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SITE ASSESSMENT REPORT FOR CHARNOCK MTBE INVESTIGATION

March 30, 1998

Volume I of II
General Report - Sections 1 through 10
Appendices A through G

76 (TOSCO) STATION 4357
11280 National Boulevard
Los Angeles, California
File No. 96-042, PRP #16

Prepared For:

TOSCO MARKETING COMPANY

Prepared By:

ALTON GEOSCIENCE
25A Technology Drive
Irvine, California 92618

U.S. EPA Region 9 - Official File Copy
16-Report- 1471
Charnock and Arcadia MtBE Projects
3/1/98

TOSCO

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March 30, 1998

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Denise Kruger
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P.O. Box 9016
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Re: Methyl Tertiary Butyl Ether Pollution Investigation of the Charnock Sub-Basin
Response to Request for Work Plan for MTBE Investigation of Potential Responsible Party Sites (File Number 96-042)
UNOCAL Service Station #4357, 11280 National Boulevard, Los Angeles, California

Dear Ms. Kruger and Messrs. Bacharowski, Linder and Rodriguez:

Please find enclosed the *Site Assessment Report for Charnock MTBE Investigation,* for the above referenced site. The work was conducted in accordance with the approved workplan. Nine hollow-stem augered borings were completed with three of these were converted to monitoring wells. In addition 10 hand auger borings were completed . The work completed has investigated all potential source areas, potential impacted soil areas and impact to groundwater at SS # 4357. Based on the results Tosco believes that this site should be removed from the investigation and receive regulatory closure after one more ground water sampling event, if the results are consistent with the current conditions.

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3/1/98

Charnock and Arcadia MtBE Projects

The soil results found no MTBE, above the PQLs, deeper than 35.5 ft BSG. This means that there is more than 90 ft soil column that has not been impacted with MTBE before groundwater was encountered. All water samples were below MDLs for MTBE and confirmed with 8260 as below MDLs

Please feel free to contact me at (714)428-6930, or Tosco's legal representative Jeff Dill at (562)906-7552, if you have any questions or comments concerning the Site Assessment Report for Charnock MTBE Investigation.

Sincerely,

Michael T. Vander Plaats

cc: Jeffrey Dill, Esq. (w/encl.)
Mike Bryan (w/o encl.)
David Waldschmidt (w/o encl.)

SITE ASSESSMENT REPORT
FOR CHARNOCK MTBE INVESTIGATION

March 30, 1998

76 (TOSCO) STATION #4357
11280 National Boulevard
Los Angeles, California

FILE NO. 96-042, PRP SITE NO. 16
(CASE FILE NO. 900660061)
ALTON PROJECT NO. 20-0368

Prepared For:

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1.0 INTRODUCTION

The site assessment activities described in this report were conducted as required by the Los Angeles Regional Water Quality Control Board (LARWQCB) and United States Environmental Protection Agency (USEPA). All work was conducted in accordance with the Alton Geoscience Revised Work Plan for MTBE Investigation dated November 11, 1997; the addendum to the Workplan dated January 12, 1998; and the Los Angeles Regional Water Quality Control Board (LARWQCB) and United States Environmental Protection Agency (USEPA) letters dated January 15 and 23, 1998, except where described below in Section 1.4.

Volume II of this report will be submitted upon completion of the LARWQCB Laboratory Forms by the various laboratories. This volume will also contain a disk with the electronic copies of the text, figures, and tables.

1.1 OBJECTIVES

The primary objectives of the current site assessment activities were to specifically investigate the occurrence of methyl tertiary-butyl ether (MTBE) beneath this active service station site, and to characterize the site's soil and aquifer properties that could affect the contaminant's mobility and transport if it were present. Since the site's vadose zone was thoroughly investigated for other gasoline hydrocarbons during previous site assessment activities, the lateral extent of gasoline contamination in the vadose zone had already been established. However, during the course of this investigation, additional data regarding the current level and extent of residual gasoline contamination was gathered.

A secondary objective of the investigation was to install monitoring wells where groundwater depth, gradient and quality could be monitored. None of the previous investigations at this site included monitoring well installations or an evaluation of groundwater conditions beneath the site.

1.2 SCOPE OF WORK

Nineteen soil borings were cored and/or sampled, and three were converted to groundwater monitoring wells to satisfy the investigation objectives. The soil boring and monitoring well locations are shown on Figure 2. The soil cores and samples were described, cataloged and photographed. Soil samples collected at approximately 5-foot depth increments in each boring were submitted to state-certified laboratories for analysis. Four of the borings/monitoring wells were geophysically logged using wireline logging equipment. The monitoring wells were properly developed. The monitoring well casing tops and fluid levels were surveyed, and their liquid contents were sampled and analyzed.

1.3 RATIONALE FOR SOIL BORING \ MONITORING WELL LOCATIONS

Soil Borings B-5, B-6 and B-7 were drilled in close proximity to the three areas of soil contamination previously identified at the site. Soil Boring B-5 was drilled near the southeast corner of the existing (and former) underground storage tank (UST) area, adjacent to the existing Vadose Monitoring Well VE-1 (Soil Boring B-1), to further assess the vertical extent of gasoline-hydrocarbons which were

previously detected in B-1 to 90 feet below grade (fbg). Soil Boring B-6 was drilled adjacent to the southwestern dispenser island where gasoline-impacted soil was previously encountered to 20 fbg, and B-7 was drilled off the southern end of the southeastern dispenser island where gasoline hydrocarbons were previously detected at 2 and 10 fbg.

Soil Borings B-8, B-9 and B-10 were drilled southwest, northwest and northeast of the UST area to assess the vertical and lateral extent of MTBE-affected soil, if any, in the vicinity of the USTs, and to complete the characterization of the vadose zone soils. In addition, ten hand-auger borings (HB-5 through HB-14) were advanced at various locations onsite to assess the current environmental condition of the shallow soils in the vicinity of the fuel dispensers and UST vent lines.

To investigate the uppermost aquifer, three groundwater monitoring wells were installed with their well screens placed across the first water-bearing unit encountered; one (MW-1) in the expected upgradient direction and two (MW-2 and MW-3) in the expected downgradient direction of the potential source areas.

1.4 DEVIATIONS FROM APPROVED WORK PLAN

Due to existing and unexpected site conditions, it was necessary to adjust some of the boring locations in the field. The locations of Soil Borings B-8, B-9 and B-10 were essentially rotated counter-clockwise around the UST invert perimeter so that they could be drilled through the site's asphalt pavement and native soil instead of through the concrete UST pad and "flowing" pea gravel backfill. In addition, Soil Boring B-8 was moved approximately four feet to the southwest to avoid a patched asphalt area.

Continuous coring or sampling of Soil Borings B-6 and B-7 was not practical given the drilling and sampling equipment available for the drilling of these two borings. Both locations required the use of a "limited access" drill rig due to the overhead height restrictions present at the site (i.e., dispenser canopy and overhead wires). The continuous soil coring equipment used in the other borings was not compatible with the limited access rig, so all soil sampling in these two borings had to be performed with a split-spoon sampler. Continuous sampling using this method became impractical below approximately 55 fbg where soils are so dense that more than 0.5 foot of penetration required excessive (generally greater than 50 or 60) blows with the downhole hammer. As an alternative, below approximately 55 fbg, at least one representative soil sample (generally 0.5 to 0.75 foot long) was collected from each 1.5 or 2.0 feet of boring depth. A strong correlation of soil types exists between all of the borings (see Figures 3 and 4).

2.0 BACKGROUND AND PREVIOUS INVESTIGATIONS

The Tosco site is located on the southeast corner of National Boulevard and Sawtelle Boulevard (Figure 1). The site contains two 12,000-gallon underground gasoline storage tanks (USTs) northwest of the station building and one 550-gallon waste oil storage tank south of the station building (Figure 2). Gasoline is dispensed from four dispenser islands located north and west of the station building. A

commercial retail center is located across National Boulevard to the northwest, and additional commercial properties are located north, west, and south of the site. Interstate 405 is located east of the site.

In 1953, the Los Angeles Fire Department issued a permit to Union Oil for the installation of two 6,000-gallon and one 280-gallon USTs at the site. The location of these tanks is not known. A 1956 lease for the subject site listed two 10,000-gallon USTs and one 280-gallon UST. A site plan was not found depicting the location of these tanks. A site plan from 1971 shows two 10,000-gallon USTs on the northwest side of the lot, and one 550-gallon UST on the south side of the station building. In 1981, one 10,000-gallon diesel tank was installed on the north side of the existing product USTs. In September 1992, the two 10,000-gallon gasoline USTs, one 10,000-gallon diesel UST, and one 550-gallon waste oil UST were excavated and removed from the site. During the course of underground storage tank removal activities, soil samples were obtained from beneath the USTs, dispensers, and along product lines. Total gasoline-range petroleum hydrocarbon (TPH-G) concentrations in excess of 100 parts per million (ppm) were observed in soil samples obtained from beneath the southwestern and southeastern dispenser islands at depths of 2 feet below grade (fbg), and in the southeastern portion of the underground storage tank cavity at a depth of approximately 12 fbg (Montgomery Watson, 1992). Approximately 710 tons of potentially hydrocarbon affected soil was excavated and transported to the Puente Hills Landfill in Whittier, California for disposal. The vertical and lateral extent of adsorbed phase hydrocarbons was not characterized during tank, line, and dispenser replacement activities.

In 1992, the gasoline and waste oil USTs were replaced with two 12,000-gallon USTs and one 550-gallon UST, respectively, in the same approximate locations as the former tanks. The new 12,000-gallon USTs are Modern Welding, double containment, Plass Steel Enviro tanks with an API Ronan Leak Detection System. This system monitors the interstitial space between the two gasoline USTs and the waste oil UST for the presence of liquids. If a liquid is detected, the monitor goes into an alarm condition. The Ronan Leak Detection System also electronically monitors the secondary containment system for the product lines. Annual leak detection certifications have been performed at the site since 1992; no leaks have been detected. Copies of the certifications were provided to the LARWQCB in a Tosco response letter dated July 24, 1997.

In March 1993, three hand auger soil borings (HB-2 through HB-4), three slant soil borings (SB-1 through SB-3), and four vertical soil borings (B-1 through B-4) were drilled to total depths ranging from 10 to 95 fbg (Figure 2). Soil Boring B-1 was subsequently converted to vapor monitoring well VE-1 and was completed to a total depth of approximately 90 fbg. Adsorbed phase hydrocarbons in excess of 100 ppm TPH-G were observed in Soil Boring B-1 (VE-1) to 40 fbg. No TPH-G concentrations in excess of 100 ppm were observed in any other soil samples obtained during site assessment activities (Montgomery Watson, 1993). Soil sample laboratory results from previous investigations are presented in Appendix A.

In September 1993, a soil venting test was conducted using existing vapor well VE-1 as a test well. During the test, the applied vacuum ranged to 48 inches of water column while extraction rates ranged to 155 cubic feet per minute (cfm) (VET, 1993). Analytical results of vapor samples obtained during the course of the vapor extraction testing indicated a maximum vapor phase hydrocarbon concentration

of 783 parts per million by volume (ppmv). This relatively low hydrocarbon vapor concentration suggests that either the mass of hydrocarbons potentially present in the subsurface is small or that residual petroleum hydrocarbons are not readily extractable. In addition, field monitoring data indicate an initially low oxygen concentration in subsurface air and an increase in oxygen concentrations during the course of soil vent test. This finding suggests that intrinsic biodegradation of adsorbed phase hydrocarbon had been occurring in the subsurface.

In 1995, dispenser island upgrade activities were performed at the site. New dispensers were installed, and containment pans were installed beneath each dispenser.

A Formal Site Closure Request dated September 16, 1996 was submitted to the Los Angeles City Fire Department (LACFD). A " no further action" letter dated May 13, 1997 was received from the LACFD.

On July 1 and October 28, 1997, Well VE-1 was gauged to assess the presence of groundwater within the well. No groundwater was encountered in the well and the total depth of the well was measured at 90.25 fbg.

On July 9, 1997, a vapor sample was collected from Well VE-1 using a mobile vapor extraction system. This sample was analyzed for TPH-G using EPA Method 8015 modified, BTEX using EPA Method 8020, and MTBE using EPA Method 8260. The results were: 67 ppmv TPH-G, 0.23 ppmv benzene, 5.5 ppmv toluene, 0.68 ppmv ethylbenzene, 7.4 ppmv total xylenes, and 0.84 ppmv MTBE.

3.0 REGIONAL GEOLOGY AND HYDROGEOLOGY

The Tosco site lies within the Los Angeles Coastal Plain in the subarea known as the Santa Monica Basin. The Santa Monica Basin is bounded by the Santa Monica Mountains to the north, the Ballona Escarpment and Baldwin Hills to the south, the Pacific Ocean to the west and the Newport-Inglewood Fault Zone to the east. The geology of the Santa Monica Basin consists predominantly of mid-Pliocene to upper-Pleistocene fluvial and marine gravels, sands, silts and clays (Poland et al., 1959). The basin is subdivided by faults into three smaller basins: the Coastal Sub-basin, the Charnock Sub-basin, and the Crestal Sub-basin. The Tosco site is located in the Charnock Sub-basin, which is bounded by the Overland Fault to the east and the Charnock Fault to the west.

The Santa Monica Basin is subdivided into six physiographic subareas: the Santa Monica Plain, the Ocean Park Plain, the Sawtelle Plain, a portion of the Beverly Hills, the Ballona Gap and the northern tip of the Baldwin Hills (California Department of Water Resources [DWR], 1961). The Tosco site is located in the Sawtelle Plain between the Beverly Hills and Ocean Park Plain physiographic provinces. Ballona Creek is approximately 3 miles southeast of the site.

Recent alluvium within this region is subdivided into two hydrogeologic units: the Bellflower aquitard and the underlying Ballona aquifer. In this basin, the upper Pleistocene is represented by the Older

Dune Sands and the Lakewood formation, while the lower Pleistocene consists of the San Pedro formation (DWR, 1961).

Beneath the Tosco site, the Recent alluvium is believed to be approximately 55 to 60 feet thick with the Bellflower aquitard comprising the uppermost 40 feet and overlying the upper extent of the Ballona aquifer. The Ballona aquifer, also referred to as the "50-foot gravel" (Poland et al., 1959), consists of fine to coarse sands, gravels and crystalline cobbles. The Ballona aquifer sediments lie unconformably on a clean well sorted massive sand unit interpreted to be the Older Dune Sands. This fine grained sand unit extends to approximately 110 fbg at the site, and is underlain by the first water-bearing unit. The water bearing unit is composed of poorly and well graded sands with a few thin and discontinuous silt and clay interbeds. The upper extent of this unit is most likely representative of the Lakewood formation, however, aquifers of the Lakewood formation may be undifferentiated from the Lower Pleistocene Silverado aquifer in this locale. The top of the Silverado aquifer is estimated to be approximately 140 feet beneath the Tosco site, and to have a thickness of approximately 220 feet (DWR, 1961; Poland et. al., 1959). At a depth of approximately 360 fbg, the Silverado aquifer is underlain by a thick section of Tertiary sediments deposited on crystalline basement rocks (Poland et al., 1959; Kennedy/Jenks, 1992). The Tertiary sediments are thought to contain no potable water (Poland et al., 1959).

Groundwater flow in the Silverado aquifer, within the Charnock Sub-basin, is reported to be toward the southeast, away from the Santa Monica Mountains. However, when the water production wells in the Charnock Wellfield are pumping, radial flow toward the wellfield is assumed. Under pumping conditions, groundwater flow in the Silverado aquifer beneath the Tosco site is therefore assumed to be to the southeast. Under non-pumping conditions, groundwater flow in the Silverado aquifer would also likely be toward the southeast. Groundwater levels in the basin are reported to be rising following the cessation of pumping operations in June 1996 at the Charnock and Southern California Water Company Groundwater Wellfields.

4.0 FIELD ACTIVITIES

4.1 PRE-FIELD ACTIVITIES

Prior to conducting field activities, a revised workplan and addendum were prepared by Alton Geoscience, and approved by the LARWQCB and USEPA. In addition, permits were obtained from the Los Angeles County Department of Public Works, the site was marked with white spray paint to identify proposed work areas, and Underground Services Alert (USA) was notified. The LARWQCB, USEPA, the City of Santa Monica and the Southern California Water Company (SCWC) were also notified prior to the commencement of field work.

4.2 DRILLING AND WELL CONSTRUCTION

Soil boring and groundwater monitoring well installation activities were conducted at the site between January 26 and February 9, 1998 using hollow-stem auger and hand auger drilling techniques. Soil

samples were collected from a total of nine (9) hollow-stem augered borings (MW-1, MW-2, MW-3, and B-5 through B-10) and ten (10) hand augered borings (HB-5 through HB-14) for description, field hydrocarbon-vapor readings, and laboratory analysis. Soil Borings MW-1, MW-2 and MW-3 were drilled and sampled to approximately 145 fbg, B-5 through B-10 were drilled and sampled to approximately 115 fbg, and HB-5 through HB-14 were each advanced to 10 fbg. In each of the hollow-stem auger borings, soil samples were collected using a continuous core barrel (5-foot length) and/or at discrete depths using a California Modified Split Spoon Sampler. In each of the hand-augered borings, soil samples were collected at discrete depths using an AMS Core Soil Sampler. Refer to Appendix B for additional detail regarding the field procedures used. Mr. Robert TerBerg of Komex (representing the City of Santa Monica), Mr. Benjamin Castellana and Eric Hamrick of Ecology and Environment (representing USEPA), and Mr. Toby Moore of Mission Geoscience (representing SCWC), were onsite periodically throughout the investigation to witness the field activities and collect split samples.

Groundwater-saturated soils were first encountered at approximately 130.5 fbg, 129.0, fbg and 128.5 fbg in MW-1, MW-2 and MW-3, respectively. A "wet" sand interval observed from 110.0 fbg to 111.1 fbg in MW-1 was tested for groundwater production, but failed to yield any detectable quantity of water to the open boring after allowing approximately 1 hour for groundwater infiltration to occur. Saturated soil was not detected in the other borings or monitoring wells above approximately 128 fbg. The locations of the borings are shown on Figure 2, and the boring logs are provided in Appendix B.

Following sample collection, MW-1, MW-2 and MW-3 were converted to groundwater monitoring wells. All other borings were sealed from their total depths to approximately 2 fbg with Volclay (bentonite) grout, and from approximately 2 fbg to surface grade with concrete. The sealing material was pumped into the hollow-stem augered borings using the augers and/or a hose as a "tremie." The hand-augered borings were sealed by pouring the sealing material into the open borings.

The monitoring wells were constructed using 4-inch diameter, schedule 40 PVC casing with flush threaded joints. The screen section for each well consists of 25 feet of 0.010-inch wide, factory-cut slots, and was installed with approximately 9 to 12 feet of screen interval above the observed saturated soil. The screen/boring annulus was filled with a filter material which consisted of Lonestar #2/16 (16-30 mesh) graded silica sand. The selection of filter pack material was based on the results of sieve analyses conducted on aquifer samples collected from MW-1. The top of the filter pack was set at 2 to 3 feet above the top screen perforation. A 3- to 4-foot annular seal was created on top of the filter pack using medium (3/8-inch mesh) bentonite chips which were hydrated in-place with water. The remainder of the casing/boring annulus, except for the top 2 feet, was sealed with Volclay grout. The uppermost 2 feet of annulus was enlarged to fit a traffic-rated well box. The well box was placed over the casing top and cemented in place with concrete. The following table presents the individual well construction depth details.

Monitoring Well	Well Screen Interval	Filter Pack Interval	Well Seal Interval
MW-1	118.5 - 143.5 fbg	116 - 143.5 fbg	113 -116 fbg
MW-2	120 - 145 fbg	118 - 145 fbg	114 - 118 fbg
MW-3	118 - 143 fbg	115 - 143 fbg	111.5 - 115 fbg

Diagrams showing the well construction detail of each well and copies of the monitoring well permits are provided in Appendix B.

4.3 GEOPHYSICAL LOGGING

On February 9, 1998, Boring B-5 and Monitoring Wells MW-1, MW-2, and MW-3 were geophysically logged using wireline EM Induction and Natural Gamma logging equipment. A 2-inch PVC casing was temporarily installed in B-5 prior to backfilling the boring to facilitate the geophysical logging. Following geophysical logging activities, the temporary casing was removed and the boring was backfilled with Volclay grout. The monitoring wells were logged through their well casings and annular materials. Copies of the geophysical boring logs are included in Appendix C.

4.4 WELL DEVELOPMENT

Monitoring Wells MW-1, MW-2, and MW-3 were developed on February 11, 1998 to improve hydraulic communication between the formation and the well, and to remove fines from the well. Temperature, electric conductivity, pH, and turbidity measurements were recorded during development activities. Following development, turbidity measurements were 2 NTUs (MW-1), <5 NTUs (MW-2), and 3 NTUs (MW-3). Well development data sheets are included in Appendix D. The generated waste water was placed in properly labeled, DOT-approved, 55-gallon drums, and temporarily stored onsite pending disposal at an appropriate facility.

4.5 SURVEYING

Soil boring and monitoring well locations were surveyed relative to the California State Plane Coordinate System on February 12, 1998 by a California licensed land surveyor. The survey was conducted using a vertical and horizontal precision of 0.01 foot. A copy of the survey results is included in Appendix D.

4.6 FLUID LEVEL MONITORING AND GROUNDWATER SAMPLING

Fluid levels were monitored in groundwater Monitoring Wells MW-1, MW-2 and MW-3 on February 23, 1998. On February 26, 1998, groundwater was sampled in all three wells in accordance with standard regulatory protocol. A monthly fluid level gauging event was performed on March 23, 1998. Fluid level monitoring and groundwater sampling field data sheets are included in Appendix D. The results of water level monitoring are presented in Section 7.3 and Table 3a. The waste water generated during well purging was placed in properly labeled, DOT-approved, 55-gallon drums, and temporarily stored onsite pending disposal at an appropriate facility.

4.7 QUALITY ASSURANCE / QUALITY CONTROL PROCEDURES AND SAMPLES

Quality assurance / quality control (QA/QC) procedures used in the field included collection of daily field blanks. The collection of field blanks involved pouring laboratory-prepared deionized water into sample containers during some other routine sample collecting activity (e.g., soil sampling). In

addition, rinsate samples were collected from sampling equipment to verify decontamination procedures, trip blanks were prepared and analyzed to verify sample handling procedures, and source water samples were collected.

Chain of custody protocol was followed for all soil, groundwater and QA/QC samples selected for laboratory analysis. The chain of custody form accompanied the samples from the sampling locality to the laboratory, providing a continuous record of possession prior to analysis. Copies of the chain of custody documents are provided in Appendices F, G, and H.

5.0 LABORATORY ANALYSIS

5.1 GEOCHEMICAL ANALYSIS

Selected soil samples and QA/QC water samples (field blanks, trip blanks, equipment blanks, and source water samples) collected during drilling activities were submitted to a state-certified laboratory and analyzed for total petroleum hydrocarbons with gasoline distinction (TPH-G) using EPA Method 8015, modified for gasoline; and benzene, toluene, ethylbenzene, and total xylenes (BTEX), and methyl tertiary-butyl ether (MTBE) using EPA Method 8020. Concentrations of MTBE above the practical quantitation limit (PQL) detected by EPA Method 8020 were verified using EPA Method 8260.

Groundwater samples collected during groundwater monitoring and sampling activities were submitted to a state-certified laboratory and analyzed for TPH-G using EPA Method 8015, modified for gasoline; and for BTEX, MTBE, tertiary-butanol, di-isopropyl ether (DIPE), ethyl tertiary-butyl ether (ETBE), tertiary-amyl methyl ether (TAME), and tertiary-butanol using EPA Methods 8020 and/or 8260. The groundwater samples were also analyzed for pH, chloride, nitrate as NO_3, phosphorous, specific conductance, sulfate, total alkalinity, calcium, iron, magnesium, manganese, potassium, and sodium. The laboratory methods are identified in the official laboratory reports.

Copies of the official laboratory reports and chain of custody records for geochemical analyses are included in Appendix F. The results of the laboratory analyses are listed in Tables 1, 3b, 3c, and 4.

5.2 PHYSICAL PARAMETER ANALYSIS

Selected soil samples were submitted to a geotechnical laboratory for analysis of various physical parameters. The analyses included: grain-size distribution using ASTM Method D422M or D4464M; effective porosity, bulk and grain densities, and native state permeability to air using API Method RP 40; moisture content using ASTM Method D2216; plasticity index (Atterberg Limits) using ASTM Method D4318; and hydraulic conductivity (native or specific) using EPA Method 9100. In addition, five samples were analyzed for total organic carbon (TOC) using the Walkley-Black Method.

The results of laboratory analysis are listed in Tables 3a, 3b, and 3c. Copies of the official laboratory reports and chain of custody records for geotechnical analyses are included in Appendix G.

6.0 SOIL AND LIQUID WASTE DISPOSAL

Approximately 32.77 tons of soil cuttings were generated during the drilling and soil sampling activities. The soil waste was temporarily stored onsite in covered roll-off bins while pending disposal at an appropriate facility. The soil waste has subsequently been disposed of at TPS Technologies facility in Adelanto, California. Copies of the waste manifests are included in Appendix E.

Approximately 1,645 gallons of liquid waste (water with suspended solids) were generated during onsite equipment decontamination, well development, and groundwater sampling activities. The liquid wastes were temporarily stored onsite in properly labeled, DOT-approved, 55-gallon drums pending their disposal. They have since been transported to the Crosby and Overton facility in Long Beach, California for disposal. Copies of the waste manifests are included in Appendix E.

7.0 FINDINGS

7.1 SOIL SAMPLING

The soils encountered during the drilling and sampling activities mainly consisted of silts and sands with varying amounts of clay and gravel. In general, the soil profile can be broken into five lithologic units:

1. a shallow sandy silt / silty sand with discontinuous sand interbeds from approximately 1 to 39 fbg;
2. a well graded sand and silty sand with various amounts of gravel from approximately 39 to 56 fbg;
3. a fairly-massive, poorly graded, fine sand, (probably a dune sand) from approximately 56 to 110 fbg;
4. a thin (1- to 2-foot thick) silt unit from approximately 110 to 112 fbg, but the unit is either not present or grades laterally to a silty sand on the south side of the site;
5. a sand unit consisting of interbedded sands and gravelly sands with a few thin discontinuous silt laminations from approximately 112 to at least 145 fbg. Groundwater occurs at approximately 128 fbg in this unit.

See Figures 3 and 4 for cross sections of the site showing the described lithology.

7.1.1 Geochemical Results

The geochemical results indicate that low concentrations of gasoline hydrocarbons exist locally in soil beneath portions of the site. The TPH-G concentrations in soil ranged from a high of 110 ppm in HB-12 (@ 5 fbg) to "not detectable" (ND) using a detection limit of 0.2 ppm. Low concentrations of MTBE above the EQL or PQL were detected in four soil samples (EPA method 8020), however, when the samples were re-analyzed using EPA method 8260, MTBE was only detected in two soil samples (B-5 @ 30 and 35.5 fbg). MTBE was not detected above the EQL or PQL in any soil sample collected below 35.5 fbg. The geochemical results are presented in Table 1, and summarized in Figures 5 and 6. Copies of the official laboratory reports are included in Appendix F.

7.1.2 Physical Parameters

Sixteen soil samples were submitted to a laboratory for physical parameter testing. Each of the five units described above were represented by analysis of two to four samples. The samples from the shallow silt interval (1 to 39 fbg) had an average effective porosity of 38.6%, and ranged in their plastic limits from "non-plastic" to 22. The range in native permeability to air was 0.6 to 689 millidarcies (md), while hydraulic conductivities of $2x10^{-5}$ and $2x10^{-6}$ centimeters per second (cm/s) were determined for this interval's samples.

The average effective porosities of the samples from the two underlying sand units (Unit 2 [39 to 56 fbg] and Unit 3 [56 to 110 fbg]) were 35.5% and 43.4%, respectively, while the average measured water saturations were 27% in the Unit 2 samples and 20% in Unit 3 (percent of pore volume). Native permeabilities to air ranged from 4,100 to 41,200 md, and vertical hydraulic conductivities of $2.5x10^{-4}$ and $3x10^{-4}$ cm/s were measured.

Two samples from the silt unit observed from approximately 110 to 112 fbg on the north side of the site (Unit 4), were analyzed for vertical hydraulic conductivity and plasticity (Atterburg limits). The resultant hydraulic conductivity values were $4x10^{-7}$ cm/s and $2x10^{-7}$cm/s, and the measured plastic limits were both 32.

Samples from Unit 5 (112 to >145 fbg) had an average porosity of 38.4%, and vertical and horizontal hydraulic conductivities of $2x10^{-4}$ cm/s and $5x10^{-4}$ cm/s, respectively. Results from sieve analysis of four Unit 5 samples indicate a large variability in the silt and clay fraction for this sand unit; results ranged from 2 to 30% silt and clay (combined) by weight.

The TOC values for Unit 1 ranged from 490 to 1,000 mg/kg, while no organic carbon was detected above the laboratory detection limit of 100 mg/kg in Units 2, 3 and 5. The results of physical parameter analyses are listed in Tables 2a, 2b, and 2c. Copies of the official laboratory reports and chain of custody records for geotechnical analyses are included in Appendix G.

7.2 GEOPHYSICAL LOGGING

Monitoring Wells MW-1, MW-2 and MW-3, and Soil Boring B-5 were geophysically logged using natural gamma ray and EM induction wireline logging equipment. Copies of the logs are provided in Appendix C.

The gamma ray logs have rather non-descriptive appearances. Except for the correlating 3- to 4-foot bentonite chip seal intervals, the overall curve amplitudes are low (approximately 20 to 25 API units) and difficult to correlate with either the core descriptions or the other boring logs.

Conversely, the induction logs (conductivity curves) do contain correlatable features. The most notable features include:

1. a 4- to 8-foot interval of high conductivity that occurs between 22 and 32 fbg on each log, and can be correlated with a competent silt or clayey silt interval in the core descriptions;
2. an increase in conductivity that occurs between 105 and 112 fbg in most of the geophysical logs, and can be correlated with an observed increase in moisture content and/or a thin silt or silty sand unit described in many of the soil boring cores, and;
3. an increase in conductivity that occurs between 125 and 127 fbg in MW-1, MW-2 and MW-3 which corresponds approximately to the top of the capillary fringe at each location.

In addition, a few silt and silty sand laminations (less than 1-foot thick) that were observed below 130 fbg in MW-1 and MW-2 are represented by low conductivity inflections on the induction logs.

7.3 FLUID LEVEL MONITORING AND GROUNDWATER SAMPLING

The results of the February 26, 1998 monitoring event indicate an easterly groundwater flow direction and a gradient of approximately 0.003 foot per foot. Refer to Figure 7 for a graphical representation of the water table.

The laboratory results indicate that the groundwater samples collected on February 26, 1998 from MW-1, MW-2 and MW-3 did not contain detectable concentrations of MTBE or ethlybenzene. A low concentration of xylene (0.35 ppb) and trace concentrations (less than the PQL) of TPH-G, benzene, toluene were detected in the MW-3 sample, and a trace concentration of benzene was detected in the MW-1 sample. No hydrocarbons were detected in the MW-2 sample. The trace concentrations were estimated by the laboratory from the EPA 8020/8015 analysis results. However, none of the analyte detections could be verified with the EPA 8260 analysis because of the method's higher detection limits. The laboratory's method detection limits

for the EPA 8020/8015 analyses were: 0.48 ppb for MTBE; 12 ppb for TPH-G; 0.032 ppb for benzene; 0.031 ppb for toluene; 0.025 ppb for ethylbenzene, and; 0.077 ppb for total xylenes.

Elevated levels of nitrate (as NO_3), above the State of California Maximum Contaminant Level (MCL) for drinking water, were detected in all three samples; 140 ppm in MW-1, 87 ppm in MW-2, and 120 ppm in MW-3. The MCL for nitrate is 45 ppm. The upper acceptable level of specific conductance for drinking water (1,600 micromhos) was also exceeded in the three wells; 1,900 micromhos in MW-1, 1,800 micromhos in MW-2 and 1,700 micromhos in MW-3. In addition, the secondary MCL for manganese (0.05 ppm) was exceeded in the sample from MW-3. All other measured constituents were below their respective MCL (or secondary MCL).

The groundwater chemical analysis results are summarized in Tables 3b and 3c, and Figure 8. Copies of the official laboratory reports are included in Appendix F.

7.4 QUALITY ASSURANCE / QUALITY CONTROL RESULTS

A low concentration of xylenes (1.1 ppb) was detected in B9FB06, a field blank collected on February 2, 1998. This was the only hydrocarbon concentration detected in a QA/QC sample that was greater than the PQL. However, traces of various BTEX constituents and MTBE were occasionally detected in other QA/QC samples. These trace and minor hydrocarbon detections do not invalidate the investigation findings. The laboratory has estimated these trace concentrations. Table 4 provides a summary of the QA/QC sample results, and copies of the certified laboratory results are included in Appendix F.

8.0 CONCLUSIONS

Based on the results of this investigation, Alton Geoscience concludes that:

Groundwater beneath the site is "non contaminated" with respect to MTBE, as defined in the LARWQCB and US EPA Letter dated January 15, 1998, Appendix A requirements. MTBE was not detected above the laboratory MDL in the three groundwater samples collected, nor was it detected in any of the soil samples collected from the saturated zone. The levels of other gasoline hydrocarbons detected in the groundwater samples are minor. The reported concentrations are laboratory estimates because the detections were less than the estimated quantitation limits (EQL). In summary, all of the groundwater hydrocarbon detections made during this investigation are well below the State and Federal MCLs for drinking water.

The MTBE contamination detected in the vadose zone soil is also minor. The detected concentrations are low (less than 0.04 ppm), and the extent of MTBE-impacted soil is limited both laterally and vertically. The occurrence of MTBE was confirmed in only two borings, and not at depths greater than 35.5 fbg at either location.

The fact that no MTBE was detected in the groundwater beneath the site, and that no MTBE above the PQL or EQL was detected in any boring below 35.5 fbg, suggests that the site is not a source for the MTBE concentrations detected in the City of Santa Monica's Charnock and Southern California Water Company production wells, which are located approximately 0.68 and 0.87 miles away from the site.

In addition, the threat to groundwater presented by the MTBE detected in the vadose zone at this site is minimal. Ninety feet of vadose zone separation exists between the deepest MTBE detection (above the PQL or EQL) and the groundwater table. Although the separation is comprised mostly of permeable sediments, the fact that the site has pavement over the residual MTBE concentrations, and that the upper 35 feet of vadose zone is comprised of low permeable soils, the potential for surface water to infiltrate and leach these already low concentrations 90 feet to groundwater is highly unlikely.

The other gasoline hydrocarbons present in the vadose zone soil appear to be biodegrading. Comparing the 1993 soil sample results from Vadose Well VE-1's (B-1) installation with the current results from Soil Boring B-5, drilled 4 feet away, it is apparent that the hydrocarbon concentrations and their extent have decreased over time. The decrease in hydrocarbon mass, as indicated by this comparison, is most likely due to subsurface microbial activity.

9.0 RECOMMENDATIONS

Based on the conclusions above, Alton Geoscience recommends that:

> One additional groundwater sampling event be performed to confirm that groundwater has not been contaminated with respect to MTBE as defined by the RWQCB and US EPA.
>
> Once confirmation of the absence of MTBE in groundwater has been established, the site should be removed from the regional Charnock MTBE investigation and considered for case closure.

10.0 REFERENCES

Alton Geoscience, 1996, Formal Site Closure Request, Unocal Service Station 4357, 11280 National Boulevard, Los Angeles, California, September 16.

Alton Geoscience, 1997, Workplan For MTBE Investigation, Unocal 76 (Tosco) Station 4357, 11280 National Boulevard, Los Angeles, California, July 24.

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California Department of Water Resources, 1961, Planned Utilization of the Groundwater Basins of the Coastal Plain of Los Angeles County, Bulletin No. 104, Appendix A: Groundwater Geology, June.

Kennedy/Jenks Consultants, 1992, City of Santa Monica Final Report: Santa Monica Groundwater Management Plan Charnock and Coastal Sub-Basins, June.

Montgomery Watson, 1992, Closure Report, Underground Storage Tank, Unocal Service Station #4357, 11280 National Boulevard, Los Angeles, California, December.

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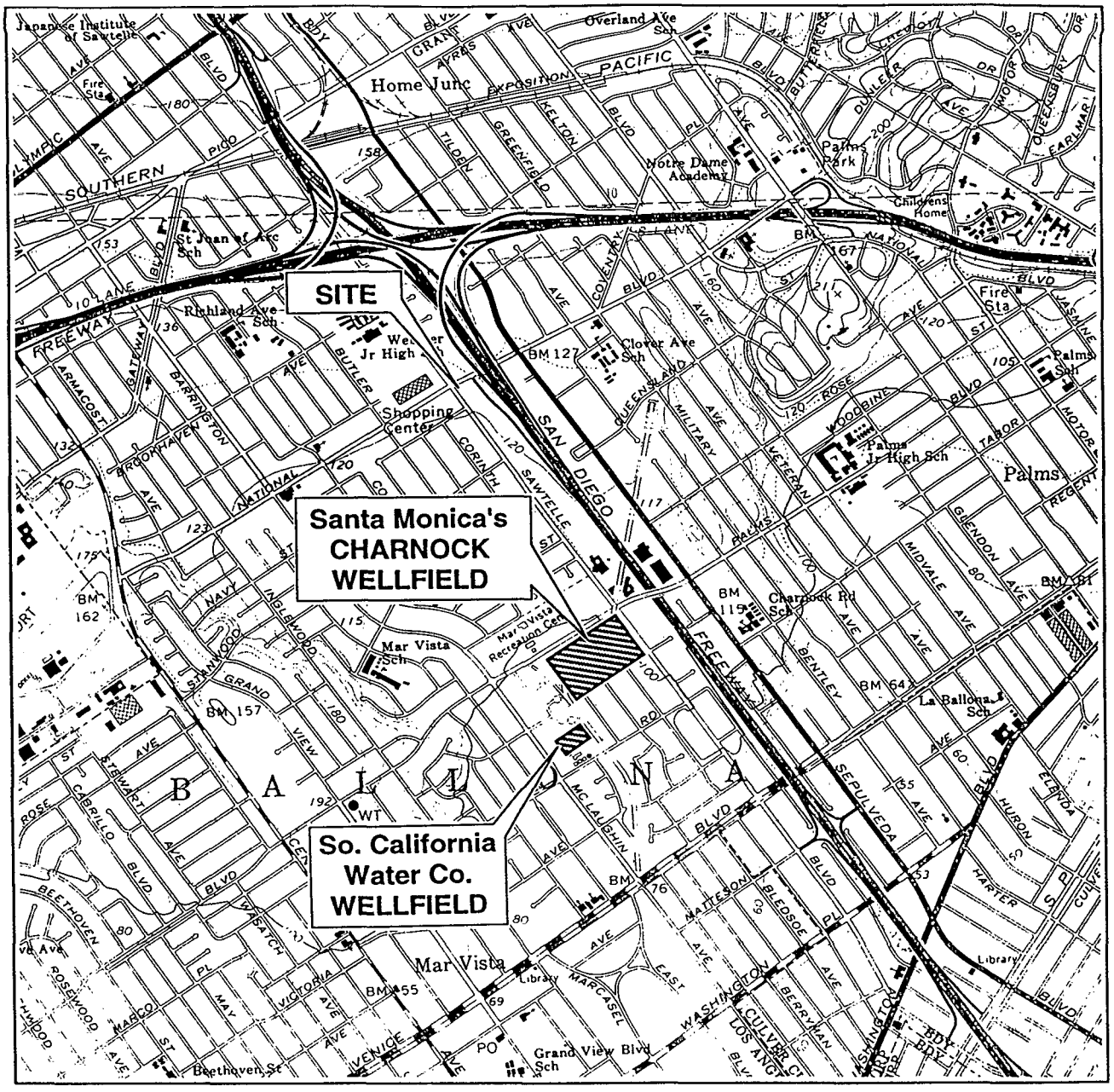
Poland, J.F., Garrett, A.A., and Sinnott, A., 1959, Geology, Hydrology, and Chemical Character of Groundwaters in the Torrance-Santa Monica Area, California: U.S. Geological Survey, Water Supply Paper 1461.

VET, 1993, Vapor Extraction Technology, Vapor Extraction Feasibility Test Report, Unocal Station 4357, 11280 National Boulevard, Los Angeles, California, October 25.

The ongoing project services summarized in this report have been conducted in accordance with current practice and the standard of care exercised by geologists and engineers performing similar tasks in this area. No warranty, express or implied, is made regarding the findings and professional opinions presented in this report. The findings are based solely upon an analysis of the observed conditions. If actual conditions differ from those described in this report, our office should be notified.

FIGURES



1 MILE 3/4 1/2 1/4 0 1 MILE

SCALE 1: 24,000

N

SOURCE:
United States Geological Survey
7.5 Minute Topographic Map:
Beverly Hills Quadrangle

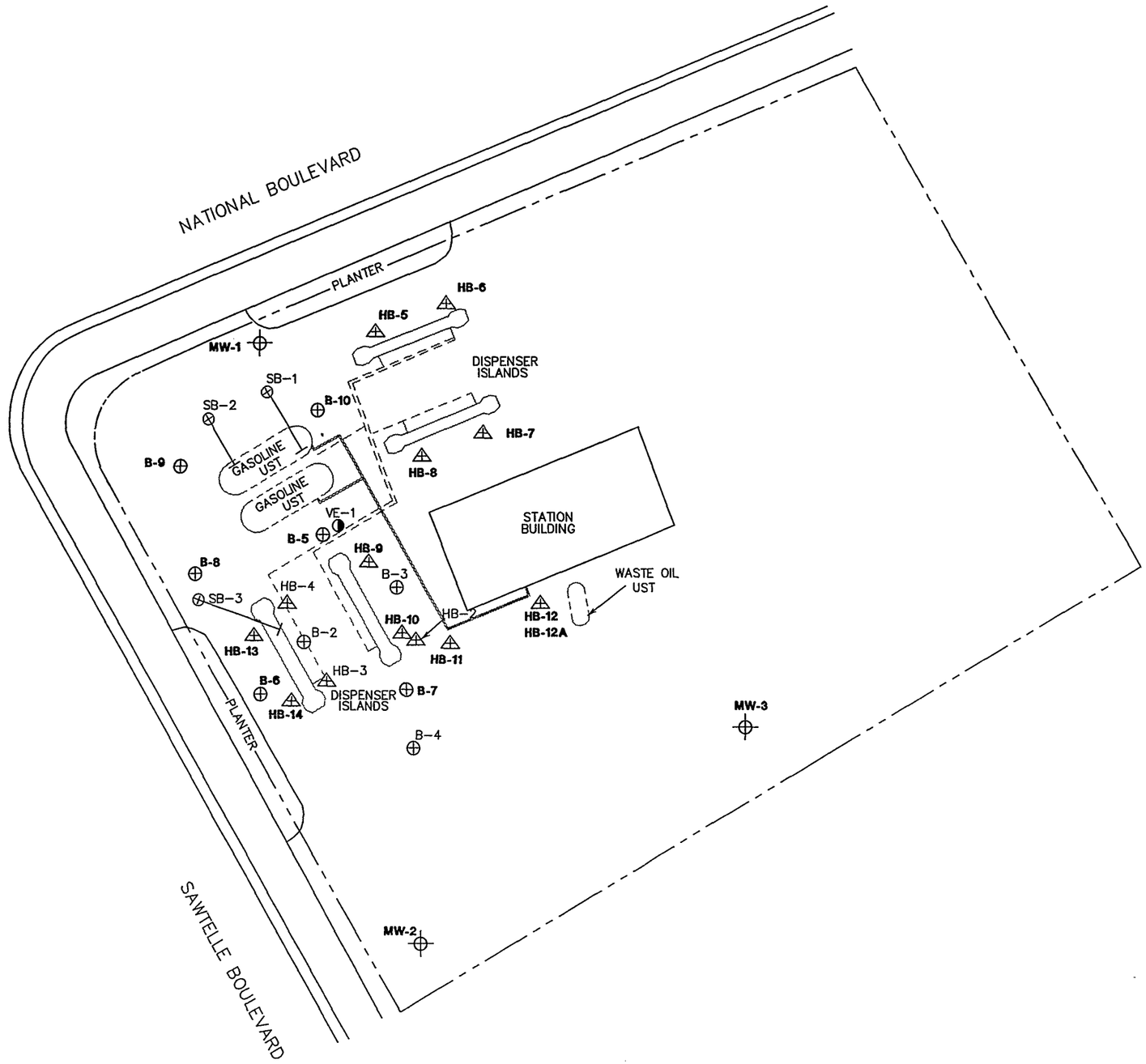
ALTON GEOSCIENCE
Irvine, California

VICINITY MAP

76 Station 4357
11280 National Boulevard
Los Angeles, California

FIGURE 1

20-0368 11/4/97



N

LEGEND

B-5	⊕	Hollow Stem Boring
VE-1	◑	Vadose Monitoring Well
MW-1	⊕	Groundwater Monitoring Well
SB-2	⊕	Slant Boring
HB-2	△	Hand Auger Boring

SCALE (FEET)

0 30 60

NOTES:

Labels of borings and monitoring wells from current investigation (1998) are bold.

Labels of borings and monitoring wells from previous investigation (1993) are not bold.

UST = Underground storage tank.

SOURCE MAP =

Asbuilt diagram dated 7/93 provided by Tosco.

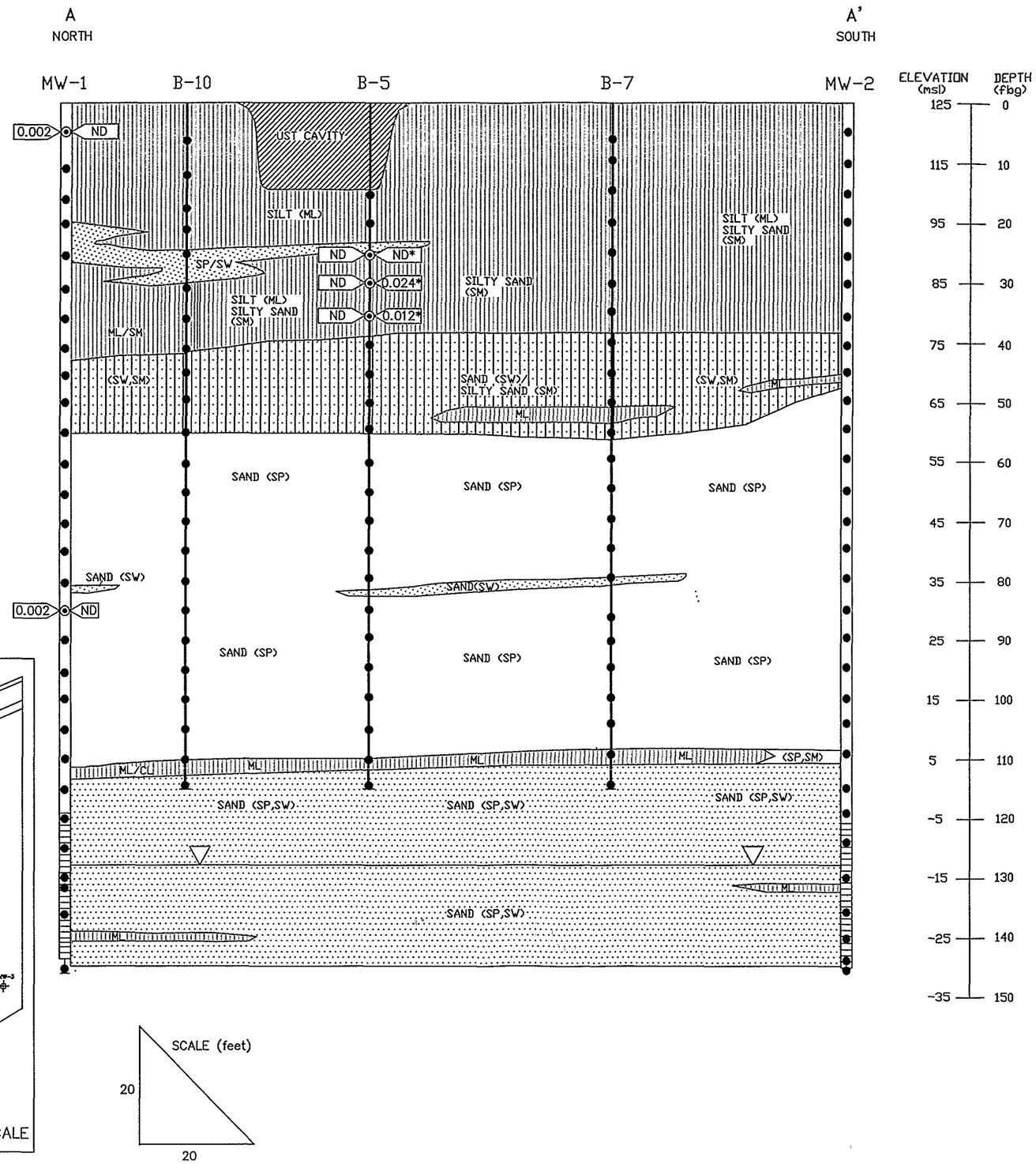
SITE PLAN

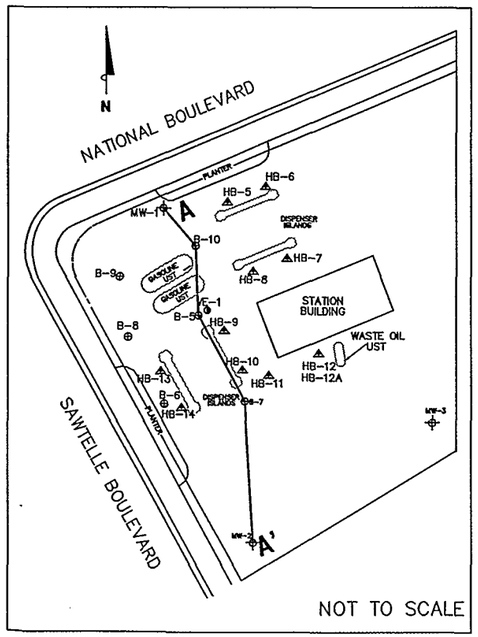
76 (Tosco) Station 4357
11280 National Boulevard
Los Angeles, California

ALTON GEOSCIENCE
Irvine, California

FIGURE 2

200368/site(ac) 3/27/98 MLW





LEGEND

- SAND (SW) / SILTY SAND (SM)
- SAND (SP/SW)
- UST CAVITY
- SILT(ML) AND OR (SM)
- SAND (SP)
- BORING
- BLANK PVC
- SCREENED PVC
- TOTAL BORING DEPTH
- SOIL SAMPLE WITH BENZENE AND MTBE CONCENTRATIONS = ND
- 0.002 — SOIL SAMPLE WITH BENZENE RESULTS (mg/kg)
- ND — SOIL SAMPLE WITH MTBE RESULTS (mg/kg)
- STATIC GROUNDWATER LEVEL

NOTES:

Soil samples analyzed by EPA method 8020.

fbg = feet below grade
msl = feet above mean sea level
ND = not detected above the practical quanitation limit (PQL)
MTBE = methyl tertiary butyl ether
* = result from EPA method 8260
mg/kg = milligrams per kilograms

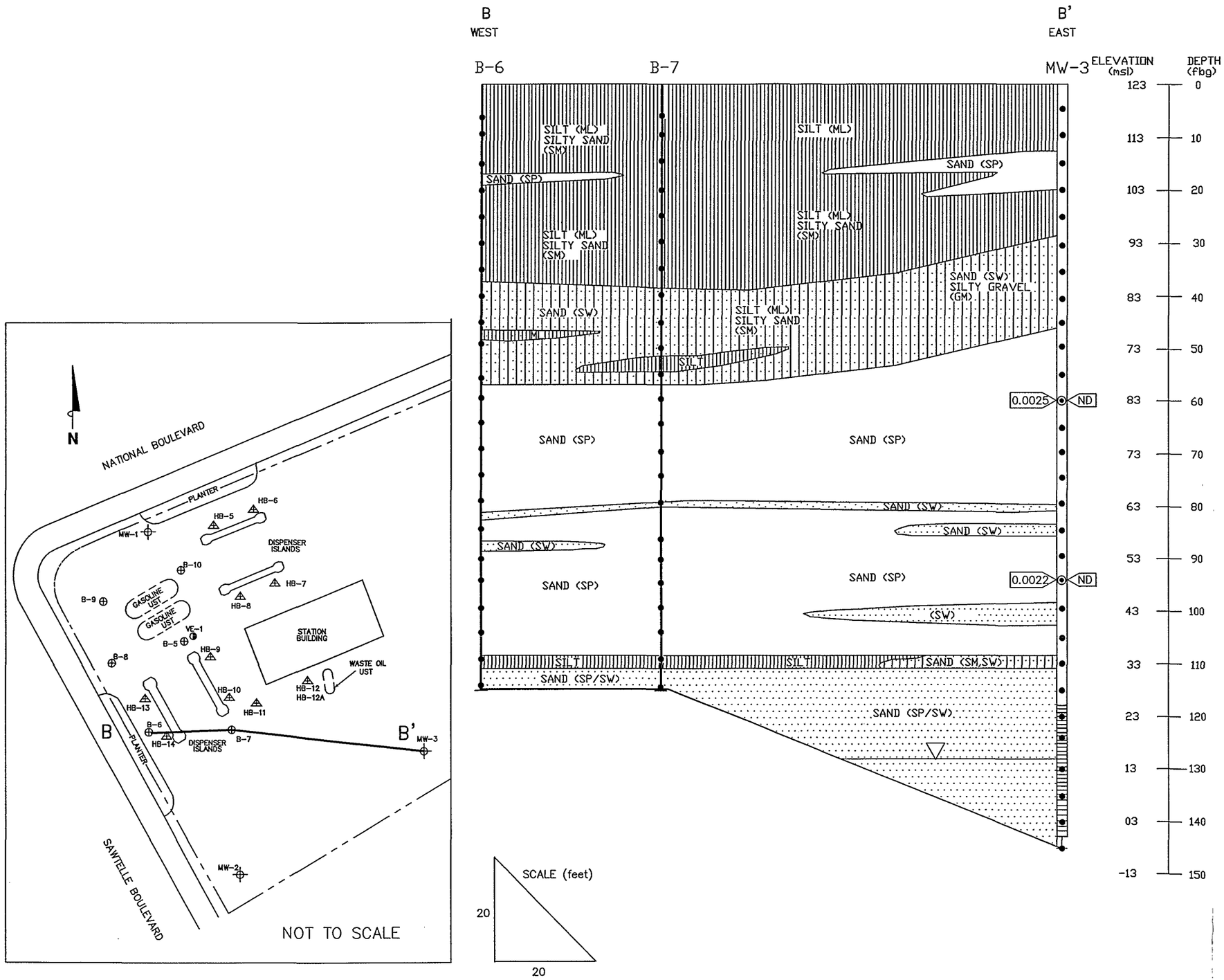
CROSS SECTION A-A'

UNOCAL 76 (TOSCO) STATION 4357
11280 National Boulevard
Los Angeles, California

ALTON GEOSCIENCE
Irvine, California

FIGURE 3

20-0368 Xsect A-A' 327/98 MLW



LEGEND

- SAND (SW) / SILTY SAND (SM)
- SAND (SP/SW)
- SILT (ML) AND/OR SILTY SAND (SM)
- SAND (SP)
- BORING
- BLANK PVC
- SCREENED PVC
- TOTAL BORING DEPTH
- SOIL SAMPLE WITH BENZENE AND MTBE CONCENTRATIONS = ND
- ND — SOIL SAMPLE WITH BENZENE RESULTS (mg/kg)
- ND — SOIL SAMPLE WITH MTBE RESULTS (mg/kg)
- STATIC GROUNDWATER LEVEL

NOTES:

Soil samples analyzed by EPA method 8020.

MTBE = methyl tertiary butyl ether
fbg = feet below grade
msl = feet above mean sea level
ND = not detected above the practical quanitation limit (PQL)
mg/kg = milligrams per kilogram

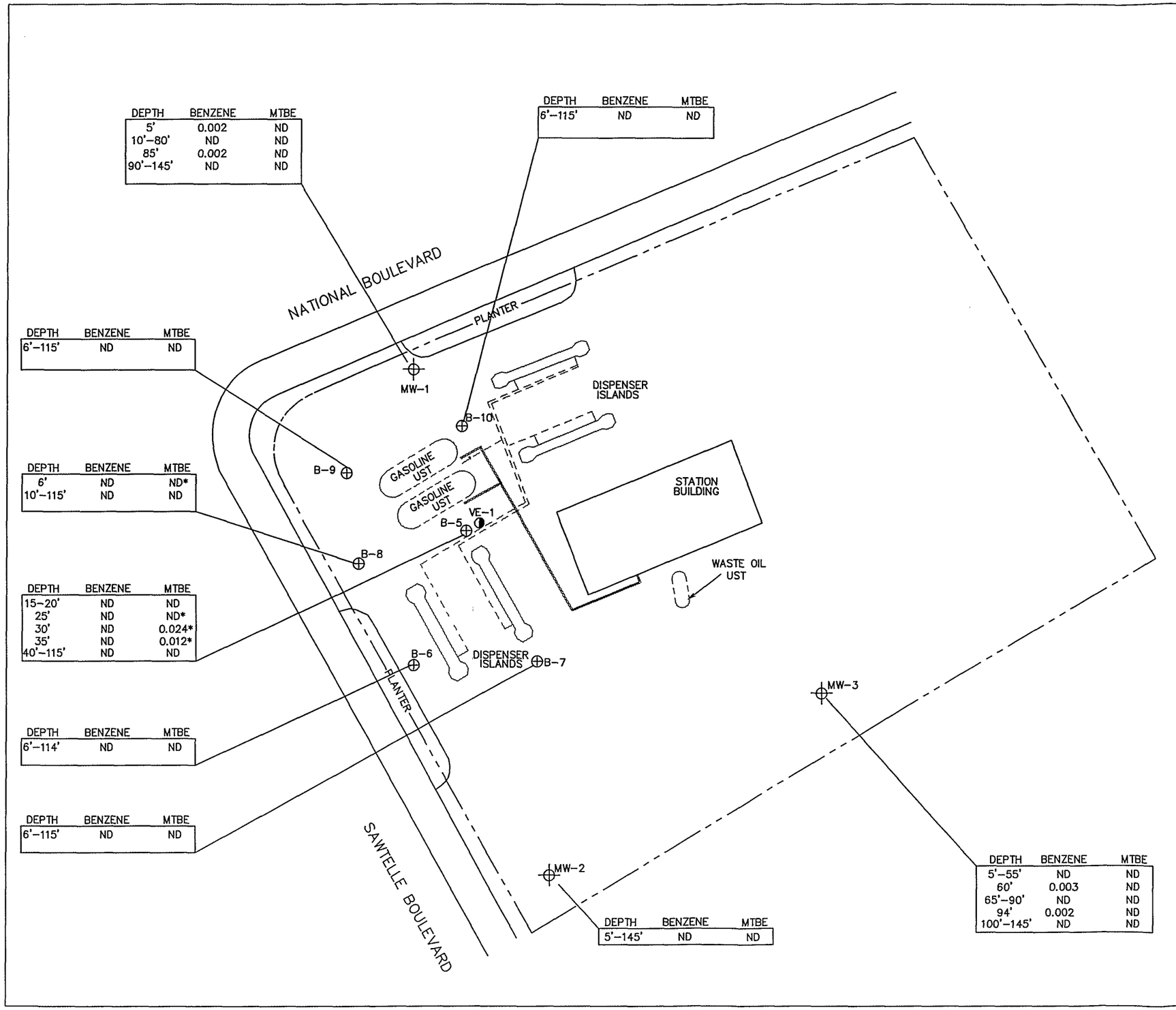
CROSS SECTION B-B'

76 (TOSCO) STATION 4357
11280 National Boulevard
Los Angeles, California

ALTON GEOSCIENCE
Irvine, California

FIGURE 4

20-0368 X sect B-B' 3/29/98 MLW



N

LEGEND

B-5 ⊕ Hollow Stem Auger Boring

MW-1 ⊕ Groundwater Monitoring Well

DEPTH	BENZENE	MTBE
6'	ND	0.007

Depth (fbg) and Soil Sample Results (mg\kg)

SCALE (FEET)

0 30 60

NOTES:

Soil samples analyzed using EPA method 8020.

UST =underground storage tank
mg/kg =milligram per kilogram
ND =not detected above practical quantitation limit (PQL).
MTBE =methyl tertiary butyl ether
fbg =feet below grade
* = soil samples analyzed using EPA method 8260

SOURCE MAP:
Asbuilt diagram dated 7/93 provided by Tosco.

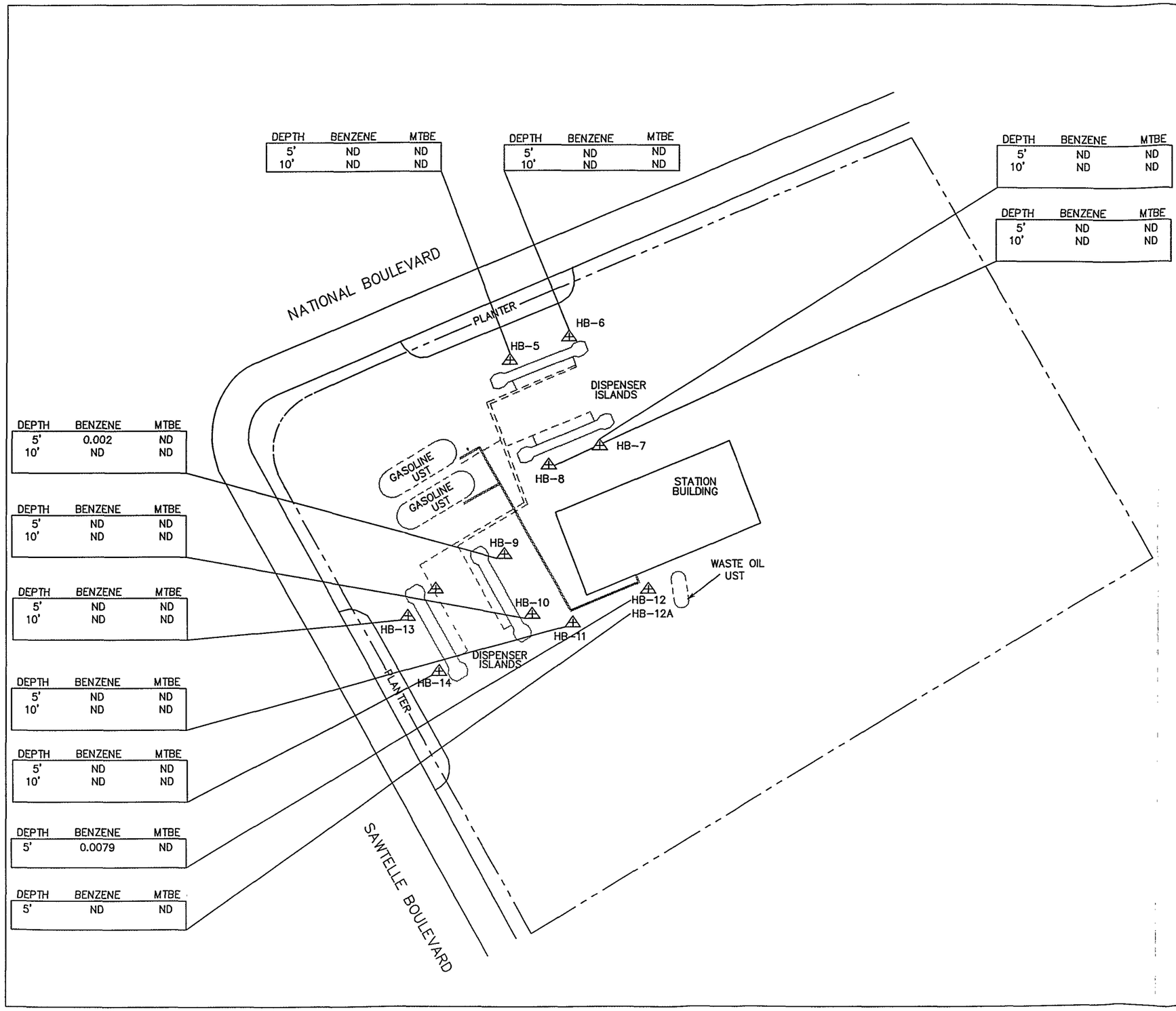
SOIL SAMPLE RESULTS (DEEP BORINGS)

76 (Tosco) Station 4357
11280 National Boulevard
Los Angeles, California

ALTON GEOSCIENCE
Irvine, California

FIGURE 5

200368/site(ac) 3/19/98 MLW



N

LEGEND

Hand auger boring

DEPTH	BENZENE	MTBE
6'	ND	ND

Depth and Soil Sample Results (mg/kg)

SCALE (FEET)

0 30 60

NOTES:

Soil samples analyzed using EPA method 8020.

UST = underground storage tank.

mg/kg = milligram per kilogram

ND = Not detected above practical quantitation limit (PQL).

SOURCE MAP:

Asbuilt diagram dated 7/93 provided by Tosco.

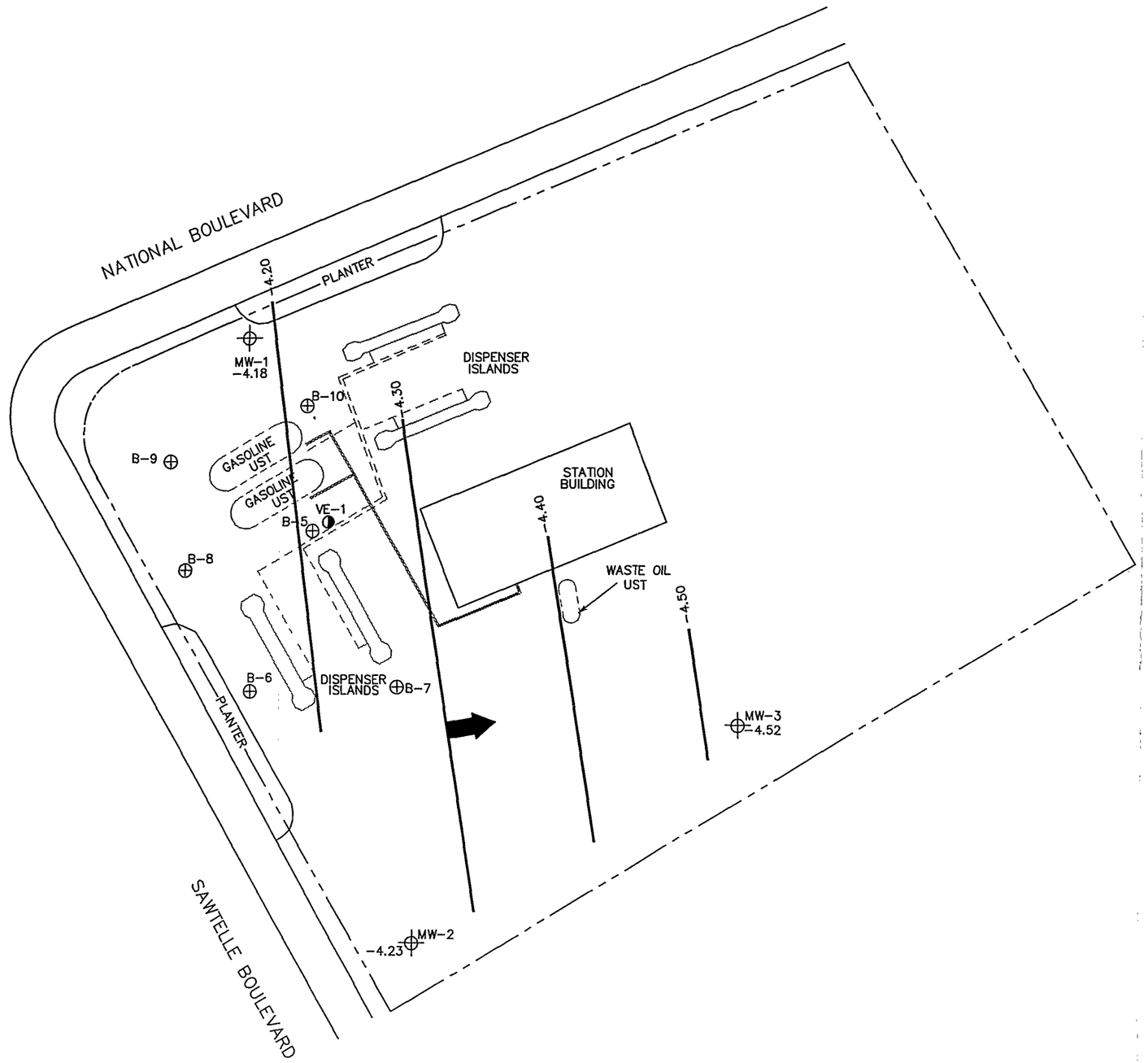
SOIL SAMPLE RESULTS (HAND-AUGERED BORINGS)

76 (Tosco) Station 4357
11280 National Boulevard
Los Angeles, California

ALTON GEOSCIENCE
Irvine, California

FIGURE 6

200368/site(ac) 3/19/98 MLW



N

LEGEND

MW-3 -4.52 — Monitoring Well With Groundwater Elevation (In Feet)

-4.40 — Groundwater Elevation Contour (Contour Interval = 0.10 foot)

General Direction of Groundwater Flow

SCALE (FEET)

0 30 60

NOTE:

Contour lines are in interpretive based on fluid level measured in monitoring wells. Elevations are in feet above mean sea level. UST = underground storage tank.

SOURCE MAP: Asbuilt diagram dated (7/93) provided by Tosco

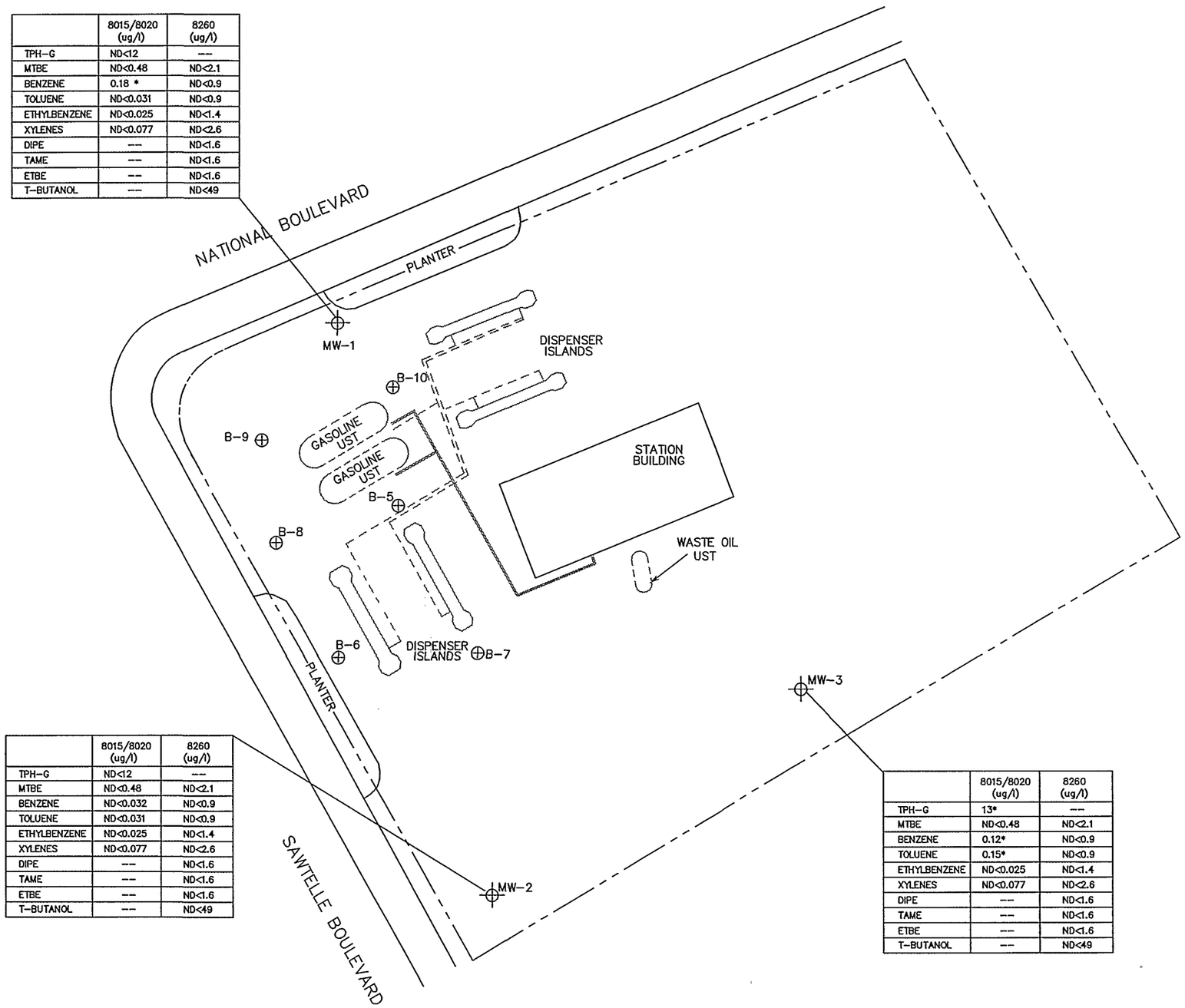
GROUNDWATER ELEVATION CONTOUR MAP
February 23, 1998

76 (Tosco) Station 4357
11280 National Boulevard
Los Angeles, California

ALTON GEOSCIENCE
Irvine, California

FIGURE 7

200368/site(ac) 3/19/98 MLW



	8015/8020 (ug/l)	8260 (ug/l)
TPH-G	ND<12	---
MTBE	ND<0.48	ND<2.1
BENZENE	0.18 *	ND<0.9
TOLUENE	ND<0.031	ND<0.9
ETHYLBENZENE	ND<0.025	ND<1.4
XYLENES	ND<0.077	ND<2.6
DIPE	---	ND<1.6
TAME	---	ND<1.6
ETBE	---	ND<1.6
T-BUTANOL	---	ND<49

	8015/8020 (ug/l)	8260 (ug/l)
TPH-G	ND<12	---
MTBE	ND<0.48	ND<2.1
BENZENE	ND<0.032	ND<0.9
TOLUENE	ND<0.031	ND<0.9
ETHYLBENZENE	ND<0.025	ND<1.4
XYLENES	ND<0.077	ND<2.6
DIPE	---	ND<1.6
TAME	---	ND<1.6
ETBE	---	ND<1.6
T-BUTANOL	---	ND<49

	8015/8020 (ug/l)	8260 (ug/l)
TPH-G	13*	---
MTBE	ND<0.48	ND<2.1
BENZENE	0.12*	ND<0.9
TOLUENE	0.15*	ND<0.9
ETHYLBENZENE	ND<0.025	ND<1.4
XYLENES	ND<0.077	ND<2.6
DIPE	---	ND<1.6
TAME	---	ND<1.6
ETBE	---	ND<1.6
T-BUTANOL	---	ND<49

N

LEGEND

MW-1 Groundwater Monitoring Well

SCALE (FEET)

0 30 60

NOTES:

Water samples analyzed using EPA methods 8015, 8020, and/or 8260.

UST = underground storage tank

ug/l = micrograms per liter

* = estimated concentration below the estimated quatitation limit (EQL)

ND = not detected at concentrations above the method detection limit (MDL).

SOURCE MAP:

Asbuilt diagram dated 7/93 provided by Tosco.

HYDROCARBON CONCENTRATIONS IN GROUNDWATER
February 26, 1998

76 (Tosco) Station 4357
11280 National Boulevard
Los Angeles, California

ALTON GEOSCIENCE
Irvine, California

FIGURE 8

200368/site(ac) 3/19/98 MLW

TABLES

Table 1

RESULTS OF GEOCHEMICAL ANALYSIS OF SOIL SAMPLES - CURRENT INVESTIGATION
January 26 through February 9, 1998
76 Station 4357

Boring/ Well ID	Sample Date	Depth (fbg)	TPH-G (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)
			EPA 8015-m	EPA 8020				EPA 8020 (8260)
Hollow Stem Auger Borings								
B-5	2/9/98	15.25	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003
		20	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0046*
		25.25	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.005 (ND<0.0025)
		30	1.3	ND<0.0003	0.0041†	0.0027	0.035	0.027 (0.024)
		35.5	5.9	ND<0.0003	0.024†	0.21	0.53	0.039 (0.012)
		40.25	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0015*
		45.25	ND<0.05	ND<0.0003	0.0026†	0.0014*	0.011	0.0017*
		50	ND<0.05	ND<0.0003	0.0019*†	ND<0.0003	0.0054	0.0012*
		54.5	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003
		60	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.002*
		65	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0016*
		69.8	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0023*
		74.75	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003
		79.5	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0015*
		84.75	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003
		89.5	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.001*
		94.5	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003
		99.5	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0014*
		104.5	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003
		110.25	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0024*
		114.5	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003
B-6	2/5/98	6.25	ND<0.05	0.0010*	0.0015*†	0.0010*	0.0018*	0.0038*
		9.25	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0026*
		15	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003
		20	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0023*
		25	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003
		30	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0027*
		35	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003
		40	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0016*
		45	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003
		49	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0015*
		55.5	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0017*
		59.25	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0029*
		64	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0018*

Table 1

RESULTS OF GEOCHEMICAL ANALYSIS OF SOIL SAMPLES - CURRENT INVESTIGATION
January 26 through February 9, 1998
76 Station 4357

Boring/ Well ID	Sample Date	Depth (fbg)	TPH-G (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)
			EPA 8015-m	EPA 8020				EPA 8020 (8260)
B-6 (continued)	2/5/98	69	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0019*
		74	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0015*
		79	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0021*
		84.25	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0016*
		90	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0021*
	2/6/98	94	ND<0.05	ND<0.0003	0.0009*	0.0020*	0.0015*	ND<0.0003
		99.25	ND<0.05	ND<0.0003	0.0008*	0.0009*	0.0010*	ND<0.0003
		103.75	ND<0.05	ND<0.0003	0.0012*	ND<0.0003	0.0009*	ND<0.0003
		109.25	ND<0.05	ND<0.0003	0.0011*	ND<0.0003	0.0011*	ND<0.0003
		114	ND<0.05	0.0004*	0.0016*	ND<0.0003	0.0009*	ND<0.0003
B-7	2/6/98	6	ND<0.05	ND<0.0003	0.0009*†	ND<0.0003	0.0005*	ND<0.0003
		9.5	ND<0.05	ND<0.0003	0.0011*†	ND<0.0003	0.0013*	ND<0.0003
		14.5	ND<0.05	ND<0.0003	0.0020*†	0.0009*	0.0009*	ND<0.0003
		19.75	ND<0.05	ND<0.0003	0.0014*†	ND<0.0003	0.0008*	ND<0.0003
		24.75	ND<0.05	ND<0.0003	0.0022†	ND<0.0003	0.0014*	ND<0.0003
		30	ND<0.05	ND<0.0003	0.0023†	0.0003*	0.0008*	ND<0.0003
		34.75	ND<0.05	ND<0.0003	0.0015*†	ND<0.0003	0.0003*	ND<0.0003
		39.75	ND<0.05	ND<0.0003	0.0028†	ND<0.0003	0.0007*	ND<0.0003
		45	ND<0.05	ND<0.0003	0.0014*†	ND<0.0003	0.0004*	ND<0.0003
		50	ND<0.05	ND<0.0003	0.0018*†	ND<0.0003	0.0005*	ND<0.0003
		55	ND<0.05	ND<0.0003	0.0010*†	ND<0.0003	0.0006*	ND<0.0003
	2/7/98	59.25	ND<0.05	ND<0.0003	0.0013*†	ND<0.0003	0.0006*	ND<0.0003
		64.25	ND<0.05	ND<0.0003	0.0017*†	ND<0.0003	0.0008*	ND<0.0003
		69.5	ND<0.05	ND<0.0003	0.0021†	ND<0.0003	0.0012*	ND<0.0003
		74.4	ND<0.05	ND<0.0003	0.0008*†	0.0004*	0.0009*	ND<0.0003
		79.3	ND<0.05	ND<0.0003	0.0010*†	0.0016*	0.0016*	ND<0.0003
		86	ND<0.05	ND<0.0003	0.0014*†	0.0005*	0.0008*	ND<0.0003
		90	ND<0.05	ND<0.0003	0.0005*†	0.0003*	0.0017*	ND<0.0003
		94.4	ND<0.05	ND<0.0003	0.0004*†	ND<0.0003	0.0005*	ND<0.0003
		99.5	ND<0.05	ND<0.0003	0.0003*†	ND<0.0003	0.0004*	ND<0.0003
		104	ND<0.05	ND<0.0003	0.0014*†	0.0004*	0.0007*	ND<0.0003
		109.25	ND<0.05	ND<0.0003	0.0004*†	ND<0.0003	ND<0.0003	ND<0.0003
		114.5	ND<0.05	ND<0.0003	0.0004*†	ND<0.0003	0.0005*	ND<0.0003

Table 1

RESULTS OF GEOCHEMICAL ANALYSIS OF SOIL SAMPLES - CURRENT INVESTIGATION
January 26 through February 9, 1998
76 Station 4357

Boring/ Well ID	Sample Date	Depth (fbg)	TPH-G (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)
			EPA 8015-m	EPA 8020				EPA 8020 (8260)
B-8	1/29/98	6.5	ND<0.05	ND<0.0003	0.0027†	ND<0.0003	ND<0.0003	0.007 (ND<0.0025)
		10.5	ND<0.05	ND<0.0003	0.0019*†	ND<0.0003	ND<0.0003	0.0041*
		15.5	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0037*
		21	0.7	ND<0.0003	0.009†	0.004	0.019	0.0018*
		26	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003
		30.5	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003
		36	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0048*
		40.5	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0044*
		44.75	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003
		50.5	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003
		55.4	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0048*
		60	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003
		65	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003
		70	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003
		75	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0023*
		80	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003
		85	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003
		90	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003
		95.25	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0024*
		100	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0039*
		104.75	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0022*
		110	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0026*
		114.75	ND<0.05	ND<0.0003	0.0019*†	ND<0.0003	ND<0.0003	0.0049* (ND<0.0025)
B-9	1/30/98	6.25	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0039*
		10.25	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0033*
		15.75	ND<0.05	ND<0.0003	0.0011*†	ND<0.0003	ND<0.0003	0.0020*
		21	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	0.0024	0.0033*
	2/2/98	25.75	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0048*
		30.5	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	0.0012*	0.0016*
		35.5	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0048*
		40.5	ND<0.05	0.0010*	0.0017*†	ND<0.0003	0.0015*	0.0023*
		45.5	ND<0.05	ND<0.0003	0.0023†	ND<0.0003	ND<0.0003	0.0020*
		50.75	ND<0.05	0.0011*	0.0027†	ND<0.0003	0.0016*	0.0024*
		55	ND<0.05	0.0014*	0.0019*†	ND<0.0003	0.0016*	0.0026*

Table 1

RESULTS OF GEOCHEMICAL ANALYSIS OF SOIL SAMPLES - CURRENT INVESTIGATION
January 26 through February 9, 1998
76 Station 4357

Boring/ Well ID	Sample Date	Depth (fbg)	TPH-G (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)
			EPA 8015-m	EPA 8020				EPA 8020 (8260)
B-9 (continued)	2/2/98	60.25	ND<0.05	ND<0.0003	0.0019*†	ND<0.0003	ND<0.0003	0.0041*
		65.4	ND<0.05	ND<0.0003	0.0020*†	ND<0.0003	ND<0.0003	0.0044*
		70.25	ND<0.05	ND<0.0003	0.0022†	ND<0.0003	0.0013*	0.0013*
		75.25	ND<0.05	ND<0.0003	0.0017*†	ND<0.0003	ND<0.0003	0.0044*
		80	ND<0.05	ND<0.0003	0.0041†	ND<0.0003	ND<0.0003	ND<0.0003
		85	ND<0.05	ND<0.0003	0.0017*†	ND<0.0003	ND<0.0003	0.0017*
		90.25	ND<0.05	0.0013*	0.0018*†	ND<0.0003	0.0018*	0.0026*
		95	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003
		100.25	ND<0.05	ND<0.0003	0.0017*†	ND<0.0003	0.0015*	0.0020*
		105.4	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0018*
		110	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003
		115	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0018*
B-10	1/30/98	6.25	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0025*
		12	ND<0.05	ND<0.0003	0.0012*†	ND<0.0003	0.0012*	0.0026*
		17.5	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0049*
		21	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0023*
		25	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0016*
		30.8	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0049*
		36	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003
		41	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0044*
		45	ND<0.05	ND<0.0003	0.0015*†	ND<0.0003	0.0019*	0.0023*
		49.8	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0027*
		55	ND<0.05	ND<0.0003	0.0011*†	ND<0.0003	0.0013*	0.0016*
		60.25	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0033*
		65	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0043*
		70	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0043*
		75	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0038*
		80	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0040*
		85	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0041*
		90	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003
		95	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0015*
		100	ND<0.05	ND<0.0003	0.0014*†	ND<0.0003	ND<0.0003	0.0046*
		105	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0043*
		110	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0049*

Table 1

RESULTS OF GEOCHEMICAL ANALYSIS OF SOIL SAMPLES - CURRENT INVESTIGATION
January 26 through February 9, 1998
76 Station 4357

Boring/ Well ID	Sample Date	Depth (fbg)	TPH-G (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)
			EPA 8015-m	EPA 8020				EPA 8020 (8260)
B-10 (continued)	1/30/98	115	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0028*
Hand Auger Borings								
HB-05	1/28/98	5	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		10	ND<0.20	ND<0.00020	0.002	0.001*	ND<0.00088	ND<0.001
HB-06	1/28/98	5	ND<0.20	ND<0.00020	0.003	ND<0.00029	ND<0.00088	ND<0.001
		10	ND<0.20	ND<0.00020	0.003	0.001*	ND<0.00088	ND<0.001
HB-07	2/9/98	5	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		10	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
HB-08	2/9/98	5	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		10	ND<0.20	ND<0.00020	0.0017*	ND<0.00029	ND<0.00088	ND<0.001
HB-09	2/9/98	5	16	0.0020	0.024	0.11	0.22	ND<0.001
		10	0.39*	ND<0.00020	ND<0.00029	0.0036	0.014	ND<0.001
HB-10	2/9/98	5	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		10	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
HB-11	1/29/98	5	0.68	ND<0.00020	ND<0.00029	0.0013*	ND<0.00088	ND<0.001
		10	ND<0.20	ND<0.00020	ND<0.00029	0.0023	ND<0.00088	ND<0.001
HB-12	1/29/98	5	110	0.0079	0.17	0.78	4.1	0.0079*(ND<0.0025)
HB-12A	2/9/98	5	42	ND<0.00020	0.040	0.12	0.33	ND<0.001
HB-13	1/29/98	5	ND<0.20	ND<0.00020	ND<0.00029	0.0014*	ND<0.00088	ND<0.001
		10	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
HB-14	1/29/98	5	ND<0.20	0.0012*	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		10	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001

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January 26 through February 9, 1998
76 Station 4357

Boring/ Well ID	Sample Date	Depth (fbg)	TPH-G (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)
			EPA 8015-m	EPA 8020				EPA 8020 (8260)
Monitoring Wells								
MW-1	1/26/98	4.75	0.38*	0.002	0.004	ND<0.00029	ND<0.00088	ND<0.001
		10.75	ND<0.20	ND<0.00020	0.003	ND<0.00029	ND<0.00088	ND<0.001
		16	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		20	ND<0.20	ND<0.00020	0.002	ND<0.00029	ND<0.00088	ND<0.001
		25.25	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		31	ND<0.20	ND<0.00020	0.001*	0.001*	ND<0.00088	ND<0.001
		36	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		41	ND<0.20	ND<0.00020	0.002	ND<0.00029	ND<0.00088	ND<0.001
		45.4	ND<0.20	ND<0.00020	0.002	ND<0.00029	ND<0.00088	ND<0.001
		50	ND<0.20	ND<0.00020	0.002	ND<0.00029	ND<0.00088	ND<0.001
		55	ND<0.20	ND<0.00020	0.002	ND<0.00029	ND<0.00088	ND<0.001
		60.4	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		65.4	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		70.4	ND<0.20	ND<0.00020	0.002	0.002	ND<0.00088	ND<0.001
	1/27/98	75	ND<0.20	0.001*	0.003	0.001*	0.004*	ND<0.001
		80.3	ND<0.20	ND<0.00020	0.002	0.001*	0.003*	ND<0.001
		85	ND<0.20	0.002	0.002	ND<0.00029	0.003*	ND<0.001
		90	ND<0.20	ND<0.00020	0.002	ND<0.00029	0.002*	ND<0.001
		95.4	ND<0.20	0.001*	ND<0.00029	0.001*	0.003*	ND<0.001
		99.9	ND<0.20	ND<0.00020	0.001*	ND<0.00029	0.002*	ND<0.001
		105	ND<0.20	ND<0.00020	0.001*	ND<0.00029	0.002*	ND<0.001
		110	ND<0.20	0.001*	ND<0.00029	ND<0.00029	0.003*	ND<0.001
		115	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	0.002*	ND<0.001
		120	ND<0.20	ND<0.00020	ND<0.00029	0.001*	0.004*	ND<0.001
		125	ND<0.20	ND<0.00020	0.001*	ND<0.00029	0.003*	ND<0.001
		130.25	ND<0.20	ND<0.00020	0.001*	ND<0.00029	0.004*	ND<0.001
		131	ND<0.20	0.001*	0.002	0.001*	0.003*	ND<0.001
		135.5	ND<0.20	ND<0.00020	0.001*	0.001*	0.003*	ND<0.001
		145.25	ND<0.20	ND<0.00020	0.001*	ND<0.00029	0.003*	ND<0.001
MW-2	2/2/98	4.75	ND<0.05	0.0018*	0.003†	ND<0.003	0.003	0.0036*
		10	ND<0.05	ND<0.0003	0.0017*†	ND<0.0003	ND<0.0003	0.0045*
		15	ND<0.05	ND<0.0003	0.0014*†	ND<0.0003	ND<0.0003	ND<0.0003
		20	ND<0.05	ND<0.0003	0.0012*†	ND<0.0003	ND<0.0003	0.0047*

Table 1

RESULTS OF GEOCHEMICAL ANALYSIS OF SOIL SAMPLES - CURRENT INVESTIGATION
January 26 through February 9, 1998
76 Station 4357

Boring/ Well ID	Sample Date	Depth (fbg)	TPH-G (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)
			EPA 8015-m	EPA 8020				EPA 8020 (8260)
MW-2 (continued)	2/2/98	25.5	ND<0.05	0.0012*	0.0022†	ND<0.0003	0.0017*	0.0025*
		30	ND<0.05	ND<0.0003	0.0011*†	ND<0.0003	ND<0.0003	0.0021*
		35.5	ND<0.05	ND<0.0003	0.0014*†	ND<0.0003	0.0012*	0.0016*
		40.25	ND<0.05	ND<0.0003	ND<0.0003	ND<0.0003	ND<0.0003	0.0044*
		44.8	ND<0.05	0.0014*	0.0032†	ND<0.0003	0.0020*	0.0026*
		49.5	ND<0.05	0.0013*	0.0021†	ND<0.0003	0.0017*	0.0023*
		54.5	ND<0.05	ND<0.0003	0.0016*†	ND<0.0003	0.0015*	0.0018*
	2/4/98	59.5	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		64.75	ND<0.20	ND<0.00020	0.0026	ND<0.00029	0.0033*	ND<0.001
		69.75	ND<0.20	ND<0.00020	ND<0.00029	0.0011*	ND<0.00088	ND<0.001
		74.5	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		79.5	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		84.75	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		89.5	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		94.5	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		99.75	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		104.25	ND<0.20	ND<0.00020	0.0011*	ND<0.00029	ND<0.00088	ND<0.001
		109.25	ND<0.20	ND<0.00020	0.0019*	ND<0.00029	ND<0.00088	ND<0.001
		114.5	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		119.25	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		124.25	ND<0.20	0.0012*	0.0010*	0.0012*	ND<0.00088	ND<0.001
		129.5	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		134.5	ND<0.20	ND<0.00020	0.0010*	ND<0.00029	ND<0.00088	ND<0.001
		140	ND<0.20	ND<0.00020	0.0042	0.0017*	0.0030*	ND<0.001
		144	ND<0.20	0.0011*	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		145.4	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
MW-3	2/5/98	4.75	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		9.5	ND<0.20	0.0012*	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		15	ND<0.20	0.0015*	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		20	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		25	ND<0.20	ND<0.00020	0.0014*	ND<0.00029	ND<0.00088	ND<0.001
		30.25	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		35.25	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		40.5	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		45	ND<0.20	ND<0.00020	0.0036	ND<0.00029	ND<0.00088	ND<0.001

Table 1

RESULTS OF GEOCHEMICAL ANALYSIS OF SOIL SAMPLES - CURRENT INVESTIGATION
January 26 through February 9, 1998
76 Station 4357

Boring/ Well ID	Sample Date	Depth (fbg)	TPH-G (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)
			EPA 8015-m	EPA 8020				EPA 8020 (8260)
MW-3 (continued)	2/5/98	49.5	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		54.9	ND<0.20	ND<0.00020	0.0021	ND<0.00029	ND<0.00088	ND<0.001
		59.75	ND<0.20	0.0025	0.0018*	0.0014*	0.0028*	ND<0.001
		64.75	ND<0.20	ND<0.00020	0.0023	0.0017*	0.0023*	ND<0.001
		69.7	ND<0.20	ND<0.00020	0.0025	ND<0.00029	ND<0.00088	ND<0.001
		74.5	ND<0.20	ND<0.00020	0.0020	ND<0.00029	ND<0.00088	ND<0.001
		79.5	ND<0.20	0.0011*	0.0026	ND<0.00029	ND<0.00088	ND<0.001
		84.5	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		89.5	ND<0.20	ND<0.00020	0.0020	ND<0.00029	ND<0.00088	ND<0.001
		94	ND<0.20	0.0022	0.0028	0.0017*	0.0033*	ND<0.001
		99.5	ND<0.20	ND<0.00020	0.0022	0.0020	ND<0.00088	ND<0.001
		104.5	ND<0.20	ND<0.00020	0.0017*	ND<0.00029	ND<0.00088	ND<0.001
		109.5	ND<0.20	ND<0.00020	0.0039	ND<0.00029	0.0032*	ND<0.001
		114.5	ND<0.20	ND<0.00020	0.0015*	ND<0.00029	ND<0.00088	ND<0.001
		119.5	ND<0.20	ND<0.00020	0.0021	ND<0.00029	ND<0.00088	ND<0.001
		124.4	ND<0.20	ND<0.00020	0.0024	ND<0.00029	ND<0.00088	ND<0.001
		129.5	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001
		135	ND<0.20	ND<0.00020	0.0021	0.0010*	0.0031*	ND<0.001
		140	ND<0.20	ND<0.00020	0.0022	ND<0.00029	ND<0.00088	ND<0.001
		144.75	ND<0.20	ND<0.00020	ND<0.00029	ND<0.00029	ND<0.00088	ND<0.001

Notes
- TPH-G = total petroleum hydrocarbons with gasoline distinction
- MTBE = methyl tertiary butyl ether
- fbg = feet below grade
- mg/kg = milligrams per kilogram
- ND = not detected at the Method Detection Limit (MDL)
- * = result is estimated, value is between MDL and Estimated Quantitation Limit (EQL)
- † = found in the Method Blank

Table 2A

RESULTS OF GEOTECHNICAL ANALYSIS OF SOIL SAMPLES
PARTICLE SIZE SUMMARY
January 27, 1998 through March 4, 1998
76 Station 4357

Sample ID	Sample Date	Depth (fbg)	Description USCS/ASTM (1)	Median Grain Size (mm)	Particle and Distribution, wt. percent						Silt & Clay
					Gravel	Sand Size			Silt	Clay	
						Coarse	Medium	Fine			
B5-49.5	2/9/98	49.50	Coarse sand	3.184	41.18	20.86	19.12	14.04	(2)	(2)	4.79
B6-55.25	2/5/98	55.25	Coarse sand	1.337	24.61	17.48	33.12	20.02	(2)	(2)	4.76
B7-9.0	2/6/98	9.0	Silt	0.027	0.00	0.00	0.63	14.72	70.43	14.22	84.65
B7-19.25	2/6/98	19.25	Fine sand	0.057	0.00	0.00	4.05	38.28	51.52	6.16	57.67
B10-112.5	3/4/98	112.5	Silt	0.030	0.00	0.00	0.00	11.23	77.35	11.41	88.77
MW1-124.5	1/27/98	124.5	Fine sand	0.186	0.00	0.00	16.87	53.32	25.28	4.53	29.81
MW1-135.0	1/27/98	135.0	Medium sand	0.474	0.00	3.13	54.87	33.16	(Dry Sieve)		8.85
MW1-140.3	1/27/98	140.3	Fine sand	0.187	0.00	0.00	9.59	73.91	13.91	2.58	16.49
MW1-112.5	3/4/98	112.5	Silt	0.031	0.00	0.00	0.81	15.27	71.66	12.25	83.91
MW3-134.5	2/5/98	134.50	Medium sand	0.492	0.00	1.07	55.65	41.22	(2)	(2)	2.07

Notes:
wt. = weight
fbg = feet below grade
(1) = based on Mean from Task
mm = millimeters
(2) = ASTM D422M method used, no individual quantitation for silt and clay ranges

Table 2B

RESULTS OF LABORATORY ANALYSIS OF SOIL SAMPLES
PHYSICAL PROPERTIES DATA
January 27, 1998 through March 4, 1998
76 Station 4357

Sample ID	Sample Date	Sample Depth (fbg)	Sample Orient. (1)	Moisture Content (% wt)	Density Bulk (g/cc)	Density Grain (g/cc)	Effective Porosity (%Vb)	Pore Fluid Saturation, % Pv Water (2)	Pore Fluid Saturation, % Pv Hydrocarbon (3)	Total Organic Carbon mg/kg	25.0 PSI Confining Stress Native Permeability To Air (millidarcy)	25.0 PSI Confining Stress Specific Permeability To Water (millidarcy)	25.0 PSI Confining Stress Specific Hydraulic Conductivity (cm/s)
B5	2/9/98	34.75	V	17.5	1.69	2.64	35.9	77.7	ND	--	0.654	2.21	2.15E-06
	2/9/98	49.50	V	6.5	1.70	2.66	36.1	30.5	ND	<100	41235	255	2.50E-04
	2/9/98	64.50	V	7.3	1.40	2.61	46.6	20.7	ND	<100	4083	281	2.73E-04
B6	2/5/98	29.25	V	16.2	1.67	2.66	37.2	71.4	ND	490	24.0	--	--
	2/5/98	55.25	V	6.3	1.68	2.64	36.2	27.7	ND	--	9188	--	--
	2/6/98	98.75	V	6.8	1.43	2.61	45.0	20.7	ND	--	5307	--	--
B7	2/6/98	9.00	V	22.1	1.52	2.65	42.6	77.5	ND	1000	0.621	--	--
	2/6/98	19.25	V	11.1	1.62	2.64	38.5	44.7	ND	--	689	22.0	2.13E-05
	2/6/98	44.50	V	4.8	1.74	2.65	34.2	23.6	ND	--	14624	--	--
	2/7/98	78.80	V	5.4	1.60	2.61	38.7	19.3	ND	--	22969	--	--
B10	3/4/98	112.5	V	--	--	--	--	--	--	--	--	0.248	2.36E-07†
MW1	1/27/98	124.50	H	15.2	1.64	2.64	38.0	66.9	ND	<100	--	542	5.27E-04
	3/4/98	112.5	V	--	--	--	--	--	--	--	--	0.420	3.99E-07†
MW3	2/5/98	134.50	V	5.9	1.61	2.62	38.7	27.9	ND	--	--	254	2.46E-04

Table 2B

RESULTS OF LABORATORY ANALYSIS OF SOIL SAMPLES
PHYSICAL PROPERTIES DATA
January 27, 1998 through March 4, 1998
76 Station 4357

Sample ID	Sample Date	Sample Depth (fbg)	Sample Orient. (1)	Moisture Content (% wt)	Density		Effective Porosity (%Vb)	Pore Fluid Saturation, % Pv		Total Organic Carbon mg/kg	25.0 PSI Confining Stress		
					Bulk (g/cc)	Grain (g/cc)		Water (2)	Hydrocarbon (3)		Native Permeability To Air (millidarcy)	Specific Permeability To Water (millidarcy)	Specific Hydraulic Conductivity (cm/s)

Notes:

PSI	=	pounds per square inch
% Pv	=	percent pore volume (cubic centimeter)
fbg	=	feet below grade
(1)	=	sample orientation: H = horizontal; V = vertical
% wt	=	percent weight
g/cc	=	grams per cubic centimeter
% Vb	=	percent bulk volume (cubic centimeter)
(2)	=	0.9986 gm/cc used for calculation
(3)	=	0.7500 gm/cc used for calculation
mg/kg	=	milligrams per kilogram
cm/s	=	centimeters per second
ND	=	not detected; see official laboratory report for detection limits
--	=	not analyzed, measured, or collected
†	=	native hydraulic conductivity

Table 2C

RESULTS OF LABORATORY ANALYSIS OF SOIL SAMPLES
ATTERBERG LIMITS DATA
February 5, 1998 through March 4, 1998
76 Station 4357

Sample ID	Sample Date	Sample Depth (fbg)	Moisture Content (% wt)	Liquid Limit	Plastic Limit	Plasticity Index	USCS Class
B5	2/9/98	34.75	19.4	25	19	6	CL-ML
B6	2/5/98	29.25	17.6	35	18	17	CL
B7	2/6/98	9.00	22.1	37	22	15	CL
	2/6/98	19.25			NON-PLASTIC		
B10	3/4/98	112.5	21.4	48	32	16	ML
MW1	3/4/98	112.5	27.7	55	32	23	MH

Notes: fbg = feet below grade
% wt = percent weight

Table 3A

SUMMARY OF GROUNDWATER LEVELS
February 23 through March 23, 1998
76 Station 4357

Sampling Date	Casing Elevation	Depth to Water (feet)	LPH Thickness (feet)	Groundwater Elevation (feet)
MW-1				
2/23/98	124.86	129.04	0.00	-4.18
3/23/98	124.86	128.49	0.00	-3.63
MW-2				
2/23/98	123.22	127.45	0.00	-4.23
3/23/98	123.22	126.50	0.00	-3.28
MW-3				
2/23/98	122.51	127.03	0.00	-4.52
3/23/98	122.51	126.47	0.00	-3.96

Notes: Elevations are in feet above mean sea level (NGVD-1929).
Groundwater elevation calculated as follows:
surface elevation - depth to water + (0.75 x LPH thickness)

LPH = liquid phase hydrocarbons

Table 3B

SUMMARY OF GROUNDWATER CHEMICAL ANALYSIS RESULTS

February 26, 1998

76 Station 4357

Sampling Date	TPH-G (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	o-Xylenes (µg/l)	m,p-Xylenes (µg/l)	MTBE (µg/l)
	EPA 8015m	EPA 8260(8020)					
MW-1							
2/26/98	ND<12	ND<0.90 (0.18*)	ND<0.90 (ND<0.031)	ND<1.4 (ND<0.025)	ND<1.3 (ND<0.032)	ND<2.6 (ND<0.077)	ND<2.1 (ND<0.48)
MW-2							
2/26/98	ND<12	ND<0.90 (ND<0.032)	ND<0.90 (ND<0.031)	ND<1.4 (ND<0.025)	ND<1.3 (ND<0.032)	ND<2.6 (ND<0.077)	ND<2.1 (ND<0.48)
MW-3							
2/26/98	13*	ND<0.90 (0.12*)	ND<0.90 (0.15*)	ND<1.4 (ND<0.025)	ND<1.3 (0.35)	ND<2.6 (ND<0.077)	ND<2.1 (ND<0.48)
Quality Assurance/Quality Control Results							
Equipment Blank							
Probe - 2/26/98	ND<12	ND<0.90 (ND<0.032)	ND<0.90 (0.033*)	ND<1.4 (ND<0.025)	ND<1.3 (ND<0.032)	ND<2.6 (ND<0.077)	ND<2.1 (0.53*)
Pump - 2/26/98	ND<12	ND<0.90 (0.038*)	ND<0.90 (0.039*)	ND<1.4 (ND<0.025)	ND<1.3 (ND<0.032)	ND<2.6 (ND<0.077)	ND<2.1 (ND<0.48)
Trip Blank							
2/26/98	ND<12	ND<0.90 (ND<0.032)	ND<0.90 (ND<0.031)	ND<1.4 (ND<0.025)	ND<1.3 (ND<0.032)	ND<2.6 (ND<0.077)	ND<2.1 (ND<0.48)
Field Blank							
2/26/98	ND<12	ND<0.90 (ND<0.032)	ND<0.90 (0.036*)	ND<1.4 (ND<0.025)	ND<1.3 (ND<0.032)	ND<2.6 (ND<0.077)	ND<2.1 (0.60*)

Table 3B

SUMMARY OF GROUNDWATER CHEMICAL ANALYSIS RESULTS
February 26, 1998
76 Station 4357

Sampling Date	DIPE (µg/l)	TAME (µg/l)	ETBE (µg/l)	t-Butanol (µg/l)
	EPA 8260			
MW-1				
2/26/98	ND<1.6	ND<1.6	ND<1.6	ND<49
MW-2				
2/26/98	ND<1.6	ND<1.6	ND<1.6	ND<49
MW-3				
2/26/98	ND<1.6	ND<1.6	ND<1.6	ND<49
Quality Assurance/Quality Control Results				
Equipment Blank				
Probe - 2/26/98	ND<1.6	ND<1.6	ND<1.6	ND<49
Pump - 2/26/98	ND<1.6	ND<1.6	ND<1.6	ND<49
Trip Blank				
2/26/98	ND<1.6	ND<1.6	ND<1.6	ND<49
Field Blank				
2/26/98	ND<1.6	ND<1.6	ND<1.6	ND<49

Notes:

TPH-G	=	total petroleum hydrocarbons with gasoline distinction
µg/l	=	micrograms per liter
MTBE	=	methyl tertiary butyl ether
DIPE	=	di-isopropyl ether
TAME	=	tertiary-amyl methyl ether
ETBE	=	ethyl tertiary-butyl ether
ND	=	non detect above the Method Detection Limit (MDL)
*	=	estimated concentration, value is between the Estimated Quantitation Limit (EQL) and the MDL

Table 3C

SUMMARY OF GROUNDWATER CHEMICAL ANALYSIS RESULTS
GENERAL CHEMISTRY
76 Station 4357

ANALYTE	SAMPLE ID AND DATE			
	MW-1 (2/26/98) (mg/l)	MW-2 (2/26/98) (mg/l)	MW-3 (2/26/98) (mg/l)	MCL Concentrations (mg/l)
General Chemistry mg/l*				
Chloride	54	60	73	500
Nitrate as NO_3	140	87	120	45
pH (pH units)	7.0	6.9	7.0	6.5 - 8.5
Phosphorous	0.62	0.17	0.16	--
Specific Conductance (μmhos/cm)	1,900	1,800	1,700	1,600
Sulfate	250	240	210	500
Total Alkalinity as $CaCO_3$	560	530	490	--
Dissolved Calcium	170	130	140	--
Dissolved Iron	ND<0.020	ND<0.020	ND<0.020	0.3
Dissolved Magnesium	72	61	66	--
Dissolved Manganese	0.024	ND<0.020	0.11	0.05
Dissolved Potassium	3.2	3.0	4.1	--
Dissolved Sodium	100	130	110	--

Notes:
- MCL = maximum contaminant level (upper primary or upper secondary) as defined by the State of California
- mg/l = milligrams per liter
- * = milligrams per liter unless otherwise noted
- (μmhos/cm) = micromhos per centimeter
- ND = not detected
- -- = not available

Table 4

RESULTS OF QUALITY ASSURANCE / QUALITY CONTROL SAMPLES
January 26 through February 9, 1998
76 Station 4357

Boring / Well ID	Sample Date	TPH-G (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
		EPA 8015-m	EPA 8020				EPA 8020 (8260)
B5ER11	2/9/98	ND<5.4	ND<0.04	0.14*	ND<0.07	ND<0.15	ND<0.12
B5FB11	2/9/98	ND<5.4	ND<0.04	0.12*	ND<0.07	ND<0.15	ND<0.12
B5TB11	2/9/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<0.12
B6ER08	2/5/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<0.12
B6FB08	2/5/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<0.12
B6TB07	2/5/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<0.12
B7ER09	2/6/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<0.12
B7ER10	2/7/98	ND<5.4	ND<0.04	0.07*	ND<0.07	ND<0.15	ND<0.12
B7FB09	2/6/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<0.12
B7FB10	2/7/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<0.12
B7TB09	2/6/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<0.12
B7TB10	2/7/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<0.12
B8FB04	1/29/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<0.12
B8ER04	1/29/98	ND<5.4	ND<0.04	0.10*	ND<0.07	ND<0.15	ND<0.12
B8TB04	1/29/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<0.12
B9TB06	2/2/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<0.12
B9FB06	2/2/98	ND<5.4	0.19*	0.44*	ND<0.07	1.1	ND<0.12
B9ER06	2/2/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	0.68*(0.87*)
B10TB05	1/30/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<0.12
B10FB05	1/30/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<0.12
B10ER05	1/30/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<0.12
HB05FB03	1/28/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<0.12
HB05TB03	1/28/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<0.12
HB06ER03	1/28/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<0.12
HB07ER12	2/9/98	ND<5.4	ND<0.04	0.06*	ND<0.07	ND<0.15	ND<0.12
MW1 ER01	1/26/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<2.5
MW1 ER02	1/27/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<0.12
MW1 FB01	1/26/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<2.5

Table 4

RESULTS OF QUALITY ASSURANCE / QUALITY CONTROL SAMPLES
January 26 through February 9, 1998
76 Station 4357

Boring / Well ID	Sample Date	TPH-G (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
		EPA 8015-m	EPA 8020				EPA 8020 (8260)
MW1 FB02	1/27/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<0.12
MW1 TB01	1/26/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<2.5
MW1 TB02	1/27/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<0.12
MW2 ER07	2/4/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<0.12
MW2 FB07	2/4/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<0.12
MW2 TB07	2/4/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<0.12
MW3ER07	2/5/98	ND<5.4	ND<0.04	0.07*	ND<0.07	ND<0.15	ND<0.12
RIG 04SW	1/26/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<2.5
RIG 11SW	2/4/98	ND<5.4	ND<0.04	ND<0.05	0.09*	ND<0.15	ND<0.12
4357SW	1/28/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	0.42*
TB	2/5/98	ND<5.4	ND<0.04	ND<0.05	ND<0.07	ND<0.15	ND<0.12

Notes:
TPH-G = total petroleum hydrocarbons with gasoline distinction
MTBE = methyl tertiary butyl ether
µg/l = micrograms per liter
ND = non detect above the Method Detection Limit (MDL)
* = result is estimated, value is between MDL and PQL

APPENDIX A

RESULTS OF LABORATORY ANALYSIS OF SOIL SAMPLES - PREVIOUS INVESTIGATIONS

APPENDIX A

HISTORICAL SOIL
SAMPLE LABORATORY RESULTS

Compiled in Montgomery Watson Phase II Subsurface Investigation Report, April, 1993

Table 1 - Laboratory Analyses of Confirmation Soil Boring Samples
Table 2 - Summary of Subsurface Tank Removal Soil Sample Analytical Results
Table 3 - Geotechnical and Chemical Analysis Results for Soil Sample B-1-40'

TABLE 1
LABORATORY ANALYSES OF CONFIRMATION SOIL BORING SAMPLES
UNOCAL STATION NO. 4357
(MARCH 1993)

BORING/ DEPTH (ft)		PID (units)	TFH-G (mg/kg)	TFH-D (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Total Xylene (mg/kg)	Ethylbenzene (mg/kg)
SB-1	15	4	ND		ND	ND	ND	ND
	20	2.6	ND		ND	ND	ND	ND
	30	2.8	ND		ND	ND	ND	ND
	40	1.1	ND		ND	ND	ND	ND
	45	2.4	ND		ND	ND	ND	ND
SB-2	15	3.8	ND		ND	ND	ND	ND
	20	3.8	ND		ND	ND	ND	ND
	30	3.8	ND		ND	ND	ND	ND
	40	3.8	ND		ND	ND	ND	ND
SB-3	15	2.6	ND		ND	ND	ND	ND
	30	3	ND		ND	ND	ND	ND
	40	2	ND		ND	ND	ND	ND
	50	2	ND		ND	ND	ND	ND
B-1	15	35	ND		ND	0.011	0.17	0.03
	20	185	3100	ND<10	ND<0.5	34	520	100
	30	172	97		ND<0.025	0.99	16	2.5
	40	152	960		0.9	70	160	31
	45	40	10		0.007	0.54	1.1	0.16
	50	22	ND		ND	0.051	0.091	0.009
	55	15.2	1.8		ND	0.056	0.069	0.013
	60	24	ND		ND	0.031	0.063	0.009
	65	32	ND		ND	ND	ND	ND
	70	5	ND		ND	0.006	0.035	ND
	75	18	ND		ND	0.005	0.03	0.005
	90	18	ND		ND	ND	0.019	ND
B-2	15	172	8		0.047	0.019	0.052	0.016
	20	152	ND	ND<10	0.19	0.006	0.087	ND
B-3	10	1	ND		ND	ND	ND	ND
	20	1	ND		ND	ND	ND	ND
	30	0	ND		ND	ND	ND	ND
	40	1	ND		ND	ND	ND	ND
B-4	20	0	ND		ND	ND	ND	ND
HB-2	10	1.5	2.3		ND	ND	0.043	0.012
HB-3	10	0	ND		ND	ND	ND	ND
HB-4	10	0	ND		ND	ND	ND	ND

NOTE:
ND indicates constituents not detected above analytical limit:
TFH-G - Gasoline - ND < 1.0 mg/kg
TFH-D - Diesel - ND < 10 mg/kg
Benzene - ND < 0.005 mg/kg
Toluene - ND < 0.005 mg/kg
Ethylbenzene - ND < 0.005 mg/kg
Xylenes - ND < 0.015 mg/kg
Shaded area means results above the detection limits.
Blank space means not analyzed.

TABLE 2
UNOCAL SERVICE STATION #4357
SUMMARY OF SUBSURFACE TANK REMOVAL SOIL SAMPLE ANALYTICAL RESULTS (mg/kg)
(SEPTEMBER 1992)

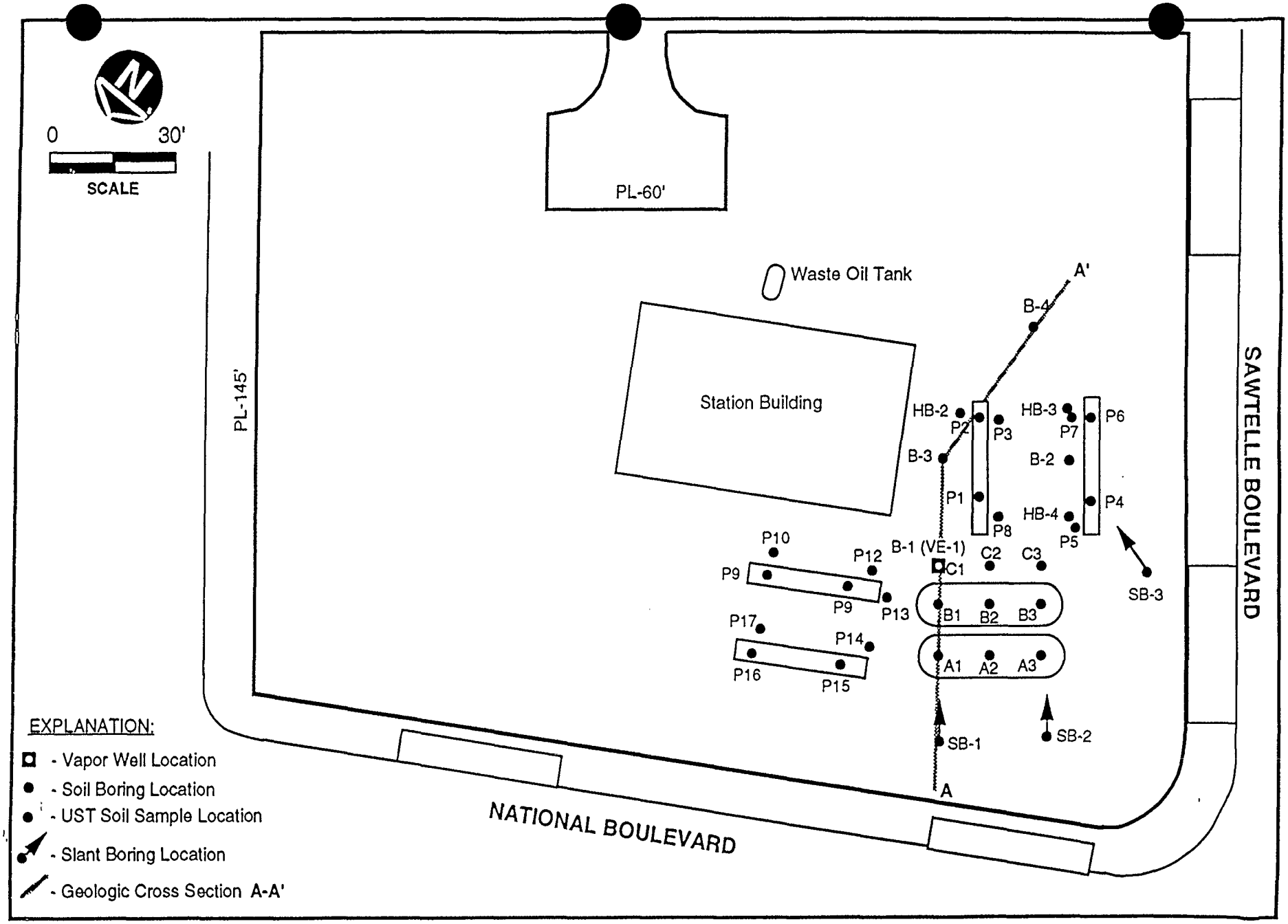
LOG #	Depth (ft)	TPH-G	BENZENE	TOLUENE	ETHYL BENZENE	XYLENES	COMMENTS
A-1	12	ND<10	ND<0.005	ND<0.005	ND<0.005	ND<0.015	Bottom sample- diesel tank
A-2	12	ND<10	ND<0.005	ND<0.005	ND<0.005	ND<0.015	Bottom sample- diesel tank
A-3	12	ND<10	ND<0.005	ND<0.005	ND<0.005	ND<0.015	Bottom sample- diesel tank
B-1	12	ND<10	ND<0.005	ND<0.005	ND<0.005	ND<0.015	Bottom sample- gasoline tank
B-2	12	ND<10	ND<0.005	ND<0.005	ND<0.005	ND<0.015	Bottom sample- gasoline tank
B-3	12	ND<10	ND<0.005	ND<0.005	ND<0.005	ND<0.015	Bottom sample- gasoline tank
C-1	12	3300	ND<0.5	24	79	580	Bottom sample- gasoline tank
C-2	12	ND<10	ND<0.005	ND<0.005	ND<0.005	ND<0.015	Bottom sample- gasoline tank
C-3	12	ND<10	ND<0.005	ND<0.005	ND<0.005	ND<0.015	Bottom sample- gasoline tank
P-1	2	ND<10	ND<0.005	ND<0.005	ND<0.005	0.042	Pump island sample
P-2	2	170	0.55	1.3	1.7	1.3	Pump island sample
P-3	2	ND<10	0.014	0.025	0.047	0.33	Product piping sample
P-4	2	280	1.0	4.7	4.8	32	Pump island sample
P-5	2	ND<20	ND<0.010	ND<0.010	ND<0.010	0.066	Product piping sample
P-6	2	380	0.8	10	5.5	50	Pump island sample
P-7	2	18	0.41	0.22	0.49	2.1	Product piping sample
P-8	2	ND<10	ND<0.005	ND<0.005	0.007	0.057	Product piping sample
P-9	2	ND<10	ND<0.005	ND<0.005	ND<0.005	ND<0.015	Pump island sample
P-10	2	ND<10	ND<0.005	ND<0.005	ND<0.005	ND<0.015	Product piping sample
P-11	2	ND<10	ND<0.005	ND<0.005	ND<0.005	ND<0.015	Pump island sample
P-12	2	ND<10	ND<0.005	ND<0.005	ND<0.005	ND<0.015	Product piping sample
P-13	2	17	0.005	0.005	0.031	0.13	Product piping sample
P-14	2	ND<10	ND<0.005	ND<0.005	ND<0.005	ND<0.015	Product piping sample
P-15	2	ND<10	ND<0.005	ND<0.005	ND<0.005	ND<0.015	Pump island sample
P-16	2	ND<10	ND<0.005	ND<0.005	ND<0.005	ND<0.015	Pump island sample
P-17	2	ND<10	ND<0.005	ND<0.005	ND<0.005	ND<0.015	Product piping sample

TABLE 3
UNOCAL SERVICE STATION #4357
GEOTECHNICAL AND CHEMICAL ANALYSIS RESULTS FOR SOIL SAMPLE B-1-40'
(MARCH 1993)

PARAMETER	METHOD	RESULT
Porosity	API RP-40	34.3 %
Bulk Density	API RP-40	1.73 g/cc
Hydraulic Conductivity	EPA 9100	7.36×10^{-6}
Water Saturation	Dean-Stark	91.6 %
Contaminant Saturation	Dean-Stark	<0.1 %
Air Permeability, Native	API RP-40	13.5 md
Particl Size		see Appendix D
pH	EPA 9045	7.9 units
Nitrogen, as Ammonia	EPA 350.3	ND<10 mg/kg
Phosphate	EPA 300.0	ND<5 mg/kg
Heterotrophic Plate Count	M223	3.0×10^{3} CFU/g
Total Organic Carbons	EPA 415.1	770 mg O2/kg)

K = Permeability
md = Millidarcys
gm = Grams
cc = Cubic Centimeters
CFU/g = Colony Forming Units/grams

FIGURE FROM
REMEDIAL ACTION PLAN, JUNE, 1994
BY
MONTGOMERY WATSON



UNOCAL SERVICE STATION 4357
SITE PLOT PLAN & SOIL BORING LOCATIONS
FIGURE 2

MONTGOMERY WATSON

APPENDIX B

GENERAL FIELD PROCEDURES, BORING LOGS, WELL CONSTRUCTION DETAILS, AND MONITORING WELL PERMITS

APPENDIX

GENERAL FIELD PROCEDURES

A description of the general field procedures used during site investigation and monitoring activities is presented below.

DRILLING AND SOIL SAMPLING

Soil borings are drilled using continuous-flight, hollow-stem augers. Borings that are not completed as monitoring wells are grouted to within 5 feet of the ground surface with a cement/bentonite slurry. The remaining 5 feet is filled with concrete.

Soil samples are obtained for soil description, field hydrocarbon vapor screening, and possible laboratory analysis. Soil samples are retrieved from the borings by one of two methods: 1) continuously, using a 5-foot-long, continuous-core barrel sampler advanced into the soil with the lead auger; sample tubes are driven into the core with a mallet, or 2) at 2.5- or 5-foot intervals, using a standard split-spoon sampler lined with four 1.5-inch-diameter stainless steel or brass sample inserts. The split-spoon sampler is driven approximately 18 inches beyond the lead auger with a 140-pound hammer dropped from a height of 30 inches.

For hand auger borings and hand-held, power-driven auger borings, soil samples are retrieved using a hand-driven slide hammer lined with a 1.5-inch-diameter stainless steel sample tube.

During drilling activities, soil adjacent to the laboratory sample is screened for combustible vapors using a combustible gas indicator (CGI) or equivalent field instrument. For each hydrocarbon vapor screening event, a 6-inch-long by 2.5-inch-diameter sample insert is filled approximately 1/3 full with the soil sample, capped at both ends, and shaken. The probe is then inserted through a small opening in the cap, and a reading is taken after approximately 15 seconds and recorded on the boring log. The remaining soil recovered is removed from the sample insert or sampler, and described in accordance with the Unified Soil Classification System. For each sampling interval, field estimates of soil type, density/consistency, moisture, color, and grading are recorded on the boring logs.

EXCAVATION SOIL SAMPLING

Excavation soil samples are collected either by driving a stainless steel sample tube directly into freshly uncovered soil, or from the backhoe bucket by driving the sample tube into a relatively coherent and undisturbed portion of soil within the bucket. Excavated soil is temporarily stockpiled onsite. Stockpile samples are collected by shoveling below the surface of the pile and inserting a steel sample tube into the soil.

SOIL SAMPLE HANDLING

Upon retrieval, soil samples are immediately removed from the sampler, sealed with Teflon sheeting and polyurethane caps, and wrapped with tape. Each sample is labeled with the project number, boring/well number, sample depth, geologist's initials, and date of collection. After the samples have been labeled and documented in the chain of custody record, they are placed in a cooler with ice at approximately 4 degrees Celsius (°C) prior to and during transport to a state-certified laboratory for analysis. Samples not selected for immediate analysis may be transported in a cooler with ice and archived in a frostless refrigerator at approximately 4°C for possible future testing.

MONITORING WELL INSTALLATION

Monitoring wells are typically constructed of 4-inch-diameter, flush-threaded Schedule 40 PVC blank and screened (0.020-inch slot size) casing. Where possible, the screened interval will extend at least 10 feet above, and 10 to 20 feet below, the top of the groundwater table. The annular space surrounding the screened casing is backfilled with No. 3 Monterey sand (filter pack) to approximately 2 feet above the top of the screened section.

During well construction, the filter pack is completed by surging with a rig-mounted surge block. A 3-foot-thick bentonite annular seal is placed above the filter pack. The remaining annular space is grouted with Portland cement and/or bentonite grout to the surface. Utility access boxes are installed slightly above grade. Locking, watertight caps are installed to prevent unauthorized access to the well, and limit infiltration of surface fluids.

FLUID LEVEL MONITORING

Fluid levels are monitored in the wells using an electronic interface probe with conductance sensors. The presence of liquid-phase hydrocarbons is verified using a hydrocarbon-reactive paste. The depth to liquid-phase hydrocarbons and water is measured relative to the well box top or top of casing. Well box or casing elevations are surveyed to within 0.02 foot relative to a county or city bench mark.

GROUNDWATER PURGING AND SAMPLING

Groundwater monitoring wells are purged and sampled in accordance with standard regulatory protocol. Typically, monitoring wells that contain no liquid-phase hydrocarbons are purged of groundwater prior to sampling so that fluids sampled are representative of fluids within the formation. Temperature, pH, and specific conductance are typically measured after each well casing volume has been removed. Purging is considered complete when these parameters vary less than 10% from the previous readings, or when four casing volumes of fluid have been removed. Samples are collected without further purging if the well does not recharge within 2 hours to 80% of its volume before purging.

The purged water is either pumped directly into a licensed vacuum truck or temporarily stored in labeled drums prior to transport to an appropriate treatment or recycling facility. If an automatic recovery system (ARS) is operating at the site, purged water may be pumped into the ARS for treatment.

Groundwater samples are collected by lowering a 1.5-inch-diameter, bottom-fill, disposable polyethylene bailer just below the static water level in the well. The samples are carefully transferred from the check-valve-equipped bailer to 1-liter and 40-milliliter glass containers. The sample containers are filled to zero headspace and fitted with Teflon-sealed caps. Each sample is labeled with the project number, well number, sample date, and sampler's initials. Samples remain chilled at approximately 4°C prior to analysis by a state-certified laboratory.

CHAIN OF CUSTODY PROTOCOL

Chain of custody protocol is followed for all soil and groundwater samples selected for laboratory analysis. The chain of custody form(s) accompanies the samples from the sampling locality to the laboratory, providing a continuous record of possession prior to analysis.

DECONTAMINATION

Drilling and Soil Sampling

Drilling equipment is decontaminated by steam cleaning before being brought onsite. The augers are also steam cleaned before each new boring is commenced. Prior to use, the sampler and sampling tubes are brush-scrubbed in a Liqui-nox and potable water solution and rinsed twice in clean potable water. Sampling equipment and tubes are also decontaminated before each sample is collected to avoid cross-contamination between borings.

Groundwater Sampling

Purging and sampling equipment that could contact well fluids is either dedicated to a particular well or cleaned prior to each use in a Liqui-nox solution followed by two tap water rinses.

LITHOLOGY
(UNIFIED SOIL CLASSIFICATION SYSTEM)

MAJOR DIVISIONS			TYPICAL NAMES	
COARSE-GRAINED SOILS MORE THAN HALF IS LARGER THAN No. 200 SIEVE	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN No. 4 SIEVE SIZE	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
			GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES
		GRAVELS WITH OVER 12% FINES	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
			GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
	SANDS MORE THAN HALF COARSE FRACTION IS SMALLER THAN No. 4 SIEVE SIZE	CLEAN SANDS WITH LITTLE OR NO FINES	SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
			SP	POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		SANDS WITH OVER 12% FINES	SM	SILTY SANDS, SAND-SILT MIXTURES
			SC	CLAYEY SANDS, SAND-CLAY MIXTURES
FINE-GRAINED SOILS MORE THAN HALF IS SMALLER THAN No. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
			CL	INORGANIC CLAYS OF LOW- TO MEDIUM-PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
			OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH	ORGANIC CLAYS OF MEDIUM- TO HIGH-PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS			Pt	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

SYMBOLS AND NOTES

- SAMPLE INTERVAL
- SAMPLE NOT RECOVERED
- BENTONITE
- CONCRETE
- VOLCLAY GROUT
- FILTER SAND PACK
- STATIC WATER LEVEL
- WATER LEVEL ENCOUNTERED WHEN DRILLING

CLAST SIZE (Field Classification)

Gravel = > 0.2 inches
Sand = 0.003 - 0.2 inches
Silt = < 0.003 (not plastic)
Clay = < 0.003 (plastic)

DESCRIPTORS

Trace = 1% - 5%
Some = 6% -10%
With = 11% -25%
-ly = 26% -40%
And = >40%

SANDS

4 - 10 blows per foot = Loose
10 - 30 blows per foot = Medium Dense
30 -50 blows per foot = Dense
>50 blows per foot = Very Dense

SILTS & CLAYS

2 - 4 blows per foot = Soft
4 - 8 blows per foot = Medium Stiff
8 -15 blows per foot = Stiff
15 -30 blows per foot = Very Stiff
> 30 blows per foot = Hard

USCS = Unified Soil Classification System
ppm = Parts Per Million (mg/Kg)

PID = Photoionization Detector
CGI = Combustible Gas Indicator

ALTON GEOSCIENCE
Irvine, California

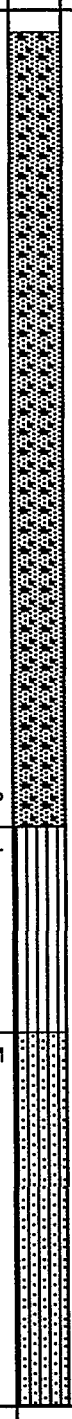
KEY TO BORING LOG

PROJECT NO.: 20-0368	DATE DRILLED: February 9, 1998
LOCATION: 76 Station 4357	LOGGED BY: C. Callegari
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ CME 75

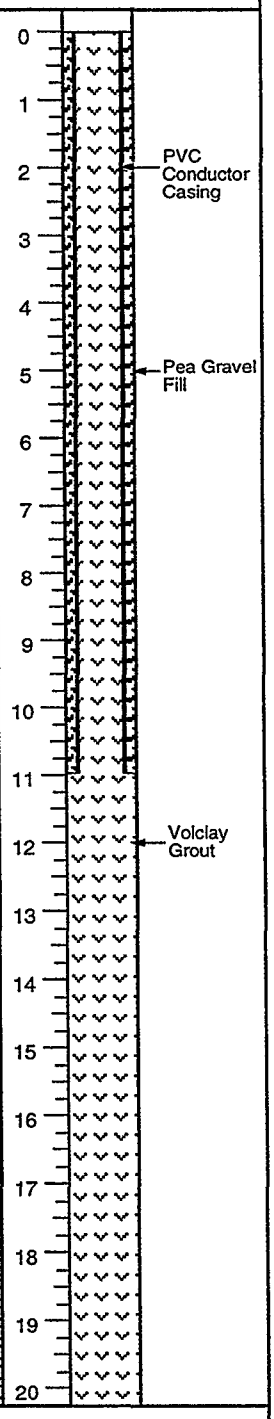
DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 114.5 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				0	Conductor casing to 11 feet.	
				1		
				2		
				3		
				4		
				5		
				6		
				7		
				8		
				9		
				10		
				11	Pea gravel fill.	GP
				12	SILT: olive brown (2.5Y 4/3), very stiff, moist, trace clay.	ML
				13		
8/10/12		1.8		14	3" pea gravel lens.	
					SANDY SILT: light olive brown (2.5Y 5/4), very stiff, moist, fine-grained sand.	
				15	SILTY SAND: olive brown (2.5Y 4/4), medium dense, moist, fine-grained.	SM
				16		
				17	*Fine- to medium-grained sand, some fine gravel.*	
				18		
9/9/10		0.6		19	No gravel.	
				20		

GRAPHIC LOG



BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-5

20 0368 (#4357) 3/26/98 jrw

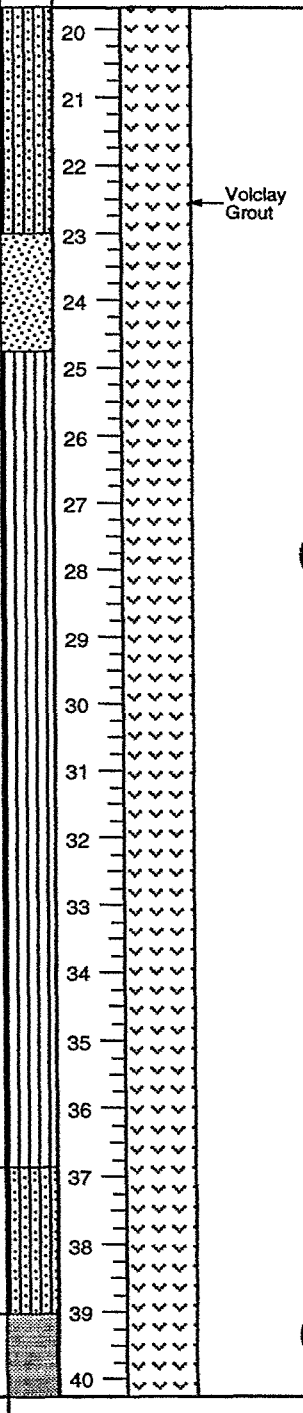
PROJECT NO.: 20-0368	DATE DRILLED: February 9, 1998
LOCATION: 76 Station 4357	LOGGED BY: C. Callegari
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 114.5 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				20	Olive brown (2.5Y 4/3), fine-grained sand, some coarse-grained sand, trace fine gravel.	SM
				21		
				22		
				23		
				24	SAND: olive brown (2.5Y 4/3), dense, moist, fine- to coarse-grained sand, trace fine gravel.	SW
20/23/23		2.6		25	SANDY SILT: light olive brown (2.5Y 5/4), stiff, moist, fine-grained.	ML
				26		
				27		
				28		
		3.1		29	SILT: olive brown (2.5Y 4/4), hard, moist, some clay.	
18/43/30				30		
				31	SANDY SILT: olive brown (2.5Y 4/4), hard, moist, fine-grained.	
				32		
				33		
				34	SILT: olive brown (2.5Y 4/4), hard, moist, with fine-grained sand.	
10/10/13				35		
		17.8			SANDY SILT: olive brown (2.5Y 4/4), hard, moist, fine-grained.	
				36		
				37	SILTY SAND: light olive brown (2.5Y 5/4), medium dense, moist, fine-grained.	SM
				38		
10/11/12		2.7		39	SAND: light olive brown (2.5Y 5/4), medium dense, moist, fine-grained sand with silt.	SP
				40		

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-5

20 0368 (#4357) 3/26/98 jrw

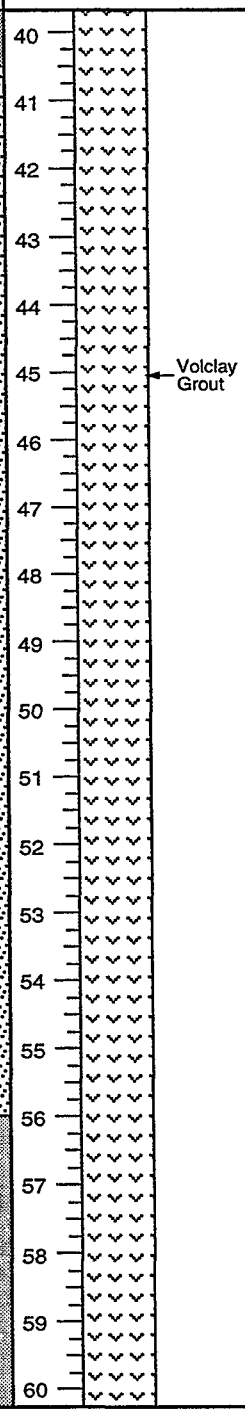
PROJECT NO.: 20-0368	DATE DRILLED: February 9, 1998
LOCATION: 76 Station 4357	LOGGED BY: C. Callegari
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 114.5 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				40		SP
				41	SAND: olive brown (2.5Y 4/4), dense, moist, fine- to coarse-grained sand, with fine gravel, trace coarse gravel.	SW
				42		
				43		
25/36/37		9.5		44	GRAVELLY SAND: olive brown (2.5Y 4/4), very dense, moist, fine- to coarse-grained sand, fine gravel.	
				45		
				46		
				47		
				48		
28/50 for 6"		4.1		49		
				50		
				51	Fine to coarse gravel.	
				52		
				53		
50 for 6"		3.3		54		
				55		
				56	SAND: olive yellow (2.5Y 6/6), very dense, moist, fine- to medium-grained.	SP
				57		
				58		
26/50 for 6"		1.7		59	Slightly moist, fine-grained.	
				60		

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-5

20 0368 (#4357) 3/26/98 jrw

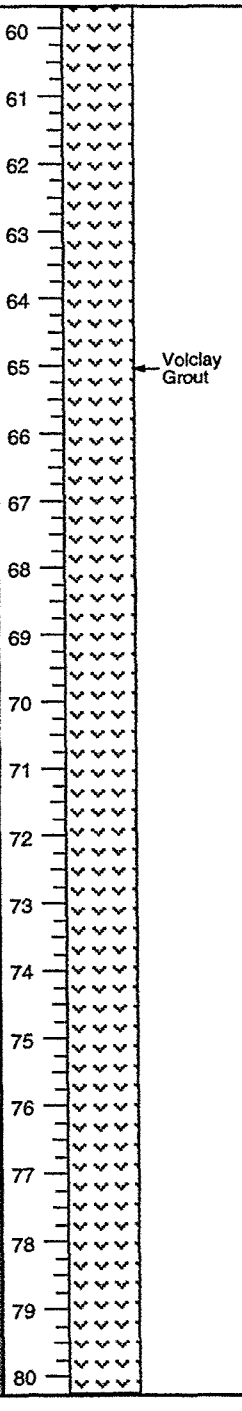
PROJECT NO.: 20-0368	DATE DRILLED: February 9, 1998
LOCATION: 76 Station 4357	LOGGED BY: C. Callegari
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 114.5 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				60		
				61	Light yellowish brown (2.5Y 6/4), dense, fine- to medium-grained.	SP
				62		
				63		
24/50 for 6"		0.7		64	Very dense, fine-grained.	
				65		
				66		
				67		
				68		
30/50 for 4"		0.2		69	Olive yellow (2.5Y 6/6).	
				70		
				71	Fine- to medium-grained sand, trace coarse-grained sand.	
				72	Light yellowish brown (2.5Y 6/3).	
				73		
40/50 for 3"		0.3		74	Pale yellow (2.5Y 7/3).	
				75		
				76	Light yellowish brown (2.5Y 6/4).	
				77		
				78		
60 for 6"		0.2		79	Some iron staining.	
				80		

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-5

20 0368 (#4357) 3/26/98 jrw

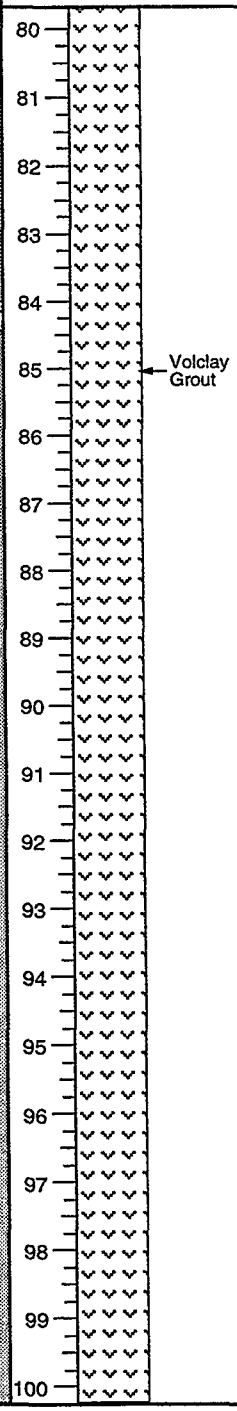
PROJECT NO.: 20-0368	DATE DRILLED: *February 9, 1998*
LOCATION: 76 Station 4357	LOGGED BY: C. Callegari
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 114.5 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				80		SP
					SAND: olive yellow (2.5Y 6/4), very dense, slightly moist, fine- to coarse-grained.	SW
				81	SAND: olive yellow (2.5Y 6/8), very dense, slightly moist, fine- to medium-grained sand, with fine to coarse gravel, trace coarse-grained sand.	SP
				82		
				83		
32/50 for 3"		0.8		84	SAND: olive yellow (2.5Y 6/6), very dense, moist, fine- to coarse-grained sand,with fine gravel, iron oxide staining.	SW
				85	SAND: olive yellow (2.5Y 6/8), very dense, moist, fine-grained, no fine gravel, no iron oxide staining.	SP
				86	3" fine- to medium-grained sand lens, 86.5' - 86.75'.	
				87		
				88		
75 for 6"		0		89	Yellow (2.5Y 7/6), slightly moist, trace medium-grained sand. Olive yellow (2.5Y 6/6), no medium-grained sand.	
				90		
				91		
				92		
				93		
60 for 6"		0		94		
				95	3" fine- to medium-grained sand lens, 95.5' - 95.75'.	
				96		
				97		
				98		
60 for 6"		0		99	Trace silt.	
				100		

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-5

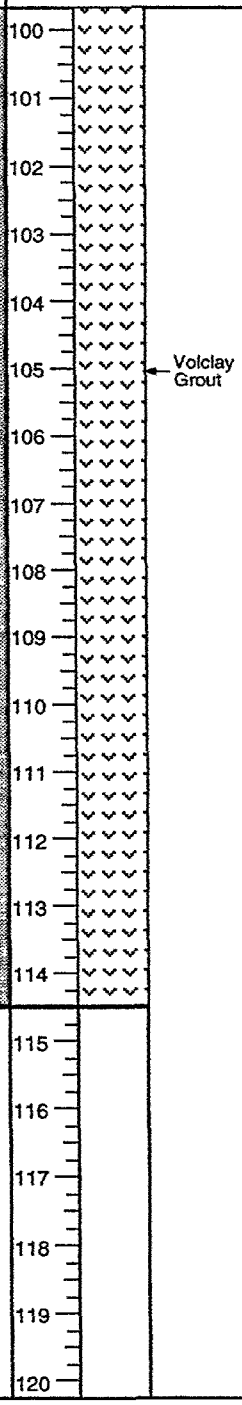
20 0368 (#4357) 3/26/98 jrw

PROJECT NO.: 20-0368	DATE DRILLED: February 9, 1998
LOCATION: 76 Station 4357	LOGGED BY: C. Callegari
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 114.5 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS	GRAPHIC LOG
				100	Pale yellow (2.5Y 7/4).	SP	
				101			
				102			
				103			
60 for 6"		0.8		104	Light olive brown (2.5Y 5/6), with silt.		
				105	Yellow (2.5Y 7/6), fine- to medium-grained sand, iron oxide staining, no silt.		
				106			
				107			
				108			
20/30/50 for 3"		2.7		109	Olive yellow (2.5Y 6/6), fine-grained, trace silt. Light olive brown (2.5Y 5/6), with silt.		
				110			
				111	Light olive brown (2.5Y 5/3), fine- to medium-grained, no silt, no iron oxide staining.		
				112	Pale yellow (2.5Y 7/4).		
				113			
60 for 6"		0		114	Trace coarse-grained sand.		
				115			
				116			
				117			
				118			
				119			
				120			

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-5

20 0368 (#4357) 3/26/98 jrw

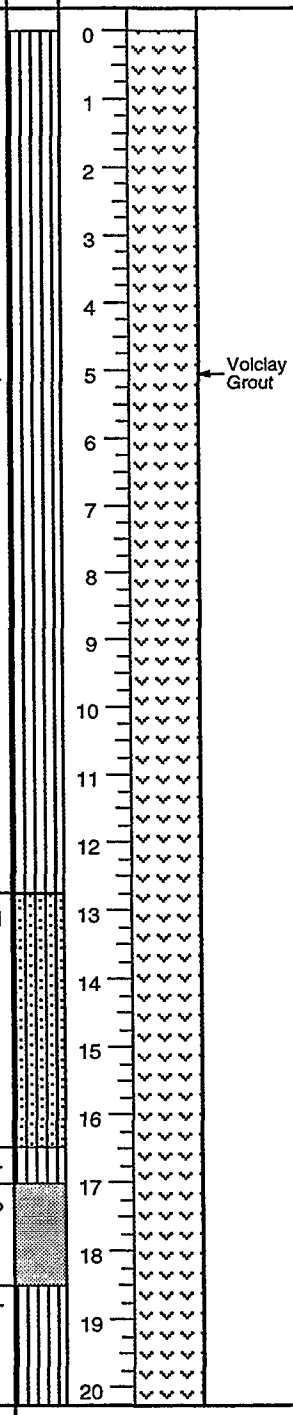
PROJECT NO.: 20-0368	DATE DRILLED: February 5, 1998
LOCATION: 76 Station 4357	LOGGED BY: C. Callegari
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ LAR

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 114 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				0	Hand Augered to 5 feet.	
10/10/15		0		5	SILT: olive brown (2.5Y 4/3), very stiff, slightly moist, some fine-grained sand, trace clay.	ML
10/12/15/16				7	Increase in sand content.	
5/10/12				9	With sand.	
11/11/11		0		10	SANDY SILT: olive brown (2.5Y 4/3), very stiff, moist, fine-grained sand, trace clay.	
15/18/20/23				12		
7/15/26		0		13	SILTY SAND: olive brown (2.5Y 4/4), dense, moist, fine-grained sand, trace clay.	SM
16/12/14				15	No clay.	
				17	SANDY SILT: olive brown (2.5Y 4/3), very stiff, moist, fine-grained sand, trace clay.	ML
12/14/16/16				18	SAND: brown, dense, moist, fine-grained sand, with silt.	SP
13/13/18		0		19	SANDY SILT: brown, hard, moist, fine-grained sand, trace clay.	ML
				20		

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-6

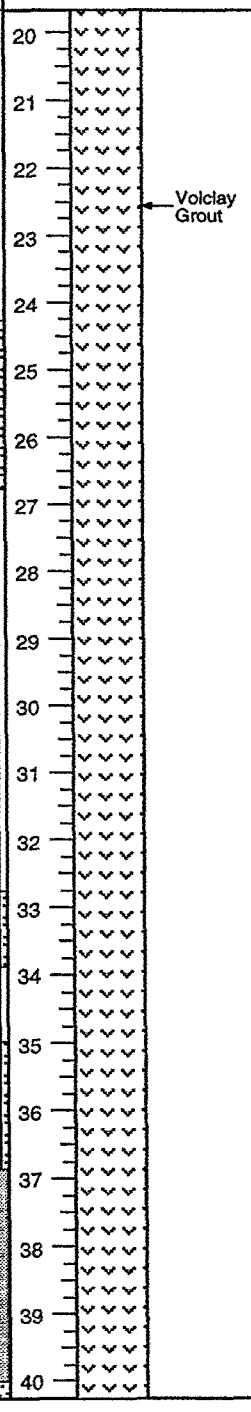
20 0368 (#4357) 3/26/98 jrw

PROJECT NO.: 20-0368	DATE DRILLED: February 5, 1998
LOCATION: 76 Station 4357	LOGGED BY: C. Callegari
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ LAR

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 114 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
15/15/16				20–21	SILT: brown, hard, moist, some fine-grained sand, some clay.	ML
11/13/13/15		0	X	22–23	Iron oxide staining (22.5' - 23').	
11/21/28				24–25	SILTY SAND: olive brown (2.5Y 4/4), dense, moist, fine-grained.	SM
15/17/19			X	25–26		
16/17/17/18		0	X	27–28	SANDY SILT: olive brown (2.5Y 4/4), hard, moist, fine-grained sand, trace clay.	ML
12/14/18				29		
15/20/30				30–31		
14/16/18/19				32		
		0		33	SILTY SAND: olive brown (2.5Y 4/4), dense, moist, fine-grained sand, trace clay.	SM
13/14/15				34	SANDY SILT: olive brown (2.5Y 4/4), very stiff, moist, fine-grained sand, trace clay.	ML
15/17/19			X	35–36	SILTY SAND: brown, dense, moist, fine-grained sand, fine gravel to 0.25" diameter. Very dense.	SM
18/25/35/40		0		37–38	SAND: olive brown (2.5Y 4/4), very dense, moist, fine-grained sand, fine gravel to 0.125" diameter.	SP
15/19/21				39–40	No gravel.	

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-6

20 0368 (#4357) 3/26/98 jrw

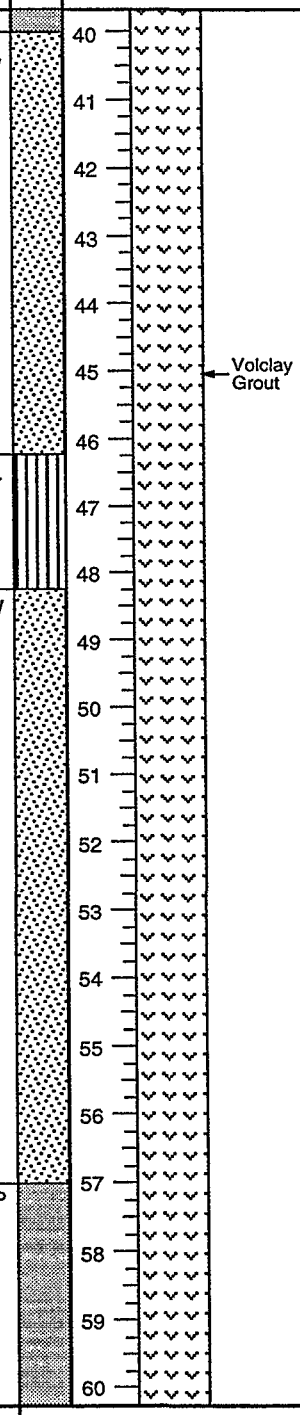
PROJECT NO.: 20-0368	DATE DRILLED: February 5, 1998
LOCATION: 76 Station 4357	LOGGED BY: C. Callegari
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ LAR

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 114 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
25/27/ 50 for 5"				40	GRAVELLY SAND: brown, very dense, moist, fine- to coarse-grained sand, fine (0.25") to coarse (1") gravel.	SW
				41		
27/50 for 6"				42	Trace silt.	
				43		
		0		44	Dense.	
16/23/25				45		
25/31/36				46	Very dense.	
				47	SANDY SILT: light brown, hard, moist, fine-grained sand.	ML
23/27/ 50 for 6"		0		48		
27/50 for 6"				49	GRAVELLY SAND: brown, very dense, moist, fine- to coarse-grained sand, fine (0.25") to coarse (1") gravel, some silt.	SW
				50		
45/50 for 6"				51		
				52		
				53		
				54		
38/50 for 6"		0		55		
48/50 for 6"		0		56		
				57	SAND: yellowish orange, very dense, moist, fine-grained sand, some silt.	SP
27/50 for 4"				58		
50 for 3"		0		59		
				60		

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-6

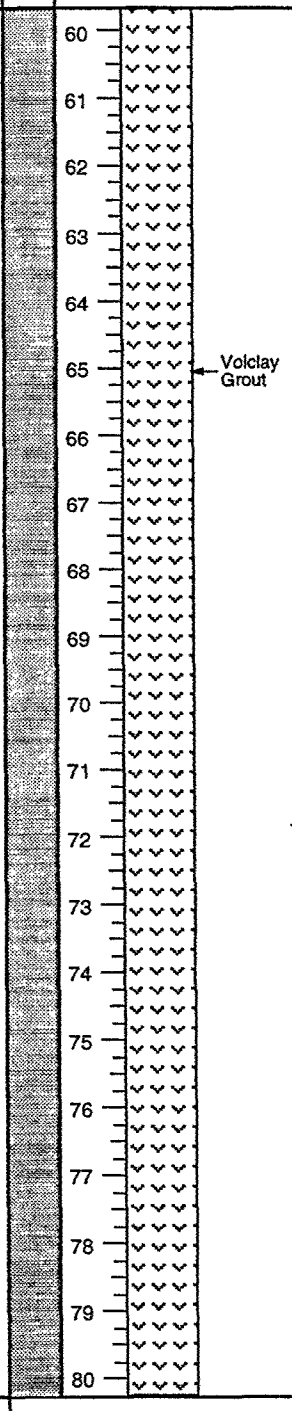
20 0368 (#4357) 3/26/98 jrw

PROJECT NO.: 20-0368	DATE DRILLED: February 5, 1998
LOCATION: 76 Station 4357	LOGGED BY: C. Callegari
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ LAR

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 114 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
60 for 6"				60		
				61	Fine- to medium-grained, trace silt.	SP
30/50 for 6"				62		
				63		
60 for 6"		0		64	Tan brown, fine-grained, some silt.	
30/50 for 3"				65		
				66		
				67	Yellowish orange, with silt.	
40/50 for 1"				68		
50 for 5"		0		69		
50 for 6"				70		
				71		
50 for 4"				72		
				73		
70 for 6"		0		74	Brown, fine- to medium-grained sand, trace silt.	
41/50 for 6"				75		
				76		
70 for 6"				77		
				78		
60 for 6"		0		79		
				80		

GRAPHIC LOG / BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-6

20 0368 (#4357) 3/26/98 jrw

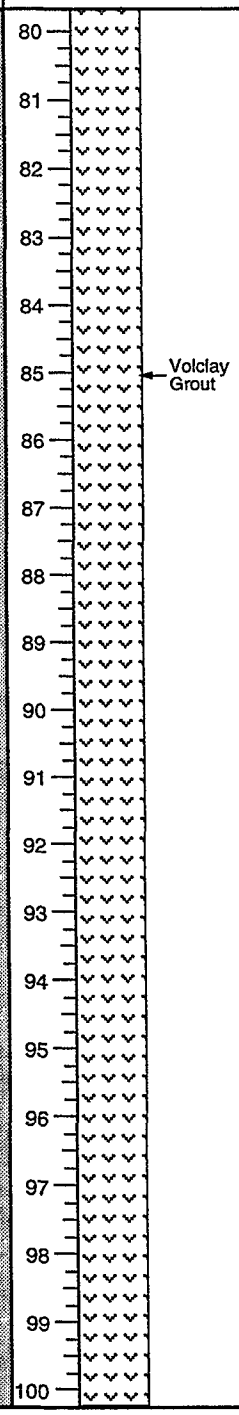
PROJECT NO.: 20-0368	DATE DRILLED: February 5, 1998
LOCATION: 76 Station 4357	LOGGED BY: C. Callegari
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ LAR

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 114 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
42/50 for 3"				80	Yellowish orange, fine- to coarse-grained.	SP
				81		
70 for 6"				82	Fine gravel, iron oxide staining (81.75' - 82').	
				83		
45/50 for 3"		0		84	Fine-grained, some silt, trace fine gravel, no iron oxide staining.	
44/50 for 3"				85	GRAVELLY SAND: yellowish orange, very dense, moist, fine- to medium-grained sand, fine gravel to 0.25" diameter.	
				86	SAND: yellowish orange, very dense, moist, fine-grained sand, some silt, trace fine gravel.	
45/50 for 2"				87	Fine- to coarse-grained, trace fine gravel(87' - 87.25'), no silt.	
				88	Some silt.	
47/50 for 3"				89		
60 for 6"		0		90	Fine-grained.	
70 for 6"				91		
				92		
100 for 6"		0		93		
				94		
100 for 6"				95	Trace silt.	
				96		
45/50 for 3"				97		
				98		
65/70 for 6"		0		99		
				100		

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-6

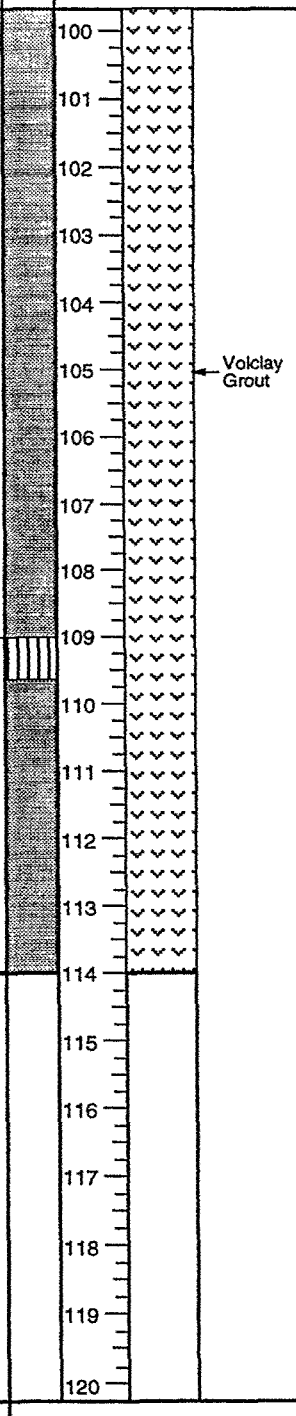
20 0368 (#4357) 3/26/98 jrw

PROJECT NO.: 20-0368	DATE DRILLED: February 5, 1998
LOCATION: 76 Station 4357	LOGGED BY: C. Callegari
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ LAR

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 114 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
50 for 6"				100		
				101	Some silt.	SP
38/50 for 3"				102		
				103		
50 for 5"		0		104		
50 for 3"				105	Fine- to medium-grained sand, iron oxide staining.	
				106		
50 for 6"				107	Trace coarse-grained sand, trace silt, no iron oxide staining.	
				108		
46/50 for 3"		0		109	SILT: olive brown (2.5Y 4/4), hard, moist, some fine-grained sand, with silt.	ML
50 for 6"				110	SAND: light gray, very dense, moist, fine-grained, with silt.	SP
				111		
				112		
				113		
50 for 6"		0		114	Fine- to medium-grained sand, some silt.	
				115		
				116		
				117		
				118		
				119		
				120		

GRAPHIC LOG / BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-6

20 0368 (#4357) 3/26/98 jrw

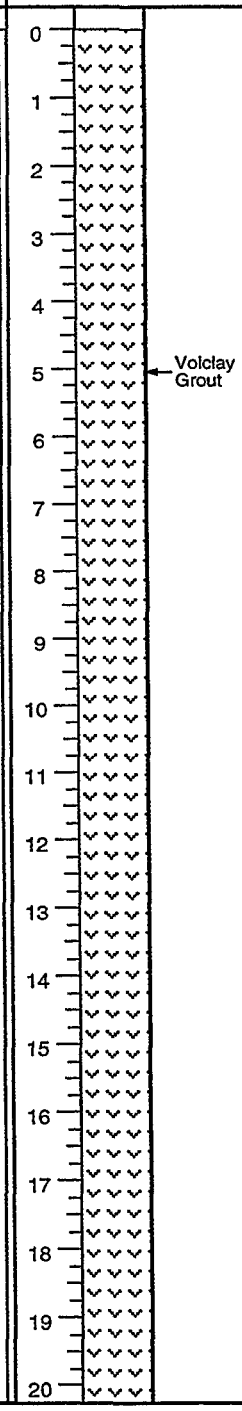
PROJECT NO.: 20-0368	DATE DRILLED: February 6, 7, 1998
LOCATION: 76 Station 4357	LOGGED BY: C. Callegari
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ LAR

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 114.5 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				0	Hand Augered to 5 feet.	
20/27/40		0	X	5	SILT: very dark grayish brown (2.5Y 3/2), hard, moist, with fine- to coarse-grained sand, some clay.	ML
9/10/12/15				7	Dark olive brown (2.5Y 3/3), very stiff, some clay, trace fine-grained sand. Coarse gravel from 7.5' - 7.75'.	
8/8/12		1.0	X	9	No gravel.	
35/50 for 3"				10	Trace coarse-grained sand.	
9/15/20/25				12	Olive brown (2.5Y 4/4), some fine-grained sand, trace coarse-grained sand.	
10/10/20		1.0	X	14	Trace fine gravel to 0.25" diameter.	
12/15/19				15	SANDY SILT: olive brown (2.5Y 4/4), hard, moist, fine- to coarse-grained sand, trace fine gravel to 0.25" diameter.	
10/13/19/20				17		
11/15/18		1.0	X	18		
			X	20		

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-7

20 0368 (#4357) 3/26/98 jrw

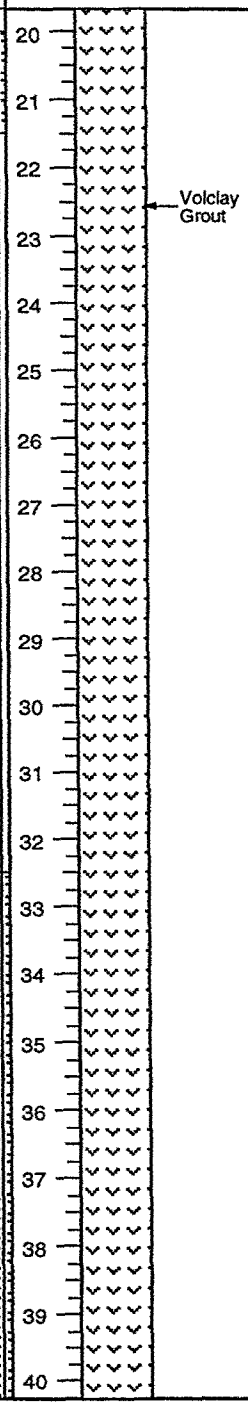
PROJECT NO.: 20-0368	DATE DRILLED: February 6, 7, 1998
LOCATION: 76 Station 4357	LOGGED BY: C. Callegari
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ LAR

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 114.5 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				20		ML
14/14/19				20	SILTY SAND: olive brown (2.5Y 4/4), dense, moist, fine-grained sand, trace coarse-grained sand.	SM
				21		
				22		
11/13/13/19				23	SILT: olive brown (2.5Y 4/4), hard, moist, with fine-grained sand, trace coarse-grained sand.	ML
		0		24	Iron oxide staining (23.5' - 23.75').	
15/15/18					Some fine-grained sand, no coarse-grained sand, iron oxide staining.	
				25	Trace medium-grained sand.	
				26		
13/50 for 6"				27	Some clay.	
28/35/50 for 4"				28		
		0		29	Trace fine-grained sand, no medium-grained sand, no iron oxide staining.	
20/23/40						
17/24/50 for 3"				30	Some fine-grained sand, trace medium-grained sand, trace clay.	
				31		
				32	SANDY SILT: olive brown (2.5Y 4/4), hard, moist, fine- to medium-grained sand, trace fine gravel, trace clay.	
15/20/28/30				33	SILTY SAND: light olive brown (2.5Y 5/4), very dense, moist, fine-grained sand, trace clay.	SM
		10		34	Some coarse gravel.	
25/28/30				35		
14/22/28				36	Some fine to coarse gravel.	
				37	Olive brown (2.5Y 4/4).	
20/24/25/40				38	Coarse gravel (38' - 38.25').	
24/28/29		10		39	Fine- to coarse-grained sand, some fine gravel to 0.25" diameter.	
				40		

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-7

20 0368 (#4357) 326/98 jrw

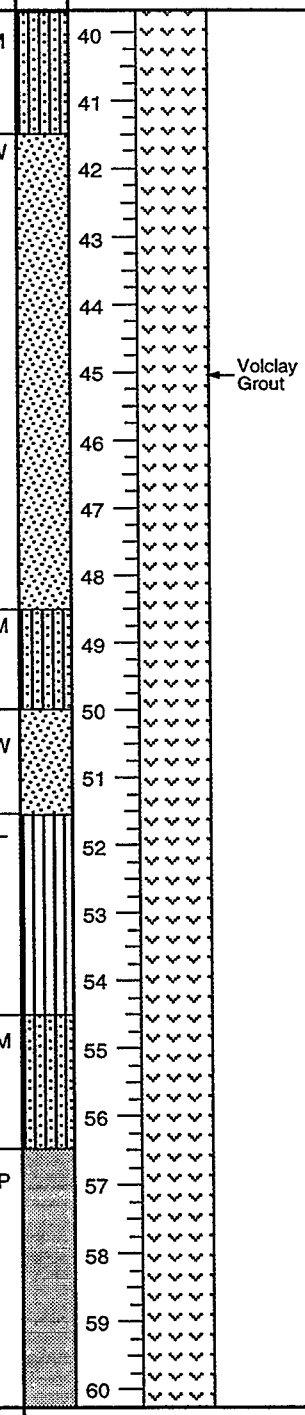
PROJECT NO.: 20-0368	DATE DRILLED: February 6, 7, 1998
LOCATION: 76 Station 4357	LOGGED BY: C. Callegari
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ LAR

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 114.5 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
19/22/28			X	40, 41	3" gravelly sand lens: olive brown (2.5Y 4/4), dense, moist, fine- to coarse-grained sand, fine to coarse gravel. SILTY SAND: olive brown (2.5Y 4/4), dense, moist, fine- to medium-grained sand, some fine to coarse gravel.	SM
22/28/40/45				42, 43, 44	GRAVELLY SAND: light olive brown (2.5Y 5/3), very dense, moist, fine- to coarse-grained sand, fine to coarse gravel.	SW
28/35/40 38/50 for 6"		18		45, 46	Some silt (44.75' - 45'). No silt.	
25/28/45 50 for 4"				47, 48	Trace silt.	
25/35/50 for 6"		5	X	49, 50	GRAVELLY SILTY SAND: light olive brown (2.5Y 5/6), very dense, moist, fine- to coarse-grained sand, fine to coarse gravel.	SM
18/22/28				51	GRAVELLY SAND: light olive brown (2.5Y 5/3), very dense, moist, fine- to coarse-grained sand, fine to coarse gravel, with silt.	SW
25/35/40 50 for 4"			X	52, 53	GRAVELLY SANDY SILT: olive brown (2.5Y 4/4), hard, moist, fine- to coarse-grained sand, fine to coarse gravel, trace clay.	ML
19/26/28		0		54	SANDY SILT: light olive brown (2.5Y 5/4), hard, moist, fine-grained sand.	
				55, 56	SILTY SAND: light olive brown (2.5Y 5/4), very dense, moist, fine- to coarse-grained sand, some fine gravel. 3" silt lens at 55': light olive brown (2.5Y 5/3), hard, moist, some fine-grained sand, iron oxide staining.	SM
30/50 for 1"				57	SAND: light olive brown (2.5Y 5/6), very dense, slightly moist, fine- to medium-grained sand, trace coarse-grained sand.	SP
60 for 6"				58		
35/50 for 5"		0		59, 60	Some coarse-grained sand.	

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-7

20 0368 (#4357) 3/26/98 jrw

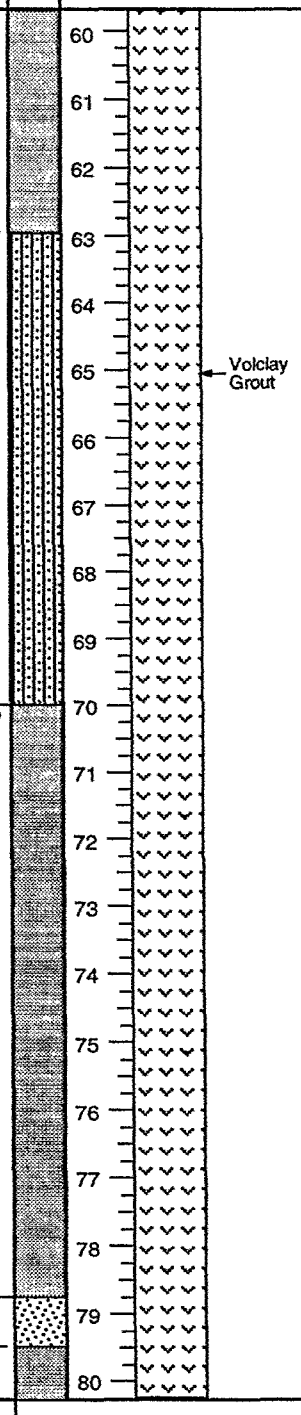
PROJECT NO.: 20-0368	DATE DRILLED: February 6, 7, 1998
LOCATION: 76 Station 4357	LOGGED BY: C. Callegari
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ LAR

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 114.5 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
38/50 for 6"				60	No coarse-grained sand, some silt.	SP
				61	Fine-grained sand, no silt.	
35/50 for 6"				62	Fine- to medium-grained sand, trace silt.	
				63		
29/35/50 for 3"		0		64	SILTY SAND: light olive brown (2.5Y 5/6), very dense, slightly moist, fine-grained.	SM
37/50 for 6"				65		
				66		
40/50 for 3"				67		
				68		
33/50 for 6"		0.2		69	Fine- to medium-grained.	
50 for 6"				70	SAND: olive yellow (2.5Y 6/8), very dense, moist, fine- to medium-grained sand, some coarse-grained sand, some fine gravel to 0.25" diameter.	SP
				71		
50 for 6"				72	Light yellowish brown (2.5Y 6/4), trace silt, no coarse-grained sand, no fine gravel.	
				73		
40/50 for 5"		0.5		74		
35/50 for 6"				75	No silt.	
				76		
				77		
40/60 for 2"				78		
38/50 for 4"		0.5		79	SAND: olive yellow (2.5Y 6/8), very dense, moist, fine- to coarse-grained sand, trace fine gravel.	
				80		

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-7

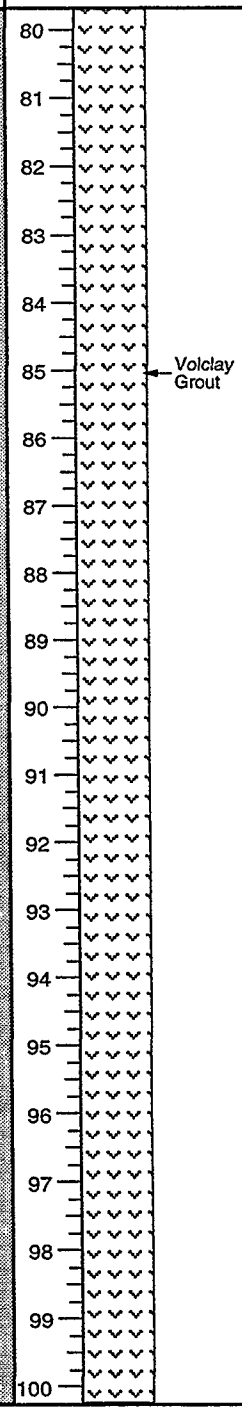
20 0368 (#4357) 3/26/98 jrw

PROJECT NO.: 20-0368	DATE DRILLED: February 6, 7, 1998
LOCATION: 76 Station 4357	LOGGED BY: C. Callegari
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ LAR

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 114.5 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
70 for 6"				80	SAND: olive yellow (2.5Y 6/8), very dense, moist, fine- to medium-grained sand, some coarse-grained sand, trace fine to coarse gravel.	SP
				81		
				82	Some fine to coarse gravel.	
50 for 6"				83		
				84		
		0		85	Light olive brown (2.5Y 5/6), with fine gravel (0.25") to coarse (2") gravel, trace coarse-grained sand, trace silt.	
50/100 for 6"				86		
				87	Olive yellow (2.5Y 6/8), fine-grained sand, some medium-grained sand, trace fine gravel, no silt.	
45/70 for 4"				88		
		0		89	Trace silt, no medium-grained sand, no coarse-grained sand, no fine gravel.	
35/45/50 for 6"				90		
42/50 for 5"				91		
				92		
40/45/50 for 6"				93		
		0		94	Some medium-grained sand.	
47/65 for 5"				95	No medium-grained sand.	
42/50 for 3"				96		
				97		
46/50 for 4"				98		
		0		99		
30/50 for 6"				100		

GRAPHIC LOG / BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-7

20 0368 (#4357) 3/26/98 jrw

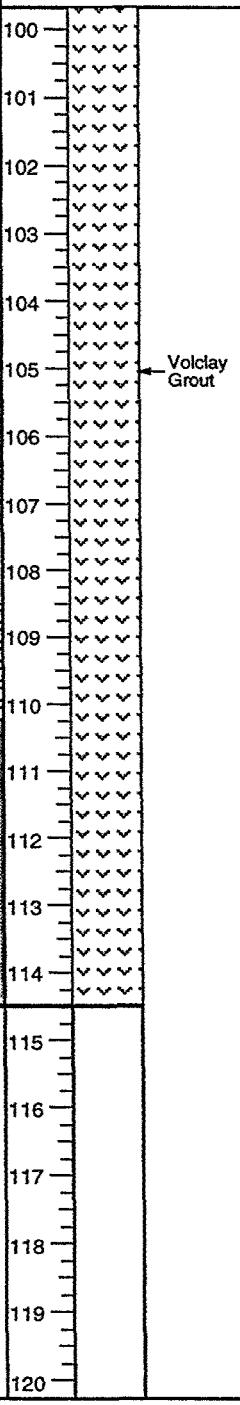
PROJECT NO.: 20-0368	DATE DRILLED: February 6, 7, 1998
LOCATION: 76 Station 4357	LOGGED BY: C. Callegari
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ LAR

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: California Modified Split Spoon
TOTAL DEPTH: 114.5 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
36/50 for 2"				100	Olive yellow (2.5Y 6/6), slightly moist, no silt.	SP
				101		
30/38//50 for 6"				102	Light olive brown (2.5Y 5/4).	
				103		
38/50 for 3"		0		104	Olive yellow (2.5Y 6/6), moist, fine- to medium-grained.	
75 for 6"				105	Trace coarse-grained sand.	
				106		
48/60 for 5"				107	SANDY SILT: light yellowish brown (2.5Y 6/3), hard, slightly moist, fine-grained sand.	ML
				108		
48/50 for 3"		0		109	SILTY SAND: light olive brown (2.5Y 5/3), very dense, slightly moist, fine-grained.	SM
				110		
75 for 5"				111	SAND: light yellowish brown (2.5Y 6/3), very dense, moist, fine-grained sand.	SP
70 for 6"				112	Light yellowish brown (2.5Y 6/4), very dense, slightly moist, fine- to medium-grained sand, trace silt.	
				113		
42/50 for 6"		0		114		
				115		
				116		
				117		
				118		
				119		
				120		

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-7

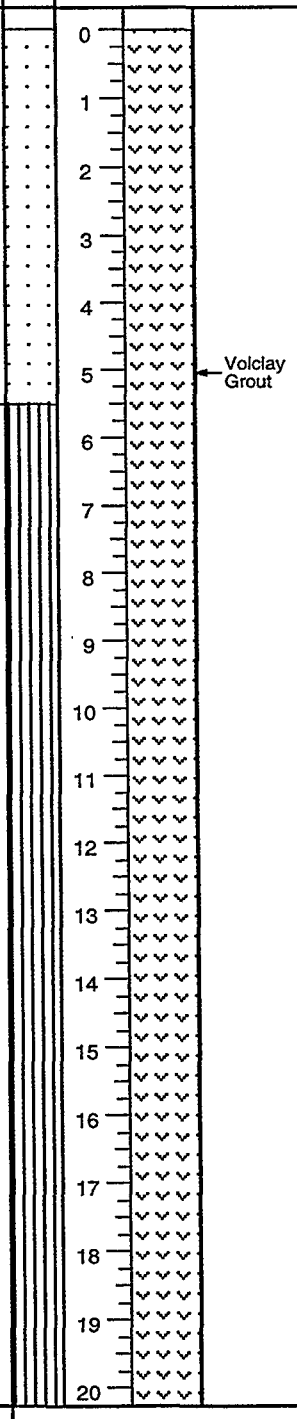
20 0368 (#4357) 3/26/98 jrw

PROJECT NO.:	20-0368	DATE DRILLED:	January 29, 1998
LOCATION:	76 Station 4357	LOGGED BY:	M. Katen, RG
	11280 National Boulevard	APPROVED BY:	G. Fry, RG
	Culver City, California	DRILLING CO.:	West Hazmat/ CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 115 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				0	Hand Augered to 5 feet.	
3/4/5		0		5	Artificial fill to 5.5'. Geofabric in sampler.	
				6	SILT: dark olive brown (2.5Y 3/3), stiff, moist, with clay.	ML
				7	Trace clay.	
		0		9		
5/6/8				10	Trace coarse-grained sand.	
				11	Picked up lost recovery in next core.	
		0.7		14	2" fine-grained sand stringer at 14'.	
				15	Slightly moist, some fine-grained sand.	
10/10/14				16		
				17	SANDY SILT: olive brown (2.5Y 4/4), very stiff, slightly moist, fine-grained sand, occasional coarse-grained sand, trace clay.	
				18		
				19		
		0		20		

GRAPHIC LOG / BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-8

20 0368 (#4357) 3/26/98 jrw

PROJECT NO.: 20-0368	DATE DRILLED: January 29, 1998
LOCATION: 76 Station 4357	LOGGED BY: M. Katen, RG
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 115 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS	GRAPHIC LOG	BOREHOLE DETAIL
8/10/11				20				
				21	SILT: olive brown (2.5Y 4/3), very stiff, slightly moist, some clay, some fine-grained sand, occasional coarse sand grain.	ML		
				22				
				23				
				24	Light olive brown (2.5Y 5/3), trace clay, abundant iron oxide staining, no coarse sand grains.			
10/13/16		0.5		25	Less iron oxide staining.			Volclay Grout
				26				
				27	No iron oxide staining.			
				28				
				29	Dark yellowish brown (10YR 3/6), hard.			
10/18/20				30				
				31				
				32	Occasional fine gravel to 0.6" diameter.			
				33				
				34				
15/17/23		0		35	Occasional coarse-grained sand.			
				36				
				37	SANDY SILT: brown (10YR 4/3), hard, slightly moist, fine-grained sand, trace coarse-grained sand.			
				38				
				39				
				40				

ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-8

20 0368 (#4357) 3/26/98 jrw

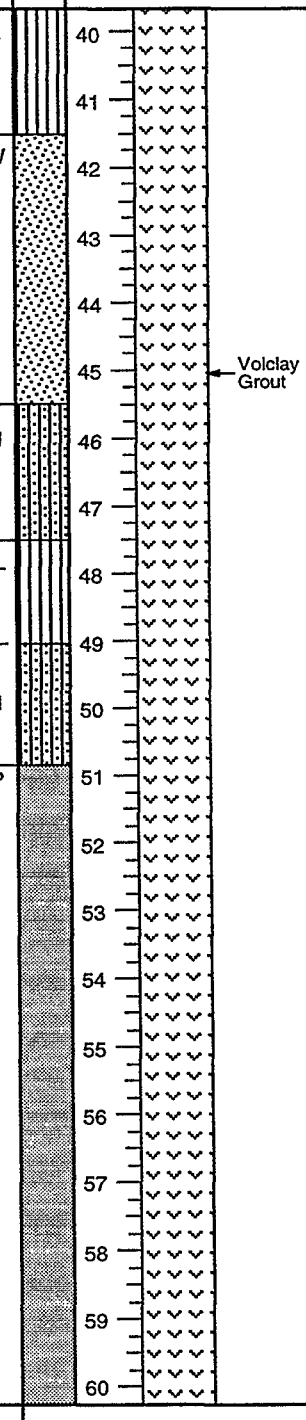
PROJECT NO.: 20-0368	DATE DRILLED: January 29, 1998
LOCATION: 76 Station 4357	LOGGED BY: M. Katen, RG
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 115 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
10/15/20				40, 41		ML
				42, 43, 44, 45	GRAVELLY SAND: light olive brown (2.5Y 5/3), dense, slightly moist, fine- to coarse-grained sand, fine gravel, trace coarse gravel to 0.8" diameter.	SW
50 for 6"		1		46, 47	SILTY SAND: yellowish brown (10YR 5/6), very dense, slightly moist, fine-grained.	SM
				48, 49	SANDY SILT: olive brown (2.5Y 4/4), hard, slightly moist, fine-grained sand, with fine gravel to 0.3" diameter.	ML
50 for 6"				50	SILTY SAND: dark grayish brown (2.5Y 5/2), very dense, slightly moist, fine- to coarse-grained sand, with fine and coarse gravel to 1" diameter.	SM
				51	SAND: yellowish brown (10YR 5/6), very dense, slightly moist, fine-grained sand, with fine gravel to 0.3" diameter. No gravel at 51.5'.	SP
				52	With silt, occasional coarse-grained sand.	
				53	Wet, some silt, no coarse-grained sand.	
28/50 for 5"		0.4		54, 55	Olive brown (2.5Y 4/4), moist, with fine to coarse gravel.	
				56	Grades to medium-grained sand.	
				57	Light yellowish brown (2.5Y 6/4), fine- to medium-grained, grading to fine-grained at 57'. Silty at 57.5' - 58'.	
				58, 59		
70 for 6"		0.3		60		

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-8

20 0368 (#4357) 3/26/98 jrw

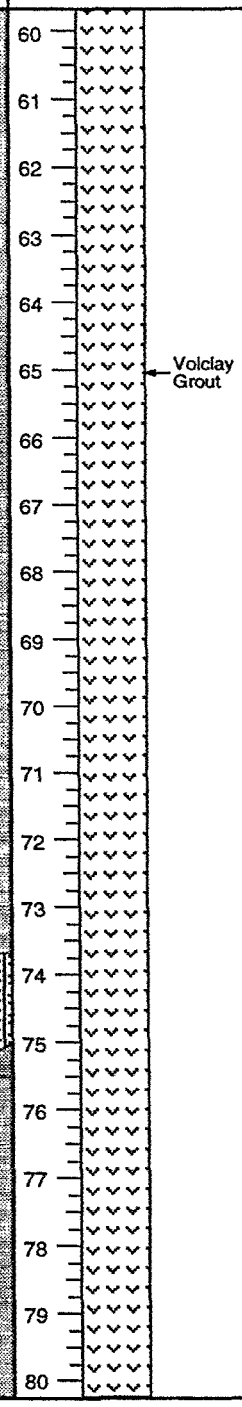
PROJECT NO.: 20-0368	DATE DRILLED: January 29, 1998
LOCATION: 76 Station 4357	LOGGED BY: M. Katen, RG
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 115 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				60		
				61	Pale yellow (2.5Y 7/4), some silt.	SP
				62	Slightly moist, with silt, trace medium-grained sand.	
				63		
				64		
70 for 6"		0.8		65	Light olive brown (2.5Y 5/6), mosit to damp, fine- to medium-grained sand, some silt.	
				66	Olive yellow (2.5Y 6/6), slightly moist, fine-grained sand, with silt.	
				67		
				68		
				69		
100 for 6"		0		70		
				71		
				72		
				73	Fine- to medium-grained sand, trace silt. Light olive gray (5Y 6/2), with abundant iron oxide staining.	
				74	SILTY SAND: brown (10YR 4/3), very dense, moist, fine-grained sand, trace medium-grained sand.	SM
100 for 6"		0.3		75	Increasing sand to 75.6'. *Gradation*	
				76	SAND: brownish yellow (10YR 7/6), very dense, moist, fine-grained.	SP
				77		
				78		
				79		
80 for 6"				80		

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-8

20 0368 (#4357) 3/26/98 jrw

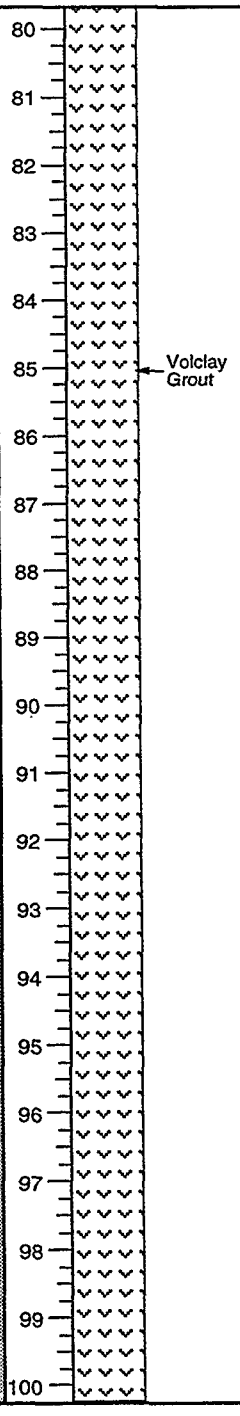
PROJECT NO.: 20-0368	DATE DRILLED: *January 29, 1998*
LOCATION: 76 Station 4357	LOGGED BY: M. Katen, RG
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 115 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				80		
				81		
				82	30% medium-grained sand, some fine gravel to 0.5" diameter to 82.5'.	SP
				83	With silt, no medium-grained sand.	
				84	Pale yellow (2.5Y 7/4), fine-to coarse-grained, 25% medium and coarse grains, with silt, trace fine gravel to 0.6" diameter.	
90 for 6"		0		85	Fine-grained sand.	
				86	SANDY GRAVEL: 50% fine gravel and 15% coarse gravel to 1" diameter.	GP
				87	SAND: pale yellow (2.5Y 7/4), very dense, moist, fine-grained,	
				88		
				89		
80 for 6"				90	Yellow (2.5Y 7/6), some medium and coarse grains, trace silt.	SP
				91	Moist to damp, fine- to medium-grained sand, no silt. Pale yellow (2.5Y 7/3), moist, fine-grained sand, occasional fine gravel to 0.25" diameter, trace silt.	
				92		
				93		
				94	Silt increasing with depth.	
100 for 9"				95	With silt, no fine gravel.	
				96		
				97		
				98		
				99		
50 for 6"				100		

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-8

20 0368 (#4357) 3/26/98 jrw

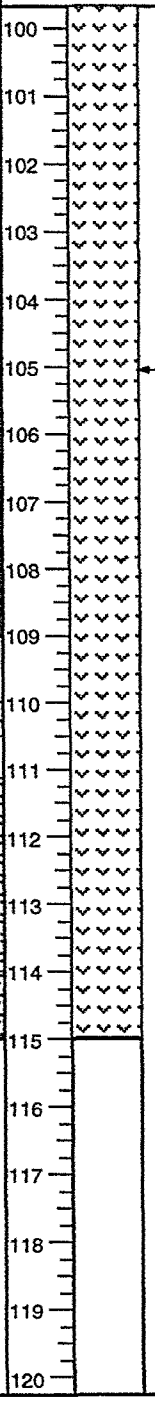
PROJECT NO.: 20-0368	DATE DRILLED: January 29, 1998
LOCATION: 76 Station 4357	LOGGED BY: M. Katen, RG
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 115 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				100		SP
				101		
				102		
				103		
				104		
70 for 6"				105		
				106	Damp at 106' - 106.5'. Moist, fine- to medium-grained.	
				107		
				108		
				109	SILT: light olive brown (2.5Y 5/4), hard, moist, laminated, some iron oxide staining. Picked up 6" of lost core from previous core (109' - 109.5').	ML
73 for 6"		0		110	SAND: olive yellow (2.5Y 6/6), very dense, damp to wet, fine- to coarse-grained, some silt.	SW
				111	SILT: olive gray (5Y 5/2), hard, moist, laminated, to 111.2'.	ML
				112	SILTY SAND: light yellowish brown (2.5Y 6/3), very dense, moist, fine- to coarse-grained sand, trace fine gravel to 0.35" diameter to 113'.	SM
				113	Pale yellow (2.5Y 8/3), slightly moist, fine- to medium-grained sand, 15% medium-grained sand, occasional fine gravel to 0.2" diameter.	
100 for 6"				114	SAND: light yellowish brown (2.5Y 6/4), very dense, moist, fine- to coarse-grained sand.	SP
				115		
				116		
				117		
				118		
				119		
				120		

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-8

20 0368 (#4357) 3/26/98 jrw

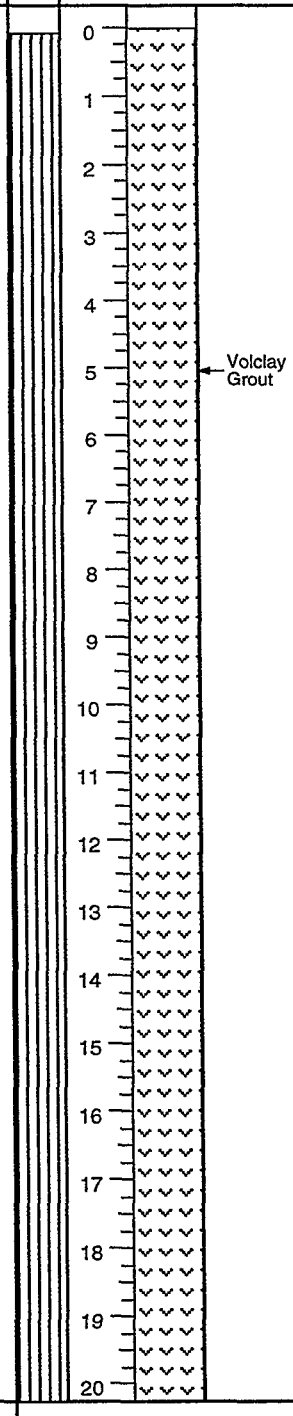
PROJECT NO.: 20-0368	DATE DRILLED: January 30, February 2, 1998
LOCATION: 76 Station 4357	LOGGED BY: M. Katen, RG
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 115 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				0	Hand Augered to 5 feet.	
5/6/7		1.1		5	SILT: dark grayish brown (2.5Y 3/2), stiff, moist, with clay.	ML
				7	Light olive brown (2.5Y 5/3), medium stiff, slightly moist, some fine-grained sand, no clay. Recovered 0.25' of core from previous sample 6.25' - 6.5'.	
5/6/7				10	Stiff.	
				11	Some clay.	
9/7/13				16	SANDY SILT: light olive brown (2.5Y 5/3), very stiff, slightly moist, fine-grained sand.	
				17	Occasional fine gravel to 0.25" diameter.	
-		0.7		20	Olive brown (2.5Y 4/3).	

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-9

20 0368 (#4357) 3/26/98 jrw

PROJECT NO.: 20-0368	DATE DRILLED: January 30, February 2, 1998
LOCATION: 76 Station 4357	LOGGED BY: M. Katen, RG
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 115 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS	GRAPHIC LOG	BOREHOLE DETAIL
				20				
				21	Soft, approximately 30% fine-grained sand, occasional fine gravel to 0.3" diameter.	ML		
					SILT: olive brown (2.5Y 5/3), stiff, moist, with fine-grained sand.			
				22				
				23				
		1.3		24				
24/30/35				25	Hard, with iron oxide mottling.			Volclay Grout
				26				
				27	Picked up 0.25' lost recovery from previous sample (25.75' - 26').			
				28				
		0.7		29				
14/20/25				30				
				31	Picked up 0.5' lost recovery from previous sample (30.5' - 31').			
				32				
				33				
		0		34				
12/25/29				35	SANDY SILT: dark yellowish brown (10YR 4/4), hard, moist, 30-35% fine-grained sand, occasional fine gravel to 0.4" diameter.			
				36				
				37	SILTY SAND: dark yellowish brown (10YR 4/4), very dense, moist, 35% silt, some fine gravel.	SM		
				38				
				39				
		0		40				

ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-9

20 0368 (#4357) 3/26/98 jrw

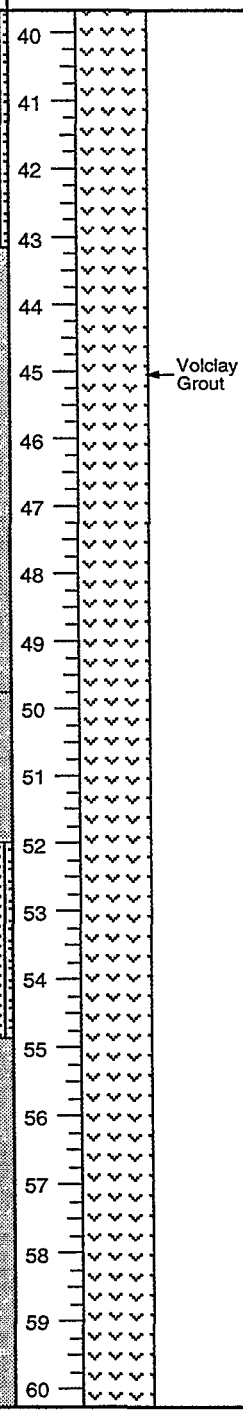
PROJECT NO.: 20-0368	DATE DRILLED: January 30, February 2, 1998
LOCATION: 76 Station 4357	LOGGED BY: M. Katen, RG
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 115 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
13/15/28				40	Dense, 25-30% silt, no fine gravel.	SM
				41		
				42	With gravel, with coarse-grained sand.	
				43		
				44		
30/35/50 for 6"		0.5		45	SAND: olive brown (2.5Y 4/4), very dense, moist, fine- to medium-grained sand, with fine gravel to 0.6" diameter.	SP/ SW
				46	GRAVELLY SAND: olive brown (2.5Y 4/4), very dense, moist, fine- to medium-grained sand, 30% fine and coarse gravel.	
				47		
				48		
				49		
		0		50	SAND: brown (10YR 4/3), dense, moist, fine-grained sand, with silt.	SP
15/18/28				51		
				52	SILTY SAND: olive brown (2.5Y 4/4), very dense, slightly moist, fine- to coarse-grained sand, with fine and coarse gravel.	SM
				53		
				54		
80 for 6"				55	SAND: yellowish brown (10YR 5/4), very dense, moist, fine-grained sand, trace silt.	SP
				56	Pale yellow (2.5YR 7/4), with silt.	
				57		
				58		
30/50 for 6"				59		
		1.8		60		

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-9

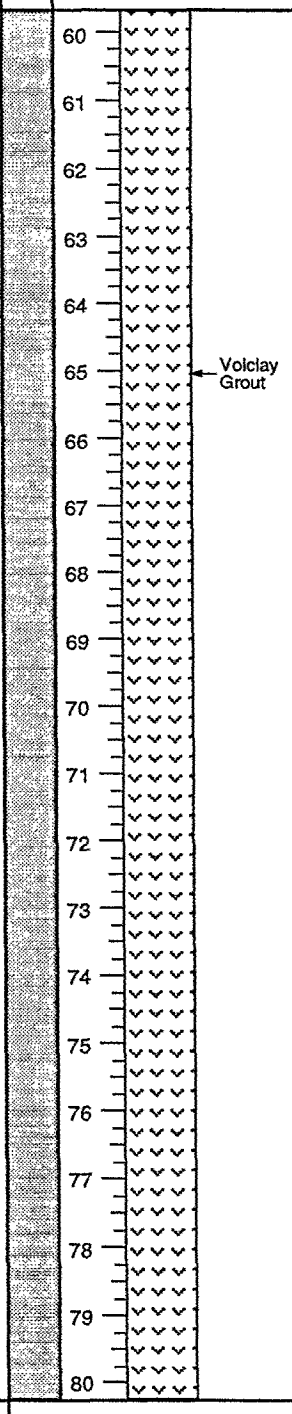
20 0368 (#4357) 3/26/98 jrw

PROJECT NO.: 20-0368	DATE DRILLED: January 30, February 2, 1998
LOCATION: 76 Station 4357	LOGGED BY: M. Katen, RG
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 115 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				60	Some silt.	SP
				61		
				62		
				63		
				64		
50/50 for 4"				65		
				66	Fine- to medium-grained sand, trace silt.	
				67	Fine-grained sand, some silt.	
				68	With silt.	
				69		
50/50 for 5"		1.7		70		
				71		
				72	Fine- to medium-grained sand, occasional fine and coarse gravel to 0.8" diameter.	
				73		
		1.1		74		
35/50 for 4"				75	Yellowish brown (10YR 5/4), fine-grained, some silt, abundant iron oxide staining (75.4' - 76.5').	
				76		
				77		
				78	Gray (10YR 6/1) to yellow (2.5Y 7/6), with silt.	
				79		
85 for 6"		1.2		80		

GRAPHIC LOG / BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-9

20 0368 (#4357) 3/26/98 jrw

PROJECT NO.: 20-0368	DATE DRILLED: January 30, February 2, 1998
LOCATION: 76 Station 4357	LOGGED BY: M. Katen, RG
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 115 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS	GRAPHIC LOG	BOREHOLE DETAIL
				80				
					Yellow (2.5Y 7/6), damp, trace silt.	SP		
				81	With silt.			
				82				
				83				
				84	Yellowish brown (10YR 5/6).			
80 for 6"				85	GRAVELLY SAND: yellowish brown (10YR 5/6), very dense, damp, fine- to coarse-grained sand, 35% fine gravel, occasional coarse gravel to 1" diameter.	SW		Volclay Grout
				86	SAND: yellow (2.5Y 8/6), very dense, moist, fine-grained, stringers with fine gravel at 87.5' and 88.3'.	SP		
				87				
				88				
		0.9		89				
50/50 for 3"				90				
					Increasing silt content.			
				91				
				92				
				93				
				94				
80 for 6"		5.1			With silt.			
				95				
				96				
				97				
				98				
				99				
30/60 for 3"		4.2		100				

ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-9

20 0368 (#4357) 3/26/98 jrw

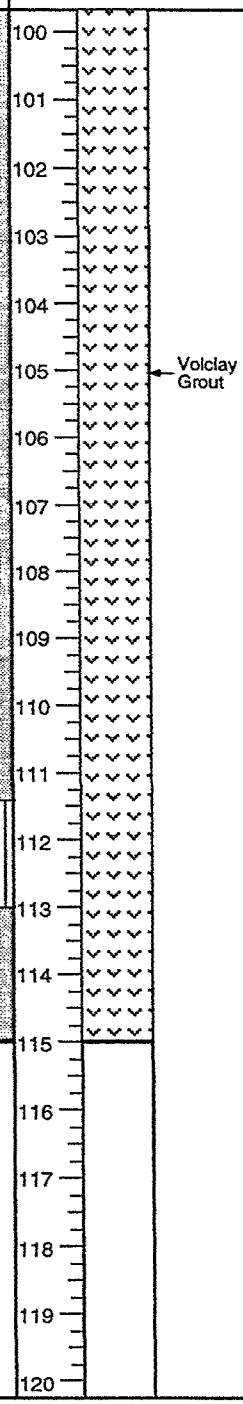
PROJECT NO.: 20-0368	DATE DRILLED: January 30, February 2, 1998
LOCATION: 76 Station 4357	LOGGED BY: M. Katen, RG
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat/ CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 115 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				100	Pale yellow (2.5Y 7/3).	SP
				101		
				102		
				103		
		2.3		104		
30/50 for 5"				105		
				106		
				107	Pale yellow (2.5Y 6/4), fine- to medium-grained sand, some silt.	
				108		
				109		
85 for 6"		0		110	Damp, occasional coarse-grained sand.	
				111	Wet.	
				112	CLAYEY SILT: olive brown to black (2.5Y 4/3 - 2.5/1), hard, moist, with varying amounts of clay , abundant iron oxide staining. 2" black micaceous silt streak at 111.8' - 112'.	ML
				113	SAND: light yellowish brown (2.5Y 6/4), very dense, slightly moist, fine- to coarse-grained sand, with silt.	SP
		0.1		114		
95 for 6"				115	Moist to damp.	
				116		
				117		
				118		
				119		
				120		

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-9

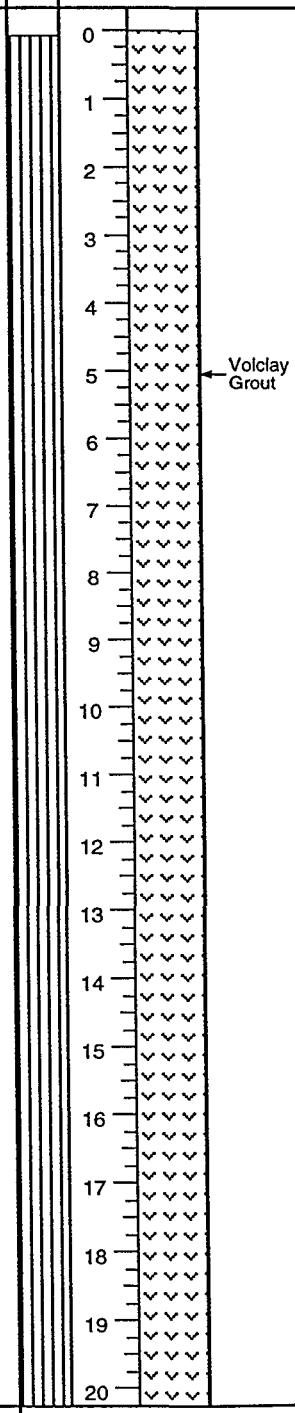
20 0368 (#4357) 3/26/98 jrw

PROJECT NO.: 20-0368	DATE DRILLED: *January 30, 1998*
LOCATION: 76 Station 4357	LOGGED BY: C. Callegari
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat / CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 115.5 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				0	Hand Augered to 5 feet.	
					SILT: dark grayish brown (2.5Y 3/2), moist, trace clay.	ML
				1		
				2		
				3		
				4		
3/4/5		6		5	Stiff.	
				6		
				7	Dark grayish brown (2.5Y 4/2).	
				8		
				9		
				10	Stiff.	
5/6/8		0		11		
				12		
				13		
				14		
				15		
8/8/9		0.4		16	Olive brown (2.5Y 4/3), very stiff, slightly moist, with fine gravel, trace sand.	
				17		
				18		
				19	Some fine gravel, some sand.	
		0		20		

GRAPHIC LOG / BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-10

20-0368 (#4357) 3/27/98 jnw

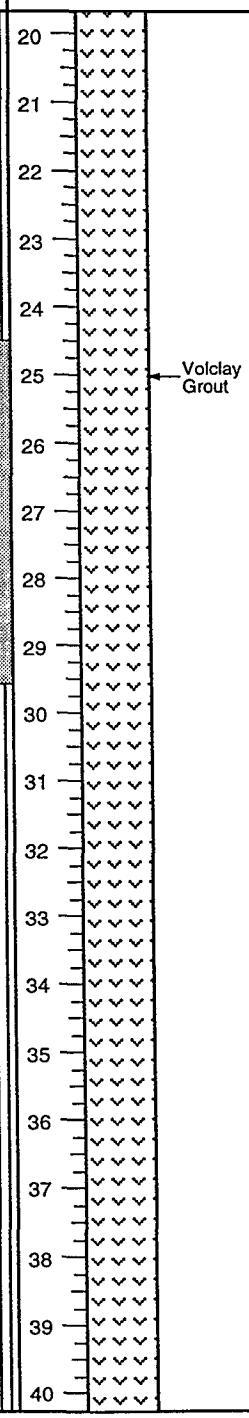
PROJECT NO.: 20-0368	DATE DRILLED: January 30, 1998
LOCATION: 76 Station 4357	LOGGED BY: C. Callegari
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat / CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 115.5 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				20		
				21		
8/8/9				22	Some fine-grained sand, no fine gravel.	ML
				23		
				24		
				25	GRAVELLY SAND: light olive brown (2.5Y 5/6), medium dense, slightly moist, fine-grained sand, fine gravel to 0.25" diameter.	SP
				26		
				27		
50 for 6"				28	Moist to damp, trace coarse gravel.	
				29		
				30	SILT: olive brown (2.5Y 4/4), hard, moist, trace clay.	ML
				31	Dark olive brown (2.5Y 3/3), stiff, slightly moist.	
				32		
25/28/50 for 4"		0		33		
				34	Olive brown (2.5Y 4/4), trace sand.	
				35	Increasing sand content.	
				36	Olive brown (2.5Y 4/3), moist, with sand, trace fine gravel.	
				37		
				38		
				39		
		0.5		40		

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-10

PROJECT NO.: 20-0368	DATE DRILLED: January 30, 1998
LOCATION: 76 Station 4357	LOGGED BY: C. Callegari
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat / CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 115.5 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				40	SANDY SILT: olive brown (2.5Y 4/4), stiff, moist, fine-grained sand, trace clay.	ML
				41		
				42	SAND: light olive brown (2.5Y 5/6), medium dense, moist, fine- to coarse-grained sand, with fine gravel to 0.25" diameter, trace silt.	SW
				43		
				44	GRAVELLY SAND: dark olive brown (2.5Y 3/3), very dense, moist, fine- to coarse-grained sand, fine to coarse gravel, trace silt.	
50 for 6"				45		
				46		
				47	SILTY SAND: dark olive brown (2.5Y 3/3), dense, moist, fine- to medium-grained sand, with increasing silt, with fine gravel.	SM
				48		
				49	SAND: olive brown (2.5Y 4/4), very dense, moist, fine- to coarse-grained sand, with silt, with fine gravel.	SW
65 for 6"				50		
				51		
				52	Fine to coarse gravel (to 1.2" diameter).	
				53		
				54		
78 for 6"		0.5		55		
				56	Fine-grained sand lens from 56' - 56.5', (2.5Y 5/4), moist.	
					Gradation	
				57	SAND: yellow (2.5Y 7/6), medium dense, slightly moist, fine-grained sand, no fine to coarse gravel.	SP
				58		
				59		
32/50 for 3"		0		60		

GRAPHIC LOG

BOREHOLE DETAIL

Volclay Grout

ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-10

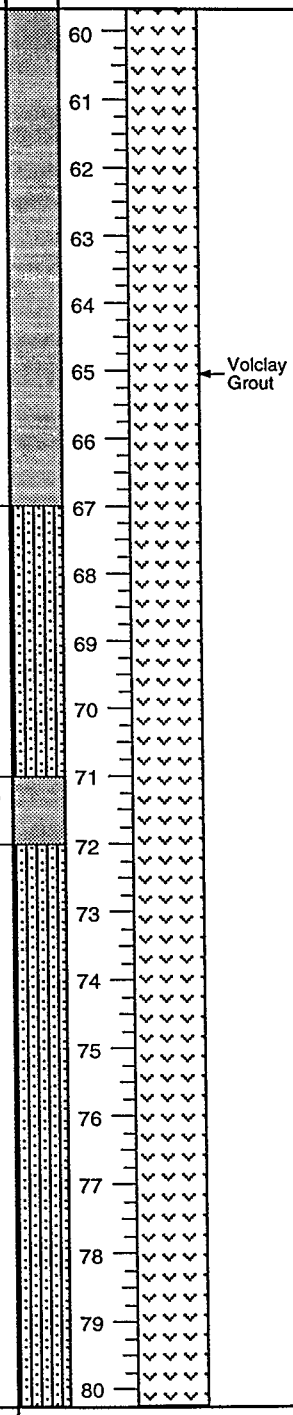
PROJECT NO.: 20-0368	DATE DRILLED: January 30, 1998
LOCATION: 76 Station 4357	LOGGED BY: C. Callegari
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat / CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 115.5 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				60		SP
				61		
				62		
				63		
				64		
60 for 6"		0.5		65	Very dense.	
				66		
				67	SILTY SAND: yellow (2.5Y 7/6), very dense, slightly moist, fine-grained sand.	SM
				68		
				69		
50 for 6"		1.5		70		
				71	SAND: pale yellow (2.5Y 8/4), very dense, slightly moist, fine- to medium-grained.	SP
				72	SILTY SAND: pale yellow (2.5Y 8/4), medium dense, slightly moist, fine-grained sand.	SM
				73		
				74		
50 for 6"		1.3		75	Iron oxide mottling throughout.	
				76		
				77		
				78		
				79		
55 for 6"		1.3		80		

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-10

20-0368 (#4357) 3/27/98 jw

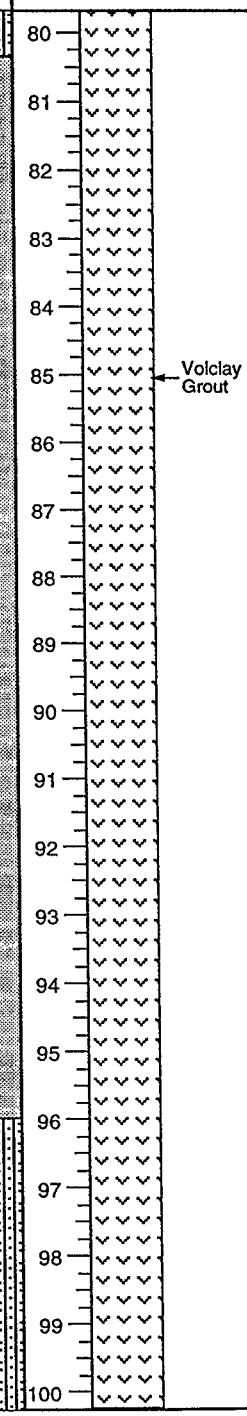
PROJECT NO.: 20-0368	DATE DRILLED: January 30, 1998
LOCATION: 76 Station 4357	LOGGED BY: C. Callegari
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat / CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 115.5 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				80		SM
				81	SAND: pale yellow (2.5Y 8/4), very dense, slightly moist, fine-grained sand, with silt.	SP
				82	Very gravelly from 82' - 82.5' with fine to coarse gravel (0.25" to 1" diameter).	
				83		
				84	Olive yellow (2.5Y 6/6), some silt, trace fine gravel.	
80 for 6"		0.6		85	Fine- to medium-grained sand, some fine gravel.	
				86		
				87		
				88		
				89		
55 for 6"				90		
				91	Very pale yellow (2.5Y 8/3), fine-grained sand, with silt, no fine gravel, fine- to medium-grained sand 90' - 91'.	
				92		
				93		
				94		
60 for 6"		0.4		95		
				96	SILTY SAND: very pale yellow (2.5Y 8/3), very dense, slightly moist, fine-grained.	SM
				97		
				98		
				99		
50 for 6"		1		100	Yellowish brown (2.5Y 5/6).	

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-10

20-0368 (#4357) 3/27/98 jcw

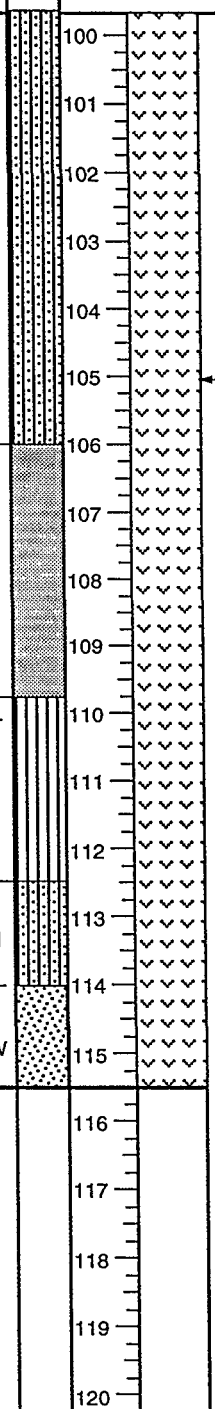
PROJECT NO.: 20-0368	DATE DRILLED: January 30, 1998
LOCATION: 76 Station 4357	LOGGED BY: C. Callegari
11280 National Boulevard	APPROVED BY: G. Fry, RG
Culver City, California	DRILLING CO.: West Hazmat / CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 115.5 feet DEPTH TO WATER: N/A

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				100	Yellow (2.5Y 8/6).	SM
				101		
				102		
				103		
				104		
50 for 6"				105		
				106	SAND: olive yellow (2.5Y 6/8), very dense, slightly moist, fine- to medium-grained sand, with silt.	SP
				107		
				108		
		1.5		109	Wet, iron oxide staining.	
60 for 6"				110	SILT: light olive brown (2.5Y 5/4), hard, slightly moist, some sand, trace clay.	ML
				111	Olive brown (2.5Y 4/3), moist, some clay, iron oxide staining (111' - 11.5'), no sand.	
				112	Dark gray (2.5Y 4/1), no iron oxide staining, wood fragment at 112.3'	
				113	SILTY SAND: yellowish red (5YR 4/6), very dense, moist, fine-grained sand, trace clay.	SM
				114		
50 for 6"				115	SAND: light olive brown (2.5Y 5/6), very dense, moist, fine- to coarse-grained sand, trace silt.	SW
90 for 6"						
				116		
				117		
				118		
				119		
				120		

GRAPHIC LOG

BOREHOLE DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

B-10

20-0368 (#4357) 2/27/98 jaw

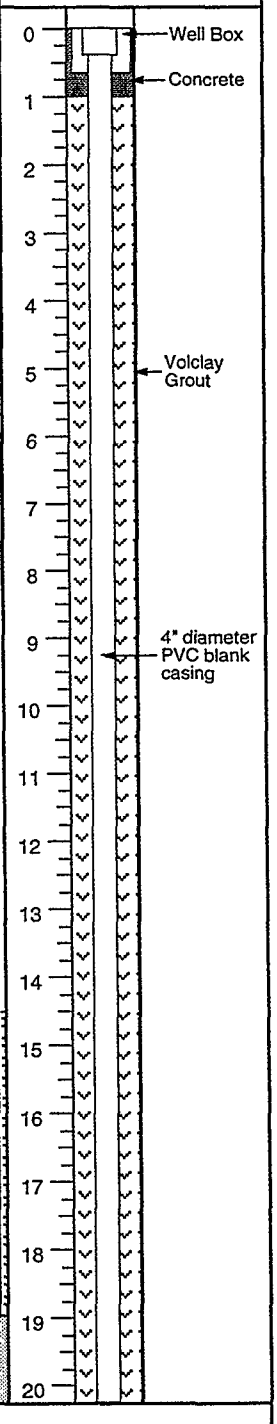
PROJECT NO.:	20-0368	DATE DRILLED:	*January 26, 27, 1998*
LOCATION:	76 Station 4357	LOGGED BY:	M. Katen, RG
	11280 National Boulevard	APPROVED BY:	G. Fry, RG
	Culver City, California	DRILLING CO.:	West Hazmat / CME 75

DRILLING METHOD: 8 &10-inch Hollow-Stem Augers
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 146 feet DEPTH TO WATER: 130.75 feet

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				0	Hand Augered to 4.5 feet.	
				1		
				2		
				3		
				4		
				5	CLAY: very dark gray (2.5Y 3/1), stiff, slightly moist, with fine- to medium-grained sand, 1' recovery.	CL
5/6/7		10		6		
					Gradation	
				7	SILT: dark gray (2.5Y 4/2), stiff, slightly moist, with clay, trace fine-grained sand.	ML
				8		
				9		
				10		
5/8/11		49.7		11		
				12		
				13		
7/9/11		61.5		14		
				15	SILTY SAND: dark grayish brown, medium dense, slightly moist, fine-grained, trace coarse-grained sand.	SM
				16	With fine gravel.	
				17		
				18		
				19		
		3.1		20		SP

GRAPHIC LOG

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

MW-1

20 0368 (#4357) 3/18/98 jrw

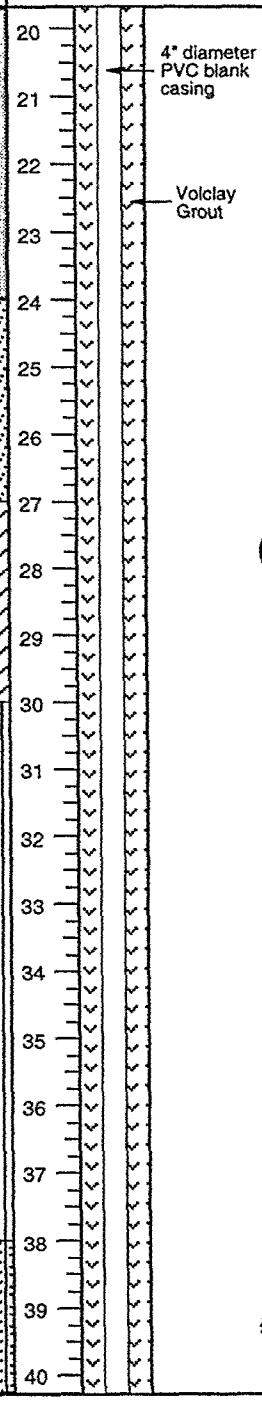
PROJECT NO.:	20-0368	DATE DRILLED:	January 26, 27, 1998
LOCATION:	76 Station 4357	LOGGED BY:	M. Katen, RG
	11280 National Boulevard	APPROVED BY:	G. Fry, RG
	Culver City, California	DRILLING CO.:	West Hazmat / CME 75

DRILLING METHOD: 8 &10-inch Hollow-Stem Augers
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 146 feet DEPTH TO WATER: 130.75 feet

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
9/11/16				20	SAND: dark grayish brown (2.5Y 4/2), medium dense, damp, fine-grained, some coarse-grained sand, trace fine gravel.	SP
				21		
				22	Dense, moist, fine- to coarse-grained, some medium-grained sand.	
				23		
				24		
		36.2			SAND: dark grayish brown (2.5Y 4/2), very dense, moist, fine- to coarse-grained, some medium-grained sand, with fine gravel.	SW
28/50 for 3"				25		
				26	Olive brown (2.5Y 4/3), medium dense, damp, some fine gravel.	
				27	SILTY CLAY: olive brown (2.5Y 4/3), very stiff, slightly moist, some fine-grained sand.	CL
				28		
				29		
		18				
10/11/15				30	SANDY SILT: olive brown (2.5Y 4/3), very stiff, slightly moist, fine-grained sand, some clay.	ML
				31	Waited 1/2 hour, no water.	
				32	Trace coarse-grained sand.	
				33		
				34		
		27.4				
11/14/17				35	Brown (10YR 4/3), with coarse-grained sand, trace fine gravel.	
				36	Increasing gravel with depth.	
				37		
				38		
				39		
		22.4		40	SILTY SAND: brown (10YR 4/3), very dense, fine- to coarse-grained sand, some fine gravel.	SM

GRAPHIC LOG

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

MW-1

20 0368 (#4357) 3/18/98 jrw

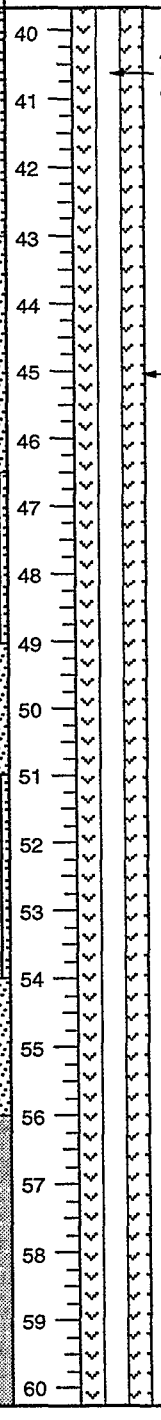
PROJECT NO.:	20-0368	DATE DRILLED:	*January 26, 27, 1998*
LOCATION:	76 Station 4357	LOGGED BY:	M. Katen, RG
	11280 National Boulevard	APPROVED BY:	G. Fry, RG
	Culver City, California	DRILLING CO.:	West Hazmat / CME 75

DRILLING METHOD: 8 &10-inch Hollow-Stem Augers
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 146 feet DEPTH TO WATER: 130.75 feet

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
11/18/26				40	Dense, trace coarse gravel to 1" diameter at 40.5'.	SM
				41	Moist, fine-grained, some fine gravel.	
				42	Fine and coarse gravel to 1.75" diameter.	
70 for 6"				43	No recovery 43' - 43.5'.	
				44	SAND: dark olive brown (2.5Y 3/3), very dense, moist, fine- to coarse-grained sand, with silt, some fine gravel.	SW
28/50 for 4"		14.6		45		
				46		
				47	SILTY SAND: olive brown (2.5Y 4/3), very dense, moist, fine- to coarse-grained sand, with fine gravel, trace coarse gravel to 1.75" diameter.	SM
				48		
				49		
70 for 6"		18.5		50	SAND: dark olive brown (2.5Y 3/3), very dense, moist, fine- to coarse-grained sand, with silt.	SW
				51	SILTY SAND: olive brown (2.5Y 4/3), very dense, slightly moist, fine- to coarse-grained sand, with fine and coarse gravel to 1" diameter.	SM
				52		
				53		
				54		
60 for 6"		10.2		55	SAND: olive brown (2.5Y 4/3), very dense, slightly moist, fine- to coarse-grained sand, some fine gravel to 0.75" diameter, with silt. Clay inclusions.	SW
				56	SAND: olive yellow (2.5Y 6/6), dense, damp, fine-grained sand, trace medium-grained sand.	SP
				57	Yellow (2.5Y 8/6), moist, some silt.	
				58		
		23		59		
				60		

GRAPHIC LOG

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

MW-1

20 0368 (#4357) 3/18/98 jrw

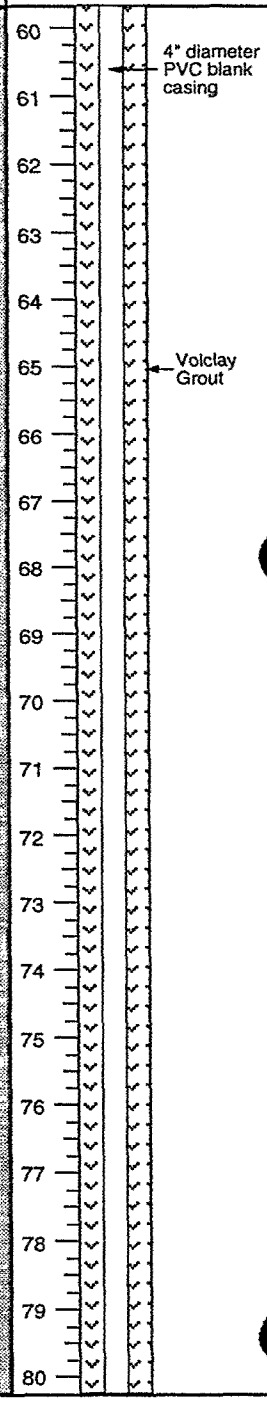
PROJECT NO.:	20-0368	DATE DRILLED:	January 26, 27, 1998
LOCATION:	76 Station 4357	LOGGED BY:	M. Katen, RG
	11280 National Boulevard	APPROVED BY:	G. Fry, RG
	Culver City, California	DRILLING CO.:	West Hazmat / CME 75

DRILLING METHOD: 8 &10-inch Hollow-Stem Augers
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 146 feet DEPTH TO WATER: 130.75 feet

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
22/50 for 5"				60		SP
				61		
				62	With medium-grained sand.	
				63		
				64		
25/50 for 5"		7.1		65	Trace medium-grained sand.	
				66		
				67		
				68		
		18.9		69		
25/50 for 4"				70		
					No medium-grained sand.	
				71		
				72	Damp at 71.7'.	
				73		
				74		
70 for 6"		3.1		75	Light yellowish brown (2.5YR 6/4), trace medium- and coarse-grained sand, occasional fine gravel to 0.5" diameter.	
				76		
				77		
					Pale yellow (2.5Y 8/4), some iron oxide staining.	
				78		
				79		
		6		80		

GRAPHIC LOG

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

MW-1

20 0368 (#4357) 3/18/98 jrw

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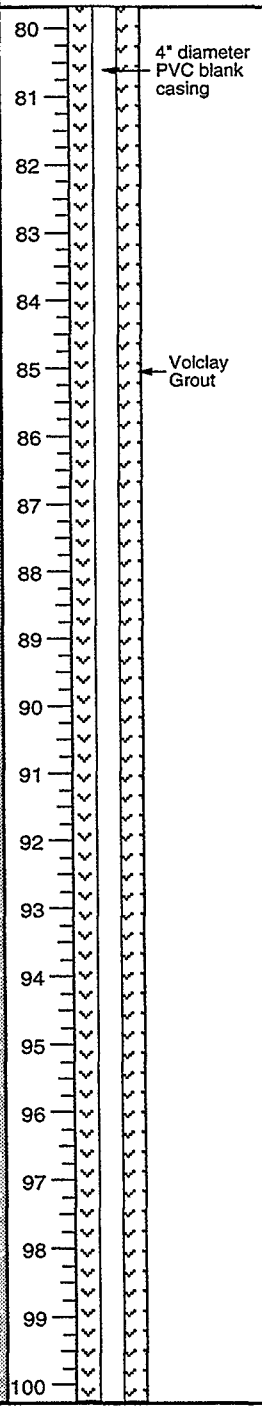
	Culver City, California	DRILLING CO.:	West Hazmat / CME 75

DRILLING METHOD: 8 &10-inch Hollow-Stem Augers
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 146 feet DEPTH TO WATER: 130.75 feet

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
17/50 for 6"				80	Moist to slightly moist, no medium- or coarse-grained sand.	SP
				81		
				82	Olive yellow (2.5Y 6/6), slightly moist, with fine gravel to 0.5" diameter, some silt.	
				83		
				84		
70 for 6"		7		85	Trace coarsed-grained sand. Fine gravel to 0.2" diameter.	
				86	Yellowish brown (10YR 5/6), damp, fine- to coarse-grained sand, some fine gravel to 0.3" diameter.	
				87	Olive yellow (2.5Y 6/6), moist, fine-grained sand, trace coarse-grained sand, trace fine gravel to 0.5" diameter.	
				88		
				89		
70 for 6"		11.4		90		
				91	Some medium-grained sand, 2" laminations at 90.2', 91.2', and 92'.	
				92		
				93		
				94		
30/100 for 5"		9.2		95		
				96		
				97	Without coarse fraction.	
				98		
				99		
64 for 5"				100		

GRAPHIC LOG

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

MW-1

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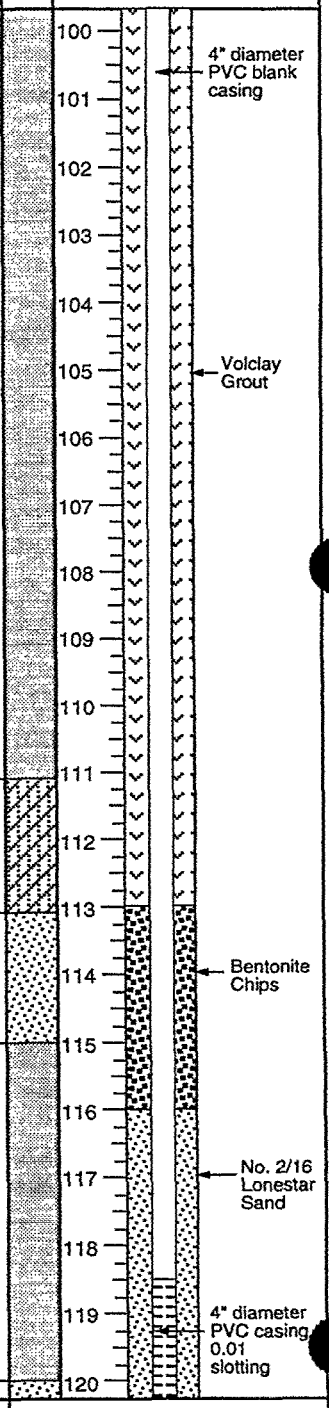
	Culver City, California	DRILLING CO.:	West Hazmat / CME 75

DRILLING METHOD: 8 &10-inch Hollow-Stem Augers
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 146 feet DEPTH TO WATER: 130.75 feet

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				100	Pale yellow (2.5YR 7/4), trace silt.	SP
				101		
				102		
				103		
			X	104		
70 for 6"				105		
				106		
				107	Light yellowish brown (2.5Y 6/4), damp, fine- to medium-grained sand, trace coarse-grained sand, trace fine gravel to 0.5" diameter.	
				108		
			X	109		
				110		
60 for 6"		4.5		111	Wet.	
					CLAYEY SILT: light olive brown (2.5Y 5/4), hard, moist. Sandy silty clay lens with abundant iron oxide staining, from 111.7' - 112'.	ML/ CL
				112	Black (2.5Y 5/4), grading to olive brown and iron oxide at 112.8' - 113.1'.	
				113	SAND: pale yellow (2.5YR 7/4), very dense, slightly moist, fine- to coarse-grained sand, trace fine gravel to 0.3" diameter.	SW
			X	114		
65 for 6"				115	SAND: olive yellow (2.5Y 6/6), slightly moist, fine- to medium-grained sand, occasional fine gravel at 118'.	SP
				116		
				117		
			X	118		
				119		
50 for 6"				120	Some coarse-grained sand.	

GRAPHIC LOG / WELL CONSTRUCTION DETAIL



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Irvine, California

LOG OF EXPLORATORY BORING

MW-1

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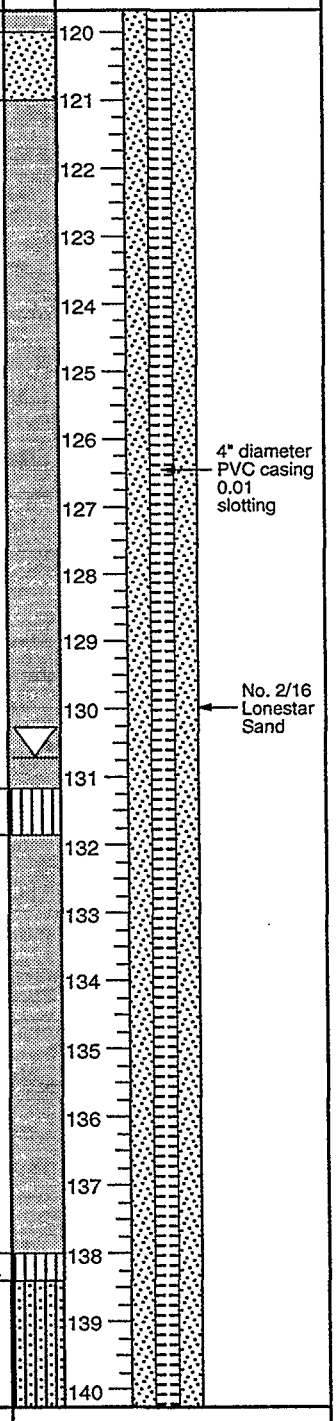
	Culver City, California	DRILLING CO.:	West Hazmat / CME 75

DRILLING METHOD: 8 &10-inch Hollow-Stem Augers
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 146 feet DEPTH TO WATER: 130.75 feet

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				120		SP
					SAND: olive yellow (2.5Y 6/6), very dense, damp, fine- to coarse-grained sand, some fine gravel to 0.5" diameter.	SW
				121	SAND: pale yellow (2.5Y 7/4), very dense, moist, fine-grained, some silt.	SP
				122		
				123		
				124		
59 for 6"		45.8		125	Trace coarse-grained sand.	
					No coarse-grained sand, occasional fine gravel to 0.3" diameter.	
				126	Pale olive (5Y 6/3).	
				127		
				128		
				129		
63 for 9"		34.1		130	Light olive brown (2.5Y 5/3), damp, fine- to medium-grained sand, trace coarse-grained sand.	
					Wet.	
				131	SILT: olive brown (2.5Y 4/3), hard, wet, with fine- to coarse-grained sand, with clay rich inclusions.	ML
				132	SAND: light yellowish brown (2.5Y 6/3), very dense, saturated, fine- to medium-grained, trace coarse-grained sand.	SP
				133		
				134		
23/50 for 6"		57.1		135	Occasional fine gravel to 0.5" diameter.	
				136	1" sandy silt lamination at 136.3'.	
				137		
				138	SANDY SILT: light olive brown (2.5Y 5/4), hard, wet.	ML
					Gradation	
				139	SILTY SAND: light olive brown (2.5Y 5/3), very dense, wet, abundant iron oxide staining in selective laminations.	SM
50 for 6"					Insufficient sample for analysis.	
				140		

GRAPHIC LOG

WELL CONSTRUCTION DETAIL



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Irvine, California

LOG OF EXPLORATORY BORING

MW-1

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DRILLING METHOD: 8 &10-inch Hollow-Stem Augers

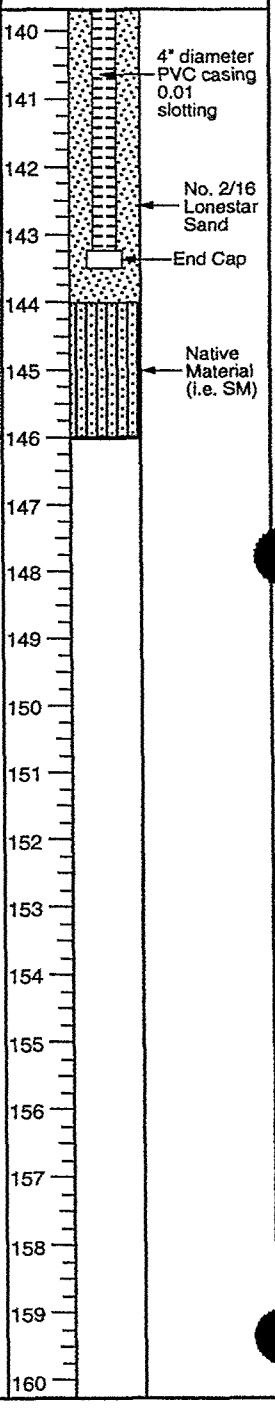
SAMPLER TYPE: Split Spoon and Continuous Core

TOTAL DEPTH: 146 feet DEPTH TO WATER: 130.75 feet

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				140		SM
				141	SAND: olive yellow (2.5Y 6/6), dense, saturated, fine-grained sand, with silt, abundant iron oxide staining.	SP
				142		
				143	SANDY SILT: light yellowish brown (2.5Y 6/3), stiff, wet, with fine-grained sand, some iron oxide staining.	ML
				144		
3/3/3				145	SAND: light olive brown (2.5Y 5/6), loose, saturated, fine- to medium-grained sand, trace coarse-grained sand, trace silt.	SP
				146		
				147		
				148		
				149		
				150		
				151		
				152		
				153		
				154		
				155		
				156		
				157		
				158		
				159		
				160		

GRAPHIC LOG

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

MW-1

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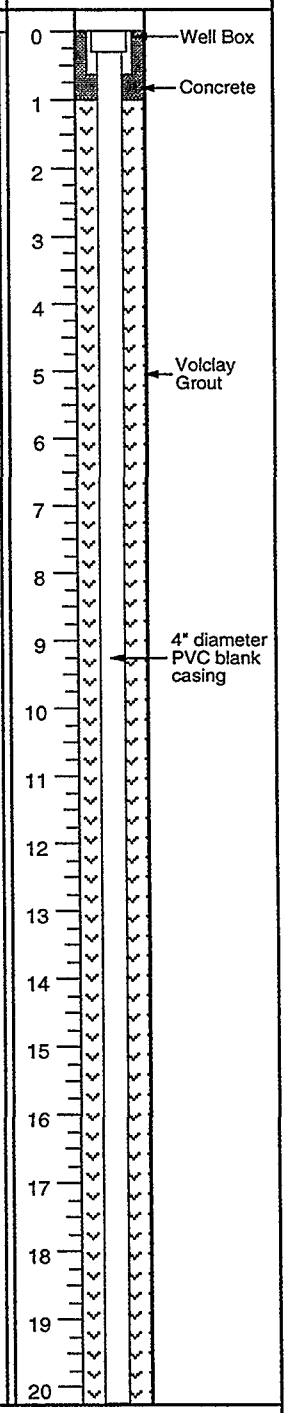
	Culver City, California	DRILLING CO.:	West Hazmat / CME 75

DRILLING METHOD: 8 &10-inch Hollow-Stem Augers
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 145.5 feet DEPTH TO WATER: 129 feet

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				0	Hand Augered to 4.5 feet.	
15/18/30		0		4		
				5	SANDY SILT: very dark grayish brown (2.5Y 3/2), hard, slightly moist, with fine-grained sand, trace fine gravel (possibly fill).	ML
				6	SILT: olive brown (2.5Y 4/3), stiff, slightly moist, some fine-grained sand.	
9/11/12		0		9	Very stiff.	
				11	Occasional fine gravel to 0.3" diameter. Fine-grained sand increasing with depth.	
5/8/12		0		14		
				16	SANDY SILT: olive brown (2.5Y 3/4), very stiff, slightly moist, fine-grained sand.	
9/11/14		0		19		

GRAPHIC LOG

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

MW-2

20 0368 (#4357) 3/26/98 jrw

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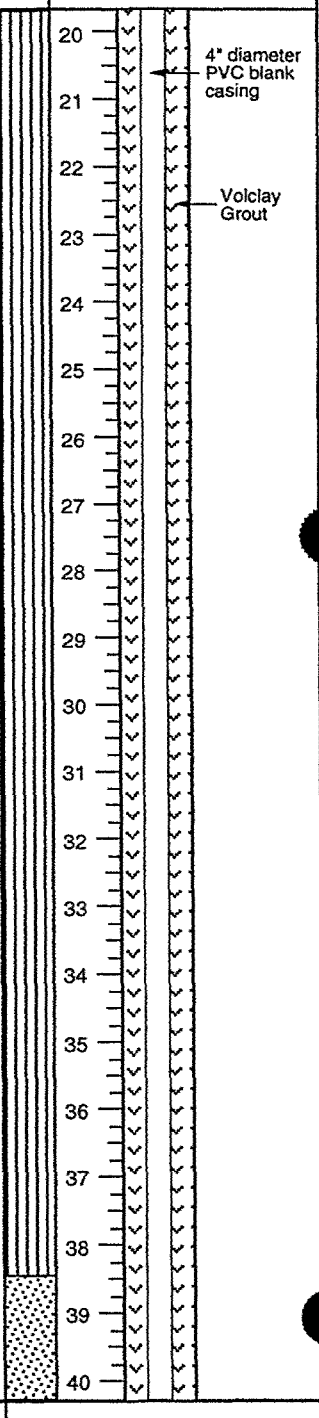
	11280 National Boulevard	APPROVED BY:	G. Fry, RG
	Culver City, California	DRILLING CO.:	West Hazmat / CME 75

DRILLING METHOD: 8 &10-inch Hollow-Stem Augers
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 145.5 feet DEPTH TO WATER: 129 feet

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
			X	20		ML
				21		
				22	SILT: olive brown (2.5Y 4/3), stiff, slightly moist, some fine-grained sand, iron oxide staining (23' - 24'), trace clay.	
				23		
				24	Brown (10YR 4/3), hard, with clay, trace medium-grained sand.	
18/25/35		0		25		
				26		
				27		
				28		
				29	Trace coarse-grained sand.	
		0				
12/19/36				30		
			X	31	SANDY SILT: yellowish brown (10YR 5/4), stiff, slightly moist, fine-grained sand.	
				32		
				33		
				34		
		0		35	SILT: yellowish brown (10YR 5/4), hard, slightly moist, with fine-grained sand, trace fine gravel to 0.3" diameter.	
15/17/24				36		
				37		
				38		
			X	39	GRAVELLY SAND: dark yellowish brown (10YR 3/4), dense, slightly moist, fine- to coarse-grained sand, fine gravel, with silt.	SW
17/24/28		0		40		

GRAPHIC LOG

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

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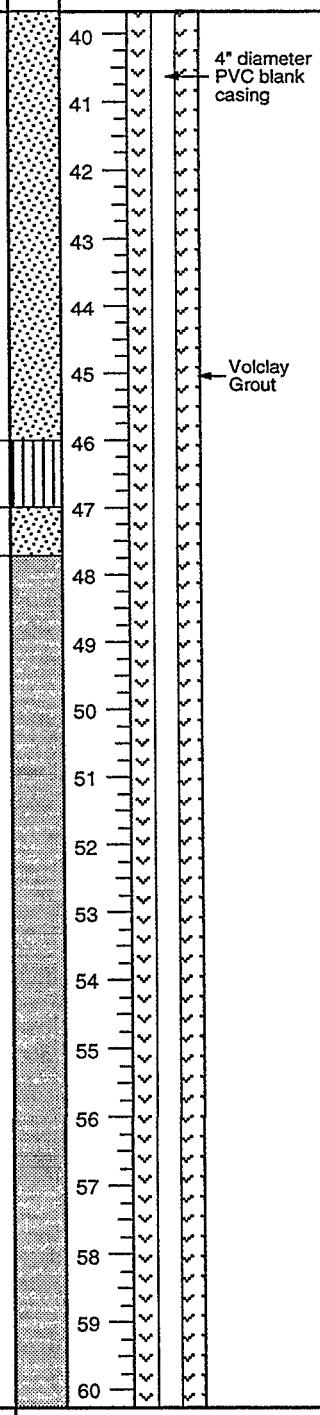
DRILLING METHOD: 8 &10-inch Hollow-Stem Augers
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 145.5 feet DEPTH TO WATER: 129 feet

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				40		
				41	Dark yellowish brown (10YR 4/4), fine and coarse gravel to 1.0" diameter.	SW
				42		
				43		
35/50 for 4"		0		44	Moist.	
				45		
				46	SILT: light olive brown (2.5Y 5/4), stiff, slightly moist, fine-grained sand, with clay from 46' - 46.3', trace clay from 46.3' - 47'.	ML
				47	GRAVELLY SAND: dark yellowish brown (10YR 4/4), very dense, moist, fine- to coarse-grained sand, fine gravel.	SW
				48	SAND: yellowish brown (10YR 5/4), very dense, moist, fine-grained sand, some silt.	SP
40/50 for 3"		0		49	Trace silt.	
				50		
				51		
				52	Some medium-grained sand, some silt.	
				53		
40/50 for 4"		0		54	Moist to damp, trace silt.	
				55	Pale yellow (2.5Y 7/4), moist.	
				56		
				57		
				58		
40/50 for 3"		0		59		
				60		

GRAPHIC LOG

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
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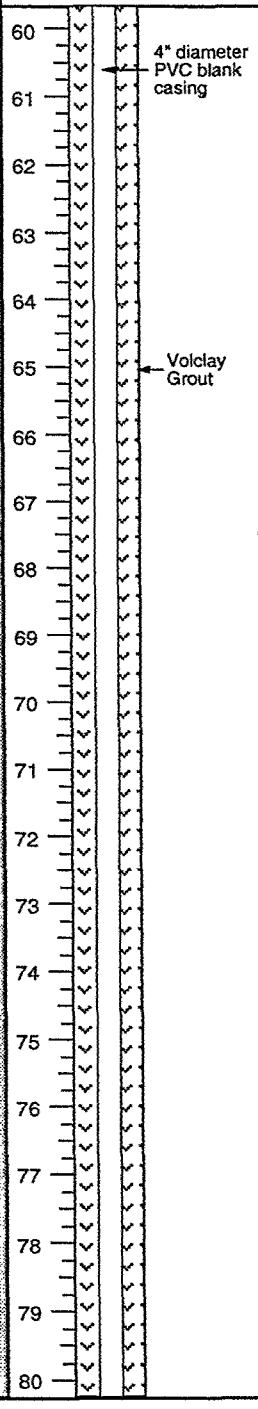
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 145.5 feet DEPTH TO WATER: 129 feet

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				60	Some silt.	SP
				61		
				62		
				63		
35/50 for 3"		0		64		
				65		
				66		
				67		
				68		
35/50 for 3"		0		69	With medium- to coarse-grained sand, trace fine gravel.	
				70	With silt. Light yellowish brown (2.5Y 6/3), some silt, iron oxide mottling.	
				71		
				72	Yellow (2.5Y 7/6).	
				73		
37/50 for 4"		0		74	Pale yellow (2.5Y 7/4).	
				75	No iron oxide mottling.	
				76	Fine- to medium-grained.	
				77		
				78		
35/50 for 3"		0		79	Fine-grained.	
				80		

GRAPHIC LOG

WELL CONSTRUCTION DETAIL



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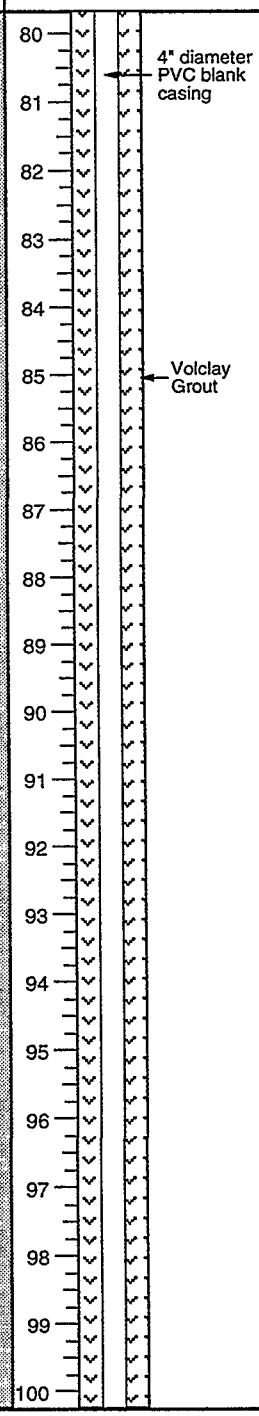
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 145.5 feet DEPTH TO WATER: 129 feet

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				80	Yellow (2.5Y 7/6), with medium-grained sand, some fine gravel.	SP
				81	Pale yellow (2.5Y 7/4), no medium-grained sand.	
				82		
				83		
35/50 for 3"		0		84	No fine gravel.	
				85		
				86		
				87	Thin (1"-2") interbeds of fine- to medium-grained sand. Iron oxide staining at 87.4' - 87.5'.	
				88		
45/50 for 3"		0		89	No medium-grained sand.	
				90	Occasional fine gravel to 0.5" diameter.	
				91		
				92		
				93		
60 for 6"				94	With medium-grained sand.	
				95		
				96	No medium-grained sand.	
				97	Pale yellow (5Y 7/3).	
				98		
35/50 for 3"		0		99		
				100		

GRAPHIC LOG

WELL CONSTRUCTION DETAIL



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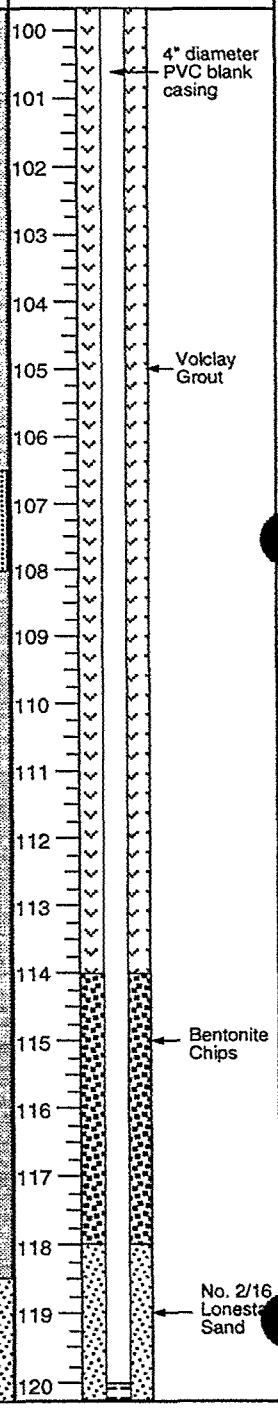
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 145.5 feet DEPTH TO WATER: 129 feet

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				100	Some silt. Occasional 2-3" intervals with 25-35% medium-grained sand (100.5', 101', and 103.1').	SP
				101		
				102		
				103		
45 for 6"		0		104	With medium-grained sand.	
				105	Damp, trace coarse-grained sand.	
				106		
				107	SAND and SILTY SAND: light olive gray (5Y 6/2), very dense, moist, fine-grained sand with laminations of black silt.	SP/ SM
				108		
75 for 3"				109	SAND: pale olive (5Y 6/3), very dense, moist, fine-grained sand with silt.	SP
				110		
				111		
				112		
				113		
60 for 6"		0		114		
				115		
				116		
				117	Light gray (2.5Y 7/2), fine- to medium-grained sand, occasional fine gravel to 0.3" diameter. Some coarse-grained sand.	
				118		
25/50 for 1"		0		119	SAND: pale yellow (2.5YR 7/3), very dense, moist, fine- to coarse-grained sand, moderate to well graded, trace silt.	SW
				120		

GRAPHIC LOG

WELL CONSTRUCTION DETAIL



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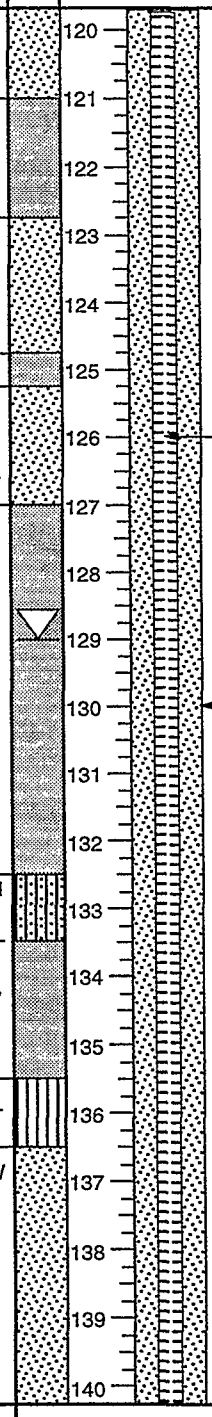
	11280 National Boulevard	APPROVED BY:	G. Fry, RG
	Culver City, California	DRILLING CO.:	West Hazmat / CME 75

DRILLING METHOD: 8 &10-inch Hollow-Stem Augers
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 145.5 feet DEPTH TO WATER: 129 feet

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				120		SW
				121	SAND: pale yellow (2.5Y 7/3), very dense, moist, fine- to medium-grained sand, trace coarse-grained sand, with silt.	SP
				122		
				123	SAND: pale yellow (2.5Y 7/3), very dense, moist, fine- to coarse-grained sand, moderate to well graded, some silt.	SW
55 for 3"		0		124		
				125	SAND: pale yellow (2.5Y 7/3), very dense, moist, fine- to medium-grained.	SP
				126	SAND: pale yellow (2.5Y 7/3), very dense, moist, fine- to coarse-grained sand, well graded, some fine gravel.	SW
				127		
				128	SAND: light olive gray (5Y 6/2), very dense, damp, fine- to medium-grained, no fine gravel. Saturated.	SP
75 for 6"		0		129		
				130		
				131		
				132		
				133	SILTY SAND: light olive gray (5Y 6/2), very dense, fine- to coarse-grained, some fine gravel to 0.4" diameter.	SM
65 for 6"		0		134	SAND: light olive gray (5Y 6/2), very dense, fine- to medium-grained, some silt.	SP
				135	Trace fine gravel to 0.4" diameter.	
				136	SILT: olive (5Y 5/3), hard, wet, some fine-grained sand, trace clay.	ML
				137	SAND: pale yellow (5Y 7/3), very dense, saturated, fine- to coarse-grained sand, moderate to well graded, trace silt.	SW
				138		
25/50 for 6"		0		139		
				140		

GRAPHIC LOG



WELL CONSTRUCTION DETAIL

ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

MW-2

20 0368 (#4357) 3/26/98 jrw

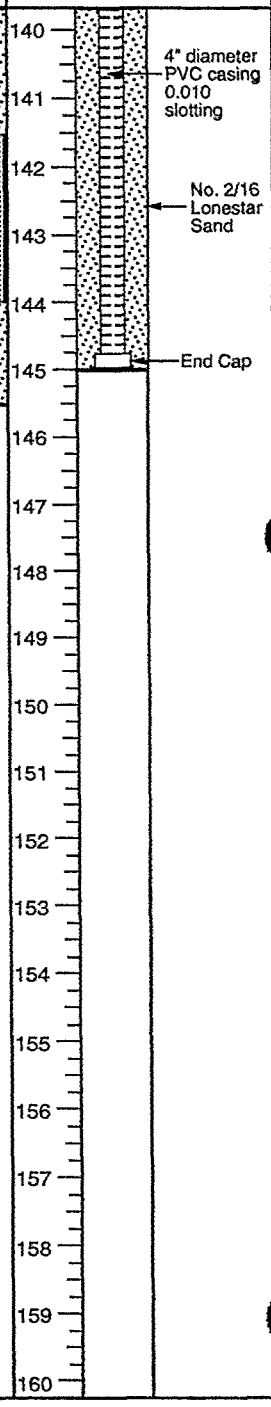
PROJECT NO.:	20-0368	DATE DRILLED:	February 2, 4, 1998
LOCATION:	76 Station 4357	LOGGED BY:	M. Katen, RG
	11280 National Boulevard	APPROVED BY:	G. Fry, RG
	Culver City, California	DRILLING CO.:	West Hazmat / CME 75

DRILLING METHOD: 8 &10-inch Hollow-Stem Augers
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 145.5 feet DEPTH TO WATER: 129 feet

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				140	Not sampled from 140' - 142.5'.	SW
				141		
				142		
25/30/40		0		143	SAND: pale olive (5Y 6/3), very dense, saturated, fine- to medium-grained sand, with silt.	SP/ SM
				144		
13/50 for 5"		0		145	SAND: pale olive (5Y 6/3), very dense, saturated fine- to coarse-grained, moderate to well graded. 2" silt lens at 144.8' - 145.0'.	SW
				146	NOTES: Total depth at 145.5' with sampler. Reamed boring with 10-inch diameter auger to 145'.	
				147		
				148		
				149		
				150		
				151		
				152		
				153		
				154		
				155		
				156		
				157		
				158		
				159		
				160		

GRAPHIC LOG

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

MW-2

20 0368 (#4357) 3/26/98 jrw

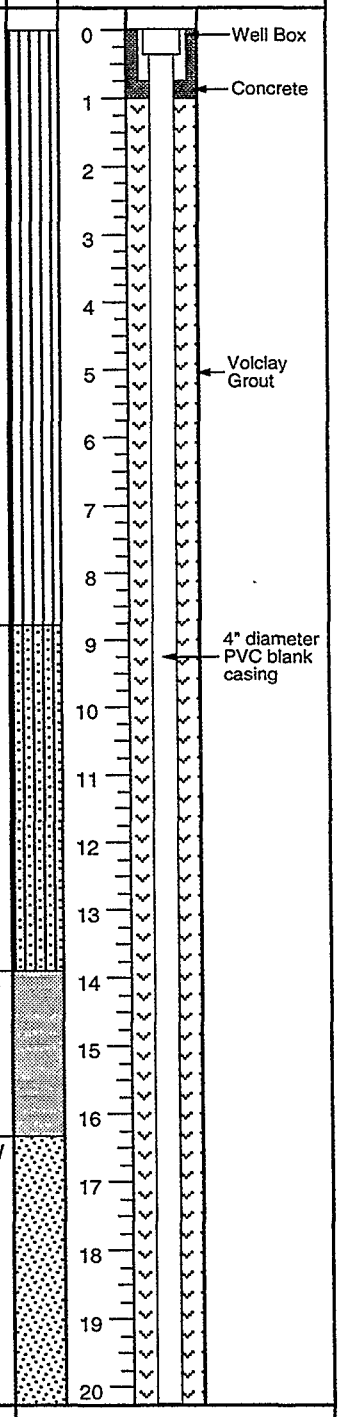
PROJECT NO.:	20-0368	DATE DRILLED:	February 5, 1998
LOCATION:	76 Station 4357	LOGGED BY:	M. Katen, RG
	11280 National Boulevard	APPROVED BY:	G. Fry, RG
	Culver City, California	DRILLING CO.:	West Hazmat / CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 144.75 feet DEPTH TO WATER: 128.5 feet

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				0	Hand Augered to 4 feet.	
7/12/15		0.2		4		
				5	SANDY SILT: dark yellowish brown (10YR 4/3), very stiff, moist, fine-grained sand.	ML
9/11/12		0.2		9	SILTY SAND: dark yellowish brown (10YR 4/3), medium dense, moist, fine-grained sand.	SM
				11	Occasional fine and coarse gravel to 0.8" diameter.	
12/12/10		0.2		14	SAND: dark yellowish brown (10YR 4/4), medium dense, moist, fine-grained sand, with silt.	SP
				15	With gravel.	
				17	GRAVELLY SAND: grayish brown (10YR 5/2), medium dense, slightly moist, fine- to coarse-grained sand, fine and coarse gravel to 0.8" diameter.	SW
33/50 for 6"		0		19		

GRAPHIC LOG

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

MW-3

20 0368 (#4357) 3/26/98 jrw

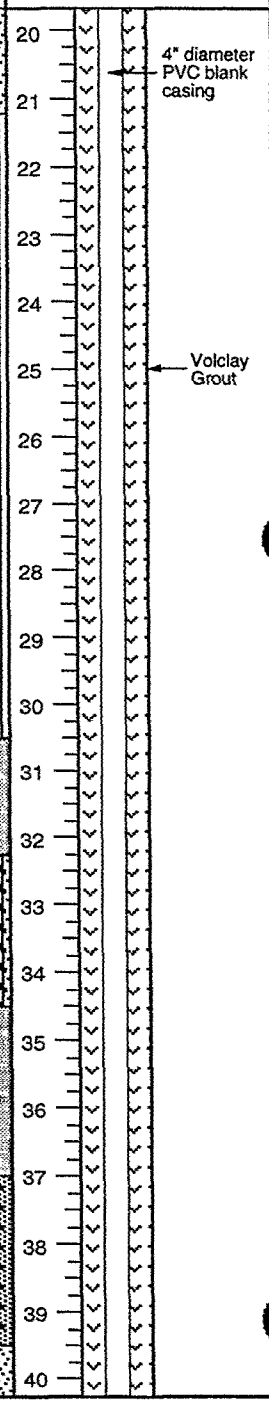
PROJECT NO.:	20-0368	DATE DRILLED:	February 5, 1998
LOCATION:	76 Station 4357	LOGGED BY:	M. Katen, RG
	11280 National Boulevard	APPROVED BY:	G. Fry, RG
	Culver City, California	DRILLING CO.:	West Hazmat / CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 144.75 feet DEPTH TO WATER: 128.5 feet

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				20		SW
				21	SILT: reddish brown (5YR 4/3), hard, slightly moist, with fine-grained sand, with clay.	ML
				22		
				23		
22/27/37		0.3		24	Dark brown (7.5YR 3/3).	
				25		
				26	Increasing sand, decreasing clay.	
				27		
				28		
		0		29	SANDY SILT: dark brown (7.5YR 3/4), hard, moist, fine-grained sand, trace clay.	
				30		
17/18/20				31	SAND: brown (7.5YR 4/3), dense, moist, fine-grained sand, some coarse-grained sand, some fine gravel, with silt.	SP
				32		
				33	SILTY SANDY GRAVEL: brown (7.5YR 4/3), dense, slightly moist, fine to coarse gravel, few clasts >2" diameter, fine-grained sand.	GM
15/15/15		0.1		34		
				35	SAND: brown (7.5YR 4/3), dense, moist, fine-grained sand, with fine gravel to 0.6" diameter, with silt.	SP
				36	Brown (7.5YR 4/4), medium dense, damp to wet, fine-grained sand, some silt, no gravel.	
				37	SANDY GRAVEL: yellowish brown (10YR 5/4), dense, moist, fine gravel, with occasional coarse gravel clasts to 0.8" diameter, fine- and coarse-grained sand.	GP
				38		
26/30/35		0		39		
				40	GRAVELLY SAND: dark yellowish brown (10YR 4/4), dense, slightly moist, fine- to coarse-grained sand, fine and coarse gravel to 1" diameter, trace silt.	SW

GRAPHIC LOG

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

MW-3

20 0368 (#4357) 3/26/98 jrw

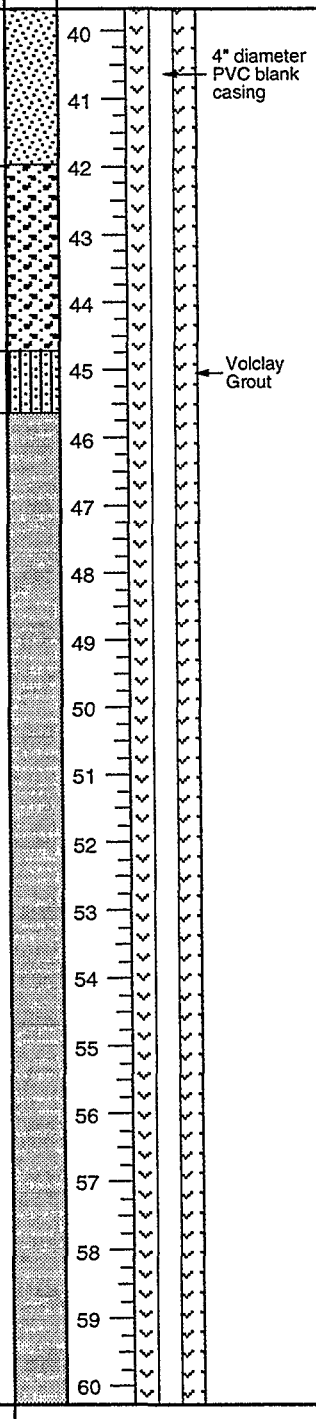
PROJECT NO.:	20-0368	DATE DRILLED:	February 5, 1998
LOCATION:	76 Station 4357	LOGGED BY:	M. Katen, RG
	11280 National Boulevard	APPROVED BY:	G. Fry, RG
	Culver City, California	DRILLING CO.:	West Hazmat / CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 144.75 feet DEPTH TO WATER: 128.5 feet

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				40		SW
				41		
				42	SANDY GRAVEL: brown (7.5YR 4/4), very dense, slightly moist, fine and coarse gravel, mostly fine gravel, fine- to coarse-grained sand, some silt.	GW
				43		
35/45/ 50 for 4"		0.2		44		
				45	SILTY SAND: light olive brown (2.5Y 5/3), very dense, slightly moist, fine-grained sand, with trace medium-grained sand.	SM
				46	SAND: dark yellowish brown (10YR 4/6), very dense, moist to damp, fine-grained sand, trace silt.	SP
				47		
				48		
65 for 6"		0.3		49	Yellowish brown (10YR 5/6), moist.	
				50		
				51	Brownish yellow (10YR 6/8).	
				52		
				53		
45/50 for 5"		0.5		54	Pale yellow (2.5Y 7/4), some silt.	
				55		
				56	Yellow (2.5Y 7/6).	
				57		
				58		
35/50 for 3"		0.7		59	Pale yellow (2.5Y 7/4).	
				60		

GRAPHIC LOG

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

MW-3

20 0368 (#4357) 3/26/98 jrw

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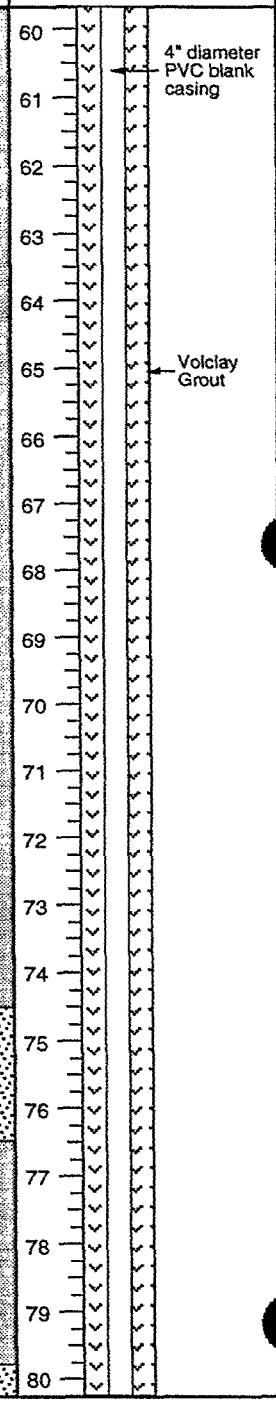
	11280 National Boulevard	APPROVED BY:	G. Fry, RG
	Culver City, California	DRILLING CO.:	West Hazmat / CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 144.75 feet DEPTH TO WATER: 128.5 feet

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				60	Slightly moist.	SP
				61		
				62		
				63		
				64		
23/50 for 3"		0.5			Fine- to medium-grained sand, trace silt.	
				65		
				66	Fine-grained sand, some silt, fine gravel to 0.6" diameter.	
					Light gray (2.5Y 7/2), fine- to medium-grained sand, trace silt.	
				67	Pale yellow (2.5Y 7/4).	
				68		
28/50 for 2"		0.7		69	Less medium-grained sand.	
				70	No medium-grained sand, fine gravel lens from 72.6' - 72.7'.	
				71		
				72		
				73		
60 for 6"		0		74	With medium-grained sand.	
				75	SAND: yellowish brown (10YR 5/6), very dense, damp, fine- to coarse-grained sand, few fine gravel to 0.4" diameter.	SW
				76		
				77	SAND: yellow (2.5Y 7/6), very dense, moist, fine-grained sand, some silt.	SP
				78		
65 for 6"		0		79	Occasional fine gravel to 0.5" diameter.	
				80		SW

GRAPHIC LOG

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

MW-3

20 0368 (#4357) 3/26/98 jrw

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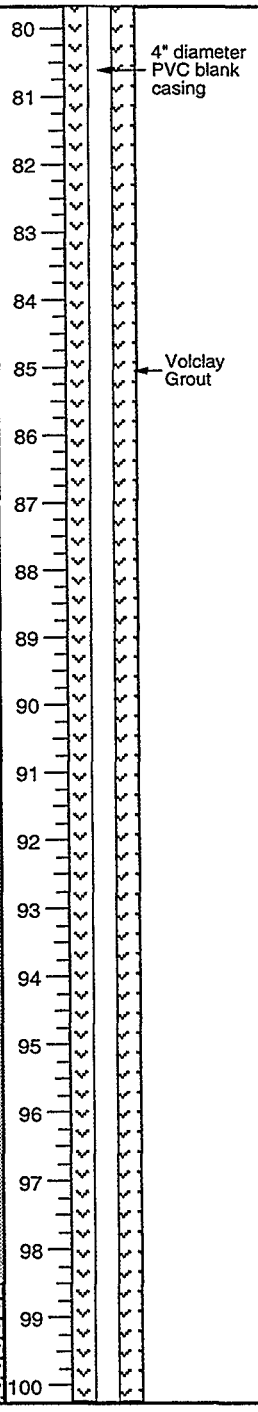
	Culver City, California	DRILLING CO.:	West Hazmat / CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 144.75 feet DEPTH TO WATER: 128.5 feet

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				80	SAND: yellowish brown (10YR 5/6), very dense, damp, fine- to coarse-grained sand, some fine gravel to 0.4" diameter.	SW
				81	SAND: yellow (10YR 7/6), very dense, moist, fine-grained sand, some silt.	SP
				82		
				83		
		0		84	Some medium-grained sand.	
60 for 6"				85	No medium-grained sand, heavy iron oxide staining (85.25' - 86').	
				86		
				87		
				88		
		0		89	Occasional fine gravel to 0.5" diameter.	
28/50 for 3"				90		
				91	Pale yellow (2.5Y 7/4), no fine gravel.	
				92		
				93		
		0		94		
50 for 6"				95		
				96	With varying amounts of silt (5-20%).	
				97		
				98	Slightly moist, fine- to medium-grained sand, trace coarse-grained sand.	
		0		99	*Gradation*	
65 for 3"				100	SAND: pale yellow (2.5Y 7/4), very dense, slightly moist, fine- to coarse-grained sand, heavy iron oxide staining.	

GRAPHIC LOG

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

MW-3

20 0368 (#4357) 3/26/98 jrw

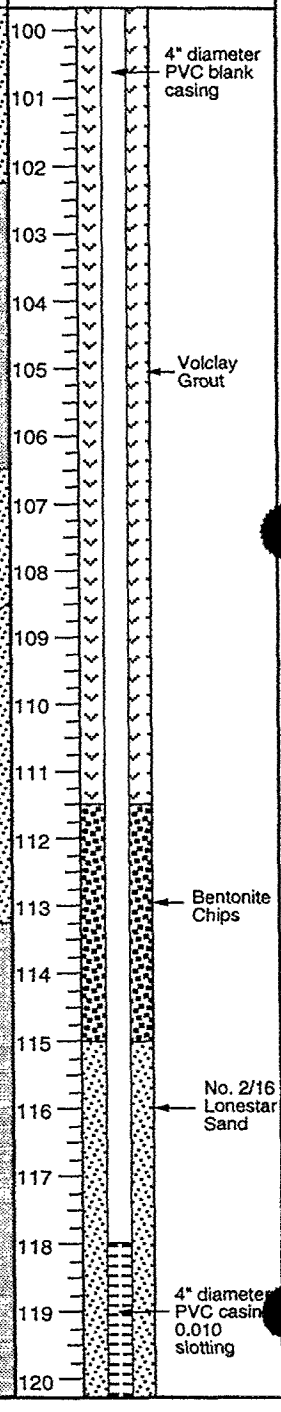
PROJECT NO.:	20-0368	DATE DRILLED:	February 5, 1998
LOCATION:	76 Station 4357	LOGGED BY:	M. Katen, RG
	11280 National Boulevard	APPROVED BY:	G. Fry, RG
	Culver City, California	DRILLING CO.:	West Hazmat / CME 75

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 144.75 feet DEPTH TO WATER: 128.5 feet

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				100–101	Moist to damp, fine- to coarse-grained sand, varying amounts of silt (<5-10%).	SW
				101–103	SAND: pale olive (5Y 6/3), very dense, slightly moist, fine-grained sand, with silt.	SP
50 for 6"		0	X	103–104		
				104–106		
				106–107	SAND and SILTY SAND: light gray (5Y 7/2), very dense, slightly moist, fine- to coarse-grained sand, moderate to well graded.	SW/ SM
			X	107–108		
70 for 6"		0		108–109	*Gradation*	
				109–113	SAND: pale yellow (2.5Y 7/3), moist, fine- to medium- to coarse-grained sand, some silt.	SW
			X	113–114		
70 for 6"		0		114–118	SAND: pale yellow (2.5Y 7/3), very dense, moist, fine- to medium grained sand, some coarse-grained sand, moderate grading. With coarse-grained sand, trace silt.	SP
			X	118–119		
50 for 6"		0		119–120	Light yellowish brown (2.5Y 6/4), fine-grained sand, some silt.	

GRAPHIC LOG

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

MW-3

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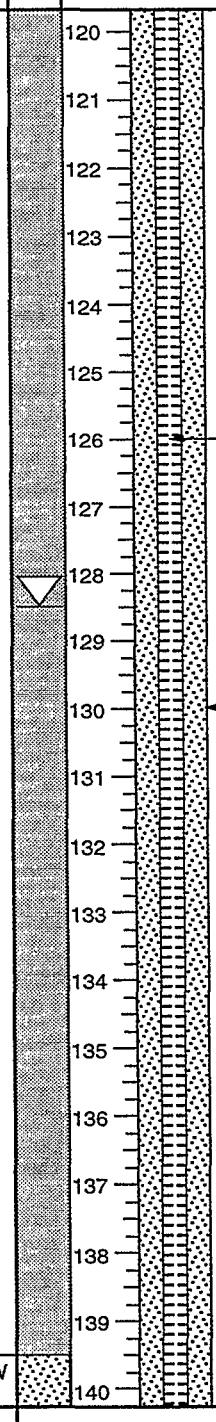
TOTAL DEPTH: 144.75 feet DEPTH TO WATER: 128.5 feet

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS
				120	Pale yellow (2.5Y 7/4), fine- to medium-grained sand, trace coarse-grained sand, some silt.	SP
				121		
				122	Light gray (2.5Y 7/2), no coarse-grained sand.	
				123		
50 for 4"		0		124		
				125		
				126	*Increasing medium-grained sand, black silt laminations form126.4' - 127'.*	
				127	Pale yellow (2.5Y 7/3), damp to wet, increasing moisture, fine- to coarse-grained sand, with silt, heavy iron oxide staining (127' - 127.75').	
				128		
65 for 6"		0		129	Saturated.	
				130		
				131	2" - 3" fine-grained sand interval from 131.4' - 131.6'.	
				132		
				133		
20/50 for 6"		0		134	Light yellowish brown (2.5Y 6/4).	
				135		
				136		
				137	Pale yellow (2.5Y 7/4), wet, increasing moisture, fine- to coarse-grained sand, with silt, with fine gravel to 0.4" diameter, abundant black silt laminations.	
				138		
27/50 for 6"		0		139	Light brownish gray (2.5Y 6/2), saturated, fine-grained.	
				140	SAND: light brownish gray (2.5Y 6/2), very dense, saturated, fine- to coarse-grained.	SW

GRAPHIC LOG



WELL CONSTRUCTION DETAIL

ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

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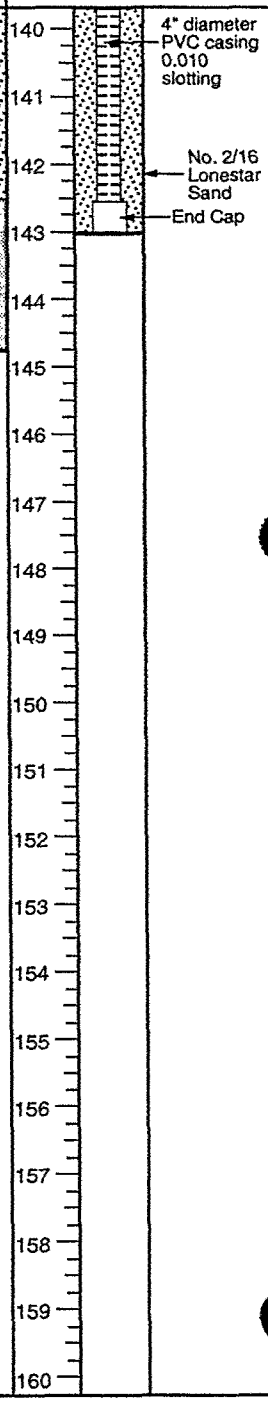
SAMPLER TYPE: Split Spoon and Continuous Core
TOTAL DEPTH: 144.75 feet DEPTH TO WATER: 128.5 feet

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS	GRAPHIC LOG
				140	Pale yellow (2.5Y 7/3).		
				141			
				142			
				143	SAND: light yellowish brown (2.5Y 6/4), very dense, wet, fine-grained, with silt.	SP	
12/50 for 3"		0		144	Saturated.		
				145	NOTES: Total depth at 144.75' with sampler. Reamed boring with 10-inch diameter auger to 143'.		
				146			
				147			
				148			
				149			
				150			
				151			
				152			
				153			
				154			
				155			
				156			
				157			
				158			
				159			
				160			

WELL CONSTRUCTION DETAIL



ALTON GEOSCIENCE
Irvine, California

LOG OF EXPLORATORY BORING

MW-3

20 0368 (#4357) 3/26/98 jrw

APPLICATION FOR WELL PERMIT
ENVIRONMENTAL HEALTH 2525 Corporate Place Monterey Park, Ca 91754
COUNTY OF LOS ANGELES DEPARTMENT OF HEALTH SERVICES

DATE 1/23/98

DESCRIPTION

TYPE OF PERMIT (CHECK)

- [x] NEW WELL CONSTRUCTION (Three)
- [ ] RECONSTRUCTION OR RENOVATION
- [ ] DESTRUCTION

TYPE OF WELL Permit issued for Three Monitoring Wells Construction

- [ ] PRIVATE DOMESTIC
- [ ] PUBLIC DOMESTIC
- [ ] IRRIGATION
- [x] OBSERVATION/MONITORING
- [ ] CATHODIC
- [ ] INDUSTRIAL
- [ ] GRAVEL PACK
- [ ] TEST

TYPE OF CASING 4" Schedule 40 PVC

METHOD OF SEALING OF CASING Bentonite chips, bentonite grout, concrete cap (see attached)

METHOD OF DESTRUCTION

LOCATION

ADDRESS (NUMBER, STREET, AND NEAREST INTERSECTION) 11280 National Boulevard / Sawtelle

CITY Los Angeles

DIAGRAM (SHOW PROPERTY LINES, STREET, ADDRESS, WELL SITE, SEWERS, AND PRIVATE SEWAGE DISPOSAL SYSTEMS ALONG WITH LABELS AND DIMENSIONS)

See attached

APPLICANT

NAME OF WELL DRILLER (PRINT) West Hazmat Drilling

TRADE NAME West Hazmat

BUSINESS ADDRESS 1016 E. Katella Ave

CITY Anaheim

NAME OF WELL OWNER (PRINT) Tosco Marketing

MAILING ADDRESS 555 Anton Blvd.

CITY Costa Mesa

I hereby agree to comply in every respect with all regulations of the County Preventive/Public Health Services and with all ordinances and laws of the County of Los Angeles and of the State of California pertaining to well construction, reconstruction and destruction. Upon completion of well and within ten days thereafter, I will furnish the County Preventive/Public Health Services with a complete log of the well, giving date drilled, depth of well, all perforations in casing, and any other data deemed necessary by such County Preventive/Public Health Services.

Applicant's Signature

Mail Permit to: Anton Geoscience
25A Technology Drive, Irvine, Ca 92618

DISPOSITION OF APPLICATION: (For Sanitarians Use Only)

- [x] APPROVED
- [ ] DENIED
- [ ] APPROVED WITH CONDITIONS

If denied or approved with conditions, report reason or conditions here:

DATE

SANITARIAN

DATE 1/24/98

SECTION CHIEF

ENTERED

When signed by Section Chief, this application is a permit.

APPLICANT COPY

Please Return All Copies

76A668
H-13 (Rev. 3/91) 5/96

APPENDIX C
GEOPHYSICAL BORING LOGS

PARTIALLY SCANNED
OVERSIZE ITEM (S)

See Document # 89042
for partially scanned image(s).

For complete version of oversize document(s),
see paper copy.

OVD-parent

APPENDIX D

WELL DEVELOPMENT DATA SHEETS, SURVEY MAP, AND FLUID LEVEL MONITORING AND GROUNDWATER SAMPLING DATA SHEETS

Page #: 2

Well Development Data Sheet

Date: 2-12-98

Site Name / Project #: 76 STATION 4357 / 20-0368

Well ID: MW-1

Tech: ED DE LA CRUZ

Purge Data								
Time	Temp.	E.C.	pH	Turbidity	Gallons	Notes		
Surge Start: 10:24						SAME PROCEDURE AND EQUIPMENT USED IN		
Surge Stop: 10:43						MW-3	Bail / Pump	
Bail Start 10:45					} 63			
Bail Stop 11:08							Total Gals. Purged	128
Pump Start: 11:11							Total Vols. Purged	6
1.0 BV	20.9°C	1.72	6.36	696	21			
1.5 BV	18.1°C	1.94	6.52	321	32	INITIAL pH 6.66	Final EC	1.98
2.0 BV	20.7	1.89	6.50	165	43	EC 1.63	Final pH	6.51
2.5 BV	20.1	1.78	6.53	7	54	Temp 19.3°C	Final Temp.	18.8°C
3.0 BV	20.4	1.91	6.47	2	65	Turb —		
Pump Stop: 11:42								
Q (Vol/Time)								

Special Notes for This Well:
ALL MEASUREMENTS DONE AT TOP OF CASING TO THE NORTH.

Well Data	
Bore OD:	10"
Casing ID:	4"
Well TD:	142.35
D.T.W.	129.16
Ft./Water:	13
80% Recovery:	
Factor:	1.63
1 Volume:	21
Recharge:	F/S

Bore Volume Factor Calculation:

$$\frac{12 * [P (BD/2)_2 - P (CD/2)_2 + (CD/2)_2][WD-GW]}{231}$$

Bore Volume:

$$[7.48 * / 4] \times [CD_2 + P(BD_2 - CD_2)][WD-GW]^*$$

WD = Well Depth (Ft.)
GW = Depth to Groundwater (Ft.)
CD= Casing Diameter (Ft.)
BV = Bore Volume
* = 3.14
P = Porosity of Filter Pack
BD = Bore Diameter (Ft.)

Standard Bore Volume Factor Constants for 0.3 Filter Pack Porosity, Schedule 40 PVC:

Casing/Bore Diameter:	Bore Volume Factors:	Casing Volume Factors:
2"/8"	0.88	0.17 Gal/Ft.
4"/8"	1.19	0.66 Gal/Ft.
4"/10"	1.63	0.66 Gal/Ft.
6"/10"	2.16	1.5 Gal/Ft.
6"/12"	3.07	1.5 Gal/Ft.

Page #: 3

Well Development Data Sheet

Date: 2-12-98

Site Name / Project #: 76 STATION 4357 / 20-0368

Well ID: MW-2

Tech: ED DE LA CRUZ

Purge Data

Time	Temp.	E.C.	pH	Turbidity	Gallons	Notes
Surge Start: 12:17						SAME PROCEDURE + EQUIPMENT USED
Surge Stop: 12:36						IN MW-3 + MW-1
Bail Start 12:36					} 85	
Bail Stop 1:10						
Pump Start: 1:15						
1.0 BV	17.0°c	1.77	6.56	504	27	
1.5 BV	20.3°c	1.65	6.62	489	40	INITIAL E.C 1.71
2.0 BV	20.5	1.70	6.65	231	53	pH 6.88
2.5 BV	18.3	1.72	6.62	— *	66	Temp 19.6°c
3.0 BV	20.3	1.62	6.61	— *	115	Turb 999
Pump Stop: 1:47						
Q (Vol/Time)						

Bail / Pump	
Total Gals. Purged	200
Total Vols. Purged	7
Final EC	1.62
Final pH	6.61
Final Temp.	20.3

Special Notes for This Well:

ALL MEASUREMENTS TAKEN TOP OF CASING TO THE NORTH.

*Used visual comparison of NTUs to determine <5 NTUs by comparing to NTUs of MW-3 and MW-1

Well Data

Bore OD:	10"
Casing ID:	4"
Well TD:	144.35
D.T.W.	127.71
Ft. Water	16.6
90% Recovery:	
Factor:	1.63
1 Volume:	27
Recharge:	F/S

Bore Volume Factor Calculation:

$$\frac{12 * [P (BD/2)_2 - P (CD/2)_2 + (CD/2)_2][WD-GW]}{231}$$

Bore Volume:

$$[7.48 * / 4] \times [CD_2 + P(BD_2 - CD_2)][WD-GW]^*$$

WD = Well Depth (Ft.)

GW = Depth to Groundwater (Ft.)

CD = Casing Diameter (Ft.)

BV = Bore Volume

* = 3.14

P = Porosity of Filter Pack

BD = Bore Diameter (Ft.)

Standard Bore Volume Factor Constants for 0.3 Filter Pack Porosity, Schedule 40 PVC:

Casing/Bore Diameter:	Bore Volume Factors:	Casing Volume Factors:
2"/8"	0.88	0.17 Gal/Ft.
4"/8"	1.19	0.66 Gal/Ft.
4"/10"	1.63	0.66 Gal/Ft.
6"/10"	2.16	1.5 Gal/Ft.
6"/12"	3.07	1.5 Gal/Ft.

Page #: 1

Well Development Data Sheet

Date: 2-12-98

Site Name / Project #: 76 STATION 4357 / 20-0368

Well ID: MW-3

Tech: ED DE LA CRUZ

Purge Data								
Time	Temp	E.C	pH	Turbidity	Gallons	Notes		
Surge Start: 8:08						SURGING FROM BOTTOM UP AT 18"		
Surge Stop: 8:29						INTERVALS USING WALKING BEAM	Bail / Pump	
Bail Start 8:31					} 80 gallons			
Bail Stop 9:10						3 mL sediment / 1 Liter water per	Total Gals. Purged	155
Pump Start: 9:24						sedimentation cone	Total Vols. Purged	6
1.0 BV	20.0°C	1.60	6.66	23	25			
1.5 BV	19.3	1.61	6.70	13	37.5	initial pH 6.54	Final EC	1.17
2.0 BV	21.0	1.63	6.69	10	50	Temp 19.5°C	Final pH	6.70
2.5 BV	20.9	1.59	6.64	5	62.50	E.C. 1.5 ms/cm	Final Temp.	19.3
3.0 BV	20.5	1.56	6.60	3	75	Turb 8		
Pump Stop: 9:48								
Q (Vol/Time)						Pump at 2.25 gal/min		

Special Notes for This Well:

ALL MEASUREMENTS MADE AT TOP OF CASING TO THE NORTH

Well Data	
Bore OD:	10"
Casing ID:	4"
Well TD:	142.81
DTW:	127.31
Ft. Water:	16.5
90% Recovery:	
Factor:	1.63
1 Volume:	25
Recharge:	F/S

Bore Volume Factor Calculation:

$$\frac{12 \pi [P (BD/2)_2 - P (CD/2)_2 + (CD/2)_2][WD-GW]}{231}$$

Bore Volume:

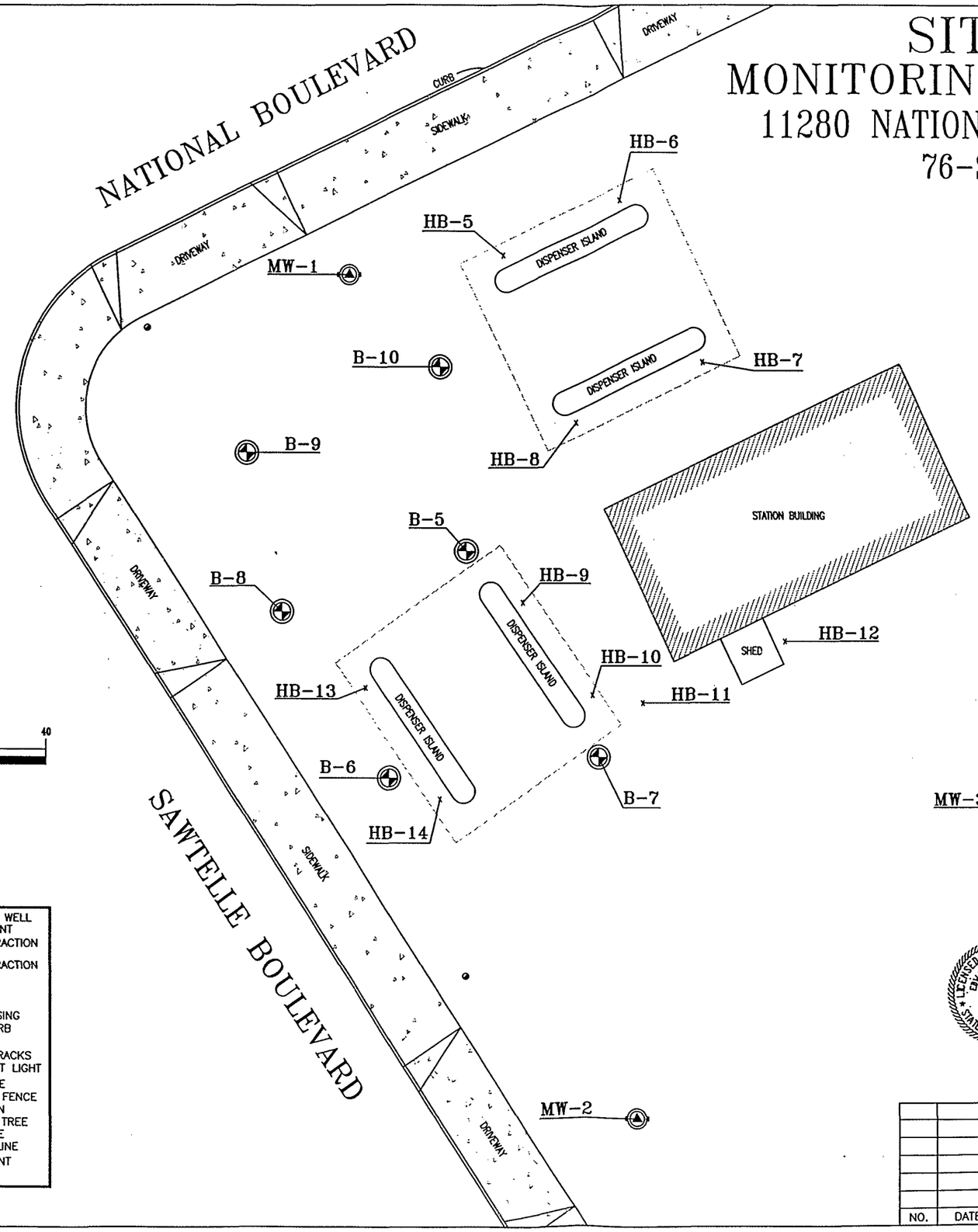
$$[7.48 \pi / 4] \times [CD_2 + P(BD_2 - CD_2)][WD-GW]^*$$

WD = Well Depth (Ft.)
GW = Depth to Groundwater (Ft.)
CD = Casing Diameter (Ft.)
BV = Bore Volume
π = 3.14
P = Porosity of Filter Pack
BD = Bore Diameter (Ft.)

Standard Bore Volume Factor Constants for 0.3 Filter Pack Porosity, Schedule 40 PVC:

Casing/Bore Diameter:	Bore Volume Factors:	Casing Volume Factors:
2"/8"	0.88	0.17 Gal/Ft.
4"/8"	1.19	0.66 Gal/Ft.
4"/10"	1.63	0.66 Gal/Ft.
6"/10"	2.16	1.5 Gal/Ft.
6"/12"	3.07	1.5 Gal/Ft.

SITE PLAN
MONITORING WELL LOCATIONS
11280 NATIONAL BLVD. LOS ANGELES, CA
76-STATION 4357



Graphic Scale

20 0 10 20 40

(In Feet)

1 inch = 20 ft.

LEGEND

AC	ASPHALT PAVING		MONITORING WELL
BH	BORE HOLE		SPARGE POINT
CLF	CHAIN LINK FENCE		VAPOR EXTRACTION WELLS
EB	ELECTRIC BOX		VAPOR EXTRACTION VALVES
EMB	ELECTRIC MAN HOLE		BORE HOLE
EV	ELECTRIC VAULT	TOR	TOP OF RIM
FS	FINISH SURFACE	TOC	TOP OF CASING
FR	FIRE RISER	TC	TOP OF CURB
GM	GAS METER	FL	FLOW LINE
GV	GAS VAULT		RAILROAD TRACKS
PHV	PHONE VAULT		PARKING LOT LIGHT
SCO	SEWER CLEAN OUT		WOOD FENCE
SD	STORM DRAIN		CHAIN LINK FENCE
TV	TELEPHONE VAULT	CB	CATCH BASIN
TMH	TELEPHONE MAN HOLE		LANDSCAPE TREE
TOW	TOP OF WALL		CENTER LINE
UB	UTILITY BOX		PROPERTY LINE
VLT	VAULT	FH	FIRE HYDRANT
WB	WATER BOX		LIGHT
WM	WATER METER		
WVS	WATER VALVES		

COORDINATE LISTING

NAME	NORTH	EAST	TOR	TOC	FS
B-5	4121925.73	4157382.24			124.40
B-6	4121887.45	4157368.77			123.70
B-7	4121890.96	4157405.17			124.16
B-8	4121915.50	4157350.12			124.06
B-9	4121942.28	4157344.10			124.58
B-10	4121956.76	4157377.80			125.04
HB-5	4121975.48	4157388.73			125.28
HB-6	4121984.80	4157408.98			125.40
HB-7	4121957.50	4157423.37			125.02
HB-8	4121947.39	4157401.27			124.86
HB-9	4121917.05	4157392.02			124.40
HB-10	4121901.42	4157404.09			124.30
HB-11	4121900.10	4157412.86			124.13
HB-12	4121910.44	4157437.70			124.34
HB-13	4121902.65	4157364.60			123.88
HB-14	4121883.86	4157377.66			123.68
MW-1	4121972.26	4157361.92	125.12	124.86	
MW-2	4121830.39	4157411.83	123.54	123.22	
MW-3	4121882.38	4157481.01	122.85	122.51	

NOTE: MW-1 LATITUDE 34° 01' 34", LONGITUDE 118° 25' 48" AND 1927 DATUM.

DATE OF SURVEY
FEBRUARY 12, 1998

BENCH MARK
THE ELEVATIONS SHOWN HEREON ARE BASED UPON THE CITY OF LOS ANGELES BENCH MARK NO. 13-10040 ELEVATION = 123.16

LICENSED LAND SURVEYOR EDWARD L. SCHENET L.S. 4240 Exp. 6/30/98 STATE OF CALIFORNIA

PREPARED FOR
ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92618
(714) 753-0101
(714) 753-0111 Fax

NO.	DATE	REVISIONS	BY

PREPARED BY JOB NO. 98058

CAL VADA SURVEYING INC.
108 BUSINESS CENTER DRIVE
CORONA, CA 91720
PHONE: (909) 280-9960
FAX: (909) 280-9748

EDWARD L SCHENET PLS 4240

DATE: FEBRUARY 13, 1998 SHEET 1 OF 1

FIELD MONITORING DATA SHEET

Technician: MARK ALVARIS Job #/Task #: _____ Date: 2-23-98

Site # 4357 Project Manager GIL FRY Page 1 of 1

Well #	Grade	TOC	Total Depth	Depth to Water	Depth to Product	Product Thickness (feet)	Time Sampled	Misc. Well Notes
MW-1		X	143.60	129.04	Ø	Ø	X	GAUGED ONLY
MW-2		X	144.45	127.45	Ø	Ø	X	↓ ↓
MW-3		X	142.98	127.03	Ø	Ø	X	↓ ↓

Comments/Repairs Completed:

FLDMON.XLS 4/25/97

GROUNDWATER SAMPLING FIELD NOTES

Site: 4357 Project No.: _____ Sampled By: MARK ROBBINS Date: 2-26-98

Well No. MW-1 Purge Method: SUB
Depth to Water (feet): 129.04 Depth to Product (feet): Ø
Total Depth (feet) 143.60 LPH & Water Recovered (gallons): Ø
Water Column (feet): 14.56 Casing Diameter (inches): 4"
80% Recharge Depth (feet) 131.95 1 Well Volume (gallons) 9

Time Start	Time Stop	Depth To Water TURBIDITY	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F, C)	pH
9:02		48.6	9	1.47	67.1	7.71
		9.82	18	1.46	68.1	7.54
	9:07	5.21	27	1.49	69.8	7.51

Static at Time Sampled	Total Purged	Time Sampled
129.46	27	9:19

Comments:

Well No. MW-2 Purge Method: SUB
Depth to Water (feet): 127.45 Depth to Product (feet): Ø
Total Depth (feet) 144.45 LPH & Water Recovered (gallons): Ø
Water Column (feet): 17.00 Casing Diameter (inches): 4"
80% Recharge Depth (feet): 130.85 1 Well Volume (gallons) 11

Time Start	Time Stop	Depth To Water TURBIDITY	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F, C)	pH
10:06		21.1	11	1.43	68.9	7.81
		19.8	22	1.42	69.7	7.90
	10:13	200	33	1.35	69.9	7.88

Static at Time Sampled	Total Purged	Time Sampled
127.45	33	10:22

Comments:

Well No. MW-3 Purge Method SUB
Depth to Water (feet) 127.03 Depth to Product (feet): Ø
Total Depth (feet): 142.98 LPH & Water Recovered (gallons) Ø
Water Column (feet) 15.95 Casing Diameter (inches): 4"
80% Recharge Depth (feet) 130.22 1 Well Volume (gallons): 10

Time Start	Time Stop	Depth To Water TURBIDITY	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F, C)	pH
10:42		33.0	10	1.45	70.7	7.88
		35.0	20	1.41	71.6	7.86
	10:46	24.0	30	1.40	71.3	7.87

Static at Time Sampled	Total Purged	Time Sampled
127.06	30	10:55

Comments:

Well No. _____ Purge Method: _____
Depth to Water (feet) _____ Depth to Product (feet): _____
Total Depth (feet): _____ LPH & Water Recovered (gallons): _____
Water Column (feet) _____ Casing Diameter (inches): _____
80% Recharge Depth (feet): _____ 1 Well Volume (gallons): _____

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F, C)	pH

Static at Time Sampled	Total Purged	Time Sampled

Comments:

Well No. _____ Purge Method _____
Depth to Water (feet) _____ Depth to Product (feet) _____
Total Depth (feet) _____ LPH & Water Recovered (gallons) _____
Water Column (feet) _____ Casing Diameter (inches) _____
80% Recharge Depth (feet) _____ 1 Well Volume (gallons) _____

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F, C)	pH

Static at Time Sampled	Total Purged	Time Sampled

Comments:

Well No. _____ Purge Method _____
Depth to Water (feet) _____ Depth to Product (feet) _____
Total Depth (feet): _____ LPH & Water Recovered (gallons) _____
Water Column (feet) _____ Casing Diameter (inches) _____
80% Recharge Depth (feet) _____ 1 Well Volume (gallons) _____

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F, C)	pH

Static at Time Sampled	Total Purged	Time Sampled

Comments:

FIELD MONITORING DATA SHEET

Technician: MARK RUDDIS Job #/Task #: _____ Date: 3-23-98

Site # 4357 Project Manager GIL FRY Page 1 of 1

Well #	Grade	TOC	Total Depth	Depth to Water	Depth to Product	Product Thickness (feet)	Time Sampled	Misc. Well Notes
MW-1		X		128.49	Ø	Ø	X	GAUGED ONLY
MW-3		X		126.50	Ø	Ø	X	↓ ↓
MW-2		X		126.47	Ø	Ø	X	↓ ↓

FIELD DATA COMPLETE QA/QC COC WELL BOX CONDITION SHEETS

WTT CERTIFICATE MANIFEST DRUM INVENTORY

FLDMON.XLS 2/4/98

APPENDIX E

MANIFESTS

#10450

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No. 00001

2. Page 1 of 1

3. Generator's Name and Mailing Address
TOSCO MARKETING
P.O. BOX 25376 SANTA ANA, CA. 92799-5376

4. Generator's Phone ( )

5. Transporter 1 Company Name: MANESS CORPORATION

6. US EPA ID Number: CAD009684234

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address
CROSBY & OVERTON
1630 W. 17TH STREET
LONG BEACH,CA. 90813

10. US EPA ID Number: CAD028409019

A. Transporter's Phone 562-595-4555
B. Transporter's Phone
C. Facility's Phone 562-432-5445

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NON-HAZARDOUS WASTE LIQUIDS (PURGE WATER/WELL MONITORING WATER)	001	TT	006.00	G
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above
11a. 100% PURGE WATER-WELL MONITORING WATER

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
WEAR PROPER PROTECTIVE CLOTHING
24 HOUR EMERGENCY CONTACT:
24 HOUR PHONE:
PROFILE# 14474

SITE: 4357
11280 NATIONAL BLVD.
LOS ANGELES, CA.

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste

Printed/Typed Name: Agent for Tosco Richard Okada
Signature: Richard Okada
Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: GREG MARISCAL
Signature: Greg Mariscal
Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Joe Simons
Signature: [signature]
Month Day Year: 10 9 10 6 98

GENERATOR

TRANSPORTER

FACILITY

TRANSPORTER #1

#10450

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No. 0 0 0 0 1

2. Page 1 1 of 1

3. Generator's Name and Mailing Address
TOSCO MARKETING
P.O. BOX 25376 SANTA ANA, CA. 92799-5376

4. Generator's Phone ( ) JIM ADAMS

5. Transporter 1 Company Name: MANESS CORPORATION

6. US EPA ID Number: C A D 0 0 9 6 8 4 2 3 4

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address
CROSBY & OVERTON
1630 W. 17TH STREET
LONG BEACH, CA. 90813

10. US EPA ID Number: C A D 0 2 8 4 0 9 0 1 9

A. Transporter's Phone 562-595-4555
B. Transporter's Phone
C. Facility's Phone 562-432-5445

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NON-HAZARDOUS WASTE LIQUIDS (PURGE WATER/WELL MONITORING WATER)	0 0 1	T T	0 1 0 4 5	G
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above
11a. 100% PURGE WATER-WELL MONITORING WATER

E. Handling Codes for Wastes Listed Above
15

15. Special Handling Instructions and Additional Information
WEAR PROPER PROTECTIVE CLOTHING
24 HOUR EMERGENCY CONTACT:
24 HOUR PHONE:
PROFILE# 14474

SITE:4357
11280 NATIONAL BLVD.
LOS ANGELES, CA.

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: AGENT FOR TOSCO--RICHARD OKUDA
Signature: Richard Okuda
Month 02 Day 11 Year 98

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: EDWARD G. WOODALL
Signature: Edward H. Woodall
Month 02 Day 11 Year 98

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: EDWARD HUIZAR
Signature: Edward Huizar
Month 02 Day 11 Year 98

GENERATOR

TRANSPORTER

FACILITY

TRANSPORTER #1

Soil Master (c)

TPS Technologies, Inc.

Customer Job Repor

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

Job Number Name	SiteAddress	SiteCity	State	ZipCode
A07 -- 10147 76 #4357 - M	11280 NATIONAL BLVD	LOS ANGELES	CA	90064

Load #	Date & Time Out	Transporter #	Truck & Trailer Number	Gross (lb)	Tare (lb)	Net (lb)	Net Wt (tons)
2	02/11/98 14:05	7MANESS	2401	58,400M	26,460M	31,940	15.97
1	02/12/98 09:23	7MANESS	2401 -- 2401	58,380S1	37,660S1	20,720	10.36
3	02/16/98 15:08	7MANESS	2401 -- 10450	48,120M	37,580M	10,540	5.27
4	03/16/98 09:22	7MANESS		7,460M	5,120M	2,340	1.17

Completed Loads	Manifests Received	Completed Weight	Estimated Weight	TOTAL Net Wt:
80.00%	4	163.90%	20.00(tons)	32.77 (tons)

#10450

Manifest

TPS Technologies Soil Recycling
Non-Hazardous Soils

↓ Manifest # ↓

Date of Shipment:	Responsible for Payment:	Transporter Truck #:	Facility #:	Given by TPS:	Load #
2-12-98		2401		10147	0 0

Generator and/or Consultant

Generator's Name and Billing Address: TOSCO MARKETING ATTN: JIM ADAMS P.O. BOX 25376 SANTA ANA, CA. 92799-5376	Generator's Phone #: Person to Contact: FAX#:	Generator's US EPA ID No. Customer Account Number with TPS:
Consultant's Name and Billing Address: MANESS ENVIRONMENTAL SERVICES, INC. 1101 E. SPRING ST. LONG BEACH, CA. 90806	Consultant's Phone #: 310-595-4555 Person to Contact: RICHARD OKUDA FAX#: 310-492-6495	Customer Account Number with TPS: 1000369
Generation Site (Transport from): *(name & address)* #4357 11280 NATIONAL BLVD. LOS ANGELES, CA.	Site Phone #: Person to Contact: FAX#:	BTEX Levels TPH Levels AVG. Levels
Designated Facility (Transport to): *(name & address)* TPS TECHNOLOGIES 12328 HIBICUS AVE. ADELANTO, CA. 92301	Facility Phone #: 800-862-8001 Person to Contact: DARREN BARTLETT FAX#: 619-862-8004	Facility Permit Numbers
Transporter Name and Mailing Address: MANESS ENVIRONMENTAL SERVICES, INC. 1101 E. SPRING ST. LONG BEACH, CA. 90806	Transporter's Phone #: 310-595-4555 Person to Contact: RICHARD OKUDA FAX#: 310-492-6495	Transporter's US EPA ID No. Transporter's DOT No.: Customer Account Number with TPS:

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐			58380	37660	20720
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐					10.36

List any exception to items listed above: 25620

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: AGENT FOR TOSCO--RICHARD OKUDA ☐ Generator ☐ Consultant — Signature and date: Richard Okuda — Month 02 Day 12 Year 98

Transporter

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: Robert Mitchell — Signature and date: Robert Mitchell — Month 02 Day 12 Year 98

Recycling Facility

Discrepancies:

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

Print or Type Name: DARREN R. BARTLETT — Signature and date: [signature] 2-12-98

Please print or type.

TPS FACILITY COPY

98004-8017

Manifest

TPS Technologies Soil Recycling
Non-Hazardous Soils

↓ Manifest # ↓

Date of Shipment:	Responsible for Payment:	Transporter Truck #:	Facility #:	Given by TPS:	Load #
2-11-98		2801		10147	002

Generator and/or Consultant

Generator's Name and Billing Address: TOSCO MARKETING P.O. BOX 25376 SANTA ANA, CA. 92799-5376	Generator's Phone #: / Person to Contact: / FAX#:	Generator's US EPA ID No. / Customer Account Number with TPS:
Consultant's Name and Billing Address: MANESS ENVIRONMENTAL SERVICES, INC. 1101 E. SPRING ST. LONG BEACH, CA. 90806	Consultant's Phone #: 310-595-4555 / Person to Contact: RICHARD OKUDA / FAX# 310-492-6495	Customer Account Number with TPS: 1000369
Generation Site (Transport from): *(name & address)* TOSCO MARKETING SERVICE STATION # 4357 11280 NATIONAL BLVD. LOS ANGELES, CA. 90064	Site Phone #: / Person to Contact: / FAX#:	BTEX Levels / TPH Levels / AVG. Levels
Designated Facility (Transport to): *(name & address)* TPS TECHNOLOGIES 12328 HIBICUS AVE. ADELANTO, CA. 92301	Facility Phone #: 800-862-8001 / Person to Contact: DARREN BARTLETT / FAX#: 619-862-8004	Facility Permit Numbers
Transporter Name and Mailing Address: MANESS ENVIRONMENTAL SERVICES, INC. 1101 E. SPRING ST. LONG BEACH, CA. 90806	Transporter's Phone #: 310-595-4555 / Person to Contact: RICHARD OKUDA / FAX#: 310-492-6495	Transporter's US EPA ID No.: / Transporter's DOT No.: / Customer Account Number with TPS:

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐			58400	26460	31940
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐					15,97

List any exception to items listed above: 25614

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 ☒ RICHARD OKUDA – AGENT FOR TOSCO MARKETING — Signature and date: — Month 02 Day 02 Year 98

Transporter

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 2 Day 2 Year 98

Recycling Facility

Discrepancies:

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

Print or Type Name: Dellena Benton — Signature and date: 2/11/98

Please print or type.

TPS FACILITY COPY

Bin 2014-80

10450

Manifest

TPS Technologies Soil Recycling
Non-Hazardous Soils

↓ Manifest # ↓

Date of Shipment:	Responsible for Payment:	Transporter Truck #:	Facility #:	Given by TPS:	Load #
		2401		10147	1008

Generator and/or Consultant

Generator's Name and Billing Address: TOSCO MARKETING ATTN: JIM ADAMS P.O. BOX 25376 SANTA ANA, CA. 92799-5376	Generator's Phone #: Person to Contact: FAX#:	Generator's US EPA ID No. Customer Account Number with TPS:
Consultant's Name and Billing Address: MANESS ENVIRONMENTAL SERVICES, INC. 1101 E. SPRING ST. LONG BEACH, CA. 90806	Consultant's Phone #: 310-595-4555 Person to Contact: RICHARD OKUDA FAX#: 310-492-6495	 Customer Account Number with TPS: 1000369
Generation Site (Transport from): *(name & address)* #4357 11280 NATIONAL BLVD. LOS ANGELES, CA.	Site Phone #: Person to Contact: FAX#:	BTEX Levels TPH Levels AVG. Levels
Designated Facility (Transport to): *(name & address)* TPS TECHNOLOGIES 12328 HIBICUS AVE. ADELANTO, CA. 92301	Facility Phone #: 800-862-8001 Person to Contact: DARREN BARTLETT FAX#: 619-862-8004	Facility Permit Numbers
Transporter Name and Mailing Address: MANESS ENVIRONMENTAL SERVICES, INC. 1101 E. SPRING ST. LONG BEACH, CA. 90806	Transporter's Phone #: 310-595-4555 Person to Contact: RICHARD OKUDA FAX#: 310-492-6495	Transporter's US EPA ID No.: Transporter's DOT No.: Customer Account Number with TPS:

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% over ☐	Gas ☐ Diesel ☑ Other ☐			~~26780~~	37580	10540
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐			48120		5.27

List any exception to items listed above: 25684

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 ☐ — AGENT FOR TOSCO--RICHARD OKUDA

Signature and date: [signature] — Month 02 Day 05 Year 98

Transporter

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] — Month 2 Day 5 Year 98

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: [signature] 2/11/98

Please print or type.

TPS FACILITY COPY

#10450

Manifest

TPS Technologies Soil Recycling
Non-Hazardous Soils

↓ Manifest # ↓

Date of Shipment:	Responsible for Payment:	Transporter Truck #:	Facility #:	Given by TPS:	Load #
				10147	1004

Generator and/or Consultant

Generator's Name and Billing Address: TOSCO MARKETING P.O. BOX 25376 SANTA ANA, CA. 92799-5376	Generator's Phone #:	Generator's US EPA ID No.
	Person to Contact:	
	FAX#:	Customer Account Number with TPS:
Consultant's Name and Billing Address: MANESS ENVIRONMENTAL SERVICES, INC. 1101 E. SPRING ST. LONG BEACH, CA. 90806	Consultant's Phone #: 310-595-4555	
	Person to Contact: RICHARD OKUDA	
	FAX#: 310-492-6495	Customer Account Number with TPS: 1000369
Generation Site (Transport from): *(name & address)* #4357 11280 NATIONAL BLVD. LOS ANGELES, CA. 90066	Site Phone #:	BTEX Levels
	Person to Contact:	TPH Levels
	FAX#:	AVG. Levels
Designated Facility (Transport to): *(name & address)* TPS TECHNOLOGIES 12328 HIBICUS AVE. ADELANTO, CA. 92301	Facility Phone #: 800-862-8001	Facility Permit Numbers
	Person to Contact: DARREN BARTLETT	
	FAX#: 619-862-8004	
Transporter Name and Mailing Address: MANESS ENVIRONMENTAL SERVICES, INC. 1101 E. SPRING ST. LONG BEACH, CA. 90806	Transporter's Phone #: 310-595-4555	Transporter's US EPA ID No.:
	Person to Contact: RICHARD OKUDA	Transporter's DOT No.:
	FAX#: 310-492-6495	Customer Account Number with TPS:

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐	4 SOIL		7460	5120	2340
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐					1.17

List any exception to items listed above: 26440

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 ☐ — AGENT FOR TOSCO--RICHARD OKUDA

Signature and date: [signature] Month Day Year

Transporter

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: GREG MARISCAL

Signature and date: [signature] 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: [signature] 3/16/98

Please print or type.

TPS FACILITY COPY

APPENDIX F

OFFICIAL LABORATORY REPORTS AND CHAIN OF CUSTODY RECORDS - GEOCHEMICAL ANALYSES

Jones Environmental, Inc.

Testing Laboratories

P.O. Box 5387 • Fullerton, CA 92838
(714) 449-9937 • FAX (714) 449-9685

JONES ENVIRONMENTAL

LABORATORY REPORT

Client:	Alton Geoscience	**Report Date:**	02/09/98
Client Address:	25A Technology Drive Irvine, CA 92618	**JEL Ref. No.:** **Client Ref. No.:**	A-2880
Attn:	Gil Fry	**Date Sampled:**	02/09/98
		Date Received:	02/09/98
Project:	76 Station #4357	**Date Analyzed:**	02/09/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

ANALYSES REQUESTED

1. EPA 8020 - Volatile Aromatic Hydrocarbons
2. Mod 8015 Gasoline - Volatile Hydrocarbons

Approval:

Steve Jones, Ph.D.
Laboratory Manager

Jones Environmental, Inc.

Testing Laboratories

P.O. Box 5387 • Fullerton, CA 92835
(714) 449-9937 • FAX (714) 449-9685

JONES ENVIRONMENTAL

LABORATORY RESULTS

Client:	Alton Geoscience	**Report Date:**	02/09/98
Client Address:	25A Technology Drive Irvine, CA 92618	**JEL Ref. No.:**	A-2880
		Client Ref. No.:	
Attn:	Gil Fry	**Date Sampled:**	02/09/98
		Date Received:	02/09/98
Project:	76 Station #4357	**Date Analyzed:**	02/09/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

EPA 8020 - Volatile Aromatic Hydrocarbons

Concentration (mg/Kg)

Sample ID	MTBE@	Benzene	Toluene	Ethylbenzene	Xylenes	E.Q.L (mg/Kg)	M.D.L. (mg/Kg)	Surrogate Recovery %
B5-15.25	ND	ND	ND	ND	ND	0.002	0.0003	104
B5-20.0	0.0046*	ND	ND	ND	ND	0.002	0.0003	97
B5-25.25	0.005	ND	ND	ND	ND	0.002	0.0003	101
B5-30.0	0.027	ND	0.0041B	0.0027	0.035	0.002	0.0003	104
B5-35.5	0.039	ND	0.024B	0.21	0.53	0.002	0.0003	107
B5-40.25	0.0015*	ND	ND	ND	ND	0.002	0.0003	104
B5-45.25	0.0017*	ND	0.0026B	0.0014*	0.011	0.002	0.0003	104
B5-50.0	0.0012*	ND	0.0019*B	ND	0.0054	0.002	0.0003	100
B5-54.5	ND	ND	ND	ND	ND	0.002	0.0003	104
B5-60.0	0.002*	ND	ND	ND	ND	0.002	0.0003	99
B5-65.0	0.0016*	ND	ND	ND	ND	0.002	0.0003	102
B5-69.8	0.0023*	ND	ND	ND	ND	0.002	0.0003	106
B5-74.75	ND	ND	ND	ND	ND	0.002	0.0003	104
B5-79.5	0.0015*	ND	ND	ND	ND	0.002	0.0003	104
B5-84.75	ND	ND	ND	ND	ND	0.002	0.0003	103
B5-89.5	0.001*	ND	ND	ND	ND	0.002	0.0003	107
B5-94.5	ND	ND	ND	ND	ND	0.002	0.0003	103
B5-99.5	0.0014*	ND	ND	ND	ND	0.002	0.0003	101
B5-104.5	ND	ND	ND	ND	ND	0.002	0.0003	104
B5-110.25	0.0024*	ND	ND	ND	ND	0.002	0.0003	102
B5-114.5	ND	ND	ND	ND	ND	0.002	0.0003	103

B = Found in the Method Blank.
@ = MTBE has an EQL of 0.005 mg/Kg and an MDL of 0.001 mg/Kg; all other BTEX compounds are as given.
* = Estimated concentrations.
ND = Not Detected at levels above the Method Detection Limit (MDL).

Jones Environmental, Inc.

Testing Laboratories

JONES ENVIRONMENTAL

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(714) 449-9937 • FAX (714) 449-9685

QUALITY CONTROL INFORMATION

Client:	Alton Geoscience	**Report Date:**	02/09/98
Client Address:	25A Technology Drive Irvine, CA 92618	**JEL Ref. No.:** **Client Ref. No.:**	A-2880
Attn:	Gil Fry	**Date Sampled:**	02/09/98
		Date Received:	02/09/98
Project:	76 Station #4357	**Date Analyzed:**	02/09/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

EPA 8020 - Volatile Aromatic Hydrocarbons

Sample Spiked: B5-114.5

Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)
Toluene	102%	99%	2.8%	65 - 125
o-Xylene	104%	102%	2.3%	65 - 125

Sample Spiked: B5-110.25

Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)
Toluene	100%	99%	0.2%	65 - 125
o-Xylene	103%	106%	2.7%	65 - 125

Method Blank = Not Detected < 0.002 mg/Kg

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference

Jones Environmental, Inc.

Testing Laboratories

P.O. Box 5387 • Fullerton, CA 9283
(714) 449-9937 • FAX (714) 449-9685

JONES ENVIRONMENTAL

LABORATORY RESULTS

Client:	Alton Geoscience	**Report Date:**	02/09/98
Client Address:	25A Technology Drive Irvine, CA 92618	**JEL Ref. No.:** **Client Ref. No.:**	A-2880
Attn:	Gil Fry	**Date Sampled:**	02/09/98
		Date Received:	02/09/98
Project:	76 Station #4357	**Date Analyzed:**	02/09/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

Modified EPA 8015 - Volatile Hydrocarbons (Gasoline)

Sample ID	Concentration (mg/Kg)	Surrogate Recovery %	E.Q.L. (mg/Kg)	M.D.L. (mg/Kg)
B5-15.25	ND	101	0.5	0.05
B5-20.0	ND	90	0.5	0.05
B5-25.25	ND	105	0.5	0.05
B5-30.0	1.3	101	0.5	0.05
B5-35.5	5.9	123	0.5	0.05
B5-40.25	ND	101	0.5	0.05
B5-45.25	ND	105	0.5	0.05
B5-50.0	ND	99	0.5	0.05
B5-54.5	ND	105	0.5	0.05
B5-60.0	ND	99	0.5	0.05
B5-65.0	ND	108	0.5	0.05
B5-69.8	ND	103	0.5	0.05
B5-74.75	ND	105	0.5	0.05
B5-79.5	ND	99	0.5	0.05
B5-84.75	ND	101	0.5	0.05
B5-89.5	ND	103	0.5	0.05
B5-94.5	ND	106	0.5	0.05
B5-99.5	ND	99	0.5	0.05
B5-104.5	ND	104	0.5	0.05
B5-110.25	ND	100	0.5	0.05
B5-114.5	ND	104	0.5	0.05

ND = Not Detected at levels above the Method Detection Limit (MDL).

Jones Environmental, Inc.

Testing Laboratories
JONES ENVIRONMENTAL

P.O. Box 5387 • Fullerton, CA 92838
(714) 449-9937 • FAX (714) 449-9685

QUALITY CONTROL INFORMATION

Client:	Alton Geoscience	**Report Date:**	02/09/98
Client Address:	25A Technology Drive Irvine, CA 92618	**JEL Ref. No.:** **Client Ref. No.:**	A-2880
Attn:	Gil Fry	**Date Sampled:**	02/09/98
		Date Received:	02/09/98
Project:	76 Station #4357	**Date Analyzed:**	02/09/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

Modified EPA 8015 - Volatile Hydrocarbons (Gasoline)

Sample Spiked: B5-110.25

Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)
Gasoline	101%	%	%	65 - 125

Sample Spiked: B5-114.5

Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)
Gasoline	108%	106%	1.8%	65 - 125

Method Blank = Not Detected

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference

BC LABORATORIES, INC.

LABORATORY
(805) 327-4911
FAX (805) 327-1918
4100 Atlas Ct.
Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton GeoScience	Project Name: 76 Station/Tosco
Address: 25A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Gil Fry Sampler: Sonya	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Per EPA protocol

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water
☐ Waste Water
☐ Other

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8020/8240 MTBE									Comments
B5-15.25	2/4/98 804	Soil	1	2x6 Brass		X									Mobile Lab
B5-20.0	808		1	2x6 Brass		X									
B5-25.25	814		1			X									
B5-30.0	821		1			X									
B5-35.5	832		1			X									
B5-40.25	846		1			X									
B5-45.25	857		1			X									
B5-50.0	908		1			X									
B5-54.5	917		1			X									

Relinquished By: Sonya V. Hansen	Date: 2/5/98	Time: 1315	Received By: [illegible]	Date: 2/9/98	Time: 1314
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment_____ Page 1 Of 3

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed?_____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time?_____
Approved by:_____ Signature:_____ Company:_____ Date:_____

BC LABORATORIES, INC.

LABORATORY
(805) [illegible] 4911
FAX (805) 327-1918
4100 Atlas Ct.
Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station / Tosco
Address: 25 A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 7147530101 FAX: 7147530111	Site # 4357
Report To: Gil Fry Sampler: Sonya	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water ← Per EPA protocol
☐ Waste Water
☐ Other

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015G/8260 Sep 30 mint									Comments
B5-60.0	2/9/98 942	Soil	1	2x6 Brass		X									Mobile Lab
B5-65.0	952					X									
B5-69.8	1011					X									
B5-74.75	1021					X									
B5-79.5	1032					X									
B5-84.75	1054					X									
B5-89.5	1103					X									
B5-94.5	1118					X									
B5-99.5	1152					X									

Relinquished By: Sonya V. Simone	Date: 2/9/98	Time: 1315	Received By: [signature]	Date: 2/9/98	Time: 1314
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 2 Of 3

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved by: _____ Signature: _____ Company: _____ Date: _____

TOU / 05

BC LABORATORIES, INC.

LABORATORY
(805) 327-4911
FAX (805) 327-1918
4100 Atlas Ct.
Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station / Tosco
Address: 25A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Gil Fry Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours
CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water (Per EPA Protocol)
☐ Waste Water
☐ Other

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8020/8260 MTBE									Comments
B5-104.5	2/9/98 1208	Soil	1	2x6 Brass		X									Mobile Lab
B5-110.25	1227	↓	↓	↓		X									↓
B5-114.5	1243	↓	↓	↓		X									2/3 full ↓

SL

Relinquished By: Sonya V. Luisoni	Date: 2/9/98	Time: 1315	Received By: [signature]	Date: 2/9/98	Time: 1314
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 3 Of 3

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved by: _____ Signature: _____ Company: _____ Date: _____

Jones Environmental, Inc.

Testing Laboratories
JONES ENVIRONMENTAL

P.O. Box 5387 • Fullerton, CA 92838
(714) 449-9937 • FAX (714) 449-9685

LABORATORY REPORT

Client:	Alton Geoscience	**Report Date:**	02/06/98
Client Address:	25A Technology Dr. Irvine, CA 92718	**JEL Ref. No.:**	A-2878
		Client Ref. No.:	
Attn:	Gil Fry	**Date Sampled:**	02/05/98
		Date Received:	02/05/98
Project:	76 Station #4357	**Date Analyzed:**	02/05/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

ANALYSES REQUESTED

1. EPA 8020 - Volatile Aromatic Hydrocarbons
2. Mod 8015 Gasoline - Volatile Hydrocarbons

Approval:

Steve Jones, Ph.D.
Laboratory Manager

Jones Environmental, Inc.

Testing Laboratories

P.O. Box 5387 • Fullerton, CA 92835
(714) 449-9937 • FAX (714) 449-9685

JONES ENVIRONMENTAL

LABORATORY RESULTS

Client:	Alton Geoscience	**Report Date:**	02/06/98
Client Address:	25A Technology Dr. Irvine, CA 92718	**JEL Ref. No.:** **Client Ref. No.:**	A-2878
Attn:	Gil Fry	**Date Sampled:**	02/05/98
		Date Received:	02/05/98
Project:	76 Station #4357	**Date Analyzed:**	02/05/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

EPA 8020 - Volatile Aromatic Hydrocarbons

Concentration (mg/Kg)

Sample ID	MTBE@	Benzene	Toluene	Ethylbenzene	Xylenes	E.Q.L (mg/Kg)	M.D.L (mg/Kg)	Surrogate Recovery %
B6-6.25	0.0038*	0.0010*	0.0015*B	0.0010*	0.0018*	0.002	0.0003	101
B6-9.25	0.0026*	ND	ND	ND	ND	0.002	0.0003	112
B6-15.0	ND	ND	ND	ND	ND	0.002	0.0003	102
B6-20.0	0.0023*	ND	ND	ND	ND	0.002	0.0003	114
B6-25.0	ND	ND	ND	ND	ND	0.002	0.0003	108
B6-30.0	0.0027*	ND	ND	ND	ND	0.002	0.0003	104
B6-35.0	ND	ND	ND	ND	ND	0.002	0.0003	105
B6-40.0	0.0016*	ND	ND	ND	ND	0.002	0.0003	106
B6-45.0	ND	ND	ND	ND	ND	0.002	0.0003	104
B6-49.0	0.0015*	ND	ND	ND	ND	0.002	0.0003	101
B6-55.5	0.0017*	ND	ND	ND	ND	0.002	0.0003	102
B6-59.25	0.0029*	ND	ND	ND	ND	0.002	0.0003	104
B6-64.0	0.0018*	ND	ND	ND	ND	0.002	0.0003	104
B6-69.0	0.0019*	ND	ND	ND	ND	0.002	0.0003	102
B6-74.0	0.0015*	ND	ND	ND	ND	0.002	0.0003	105
B6-79.0	0.0021*	ND	ND	ND	ND	0.002	0.0003	105
B6-84.25	0.0016*	ND	ND	ND	ND	0.002	0.0003	102
B6-90.0	0.0021*	ND	ND	ND	ND	0.002	0.0003	105

@ = MTBE has an EQL of 0.005 mgKg and an MDL of 0.001 mg/Kg; all other BTEX compounds are as given.
B = Found in Method Blank
* = Estimated concentrations.
ND = Not Detected at levels above the Method Detection Limit (MDL).

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Testing Laboratories
JONES ENVIRONMENTAL

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QUALITY CONTROL INFORMATION

Client:	Alton Geoscience	**Report Date:**	02/06/98
Client Address:	25A Technology Dr. Irvine, CA 92718	**JEL Ref. No.:** **Client Ref. No.:**	A-2878
Attn:	Gil Fry	**Date Sampled:**	02/05/98
		Date Received:	02/05/98
Project:	76 Station #4357	**Date Analyzed:**	02/05/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

EPA 8020 - Volatile Aromatic Hydrocarbons

Sample Spiked: B6-25.0

Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)
Toluene	101%	101%	0.7%	65 - 125
o-Xylene	102%	101%	0.9%	65 - 125

Sample Spiked: B6-30.0

Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)
Toluene	101%	101%	0.5%	65 - 125
o-Xylene	101%	101%	0.6%	65 - 125

Method Blank = Not Detected < 0.002 mg/Kg

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference

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LABORATORY RESULTS

Client:	Alton Geoscience	**Report Date:**	02/06/98
Client Address:	25A Technology Dr. Irvine, CA 92718	**JEL Ref. No.:** **Client Ref. No.:**	A-2878
Attn:	Gil Fry	**Date Sampled:**	02/05/98
		Date Received:	02/05/98
Project:	76 Station #4357	**Date Analyzed:**	02/05/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

Modified EPA 8015 - Volatile Hydrocarbons (Gasoline)

Sample ID	Concentration (mg/Kg)	Surrogate Recovery %	E.Q.L (mg/Kg)	M.D.L (mg/Kg)
B6-6.25	ND	9.1	0.5	0.05
B6-9.25	ND	102	0.5	0.05
B6-15.0	ND	99	0.5	0.05
B6-20.0	ND	102	0.5	0.05
B6-25.0	ND	102	0.5	0.05
B6-30.0	ND	109	0.5	0.05
B6-35.0	ND	101	0.5	0.05
B6-40.0	ND	106	0.5	0.05
B6-45.0	ND	97	0.5	0.05
B6-49.0	ND	101	0.5	0.05
B6-55.5	ND	100	0.5	0.05
B6-59.25	ND	100	0.5	0.05
B6-64.0	ND	99	0.5	0.05
B6-69.0	ND	99	0.5	0.05
B6-74.0	ND	101	0.5	0.05
B6-79.0	ND	106	0.5	0.05
B6-84.25	ND	107	0.5	0.05
B6-90.0	ND	100	0.5	0.05

ND = Not Detected at levels above the Method Detection Limit (MDL).

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QUALITY CONTROL INFORMATION

Client:	Alton Geoscience	**Report Date:**	02/06/98
Client Address:	25A Technology Dr. Irvine, CA 92718	**JEL Ref. No.:** **Client Ref. No.:**	A-2878
Attn:	Gil Fry	**Date Sampled:**	02/05/98
		Date Received:	02/05/98
Project:	76 Station #4357	**Date Analyzed:**	02/05/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

Modified EPA 8015 - Volatile Hydrocarbons (Gasoline)

Sample Spiked: B6-25.0

Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)
Gasoline	109%	109%	0.09%	65 - 125

Sample Spiked: B6-30.0

Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)
Gasoline	101%	100%	0.5%	65 - 125

Method Blank = Not Detected

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference

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Bakersfield, CA 93308

SERVICE CENTER
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FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station Tosco
Address: 25A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 7530101 FAX: 714 7530111	Site # 4357
Report To: Gil Fry Sampler:	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours
CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water
☐ Waste Water
☐ Other

Per EPA protocol

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015G/8020 or 8260A MTBE									Comments
B6 ~~MW~~ - 6.25	2/5/98 850	Soil	1	2x6 Brass		X									Mobile Lab
B6 - 9.25	857					X									
B6 - 15.0	919					X									
B6 - 20.0	938					X									
B6 - 25.0	951					X									
B6 - 30	1020			2x3 Brass		X									
B6 - 35	1104			2x6 Brass		X									
B6 - 40.0	1124					X									
B6 - 45.0	1145					X									

Relinquished By: Sonya V. Iusoni	Date: 2/5/98	Time: 1705	Received By: [signature]	Date: 2/5/98	Time: 1706
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 1 Of 2

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved by: _____ Signature: _____ Company: _____ Date: _____

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Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station 1050
Address: 25A Technology Drive	Project Manager: Mike Vander Plaat
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Gil Fry Sampler: Sonya L	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water ☐ Waste Water ☐ Other

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Per EPA doc protocol

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8020/8260 MTBE									Comments
~~MW3~~ B6-49	2/5/98 1214	Soil	1	2x3 Brass		X									Mobile Lab
B6-55.5	1305		1	2x6 Brass		X									
B6-59.25	1337		1	2x6 Brass		X									
B6-64.0	1447		1	2x6 Brass		X									
B6-69.0	1508		1	↓		X									
B6-74.0	1521		1	2x6 Brass		X									
B6-79.0	1543		1	↓		X									
B6-84.25	1610		1	↓		X									
B6-90.0	1643		1	↓		X									

Relinquished By: Sonya V. Lusiani	Date: 2/5/98	Time: 1705	Received By: [signature]	Date: 2/5/98	Time: 1706
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 2 Of 2

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved by: _____ Signature: _____ Company: _____ Date: _____

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LABORATORY REPORT

Client:	Alton Geoscience	**Report Date:**	02/08/98
Client Address:	25A Technology Drive Irvine, CA 92718	**JEL Ref. No.:**	B-1932
		Client Ref. No.:	
Attn:	Gil Fry	**Date Sampled:**	02/06/98
		Date Received:	02/06/98
Project:	76 Station #4357	**Date Analyzed:**	02/06/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

ANALYSES REQUESTED

1. EPA 8020 - Volatile Aromatic Hydrocarbons
2. Mod 8015 Gasoline - Volatile Hydrocarbons

Approval:

Steve Jones, Ph.D.
Laboratory Manager

Jones Environmental, Inc.

Testing Laboratories

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LABORATORY RESULTS

Client:	Alton Geoscience	**Report Date:**	02/08/98
Client Address:	25A Technology Drive Irvine, CA 92718	**JEL Ref. No.:** **Client Ref. No.:**	B-1932
Attn:	Gil Fry	**Date Sampled:**	02/06/98
		Date Received:	02/06/98
Project:	76 Station #4357	**Date Analyzed:**	02/06/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

EPA 8020 - Volatile Aromatic Hydrocarbons

Concentration (mg/Kg)

Sample ID	MTBE@	Benzene	Toluene	Ethylbenzene	Xylenes	E.Q.L (mg/Kg)	M.D.L (mg/Kg)	Surrogate Recovery %
B6-94.0	ND	ND	0.0009*	0.0020*	0.0015*	0.002	0.0003	99
B6-99.25	ND	ND	0.0008*	0.0009*	0.0010*	0.002	0.0003	103
B6-103.75	ND	ND	0.0012*	ND	0.0009*	0.002	0.0003	97
B6-109.25	ND	ND	0.0011*	ND	0.0011*	0.002	0.0003	108
B6-114.0	ND	0.0004*	0.0016*	ND	0.0009*	0.002	0.0003	100

B = Found in Method Blank.
@ = MTBE has an EQL of 0.005 mg/Kg and an MDL of 0.001 mg/Kg; all other BTEX compounds are as given.
* = Estimated concentrations.
ND = Not Detected at levels above Method Detection Limit (MDL).

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QUALITY CONTROL INFORMATION

Client:	Alton Geoscience	**Report Date:**	02/08/98
Client Address:	25A Technology Drive Irvine, CA 92718	**JEL Ref. No.:** **Client Ref. No.:**	B-1932
Attn:	Gil Fry	**Date Sampled:**	02/06/98
		Date Received:	02/06/98
Project:	76 Station #4357	**Date Analyzed:**	02/06/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

EPA 8020 - Volatile Aromatic Hydrocarbons

Sample Spiked: B6-114.0

Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)
Toluene	94%	96%	1.5%	65 - 125
o-Xylene	98%	100%	2.1%	65 - 125

Method Blank = Not Detected < 0.002 mg/Kg.

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference

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LABORATORY RESULTS

Client:	Alton Geoscience	**Report Date:**	02/08/98
Client Address:	25A Technology Drive	**JEL Ref. No.:**	B-1932
	Irvine, CA 92718	**Client Ref. No.:**	
Attn:	Gil Fry	**Date Sampled:**	02/06/98
		Date Received:	02/06/98
Project:	76 Station #4357	**Date Analyzed:**	02/06/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

Modified EPA 8015 - Volatile Hydrocarbons (Gasoline)

Sample ID	Concentration (mg/Kg)	Surrogate Recovery %	E.Q.L. (mg/Kg)	M.D.L. (mg/Kg)
B6-94.0	ND	99	0.5	0.05
B6-99.25	ND	119	0.5	0.05
B6-103.75	ND	99	0.5	0.05
B6-109.25	ND	120	0.5	0.05
B6-114.0	ND	100	0.5	0.05

ND = Not Detected at levels above Method Detection Limit (MDL).

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QUALITY CONTROL INFORMATION

Client:	Alton Geoscience	**Report Date:**	02/08/98
Client Address:	25A Technology Drive Irvine, CA 92718	**JEL Ref. No.:** **Client Ref. No.:**	B-1932
Attn:	Gil Fry	**Date Sampled:**	02/06/98
		Date Received:	02/06/98
Project:	76 Station #4357	**Date Analyzed:**	02/06/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

Modified EPA 8015 - Volatile Hydrocarbons (Gasoline)

Sample Spiked: B6-114.0

Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)
Gasoline	105%	108%	2.7%	65 - 125

Method Blank = Not Detected

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference

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Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton GeoScience	Project Name: 76 Station Tosco
Address: 25A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 453 0101 FAX: 714 753 0111	Site # 4357
Report To: Gil Fry Sampler:	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Per EPA protocol

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water
☐ Waste Water
☐ Other

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8020/8260 MTBE									Comments
B6-94.0	2/6/98 813	Soil	1	2x6 Brass		X									Mobile Lab
B6-99.25	851					X									
B6-103.75	916					X									1/2 full
B6-109.25	948					X									
B6-114.0	1007			2x3 Brass		X									

Relinquished By: [signature]	Date: 2/6/98	Time: 11:10	Received By: [signature]	Date: 2/6/98	Time: 1121
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment_____ Page 1 Of 1

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed?_____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time?_____
Approved by:_____ Signature:_____ Company:_____ Date:_____

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LABORATORY REPORT

Client:	Alton Geoscience	**Report Date:**	02/09/98
Client Address:	25A Technology Drive Irvine, CA 92718	**JEL Ref. No.:** **Client Ref. No.:**	B-1936
Attn:	Gil Fry	**Date Sampled:**	02/06-07/98
		Date Received:	02/07/98
Project:	76 Station #4357	**Date Analyzed:**	02/07/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

ANALYSES REQUESTED

1. EPA 8020 - Volatile Aromatic Hydrocarbons
2. Mod 8015 Gasoline - Volatile Hydrocarbons

Approval:

Steve Jones, Ph.D.
Laboratory Manager

Jones Environmental, Inc.

Testing Laboratories

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LABORATORY RESULTS

Client:	Alton Geoscience	**Report Date:**	02/09/98
Client Address:	25A Technology Drive Irvine, CA 92718	**JEL Ref. No.:**	B-1936
		Client Ref. No.:	
Attn:	Gil Fry	**Date Sampled:**	02/06-07/98
		Date Received:	02/07/98
Project:	76 Station #4357	**Date Analyzed:**	02/07/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

EPA 8020 - Volatile Aromatic Hydrocarbons

Concentration (mg/Kg)

Sample ID	MTBE@	Benzene	Toluene	Ethylbenzene	Xylenes	E.Q.L (mg/Kg)	M.D.L (mg/Kg)	Surrogate Recovery %
B7-6.0	ND	ND	0.0009*B	ND	0.0005*	0.002	0.0003	87
B7-9.5	ND	ND	0.0011*B	ND	0.0013*	0.002	0.0003	97
B7-14.5	ND	ND	0.0020*B	0.0009*	0.0009*	0.002	0.0003	96
B7-19.75	ND	ND	0.0014*B	ND	0.0008*	0.002	0.0003	101
B7-24.75	ND	ND	0.0022B	ND	0.0014*	0.002	0.0003	97
B7-30.0	ND	ND	0.0023B	0.0003*	0.0008*	0.002	0.0003	100
B7-34.75	ND	ND	0.0015*B	ND	0.0003*	0.002	0.0003	96
B7-39.75	ND	ND	0.0028B	ND	0.0007*	0.002	0.0003	99
B7-45.0	ND	ND	0.0014*B	ND	0.0004*	0.002	0.0003	93
B7-50.0	ND	ND	0.0018*B	ND	0.0005*	0.002	0.0003	100
B7-55.0	ND	ND	0.0010*B	ND	0.0006*	0.002	0.0003	91
B7-59.25	ND	ND	0.0013*B	ND	0.0006*	0.002	0.0003	104
B7-64.25	ND	ND	0.0017*B	ND	0.0008*	0.002	0.0003	99
B7-69.5	ND	ND	0.0021B	ND	0.0012*	0.002	0.0003	103
B7-74.4	ND	ND	0.0008*B	0.0004*	0.0009*	0.002	0.0003	87
B7-79.3	ND	ND	0.0010*B	0.0016*	0.0016*	0.002	0.0003	105
B7-86.0	ND	ND	0.0014*B	0.0005*	0.0008*	0.002	0.0003	99
B7-90.0	ND	ND	0.0005*B	0.0003*	0.0017*	0.002	0.0003	93
B7-94.4	ND	ND	0.0004*B	ND	0.0005*	0.002	0.0003	99
B7-99.5	ND	ND	0.0003*B	ND	0.0004*	0.002	0.0003	95
B7-104.0	ND	ND	0.0014*B	0.0004*	0.0007*	0.002	0.0003	106
B7-109.25	ND	ND	0.0004*B	ND	ND	0.002	0.0003	104
B7-114.5	ND	ND	0.0004*B	ND	0.0005*	0.002	0.0003	97

B = Found in Method Blank.
@ = MTBE has an EQL of 0.005 mg/Kg and an MDL of 0.001 mg/Kg; all other BTEX compounds are as given.
* = Estimated concentrations.
ND = Not Detected at levels above the Method Detection Limit (MDL).

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QUALITY CONTROL INFORMATION

Client:	Alton Geoscience	**Report Date:**	02/09/98
Client Address:	25A Technology Drive Irvine, CA 92718	**JEL Ref. No.:** **Client Ref. No.:**	B-1936
Attn:	Gil Fry	**Date Sampled:**	02/06-07/98
		Date Received:	02/07/98
Project:	76 Station #4357	**Date Analyzed:**	02/07/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

EPA 8020 - Volatile Aromatic Hydrocarbons

Sample Spiked: B7-104.0

Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)
Toluene	94%	95%	1.7%	65 - 125
o-Xylene	92%	99%	7.3%	65 - 125

Sample Spiked: B7-64.25

Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)
Toluene	95%	96%	0.7%	65 - 125
o-Xylene	94%	99%	2.3%	65 - 125

Method Blank = Not Detected < 0.002 mg/Kg.

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference

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LABORATORY RESULTS

Client:	Alton Geoscience	**Report Date:**	02/09/98
Client Address:	25A Technology Drive Irvine, CA 92718	**JEL Ref. No.:** **Client Ref. No.:**	B-1936
Attn:	Gil Fry	**Date Sampled:**	02/06-07/98
		Date Received:	02/07/98
Project:	76 Station #4357	**Date Analyzed:**	02/07/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

Modified EPA 8015 - Volatile Hydrocarbons (Gasoline)

Sample ID	Concentration (mg/Kg)	Surrogate Recovery %	E.Q.L. (mg/Kg)	M.D.L. (mg/Kg)
B7-6.0	ND	90	0.5	0.05
B7-9.5	ND	94	0.5	0.05
B7-14.5	ND	93	0.5	0.05
B7-19.75	ND	91	0.5	0.05
B7-24.75	ND	100	0.5	0.05
B7-30.0	ND	89	0.5	0.05
B7-34.75	ND	90	0.5	0.05
B7-39.75	ND	91	0.5	0.05
B7-45.0	ND	80	0.5	0.05
B7-50.0	ND	87	0.5	0.05
B7-55.0	ND	100	0.5	0.05
B7-59.25	ND	102	0.5	0.05
B7-64.25	ND	99	0.5	0.05
B7-69.5	ND	102	0.5	0.05
B7-74.4	ND	101	0.5	0.05
B7-79.3	ND	108	0.5	0.05
B7-86.0	ND	103	0.5	0.05
B7-90.0	ND	100	0.5	0.05
B7-94.4	ND	96	0.5	0.05
B7-99.5	ND	97	0.5	0.05
B7-104.0	ND	106	0.5	0.05
B7-109.25	ND	102	0.5	0.05
B7-114.5	ND	100	0.5	0.05

ND = Not Detected at levels above the Method Detection Limit (MDL).

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QUALITY CONTROL INFORMATION

Client:	Alton Geoscience	**Report Date:**	02/09/98
Client Address:	25A Technology Drive Irvine, CA 92718	**JEL Ref. No.:** **Client Ref. No.:**	B-1936
Attn:	Gil Fry	**Date Sampled:**	02/06-07/98
		Date Received:	02/07/98
Project:	76 Station #4357	**Date Analyzed:**	02/07/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

Modified EPA 8015 - Volatile Hydrocarbons (Gasoline)

Sample Spiked: B7-64.25

Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)
Gasoline	100%	108%	7.5%	65 - 125

Sample Spiked: B7-104.0

Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)
Gasoline	96%	104%	7.5%	65 - 125

Method Blank = Not Detected

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference

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FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station TOSCO
Address: 25A Technology Drive	Project Manager: Mike Vanden Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Gil Fry Sampler: Sonya L	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water
☐ Waste Water
☐ Other

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8020/8240 MTBE									Comments
B7-6.0	2/6/98 1411	soil	1	2x4 Brass		X									Mobile Lab
B7-9.5	1421					X									
B7-14.5	1430					X									
B7-19.75	1444					X									
B7-24.75	1503					X									
B7-30.0	1526					X									
B7-34.75	1544					X									
B7-39.75	1605					X									
B7-45.0	1627					X									

Relinquished By: Sonya L. Lusero	Date: 2/7/98	Time: 1250	Received By: [signature]	Date: 2/7/98	Time: 12:50
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 1 Of 2

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved by: _____ Signature: _____ Company: _____ Date: _____

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7551-50

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station / Tosco
Address: 25A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Gil Fry Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water Per EPA protocol
☐ Waste Water
☐ Other

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8020/8260 MTBE									Comments
B7-50.0	2/6/98 1700	Soil	1	2x6 Brass		X									Mobile lab

Relinquished By: Sonya V. Anderson	Date: 2/7/98	Time: 1250	Received By:	Date: 2/7/98	Time: 1250
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment_____ Page 2 Of 2

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed?_____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time?_____
Approved by:_____ Signature:_____ Company:_____ Date:_____

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Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station Tosco
Address: 25A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Gil Fry Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours
CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water ☐ Waste Water ☐ Other

Analyses Requested: 8020/8260 MTBE

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8020/8260 MTBE									Comments
B7-55.0	2/7/98 748	soil	1	2x6 Brass		X									Mobile Lab
B7-59.25	800					X									
B7-64.25	825					X									
B7-69.5	842					X									
B7-74.4	917					X									
B7-79.3	941					X									
B7-86.0	1003					X									
B7-90.0	1024			2x3 Brass		X									
B7-94.4	1047			2x6 Brass		X									

Relinquished By: Sonya V. Luisoni	Date: 2/7/98	Time: 1250	Received By: [signature]	Date: 2/7/98	Time: 12:50
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 1 Of 2

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved by: _____ Signature: _____ Company: _____ Date: _____

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Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station / TOSCO
Address: 25A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Gil Fry Sampler: Sonya L	QC Data? ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water ☐ Waste Water ☐ Other

Per EPA Protocol

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8020/5030 MTBE									Comments
B7-99.5	2/7/98 1109	Soil	1	2x6 Brass		X									Mobile Lab
B7-104.0	1149	↓	↓	↓		X									↓
B7-109.25	1206	↓	↓	↓		X									↓
B7-114.5	1229	↓	↓	↓		X									↓

Relinquished By: Sonya N. Ausiani	Date: 2/7/98	Time: 1250	Received By:	Date: 2/7/98	Time: 12:50
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment_____ Page 2 Of 2

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed?_____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time?_____
Approved by:_____ Signature:_____ Company:_____ Date:_____

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LABORATORY REPORT

Client:	Alton Geoscience	**Report Date:**	01/30/98
Client Address:	25A Technology Drive Irvine, CA 92718	**JEL Ref. No.:**	A-2871
		Client Ref. No.:	4357-06,08,09
Attn:	Liz Sewell	**Date Sampled:**	01/29/98
		Date Received:	01/29/98
Project:	76 Station #4357	**Date Analyzed:**	01/29/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

ANALYSES REQUESTED

1. EPA 8020 - Volatile Aromatic Hydrocarbons
2. Mod 8015 Gasoline - Volatile Hydrocarbons

Approval:

Steve Jones, Ph.D.
Laboratory Manager

Jones Environmental, Inc.

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LABORATORY RESULTS

Client:	Alton Geoscience	**Report Date:**	01/30/98
Client Address:	25A Technology Drive Irvine, CA 92718	**JEL Ref. No.:**	A-2871
		Client Ref. No.:	4357-06,08,09
Attn:	Liz Sewell	**Date Sampled:**	01/29/98
		Date Received:	01/29/98
Project:	76 Station #4357	**Date Analyzed:**	01/29/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

EPA 8020 - Volatile Aromatic Hydrocarbons

Concentration (mg/Kg)

Sample ID	MTBE@	Benzene	Toluene	Ethylbenzene	Xylenes	E.Q.L (mg/Kg)	M.D.L. (mg/Kg)	Surrogate Recovery %
B8-6.5	0.007	ND	0.0027B	ND	ND	0.002	0.0003	85
B8-10.5	0.0041*	ND	0.0019*B	ND	ND	0.002	0.0003	103
B8-15.5	0.0037*	ND	ND	ND	ND	0.002	0.0003	116
B8-21.0	0.0018*	ND	0.009 B	0.004	0.019	0.002	0.0003	--
B8-26.0	ND	ND	ND	ND	ND	0.002	0.0003	94
B8-30.5	ND	ND	ND	ND	ND	0.002	0.0003	71
B8-36.0	0.0048*	ND	ND	ND	ND	0.002	0.0003	114
B8-40.5	0.0044*	ND	ND	ND	ND	0.002	0.0003	116
B8-44.75	ND	ND	ND	ND	ND	0.002	0.0003	88
B8-50.5	ND	ND	ND	ND	ND	0.002	0.0003	118
B8-55.4	0.0048*	ND	ND	ND	ND	0.002	0.0003	118
B8-60.0	ND	ND	ND	ND	ND	0.002	0.0003	119
B8-65.0	ND	ND	ND	ND	ND	0.002	0.0003	88
B8-70.0	ND	ND	ND	ND	ND	0.002	0.0003	104
B8-75.0	0.0023*	ND	ND	ND	ND	0.002	0.0003	106
B8-80.0	ND	ND	ND	ND	ND	0.002	0.0003	102
B8-85.0	ND	ND	ND	ND	ND	0.002	0.0003	101
B8-90.0	ND	ND	ND	ND	ND	0.002	0.0003	95
B8-95.25	0.0024*	ND	ND	ND	ND	0.002	0.0003	116
B8-100.0	0.0039*	ND	ND	ND	ND	0.002	0.0003	101
B8-104.75	0.0022*	ND	ND	ND	ND	0.002	0.0003	115
B8-110.0	0.0026*	ND	ND	ND	ND	0.002	0.0003	101
B8-114.75	0.0049*	ND	0.0019*B	ND	ND	0.002	0.0003	88

B = Found in Method Blank.
@ = MTBE has an EQL of 0.005 mg/Kg and an MDL of 0.001 mg/Kg; all other BTEX compounds are as given.
* = Estimated concentrations.
ND = Not Detected at levels above the Method Detection Limit (MDL).

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QUALITY CONTROL INFORMATION

Client:	Alton Geoscience	**Report Date:**	01/30/98
Client Address:	25A Technology Drive Irvine, CA 92718	**JEL Ref. No.:**	A-2871
		Client Ref. No.:	4357-06,08,09
Attn:	Liz Sewell	**Date Sampled:**	01/29/98
		Date Received:	01/29/98
Project:	76 Station #4357	**Date Analyzed:**	01/29/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

EPA 8020 - Volatile Aromatic Hydrocarbons

Sample Spiked: B8-114.75

Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)
Toluene	101%	100%	0.92%	65 - 125
o-Xylene	100%	101%	1.9%	65 - 125

Sample Spiked: B8-36.0

Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)
Toluene	102%	102%	0.0%	65 - 125
o-Xylene	101%	102%	0.58%	65 - 125

Method Blank = Not Detected <0.002 mg/Kg

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference

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LABORATORY RESULTS

Client:	Alton Geoscience	**Report Date:**	01/30/98
Client Address:	25A Technology Drive Irvine, CA 92718	**JEL Ref. No.:**	A-2871
		Client Ref. No.:	4357-06,08,09
Attn:	Liz Sewell	**Date Sampled:**	01/29/98
		Date Received:	01/29/98
Project:	76 Station #4357	**Date Analyzed:**	01/29/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

Modified EPA 8015 - Volatile Hydrocarbons (Gasoline)

Sample ID	Concentration (mg/Kg)	Surrogate Recovery %	E.Q.L. (mg/Kg)	M.D.L (mg/Kg)
B8-6.5	ND	92	0.5	0.05
B8-10.5	ND	112	0.5	0.05
B8-15.5	ND	98	0.5	0.05
B8-21.0	0.7	113	0.5	0.05
B8-26.0	ND	94	0.5	0.05
B8-30.5	ND	67	0.5	0.05
B8-36.0	ND	102	0.5	0.05
B8-40.5	ND	102	0.5	0.05
B8-44.75	ND	88	0.5	0.05
B8-50.5	ND	102	0.5	0.05
B8-55.4	ND	100	0.5	0.05
B8-60.0	ND	102	0.5	0.05
B8-65.0	ND	84	0.5	0.05
B8-70.0	ND	97	0.5	0.05
B8-75.0	ND	94	0.5	0.05
B8-80.0	ND	92	0.5	0.05
B8-85.0	ND	93	0.5	0.05
B8-90.0	ND	94	0.5	0.05
B8-95.25	ND	100	0.5	0.05
B8-100.0	ND	116	0.5	0.05
B8-104.75	ND	102	0.5	0.05
B8-110.0	ND	111	0.5	0.05
B8-114.75	ND	77	0.5	0.05

ND = Not Detected at levels above the Method Detection Limit (MDL).

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QUALITY CONTROL INFORMATION

Client:	Alton Geoscience	**Report Date:**	01/30/98
Client Address:	25A Technology Drive Irvine, CA 92718	**JEL Ref. No.:**	A-2871
		Client Ref. No.:	4357-06,08,09
Attn:	Liz Sewell	**Date Sampled:**	01/29/98
		Date Received:	01/29/98
Project:	76 Station #4357	**Date Analyzed:**	01/29/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

Modified EPA 8015 - Volatile Hydrocarbons (Gasoline)

Sample Spiked: B8-36.0

Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)
Gasoline	101%	106%	4.8%	65 - 125

Sample Spiked: B8-114.75

Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)
Gasoline	103%	104%	1.5%	65 - 125

Method Blank = Not Detected

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference

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P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station ~~[illegible]~~ Tosco
Address: 25A Technology Drive	Project Manager:
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Liz Sewell Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours
CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water
☐ Waste Water
☐ Other

Per EPA protocal

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015/8260A MTBE (8020)	8015/8260A MTBE							Comments
B8-90.0	1/29/98 1401	Soil	1	2x6 Brass		X								Mobile lab
B8-95.25	1409			2x6 Brass		X								Mobile lab
B8-94.75	1424			2x3 Brass										Mobil lab
B8-100.0	1424			2x6 Brass		X								Mobil lab
B8-104.75	1433			2x6 Brass		X								1/2 full - mobile lab
B8-110.0	1454			2x6 Brass		X								Mobile lab
B8-109.5	1454			2x3 Brass				X						hold only - BC
B8-114.75	1532			2x3 Brass		X								Mobile lab

ignore
NO analysis only hold

Relinquished By: Sonya V. Luisone	Date: 1/29/98	Time: 1533	Received By: [signature]	Date: 1/29/98	Time: 15:33
Relinquished By: [signature]	Date: 1/29/98	Time: 1636	Received By: [signature]	Date: 1-29-98	Time: 16:33
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 1 Of 1

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved by: _____ Signature: _____ Company: _____ Date: _____

4357-06

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P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Union Geoscience	Project Name: 76 Station - Tosco
Address: 25A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 2618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Liz Sewell Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☒ ~~10~~ 7 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours
CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water (See EPA protocol)
☐ Waste Water
☐ Other

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015G/8260A MT BE	8015G/8260A MT BE								Comments
B8-55.4	1/29/98 1119	Soil	1	2x6 Brass		X									MOBILE LAB
B8-54.9	1119			2x6 Brass											hold - BC
B8-60.0	1233			2x6 Brass		X									MOBILE LAB
B8-65.0	1238			2x6 Brass		X									MOBILE LAB
B8-70.0	1253			2x6 Brass		X									small headspace MOBILE LAB
B8-75.0	1303			2x6 Brass		X									MOBILE LAB
B8-80.0	1332			2x6 Brass		X									small headspace MOBILE LAB
B8-85.0	1345			2x6 Brass		X									MOBILE LAB

Relinquished By: Sonya V. Lawson	Date: 1/29/98	Time: 1422	Received By: [signature]	Date: 1/29/98	Time: 14:22
Relinquished By: [signature]	Date: 1/29/98	Time: 1630	Received By: [signature]	Date: 1-29-98	Time: 16:33
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page ~~2~~ 1 Of 1

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved by: _____ Signature: _____ Company: _____ Date: _____

4357-06

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Bakersfield, CA 93308

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FAX (714) 449-9685
P.O.BOX 5367
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station - TOSCO
Address: 25A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Liz Sewell Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround Time: (Working Days) ☒ 10 Days (Standard) ☐ 5 Days ☐ 3 Days ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water ☐ Waste Water ☐ Other

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015G/8260B MTBE									Comments
X	B8-25.5	1/29/98 1023	Soil	1	2x3 Brass											hold - BC
X	B8-30.5	1041			2x6 Brass		X									MOBILE LAB
X	B8-30.0	1041			2x3 Brass											hold - BC
X	B8-36.0	1045			2x6 Brass		X									MOBILE LAB
X	B8-35.5	1045			2x3 Brass											hold - BC
X	B8-40.5	1050			2x6 Brass		X									MOBILE LAB
X	B8-40.0	1050			2x3R Brass											hold - BC
X	B8-44.75	1100			2x6 Brass		X									1/2 full MOBILE LAB
X	B8-50.5	1110			2x6 Brass		X									Small headspace MobileLab

Relinquished By: Sonya V. Ausoni	Date: 1/29/98	Time: 1128	Received By:	Date: 1/29/98	Time: 1130
Relinquished By:	Date: 1/29/98	Time: 16:30	Received By:	Date: 1-29-98	Time: 16:33
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment_____ Page 2 Of 2

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed?_____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time?_____
Approved by:_____ Signature:_____ Company:_____ Date:_____

4357-06

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SERVICE CENTER
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FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station - Tosco
Address: 25A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 7530101 FAX: 714 7530111	Site # 4357
Report To: Liz Sewell Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☒ 10 Days (Standard) ☐ 5 Days ☐ 3 Days ☐ Drinking Water
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours ☐ Waste Water
CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure ☐ Other

See EPA protocol

Analyses Requested

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015G/8260A MTBE								Comments
X	B8-6.5	1/29/98 9:36	soil	1	2x6 Brass		X								Mobile lab
X	B8-6.0	936			2x3 Brass										hold BC
X	B8-10.5	1003			2x6 Brass		X								Mobile Lab
X	B8-10.0	1003			2x3 Brass										hold BC
X	B8-15.5	1010			2x6 Brass		X								Mobile lab
X	B8-15.0	1010			2x3 Brass										hold BC
X	B8-21.0	1016			2x6 Brass		X								Mobile lab
X	B8-20.5	1016			2x3 Brass										hold BC
X	B8-26.0	1023			2x6 Brass		X								Mobile Lab

Relinquished By: Sonya V Lunsen	Date: 1/29/98	Time: 1128	Received By: [signature]	Date: 1/29/98	Time: 11:30
Relinquished By: [signature]	Date: 1/29/98	Time: 1630	Received By: [signature]	Date: 1-29.98	Time: 16:33
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 1 Of 2

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved by: _____ Signature: _____ Company: _____ Date: _____

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JONES ENVIRONMENTAL

LABORATORY REPORT

Client:	Alton Geoscience	**Report Date:**	02/03/98
Client Address:	25A Technology Dr. Irvine, CA 92718	**JEL Ref. No.:** **Client Ref. No.:**	A-2876
Attn:	Liz Sewell	**Date Sampled:**	02/02/98
		Date Received:	02/02/98
Project:	76 Station #4357	**Date Analyzed:**	02/02/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

ANALYSES REQUESTED

1. EPA 8020 - Volatile Aromatic Hydrocarbons
2. Mod 8015 Gasoline - Volatile Hydrocarbons

Approval:

Steve Jones, Ph.D.
Laboratory Manager

Jones Environmental, Inc.

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JONES ENVIRONMENTAL

LABORATORY RESULTS

Client:	Alton Geoscience	**Report Date:**	02/03/98
Client Address:	25A Technology Dr. Irvine, CA 92718	**JEL Ref. No.:** **Client Ref. No.:**	A-2876
Attn:	Liz Sewell	**Date Sampled:**	02/02/98
		Date Received:	02/02/98
Project:	76 Station #4357	**Date Analyzed:**	02/02/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

EPA 8020 - Volatile Aromatic Hydrocarbons

Concentration (mg/Kg)

Sample ID	MTBE@	Benzene	Toluene	Ethylbenzene	Xylenes	E.Q.L. (mg/Kg)	M.D.L. (mg/Kg)	Surrogate Recovery %
B9-25.75	0.0048*	ND	ND	ND	ND	0.002	0.0003	103
B9-30.5	0.0016*	ND	ND	ND	0.0012*	0.002	0.0003	107
B9-35.5	0.0048*	ND	ND	ND	ND	0.002	0.0003	102
B9-40.5	0.0023*	0.0010*	0.0017*B	ND	0.0015*	0.002	0.0003	88
B9-45.5	0.0020*	ND	0.0023B	ND	ND	0.002	0.0003	99
B9-50.75	0.0024*	0.0011*	0.0027B	ND	0.0016*	0.002	0.0003	104
B9-55.0	0.0026*	0.0014*	0.0019*B	ND	0.0016*	0.002	0.0003	102
B9-60.25	0.0041*	ND	0.0019*B	ND	ND	0.002	0.0003	100
B9-65.4	0.0044*	ND	0.0020*B	ND	ND	0.002	0.0003	102
B9-70.25	0.0013*	ND	0.0022B	ND	0.0013*	0.002	0.0003	90
B9-75.25	0.0044*	ND	0.0017*B	ND	ND	0.002	0.0003	102
B9-80.0	ND	ND	0.0041B	ND	ND	0.002	0.0003	101
B9-85.0	0.0017*	ND	0.0017*B	ND	ND	0.002	0.0003	106
B9-90.25	0.0026*	0.0013*	0.0018*B	ND	0.0018*	0.002	0.0003	101
B9-95.0	ND	ND	ND	ND	ND	0.002	0.0003	89
B9-100.25	0.0020*	ND	0.0017*B	ND	0.0015*	0.002	0.0003	98
B9-105.4	0.0018*	ND	ND	ND	ND	0.002	0.0003	97
B9-110.0	ND	ND	ND	ND	ND	0.002	0.0003	108
B9-115.0	0.0018*	ND	ND	ND	ND	0.002	0.0003	110

@ = MTBE has an EQL of 0.005 mg/Kg and an MDL of 0.001 mg/Kg; all other BTEX compounds are as given.
B = Found in Method Blank
* = Estimated concentrations.
ND = Not Detected at levels above the Method Detection Limit (MDL).

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JONES ENVIRONMENTAL

LABORATORY RESULTS

Client:	Alton Geoscience	**Report Date:**	02/03/98
Client Address:	25A Technology Dr. Irvine, CA 92718	**JEL Ref. No.:** **Client Ref. No.:**	A-2876
Attn:	Liz Sewell	**Date Sampled:**	02/02/98
		Date Received:	02/02/98
Project:	76 Station #4357	**Date Analyzed:**	02/02/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

EPA 8020 - Volatile Aromatic Hydrocarbons

Concentration (mg/Kg)

Sample ID	MTBE@	Benzene	Toluene	Ethylbenzene	Xylenes	E.Q.L (mg/Kg)	M.D.L (mg/Kg)	Surrogate Recovery %
MW2-4.75	0.0036*	0.0018*	0.003B	ND	0.003	0.002	0.0003	102
MW2-10.0	0.0045*	ND	0.0017*B	ND	ND	0.002	0.0003	107
MW2-15.0	ND	ND	0.0014*B	ND	ND	0.002	0.0003	95
MW2-20.0	0.0047*	ND	0.0012*B	ND	ND	0.002	0.0003	103
MW2-25.5	0.0025*	0.0012*	0.0022B	ND	0.0017*	0.002	0.0003	106
MW2-30.0	0.0021*	ND	0.0011*B	ND	ND	0.002	0.0003	108
MW2-35.5	0.0016*	ND	0.0014*B	ND	0.0012*	0.002	0.0003	100
MW2-40.25	0.0044*	ND	ND	ND	ND	0.002	0.0003	103
MW2-44.8	0.0026*	0.0014*	0.0032B	ND	0.0020*	0.002	0.0003	101
MW2-49.5	0.0023*	0.0013*	0.0021B	ND	0.0017*	0.002	0.0003	104
MW2-54.5	0.0018*	ND	0.0016*B	ND	0.0015*	0.002	0.0003	97

@ = MTBE has an EQL of 0.005 mg/Kg and an MDL of 0.001 mg/Kg; all other BTEX compounds are as given.
B = Found in Method Blank
* = Estimated concentrations.
ND = Not Detected at levels above the Method Detection Limit (MDL).

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QUALITY CONTROL INFORMATION

Client:	Alton Geoscience	**Report Date:**	02/03/98
Client Address:	25A Technology Dr. Irvine, CA 92718	**JEL Ref. No.:** **Client Ref. No.:**	A-2876
Attn:	Liz Sewell	**Date Sampled:**	02/02/98
		Date Received:	02/02/98
Project:	76 Station #4357	**Date Analyzed:**	02/02/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

EPA 8020 - Volatile Aromatic Hydrocarbons

Sample Spiked: B9-85.0

Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)
Toluene	100%	100%	0.2%	65 - 125
o-Xylene	103%	103%	0.4%	65 - 125

Sample Spiked: B9-80.0

Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)
Toluene	100%	102%	1.9%	65 - 125
o-Xylene	102%	107%	4.1%	65 - 125

Method Blank = Not Detected <0.002 mg/Kg.

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference

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JONES ENVIRONMENTAL

LABORATORY RESULTS

Client:	Alton Geoscience	**Report Date:**	02/03/98
Client Address:	25A Technology Dr. Irvine, CA 92718	**JEL Ref. No.:** **Client Ref. No.:**	A-2876
Attn:	Liz Sewell	**Date Sampled:**	02/02/98
		Date Received:	02/02/98
Project:	76 Station #4357	**Date Analyzed:**	02/02/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

Modified EPA 8015 - Volatile Hydrocarbons (Gasoline)

Sample ID	Concentration (mg/Kg)	Surrogate Recovery %	E.Q.L (mg/Kg)	M.D.L. (mg/Kg)
B9-25.75	ND	95	0.5	0.05
B9-30.5	ND	106	0.5	0.05
B9-35.5	ND	104	0.5	0.05
B9-40.5	ND	88	0.5	0.05
B9-45.5	ND	95	0.5	0.05
B9-50.75	ND	106	0.5	0.05
B9-55.0	ND	108	0.5	0.05
B9-60.25	ND	97	0.5	0.05
B9-65.4	ND	96	0.5	0.05
B9-70.25	ND	87	0.5	0.05
B9-75.25	ND	97	0.5	0.05
B9-80.0	ND	99	0.5	0.05
B9-85.0	ND	98	0.5	0.05
B9-90.25	ND	104	0.5	0.05
B9-95.0	ND	91	0.5	0.05
B9-100.25	ND	89	0.5	0.05
B9-105.4	ND	91	0.5	0.05
B9-110.0	ND	104	0.5	0.05
B9-115.0	ND	101	0.5	0.05

ND = Not Detected at levels above the Method Detection Limit (MDL).

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LABORATORY RESULTS

Client:	Alton Geoscience	**Report Date:**	02/03/98
Client Address:	25A Technology Dr. Irvine, CA 92718	**JEL Ref. No.:** **Client Ref. No.:**	A-2876
Attn:	Liz Sewell	**Date Sampled:**	02/02/98
		Date Received:	02/02/98
Project:	76 Station #4357	**Date Analyzed:**	02/02/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

Modified EPA 8015 - Volatile Hydrocarbons (Gasoline)

Sample ID	Concentration (mg/Kg)	Surrogate Recovery %	E.Q.L. (mg/Kg)	M.D.L. (mg/Kg)
MW2-4.75	ND	94	0.5	0.05
MW2-10.0	ND	100	0.5	0.05
MW2-15.0	ND	92	0.5	0.05
MW2-20.0	ND	96	0.5	0.05
MW2-25.5	ND	108	0.5	0.05
MW2-30.0	ND	101	0.5	0.05
MW2-35.5	ND	91	0.5	0.05
MW2-40.25	ND	94	0.5	0.05
MW2-44.8	ND	91	0.5	0.05
MW2-49.5	ND	104	0.5	0.05
MW2-54.5	ND	99	0.5	0.05

ND = Not Detected at levels above the Method Detection Limit (MDL).

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QUALITY CONTROL INFORMATION

Client:	Alton Geoscience	**Report Date:**	02/03/98
Client Address:	25A Technology Dr. Irvine, CA 92718	**JEL Ref. No.:** **Client Ref. No.:**	A-2876
Attn:	Liz Sewell	**Date Sampled:**	02/02/98
		Date Received:	02/02/98
Project:	76 Station #4357	**Date Analyzed:**	02/02/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

Modified EPA 8015 - Volatile Hydrocarbons (Gasoline)

Sample Spiked: B9-85.0

Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)
Gasoline	97%	101%	3.3%	65 - 125

Sample Spiked: B9-80.0

Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)
Gasoline	110%	115%	4.0%	65 - 125

Method Blank = Not Detected

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference

4551-11

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P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station Tosco
Address: 25A Technology Drive (92618)	Project Manager: Mike Vanden Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Liz Sewell Sampler: Sonya V. L	QC Data: ☐ Level (standard) per EPA Protocol ☐ Level I ☐ Level II ☐ Level III

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water
☐ Waste Water
☐ Other

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8020									Comments
~~B9-35.5~~	~~2/2/98 852~~				~~82~~										
B9-50.75	2/2/98 920	Soil	1	2XL Brass		X									Mobile Lab
B9-45.5	913					X									
B9-40.5	900					X									
B9-35.5	852					X									
B9-30.5	840					X									
B9-25.75	830					X									
B9-55.0	932					X									
B9-60.25	953					X									

Relinquished By: Sonya V. Luiseni	Date: 2/2/98	Time: 1455	Received By:	Date: 2/2/98	Time: 14:55
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment_____ Page 1 Of 3

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed?_____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time?_____
Approved by:_____ Signature:_____ Company:_____ Date:_____

7551-11

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Bakersfield, CA 93308

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Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station Tosco
Address: 25A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Liz Sewell Sampler: Sonya L	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Per EPA Protocol

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water
☐ Waste Water
☐ Other

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015G/8260AG 8020 MTBE									Comments
B9-65.4	2/2/98 1000	soil	1	2x6 Brass		X									Mobile Lab
B9-70.25	1011			2x6 Brass		X									
B9-75.25	1027			2x6 Brass		X									
B9-80.0	1040			2x6 Brass		X									headspace
B9-85.0	1049			2x6 Brass		X									
B9-90.25	11.00			2x6 Brass		X									
B9-95.0	1111			2x6 Brass		X									
B9-100.25	1124			2x6 Brass		X									
B9-105.4	1135			2x6 Brass		X									

Relinquished By: Sonya V. Luisoni	Date: 2/2/98	Time: 14:55	Received By: [signature]	Date: 2/2/98	Time: 14:55
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 2 Of 3

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved by: _____ Signature: _____ Company: _____ Date: _____

BC LABORATORIES, INC.

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FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station Tosco
Address: 25A Technology Drive	Project Manager: Mike VanderPlaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 7147530101 FAX: 7147530111	Site # 4357
Report To: Liz Sewell Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Per EPA Protocol

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water
☐ Waste Water
☐ Other

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015/8260/8020 MTBE									Comments
B9-110.0	2/2/98 1150	Soil	1	2x6 Brass		X									Mobile Lab
B9-115.0	↓ 1207		1			X									½ full ↓

Relinquished By: Sonya V. Lusieni	Date: 2/2/98	Time: 1455	Received By:	Date: 2/2/98	Time: 14:55
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 3 of 3

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved by: _____ Signature: _____ Company: _____ Date: _____

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T551-20

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station 4357 Tosco
Address: 25 A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Liz Sewell Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Per EPA protocol

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water
☐ Waste Water
☐ Other

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8020									Comments
MW2-4.75	2/2/98 1508	Soil	1	2x6 Brass		X									Mobile Lab
MW2-10.0	1514		1			X									
MW2-15.0	1521		1			X									
MW2-20.0	1527		1			X									
MW2-25.5	1537		1	2x6 Brass		X									
MW2-30.0	1546		1	2x6		X									
MW2-35.5	1557		1	2x6 Brass		X									
MW2-40.25	1604		1	2x6		X									
MW2-44.8	1608		1	2x6		X									

Relinquished By: Sonya L. Scisoni	Date: 2/2/98	Time: 1640	Received By:	Date: 2/2/98	Time: 1640
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 1 Of 2

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved by: _____ Signature: _____ Company: _____ Date: _____

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Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station ~~tr~~ Tosco
Address: 25A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Liz Sewell Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Per ERA protocol

Turnaround Time: (Working Days) ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water ☐ Waste Water ☐ Other

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8020									Comments
MW2-49.5	2/2/98 1624	Soil	1	2x3 Brass		X									Mobile Lab
MW2-54.5	1630		1	1		X									1

SL

Relinquished By: Sonya V. Fusari	Date: 2/2/98	Time: 16:40	Received By:	Date: 2/2/98	Time: 16:40
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment_____ Page 2 Of 2

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed?_____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time?_____
Approved by:_____ Signature:_____ Company:_____ Date:_____

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LABORATORY REPORT

Client:	Alton Geoscience	**Report Date:**	02/02/98
Client Address:	25A Technology Drive Irvine, CA 92718	**JEL Ref. No.:**	A-2873
		Client Ref. No.:	4357-13,15
Attn:	Liz Sewell	**Date Sampled:**	01/30/98
		Date Received:	01/30/98
Project:	76 Station #4357	**Date Analyzed:**	01/30/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

ANALYSES REQUESTED

1. EPA 8020 - Volatile Aromatic Hydrocarbons
2. Mod 8015 Gasoline - Volatile Hydrocarbons

Approval:

Steve Jones, Ph.D.
Laboratory Manager

Jones Environmental, Inc.

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LABORATORY RESULTS

Client:	Alton Geoscience	**Report Date:**	02/02/98
Client Address:	25A Technology Drive Irvine, CA 92718	**JEL Ref. No.:**	A-2873
		Client Ref. No.:	4357-13,15
Attn:	Liz Sewell	**Date Sampled:**	01/30/98
		Date Received:	01/30/98
Project:	76 Station #4357	**Date Analyzed:**	01/30/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

EPA 8020 - Volatile Aromatic Hydrocarbons

Concentration (mg/Kg)

Sample ID	MTBE@	Benzene	Toluene	Ethylbenzene	Xylenes	E.Q.L (mg/Kg)	M.D.L (mg/Kg)	Surrogate Recovery %
B10-6.25	0.0025*	ND	ND	ND	ND	0.002	0.0003	105
B10-12.0	0.0026*	ND	0.0012*B	ND	0.0012*	0.002	0.0003	103
B10-17.5	0.0049*	ND	ND	ND	ND	0.002	0.0003	104
B10-21.0	0.0023*	ND	ND	ND	ND	0.002	0.0003	105
B10-25.0	0.0016*	ND	ND	ND	ND	0.002	0.0003	115
B10-30.8	0.0049*	ND	ND	ND	ND	0.002	0.0003	101
B10-36.0	ND	ND	ND	ND	ND	0.002	0.0003	111
B10-41.0	0.0044*	ND	ND	ND	ND	0.002	0.0003	101
B10-45.0	0.0023*	ND	0.0015*B	ND	0.0019*	0.002	0.0003	95
B10-49.8	0.0027*	ND	ND	ND	ND	0.002	0.0003	114
B10-55.0	0.0016*	ND	0.0011*B	ND	0.0013*	0.002	0.0003	101
B10-60.25	0.0033*	ND	ND	ND	ND	0.002	0.0003	97
B10-65.0	0.0043*	ND	ND	ND	ND	0.002	0.0003	100
B10-70.0	0.0043*	ND	ND	ND	ND	0.002	0.0003	91
B10-75.0	0.0038*	ND	ND	ND	ND	0.002	0.0003	105
B10-80.0	0.0040*	ND	ND	ND	ND	0.002	0.0003	105
B10-85.0	0.0041*	ND	ND	ND	ND	0.002	0.0003	109
B10-90.0	ND	ND	ND	ND	ND	0.002	0.0003	89
B10-95.0	0.0015*	ND	ND	ND	ND	0.002	0.0003	108
B10-100.0	0.0046*	ND	0.0014*B	ND	ND	0.002	0.0003	94
B10-105.0	0.0043*	ND	ND	ND	ND	0.002	0.0003	90
B10-110.0	0.0049*	ND	ND	ND	ND	0.002	0.0003	84
B10-115.0	0.0028*	ND	ND	ND	ND	0.002	0.0003	96

B = Found in Method Blank.
@ = MTBE has an EQL of 0.005 mg/Kg and an MDL of 0.001 mg/Kg; all other BTEX compounds are as given.
* = Estimated concentrations.
ND = Not Detected at levels above the Method Detection Limit (MDL).

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LABORATORY RESULTS

Client:	Alton Geoscience	**Report Date:**	02/02/98
Client Address:	25A Technology Drive Irvine, CA 92718	**JEL Ref. No.:**	A-2873
		Client Ref. No.:	4357-13,15
Attn:	Liz Sewell	**Date Sampled:**	01/30/98
		Date Received:	01/30/98
Project:	76 Station #4357	**Date Analyzed:**	01/30/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

EPA 8020 - Volatile Aromatic Hydrocarbons

Concentration (mg/Kg)

Sample ID	MTBE@	Benzene	Toluene	Ethylbenzene	Xylenes	E.Q.L (mg/Kg)	M.D.L (mg/Kg)	Surrogate Recovery %
B9-6.25	0.0039*	ND	ND	ND	ND	0.002	0.0003	92
B9-10.25	0.0033*	ND	ND	ND	ND	0.002	0.0003	94
B9-15.75	0.0020*	ND	0.0011*B	ND	ND	0.002	0.0003	82
B9-21.0	0.0033*	ND	ND	ND	0.0024	0.002	0.0003	87

B = Found in Method Blank.
@ = MTBE has an EQL of 0.005 mg/Kg and an MDL of 0.001 mg/Kg; all other BTEX compounds are as given.
* = Estimated concentrations.
ND = Not Detected at levels above the Method Detection Limit (MDL).

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QUALITY CONTROL INFORMATION

Client:	Alton Geoscience	**Report Date:**	02/02/98
Client Address:	25A Technology Drive Irvine, CA 92718	**JEL Ref. No.:**	A-2873
		Client Ref. No.:	4357-13,15
Attn:	Liz Sewell	**Date Sampled:**	01/30/98
		Date Received:	01/30/98
Project:	76 Station #4357	**Date Analyzed:**	01/30/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

EPA 8020 - Volatile Aromatic Hydrocarbons

Sample Spiked: B10-115.5

Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)
Toluene	102%	102%	0.1%	65 - 125
o-Xylene	102%	104%	2.3%	65 - 125

Sample Spiked: B9-21.0

Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)
Toluene	98%	100%	2.0%	65 - 125
o-Xylene	106%	109%	3.0%	65 - 125

Method Blank = Not Detected < 0.002 mg/Kg

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference

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LABORATORY RESULTS

Client:	Alton Geoscience	**Report Date:**	02/02/98
Client Address:	25A Technology Drive Irvine, CA 92718	**JEL Ref. No.:**	A-2873
		Client Ref. No.:	4357-13,15
Attn:	Liz Sewell	**Date Sampled:**	01/30/98
		Date Received:	01/30/98
Project:	76 Station #4357	**Date Analyzed:**	01/30/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

Modified EPA 8015 - Volatile Hydrocarbons (Gasoline)

Sample ID	Concentration (mg/Kg)	Surrogate Recovery %	E.Q.L. (mg/Kg)	M.D.L. (mg/Kg)
B10-6.25	ND	92	0.5	0.05
B10-12.0	ND	102	0.5	0.05
B10-17.5	ND	96	0.5	0.05
B10-21.0	ND	110	0.5	0.05
B10-25.0	ND	120	0.5	0.05
B10-30.8	ND	106	0.5	0.05
B10-36.0	ND	113	0.5	0.05
B10-41.0	ND	104	0.5	0.05
B10-45.0	ND	94	0.5	0.05
B10-49.8	ND	122	0.5	0.05
B10-55.0	ND	102	0.5	0.05
B10-60.25	ND	93	0.5	0.05
B10-65.0	ND	92	0.5	0.05
B10-70.0	ND	80	0.5	0.05
B10-75.0	ND	99	0.5	0.05
B10-80.0	ND	97	0.5	0.05
B10-85.0	ND	109	0.5	0.05
B10-90.0	ND	83	0.5	0.05
B10-95.0	ND	113	0.5	0.05
B10-100.0	ND	89	0.5	0.05
B10-105.0	ND	84	0.5	0.05
B10-110.0	ND	73	0.5	0.05
B10-115.0	ND	77	0.5	0.05

ND = Not Detected at levels above the Method Detection Limit (MDL).

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LABORATORY RESULTS

Client:	Alton Geoscience	**Report Date:**	02/02/98
Client Address:	25A Technology Drive Irvine, CA 92718	**JEL Ref. No.:** **Client Ref. No.:**	A-2873 4357-13,15
Attn:	Liz Sewell	**Date Sampled:** **Date Received:**	01/30/98 01/30/98
Project:	76 Station #4357	**Date Analyzed:**	01/30/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

Modified EPA 8015 - Volatile Hydrocarbons (Gasoline)

Sample ID	Concentration (mg/Kg)	Surrogate Recovery %	E.Q.L. (mg/Kg)	M.D.L. (mg/Kg)
B9-6.25	ND	86	0.5	0.05
B9-10.25	ND	95	0.5	0.05
B9-15.75	ND	89	0.5	0.05
B9-21.0	ND	91	0.5	0.05

ND = Not Detected at levels above the Method Detection Limit (MDL).

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QUALITY CONTROL INFORMATION

Client:	Alton Geoscience	**Report Date:**	02/02/98
Client Address:	25A Technology Drive Irvine, CA 92718	**JEL Ref. No.:**	A-2873
		Client Ref. No.:	4357-13,15
Attn:	Liz Sewell	**Date Sampled:**	01/30/98
		Date Received:	01/30/98
Project:	76 Station #4357	**Date Analyzed:**	01/30/98
Project Address:	Los Angeles, CA	**Physical State:**	Soil

Modified EPA 8015 - Volatile Hydrocarbons (Gasoline)

Sample Spiked: B10-115.5

Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)
Gasoline	113%	115%	1.8%	65 - 125

Sample Spiked: B9-21.0

Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)
Gasoline	93%	99%	6.0%	65 - 125

Method Blank = Not Detected

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference

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P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Atlas Geoscience	Project Name: 76 Station Tosco
Address: 25A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Liz Sewell Sampler: Sonya V. Luisoni	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Per EPA Protocol

Turnaround Time: (Working Days) ☒ 10 Days (Standard) ☐ 5 Days ☐ 3 Days ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water ☐ Waste Water ☐ Other

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested: BTEX & TPH/GCA & 8020 MTBE

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	BTEX & TPH/GCA & 8020 MTBE	Comments *
B9-6.25	1/20/98 1512	Soil	1	2x6 Brass		X	Mobile Lab
B9-10.25	1519			2x6 Brass		X	
B9-15.75	1526			2x6 Brass		X	
B9-21.0	1533			2x6 Brass		X	

SL

Relinquished By: Sonya V. Luisoni	Date: 1535	Time: 1/30/98	Received By: [signature]	Date: 1/30/98	Time: 1535
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 1 Of 1

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved by: _____ Signature: _____ Company: _____ Date: _____

4357-13

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Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station Toscoo
Address: 25A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Liz Sewell Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Per EPA protocol

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours
CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water
☐ Waste Water
☐ Other

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015B/8260A or 8020 MTBE									Comments*
B10-6.25	1/30/98 850	soil	1	2x6 Brass	A2873-1	X									Mobil Lab
B10-12.0	900				A2873-2	X									
B10-17.5	907				A2873-3	X									
B10-~~22.75~~ 21.0 SL	913				A2873-4	X									B10-21.0
B10-25.0 SL	918			2x3 Brass	A2873-5	X									B10-25.0
B10-30.8 SL	932				A2873-6	X									B10-30.8
B10-36.0	954			2x6 Brass	A2873-7	X									
B10-41.0	1008			2x6 Brass	A2873-8	X									
B10-45.0	1019				A2873-9	X									

Relinquished By: Sonya V. Lusoni	Date: 1/30/98	Time: 1342	Received By: [signature]	Date: 1/30/98	Time: 1342
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 1 Of 3

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved by: _____ Signature: _____ Company: _____ Date: _____

* [illegible] low level soil testing requirements [illegible]

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Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station Tosco
Address: 25A Technology Drive	Project Manager: Mike Vanda Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Liz Sewell Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours
CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water
☐ Waste Water
☐ Other

see EPA protocal

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015G/8260A & 8030 MTBE								Comments *
B10-49.8	1/30/98 1035	Soil	2x6 Brass	1	A2873-10	X								Mobile Lab
B10-55.0	1044			2x6 Brass	A2873-11	X								
B10-60.25	1052			2x6 Brass	A2873-12	X								
B10-65.0	1109				A2873-13	X								
B10-70.0	1112				A2873-14	X								
B10-75.0	1127				A2873-15	X								
B10-80.0	1139				A2873-16	X								
B10-85.0	1150				A2873-17	X								
B10-90.0	1202				A2873-18	X								(3/4 full)

Relinquished By: Sonya V. Luisone	Date: 1/30/98	Time: 1342	Received By: [signature]	Date: 1/30/98	Time: 1342
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 2 Of 3

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved by: _____ Signature: _____ Company: _____ Date: _____

* Ensure [illegible] soil testing requirements are met. Samples must be taken from center of pipe

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FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station Tosco
Address: 25A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Liz Sewell Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Per EPA protocol

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water
☐ Waste Water
☐ Other

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015C/8260A & 8020 MTBE									Comments
B10-95.0	1/30/98 1217	Soil	1	2x6 Brass	A2873-19	X									Mobile Lab
B10-100.0	1225				A2873-20	X									
B10-105.0	1238				A2873-21	X									(3/4 full)
B10-110.0	1252			2x3 Brass	A2873-22	X									
B10-115.0	1318			2x3 Brass	A2873-23	X									

Relinquished By: Sonya V. Lawson	Date: 1/30/98	Time: 1342	Received By: [signature]	Date: 1/30/98	Time: 1342
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment_____ Page 3 Of 3

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed?_____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time?_____
Approved by:_____ Signature:_____ Company:_____ Date:_____

BC LABORATORIES, INC.

February 12, 1998

LIZ SEWELL
ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718

Subject: Laboratory Submission No.: 98-01007
Samples Received: 01/26/98

Dear Ms. Sewell:

The samples(s) listed on the Chain of Custody report were received by BC Laboratories, Inc. on 01/26/98.

Enclosed please find the analytical data for the testing requested. Results in RWQCB - L.A. Region Format will follow under separate cover as soon as they are available.

If there are questions regarding this report please contact me at (805)327-4911, ext. 250.

Any unused sample will be stored on our premises for a minimum of 30 days (excluding bacteriologicals) at which time they will be disposed unless otherwise requested at the time of sample receipt. A disposal fee of $5 per sample may apply for solid sample matrices.

Please refer to submission number 98-01007 when calling for assistance.

Sincerely,

Cheryl Ferguson
Project Manager
BC Laboratories, Inc.

4100 Atlas Ct. • Bakersfield, CA 93308 • (805) 327-4911 • FAX (805) 327-1918

4357-01

BC LABORATORIES, INC.

98-1007

LABORATORY
(805) 327-4911
FAX (805) 327-1918
4100 Atlas Ct.
Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station
Address: 25A Technology Drive	Project Manager:
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 7530101 FAX: 714 7530111	Site # 4357
Report To: Liz Sewell Sampler: Sonya Vusoni	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround Time: (Working Days) ☒ 7 ~~10~~ Days (Standard) ☐ 5 Days ☐ 3 Days ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water ☐ Waste Water ☐ Other

SEE EPA Protocol

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested: 8015/8020 MTBE; DISTRIBUTION; SB

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015/8020 MTBE	DISTRIBUTION	SB	Comments
X	MW1-4.75	1/26/98 923	soil	1	2x6 Brass	-1	X			
X	MW1-5.0	923			2x3 Brass	-2				hold
X	MW1-~~5~~ 10.75	940			2x6 Brass	-3	X			
X	MW1-10.25	940			2x3 Brass	-4				hold
X	MW1-16.0	957			2x6 Brass	-5	X			
X	MW1-15.5	957			2x3 Brass	-6				hold
X	MW1-20.0	1024			2x6 Brass	-7	X			
X	MW1-19.5	1024			2x3 Brass	-8				hold
X	MW1-25.25	1030			2x6 Brass	-9	X			

NUMBERING CHECKED BY: 14

Relinquished By: Sonya Vusoni	Date: 1/26/98	Time: 1613	Received By: [signature]	Date: 1/26/98	Time: 1613
Relinquished By: [signature]	Date: 1/26/98	Time: 1630	Received By: [signature]	Date: 1-26-98	Time: 16:30
Relinquished By: [signature]	Date: 1-26-98	Time: 20:37	Received By: [signature]	Date: 1-26-98	Time: 20:42

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 1 Of 4

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved: _____ Signature: _____ Company: _____

435701

BC LABORATORIES, INC.

98-1007

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Bakersfield, CA 93308

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FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station
Address: 25A Technology Drive	Project Manager:
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Liz Sewell Sampler: Sonya	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☒ ~~10~~ 7 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water ☐ Waste Water ☐ Other

See EPA Protocal

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015G/8260A MTBE	DISTRIBUTION SB							Comments
X	MW1TB01	1/26/98 1034	water	1	40ml VOA	-10	X								Blind ~~Blind~~/Trip Blank
X	MW1FB01	1040	↓	1	40ml VOA	-10	X								Field Blank Lot NP012398
X	MW1-31.0	1050	soil	1	2x4 Brass	mm -12 -11	X								
X	MW1-30.5	1050		1	2x3 Brass	-13 -12									hold
X	~~MW1~~ MW1-36	1118		1	2x6 Brass	-14 -13	X								
X	MW1-35.5	1118		1	2x3 Brass	-15 -14									hold
X	MW1-41.0	1108			2x6 Brass	-16 -15	X								
X	MW1-40.5	1108			2x3 Brass	-17 -16									hold
X	MW1-45.4	1157	↓	1	2x6 Brass	-18 -17	X								

NUMBERING CHECKED BY [illegible]

Relinquished By: Sonya V Luisoni	Date: 1/26/98	Time: 1613	Received By: [signature]	Date: 1/26/98	Time: 1613
Relinquished By: [signature]	Date: 1/26/98	Time: 1630	Received By: [signature]	Date: 1-26-98	Time: 16:30
Relinquished By: [signature]	Date: 1-26-91	Time: 20:37	Received By: [signature]	Date: 1-26-98	Time: 20:42

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 2 Of 4

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved by: _____ Signature: _____ Company: _____ Date: _____

4357 01

BC LABORATORIES, INC.

98-1007

LABORATORY
(805) 327-4911
FAX (805) 327-1918
4100 Atlas Ct.
Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station
Address: 25A Technology Drive	Project Manager:
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Liz Sewell Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☒ ~~10~~ 7 Days (Standard) ☐ 5 Days ☐ 3 Days ☐ Drinking Water → See EPA protocol
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours ☐ Waste Water
CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure ☐ Other

Analyses Requested

DISTRIBUTION SB

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015G/8260A MTBE									Comments
X	MW1-50.0	1/26/98 1211	soil	1	2x6 Brass	mm -19 -18	X									
X	MW1-55.0	1219	Soil	1	2x6 Brass	-20 -19	X									1/2" headspace
X	MW1-60.4	1228	soil	1	2x6 Brass	-21 -20	X									1/4" headspace
X	MW1-59.9	1228		1	2x3 Brass	-22 -21										hold
X	MW1-65.4	1243		1	2x6 Brass	-23 -22	X									
X	MW1-64.9	1243		1	2x3 Brass	-24 -23										hold
X	MW1-70.4	1300		1	2x6 Brass	-25 -24	X									
X	MW1-69.9	1300		1	2x3 Brass	-26 -25										hold
			water													

NUMBERING CHECKED BY SL

Relinquished By: Sonya V. Lugoni	Date: 1/26/98	Time: 1613	Received By: [signature]	Date: 1/26/98	Time: 1613
Relinquished By: [signature]	Date: 1/26/98	Time: 1630	Received By: [signature]	Date: 1-26-98	Time: 16:30
Relinquished By: [signature]	Date: 1-26-98	Time: 20:37	Received By: [signature]	Date: 1-26-98	Time: 20:42

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 3 Of 4

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approve[illegible] _____ Signature: _____ Company: _____ [illegible]: _____

435701

BC LABORATORIES, INC.

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Bakersfield, CA 93308

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P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

98-1007 ~~98-1006~~ mm ~~98-1007~~ mm

Company Name: Alton Geoscience	Project Name: 76 Station
Address: 25A Technology Drive	Project Manager:
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Liz Sewell Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

See EPA protocols

Turnaround ☒ 7 ~~10~~ Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water
☐ Waste Water
☐ Other

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested

DISTRIBUTION SB

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015G/8260A MTBE									Comments
X	RIG04SW	1/26/98 1400	water	1	40ml VOA	mm -27 -26	X									Rig #4 (Hazmat) source water
X	MW1ER01	↓ 1405	↓	1	40ml VOA	-28 -27	X									Equipment Rinsate NP012398

NUMBERING CHECKED BY AJ

Relinquished By: Sonya V. Luisoni	Date: 1/26/98	Time: 1613	Received By: [signature]	Date: 1/26/98	Time: 1613
Relinquished By: [signature]	Date: 1/26/98	Time: 1630	Received By: [signature]	Date: 1-26-98	Time: 16:30
Relinquished By: [signature]	Date: 1-26-98	Time: 20:37	Received By: [signature]	Date: 1-26-98	Time: 20:42

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 4 Of 4

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved by: _____ Signature: _____ Company: _____ Date: _____

BC LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No.4 1/7/98 Page 1 Of 3

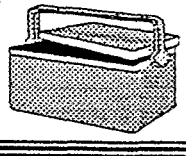
Submission #: 98-1007 Project Code:

SHIPPING INFORMATION	SHIPPING CONTAINER
Federal Express ☐ UPS ☐ Hand Delivery ☐	Ice Chest ☒ None ☐
BC Lab Field Service ☒ Other ☐ (Specify) _____	Box ☐ Other ☐ (Specify) _____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments: Ice is melted

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☐ Comments: MWI

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐



Ice Chest ID		
Temperature:	8.5 °C	
Thermometer ID:	17	
Emissivity	.85	
Container	Vou	

Ice Chest ID	
Temperature:	°C
Thermometer ID:	
Emissivity	
Container	

MWI

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL																								
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS																								
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE																								
PT NITROGEN FORMS																								
PT TOTAL SULFIDE																								
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
40ml VOA VIAL TRAVEL BLANK																								
40ml VOA VIAL										/	/													
VOA SET (3 VIALS, 1TB)																								
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080																								
QT EPA 515.1/8150																								
QT EPA 525																								
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE	/	/	/	/	/	/	/	/	/			/												
PCB VIAL																								
PLASTIC BAG																								

MWI

Comments:

Completed by: Mark Monroe

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98-1007 continued

SAMPLE CONTAINERS	SAMPLE NUMBERS																							
	13	14	15	16	17	18	19	20	21	22	23	24	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL																								
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS																								
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE																								
PT NITROGEN FORMS																								
PT TOTAL SULFIDE																								
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
[illegible]ml PHENOLICS																								
[illegible]ml VOA VIAL TRAVEL BLANK																								
40ml VOA VIAL																								
VOA SET (3 VIALS, 1TB)																								
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080																								
QT EPA 515.1/8150																								
QT EPA 525																								
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓												
PCB VIAL																								
PLASTIC BAG																								

Comments:

Completed by: Ward Monroe

(F:\WP80\LAB_DOCS\FORMS\SAMREC2.WPD)

3 of 3

98-1007 continued

SAMPLE CONTAINERS	SAMPLE NUMBERS																							
	25	26	27	28	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL																								
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS																								
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE																								
PT NITROGEN FORMS																								
PT TOTAL SULFIDE																								
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
40ml VOA VIAL TRAVEL BLANK																								
40ml VOA VIAL			/	/																				
VOA SET (3 VIALS, 1TB)																								
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080																								
QT EPA 515.1/8150																								
QT EPA 525																								
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE	/	/																						
PCB VIAL																								
PLASTIC BAG																								

Comments:

Completed by: Mark Monroe

BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/10/98
Date Received: 01/26/98
Laboratory No.: 98-01007-1

Sample Description: (SITE #4357) 76 STATION: MW1-4.75- SAMPLED BY SONYA LUISONI

Sample ID: MW1-4.75
Sample Matrix: Soil

Date Collected: 01/26/98 @ 09:23AM
Date Extracted-8020: 02/05/98
Date Analyzed-8020: 02/05/98
Date Extracted-8015M(g): 02/05/98
Date Analyzed-8015M(g): 02/05/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	0.002	mg/kg	0.002	0.00020	
Toluene	0.004	mg/kg	0.002	0.00029	
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029	
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001	
Total Xylenes	None Detected	mg/kg	0.005	0.00088	
Total Petroleum Hydrocarbons (gas)	0.38	mg/kg	0.5	0.20	*
Surrogate % Recovery	76.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, seperation, detachment or third party interpretation.

4100 Atlas Ct. • Bakersfield, CA 93308 • (805) 327-4911 • FAX (805) 327-1918

BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/10/98
Date Received: 01/26/98
Laboratory No.: 98-01007-3

Sample Description: (SITE #4357) 76 STATION: MW1-10.75- SAMPLED BY SONYA LUISONI

Sample ID: MW1-10.75
Sample Matrix: Soil

Date Collected: 01/26/98 @ 09:40AM
Date Extracted-8020: 02/05/98
Date Analyzed-8020: 02/05/98
Date Extracted-8015M(g): 02/05/98
Date Analyzed-8015M(g): 02/05/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.003	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	88.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/10/98
Date Received: 01/26/98
Laboratory No.: 98-01007-5

Sample Description: (SITE #4357) 76 STATION: MW1-16.0- SAMPLED BY SONYA LUISONI

Sample ID: MW1-16.0
Sample Matrix: Soil

Date Collected: 01/26/98 @ 09:57AM
Date Extracted-8020: 02/05/98
Date Analyzed-8020: 02/05/98
Date Extracted-8015M(g): 02/05/98
Date Analyzed-8015M(g): 02/05/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	78.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/10/98
Date Received: 01/26/98
Laboratory No.: 98-01007-7

Sample Description: (SITE #4357) 76 STATION: MW1-20.0- SAMPLED BY SONYA LUISONI

Sample ID: MW1-20.0
Sample Matrix: Soil

Date Collected: 01/26/98 @ 10:24AM
Date Extracted-8020: 02/05/98
Date Analyzed-8020: 02/05/98
Date Extracted-8015M(g): 02/05/98
Date Analyzed-8015M(g): 02/05/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.002	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	85.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/10/98
Date Received: 01/26/98
Laboratory No.: 98-01007-9

Sample Description: (SITE #4357) 76 STATION: MW1-25.25- SAMPLED BY SONYA LUISONI

Sample ID: MW1-25.25
Sample Matrix: Soil

Date Collected: 01/26/98 @ 10:30AM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	90.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/09/98
Date Received: 01/26/98
Laboratory No.: 98-01007-10

Sample Description: (SITE #4357) 76 STATION: MW1 FB01- SAMPLED BY SONYA LUISONI

Sample ID: MW1 FB01
Sample Matrix: Water

Date Collected: 01/26/98 @ 10:40AM
Date Extracted-8020: 02/04/98
Date Analyzed-8020: 02/04/98
Date Extracted-8015M(g): 02/04/98
Date Analyzed-8015M(g): 02/04/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.3	0.04
Toluene	None Detected	µg/L	0.3	0.05
Ethyl Benzene	None Detected	µg/L	0.3	0.07
Methyl-t-butylether	None Detected	µg/L	5.	2.5
Total Xylenes	None Detected	µg/L	0.6	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	96.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/10/98
Date Received: 01/26/98
Laboratory No.: 98-01007-11

Sample Description: (SITE #4357) 76 STATION: MW1-31.0- SAMPLED BY SONYA LUISONI

Sample ID: MW1-31.0
Sample Matrix: Soil

Date Collected: 01/26/98 @ 10:50AM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	None Detected	mg/kg	0.002	0.00020	
Toluene	0.001	mg/kg	0.002	0.00029	*
Ethyl Benzene	0.001	mg/kg	0.002	0.00029	*
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001	
Total Xylenes	None Detected	mg/kg	0.005	0.00088	
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20	
Surrogate % Recovery	106.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/10/98
Date Received: 01/26/98
Laboratory No.: 98-01007-13

Sample Description: (SITE #4357) 76 STATION: MW1-36- SAMPLED BY SONYA LUISONI

Sample ID: MW1-36
Sample Matrix: Soil

Date Collected: 01/26/98 @ 11:18AM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	98.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Stuart G. Buttram
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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/10/98
Date Received: 01/26/98
Laboratory No.: 98-01007-15

Sample Description: (SITE #4357) 76 STATION: MW1-41.0- SAMPLED BY SONYA LUISONI

Sample ID: MW1-41.0
Sample Matrix: Soil

Date Collected: 01/26/98 @ 11:28AM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.002	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	92.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/10/98
Date Received: 01/26/98
Laboratory No.: 98-01007-17

Sample Description: (SITE #4357) 76 STATION: MW1-45.4- SAMPLED BY SONYA LUISONI

Sample ID: MW1-45.4
Sample Matrix: Soil

Date Collected: 01/26/98 @ 11:57AM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.002	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	86.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/10/98
Date Received: 01/26/98
Laboratory No.: 98-01007-18

Sample Description: (SITE #4357) 76 STATION: MW1-50.0- SAMPLED BY SONYA LUISONI

Sample ID: MW1-50.0
Sample Matrix: Soil

Date Collected: 01/26/98 @ 12:11PM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.002	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.05	0.001
Total Xylenes	None Detected	mg/kg	0.05	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	95.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/10/98
Date Received: 01/26/98
Laboratory No.: 98-01007-19

Sample Description: (SITE #4357) 76 STATION: MW1-55.0- SAMPLED BY SONYA LUISONI

Sample ID: MW1-55.0
Sample Matrix: Soil

Date Collected: 01/26/98 @ 12:19PM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.002	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	90.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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BC LABORATORIES

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25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/10/98
Date Received: 01/26/98
Laboratory No.: 98-01007-20

Sample Description: (SITE #4357) 76 STATION: MW1-60.4- SAMPLED BY SONYA LUISONI

Sample ID: MW1-60.4
Sample Matrix: Soil

Date Collected: 01/26/98 @ 12:28PM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	86.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/10/98
Date Received: 01/26/98
Laboratory No.: 98-01007-22

Sample Description: (SITE #4357) 76 STATION: MW1-65.4- SAMPLED BY SONYA LUISONI

Sample ID: MW1-65.4
Sample Matrix: Soil

Date Collected: 01/26/98 @ 12:43PM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	90.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Stuart G. Buttram
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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/10/98
Date Received: 01/26/98
Laboratory No.: 98-01007-24

Sample Description: (SITE #4357) 76 STATION: MW1-70.4- SAMPLED BY SONYA LUISONI

Sample ID: MW1-70.4
Sample Matrix: Soil

Date Collected: 01/26/98 @ 01:00PM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.002	mg/kg	0.002	0.00029
Ethyl Benzene	0.002	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	95.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/09/98
Date Received: 01/26/98
Laboratory No.: 98-01007-26

Sample Description: (SITE #4357) 76 STATION: RIG 04SW- SAMPLED BY SONYA LUISONI

Sample ID: RIG 04SW
Sample Matrix: Water

Date Collected: 01/26/98 @ 02:00PM
Date Extracted-8020: 02/04/98
Date Analyzed-8020: 02/04/98
Date Extracted-8015M(g): 02/04/98
Date Analyzed-8015M(g): 02/04/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.3	0.04
Toluene	None Detected	µg/L	0.3	0.05
Ethyl Benzene	None Detected	µg/L	0.3	0.07
Methyl-t-butylether	None Detected	µg/L	5.	2.5
Total Xylenes	None Detected	µg/L	0.6	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	90.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/09/98
Date Received: 01/26/98
Laboratory No.: 98-01007-27

Sample Description: (SITE #4357) 76 STATION: MW1 ER01- SAMPLED BY SONYA LUISONI

Sample ID: MW1 ER01
Sample Matrix: Water

Date Collected: 01/26/98 @ 02:05PM
Date Extracted-8020: 02/04/98
Date Analyzed-8020: 02/04/98
Date Extracted-8015M(g): 02/04/98
Date Analyzed-8015M(g): 02/04/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.3	0.04
Toluene	None Detected	µg/L	0.3	0.05
Ethyl Benzene	None Detected	µg/L	0.3	0.07
Methyl-t-butylether	None Detected	µg/L	5.	2.5
Total Xylenes	None Detected	µg/L	0.6	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	86.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/09/98
Date Received: 01/26/98
Laboratory No.: 98-01007-TB

Sample Description: (SITE #4357) 76 STATION: MW1 TB01- SAMPLED BY SONYA LUISONI

Sample ID: MW1 TB01
Sample Matrix: Water

Date Collected: 01/26/98 @ 10:34AM
Date Extracted-8020: 02/05/98
Date Analyzed-8020: 02/05/98
Date Extracted-8015M(g): 02/05/98
Date Analyzed-8015M(g): 02/05/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.3	0.04
Toluene	None Detected	µg/L	0.3	0.05
Ethyl Benzene	None Detected	µg/L	0.3	0.07
Methyl-t-butylether	None Detected	µg/L	5.	2.5
Total Xylenes	None Detected	µg/L	0.6	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	92.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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February 27, 1998

GIL FRY
ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718

Subject: Laboratory Submission No.: 98-01039
Samples Received: 01/27/98

Dear Mr. Fry:

The samples(s) listed on the Chain of Custody report were received by BC Laboratories, Inc. on 01/27/98.

Enclosed please find the analytical data for the testing requested. Results in RWQCB - L.A. Region format will follow under separate cover as soon as they are available.

If there are questions regarding this report please contact me at (805)327-4911, ext. 250.

Any unused sample will be stored on our premises for a minimum of 30 days (excluding bacteriologicals) at which time they will be disposed unless otherwise requested at the time of sample receipt. A disposal fee of $5 per sample may apply for solid sample matrices.

Please refer to submission number 98-01039 when calling for assistance.

Sincerely,

Cheryl Ferguson
Project Manager
BC Laboratories, Inc.

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435703

BC LABORATORIES, INC.

98-1039

LABORATORY
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FAX (805) 327-1918
4100 Atlas Ct.
Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station
Address: 25A Technology Drive	Project Manager:
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Liz Sewell Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround Time: (Working Days) ☒ ~~10~~ 7 Days (Standard) ☐ 5 Days ☐ 3 Days ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water ☐ Waste Water ☐ Other — See EPA protocol

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested: BDIS 6/8260A BTEX

DISTRIBUTION

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	BDIS 6/8260A BTEX	Comments
X	MW1-75.0	1/27/98 816	soil	1	2x6 Brass	-1	X	
X	MW1FB02	835	water	1	40ml VOA	-2TB	X	Blind 1/27/98 MW1
X	MW1-80.3	843	soil	1	2x6 Brass	-3	X	a little headspace
X	MW1FB02	845	water	3	40ml VOA	-4	X	Field Blank NP01239B
X	MW1-85.0	907	soil	1	2x6 Brass	-5	X	small headspace
X	MW1-90.0	939	soil	1	2x6 Brass	-6	X	(3/4 full)
X	MW1-95.4	943	soil	1	2x6 Brass	-7	X	
X	MW1-94.9	943	soil	1	2x3 Brass	-8		hold
X	MW1-99.9	958	soil	1	2x6 Brass	-9	X	7/8 full

NUMBERING CHECKED BY MV

Relinquished By: Sonya V. Jensen	Date: 1/27/98	Time: 1723	Received By: [illegible]	Date: 1-22-98	Time: 17:22
Relinquished By: [illegible]	Date: 1-27-98	Time: 20:27	Received By: [illegible]	Date: 1-27-98	Time: 20:32
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☒ Yes ☐ No Samples On Ice ☒ Yes ☐ No Method Of Shipment BC LAB F.S Page ~~2~~ 1 Of 3

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved: _____ Signature: _____ Company: _____

4357-03

2

BC LABORATORIES, INC.

98-1039

LABORATORY
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FAX (805) 327-1918
4100 Atlas Ct.
Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station 4357
Address: 254 Technology Drive	Project Manager:
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Liz Sewell Sampler: Sonya	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours
CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water ☐ Waste Water ☐ Other

See EPA protocol

Analyses Requested

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015G/8260A MTBE									Comments
X	MW1-105.0	1/27/98 1011	Soil	1	2x6 Brass	-10	X									
X	MW1ER02	1109	Water	3	40ml VOA	-11	X									Equipment Rinsate MW1 - NP012398
X	MW1-110.0	1114	Soil	1	2x6 Brass	-12	X									
X	MW1-115.0	1213	Soil	1	2x6 Brass	-13	X									(3/4 free)
X	MW1-120.0	1344		1	2x6 Brass	-14	X									(3/4 full)
X	MW1-125.0	1401		1	2x6 Brass	-15	X									
X	MW1-130.25	1423		1	2x6 Brass	-16	X									
X	MW1-131.0	1435		1	2x3 Brass	-17	X									at first H_2O (disturbed)
X	MW1-135.5	1519		1	2x6 Brass	-18	X									

Relinquished By: Sonya V. Fuisen	Date: 1/27/98	Time: 1723	Received By: [signature]	Date: 1-27-98	Time: 17:23
Relinquished By: [signature]	Date: 1-27-98	Time: 20:27	Received By: [signature]	Date: 1-27-98	Time: 20:32
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☒ Yes ☐ No Samples On Ice ☒ Yes ☐ No Method Of Shipment BC LAB F.S Page 2 Of ~~2~~ 3

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed?_____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time?_____
Approved by:_____ Signature:_____ Company:_____ Date:_____

4357-03

BC LABORATORIES, INC.

98-1039

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(805) 327-4911
FAX (805) 327-1918
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Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station 4357
Address: 25A Technology Drive	Project Manager:
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Liz Sewell Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround Time: (Working Days) ☒ 10 Days (Standard) ☐ 5 Days ☐ 3 Days ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water (See EPA protocol) ☐ Waste Water ☐ Other

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested: 8015/8260A MTBE

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015/8260A MTBE	Comments
X	MW1-145.25	1/27/98 1620	Soil	1	2x6 Brass	-19	X	

Relinquished By: Sonya L. Lewsoni	Date: 1/27/98	Time: 1723	Received By: Jerry Mitchell	Date: 1-27-98	Time: 17:23
Relinquished By: Jerry Mitchell	Date: 1-27-98	Time: 20:22	Received By: [illegible]	Date: 1-27-98	Time: 20:32
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☒ Yes ☐ No Samples On Ice ☒ Yes ☐ No Method Of Shipment BC LABS F.S Page 3 Of 3

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed?
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time?
Approved: Signature: Company:

BC LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No.4 1/7/98 Page ___ Of ___

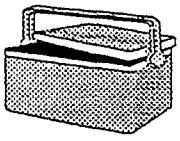
Submission #: 98-1039 Project Code:

SHIPPING INFORMATION	SHIPPING CONTAINER
Federal Express ☐ UPS ☐ Hand Delivery ☐	Ice Chest ☒ None ☐
BC Lab Field Service ☒ Other ☐ (Specify) _____	Box ☐ Other ☐ (Specify) _____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☒ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐



Ice Chest ID		
Temperature:	6.0 °C	
Thermometer ID:	35	
Emissivity	—	
Container	Soil Sleve	

Ice Chest ID	
Temperature:	°C
Thermometer ID:	
Emissivity	
Container	

SAMPLE CONTAINERS	SAMPLE NUMBERS																							
	1	~~2~~ -2TB	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL																								
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS																								
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE																								
PT NITROGEN FORMS																								
PT TOTAL SULFIDE																								
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS				1/1/28																				
40ml VOA VIAL TRAVEL BLANK		1		X	X																			
40ml VOA VIAL				3							3													
VOA SET (3 VIALS, 1TB)																								
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080																								
QT EPA 515.1/8150																								
QT EPA 525																								
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR				1/1/28																				
SOIL SLEEVE TALL	1		1	X	1	1	1		1	1		1												
PCB VIAL																								
PLASTIC BAG																								
SHORT BRASS SLEEVE								1																

Comments: _____

Completed by: _____

98-1039

SAMPLE CONTAINERS	13	14	15	16	17	18	19						SAMPLE NUMBERS											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL																								
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS																								
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE																								
PT NITROGEN FORMS																								
PT TOTAL SULFIDE																								
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
40ml VOA VIAL TRAVEL BLANK																								
40ml VOA VIAL																								
VOA SET (3 VIALS, 1TB)																								
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080																								
QT EPA 515.1/8150																								
QT EPA 525																								
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE TALL	1	1	1	1		1	1																	
PCB VIAL																								
PLASTIC BAG																								
SHORT SOIL SLEEVE					1																			

Comments:

Completed by:

F:\WP80\LAB_DOCS\FORMS\SAMREC2.WP

BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/12/98
Date Received: 01/27/98
Laboratory No.: 98-01039-1

Sample Description: (SITE #4357) 76 STATION: MW1-75.0- SAMPLED BY SONYA LUISONI

Sample ID: MW1-75.0
Sample Matrix: Soil

Date Collected: 01/27/98 @ 08:16AM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	0.001	mg/kg	0.002	0.00020	*
Toluene	0.003	mg/kg	0.002	0.00029	
Ethyl Benzene	0.001	mg/kg	0.002	0.00029	*
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001	
Total Xylenes	0.004	mg/kg	0.005	0.00088	*
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20	
Surrogate % Recovery	82.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/10/98
Date Received: 01/27/98
Laboratory No.: 98-01039-2TB

Sample Description: (SITE #4357) 76 STATION: MW1 TB02- SAMPLED BY SONYA LUISONI

Sample ID: MW1 TB02
Sample Matrix: Water

Date Collected: 01/27/98 @ 08:45AM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.5	0.04
Toluene	None Detected	µg/L	0.5	0.05
Ethyl Benzene	None Detected	µg/L	0.5	0.07
Methyl-t-butylether	None Detected	µg/L	2.	0.12
Total Xylenes	None Detected	µg/L	1.	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	82.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/12/98
Date Received: 01/27/98
Laboratory No.: 98-01039-3

Sample Description: (SITE #4357) 76 STATION: MW1-80.3- SAMPLED BY SONYA LUISONI

Sample ID: MW1-80.3
Sample Matrix: Soil

Date Collected: 01/27/98 @ 08:43AM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	None Detected	mg/kg	0.002	0.00020	
Toluene	0.002	mg/kg	0.002	0.00029	
Ethyl Benzene	0.001	mg/kg	0.002	0.00029	*
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001	
Total Xylenes	0.003	mg/kg	0.005	0.00088	*
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20	
Surrogate % Recovery	88.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/10/98
Date Received: 01/27/98
Laboratory No.: 98-01039-4

Sample Description: (SITE #4357) 76 STATION: MW1 FB02- SAMPLED BY SONYA LUISONI

Sample ID: MW1 FB02
Sample Matrix: Water

Date Collected: 01/27/98 @ 08:45AM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.5	0.04
Toluene	None Detected	µg/L	0.5	0.05
Ethyl Benzene	None Detected	µg/L	0.5	0.07
Methyl-t-butylether	None Detected	µg/L	2.	0.12
Total Xylenes	None Detected	µg/L	1.	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	110.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/12/98
Date Received: 01/27/98
Laboratory No.: 98-01039-5

Sample Description: (SITE #4357) 76 STATION: MW1-85.0- SAMPLED BY SONYA LUISONI

Sample ID: MW1-85.0
Sample Matrix: Soil

Date Collected: 01/27/98 @ 09:07AM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	0.002	mg/kg	0.002	0.00020
Toluene	0.002	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	0.003	mg/kg	0.005	0.00088 *
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	75.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/12/98
Date Received: 01/27/98
Laboratory No.: 98-01039-6

Sample Description: (SITE #4357) 76 STATION: MW1-90.0- SAMPLED BY SONYA LUISONI

Sample ID: MW1-90.0
Sample Matrix: Soil

Date Collected: 01/27/98 @ 09:39AM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	None Detected	mg/kg	0.002	0.00020	
Toluene	0.002	mg/kg	0.002	0.00029	
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029	
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001	
Total Xylenes	0.002	mg/kg	0.005	0.00088	*
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20	
Surrogate % Recovery	93.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/12/98
Date Received: 01/27/98
Laboratory No.: 98-01039-7

Sample Description: (SITE #4357) 76 STATION: MW1-95.4- SAMPLED BY SONYA LUISONI

Sample ID: MW1-95.4
Sample Matrix: Soil

Date Collected: 01/27/98 @ 09:43AM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	0.001	mg/kg	0.002	0.00020	*
Toluene	None Detected	mg/kg	0.002	0.00029	
Ethyl Benzene	0.001	mg/kg	0.002	0.00029	*
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001	
Total Xylenes	0.003	mg/kg	0.005	0.00088	*
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20	
Surrogate % Recovery	107.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

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Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/12/98
Date Received: 01/27/98
Laboratory No.: 98-01039-9

Sample Description: (SITE #4357) 76 STATION: MW1-99.9- SAMPLED BY SONYA LUISONI

Sample ID: MW1-99.9
Sample Matrix: Soil

Date Collected: 01/27/98 @ 09:58AM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	None Detected	mg/kg	0.002	0.00020	
Toluene	0.001	mg/kg	0.002	0.00029	*
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029	
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001	
Total Xylenes	0.002	mg/kg	0.005	0.00088	*
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20	
Surrogate % Recovery	97.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

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Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/12/98
Date Received: 01/27/98
Laboratory No.: 98-01039-10

Sample Description: (SITE #4357) 76 STATION: MW1-105.0- SAMPLED BY SONYA LUISONI

Sample ID: MW1-105.0
Sample Matrix: Soil

Date Collected: 01/27/98 @ 10:11AM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	None Detected	mg/kg	0.002	0.00020	
Toluene	0.001	mg/kg	0.002	0.00029	*
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029	
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001	
Total Xylenes	0.002	mg/kg	0.005	0.00088	*
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20	
Surrogate % Recovery	80.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

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Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/10/98
Date Received: 01/27/98
Laboratory No.: 98-01039-11

Sample Description: (SITE #4357) 76 STATION: MW1 ER02- SAMPLED BY SONYA LUISONI

Sample ID: MW1 ER02
Sample Matrix: Water

Date Collected: 01/27/98 @ 11:09AM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.5	0.04
Toluene	None Detected	µg/L	0.5	0.05
Ethyl Benzene	None Detected	µg/L	0.5	0.07
Methyl-t-butylether	None Detected	µg/L	2.	0.12
Total Xylenes	None Detected	µg/L	1.	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	90.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/12/98
Date Received: 01/27/98
Laboratory No.: 98-01039-12

Sample Description: (SITE #4357) 76 STATION: MW1-110.0- SAMPLED BY SONYA LUISONI

Sample ID: MW1-110.0
Sample Matrix: Soil

Date Collected: 01/27/98 @ 11:14AM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	0.001	mg/kg	0.002	0.00020	*
Toluene	None Detected	mg/kg	0.002	0.00029	
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029	
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001	
Total Xylenes	0.003	mg/kg	0.005	0.00088	*
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20	
Surrogate % Recovery	111.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

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Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/12/98
Date Received: 01/27/98
Laboratory No.: 98-01039-13

Sample Description: (SITE #4357) 76 STATION: MW1-115.0- SAMPLED BY SONYA LUISONI

Sample ID: MW1-115.0
Sample Matrix: Soil

Date Collected: 01/27/98 @ 12:13PM
Date Extracted-8020: 02/07/98
Date Analyzed-8020: 02/07/98
Date Extracted-8015M(g): 02/07/98
Date Analyzed-8015M(g): 02/07/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	0.002	mg/kg	0.005	0.00088 *
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	97.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/12/98
Date Received: 01/27/98
Laboratory No.: 98-01039-14

Sample Description: (SITE #4357) 76 STATION: MW1-120.0- SAMPLED BY SONYA LUISONI

Sample ID: MW1-120.0
Sample Matrix: Soil

Date Collected: 01/27/98 @ 01:44PM
Date Extracted-8020: 02/07/98
Date Analyzed-8020: 02/07/98
Date Extracted-8015M(g): 02/07/98
Date Analyzed-8015M(g): 02/07/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	None Detected	mg/kg	0.002	0.00020	
Toluene	None Detected	mg/kg	0.002	0.00029	
Ethyl Benzene	0.001	mg/kg	0.002	0.00029	*
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001	
Total Xylenes	0.004	mg/kg	0.005	0.00088	*
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20	
Surrogate % Recovery	94.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

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Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/12/98
Date Received: 01/27/98
Laboratory No.: 98-01039-15

Sample Description: (SITE #4357) 76 STATION: MW1-125.0- SAMPLED BY SONYA LUISONI

Sample ID: MW1-125.0
Sample Matrix: Soil

Date Collected: 01/27/98 @ 02:01PM
Date Extracted-8020: 02/07/98
Date Analyzed-8020: 02/07/98
Date Extracted-8015M(g): 02/07/98
Date Analyzed-8015M(g): 02/07/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	None Detected	mg/kg	0.002	0.00020	
Toluene	0.001	mg/kg	0.002	0.00029	*
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029	
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001	
Total Xylenes	0.003	mg/kg	0.005	0.00088	*
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20	
Surrogate % Recovery	83.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/12/98
Date Received: 01/27/98
Laboratory No.: 98-01039-16

Sample Description: (SITE #4357) 76 STATION: MW1-130.25- SAMPLED BY SONYA LUISONI

Sample ID: MW1-130.25
Sample Matrix: Soil

Date Collected: 01/27/98 @ 02:23PM
Date Extracted-8020: 02/07/98
Date Analyzed-8020: 02/07/98
Date Extracted-8015M(g): 02/07/98
Date Analyzed-8015M(g): 02/07/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	None Detected	mg/kg	0.002	0.00020	
Toluene	0.001	mg/kg	0.002	0.00029	*
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029	
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001	
Total Xylenes	0.004	mg/kg	0.005	0.00088	*
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20	
Surrogate % Recovery	74.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

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Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/12/98
Date Received: 01/27/98
Laboratory No.: 98-01039-17

Sample Description: (SITE #4357) 76 STATION: MW1-131.0- SAMPLED BY SONYA LUISONI

Sample ID: MW1-131.0
Sample Matrix: Soil

Date Collected: 01/27/98 @ 02:35PM
Date Extracted-8020: 02/07/98
Date Analyzed-8020: 02/07/98
Date Extracted-8015M(g): 02/07/98
Date Analyzed-8015M(g): 02/07/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	0.001	mg/kg	0.002	0.00020	*
Toluene	0.002	mg/kg	0.002	0.00029	
Ethyl Benzene	0.001	mg/kg	0.002	0.00029	*
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001	
Total Xylenes	0.003	mg/kg	0.005	0.00088	*
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20	
Surrogate % Recovery	72.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

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Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/12/98
Date Received: 01/27/98
Laboratory No.: 98-01039-18

Sample Description: (SITE #4357) 76 STATION: MW1-135.5- SAMPLED BY SONYA LUISONI

Sample ID: MW1-135.5
Sample Matrix: Soil

Date Collected: 01/27/98 @ 03:19PM
Date Extracted-8020: 02/07/98
Date Analyzed-8020: 02/07/98
Date Extracted-8015M(g): 02/07/98
Date Analyzed-8015M(g): 02/07/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	None Detected	mg/kg	0.002	0.00020	
Toluene	0.001	mg/kg	0.002	0.00029	*
Ethyl Benzene	0.001	mg/kg	0.002	0.00029	*
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001	
Total Xylenes	0.003	mg/kg	0.005	0.00088	*
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20	
Surrogate % Recovery	75.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

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Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/12/98
Date Received: 01/27/98
Laboratory No.: 98-01039-19

Sample Description: (SITE #4357) 76 STATION: MW1-145.25- SAMPLED BY SONYA LUISONI

Sample ID: MW1-145.25
Sample Matrix: Soil

Date Collected: 01/27/98 @ 04:20PM
Date Extracted-8020: 02/07/98
Date Analyzed-8020: 02/07/98
Date Extracted-8015M(g): 02/07/98
Date Analyzed-8015M(g): 02/07/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.001	mg/kg	0.002	0.00029 *
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	0.003	mg/kg	0.005	0.00088 *
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	74.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

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Stuart G. Buttram
Department Supervisor

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February 27, 1998

GIL FRY
ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718

Subject: Laboratory Submission No.: 98-01368
Samples Received: 02/04/98

Dear Mr. Fry:

The samples(s) listed on the Chain of Custody report were received by BC Laboratories, Inc. on 02/04/98.

Enclosed please find the analytical data for the testing requested. Results in RWQCB - L.A. Region format will follow under separate cover as soon as they are available.

If there are questions regarding this report please contact me at (805)327-4911, ext. 250.

Any unused sample will be stored on our premises for a minimum of 30 days (excluding bacteriologicals) at which time they will be disposed unless otherwise requested at the time of sample receipt. A disposal fee of $5 per sample may apply for solid sample matrices.

Please refer to submission number 98-01368 when calling for assistance.

Sincerely,

Cheryl Ferguson
Project Manager
BC Laboratories, Inc.

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CHAIN OF CUSTODY

BC LABORATORIES, INC.
4100 Atlas Court • Bakersfield, CA 93308
(805) 327-4911 • FAX (805) 327-1918

Report To:	
Name: Alfan Geoscience	Project: Unocal #4357
Address: 25 A Tech	Project #: A-2871
City: Irvine	Sampler Name:
State: CA Zip: 92718	Other: 4357-06,08,09
Attn: Gil Fry	98-1368
Phone: (714) 753-0101	

Analysis Requested: 8260 MTBE only

DISTRIBUTION: SB

Lab#	Sample Description	Date & Time Sampled	Matrix (S) Soil (W) Water (SL) Sludge (Other)	8260 MTBE only	Samples rec. cold (y/n)	Custody Seals (y/n)	Results Needed by: Date & Time	Number and Container Type
-1	B8-6.5	1/29/98	S	X				
-2	B8-114.75	1/29/98	S	X				

NUMBERING CHECKED BY [illegible]

Comment:

Billing Info:
Name: Unocal
Address
City State
Attention:
Time:
Miles:
P.O.#

Sample Disposal
☐ BC [illegible]sal @ 5.00 ea.
☐ [illegible]rn to client

Relinquished by: (Signature)	Received by: (Signature)	Date: Time:
[illegible]	[illegible]	2/4/98 9:15
[illegible]	[illegible]	2-4-98 13:45
[illegible]	[illegible]	2-4-98 19:40

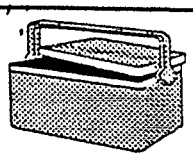
Submission #: 98-1368 Project Code:

SHIPPING INFORMATION	SHIPPING CONTAINER
Federal Express ☐ UPS ☐ Hand Delivery ☐	Ice Chest ☒ None ☐
BC Lab Field Service ☒ Other ☐ (Specify) _____	Box ☐ Other ☐ (Specify) _____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐



Ice Chest ID _____	Ice Chest ID _____
Temperature: 1.2 °C	Temperature: _____ °C
Thermometer ID: 17	Thermometer ID: _____
Emissivity .95	Emissivity _____
Container QT. Amber	Container _____

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11
QT GENERAL MINERAL/ GENERAL PHYSICAL																							
PT PE UNPRESERVED																							
QT INORGANIC CHEMICAL METALS																							
PT INORGANIC CHEMICAL METALS																							
PT CYANIDE																							
PT NITROGEN FORMS																							
PT TOTAL SULFIDE																							
2oz. NITRATE / NITRITE																							
100ml TOTAL ORGANIC CARBON																							
QT TOX																							
PT CHEMICAL OXYGEN DEMAND																							
0ml PHENOLICS																							
40ml VOA VIAL TRAVEL BLANK																							
40ml VOA VIAL																							
VOA SET (3 VIALS, 1TB)																							
QT EPA 413.1, 413.2, 418.1																							
PT ODOR																							
RADIOLOGICAL																							
BACTERIOLOGICAL																							
PT EPA 504																							
QT EPA 508/608/8080																							
QT EPA 515.1/8150																							
QT EPA 525																							
QT EPA 525 TRAVEL BLANK																							
100ml EPA 547																							
100ml EPA 531.1																							
QT EPA 548																							
QT EPA 549																							
QT EPA 632																							
QT EPA 8015M																							
QT QA/QC																							
QT AMBER																							
8 OZ. JAR																							
32 OZ. JAR																							
SOIL SLEEVE	/	/																					
PCB VIAL																							
LASTIC BAG																							

Comments:

Completed by: Mark Monroe

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Volatile Organic Analysis
(EPA Method 8260)

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 05/15/98
Date Received: 02/04/98
Laboratory No.: 98-01368-1
(Revised)

Project Number: UNOCAL #4357 (A-2871)
Sample ID: B8-6.5
Sample Depth: 6.5
Sample Matrix: Soil

Date Collected: 01/29/98
Date Extracted: 02/10/98
Date Analyzed: 02/10/98

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level
Methyl-t-butylether	None Detected	mg/kg	0.005	0.0025

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	99.	70-121
Toluene-d8	93.	81-117
4-Bromofluorobenzene	82.	74-121

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Volatile Organic Analysis
(EPA Method 8260)

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 05/15/98
Date Received: 02/04/98
Laboratory No.: 98-01368-2
(Revised)

Project Number: UNOCAL #4357 (A-2871)
Sample ID: B8-114.75
Sample Depth: 114.75
Sample Matrix: Soil

Date Collected: 01/29/98
Date Extracted: 02/10/98
Date Analyzed: 02/10/98
Dilution Used: 1

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level
Methyl-t-butylether	None Detected	mg/kg	0.005	0.0025

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	92.	70-121
Toluene-d8	98.	81-117
4-Bromofluorobenzene	96.	74-121

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC

February 27, 1998

GIL FRY
ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718

Subject: Laboratory Submission No.: 98-01065
Samples Received: 01/28/98

Dear Mr. Fry:

The samples(s) listed on the Chain of Custody report were received by BC Laboratories, Inc. on 01/28/98.

Enclosed please find the analytical data for the testing requested. Results in RWQCB - L.A. Region format will follow under separate cover as soon as they are available.

If there are questions regarding this report please contact me at (805)327-4911, ext. 250.

Any unused sample will be stored on our premises for a minimum of 30 days (excluding bacteriologicals) at which time they will be disposed unless otherwise requested at the time of sample receipt. A disposal fee of $5 per sample may apply for solid sample matrices.

Please refer to submission number 98-01065 when calling for assistance.

Sincerely,

Cheryl Ferguson
Project Manager
BC Laboratories, Inc.

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BC LABORATORIES, INC.

98-1065

LABORATORY
(805) 327-4911
FAX (805) 327-1918
4100 Atlas Ct.
Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

8L ~~4357~~ ~~9306~~ 435705

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station
Address: 25 A Technology Drive	Project Manager:
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 7530101 FAX: 714 7530111	Site # 4357
Report To: Liz Sewell Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☒ 7 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water ☐ Waste Water ☐ Other

See EPA protocol

DISTRIBUTION SB

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015G/8260A MTBE									Comments
X 4357SW	1/28/98 1000	water	3	40ml VOA	-1	X									site source H_2O
X HB05FB03	1016	water	3	40ml VOA	-2	X									Field Blank NP012198
X HB05TB03	1020	Water	1	40ml VOA	mm -3 -TB	X									Blind
X ~~HB~~ HB05-5.0	1031	Soil	1	2x6 Brass	-4 -3	X									
X HB05-10.0	1058		1	2x6 Brass	-5 -4	X									
X HB6-5.0	1210		1	2x6 Brass	-6	X									
X HB6-10.0	1223		1	2x6 Brass	-7 -6	X									
X HB06ER03	1439	WATER	3	40ml VOA	-8 -7	X									Equip Rinsate of Hand Auger NP012198

NUMBERING CHECKED BY

Relinquished By: Sonya V. Luisoni	Date: 1/28/98	Time: 1645	Received By: [signature]	Date: 1-28-98	Time: 16:45
Relinquished By: [signature]	Date: 1-28-98	Time: 20:57	Received By: [signature]	Date: 1-28-98	Time: 21:00
Relinquished By: [signature]	Date: ~~1-28-98~~	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☒ Yes ☐ No Samples On Ice ☒ Yes ☐ No Method Of Shipment BC Lab Field Service Page 1 ~~4~~ Of ____

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? ____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? ____
Approved by: ____ Signature: ____ Company: ____ Date: ____

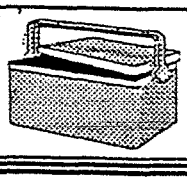
Submission #: 98-1065 Project Code:

SHIPPING INFORMATION	SHIPPING CONTAINER
Federal Express ☐ UPS ☐ Hand Delivery ☐	Ice Chest ☒ None ☐
BC Lab Field Service ☒ Other ☐ (Specify) _____	Box ☐ Other ☐ (Specify) _____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☒ Intact? Yes ☒ No ☐ None ☐ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐



Ice Chest ID _____
Temperature: 5.4 °C
Thermometer ID: 17
Emissivity .85
Container Temp Blank

Ice Chest ID _____
Temperature: _____ °C
Thermometer ID: _____
Emissivity _____
Container _____

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL																								
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS																								
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE																								
PT NITROGEN FORMS																								
PT TOTAL SULFIDE																								
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
40ml VOA VIAL TRAVEL BLANK			1																					
40ml VOA VIAL	3	3						3																
VOA SET (3 VIALS, 1TB)																								
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080																								
QT EPA 515.1/8150																								
QT EPA 525																								
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE				1	1	1	1																	
PCB VIAL																								
PLASTIC BAG																								

Comments:

Completed by: Mark Monroe

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/12/98
Date Received: 01/28/98
Laboratory No.: 98-01065-1

Sample Description: SITE #4357 (76 STATION): 4357 SW, SAMPLED BY SONYA L.

Sample ID: 4357 SW
Sample Matrix: Water

Date Collected: 01/28/98 @ 10:00AM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	None Detected	µg/L	0.5	0.04	
Toluene	None Detected	µg/L	0.5	0.05	
Ethyl Benzene	None Detected	µg/L	0.5	0.07	
Methyl-t-butylether	0.42	µg/L	2.	0.12	*
Total Xylenes	None Detected	µg/L	1.	0.15	
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4	
Surrogate % Recovery	96.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/12/98
Date Received: 01/28/98
Laboratory No.: 98-01065-2

Sample Description: SITE #4357 (76 STATION): HB05FB03, SAMPLED BY SONYA L.

Sample ID: HB05FB03
Sample Matrix: Water

Date Collected: 01/28/98 @ 10:16AM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.5	0.04
Toluene	None Detected	µg/L	0.5	0.05
Ethyl Benzene	None Detected	µg/L	0.5	0.07
Methyl-t-butylether	None Detected	µg/L	2.	0.12
Total Xylenes	None Detected	µg/L	1.	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	91.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/12/98
Date Received: 01/28/98
Laboratory No.: 98-01065-3

Sample Description: SITE #4357 (76 STATION): HB05-5.0, SAMPLED BY SONYA L.

Sample ID: HB05-5.0
Sample Matrix: Soil

Date Collected: 01/28/98 @ 10:31AM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	90.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/12/98
Date Received: 01/28/98
Laboratory No.: 98-01065-4

Sample Description: SITE #4357 (76 STATION): HB05-10.0, SAMPLED BY SONYA L.

Sample ID: HB05-10.0
Sample Matrix: Soil

Date Collected: 01/28/98 @ 10:58AM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.002	mg/kg	0.002	0.00029
Ethyl Benzene	0.001	mg/kg	0.002	0.00029 *
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	104.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/12/98
Date Received: 01/28/98
Laboratory No.: 98-01065-5

Sample Description: SITE #4357 (76 STATION): HB6-5.0, SAMPLED BY SONYA L.

Sample ID: HB6-5.0
Sample Matrix: Soil

Date Collected: 01/28/98 @ 12:10PM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.003	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	96.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/12/98
Date Received: 01/28/98
Laboratory No.: 98-01065-6

Sample Description: SITE #4357 (76 STATION): HB6-10.0, SAMPLED BY SONYA L.

Sample ID: HB6-10.0
Sample Matrix: Soil

Date Collected: 01/28/98 @ 12:23PM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.003	mg/kg	0.002	0.00029
Ethyl Benzene	0.001	mg/kg	0.002	0.00029 *
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	104.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/12/98
Date Received: 01/28/98
Laboratory No.: 98-01065-TB

Sample Description: SITE #4357 (76 STATION): HB05TB03, SAMPLED BY SONYA L.

Sample ID: HB05TB03
Sample Matrix: Water

Date Collected: 01/28/98 @ 10:20AM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.5	0.04
Toluene	None Detected	µg/L	0.5	0.05
Ethyl Benzene	None Detected	µg/L	0.5	0.07
Methyl-t-butylether	None Detected	µg/L	2.	0.12
Total Xylenes	None Detected	µg/L	1.	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	71.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/12/98
Date Received: 01/28/98
Laboratory No.: 98-01065-7

Sample Description: SITE #4357 (76 STATION): HB06ER03, SAMPLED BY SONYA L.

Sample ID: HB06ER03
Sample Matrix: Water

Date Collected: 01/28/98 @ 02:39PM
Date Extracted-8020: 02/06/98
Date Analyzed-8020: 02/06/98
Date Extracted-8015M(g): 02/06/98
Date Analyzed-8015M(g): 02/06/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.5	0.04
Toluene	None Detected	µg/L	0.5	0.05
Ethyl Benzene	None Detected	µg/L	0.5	0.07
Methyl-t-butylether	None Detected	µg/L	2.	0.12
Total Xylenes	None Detected	µg/L	1.	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	95.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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4100 Atlas Ct. • Bakersfield, CA 93308 • (805) 327-4911 • FAX (805) 327-1918

February 27, 1998

GIL FRY
ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718

Subject: Laboratory Submission No.: 98-01116
Samples Received: 01/29/98

Dear Mr. Fry:

The samples(s) listed on the Chain of Custody report were received by BC Laboratories, Inc. on 01/29/98.

Enclosed please find the analytical data for the testing requested. Results in RWQCB - L.A. Region format will follow under separate cover as soon as they are available.

If there are questions regarding this report please contact me at (805)327-4911, ext. 250.

Any unused sample will be stored on our premises for a minimum of 30 days (excluding bacteriologicals) at which time they will be disposed unless otherwise requested at the time of sample receipt. A disposal fee of $5 per sample may apply for solid sample matrices.

Please refer to submission number 98-01116 when calling for assistance.

Sincerely,

Cheryl Ferguson

Cheryl Ferguson
Project Manager
BC Laboratories, Inc.

All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, seperation, detachment or third party interpretation.

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435712

BC LABORATORIES, INC.

98-1116

LABORATORY
(805) 327-4911
FAX (805) 327-1918
4100 Atlas Ct.
Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 96 Station Tosco
Address: 25A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 7147530111	Site # 4357
Report To: Liz Sewell Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround Time: (Working Days) ☒ 7 Days (Standard) ☐ 5 Days ☐ 3 Days ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water (Per EPA protocal) ☐ Waste Water ☐ Other

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015G/8260X MTBE									Comments
X B8-FB04	1/29/98 1237	water	3	40ml VOA	-1	X									FB Field Blank NF012398
X B8-TB04	↓ 1248	water	1	40ml VOA	~~1~~ mm -TB	X									Blind
X B8-ER04	↓ 1641	water	3	40ml VOA	~~1~~ -2	X									Equip Rinsate B-8 NF012398

NUMBERING CHECKED BY [illegible]

Relinquished By: Sonya V. Lusoni	Date: 1/29/98	Time: 1658	Received By: Jerry Mitchell	Date: 1-29-98	Time: 16:59
Relinquished By: Jerry Mitchell	Date: 1-29-98	Time: 19:07	Received By: [illegible]	Date: 1-29-98	Time: 19:10
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☒ Yes ☐ No Samples On Ice ☒ Yes ☐ No Method Of Shipment BC FIELD Page 1 Of 1

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed?
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time?
Approved By: Signature: Company: Date:

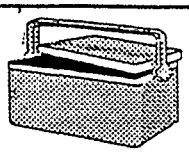
Submission #: 98-1116 Project Code:

SHIPPING INFORMATION	SHIPPING CONTAINER
Federal Express ☐ UPS ☐ Hand Delivery ☐	Ice Chest ☒ None ☐
BC Lab Field Service ☒ Other ☐ (Specify) _____	Box ☐ Other ☐ (Specify) _____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐



Ice Chest ID	
Temperature:	5.8 °C
Thermometer ID:	17
Emissivity	.85
Container	MM

Ice Chest ID	
Temperature:	°C
Thermometer ID:	
Emissivity	
Container	

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	TB	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL																								
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS																								
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE																								
PT NITROGEN FORMS																								
PT TOTAL SULFIDE																								
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
ml VOA VIAL TRAVEL BLANK			1																					
40ml VOA VIAL	3	3																						
VOA SET (3 VIALS, 1TB)																								
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080																								
QT EPA 515.1/8150																								
QT EPA 525																								
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE																								
PCB VIAL																								
PLASTIC BAG																								

Comments:

Completed by: Mark Monroe

BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/17/98
Date Received: 01/29/98
Laboratory No.: 98-01116-1

Sample Description: (SITE #4357- 76 STATION TOSCO, B8-FB04, 01/29/98 @ 12:37PM, SONYA L.

Sample ID: B8-FB04
Sample Matrix: Blank Water

Date Collected: 01/29/98 @ 12:37PM
Date Extracted-8020: 02/10/98
Date Analyzed-8020: 02/10/98
Date Extracted-8015M(g): 02/10/98
Date Analyzed-8015M(g): 02/10/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.5	0.04
Toluene	None Detected	µg/L	0.5	0.05
Ethyl Benzene	None Detected	µg/L	0.5	0.07
Methyl-t-butylether	None Detected	µg/L	2.	0.12
Total Xylenes	None Detected	µg/L	1.	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	76.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/17/98
Date Received: 01/29/98
Laboratory No.: 98-01116-2

Sample Description: (SITE #4357- 76 STATION TOSCO, B8-ER04, 01/29/98 @ 04:41PM, SONYA L.

Sample ID: B8-ER04
Sample Matrix: Blank Water

Date Collected: 01/29/98 @ 04:41PM
Date Extracted-8020: 02/10/98
Date Analyzed-8020: 02/10/98
Date Extracted-8015M(g): 02/10/98
Date Analyzed-8015M(g): 02/10/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	None Detected	µg/L	0.5	0.04	
Toluene	0.10	µg/L	0.5	0.05	*
Ethyl Benzene	None Detected	µg/L	0.5	0.07	
Methyl-t-butylether	None Detected	µg/L	2.	0.12	
Total Xylenes	None Detected	µg/L	1.	0.15	
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4	
Surrogate % Recovery	74.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/17/98
Date Received: 01/29/98
Laboratory No.: 98-01116-TB

Sample Description: (SITE #4357- 76 STATION TOSCO, B8-TB04, 01/29/98 @ 12:48PM, SONYA L.

Sample ID: B8-TB04
Sample Matrix: Blank Water

Date Collected: 01/29/98 @ 12:48PM
Date Extracted-8020: 02/10/98
Date Analyzed-8020: 02/10/98
Date Extracted-8015M(g): 02/10/98
Date Analyzed-8015M(g): 02/10/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.5	0.04
Toluene	None Detected	µg/L	0.5	0.05
Ethyl Benzene	None Detected	µg/L	0.5	0.07
Methyl-t-butylether	None Detected	µg/L	2.	0.12
Total Xylenes	None Detected	µg/L	1.	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	70.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC

February 27, 1998

GIL FRY
ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718

Subject: Laboratory Submission No.: 98-01115
Samples Received: 01/29/98

Dear Mr. Fry:

The samples(s) listed on the Chain of Custody report were received by BC Laboratories, Inc. on 01/29/98.

Enclosed please find the analytical data for the testing requested. Results in RWQCB - L.A. Region format will follow under separate cover as soon as they are available.

If there are questions regarding this report please contact me at (805)327-4911, ext. 250.

Any unused sample will be stored on our premises for a minimum of 30 days (excluding bacteriologicals) at which time they will be disposed unless otherwise requested at the time of sample receipt. A disposal fee of $5 per sample may apply for solid sample matrices.

Please refer to submission number 98-01115 when calling for assistance.

Sincerely,

Cheryl Ferguson
Project Manager
BC Laboratories, Inc.

All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, seperation, detachment or third party interpretation.
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4357-11

BC LABORATORIES, INC.

98-1115

LABORATORY
(805) 327-4911
FAX (805) 327-1918
4100 Atlas Ct.
Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station Tosco
Address: 25A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Liz Sewell Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround Time: (Working Days) ☒ 7 10 Days (Standard) ☐ 5 Days ☐ 3 Days ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water - Per EPA Protocol ☐ Waste Water ☐ Other

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015C/8260A MTBE						SB			Comments
X	HB14-5.0	1/29/98 934	Soil	1	2x6 Brass	-1	X									HB14@ 5.0'
X	HB 14-10.0	958				-2	X									HB14@ 10.0'
X	HB 13-5.0	1054				-3	X									HB13@ 5.0'
X	HB 13-10.0	1111				-4	X									HB13@ 10.0'
X	HB11-5.0	1444	Soil		2x6 Brass	-5	X									HB11@ 5.0'
X	HB 11-10.0	1648	Soil			-6	X									HB11@ 10.0'

NUMBERING CHECKED BY

Relinquished By: Sonya V. Fusari	Date: 1/29/98	Time: 1651	Received By: Jerry Mitchell	Date: 1-29-98	Time: 16:59
Relinquished By: Jerry Mitchell	Date: 1-29-98	Time: 19:07	Received By: [illegible]	Date: 1-29-98	Time: 19:10
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 1 Of 21

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved By: _____ Signature: _____ Company: _____

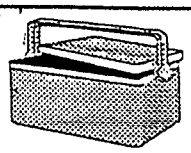
Submission #: 98-1115 Project Code:

SHIPPING INFORMATION	SHIPPING CONTAINER
Federal Express ☐ UPS ☐ Hand Delivery ☐	Ice Chest ☒ None ☐
BC Lab Field Service ☒ Other ☐ (Specify) _____	Box ☐ Other ☐ (Specify) _____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐



Ice Chest ID _____
Temperature: 2.4 °C
Thermometer ID: 17
Emissivity .90
Container Temp Blank

Ice Chest ID _____
Temperature: _____ °C
Thermometer ID: _____
Emissivity _____
Container _____

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL																								
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS																								
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE																								
PT NITROGEN FORMS																								
PT TOTAL SULFIDE																								
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
0ml VOA VIAL TRAVEL BLANK																								
40ml VOA VIAL																								
VOA SET (3 VIALS, 1TB)																								
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080																								
QT EPA 515.1/8150																								
QT EPA 525																								
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE	/	/	/	/	/	/																		
PCB VIAL																								
PLASTIC BAG																								

Comments:

Completed by: Mark Monroe

(F:\WP90\LAB_DOCS\FORMS\SAMREC2.WP

BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/17/98
Date Received: 01/29/98
Laboratory No.: 98-01115-1

Sample Description: (SITE #4357- 76 STATION TOSCO, HB14-5.0, 01/29/98 @ 09:34AM, 5.0, SONYA L.

Sample ID: HB14-5.0
Sample Matrix: Soil

Date Collected: 01/29/98 @ 09:34AM
Date Extracted-8020: 02/10/98
Date Analyzed-8020: 02/10/98
Date Extracted-8015M(g): 02/10/98
Date Analyzed-8015M(g): 02/10/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	0.0012	mg/kg	0.002	0.00020 *
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	101.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/17/98
Date Received: 01/29/98
Laboratory No.: 98-01115-2

Sample Description: (SITE #4357- 76 STATION TOSCO, HB14-10.0, 01/29/98 @ 09:50AM, 10.0, SONYA L.

Sample ID: HB14-10.0
Sample Matrix: Soil

Date Collected: 01/29/98 @ 09:50AM
Date Extracted-8020: 02/10/98
Date Analyzed-8020: 02/10/98
Date Extracted-8015M(g): 02/10/98
Date Analyzed-8015M(g): 02/10/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	94.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/17/98
Date Received: 01/29/98
Laboratory No.: 98-01115-3

Sample Description: (SITE #4357- 76 STATION TOSCO, HB13-5.0, 01/29/98 @ 10:54AM, 5.0, SONYA L.

Sample ID: HB13-5.0
Sample Matrix: Soil

Date Collected: 01/29/98 @ 10:54AM
Date Extracted-8020: 02/10/98
Date Analyzed-8020: 02/10/98
Date Extracted-8015M(g): 02/10/98
Date Analyzed-8015M(g): 02/10/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	0.0014	mg/kg	0.002	0.00029 *
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	74.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/17/98
Date Received: 01/29/98
Laboratory No.: 98-01115-4

Sample Description: (SITE #4357- 76 STATION TOSCO, HB13-10.0, 01/29/98 @ 11:11AM, 10.0, SONYA L.

Sample ID: HB13-10.0
Sample Matrix: Soil

Date Collected: 01/29/98 @ 11:11AM
Date Extracted-8020: 02/11/98
Date Analyzed-8020: 02/11/98
Date Extracted-8015M(g): 02/11/98
Date Analyzed-8015M(g): 02/11/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	124.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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4100 Atlas Ct. • Bakersfield, CA 93308 • (805) 327-4911 • FAX (805) 327-1918

BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/17/98
Date Received: 01/29/98
Laboratory No.: 98-01115-5

Sample Description: (SITE #4357- 76 STATION TOSCO, HB11-5.0, 01/29/98 @ 02:44PM, 5.0, SONYA L.

Sample ID: HB11-5.0
Sample Matrix: Soil

Date Collected: 01/29/98 @ 02:44PM
Date Extracted-8020: 02/11/98
Date Analyzed-8020: 02/11/98
Date Extracted-8015M(g): 02/11/98
Date Analyzed-8015M(g): 02/11/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	0.0013	mg/kg	0.002	0.00029 *
Methyl-t-butylether	None Detected	mg/kg	0.02	0.001
Total Xylenes	None Detected	mg/kg	0.01	0.00088
Total Petroleum Hydrocarbons (gas)	0.68	mg/kg	0.5	0.20
Surrogate % Recovery	100.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Note: Sample chromatogram not typical of gasoline.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/17/98
Date Received: 01/29/98
Laboratory No.: 98-01115-6

Sample Description: (SITE #4357- 76 STATION TOSCO, HB11-10.0, 01/29/98 @ 04:48PM, 10.0, SONYA L.

Sample ID: HB11-10.0
Sample Matrix: Soil

Date Collected: 01/29/98 @ 04:48PM
Date Extracted-8020: 02/10/98
Date Analyzed-8020: 02/10/98
Date Extracted-8015M(g): 02/10/98
Date Analyzed-8015M(g): 02/10/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	0.0023	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	97.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC

February 27, 1998

GIL FRY
ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718

Subject: Laboratory Submission No.: 98-01179
Samples Received: 01/30/98

Dear Mr. Fry:

The samples(s) listed on the Chain of Custody report were received by BC Laboratories, Inc. on 01/30/98.

Enclosed please find the analytical data for the testing requested. Results in RWQCB - L.A. Region format will follow under separate cover as soon as they are available.

If there are questions regarding this report please contact me at (805)327-4911, ext. 250.

Any unused sample will be stored on our premises for a minimum of 30 days (excluding bacteriologicals) at which time they will be disposed unless otherwise requested at the time of sample receipt. A disposal fee of $5 per sample may apply for solid sample matrices.

Please refer to submission number 98-01179 when calling for assistance.

Sincerely,

Cheryl Ferguson
Project Manager
BC Laboratories, Inc.

All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, seperation, detachment or third party interpretation.
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4357 ~~13~~ 14

BC LABORATORIES, INC.

98-1179

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FAX (805) 327-1918
4100 Atlas Ct.
Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

DISTRIBUTION

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station Tosco
Address: 25A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Liz Sewell Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☒ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water
☐ Waste Water
☐ Other

See EPA protocol

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested: 8015C/8020A or 8020 MTBE

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015C/8020A or 8020 MTBE	Comments *
B10 - 5.75	1/30/98 850	soil	1	2x3 Brass	-1		hold
B10 - 11.5	900				-2		hold
B10 - 17.0	907				-3		hold
B10 - 35.5	954				-4		hold
B10 - 40.5	1008				-5		hold
B9 - 5.75	1512				-6		hold
B9 - 9.75	1519				-7		hold
B9 - 15.25	1526				-8		hold
B9 - 20.5	1533				-9		hold

NUMBERING CHECKED BY

Relinquished By: Sonya V. Lugoni	Date: 1/30/98	Time: 1547	Received By: Jerry Mitchell	Date: 1-30-98	Time: 15:47
Relinquished By: Jerry Mitchell	Date: 1-30-98	Time: 18:50	Received By: [illegible]	Date: 1-30-98	Time: 18:50
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☒ Yes ☐ No Samples On Ice ☒ Yes ☐ No Method Of Shipment Field Service Page 1 Of 2

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed?
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time?
Approved by: Signature: Company: Date:

* Ensure low level soil testing requirements are met. Samples must be taken from center of the brass tube

4357 ~~-13~~ 8r -14

BC LABORATORIES, INC.

LABORATORY
(805) 327-4911
FAX (805) 327-1918
4100 Atlas Ct.
Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station TOSCO
Address: 25A Technology Drive	Project Manager: Mike VanderPlaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Liz Sewell Sampler: Sonya L	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours
CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water
☐ Waste Water
☐ Other

See EPA Protocol

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015G/8260A gas, BTEX									Comments *
HB 12-5.0	1/29/98 1746	Soil	1	2x6 Brass	-10	X									Handauger HB 12 @ 5.0'
B10FB05	1/30/98 1022	water	3	40 ml VOA	-11	X									Field Blank lot NP01 2878
B10TB05	1032	↓	1	↓	-TB	X									Blind Blank
B10ER05	1323	↓	3	↓	-12	X									Equipment Rinsate B10 NP01 2878

Relinquished By: Sonya V. Fuscon	Date: 1/30/98	Time: 1547	Received By: Jay Mitchell	Date: 1-30-98	Time: 15:47
Relinquished By: Jay Mitchell	Date: 1-30-98	Time: 18:50	Received By: Michael Monroe	Date: 1-30-98	Time: 18:50
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 2 Of 2

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved By: _____ Signature: _____ Company: _____

* Please include soil tracking requirements accurately. Samples must be taken from center of brass sleeve.

98-1179

Project Code:

SHIPPING INFORMATION

Federal Express ☐ UPS ☐ Hand Delivery ☐

BC Lab Field Service ☒ Other ☐ (Specify) _____

SHIPPING CONTAINER

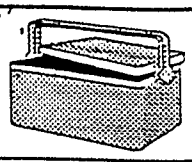
Ice Chest ☒ None ☐

Box ☐ Other ☐ (Specify) _____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☐ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐



Ice Chest ID _____
Temperature: 2.1 °C
Thermometer ID: 12
Emissivity .90
Container Temp Blank

Ice Chest ID _____
Temperature: _____ °C
Thermometer ID: _____
Emissivity _____
Container _____

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10	11	12	13	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL																								
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS																								
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE																								
PT NITROGEN FORMS																								
PT TOTAL SULFIDE																								
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
[illegible] VOA VIAL TRAVEL BLANK													1											
[illegible] VOA VIAL											3	3												
VOA SET (3 VIALS, 1TB)																								
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080																								
QT EPA 515.1/8150																								
QT EPA 525																								
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE																								
PCB VIAL																								
PLASTIC BAG																								

Comments: _____

Completed by: [signature]

F:\WP90\LAB_DOCS\FORMS\SAMREC2.WPC

BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/20/98
Date Received: 01/30/98
Laboratory No.: 98-01179-10

Sample Description: (SITE #4357) 76 STATION TOSCO: HB12-5.0- SAMPLED BY SONYA LUISONI

Sample ID: HB12-5.0
Sample Matrix: Soil

Date Collected: 01/29/98 @ 05:46PM
Date Extracted-8020: 02/11/98
Date Analyzed-8020: 02/11/98
Date Extracted-8015M(g): 02/11/98
Date Analyzed-8015M(g): 02/11/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	0.0079	mg/kg	0.006	0.00020	
Toluene	0.17	mg/kg	0.006	0.00029	
Ethyl Benzene	0.78	mg/kg	0.05	0.00029	
Methyl-t-butylether	0.0079	mg/kg	0.02	0.001	*
Total Xylenes	4.1	mg/kg	0.2	0.00088	
Total Petroleum Hydrocarbons (gas)	110.	mg/kg	20.	0.20	
Surrogate % Recovery	71.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Note: PQL's were raised due to high concentration of target analytes requiring sample dilution.
Sample chromatogram not typical of gasoline.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/18/98
Date Received: 01/30/98
Laboratory No.: 98-01179-11

Sample Description: (SITE #4357) 76 STATION TOSCO: B10FB05- SAMPLED BY SONYA LUISONI

Sample ID: B10FB05
Sample Matrix: Water

Date Collected: 01/30/98 @ 10:22AM
Date Extracted-8020: 02/12/98
Date Analyzed-8020: 02/12/98
Date Extracted-8015M(g): 02/12/98
Date Analyzed-8015M(g): 02/12/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.5	0.04
Toluene	None Detected	µg/L	0.5	0.05
Ethyl Benzene	None Detected	µg/L	0.5	0.07
Methyl-t-butylether	None Detected	µg/L	2.	0.12
Total Xylenes	None Detected	µg/L	1.	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	85.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/18/98
Date Received: 01/30/98
Laboratory No.: 98-01179-12

Sample Description: (SITE #4357) 76 STATION TOSCO: B10ER05- SAMPLED BY SONYA LUISONI

Sample ID: B10ER05
Sample Matrix: Water

Date Collected: 01/30/98 @ 01:23PM
Date Extracted-8020: 02/12/98
Date Analyzed-8020: 02/12/98
Date Extracted-8015M(g): 02/12/98
Date Analyzed-8015M(g): 02/12/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.3	0.04
Toluene	None Detected	µg/L	0.3	0.05
Ethyl Benzene	None Detected	µg/L	0.3	0.07
Methyl-t-butylether	None Detected	µg/L	1.	0.12
Total Xylenes	None Detected	µg/L	0.6	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	83.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/18/98
Date Received: 01/30/98
Laboratory No.: 98-01179-TB

Sample Description: (SITE #4357) 76 STATION TOSCO: B10TB05- SAMPLED BY SONYA LUISONI

Sample ID: B10TB05
Sample Matrix: Blank Water

Date Collected: 01/30/98 @ 10:32AM
Date Extracted-8020: 02/12/98
Date Analyzed-8020: 02/12/98
Date Extracted-8015M(g): 02/12/98
Date Analyzed-8015M(g): 02/12/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.3	0.04
Toluene	None Detected	µg/L	0.3	0.05
Ethyl Benzene	None Detected	µg/L	0.3	0.07
Methyl-t-butylether	None Detected	µg/L	1.	0.12
Total Xylenes	None Detected	µg/L	0.6	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	85.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Volatile Organic Analysis
(EPA Method 8260)

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/20/98
Date Received: 01/30/98
Laboratory No.: 98-01179-10

Sample Description: (SITE #4357) 76 STATION TOSCO: HB12-5.0- SAMPLED BY SONYA LUISONI

Sample ID: HB12-5.0
Sample Matrix: Soil

Date Collected: 01/29/98 @ 05:46PM
Date Extracted: 02/13/98
Date Analyzed: 02/13/98

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level
Methyl-t-butylether	None Detected	mg/kg	0.005	0.0025

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	100.	70-121
Toluene-d8	98.	81-117
4-Bromofluorobenzene	99.	74-121

Note: Results are estimated due to holding time being exceeded.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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February 27, 1998

GIL FRY
ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718

Subject: Laboratory Submission No.: 98-01278
Samples Received: 02/02/98

Dear Mr. Fry:

The samples(s) listed on the Chain of Custody report were received by BC Laboratories, Inc. on 02/02/98.

Enclosed please find the analytical data for the testing requested. Results in RWQCB - L.A. Region format will follow under separate cover as soon as they are available.

If there are questions regarding this report please contact me at (805)327-4911, ext. 250.

Any unused sample will be stored on our premises for a minimum of 30 days (excluding bacteriologicals) at which time they will be disposed unless otherwise requested at the time of sample receipt. A disposal fee of $5 per sample may apply for solid sample matrices.

Please refer to submission number 98-01278 when calling for assistance.

Sincerely,

Cheryl Ferguson

Cheryl Ferguson
Project Manager
BC Laboratories, Inc.

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BC LABORATORIES, INC.

98-1278

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(805) 327-4911
FAX (805) 327-1918
4100 Atlas Ct.
Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

4357 18

Chain of Custody Record

Company Name: ~~Sonya~~ Alton Geoscience	Project Name: 76 Station Tosco
Address: 25A Technology Drive	Project Manager: Mike Wendler Plants
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Liz Sewell Sampler: Sonya L	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water Per Protocol
☐ Waste Water
☐ Other

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested: 8015C/8020A 8260 MTBE

DISTRIBUTION

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	Comments
x B9-25.25	2/2/98 830	Soil	1	2x3 Brass	-1	hold
x B9-30.0	840			2x3 Brass	-2	hold
x B9-35.0	852			2x3 Brass	-3	hold
x B9-40.0	900			2x3 Brass	-4	hold
x B9-50.25	920			2x3 Brass	-5	hold
x B9-45.0	913			Brass	-6	hold
B9-				Brass		
				~~Brass~~		
				~~Brass~~		

NUMBERING CHECKED BY

Relinquished By: Sonya L. Lusiene	Date: 2/2/98	Time: 1658	Received By: John M. Knight	Date: 2-2-98	Time: 1700
Relinquished By: John M. Knight	Date: 2-2-98	Time: 1920	Received By: Mark Monroe	Date: 2-2-98	Time: 19:20
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☒ Yes ☐ No Samples On Ice ☒ Yes ☐ No Method Of Shipment BC F/S Page 1 Of 2

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed?
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time?
Approved By: Signature: Company: Date:

4357-18

BC LABORATORIES, INC.

98-1278

LABORATORY
(805) 327-4911
FAX (805) 327-1918
4100 Atlas Ct.
Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station Tosco
Address: 25 A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 7530101 FAX: 714 7530111	Site # 4357
Report To: Sewell, Liz Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours
CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water (Per EPA Protocol)
☐ Waste Water
☐ Other

Analyses Requested: 8015G/8260A or 8020 MTBE

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015G/8260A or 8020 MTBE	Comments
x B9 FB06	2/2/98 1212	water	3	40ml VOA	-7		~~Mobile Lab~~ Sy Lot # NP01-02198
x B9 ER06	1208	water	3		-8		Equip Rinsate B9 NP012198
x B9 TB06	1229	water	1		-9 TB		Blind
x MW2-9.5	1504	soil	1	2x3 Brass	-10		hold
x MW2-24.75	1537			2x3 Brass	-11		
x MW2-29.50	1546			2x3 Brass	-12		
x MW2-35.0	1557			2x3 Brass	-13		
x MW2-39.75	1604			1	-14		

Relinquished By: Sonya V. Iusseni	Date: 2/2/98	Time: 1658	Received By: [signature]	Date: 2-2-98	Time: 1700
Relinquished By: [signature]	Date: 2-2-98	Time: 1920	Received By: [signature]	Date: 2-2-98	Time: 19:25
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☒ Yes ☐ No Samples On Ice ☒ Yes ☐ No Method Of Shipment B/C. FS Page 2 Of 2

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed?
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time?
Approved by: Signature: Company: Date:

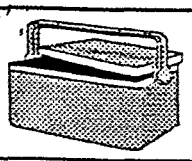
Submission #: 98-1278 Project Code:

SHIPPING INFORMATION	SHIPPING CONTAINER
Federal Express ☐ UPS ☐ Hand Delivery ☐	Ice Chest ☒ None ☐
BC Lab Field Service ☒ Other ☐ (Specify) _____	Box ☐ Other ☐ (Specify) _____

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☒ Intact? Yes ☒ No ☐ None ☐ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐



Ice Chest ID		
Temperature:	5.9 °C	
Thermometer ID:	17	
Emissivity	85	
Container	VOA	

Ice Chest ID	
Temperature:	°C
Thermometer ID:	
Emissivity	
Container	

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	TB 9	10	11	12	1	2	3	4	5	6	7	8	9	10	11
QT GENERAL MINERAL/ GENERAL PHYSICAL																							
PT PE UNPRESERVED																							
QT INORGANIC CHEMICAL METALS																							
PT INORGANIC CHEMICAL METALS																							
PT CYANIDE																							
PT NITROGEN FORMS																							
PT TOTAL SULFIDE																							
2oz. NITRATE / NITRITE																							
100ml TOTAL ORGANIC CARBON																							
QT TOX																							
PT CHEMICAL OXYGEN DEMAND																							
100ml PHENOLICS																							
40ml VOA VIAL TRAVEL BLANK									1														
40ml VOA VIAL							3	3															
VOA SET (3 VIALS, 1TB)																							
QT EPA 413.1, 413.2, 418.1																							
PT ODOR																							
RADIOLOGICAL																							
BACTERIOLOGICAL																							
PT EPA 504																							
QT EPA 508/608/8080																							
QT EPA 515.1/8150																							
QT EPA 525																							
QT EPA 525 TRAVEL BLANK																							
100ml EPA 547																							
100ml EPA 531.1																							
QT EPA 548																							
QT EPA 549																							
QT EPA 632																							
QT EPA 8015M																							
QT QA/QC																							
QT AMBER																							
8 OZ. JAR																							
32 OZ. JAR																							
SOIL SLEEVE SHORT	1	1	1	1	1	1				1	1	1											
PCB VIAL																							
PLASTIC BAG																							

Comments: _____

Completed by: _____

IF:\WP80\LAB_DOCS\FORMS\SAMREC2.W

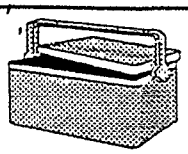
Submission #: 98-1278 Project Code:

SHIPPING INFORMATION	SHIPPING CONTAINER
Federal Express ☐ UPS ☐ Hand Delivery ☐	Ice Chest ☒ None ☐
BC Lab Field Service ☒ Other ☐ (Specify) _____	Box ☐ Other ☐ (Specify) _____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☒ Intact? Yes ☒ No ☐ None ☐ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐



Ice Chest ID _____
Temperature: 5.9 °C
Thermometer ID: 17
Emissivity 85
Container VOA

Ice Chest ID _____
Temperature: _____ °C
Thermometer ID: _____
Emissivity _____
Container _____

SAMPLE CONTAINERS	SAMPLE NUMBERS -13-14																							
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL																								
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS																								
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE																								
PT NITROGEN FORMS																								
PT TOTAL SULFIDE																								
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
40ml VOA VIAL TRAVEL BLANK																								
40ml VOA VIAL																								
VOA SET (3 VIALS, 1TB)																								
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080																								
QT EPA 515.1/8150																								
QT EPA 525																								
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE SHORT	1	1																						
PCB VIAL																								
PLASTIC BAG																								

Comments:

Completed by: [signature]

BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/02/98
Laboratory No.: 98-01278-7

Sample Description: SITE #4357 (76 STATION TOSCO), B9FB06, 02/02/98 @ 12:12PM, SONYA L.

Sample ID: B9FB06
Sample Matrix: Water

Date Collected: 02/02/98 @ 12:12PM
Date Extracted-8020: 02/13/98
Date Analyzed-8020: 02/13/98
Date Extracted-8015M(g): 02/13/98
Date Analyzed-8015M(g): 02/13/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	0.19	µg/L	0.5	0.04	*
Toluene	0.44	µg/L	0.5	0.05	*
Ethyl Benzene	None Detected	µg/L	0.5	0.07	
Methyl-t-butylether	None Detected	µg/L	2.	0.12	
Total Xylenes	1.1	µg/L	1.	0.15	
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4	
Surrogate % Recovery	85.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/02/98
Laboratory No.: 98-01278-8

Sample Description: SITE #4357 (76 STATION TOSCO), B9ER06, 02/02/98 @ 12:08PM, SONYA L.

Sample ID: B9ER06
Sample Matrix: Water

Date Collected: 02/02/98 @ 12:08PM
Date Extracted-8020: 02/14/98
Date Analyzed-8020: 02/14/98
Date Extracted-8015M(g): 02/14/98
Date Analyzed-8015M(g): 02/14/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	None Detected	µg/L	0.5	0.04	
Toluene	None Detected	µg/L	0.5	0.05	
Ethyl Benzene	None Detected	µg/L	0.5	0.07	
Methyl-t-butylether	0.68	µg/L	2.	0.12	*
Total Xylenes	None Detected	µg/L	1.	0.15	
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4	
Surrogate % Recovery	98.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/02/98
Laboratory No.: 98-01278-9TB

Sample Description: SITE #4357 (76 STATION TOSCO), B9TB06, 02/02/98 @ 12:29PM, SONYA L.

Sample ID: B9TB06
Sample Matrix: Water

Date Collected: 02/02/98 @ 12:29PM
Date Extracted-8020: 02/14/98
Date Analyzed-8020: 02/14/98
Date Extracted-8015M(g): 02/14/98
Date Analyzed-8015M(g): 02/14/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.5	0.04
Toluene	None Detected	µg/L	0.5	0.05
Ethyl Benzene	None Detected	µg/L	0.5	0.07
Methyl-t-butylether	None Detected	µg/L	2.	0.12
Total Xylenes	None Detected	µg/L	1.	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	82.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Volatile Organic Analysis
(EPA Method 8260)

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/02/98
Laboratory No.: 98-01278-8

Sample Description: SITE #4357 (76 STATION TOSCO), B9ER06, 02/02/98 @ 12:08PM, SONYA L.

Sample ID: B9ER06
Sample Matrix: Water

Date Collected: 02/02/98 @ 12:08PM
Date Extracted: 02/18/98
Date Analyzed: 02/18/98

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Benzene	None Detected	µg/L	0.5	0.08	
Ethyl Benzene	None Detected	µg/L	0.5	0.07	
Toluene	None Detected	µg/L	0.5	0.07	
Total Xylenes	None Detected	µg/L	1.	0.13	
Methyl-t-butylether	0.87	µg/L	2.	0.5	*

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	95.	76-114
Toluene-d8	99.	88-110
4-Bromofluorobenzene	97.	86-115

Note: Results are estimated due to holding time being exceeded.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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February 27, 1998

GIL FRY
ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718

Subject: Laboratory Submission No.: 98-01372
Samples Received: 02/04/98

Dear Mr. Fry:

The samples(s) listed on the Chain of Custody report were received by BC Laboratories, Inc. on 02/04/98.

Enclosed please find the analytical data for the testing requested. Results in RWQCB - L.A. Region format will follow under separate cover as soon as they are available.

If there are questions regarding this report please contact me at (805)327-4911, ext. 250.

Any unused sample will be stored on our premises for a minimum of 30 days (excluding bacteriologicals) at which time they will be disposed unless otherwise requested at the time of sample receipt. A disposal fee of $5 per sample may apply for solid sample matrices.

Please refer to submission number 98-01372 when calling for assistance.

Sincerely,

Cheryl Ferguson

Cheryl Ferguson
Project Manager
BC Laboratories, Inc.

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4357-21

BC LABORATORIES, INC.

981372

LABORATORY
(805) 327-4911
FAX (805) 327-1918
4100 Atlas Ct.
Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station Tosco
Address: 25 A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: ~~Liz Sewell~~ Gil Fry Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Per EPA protocol

Turnaround ☒ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water
☐ Waste Water
☐ Other

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015B/8260A MTBE								Comments*
MW2-59.5	2/4/98 7:30	soil	1	2x6 Brass	-1	X								
MW2-64.75	739				-2	X								
MW2-69.75	756				-3	X								
MW2-74.5	810				-4	X								
MW2-79.5	814				-5	X								
MW2-84.75	826				-6	X								
MW2-89.5	830				-7	X								
MW2-94.5	849				-8	X								
MW2-99.75	919				-9	X								

NUMBERING CHECKED BY [initials]

Relinquished By: Sonya V. Luisoni	Date: 2/4/98	Time: 1508	Received By: [signature]	Date: 2-4-98	Time: 1508
Relinquished By: [signature]	Date: 2-4-98	Time: 1935	Received By: [signature]	Date: 2-4-98	Time: 19:40
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 1 Of 3

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved by: _____ Signature: _____ Company: _____ Date: _____

* Low level soil testing requirements must be met: Soil must be sampled from center of brass ring.

1368

4357-21

BC LABORATORIES, INC.

98-1372

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Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station Tosco
Address: 25A Technology Drive	Project Manager: Mike Vanden Ploats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 7147530111	Site # 4357
Report To: ~~Liz Sewell~~ Gil Fry Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround Time: (Working Days) ☒ 10 Days (Standard) ☐ 5 Days ☐ 3 Days ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water per EPA protocol
☐ Waste Water
☐ Other

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested: 8015/8260 mtbe

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015/8260 mtbe	Comments *
MW2FB07	2/4/98 838	Water	3	40ml VOA	-10	X	Field Blank Lot# N201289
MW2ER07	922	water	3	40ml VOA	-11	X	Equip. Rinsate
MW2TB07	912	water	1	40ml VOA	-TB	X	Blind
MW2-70.4.25	931	soil	1	2x3 Brass	-12	X	
RIG11SW	940	water	3	40ml VOA	-13	X	RIG water from #11
MW2-109.25	947	soil	1	2x3 Brass	-14	X	3/4 full
MW2-114.5	958	Soil	1	2x6 Brass	-15	X	
MW2-119.25	1021	soil	1	2x3 Brass	-16	X	1/2 full
MW2-124.25	1037	soil	1	↓	-17	X	

Relinquished By: Sonya V. Lupian	Date: 2/4/98	Time: 1508	Received By: John Wright	Date: 2-4-98	Time: 1508
Relinquished By: John Wright	Date: 2-4-98	Time: 1935	Received By: Mark Monroe	Date: 2-4-98	Time: 19:40
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 2 Of 3

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved: _____ Signature: _____ Company: _____ Date: _____

4357-21

BC LABORATORIES, INC.

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Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station Tosco
Address: 25 A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 7530111	Site # 4357
Report To: ~~Liz Sewell~~ Gil Fry Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☒ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water per EPA protocal
☐ Waste Water
☐ Other

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015C/8260A MTBE								Comments *
MW2-129.50	2/4/98 11:00	soil	1	2x6 Brass	-18	X								
MW2-134.50	1109			↓	-19	X								
MW2-140.0	1128			2x6 Brass	-20	X								
MW2-139.5	1128			2x3 Brass	-21									hold
MW2-144.0	1220			2x6 Brass	-22	X								
MW2-145.4	1224			↓	-23	X								
MW2-144.8	1230			2x3 Brass	-24									hold
8														

Relinquished By: Sonya V. Luisen	Date: 2/4/98	Time: 1508	Received By: [signature]	Date: 2-4-98	Time: 1508
Relinquished By: [signature]	Date: 2 4 98	Time: 1935	Received By: [signature]	Date: 2-4-98	Time: 19:40
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☒ Yes ☐ No Samples On Ice ☒ Yes ☐ No Method Of Shipment BC FS Page 3 Of 3

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed?
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time?
Approved by: Signature: Company: Date:

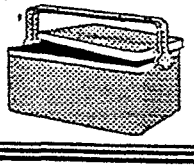
Submission #: 98-1372 Project Code:

SHIPPING INFORMATION	SHIPPING CONTAINER
Federal Express ☐ UPS ☐ Hand Delivery ☐	Ice Chest ☒ None ☐
BC Lab Field Service ☒ Other ☐ (Specify) _____	Box ☐ Other ☐ (Specify) _____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☐ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐



Ice Chest ID _____	Ice Chest ID _____
Temperature: 2.4 °C	Temperature: _____ °C
Thermometer ID: 17	Thermometer ID: _____
Emissivity .85	Emissivity _____
Container Voa	Container _____

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11
QT GENERAL MINERAL/ GENERAL PHYSICAL																							
PT PE UNPRESERVED																							
QT INORGANIC CHEMICAL METALS																							
PT INORGANIC CHEMICAL METALS																							
PT CYANIDE																							
PT NITROGEN FORMS																							
PT TOTAL SULFIDE																							
2oz. NITRATE / NITRITE																							
100ml TOTAL ORGANIC CARBON																							
QT TOX																							
PT CHEMICAL OXYGEN DEMAND																							
100ml PHENOLICS																							
40ml VOA VIAL TRAVEL BLANK																							
40ml VOA VIAL										3	3												
VOA SET (3 VIALS, 1TB)																							
QT EPA 413.1, 413.2, 418.1																							
PT ODOR																							
RADIOLOGICAL																							
BACTERIOLOGICAL																							
PT EPA 504																							
QT EPA 508/608/8080																							
QT EPA 515.1/8150																							
QT EPA 525																							
QT EPA 525 TRAVEL BLANK																							
100ml EPA 547																							
100ml EPA 531.1																							
QT EPA 548																							
QT EPA 549																							
QT EPA 632																							
QT EPA 8015M																							
QT QA/QC																							
QT AMBER																							
8 OZ. JAR																							
32 OZ. JAR																							
SOIL SLEEVE	1	1	1	1	1	1	1	1	1			1											
PCB VIAL																							
PLASTIC BAG																							

Comments: _____

Completed by: [signature]

IF:\WPSO\LAB_DOCS\FORMS\SAMREC2.W

98-1372

SAMPLE CONTAINERS	SAMPLE NUMBERS																							
	13	14	15	16	17	18	19	20	21	22	23	24	TB	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL																								
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS																								
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE																								
PT NITROGEN FORMS																								
PT TOTAL SULFIDE																								
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
TOX																								
CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
40ml VOA VIAL TRAVEL BLANK													1											
40ml VOA VIAL	3																							
VOA SET (3 VIALS, 1TB)																								
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080																								
QT EPA 515.1/8150																								
QT EPA 525																								
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
OIL SLEEVE																								
PCB VIAL																								
PLASTIC BAG																								

BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/04/98
Laboratory No.: 98-01372-1

Sample Description: 4357-76 STATION TOSCO, MW2-59.5, 02/04/98 @ 07:30AM, 59.5, SONYA LUISONI

Sample ID: MW2-59.5
Sample Matrix: Soil

Date Collected: 02/04/98 @ 07:30AM
Date Extracted-8020: 02/17/98
Date Analyzed-8020: 02/17/98
Date Extracted-8015M(g): 02/17/98
Date Analyzed-8015M(g): 02/17/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	73.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert #1186

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/04/98
Laboratory No.: 98-01372-2

Sample Description: 4357-76 STATION TOSCO, MW2-64.75, 02/04/98 @ 07:39AM, 64.75, SONYA LUISONI

Sample ID: MW2-64.75
Sample Matrix: Soil

Date Collected: 02/04/98 @ 07:39AM
Date Extracted-8020: 02/17/98
Date Analyzed-8020: 02/17/98
Date Extracted-8015M(g): 02/17/98
Date Analyzed-8015M(g): 02/17/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.0026	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	0.0033	mg/kg	0.005	0.00088 *
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	73.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

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Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/04/98
Laboratory No.: 98-01372-3

Sample Description: 4357-76 STATION TOSCO, MW2-69.75, 02/04/98 @ 07:56AM, 69.75, SONYA LUISONI

Sample ID: MW2-69.75
Sample Matrix: Soil

Date Collected: 02/04/98 @ 07:56AM
Date Extracted-8020: 02/17/98
Date Analyzed-8020: 02/17/98
Date Extracted-8015M(g): 02/17/98
Date Analyzed-8015M(g): 02/17/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	0.0011	mg/kg	0.002	0.00029 *
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	104.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/04/98
Laboratory No.: 98-01372-4

Sample Description: 4357-76 STATION TOSCO, MW2-74.5, 02/04/98 @ 08:10AM, 74.5, SONYA LUISONI

Sample ID: MW2-74.5
Sample Matrix: Soil

Date Collected: 02/04/98 @ 08:10AM
Date Extracted-8020: 02/17/98
Date Analyzed-8020: 02/17/98
Date Extracted-8015M(g): 02/17/98
Date Analyzed-8015M(g): 02/17/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.05	0.20
Surrogate % Recovery	82.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/04/98
Laboratory No.: 98-01372-5

Sample Description: 4357-76 STATION TOSCO, MW2-79.5, 02/04/98 @ 08:14AM, 79.5, SONYA LUISONI

Sample ID: MW2-79.5
Sample Matrix: Soil

Date Collected: 02/04/98 @ 08:14AM
Date Extracted-8020: 02/17/98
Date Analyzed-8020: 02/17/98
Date Extracted-8015M(g): 02/17/98
Date Analyzed-8015M(g): 02/17/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	90.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/04/98
Laboratory No.: 98-01372-6

Sample Description: 4357-76 STATION TOSCO, MW2-84.75, 02/04/98 @ 08:26AM, 84.75, SONYA LUISONI

Sample ID: MW2-84.75
Sample Matrix: Soil

Date Collected: 02/04/98 @ 08:26AM
Date Extracted-8020: 02/17/98
Date Analyzed-8020: 02/17/98
Date Extracted-8015M(g): 02/17/98
Date Analyzed-8015M(g): 02/17/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	105.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/04/98
Laboratory No.: 98-01372-7

Sample Description: 4357-76 STATION TOSCO, MW2-89.5, 02/04/98 @ 08:30AM, 89.5, SONYA LUISONI

Sample ID: MW2-89.5
Sample Matrix: Soil

Date Collected: 02/04/98 @ 08:30AM
Date Extracted-8020: 02/17/98
Date Analyzed-8020: 02/17/98
Date Extracted-8015M(g): 02/17/98
Date Analyzed-8015M(g): 02/17/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	102.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/04/98
Laboratory No.: 98-01372-8

Sample Description: 4357-76 STATION TOSCO, MW2-94.5, 02/04/98 @ 08:49AM, 94.5, SONYA LUISONI

Sample ID: MW2-94.5
Sample Matrix: Soil

Date Collected: 02/04/98 @ 08:49AM
Date Extracted-8020: 02/17/98
Date Analyzed-8020: 02/17/98
Date Extracted-8015M(g): 02/17/98
Date Analyzed-8015M(g): 02/17/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	103.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/04/98
Laboratory No.: 98-01372-9

Sample Description: 4357-76 STATION TOSCO, MW2-99.75, 02/04/98 @ 09:19AM, 99.75, SONYA LUISONI

Sample ID: MW2-99.75
Sample Matrix: Soil

Date Collected: 02/04/98 @ 09:19AM
Date Extracted-8020: 02/17/98
Date Analyzed-8020: 02/17/98
Date Extracted-8015M(g): 02/17/98
Date Analyzed-8015M(g): 02/17/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	105.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/04/98
Laboratory No.: 98-01372-10

Sample Description: 4357-76 STATION TOSCO, MW2FB07, 02/04/98 @ 08:38AM, SONYA LUISONI

Sample ID: MW2FB07
Sample Matrix: Water

Date Collected: 02/04/98 @ 08:38AM
Date Extracted-8020: 02/14/98
Date Analyzed-8020: 02/14/98
Date Extracted-8015M(g): 02/14/98
Date Analyzed-8015M(g): 02/14/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.5	0.04
Toluene	None Detected	µg/L	0.5	0.05
Ethyl Benzene	None Detected	µg/L	0.5	0.07
Methyl-t-butylether	None Detected	µg/L	2.	0.12
Total Xylenes	None Detected	µg/L	1.	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	91.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/04/98
Laboratory No.: 98-01372-11

Sample Description: 4357-76 STATION TOSCO, MW2ER07, 02/04/98 @ 09:22AM, SONYA LUISONI

Sample ID: MW2ER07
Sample Matrix: Water

Date Collected: 02/04/98 @ 09:22AM
Date Extracted-8020: 02/14/98
Date Analyzed-8020: 02/14/98
Date Extracted-8015M(g): 02/14/98
Date Analyzed-8015M(g): 02/14/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.5	0.04
Toluene	None Detected	µg/L	0.5	0.05
Ethyl Benzene	None Detected	µg/L	0.5	0.07
Methyl-t-butylether	None Detected	µg/L	2.	0.12
Total Xylenes	None Detected	µg/L	1.	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	85.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/04/98
Laboratory No.: 98-01372-12

Sample Description: 4357-76 STATION TOSCO, MW2-104.25, 02/04/98 @ 09:31AM, 104.25, SONYA LUISONI

Sample ID: MW2-104.25
Sample Matrix: Soil

Date Collected: 02/04/98 @ 09:31AM
Date Extracted-8020: 02/17/98
Date Analyzed-8020: 02/17/98
Date Extracted-8015M(g): 02/17/98
Date Analyzed-8015M(g): 02/17/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.0011	mg/kg	0.002	0.00029 *
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	97.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

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Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/04/98
Laboratory No.: 98-01372-13

Sample Description: 4357-76 STATION TOSCO, RIG11SW, 02/04/98 @ 09:40AM, SONYA LUISONI

Sample ID: RIG11SW
Sample Matrix: Water

Date Collected: 02/04/98 @ 09:40AM
Date Extracted-8020: 02/14/98
Date Analyzed-8020: 02/14/98
Date Extracted-8015M(g): 02/14/98
Date Analyzed-8015M(g): 02/14/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	None Detected	µg/L	0.5	0.04	
Toluene	None Detected	µg/L	0.5	0.05	
Ethyl Benzene	0.09	µg/L	0.5	0.07	*
Methyl-t-butylether	None Detected	µg/L	2.	0.12	
Total Xylenes	None Detected	µg/L	1.	0.15	
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4	
Surrogate % Recovery	70.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/04/98
Laboratory No.: 98-01372-14

Sample Description: 4357-76 STATION TOSCO, MW2-109.25, 02/04/98 @ 09:47AM, 109.25, SONYA LUISONI

Sample ID: MW2-109.25
Sample Matrix: Soil

Date Collected: 02/04/98 @ 09:47AM
Date Extracted-8020: 02/17/98
Date Analyzed-8020: 02/17/98
Date Extracted-8015M(g): 02/17/98
Date Analyzed-8015M(g): 02/17/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	None Detected	mg/kg	0.002	0.00020	
Toluene	0.0019	mg/kg	0.002	0.00029	*
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029	
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001	
Total Xylenes	None Detected	mg/kg	0.005	0.00088	
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20	
Surrogate % Recovery	90.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/04/98
Laboratory No.: 98-01372-15

Sample Description: 4357-76 STATION TOSCO, MW2-114.5, 02/04/98 @ 09:58AM, 114.5, SONYA LUISONI

Sample ID: MW2-114.5
Sample Matrix: Soil

Date Collected: 02/04/98 @ 09:58AM
Date Extracted-8020: 02/17/98
Date Analyzed-8020: 02/17/98
Date Extracted-8015M(g): 02/17/98
Date Analyzed-8015M(g): 02/17/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	96.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/04/98
Laboratory No.: 98-01372-16

Sample Description: 4357-76 STATION TOSCO, MW2-119.25, 02/04/98 @ 10:21AM, 119.25, SONYA LUISONI

Sample ID: MW2-119.25
Sample Matrix: Soil

Date Collected: 02/04/98 @ 10:21AM
Date Extracted-8020: 02/18/98
Date Analyzed-8020: 02/18/98
Date Extracted-8015M(g): 02/18/98
Date Analyzed-8015M(g): 02/18/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	100.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/04/98
Laboratory No.: 98-01372-17

Sample Description: 4357-76 STATION TOSCO, MW2-124.25, 02/04/98 @ 10:37AM, 124.25, SONYA LUISONI

Sample ID: MW2-124.25
Sample Matrix: Soil

Date Collected: 02/04/98 @ 10:37AM
Date Extracted-8020: 02/18/98
Date Analyzed-8020: 02/18/98
Date Extracted-8015M(g): 02/18/98
Date Analyzed-8015M(g): 02/18/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	0.0012	mg/kg	0.002	0.00020	*
Toluene	0.0010	mg/kg	0.002	0.00029	*
Ethyl Benzene	0.0012	mg/kg	0.002	0.00029	*
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001	
Total Xylenes	None Detected	mg/kg	0.005	0.00088	
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20	
Surrogate % Recovery	100.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

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Stuart G. Buttram
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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/04/98
Laboratory No.: 98-01372-18

Sample Description: 4357-76 STATION TOSCO, MW2-129.50, 02/04/98 @ 11:00AM, 129.50, SONYA LUISONI

Sample ID: MW2-129.50
Sample Matrix: Soil

Date Collected: 02/04/98 @ 11:00AM
Date Extracted-8020: 02/18/98
Date Analyzed-8020: 02/18/98
Date Extracted-8015M(g): 02/18/98
Date Analyzed-8015M(g): 02/18/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	102.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/04/98
Laboratory No.: 98-01372-19

Sample Description: 4357-76 STATION TOSCO, MW2-134.50, 02/04/98 @ 11:09AM, 134.50, SONYA LUISONI

Sample ID: MW2-134.50
Sample Matrix: Soil

Date Collected: 02/04/98 @ 11:09AM
Date Extracted-8020: 02/18/98
Date Analyzed-8020: 02/18/98
Date Extracted-8015M(g): 02/18/98
Date Analyzed-8015M(g): 02/18/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.0010	mg/kg	0.002	0.00029 *
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	72.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

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Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/04/98
Laboratory No.: 98-01372-20

Sample Description: 4357-76 STATION TOSCO, MW2-140.0, 02/04/98 @ 11:28AM, 140.0, SONYA LUISONI

Sample ID: MW2-140.0
Sample Matrix: Soil

Date Collected: 02/04/98 @ 11:28AM
Date Extracted-8020: 02/18/98
Date Analyzed-8020: 02/18/98
Date Extracted-8015M(g): 02/18/98
Date Analyzed-8015M(g): 02/18/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	None Detected	mg/kg	0.002	0.00020	
Toluene	0.0042	mg/kg	0.002	0.00029	
Ethyl Benzene	0.0017	mg/kg	0.002	0.00029	*
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001	
Total Xylenes	0.0030	mg/kg	0.005	0.00088	*
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20	
Surrogate % Recovery	72.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

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Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/04/98
Laboratory No.: 98-01372-22

Sample Description: 4357-76 STATION TOSCO, MW2-144.0, 02/04/98 @ 12:20PM, 144.0, SONYA LUISONI

Sample ID: MW2-144.0
Sample Matrix: Soil

Date Collected: 02/04/98 @ 12:20PM
Date Extracted-8020: 02/18/98
Date Analyzed-8020: 02/18/98
Date Extracted-8015M(g): 02/18/98
Date Analyzed-8015M(g): 02/18/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	0.0011	mg/kg	0.002	0.00020 *
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	115.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/04/98
Laboratory No.: 98-01372-23

Sample Description: 4357-76 STATION TOSCO, MW2-145.4, 02/04/98 @ 12:24PM, 145.4, SONYA LUISONI

Sample ID: MW2-145.4
Sample Matrix: Soil

Date Collected: 02/04/98 @ 12:24PM
Date Extracted-8020: 02/18/98
Date Analyzed-8020: 02/18/98
Date Extracted-8015M(g): 02/18/98
Date Analyzed-8015M(g): 02/18/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	92.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: LIZ SEWELL 714-753-0101

Date Reported: 02/23/98
Date Received: 02/04/98
Laboratory No.: 98-01372-TB

Sample Description: 4357-76 STATION TOSCO, MW2TB07, 02/04/98 @ 09:12AM, SONYA LUISONI

Sample ID: MW2TB07
Sample Matrix: Water

Date Collected: 02/04/98 @ 09:12AM
Date Extracted-8020: 02/14/98
Date Analyzed-8020: 02/14/98
Date Extracted-8015M(g): 02/14/98
Date Analyzed-8015M(g): 02/14/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.5	0.04
Toluene	None Detected	µg/L	0.5	0.05
Ethyl Benzene	None Detected	µg/L	0.5	0.07
Methyl-t-butylether	None Detected	µg/L	2.	0.12
Total Xylenes	None Detected	µg/L	1.	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	80.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Stuart G. Buttram
Department Supervisor

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February 27, 1998

GIL FRY
ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718

Subject: Laboratory Submission No.: 98-01463
Samples Received: 02/05/98

Dear Mr. Fry:

The samples(s) listed on the Chain of Custody report were received by BC Laboratories, Inc. on 02/05/98.

Enclosed please find the analytical data for the testing requested. Results in RWQCB - L.A. Region format will follow under separate cover as soon as they are available.

If there are questions regarding this report please contact me at (805)327-4911, ext. 250.

Any unused sample will be stored on our premises for a minimum of 30 days (excluding bacteriologicals) at which time they will be disposed unless otherwise requested at the time of sample receipt. A disposal fee of $5 per sample may apply for solid sample matrices.

Please refer to submission number 98-01463 when calling for assistance.

Sincerely,

Cheryl Ferguson

Cheryl Ferguson
Project Manager
BC Laboratories, Inc.

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4357-24

BC LABORATORIES, INC.

98-1463

LABORATORY
(805) 327-4911
FAX (805) 327-1918
4100 Atlas Ct.
Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record DISTRIBUTION

Company Name: Alton Geoscience	Project Name: 76 Station Texo
Address: 25 A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Gil Fry Sampler:	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water ☐ Waste Water ☐ Other

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Per EPA protocol

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015 & 8020 MTBE	Comments *
* MW3-4.75	2/5/98 804	Soil	1	2x6 Brass	-1	X	
* MW3-9.5	820		1	2x6 Brass	-2	X	
+ MW3-15.0	825		1	2x6 Brass	-3	X	
+ MW3-14.5	825		1	2x3 Brass	-4		hold
+ MW3-20.0	855		1	2x6 Brass	-5	X	
~~MW3-19.5~~	~~855~~		1	2x3 Brass	~~86~~		~~hold~~
+ MW3-25.0	900		1	2x6 Brass	-6	X	
+ MW3-24.5	900		1	2x3 Brass	-7		hold
+ MW3-30.25	905		1	2x6 Brass	-8	X	

NUMBERING CHECKED BY MSA

Relinquished By: Sonya V. Lujson	Date: 2/5/98	Time: 1551	Received By: Joel M Bright	Date: 2 5 98	Time: 1553
Relinquished By: Joel M Bright	Date: 2-5-98	Time: 2050	Received By: Mark Monroe	Date: 2-5-98	Time: 20:00
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment BC FIELD SERVICE Page 1 Of 5

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved By: _____ Signature: _____ Company: _____

* Laboratory testing reports must be met for Soil. Analyze soil from Center or side

4357-24

BC LABORATORIES, INC.

98 1463

LABORATORY
(805) 327-4911
FAX (805) 327-1918
4100 Atlas Ct.
Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station Tosco
Address: 25 A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753-0101 FAX: 714 753 0111	Site # 4357
Report To: ~~Liz Sewell~~ Gil Fry Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☒ 10 Days (Standard) ☐ 5 Days ☐ 3 Days ☐ Drinking Water
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours ☐ Waste Water
CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure ☐ Other

Analyses Requested: 8015 G/8020 per EPA protocol; mtbe 8020

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015 G/8020 mtbe 8020	Comments *
+ MW3-29.75	2/5/98 905	soil	1	2x3 Brass	-9		hold
+ MW3-35.25	910			2x6 Brass	-10	X	
+ MW3-34.75	910			2x3 Brass	-11		hold
+ MW3-40.5	915			2x6 Brass	-12	X	
+ MW3-40.0	↓			2x3 Brass	-13		hold
+ MW3-45.0	930			2x6 Brass	-14	X	
+ MW3-44.5	↓			2x3 Brass	-15		hold
+ MW3-49.5	925			2x6 Brass	-16	X	
+ MW3-54.9	1006			2x6 Brass	-17	X	

Relinquished By: Sonya L. Lusioni	Date: 2/5/98	Time: 1531	Received By: [signature]	Date: 2-5-98	Time: 1553
Relinquished By: [signature]	Date: 2-5-98	Time: 2050	Received By: [signature]	Date: 2-5-98	Time: 20:00
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 2 Of 5

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved by: _____ Signature: _____ Company: _____ Date: _____

4357-24

BC LABORATORIES, INC.

981463

LABORATORY
(805) 327-4911
FAX (805) 327-1918
4100 Atlas Ct.
Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station Tosco
Address: 25A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0101	Site # 4357
Report To: Gil Fry Sampler:	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours
CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water
☐ Waste Water
☐ Other

Per EPA protocol

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015G/8020 & 8260 MTBE								Comments
+ MW3-59.75	2/5/98 1015	Soil	1	2x6 Brass	-18	X								
+ MW3-64.75	1027			2x6 Brass	-19	X								
+ MW3-69.7	1050			2x6 Brass	-20	X								
+ MW3-74.5	1052			2x6 Brass	-21	X								
+ MW3-79.5	1059			2x6 Brass	-22	X								
+ MW3-84.5	1112			2x6 Brass	-23	X								
+ MW3-89.75 (89.5)	1128			2x3 Brass	-24	X								
+ MW3-99.5	1153			2x6 Brass	-25	X								
+ MW3-94.0	1140			2x3 Brass	-26	X								

Relinquished By: Sonya V. Luisoni	Date: 2/5/98	Time: 1551	Received By: Jack McKnight	Date: 2-5-98	Time: 1553
Relinquished By: Jack McKnight	Date: 2-5-98	Time: 2050	Received By: Mark Monroe	Date: 2-5-98	Time: 20:00
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 3 Of 5

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approve[illegible]: _____ Signature: _____ Company: _____ D[illegible]

4357-24

BC LABORATORIES, INC.

98-1463

LABORATORY
(805) 327-4911
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4100 Atlas Ct.
Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station Tosco
Address: 25A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 7147530101 FAX: 7147530111	Site # 4357
Report To: Gill Fry Sampler: Sonya	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water ☐ Waste Water ☐ Other

For EPA protocol

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015/8260 or 8020 MTBE									Comments*
MW3-104.5	2/5/98 1158	Soil	1	2x3 Brass	-27	X									
MW3-109.5	1227			2x6 Brass	-28	X									
MW3-114.5	1238			2x6 Brass	-29	X									
MW3-119.5	1253			↓	-30	X									
MW3-124.4	1311			2x3 Brass	-31	X									
MW3-129.5	1331			2x6 Brass	32	X									
~~MW3-134.5~~ ED	~~14:22~~			~~2x3 Brass~~		~~X~~									
MW3-135.0	14:22			2x6 Brass	-33	X									
MW3-140.0	1444			2x6 Brass	-34	X									

Relinquished By: Sonya V. Luisoni	Date: 2/5/98	Time: 1551	Received By: [signature]	Date: 2-5-98	Time: 1553
Relinquished By: [signature]	Date: 2-5-98	Time: 2050	Received By: [signature]	Date: 2-5-98	Time: 20:00
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 4 Of 5

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved by: _____ Signature: _____ Company: _____ Date: _____

4357-24

BC LABORATORIES, INC.

98-1463

LABORATORY
(805) 327-4911
FAX (805) 327-1918
4100 Atlas Ct.
Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: ALTON GEOSCIENCE	Project Name: 76 STATION TOSCO
Address: 25A Technology Dr.	Project Manager: MIKE VANDER PLATTS
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714-753-0101 FAX: 714-753-0111	Site # 4357
Report To: Gil Fry Sampler:	QC Data: ☑ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water (Per EPA protocol)
☐ Waste Water
☐ Other

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested: 8015 Gas/Diesel, 8020 MTBE

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015 Gas/Diesel	8020 MTBE	Comments
MW3-144.75	2/5/98 15:06	soil	1	2x6 Brass	-35	X		
MW3ER07	15:05	water	3	40 ml VOA	-36	X		
-TB	Not on C-O-C (5)			MG/2/6				
	8L							

Relinquished By: Sonya V. Lusani	Date: 2/5/98	Time: 1551	Received By: Jack M Knight	Date: 2-5-98	Time: 1553
Relinquished By: Jack M Knight	Date: 2-5-98	Time: 2050	Received By: Mark Wanne	Date: 2-5-98	Time: 20:00
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 5 Of 5

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved By: _____ Signature: _____ Company: _____ Date: _____

* Low level action levels ... for soils analysis soil from ... rings.

BC LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No.4 1/7/98 Page ___ Of ___

Submission #: 98-1463 Project Code:

SHIPPING INFORMATION

Federal Express ☐ UPS ☐ Hand Delivery ☐

Lab Field Service ☒ Other ☐ (Specify) _____

SHIPPING CONTAINER

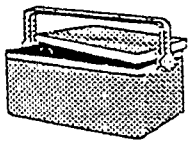
Ice Chest ☒ None ☐

Box ☐ Other ☐ (Specify) _____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☒ No ☐ None ☐ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐



Ice Chest ID _____
Temperature: 1.1 °C
Thermometer ID: 17
Emissivity .90
Container Pe Temp Blank

Ice Chest ID _____
Temperature: _____ °C
Thermometer ID: _____
Emissivity _____
Container _____

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11
QT GENERAL MINERAL/ GENERAL PHYSICAL																							
PT PE UNPRESERVED																							
QT INORGANIC CHEMICAL METALS																							
PT INORGANIC CHEMICAL METALS																							
PT CYANIDE																							
PT NITROGEN FORMS																							
PT TOTAL SULFIDE																							
2oz. NITRATE / NITRITE																							
100ml TOTAL ORGANIC CARBON																							
T TOX																							
T CHEMICAL OXYGEN DEMAND																							
100ml PHENOLICS																							
40ml VOA VIAL TRAVEL BLANK																							
40ml VOA VIAL																							
VOA SET (3 VIALS, 1TB)																							
QT EPA 413.1, 413.2, 418.1																							
PT ODOR																							
RADIOLOGICAL																							
BACTERIOLOGICAL																							
PT EPA 504																							
QT EPA 508/608/8080																							
QT EPA 515.1/8150																							
QT EPA 525																							
QT EPA 525 TRAVEL BLANK																							
100ml EPA 547																							
100ml EPA 531.1																							
QT EPA 548																							
QT EPA 549																							
QT EPA 632																							
QT EPA 8015M																							
QT QA/QC																							
QT AMBER																							
8 OZ. JAR																							
32 OZ. JAR																							
SOIL SLEEVE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓											
PCB VIAL																							
PLASTIC BAG																							

Comments: Mario

BC LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No.4 1/7/98 Page 0:

Submission #: 98-1463 Project Code:

SHIPPING INFORMATION

Federal Express ☐ UPS ☐ Hand Delivery ☐

BC Lab Field Service ☐ Other ☐ (Specify) _____

SHIPPING CONTAINER

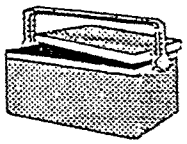
Ice Chest ☐ None ☐

Box ☐ Other ☐ (Specify) _____

Refrigerant: Ice ☐ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☐ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐



Ice Chest ID _____
Temperature: _____ °C
Thermometer ID: _____
Emissivity _____
Container _____

Ice Chest ID _____
Temperature: _____ °C
Thermometer ID: _____
Emissivity _____
Container _____

SAMPLE CONTAINERS	SAMPLE NUMBERS																					
	13	14	15	16	17	18	19	20	21	22	23	24	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL																						
PT PE UNPRESERVED																						
QT INORGANIC CHEMICAL METALS																						
PT INORGANIC CHEMICAL METALS																						
PT CYANIDE																						
PT NITROGEN FORMS																						
PT TOTAL SULFIDE																						
2oz. NITRATE / NITRITE																						
100ml TOTAL ORGANIC CARBON																						
QT TOX																						
PT CHEMICAL OXYGEN DEMAND																						
100ml PHENOLICS																						
40ml VOA VIAL TRAVEL BLANK																						
40ml VOA VIAL																						
VOA SET (3 VIALS, 1TB)																						
QT EPA 413.1, 413.2, 418.1																						
PT ODOR																						
RADIOLOGICAL																						
BACTERIOLOGICAL																						
PT EPA 504																						
QT EPA 508/608/8080																						
QT EPA 515.1/8150																						
QT EPA 525																						
QT EPA 525 TRAVEL BLANK																						
100ml EPA 547																						
100ml EPA 531.1																						
QT EPA 548																						
QT EPA 549																						
QT EPA 632																						
QT EPA 801EM																						
QT QA/QC																						
QT AMBER																						
8 OZ. JAR																						
32 OZ. JAR																						
SOIL SLEEVE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓										
PCB VIAL																						
PLASTIC BAG																						

Comments: Clear

BC LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No.4 1/7/98 Page ___ Of ___

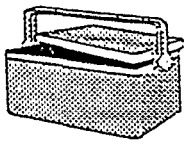
Submission #: 98-1463 Project Code:

SHIPPING INFORMATION	SHIPPING CONTAINER
Federal Express ☐ UPS ☐ Hand Delivery ☐	Ice Chest ☐ None ☐
Lab Field Service ☐ Other ☐ (Specify) _____	Box ☐ Other ☐ (Specify) _____

Refrigerant: Ice ☐ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☐ Comments:

All samples received? Yes ☐ No ☐ All samples containers intact? Yes ☐ No ☐ Description(s) match COC? Yes ☐ No ☐



Ice Chest ID _____	Ice Chest ID _____
Temperature: _____ °C	Temperature: _____ °C
Thermometer ID: _____	Thermometer ID: _____
Emissivity _____	Emissivity _____
Container _____	Container _____

SAMPLE CONTAINERS	SAMPLE NUMBERS																						
	25	26	27	28	29	30	31	32	33	34	35	36	TB	2	3	4	5	6	7	8	9	10	11
QT GENERAL MINERAL/ GENERAL PHYSICAL																							
PT PE UNPRESERVED																							
QT INORGANIC CHEMICAL METALS																							
PT INORGANIC CHEMICAL METALS																							
PT CYANIDE																							
PT NITROGEN FORMS																							
PT TOTAL SULFIDE																							
2oz. NITRATE / NITRITE																							
100ml TOTAL ORGANIC CARBON																							
PT TOX																							
CHEMICAL OXYGEN DEMAND																							
100ml PHENOLICS																							
40ml VOA VIAL TRAVEL BLANK														5									
40ml VOA VIAL												3											
VOA SET (3 VIALS, 1TB)																							
QT EPA 413.1, 413.2, 418.1																							
PT ODOR																							
RADIOLOGICAL																							
BACTERIOLOGICAL																							
PT EPA 504																							
QT EPA 508/608/8080																							
QT EPA 515.1/8150																							
QT EPA 525																							
QT EPA 525 TRAVEL BLANK																							
100ml EPA 547																							
100ml EPA 531.1																							
QT EPA 548																							
QT EPA 549																							
QT EPA 632																							
QT EPA 8015M																							
QT QA/QC																							
QT AMBER																							
8 OZ. JAR																							
32 OZ. JAR																							
SOIL SLEEVE	(	)	(	)	(	)	(	)	(	)	(	)											
PCB VIAL																							
PLASTIC BAG																							

Comments: [illegible]

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-1

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-4.75, 02/05/98 @ 08:04AM, 4.75

Sample ID: MW3-4.75
Sample Matrix: Soil

Date Collected: 02/05/98 @ 08:04AM
Date Extracted-8020: 02/17/98
Date Analyzed-8020: 02/17/98
Date Extracted-8015M(g): 02/17/98
Date Analyzed-8015M(g): 02/17/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	113.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-2

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-9.5, 02/05/98 @ 08:20AM, 9.5

Sample ID: MW3-9.5
Sample Matrix: Soil

Date Collected: 02/05/98 @ 08:20AM
Date Extracted-8020: 02/17/98
Date Analyzed-8020: 02/17/98
Date Extracted-8015M(g): 02/17/98
Date Analyzed-8015M(g): 02/17/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	0.0012	mg/kg	0.002	0.00020 *
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	104.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics
and
Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-3

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-15.0, 02/05/98 @ 08:25AM, 15.0

Sample ID: MW3-15.0
Sample Matrix: Soil

Date Collected: 02/05/98 @ 08:25AM
Date Extracted-8020: 02/17/98
Date Analyzed-8020: 02/17/98
Date Extracted-8015M(g): 02/17/98
Date Analyzed-8015M(g): 02/17/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	0.0015	mg/kg	0.002	0.00020	*
Toluene	None Detected	mg/kg	0.002	0.00029	
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029	
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001	
Total Xylenes	None Detected	mg/kg	0.005	0.00088	
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20	
Surrogate % Recovery	110.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-5

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-20.0, 02/05/98 @ 08:55AM, 20.0

Sample ID: MW3-20.0
Sample Matrix: Soil

Date Collected: 02/05/98 @ 08:55AM
Date Extracted-8020: 02/18/98
Date Analyzed-8020: 02/18/98
Date Extracted-8015M(g): 02/18/98
Date Analyzed-8015M(g): 02/18/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	106.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-6

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-25.0, 02/05/98 @ 09:00AM, 25.0

Sample ID: MW3-25.0
Sample Matrix: Soil

Date Collected: 02/05/98 @ 09:00AM
Date Extracted-8020: 02/18/98
Date Analyzed-8020: 02/18/98
Date Extracted-8015M(g): 02/18/98
Date Analyzed-8015M(g): 02/18/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	None Detected	mg/kg	0.002	0.00020	
Toluene	0.0014	mg/kg	0.002	0.00029	*
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029	
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001	
Total Xylenes	None Detected	mg/kg	0.005	0.00088	
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20	
Surrogate % Recovery	96.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics
and
Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-8

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-30.25, 02/05/98 @ 09:05AM, 30.25

Sample ID: MW3-30.25
Sample Matrix: Soil

Date Collected: 02/05/98 @ 09:05AM
Date Extracted-8020: 02/17/98
Date Analyzed-8020: 02/17/98
Date Extracted-8015M(g): 02/17/98
Date Analyzed-8015M(g): 02/17/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	128.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Stuart G. Buttram
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Purgeable Aromatics
and
Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-10

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-35.25, 02/05/98 @ 09:10AM, 35.25

Sample ID: MW3-35.25
Sample Matrix: Soil

Date Collected: 02/05/98 @ 09:10AM
Date Extracted-8020: 02/18/98
Date Analyzed-8020: 02/18/98
Date Extracted-8015M(g): 02/18/98
Date Analyzed-8015M(g): 02/18/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	120.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-12

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-40.5, 02/05/98 @ 09:15AM, 40.5

Sample ID: MW3-40.5
Sample Matrix: Soil

Date Collected: 02/05/98 @ 09:15AM
Date Extracted-8020: 02/18/98
Date Analyzed-8020: 02/18/98
Date Extracted-8015M(g): 02/18/98
Date Analyzed-8015M(g): 02/18/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	115.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-14

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-45.0, 02/05/98 @ 09:30AM, 45.0

Sample ID: MW3-45.0
Sample Matrix: Soil

Date Collected: 02/05/98 @ 09:30AM
Date Extracted-8020: 02/18/98
Date Analyzed-8020: 02/18/98
Date Extracted-8015M(g): 02/18/98
Date Analyzed-8015M(g): 02/18/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.0036	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	92.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Purgeable Aromatics
and
Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-16

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-49.5, 02/05/98 @ 09:25AM, 49.5

Sample ID: MW3-49.5
Sample Matrix: Soil

Date Collected: 02/05/98 @ 09:25AM
Date Extracted-8020: 02/18/98
Date Analyzed-8020: 02/18/98
Date Extracted-8015M(g): 02/18/98
Date Analyzed-8015M(g): 02/18/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	101.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-17

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-54.9, 02/05/98 @ 10:06AM, 54.9

Sample ID: MW3-54.9
Sample Matrix: Soil

Date Collected: 02/05/98 @ 10:06AM
Date Extracted-8020: 02/18/98
Date Analyzed-8020: 02/18/98
Date Extracted-8015M(g): 02/18/98
Date Analyzed-8015M(g): 02/18/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.0021	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	122.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-18

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-59.75, 02/05/98 @ 10:15AM, 59.75

Sample ID: MW3-59.75
Sample Matrix: Soil

Date Collected: 02/05/98 @ 10:15AM
Date Extracted-8020: 02/18/98
Date Analyzed-8020: 02/18/98
Date Extracted-8015M(g): 02/18/98
Date Analyzed-8015M(g): 02/18/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	0.0025	mg/kg	0.002	0.00020	
Toluene	0.0018	mg/kg	0.002	0.00029	*
Ethyl Benzene	0.0014	mg/kg	0.002	0.00029	*
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001	
Total Xylenes	0.0028	mg/kg	0.005	0.00088	*
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20	
Surrogate % Recovery	76.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

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Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714 753-0101

Date Reported: 03/27/98
Date Received: 02/05/98
Laboratory No.: 98-01463-19 (Revised)

Project Number: SITE #4357 (76 STATIO
Sample ID: MW3-64.75
Sample Depth: 64.75
Sample Matrix: Soil

Date Collected: 02/05/98 @ 10:27AM
Date Extracted-8020: 02/18/98
Date Analyzed-8020: 02/18/98
Date Extracted-8015M(g): 02/18/98
Date Analyzed-8015M(g): 02/18/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	None Detected	mg/kg	0.002	0.00020	
Toluene	0.0023	mg/kg	0.002	0.00029	
Ethyl Benzene	0.0017	mg/kg	0.002	0.00029	*
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001	
Total Xylenes	0.0023	mg/kg	0.005	0.00088	*
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20	
Surrogate % Recovery	112.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

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Stuart G. Burtram
Department Supervisor

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Purgeable Aromatics
and
Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-20

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-69.7, 02/05/98 @ 10:50AM, 69.7

Sample ID: MW3-69.7
Sample Matrix: Soil

Date Collected: 02/05/98 @ 10:50AM
Date Extracted-8020: 02/18/98
Date Analyzed-8020: 02/18/98
Date Extracted-8015M(g): 02/18/98
Date Analyzed-8015M(g): 02/18/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.0025	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	108.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics
and
Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-21

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-74.5, 02/05/98 @ 10:52AM, 74.5

Sample ID: MW3-74.5
Sample Matrix: Soil

Date Collected: 02/05/98 @ 10:52AM
Date Extracted-8020: 02/19/98
Date Analyzed-8020: 02/19/98
Date Extracted-8015M(g): 02/19/98
Date Analyzed-8015M(g): 02/19/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.0020	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	102.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-22

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-79.5, 02/05/98 @ 10:59AM, 79.5

Sample ID: MW3-79.5
Sample Matrix: Soil

Date Collected: 02/05/98 @ 10:59AM
Date Extracted-8020: 02/19/98
Date Analyzed-8020: 02/19/98
Date Extracted-8015M(g): 02/19/98
Date Analyzed-8015M(g): 02/19/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	0.0011	mg/kg	0.002	0.00020 *
Toluene	0.0026	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	114.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-23

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-84.5, 02/05/98 @ 10:59AM, 84.5

Sample ID: MW3-84.5
Sample Matrix: Soil

Date Collected: 02/05/98 @ 10:59AM
Date Extracted-8020: 02/18/98
Date Analyzed-8020: 02/18/98
Date Extracted-8015M(g): 02/18/98
Date Analyzed-8015M(g): 02/18/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	107.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Stuart G. Buttram
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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-24

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-89.5, 02/05/98 @ 11:28AM, 89.5

Sample ID: MW3-89.5
Sample Matrix: Soil

Date Collected: 02/05/98 @ 11:28AM
Date Extracted-8020: 02/09/98
Date Analyzed-8020: 02/09/98
Date Extracted-8015M(g): 02/09/98
Date Analyzed-8015M(g): 02/09/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.0020	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	126.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-25

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-99.5, 02/05/98 @ 11:53AM, 99.5

Sample ID: MW3-99.5
Sample Matrix: Soil

Date Collected: 02/05/98 @ 11:53AM
Date Extracted-8020: 02/19/98
Date Analyzed-8020: 02/19/98
Date Extracted-8015M(g): 02/19/98
Date Analyzed-8015M(g): 02/19/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.0022	mg/kg	0.002	0.00029
Ethyl Benzene	0.0020	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	121.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-26

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-94.0, 02/05/98 @ 11:40AM, 94.0

Sample ID: MW3-94.0
Sample Matrix: Soil

Date Collected: 02/05/98 @ 11:40AM
Date Extracted-8020: 02/19/98
Date Analyzed-8020: 02/19/98
Date Extracted-8015M(g): 02/19/98
Date Analyzed-8015M(g): 02/19/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	0.0022	mg/kg	0.002	0.00020	
Toluene	0.0028	mg/kg	0.002	0.00029	
Ethyl Benzene	0.0017	mg/kg	0.002	0.00029	*
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001	
Total Xylenes	0.0033	mg/kg	0.005	0.00088	*
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20	
Surrogate % Recovery	95.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

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Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-27

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-104.5, 02/05/98 @ 11:58AM, 104.5

Sample ID: MW3-104.5
Sample Matrix: Soil

Date Collected: 02/05/98 @ 11:58AM
Date Extracted-8020: 02/19/98
Date Analyzed-8020: 02/19/98
Date Extracted-8015M(g): 02/19/98
Date Analyzed-8015M(g): 02/19/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.0017	mg/kg	0.002	0.00029 *
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	120.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 03/27/98
Date Received: 02/05/98
Laboratory No.: 98-01463-28 (Revised)

Project Number: SITE #4357 (76 STATIO
Sample ID: MW3-109.5
Sample Depth: 109.5
Sample Matrix: Soil

Date Collected: 02/05/98 @ 12:27PM
Date Extracted-8020: 02/19/98
Date Analyzed-8020: 02/19/98
Date Extracted-8015M(g): 02/19/98
Date Analyzed-8015M(g): 02/19/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.0039	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	0.0032	mg/kg	0.005	0.00088 *
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	105.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #2186, AZ License: AZ0345

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-29

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-114.5, 02/05/98 @ 12:38PM, 114.5

Sample ID: MW3-114.5
Sample Matrix: Soil

Date Collected: 02/05/98 @ 12:38PM
Date Extracted-8020: 02/19/98
Date Analyzed-8020: 02/19/98
Date Extracted-8015M(g): 02/19/98
Date Analyzed-8015M(g): 02/19/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.0015	mg/kg	0.002	0.00029 *
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	98.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-30

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-119.5, 02/05/98 @ 12:53PM, 119.5

Sample ID: MW3-119.5
Sample Matrix: Soil

Date Collected: 02/05/98 @ 12:53PM
Date Extracted-8020: 02/19/98
Date Analyzed-8020: 02/19/98
Date Extracted-8015M(g): 02/19/98
Date Analyzed-8015M(g): 02/19/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.0021	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	108.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics
and
Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-31

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-124.4, 02/05/98 @ 01:11PM, 124.4

Sample ID: MW3-124.4
Sample Matrix: Soil

Date Collected: 02/05/98 @ 01:11PM
Date Extracted-8020: 02/19/98
Date Analyzed-8020: 02/19/98
Date Extracted-8015M(g): 02/19/98
Date Analyzed-8015M(g): 02/19/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.0024	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	110.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-32

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-129.5, 02/05/98 @ 01:31PM, 129.5

Sample ID: MW3-129.5
Sample Matrix: Soil

Date Collected: 02/05/98 @ 01:31PM
Date Extracted-8020: 02/19/98
Date Analyzed-8020: 02/19/98
Date Extracted-8015M(g): 02/19/98
Date Analyzed-8015M(g): 02/19/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	123.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-33

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-135.0, 02/05/98 @ 02:22PM, 135.0

Sample ID: MW3-135.0
Sample Matrix: Soil

Date Collected: 02/05/98 @ 02:22PM
Date Extracted-8020: 02/19/98
Date Analyzed-8020: 02/19/98
Date Extracted-8015M(g): 02/19/98
Date Analyzed-8015M(g): 02/19/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.0021	mg/kg	0.002	0.00029
Ethyl Benzene	0.0010	mg/kg	0.002	0.00029 *
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	0.0031	mg/kg	0.005	0.00088 *
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	90.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

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Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-34

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-140.0, 02/05/98 @ 02:44PM, 140.0

Sample ID: MW3-140.0
Sample Matrix: Soil

Date Collected: 02/05/98 @ 02:44PM
Date Extracted-8020: 02/19/98
Date Analyzed-8020: 02/19/98
Date Extracted-8015M(g): 02/19/98
Date Analyzed-8015M(g): 02/19/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.0022	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	99.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/05/98
Laboratory No.: 98-01463-35

Sample Description: SITE #4357 (76 STATION TOSCO), MW3-144.75, 02/05/98 @ 03:06PM, 144.75

Sample ID: MW3-144.75
Sample Matrix: Soil

Date Collected: 02/05/98 @ 03:06PM
Date Extracted-8020: 02/19/98
Date Analyzed-8020: 02/19/98
Date Extracted-8015M(g): 02/19/98
Date Analyzed-8015M(g): 02/19/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	89.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/25/98
Date Received: 02/05/98
Laboratory No.: 98-01463-36

Sample Description: SITE #4357 (76 STATION TOSCO), MW3ER07, 02/05/98 @ 03:05PM

Sample ID: MW3ER07
Sample Matrix: Water

Date Collected: 02/05/98 @ 03:05PM
Date Extracted-8020: 02/19/98
Date Analyzed-8020: 02/19/98
Date Extracted-8015M(g): 02/19/98
Date Analyzed-8015M(g): 02/19/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	None Detected	µg/L	0.5	0.04	
Toluene	0.07	µg/L	0.5	0.05	*
Ethyl Benzene	None Detected	µg/L	0.5	0.07	
Methyl-t-butylether	None Detected	µg/L	2.	0.12	
Total Xylenes	None Detected	µg/L	1.	0.15	
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4	
Surrogate % Recovery	89.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 03/27/98
Date Received: 02/05/98
Laboratory No.: 98-01463-TB (Revised)

Project Number: SITE #4357 (76 STATIO
Sample ID: TB
Sample Matrix: Water

Date Collected: 02/05/98
Date Extracted-8020: 02/19/98
Date Analyzed-8020: 02/19/98
Date Extracted-8015M(g): 02/19/98
Date Analyzed-8015M(g): 02/19/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.5	0.04
Toluene	None Detected	µg/L	0.5	0.05
Ethyl Benzene	None Detected	µg/L	0.5	0.07
Methyl-t-butylether	None Detected	µg/L	2.	0.12
Total Xylenes	None Detected	µg/L	1.	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	85.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

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Stuart G. Buttram
Department Supervisor

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February 27, 1998

GIL FRY
ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718

Subject: Laboratory Submission No.: 98-01545
Samples Received: 02/09/98

Dear Mr. Fry:

The samples(s) listed on the Chain of Custody report were received by BC Laboratories, Inc. on 02/09/98.

Enclosed please find the analytical data for the testing requested. Results in RWQCB - L.A. Region format will follow under separate cover as soon as they are available.

If there are questions regarding this report please contact me at (805)327-4911, ext. 250.

Any unused sample will be stored on our premises for a minimum of 30 days (excluding bacteriologicals) at which time they will be disposed unless otherwise requested at the time of sample receipt. A disposal fee of $5 per sample may apply for solid sample matrices.

Please refer to submission number 98-01545 when calling for assistance.

Sincerely,

Cheryl Ferguson
Project Manager
BC Laboratories, Inc.

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98-1545

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Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station / Tosco
Address: 25A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Gil' Fry Sampler: Sonya	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours
CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water ☐ Waste Water ☐ Other

Per EPA protocol

Analyses Requested

NUMBERING CHECKED BY M

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015G/8260A 8020 MTBE								Comments
X	HB12A-5.0'	8/9/98 906	Soil	1	2x6 Brass	-1	X								Hand Auger HB12A@5.0
X	HB8-5.0'	2/9/98 1051	Soil			-2	X								Hand auger HB8@5.0'
X	HB8-10.0'	1119	Soil			-3	X								Hand auger HB8@10.0'
X	HB7-5.0	1212				-4	X								Hand auger HB7@5.0'
X	HB7-10.0	1232				-5	X								Hand auger HB7@10.0'
X	HB10-5.0	1433				-6	X								Hand auger HB10@5.0
X	HB10-10.0	1454				-7	X								Hand auger HB10@10'
+	HB9-5.0	1616				-8	X								Hand auger HB9@5'
+	HB9-10.0	1635				-9	X								Hand auger HB9@10.0'

Relinquished By: Sonya V. Lusiani	Date: 2/9/98	Time: 1707	Received By: [signature]	Date: 2-9-98	Time: 17:07
Relinquished By: [signature]	Date: 2-9-98	Time: 19:58	Received By: [signature]	Date: 2-9-98	Time: 20:00
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 1 Of 1

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved By: _____ Signature: _____ Company: _____

BC LABORATORIES INC. **SAMPLE RECEIPT FORM** Rev. No.4 1/7/98 Page ___ Of ___

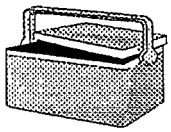
Submission #: 98-1545 **Project Code:**

SHIPPING INFORMATION	SHIPPING CONTAINER
Federal Express ☐ UPS ☐ Hand Delivery ☐	Ice Chest ☒ None ☐
BC Lab Field Service ☒ Other ☐ (Specify) _____	Box ☐ Other ☐ (Specify) _____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☐ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐



Ice Chest ID _____
Temperature: 2.7 °C
Thermometer ID: 17
Emissivity .90
Container Temp Blank-Pc

Ice Chest ID _____
Temperature: _____ °C
Thermometer ID: _____
Emissivity _____
Container _____

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL																								
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS																								
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE																								
PT NITROGEN FORMS																								
PT TOTAL SULFIDE																								
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
40ml VOA VIAL TRAVEL BLANK																								
40ml VOA VIAL																								
VOA SET (3 VIALS, 1TB)																								
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080																								
QT EPA 515.1/8150																								
QT EPA 525																								
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE	1	1	1	1	1	1	1	1	1															
PCB VIAL																								
PLASTIC BAG																								

Comments: _____

Completed by: Marie

[F:\WP80\LAB_DOCS\FORMS\SAMREC2.WPD]

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/25/98
Date Received: 02/09/98
Laboratory No.: 98-01545-1

Sample Description: (SITE 4357) 76 STATION/TOSCO: HB12A-5.0'

Sample ID: HB12A-5.0'
Sample Matrix: Soil

Date Collected: 02/09/98 @ 09:06AM
Date Extracted-8020: 02/20/98
Date Analyzed-8020: 02/20/98
Date Extracted-8015M(g): 02/20/98
Date Analyzed-8015M(g): 02/20/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.040	mg/kg	0.002	0.00029
Ethyl Benzene	0.12	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	0.33	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	42.	mg/kg	5.	0.20
Surrogate % Recovery	103.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Note: PQL's were raised due to high concentration of target analytes requiring sample dilution.
Sample chromatogram not typical of gasoline.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

4100 Atlas Ct. • Bakersfield, CA 93308 • (805) 327-4911 • FAX (805) 327-1918

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/09/98
Laboratory No.: 98-01545-2

Sample Description: (SITE 4357) 76 STATION/TOSCO: HB8-5.0'

Sample ID: HB8-5.0'
Sample Matrix: Soil

Date Collected: 02/09/98 @ 10:51AM
Date Extracted-8020: 02/19/98
Date Analyzed-8020: 02/19/98
Date Extracted-8015M(g): 02/19/98
Date Analyzed-8015M(g): 02/19/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	99.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics
and
Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/09/98
Laboratory No.: 98-01545-3

Sample Description: (SITE 4357) 76 STATION/TOSCO: HB8-10.0'

Sample ID: HB8-10.0'
Sample Matrix: Soil

Date Collected: 02/09/98 @ 11:19AM
Date Extracted-8020: 02/19/98
Date Analyzed-8020: 02/19/98
Date Extracted-8015M(g): 02/19/98
Date Analyzed-8015M(g): 02/19/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	0.0017	mg/kg	0.002	0.00029 *
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	102.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/09/98
Laboratory No.: 98-01545-4

Sample Description: (SITE 4357) 76 STATION/TOSCO: HB7-5.0'

Sample ID: HB7-5.0
Sample Matrix: Soil

Date Collected: 02/09/98 @ 12:12PM
Date Extracted-8020: 02/20/98
Date Analyzed-8020: 02/20/98
Date Extracted-8015M(g): 02/20/98
Date Analyzed-8015M(g): 02/20/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	87.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics
and
Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/09/98
Laboratory No.: 98-01545-5

Sample Description: (SITE 4357) 76 STATION/TOSCO: HB7-10.0'

Sample ID: HB7-10.0
Sample Matrix: Soil

Date Collected: 02/09/98 @ 12:32PM
Date Extracted-8020: 02/20/98
Date Analyzed-8020: 02/20/98
Date Extracted-8015M(g): 02/20/98
Date Analyzed-8015M(g): 02/20/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	114.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/09/98
Laboratory No.: 98-01545-6

Sample Description: (SITE 4357) 76 STATION/TOSCO: HB10-5.0'

Sample ID: HB10-5.0
Sample Matrix: Soil

Date Collected: 02/09/98 @ 02:33PM
Date Extracted-8020: 02/20/98
Date Analyzed-8020: 02/20/98
Date Extracted-8015M(g): 02/20/98
Date Analyzed-8015M(g): 02/20/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	87.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics
and
Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/09/98
Laboratory No.: 98-01545-7

Sample Description: (SITE 4357) 76 STATION/TOSCO: HB10-10.0'

Sample ID: HB10-10.0
Sample Matrix: Soil

Date Collected: 02/09/98 @ 02:54PM
Date Extracted-8020: 02/20/98
Date Analyzed-8020: 02/20/98
Date Extracted-8015M(g): 02/20/98
Date Analyzed-8015M(g): 02/20/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	mg/kg	0.002	0.00020
Toluene	None Detected	mg/kg	0.002	0.00029
Ethyl Benzene	None Detected	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	None Detected	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	None Detected	mg/kg	0.5	0.20
Surrogate % Recovery	83.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/09/98
Laboratory No.: 98-01545-8

Sample Description: (SITE 4357) 76 STATION/TOSCO: HB9-5.0'

Sample ID: HB9-5.0
Sample Matrix: Soil

Date Collected: 02/09/98 @ 04:16PM
Date Extracted-8020: 02/20/98
Date Analyzed-8020: 02/20/98
Date Extracted-8015M(g): 02/20/98
Date Analyzed-8015M(g): 02/20/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	0.0020	mg/kg	0.002	0.00020
Toluene	0.024	mg/kg	0.002	0.00029
Ethyl Benzene	0.11	mg/kg	0.002	0.00029
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001
Total Xylenes	0.22	mg/kg	0.005	0.00088
Total Petroleum Hydrocarbons (gas)	16.	mg/kg	5.	0.20
Surrogate % Recovery	124.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Note: PQL's were raised due to high concentration of target analytes requiring sample dilution.
Sample chromatogram not typical of gasoline.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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4100 Atlas Ct. • Bakersfield, CA 93308 • (805) 327-4911 • FAX (805) 327-1918

Purgeable Aromatics
and
Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/26/98
Date Received: 02/09/98
Laboratory No.: 98-01545-9

Sample Description: (SITE 4357) 76 STATION/TOSCO: HB9-10.0'

Sample ID: HB9-10.0
Sample Matrix: Soil

Date Collected: 02/09/98 @ 04:35PM
Date Extracted-8020: 02/20/98
Date Analyzed-8020: 02/20/98
Date Extracted-8015M(g): 02/20/98
Date Analyzed-8015M(g): 02/20/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	None Detected	mg/kg	0.002	0.00020	
Toluene	None Detected	mg/kg	0.002	0.00029	
Ethyl Benzene	0.0036	mg/kg	0.002	0.00029	
Methyl-t-butylether	None Detected	mg/kg	0.005	0.001	
Total Xylenes	0.014	mg/kg	0.005	0.00088	
Total Petroleum Hydrocarbons (gas)	0.39	mg/kg	0.5	0.20	*
Surrogate % Recovery	86.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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4100 Atlas Ct. • Bakersfield, CA 93308 • (805) 327-4911 • FAX (805) 327-1918

February 27, 1998

GIL FRY
ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718

Subject: Laboratory Submission No.: 98-01546
Samples Received: 02/09/98

Dear Mr. Fry:

The samples(s) listed on the Chain of Custody report were received by BC Laboratories, Inc. on 02/09/98.

Enclosed please find the analytical data for the testing requested. Results in RWQCB - L.A. Region format will follow under separate cover as soon as they are available.

If there are questions regarding this report please contact me at (805)327-4911, ext. 250.

Any unused sample will be stored on our premises for a minimum of 30 days (excluding bacteriologicals) at which time they will be disposed unless otherwise requested at the time of sample receipt. A disposal fee of $5 per sample may apply for solid sample matrices.

Please refer to submission number 98-01546 when calling for assistance.

Sincerely,

Cheryl Ferguson

Cheryl Ferguson
Project Manager
BC Laboratories, Inc.

All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.
4100 Atlas Ct. • Bakersfield, CA 93308 • (805) 327-4911 • FAX (805) 327-1918

4357 ~~30~~ 82 29

BC LABORATORIES, INC.

98-1546

LABORATORY
(805) 327-4911
FAX (805) 327-1918
4100 Atlas Ct.
Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

DISTRIBUTION SB

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station Tosco
Address: 25A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714	Site # 4357
Report To: Gil Fry Sampler: Sonya L	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours
CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water (Per EPA Protocol)
☐ Waste Water
☐ Other

Analyses Requested: 8015 G/8020 or 8260 MTBE

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015 G/8020 or 8260 MTBE	Comments
~~B6-98.75~~	~~2/6/98 851~~	~~Soil~~	~~2x3 1~~	~~2x3 Brass~~	~~82~~		~~Hold~~
X B7-24.25	2/6/98 1503	Soil	1	2x3 Brass	-1		Hold
X B7-29.5	1526	↓	↓	↓	-2		NUMBERING CHECKED BY [initials]
X B7-34.25	1544	↓	↓	↓	-3		↓
X B7-39.25	1605	↓	↓	↓	-4		↓
X B7-49.25 (49.5)	1700	↓	↓	2x3 ↓	-5		↓
X B7ER09	1712	water	3	40ml VOA	-6	X	Equipment Rinsate (CAR) NP012898
X B7FB09	1410	water	3	40ml VOA	-7	X	Field Blank NP012898
X B7TB09	1415	water	1	40ml VOA	-TB	X	Blind / Blind

Relinquished By: Sonya V Luisen	Date: 2/9/98	Time: 1712	Received By: Jerry Mitchell	Date: 2-9-98	Time: 17:12
Relinquished By: Jerry Mitchell	Date: 2-9-98	Time: 19:58	Received By: Mark Mowco	Date: 2-9-98	Time: 20:00
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 1 Of 1

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved By: _____ Signature: _____ Company: _____ Date: _____

BC LABORATORIES INC. **SAMPLE RECEIPT FORM** Rev. No.4 1/7/98 Page ___ Of ___

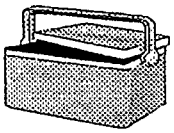
Submission #: 98-1544 Project Code:

SHIPPING INFORMATION	SHIPPING CONTAINER
Federal Express ☐ UPS ☐ Hand Delivery ☐	Ice Chest ☒ None ☐
Lab Field Service ☒ Other ☐ (Specify) _____	Box ☐ Other ☐ (Specify) _____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☐ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐



Ice Chest ID _____
Temperature: 2.7 °C
Thermometer ID: 17
Emissivity .90
Container Temp Blank-Pc

Ice Chest ID _____
Temperature: _____ °C
Thermometer ID: _____
Emissivity _____
Container _____

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL																								
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS																								
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE																								
PT NITROGEN FORMS																								
PT TOTAL SULFIDE																								
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
0ml PHENOLICS																								
ml VOA VIAL TRAVEL BLANK								1																
40ml VOA VIAL						3	3																	
VOA SET (3 VIALS, 1TB)																								
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080																								
QT EPA 515.1/8150																								
QT EPA 525																								
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE	1	1	1	1	1																			
PCB VIAL																								
PLASTIC BAG																								

Comments: _____

Completed by: [illegible]

[F:\WP80\LAB_DOCS\FORMS\SAMREC2.WPD]

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 05/15/98
Date Received: 02/09/98
Laboratory No.: 98-01546-6
(Revised)

Sample Description: (SITE #4357) 76 STATION TOSCO: B7 ER09

Project Number: (SITE #4357) 76 STATI
Sample ID: B7ER09
Sample Matrix: Water
Sample Collected By: SONYA LUISONI

Date Collected: 02/06/98 @ 05:12PM
Date Extracted-8020: 02/19/98
Date Analyzed-8020: 02/19/98
Date Extracted-8015M(g): 02/19/98
Date Analyzed-8015M(g): 02/19/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.5	0.04
Toluene	None Detected	µg/L	0.5	0.05
Ethyl Benzene	None Detected	µg/L	0.5	0.07
Methyl-t-butylether	None Detected	µg/L	2.	0.12
Total Xylenes	None Detected	µg/L	1.	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	93.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 05/15/98
Date Received: 02/09/98
Laboratory No.: 98-01546-7
(Revised)

Sample Description: (SITE #4357) 76 STATION TOSCO: B7 FB09

Project Number: (SITE #4357) 76 STATI
Sample ID: B7FB09
Sample Matrix: Water
Sample Collected By: SONYA LUISONI

Date Collected: 02/06/98 @ 02:10PM
Date Extracted-8020: 02/20/98
Date Analyzed-8020: 02/20/98
Date Extracted-8015M(g): 02/20/98
Date Analyzed-8015M(g): 02/20/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.5	0.04
Toluene	None Detected	µg/L	0.5	0.05
Ethyl Benzene	None Detected	µg/L	0.5	0.07
Methyl-t-butylether	None Detected	µg/L	2.	0.12
Total Xylenes	None Detected	µg/L	1.	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	90.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 05/15/98
Date Received: 02/09/98
Laboratory No.: 98-01546-TB (Revised)

Sample Description: (SITE #4357) 76 STATION TOSCO: B7 TB09

Project Number: (SITE #4357) 76 STATI
Sample ID: B7TB09
Sample Matrix: Blank Water
Sample Collected By: SONYA LUISONI

Date Collected: 02/06/98 @ 02:15PM
Date Extracted-8020: 02/20/98
Date Analyzed-8020: 02/20/98
Date Extracted-8015M(g): 02/20/98
Date Analyzed-8015M(g): 02/20/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.5	0.04
Toluene	None Detected	µg/L	0.5	0.05
Ethyl Benzene	None Detected	µg/L	0.5	0.07
Methyl-t-butylether	None Detected	µg/L	2.	0.12
Total Xylenes	None Detected	µg/L	1.	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	90.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES, INC.

March 09, 1998

GIL FRY
ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718

Subject: Laboratory Submission No.: 98-01427
Samples Received: 02/05/98

Dear Mr. Fry:

The samples(s) listed on the Chain of Custody report were received by BC Laboratories, Inc. on 02/05/98.

Enclosed please find the analytical data for the testing requested. Results in RWQCB - L.A. Region format will follow under separate cover as soon as they are available.

If there are questions regarding this report please contact me at (805)327-4911, ext. 250.

Any unused sample will be stored on our premises for a minimum of 30 days (excluding bacteriologicals) at which time they will be disposed unless otherwise requested at the time of sample receipt. A disposal fee of $5 per sample may apply for solid sample matrices.

Please refer to submission number 98-01427 when calling for assistance.

Sincerely,

Cheryl Ferguson
Project Manager
BC Laboratories, Inc.

4100 Atlas Ct. • Bakersfield, CA 93308 • (805) 327-4911 • FAX (805) 327-1918

98-1427 4357-27

BC LABORATORIES, INC.

LABORATORY
(805) 327-4911
FAX (805) 327-1918
4100 Atlas Ct.
Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

SB

Company Name: Alton Geoscience	Project Name: 76 Station Tosco
Address: 25A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Gil Fry Sampler:	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours
CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water ← Per EPA protocol
☐ Waste Water
☐ Other

Analyses Requested

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015 G/8000 or 8260 MTBE									Comments
x	B6-14.5	2/5/98 919	Soil	1	2x6 Brass	-1										hold
x	B6-19.5	938		1	2x6 Brass	-2										hold
x	B6-24.~~25~~ (24.5)	951		1	2x3 Brass	-3										hold
x	B6-29.75	1020		1	2x6 Brass	-4										hold
x	B6-34.5	1104		1	2x3 Brass	-5										hold
x	B6-39.~~25~~ (39.5)	1124		1	↓	-6										hold
x	B6-44.5	1145		1	↓	-7										hold
x	B6-48.25	1214		1	2x6 Brass	-8										hold
x	B6-58.75	1337		1	2x3 Brass	-9										hold

UMBERING
ED BY

Relinquished By: Sonya V. Lyseny	Date: 2/5/98	Time: 1653	Received By: [signature]	Date: 2-5-98	Time: 1653
Relinquished By: [signature]	Date: 2-5-98	Time: 2050	Received By: [signature]	Date: 2-5-98	Time: 20:00
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 1 Of 2

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approv[illegible]y: _____ Signature: _____ Company: _____ [illegible]: _____

016-1427 4357-2

BC LABORATORIES, INC.

LABORATORY
(805) 327-4911
FAX (805) 327-1918
4100 Atlas Ct.
Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station/TOSCO
Address: 25A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Gil Fry Sampler: Sonya Luisoni	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround Time: (Working Days) ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours

☐ Drinking Water ☐ Waste Water ☐ Other

Per EPA protocol

CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015/8020 Radon nitrate								Comments
~~MW~~ B6FB08	2/5/98 1545	water	3	VOA 40ml	-10	X								Field Blank NP022898
B6TB07	↓ 1603	water	1	VOA 40ml	-TB	X								Blind
B6ER08	↓ 1539	water	3	VOA 40 ml	-11	X								Equip Rinsate RIGLAR

SL

Relinquished By: Sonya V. Luisoni	Date: 2/5/98	Time: 1653	Received By: John M Kingston	Date: 2-5-98	Time: 1653
Relinquished By: John M Kingston	Date: 2-5-98	Time: 2050	Received By: Mark Monroe	Date: 2-5-98	Time: 20:00
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 2 Of 2

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved by: _____ Signature: _____ Company: _____ Date: _____

BC LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No.4 1/7/98 Page ___ Of ___

Submission # Project Code

984427 SHIPPING INFORMATION

Federal Express ☐ UPS ☐ Hand Delivery ☐

BC Lab Field Service ☒ Other ☐ (Specify) _____

SHIPPING CONTAINER

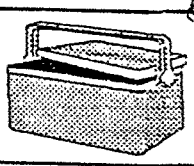
Ice Chest ☒ None ☐

Box ☐ Other ☐ (Specify) _____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☐ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐



Ice Chest ID _____
Temperature: 1.8 °C
Thermometer ID: 17
Emissivity .85
Container VOA

Ice Chest ID _____
Temperature: _____ °C
Thermometer ID: _____
Emissivity _____
Container _____

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10	11	TB	1	2	3	4	5	6	7	8	9	10	11
QT GENERAL MINERAL/ GENERAL PHYSICAL																							
PT PE UNPRESERVED																							
QT INORGANIC CHEMICAL METALS																							
PT INORGANIC CHEMICAL METALS																							
PT CYANIDE																							
PT NITROGEN FORMS																							
PT TOTAL SULFIDE																							
2oz. NITRATE / NITRITE																							
100ml TOTAL ORGANIC CARBON																							
QT TOX																							
PT CHEMICAL OXYGEN DEMAND																							
100ml PHENOLICS																							
40ml VOA VIAL TRAVEL BLANK												1											
40ml VOA VIAL									33														
VOA SET (3 VIALS, 1TB)																							
QT EPA 413.1, 413.2, 418.1																							
PT ODOR																							
RADIOLOGICAL																							
BACTERIOLOGICAL																							
PT EPA 504																							
QT EPA 508/608/8080																							
QT EPA 515.1/8150																							
QT EPA 525																							
QT EPA 525 TRAVEL BLANK																							
100ml EPA 547																							
100ml EPA 531.1																							
QT EPA 548																							
QT EPA 549																							
QT EPA 632																							
QT EPA 8015M																							
QT QA/QC																							
QT AMBER																							
8 OZ. JAR																							
32 OZ. JAR																							
SOIL SLEEVE																							
PCB VIAL																							
PLASTIC BAG																							

Comments: [illegible]

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 03/05/98
Date Received: 02/05/98
Laboratory No.: 98-01427-11

Sample Description: SITE #4357 (76 STATION TOSCO) B6ER08

Sample ID: B6ER08
Sample Matrix: WATER

Date Collected: 02/05/98 @ 03:39PM
Date Extracted-8020: 02/19/98
Date Analyzed-8020: 02/19/98
Date Extracted-8015M(g): 02/19/98
Date Analyzed-8015M(g): 02/19/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.5	0.04
Toluene	None Detected	µg/L	0.5	0.05
Ethyl Benzene	None Detected	µg/L	0.5	0.07
Methyl-t-butylether	None Detected	µg/L	2.	0.12
Total Xylenes	None Detected	µg/L	1.	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	89.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 03/05/98
Date Received: 02/05/98
Laboratory No.: 98-01427-10

Sample Description: SITE #4357 (76 STATION TOSCO) B6FB08

Sample ID: B6FB08
Sample Matrix: WATER

Date Collected: 02/05/98 @ 03:45PM
Date Extracted-8020: 02/19/98
Date Analyzed-8020: 02/19/98
Date Extracted-8015M(g): 02/19/98
Date Analyzed-8015M(g): 02/19/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.5	0.04
Toluene	None Detected	µg/L	0.5	0.05
Ethyl Benzene	None Detected	µg/L	0.5	0.07
Methyl-t-butylether	None Detected	µg/L	2.	0.12
Total Xylenes	None Detected	µg/L	1.	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	95.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 03/05/98
Date Received: 02/05/98
Laboratory No.: 98-01427-TB

Sample Description: SITE #4357 (76 STATION TOSCO) B6TB07

Sample ID: B6TB07
Sample Matrix: WATER

Date Collected: 02/05/98 @ 04:03PM
Date Extracted-8020: 02/19/98
Date Analyzed-8020: 02/19/98
Date Extracted-8015M(g): 02/19/98
Date Analyzed-8015M(g): 02/19/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.5	0.04
Toluene	None Detected	µg/L	0.5	0.05
Ethyl Benzene	None Detected	µg/L	0.5	0.07
Methyl-t-butylether	None Detected	µg/L	2.	0.12
Total Xylenes	None Detected	µg/L	1.	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	87.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES, INC.

March 09, 1998

GIL FRY
ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718

Subject: Laboratory Submission No.: 98-01544
Samples Received: 02/09/98

Dear Mr. Fry:

The samples(s) listed on the Chain of Custody report were received by BC Laboratories, Inc. on 02/09/98.

Enclosed please find the analytical data for the testing requested. Results in RWQCB - L.A. Region format will follow under separate cover as soon as they are available.

If there are questions regarding this report please contact me at (805)327-4911, ext. 250.

Any unused sample will be stored on our premises for a minimum of 30 days (excluding bacteriologicals) at which time they will be disposed unless otherwise requested at the time of sample receipt. A disposal fee of $5 per sample may apply for solid sample matrices.

Please refer to submission number 98-01544 when calling for assistance.

Sincerely,

Cheryl Ferguson
Project Manager
BC Laboratories, Inc.

4100 Atlas Ct. • Bakersfield, CA 93308 • (805) 327-4911 • FAX (805) 327-1918

4357 -36

BC LABORATORIES, INC.

98-1544

LABORATORY
(805) 327-4911
FAX (805) 327-1918
4100 Atlas Ct.
Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

DISTRIBUTION: B

Company Name: Alton Geoscience	Project Name: 76 Station/Fosco
Address: 25A Technology Drive	Project Manager: Mike Vanden Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Gil Fry Sampler: Sonya L.	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours
CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water EPA protocol
☐ Waste Water
☐ Other

Analyses Requested

NUMBERING CHECKED BY: M.

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015G/8260 8020 MTBE								Comments
X	B5-14.75	2/9/98 804	Soil	1	2x3 Brass	-1									Hold
X	B5-24.75	814			2x3 Brass	-2									hold
X	B5-29.5	821				-3									hold
X	~~B5-35.0~~	~~832~~													~~hold~~ Split w/ Ben Castellano of E+E
X	B5-39.75	846				-4									hold
	~~B5-44.75~~	~~851~~				~~R~~									~~hold~~ Split w/ Robert Terbors ROMEX
X	B5FB11	1135	water	3 ~~1135~~	40ml VOA	-5	X								Field Blank NP Lot# NP020498
X	HB7ER12	1138		3 ~~1138~~		-6	X								Equip Rinse Hand auger NP020498
X	B5TB11	1140		1		-TB	X								Blind

Relinquished By: Sonya V. Linsom	Date: 2/9/98	Time: 1709	Received By: Jerry Mitchell	Date: 2-9-98	Time: 12:09
Relinquished By: Jerry Mitchell	Date: 2-9-98	Time: 19:58	Received By: Mark Monroe	Date: 2-9-98	Time: 20:00
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 1 Of 2

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved by: _____ Signature: _____ Company: _____ Date: _____

4357-36

BC LABORATORIES, INC.

98-1544

LABORATORY
(805) 327-4911
FAX (805) 327-1918
4100 Atlas Ct.
Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station / Tosco
Address: 25A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 7530111	Site # 4357
Report To: Gil Fry Sampler: Sonya	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours
CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water
☐ Waste Water
☐ Other

EPA protocol

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015G / 8260A MTBE									Comments
x B5-109.75	2/9/98 1227	Soil	1	2x3 Brass	-7										hold
B5-ER11	2/9/98 1130	Water	3	VOA	-8										

SL

Relinquished By: Sonya V. Luisoni	Date: 2/9/98	Time: 1709	Received By: Jerry Mitchell	Date: 2-9-98	Time: 17:09
Relinquished By: Jerry Mitchell	Date: 2-9-98	Time: 19:58	Received By: Mark Munroe	Date: 2-9-98	Time: 20:00
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 2 Of 2

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved By: _____ Signature: _____ Company: _____ Date: _____

BC LABORATORIES INC. **SAMPLE RECEIPT FORM** Rev. No.4 1/7/98 Page ___ Of ___

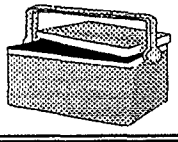
Submission #: 98-1544 **Project Code:**

SHIPPING INFORMATION	SHIPPING CONTAINER
Federal Express ☐ UPS ☐ Hand Delivery ☐	Ice Chest ☒ None ☐
BC Lab Field Service ☒ Other ☐ (Specify) _____	Box ☐ Other ☐ (Specify) _____

Refrigerant: Ice ☐ Blue Ice ☒ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☐ Comments:

All samples received? ~~Yes ☐~~ No ☐ All samples containers intact? ~~Yes ☐~~ No ☐ Description(s) match COC? ~~Yes ☐~~ No ☐



Ice Chest ID		Ice Chest ID	
Temperature:	5.8 °C	Temperature:	°C
Thermometer ID:	17	Thermometer ID:	
Emissivity	.85	Emissivity	
Container	QT Amber	Container	

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	TB	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL																								
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS																								
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE																								
PT NITROGEN FORMS																								
PT TOTAL SULFIDE																								
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
40ml VOA VIAL TRAVEL BLANK									1															
40ml VOA VIAL					3	3		3																
VOA SET (3 VIALS, 1TB)																								
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080																								
QT EPA 515.1/8150																								
QT EPA 525																								
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE	1	1	1	1			1																	
PCB VIAL																								
PLASTIC BAG																								

Comments:

Completed by: [illegible]

[F:\WP80\LAB_DOCS\FORMS\SAMREC2.WPD]

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/28/98
Date Received: 02/09/98
Laboratory No.: 98-01544-5

Sample Description: (SITE #4357) 76 STATION/ TOSCO: B5 FB11

Sample ID: B5FB11
Sample Matrix: Water

Date Collected: 02/09/98 @ 11:35AM
Date Extracted-8020: 02/21/98
Date Analyzed-8020: 02/21/98
Date Extracted-8015M(g): 02/21/98
Date Analyzed-8015M(g): 02/21/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	None Detected	µg/L	0.5	0.04	
Toluene	0.12	µg/L	0.5	0.05	*
Ethyl Benzene	None Detected	µg/L	0.5	0.07	
Methyl-t-butylether	None Detected	µg/L	2.	0.12	
Total Xylenes	None Detected	µg/L	1.	0.15	
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4	
Surrogate % Recovery	101.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/28/98
Date Received: 02/09/98
Laboratory No.: 98-01544-8

Sample Description: (SITE #4357) 76 STATION/ TOSCO: B5 ER11

Sample ID: B5ER11
Sample Matrix: Water

Date Collected: 02/09/98 @ 11:30AM
Date Extracted-8020: 02/21/98
Date Analyzed-8020: 02/21/98
Date Extracted-8015M(g): 02/21/98
Date Analyzed-8015M(g): 02/21/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	None Detected	µg/L	0.5	0.04	
Toluene	0.14	µg/L	0.5	0.05	*
Ethyl Benzene	None Detected	µg/L	0.5	0.07	
Methyl-t-butylether	None Detected	µg/L	2.	0.12	
Total Xylenes	None Detected	µg/L	1.	0.15	
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4	
Surrogate % Recovery	79.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/28/98
Date Received: 02/09/98
Laboratory No.: 98-01544-TB

Sample Description: (SITE #4357) 76 STATION/ TOSCO: B5 TB11

Sample ID: B5TB11
Sample Matrix: Water

Date Collected: 02/09/98 @ 11:40AM
Date Extracted-8020: 02/21/98
Date Analyzed-8020: 02/21/98
Date Extracted-8015M(g): 02/21/98
Date Analyzed-8015M(g): 02/21/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.5	0.04
Toluene	None Detected	µg/L	0.5	0.05
Ethyl Benzene	None Detected	µg/L	0.5	0.07
Methyl-t-butylether	None Detected	µg/L	2.	0.12
Total Xylenes	None Detected	µg/L	1.	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	70.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/28/98
Date Received: 02/09/98
Laboratory No.: 98-01544-6

Sample Description: (SITE #4357) 76 STATION/ TOSCO: HB7ER12

Sample ID: HB7ER12
Sample Matrix: Water

Date Collected: 02/09/98 @ 11:38AM
Date Extracted-8020: 02/21/98
Date Analyzed-8020: 02/21/98
Date Extracted-8015M(g): 02/21/98
Date Analyzed-8015M(g): 02/21/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	None Detected	µg/L	0.5	0.04	
Toluene	0.06	µg/L	0.5	0.05	*
Ethyl Benzene	None Detected	µg/L	0.5	0.07	
Methyl-t-butylether	None Detected	µg/L	2.	0.12	
Total Xylenes	None Detected	µg/L	1.	0.15	
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4	
Surrogate % Recovery	92.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC LABORATORIES, INC.

March 09, 1998

GIL FRY
ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718

Subject: Laboratory Submission No.: 98-01547
Samples Received: 02/09/98

Dear Mr. Fry:

The samples(s) listed on the Chain of Custody report were received by BC Laboratories, Inc. on 02/09/98.

Enclosed please find the analytical data for the testing requested. Results in RWQCB - L.A. Region format will follow under separate cover as soon as they are available.

If there are questions regarding this report please contact me at (805)327-4911, ext. 250.

Any unused sample will be stored on our premises for a minimum of 30 days (excluding bacteriologicals) at which time they will be disposed unless otherwise requested at the time of sample receipt. A disposal fee of $5 per sample may apply for solid sample matrices.

Please refer to submission number 98-01547 when calling for assistance.

Sincerely,

Cheryl Ferguson

Cheryl Ferguson
Project Manager
BC Laboratories, Inc.

4100 Atlas Ct. • Bakersfield, CA 93308 • (805) 327-4911 • FAX (805) 327-1918

BC LABORATORIES, INC.

98-1547

LABORATORY
(805) 327-4911
FAX (805) 327-1918
4100 Atlas Ct.
Bakersfield, CA 93308

SERVICE CENTER
(714) 449-7843
FAX (714) 449-9685
P.O.BOX 5387
Fullerton, CA 92635

4357 - 33

DISTRIBUTION

Chain of Custody Record

Company Name: Alton Geoscience	Project Name: 76 Station Tosco
Address: 25A Technology Drive	Project Manager: Mike Vander Plaats
City: Irvine State: CA Zip Code: 92618	AFE #
Telephone: 714 753 0101 FAX: 714 753 0111	Site # 4357
Report To: Gil Fry Sampler: Sonya	QC Data: ☐ Level (standard) ☐ Level I ☐ Level II ☐ Level III

Turnaround ☐ 10 Days (Standard) ☐ 5 Days ☐ 3 Days
Time: (Working Days) ☐ 2 Days ☐ 1 Day ☐ 2-8 Hours
CODE: ☐ Misc. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water Per EPA protocol
☐ Waste Water
☐ Other

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	8015/8260A MTBE								Comments
X B7-54.5	2/7/98 748	soil	1	2x3 Brass	-1									hold
X B7-63.75	825	↓	↓	↓	-2									↓
X B7FB10	900	water	3	40ml VOA	-3	X								Field Blank NP water NP020498
X B7TB10	905	water	1	40ml VOA	-4 TB	X								Blind
X B7ER10	1200	water	3	40ml VOA	-5	X								Equip Rinsate B7 NP020498
X B7-89.75	1024	soil	1	2x3 Brass	-6									hold
	SL				SL									

NUMBERING CHECKED BY [initials]

Relinquished By: Sonya V. Fusioni	Date: 2/9/98	Time: 1712	Received By: [signature]	Date: 2-9-98	Time: 17:12
Relinquished By: [signature]	Date: 2-9-98	Time: 19:58	Received By: [signature]	Date: 2-9-98	Time: 20:00
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received In Good Condition? ☐ Yes ☐ No Samples On Ice ☐ Yes ☐ No Method Of Shipment _____ Page 1 Of 1

To be completed upon receipt of report:
1) Were analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued in the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____
Approved by: _____ Signature: _____ Company: _____ Date: _____

BC LABORATORIES INC. **SAMPLE RECEIPT FORM** Rev. No.4 1/7/98 Page ___ Of ___

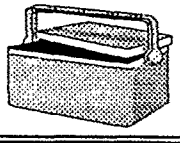
Submission #: 98-1547 Project Code:

SHIPPING INFORMATION	SHIPPING CONTAINER
Federal Express ☐ UPS ☐ Hand Delivery ☐	Ice Chest ☒ None ☐
BC Lab Field Service ☒ Other ☐ (Specify) _____	Box ☐ Other ☐ (Specify) _____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☐ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐



Ice Chest ID _____	Ice Chest ID _____
Temperature: 2.7 °C	Temperature: _____ °C
Thermometer ID: 17	Thermometer ID: _____
Emissivity .90	Emissivity _____
Container Temp Blank-Pc	Container _____

SAMPLE CONTAINERS	SAMPLE NUMBERS																							
			TB																					
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL																								
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS																								
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE																								
PT NITROGEN FORMS																								
PT TOTAL SULFIDE																								
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
40ml VOA VIAL TRAVEL BLANK				1																				
40ml VOA VIAL			3		3																			
VOA SET (3 VIALS, 1TB)																								
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080																								
QT EPA 515.1/8150																								
QT EPA 525																								
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT OA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE	1	1																						
PCB VIAL																								
PLASTIC BAG																								

Comments:

Completed by: Mario

(F:\WP80\LAB_DOCS\FORMS\SAMREC2.WPD)

Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/28/98
Date Received: 02/09/98
Laboratory No.: 98-01547-5

Sample Description: (SITE #4357) 76 STATION TOSCO: B7 ER10

Sample ID: B7ER10
Sample Matrix: Water

Date Collected: 02/07/98 @ 12:00PM
Date Extracted-8020: 02/20/98
Date Analyzed-8020: 02/20/98
Date Extracted-8015M(g): 02/20/98
Date Analyzed-8015M(g): 02/20/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit	
Benzene	None Detected	µg/L	0.5	0.04	
Toluene	0.07	µg/L	0.5	0.05	*
Ethyl Benzene	None Detected	µg/L	0.5	0.07	
Methyl-t-butylether	None Detected	µg/L	2.	0.12	
Total Xylenes	None Detected	µg/L	1.	0.15	
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4	
Surrogate % Recovery	97.	%	70-130		

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Flag Explanations:
* = Result is estimated, value is between MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics
and
Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/28/98
Date Received: 02/09/98
Laboratory No.: 98-01547-3

Sample Description: (SITE #4357) 76 STATION TOSCO: B7 FB10

Sample ID: B7FB10
Sample Matrix: Water

Date Collected: 02/07/98 @ 09:00AM
Date Extracted-8020: 02/20/98
Date Analyzed-8020: 02/20/98
Date Extracted-8015M(g): 02/20/98
Date Analyzed-8015M(g): 02/20/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.5	0.04
Toluene	None Detected	µg/L	0.5	0.05
Ethyl Benzene	None Detected	µg/L	0.5	0.07
Methyl-t-butylether	None Detected	µg/L	2.	0.12
Total Xylenes	None Detected	µg/L	1.	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	98.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Purgeable Aromatics and Total Petroleum Hydrocarbons

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 02/28/98
Date Received: 02/09/98
Laboratory No.: 98-01547-4TB

Sample Description: (SITE #4357) 76 STATION TOSCO: B7 TB10

Sample ID: B7TB10
Sample Matrix: Blank Water

Date Collected: 02/07/98 @ 09:06AM
Date Extracted-8020: 02/20/98
Date Analyzed-8020: 02/20/98
Date Extracted-8015M(g): 02/20/98
Date Analyzed-8015M(g): 02/20/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	Method Detection Limit
Benzene	None Detected	µg/L	0.5	0.04
Toluene	None Detected	µg/L	0.5	0.05
Ethyl Benzene	None Detected	µg/L	0.5	0.07
Methyl-t-butylether	None Detected	µg/L	2.	0.12
Total Xylenes	None Detected	µg/L	1.	0.15
Total Petroleum Hydrocarbons (gas)	None Detected	µg/L	50.	5.4
Surrogate % Recovery	103.	%	70-130	

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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4100 Atlas Ct. • Bakersfield, CA 93308 • (805) 327-4911 • FAX (805) 327-1918

February 27, 1998

GIL FRY
ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92618-2302

Subject: Laboratory Submission No.: 98-01956
Samples Received: 02/18/98

Dear Mr. Fry:

The samples(s) listed on the Chain of Custody report were received by BC Laboratories, Inc. on 02/18/98.

Enclosed please find the analytical data for the testing requested. Results in RWQCB - L.A. Region format will follow under separate cover as soon as they are available.

If there are questions regarding this report please contact me at (805)327-4911, ext. 250.

Any unused sample will be stored on our premises for a minimum of 30 days (excluding bacteriologicals) at which time they will be disposed unless otherwise requested at the time of sample receipt. A disposal fee of $5 per sample may apply for solid sample matrices.

Please refer to submission number 98-01956 when calling for assistance.

Sincerely,

Cheryl Ferguson
Project Manager
BC Laboratories, Inc.

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CHAIN OF CUSTODY

BC LABORATORIES, INC.
4100 Atlas Court • Bakersfield, CA 93308
(805) 327-4911 • FAX (805) 327-1918

Report To:

Name: Alton Geoscience
Address: 25A Technology Dr.
City: IRVINE
State: CA Zip: 92618
Attn: Gil Fry
Phone: 753-0101

Project: Unocal #4357
Project #: A-2880
Sampler Name:
Other: (Mike Vanderplaats)
98-1956

Lab#	Sample Description	Date & Time Sampled	Matrix (S) Soil (SL) Sludge (W) Water (Other)	8260 (mTBE only)	Samples rec. cold (y/n)	Custody Seals (y/n)	Results Needed by: Date & Time	Number and Container Type
1	B5-25.0 25	2/9/98	S	X				
2	B5-30.0	↓	S	X				
3	B5-35.5		S	X				

Analysis Requested

DISTRIBUTION

NUMBERING CHECKED BY

Comment:
*

Billing Info:
Name: ~~UAO~~ TOSCO
Address
City State
Attention:
Time:
Miles:
P.O.#

Sample Disposal
☐ BC Disposal @ 5.00 ea.
☐ Return to client

Relinquished by: (Signature)	Received by: (Signature)	Date: Time:
	[signature]	2/18/98 12:15
[signature]	[signature]	2-18-98 1525
[signature]	[signature]	2-18-98 18:00

Submission #: 98-1956 Project Code:

SHIPPING INFORMATION

Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify) _____

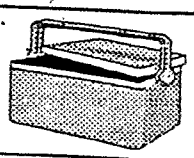
SHIPPING CONTAINER

Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify) _____

Refrigerant: Ice ☐ Blue Ice ☐ None ☐ Other ☐ Comments: To little ice

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☐ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐



Ice Chest ID _____
Temperature: 9.8 °C
Thermometer ID: 17
Emissivity .85
Container Vou

Ice Chest ID _____
Temperature: _____ °C
Thermometer ID: _____
Emissivity _____
Container _____

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL																								
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS																								
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE																								
PT NITROGEN FORMS																								
PT TOTAL SULFIDE																								
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
40ml VOA VIAL TRAVEL BLANK																								
40ml VOA VIAL																								
VOA SET (3 VIALS, 1TB)																								
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080																								
QT EPA 515.1/8150																								
QT EPA 525																								
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE	(	(	)																					
PCB VIAL																								
PLASTIC BAG																								

Comments:

Completed by: [signature]

[F:\WP80\LAB_DOCS\FORMS\SAMREC2.WPD]

BC LABORATORIES

Volatile Organic Analysis
(EPA Method 8260)

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92618-2302
Attn: GIL FRY 714-753-0101

Date Reported: 03/30/98
Date Received: 02/18/98
Laboratory No.: 98-01956-1
(Revised)

Project Number: SITE #4357 (A-2880)
Sample ID: B5-25.25
Sample Depth: 25.25
Sample Matrix: Soil

Date Collected: 02/09/98
Date Extracted: 02/23/98
Date Analyzed: 02/23/98
Dilution Used: 1

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level
Methyl-t-butylether	None Detected	mg/kg	0.005	0.0025

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	87.	70-121
Toluene-d8	93.	81-117
4-Bromofluorobenzene	84.	74-121

California D.O.H.S. Cert. #1186, AZ License: AZ0345

CERTIFIED COPY

SIGNATURE 3/30/98 DATE

Stuart G. Buttram
Department Supervisor

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4100 Atlas Ct. · Bakersfield, CA 93308 · (805) 327-4911 · FAX (805) 327-1918

BC LABORATORIES

Volatile Organic Analysis
(EPA Method 8260)

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92618-2302
Attn: GIL FRY 714-753-0101

Date Reported: 03/30/98
Date Received: 02/18/98
Laboratory No.: 98-01956-2
(Revised)

Project Number: SITE #4357 (A-2880)
Sample ID: B5-30.0
Sample Depth: 30.0
Sample Matrix: Soil

Date Collected: 02/09/98
Date Extracted: 02/23/98
Date Analyzed: 02/23/98
Dilution Used: 1

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level
Methyl-t-butylether	0.024	mg/kg	0.005	0.0025

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	88.	70-121
Toluene-d8	95.	81-117
4-Bromofluorobenzene	92.	74-121

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BC LABORATORIES

Volatile Organic Analysis
(EPA Method 8260)

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92618-2302
Attn: GIL FRY 714-753-0101

Date Reported: 03/30/98
Date Received: 02/18/98
Laboratory No.: 98-01956-3
(Revised)

Project Number: SITE #4357 (A-2880)
Sample ID: B5-35.5
Sample Depth: 35.5
Sample Matrix: Soil

Date Collected: 02/09/98
Date Extracted: 02/23/98
Date Analyzed: 02/23/98
Dilution Used: 1

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level
Methyl-t-butylether	0.012	mg/kg	0.005	0.0025

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	86.	70-121
Toluene-d8	100.	81-117
4-Bromofluorobenzene	86.	74-121

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BC LABORATORIES

Volatile Organic Analysis
(EPA Method 8260)

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 03/30/98
Date Received: 02/04/98
Laboratory No.: 98-01368-1
(Revised)

Project Number: UNOCAL #4357 (A-2871)
Sample ID: B8-6.5
Sample Depth: 6.5
Sample Matrix: Soil

Date Collected: 01/29/98
Date Extracted: 02/10/98
Date Analyzed: 02/10/98

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level
Methyl-t-butylether	None Detected	mg/kg	0.005	0.0025

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	99.	70-121
Toluene-d8	93.	81-117
4-Bromofluorobenzene	82.	74-121

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Department Supervisor

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BC LABORATORIES

Volatile Organic Analysis
(EPA Method 8260)

ALTON GEOSCIENCE
25 A TECHNOLOGY DRIVE
IRVINE, CA 92718
Attn: GIL FRY 714-753-0101

Date Reported: 03/30/98
Date Received: 02/04/98
Laboratory No.: 98-01368-2
(Revised)

Project Number: UNOCAL #4357 (A-2871)
Sample ID: B8-114.75
Sample Depth: 114.75
Sample Matrix: Soil

Date Collected: 01/29/98
Date Extracted: 02/10/98
Date Analyzed: 02/10/98
Dilution Used: 1

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level
Methyl-t-butylether	None Detected	mg/kg	0.005	0.0025

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	92.	70-121
Toluene-d8	98.	81-117
4-Bromofluorobenzene	96.	74-121

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Department Supervisor

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Del Mar Analytical

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16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-3401

Alton Geoscience	Client Project ID: 200368	Sampled:	Feb 26, 1998
25A Technology Drive	TOSCO 4357	Received:	Feb 26, 1998
Irvine, CA 92618	Sample Descript: Water, MW-1	Extracted:	Feb 27, 1998
Attention: Gil Fry	Lab Number: HB02913	Analyzed:	Feb 27, 1998
	QA Batch: HB27152W	Revised:	Mar 10, 1998

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Analyte	Estimated* Quantitation Limit µg/L (ppb)	Method** Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Benzene	0.30	0.032	0.18***
Ethylbenzene	0.30	0.025	< MDL
Toluene	0.30	0.031	< MDL
o-Xylene	0.20	0.032	< MDL
m,p-Xylenes	0.40	0.077	< MDL
Methyl tertiary-Butyl Ether	10	0.48	< MDL
TPH	50	12	< MDL

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.

* Estimated Quantitation Limit is equal to the lowest non-zero calibration standard used for the analysis.

** Method Detection Limit (MDL) is the detection limit statistically derived using the EPA prescribed replicate procedures published in 40 CFR, Part 136.

*** Estimated Concentration

DEL MAR ANALYTICAL (ELAP #1197)

Pat Abe
Project Manager

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-3401

Alton Geoscience	Client Project ID: 200368	Sampled:	Feb 26, 1998
25A Technology Drive	TOSCO 4357	Received:	Feb 26, 1998
Irvine, CA 92618	Sample Descript: Water, MW-2	Extracted:	Feb 27, 1998
Attention: Gil Fry	Lab Number: HB02914	Analyzed:	Feb 27, 1998
	QA Batch: HB27152W	Revised:	Mar 10, 1998

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Analyte	Estimated* Quantitation Limit µg/L (ppb)	Method** Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Benzene	0.30	0.032	< MDL
Ethylbenzene	0.30	0.025	< MDL
Toluene	0.30	0.031	< MDL
o-Xylene	0.20	0.032	< MDL
m,p-Xylenes	0.40	0.077	< MDL
Methyl tertiary-Butyl Ether	10	0.48	< MDL
TPH	50	12	< MDL

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.

* Estimated Quantitation Limit is equal to the lowest non-zero calibration standard used for the analysis.

** Method Detection Limit (MDL) is the detection limit statistically derived using the EPA prescribed replicate procedures published in 40 CFR, Part 136.

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Pat Abe
Project Manager

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-3401

Alton Geoscience	Client Project ID: 200368	Sampled:	Feb 26, 1998
25A Technology Drive	TOSCO 4357	Received:	Feb 26, 1998
Irvine, CA 92618	Sample Descript: Water, MW-3	Extracted:	Feb 27, 1998
Attention: Gil Fry	Lab Number: HB02915	Analyzed:	Feb 27, 1998
	QA Batch: HB27152W	Revised:	Mar 10, 1998

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Analyte	Estimated* Quantitation Limit µg/L (ppb)	Method** Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Benzene	0.30	0.032	0.12***
Ethylbenzene	0.30	0.025	< MDL
Toluene	0.30	0.031	0.15***
o-Xylene	0.20	0.032	0.35
m,p-Xylenes	0.40	0.077	< MDL
Methyl tertiary-Butyl Ether	10	0.48	< MDL
TPH	50	12	13***

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.

* Estimated Quantitation Limit is equal to the lowest non-zero calibration standard used for the analysis.

** Method Detection Limit (MDL) is the detection limit statistically derived using the EPA prescribed replicate procedures published in 40 CFR, Part 136.

*** Estimated Concentration

DEL MAR ANALYTICAL (ELAP #1197)

Pat Abe
Project Manager

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Alton Geoscience
25A Technology Drive
Irvine, CA 92618
Attention: Gil Fry

Method Blank

QA Batch: HB27152W

Extracted: Feb 27, 1998
Analyzed: Feb 27, 1998
Revised: Mar 10, 1998

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Analyte	Estimated* Quantitation Limit µg/L (ppb)	Method** Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Benzene	0.30	0.032	< MDL
Ethylbenzene	0.30	0.025	< MDL
Toluene	0.30	0.031	< MDL
o-Xylene	0.20	0.032	< MDL
m,p-Xylenes	0.40	0.077	< MDL
Methyl tertiary-Butyl Ether	10	0.48	< MDL
TPH	50	12	< MDL

* Estimated Quantitation Limit is equal to the lowest non-zero calibration standard used for the analysis.

** Method Detection Limit (MDL) is the detection limit statistically derived using the EPA prescribed replicate procedures published in 40 CFR, Part 136.

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Pat Abe
Project Manager

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MS/MSD DATA REPORT

Date: 02/27/98 **EPA Method 8015/8020**

Sample #: HB02915 Matrix: Water

Batch #: HB27152W

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	Mean PR	Acceptance Limits	
	µg/L	µg/L	µg/L	µg/L	%	%	%	%	RPD	Mean PR
TPH	13	220	233	187	100	79	22	* 89	≤20	65 - 135
Benzene	0.12	20	17	17	84	85	0.86	84	≤20	65 - 135
Toluene	0.15	20	19	17	93	84	9.3	88	≤20	65 - 135
Ethylbenzene	0	20	18	18	91	89	2.0	90	≤20	65 - 135
Xylenes	0.35	60	58	55	97	91	5.9	94	≤20	65 - 135
MTBE	0	40	36	41	91	102	12	96	≤20	65 - 135

* Refer to LCS for Batch Validation

Definition of Terms

R1..... Result of Sample Analysis
Sp..... Spike Concentration added to sample
MS..... Matrix Spike Result
MSD..... Matrix Spike Duplicate Result
PR1..... Percent Recovery of MS; ((MS-R1)/SP) X 100
PR2..... Percent Recovery of MSD; ((MSD-R1)/SP) X 100
RPD..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2) X 100
Mean PR..... Mean Percent Recovery
Acceptance Limits..... Determined by in-house Control Charts

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LCS DATA REPORT

EPA Method 8015/8020

Date: 02/27/98

Batch #: HB27152W

Analyte	Spike Conc. ppb	Result ppb	% Recovery	ACP
TPH	220	190	88	85 - 115 %
Benzene	20	19	96	85 - 115 %
Toluene	20	19	94	85 - 115 %
Ethylbenzene	20	20	101	85 - 115 %
Xylenes	60	61	101	85 - 115 %
MTBE	40	44	111	85 - 115 %

Definition of Terms

LCS ..... Laboratory Control Sample
Spike Conc ..... Concentration of spike added to blank
Result ..... Result of Laboratory Control Sample Analysis
%Recovery ..... Percent Recovery of LCS; ((Result - Spike Conc.) / Spike Conc.) X 100
ACP ..... Acceptance Limits for Percent Recovery
TPH ..... Total Petroleum Hydrocarbons

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50255

CHAIN OF CUSTODY FORM

Quote No.: _____ Page: 1 of 1

Client Name: ALTON GEOSCIENCE	P.O./Project Number: 200368 UNOCAL 4357
Address: 25A TECHNOLOGY DR.	Project Name: 11280 NATIONAL BLVD. LA
City: IRVINE State: CA. Zip: 92718	Project Manager:
Tel: 753-0101 Fax.: 753-0111	Sampler(s) (signature): [signature]

Sample I.D.	Matrix	Date Sampled	Time	Preservation	Number of Containers	Type of Containers	8015 (Gas) [X] 8020 (BTEX) [X] SB2/26/98 MTBE (8020) [X] 8015/8020/MTBE [ ]	8015 (Diesel) [ ] simulated distillation [ ] fuel fingerprint [ ]	Oil & Grease - EPA 413.2	TRPH - EPA 418.1	EPA 8010 [ ] EPA 8010/8020 [ ]	EPA 8270	Title 22 Metals EPA 6010/7000 [ ] +Cr VI [ ]	EPA 8260 [ ] + Oxygenates [ ] +MTBE [ ] MTBE only [ ]	Lead	pH	8260 (~~[illegible]~~ OXYGENATES)	DISSOLVED METALS	ALK, SPEC. COND, PH, CL	NO3, SO4	TOT PHOSPHORUS		
MW-1	H_2O	2/26/98	9:19	mix	9	mix	X										X	X	X	X	X		
MW-2	↓	↓	10:22	↓	9	↓	↓										X	X	X	X	X		
MW-3	↓	↓	10:55	↓	9	↓	↓										X	X	X	X	X		
EQUIP. BLANK PROBE	↓	↓	N/A	↓	6	V	↓										X						
EQUIP. BLANK PUMP	↓	↓	N/A	↓	6	V	↓										X						
FIELD BLANKS	↓	↓	N/A	↓	6	V	↓										X						
TRIP BLANKS	↓	↓	N/A	↓	6	V	↓										X						
																	SB2/26/98 confirmation only						

Relinquished by:	Date/Time:	Received by:	Date/Time:
[signature]	2/26/98 12:10	[signature]	2/26/98 12:10
[signature]	2/26/98 2:30 PM		
		Received in Lab by: [signature]	2/26/98 2:30 pm

Remarks:

Turnaround Time: (check one):
Same Day ___ 72 hours ___
24 Hours ___ 5 Days X
48 Hours X Standard ___

Sample Integrity:
Intact: X On Ice X

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of the invoice. Sample(s) will be disposed of after 30 days.

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50255

CHAIN OF CUSTODY FORM

Quote No.: _____ Page: 1 of 1

Client Name: ALTON GEOSCIENCE
Address: 25A TECHNOLOGY DR.
City: IRVINE State: CA. Zip: 92718
Tel: 753-0101 Fax.: 753-0111

P.O./Project Number: 200368 UNOCAL 4357
Project Name: 11280 NATIONAL BLVD. LA
Project Manager:
Sampler(s) (signature): [signature]

Sample I.D.	Matrix	Date Sampled	Time	Preservation	Number of Containers	Type of Containers	8015 (Gas) ☒ 8020 (BTEX) ☒ MTBE (8020) ☒ 8015/8020/MTBE ☐	8015 (Diesel) ☐ simulated distillation ☐ fuel fingerprint ☐	Oil & Grease - EPA 413.2	TRPH - EPA 418.1	EPA 8010 ☐ EPA 8010/8020 ☐	EPA 8270	Title 22 Metals EPA 6010/7000 ☐ +Cr VI ☐	EPA 8260 ☐ + Oxygenates ☐ + MTBE ☐ MTBE only ☐	Lead	pH	8260 (BTEX + OXYGENATES)	DISSOLVED METALS	ALK, SPEC. COND, PH, CL	NO3, SO4	TOT PHOSPHORUS		
MW-1	H_2O	2/26/98	9:19	M.X	9	M.X	X										X	X	X	X	X		
MW-2	↓	↓	10:22	↓	9	↓	↓										X	X	X	X	X		
MW-3	↓	↓	10:55	↓	9	↓	↓										X	X	X	X	X		
EQUIP. BLANK PROBE	↓	↓	N/A	↓	6	V	↓										↓						
EQUIP. BLANK PUMP	↓	↓	N/A	↓	6	V	↓										↓						
FIELD BLANKS	↓	↓	N/A	↓	6	V	↓										↓						
TRIP BLANKS	↓	↓	N/A	↓	6	V	↓										↓						

[initials] 2/26/98 confirmation only per Gil Fry

Relinquished by:	Date/Time:	Received by:	Date/Time:
[signature]	2/26/98 12:10	[signature]	2/26/98 12:10
[signature]	2/26/98 2:30 PM		
		Received in Lab by: [signature]	2/26/98 2:30 pm

Turnaround Time: (check one):
Same Day ___ 72 hours ___
24 Hours ___ 5 Days X
48 Hours ___ Standard ___

Sample Integrity:
Intact: X On Ice X

Remarks:

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of the invoice. Sample(s) will be disposed of after 30 days

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-3401

Alton Geoscience	Client Project ID: 200368-01 TA10	Sampled:	Feb 26, 1998
15A Technology Drive	Tosco 4357	Received:	Feb 26, 1998
Irvine, CA 92618	Sample Descript: Water, MW-1	Extracted:	Mar 5, 1998
Attention: Gil Fry	Lab Number: HC00624	Analyzed:	Mar 5, 1998
		Reported:	Mar 6, 1998

VOLATILE ORGANICS by GC/MS (EPA 8260)

Analyte	Estimated* Quantitation Limit µg/L (ppb)	Method** Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Benzene	2.0	0.90	< MDL
Ethylbenzene	2.0	1.4	< MDL
Toluene	2.0	0.90	< MDL
o-Xylene	2.0	1.3	< MDL
m,p-Xylenes	4.0	2.6	< MDL
Methyl tertiary-Butyl Ether	5.0	2.1	< MDL
Di-isopropyl Ether	5.0	1.6	< MDL
Ethyl tertiary-Butyl Ether	5.0	1.6	< MDL
Tertiary-Amyl Methyl Ether	5.0	1.6	< MDL
Tertiary-Butanol	50	49	< MDL

* Estimated Quantitation Limit is equal to the lowest non-zero calibration standard used for the analysis.

** Method Detection Limit (MDL) is the detection limit statistically derived using the EPA prescribed replicate procedures published in 40 CFR, Part 136.

DEL MAR ANALYTICAL (ELAP #1197)

Pat Abe
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (86-118)	109%
Toluene-d8 (88-110)	102%
4-Bromofluorobenzene (86-115)	106%

Results pertain only to samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-3401

Alton Geoscience	Client Project ID: 200368-01 TA10	Sampled:	Feb 26, 1998
25A Technology Drive	Tosco 4357	Received:	Feb 26, 1998
Irvine, CA 92618	Sample Descript: Water, MW-2	Extracted:	Mar 5, 1998
Attention: Gil Fry	Lab Number: HC00625	Analyzed:	Mar 5, 1998
		Reported:	Mar 6, 1998

VOLATILE ORGANICS by GC/MS (EPA 8260)

Analyte	Estimated* Quantitation Limit µg/L (ppb)	Method** Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Benzene	2.0	0.90	< MDL
Ethylbenzene	2.0	1.4	< MDL
Toluene	2.0	0.90	< MDL
o-Xylene	2.0	1.3	< MDL
m,p-Xylenes	4.0	2.6	< MDL
Methyl tertiary-Butyl Ether	5.0	2.1	< MDL
Di-isopropyl Ether	5.0	1.6	< MDL
Ethyl tertiary-Butyl Ether	5.0	1.6	< MDL
Tertiary-Amyl Methyl Ether	5.0	1.6	< MDL
Tertiary-Butanol	50	49	< MDL

* Estimated Quantitation Limit is equal to the lowest non-zero calibration standard used for the analysis.

** Method Detection Limit (MDL) is the detection limit statistically derived using the EPA prescribed replicate procedures published in 40 CFR, Part 136.

DEL MAR ANALYTICAL (ELAP #1197)

Pat Abe
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (86-118)	110%
Toluene-d8 (88-110)	102%
4-Bromofluorobenzene (86-115)	107%

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Alton Geoscience	Client Project ID: 200368-01 TA10	Sampled:	Feb 26, 1998
15A Technology Drive	Tosco 4357	Received:	Feb 26, 1998
Irvine, CA 92618	Sample Descript: Water, MW-3	Extracted:	Mar 5, 1998
Attention: Gil Fry	Lab Number: HC00626	Analyzed:	Mar 5, 1998
		Reported:	Mar 6, 1998

VOLATILE ORGANICS by GC/MS (EPA 8260)

Analyte	Estimated* Quantitation Limit µg/L (ppb)	Method** Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Benzene	2.0	0.90	< MDL
Ethylbenzene	2.0	1.4	< MDL
Toluene	2.0	0.90	< MDL
o-Xylene	2.0	1.3	< MDL
m,p-Xylenes	4.0	2.6	< MDL
Methyl tertiary-Butyl Ether	5.0	2.1	< MDL
Di-isopropyl Ether	5.0	1.6	< MDL
Ethyl tertiary-Butyl Ether	5.0	1.6	< MDL
Tertiary-Amyl Methyl Ether	5.0	1.6	< MDL
Tertiary-Butanol	50	49	< MDL

* Estimated Quantitation Limit is equal to the lowest non-zero calibration standard used for the analysis.

** Method Detection Limit (MDL) is the detection limit statistically derived using the EPA prescribed replicate procedures published in 40 CFR, Part 136.

DEL MAR ANALYTICAL (ELAP #1197)

Pat Abe
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (86-118)	110%
Toluene-d8 (88-110)	103%
4-Bromofluorobenzene (86-115)	107%

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Alton Geoscience	Client Project ID: 200368-01 TA10	Sampled:	Feb 26, 1998
25A Technology Drive	Tosco 4357	Received:	Feb 26, 1998
Irvine, CA 92618	Sample Descript: Water, Equip. Blank Probe	Extracted:	Mar 5, 1998
Attention: Gil Fry	Lab Number: HC00627	Analyzed:	Mar 5, 1998
		Reported:	Mar 6, 1998

VOLATILE ORGANICS by GC/MS (EPA 8260)

Analyte	Estimated* Quantitation Limit µg/L (ppb)	Method** Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Benzene	2.0	0.90	< MDL
Ethylbenzene	2.0	1.4	< MDL
Toluene	2.0	0.90	< MDL
o-Xylene	2.0	1.3	< MDL
m,p-Xylenes	4.0	2.6	< MDL
Methyl tertiary-Butyl Ether	5.0	2.1	< MDL
Di-isopropyl Ether	5.0	1.6	< MDL
Ethyl tertiary-Butyl Ether	5.0	1.6	< MDL
Tertiary-Amyl Methyl Ether	5.0	1.6	< MDL
Tertiary-Butanol	50	49	< MDL

* Estimated Quantitation Limit is equal to the lowest non-zero calibration standard used for the analysis.

** Method Detection Limit (MDL) is the detection limit statistically derived using the EPA prescribed replicate procedures published in 40 CFR, Part 136.

DEL MAR ANALYTICAL (ELAP #1197)

Pat Abe
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (86-118)	113%
Toluene-d8 (88-110)	102%
4-Bromofluorobenzene (86-115)	106%

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-3401

Alton Geoscience	Client Project ID: 200368-01 TA10	Sampled:	Feb 26, 1998
5A Technology Drive	Tosco 4357	Received:	Feb 26, 1998
Irvine, CA 92618	Sample Descript: Water, Equip. Blank Pump	Extracted:	Mar 5, 1998
Attention: Gil Fry	Lab Number: HC00628	Analyzed:	Mar 5, 1998
		Reported:	Mar 6, 1998

VOLATILE ORGANICS by GC/MS (EPA 8260)

Analyte	Estimated* Quantitation Limit µg/L (ppb)	Method** Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Benzene	2.0	0.90	< MDL
Ethylbenzene	2.0	1.4	< MDL
Toluene	2.0	0.90	< MDL
o-Xylene	2.0	1.3	< MDL
m,p-Xylenes	4.0	2.6	< MDL
Methyl tertiary-Butyl Ether	5.0	2.1	< MDL
Di-isopropyl Ether	5.0	1.6	< MDL
Ethyl tertiary-Butyl Ether	5.0	1.6	< MDL
Tertiary-Amyl Methyl Ether	5.0	1.6	< MDL
Tertiary-Butanol	50	49	< MDL

* Estimated Quantitation Limit is equal to the lowest non-zero calibration standard used for the analysis.

** Method Detection Limit (MDL) is the detection limit statistically derived using the EPA prescribed replicate procedures published in 40 CFR, Part 136.

DEL MAR ANALYTICAL (ELAP #1197)

Pat Abe
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (86-118)	111%
Toluene-d8 (88-110)	102%
4-Bromofluorobenzene (86-115)	108%

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968 3401

Alton Geoscience	Client Project ID: 200368-01 TA10	Sampled:	Feb 26, 1998
25A Technology Drive	Tosco 4357	Received:	Feb 26, 1998
Irvine, CA 92618	Sample Descript: Water, Field Blanks	Extracted:	Mar 5, 1998
Attention: Gil Fry	Lab Number: HC00629	Analyzed:	Mar 5, 1998
		Reported:	Mar 6, 1998

VOLATILE ORGANICS by GC/MS (EPA 8260)

Analyte	Estimated* Quantitation Limit µg/L (ppb)	Method** Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Benzene	2.0	0.90	< MDL
Ethylbenzene	2.0	1.4	< MDL
Toluene	2.0	0.90	< MDL
o-Xylene	2.0	1.3	< MDL
m,p-Xylenes	4.0	2.6	< MDL
Methyl tertiary-Butyl Ether	5.0	2.1	< MDL
Di-isopropyl Ether	5.0	1.6	< MDL
Ethyl tertiary-Butyl Ether	5.0	1.6	< MDL
Tertiary-Amyl Methyl Ether	5.0	1.6	< MDL
Tertiary-Butanol	50	49	< MDL

* Estimated Quantitation Limit is equal to the lowest non-zero calibration standard used for the analysis.

** Method Detection Limit (MDL) is the detection limit statistically derived using the EPA prescribed replicate procedures published in 40 CFR, Part 136.

DEL MAR ANALYTICAL (ELAP #1197)

Pat Abe
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (86-118)	113%
Toluene-d8 (88-110)	101%
4-Bromofluorobenzene (86-115)	106%

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Alton Geoscience	Client Project ID: 200368-01 TA10	Sampled:	Feb 26, 1998
25A Technology Drive	Tosco 4357	Received:	Feb 26, 1998
Irvine, CA 92618	Sample Descript: Water, Trip Blanks	Extracted:	Mar 5, 1998
Attention: Gil Fry	Lab Number: HC00630	Analyzed:	Mar 5, 1998
		Reported:	Mar 6, 1998

VOLATILE ORGANICS by GC/MS (EPA 8260)

Analyte	Estimated* Quantitation Limit µg/L (ppb)	Method** Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Benzene	2.0	0.90	< MDL
Ethylbenzene	2.0	1.4	< MDL
Toluene	2.0	0.90	< MDL
o-Xylene	2.0	1.3	< MDL
m,p-Xylenes	4.0	2.6	< MDL
Methyl tertiary-Butyl Ether	5.0	2.1	< MDL
Di-isopropyl Ether	5.0	1.6	< MDL
Ethyl tertiary-Butyl Ether	5.0	1.6	< MDL
Tertiary-Amyl Methyl Ether	5.0	1.6	< MDL
Tertiary-Butanol	50	49	< MDL

* Estimated Quantitation Limit is equal to the lowest non-zero calibration standard used for the analysis.

** Method Detection Limit (MDL) is the detection limit statistically derived using the EPA prescribed replicate procedures published in 40 CFR, Part 136.

DEL MAR ANALYTICAL (ELAP #1197)

Pat Abe
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (86-118)	113%
Toluene-d8 (88-110)	101%
4-Bromofluorobenzene (86-115)	109%

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Alton Geoscience
25A Technology Drive
Irvine, CA 92618
Attention: Gil Fry

Method Blank

Extracted: Mar 5, 1998
Analyzed: Mar 5, 1998
Reported: Mar 6, 1998

VOLATILE ORGANICS by GC/MS (EPA 8260)

Analyte	Estimated* Quantitation Limit µg/L (ppb)	Method** Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Benzene	2.0	0.90	< MDL
Ethylbenzene	2.0	1.4	< MDL
Toluene	2.0	0.90	< MDL
o-Xylene	2.0	1.3	< MDL
m,p-Xylenes	4.0	2.6	< MDL
Methyl tertiary-Butyl Ether	5.0	2.1	< MDL
Di-isopropyl Ether	5.0	1.6	< MDL
Ethyl tertiary-Butyl Ether	5.0	1.6	< MDL
Tertiary-Amyl Methyl Ether	5.0	1.6	< MDL
Tertiary-Butanol	50	49	< MDL

* Estimated Quantitation Limit is equal to the lowest non-zero calibration standard used for the analysis.

** Method Detection Limit (MDL) is the detection limit statistically derived using the EPA prescribed replicate procedures published in 40 CFR, Part 136.

DEL MAR ANALYTICAL (ELAP #1197)

Pat Abe
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (86-118)	109%
Toluene-d8 (88-110)	102%
4-Bromofluorobenzene (86-115)	107%

Results pertain only to samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

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MS/MSD DATA REPORT

EPA METHOD: 8260

Matrix: Water

Date: 3/5/98

Sample: HC00627

Batch: HC05091W

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	MEAN PR	Acceptance Limits	
	ppb	ppb	ppb	ppb	%	%	%	%	RPD	MPR
Benzene	0	50	49	50	98%	100%	2.0%	99%	30	65-135
Chlorobenzene	0	50	52	54	104%	108%	3.8%	106%	30	65-135
1,1-Dichloroethane	0	50	52	55	104%	110%	5.6%	107%	30	65-135
1,2-Dichlororethane	0.10	50	53	61	106%	122%	14%	114%	30	65-135
1,1-Dichloroethene	0	50	53	47	106%	94%	12%	100%	30	65-135
Chloroform	0	50	54	58	108%	116%	7.1%	112%	30	65-135
Ethylbenzene	0	50	52	51	104%	102%	1.9%	103%	30	65-135
MTBE	0	50	57	69	114%	138%	19%	126%	30	65-135
Tetrachloroethene	0	50	50	49	100%	98%	2.0%	99%	30	65-135
Toluene	0.10	50	49	50	98%	100%	2.0%	99%	30	65-135
Trichloroethene	0	50	49	48	98%	96%	2.1%	97%	30	65-135
Vinyl Chloride	0	50	52	54	104%	108%	3.8%	106%	30	65-135
m,p-Xylenes	0	100	102	102	102%	102%	0.0%	102%	30	65-135
o-Xylene	0	50	52	54	104%	108%	3.8%	106%	30	65-135

Definition of Terms:

R1..... Result of Sample Analysis
Sp..... Spike Concentration Added to Sample
MS..... Matrix Spike Result
MSD..... Matrix Spike Duplicate Result
PR1..... Percent Recovery of MS; ((MS-R1) / SP) X 100
PR2..... Percent Recovery of MSD; ((MSD-R1) / SP) X 100
RPD..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2) X 100
Acceptance Limits..... Statistically determined on an annual basis.

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3484 Chesapeake Dr. Suite 805 San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689

50255

CHAIN OF CUSTODY FORM

Quote No.: _____ Page: 1 of 1

Client Name: ALTON GEOSCIENCE
Address: 25A TECHNOLOGY DR.
City: IRVINE State: CA. Zip: 92718
Tel: 753-0101 Fax.: 753-0111

P.O./Project Number: 200368 UNOCAL 4357
Project Name: 11280 NATIONAL BLVD LA
Project Manager:
Sampler(s) (signature): [signature]

Sample I.D.	Matrix	Date Sampled	Time	Preservation	Number of Containers	Type of Containers	8015 (Gas) [X] 8020 (BTEX) [X] MTBE (8020) [X] 8015/8020/MTBE [ ]	8015 (Diesel) [ ] simulated fuel distillation [ ] fingerprint [ ]	Oil & Grease - EPA 413.2	TRPH - EPA 418.1	EPA 8010 [ ] EPA 8010/8020 [ ]	EPA 8270	Title 22 Metals EPA 6010/7000 [ ] +Cr VI [ ]	EPA 8260 [ ] + Oxygenates [ ] +MTBE [ ] MTBE only [ ]	Lead	pH	8260 (BTEX + OXYGENATES)	DISSOLVED METALS	ALK, SPEC. COND. PH, CL	NO3, SO4	TOT PHOSPHORUS		
MW-1	H_2O	2/26/98	9:19	M.X	9	M.X	X										X	X	X	X	X		
MW-2	↓	↓	10:22	↓	9	↓	↓										X	X	X	X	X		
MW-3	↓	↓	10:55	↓	9	↓	↓										X	X	X	X	X		
EQUIP. BLANK PROBE	↓	↓	N/A	↓	6	V	↓																
EQUIP. BLANK PUMP	↓	↓	N/A	↓	6	V	↓																
FIELD BLANKS	↓	↓	N/A	↓	6	V	↓																
TRIP BLANKS	↓	↓	N/A	↓	6	V	↓																

[initials] 2/26/98 confirmation only per Gil Fry

Relinquished by:	Date/Time:	Received by:	Date/Time:
[signature]	2/26/98 12:10	[signature] 2/26/98	12:10
[signature] 2/26/98	2:30 PM		
		Received in Lab by: [signature]	2/26/98 2:30 pm

Remarks:

Turnaround Time: (check one):
Same Day ___ 72 hours ___
24 Hours ___ 5 Days X
48 Hours ___ Standard ___

Sample Integrity:
Intact: X On Ice X

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on the chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of [illegible]

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ADDITIONAL ANALYSIS REQUEST FORM

Today's Date: 3/4/98 Del Mar Analytical Project Manager: Pat Abe

Request via: ✓ telephone ____ chain of custody form ____ fax transmission ____ E-mail ____ other

Client: Alton Geoscience Contact: Gil Fry

Project: 2ØØ368-Ø1 TA1Ø Tosco 4357

Date Sampled: 2/26/98 Date Received: 2/26/98

Status: ✓ in progress ____ completed ____ received today ____ received yesterday ____ on hold ____ other

SAMPLE NUMBER	SAMPLE DESCRIPTION	ANALYSIS REQUESTED	SPECIAL REQUIREMENTS
HB02913	MW-1	8260 for BTEX+OXY only Channel format	LOIP mult. dil.
2914	MW-2	↓	↓
2915	MW-3		
2916	Equip. Blank Probe		
2917	Equip. Blank Pump		
2918	Field Blanks		
2919	Trip Blanks		

TURNAROUND STATUS: ____ Same Day ____ 24hr ____ 48hr ✓ 3days

____ 5days ____ Standard ✓ No Rush Charge

g:\dmai\misc\forms\add-req.doc

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Alton Geoscience	Client Project ID: 200368-01 TA10	Sampled: Feb 26, 1998
25A Technology Drive	TOSCO 4357	Received: Feb 26, 1998
Irvine, CA 92618	Sample Descript: Water	Extracted: Feb 26, 1998
Attention: Gil Fry	First Sample #: HB02913	Analyzed: Feb 26, 1998
		Reported: Mar 6, 1998

pH (EPA 150.1)

Laboratory Number	Sample Description	Reporting Limit pH units	Sample Result pH units
HB02913	MW-1	N.A.	7.0
HB02914	MW-2	N.A.	6.9
HB02915	MW-3	N.A.	7.0

DEL MAR ANALYTICAL (ELAP #1197)

Pat Abe
Project Manager

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Alton Geoscience	Client Project ID: 200368-01 TA10	Sampled: Feb 26, 1998
25A Technology Drive	TOSCO 4357	Received: Feb 26, 1998
Irvine, CA 92618	Sample Descript: Water, MW-1	Extracted: 2/26-3/3, 1998
Attention: Gil Fry	Lab Number: HB02913	Analyzed: 2/26-3/3, 1998
		Reported: Mar 6, 1998

LABORATORY ANALYSIS

Analyte	Method	Reporting Limit mg/L (ppm)	Sample Result mg/L (ppm)
Chloride	EPA 300.0	5.0	54
Nitrate-NO3	EPA 300.0	10	140
Phosphorous	EPA 365.3	0.050	0.62
Specific Conductance (µmhos/cm)	SM 2510B	1.0	1,900
Sulfate	EPA 300.0	10	250
Total Alkalinity	SM 2320B	2.0	560

Analytes reported as N.D. were not present at or above the reporting limit.

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Alton Geoscience	Client Project ID: 200368-01 TA10	Sampled:	Feb 26, 1998
25A Technology Drive	TOSCO 4357	Received:	Feb 26, 1998
Irvine, CA 92618	Sample Descript: Water, MW-2	Extracted:	2/26-3/3, 1998
Attention: Gil Fry	Lab Number: HB02914	Analyzed:	2/26-3/3, 1998
		Reported:	Mar 6, 1998

LABORATORY ANALYSIS

Analyte	Method	Reporting Limit mg/L (ppm)	Sample Result mg/L (ppm)
Chloride	EPA 300.0	5.0	60
Nitrate-NO3	EPA 300.0	5.0	87
Phosphorous	EPA 365.3	0.050	0.17
Specific Conductance (µmhos/cm)	SM 2510B	1.0	1,800
Sulfate	EPA 300.0	10	240
Total Alkalinity	SM 2320B	2.0	530

Analytes reported as N.D. were not present at or above the reporting limit.

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Alton Geoscience	Client Project ID: 200368-01 TA10	Sampled: Feb 26, 1998
25A Technology Drive	TOSCO 4357	Received: Feb 26, 1998
Irvine, CA 92618	Sample Descript: Water, MW-3	Extracted: 2/26-3/3, 1998
Attention: Gil Fry	Lab Number: HB02915	Analyzed: 2/26-3/3, 1998
		Reported: Mar 6, 1998

LABORATORY ANALYSIS

Analyte	Method	Reporting Limit mg/L (ppm)	Sample Result mg/L (ppm)
Chloride	EPA 300.0	5.0	73
Nitrate-NO3	EPA 300.0	10	120
Phosphorous	EPA 365.3	0.050	0.16
Specific Conductance (µmhos/cm)	SM 2510B	1.0	1,700
Sulfate	EPA 300.0	10	210
Total Alkalinity	SM 2320B	2.0	490

Analytes reported as N.D. were not present at or above the reporting limit.

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Alton Geoscience	Client Project ID: 200368-01 TA10	Sampled: Feb 26, 1998
25A Technology Drive	TOSCO 4357	Received: Feb 26, 1998
Irvine, CA 92618	Sample Descript: Water, MW-1	Extracted: Mar 3, 1998
Attention: Gil Fry	Lab Number: HB02913	Analyzed: Mar 4, 1998
		Reported: Mar 6, 1998

DISSOLVED METALS

Analyte	EPA Method	Reporting Limit mg/L (ppm)	Sample Result mg/L (ppm)
Calcium	6010A	1.0	170
Iron	6010A	0.020	N.D.
Magnesium	6010A	3.0	72
Manganese	6010A	0.020	0.024
Potassium	6010A	1.0	3.2
Sodium	6010A	10	100

Analytes reported as N.D. were not present at or above the reporting limit.

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Alton Geoscience	Client Project ID: 200368-01 TA10	Sampled:	Feb 26, 1998
15A Technology Drive	TOSCO 4357	Received:	Feb 26, 1998
Irvine, CA 92618	Sample Descript: Water, MW-2	Extracted:	Mar 3, 1998
Attention: Gil Fry	Lab Number: HB02914	Analyzed:	Mar 4, 1998
		Reported:	Mar 6, 1998

DISSOLVED METALS

Analyte	EPA Method	Reporting Limit mg/L (ppm)	Sample Result mg/L (ppm)
Calcium	6010A	1.0	130
Iron	6010A	0.020	N.D.
Magnesium	6010A	3.0	61
Manganese	6010A	0.020	N.D.
Potassium	6010A	1.0	3.0
Sodium	6010A	10	130

Analytes reported as N.D. were not present at or above the reporting limit.

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Alton Geoscience	Client Project ID: 200368-01 TA10	Sampled: Feb 26, 1998
25A Technology Drive	TOSCO 4357	Received: Feb 26, 1998
Irvine, CA 92618	Sample Descript: Water, MW-3	Extracted: Mar 3, 1998
Attention: Gil Fry	Lab Number: HB02915	Analyzed: Mar 4, 1998
		Reported: Mar 6, 1998

DISSOLVED METALS

Analyte	EPA Method	Reporting Limit mg/L (ppm)	Sample Result mg/L (ppm)
Calcium	6010A	1.0	140
Iron	6010A	0.020	N.D.
Magnesium	6010A	3.0	66
Manganese	6010A	0.020	0.11
Potassium	6010A	1.0	4.1
Sodium	6010A	10	110

Analytes reported as N.D. were not present at or above the reporting limit.

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Alton Geoscience	Client Project ID: 200368-01 TA10	Sampled:	Feb 26, 1998
15A Technology Drive	TOSCO 4357	Received:	Feb 26, 1998
Irvine, CA 92618	Sample Descript: Water, Equip. Blank Probe	Extracted:	Feb 28, 1998
Attention: Gil Fry	Lab Number: HB02916	Analyzed:	Feb 28, 1998
	QA Batch: HB28241W	Reported:	Mar 10, 1998

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Analyte	Estimated* Quantitation Limit µg/L (ppb)	Method** Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Benzene	0.30	0.032	< MDL
Ethylbenzene	0.30	0.025	< MDL
Toluene	0.30	0.031	0.033 ***
o-Xylene	0.20	0.032	< MDL
m,p-Xylenes	0.40	0.077	< MDL
Methyl tertiary-Butyl Ether	10	0.48	0.53 ***
TPH	50	12	< MDL

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.

* Estimated Quantitation Limit is equal to the lowest non-zero calibration standard used for the analysis.

** Method Detection Limit (MDL) is the detection limit statistically derived using the EPA prescribed replicate procedures published in 40 CFR, Part 136.

*** Estimated Concentration

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Alton Geoscience	Client Project ID: 200368-01 TA10	Sampled:	Feb 26, 1998
25A Technology Drive	TOSCO 4357	Received:	Feb 26, 1998
Irvine, CA 92618	Sample Descript: Water, Equip. Blank Pump	Extracted:	Feb 28, 1998
Attention: Gil Fry	Lab Number: HB02917	Analyzed:	Feb 28, 1998
	QA Batch: HB28241W	Reported:	Mar 10, 1998

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Analyte	Estimated* Quantitation Limit µg/L (ppb)	Method** Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Benzene	0.30	0.032	0.038 ***
Ethylbenzene	0.30	0.025	< MDL
Toluene	0.30	0.031	0.039 ***
o-Xylene	0.20	0.032	< MDL
m,p-Xylenes	0.40	0.077	< MDL
Methyl tertiary-Butyl Ether	10	0.48	< MDL
TPH	50	12	< MDL

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.

* Estimated Quantitation Limit is equal to the lowest non-zero calibration standard used for the analysis.

** Method Detection Limit (MDL) is the detection limit statistically derived using the EPA prescribed replicate procedures published in 40 CFR, Part 136.

*** Estimated Concentration

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Alton Geoscience	Client Project ID: 200368-01 TA10	Sampled: Feb 26, 1998
15A Technology Drive	TOSCO 4357	Received: Feb 26, 1998
Irvine, CA 92618	Sample Descript: Water, Field Blanks	Extracted: Feb 28, 1998
Attention: Gil Fry	Lab Number: HB02918	Analyzed: Feb 28, 1998
	QA Batch: HB28241W	Reported: Mar 10, 1998

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Analyte	Estimated* Quantitation Limit µg/L (ppb)	Method** Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Benzene	0.30	0.032	< MDL
Ethylbenzene	0.30	0.025	< MDL
Toluene	0.30	0.031	0.036 ***
o-Xylene	0.20	0.032	< MDL
m,p-Xylenes	0.40	0.077	< MDL
Methyl tertiary-Butyl Ether	10	0.48	0.60 ***
TPH	50	12	< MDL

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.

* Estimated Quantitation Limit is equal to the lowest non-zero calibration standard used for the analysis.

** Method Detection Limit (MDL) is the detection limit statistically derived using the EPA prescribed replicate procedures published in 40 CFR, Part 136.

*** Estimated Concentration

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Alton Geoscience	Client Project ID: 200368-01 TA10	Sampled:	Feb 26, 199
25A Technology Drive	TOSCO 4357	Received:	Feb 26, 199
Irvine, CA 92618	Sample Descript: Water, Trip Blanks	Extracted:	Feb 28, 1998
Attention: Gil Fry	Lab Number: HB02919	Analyzed:	Feb 28, 1998
	QA Batch: HB28241W	Reported:	Mar 10, 1998

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Analyte	Estimated* Quantitation Limit µg/L (ppb)	Method** Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Benzene	0.30	0.032	< MDL
Ethylbenzene	0.30	0.025	< MDL
Toluene	0.30	0.031	< MDL
o-Xylene	0.20	0.032	< MDL
m,p-Xylenes	0.40	0.077	< MDL
Methyl tertiary-Butyl Ether	10	0.48	< MDL
TPH	50	12	< MDL

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.

* Estimated Quantitation Limit is equal to the lowest non-zero calibration standard used for the analysis.

** Method Detection Limit (MDL) is the detection limit statistically derived using the EPA prescribed replicate procedures published in 40 CFR, Part 136.

*** Estimated Concentration

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Alton Geoscience
25A Technology Drive
Irvine, CA 92618
Attention: Gil Fry

Method Blank

Extracted: Mar 3, 1998
Analyzed: Mar 4, 1998
Reported: Mar 6, 1998

DISSOLVED METALS

Analyte	EPA Method	Reporting Limit mg/L (ppm)	Sample Result mg/L (ppm)
Calcium	6010A	0.10	N.D.
Iron	6010A	0.020	N.D.
Magnesium	6010A	0.020	N.D.
Manganese	6010A	0.020	N.D.
Potassium	6010A	0.50	N.D.
Sodium	6010A	0.50	N.D.

Analytes reported as N.D. were not present at or above the reporting limit.

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Extracted: Feb 28, 1998
Analyzed: Feb 28, 1998
Reported: Mar 10, 1998

Method Blank

QA Batch: HB28241W

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Analyte	Estimated* Quantitation Limit µg/L (ppb)	Method** Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Benzene	0.30	0.032	< MDL
Ethylbenzene	0.30	0.025	< MDL
Toluene	0.30	0.031	< MDL
o-Xylene	0.20	0.032	< MDL
m,p-Xylenes	0.40	0.077	< MDL
Methyl tertiary-Butyl Ether	10	0.48	< MDL
TPH	50	12	< MDL

* Estimated Quantitation Limit is equal to the lowest non-zero calibration standard used for the analysis.

** Method Detection Limit (MDL) is the detection limit statistically derived using the EPA prescribed replicate procedures published in 40 CFR, Part 136.

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MS/MSD DATA REPORT

METHOD: **Metals**
Instrument: ICP
Matrix: Water

DATE: 3/3/98

SAMPLE: HB02948

Analyte	R1	SP	MS	MSD	PR1	PR2	RPD	MEAN PR
	ppb	ppb	ppb	ppb	%	%	%	%
Iron	27	1000	1201	1096	117%	107%	9.1%	112%

R1..... Result of Sample Analysis
Sp..... Spike Concentration Added to Sample
MS..... Matrix Spike Result
MSD..... Matrix Spike Duplicate Result
PR1..... Percent Recovery of MS; ((MS-R1) / SP) X 100
PR2..... Percent Recovery of MSD; ((MSD-R1) / SP) X 100
RPD..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2)) X 100

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MS/MSD DATA REPORT

METHOD: **Metals**
Instrument: ICP
Matrix: Water

DATE: 3/3/98

SAMPLE: HB02915

Analyte	R1	SP	MS	MSD	PR1	PR2	RPD	MEAN PR
	ppb	ppb	ppb	ppb	%	%	%	%
Sodium *	5582	2000	7308	7004	86%	71%	4.2%	79%
Potassium	2073	5000	6768	6748	94%	94%	0.30%	94%

* Refer to LCS for batch validation.

R1..... Result of Sample Analysis
Sp..... Spike Concentration Added to Sample
MS..... Matrix Spike Result
MSD..... Matrix Spike Duplicate Result
PR1..... Percent Recovery of MS; ((MS-R1) / SP) X 100
PR2..... Percent Recovery of MSD; ((MSD-R1) / SP) X 100
RPD..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2)) X 100

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LABORATORY CONTROL SAMPLE

EPA METHOD 6010

DATE: 3/3/98

Analyte	St	R1	PR
	ppb	ppb	%
Sodium	5000	5823	116%

Definition of Terms:

St. . . . . . **Standard Concentration**

R1 . . . . . **Standard Result**

PR . . . . . **Percent Recovery of R1; (R1 / St) X 100**

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MS/MSD DATA REPORT

EPA METHOD: **365.3**
Matrix: Water

DATE: 3/3/98

SAMPLE #: HB02914

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	MEAN PR
	ppm	ppm	ppm	ppm	%	%	%	%
Phosphorus	0.17	0.50	0.68	0.68	102%	102%	0.0%	102%

Definition of Terms:

R1..... Result of Sample Analysis

Sp..... Spike Concentration Added to Sample

MS..... Matrix Spike Result

MSD..... Matrix Spike Duplicate Result

PR1..... Percent Recovery of MS; ((MS-R1) / SP) X 100

PR2..... Percent Recovery of MSD; ((MSD-R1) / SP) X 100

RPD..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2)) X 100

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MS/MSD DATA REPORT

EPA METHOD: **300**
Instrument: IC
Matrix: Water

DATE: 2/26/98

SAMPLE #: HB02922

Analyte	R1	SP	MS	MSD	PR1	PR2	RPD	MEAN PR
	ppm	ppm	ppm	ppm	%	%	%	%
Chloride	0	2.5	2.4	2.4	96%	96%	0.0%	96%
Nitrite	0	2.5	2.4	2.5	96%	100%	4.1%	98%
Nitrate	0	2.5	2.6	2.6	104%	104%	0.0%	104%
Sulfate	0	5.0	4.9	4.9	98%	98%	0.0%	98%

R1..... ..... Result of Sample Analysis

Sp..... ..... Spike Concentration Added to Sample

MS..... ..... Matrix Spike Result

MSD..... ..... Matrix Spike Duplicate Result

PR1..... ..... Percent Recovery of MS; (MS-R1) / SP X 100

PR2..... ..... Percent Recovery of MSD; ((MSD-R1) / SP X 100

RPD..... ..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2)) X 100

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (714) 261-1022 FAX (714) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-3401

MS/MSD DATA REPORT

METHOD: **Metals**
Instrument: ICP
Matrix: Water

Date: 3/3/98

Sample: HB02915

Analyte	R1	SP	MS	MSD	PR1	PR2	RPD	MEAN PR
	ppm	ppm	ppm	ppm	%	%	%	%
Calcium *	138300	10000	152000	152000	137%	137%	0.0%	137%
Magnesium *	65530	10000	70580	73360	51%	78%	3.9%	64%
Manganese	109	10000	9071	8871	90%	88%	2.2%	89%

* Refer to LCS for batch validation.

Acceptance Limits

RPD	MPR
20	80-120

R1..... Result of Sample Analysis
Sp..... Spike Concentration Added to Sample
MS..... Matrix Spike Result
MSD..... Matrix Spike Duplicate Result
PR1..... Percent Recovery of MS; ((MS-R1) / SP) X 100
PR2..... Percent Recovery of MSD; ((MSD-R1) / SP) X 100
RPD..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2)) X 100

Del Mar Analytical

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (714) 261-1022 FAX (714) 261-1228
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LABORATORY CONTROL SAMPLE

EPA METHOD 6010

DATE: 3/3/98

Analyte	St	R1	PR	Acceptance Limits
	ppm	ppm	%	%
Calcium	2000	1802	90%	85-115
Magnesium	2000	1913	96%	85-115

Definition of Terms:

St..... Standard Concentration

R1..... Standard Result

PR..... ..... Percent Recovery of R1; (R1 / St) X 100

Del Mar Analytical

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (714) 261-1022 FAX (714) 261-1228
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MS/MSD DATA REPORT

Date: 02/28/98 **EPA Method 8015/8020**

Sample #: HB02916 Matrix: Water

Batch #: HB28241W

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	Mean PR	Acceptance Limits	
	µg/L	µg/L	µg/L	µg/L	%	%	%	%	RPD	Mean PR
TPH	2.2	220	230	240	104	108	4.2	106	≤20	65 - 135
Benzene	0	20	21	21	104	104	0.24	104	≤20	65 - 135
Toluene	0.033	20	21	21	104	105	0.11	104	≤20	65 - 135
Ethylbenzene	0	20	21	21	106	107	0.65	107	≤20	65 - 135
Xylenes	0	60	61	62	102	103	1.0	103	≤20	65 - 135
MTBE	0.53	40	39	40	97	98	1.3	97	≤20	65 - 135

Definition of Terms

R1..... Result of Sample Analysis
Sp..... Spike Concentration added to sample
MS..... Matrix Spike Result
MSD..... Matrix Spike Duplicate Result
PR1..... Percent Recovery of MS; ((MS-R1)/SP) X 100
PR2..... Percent Recovery of MSD; ((MSD-R1)/SP) X 100
RPD..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2) X 100
Mean PR..... Mean Percent Recovery
Acceptance Limits..... Determined by in-house Control Charts

Del Mar Analytical

Del Mar Analytical
20[illegible] Ave., Irvine, CA 92606 (714) 261-1022 FAX (714) 261-1228
1014 E Cooley [illegible] A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
2465 W 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689

50255

CHAIN OF CUSTODY FORM

Quote No.: _____ Page: 1 of 1

Client Name: ALTON GEOSCIENCE
Address: 25A TECHNOLOGY DR.
City: IRVINE State: CA. Zip: 92718
Tel: 753-0101 Fax.: 753-0111

P.O./Project Number: 200368 UNOCAL 4357
Project Name: 11280 NATIONAL BLVD. LA
Project Manager:
Sampler(s) (signature): [signature]

Sample I.D.	Matrix	Date Sampled	Time	Preservation	Number of Containers	Type of Containers	8015 (Gas) [X] 8020 (BTEX) [X] MTBE (8020) [X] 8015/8020/MTBE [ ]	8015 (Diesel) [ ] simulated distillation [ ] fuel fingerprint [ ]	Oil & Grease - EPA 413.2	TRPH - EPA 418.1	EPA 8010 [ ] EPA 8010/8020 [ ]	EPA 8270	Title 22 Metals EPA 6010/7000 [ ] +Cr VI [ ]	EPA 8260 [ ] + Oxygenates [ ] +MTBE [ ] MTBE only [ ]	Lead	pH	8260 (BTEX + OXYGENATES)	DISSOLVED METALS	ALK, SPEC. COND, PH, CL	NO3, SO4	TOT PHOSPHORUS		
MW-1	H_2O	2/26/98	9:19	M.X	9	M.X	X										X	X	X	X	X		
MW-2	↓	↓	10:22	↓	9	↓	↓										X	X	X	X	X		
MW-3	↓	↓	10:55	↓	9	↓	↓										X	X	X	X	X		
EQUIP. BLANK PROBE	↓	↓	N/A	↓	6	V	↓																
EQUIP. BLANK PUMP	↓	↓	N/A	↓	6	V	↓																
FIELD BLANKS	↓	↓	N/A	↓	6	V	↓																
TRIP BLANKS	↓	↓	N/A	↓	6	V	↓																

[initials] 2/26/98 confirmation only per Gil Fry

Relinquished by:	Date/Time:	Received by:	Date/Time:
[signature]	2/26/98 12:10	[signature]	2/26/98 12:10
[signature]	2/26/98, 2:30 PM		
		Received in Lab by: [signature]	2/26/98 2:30 pm

Remarks:

Turnaround Time: (check one):
Same Day ___ 72 hours ___
24 Hours ___ 5 Days X
48 Hours ___ Standard ___

Sample Integrity:
Intact: X On Ice X

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of the invoice. Sample(s) will be disposed of after 30 days.

APPENDIX G

OFFICIAL LABORATORY REPORTS AND CHAIN OF CUSTODY RECORDS - GEOTECHNICAL ANALYSES

PTS Laboratories, Inc.

Geotechnical Services

8100 Secura Way • Santa Fe Springs • CA 90670
Phone (562) 907-3607 • Fax (562) 907-3610

February 11, 1998

Ms. Liz Sewell
Alton Geoscience
25A Technology Dr.
Irvine, CA 92718

Re: 76 Station 4357
PTS File: 28046

Dear Ms. Sewell:

Enclosed are final data for samples submitted from your 76 Station 4357 Project # 20-0368. All analyses were performed by applicable ASTM, EPA or API. Samples will be retained for 30 days before disposal unless other arrangements are made.

We appreciate the opportunity to be of service and trust these data will prove beneficial in the development of this project. Please feel free to call myself or Larry Kunkel, District Manager, should you have any questions or require additional information.

Sincerely,

PTS Laboratories, Inc.

Richard L. Young
Project/QC Manager

RLY: ih

encl.

PTS Laboratories, Inc.

Alton Geoscience
PTS File No: 28046

PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D4464)

PROJECT NAME: 76 Station 4357
PROJECT NO: 20-0368

Sample ID	Depth, ft.	Description USCS/ASTM (1)	Median Grain Size mm	Particle Size Distribution, wt. percent						Silt & Clay
				Gravel	Sand Size			Silt	Clay	
					Coarse	Medium	Fine			
MW1-140.3	140.3	Fine sand	0.187	0.00	0.00	9.59	73.91	13.91	2.58	16.49
MW1-135.0	135.0	Medium sand	0.474	0.00	3.13	54.87	33.16	(Dry Sieve)		8.85

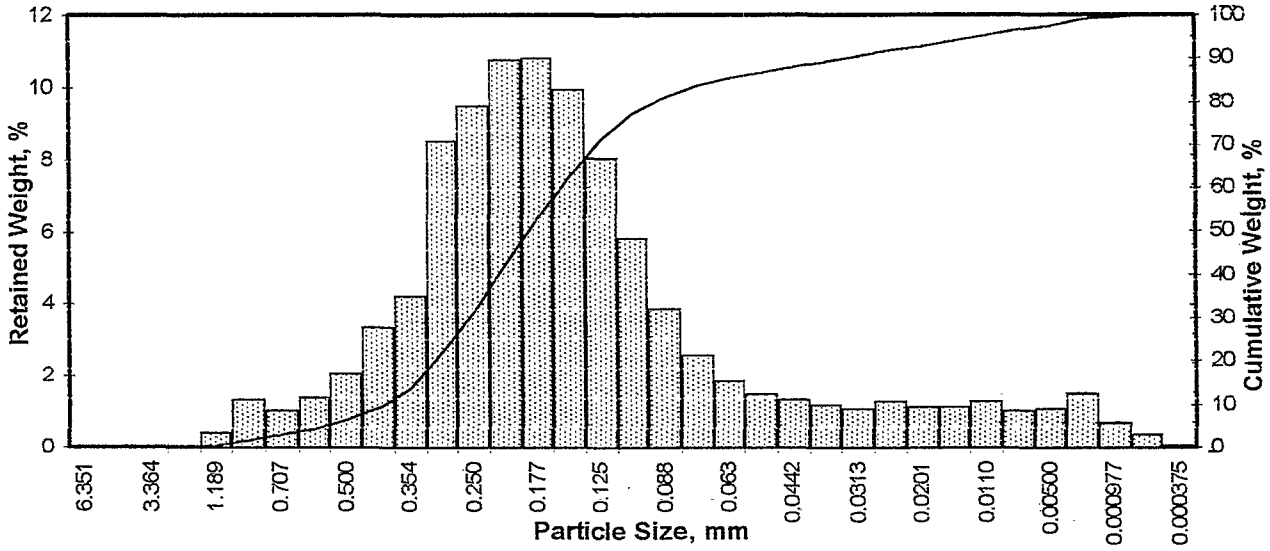
(1) based on Mean from Trask

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	Alton Geoscience	**PTS File No:**	28046
Project:	76 Station 4357	**Sample ID:**	MW1-140.3
Project No:	20-0368	**Depth, ft:**	140.3

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.44	0.43	0.43
0.0331	0.841	0.25	20	1.33	1.33	1.76
0.0278	0.707	0.50	25	1.03	1.03	2.79
0.0234	0.595	0.75	30	1.37	1.37	4.16
0.0197	0.500	1.00	35	2.08	2.08	6.24
0.0166	0.420	1.25	40	3.35	3.35	9.59
0.0139	0.354	1.50	45	4.22	4.22	13.81
0.0117	0.297	1.75	50	8.48	8.48	22.29
0.0098	0.250	2.00	60	9.47	9.47	31.76
0.0083	0.210	2.25	70	10.75	10.75	42.51
0.0070	0.177	2.50	80	10.84	10.84	53.35
0.0059	0.149	2.75	100	9.92	9.92	63.27
0.0049	0.125	3.00	120	8.02	8.02	71.29
0.0041	0.105	3.25	140	5.81	5.81	77.10
0.0035	0.088	3.50	170	3.86	3.86	80.96
0.0029	0.074	3.75	200	2.55	2.55	83.51
0.0025	0.063	4.00	230	1.84	1.84	85.35
0.0021	0.053	4.25	270	1.51	1.51	86.86
0.00174	0.0442	4.50	325	1.32	1.32	88.18
0.00146	0.0372	4.75	400	1.20	1.20	89.38
0.00123	0.0313	5.00	450	1.09	1.09	90.47
0.000986	0.0250	5.32	500	1.27	1.27	91.74
0.000790	0.0201	5.64	635	1.14	1.14	92.88
0.000615	0.0156	6.00		1.13	1.13	94.01
0.000435	0.0110	6.50		1.30	1.30	95.31
0.000308	0.00781	7.00		1.05	1.05	96.36
0.000197	0.00500	7.65		1.06	1.06	97.42
0.000077	0.00195	9.00		1.51	1.51	98.93
0.000038	0.000977	10.00		0.69	0.69	99.62
0.000019	0.000488	11.00		0.35	0.35	99.97
0.000015	0.000375	11.38		0.03	0.03	100.00
TOTALS				100.01	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	0.85	0.0218	0.555
10	1.27	0.0163	0.414
16	1.56	0.0133	0.338
25	1.82	0.0111	0.283
40	2.19	0.0086	0.219
50	2.42	0.0073	0.187
60	2.67	0.0062	0.157
75	3.16	0.0044	0.112
84	3.82	0.0028	0.071
90	4.89	0.0013	0.034
95	6.38	0.0005	0.012

Measure	Trask	Inman	Folk-Ward
Median, phi	2.42	2.42	2.42
Median, in.	0.0073	0.0073	0.0073
Median, mm	0.187	0.187	0.187
Mean, phi	2.34	2.69	2.60
Mean, in.	0.0078	0.0061	0.0065
Mean, mm	0.197	0.155	0.165
Sorting	0.629	1.126	1.401
Skewness	0.954	0.238	0.335
Kurtosis	0.225	1.456	1.694

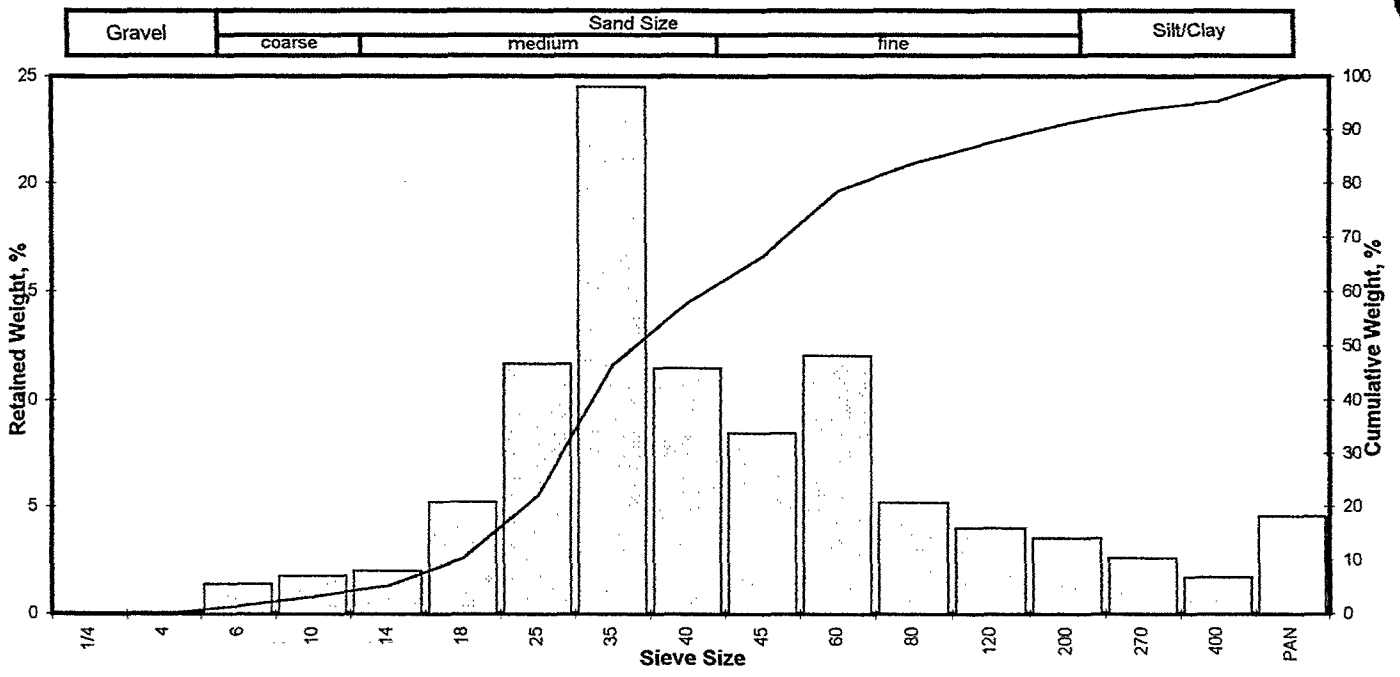
Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	9.59
Fine Sand	200	73.91
Silt	>0.005 mm	13.91
Clay	<0.005 mm	2.58
	Total	100

PTS Laboratories, Inc.

Sieve Analysis Results - ASTM D422

Client:	Alton Geosciense	**PTS File No:**	28046
Project:	76 Station 4357	**Sample ID:**	MW1-135.0
Project No:	20-0368	**Depth, ft:**	135



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.34	1.38	1.38
0.0787	2.000	-1.00	10	0.43	1.75	3.13
0.0557	1.414	-0.50	14	0.49	1.99	5.11
0.0394	1.000	0.00	18	1.28	5.19	10.31
0.0278	0.707	0.50	25	2.88	11.69	22.00
0.0197	0.500	1.00	35	6.04	24.51	46.51
0.0166	0.420	1.25	40	2.83	11.49	58.00
0.0139	0.354	1.50	45	2.08	8.44	66.44
0.0098	0.250	2.00	60	2.97	12.05	78.49
0.0070	0.177	2.50	80	1.27	5.15	83.64
0.0049	0.125	3.00	120	0.98	3.98	87.62
0.0029	0.074	3.75	200	0.87	3.53	91.15
0.0021	0.053	4.25	270	0.64	2.60	93.75
0.0015	0.037	4.75	400	0.42	1.70	95.45
			PAN	1.12	4.55	100.00
TOTALS				24.64	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Inches	Millimeters
5	-0.53	0.0568	1.443
10	-0.03	0.0402	1.021
16	0.24	0.0333	0.845
25	0.56	0.0267	0.678
40	0.87	0.0216	0.548
50	1.08	0.0187	0.474
60	1.31	0.0159	0.403
75	1.86	0.0109	0.276
84	2.54	0.0067	0.171
90	3.51	0.0035	0.088
95	4.62	0.0016	0.041

Measure	Trask	Inman	Folk-Ward
Median, phi	1.08	1.08	1.08
Median, in.	0.0187	0.0187	0.0187
Median, mm	0.474	0.474	0.474
Mean, phi	1.07	1.39	1.29
Mean, in.	0.0188	0.0150	0.0161
Mean, mm	0.477	0.380	0.410
Sorting	0.639	1.151	1.355
Skewness	0.912	0.276	0.326
Kurtosis	0.215	1.236	1.630
Grain Size Description (ASTM-USCS Scale)		Medium sand (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	3.13
Medium Sand	40	54.87
Fine Sand	200	33.16
Silt/Clay	<200	8.85
	Total	100

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Phone (562) 907-3607 Fax (562) 907-3610

DATE [illegible]7/98 PTS FILE# 28046 CHAIN OF CUSTODY RECORD PAGE 1 OF 1

COMPANY: Alton Geoscience

ADDRESS: 25A Technology Drive

PROJECT MANAGER: Liz Sewell

PROJECT NAME: 76 Station 4357 PHONE NUMBER: 714 753 0101

PROJECT NUMBER: 20-0368 FAX NUMBER: 714 753 0111

SITE LOCATION: 11280 National Blvd LA, CA

SAMPLER SIGNATURE: Sonya V. Fuisoni

P0#

SPECIAL HANDLING: 24 HOURS, 5 DAYS, 72 HOURS, NORMAL, OTHER

SAMPLE CONDITIONS: RECEIVED ON ICE YES/NO; SEALED YES/NO; OTHER YES/NO

ANALYSIS REQUEST

	SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY, API RP40	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YELD ASTM D425	CATION EXCHANGE CAPACITY EPA 9080	SOIL pH, EPA 9045	GRAIN SIZE: DRY; 400 MESH	GRAIN SIZE: SIEVE & LASER	GRAIN SIZE: LASER; 1 MICRON	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40	TOC: WALKLEY-BLACK	HYDRAULIC CONDUCTIVITY PACKAGE	NUMBER OF SAMPLES	COMMENTS
x	MW1-74.5	1/27/98	816	74.5																	hold
x	MW1-79.75		843	79.75																	hold (1/2 full)
x	MW1-94.6		943	94.6																	(1/4 full) hold
x	MW1-124.5		1401	124.5																	(1/2 full) hold
x	MW1-129.75		1423	129.75																	(3/4 full) hold
x	MW1-135.0		1519	135.0											X						RUSH: Fax results to
																					Matt Katen Rm 400
																					(310) 478-1401
x	MW1-140.3		1612												X						RUSH

1. RELINQUISHED BY	2. RELINQUISHED BY	3. RELINQUISHED BY	4. RELINQUISHED BY
Sonya V. Fuisoni	[signature]		
COMPANY: Alton Geoscience	COMPANY: PTS Laboratories	COMPANY:	COMPANY:
DATE: 1/27/98 TIME: 1617	DATE: 27 JAN 98 TIME: 1617	DATE: TIME:	DATE: TIME:

PTS Laboratories, Inc.

Geotechnical Services

8100 Secura Way • Santa Fe Springs • CA 90670
Phone (562) 907-3607 • Fax (562) 907-3610

March 11, 1998

Mr. Gil Fry
Alton Geoscience
25A Technology Dr.
Irvine, CA 92718

Re: 20-0368
PTS File: 28100

Dear Mr. Fry

Enclosed are final data for samples submitted from your Project #20-0368. All analyses were performed by applicable ASTM, EPA or API. Samples will be retained for 30 days before disposal unless other arrangements are made.

We appreciate the opportunity to be of service and trust these data will prove beneficial in the development of this project. Please feel free to call myself or Larry Kunkel, District Manager, should you have any questions or require additional information.

Sincerely,

PTS Laboratories, Inc.

R. L. Y.

Richard L. Young
Project/QC Manager

RLY: ih

encl.

PHYSICAL PROPERTIES DATA

(METHODOLOGY: EPA 9100)

PROJECT NAME: 76 Station 4357
PROJECT NO: 20-0368

			25.0 PSI CONFINING STRESS	
SAMPLE ID.	DEPTH, ft.	SAMPLE ORIENT. (1)	NATIVE PERMEABILITY TO WATER (millidarcy)	NATIVE HYDRAULIC CONDUCTIVITY (cm/s)
MW1	112.5	V	0.420	3.99E-07
B10	112.5	V	0.248	2.36E-07

(1) Sample Orientation: H = Horizontal; V = Vertical

Vb = Bulk Volume, cc
Pv = Pore Volume, cc
ND = Not Detected

ATTERBERG LIMITS DATA

(METHODOLOGY: ASTM D4318)

PROJECT NAME: 76 Station 4357
PROJECT NO: 20-0368

SAMPLE ID	DEPTH, ft.	MOISTURE CONTENT	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	USCS CLASS
MW1	112.5	27.7	55	32	23	MH
B10	112.5	21.4	48	32	16	ML

PTS Laboratories, Inc.

Alton Geoscience
PTS File No: 28100

PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D4464M)

PROJECT NAME: 76 Station 4357
PROJECT NO: 20-0368

Sample ID	Depth, ft.	Description USCS/ASTM (1)	Median Grain Size mm	Particle Size Distribution, wt. percent						Silt & Clay
				Gravel	Sand Size			Silt	Clay	
					Coarse	Medium	Fine			
B10-112.5	112.5	Silt	0.030	0.00	0.00	0.00	11.23	77.35	11.41	88.77
MW1-112.5	112.5	Silt	0.031	0.00	0.00	0.81	15.27	71.66	12.25	83.91

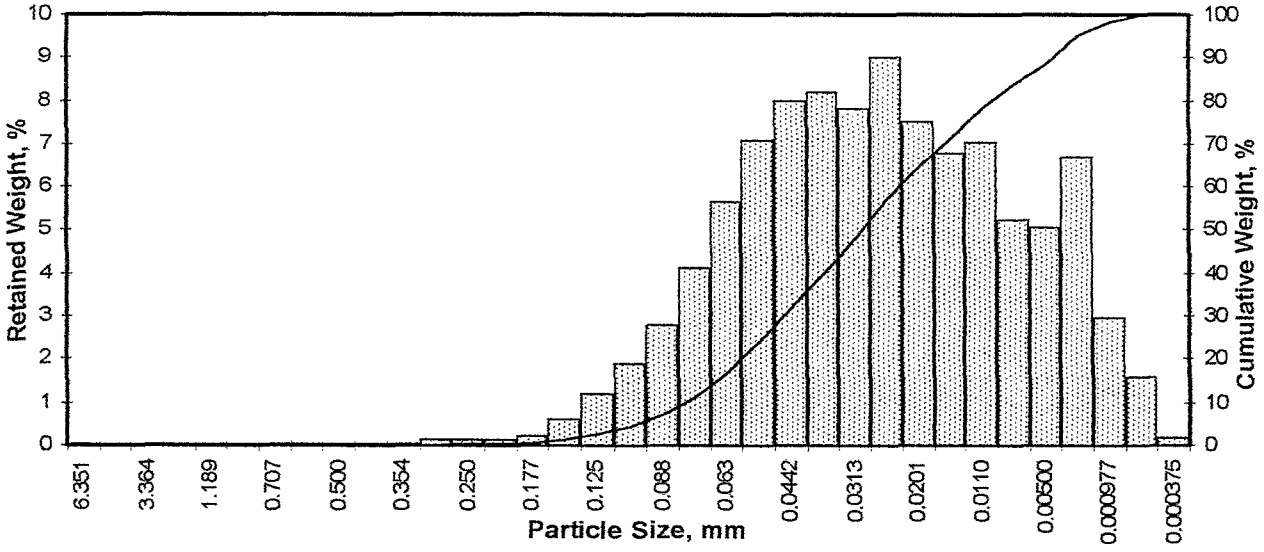
(1) based on Mean from Trask

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	Alton Geoscience	**PTS File No:**	28100
Project:	76 Station 4357	**Sample ID:**	B10-112.5
Project No:	20-0368	**Depth, ft:**	112.5

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.00	0.00	0.00
0.0331	0.841	0.25	20	0.00	0.00	0.00
0.0278	0.707	0.50	25	0.00	0.00	0.00
0.0234	0.595	0.75	30	0.00	0.00	0.00
0.0197	0.500	1.00	35	0.00	0.00	0.00
0.0166	0.420	1.25	40	0.00	0.00	0.00
0.0139	0.354	1.50	45	0.02	0.02	0.02
0.0117	0.297	1.75	50	0.12	0.12	0.13
0.0098	0.250	2.00	60	0.14	0.14	0.27
0.0083	0.210	2.25	70	0.12	0.12	0.39
0.0070	0.177	2.50	80	0.22	0.22	0.61
0.0059	0.149	2.75	100	0.62	0.62	1.23
0.0049	0.125	3.00	120	1.19	1.19	2.42
0.0041	0.105	3.25	140	1.87	1.87	4.29
0.0035	0.088	3.50	170	2.81	2.81	7.10
0.0029	0.074	3.75	200	4.13	4.13	11.23
0.0025	0.063	4.00	230	5.66	5.66	16.89
0.0021	0.053	4.25	270	7.06	7.06	23.95
0.00174	0.0442	4.50	325	7.96	7.96	31.92
0.00146	0.0372	4.75	400	8.18	8.18	40.10
0.00123	0.0313	5.00	450	7.82	7.82	47.92
0.000986	0.0250	5.32	500	9.02	9.02	56.94
0.000790	0.0201	5.64	635	7.51	7.51	64.45
0.000615	0.0156	6.00		6.80	6.80	71.25
0.000435	0.0110	6.50		7.04	7.04	78.29
0.000308	0.00781	7.00		5.24	5.24	83.54
0.000197	0.00500	7.65		5.05	5.05	88.59
0.000077	0.00195	9.00		6.71	6.71	95.30
0.000038	0.000977	10.00		2.96	2.96	98.26
0.000019	0.000488	11.00		1.58	1.58	99.84
0.000015	0.000375	11.38		0.16	0.16	100.00
TOTALS				99.98	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	3.31	0.0040	0.101
10	3.68	0.0031	0.078
16	3.96	0.0025	0.064
25	4.28	0.0020	0.051
40	4.75	0.0015	0.037
50	5.07	0.0012	0.030
60	5.45	0.0009	0.023
75	6.27	0.0005	0.013
84	7.06	0.0003	0.007
90	7.93	0.0002	0.004
95	8.94	0.0001	0.002

Measure	Trask	Inman	Folk-Ward
Median, phi	5.07	5.07	5.07
Median, in.	0.0012	0.0012	0.0012
Median, mm	0.030	0.030	0.030
Mean, phi	4.96	5.51	5.36
Mean, in.	0.0013	0.0009	0.0010
Mean, mm	0.032	0.022	0.024
Sorting	0.503	1.549	1.627
Skewness	0.870	0.281	0.328
Kurtosis	0.259	0.816	1.163
Grain Size Description (ASTM-USCS Scale)			Silt (based on Mean from Trask)

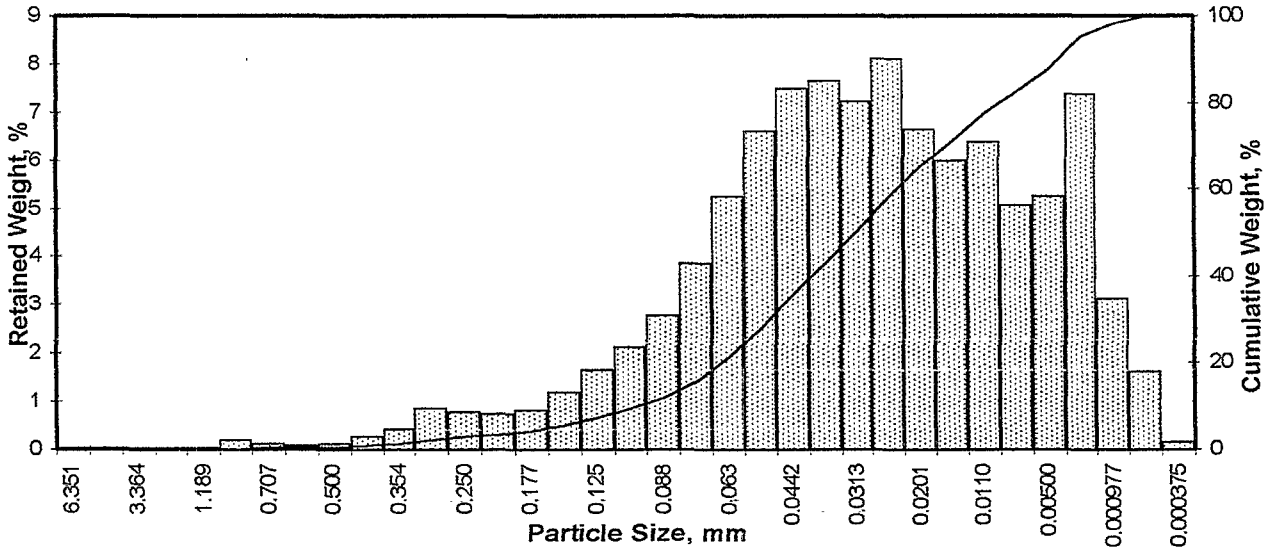
Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	0.00
Fine Sand	200	11.23
Silt	>0.005 mm	77.35
Clay	<0.005 mm	11.41
	Total	100

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	Alton Geoscience	**PTS File No:**	28100
Project:	76 Station 4357	**Sample ID:**	MW1-112.5
Project No:	20-0368	**Depth, ft:**	112.5

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.01	0.01	0.01
0.0331	0.841	0.25	20	0.18	0.18	0.19
0.0278	0.707	0.50	25	0.12	0.12	0.31
0.0234	0.595	0.75	30	0.09	0.09	0.40
0.0197	0.500	1.00	35	0.12	0.12	0.52
0.0166	0.420	1.25	40	0.29	0.29	0.81
0.0139	0.354	1.50	45	0.44	0.44	1.25
0.0117	0.297	1.75	50	0.85	0.85	2.10
0.0098	0.250	2.00	60	0.76	0.76	2.86
0.0083	0.210	2.25	70	0.72	0.72	3.58
0.0070	0.177	2.50	80	0.83	0.83	4.40
0.0059	0.149	2.75	100	1.21	1.21	5.61
0.0049	0.125	3.00	120	1.66	1.66	7.27
0.0041	0.105	3.25	140	2.14	2.14	9.41
0.0035	0.088	3.50	170	2.80	2.80	12.21
0.0029	0.074	3.75	200	3.87	3.87	16.09
0.0025	0.063	4.00	230	5.25	5.25	21.34
0.0021	0.053	4.25	270	6.61	6.61	27.95
0.00174	0.0442	4.50	325	7.50	7.50	35.45
0.00146	0.0372	4.75	400	7.66	7.66	43.11
0.00123	0.0313	5.00	450	7.21	7.21	50.32
0.000986	0.0250	5.32	500	8.12	8.12	58.44
0.000790	0.0201	5.64	635	6.63	6.63	65.07
0.000615	0.0156	6.00		5.98	5.98	71.05
0.000435	0.0110	6.50		6.39	6.39	77.44
0.000308	0.00781	7.00		5.06	5.06	82.50
0.000197	0.00500	7.65		5.24	5.24	87.75
0.000077	0.00195	9.00		7.36	7.36	95.11
0.000038	0.000977	10.00		3.12	3.12	98.23
0.000019	0.000488	11.00		1.61	1.61	99.84
0.000015	0.000375	11.38		0.16	0.16	100.00
TOTALS				99.99	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	2.62	0.0064	0.162
10	3.30	0.0040	0.101
16	3.74	0.0029	0.075
25	4.14	0.0022	0.057
40	4.65	0.0016	0.040
50	4.99	0.0012	0.031
60	5.40	0.0009	0.024
75	6.31	0.0005	0.013
84	7.18	0.0003	0.007
90	8.06	0.0001	0.004
95	8.98	0.0001	0.002

Measure	Trask	Inman	Folk-Ward
Median, phi	4.99	4.99	4.99
Median, in.	0.0012	0.0012	0.0012
Median, mm	0.031	0.031	0.031
Mean, phi	4.85	5.46	5.31
Mean, in.	0.0014	0.0009	0.0010
Mean, mm	0.035	0.023	0.025
Sorting	0.471	1.720	1.823
Skewness	0.850	0.276	0.266
Kurtosis	0.226	0.848	1.201

Grain Size Description (ASTM-USCS Scale)	Silt (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	0.81
Fine Sand	200	15.27
Silt	>0.005 mm	71.66
Clay	<0.005 mm	12.25
	Total	100

DATE **PTS FILE #** **CHAIN OF CUSTODY RECORD** **PAGE 1 OF 1**

COMPANY: Alton Geoscience

ADDRESS: 25 A Technology Dr.

PROJECT MANAGER: Gil Fry

PROJECT NAME: 76 Station 4357

PHONE NUMBER: 714 753-0101

PROJECT NUMBER: 20-0368

FAX NUMBER: 714 753-0111

SITE LOCATION: 11280 National Blvd, LA CA

SAMPLER SIGNATURE:

ANALYSIS REQUEST

PO#:

SPECIAL HANDLING: 24 HOURS, 72 HOURS, OTHER, 5 DAYS, NORMAL

SAMPLE CONDITIONS: RECEIVED ON ICE YES/NO; SEALED YES/NO; OTHER YES/NO

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY, API RP40	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YIELD ASTM D425	CATION EXCHANGE CAPACITY, EPS 9080	SOIL pH, EPA 9045	GRAIN SIZE: DRY: 400 MESH	GRAIN SIZE: SIEVE & LASER	GRAIN SIZE: LASER; 1 MICRON	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40 *	TOC: WALKLEY-BLACK	HYDRAULIC CONDUCTIVITY PACKAGE	Plasticity Index (Atterberg Limits)					
MW1-112.5	3/4/98		112.5											X	X	X			X					
B10-112.5	"		112.5												X	X			X					

COMMENTS: * Vertical Hydraulic Conductivity

1. RELINQUISHED BY	2. RECEIVED BY	3. RELINQUISHED BY	4. RECEIVED BY
COMPANY: Alton	COMPANY:	COMPANY:	COMPANY:
DATE: 3/4/98 TIME: 11:40	DATE: TIME:	DATE: TIME:	DATE: TIME:

PTS Laboratories, Inc.

Geotechnical Services

8100 Secura Way • Santa Fe Springs • CA 90670
Phone (562) 907-3607 • Fax (562) 907-3610

March 11, 1998

Mr. Gil Fry
Alton Geoscience
25A Technology Dr.
Irvine, CA 92718

Re: 76 Station 4357
PTS File: 28096

Dear Mr. Fry:

Enclosed are final data for samples submitted from your 76 Station Project # 20-0368. All analyses were performed by applicable ASTM, EPA or API. Samples will be retained for 30 days before disposal unless other arrangements are made.

We appreciate the opportunity to be of service and trust these data will prove beneficial in the development of this project. Please feel free to call myself or Larry Kunkel, District Manager, should you have any questions or require additional information.

Sincerely,

PTS Laboratories, Inc.

Richard L. Young
Project/QC Manager

CC: Matt Katen

RLY: ih

encl.

ATTERBERG LIMITS DATA

(METHODOLOGY: ASTM D4318

PROJECT NAME: 76 Station 4357
PROJECT NO: 20-0368

SAMPLE ID	DEPTH, feet	MOISTURE CONTENT	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	USCS CLASS
B5	34.75	19.4	25	19	6	CL-ML
B6	29.25	17.6	35	18	17	CL
B7	9.00	22.1	37	22	15	CL
B7	19.25			**NON-PLASTIC**		

PTS Laboratories, Inc.

Alton Geoscience
PTS File No: 28096

PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D4464M/D422M)

PROJECT NAME: 76 Station 4357
PROJECT NO: 20-0368

Sample ID	Depth, ft.	Description USCS/ASTM (1)	Median Grain Size mm	Particle Size Distribution, wt. percent						Silt & Clay
				Gravel	Sand Size			Silt	Clay	
					Coarse	Medium	Fine			
MW1-124.5	124.50	Fine sand	0.186	0.00	0.00	16.87	53.32	25.28	4.53	29.81
B7-19.25	19.25	Fine sand	0.057	0.00	0.00	4.05	38.28	51.52	6.16	57.67
B7-9.0	9.00	Silt	0.027	0.00	0.00	0.63	14.72	70.43	14.22	84.65
B5-49.5	N/A	Coarse Sand	3.184	41.18	20.86	19.12	14.04	(2)	(2)	4.79
MW3-134.5	N/A	Medium sand	0.492	0.00	1.07	55.65	41.22	(2)	(2)	2.07
B6-55.25	N/A	Coarse sand	1.337	24.61	17.48	33.12	20.02	(2)	(2)	4.76

(2) Analysis performed using ASTM D422M; no individual quantitation for silt and clay.

(1) based on Mean from Trask

PHYSICAL PROPERTIES DATA

(METHODOLOGY: ASTM D2216, API RP40, EPA 9100, WALKLEY-BLACK)

PROJECT NAME: 76 Station 4357
PROJECT NO: 20-0368

SAMPLE ID.	DEPTH, ft.	SAMPLE ORIENT. (1)	MOISTURE CONTENT (% wt)	DENSITY BULK (g/cc)	DENSITY GRAIN (g/cc)	EFFECTIVE POROSITY, % Vb	PORE FLUID SATURATION, % Pv WATER (2)	PORE FLUID SATURATION, % Pv HYDROCARBON (3)	TOTAL ORGANIC CARBON mg/kg	25.0 PSI CONFINING STRESS NATIVE PERMEABILITY TO AIR (millidarcy)	25.0 PSI CONFINING STRESS SPECIFIC PERMEABILITY TO WATER (millidarcy)	25.0 PSI CONFINING STRESS SPECIFIC HYDRAULIC CONDUCTIVITY (cm/s)
B5	34.75	V	17.5	1.69	2.64	35.9	77.7	ND		0.654	2.21	2.15E-06
B5	49.50	V	6.5	1.70	2.66	36.1	30.5	ND	<100	41235	255	2.50E-04
B5	64.50	V	7.3	1.40	2.61	46.6	20.7	ND	<100	4083	281	2.73E-04
B6	29.25	V	16.2	1.67	2.66	37.2	71.4	ND	490	24.0		
B6	55.25	V	6.3	1.68	2.64	36.2	27.7	ND		9188		
B6	98.75	V	6.8	1.43	2.61	45.0	20.7	ND		5307		
B7	9.00	V	22.1	1.52	2.65	42.6	77.5	ND	1000	0.621		
B7	19.25	V	11.1	1.62	2.64	38.5	44.7	ND		689	22.0	2.13E-05
B7	44.50	V	4.8	1.74	2.65	34.2	23.6	ND		14624		
B7	78.80	V	5.4	1.60	2.61	38.7	19.3	ND		22969		
MW1	124.50	H	15.2	1.64	2.64	38.0	66.9	ND	<100		542	5.27E-04
MW3	134.50	V	5.9	1.61	2.62	38.7	27.9	ND			254	2.46E-04

(1) Sample Orientation: H = Horizontal; V = Vertical

(2) 0.9986 gm/cc used for calculation
(3) 0.7500 gm/[illegible]sed for calculation

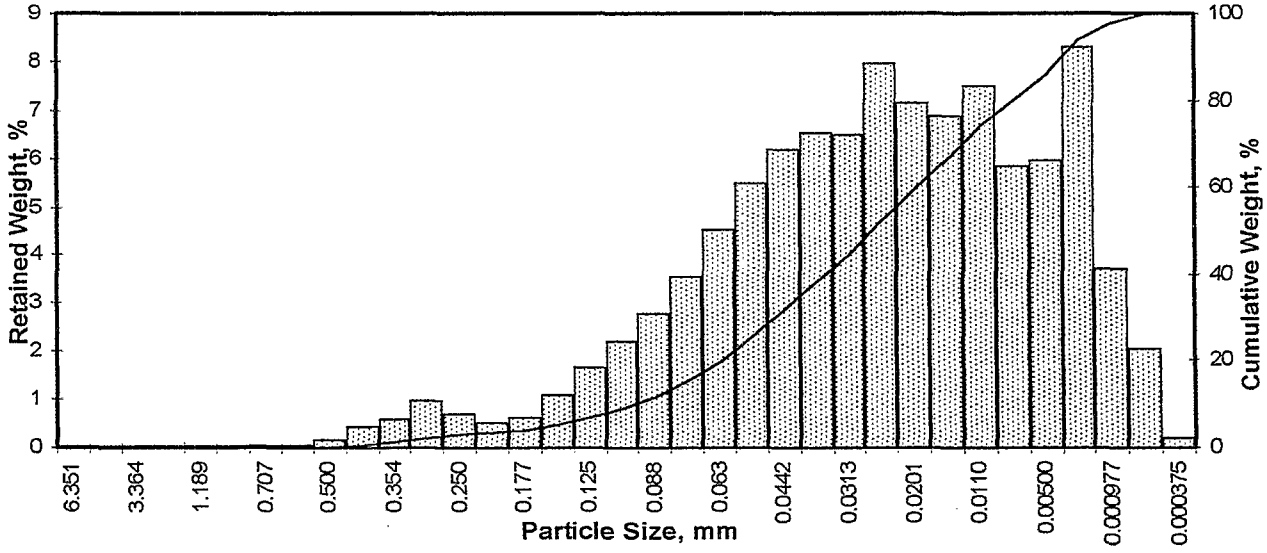
Vb = Bulk Volume, cc
Pv = Pore Volume, cc
ND = [illegible] Detected

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	Alton Geoscience	**PTS File No:**	28096
Project:	76 Station 4357	**Sample ID:**	B7-9.0
Project No:	20-0368	**Depth, ft:**	9.00

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.00	0.00	0.00
0.0331	0.841	0.25	20	0.01	0.01	0.01
0.0278	0.707	0.50	25	0.03	0.02	0.04
0.0234	0.595	0.75	30	0.04	0.04	0.07
0.0197	0.500	1.00	35	0.14	0.14	0.21
0.0166	0.420	1.25	40	0.41	0.41	0.63
0.0139	0.354	1.50	45	0.59	0.59	1.22
0.0117	0.297	1.75	50	0.98	0.98	2.20
0.0098	0.250	2.00	60	0.68	0.68	2.88
0.0083	0.210	2.25	70	0.52	0.52	3.40
0.0070	0.177	2.50	80	0.61	0.61	4.01
0.0059	0.149	2.75	100	1.08	1.08	5.09
0.0049	0.125	3.00	120	1.67	1.67	6.76
0.0041	0.105	3.25	140	2.22	2.22	8.98
0.0035	0.088	3.50	170	2.80	2.80	11.78
0.0029	0.074	3.75	200	3.57	3.57	15.35
0.0025	0.063	4.00	230	4.53	4.53	19.88
0.0021	0.053	4.25	270	5.49	5.49	25.37
0.00174	0.0442	4.50	325	6.19	6.19	31.56
0.00146	0.0372	4.75	400	6.51	6.51	38.07
0.00123	0.0313	5.00	450	6.48	6.48	44.55
0.000986	0.0250	5.32	500	7.95	7.95	52.49
0.000790	0.0201	5.64	635	7.15	7.15	59.64
0.000615	0.0156	6.00		6.86	6.86	66.50
0.000435	0.0110	6.50		7.49	7.49	73.99
0.000308	0.00781	7.00		5.85	5.85	79.84
0.000197	0.00500	7.65		5.94	5.94	85.78
0.000077	0.00195	9.00		8.29	8.29	94.07
0.000038	0.000977	10.00		3.69	3.69	97.76
0.000019	0.000488	11.00		2.03	2.03	99.79
0.000015	0.000375	11.38		0.21	0.21	100.00
TOTALS				100.01	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	2.73	0.0059	0.151
10	3.34	0.0039	0.099
16	3.79	0.0029	0.072
25	4.23	0.0021	0.053
40	4.82	0.0014	0.035
50	5.22	0.0011	0.027
60	5.66	0.0008	0.020
75	6.59	0.0004	0.010
84	7.45	0.0002	0.006
90	8.33	0.0001	0.003
95	9.25	0.0001	0.002

Measure	Trask	Inman	Folk-Ward
Median, phi	5.22	5.22	5.22
Median, in.	0.0011	0.0011	0.0011
Median, mm	0.027	0.027	0.027
Mean, phi	4.98	5.62	5.49
Mean, in.	0.0013	0.0008	0.0009
Mean, mm	0.032	0.020	0.022
Sorting	0.442	1.833	1.905
Skewness	0.877	0.218	0.227
Kurtosis	0.224	0.780	1.136
Grain Size Description (ASTM-USCS Scale)		Silt (based on Mean from Trask)	

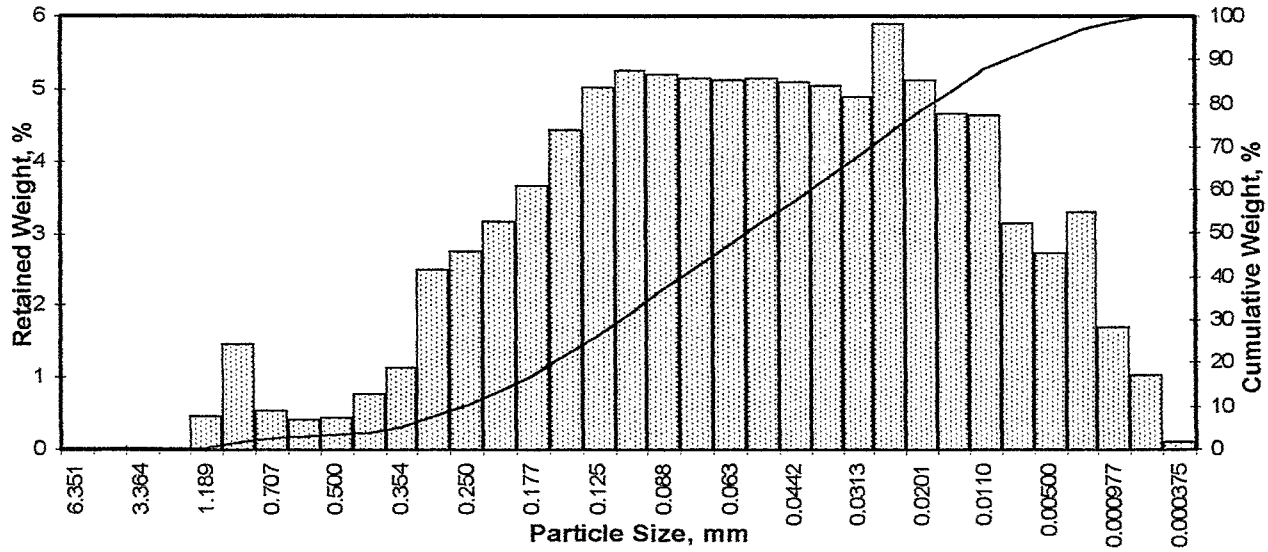
Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	0.63
Fine Sand	200	14.72
Silt	>0.005 mm	70.43
Clay	<0.005 mm	14.22
	Total	100

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	Alton Geoscience	**PTS File No:**	28096
Project:	76 Station 4357	**Sample ID:**	B7-19.25
Project No:	20-0368	**Depth, ft:**	19.25

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.46	0.46	0.46
0.0331	0.841	0.25	20	1.46	1.46	1.92
0.0278	0.707	0.50	25	0.53	0.53	2.45
0.0234	0.595	0.75	30	0.41	0.41	2.85
0.0197	0.500	1.00	35	0.43	0.43	3.28
0.0166	0.420	1.25	40	0.76	0.76	4.05
0.0139	0.354	1.50	45	1.14	1.14	5.19
0.0117	0.297	1.75	50	2.49	2.49	7.68
0.0098	0.250	2.00	60	2.75	2.75	10.43
0.0083	0.210	2.25	70	3.17	3.17	13.60
0.0070	0.177	2.50	80	3.66	3.66	17.26
0.0059	0.149	2.75	100	4.43	4.43	21.69
0.0049	0.125	3.00	120	5.02	5.02	26.71
0.0041	0.105	3.25	140	5.26	5.26	31.97
0.0035	0.088	3.50	170	5.21	5.21	37.18
0.0029	0.074	3.75	200	5.15	5.15	42.33
0.0025	0.063	4.00	230	5.13	5.13	47.46
0.0021	0.053	4.25	270	5.14	5.14	52.59
0.00174	0.0442	4.50	325	5.10	5.10	57.69
0.00146	0.0372	4.75	400	5.04	5.04	62.73
0.00123	0.0313	5.00	450	4.90	4.90	67.63
0.000986	0.0250	5.32	500	5.91	5.91	73.54
0.000790	0.0201	5.64	635	5.13	5.13	78.67
0.000615	0.0156	6.00		4.66	4.66	83.33
0.000435	0.0110	6.50		4.63	4.63	87.96
0.000308	0.00781	7.00		3.15	3.15	91.11
0.000197	0.00500	7.65		2.73	2.73	93.84
0.000077	0.00195	9.00		3.30	3.30	97.14
0.000038	0.000977	10.00		1.71	1.71	98.85
0.000019	0.000488	11.00		1.04	1.04	99.89
0.000015	0.000375	11.38		0.11	0.11	100.00
TOTALS				100.01	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	1.46	0.0143	0.364
10	1.96	0.0101	0.257
16	2.41	0.0074	0.188
25	2.92	0.0052	0.133
40	3.64	0.0032	0.080
50	4.12	0.0023	0.057
60	4.61	0.0016	0.041
75	5.41	0.0009	0.024
84	6.07	0.0006	0.015
90	6.82	0.0003	0.009
95	8.12	0.0001	0.004

Measure	Trask	Inman	Folk-Ward
Median, phi	4.12	4.12	4.12
Median, in.	0.0023	0.0023	0.0023
Median, mm	0.057	0.057	0.057
Mean, phi	3.68	4.24	4.20
Mean, in.	0.0031	0.0021	0.0021
Mean, mm	0.078	0.053	0.054
Sorting	0.421	1.829	1.924
Skewness	0.973	0.065	0.133
Kurtosis	0.220	0.821	1.094

Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Mean from Trask)

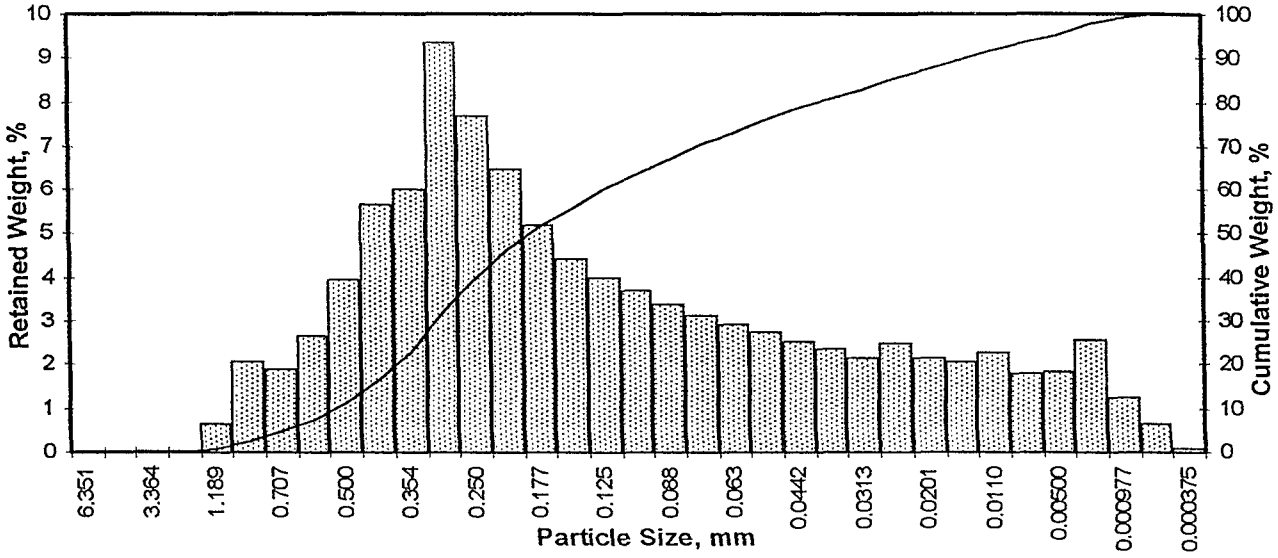
Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	4.05
Fine Sand	200	38.28
Silt	>0.005 mm	51.52
Clay	<0.005 mm	6.16
	Total	100

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	Alton Geoscience	**PTS File No:**	28096
Project:	76 Station 4357	**Sample ID:**	MW1-124.5
Project No:	20-0368	**Depth, ft:**	124.50

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.66	0.66	0.66
0.0331	0.841	0.25	20	2.06	2.06	2.72
0.0278	0.707	0.50	25	1.88	1.88	4.60
0.0234	0.595	0.75	30	2.66	2.66	7.26
0.0197	0.500	1.00	35	3.95	3.95	11.21
0.0166	0.420	1.25	40	5.67	5.67	16.87
0.0139	0.354	1.50	45	6.01	6.01	22.88
0.0117	0.297	1.75	50	9.37	9.37	32.25
0.0098	0.250	2.00	60	7.67	7.67	39.92
0.0083	0.210	2.25	70	6.47	6.47	46.39
0.0070	0.177	2.50	80	5.19	5.19	51.58
0.0059	0.149	2.75	100	4.42	4.42	55.99
0.0049	0.125	3.00	120	4.00	4.00	59.99
0.0041	0.105	3.25	140	3.69	3.69	63.68
0.0035	0.088	3.50	170	3.38	3.38	67.06
0.0029	0.074	3.75	200	3.13	3.13	70.19
0.0025	0.063	4.00	230	2.93	2.93	73.12
0.0021	0.053	4.25	270	2.75	2.75	75.87
0.00174	0.0442	4.50	325	2.55	2.55	78.42
0.00146	0.0372	4.75	400	2.36	2.36	80.78
0.00123	0.0313	5.00	450	2.15	2.15	82.93
0.000986	0.0250	5.32	500	2.48	2.48	85.41
0.000790	0.0201	5.64	635	2.14	2.14	87.55
0.000615	0.0156	6.00		2.04	2.04	89.59
0.000435	0.0110	6.50		2.26	2.26	91.85
0.000308	0.00781	7.00		1.80	1.80	93.64
0.000197	0.00500	7.65		1.83	1.83	95.47
0.000077	0.00195	9.00		2.58	2.58	98.05
0.000038	0.000977	10.00		1.23	1.23	99.28
0.000019	0.000488	11.00		0.65	0.65	99.94
0.000015	0.000375	11.38		0.07	0.06	100.00
TOTALS				100.03	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	0.54	0.0271	0.689
10	0.92	0.0208	0.527
16	1.21	0.0170	0.432
25	1.56	0.0134	0.340
40	2.00	0.0098	0.249
50	2.42	0.0073	0.186
60	3.00	0.0049	0.125
75	4.17	0.0022	0.056
84	5.14	0.0011	0.028
90	6.09	0.0006	0.015
95	7.48	0.0002	0.006

Measure	Trask	Inman	Folk-Ward
Median, phi	2.42	2.42	2.42
Median, in.	0.0073	0.0073	0.0073
Median, mm	0.186	0.186	0.186
Mean, phi	2.34	3.17	2.92
Mean, in.	0.0078	0.0044	0.0052
Mean, mm	0.198	0.111	0.132
Sorting	0.404	1.963	2.033
Skewness	0.737	0.382	0.419
Kurtosis	0.278	0.767	1.088
Grain Size Description (ASTM-USCS Scale)		Fine sand (based on Mean from Trask)	

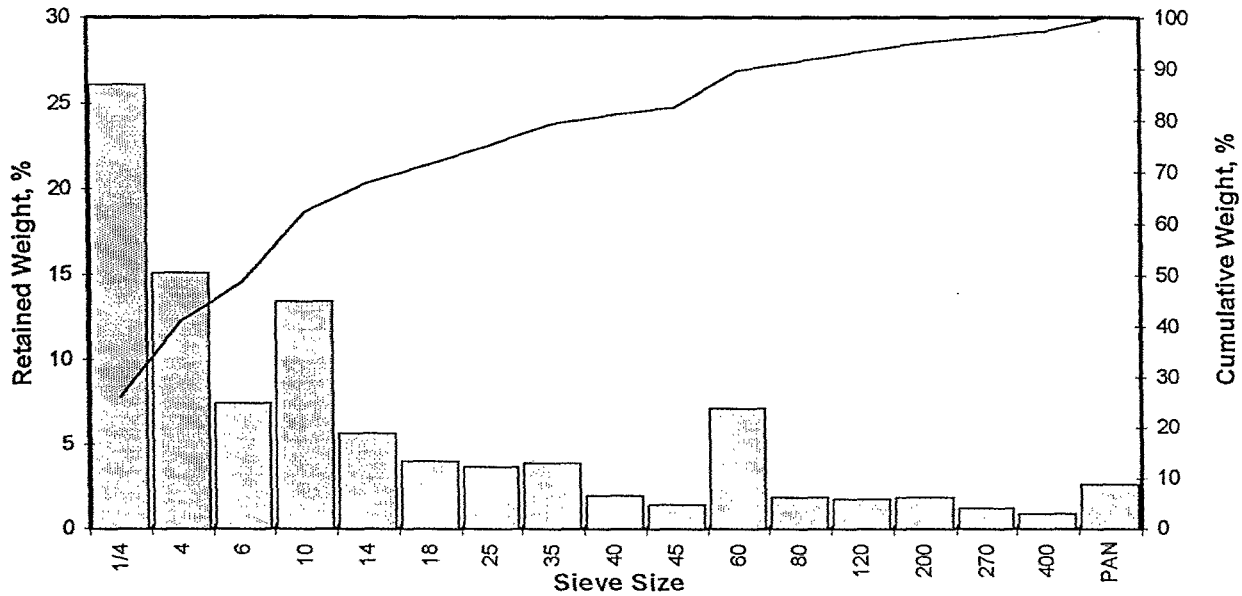
Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	16.87
Fine Sand	200	53.32
Silt	>0.005 mm	25.28
Clay	<0.005 mm	4.53
	Total	100

PTS Laboratories, Inc.

Sieve Analysis Results - ASTM D422

Client:	Alton Geoscience	**PTS File No:**	28096
Project:	76 Station 4357	**Sample ID:**	B5-49.5
Project No:	20-0368	**Depth, ft:**	N/A

Gravel	Sand			Silt/Clay
	coarse	medium	fine	



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	6.32	26.10	26.10
0.1873	4.757	-2.25	4	3.65	15.08	41.18
0.1324	3.364	-1.75	6	1.79	7.39	48.57
0.0787	2.000	-1.00	10	3.26	13.47	62.04
0.0557	1.414	-0.50	14	1.36	5.62	67.66
0.0394	1.000	0.00	18	0.96	3.97	71.62
0.0278	0.707	0.50	25	0.89	3.68	75.30
0.0197	0.500	1.00	35	0.94	3.88	79.18
0.0166	0.420	1.25	40	0.48	1.98	81.16
0.0139	0.354	1.50	45	0.35	1.45	82.61
0.0098	0.250	2.00	60	1.71	7.06	89.67
0.0070	0.177	2.50	80	0.46	1.90	91.57
0.0049	0.125	3.00	120	0.42	1.73	93.31
0.0029	0.074	3.75	200	0.46	1.90	95.21
0.0021	0.053	4.25	270	0.30	1.24	96.45
0.0015	0.037	4.75	400	0.22	0.91	97.36
			PAN	0.64	2.64	100.00
TOTALS				24.21	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5			
10			
16			
25			
40	-2.28	0.1916	4.866
50	-1.67	0.1253	3.184
60	-1.11	0.0852	2.164
75	0.46	0.0286	0.727
84	1.60	0.0130	0.330
90	2.09	0.0093	0.236
95	3.67	0.0031	0.079

Measure	Trask	Inman	Folk-Ward
Median, phi	-1.67	-1.67	-1.67
Median, in.	0.1253	0.1253	0.1253
Median, mm	3.184	3.184	3.184
Mean, phi			
Mean, in.			
Mean, mm			
Sorting			
Skewness			
Kurtosis			

Grain Size Description (ASTM-USCS Scale)	Coarse Sand (based on Mean from Trask)

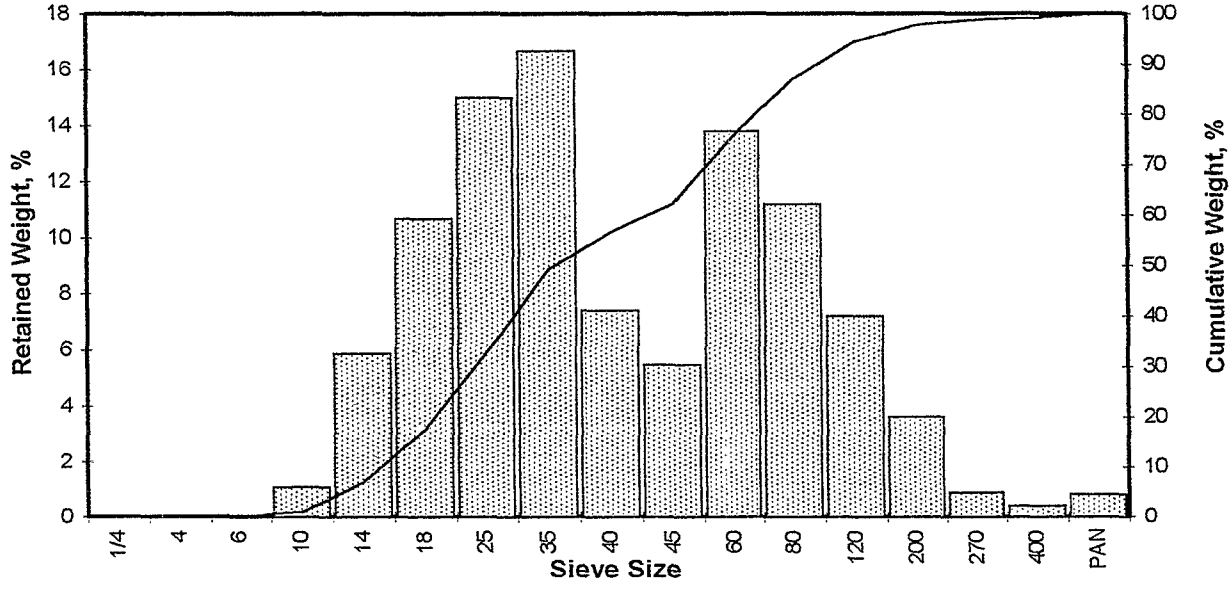
Description	Retained on Sieve #	Weight Percent
Gravel	4	41.18
Coarse Sand	10	20.86
Medium Sand	40	19.12
Fine Sand	200	14.04
Silt/Clay	<200	4.79
	Total	100

PTS Laboratories, Inc.

Sieve Analysis Results - ASTM D422

Client:	Alton Geoscience	**PTS File No:**	28096
Project:	76 Station 4357	**Sample ID:**	MW3-134.5
Project No:	20-0368	**Depth, ft:**	N/A

Gravel	Sand			Silt/Clay
	coarse	medium	fine	



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.17	1.07	1.07
0.0557	1.414	-0.50	14	0.94	5.90	6.96
0.0394	1.000	0.00	18	1.70	10.66	17.63
0.0278	0.707	0.50	25	2.39	14.99	32.62
0.0197	0.500	1.00	35	2.66	16.69	49.31
0.0166	0.420	1.25	40	1.18	7.40	56.71
0.0139	0.354	1.50	45	0.87	5.46	62.17
0.0098	0.250	2.00	60	2.20	13.80	75.97
0.0070	0.177	2.50	80	1.78	11.17	87.14
0.0049	0.125	3.00	120	1.15	7.21	94.35
0.0029	0.074	3.75	200	0.57	3.58	97.93
0.0021	0.053	4.25	270	0.14	0.88	98.81
0.0015	0.037	4.75	400	0.06	0.38	99.18
			PAN	0.13	0.82	100.00
TOTALS				15.94	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-0.67	0.0625	1.587
10	-0.36	0.0504	1.281
16	-0.08	0.0415	1.054
25	0.25	0.0332	0.843
40	0.72	0.0239	0.607
50	1.02	0.0194	0.492
60	1.40	0.0149	0.379
75	1.96	0.0101	0.256
84	2.36	0.0077	0.195
90	2.70	0.0061	0.154
95	3.14	0.0045	0.114

Measure	Trask	Inman	Folk-Ward
Median, phi	1.02	1.02	1.02
Median, in.	0.0194	0.0194	0.0194
Median, mm	0.492	0.492	0.492
Mean, phi	0.86	1.14	1.10
Mean, in.	0.0216	0.0178	0.0183
Mean, mm	0.550	0.453	0.466
Sorting	0.551	1.218	1.185
Skewness	0.945	0.097	0.104
Kurtosis	0.260	0.561	0.906
Grain Size Description (ASTM-USCS Scale)		Medium sand (based on Mean from Trask)	

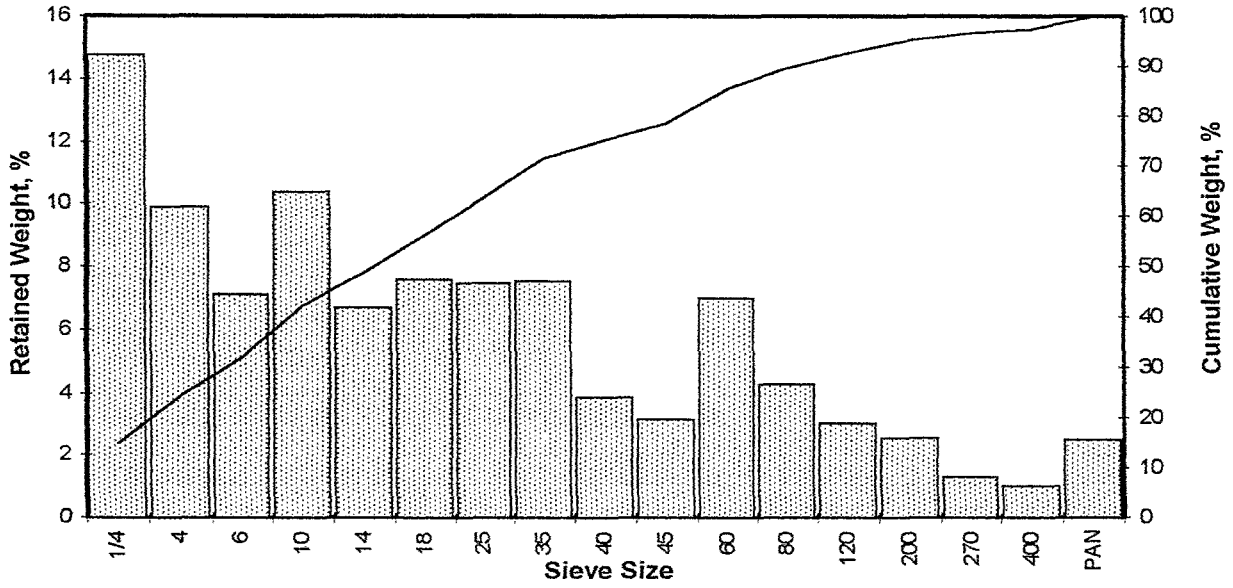
Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	1.07
Medium Sand	40	55.65
Fine Sand	200	41.22
Silt/Clay	<200	2.07
	Total	100

PTS Laboratories, Inc.

Sieve Analysis Results - ASTM D422

Client:	Alton Geoscience	**PTS File No:**	28096
Project:	76 Station 4357	**Sample ID:**	B6-55.25
Project No:	20-0368	**Depth, ft:**	N/A

Gravel	Sand			Silt/Clay
	coarse	medium	fine	



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	4.24	14.74	14.74
0.1873	4.757	-2.25	4	2.84	9.87	24.61
0.1324	3.364	-1.75	6	2.04	7.09	31.70
0.0787	2.000	-1.00	10	2.99	10.39	42.09
0.0557	1.414	-0.50	14	1.92	6.67	48.77
0.0394	1.000	0.00	18	2.19	7.61	56.38
0.0278	0.707	0.50	25	2.14	7.44	63.82
0.0197	0.500	1.00	35	2.17	7.54	71.36
0.0166	0.420	1.25	40	1.11	3.86	75.22
0.0139	0.354	1.50	45	0.91	3.16	78.38
0.0098	0.250	2.00	60	2.02	7.02	85.40
0.0070	0.177	2.50	80	1.23	4.28	89.68
0.0049	0.125	3.00	120	0.87	3.02	92.70
0.0029	0.074	3.75	200	0.73	2.54	95.24
0.0021	0.053	4.25	270	0.37	1.29	96.52
0.0015	0.037	4.75	400	0.29	1.01	97.53
			PAN	0.71	2.47	100.00
TOTALS				28.77	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5			
10			
16	-2.61	0.2410	6.121
25	-2.22	0.1837	4.667
40	-1.15	0.0874	2.221
50	-0.42	0.0526	1.337
60	0.24	0.0333	0.845
75	1.24	0.0167	0.425
84	1.90	0.0105	0.268
90	2.55	0.0067	0.170
95	3.68	0.0031	0.078

Measure	Trask	Inman	Folk-Ward
Median, phi	-0.42	-0.42	-0.42
Median, in.	0.0526	0.0526	0.0526
Median, mm	1.337	1.337	1.337
Mean, phi	-1.35	-0.36	-0.38
Mean, in.	0.1002	0.0504	0.0511
Mean, mm	2.546	1.281	1.299
Sorting	0.302	2.257	
Skewness	1.053	0.028	
Kurtosis			

Grain Size Description (ASTM-USCS Scale)	Coarse sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	24.61
Coarse Sand	10	17.48
Medium Sand	40	33.12
Fine Sand	200	20.02
Silt/Clay	<200	4.76
	Total	100

DATE 2/98 PTS FILE# **CHAIN OF CUSTODY RECORD** PAGE 1 OF 2

COMPANY: Alton Geoscience
ADDRESS: 25A Technology Drive
PROJECT MANAGER: Gil Fry
PROJECT NAME / PHONE NUMBER: 76 Station 4357 — 714 7530101
PROJECT NUMBER: 20-0368 — FAX NUMBER: 714 7530111
SITE LOCATION: 11280 National Blvd. LA, CA
SAMPLER SIGNATURE:

PO#

SPECIAL HANDLING: 24 HOURS / 5 DAYS / 72 HOURS / NORMAL / OTHER

SAMPLE CONDITIONS: RECEIVED ON ICE YES/NO; SEALED YES/NO; OTHER YES/NO

ANALYSIS REQUEST

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY, API RP40	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YELD ASTM D425	CATION EXCHANGE CAPACITY EPA 9080	SOIL pH, EPA 9045	GRAIN SIZE: DRY; 400 MESH 02 MAR 98 FAC	GRAIN SIZE: SIEVE & LASER	GRAIN SIZE: LASER; 1 MICRON	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40	TOC: WALKLEY-BLACK 02 MAR 98 FAC	HYDRAULIC CONDUCTIVITY PACKAGE FAC 02 MAR 98	Soil Prop (Vadose zone) FAC 02 MAR 98	Vertical Hydraulic conductivity 02 MAR 98 FAC				NUMBER OF SAMPLES	COMMENTS
x B5-14.5	2/9/98	804	14.5																						hold
x B5-19.5		808	19.5																						
x B5-24.5		814	24.5																						
x B5-34.75		832	34.75																X	X					
x B5-39.5		846	39.5																						
x B5-44.5		857	44.5																						
x B5-~~50.0~~ 49.5		908	~~50.0~~ 49.5										X				X		X	X					
x B5-59.5		942	59.5																						
x B5-64.5		952	64.5														X		X	X					
x B5-69.2		1011	69.5																						
x B5-74.25		1021	74.25																						

1. RELINQUISHED BY	2. ~~RELINQUISHED BY~~ Rec'd by	3. RELINQUISHED BY	4. RELINQUISHED BY
Sonya V. Fusoni	[illegible]		
COMPANY: Alton Geoscience	COMPANY: PTS Labs	COMPANY	COMPANY
DATE: 2/9/98 TIME: 1441	DATE: 02/09/98 TIME: 14:40	DATE TIME	DATE TIME

DATE 2/9/98 PTS FILE# **CHAIN OF CUSTODY RECORD** PAGE 2 OF 2

COMPANY: Alton Geoscience
ADDRESS: 25A Technology Drive
PROJECT MANAGER: Gil Fry
PROJECT NAME: 76 Station 4357
PHONE NUMBER: 714 753 0101
PROJECT NUMBER: 20-0368
FAX NUMBER: 714 753 0111
SITE LOCATION: 11280 National Blvd LA, CA
SAMPLER SIGNATURE:

ANALYSIS REQUEST

P0#

SPECIAL HANDLING
24 HOURS 5 DAYS
72 HOURS NORMAL
OTHER

SAMPLE CONDITIONS
RECEIVED ON ICE YES/NO
SEALED YES/NO
OTHER YES/NO

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY, API RP40	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YELD ASTM D425	CATION EXCHANGE CAPACITY EPA 9080	SOIL pH, EPA 9045	GRAIN SIZE: DRY; 400 MESH	GRAIN SIZE: SIEVE & LASER	GRAIN SIZE: LASER; 1 MICRON	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40	TOC: WALKLEY-BLACK	HYDRAULIC CONDUCTIVITY PACKAGE	NUMBER OF SAMPLES	COMMENTS
X B5-84.25	2/9/98	1054	84.25																	hold
X B5-109.5		1227	109.5																	
82																				

1. RELINQUISHED BY: Sonya V. Husani
COMPANY: Alton Geoscience
DATE: 2/9/98 TIME: 1441

2. ~~RELINQUISHED BY~~ Rec'd by
COMPANY: PTS Labs
DATE: 02/09/98 TIME: 14:41

3. RELINQUISHED BY
COMPANY
DATE TIME

4. RELINQUISHED BY
COMPANY
DATE TIME

DATE 2/9/98 PTS FILE# CHAIN OF CUSTODY RECORD 4357-34 PAGE 1 OF 1

COMPANY: Alton Geoscience
ADDRESS: 25A Technology Drive
PROJECT MANAGER: Gil Fry
PROJECT NAME / PHONE NUMBER: 76 Station 4357 714 7530101
PROJECT NUMBER: 20-0368 FAX NUMBER: 714 7530111
SITE LOCATION: 11280 National Blvd LA, CA
SAMPLER SIGNATURE: Sonya V. Fusoni

ANALYSIS REQUEST

P0#

SPECIAL HANDLING: 24 HOURS / 5 DAYS / 72 HOURS / NORMAL / OTHER

SAMPLE CONDITIONS: RECEIVED ON ICE YES/NO; SEALED YES/NO; OTHER YES/NO

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY, API RP40	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YELD ASTM D425	CATION EXCHANGE CAPACITY EPA 9080	SOIL pH, EPA 9045	GRAIN SIZE: DRY; 400 MESH	GRAIN SIZE: SIEVE & LASER	GRAIN SIZE: LASER; 1 MICRON	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40	TOC: WALKLEY-BLACK	HYDRAULIC CONDUCTIVITY PACKAGE		Sp. Prop (Vadose zone Samples Only)					NUMBER OF SAMPLES	COMMENTS
B7-54.25	2/7/98	748	54.25																							Hold
B7-58.75		800	58.75																							
B7-63.5		825	63.5																							
B7-69.0		842	69.0																							
B7-73.9		917	73.9																							
B7-78.8		941	78.8																	X						
B7-85.5		1003	85.5																							
B7-89.5		1024	89.5																							
B7-93.9		1047	93.9																							
B7-99.0		1109	99.0																							

3

1. RELINQUISHED BY	2. RELINQUISHED BY	3. RELINQUISHED BY	4. RELINQUISHED BY
Sonya V. Fusoni	Lynette Nu recd by –		
COMPANY: Alton Geoscience	COMPANY: PTS Lab	COMPANY	COMPANY
DATE 2/9/98 TIME 1450	DATE 02/09/98 TIME 1450	DATE TIME	DATE TIME

DATE 2/6/98 PTS FILE# **CHAIN OF CUSTODY RECORD** PAGE 1 OF 1

COMPANY: Alton Geoscience

ADDRESS: 25A Technology Drive

PROJECT MANAGER: Gil Fry

PROJECT NAME: 76 Station Tosco PHONE NUMBER: 714 753 0101

PROJECT NUMBER: 20-0368 FAX NUMBER: 714 753 0111

SITE LOCATION: 11280 National Blvd. LA, CA

SAMPLER SIGNATURE:

P0#

SPECIAL HANDLING: 24 HOURS, 5 DAYS, 72 HOURS, NORMAL, OTHER

SAMPLE CONDITIONS: RECEIVED ON ICE YES/NO; SEALED YES/NO; OTHER YES/NO

ANALYSIS REQUEST

	SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY, API RP40	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YELD ASTM D425	CATION EXCHANGE CAPACITY EPA 9080	SOIL pH, EPA 9045	GRAIN SIZE: DRY; 400 MESH	GRAIN SIZE: SIEVE & LASER	GRAIN SIZE: LASER; 1 MICRON 02MAR98 FAG	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40	TOC: WALKLEY-BLACK 02MAR98 FAG	HYDRAULIC CONDUCTIVITY PACKAGE		Soil Resp (Vadose zone) 02MAR98 FAG	Vertical H Conductivity 02MAR98 FAG				NUMBER OF SAMPLES	COMMENTS
X	B7-5.5	2/6/98	1411	5.5																							Hold
X	B7-9.0		1421	9.0												X		X			X	X					
X	B7-14.0		1430	14.0																							
X	B7-19.25		1444	19.25																							
X	B7-23.75		1503	23.75																							
X	B7-29.25		1526	29.25																							
X	B7-34.0		1544	34.0																							
X	B7-39.0		1605	39.0																							
X	B7-44.5		1627	44.5																	X						
X	B7-49.25		1700	49.5																							

1. RELINQUISHED BY	2. RELINQUISHED BY	3. RELINQUISHED BY	4. RELINQUISHED BY
Sonya V. Lusoni	[signature] Recd by [signature]		
COMPANY: Alton Geoscience	COMPANY: PTS Labs	COMPANY:	COMPANY:
DATE: 2/9/98 TIME: 1450	DATE: 02/09/98 TIME: 1450	DATE: TIME:	DATE: TIME:

DATE 2[illegible]/98 PTS FILE# CHAIN OF CUS[illegible]DY RECORD 1331 20 PAGE [illegible] OF 2

COMPANY: Alton Geoscience

ADDRESS: 25A Technology Drive

PROJECT MANAGER: Gil Fry

PROJECT NAME: 76 Station 4357 PHONE NUMBER: 7147530101

PROJECT NUMBER: 20-0368 FAX NUMBER: 7147530111

SITE LOCATION: 11280 National Blvd LA CA

SAMPLER SIGNATURE: Sonya V. Fusoni

ANALYSIS REQUEST

PO#

SPECIAL HANDLING: 24 HOURS, 5 DAYS, 72 HOURS, NORMAL, OTHER

SAMPLE CONDITIONS: RECEIVED ON ICE YES/NO; SEALED YES/NO; OTHER YES/NO

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY, API RP40	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YELD ASTM D425	CATION EXCHANGE CAPACITY EPA 9080	SOIL pH, EPA 9045	GRAIN SIZE: DRY; 400 MESH	GRAIN SIZE: SIEVE & LASER	GRAIN SIZE: LASER; 1 MICRON	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40	TOC: WALKLEY-BLACK	HYDRAULIC CONDUCTIVITY PACKAGE		Soil prop (VADOSE ZONE) [illegible]					NUMBER OF SAMPLES	COMMENTS
B6-58.25	2/5/98	1337	58.25																							hold
B6-83.75	↓	1610	83.75																							↓
B6-89.5	↓	1643	89.5																							↓
B6-98.75	2/6/98	851	98.75																	X						↓
B6-108.75	↓	948	108.75																							↓

SL

5

1. RELINQUISHED BY	2. RELINQUISHED BY RECEIVED BY	3. RELINQUISHED BY	4. RELINQUISHED BY
Sonya V. Fusoni	[illegible]		
COMPANY: Alton Geoscience	COMPANY: PTS LABS	COMPANY	COMPANY
DATE: 2/6/98 TIME: 1321	DATE: 6 FEB 9 TIME: 1321	DATE TIME	DATE TIME

DATE 2/5/98 **PTS FILE#** **CHAIN OF CUSTODY RECORD** 4357-28 **PAGE** 1 **OF** 2

COMPANY: ALTON GEOSCIENCE

ADDRESS: 25A Technology Dr., Irvine, CA 92618

PROJECT MANAGER: GIL FRY

PROJECT NAME: 76 STATION 4357 PHONE NUMBER: 714-753-0101

PROJECT NUMBER: 20-0368 FAX NUMBER: 714-753-0111

SITE LOCATION: 11280 National Blvd., L.A., CA

SAMPLER SIGNATURE: Sonya V. Luisoni

P0#

SPECIAL HANDLING: 24 HOURS, 5 DAYS, 72 HOURS, NORMAL, OTHER

SAMPLE CONDITIONS: RECEIVED ON ICE YES/NO; SEALED YES/NO; OTHER YES/NO

ANALYSIS REQUEST

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY, API RP40	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YELD ASTM D425	CATION EXCHANGE CAPACITY EPA 9080	SOIL pH, EPA 9045	GRAIN SIZE: DRY; 400 MESH 02MAR98 TAG	GRAIN SIZE: SIEVE & LASER	GRAIN SIZE: LASER; 1 MICRON	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40	TOC: WALKLEY-BLACK 02MAR98 TAG	HYDRAULIC CONDUCTIVITY PACKAGE		Soil Prop (Sat. Zone) 02MAR98 TAG					NUMBER OF SAMPLES	COMMENTS
MW3-134.5	2/5/98	1422	134.5										X				X			X						Hold
MW3-139.5	↓	1444	139.5																							Hold
MW3-144.25	↓	1506	144.25																							Hold

6

1. RELINQUISHED BY	2. ~~RELINQUISHED BY~~ RECEIVED BY	3. RELINQUISHED BY	4. RELINQUISHED BY
Sonya V. Luisoni	[signature]		
COMPANY: Alton Geoscience	COMPANY: PTS LABS	COMPANY	COMPANY
DATE: 2/6/9[illegible] TIME: 1321	DATE: 6FEB98 TIME: 1321	DATE TIME	DATE TIME

DATE 2/5/98 PTS FILE# CHAIN OF CUSTODY RECORD 4357-23 PAGE 2 OF 2

COMPANY: Alton Geoscience

ADDRESS: 25A Technology Drive

PROJECT MANAGER: Gil Fry

PROJECT NAME / PHONE NUMBER: 76 Station 4357 714 7530101

PROJECT NUMBER / FAX NUMBER: 20-0368 714 7530111

SITE LOCATION: 11280 National Blvd LA, CA

SAMPLER SIGNATURE: Sonya V. Lusoni

P0#

SPECIAL HANDLING: 24 HOURS, 5 DAYS, 72 HOURS, NORMAL, OTHER

SAMPLE CONDITIONS: RECEIVED ON ICE YES/NO; SEALED YES/NO; OTHER YES/NO

ANALYSIS REQUEST

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY, API RP40	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YELD ASTM D425	CATION EXCHANGE CAPACITY EPA 9080	SOIL pH, EPA 9045	GRAIN SIZE: DRY; 400 MESH	GRAIN SIZE: SIEVE & LASER	GRAIN SIZE: LASER; 1 MICRON	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40	TOC: WALKLEY-BLACK	HYDRAULIC CONDUCTIVITY PACKAGE	NUMBER OF SAMPLES	COMMENTS
MW3-59.25	2/5/98	1015	59.25																	hold
MW3-64.25		1027	64.25																	
MW3-89.25		1128	89.25																	
~~MW3-94.0~~																				

7

1. RELINQUISHED BY	2. RELINQUISHED BY	3. RELINQUISHED BY	4. RELINQUISHED BY
Sonya V. Lusoni	Roy Guillin		
COMPANY: Alton Geoscience	COMPANY: PTS	COMPANY	COMPANY
DATE: 2/5/98 TIME: 1417.	DATE: 2/5/98 TIME: 14:17	DATE TIME	DATE TIME

DATE 2/5/98 PTS FILE# 25 **CHAIN OF CUSTODY RECORD** PAGE 1 OF 2

COMPANY: Alton Geoscience
ADDRESS: 25A Technology Drive
PROJECT MANAGER: Gil Fry
PROJECT NAME: 76 Station 4351
PHONE NUMBER: 714 753 0101
PROJECT NUMBER: 20-0368
FAX NUMBER: 714 753 0111
SITE LOCATION: 11280 National Blvd LA, CA
SAMPLER SIGNATURE:

PO#:
SPECIAL HANDLING: 24 HOURS / 5 DAYS / 72 HOURS / NORMAL / OTHER
SAMPLE CONDITIONS: RECEIVED ON ICE YES/NO; SEALED YES/NO; OTHER YES/NO

ANALYSIS REQUEST

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY, API RP40	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YELD ASTM D425	CATION EXCHANGE CAPACITY EPA 9080	SOIL pH, EPA 9045	GRAIN SIZE: DRY; 400 MESH ASTM D422 FAC	GRAIN SIZE: SIEVE & LASER	GRAIN SIZE: LASER; 1 MICRON	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40	TOC: WALKLEY-BLACK ASTM D2974-95 FAC	HYDRAULIC CONDUCTIVITY PACKAGE		Soil prep (Freeze Dry) ASTM D5358 FAC					NUMBER OF SAMPLES	COMMENTS
~~MW3-4.25~~	~~2/5/98~~	~~8034~~	~~4.25~~ 8																							~~hold~~
~~MW~~ B6-5.75	2/5/98	850	5.75																							hold
B6-8.75		857	8.75																							
B6-14.0		919	14.0																							
B6-19.0		938	19.0																							
B6-24.25		951	24.25																							
B6-29.25		1020	29.25														X			X						
B6-34.25		1104	34.25																							
B6-39.25		1124	39.25																							
B6-44.25		1145	44.25																							
B6-55.25		1305	55.25										X							X						8

1. RELINQUISHED BY	2. RELINQUISHED BY	3. RELINQUISHED BY	4. RELINQUISHED BY
Sonya V. Fusani	Ray Guillen		
COMPANY: Alton Geoscience	COMPANY: PTS	COMPANY	COMPANY
DATE: 2/5/98 TIME: 1413	DATE: 2/5/98 TIME: 14:13	DATE TIME	DATE TIME

DATE 2/[illegible]/98 PTS FILE# CHAIN OF CUS[illegible]DY RECORD 4357-23 PAGE 1 [illegible]F 2

COMPANY: Alton Geoscience

ADDRESS: 25 A Technology Drive

PROJECT MANAGER: ~~Liz Sewell~~ & Gil Fry

PROJECT NAME: 76 Station 4357 PHONE NUMBER: 714 753 0101

PROJECT NUMBER: 20-0368 FAX NUMBER: 714 753 0111

SITE LOCATION: 11280 National Blvd, LA, CA

SAMPLER SIGNATURE: Sonya V. Luisoni

ANALYSIS REQUEST

P0#

SPECIAL HANDLING: 24 HOURS, 5 DAYS, 72 HOURS, NORMAL, OTHER

SAMPLE CONDITIONS: RECEIVED ON ICE YES/NO; SEALED YES/NO; OTHER YES/NO

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY, API RP40	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YELD ASTM D425	CATION EXCHANGE CAPACITY EPA 9080	SOIL pH, EPA 9045	GRAIN SIZE: DRY; 400 MESH	GRAIN SIZE: SIEVE & LASER	GRAIN SIZE: LASER; 1 MICRON	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40	TOC: WALKLEY-BLACK	HYDRAULIC CONDUCTIVITY PACKAGE	NUMBER OF SAMPLES	COMMENTS
MW2-143.5	2/4/98	1230	143.5																	hold
MW3-4.25	2/5/98	804	4.25																	hold (1/2 full)
MW3-9.0		820	9.0																	hold
MW3-19.5		855	19.5																	hold
MW3-14.25		825	14.25																	
MW3-24.25		900	24.25																	
MW3-29.25		905	29.25																	
MW3-34.50		910	34.50																	
MW3-39.75		915	39.75																	
MW3-44.25		930	44.25																	
MW3-54.45		1006	54.45																	9

1. RELINQUISHED BY	2. RELINQUISHED BY	3. RELINQUISHED BY	4. RELINQUISHED BY
Sonya V. Luisoni	Roy Guillen		
COMPANY: Alton Geoscience	COMPANY: P.T.S	COMPANY:	COMPANY:
DATE: 2/5/98 TIME: 1417	DATE: 2/5/98 TIME: 14:17	DATE: TIME:	DATE: TIME:

PTS Laboratories, Inc. • 8100 Secura Way • Santa Fe Springs, CA 90670 • Phone (562) 907-3607 • Fax (562) 907-3610

DATE **PTS FILE#** **CHAIN OF CUSTODY RECORD** 4201-22 **PAGE** 1 **OF** 1

COMPANY: Alton Geoscience

ADDRESS: 25A Technology Drive

PROJECT MANAGER: Liz Sewell

PROJECT NAME: 76 Station 4357 PHONE NUMBER: 714 753 0101

PROJECT NUMBER: 20-0368 FAX NUMBER: 714 753 0111

SITE LOCATION: 11280 National Blvd. LA, CA

SAMPLER SIGNATURE: Sonya V. Fuisoni

P0#

SPECIAL HANDLING: 24 HOURS, 5 DAYS, 72 HOURS, NORMAL, OTHER

SAMPLE CONDITIONS: RECEIVED ON ICE YES/NO; SEALED YES/NO; OTHER YES/NO

ANALYSIS REQUEST

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY, API RP40	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YELD ASTM D425	CATION EXCHANGE CAPACITY EPA 9080	SOIL pH, EPA 9045	GRAIN SIZE: DRY; 400 MESH	GRAIN SIZE: SIEVE & LASER	GRAIN SIZE: LASER; 1 MICRON	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40	TOC: WALKLEY-BLACK	HYDRAULIC CONDUCTIVITY PACKAGE	NUMBER OF SAMPLES	COMMENTS
MW2-69.25	2/4/98	756	69.25																	hold
MW2-139.25	↓	1128	139.25																	hold

10

1. RELINQUISHED BY	2. ~~RELINQUISHED BY~~ RECEIVED BY	3. RELINQUISHED BY	4. RELINQUISHED BY
Sonya V. Fuisoni	[signature]		
COMPANY: Alton Geoscience	COMPANY: PTS LAB	COMPANY	COMPANY
DATE: 2/4/98 TIME: 1455	DATE: 04 FEB 98 TIME: 1455	DATE TIME	DATE TIME

DATE 2/2/98 PTS FILE# CHAIN OF CUSTODY RECORD 4357-19 PAGE 2 OF 2

COMPANY: Alton Geoscience
ADDRESS: 25A Technology Drive
PROJECT MANAGER: Liz Sewell
PROJECT NAME: 76 Station Tosco 4357 PHONE NUMBER: 714 753 0101
PROJECT NUMBER: 20-0368 FAX NUMBER: 714 753 0111
SITE LOCATION: ~~3470~~ 11280 National Blvd LA, CA
SAMPLER SIGNATURE: Sonya V. Fusani

ANALYSIS REQUEST

PO#

SPECIAL HANDLING: 24 HOURS / 5 DAYS / 72 HOURS / NORMAL / OTHER

SAMPLE CONDITIONS: RECEIVED ON ICE YES/NO; SEALED YES/NO; OTHER YES/NO

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY, API RP40	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YELD ASTM D425	CATION EXCHANGE CAPACITY EPA 9080	SOIL pH, EPA 9045	GRAIN SIZE: DRY; 400 MESH	GRAIN SIZE: SIEVE & LASER	GRAIN SIZE: LASER; 1 MICRON	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40	TOC: WALKLEY-BLACK	HYDRAULIC CONDUCTIVITY PACKAGE	NUMBER OF SAMPLES	COMMENTS
MW2-19.5	2/2/98	1527	19.5																	hold
MW2-25.25		1537	25.25																	hold
MW2-29.25		1546	29.25																	
MW2-34.75		1557	34.75																	
MW2-39.5		1604	39.5																	
MW2-44.2		1608	44.2																	
B9-104.9		1135	104.9																	11

1. RELINQUISHED BY	2. RELINQUISHED BY	3. RELINQUISHED BY	4. RELINQUISHED BY
Sonya V. Fusani	[illegible]		
COMPANY: Alton Geoscience	COMPANY: PTS Labs	COMPANY	COMPANY
DATE: 2/2/98 TIME: 1716	DATE: 02 FEB 98 TIME: 1716	DATE TIME	DATE TIME

DATE 2/2/98 PTS FILE# CHAIN OF CUSTODY RECORD 4357-19 PAGE 1 OF 2

COMPANY: ALTON GEOSCIENCE

ADDRESS: 25 A Technology Drive

PROJECT MANAGER: Liz Sewell

PROJECT NAME: 76 Station 4357 PHONE NUMBER: 714 753 0101

PROJECT NUMBER: 20-0368 FAX NUMBER: 714 753 0111

SITE LOCATION: 11280 National Blvd LA, CA

SAMPLER SIGNATURE: Sonya V. Lusoni

ANALYSIS REQUEST

PO#

SPECIAL HANDLING: 24 HOURS, 5 DAYS, 72 HOURS, NORMAL, OTHER

SAMPLE CONDITIONS: RECEIVED ON ICE YES/NO; SEALED YES/NO; OTHER YES/NO

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY, API RP40	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YELD ASTM D425	CATION EXCHANGE CAPACITY EPA 9080	SOIL pH, EPA 9045	GRAIN SIZE: DRY; 400 MESH	GRAIN SIZE: SIEVE & LASER	GRAIN SIZE: LASER; 1 MICRON	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40	TOC: WALKLEY-BLACK	HYDRAULIC CONDUCTIVITY PACKAGE	NUMBER OF SAMPLES	COMMENTS
B9-25.00	2-2-98	0830	25.00																	Hold
B9-34.75	↓	852	34.75																	hold
B9-39.75	↓	900	39.75																	hold
B9-50.0	↓	920	50.0																	hold
B9-44.75	↓	913	44.75																	hold
B9-64.9	↓	1000	64.9																	hold
B9-69.75	↓	1011	69.75																	hold
B9-74.75	↓	1027	74.75																	↓
MW2-4.25	↓	1508	4.25																	↓
MW2-9.25	↓	1514	9.25																	↓
MW2-14.5	↓	~~14.5~~ 1521	14.5																	↓ 12

1. RELINQUISHED BY	2. RELINQUISHED BY	3. RELINQUISHED BY	4. RELINQUISHED BY
Sonya Lusoni	[signature]		
COMPANY: Alton Geoscience	COMPANY: PTS Labs	COMPANY	COMPANY
DATE: 2/2/9[illegible] TIME: 1716	DATE: 02 FEB 98 TIME: 1716	DATE TIME	DATE TIME

DATE 1/30/98 PTS FILE# CHAIN OF CUSTODY RECORD 4357-16 PAGE 1 OF 1

COMPANY: Alton Geoscience

ADDRESS: 25A Technology Drive

PROJECT MANAGER: Liz Sewell

PROJECT NAME: 76 Station 4357 PHONE NUMBER: 714 7530101

PROJECT NUMBER: 20-0368 FAX NUMBER: 714 7530111

SITE LOCATION: 11280 National Blvd LA, CA

SAMPLER SIGNATURE: Sonya V. Lewsoni

PO#

SPECIAL HANDLING: 24 HOURS, 5 DAYS, 72 HOURS, NORMAL, OTHER

SAMPLE CONDITIONS: RECEIVED ON ICE YES/NO; SEALED YES/NO; OTHER YES/NO

ANALYSIS REQUEST

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY, API RP40	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YELD ASTM D425	CATION EXCHANGE CAPACITY EPA 9080	SOIL pH, EPA 9045	GRAIN SIZE: DRY; 400 MESH	GRAIN SIZE: SIEVE & LASER	GRAIN SIZE: LASER; 1 MICRON	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40	TOC: WALKLEY-BLACK	HYDRAULIC CONDUCTIVITY PACKAGE	NUMBER OF SAMPLES	COMMENTS
B9-5.25	1/30/98	1512	5.25																	hold
B9-9.5	↓	1519	9.5																	hold
B9-15.0	↓	1526	15.0																	hold
B9-20.25	↓	1533	20.25																	hold

13

1. RELINQUISHED BY	2. RELINQUISHED BY	3. RELINQUISHED BY	4. RELINQUISHED BY
Sonya V. Lewsoni	[signature]		
COMPANY: Alton Geoscience	COMPANY: PTS Labs	COMPANY	COMPANY
DATE: 2/2/98 TIME: 1709	DATE: 2/2/98 TIME: 1709	DATE TIME	DATE TIME

DATE 1/29/98 PTS FILE# CHAIN OF CUSTODY RECORD 4357-10 PAGE 1 OF 1

COMPANY: Alton Geoscience

ADDRESS: 25 A Technology Drive

PROJECT MANAGER: Liz Sewell

PROJECT NAME: 76 Station Tosco 4357 PHONE NUMBER: 714 7530101

PROJECT NUMBER: 20-~~063~~ 0368 FAX NUMBER: 714 7530111

SITE LOCATION: ~~HI7~~ 11280 National Blvd LA/CA

SAMPLER SIGNATURE: Sonya V. Lusoni

ANALYSIS REQUEST

P0#

SPECIAL HANDLING: 24 HOURS, 5 DAYS, 72 HOURS, NORMAL, OTHER

SAMPLE CONDITIONS: RECEIVED ON ICE YES/NO; SEALED YES/NO; OTHER YES/NO

	SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY, API RP40	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YELD ASTM D425	CATION EXCHANGE CAPACITY EPA 9080	SOIL pH, EPA 9045	GRAIN SIZE: DRY; 400 MESH	GRAIN SIZE: SIEVE & LASER	GRAIN SIZE: LASER; 1 MICRON 02 MARGS T/PC	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40	TOC: WALKLEY-BLACK	HYDRAULIC CONDUCTIVITY PACKAGE			Vert Hy Conductivity 02 MARGS T/PC				NUMBER OF SAMPLES	COMMENTS
x	B8-109.25	1/29/98	1454	109.25												X						X					hold
			SL																								
o	B10-5.5	1/30/98	850	5.5																							hold
x	B10-11.25		900	11.25																							hold
x	B10-16.75		907	16.75																							hold
x	B10-~~22.25~~ 20.5 SL		913	~~22.25~~ 20.5 SL																							hold B10-20.5
x	B10-~~30.25~~ 30.4 SL		932	~~30.25~~ 30.4 SL																							hold B10-30.4
x	B10-35.25		954	35.25																							hold
x	B10-40.25		1008	40.25																							hold
x	B10-59.75		1052	59.75																							hold
				SL																							hold 14

1. RELINQUISHED BY	2. RELINQUISHED BY	3. RELINQUISHED BY	4. RELINQUISHED BY
Sonya V. Lusoni	[signature]		
COMPANY: Alton Geoscience	COMPANY: PTS Labs	COMPANY	COMPANY
DATE: 1/30/[illegible] TIME: 1438	DATE: 30 JAN 98 TIME: 1438	DATE TIME	DATE TIME

DATE 1/[illegible]/98 PTS FILE# 28046 CHAIN OF CUS[illegible]DY RECORD PAGE 1 [illegible]F 1

COMPANY: Alton Geoscience

ADDRESS: 25A Technology Drive

PROJECT MANAGER: Liz Sewell

PROJECT NAME: 76 Station 4357 PHONE NUMBER: 714 753 0101

PROJECT NUMBER: 20-0368 FAX NUMBER: 714 753 0111

SITE LOCATION: 11280 National Blvd LA, CA

SAMPLER SIGNATURE: Sonya V. Iusoni

ANALYSIS REQUEST

P0#

SPECIAL HANDLING: 24 HOURS, 5 DAYS, 72 HOURS, NORMAL, OTHER

SAMPLE CONDITIONS: RECEIVED ON ICE YES/NO; SEALED YES/NO; OTHER YES/NO

	SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY, API RP40	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YELD ASTM D425	CATION EXCHANGE CAPACITY EPA 9080	SOIL pH, EPA 9045	GRAIN SIZE: DRY; 400 MESH	GRAIN SIZE: SIEVE & LASER	GRAIN SIZE: LASER; 1 MICRON 02 MAR 98 FAG	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40	TOC: WALKLEY-BLACK	HYDRAULIC CONDUCTIVITY PACKAGE	Soil Prop (Sat Zone) 02 MAR 98 FAG	Vert Hydraulic Conductivity 02 MAR 98 FAG	NUMBER OF SAMPLES	COMMENTS
x	MW1-74.5	1/27/98	816	74.5																			hold
x	MW1-79.75		843	79.75																			hold (1/2 full)
x	MW1-94.6		943	94.6																			(1/4 full) hold
x	MW1-124.5		1401	124.5												X				X	X		(1/2 full) hold
x	MW1-129.75		1423	129.75																			(3/4 full) hold
x	MW1-135.0		1519	135.0											X								RUSH: Fax results to
																							Matt Katen Rm 400
																							(310) 478-1401
x	MW1-140.3		1612												X								RUSH
																							15

1. RELINQUISHED BY	2. RELINQUISHED BY	3. RELINQUISHED BY	4. RELINQUISHED BY
Sonya V. Iusoni	[signature]		
COMPANY: Alton Geoscience	COMPANY: PTS Laboratories	COMPANY	COMPANY
DATE: 1/27/98 TIME: 1617	DATE: 27 JAN 98 TIME: 1617	DATE TIME	DATE TIME

DATE 1/29/98 **PTS FILE#** 28053 **CHAIN OF CUSTODY RECORD** **PAGE** 1 **OF** 1

COMPANY: Alton Geoscience
ADDRESS: 25A Technology Drive
PROJECT MANAGER: Liz Sewell
PROJECT NAME: 76 Station 4357 — PHONE NUMBER: 714 753 0101
PROJECT NUMBER: 20-0368 — FAX NUMBER: 714 753 0111
SITE LOCATION: 2112 80 National Blvd LA/CA
SAMPLER SIGNATURE: Sonya V. Fusoni

ANALYSIS REQUEST: PHYSICAL PROPERTIES PACKAGE, API RP40; MOISTURE CONTENT, ASTM D2216; POROSITY, API RP40; GRAIN DENSITY, API RP40; BULK DENSITY, API RP40; AIR PERMEABILITY, API RP40; SPECIFIC RETENTION/YELD ASTM D425; CATION EXCHANGE CAPACITY EPA 9080; SOIL pH, EPA 9045; GRAIN SIZE: DRY; 400 MESH; GRAIN SIZE: SIEVE & LASER; GRAIN SIZE: LASER; 1 MICRON; HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40; TOC: WALKLEY-BLACK; HYDRAULIC CONDUCTIVITY PACKAGE; NUMBER OF SAMPLES

P0#

SPECIAL HANDLING: 24 HOURS / 5 DAYS / 72 HOURS / NORMAL / OTHER

SAMPLE CONDITIONS: RECEIVED ON ICE YES/NO; SEALED YES/NO; OTHER YES/NO

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	COMMENTS
~~HB14-50~~	~~1/29/98~~	~~9 34~~	~~5.0~~ 82	82
X B8-5.75	1/29/98	936	5.75	hold
X B8-9.75		1003	9.75	hold (1/2 tube)
X B8-14.75		1010	14.75	hold
X B8-25.25		1023	25.25	hold
X B8-29.75		1041	29.75	hold
X B8-35.25		1045	35.25	hold
X B8-~~X~~ 39.75		1050	39.75	hold
X B8-54.75		1119	54.75	hold
X B8-20.25		1016	20.25	hold
			~~82~~	hold 16

1. RELINQUISHED BY	2. RELINQUISHED BY	3. RELINQUISHED BY	4. RELINQUISHED BY
Sonya V. Fusoni	[illegible]		
COMPANY: Alton Geoscience	COMPANY: PTS Laboratories	COMPANY	COMPANY
DATE: 1/29/98 TIME: 1428	DATE: 29 JAN 98 TIME: 1428	DATE TIME	DATE TIME

DATE [illegible]/98 PTS FILE# CHAIN OF CUSTODY RECORD 4357-05 PAGE 1 OF 2

COMPANY: Alton Geoscience

ADDRESS: 25A Technology Drive

PROJECT MANAGER: Liz Sewell

PROJECT NAME: 76 Station 4357 PHONE NUMBER: 714 753 0101

PROJECT NUMBER: 20-0368 FAX NUMBER: 714 753 0111

SITE LOCATION: 11280 National Blvd LA, CA

SAMPLER SIGNATURE: Sanga V. Luisoni

ANALYSIS REQUEST

P0#

SPECIAL HANDLING: 24 HOURS, 5 DAYS, 72 HOURS, NORMAL, OTHER

SAMPLE CONDITIONS: RECEIVED ON ICE YES/NO; SEALED YES/NO; OTHER YES/NO

	SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY, API RP40	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YELD ASTM D425	CATION EXCHANGE CAPACITY EPA 9080	SOIL pH, EPA 9045	GRAIN SIZE: DRY; 400 MESH	GRAIN SIZE: SIEVE & LASER	GRAIN SIZE: LASER; 1 MICRON	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40	TOC: WALKLEY-BLACK	HYDRAULIC CONDUCTIVITY PACKAGE	NUMBER OF SAMPLES	COMMENTS
x	MW1-4.25	1/26/98	9:23	4.25																	hold
x	MW1-10.0		940	10.0																	hold
x	MW1-15.25		957	15.25																	hold
x	MW1-19.25		1024	19.25																	hold
x	MW1-24.75		1030	24.75																	hold
x	MW1-30.25		1050	30.5																	hold
x	MW1-35.25		1118	35.25																	hold
x	MW1-40.25		1128	40.25																	hold
x	MW1-45.0		1157	45.0																	hold
x	MW1-59.65		1228	59.65																	hold (1/2 full)
x	MW1-64.65		1243	64.65																	hold

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1. RELINQUISHED BY	2. RELINQUISHED BY	3. RELINQUISHED BY	4. RELINQUISHED BY
Sanga V Luisoni	[signature]		
COMPANY: Alton Geoscience	COMPANY: PTS Laboratories	COMPANY	COMPANY
DATE: 1/26/98 TIME: 504	DATE: 26 JAN 98 TIME: 1704	DATE TIME	DATE TIME

DATE 1/26/98 PTS FILE# **CHAIN OF CUSTODY RECORD** PAGE 2 OF 2

COMPANY: Alton Geoscience

ADDRESS: 25A Technology Drive

PROJECT MANAGER: Liz Sewell

PROJECT NAME: 76 Station 4357 PHONE NUMBER: 714 753 0101

PROJECT NUMBER: 20-0368 FAX NUMBER: 714 753 0111

SITE LOCATION: 11280 National Blvd LA CA

SAMPLER SIGNATURE: Sonya V. Fuisoni

ANALYSIS REQUEST

P0#

SPECIAL HANDLING: 24 HOURS, 5 DAYS, 72 HOURS, NORMAL, OTHER

SAMPLE CONDITIONS: RECEIVED ON ICE YES/NO; SEALED YES/NO; OTHER YES/NO

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY, API RP40	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YELD ASTM D425	CATION EXCHANGE CAPACITY EPA 9080	SOIL pH, EPA 9045	GRAIN SIZE: DRY; 400 MESH	GRAIN SIZE: SIEVE & LASER	GRAIN SIZE: LASER; 1 MICRON	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40	TOC: WALKLEY-BLACK	HYDRAULIC CONDUCTIVITY PACKAGE	NUMBER OF SAMPLES	COMMENTS
x MW1 - 69.65	1/26/98	1300	69.65																	hold

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1. RELINQUISHED BY	2. RELINQUISHED BY	3. RELINQUISHED BY	4. RELINQUISHED BY
Sonya V. Fuisoni	[signature]		
COMPANY: Alton Geoscience	COMPANY: PTS Laboratories	COMPANY	COMPANY
DATE: 1/26 TIME: 504	DATE: 26 JAN 98 TIME: 1704	DATE TIME	DATE TIME