and exhibited a diesel odor. Approximately 4 cubic yards of soil was removed, mostly from the areas where soil samples SS-1 and SS-2 were collected.

~~The soil samples were collected by One Earth Environmental, Inc. and analyzed by Delta Environmental Laboratories located in Benicia, California, for total petroleum hydrocarbons as diesel (TPHd) by EPA Method 8015 (modified), and purgable hydrocarbons by EPA Method 8020. TPHd concentrations were 2,860 and 6.50 parts per million (ppm) in SS-1 and SS-2, respectively. Purgable hydrocarbon concentrations were 98.184 ppm in sample SS-1 and below the laboratory method detection in sample SS-2.~~
Copies of the laboratory report and chain-of-custody are included in Attachment A.

According to Mr. David Langlois of the SLDMWA, the dispensing line was broken during excavation activities and subsequently repaired.

(2)


CLEARWATER
GROUP INC.

Additional Excavation and Soil Sampling

On October 19, 1995, Clearwater personnel arrived at the site to direct limited additional excavation and collect confirmation soil samples. Upon arrival, Clearwater personnel noted that the repaired dispensing line was leaking at repair joints, which caused staining along the length of the repaired interval (Photograph 1). The line was constructed of one-inch diameter polyvinyl chloride (PVC). As the immediate area of this line and its connection to the diesel UST were hand excavated to assess the problem, the vent line was discovered. The vent line had approximately a one-inch gap and was constructed of the PVC also (Photograph 2). PVC joints of both the dispensing and vent lines were loose, likely the result of PVC cement degradation by the diesel. Based on these observations, it was unclear if and how long the entire piping system may have been leaking. As a result, it was agreed upon by Clearwater personnel and Mr. Dave Langlois of the SLDMWA that C.L. Bryant should not be held responsible for possible contamination in this area, and thus excavation activities in this location were terminated.

Additional excavation then focused on the following two areas where residual soil contamination resulting from the diesel overfill was identified: (1) a linear area of stained soil approximately one foot by 30 feet long, and (2) an area on the northeast side of a utility box (Figure 1). Approximately one cubic yard of soil was removed from each area and confirmation soil samples were collected. Sample locations and depths are shown on Figure 1.

Soil samples were collected by Clearwater personnel using a clean trowel and placed in clean brass tubes capped with teflon lined end caps. Each sample tube was labeled, documented on a chain-of-custody, and placed on ice in a cooler for transport to the project laboratory. The samples were analyzed by American Environmental Laboratories, Inc. located in Pleasanton, California for TPHd by EPA Method 8015 (modified). Soil was stockpiled on-site, enveloped in visqueen, pending removal and disposal by a licensed waste-hauler. Approximately 10 cubic yards of soil and asphalt are currently stockpiled on-site.

Results of soil sample analyses for TPHd ranged from non-detectable above the laboratory method limit to 25 ppm. The samples collected from the linear trench, SS-3-1' and SS-4-1', contained concentrations of 7 ppm and 25 ppm, respectively. The sample collected from the excavated area near the utility box, SS-5-1' did not contain concentrations of TPHd exceeding the laboratory detection limit. The sample collected from the sidewall of the piping trench, SS-6-3.5', also did not contain concentrations of TPHd exceeding the

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CLEARWATER
GROUP, INC.

laboratory method detection limit. Copies of the laboratory report and chain-of-custody are included in Attachment A.

Status

It is understood that the diesel UST piping was decommissioned on October 19, 1995, and that a temporary hand pump would be used to remove the remaining diesel fuel as needed by SLDMWA personnel. The area of excavation remains open, secured with barricades and caution tape, and will be backfilled during the week of November 6 in conjunction with the removal of stockpiled soil. The affected area will not be resurfaced with asphalt at this time, but will be coordinated with removal of diesel UST in early 1996.

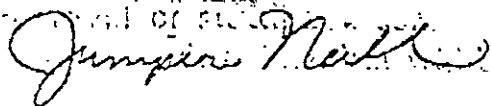
Based on field observations and analytical results, damages caused by the overfill spill appear to be successfully mitigated.

If you have any questions or comments regarding this report, please contact either myself or Juniper Neill at (510) 337-8730.

Sincerely,
CLEARWATER GROUP, INC.



Brian Gwinn
Project Geologist



Juniper Neill
Project Manager

Attachments

- cc Mr. David Langlois, San Luis & Delta-Mendota Water Authority
- Mr. Andrew Bohart, NSR Information, Inc.
- Mr. Robert Westen, ACEP
- Mr. Herb Ng, Bureau of Reclamation

02/03/87 13:38 FAX 916 979 2450

005

FEB-03-1997 11:46 FROM USBR-S0003

TO

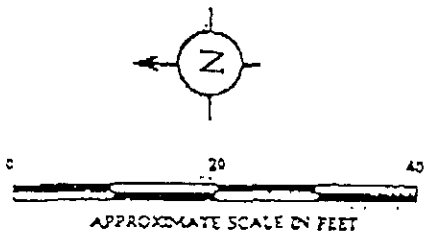
MAIN OFF SACTO

P.05

4

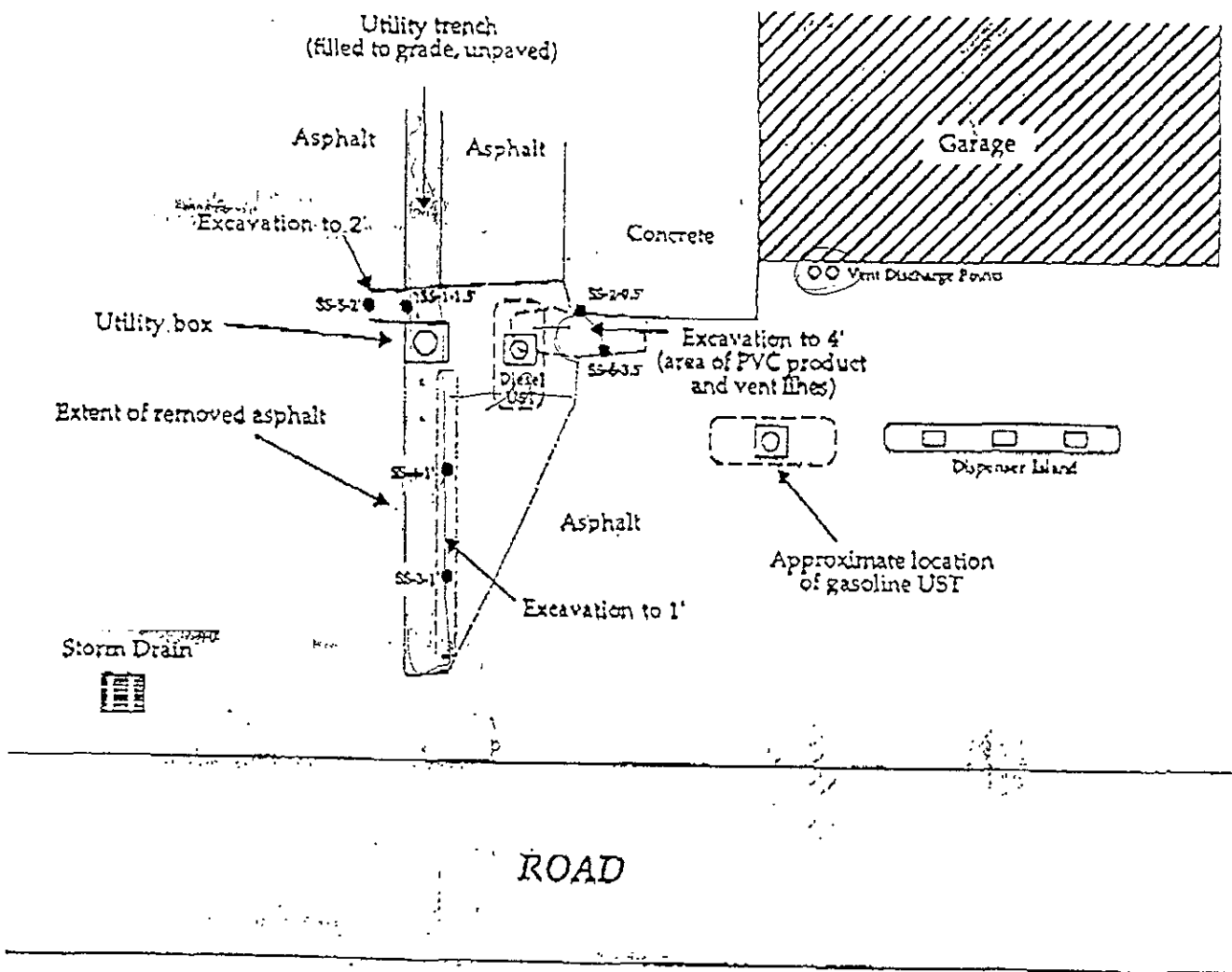
Figures and Photographs

5

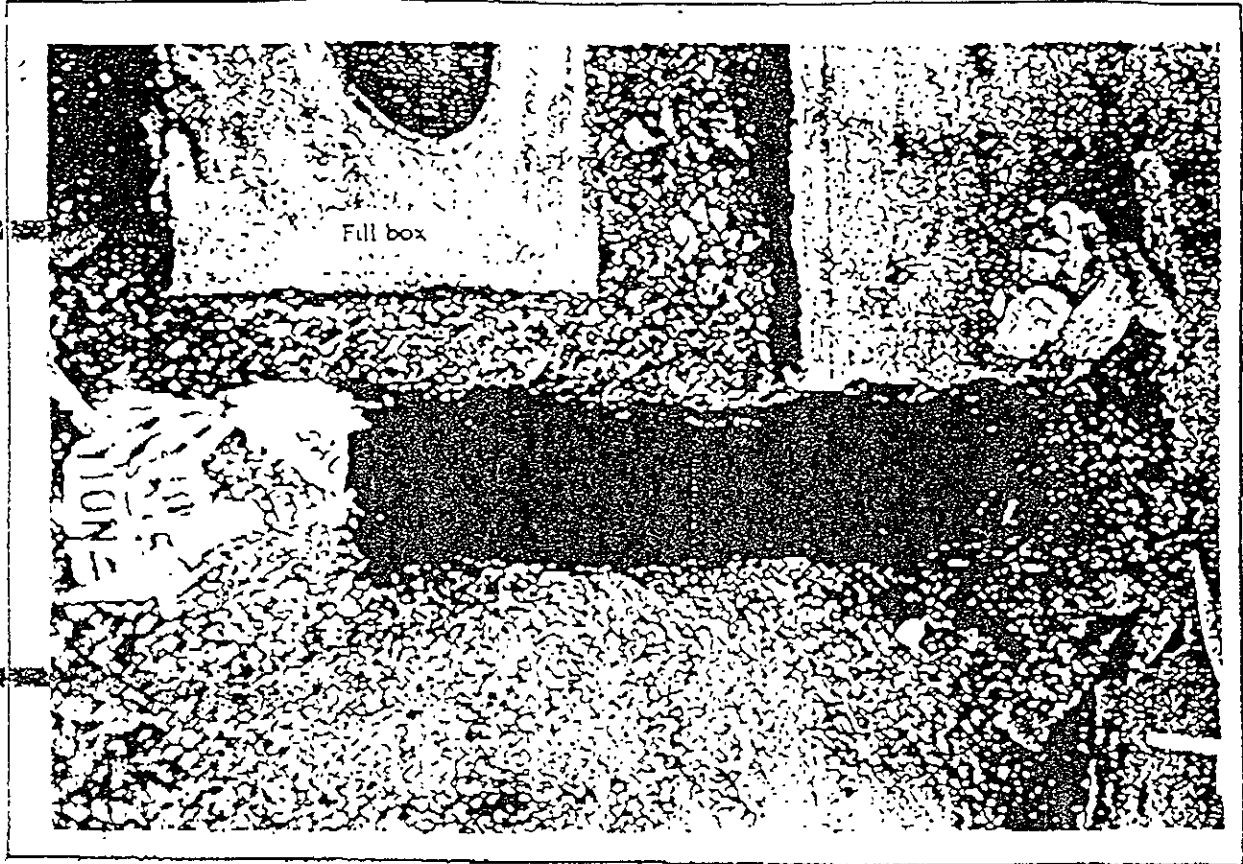


EXPLANATION

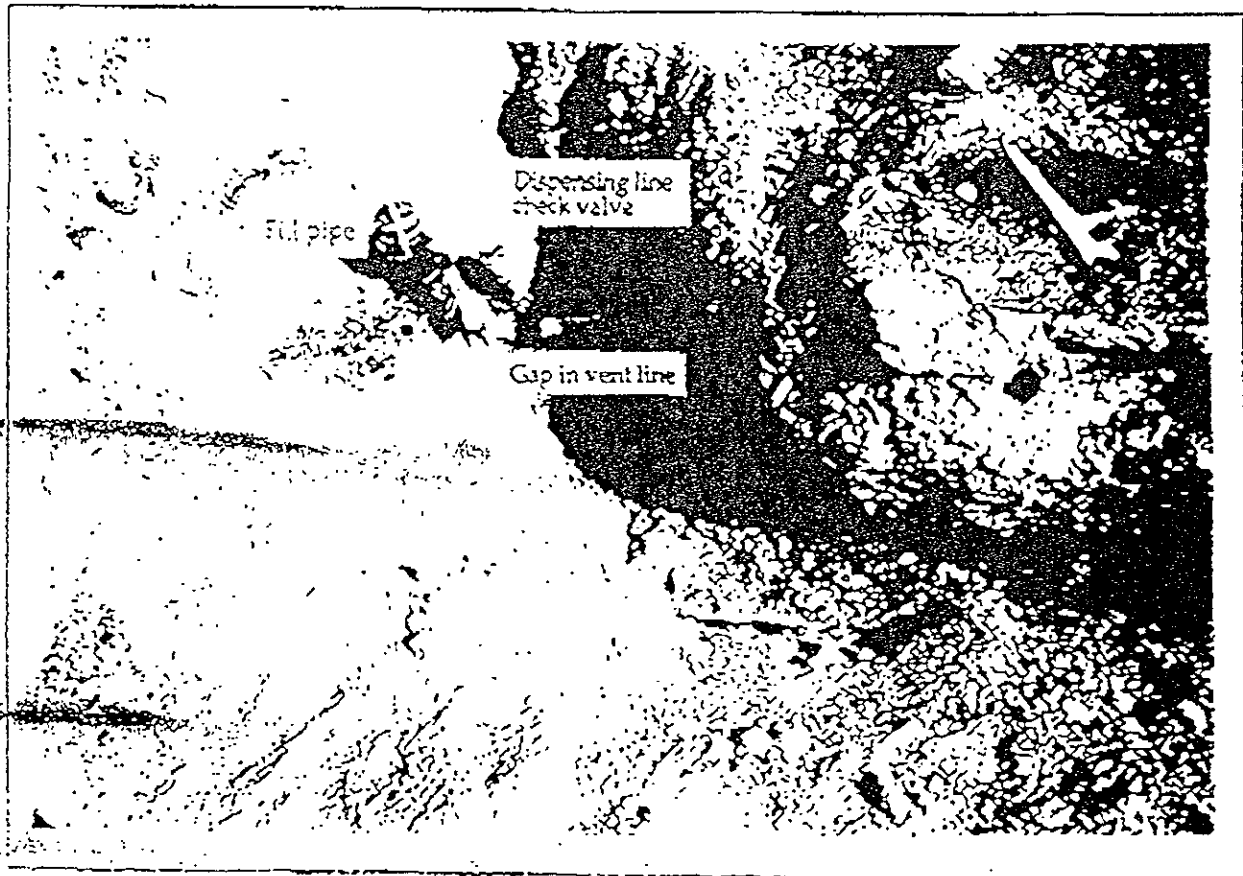
- SS-52 Soil sample location, designation and depth
- ▭ Limit of excavation



6



Photograph 1: Stained soil beneath diesel dispensing line



02/03/97 13:35 FAX 916 979 2450

Z005

FEB-23-1997 11:48 FROM USBR-SCCAC

TO

MAIN OFF SACTO

P.05

7

Attachment A

FEB-23-1997 11:45 FROM USBR-SCCAD

TQ MAIN OFF SACTO P.29

WATER • WASTE WATER • HAZARDOUS WASTE • FUEL • AIR • SOIL



ENVIRONMENTAL LABORATORIES

San Luis Delta & Endota Water Authority
 Route One, Box 35F
 Byron, CA 94514

Client Project ID:

Method: EPA 8020, 8015
 Sampled: 10/2/95
 Received: 10/2/95
 Matrix: Soil
 Analyzed: 10/6 - 10/9/95
 Reported: 10/10/95
 Units: mg/kg

Attn: David Langlois

Laboratory Results for TPH + BTEX Analysis

Analyte	Detection Limit mg/kg	Results (mg/kg)	
		SS-1	SS-2
TPH-D	2.5	2860	8.50
8020			
Benzene	0.005	0.332	ND
Toluene	0.005	3.90	ND
Ethylbenzene	0.005	0.302	ND
Chlorobenzene	0.005	6.17	ND
m,p-Xylene	0.005	24.1	ND
o-Xylene	0.005	12.4	ND
1,3-Dichlorobenzene	0.005	9.69	ND
1,4-Dichlorobenzene	0.005	25.7	ND
1,2-Dichlorobenzene	0.005	15.6	ND

*ND: Not Detected (< MDL)

Delta Environmental Laboratories

Hossain Khosh Khoo, Ph.D.

Company: **SAN JOAQUIN DELTA MENDOCINO WATER AUTHORITY**
 Address: **ROUTE ONE BOX 35F**
 City, State, Zip: **BYRON, CA 94514**
 Phone: **(209) 733-1050** Fax: **(209) 833-1034**
 Project Manager: **DAVID LANGRISH (SLONHO)**
 Alternate Contact: **HECTOR DELREAL (CDEE)**
 Project No.: _____ P.O. No. _____

TURN AROUND TIME
 (circle one)
 Same Day **72 Hrs.**
 24 Hrs. 48 Hrs.
 Normal 5 Day

DELTA ENVIRONMENTAL LABORATORY
MARTINEZ, CA
PHONE (707) 747-6081

Sample Identification	Date/Time	Depth	Sampling Remarks				Blot/Remediation	USY	Monitoring	Recent Contamination	Unknown Compounds	COMMENTS:
			Depth	Time	# of Containers	Notes						
1 SS-1	5	X	X									Recent Cont.
2 SS-2	6	X	X									Recent Cont.
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												

Relinquished By: **DAVID LANGRISH**
 Organization: **DELTA ENVIRONMENTAL LABORATORY**
 Date/Time: **10-03-95 16:15**
 Relinquished By: **DAVID LANGRISH**
 Organization: **SAN JOAQUIN DELTA MENDOCINO WATER AUTHORITY**
 Date/Time: **10-03-95 16:25**
 Relinquished By: **Schubert, David**
 Organization: **RECA 729**
 Date/Time: **10-3 8:15**

Received By: **DAVID LANGRISH**
 Organization: **DELTA ENVIRONMENTAL LABORATORY**
 Date/Time: **10-03-95**
 Received By: **DAVID LANGRISH**
 Organization: **RECA 729**
 Date/Time: **10-03-95**
 Received By: _____
 Laboratory: _____
 Date/Time: _____

Lab: Please Initial the following:
 Samples Stored in Ice: _____
 Appropriate Containers: _____
 Samples Preserved: _____
 VDA's without headspace: _____
 Comments: _____

FEB-23-1997 11:49 FROM USBR-SCCAD

TO MAIN OFF SACTO P.11

RECEIVED OCT 21 1995

10

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172

ATHA Accreditation: 11154

PAGE 1

INC. STE 102
ALAMEDA, CA 94501

REPORT DATE: 10/26/95
DATE(S) SAMPLED: 10/19/95
DATE RECEIVED: 10/20/95
AEN WORK ORDER: 9510261

ATTN: JUNIPER NEILL
CLIENT PROJ. ID: A-172
CLIENT PROJ. NAME: SAN LUIS DELTA

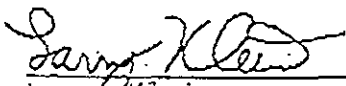
PROJECT SUMMARY:

On October 20, 1995, this laboratory received 4 soil sample(s).

Client requested sample(s) be analyzed for organic parameters. Results of analysis are summarized on the following page(s). Please see quality control report for a summary of QC data pertaining to this project.

Samples will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Samples may be archived by prior arrangement.

If you have any questions, please contact Client Services at (510) 930-9090.


Larry Klein
Laboratory Director

~~FEB-03-1997 11:58 AM FROM USER#999999~~

TO MAIN OFF SACTO P.12

American Environmental Network

(11)

PAGE 2

CLEARWATER GROUP, INC.

~~SAMPLE ID: CSS-3-1~~

AEN LAB NO: 9510261-01
AEN WORK ORDER: 9510261
CLIENT PROJ. ID: A-172

DATE SAMPLED: 10/19/95
DATE RECEIVED: 10/20/95
REPORT DATE: 10/26/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3550	-		Extrn Date	10/23/95
TPH as Diesel	GC-FID	7 *		1 mg/kg	10/23/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

American Environmental Network

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PAGE 3

CLEARWATER GROUP, INC.

~~SAMPLE ID: 9510261-02~~
AEN LAB NO: 9510261-02
AEN WORK ORDER: 9510261
CLIENT PROJ. ID: A-172

DATE SAMPLED: 10/19/95
DATE RECEIVED: 10/20/95
REPORT DATE: 10/26/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3550	-		Extrn Date	10/23/95
TPH as Diesel	GC-FID	25 *		1 mg/kg	10/23/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

American Environmental Network

(13) PAGE 4

CLEARWATER GROUP, INC.

SAMPLE ID: SS-5-1'
AEN LAB NO: 9510261-03
AEN WORK ORDER: 9510261
CLIENT PROJ. ID: A-172

DATE SAMPLED: 10/19/95
DATE RECEIVED: 10/20/95
REPORT DATE: 10/26/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3550	-		Extrn Date	10/23/95
TPH as Diesel	GC-FID	ND		1 mg/kg	10/23/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

American Environmental Network

14 PAGE 5

CLEARWATER GROUP, INC.

SAMPLE ID: SS-6-3.5'
AEN LAB NO: 9510261-04
AEN WORK ORDER: 9510261
CLIENT PROJ. ID: A-172

DATE SAMPLED: 10/19/95
DATE RECEIVED: 10/20/95
REPORT DATE: 10/26/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3550	-		Extrn Date	10/23/95
TPH as Diesel	GC-FID	ND		5 mg/kg	10/23/95

Reporting limit elevated due to high level of non-target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

15

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9510261

CLIENT PROJECT ID: A-172

Quality Control Summary

All laboratory quality control parameters were found to be within established limits.

Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

#: Surrogates only

#: Indicates result outside of established laboratory QC limits

CLEARWATER GROUP, INC.
 1125 Atlantic Avenue, Suite 102
 Alameda, California 94501
 Phone: (510) 523-8730
 Fax: (510) 523-0984

CGL Project Contact: Juniper Neill
 CGL Project Number: 1-172
 Page 1 of 1

Client: CL Bryant / Federated Contact: Juniper Neill Phone #: 337-8731 Fax #: 523-0984

Site Address: Byron, CA San Luis Delta Mendota Water Authority

Sampled by: J. Neill / B. Givens Sampler's Signature: Juniper Neill Shipment Method: courier

Laboratory: AEN Lab. Address: Lab. Phone #: 930-9090

TAT: 24 hr 48 hr 72 hr 10 day (std.)

ANALYSIS REQUIRED

SAMPLE DESCRIPTION	COLLECTION DATE/TIME	MATRIX SOIL/WATER	PRESERVATIVES		NUMBER OF CONT.	TYPE (EPA 8150)	TIME (EPA 8150)	SIZE (EPA 8150)	MATERIAL (EPA 8150)	ANALYSIS (EPA 8150)	ANALYSIS (EPA 8150)	ANALYSIS (EPA 8150)	ANALYSIS (EPA 8150)	ANALYSIS (EPA 8150)	ANALYSIS (EPA 8150)	ANALYSIS (EPA 8150)	ANALYSIS (EPA 8150)	Comments
			U	W														
SS-3-1'	4pm/10-19	Soil	Y															*Need Tuesday by mid morning Oct. 24th
SS-4-1'	↓	↓	Y															
SS-5-1'	↓	↓	Y															
SS-6-35'	↓	↓	Y															

Relinquished by/Affiliation	Date	Time	Received by/Affiliation	Date	Time	Additional Comments:
<u>Juniper Neill / CGL</u>	<u>10/24/95</u>	<u>9:59</u>	<u>Ray / AEN</u>	<u>10/20/95</u>	<u>03:00</u>	

(16)

COTTLE ENGINEERING
1994

PRELIMINARY SITE ASSESSMENT
AND
WORK PLAN FOR INSTALLATION OF MONITORING WELL

TRACY PUMPING STATION AND SUBSTATION
MOUNTAIN HOUSE AND KELSO ROADS
ALAMEDA COUNTY, CA

PREPARED FOR:

Mr. Herb Ng
U.S. Bureau of Reclamation
Rural Route 1, Box 35
Byron, CA 94514-9614

PREPARED BY:

COTTLE ENGINEERING
P.O. Box 7
Antioch, CA 94509

APRIL 1994

COTTLE ENGINEERING
P.O. Box 7
Antioch, CA 94509

Mr. Herb Ng
Rural Route 1, Box 35
Byron, CA 94514-9614

April 28, 1994

RE: PRELIMINARY SITE ASSESSMENT AND WORK PLAN FOR INSTALLATION OF
MONITORING WELL: TRACY PUMPING STATION AND SUBSTATION
MOUNTAIN HOUSE AND KELSO ROADS
TRACY, CA

Dear Mr. Ng:

The enclosed report, Preliminary Site Assessment and Work Plan for Installation of Monitoring Well, was prepared subsequent to the February 8, 1994 underground storage tank (UST) removals near the Tracy Pumping Station vehicle maintenance garage.

The scope of our work included research and review of prior environmental investigations pertaining to the site; consultation with county, state, and federal agencies; site reconnaissance visits; interviews with USBR employees; and preparation of this report.

This report summarizes the environmental and hydrogeologic settings, and the background of the site, including previous environmental investigations, subsurface sampling methods, analytical results of soil and groundwater samples, recent UST removal activity, and detected soil contamination subsequent to the tank removals.

This report also includes a work plan for installation of one groundwater monitoring well near the vehicle maintenance garage, and excavation of petroleum-hydrocarbon contaminated soil.

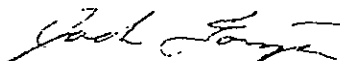
We recommend that a copy of this report be submitted to the following agencies:

- Alameda County Health Agency
Department of Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621
Attn: Ms. Eva Chu (510) 271-4530
- California Regional Water Quality Control Board
3443 Routier Road
Sacramento, CA 95827

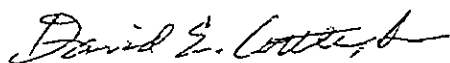
Should you have any questions regarding this project or need additional information, please contact us at (510) 754-8428. Cottle Engineering is pleased to be of service to you on this project.

Sincerely,

Cottle Engineering



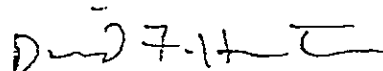
Jack Forsythe
Associate Geologist



David Cottle
Principal

Reviewed by:

HOEXTER CONSULTING, INC.



David F. Hoexter, CEG/REA
Principal

PRELIMINARY SITE ASSESSMENT
AND
WORK PLAN FOR INSTALLATION OF MONITORING WELL
TRACY PUMPING STATION AND SUBSTATION
MOUNTAIN HOUSE AND KELSO ROADS
ALAMEDA COUNTY, CA


PREPARED FOR:

Mr. Herb Ng
U.S. Bureau of Reclamation
Rural Route 1, Box 35
Byron, CA 94514-9614

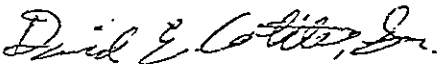
PREPARED BY:

COTTLE ENGINEERING
P.O. Box 7
Antioch, CA 94509

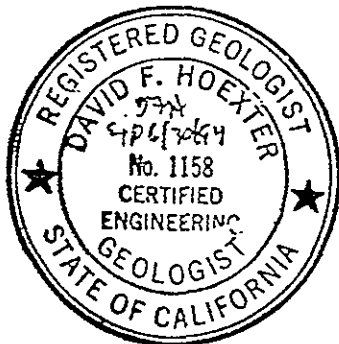
APRIL 1994



Jack Forsythe
Associate Geologist

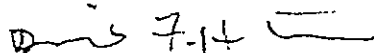


David Cottle
Principal

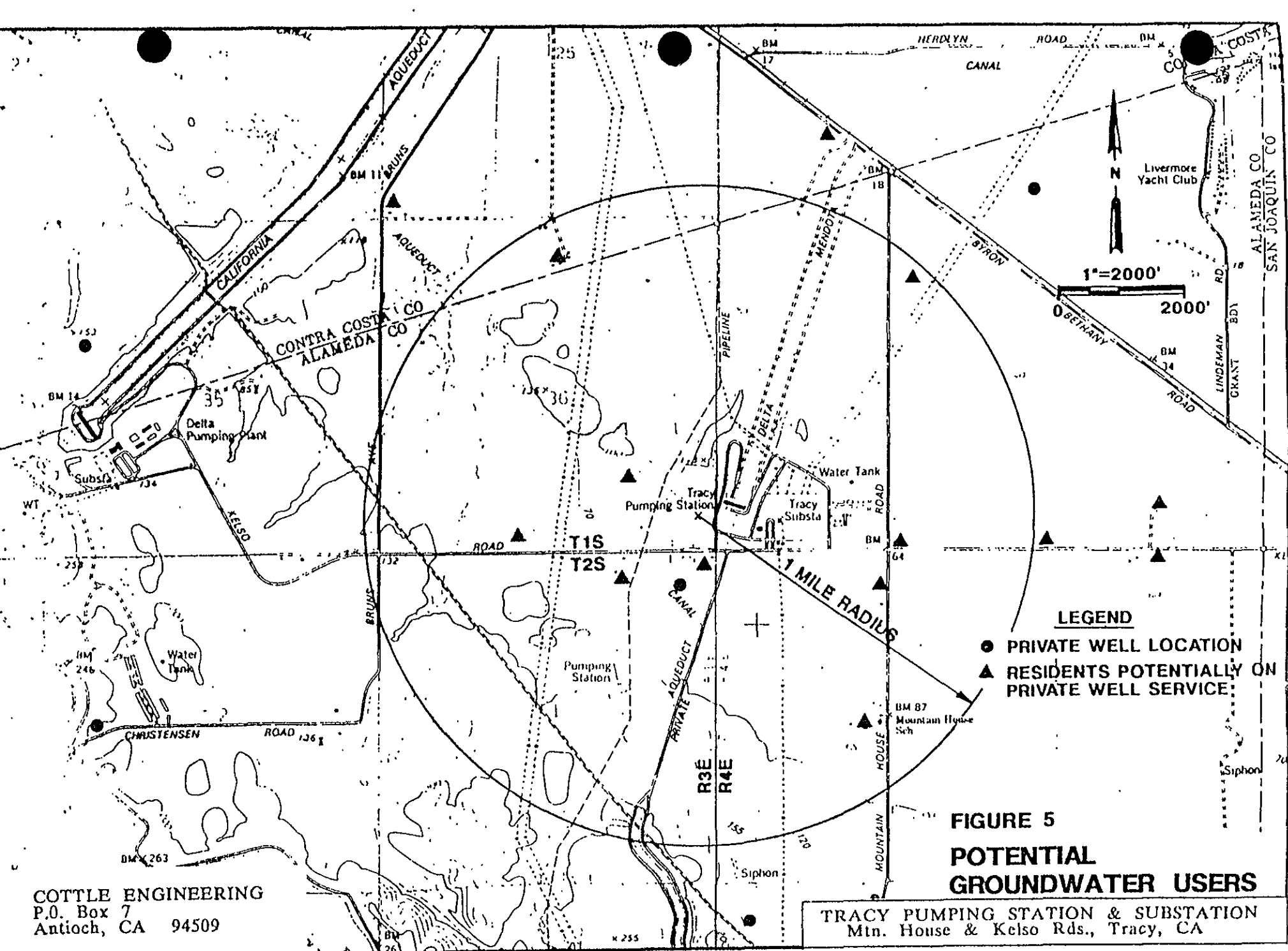


Reviewed by:

HOEXTER CONSULTING, INC.



David F. Hoexter, CEG/REA
Principal



COTTLE ENGINEERING
P.O. Box 7
Antioch, CA 94509

SOURCE: Final Preliminary Endangerment Assessment Report,
U.S. Bureau of Reclamation Landfill Site, Tracy, CA,
CH2M Hill, November, 1992

Figure 7, Underground Utility Map, shows locations of underground utility lines.

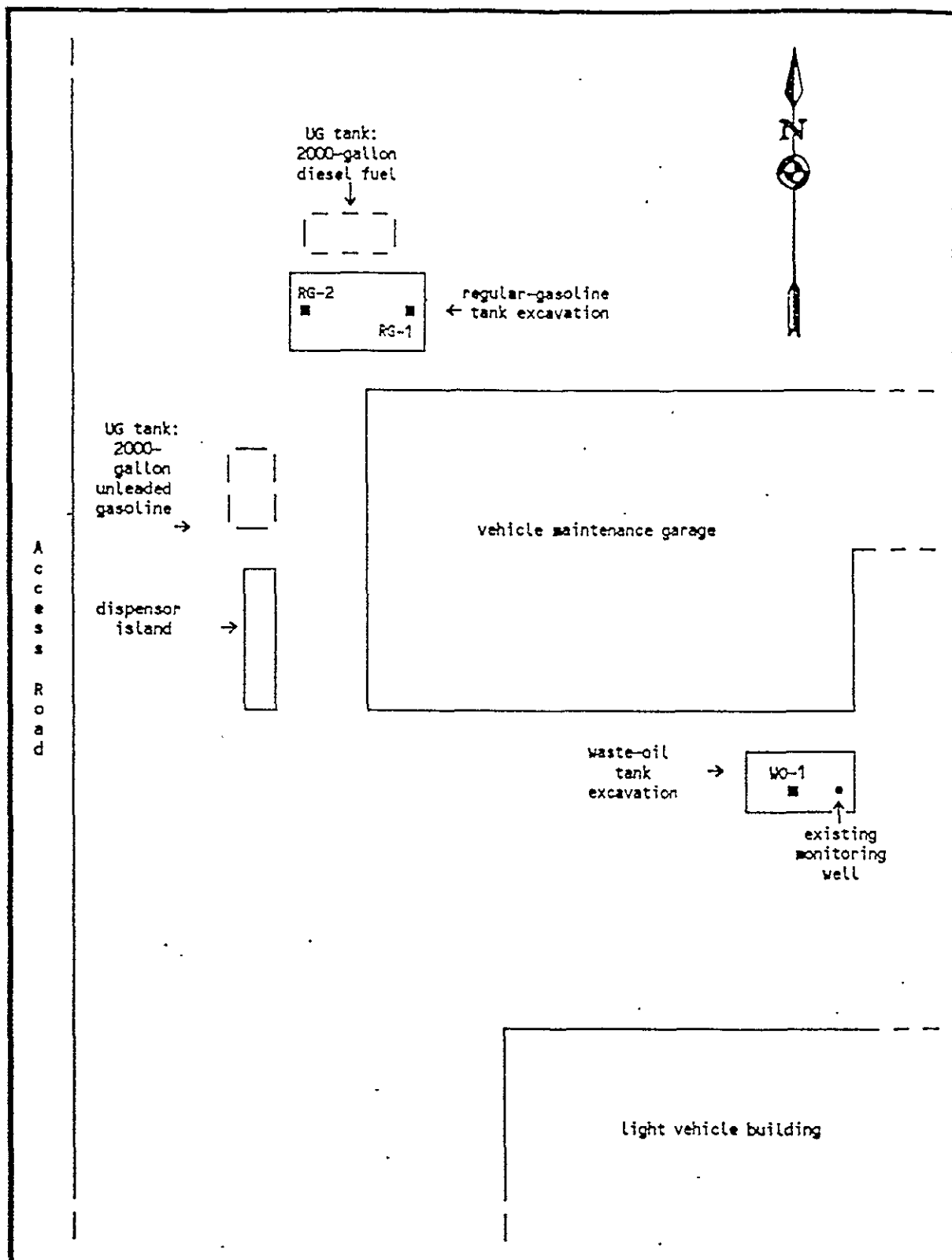
II. C. Existing Soil Contamination and Excavation Results

Cottle Engineering removed two single-walled USTs during February, 1994, from asphalt-paved areas adjacent to the vehicle maintenance garage. A fiberglass, 1000-gallon waste oil tank, and a steel, 2000-gallon, regular-gasoline tank were removed. Soil that was excavated in order to remove each of the tanks was stockpiled separately near each respective excavation pit, and the excavation pits were left open. Groundwater was not encountered during the excavations.

Soil samples were collected after the tanks were removed: two samples were collected from the floor of the gasoline tank excavation; one sample was collected from the floor of the waste oil tank excavation; and eight samples were collected from the soil stockpiles, for waste characterization. Four samples were collected from each stockpile; each group of discrete stockpile samples subsequently was combined at the analytical laboratory, forming one composited sample for each respective stockpile. Figure 8, UST Removal Soil Samples, indicates locations where excavation soil samples were collected.

The samples were submitted to McCampbell Analytical laboratory, in Pacheco, California (State-certification #1644). All samples were analyzed for detection of the following: total petroleum hydrocarbons (TPH) as gasoline (TPHg), using EPA Method 5030/8015; benzene, toluene, ethylbenzene, and xylenes (BTEX) using EPA Method 8020; and lead using EPA Method 7420. Additionally, soil samples associated with the waste oil tank also were analyzed for detection of the following: TPH as diesel, using EPA Method 3550/8015; volatile and semi-volatile organic compounds using EPA Method 8240 or 8270; total recoverable petroleum hydrocarbons (TRPH) as oil and grease, using EPA Method 418.1 or 9073; and the metals cadmium (EPA Method 7130), chromium (EPA Method 7190), nickel (EPA Method 7520), and zinc (EPA Method 7950).

The waste oil tank was located approximately five feet south of the maintenance garage. One soil sample was collected from the floor of the tank-removal pit; analytical results indicated detection of 19 ug/kg total xylenes, 5.1 mg/kg lead, 41 mg/kg chromium, 28 mg/kg nickel, and 36 mg/kg zinc.



<p>FIGURE 8: UST REMOVAL SOIL SAMPLES</p>	<p>APRIL, 1994</p>
<p>TRACY PUMPING STATION & SUBSTATION Mtn. House & Kelso Rds., Tracy, CA</p>	<p>SCALE: 1 inch = approximately 20 feet</p>
<p>COTTLE ENGINEERING</p>	

The regular-gasoline tank was located near the northwest corner of the garage, approximately six feet north of the building. Two samples were collected from the floor of the tank-removal pit: samples RG-1 and RG-2, respectively, were collected from 11- and 12-foot depths, near the eastern and western ends of the excavation. Analytical results for sample RG-1 indicated detection of 3.1 mg/kg TPHg. Analytical results for sample RG-2 indicated detection of 130 mg/kg TPHg, 0.16 mg/kg toluene, 0.76 mg/kg ethylbenzene, 1.9 mg/kg xylenes, and 5.7 mg/kg lead.

The composite soil stockpile sample associated with the waste oil tank contained the following contaminant concentrations: 7.4 ug/kg total xylenes; 56 mg/kg TRPH as oil and grease; 27 mg/kg chromium; 14 mg/kg nickel; and 37 mg/kg zinc.

The composite soil stockpile sample associated with the regular-gasoline tank contained the following contaminant concentrations: 94 mg/kg TPHg; 0.006 mg/kg benzene; 0.62 mg/kg toluene, 0.01 mg/kg ethylbenzene, 0.98 mg/kg xylenes, and 10 mg/kg lead.

III. PLAN FOR DETERMINING THE EXTENT OF SOIL CONTAMINATION

Currently, USBR plans include excavation of contaminated soil from the existing pit where the gasoline tank was located, aeration of all soils excavated from that area, and installation of a down-gradient monitoring well.

III. A. Determining Extent of Contamination Within the Excavation

A photoionization detector (PID), or similar instrument, will be used to screen soil for petroleum hydrocarbon vapors and to guide the progress of the excavation. Samples will be periodically collected from each wall and from the floor of the excavation and subjected to a headspace analysis using the PID. Upon collection of a sample to be analyzed, the soil will be placed inside a zip-lock plastic bag. The sample will then be crumbled inside the bag and allowed to bake in the sunlight for approximately five minutes in order to volatilize any hydrocarbons in the sample into vapors. The probe of the PID will then be inserted into the bag and the level of hydrocarbon vapors measured and recorded.

III. B. Sampling Methods and Procedures

When field analysis of headspace samples indicates that a majority of the contaminated soils have been excavated, confirmatory soil samples will be collected for laboratory analysis. Soil samples will be collected from the floor and sidewalls of the excavation pit, approximately every 15 lineal feet.

IV. PLAN FOR DETERMINING GROUNDWATER CONTAMINATION

To investigate possible groundwater contamination, USBR plans include installation, development, and sampling of a shallow monitoring well down-gradient from the former location of the gasoline tank.

Cottle Engineering recommends that construction and placement of the well follow California Regional Water Quality Control Board (RWQCB) guidelines.

A monitoring well currently exists at the eastern end of the waste oil tank excavation pit. Another monitoring well is located approximately 150 feet south of the garage; a third well is located approximately 400 feet north-northeast of the garage.

IV. A. Placement of Monitoring Well and Rationale for Location

Installation and sampling of a two-inch diameter groundwater monitoring well is recommended by Cottle Engineering. Figure 9, Proposed Well Location, depicts the approximate anticipated location of the monitoring well. The location was selected with regard to the area of possible existing soil contamination; specifically, the area where the regular-gasoline tank was located.

Based on the results of previous groundwater studies at the site, the chosen location is assumed to be down-gradient from the area where the gasoline tank was located.

IV. B. Well Drilling Method and Decontamination Procedures

Drilling will be performed by a Bureau of Reclamation drill crew or a state-licensed (C-57) drilling contractor, using a continuous-flight, minimum eight-inch outer diameter (OD), hollow-stem auger. All augers and other down-hole drilling equipment will be thoroughly steam-cleaned prior to their use at the site.

A geologic drilling (boring) log will be maintained, recording the materials encountered and the locations of collected soil samples. The log will include field descriptions of the soil properties and lithologic variations using the Unified Soil Classification System (USCS), penetration rate of the split-spoon sampler (blows per 6-inch interval), moisture conditions, well construction, and any unusual characteristics that may indicate the presence of chemical contamination. The log will be signed by a Registered Professional Engineer or Registered Geologist.

Cottle Industries P.O. Box 7 Antioch, CA 94509	Client Project ID: Bureau Of Reclamation	Date Sampled: 02/08/94
		Date Received: 02/09/94
	Client Contact: Roy Pantle	Date Extracted: 02/09/94
	Client P.O.:	Date Analyzed: 02/09-02/11/94

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with BTEX*

EPA methods 5030, modified 8013, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID (3030)

Lab ID	Client ID	Matrix	TPH(g) [†]	Benzene	Toluene	Ethylbenzene	Xylenes	% Rec. Surrogate
34155	W0-1	S	ND	ND	ND	ND	ND	109
34156	W0-Comp	S	ND	ND	ND	ND	ND	110
34157	RG-1	S	3.1,g	ND	ND	ND	ND	99
34158	RG-2	S	130,b,d	ND < 0.025	0.16	0.76	1.9	100
34159	RG-Comp	S	94,g	0.006	0.062	0.010	0.98	94
Detection Limit unless otherwise stated; ND means Not Detected		W	50 ug/L	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.005	0.005	0.005	0.005	

*water samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

[#] cluttered chromatogram; sample peak co-elutes with surrogate peak

[†] The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant (aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds are significant; no recognizable pattern; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible phase is present.

Cottle Industries P.O. Box 7 Antioch, CA 94509	Client Project ID. Bureau Of Reclamation	Date Sampled. 02/08/94
		Date Received: 02/09/94
	Client Contact: Roy Pantle	Date Extracted. 02/15/94
	Client P.O.:	Date Analyzed: 02/15/94

Lead*

EPA analytical method 239.2 or 7420*

Lab ID	Client ID	Matrix	Extraction ^o	Lead [*]
34157	RG-1	S	TTLc	ND
34158	RG-2	S	TTLc	5.7
34159	RG-Comp	S	TTLc	10
Detection limit unless otherwise stated: ND means Not Detected	W	TTLc		0.005mg/L
	S	TTLc		4.0 mg/kg
	—	STLc, TCLP		0.20 mg/L

* soil samples are reported in mg/kg. and water samples and all STLc & TCLP extracts in mg/L
^o Lead is analysed using FPA method 7420 (AA Flame) for soils, STLc & TCLP extracts and method 239.2 (AA Furnace) for water samples
^o EPA extraction methods 1311(TCLP), 3010/3020(water, TTLc), 3040(organic matrices, TTLc), 3050(solids, TTLc); STLc from CA Title 22

McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553
 Tele: 510-798-1620 Fax: 510-798-1622

Cottle Industries P.O. Box 7 Antioch, CA 94509	Client Project ID: Bureau Of Reclamation	Date Sampled: 02/08/94
	Client Contact: Roy Pantle	Date Received: 02/09/94
	Client P.O.:	Date Extracted: 02/15/94
		Date Analyzed: 02/15/94

LUFT Metals*

EPA analytical methods				239.2,7420 [†]	213.1,7130	218.1,7190	249.1,7520	289.1,7950
Lab ID	Client ID	Matrix	Extraction [‡]	Lead [§]	Cadmium [§]	Chromium [§]	Nickel [§]	Zinc [§]
34155	WO-1	S	TTLIC	5.1	ND	41	28	36
34156	WO-Comp	S	TTLIC	ND	ND	27	14	37
Detection Limit unless otherwise stated: ND means Not Detected	W	TTLIC	0.005mg/L	0.05	0.25	0.10	0.05	
	S	TTLIC	4.0 mg/kg	1.0	3.0	2.0	1.0	
	—	STLC,TCLP	0.20 mg/L	0.05	0.25	0.10	0.05	

* soil samples are reported in mg/kg, and water samples and all STLC & TCLP extracts in mg/l.
[†] Lead is analyzed using EPA method 7420 (AA Flame) for soils, STLC & TCLP extracts and method 239.2 (AA Furnace) for water samples.
[‡] EPA extraction methods 1311(TCLP), 3010/3020(water,TTLIC), 3040(organic matrices,TTLIC), 3050(solids,TTLIC), STLC from CA Title 22

Cottle Industries P.O. Box 7 Antioch, CA 94509	Client Project ID: Bureau Of Reclamation	Date Sampled: 02/08/94
	Client Contact: Roy Pantle	Date Received: 02/09/94
	Client P.O:	Date Extracted: 02/09/94
		Date Analyzed: 02/09/94

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel *
EPA methods, modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d) [†]	% Recovery Surrogate
34155	WO-1	S	ND	97
34156	WO-Comp	S	ND,g	98
Detection Limit unless otherwise stated; ND means Not Detected	W		50 ug/L	
	S		10 mg/kg	

* water samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

† cluttered chromatogram; surrogate and sample peaks co-elute or surrogate peak is on elevated baseline

* The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) modified diesel?; light (CL) or heavy (CH) diesel compounds are significant; d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel(?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible phase is present.

McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553

Tele: 510-798-1620 Fax: 510-798-1622

Cottle Industries P.O. Box 7 Antioch, CA 94509	Client Project ID: Bureau Of Reclamation	Date Sampled 02/08/94
		Date Received: 02/09/94
	Client Contact: Roy Pantle	Date Extracted: 02/11/94
	Client P.O:	Date Analyzed: 02/11/94

Total Recoverable Petroleum Hydrocarbons as Oil & Grease (with Silica Gel Clean-up) by Scanning IR Spectrometry*

EPA method 412.1 or 9073; Standard Methods 5320 C&F

Lab ID	Client ID	Matrix	TRPH ⁺
34155	WO-1	S	ND
34156	WO-Comp	S	56
Detection Limit unless otherwise stated; ND means Not Detected	W		5 mg/L
	S		50 mg/kg

*water samples are reported in mg/L and soils in mg/kg

⁺ If TPH(d) is not requested then all positive results are run by direct injection chromatography with FID detection. The following comments pertain to these GC results: a) gasoline-range compounds (C6-C12) present; b) diesel range compounds (C10-C23) present; c) oil-range compounds (> C18) present; d) other patterned solvent(?); e) isolated peaks; f) GC compounds are absent or insignificant relative to TRPH inferring that complex biologically derived molecules (lipids?) are the source of IR absorption.

CHROMALAB, INC.

5 DAYS TURNAROUND

Environmental Laboratory (1094)

February 21, 1994

ChromaLab File # 9402178
 Submission #: 9402000178

MCCAMPBELL ANALYTICAL, INC.
 Attn: Ed Hamilton

Date Sampled: February 8, 1994 Date Submitted: February 14, 1994
 Date Extracted: February 18, 1994 Date Analyzed: February 18, 1994

Project Name: C/BOR
 Project No: 2050
 Sample I.D.: WO-1

Method of analysis: EPA 8270
 Matrix: Soil
 Dilution Factor: None

COMPOUND NAME	Sample mg/kg	MDL mg/kg	Spike Recovery
PHENOL	N.D.	0.05	63% 82%
BIS(2-CHLOROETHYL) ETHER	N.D.	0.05	-----
2-CHLOROPHENOL	N.D.	0.05	55% 89%
1,3-DICHLOROBENZENE	N.D.	0.05	-----
1,4-DICHLOROBENZENE	N.D.	0.05	-----
BENZYL ALCOHOL	N.D.	0.10	-----
1,2-DICHLOROBENZENE	N.D.	0.05	-----
2-METHYLPHENOL	N.D.	0.05	-----
BIS(2-CHLOROISOPROPYL) ETHER	N.D.	0.05	-----
4-METHYLPHENOL	N.D.	0.05	-----
N-NITROSO-DI-N-PROPYLAMINE	N.D.	0.05	-----
HEXACHLOROETHANE	N.D.	0.05	-----
NITROBENZENE	N.D.	0.05	-----
ISOPHORONE	N.D.	0.05	-----
2-NITROPHENOL	N.D.	0.05	-----
2,4-DIMETHYLPHENOL	N.D.	0.05	-----
BENZOIC ACID	N.D.	0.25	-----
BIS(2-CHLOROETHOXY) METHANE	N.D.	0.05	-----
2,4-DICHLOROPHENOL	N.D.	0.05	-----
1,2,4-TRICHLOROBENZENE	N.D.	0.05	95% 98%
NAPHTHALENE	N.D.	0.05	-----
4-CHLOROANILINE	N.D.	0.10	-----
HEXACHLOROBUTADIENE	N.D.	0.05	-----
4-CHLORO-3-METHYLPHENOL	N.D.	0.10	81% 100%
2-METHYLNAPHTHALENE	N.D.	0.05	-----
HEXACHLOROCYCLOPENTADIENE	N.D.	0.05	-----
2,4,6-TRICHLOROPHENOL	N.D.	0.05	-----
2,4,5-TRICHLOROPHENOL	N.D.	0.05	-----
2-CHLORONAPHTHALENE	N.D.	0.05	-----
2-NITROANILINE	N.D.	0.25	-----
DIMETHYL PHTHALATE	N.D.	0.05	-----
ACENAPHTHYLENE	N.D.	0.05	-----
3-NITROANILINE	N.D.	0.25	-----
ACENAPHTHENE	N.D.	0.05	83% 89%
2,4-DINITROPHENOL	N.D.	0.25	-----
4-NITROPHENOL	N.D.	0.25	-----
DIBENZOPURAN	N.D.	0.05	-----

(continued on next page)

CHROMALAB, INC.

Environmental Laboratory (1094)

8 DAYS TURNAROUND

February 22, 1994

ChromaLab File#: 9402178

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: C/BOR

Project#: 2050

Submitted: February 14, 1994

re: One sample for Volatile Organic Compounds analysis.

Sample: WO-1/34155

Matrix: SOIL

Lab #: 43639-2298

Sampled: February 8, 1994

Analyzed: February 17, 1994

Method: EPA 8240

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE RESULT (%)
ACETONE	N.D.	25	N.D.	--
BENZENE	N.D.	25	N.D.	--
BROMODICHLOROMETHANE	N.D.	25	N.D.	--
BROMOFORM	N.D.	25	N.D.	--
BROMOMETHANE	N.D.	25	N.D.	--
2-BUTANONE	N.D.	25	N.D.	--
CARBON TETRACHLORIDE	N.D.	25	N.D.	--
CHLOROBENZENE	N.D.	25	N.D.	--
CHLOROETHANE	N.D.	25	N.D.	--
2-CHLOROETHYL VINYL ETHER	N.D.	25	N.D.	--
CHLOROFORM	N.D.	25	N.D.	--
CHLOROMETHANE	N.D.	25	N.D.	--
DIBROMOCHLOROMETHANE	N.D.	25	N.D.	--
1,1-DICHLOROETHANE	N.D.	25	N.D.	79
1,2-DICHLOROETHANE	N.D.	25	N.D.	--
1,1-DICHLOROETHENE	N.D.	25	N.D.	--
1,2-DICHLOROETHENE (CIS)	N.D.	25	N.D.	--
1,2-DICHLOROETHENE (TRANS)	N.D.	25	N.D.	--
1,2-DICHLOROPROPANE	N.D.	25	N.D.	--
1,3-DICHLOROPROPENE (CIS)	N.D.	25	N.D.	--
1,3-DICHLOROPROPENE (TRANS)	N.D.	25	N.D.	--
ETHYL BENZENE	N.D.	25	N.D.	--
2-HEXANONE	N.D.	25	N.D.	--
METHYLENE CHLORIDE	N.D.	25	N.D.	--
4-METHYL-2-PENTANONE	N.D.	25	N.D.	--
STYRENE	N.D.	25	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	25	N.D.	85
TETRACHLOROETHENE	N.D.	25	N.D.	95
TOLUENE	N.D.	25	N.D.	--
1,1,1-TRICHLOROETHANE	N.D.	25	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	25	N.D.	--
TRICHLOROETHENE	N.D.	25	N.D.	88
TRICHLOROFLUOROMETHANE	N.D.	25	N.D.	--
VINYL ACETATE	N.D.	25	N.D.	--
VINYL CHLORIDE	N.D.	25	N.D.	--
XYLENES (TOTAL)	19	25	N.D.	--

ChromaLab, Inc.



David Wintergrass
Chemist



Eric Tam
Laboratory Director

CHROMALAB, INC.

Environmental Laboratory (1054)

8 DAYS TURNAROUND

Page 2

Chromalab File # 9402178

Project Name: C/BOR
 Project No: 2050
 Sample I.D.: WO-1
 Method of Analysis: BPA #270 Matrix: soil

COMPOUND NAME	Sample mg/kg	MDL mg/kg	Spike Recovery
2,4-DINITROTOLUENE	N.D.	0.05	-----
2,6-DINITROTOLUENE	N.D.	0.05	75% 80%
DIETHYL PHTHALATE	N.D.	0.05	-----
4-CHLORO-PHENYL PHENYL ETHER	N.D.	0.05	-----
FLUORENE	N.D.	0.05	-----
4-NITROANILINE	N.D.	0.25	-----
4,6-DINITRO-2-METHYL PHENOL	N.D.	0.25	-----
N-NITROSODIPHENYLAMINE	N.D.	0.05	-----
4-BROMOPHENYL PHENYL ETHER	N.D.	0.05	-----
HEXACHLOROBENZENE	N.D.	0.05	-----
PENTACHLOROPHENOL	N.D.	0.25	87% 111%
PHENANTHRENE	N.D.	0.05	-----
ANTHRACENE	N.D.	0.05	-----
DI-N-BUTYL PHTHALATE	N.D.	0.05	-----
FLUORANTHENE	N.D.	0.05	-----
PYRENE	N.D.	0.05	106% 129%
BUTYLBENZYL PHTHALATE	N.D.	0.05	-----
3,3'-DICHLOROBENZIDINE	N.D.	0.10	-----
BENZO (A) ANTHRACENE	N.D.	0.05	-----
BIS (2-ETHYLMETHYL) PHTHALATE	N.D.	0.05	-----
CHRYSENE	N.D.	0.05	-----
DI-N-OCTYL PHTHALATE	N.D.	0.05	-----
BENZO (B) FLUORANTHENE	N.D.	0.05	-----
BENZO (K) FLUORANTHENE	N.D.	0.05	-----
BENZO (A) PYRENE	N.D.	0.05	-----
INDENO (1,2,3 C,D) PYRENE	N.D.	0.05	-----
DIBENZO (A,H) ANTHRACENE	N.D.	0.05	-----
BENZO (G,H,I) PERYLENE	N.D.	0.05	-----

Chromalab, Inc.


 Alex Tam
 Analytical Chemist


 Eric Tam
 Lab Director

**U. S. DEPARTMENT OF INTERIOR
BUREAU OF RECLAMATION
1994 AND 1995**

470

SEP 01 1994

MP-220
PRJ-10.00

MEMORANDUM

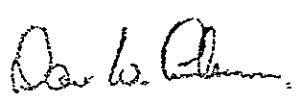
To: Area Manager, Delta

From: David W. Eubank
Regional Engineer

Subject: Installation of Monitoring Well MW-7 and Results of Testing for Ground-Water Contamination - Vehicle Maintenance Facility - Tracy Pumping Plant - Central Valley Project, California

Attached is a copy of a memorandum, above subject, prepared by this office, code MP-221 (Geology Section). This memorandum describes the procedures used to install monitoring well MW-7 and presents the results of testing the air, soil, and ground water during well installation. Additionally, the test results of the ground-water sample collected 3 days after well completion are also presented.

If you have any questions, please contact Steven Sherer or Wendel Carlson of my staff at (916) 978-4902.



Attachments

cc: DAO-400
(w/c attachments)

hc: MP-152, -221, -400/-470
(ea w/c attachments)

REGIONAL GEOLOGY SECTION
SACRAMENTO, CALIFORNIA

AUGUST 31, 1994

MEMORANDUM TO THE TECHNICAL FILES

FROM: Steven Sherer, Geologist

SUBJECT: Installation of Monitoring Well MW-7 and Results of Testing for Groundwater Contamination--Vehicle Maintenance Facility--Tracy Pumping Plant-- Central Valley Project, California.

At the request of the Delta Area Office (DAO), a groundwater contamination monitoring well, MW-7, was installed in the vicinity of the vehicle maintenance garage at the Tracy Pumping Plant on June 23, 1994. The purpose of this memorandum is to document the procedures used to install this well and to present the results of testing air, soil and groundwater during well installation. In addition, the test results of the groundwater sample collected three days after well completion is also noted.

Previous Work

On February 8, 1994, two underground storage tanks were removed from areas adjacent to the vehicle maintenance garage at the Tracy Pumping Plant by Cottle Engineering, a private contractor. One tank located on the south side of the garage was a 1,000 gallon fiberglass tank utilized for the storage of waste oil. The second tank located on the northwest side of the garage was a 2,000 gallon steel tank utilized for storage of regular leaded gasoline. Soils excavated during tank removal were stockpiled adjacent to the pits, and the pits were left open. Soil samples were collected after the tanks were removed. Soil samples taken from the gasoline tank excavation contained elevated concentrations of up to 130 mg/kg of Total Petroleum Hydrocarbons (TPH) in the form of gasoline (TPHg).

During previous site assessments, six monitoring wells (MW-1 through MW-6) were installed in or adjacent to the vehicle maintenance facility. Four of these wells, MW-1 through MW-4, were destroyed under permit from Alameda County just prior to the removal of the underground storage tanks. MW-5 is located approximately 400 feet north-northeast of the garage, and MW-6 is located 150 feet south of the garage. Following removal of the tanks, Cottle Engineering installed one monitoring well in the pit that formerly had contained the waste oil tank. However, in order to monitor the groundwater at this site for any downgradient migration of contaminants, an additional monitoring well, MW-7, was required.

Installation of Monitoring Well MW-7

Monitoring Well MW-7 is located 39.5 feet north and 8 feet west of the northwest corner of the vehicle maintenance garage at El. 56.9. The hole for the monitoring well was drilled with the CME-75 drill rig utilizing the 7 7/8-inch-diameter flight auger and dry core system with Standard Penetration Tests (SPTs) taken in selected intervals during drilling. Four 6-inch-long brass liners were used in each SPT spoon used. Material in the segment of liner selected for laboratory testing was capped with teflon and plastic end caps and sealed with aluminized tape. SPT samples were taken from between 4.7 to 5.2 feet (MW-7001) and 9.5 to 10.0 feet (MW-7002) for laboratory testing.

The hole was drilled to a total depth of 19.3 feet. The drill hole first encountered water at 9.7 feet of depth. The monitoring well consists of a 0.2-foot-long cap placed at the bottom of 12.0 feet of 0.01-inch machine-slotted, 2-inch-diameter, Schedule 40 PVC pipe. The top of the screened interval is at a depth of 7.2 feet in the monitoring well. Schedule 40, non-slotted PVC pipe was installed above the machine slotted pipe. The top of the monitoring well casing is 0.4 foot below ground surface and located inside a tamper-resistant traffic box set flush with the surface of the surrounding asphalt. A locking cap is mounted on top of the pipe. Number 2 Monterey sand was placed around the pipe from depths of 5.2 to 19.3 feet to backfill the drill hole. For a seal at the surface, bentonite pellets were used between the depths of 3.2 and 5.3 feet, and cement grout was used from the surface to 3.2 feet. The attached drill hole log describes the materials encountered and the monitoring well installation.

Decontamination

Both prior to and following drilling, all down hole drilling and sampling equipment was steam-cleaned, rinsed in deionized water and then allowed to air dry. In order to capture the water and contaminants from the washing and rinsing operations, three adjoining pits were constructed using 8-foot-long, 4- by 4-inch boards laid out and covered with 10-mil thick visquene. Two of these pits were eight feet square with the third pit being 16 feet by 8 feet. Water collected in these pits was hand bailed into a 55-gallon waste disposal drum.

Personal protective equipment utilized during drilling operations was level D, and consisted of coveralls, steel toed boots, hard hats, and gloves.

Monitoring for Contaminants During Drilling

During drilling, the air around soils brought to the surface by the rotating flight auger was periodically sampled with a photo ionization detector (PID). No contamination was detected. These materials were then shoveled onto the adjacent pile of soil from underground storage tank removal. Dry core samples from this drill hole were also "sniffed" with

the PID, then wrapped in visquene, marked, and stored at the west end of this pile of soil. The air in the drill hole was periodically tested with the PID, and no contamination was detected. During drilling operations, soil samples were taken from the dry core between 7.3 and 7.5 feet (top of the sand zone) and at 9.4 to 9.6 feet (just above the water contact). These samples were placed in a plastic container, which was then sealed, shaken and placed in the sunlight for at least 15 minutes. This container was then opened, and the air inside was tested with the PID for contaminants. No contamination of soils was detected by this method. Air at the drill site was monitored with a TMX 410, for lower explosive limit vapors and level of oxygen at the site. No combustible organic vapors were detected except on two brief occasions when vehicles in an adjacent area were being filled with gasoline. Once the vehicles were filled the vapor readings returned to normal (background levels).

Results of Laboratory Testing

Soil sample MW-7001 (4.7- to 5.2-feet) had no detectable contamination of TPHg, Benzene, Ethylbenzene, Toluene, or Xylenes. Soil sample MW-7002 (9.5- to 10.0-feet) had no detectable TPHg, Ethylbenzene, Toluene, or Xylenes, but this sample did have a 0.02 mg/kg detection of Benzene. However, the detection limit for this test is 0.02 mg/kg and when readings are at the detection limit they are considered to be inconclusive.

Water sample MW-7003 taken three days after the well was initially developed had no detectable TPHg, Benzene, Ethylbenzene, Toluene, or Xylenes.

Conclusions

No hydrocarbon contamination of the groundwater or soil is detected downgradient from the former site of the unleaded gasoline tank. Indications are that the contamination detected in the excavated soils from the tank removal is minor, and is probably restricted to the area where the gasoline tank was located.

Recommendations

Based on the absence of any hydrocarbon contamination encountered during the installation and initial monitoring in well MW-7, it is apparent that there is no groundwater or soil contamination outside the immediate area of the gasoline tank pit. Therefore, we recommend that the Quality Assurance and Environmental Branch (MP-470) perform tests in the pit walls. It is possible that only minor amounts of additional pit excavation will be required to remove the remaining contaminated soil. If so, this soil could be aerated at the site and, after aeration, returned to the pit.

Steven G. Sherer
Steven Sherer, Geologist

Noted: J. Wendel Carlson 8/31/94
J. Wendel Carlson, Project Leader Date

Noted: David M. Sparks 8/31/94
David M. Sparks; Head, Engineering Section Date

Noted: Charles L. Howard 8/31/94
Charles L. Howard, Regional Geologist Date

GEOLOGIC LOG OF DRILL HOLE NO. MW-7

SHEET 1 OF 2

FEATURE: TRACY PUMPING PLANT
 LOCATION: SEE NOTES
 BEGUN: 06-21-94 FINISHED: 06-23-94
 DEPTH AND ELEV. OF WATER LEVEL AND DATE MEASURED: SEE NOTES, SHEET 2

PROJECT: CENTRAL VALLEY PROJECT
 COORDINATES: N 473979 E 1688170
 TOTAL DEPTH: 19.3
 DEPTH TO BEDROCK:

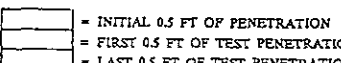
STATE: CALIFORNIA
 GROUND ELEVATION: 56.8
 ANGLE FROM HORIZONTAL: 90 BEARING:
 HOLE LOGGED BY: STEVEN SHERER
 REVIEWED BY:

NOTES	DEPTH	HOLE TYPE/SIZE	% RECOVERY	TPH-GASOLINE	BENZENE	ETHYLBENZENE	TOLUENE	TOTAL XYLENES	BLOWS/0.5 FT [a]	SPT [b]	CLASSIFICATION	DEPTH	FIELD VISUAL CLASSIFICATION AND PHYSICAL CONDITION	
														0
<p>ALL MEASUREMENTS ARE IN FEET FROM GROUND SURFACE.</p> <p>DRILLED BY: Regional Drill Crew; Al Velarde, driller.</p> <p>PURPOSE OF HOLE: To install piezometer to monitor for ground-water contamination by petroleum products from nearby gasoline and diesel underground storage tanks.</p> <p>LOCATION OF HOLE: Vehicle maintenance facility; 39.5 ft north and 8 ft west of northwest corner of garage.</p> <p>DRILL RIG: CME 75</p> <p>DILLING & SAMPLING METHODS: 0.0 to 1.0 ft: 3-3/4 inch by 7-5/8 inch flight auger with pilot bit. 1.0 to 19.3 ft 3-inch i.d. by 5 ft split barrel dry coring system (FADC) except: 4.2 to 5.7 ft and 9.2 to 10.7 ft: Standard penetration test (SPT). See "COMMENTS" below for details of SPTs.</p> <p>DRILLING CONDITIONS: 0.0 to 19.3 ft: Slow and smooth.</p> <p>HYDRAULIC PRESSURE GAUGE READINGS (LBS./SQUARE INCH): Interval From To Gauge (feet) (feet) Reading 0.0 4.2 300 4.2 9.2 300/400 9.2 14.2 300/250 14.2 19.2 300/450/350</p> <p>HOLE COMPLETION: Installed 12.0 ft of 0.010-inch machine-slotted Schedule 40 PVC screen at 7.2 to 19.2 ft and Schedule 40 PVC pipe from 0.4 to 7.3 ft. Piezometer was plugged at bottom with 0.1 ft long cap. Backfilled hole as follows (also see Diagram, Sheet 2): from 19.3 to 5.2 ft, Monterey No. 2-size sand; from 5.2 to 3.2 ft, bentonite hole plug;</p>	0	FA	0						Asphalt Road Base	CH	0	0.0 to 0.4 ft: Asphalt.		
		0.4	FADC	100								CH	0.4	0.4 to 0.8 ft: Roadbase material, SH-SM; maximum size 3 inches.
		5	SPT	100	<0.02	<0.02	<0.02	<0.02	<0.02	14	22	CH/CL	5	0.8 to 2.8 ft: Fat Clay, CH. About 100% fines with high plasticity, high dry strength, no dilatancy, high toughness; dry; dark brown.
		10	FADC	100								SP-SM	10	2.8 to 7.3 ft: Lean to Fat Clay, CH/CL. About 95% fines with high plasticity, medium to high dry strength, no dilatancy, high toughness; about 5% fine, subangular to rounded sand; maximum size fine sand; dry; yellow brown.
		15	FADC	100								CL/SC	15	7.3 to 11.3 ft: Poorly Graded Sand with Silt, SP-SM. About 90% fine, subangular to rounded sand; about 10% nonplastic fines; maximum size fine sand; dark brown.
		20	FADC	100								CL/SC	20	7.3 to 9.7 ft: Dry. 9.7 to 11.3 ft: Saturated.
		20										HI/SM	20	11.3 to 12.9 ft: Lean to Fat Clay, CH/CL. About 100% fines with medium to high plasticity, high dry strength, no dilatancy, medium to high toughness; saturated; dark brown.
		20											20	12.9 to 14.2 ft: Clayey Sand, SC. About 60% fine, subangular to rounded sand; about 40% fines with medium to high plasticity; maximum size fine sand; saturated; dark brown.
		20											20	14.2 to 15.2 ft: Poorly Graded Sand, SP. About 95% fine, subrounded to rounded sand; about 5% fines with medium to high plasticity; maximum size fine sand; saturated; dark brown.
		20											20	15.2 to 18.8 ft: Sandy Lean Clay, CL/SC. About 50% fine to medium, angular to rounded sand; about 50% fines with high plasticity, medium dry strength, no dilatancy, medium to high toughness; maximum size medium sand; saturated; dark yellow brown.
	20											20	18.8 to 19.3 ft: Sandy Silt, ML/SM. About 55% fines with low plasticity, low dry strength, fast dilatancy, low toughness; about 45%	

NOTES ON LABORATORY TESTING OF SOIL & WATER SAMPLES:
 THE MINIMUM DETECTION LIMIT FOR THE TEST IS 0.02 mg/kg, AND WHEN THE RESULTS ARE AT THE DETECTION LIMIT, THEY ARE CONSIDERED TO BE INCONCLUSIVE.
 WATER SAMPLE MW-7003 WAS TAKEN THREE DAYS AFTER THE WELL WAS INITIALLY DEVELOPED.

COMMENTS:
 THE SPTS WERE CONDUCTED USING THE FOLLOWING EQUIPMENT:
 1) CME 140 LB AUTOMATIC SPT HYDRAULIC HAMMER WITH 30-INCH DROP. CALIBRATED ENERGY RATING IS 95% (MEASURED AT MORMON ISLAND AUXILIARY DAM, 1992).
 2) MOBILE NWJ UPSET DRILL RODS, APPROX. 57.5 LBS/10 FT.
 3) PENETRATION SAMPLER WITH SPLIT INNER BARREL; 2.95 FT LONG, 1-3/8 INCH I.D., 2-INCH O.D.; LINER NOT USED.

SOIL AND WATER SAMPLE ANALYSES PERFORMED BY STATE CERTIFIED LAB (NUMBER 1312) AGRICULTURE AND PRIORITY POLLUTANTS LABORATORIES, INC. OF FRESNO, CA.

[a]  = INITIAL 0.5 FT OF PENETRATION
 = FIRST 0.5 FT OF TEST PENETRATION
 = LAST 0.5 FT OF TEST PENETRATION

[b] TOTAL BLOWS FOR 1.0 FT TEST PENETRATION.

FA: 3-3/4 inch by 7-5/8 inch flight auger with pilot bit.
 FADC: 3-inch i.d. by 5 ft split barrel dry coring system.
 SPT: Standard penetration test.

GEOLOGIC LOG OF DRILL HOLE NO. MW-7

SHEET 2 OF 2

WELL: TRACY PUMPING PLANT
 WDN: SEE NOTES
 BEGON: 05-21-94 FINISHED: 06-23-94
 DEPTH AND ELEV. OF WATER
 LEVEL AND DATE MEASURED: SEE NOTES BELOW.

PROJECT: CENTRAL VALLEY PROJECT
 COORDINATES: N 473879 E 1688170
 TOTAL DEPTH: 19.3
 DEPTH TO BEDROCK:

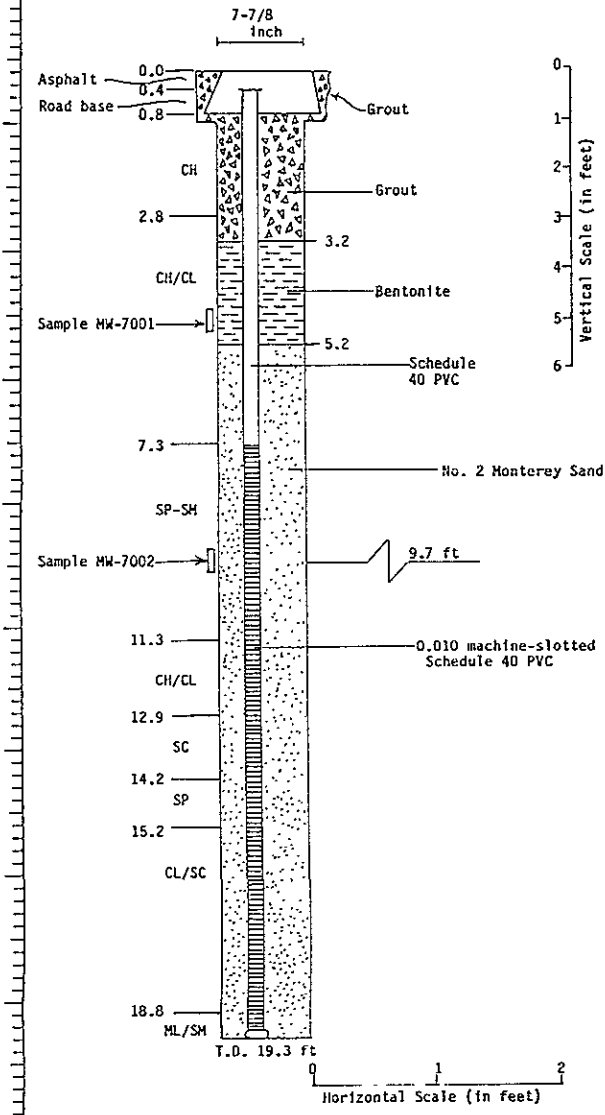
STATE: CALIFORNIA
 GROUND ELEVATION: 56.9
 ANGLE FROM HORIZONTAL: 90 BEARING:
 HOLE LOGGED BY: STEVEN SHERER
 REVIEWED BY:

NOTES	DEPTH	HOLE TYPE/SIZE	X RECOVERY	TPH-GASOLINE	BENZENE	ETHYLBENZENE	TOLUENE	TOTAL XYLENESS	BLOWS/0.5 FT	SPT	CLASSIFICATION	DEPTH	FIELD VISUAL CLASSIFICATION AND PHYSICAL CONDITION
									0		50		

from 3.2 to 1.0 ft. grout as auger flights were pulled. Enlarged diameter of hole at top 1.0 ft of depth for meter box. Installed meter box by grouting outside box to surface and inside of box to 0.8 ft depth. Installed locking cap on top of piezometer. Top of meter box has vandal-resistant cover.

DEPTH TO WATER (Below ground surface):
 Water encountered at 9.7 while drilling.
 6-23-94: 12.1 ft (14 hours after installation).
 6-24-94: 12.1 FT
 6-27-94: 12.1 FT
 6-28-94: 11.6 FT

DIAGRAM OF HOLE COMPLETION:



fine, subangular to rounded sand; maximum size fine sand; saturated; medium gray brown.

COMMENTS:

00185

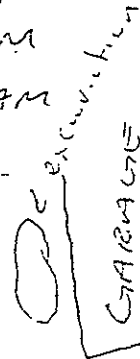
TRACY MAINTENANCE FACILITY 06/22/94
UST Monitoring Well 11:00 AM
INSTALLATION 1:00 AM

SAMPLE ID

MW7001 = 4.8' - 5.2' (depth)
MW7002 = 9.5' - 10.0' (depth)

WELL LOCATION:

↑
Monitoring well
(MW7) →



Samples Collected for TPH Cuts
AND BTEX ANALYSIS PER Requirements
outlined in the Preliminary Site Assessment
For This Site. Samples Collected Utilizing
a Modified Split Spoon Sampler lowered
into the drill boring and advanced using
a "hammer" on the drill rig. Brass tubes
were utilized for collection of soil. These
liners were removed from the Modified
Split Spoon, lined w/ Teflon tape and
capped. Samples were put on ice,
exported to Sacramento and Shipped
Overnite Federal Express to Appl
in Fresno. Soil was mostly Clay w/
some sand in various locations. A sand
lense was encountered at approx 7' and
the water table was reached at
about 10'. (see drill log for Specific
Core data)

Sampling Complete and Equipment Cleaned
Run Print

Monitoring Well MW7 Sampling Results

Soil Samples

Soil Samples: 22 June 1994

Soil samples were collected utilizing a modified California split spoon sampler with brass sleeve inserts. Results from soil samples of the drill core from MW7 are as follows:

MW7001 (4.8' to 5.2')

TPH-Gasoline	<1.0	mg/kg
Benzene	<0.02	mg/kg
Ethylbenzene	<0.02	mg/kg
Toluene	<0.02	mg/kg
Total Xylenes	<0.02	mg/kg

MW7002 (9.5' to 10.0')

TPH-Gasoline	<1.0	mg/kg
Benzene	0.02	mg/kg
Ethylbenzene	<0.02	mg/kg
Toluene	<0.02	mg/kg
Total Xylenes	<0.02	mg/kg

U.S. BUREAU OF RECONSTRUCTION
FIELD SAMPLE LOG

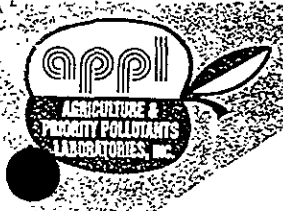
SAMPLE IDENTIFICATION				FIELD MEASUREMENTS						SAMPLE TYPES					Comments	DMS Entry
Field ID	Site Name	Date	QA Type	pH	EC	Turb	EH	DO	Other	Trace RA FA	Cation FA	Anion FU	(NO2-03)N FA	BRASS Other TUBE		
MW7001	4.8'-5.2' TRACY	6/22/94	-											1		
MW7002	9.5'-10.0' TRACY	6/22/94	-											1		

REMARKS:

Project Name TRACY UST

Collected by: R. GRIMES/DRILL CREW
 SAMPLE TYPE: Soil Vegetation Water

WQL Batch ID _____
 Contractor Batch ID _____



4.84 - 5.21

U.S. Department of the Interior
Bureau of Reclamation
2800 Cottage Way
Sacramento, California 95825-1898
Attn: QA Section

Sample Date: 06/22/94

Report Date: 06/29/94

Page 1 of 1

Sample I.D. No: Tracy UST Monitoring
Well MW 7001

Date Received: 06/24/94

APPL Sample No: R17588-08846S

Date Extracted: 06/27/94

Test Results:**

<u>Compound</u>	<u>Concentration mg/kg</u>	<u>Detection limit mg/kg</u>
Benzene	ND*	0.02
Ethylbenzene	ND	0.02
Toluene	ND	0.02
Total Xylenes	ND	0.02
TPH-Gasoline	ND	1.0

* ND = None Detected

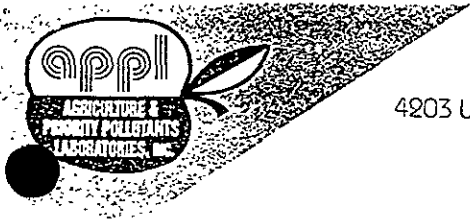
** B.T.E. & X. analyzed by EPA Method 8020 & 5030.
TPH (Total Purgeable Hydrocarbons) analyzed by EPA Method 5030 and GC/FID.

Data is QA approved
CD
7/1/94

Tested By Paula Young

Checked By Mick OJ

10/24 Ter R G.



9.5' - 10.0'

U.S. Department of the Interior
Bureau of Reclamation
2800 Cottage Way
Sacramento, California 95825-1898
Attn: QA Section

Sample Date: 06/22/94

Report Date: 06/29/94

Page 1 of 1

Sample I.D. No: Tracy UST Monitoring
Well MW 7002

Date Received: 06/24/94

APPL Sample No: R17588-08847S

Date Extracted: 06/27/94

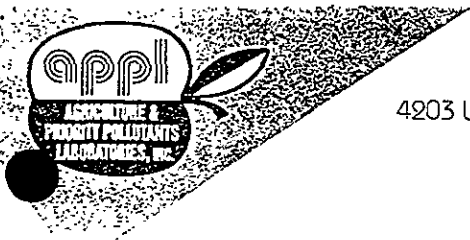
Test Results:**

<u>Compound</u>	<u>Concentration mg/kg</u>	<u>Detection limit mg/kg</u>
Benzene	0.02	0.02
Ethylbenzene	ND*	0.02
Toluene	ND	0.02
Total Xylenes	ND	0.02
TPH-Gasoline	ND	1.0

* ND = None Detected

** B.T.E. & X. analyzed by EPA Method 8020 & 5030.
TPH (Total Purgeable Hydrocarbons) analyzed by EPA Method 5030 and GC/FID.

Tested By Paula Young
Checked By [Signature]



U.S. Department of the Interior
Bureau of Reclamation
2800 Cottage Way
Sacramento, California 95825-1898
Attn: QA Section

Sample Date: NA
Report Date: 06/29/94
Page 1 of 2

Sample I.D. No: Tracy UST Monitoring
Well
Blank for samples
taken 06/22/94

Date Received: NA

APPL Sample No: R17588-940627S

Date Extracted: 06/27/94

Test Results:**

<u>Compound</u>	<u>Concentration mg/kg</u>	<u>Detection limit mg/kg</u>
Benzene	ND*	0.02
Ethylbenzene	ND	0.02
Toluene	ND	0.02
Total Xylenes	ND	0.02
TPH-Gasoline	ND	1.0

* ND = None Detected

** B.T.E. & X. analyzed by EPA Method 8020 & 5030.
TPH (Total Purgeable Hydrocarbons) analyzed by EPA Method
5030 and GC/FID.

Checked By Janette Coosa

U.S. Department of the Interior
Bureau of Reclamation
2800 Cottage Way
Sacramento, California 95825-1898
Attn: QA Section

Report Date: 06/29/94

Page 2 of 2

Project ID No: Tracy UST Monitoring Well

APPL Spike ID: R17588 08846S-08847S 3792A

Concentration Units: mg/kg

SPIKES

<u>Method</u>	<u>Analysis</u>	<u>Date</u>	<u>Amt in Sample</u>	<u>Amt Spiked</u>	<u>Results</u>	<u>Percent Recovery</u>	<u>RPD</u>
8020	Benzene	06/27/94	0.00	0.20	0.177	88.5	0.0
8020	Toluene	06/27/94	0.00	0.20	0.175	87.5	0.6
8020	Ethyl benzene	06/27/94	0.00	0.20	0.175	87.5	0.0
8020	Xylenes	06/27/94	0.00	0.60	0.514	85.7	0.8
GC/FID	Gasoline	06/27/94	0.00	4.0	4.14	104	0.2

APPL Spike ID: R17588 08846S-08847S 3793B

<u>Method</u>	<u>Analysis</u>	<u>Date</u>	<u>Amt in Sample</u>	<u>Amt Spiked</u>	<u>Results</u>	<u>Percent Recovery</u>	<u>RPD</u>
8020	Benzene	06/27/94	0.00	0.20	0.177	88.5	0.0
8020	Toluene	06/27/94	0.00	0.20	0.176	88.0	0.6
8020	Ethyl benzene	06/27/94	0.00	0.20	0.175	87.5	0.0
8020	Xylenes	06/27/94	0.00	0.60	0.518	86.5	0.8
GC/FID	Gasoline	06/27/94	0.00	4.0	4.15	104	0.2

Comments:

Checked By

Pamela Cooper



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

Chain of Custody Record

Please Address Data/Questions to: (916) 978-5581
Kerry Rae, Vis, Bureau Reclamation 2800 Cottage Way, SACRO, CA 95825

Project Name: TRACY UST MONITORING WELL Project Manager: Herb Ng

Analysis Requested: BTEX & TPH GAS (EPA 5030)

Batch Identification: _____

Remarks: _____

Initials and Date Sample Destroyed: _____

Sampled by and title (signatures): Russell W. Amin Physical Scientist
 Laboratory: ARPL

Field Identification	Date Coll.	Time	Lab Identification	Sample Type	Number of Containers	Analysis Requested										Remarks	Initials and Date Sample Destroyed			
MW7001	6/22/94	11:15		SOIL	1	✓													Please Quantitate	
MW7002	6/22/94	2:00		SOIL	1	✓													Gas down to 10ppm (ok per discussion with Mike Ray).	
		:																		
		:																		
		:																		
		:																		
		:																		
		:																		
		:																		
		:																		

Relinquished by (signature): <u>Russell Amin</u>	Date: <u>6/23/94</u> Time: <u>9:45</u>	Relinquished by (signature): <u>Cassara</u>	Date: <u>6/23/94</u> Time: <u>10:30</u>	Relinquished by (signature): <u>Fed Express</u>	Date: _____ Time: _____
Received by (signature): <u>Cassara</u>	Date: <u>6/23/94</u> Time: <u>9:45</u>	Received by (signature): <u>Fed Express</u>	Date: _____ Time: _____	Received by (signature): <u>W. Zubalant</u>	Date: <u>6/23/94</u> Time: <u>10:15</u>

Sample shipped via Chilled & intact

Priority Mail Bus Other
 Express Mail UPS

Water Samples

Development: 27 June 1994

Development of monitoring well MW7 was accomplished using a centrifugal pump. Fifty gallons of water was evacuated from MW7. This amount of water was required to clear well of fine grained sediment. Refer to sample collection log for complete development technique.

Sample Collection: 30 June 1994

Well was purged utilizing a peristaltic pump with a flow rate of approximately 1 liter per minute. 17.7 liters, or 4 well volumes, evacuated from well prior to sample collection. Sample collected utilizing a teflon bailer. Teflon bailer was lowered very gently into the well in an effort to minimize agitation. Three VOA containers filled from controlled flow valve on bailer. Refer to sample collection log for complete sample collection technique.

Water Sample MW7003

TPH-Gasoline	<20	ug/L
Benzene	<0.5	ug/L
Ethylbenzene	<0.5	ug/L
Toluene	<0.5	ug/L
Total Xylenes	<0.5	ug/L

Sample analyses performed by State Certified Lab (number 1312) Agriculture and Priority Pollutants Laboratories, Inc. of Fresno, Ca.

Sample Collection: 23 Sept 1994

Well was purged utilizing a peristaltic pump with a flow rate of approximately 1 liter per minute. 19 liters, or 4 well volumes, evacuated from well prior to sample collection. Sample collected utilizing a teflon bailer. Teflon bailer was lowered very gently into the well in an effort to minimize agitation. Three VOA containers filled from controlled flow valve on bailer. Refer to sample collection log for complete sample collection technique.

Water Sample MW7003

TPH-Gasoline	<20	ug/L
Benzene	<0.5	ug/L
Ethylbenzene	<0.5	ug/L
Toluene	<0.5	ug/L
Total Xylenes	<0.5	ug/L

Sample analyses performed by State Certified Lab (number 1468) Anlab Analytical Laboratory of Sacramento, Ca.

00107

TRACY MAINTENANCE FACILITY
WELL (MW7) DEVELOPMENT

6/27/94

START: 11:20 AM

FINISH: 2:30 PM

Depth to Bottom - 18.8'

Depth to WATER - 11.7'

WATER COLUMN = 7.1' Conversion Factor = 1.62

$$7.1' \div 1.62 = 4.38 \text{ Liters in well (VOLUME)}$$

WELL DEVELOPMENT WAS ACCOMPLISHED UTILIZING A centrifugal pump with a maximum pump rate of 32 gpm or 121.12 liters/minute. A total of 50 gallons, or 189.25 liters, was removed from monitoring well MW7 FOR development.

technique of drying out the well interspersed w/ periods of steady pumping at recharge rate was followed.

Water in well contained a great deal of sediment (clay sized particles) at the beginning of evacuation, and the well water stayed fairly dirty for the first 30 gallons or so. (approximately 100 liters) After pumping 50 gallons from well it was determined that the water was sufficiently clean for representative sampling to occur. In approximately 72 hours as prescribed in the Preliminary Site Assessment, All water contained in a 55 gallon drum which was sealed upon completion of well development

Run Man

00183

TRACY MAINTENANCE FACILITY / 6/30/94
11:40

HOT (APPROX 90°F), SUNNY, WINDY.

MW7003

Reason: Samples to be collected for
Analysis of TPH GAS & BTEX
(IN VOA^S) TO DETERMINE
IF GROUND WATER CONTAMINATION
EXISTS.

EVALUATION: EVACUATION COMPLETED USING
A PERISTALTIC PUMP.

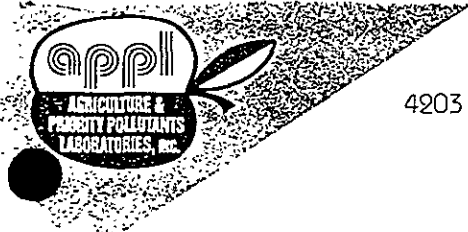
VOLUME - WATER DEPTH 11.6 WATER COLUMN 2
DEPTH OF WELL 18.8 WC 14 - 28.8
 $28.8 \times 1.62 = 17.7$ Liters

18 LITERS EVACUATED W/ PERISTALTIC
SAMPLE COLLECTED W/ A BAILER

Collection - TEFLON BAILER LOWERED
GENTLY INTO WELL TO MINIMIZE
AGITATION. BAILER RINSED W/ DI
WATER PRIOR TO SAMPLE COLLECTION
AND ALLOWED TO AIR DRY. BAILER
NOT RINSED W/ SAMPLE WATER PRIOR
TO COLLECTION. EMPTYING VALVE USED
TO SLOWLY FILL VOA CONTAINERS (3).

Samples collected, labelled, packed, COC
sealed, and shipped Federal Express.
All equipment cleaned, well locked,
Batteries secured.

Russell M.



U.S. Department of the Interior
Bureau of Reclamation
2800 Cottage Way, MP-470
Sacramento, California 95825-1898
Attn: QA Section

Sample Date: 06/30/94
Report Date: 07/07/94
Page 1 of 1

Sample I.D. No: TRACY UST INVEST.
MW 7003
APPL Sample No: R17646-09116WA-C

Date Received: 07/01/94
Date Extracted: 07/05/94

Test Results:**

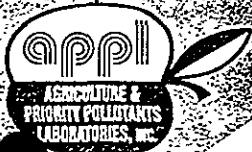
<u>Compound</u>	<u>Concentration $\mu\text{g/L}$</u>	<u>Detection limit $\mu\text{g/L}$</u>
Benzene	ND*	0.5
Ethylbenzene	ND	0.5
Toluene	ND	0.5
Total Xylenes	ND	0.5
TPH-Gasoline	ND	20

Data QA approved.
To RG 7/13/94 K Bae

* ND = None Detected

** B.T.E. & X. analyzed by EPA Method 8020 & 5030.
TPH (Total Purgeable Hydrocarbons) analyzed by EPA Method 5030 and GC/FID.

Tested By Jane Bannum
Checked By Mark By



U.S. Department of the Interior
Bureau of Reclamation
2800 Cottage Way, MP-470
Sacramento, California 95825-1898
Attn: QA Section

Sample Date: 06/30/94

Report Date: 07/07/94

Page 1 of 1

Sample I.D. No: TRACY UST INVEST.

Date Received: 07/01/94

APPL Sample No: R17646-09117W ✓

Date Extracted: 07/05/94

Test Results:**

<u>Compound</u>	<u>Concentration $\mu\text{g/L}$</u>	<u>Detection limit $\mu\text{g/L}$</u>
Benzene	ND*	0.5
Ethylbenzene	ND	0.5
Toluene	ND	0.5
Total Xylenes	ND	0.5
TPH-Gasoline	ND	20

* ND = None Detected

** B.T.E. & X. analyzed by EPA Method 8020 & 5030.
TPH (Total Purgeable Hydrocarbons) analyzed by EPA Method
5030 and GC/FID.

Tested By *Jon Summers*

Checked By *Mike O'G*



U.S. Department of the Interior
Bureau of Reclamation
2800 Cottage Way, MP-470
Sacramento, California 95825-1898
Attn: QA Section

Sample Date: NA
Report Date: 07/07/94
Page 1 of 2

Sample I.D. No: TRACY UST INVEST.
Blank for samples
taken 06/30/94
APPL Sample No: R17646-940705W

Date Received: NA
Date Extracted: 07/05/94

Test Results:**

<u>Compound</u>	<u>Concentration $\mu\text{g/L}$</u>	<u>Detection limit $\mu\text{g/L}$</u>
Benzene	ND*	0.5
Ethylbenzene	ND	0.5
Toluene	ND	0.5
Total Xylenes	ND	0.5
TPH-Gasoline	ND	20

* ND = None Detected

** B.T.E. & X. analyzed by EPA Method 8020 & 5030.
TPH (Total Purgeable Hydrocarbons) analyzed by EPA Method 5030 and GC/FID.

Checked By Pamela Cooper

U.S. Department of the Interior
Bureau of Reclamation
2800 Cottage Way, MP-470
Sacramento, California 95825-1898
Attn: QA Section

Report Date: 07/07/94

Page 2 of 2

Project ID No: TRACY UST INVEST.

APPL Spike ID: R17646 09116W-09117W 3836A

Concentration Units: $\mu\text{g/L}$

SPIKES

Method	Analysis	Date	Amt in Sample	Amt Spiked	Results	Percent Recovery	RPD
8020	Benzene	07/05/94	0.00	5.00	4.58	91.6	3.0
8020	Toluene	07/05/94	0.00	5.00	4.35	87.0	1.4
8020	Ethyl benzene	07/05/94	0.00	5.00	4.36	87.2	1.4
8020	Xylenes	07/05/94	0.00	15.0	13.0	86.7	1.9
GC/FID	Gasoline	07/05/94	0.00	100	108	108	2.7

APPL Spike ID: R17646 09116W-09117W 3837B

Method	Analysis	Date	Amt in Sample	Amt Spiked	Results	Percent Recovery	RPD
8020	Benzene	07/05/94	0.00	5.00	4.72	94.4	3.0
8020	Toluene	07/05/94	0.00	5.00	4.41	88.2	1.4
8020	Ethyl benzene	07/05/94	0.00	5.00	4.42	88.4	1.4
8020	Xylenes	07/05/94	0.00	15.0	13.3	88.3	1.9
GC/FID	Gasoline	07/05/94	0.00	100	111	111	2.7

Comments:

Checked By

Jamela Cooke



Chain of Custody Record

Please Address Data/Questions to:

Kerry RAE (MP-470) 2800 COTTAGE WAY, SACRAMENTO, CA 95825 (916) 978-5581

Batch Identification

Project Name

TRACY UST INVEST.

Project Manager

Herb Ng

Analysis Requested

Sampled by and title (signatures)

Russell W. Mann Physical Scientist

Laboratory

APPL - FRESNO

Number of Containers

*BTEX & TPH GAS
(8015 - Mod)*

Remarks

Initials and Date Sample Destroyed

Field Identification	Date Coll.	Time	Lab Identification	Sample Type	Number of Containers	Analysis Requested										Remarks	Initials and Date Sample Destroyed		
<i>MW7003</i>	<i>6/30/94</i>	<i>12:30pm</i>		<i>WATER</i>	<i>3</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Chilled & intact</i>	
<i>TRIP BLANK</i>	<i>6/30/94</i>	<i>9:30am</i>		<i>WATER</i>	<i>1</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>↓</i>	

Relinquished by (signature) <i>Russell W. Mann</i>	Date <i>6/30/94</i>	Time <i>2:00pm</i>	Relinquished by (signature)	Date	Time	Relinquished by (signature) <i>Fed Express</i>	Date	Time
Received by (signature) <i>FED EX</i>	Date <i>6/30/94</i>	Time <i>2:00pm</i>	Received by (signature)	Date	Time	Received by (signature) <i>[Signature]</i>	Date <i>7/1/94</i>	Time <i>9:50</i>

Sample shipped via

- Priority Mail
- Bus
- Express Mail
- UPS
- Other

TRACY UST

9-23-94

12:50

11:15

Sample of Monitoring Well
FOR BTEX AND TPH GAS TO FULFILL
QUARTERLY Sampling for one (1) year
As prescribed by Alameda County

WELL DEPTH 18.8

Column 7.7

DEPTH TO WATER 11.1

EVACUATE 21

$$(7.7 \times 4) \div 1.62 \approx 21.9$$

19 Liters evacuated with Peristaltic
Pump.

Sample Collected with Teflon Bailor

Sample ID ~~TMW003~~ TMW003

Sample Analysis BTEX, TPH GAS
3 VOA 1 AMBER LITER

U.S. BUREAU OF RECLAMATION
FIELD SAMPLE LOG

SAMPLE IDENTIFICATION				FIELD MEASUREMENTS							SAMPLE TYPES					Comments	DMS Entry
Field ID	Site Name	Date	QA Type	pH	EC	Turb	EH	DO	Other	Trace BA FA	Cation FA	Anion FU	(NO2-03)N FA	Other			
TMW003	TRACY MONITORING WELL UST	9-23-94								3	1						

REMARKS:

Project Name TRACY UST

Collected by: R. GRIMES
 SAMPLE TYPE: Soil Vegetation Water

WQL Batch ID _____
 Contractor Batch ID _____

RUSH

SAMPLE RECEIPT

ANLAB Analytical Laboratory
Anlab batch number: 09231449

Sample I.D. AD24610
Client Code 13
Client Name USBR - SACRAMENTO
Sample Disposal LAB
Collection date: 09/23/94
Lab submittal date: 09/23/94
Due date: 10/05/94
Turn-Around-Time: RUSH 8

Collection time:
Lab submittal time: 14:48
Project Code: SACTO

SAMPLE DESCRIPTION TMW003
QA/QC 2

!
Matrix W
I_CONT _____
M_CONT _____
VOL_CONT 4V
EXT_CONT _____
SUB_CONT _____

THIS IS A REPORT

Analyses ordered	Method	Due Date
GCMS VALIDATION	---	10/01/94
Gas (8015)/BTX&E(8020) EPA 5030	EPAS030/8015	10/01/94

Please refer to the indicated sample I.D. number when making inquiries.

Received by: LAED



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

Chain of Custody Record

Temp 24°C

Please Address Data/Questions to: (916) 978-5581						Batch Identification	
Kerry Rae 2800 Cottage Way Sacramento, Ca 95825							
Project Name TRACY OST			Project Manager Herb Ng K. Doebbler			Analysis Requested	
Sampled by and title (signatures) Russ Mines Physical Scientist						Number of Containers BTEX VTPH GAS	
Field Identification	Date Coll.	Time	Lab Identification	Sample Type		Remarks	Initials and Date Sample Destroyed
TMW003	9-23-94	:		WATER	✓		

Relinquished by (signature) Russ W. Mines	Date 9/23/94	Time 2:40 pm	Relinquished by (signature)	Date	Time	Relinquished by (signature)	Date	Time
Received by (signature) Herb Ng	Date 9/23/94	Time 11:11 am	Received by (signature)	Date	Time	Received by (signature)	Date	Time

Sample shipped via

- Priority Mail Bus Other



ANALYTICAL LABORATORY

1910 S STREET SACRAMENTO, CALIFORNIA 95814 • 916-447-2946 • FAX 916-447-8321

October 5, 1994

US Bureau of Reclamation
2800 Cottage Way, MP-470
Sacramento, CA 95825-1898
Attn: Kerry Rae

Tracy Monitoring

Anlab I.D. AD24610
SAMPLE DESCRIPTION: TMW003
Sample collection date: 09/23/94
Lab submittal date: 09/23/94
Turn-Around-Time: RUSH 8

Client Code: 13
Matrix: W
Time:
Time: 14:48
Sample Disposal: LAB

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
Multicomponent analysis: Gas(8015)/BTX&E(8020) EPA 5030			
Gasoline	ug/l	ND	20
Benzene	ug/l	ND	0.5
Toluene	ug/l	ND	0.5
Xylene	ug/l	ND	0.5
Ethylbenzene	ug/l	ND	0.5

SAMPLE DESCRIPTION: METHOD BLANK
Matrix: W
Sample collection date: NA
Lab submittal date: NA
Turn-Around-Time: RUSH 8

Client Code: 13
Time: NA
Time: NA
Sample Disposal: LAB

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
Multicomponent analysis: Gas(8015)/BTX&E(8020) EPA 5030			
Gasoline	ug/l	ND	20
Benzene	ug/l	ND	0.5
Toluene	ug/l	ND	0.5
Xylene	ug/l	ND	0.5
Ethylbenzene	ug/l	ND	0.5

ND = Not Detected

Report Approved By: *Wendy Jua*
ELAP ID #: 1468

Wendy Jua

:jbc
*All results in
GH approved (no QM incorporated)
10/11/94*

ANLAB QA/QC REPORT AD24610

ANALYTE	MDL	UNITS	QC SAMPLE #	QC SAMPLE RESULT	LCS %REC	SPIKE RESULT	MSD RESULT	% SPIKE REC	RPD %	METHOD BLANK
\$5030 (Benzene)	0.5	ug/l	AD24610	ND	97	2.88	2.77	111	3.9	ND
\$5030 (Toulene)	0.5	ug/l	AD24610	ND	107	3.05	2.93	117	4.0	ND
\$5030 (Xylene)	0.5	ug/l	AD24610	ND	115	9.21	8.83	118	4.2	ND
\$5030 (Ethylbenzene)	0.5	ug/l	AD24610	ND	105	2.99	2.85	114	4.8	ND

ND = Not Detected

LCS = Laboratory Control Sample

MS = Matrix Spike

MSD = Matrix Spike Duplicate

This report is applicable only to the sample received by the laboratory. The liability of the laboratory is limited to the amount paid for this report. This report is for the exclusive use of the client to whom it is addressed and upon the condition that the client assumes all liability for the further distribution of the report or its contents.



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

Chain of Custody Record

Please Address Data/Questions to: (916) 973-5581						Batch Identification	
Project Name: TRACY OST						Project Manager: Herb Ng	
Address: 2800 Cottage Way Sacramento, Ca 95825						Analysis Requested	
Sampled by and title (signatures): Russ Mines Physical Scientist						Number of Containers	PETEX TRH GAS
Laboratory: Anlab							
Field Identification	Date Coll.	Time	Lab Identification	Sample Type			Remarks
TMW003	9-23-94	:		WATER	✓	✓	
		:					
		:					
		:					
		:					
		:					
		:					
		:					
		:					
		:					
		:					

Relinquished by (signature): <i>Russ Mines</i>	Date: 9/23/94	Time: 2:40 pm	Relinquished by (signature):	Date:	Time:	Relinquished by (signature):	Date:	Time:
Received by (signature): <i>[Signature]</i>	Date:	Time:	Received by (signature):	Date:	Time:	Received by (signature):	Date:	Time:

Sample shipped via
 Priority Mail Bus Other
 Express Mail UPS

DISTRIBUTION: Original: Accompanies shipment Pink copy: Field records Yellow copy: Associate laboratory

Sample Collection: 29 Dec 1994

Well was purged utilizing a peristaltic pump with a flow rate of approximately 1 liter per minute. 18.8 liters, or 4 well volumes, evacuated from well prior to sample collection. Sample collected utilizing a teflon bailer. Teflon bailer was lowered very gently into the well in an effort to minimize agitation. Three VOA containers filled from controlled flow valve on bailer. Refer to sample collection log for complete sample collection technique.

Water Sample MW7004

TPH-Gasoline	<20	ug/L
Benzene	<0.5	ug/L
Ethylbenzene	<0.5	ug/L
Toluene	<0.5	ug/L
Total Xylenes	<0.5	ug/L

Sample analyses performed by State Certified Lab (number 1312) Agriculture and Priority Pollutants Laboratories, Inc. of Fresno, Ca.

Sample Collection: 28 March 1995

Well was purged utilizing a peristaltic pump with a flow rate of approximately 1 liter per minute. 21 liters, or 4 well volumes, evacuated from well prior to sample collection. Sample collected utilizing a teflon bailer. Teflon bailer was lowered very gently into the well in an effort to minimize agitation. Three VOA containers filled from controlled flow valve on bailer. Refer to sample collection log for complete sample collection technique.

Water Sample MW7004

TPH-Gasoline	<50	ug/L
Benzene	<0.3	ug/L
Ethylbenzene	<0.3	ug/L
Toluene	<0.3	ug/L
Total Xylenes	<0.3	ug/L

Sample analyses performed by State Certified Lab (number 1346) Western Environmental Science and Technology Laboratory of Davis, Ca.

12/28/94

TRACY UST

43

9:17 AM

11:00 AM

WEATHER: Cold, Cloudy (Partly), Ground wet

Site: Maintenance Facility adjacent the Delta Area Office, (Formerly USBR near the Canal Authority)

Purpose: Collection of 3rd Quarterly sampling for BTEX and TPHg. (4 quarters to be collected for compliance prior to closure)

Collection: Well evacuated utilizing a peristaltic pump. Collection made utilizing a teflon Bailer w/ Bottom emptying valve care taken to minimize aeration. Sample consists of 3 VOA's \rightarrow (4 VOA's) (1 extra)

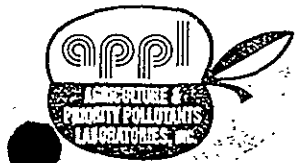
Evacuation:

Bottom Depth: 18.8 Depth to Water: 12.5
Water Column: $6.3 \times 4 \div 1.62 = 15.5$
liters evacuated prior to collection.

ID \rightarrow TMW004

Note: Well was pumped dry. (Approximately 4 liters)
Well was allowed to recharge and the evacuation was completed using bailer. Bailer was triple rinsed w/ DI
Prior to collection to avoid Cross Contamination
Sediment allowed to settle prior to collection
(approx 10 min) Samples collected, equipment cleaned

Run Min



U.S. Department of the Interior
Bureau of Reclamation
2800 Cottage Way, MP-470
Sacramento, California 95825-1898
Attn: QA Section

Sample Date: 12/28/94

Report Date: 01/05/95

Page 1 of 1

Sample I.D. No: Tracy UST
TMW004

Date Received: 12/30/94

APPL Sample No: R19160-17454W A-D

Date Extracted: 01/03/95

Test Results:**

<u>Compound</u>	<u>Concentration $\mu\text{g/L}$</u>	<u>Detection limit $\mu\text{g/L}$</u>
Benzene	ND*	0.5
Ethylbenzene	ND	0.5
Toluene	ND	0.5
Total Xylenes	ND	0.5
TPH-Gasoline	ND	20

*See rest of
batch in Mayflower
binder.
KAC*

* ND = None Detected

** B.T.E. & X. analyzed by EPA Method 8020 & 5030.
TPH (Total Purgeable Hydrocarbons) analyzed by EPA Method
5030 and GC/FID.

Tested By *Joni Beunee*
Checked By *Mark OJ*



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

Chain of Custody Record

Please Address Data/Questions to: (916) 979-2427 Kerry Rae 2800 COTTAGEWAY Sacramento, Ca 95814 (MP-470)						Batch Identification			
Project Name TRACY WSR		Project Manager Herb Ng		Analysis Requested				Remarks	Initials and Date Sample Destroyed
Sampled by and title (signatures) Russ Mann Physical Scientist				Number of Containers BTEX & TPH gasoline					
Laboratory APPL - FRESNO									
Field Identification	Date Coll.	Time	Lab Identification		Sample Type				
TMWOOD4	12/28/94	11:00 AM		WATER	4	✓			
TRAVEL BRANK	12/29/94	10:00 AM		WATER	1	✓			
MUDH-2-10	12/25/94	1000 AM		WATER	3	✓			
		:							
		:							
		:							
		:							
		:							
		:							
		:							

Relinquished by (signature) Russell Ammer	Date 12/29/94	Time 3:00 PM	Relinquished by (signature)	Date	Time	Relinquished by (signature) Fed Ex	Date	Time
Received by (signature) Fed Ex	Date	Time	Received by (signature)	Date	Time	Received by (signature) Shelton	Date 12/30/94	Time 11:45 AM

Sample shipped via

Priority Mail Bus Other
 Express Mail UPS

9:20 AM

TRACY UST Monitoring Well

3/28/95

10:00 AM

Weather: Sunny, Cool, Windy

Site: WAPA Maintenance facility operated by the Canal Authority

Purpose: quarterly monitoring required for site closure after removing UST

Collection: 3 UOA/w/14l collected using a teflon bailer w/control flow bottom

Evacuation: well evacuated using vacuum pump.

Depth to gw: 10.6

Depth of well 18.8

Water column: $8.2 \times 4 \div 1.62 =$

Amount to Evacuate: 21

ID TMW005

U.S. BUREAU OF ~~ENVIRONMENTAL~~ ^{WATER} AMATION
FIELD SAMPLE LOG

SAMPLE IDENTIFICATION				FIELD MEASUREMENTS						SAMPLE TYPES						
Field ID	Site Name	Date	QA Type	pH	EC	Turb	EH	DO	Other	Trace RA FA	Cation FA	Anion FU	(N02-03)N FA	Other	Comments	DMS Entry
TMW005	TRACY USF MONIT. WELL	3/28/95	—	—	—	—	—	—	—	3	VOA's				w/HCl	

REMARKS:

Project Name TRACY Maintenance facility Collected by: Russ Grimes WQL Batch ID _____
 SAMPLE TYPE: Soil Vegetation Water Contractor Batch ID 11631

WEST LABORATORY

Sample Log 11631

11631-01

Sample: TMW 005

From : Tracy UST & Mayflower

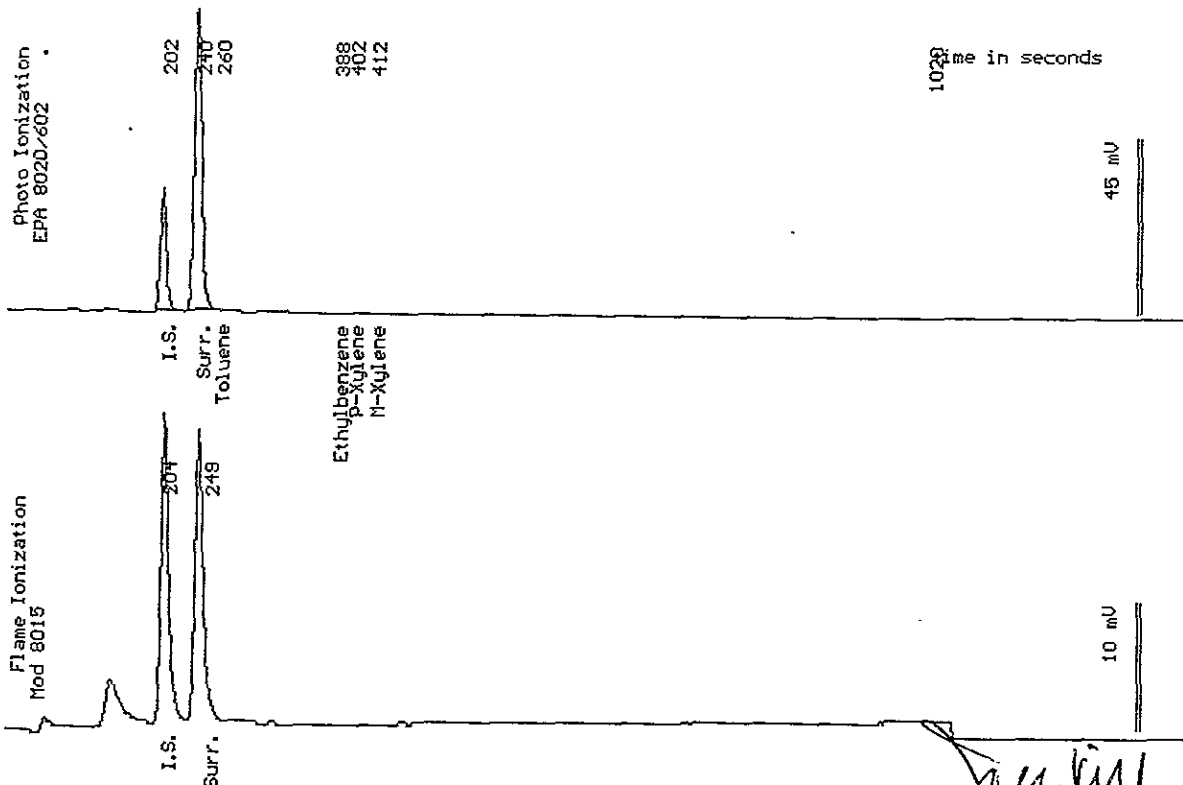
Sampled : 03/28/95

Dilution : 1:1

Matrix : Water

QC Batch : 2117B

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.30)	<.30
Toluene	(.30)	<.30
Ethylbenzene	(.30)	<.30
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	<50
Surrogate Recovery		104 %



Date Analyzed: 03-30-95
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Mitra Sarkhosh
Senior Chemist

Sample: MWDH-2-11

From : Tracy UST & Mayflower

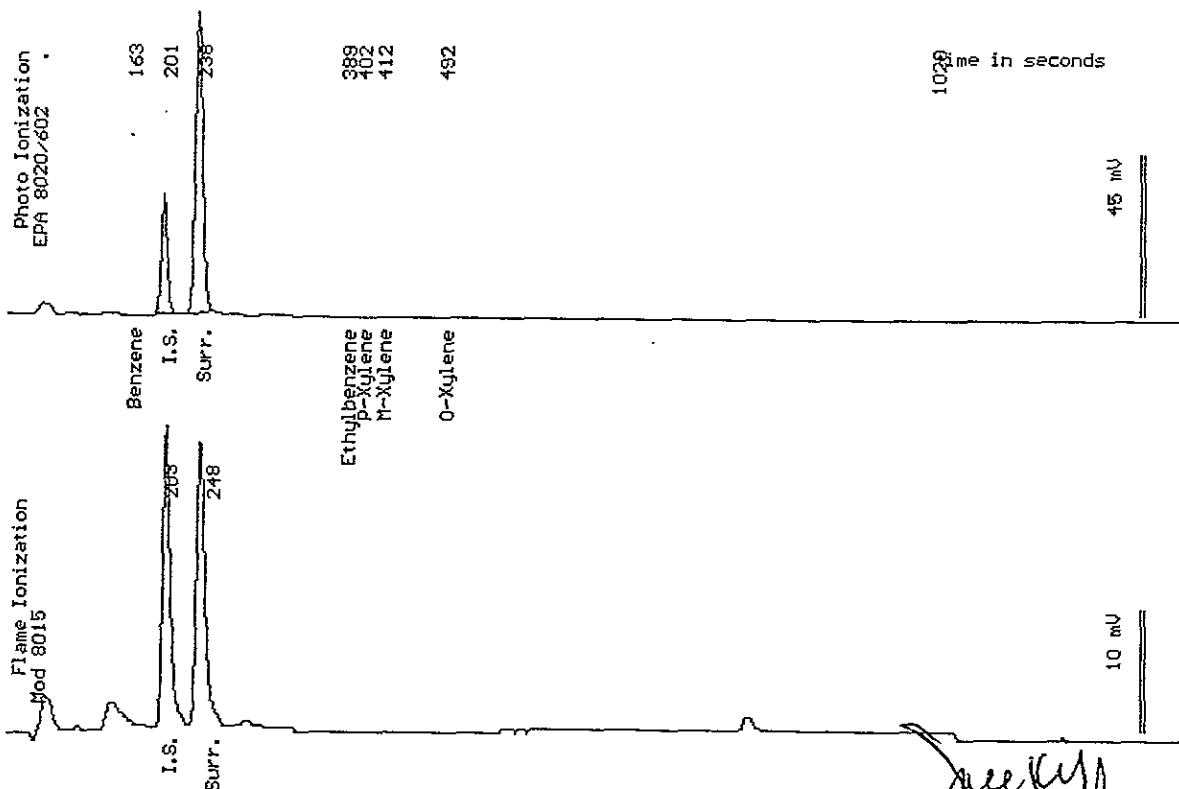
Sampled : 03/27/95

Dilution : 1:1

Matrix : Water

QC Batch : 2117B

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.30)	<.30
Toluene	(.30)	<.30
Ethylbenzene	(.30)	<.30
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	<50
Surrogate Recovery		103 %



Sample: TRAVEL BLANK

From : Tracy UST & Mayflower

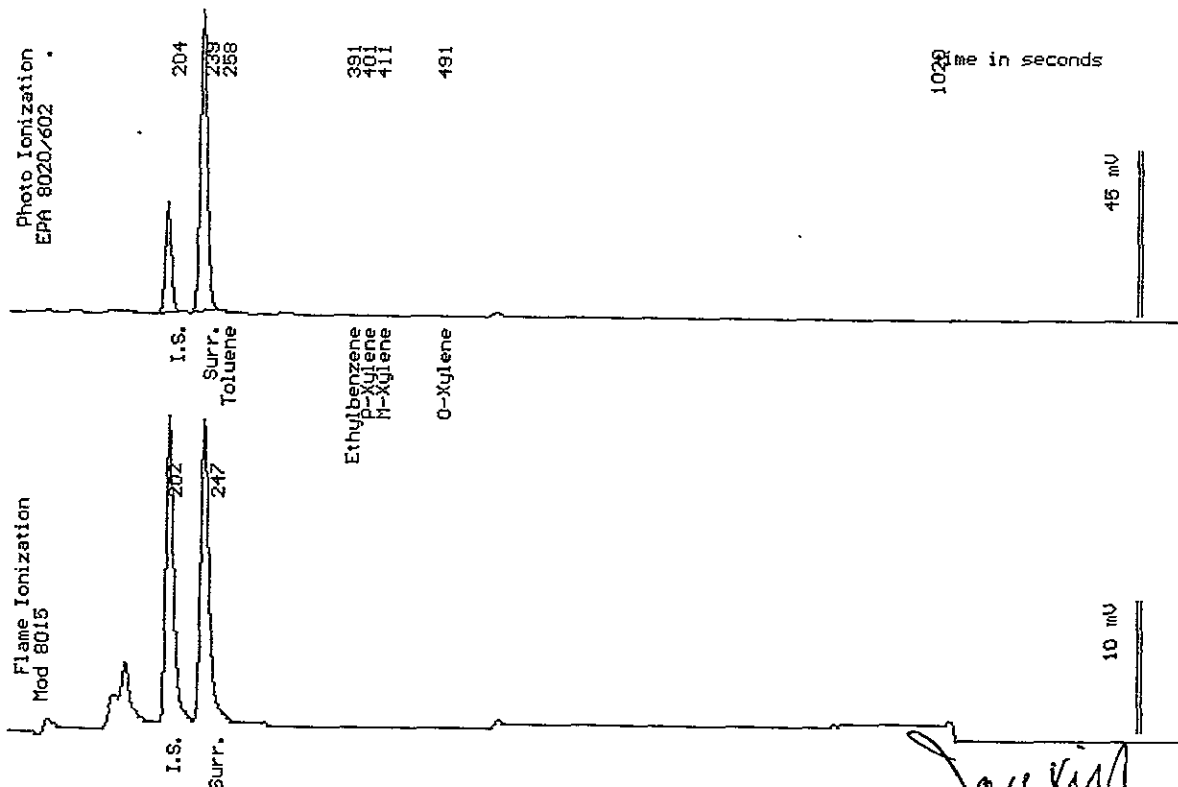
Sampled : 03/27/95

Dilution : 1:1

Matrix : Water

QC Batch : 2117B

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.30)	<.30
Toluene	(.30)	<.30
Ethylbenzene	(.30)	<.30
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	<50
Surrogate Recovery		103 %



WEST LABORATORY

March 31, 1995
Sample Log 11631

QC Report for EPA 602 & Modified EPA 8015

From : Tracy UST & Mayflower
Received : 03/29/95
Analyzed : 03/30/95
Matrix : Water

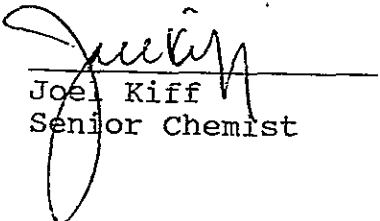
Parameter	Matrix Spike % Recovery	Matrix Spike Duplicate % Recovery	RPD
Benzene	105	106	1
Ethylbenzene	99	99	0
TPH as Gasoline	92	95	3
Tetrachloroethene (Surrogate)	102	103	% Recovery

Parameter	LCS % Recovery	
Benzene	102	
Ethylbenzene	98	
TPH as Gasoline	103	
Tetrachloroethene (Surrogate)	104	% Recovery

EPA 602 & Modified EPA 8015 Method Blank Water

Analyzed : 03/30/95

Parameter	MRL	Measured Value(ug/L)
Benzene	0.30	<0.30
Toluene	0.30	<0.30
Ethylbenzene	0.30	<0.30
Total Xylenes	0.50	<0.50
TPH as Gasoline	50	<50
Tetrachloroethene (Surrogate)		101 % Recovery


Joel Kiff
Senior Chemist



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

Chain of Custody Record

Please Address Data/Questions to: 916.979.2427 2800 Cottage Way (MP-470) Batch Identification
Carissa Dunn Sacramento, Ca 95825

Project Name TRACY OST # Project Manager K. Doebbler Analysis Requested
MAYFLOWER

Sampled by and title (signatures) Russ M. Env. Scientist Number of Containers
WEST LABS BTEX & TPH gasoline

Field Identification	Date Coll.	Time	Lab Identification	Sample Type	Number of Containers	Analysis Requested	Remarks	Initials and Date Sample Destroyed
<u>TMWOODS</u>	<u>3/28/95</u>			<u>WATER</u>	<u>3</u>	<input checked="" type="checkbox"/>		
<u>MWDH-2-11</u>	<u>3/27/95</u>			<u>WATER</u>	<u>3</u>	<input checked="" type="checkbox"/>		
<u>RAVE BLANK</u>	<u>3/27/95</u>			<u>WATER</u>	<u>1</u>	<input checked="" type="checkbox"/>		

RECEIVED
 DATE 3/29/95 TIME 12:05
 BY OSL
 WEST LAB

Relinquished by (signature) <u>[Signature]</u>	Date <u>3/29/95</u>	Time <u>10:00</u>	Relinquished by (signature) <u>[Signature]</u>	Date <u>3/29/95</u>	Time <u>12:05</u>	Relinquished by (signature) <u>[Signature]</u>	Date <u>3/29/95</u>	Time <u>12:05</u>
Received by (signature) <u>[Signature]</u>	Date <u>3/29/95</u>	Time <u>10:00</u>	Received by (signature) <u>[Signature]</u>	Date <u>3/29/95</u>	Time <u>12:05</u>	Received by (signature) <u>[Signature]</u>	Date <u>3/29/95</u>	Time <u>12:05</u>

Sample shipped via
 Priority Mail Bus Other
 Express Mail UPS

**U. S. DEPARTMENT OF ENERGY
WESTERN AREA
POWER ADMINISTRATION
1996**

Elizabeth,

Please find attached copies of the laboratory analysis for PCB's and Total Petroleum Hydrocarbons (TPH) for surface samples taken from the area between the warehouse and the 500kv yard. The sample points are marked on site with orange painted numbers and on the attached map. Construction/remodel is scheduled to start approximately October 1, 1996 so it is important that the area be cleaned before then.

Additionally, Western will reimburse the Bureau for the tank removal (approximately \$10,000) through the COMA. I have let Brian Shinmoto know.

Let me know if you need additional information or any assistance.

Thanks!

Bruce Thomas
(916) 353-4542

OPTIONAL FORM 99 (7-97)

FAX TRANSMITTAL # of PAGES 5

TO Elizabeth Partridge EMPLOYMENT USBR 10264	FROM Bruce Thomas PHONE 916 353-4542
FAX 209 836 6278	FAX 916 985-1936

NSN 7540-01-217-7000 5099-101 GENERAL SERVICES ADMINISTRATION



Analytical ChemTech International, Inc.
4011 Power Inn Road, Sacramento, CA 95826

PHONE 916-455-2284
FAX 916-455-0191
RBBS 916-455-0148
24 HR. PGR 916-328-5512

PCB CONTENT
USEPA METHOD 8080

WESTERN AREA POWER ADMIN.
MAIL CODE W0422
116 PARKSHORE DRIVE
FOLSOM, CA 95630

12 JUN 96

REPORT No.: 60163

ATTN: BRUCE THOMAS

SAMPLE IDENTIF	CAPTION	LABORATORY NUMBER	RESULTS	UNITS	CONC	REMARKS
TRACY WAREHOUSE #1	NEAR WALL CRACK	422480	<1	PPB	ND	1 A
TRACY WAREHOUSE #2	#2 MIDDLE RACK	422481	1.0	PPB	1260	1 B
TRACY SHED #3	SHED FROM RACK & FLOOR	422482	<1	PPB	ND	1 B
TRACY WAREHOUSE BACK	UPING FENCE	422483	<1	PPB	ND	1 B

California State Certified Laboratory

The analyses, opinions or interpretations contained in this report are based upon material furnished by the client. Analytical ChemTech International, Inc. (ACTI) does not imply that the contents of the sample received by this laboratory are the same as all such material in the environment from which the sample was taken. Our test results relate only to the quantity of samples tested. Any interpretations or opinions expressed represent the best judgment of ACTI. ACTI assumes no responsibility and makes no warranty or representation, express or implied, as to the condition, productivity, proper operation, or profitability of any equipment or other property for which this report may be used or relied upon for any reason whatsoever.

Approved By: Kendrick W. [Signature]



Analytical ChemTech International, Inc
 4011 Power Inn Road, Sacramento, CA 95826

PHONE 916-455-2284
 FAX 916-455-0191
 RDDS 916-455-0148
 24 HR. PGR 916-325-5512

TOTAL PETROLEUM HYDROCARBONS
 (EPA Method 8015mod)

WESTERN AREA POWER ADMIN.
 MAIL CODE W0422
 116 PARKSHORE DRIVE
 FOLSOM, CA 95630

17 JUN 96

60220

ATTN: BRUCE THOMAS

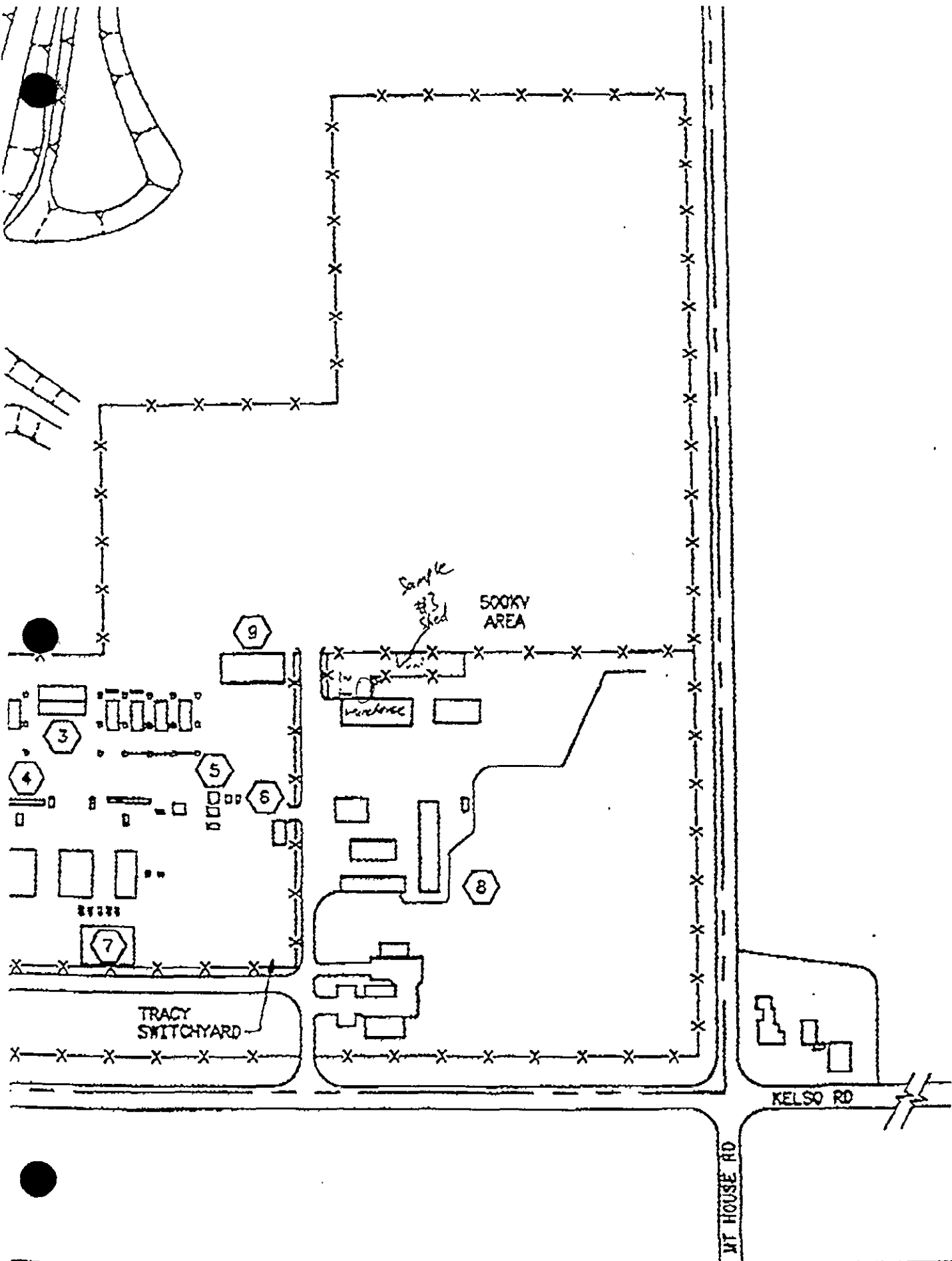
SAMPLE IDENTIFICATION	LAB NUMBER	RESULTS					UNITS	DETECTION LIMIT
		OTHER	KEROSENE	DIESEL	MINERAL OIL	FUEL OIL		
TRACY WAREHOUSE #1	622684	<1	<1	<1	<100	<1	PPM	1 PPM *
TRACY WAREHOUSE #2	622485	<1	<1	<1	2850	<1	PPM	1 PPM *
TRACY SHED #3	622686	<1	<1	<1	3930	<1	PPM	1 PPM *
TRACY WAREHOUSE #4	622687	<1	<1	<1	245	<1	PPM	1 PPM *

California State Certified Laboratory

Approved By: *Kendrick Wayne*

* Reporting Limit for Mineral Oil in soil is 100 ppm (part per million)

L



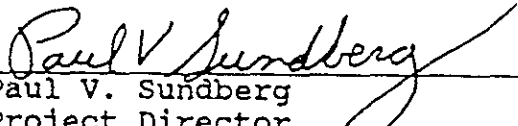
**WESTON MANAGERS, DESIGNERS,
CONSULTANTS
1990**



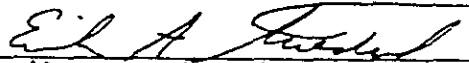
83 WEST MARCH LANE
SUITE 12
STOCKTON, CA 95207
PHONE. (209) 476-1635

PRELIMINARY SITE INVESTIGATION REPORT
TRACY PUMPING PLANT AND SUBSTATION
TRACY, CALIFORNIA


U.S. Department of Energy
Western Area Power Administration



Paul V. Sundberg
Project Director



Erik A. Friedrich, R.E.A., R.E.P.
Project Engineer



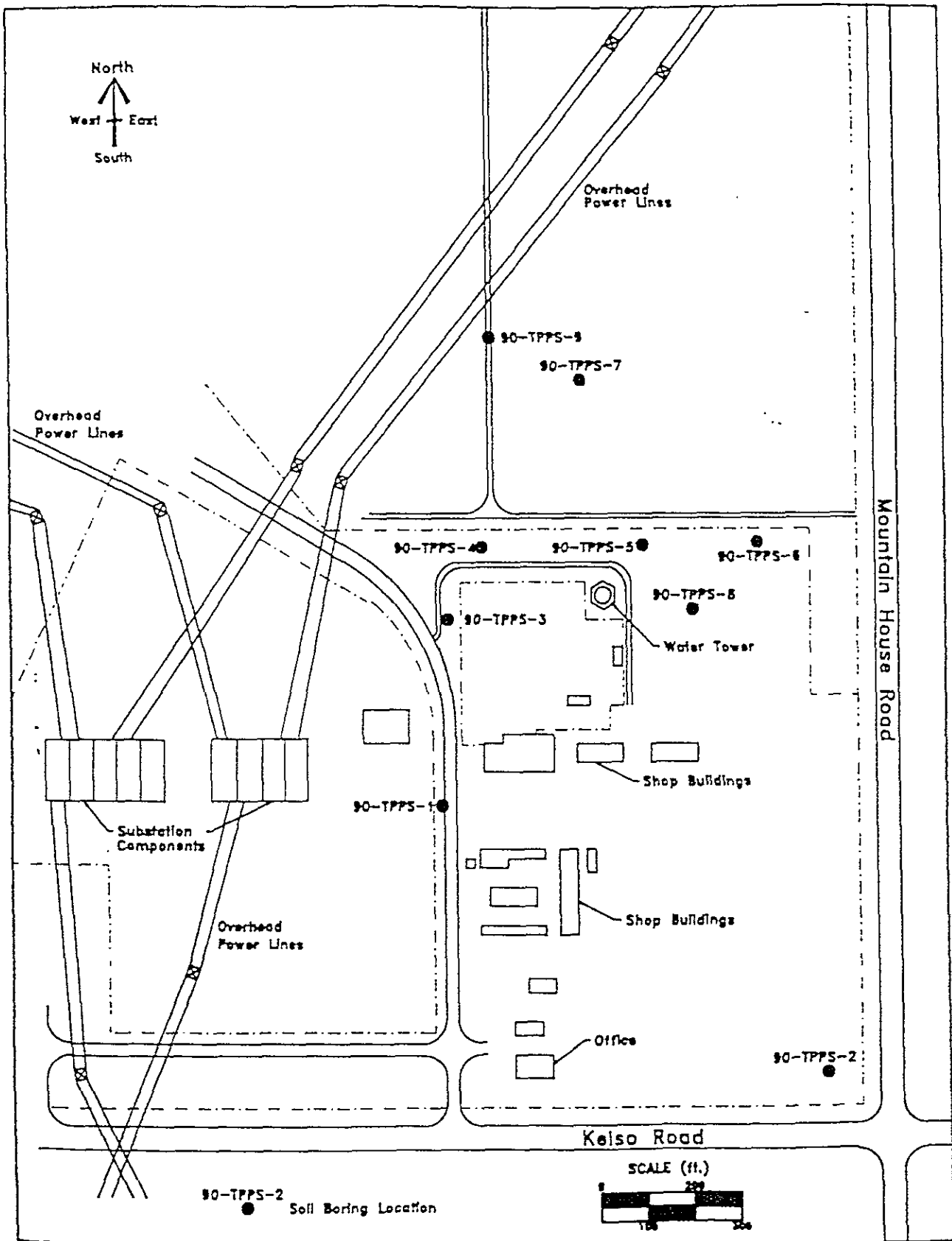
Robert M. Sengebusch, R.G. # 3990
Project Manager

March 19, 1990

TABLE 1

Borehole I.D.	Number of Samples & Matrix Sampled		Analytical Parameters (EPA Method #)*
	Water	Soil	
90-TPPS-1	1		418.1, 8150, 608, 625, 624, PP Metals
		1	418.1
90-TPPS-2	1		418.1, 8150, 608, 625, 624, PP Metals
		1	418.1, 8150, 8080, 8270, 8240, PP Metals
90-TPPS-3	1		418.1, 8150, 608, 625, 624, PP Metals
90-TPPS-4	1		418.1, 8150, 608, 625, 624, PP Metals
90-TPPS-5	1		418.1, 8150, 608, 625, 624, PP Metals
		1	418.1, 8150, 8080, 8270, 8240, PP Metals
90-TPPS-6	1		418.1, 8150, 608, 625, 624, PP Metals
90-TPPS-7	1		418.1, 8150, 608, 625, 624, PP Metals
90-TPPS-8	1		418.1, 8150, 608, 625, 624, PP Metals
		3	8240, 8270
90-TPPS-9	1		418.1, 8150, 608, 625, 624, PP Metals
		1	418.1, 8150, 8080, 8270, 8240, PP Metals

* Explanation of EPA Method numbers is contained in Appendix A and in Section 3.0.



WESTERN AREA POWER AUTHORITY
SOIL BORING LOCATIONS

FIGURE 2

TABLE 2

WAPA Soil Sample
Analytical Results
Concentrations Detected (mg/Kg)

Compounds	90-TPPS-1	90-TPPS-2	90-TPPS-5	90-TPPS-8-3	90-TPPS-8-9	90-TPPS-8-12	90-TPPS-9	State Total Designated Levels*
418.1								
TPH	11*	u	u	NTR	NTR	NTR	u	10(1)
8150								
Phenoxy Herbicides	NTR	u	u	NTR	NTR	NTR	u	--
8080								
OC Pesticides	NTR	u	u	NTR	NTR	NTR	u	--
8270								
Semi-VOC's	NTR	u	u	u	u		u	
Bis(2-Ethylhexyl) Phthalate	NTR	u	u	u	u	630*	u	210
8240								
VOC's	NTR		u				u	
Methylene Chloride	NTR	u	u	88	98	98	u	40
Toluene	NTR	6	u	420*	340*	310*	u	100
Xylene	NTR	u	u	14	4	u	u	1750
PP Metals								
Silver	NTR	u	u	NTR	NTR	NTR	u	500
Arsenic	NTR	4.0	12.9	NTR	NTR	NTR	8.1	500
Beryllium	NTR	u	1.3	NTR	NTR	NTR	1.6	NA
Cadmium	NTR	u	u	NTR	NTR	NTR	u	100
Chromium	NTR	31.5	33.3	NTR	NTR	NTR	54.7	500
Copper	NTR	22.8	26.5	NTR	NTR	NTR	38.1	10,000
Mercury	NTR	0.28	0.12	NTR	NTR	NTR	u	20
Nickel	NTR	30.9	32.5	NTR	NTR	NTR	50.4	1500
Lead	NTR	10.9	8.3	NTR	NTR	NTR	12.2	500
Antimony	NTR	25.5	27.6	NTR	NTR	NTR	43.3	1460
Selenium	NTR	u	u	NTR	NTR	NTR	u	100
Thallium	NTR	u	u	NTR	NTR	NTR	u	130
Zinc	NTR	94	116	NTR	NTR	NTR	161	50,000

NTR - No test required

u - Not detected at or above detection limit

* - Above-State Designated Level

+ - Designated Levels determined per the California Regional Water Quality Control Board's, June 1989, Staff Report "The Designated Level Methodology for waste classification and cleanup level determination"

(1) - LUFT Manual maximum allowable concentration

B - Detected in laboratory method blank

TABLE 3
 WAPA Groundwater Sample
 Analytical Results
 Concentrations Detected (ug/L)

Compounds	90-TPPS-1	90-TPPS-2	90-TPPS-3	90-TPPS-4	90-TPPS-5	90-TPPS-6	90-TPPS-7	90-TPPS-8	90-TPPS-9	EPA or State Levels
418.1										
TPH	u	u	u	u	u	u	u	u	u	--
8150										
Phenoxy Herbicides	u	u	u	u	u	u	u	u	u	--
608										
OC Pesticides	u	u	u	u	u	u	u	u	u	--
625										
Semi-VOC's	u	u	u	u	u	u	u	u	u	--
624										
VOC's		u	u	u	u	u	u	u	u	--
1,2-Dichloropropane	5	u	u	u	u	u	u	u	u	6(6)
1,1,2-Trichloroethane	5	u	u	u	u	u	u	u	u	32(1)
1,1,1-Trichloroethane	u	u	u	u	u	u	u	36	u	200(1)
1,1-Dichloroethane	u	u	u	u	u	u	u	15*	u	5(7)
PP Metals										
Silver	u	u	u	u	u	u	u	u	u	50(1)
Arsenic	u	u	17.3	u	18.3	u	u	15.2	u	50(1)
Beryllium	63.3	76.7	50.9	50.9	57.0	104	68	131	75.6	NA
Cadmium	u	u	u	u	u	u	u	u	u	10(1)
Chromium	1740*	2150*	1660*	1570*	1610*	3190*	1970*	2810*	2170*	50(1)
Copper	1800*	2380*	1650*	1530*	1730*	3690*	2020*	3210*	2190*	1000(2)
Mercury	3.2*	1.2	0.59	0.59	0.28	2.3*	0.20	2.4*	0.20	2(1)
Nickel	2210*	2880*	1740*	1760*	1820*	6040*	2270*	5090*	2550*	150(3)
Lead	186*	273*	199*	127*	121*	u	190*	u	174*	50(1) 5(4)
Antimony	1900*	2310*	1720*	1690*	1880*	6030*	2120*	6770*	2270*	146(5)
Selenium	u	u	u	u	u	u	u	u	u	10(1)
Thallium	u	u	u	u	u	u	u	u	u	13(5)
Zinc	4770	5820*	4320	5160*	4860	8780*	4910	10,700*	5060*	5000(2)

u - Not detected at or above detection limit
 * - Above regulatory criteria
 (1) State Primary MCL
 (2) State Secondary MCL
 (3) EPA Snarl
 (4) EPA MCL
 (5) EPA - National Ambient Water Quality Criteria
 (6) EPA Proposed MCL
 (7) DHS - State Action Level (Toxicity)