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**SEACOR**  
Science & Engineering  
Analysis Corporation

**SITE MANAGEMENT PLAN  
8000 SOUTH COLISEUM WAY  
Oakland, California**

Submitted by:  
Science & Engineering Analysis Corporation  
(SEACOR)

for:

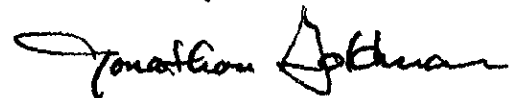
Coliseum Way 8000, Inc.  
1411 Harbor Bay Parkway, Suite 2008  
Oakland, California

August 22, 1994

Prepared by:

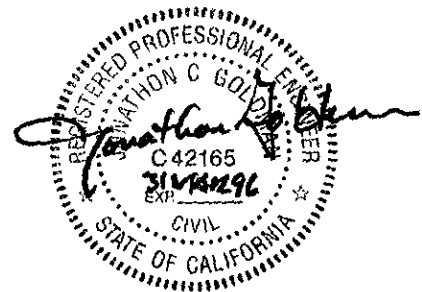
  
Xiao Xia Zhu  
Project Manager

Reviewed by:



Jonathon C. Goldman, P.E.  
Principal Civil Engineer  
C042165  
Expires : 31MAR96

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# TABLE OF CONTENTS

<u>Section</u>	<u>Page No.</u>
<b>1.0 INTRODUCTION</b> .....	1
1.1 Project Area and Site Location and Description .....	1
1.2 Background .....	1
1.3 Objective .....	2
1.4 Development and Maintenance Plans .....	2
<b>2.0 SUMMARY OF AVAILABLE INFORMATION</b> .....	3
2.1 Historical Aerial Photographs .....	3
2.2 Regulatory Agency Files and Other Reports .....	4
<b>3.0 SITE AND SUBSTANCE CHARACTERIZATION</b> .....	6
3.1 Soil and Substance Sampling .....	6
3.2 Groundwater Sampling .....	6
3.3 Shallow Site Lithology and Extent of Tar-Like Substance .....	7
3.4 Shallow Groundwater Conditions .....	8
3.5 Analytical Results .....	9
<b>4.0 CONCLUSIONS</b> .....	13

## LIST OF TABLES

TABLE 1	Summary of Tar-Like Substance T-1 Sample Analytical Results
TABLE 2	Summary of Soil Sample SB-32-4.5 Analytical Results
TABLE 3	Summary of Grab Groundwater Sample Analytical Results
TABLE 4	Summary of Shallow Groundwater Monitoring Well MW-19 Sample Analytical Results

## LIST OF FIGURES

FIGURE 1	Location Map
FIGURE 2	Soil Sample and Shallow Groundwater Monitoring Well Locations

## LIST OF APPENDICES

APPENDIX A	Summary of Available Information Regarding Neighboring Sites
APPENDIX B	Soil Boring Logs and Well Construction Diagrams
APPENDIX C	Soil Boring and Shallow Groundwater Monitoring Well Permits
APPENDIX D	Analytical Laboratory Reports and Chain-of-Custody Records
APPENDIX E	Groundwater Sample Analytical Laboratory Reports (WCC, 1994)

## 1.0 INTRODUCTION

This is a management plan (the Plan) for a site in Oakland, California affected by small volumes of a potentially hazardous tar-like substance. The tar-like substance is commingled with fill materials used historically to raise the grade at the site. The Plan includes a description of the procedures used for and the results of: (1) identification and characterization of potentially hazardous components of the substance, (2) evaluation of its extent onsite and in the vicinity, and (3) assessment of the fate and mobility of the potentially hazardous constituents identified. The Plan also includes preliminary assessment of the public health and environmental risks associated with the conditions identified, and conclusions regarding the feasibility of management of the substance in-place.

### 1.1 Project Area and Site Location and Description

The Site is located at 8000 South Coliseum Way in Oakland, California and consists of an approximately 8.5 acre triangularly-shaped parcel of real property. The Site is currently leased to and occupied by the Malibu Grand Prix and Fun Center. The Site is bounded by South Coliseum Way to the southwest, Elmhurst Creek and the Oakland-Alameda County Coliseum Complex (the Coliseum) to the northwest, and commercial properties (625-675 Hegenberger Road) to the east. The vicinity of the Site within an approximate radius of 1 mile constitutes the Project Area for purposes of this Plan.

### 1.2 Background

The Site is of interest to the Coliseum for use as a parking lot. The Coliseum and Coliseum Way 8000, Inc. (the present owner of the Site) are in contract for transfer of ownership. During the course of due diligence for its acquisition, a tar-like substance was noted by the Coliseum's consultant on the ground surface in certain portions of the Site. Limited sampling and laboratory analysis of the tar-like substance was performed. Certain constituents of the tar-like substance, specifically phenanthrene, naphthalene, pyrene, and the metal lead were detected at elevated concentrations. On the basis of a preliminary conversation with Dr. Ravi Arulanantham (the Staff Toxicologist with the Alameda County Department of Environmental Health and the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB)), the following general criteria for evaluating the presence of the substance onsite were identified:

- (1) characterization of the lateral and vertical extent of the substance onsite,
- (2) evaluation of historic Site land uses to assess whether the substance was released as a result of Site activities,
- (3) evaluation of available information regarding similar properties in the Project Area to determine whether the substance is or appears to be a regional characteristic,

**Site Management Plan**  
8000 Coliseum Way  
August 19, 1994

- (4) evaluation of the mobility of identified hazardous constituents in environmental media (soil, soil gas, groundwater, surface water, and air), and investigation of shallow groundwater quality downgradient of soils affected by the substance, and
- (5) evaluation of the potential public health and environmental risks associated with the conditions identified.

These criteria were confirmed in a meeting held July 27, 1994 where representative of the ACDEH and the RWQCB (the Agencies) provided a consensus request for additional work in order to evaluate alternate courses of remedial action for the tar-like substance onsite.

### **1.3 Objective**

Acquisition of the Site by the Coliseum for use as a parking lot is contingent on the technical and regulatory feasibility of managing the substance in place. Therefore, this document summarizes the information developed subject to the criteria listed above for the purpose of evaluating the feasibility of implementing a plan for such management.

### **1.4 Development and Maintenance Plans**

Assuming that appropriate approvals can be acquired for management of the tar-like substance onsite, the Coliseum is committed to careful demolition of the existing structures and development and maintenance of the Site as a parking lot. The existing Site topography will allow for such development with no or very limited movement of soils in the areas of the Site where the tar-like substance has been encountered as discussed below.

**Site Management Plan**  
8000 Coliseum Way  
August 19, 1994

## **2.0 SUMMARY OF AVAILABLE INFORMATION**

Available information was reviewed from: (1) regulatory agency files, (2) historical aerial photography archives, and (3) reports prepared by others to establish the context for evaluation of Site conditions.

### **2.1 Historical Aerial Photographs**

The following available historical aerial photographs of the Project Area were reviewed at Pacific Aerial Surveys in Oakland, California:

Site Management Plan  
8000 Coliseum Way  
August 19, 1994

<u>Flight Line No. (Negative No.)</u>	<u>Date Photographed</u>
AV 253 (11-35 and 11-36)	May 4, 1957
AV 337 (07-38 and 07-39)	July 7, 1959
AV 550 (09-23 and 09-24)	July 25, 1963
AV 710 (10-30 and 10-31)	April 20, 1966
AV 858 (03-33 and 03-34)	July 2, 1968
AV 902 (06-29 and 06-30)	May 2, 1969
AV 995 (04-28 and 04-29)	May 19, 1971
AV 1100 (06-31 and 06-32)	April 24, 1973
AV 1193 (06-27 and 06-28)	May 19, 1975
AV 1235 (04-07 and 04-08)	March 9, 1976
AV 1377 (06-30 and 06-31)	July 19, 1977
AV 1750 (06-30)	September 14, 1979
AV 2040 (06-30 and 06-31)	June 22, 1981
AV 2640 (06-31 and 06-32)	May 15, 1985
AV 2655 (05-18 and 05-19)	June 9, 1985
AV 3268 (06-32 and 06-33)	March 30, 1988
AV 3292 (05-09 and 05-10)	May 3, 1988
AV 3817 (03-08 and 03-09)	April 30, 1990
AV 3845 (11-38 and 11-39)	June 12, 1990

On the basis of the aerial photographs reviewed, it is clear that the Site and the Project Area were historically filled (*i.e.*, soil and other non-biodegradable debris was deposited in low-lying areas to raise the ground surface) in a series of stages. Initial filling of the Site apparently occurred prior to 1960. A review of aerial photographs was cited in the report, "*Phase I Environmental Site Assessment, Malibu Grand Prix Site, 8000 S. Coliseum Way, Oakland, California*" (Woodward-Clyde Consultants (WCC), March 1994). WCC reported that Site filling began in 1959 (WCC, March 1994).

## 2.2 Regulatory Agency Files and Other Reports

**Site Management Plan**  
8000 Coliseum Way  
August 19, 1994

Leaking Underground Storage Tank (LUST) and North Bay Toxic (NBT) files were reviewed at the RWQCB on June 21, 1994 regarding properties in the vicinity of the Site vicinity (the Project Area). Files were reviewed regarding properties reported within a 1-mile radius of the Site in *"Phase I Environmental Site Assessment, Malibu Grand Prix Site, 8000 S. Coliseum Way, Oakland, California"* (WCC, March 1994). The purpose of the file review was to compare the characteristics of properties in the vicinity of the Site with respect to imported fill and the possible presence of tar-like substance similar to that found onsite. The following file summaries describe available information including proximity to the Site, hazardous materials history, shallow subsurface conditions, and chemical type and concentration in soils and groundwater. A summary of the information derived from the files reviewed is included in Appendix A.

Fundamentally, the properties within the Project Area with similar natural elevation characteristics all appear to have been filled at approximately the same times and with similar materials (brown colored sands and gravels intermixed with small volumes of miscellaneous debris including asphalt, wood, bricks, *etc.*). Regulatory agency files exist primarily for properties with existing or former USTs. Therefore the testing results are most often petroleum-related rather than being focused on the constituents of the tar-like substance. Nonetheless, elevated lead concentrations have been reported in soil samples from five of the properties, four of which are to the east (upgradient) of the Site.



### 3.0 SITE AND SUBSTANCE CHARACTERIZATION

#### 3.1 Soil and Substance Sampling

Between April 5 and April 8, 1994, a total of thirty shallow continuously-cored soil borings (SB-1 to SB-30) were advanced to a maximum depth of 14 feet below ground surface (bgs) at the locations shown on Figure 2. Soil boring locations were selected with the intent to characterize the lateral and vertical extent of the tar-like substance in soil at the Site above the Bay Mud layer underlying the imported fill. The soil cores were collected using a small-diameter split spoon sampler advanced by a hydraulically-driven hammer. Logs for each boring are presented in Appendix B. Each soil sample core was visually inspected and screened in the field for the presence of volatile organic compounds (VOC's) using a Thermo-Analytic Organic Vapor Meter (OVM) photoionization detector (PID) calibrated to isobutylene. As indicated on the boring logs, PID readings for soil samples ranged from not detected to 4,500 parts per million, vapor (ppmv). The logs also identify the soils encountered as classified using the Unified Soil Classification System, and note the presence of non-soil inclusions (e.g., tar, asphalt, bricks, etc.) where encountered. In addition, the boring logs note the presence of hydrocarbon or other distinct odors.

In conformance with the permits received for their installation from Alameda County Zone 7, each soil boring was backfilled to the surface with cement grout following collection of the core. A copy of the permits for boring installation are Appendix C to this Plan.

Two samples of the tar-like substance were collected previously onsite by WCC and analyzed. The results of these analyses are discussed below. The results of analysis of samples of soil and groundwater sample from properties with similar fill characteristics identified in the Project Area are also discussed below.

Samples of the tar-like substance were subsequently collected from locations in the northeastern portion of the Site on July 26, 1994. These locations were selected on the basis of proximity to the borings installed previously where the tar-like substance was visibly present on the ground surface. The sample of the tar-like substance identified as sample T-1 was collected at the ground surface in conjunction with sampling by Mr. Barney Chan of the ACDEH.

#### 3.2 Groundwater Sampling

Monitoring of shallow groundwater onsite is performed in conformance with ACDEH requirements regarding release(s) associated with underground storage tanks operated by Malibu Grand Prix. Sampling of three of these shallow groundwater monitoring wells (Wells MW-2, MW-3, and MW-10) located along the downgradient boundary of the Site was conducted on February 11, 1994 by the Coliseum's consultant (WCC, March 1994). In addition, the results of groundwater monitoring

**Site Management Plan**  
8000 Coliseum Way  
August 19, 1994

performed at properties in the Project Area were reviewed to augment information available from groundwater onsite.

On the basis of the consensus request from the Agencies transmitted verbally prior to and confirmed during the course of the July 27, 1994 meeting, grab groundwater samples were collected from the three hollow-stem auger borings drilled on July 26, 1994. Once each boring was advanced to the top of Bay Mud, the auger flights were raised slightly to allow groundwater inflow into the hollow stem of the auger. The grab groundwater samples were collected using a new Teflon bailer for each boring. As indicated on the attached Table 2, two types of grab groundwater samples were collected from each of the three borings. The first (unfiltered) samples were decanted directly from the bailer into analytical laboratory-supplied bottles. These bottles contained standard chemical preservative agents (hydrochloric acid for organic analyses, nitric acid for inorganic (metal) analyses) as provided by the laboratory. The second (field-filtered or "F") set of samples were filtered in the field using a 20-25 micron filter apparatus provided by the laboratory. These samples were filtered directly into laboratory-supplied 500 ml bottles containing a preservative agent.

Because both the unfiltered and field-filtered samples contained visible turbidity, and the sample containers provided contained acidic preservative agents, the analytical results for those samples do not allow determination of whether chemicals detected were dissolved or present on suspended solids. Therefore, the need for a shallow groundwater monitoring well was established.

After completion of three soil borings and one groundwater monitoring well which did not produce significant groundwater, a shallow groundwater monitoring well was constructed in a fifth boring drilled Monday August 8, 1994. The shallow monitoring well which produces water is denoted as MW-19 on Figure 2. MW-19 is approximately ten feet deep and screened upward from its bottom to a depth of five feet below ground surface with 0.01 inch factory-slotted, flush-threaded 4-inch diameter PVC well casing. Following the well's completion and an 18-hour period for cement-grout curing, the well was developed, purged and sampled on Tuesday August 9, 1994. An estimated 100 gallons of development and purge water were produced from the well. Groundwater samples were collected using a new Teflon bailer.

### **3.3 Shallow Site Lithology and Extent of Tar-Like Substance**

By inspection of the borings logs in Appendix B, the thickness of fill materials overlying the Bay Mud onsite ranges from less than three to more than ten feet. In general, the thickness of the fill increases from northeast to west and southwest. In addition to the small volumes of tar-like substance encountered at random depths in the northeastern portion of the Site, the fill materials logged in the soil cores collected include gray and brown sands and gravels, wood chips, asphalt, cardboard, and other debris. The fill is underlain at each soil boring location onsite by blue, green or gray organic clay Bay Mud.

**Site Management Plan**  
8000 Coliseum Way  
August 19, 1994

The tar-like substance was encountered randomly throughout approximately twenty percent of the cores collected from the fill onsite. At those locations (borings no. SB-5, SB-6, SB-11, SB-12, SB-13, SB-15, and SB-22), the substance was present in limited quantities (an estimated average of ten percent by volume per core). On this basis it is estimated that perhaps 2 percent of the volume of fill onsite may consist of the tar-like substance. The substance has been encountered at the ground surface onsite only in an area of approximately 3 square feet in the vicinity of soil borings SB-6, SB-13, SB-32, SB-33, SB-34, SB-35, and SB-36.

### **3.4 Shallow Groundwater Conditions**

Shallow groundwater onsite generally occurs at depths of between 6 and 11 feet below ground surface ("*Groundwater Monitoring Report, Fourth Quarter 1993, Malibu Grand Prix, 8000 South Coliseum Way, Oakland, California*," RESNA, March 1994). These depths correspond with water surface elevations near mean sea level and are consistent with the reported tidal influence on water levels (RESNA, March 1994). These depths are also generally consistent with those measured in shallow groundwater monitoring wells in the Project Area. Despite the tidal influence, the aggregate direction of the shallow groundwater hydraulic gradient onsite and in the Project is from the east to the west with local variations in direction toward or away from tidally-influenced surface water channels.

In the northeastern portion of the Site, where wells MW-19 and MW-20 were constructed, significant groundwater is not uniformly present above the Bay Mud. Shallow groundwater monitoring well MW-20 was installed using the dual-tube air percussion drilling method and although approximately 30 gallons of water was produced during drilling, the well was observed to be dry through four tidal cycles. A prior boring (near the location of SB-6) was also installed by dual-tube, did not produce water, and was destroyed by grouting. Borings SB-35 and SB-36 were installed by hollow-stem auger to confirm that the drilling method did not affect the yield of wells installed. Both of those borings were also dry.

The TDS concentration of more than 9,200 milligram per liter (mg/l) measured in the sample from MW-19 is consistent with the electrical conductivity of the groundwater measured at the time of sampling (more than 18,000 micromhos per cubic centimeter). According to Freeze and Cherry (*Groundwater*, 1979, Prentice-Hall) the water sampled would be considered brackish. Fresh water (suitable for drinking) is generally of TDS less than 1,000 mg/l and seawater is approximately 35,000 mg/l (*Id.*). The water temperature measured at time of sampling was approximately 70 degrees Fahrenheit (21 degrees Celsius) and the log hydrogen ion concentration (pH) was 7.0. The groundwater samples collected were free of visible turbidity although a weak amber color was noted. A slight sulfide (anaerobic) odor was noted in the groundwater produced during well development, purging, and sampling.

### 3.5 Analytical Results

#### Soil and Tar-Like Substance Samples

**Soil Cores** Five samples selected from cores SB-22, SB-15, and SB-6 were submitted with a completed chain-of-custody record to Superior Precision Analytical, Inc., a state-certified hazardous waste analysis laboratory. Samples of the substance and of soils immediately beneath were selected for analysis to: (1) confirm the reported elevated concentrations of hazardous constituents of the substance (WCC, March 1994), and (2) evaluate whether those constituents affected underlying native soils. The soil samples were selected because of the presence of tar-like substance at those locations. The substance and soil samples selected were analyzed by EPA Method 6010 for total lead by atomic absorption (AA), and semi-volatile organic chemicals by EPA Method 8270 by gas chromatography and mass spectroscopy (GC/MS). The analytical results for these samples are summarized below, and the laboratory analytical reports are included in Appendix D.

Total lead was detected at a reported concentration of 22,000 milligrams per kilogram (mg/kg) (a concentration of 2.2 percent by weight) in substance sample SB-22-6 (logged as "tar-like substance", refer to Appendix B), and 11 mg/kg in soil sample SB-22-10 (logged as gray green clay -- Bay Mud), collected from four feet underneath sample SB-22-6. Total lead was detected in substance-containing sample SB-6-1 (logged as sand with a "tar odor") and in soil sample SB-6-4.5 (logged as gray clay - - Bay Mud) at respective concentrations of 5,800 mg/kg (0.6 percent by weight) and 57 mg/kg. In sample SB-15-12 (logged as gray green clay -- Bay Mud), a total lead concentration of 7 mg/kg was detected. Soil sample SB-15-12 underlies by four feet soils logged as sandy clay with "tar-like substance mixed with wood chips." It is unlikely that either the sample collection technique (coring without sample liners and caps) or the holding time significantly affected the total lead results.

**Tar-Like Substance Sample T-1** As indicated on Table 1, results of analysis of tar-like substance sample T-1 confirm the presence of elevated concentrations of metallic lead and petroleum hydrocarbons. As a result of analysis by both EPA Methods 8240 and 8015, the petroleum hydrocarbons benzene, toluene, ethylbenzene, and xylenes were detected at elevated concentrations. Further, as a result of EPA Method 8080 analysis for organochlorine pesticides and polychlorinated biphenyls (PCBs), the PCB Aroclor 1260 was detected at a concentration of 7.0 mg/kg. The laboratory analytical methods performed on samples T-1 and SB-32-4.5 were requested by representatives of the ACDEH and the California Water Quality Control Board, San Francisco Bay Region (RWQCB) during the course of a meeting held July 27, 1994. The analyses were performed by Inchscape Testing Services, Anametrix Laboratories, a state-certified hazardous waste testing laboratory.

The lead results for the substance samples are consistent with previous laboratory analyses of samples of the tar-like substance reported by WCC. Two samples of the substance collected by WCC from the ground surface in the vicinity of soil borings SB-6 and SB-13 were analyzed and total lead concentrations of 5,710 mg/kg (0.6 percent by weight) and 11,000 mg/kg (1.1 percent by weight)

**Site Management Plan**  
8000 Coliseum Way  
August 19, 1994

were detected (WCC, March 1994). WCC also reported the detection of naphthalene, phenanthrene and pyrene at concentrations ranging from 770 mg/kg to 990 mg/kg in the two substance samples collected (WCC, March 1994).

**Fill Soil Sample SB-32-4.5** In order to confirm the absence in underlying fill soils of elevated concentrations of EPA Method 8240, 8270, 8080 constituents from the tar-like substance, a sample of fill material (SB-32-4.5) was collected at a depth of 4.5-5 feet below ground surface and analyzed. The tar-like substance was logged in that boring at depths of 2 to 3 feet below ground surface or 1.5 feet above sample SB-32-4.5. As indicated on Table 2, only low levels of substance constituents were detected in the soil sample analyzed with the maximum concentrations being those reported for TPHd and TPHmo. The analytical laboratory qualified these TPHd results indicating that the fingerprint is more characteristic of heavier hydrocarbons than of diesel (*see* Appendix D). These results, in conjunction with those reported previously for metallic lead, support the conclusion that above the water table, only the tar-like substance itself is affected by elevated concentrations of potentially hazardous chemicals.

**Summary** Clearly the presence of elevated lead concentrations in the tar-like substance is of potential public health and environmental concern. The fact that the substance appears to have been in place since the late 1950's or early 1960's and yet manifests such elevated lead concentrations indicates that the lead is not particularly mobile in the soil- and aqueous environment which exists at the Site and in the Project Area. To confirm these conclusions, the grab groundwater and shallow groundwater monitoring well sampling and analysis was performed.

## **Groundwater**

**Pre-Existing Monitoring Wells** Groundwater samples were collected for purposes of evaluating the potential impact of the tar-like substance from three existing shallow monitoring wells (MW-2, MW-3, and MW-10) aligned (as indicated on Figure 2) along the downgradient boundary of the Site as well as from shallow well MW-19 installed August 8, 1994. Shallow groundwater monitoring wells MW-2, MW-3, and MW-10 are tested quarterly in compliance with ACDEH requirements because of the former use of USTs onsite by Malibu Grand Prix. Shallow groundwater samples from these (and other onsite) monitoring wells are analyzed by EPA Method 5030/8015/602 for total purgeable petroleum hydrocarbons as gasoline (TPHg) with benzene, toluene, ethylbenzene, and xylenes (BTEX) distinction by GC (RESNA, March 1994). Historical analytical results for samples from those wells indicate low levels of impact from the USTs (*e.g.*, toluene, ethylbenzene and xylenes in samples from MW-2 at concentrations less than 2 micrograms per liter ( $\mu\text{g/l}$  or parts per billion); BTEX and TPHg in samples from MW-3 at concentrations of less than 10  $\mu\text{g/l}$  (BTEX) and 111  $\mu\text{g/l}$  (TPHg); and BTEX and TPHg in samples from MW-10 at concentrations less than 25  $\mu\text{g/l}$  (BTEX) and 1,000  $\mu\text{g/l}$  (TPHg) (RESNA, March 1994).

The groundwater samples collected by WCC were analyzed using EPA 8240 (volatile organics by GC/MS), 8270, 8080 (organochlorine pesticides and PCBs by GC), 6010 and 7000 (inductively-

## Site Management Plan

8000 Coliseum Way

August 19, 1994

coupled argon plasma (ICAP) series methods by Anametrix, Inc., a state-certified hazardous waste analysis laboratory (WCC, March 1994). These groundwater analyses did not detect any volatile organic, semi-volatile organic, lead, pesticides or PCBs at concentrations above the respective method detection limits (WCC, March 1994). The analytical results of these groundwater samples are presented in Appendix E.

### Grab Groundwater Samples

As indicated on Table 4, elevated concentrations of petroleum hydrocarbons and metallic lead were detected in the unfiltered grab groundwater sample collected from boring SB-1. Analysis of the field-filtered samples collected from borings SB-1 and SB-2 did not detect dissolved lead. Because of the uncertainty as to whether the results for the grab samples analyzed are representative of dissolved groundwater constituents or suspended solids, MW-19 was constructed and samples collected for analysis.

### MW-19 Shallow Groundwater Monitoring Well Sample

The following laboratory analyses were performed on a shallow groundwater sample collected from monitoring well MW-19:

- EPA Method 8270
- EPA Method 8015 modified for
  - total petroleum hydrocarbons as gasoline (TPHg),
  - total petroleum hydrocarbons as diesel (TPHd), and
  - total petroleum hydrocarbon as motor oil (TPHmo)),
- EPA Method 8240
- EPA Method 7421 for dissolved metallic lead
- EPA Method 160.1 for total dissolved solids
- EPA Method 8080 for organochlorine pesticides and polychlorinated biphenyl compounds (PCBs)

As indicated on Table 3, only the pollutants TPHd (at a concentration of 1,100 micrograms per liter), TPHmo (at 1,200 micrograms per liter), and a trace concentration (6 micrograms per liter, just higher than the 5 microgram per liter reporting limit) of methylene chloride were detected in the MW-19 shallow groundwater monitoring well sample analyzed. The TPHd and TPHmo results are generally consistent with results reported for groundwater samples collected from the property immediately to the east (upgradient) of the Site. The trace level methylene chloride was also detected by the laboratory in the method blank. Therefore the methylene chloride result is qualified by the laboratory and not considered representative of shallow groundwater quality at the Site.

**Site Management Plan**  
8000 Coliseum Way  
August 19, 1994

**Summary**                    No lead is reported as having been detected in the groundwater samples from properties with fill characteristics similar to those of the Site in the Project Area, including those where elevated lead has been reported in soil sample results both upgradient and downgradient of the Site. It is concluded on the basis of the information available that none of the potentially hazardous constituents of the tar-like substance identified have significantly affected shallow groundwater onsite.

#### 4.0 CONCLUSIONS

Using the criteria provided by Dr. Arulanantham, and those generally applied in similar situations under the National Oil and Hazardous Substances Contingency Plan (NCP), the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)<sup>1</sup>, the California Bond Expenditure Plan,<sup>2,3</sup> federal and state Occupational Safety and Health Administration criteria,<sup>4</sup> and applicable RWQCB guidance, the following key conclusions are made:

- The tar-like substance present at the Site was likely imported with fill material in phases of construction activity which took place between 1955 and 1975. Development of the Malibu Grand Prix and Fun Park facilities has been the only apparent historic use of the Site (*see* Section 2.1).
- The tar-like substance was encountered randomly in twenty percent of the shallow soil borings cored onsite. Of those borings, the tar-like substance occupied an average of only ten percent of the core volume at each location. The borings in which the tar-like substance was encountered were located in the northeastern portion of the Site (*see* Section 3.3).
- Site conditions are consistent with those occurring in the Project Area with respect to the presence of tar or similar materials in imported fill materials (*see* Section 2.2).
- The chemicals of primary concern, the metal lead, and the organic semi-volatiles phenanthrene, pyrene and naphthalene, have not affected the soils underlying locations onsite where the tar-like substance is present in the fill (*see* Section 3.5).
- Shallow groundwater downgradient has not been affected by chemicals of concern from the tar-like substance (*see* Section 3.5). In addition, shallow groundwater at

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<sup>1</sup> *see Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA*, EPA 540/G-89/004 October 1988; *The Superfund Public Health Evaluation Manual*, EPA 540/1-86-060 October 1986; and *Risk Assessment Guidance for Superfund*, EPA 540/1-90/002, 1989.

<sup>2</sup> *see Scientific and Technical Standards for Hazardous Waste Sites*, California Department of Health Services, 1990.

<sup>3</sup> *see The California Site Mitigation Decision Tree Manual*, California Department of Health Services, 1986.

<sup>4</sup> *see* 29 CFR 1910, for example.



**Site Management Plan**  
8000 Coliseum Way  
August 19, 1994

properties in the Project Area with similar fill characteristics and elevated lead concentrations in soil has not been affected by those conditions (*see* Section 3.5).

- The primary pathway of potential human or environmental exposure to the hazardous materials identified is through direct exposure (*see* Section 3.5). This condition would be of short-term concern for workers and the community during demolition and construction activities to take place as the Site is developed as a parking lot, and in any subsequent such activities.
- Given the random occurrence of a small volume of the tar-like substance in a large volume of fill materials, and the planned development and maintenance of the Site as a parking lot, excavation and disposal is not an economically feasible alternative remedial action.
- Development and maintenance of the Site as a parking lot will create little or no disturbance of the tar-like substance as it occurs and will provide a continuing barrier to protect against human and environmental contact with the substance.

Therefore, consistent with the applicable criteria identified the following actions will provide an effective remedy for the presence of the tar-like substance onsite:

- (1) development and maintenance of the Site as a parking lot,
- (2) appropriate worker and community health and safety plans during any subsequent onsite construction,
- (3) appropriate limitations on excavation in areas where the fill includes the tar-like substance, and
- (4) a deed notice providing for future notice of Site conditions, precautions, and notification of the relevant regulatory agencies.

Site Management Plan  
 8000 Coliseum Way  
 August 19, 1994

TABLE 1  
 Summary of Analytical Results  
 Tar-Like Substance Sample T-1  
 (Compounds Detected)  
 Coliseum Way Site  
 8000 South Coliseum Way  
 Oakland, California

TPHg <sup>(1)</sup> (mg/Kg) <sup>(2)</sup>	TPHd <sup>(3)</sup> (mg/Kg)	TPHmo <sup>(4)</sup> (mg/Kg)	Benzene / Toluene / Ethyl- benzene / Xylenes <sup>(5)</sup> (mg/Kg)	Benzene / Toluene / Ethyl- benzene / Xylenes <sup>(6)</sup> (mg/Kg)	Total Lead <sup>(7)</sup> (mg/Kg)	PCBs <sup>(8)</sup> (mg/Kg)	Phenanthrene <sup>(9)</sup> (mg/Kg)
80	180,000	670,000	2.0 / 6.3 / 2.8 / 11	2.1 / 5.1 / 3 / 6.3	2,000	7.0	600

Notes:

Site Management Plan  
8000 Coliseum Way  
August 19, 1994

- (1) TPHg: Total petroleum hydrocarbons as gasoline (EPA Method 8015, Modified).
- (2) mg/Kg: Milligrams per kilogram.
- (3) TPHd: Total petroleum hydrocarbons as diesel (EPA Method 8015, Modified).
- (4) TPHmo: Total petroleum hydrocarbons as motor oil (EPA Method 8015, Modified).
- (5) Benzene / Toluene / Ethylbenzene / Xylenes (EPA Method 8015, Modified TPHg)
- (6) Benzene / Toluene / Ethylbenzene / Xylenes (EPA Method 8240)
- (7) Total Lead: Total Lead (EPA Method 6010).
- (8) PCB: Polychlorinated Biphenyls as Aroclor 1260 (EPA Method 8080).
- (9) Phenanthrene: Phenanthrene (EPA Method 8270).

Site Management Plan  
 8000 Coliseum Way  
 August 22, 1994

TABLE 2  
 Summary of Analytical Results  
 Soil Sample  
 (Compounds Detected)  
 Coliseum Way Site  
 8000 South Coliseum Way  
 Oakland, California

Sample Number	TPHg / TPHd / TPHmo <sup>(1)</sup> (mg/kg) <sup>(2)</sup>	Benzene <sup>(3)</sup> (mg/kg)	Toluene <sup>(3)</sup> (mg/kg)	Ethylbenzene <sup>(3)</sup> (mg/kg)	Total Xylenes <sup>(3)</sup> (mg/kg)	Method 8270 <sup>(4)</sup> (mg/kg)	Aroclor 1260 (PCBs) <sup>(5)</sup> (mg/kg)
SB-32-4.5'	ND<1 / 1,500 / 4,000	0.006	0.012	0.009	0.026	ND<3	0.660

Notes:

- (1) TPHg: total petroleum hydrocarbons as gasoline (EPA Method 8015, Modified), none detected (ND) above stated reporting limit, TPHd: Total Petroleum Hydrocarbons as diesel; TPHmo: Total Petroleum Hydrocarbons as motor oil. Laboratory noted that TPHd results are not typical for diesel-affected soils, are instead indicative of the presence of heavier hydrocarbons.
- (2) mg/kg: milligrams per kilogram or parts per million.
- (3) EPA Method 8015, Modified.
- (4) EPA Method 8270 semi-volatile organic compounds, none detected above stated reporting limit.
- (5) Organochlorine pesticides and polychlorinated biphenyls (PCBs) (EPA Method 8080).

Site Management Plan  
 8000 Coliseum Way  
 August 22, 1994

TABLE 3  
 Summary of Analytical Results  
 MW-19 Groundwater Sample  
 (Compounds Detected)  
 Coliseum Way Site  
 8000 South Coliseum Way  
 Oakland, California

Sample Number	TPHg <sup>(1)</sup> (ug/l) <sup>(2)</sup>	TPHd <sup>(3)</sup> (ug/l)	TPHmo <sup>(4)</sup> (ug/l)	Methylene Chloride <sup>(5)</sup> (ug/l)	Other Method 8240 <sup>(6)</sup> (ug/l)	Dissolved Lead <sup>(7)</sup> (ug/l)	Method 8080 (PCBs) <sup>(8)</sup> (ug/l)	Method 8270 <sup>(9)</sup> (ug/l)	TDS <sup>(10)</sup> (mg/l) <sup>(1)</sup>
MW-19-2	ND<50	1,100	1,200	6 (B)	ND<5	ND<3	ND<1	ND<10	9,260 9,220

- Notes: (1) TPHg: total petroleum hydrocarbons as gasoline (EPA Method 8015, Modified), none detected (ND) above stated reporting limit.  
 (2) ug/l: micrograms per liter or parts per billion.  
 (3) TPHd: total petroleum hydrocarbons as diesel (EPA Method 8015, Modified).  
 (4) TPHmo: total petroleum hydrocarbons as motor oil (EPA Method 8015, Modified), none detected.  
 (5) EPA Method 8240 volatile organic analysis (B) qualifier indicates that methylene chloride was also detected by the laboratory in the method blank, result not considered representative of shallow groundwater quality.  
 (6) No other EPA Method 8240 volatile organic analytes were detected, reporting limit shown is for benzene.  
 (7) EPA Method 7421 for dissolved metallic lead.  
 (8) Organochlorine pesticides and polychlorinated biphenyls (PCBs) (EPA Method 8080), no analytes detected, reporting limit shown is for Aroclor 1260.  
 (9) EPA Method 8270 semi-volatile organic compounds, none detected.  
 (10) Total dissolved solids (EPA Method 160.1).

Site Management Plan  
8000 Coliseum Way  
August 19, 1994

(11) mg/l: Milligrams per liter.

TABLE 4  
 Summary of Analytical Results  
 Grab Groundwater Samples  
 (Compounds Detected)

Coliseum Way Site  
 8000 South Coliseum Way  
 Oakland, California

Sample Number	TPHg <sup>(1)</sup> (ug/l) <sup>(2)</sup>	TPHd <sup>(3)</sup> (ug/l)	TPHmo <sup>(4)</sup> (ug/l)	Benzene <sup>(5)</sup> (ug/l)	Toluene <sup>(6)</sup> (ug/l)	Ethyl- benzene <sup>(7)</sup> (ug/l)	Xylenes <sup>(8)</sup> (ug/l)	Lead <sup>(9)</sup> (ug/l)	PCB <sup>(10)</sup> (ug/l)	Phenan- threne <sup>(11)</sup> (ug/l)	8240 <sup>(16)</sup>	TDS <sup>(12)</sup> (mg/l) <sup>(13)</sup>
SB-1	98	76,000	220,000	5.7	1.7	1.5	3.1	210	NA <sup>(14)</sup>	NA	NA	NA
SB-2	ND<50 <sup>(15)</sup>	NA	NA	ND<0.5 ND<1*	ND<0.5 ND<3*	ND<0.5 ND<3*	ND<0.5 ND<3*	8	NA	ND<10	ND<10	NA
SB-3	ND<50	ND<50	ND<500	ND<0.5	ND<0.5	ND<0.5	ND<0.5	41	NA	NA	NA	NA
SB-1F	NA	NA	NA	NA	NA	NA	NA	ND<500 <sup>(17)</sup>	NA	NA	NA	8,900
SB-2F	NA	NA	NA	NA	NA	NA	NA	ND<500 <sup>(17)</sup>	NA	NA	NA	12,000
SB-3F	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,000

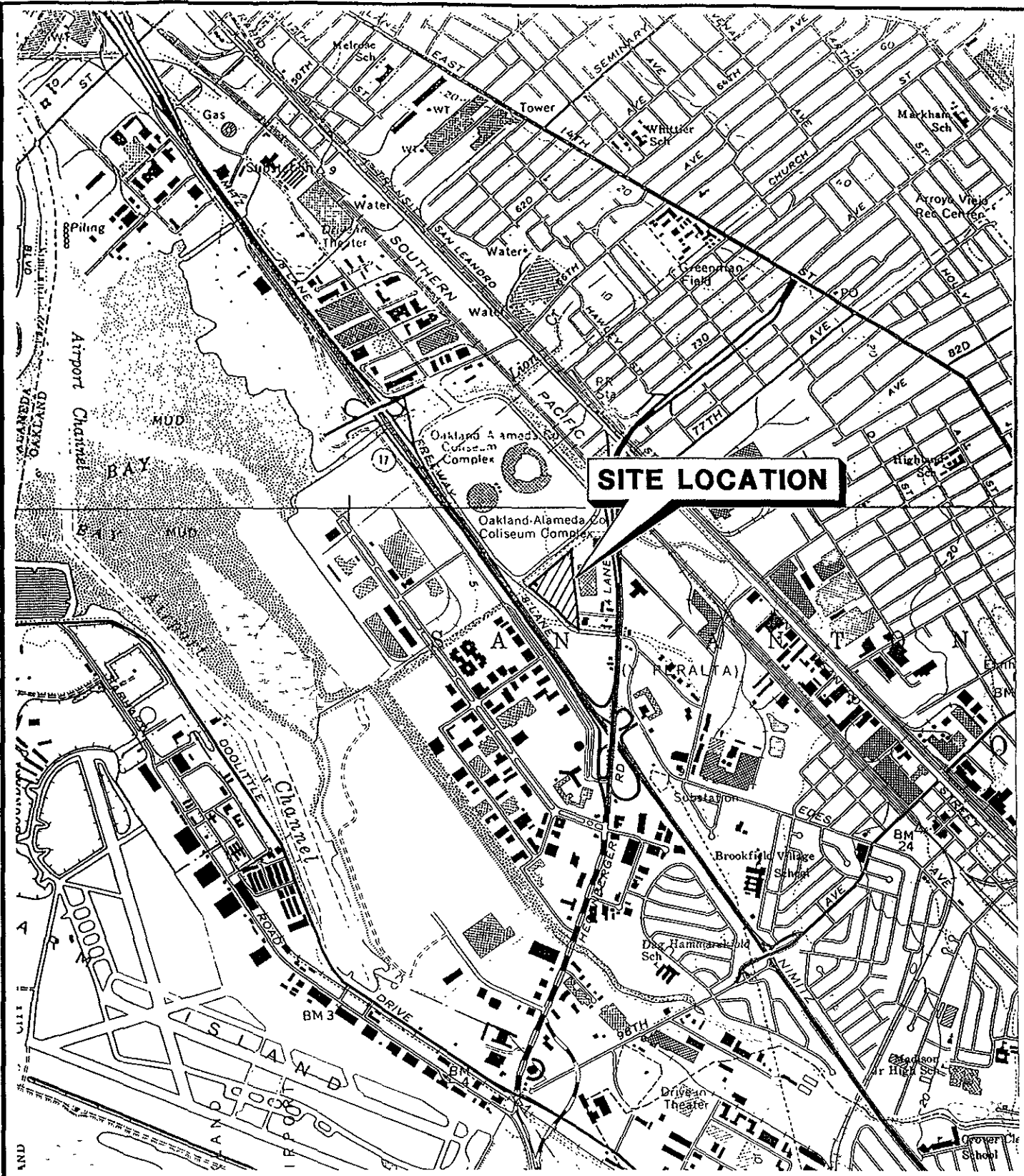
Refer to notes, Page 2 of 2.

TABLE 4  
Summary of Analytical Results  
Grab Groundwater Samples  
(Compounds Detected)

Coliseum Way Site  
8000 South Coliseum Way  
Oakland, California

- Notes: (1) TPHg: Total petroleum hydrocarbons as gasoline (EPA Method 8015, Modified).  
(2) ug/l: Micrograms per liter or parts per billion.  
(3) TPHd: Total petroleum hydrocarbons as diesel (EPA Method 8015, Modified).  
(4) TPHmo: Total petroleum hydrocarbons as motor oil (EPA Method 8015, Modified).  
(5) Benzene: Benzene constituent of TPH (EPA Method 8015, Modified, except where denoted by \*).  
(6) Toluene: Toluene constituent of TPH (EPA Method 8015, Modified, except where denoted by \*).  
(7) Ethylbenzene: Ethylbenzene constituent of TPH (EPA Method 8015, Modified, except where denoted by \*).  
(8) Xylenes: Xylenes constituent of TPH (EPA Method 8015, Modified, except where denoted by \*).  
(9) Lead: Total Lead by (EPA Method 7421) except for footnote 17 results..  
(10) PCB: Polychlorinated Biphenyls (EPA Method 8080), none other Method 8080 constituents detected .  
(11) Phenanthrene: Phenanthrene (EPA Method 8270), all other Method 8270 results none detected.  
(12) TDS: Total dissolved solids (EPA Method 160.1).  
(13) mg/l: Milligrams per liter.  
(14) NA: Not analyzed.  
(15) ND: Not detected at the specified reporting limit.  
(16) \*: EPA Method 8240.  
(17) Soluble Lead by TCLP, Method 6010.





**SITE LOCATION**

SOURCE: BASE MAP FROM U.S.G.S. SAN LEANDRO AND OAKLAND, EAST CA QUADRANGLES. 7.5 MINUTE SERIES TOPOGRAPHIC. PHOTOREVISED 1980.



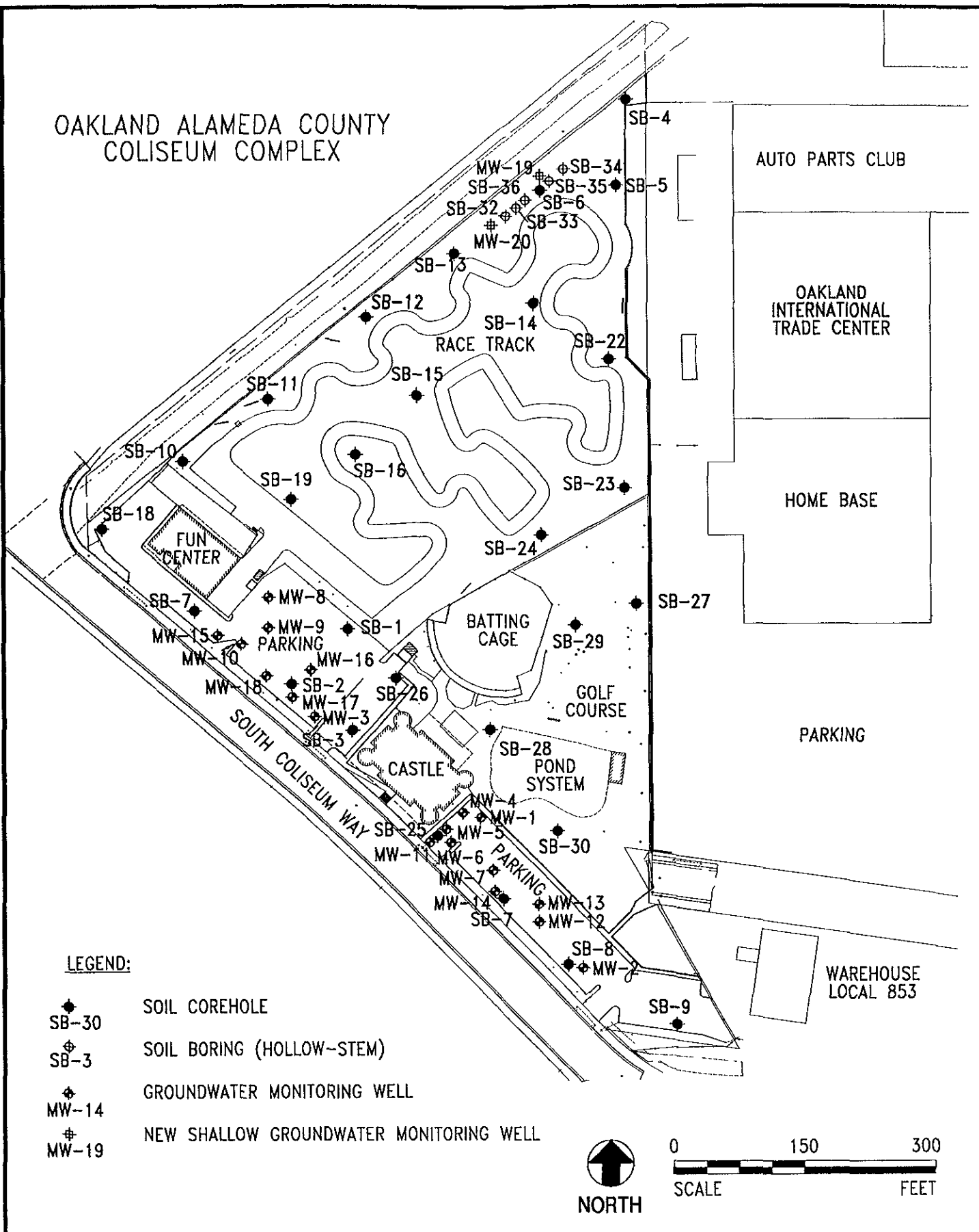
199406.301347 1 JOBS\MALIBU\SITE-LOC

**SEACOR**  
ENVIRONMENTAL  
ENGINEERING

DRAWN	CCR
APPR	JG
DATE	30JUN94
JOB NO	50102-001-02

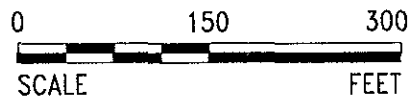
FIGURE 1  
MALIBU GRAND PRIX  
8000 SOUTH COLISEUM WAY  
OAKLAND, CALIFORNIA  
**SITE LOCATION MAP**

OAKLAND ALAMEDA COUNTY  
COLISEUM COMPLEX



LEGEND:

- ◆ SB-30 SOIL COREHOLE
- ⊕ SB-3 SOIL BORING (HOLLOW-STEM)
- ◆ MW-14 GROUNDWATER MONITORING WELL
- ⊕ MW-19 NEW SHALLOW GROUNDWATER MONITORING WELL



199406.231459 C:\JOBS\MALIBU\7144

**SEACOR**  
ENVIRONMENTAL  
ENGINEERING

DRAWN	CCR
APPR	JG
DATE	17AUG94
JOB NO.	50102-001-02

FIGURE 2  
MALIBU GRAND PRIX  
8000 SOUTH COLISEUM WAY  
OAKLAND, CALIFORNIA  
**SOIL BORING AND GROUNDWATER  
MONITORING WELL LOCATIONS**

**APPENDIX A**  
**SUMMARY OF AVAILABLE INFORMATION REGARDING NEIGHBORING SITES**

**I. Oakland International Trade, 625 Hegenberger Road, Oakland.**

Oakland International Trade is located approximately 1/4-mile northeast of the Site. No information regarding this property was contained in the RWQCB LUST file. WCC (March 1994) states that three underground storage tanks (UST's) and one sump were abandoned at this property for an undetermined amount of time. An assessment of the property was conducted in 1988 and included the installation of monitoring wells and 23 soil borings. WCC states that groundwater sampled from beneath this property in December 1993 contained total petroleum hydrocarbons as gasoline (TPHg) and diesel (TPHd), and benzene, toluene, ethylbenzene, and xylenes (BTEX). Lead was not detected in samples of groundwater collected on this property. Free petroleum product was observed in one soil boring.

**II. Alameda County Flood Control Canal, Elmhurst Creek, Oakland.**

The Alameda County Elmhurst Creek Flood Control Canal at Elmhurst Business Park is located approximately 1/4-mile northeast of the Site at the intersection of 85th Avenue and San Leandro Street. WCC (March 1994) states that the canal is utilized for storm water drainage. The canal drains west to the San Leandro Bay and is adjacent to the north Site boundary. Information contained in the RWQCB NBT file indicates that elevated lead and TPH as motor oil (TPHmo) were detected in canal soils in September 1988 at concentrations ranging from 3.4 to 359 mg/kg and 1,500 mg/kg, respectively. Soil containing lead and TPHmo was subsequently removed from the canal at this location. No other information was contained in this file.

**III. ARCO, 566 Hegenberger Road, Oakland.**

ARCO Service Station Number 4494 is located approximately 1/4-mile southeast of the Site. Information contained in the RWQCB LUST file indicates that one waste oil UST was removed from the property in 1989. The removed UST was reportedly in good condition and there was no evidence of a product leak, but soil in the UST excavation had a strong product odor. Analytical results of soil samples collected from seven feet below ground surface (bgs) revealed concentrations of 4,500 mg/kg total oil and grease (TOG), 4,800 mg/kg high boiling point hydrocarbons as oil (HBPHoil), and 370 mg/kg HBPH as diesel (HBPHd). No odor was reportedly detected in soil samples collected from 10 feet bgs in the UST excavation.

Samples of imported fill soils were collected from depths of five, ten, and twenty feet bgs in the vicinity of the former waste oil UST in 1990. Analytical results included elevated lead at five, ten, and twenty feet bgs at concentrations ranging from 19.9 to 179 mg/kg, less than 1 to 88 mg/kg, and

Site Management Plan  
8000 Coliseum Way  
August 19, 1994

less than 1 to 94 mg/kg, respectively. A record search was reportedly performed in 1990 to identify the source of fill at the property, but the effort was apparently unsuccessful.

An UST replacement assessment was performed at the property in May 1991. The resulting report states that "...heterogeneous fill..." at the property ranges in depth from two to eleven feet bgs and native clay was encountered at depths ranging from five to eleven feet bgs. Soil boring logs contained in the report describe black, silty clay fill at the property that contains, "...concrete, asphalt, glass and metallic slag from an undetermined source, and a noticeable odor even at a depth of one foot bgs." Soil samples from depths of five feet were collected in several locations near the station building and subsequently analyzed. Analytical results indicated TOG concentrations ranging from 280 to 570 mg/kg. TPHg and TPHd were not detected in these soil samples. The report concluded that, "...artificial fill of the former drainage ditch that crossed the site prior to development may be a potential source of the TOG encountered."

WCC (March 1994) states that, "A black hydrocarbon material seeped out of an old storm drain pipe (no longer in use) from off-site, during tank removal. It was not investigated, but a slurry wall was installed. Soils and groundwater are contaminated, but most of contamination appears to be localized." B. Chan, Alameda County Department of Environmental Health (ACDEH) Hazardous Material Officer, was quoted as writing in the reviewed file, "Potentially, one of the more contaminated sites in the area" (WCC March 1994).

#### IV. Aero Quality Plating, 710 73rd Avenue, Oakland.

The former Aero Quality Plating property is located approximately 1/4 to 1/2-mile north of the Site. Information contained in the RWQCB NBT file indicates a plating facility operated at this location from 1958 until 1985 when it was abandoned. Soil was removed from the property in 1981, but removal procedures were not documented. The United States Environmental Protection Agency (EPA) and the National Coast Guard (NCG) performed a preliminary site assessment of the property and determined that heavy metals, acids, caustics, and sludges were spilled and improperly stored at the facility, and had the potential to leak into Arroyo Viejo Creek. ACDEH removed the hazardous materials from the facility and installed monitoring wells at the property in 1990. No other information regarding this property was contained in the file.

WCC (March 1994) states the most recent report contained in the ACDEH NBT file for this property was dated 1987. WCC summarized the information as, "Historical problems related to storage and containment of hazardous and chemicals and wastes."

Site Management Plan  
8000 Coliseum Way  
August 19, 1994

**V. GMC Truck Center, 8099 South Coliseum Way, Oakland.**

The GMC Truck Center property is located approximately 1/8-mile southwest of the Site. Information regarding this property in the RWQCB LUST file was limited to indicating that UST excavation was initiated in August 1993.

WCC's 1994 REPORT states that four UST's containing gasoline, diesel, waste oil, and hydraulic fluid were removed from the property in 1993. Property soil and groundwater is affected by elevated TPH concentrations and property characterization is on-going.

**VI. Former Caltrans Facility, 555 Hegenberger Road, Oakland.**

The former Caltrans facility property is located approximately 1/8-mile southeast of the Site. Information regarding this property in the RWQCB LUST file was limited to indicating that UST excavation was initiated in December 1992.

WCC's 1994 REPORT states that four 1,000-gallon UST's containing gasoline and diesel were removed from the property in 1990. Soil and groundwater samples collected from adjacent GMC Truck Center property, approximately fifteen feet west of former Caltrans facility UST excavation, indicate elevated TPH concentrations. A revised closure plan is required by ACDEH.

**VII. Superior Tile, 7801 Oakland Street, Oakland.**

Superior Tile is located approximately 1/4-mile south of the Site. Information contained in the RWQCB LUST file for this property indicated that a leaking gasoline UST was removed in February 1990. TPHg and BTEX constituents were detected in groundwater samples from the property, but were not detected in soil. ACDEH required a subsurface investigation at the property in a letter dated May 30, 1990. No other information regarding this property was contained in the file.

WCC's 1994 report states that soil and groundwater samples collected from the former UST excavation contained TPHg and BTEX. Three groundwater monitoring wells were installed at the property and quarterly groundwater monitoring is on-going.

**VIII. Ryder Truck Rental, 8001 Hegenberger Road, Oakland.**

Ryder Truck Rental is located approximately 1/4-mile south of the Site. Information contained in the RWQCB LUST file indicates that one 550-gallon waste oil UST was removed from the property in January 1992. Analytical results from soil samples collected from depths of 3.5 to 5 feet bgs in the former UST excavation ranged up to 11 mg/kg TPHg, 400 mg/kg TPHd, 0.062 mg/kg BTEX, and 284 mg/kg TOG. One soil sample collected from 4.5 feet bgs was tested, but lead was not detected. Samples of groundwater from the property contained up to 97 milligrams per liter (mg/l) TPHg, 2,000 mg/l, and 20 mg/l BTEX. TOG was not detected in groundwater samples tested. Fill at the property

Site Management Plan  
8000 Coliseum Way  
August 19, 1994

extends to approximately seven feet bgs. The fill is described as tan gravel and baserock containing cobbles and boulders. WCC's 1994 report states that nine groundwater monitoring wells have been installed at the property and are monitored quarterly.

**IX. County Recycling Services, 800 77th Avenue, Oakland.**

County Recycling is located approximately 1/2-mile northeast of the Site. Information contained in the RWQCB LUST file indicates one 1,000-gallon gasoline UST was removed and replaced at the property in December 1988 due to a piping leak. Soil samples were reportedly collected from depths of five and ten feet bgs in the former UST excavation. Analytical results of the soil sample collected from five feet bgs revealed 2,200 mg/kg TPHg and 21 mg/kg total BTEX. Analysis of soil samples collected from ten feet bgs and a groundwater sample did not detect TPHg or BTEX.

Fill at this property reportedly ranges in depth to 5 feet bgs. The fill is dark brown sandy silt containing concrete, brick, and asphalt. Soil boring logs indicate the fill in some locations exhibited a hydrocarbon odor. Native, grayish-black, silty clay was logged at depths between 5 and 9.5 feet bgs. This native clay exhibited a hydrocarbon odor.

WCC's 1994 report states that the gasoline UST removed from the property in 1988 caused limited soil contamination. Chemical constituents were not detected in soil upon further investigation. One 10,000-gallon UST and one 1,000-gallon UST were removed from the property in May 1992. No other information regarding this property was provided in WCC's 1994 report.

**X. American Brass & Iron Foundry, 7825 San Leandro Street, Oakland.**

American Brass & Iron Foundry is located approximately 1/4-mile northeast of the Site. Information contained in the RWQCB LUST file included an UST closure report dated September 1992 provided details of the removal of a 12,000-gallon diesel UST. Groundwater was encountered beneath the property at approximately 9 to 10 feet bgs, and stabilized between 10 and 13 feet bgs. Soil samples collected from 8 to 9.5 feet bgs did not contain TPHd or BTEX. A groundwater sample collected contained 6.8 mg/l TPHd, but did not contain BTEX. No soil boring logs or soil descriptions were provided in file documentation.

WCC's 1994 report states that one petroleum product UST was removed from the property in 1977, and two petroleum product UST's and one waste solvent UST were removed from the property in 1991. A property assessment performed in 1993 identified soil and groundwater impacted by TPH and volatile organic compounds (VOC's). Four monitoring wells exist on the property.

**XI. Unocal, Larkins Truck Shop, 8255 San Leandro Street, Oakland.**

Larkins Truck Shop and Unocal is located approximately 1/2-mile east of the Site. Information contained in the RWQCB LUST file included an October 1992 quarterly groundwater monitoring

**Site Management Plan**  
8000 Coliseum Way  
August 19, 1994

report (QMR) for the property. The QMR reviewed describes fill to depths ranging between 7.5 and 10 feet bgs. and containing large concrete slabs at depths of 8.5 to 10 feet bgs. The property fill is described as, "...assorted refuse from the pre-1967 version of the site service station." October 1990 soil boring logs describe property fill as black to orange brown and green-gray, clayey gravel.

WCC's 1994 report states that a soil and groundwater investigation was performed in September 1993 after the removal of one 10,000-gallon UST. Laboratory analyses did not detect TPH in soils, but did detect limited TPH concentrations in samples of groundwater from beneath the property. Quarterly groundwater monitoring will continue for at least three successive quarters.

#### **XII. West Coast Wire, Rope, & Rig, 608 McClary Avenue, Oakland.**

West Coast Wire, Rope, & Rig is located between 1/4 and 1/2-mile southeast of the Site. Information contained in the RWQCB LUST file documented the removal of one 8,000-gallon diesel UST from the property in June 1990. A hydrocarbon odor was reported to have emanated from the UST backfill. Analyses of soil samples collected from the UST excavation detected up to 1,700 mg/kg TPHd. No soil boring logs or soil descriptions were documented in the file. A file review summary for this property was not performed by WCC.

#### **XIII. Dwyer Construction, 8401 Baldwin Street, Oakland.**

Dwyer Construction is located between 1/4 and 1/2-mile southeast of the Site. Information contained in the RWQCB LUST file documented the removal of one 1,000-gallon leaded gasoline UST from the property in 1989. Soil sample analyses detected TPHg concentrations ranging to 7.6 mg/kg. Benzene and toluene were not detected in the soil samples tested. Ethylbenzene and xylenes concentrations in soil ranged to 0.014 and 0.022 mg/kg, respectively. Analysis of groundwater samples detected TPHg, and BTEX at 63, 2.4, 5.1, 1.4, and 12 mg/l, respectively. One analysis for total lead was performed on a soil sample collected from 15 feet bgs. The total lead concentration detected in this sample was 39 mg/kg. The soil sample report suggests that the lead was probably generated from a source other than the UST, since it only appeared in one soil boring and was not detected in groundwater. Property fill was described to depths of 10 feet bgs as a clayey silt, and did not exhibit odor.

WCC's 1994 report did not provide information summarizing regulatory agency file documentation regarding this property.

#### **XIV. Morris Transportation, Inc., 8300 Baldwin Street, Oakland.**

Morris Transportation is located approximately 1/2-mile east of the Site. Information contained in the RWQCB LUST file was limited to an ACDEH letter dated June 1992 requested a property investigation report or a workplan for a property investigation be submitted to their agency. No other information regarding this property was contained in the file.

**Site Management Plan**  
8000 Coliseum Way  
August 19, 1994

WCC's 1994 report did not provide information summarizing regulatory agency file documentation regarding this property.

**XV. Monterey Mechanical, 8275 San Leandro Street, Oakland.**

Monterey Mechanical is located approximately 1/2-mile east of the Site. Information contained in the RWQCB LUST file included documentation of an assessment and groundwater investigation of the property performed in 1989. One 1,000-gallon gasoline UST was removed from the property in March 1988. Soil and groundwater analytical results indicated elevated TPHg concentrations. Soil boring logs describe black, sandy clay fill to a depth of one foot bgs. Black, native clay is described to a depth of 14 feet bgs.

WCC's 1994 report states that two groundwater monitoring wells were monitored at the property. No other information regarding the property is presented in the WCC report.

**XVI. Lockup Self Storage/A&B Auto, 8451 San Leandro Street, Oakland.**

The Lockup Self Storage and A & B Auto property is located approximately 1/2 to 1-mile east-southeast of the Site. Information contained in the RWQCB LUST file was limited to indicating an UST was removed from the property in July 1991 and that soil and groundwater were impacted by the former UST contents.

WCC's 1994 report did not provide information summarizing regulatory agency file documentation regarding this property.

**XVII. Ran-Rob Tool & Die, 631 85th Avenue, Oakland.**

Ran-Rob Tool & Die is located approximately 1/2-mile southeast of the Site. Information contained in the RWQCB NBT file documented a February 1991 soil investigation in response to the discharge of 1,1,1-trichloroethane (TCA) to the property in 1978 or 1979. Orange-brown, sandy gravel fill was described to three feet bgs.

WCC's 1994 report did not provide information summarizing regulatory agency file documentation regarding this property.

**XVIII. West Coast Wire, Rope & Rig, 597 85th Avenue, Oakland.**

West Coast Wire, Rope & Rig is located approximately 1/2-mile southeast of the Site. Information contained in the RWQCB LUST file was limited to an ACDEH letter dated December 1990 indicating that four, 8,000-gallon diesel UST's were removed from the property in 1988, and requesting a subsurface investigation to determine the extent of soil contamination and assess the potential for impact to groundwater.



**Site Management Plan**  
8000 Coliseum Way  
August 19, 1994

WCC's 1994 report did not provide information summarizing regulatory agency file documentation regarding this property.

**XIX. Union Bank, 460 Hegenberger Road, Oakland.**

Union Bank is located approximately 3/4-mile southeast of the Site. Information contained in the RWQCB LUST file includes a workplan for subsurface investigation of the property dated June 1992. One 10,000-gallon gasoline and one 10,000-gallon diesel UST were removed from the property in October 1990. Analytic results of soil and groundwater samples collected from the former UST excavation indicated TPHg and BTEX concentrations. Analytical results of soil samples collected from the former UST piping excavation indicated TPHd and TPHo concentrations. Concentrations of TPHo in soil on this property are reportedly the result of background concentrations of TPHo in the property fill. No soil boring logs or soil descriptions were documented in the file.

WCC's 1994 report did not provide information summarizing regulatory agency file documentation regarding this property.

**XX. Goodyear Tire & Rubber, 7727 Oakland Street, Oakland.**

Goodyear Tire & Rubber is located 3/4-mile northwest of the Site. Information contained in the RWQCB LUST file for this property is limited to an ACDEH letter dated October 1991 requesting a workplan for a subsurface investigation. Concentrations of TPHd and TOG in soil are listed, and range from 550 mg/kg to 1,600 mg/kg, and 130 mg/kg to 380 mg/kg, respectively.

WCC's 1994 report states that one 1,000-gallon UST was removed from the property. No other information regarding this property is presented in the WCC report.

**XXI. PG&E, 4930 Coliseum Way, Oakland.**

The PG&E property is located approximately 1/8-mile west of the Site. Information contained in the RWQCB NBT file is related to lead concentrations in property soils. Laboratory analysis of soil samples from the property detected lead at concentrations up to 3,287 mg/kg. Lead was not detected in samples of groundwater from beneath the property. A former aboveground gas tank was installed on the property in 1939. Lead-containing paint on the gas tank is the reported source of elevated lead concentrations in property soil. Property fill is described as a seven inch thick layer of coarse gravel. Seven groundwater monitoring wells are located on the property. No soil boring logs or soil descriptions were documented in the file. A file review summary for this property was not performed by WCC.

Site Management Plan  
8000 Coliseum Way  
August 19, 1994

**XXII. Chevron Training Center, 7616 San Leandro Street, Oakland.**

The Chevron Training Center is located approximately 1/2-mile northeast of the Site. Information contained in the RWQCB LUST file indicated one waste oil UST was removed from the property in March 1993. Soil sample analyses detected TOG concentrations ranging to 67 mg/kg and lead concentrations ranging from 5 mg/kg to 33 mg/kg. TPHg was not detected in the samples of property soil tested.


WCC's 1994 report lists the Chevron Training Center at the same address as County Recycling Services, therefore, WCC did not provide information summarizing regulatory agency file documentation regarding this property.

Site Management Plan  
8000 Coliseum Way  
August 19, 1994

**APPENDIX B**

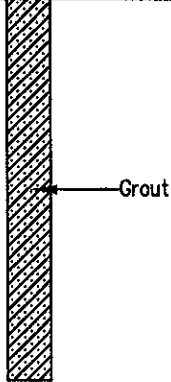
**Soil Boring Logs and Well Construction Diagrams**

Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY	Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: MALIBU GRAND PRIX		<b>SB-1</b>
Subcontractor and Equipment: POWERCORE	Logged By: SRS	
Sampling Method: CONTINUOUS CORE	Monitoring Device: OVM 580B	Comments:
Start Date/Time: 4/5/94//0800	Finish Date/Time: 4/5/94//0820	
First Water (bgs): NA	Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
			0				BROWN GRAVELLY DRY (FILL)		 <p>Grout</p>
			1						
			2				GREEN FINE SAND (SP)		
	24		3				DARK GRAY GRAVEL (GW)		
			4				black "sooty material"		
			5						
	130		6				GREEN CLAY (OH) moist (BAYMUD)		
			7				Bottom of boring @ 8 feet		
	47		8						
			9						
			10						
			11						
			12						
			13						
			14						
			15						
			16						
			17						
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: MALIBU GRAND PRIX			<b>SB-2</b>
Subcontractor and Equipment: POWERCORE		Logged By: SRS	
Sampling Method: CONTINUOUS CORE		Monitoring Device: OVM 580B	Comments:
Start Date/Time: 4/5/94//0830		Finish Date/Time: 4/5/94//0850	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
			0						
	25		1				LIGHT BROWN, FINE SAND (SP) slightly moist (FILL)		
			2				DARK GRAY, FINE SAND (SP) slightly moist increasing clay		
	148		3						
			4						
			5						
	21		6				DARK GRAY (OH) soft, wet (BAYMUD)		
			7						
			8				Bottom of boring @ 8 feet		
	1000		9						
			10						
			11						
			12						
			13						
			14						
			15						
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: MALIBU GRAND PRIX			<b>SB-3</b>
Subcontractor and Equipment: POWERCORE		Logged By: SRS	
Sampling Method: CONTINUOUS CORE		Monitoring Device: OVM 580B	Comments:
Start Date/Time: 4/5/94//0900		Finish Date/Time: 4/5/94//0930	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
			0						
		774	1				GREEN FINE SAND (SP) moist (FILL)		 <p>Grout</p>
		1000	3				DARK GRAY GRAVEL (GW) dry to slightly moist		
		662	5						
			6						
			7				oily sheen, strong odor		
		601	8						
			9						
			10				GRAYISH GREEN, CLAY (OH) wet, sheen		
			11						
			12						
			13				Bottom of boring @ 13 feet		
			14						
			15						
			16						
			17						
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: MALIBU GRAND PRIX			<b>SB-4</b>
Subcontractor and Equipment: POWERCORE		Logged By: SRS	
Sampling Method: CONTINUOUS CORE		Monitoring Device: OVM 580B	Comments:
Start Date/Time: 4/5/94//1035		Finish Date/Time: 4/5/94//1100	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
		800	0				BROWN, GRAVEL (GW) slightly moist, no odor (FILL)		
		767	1						
			2						
			3						
			4						
			5						
		4029	6				BAY MUD (OH)		
			7				Bottom of boring @ 6 feet		
			8						
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			12						
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY	Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: MALIBU GRAND PRIX		<b>SB-5</b>
Subcontractor and Equipment: POWERCORE	Logged By: SRS	
Sampling Method: CONTINUOUS CORE	Monitoring Device: OVM 580B	Comments:
Start Date/Time: 4/5/94//1115	Finish Date/Time: 4/5/94//1125	
First Water (bgs): NA	Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
		1252	0				DARK BROWN, GRAVEL (GW) slightly moist (FILL)		 Grout
		403	1				BLACK "GREASY" COARSE SAND (SP)		
			2				LIGHT BROWN, GRAVELLY SAND (SW)		
		<1	3				BLACK "GREASY" GRAVEL (SW)		
			4				BAY MUD (OH) wet		
			5				Bottom of boring @ 5 feet		
			6						
			7						
			8						
			9						
			10						
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: MALIBU GRAND PRIX			<b>SB-6</b>
Subcontractor and Equipment: POWERCORE		Logged By: SRS	
Sampling Method: CONTINUOUS CORE		Monitoring Device: OVM 580B	Comments:
Start Date/Time: 4/5/94//1135		Finish Date/Time: 4/5/94//1155	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
SB-6-1	741	<1	0				BROWN, GRAVEL (GW) slightly moist (FILL)		 Grout
			1				GRAY, GRAVELLY SAND (SW) slightly moist, with tan, tar odor		
			2			becomes almost pure tar, sticky, oily near top, strong odor			
			3			GRAY CLAY (OH) soft, moist (BAYMUD)			
SB-6-4.5			4			Bottom of boring @ 6 feet			
			5						
			6						
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:  <b>SB-7</b>
Boring Location: MALIBU GRAND PRIX			
Subcontractor and Equipment: POWERCORE		Logged By: SRS	
Sampling Method: CONTINUOUS CORE		Monitoring Device: OVM 580B	
Start Date/Time: 4/5/94//1400		Finish Date/Time: 4/5/94//1420	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	Comments: Refusal at surface, move over 2'

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
			0						
	741		1				BROWN AND GREEN, GRAVEL (GW) slightly moist to dry, dense (FILL)		 <p>Grout</p>
			2						
	22		3				becomes green and dark gray		
			4						
	24		5				becomes wet and soft		
			6				wet zone with black gravel		
	10		7				GREEN AND BROWN, GRAVELLY CLAY (CL) dry to slightly moist		
			8				grades with less clay, increasing gravel		
	810		9				GRAYISH GREEN, CLAY (OH) soft (BAYMUD)		
	39		10				Bottom of boring @ 10 feet		
			11						
			12						
			13						
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY	Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: MALIBU GRAND PRIX		<b>SB-8</b>
Subcontractor and Equipment: POWERCORE	Logged By: SRS	
Sampling Method: CONTINUOUS CORE	Monitoring Device: OVM 580B	Comments:
Start Date/Time: 4/5/94//1430	Finish Date/Time: 4/5/94//1450	
First Water (bgs): NA	Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
			0				BROWN AND GREEN, GRAVEL (GW) slightly moist to dry in places (FILL)		
	42		1						
			2						
		2778	3				thin green clay layer 2.5 to 3 feet		
			4						
	167		5				becomes moist with increasing clay		
			6						
		57	7				GRAYISH GREEN, CLAY (OH) soft, moist, abundant organic material (plant) (BAYMUD)		
			8				Bottom of boring @ 8 feet		
			9						
			10						
			11						
			12						
			13						
			14						
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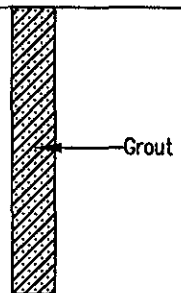
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:  <b>SB-9</b>
Boring Location: MALIBU GRAND PRIX			
Subcontractor and Equipment: POWERCORE		Logged By: SRS	Comments:
Sampling Method: CONTINUOUS CORE		Monitoring Device: OVM 580B	
Start Date/Time: 4/5/94//1455		Finish Date/Time: 4/5/94//1520	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
			0				BROWN, GRAVEL (GW) (FILL)		 <p>Grout</p>
	95		1				BROWN, FINE SAND (SP) moist, medium dense		
			2				GREEN, FINE SAND (SP) moist, medium dense		
	48		3				GREEN AND BROWN, GRAVEL (SW) dense, slightly moist to dry		
			4						
			5						
			6						
			7				becoming tan with cobbles		
	42		8				GRAYISH GREEN, CLAY (OH) soft (BAYMUD)		
			9						
			10						
			11				Bottom of boring @ 12 feet		
			12						
			13						
			14						
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			16						
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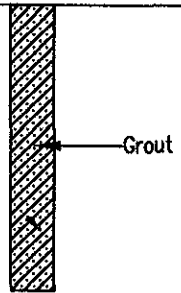
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: MALIBU GRAND PRIX			<b>SB-10</b>
Subcontractor and Equipment: POWERCORE		Logged By: KEC	
Sampling Method: CONTINUOUS CORE		Monitoring Device: OVM 580B	Comments:
Start Date/Time: 4/6/94//0735		Finish Date/Time: 4/6/94//0750	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
	<1		0				BROWN, SOIL moist		
	2		1				GRAYISH GREEN, CLAY (OH) soft, moist (BAYMUD)		
			2						
			3				Bottom of boring @ 6 feet		
			4						
			5						
	16		6						
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:  <b>SB-11</b>
Boring Location: MALIBU GRAND PRIX			
Subcontractor and Equipment: POWERCORE		Logged By: KEC	Comments:
Sampling Method: CONTINUOUS CORE		Monitoring Device: OVM 580B	
Start Date/Time: 4/6/94//0758		Finish Date/Time: 4/6/94//0815	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
			0						
			1				BROWN, SOIL moist		
	<1		2				DARK BROWN, CLAY (CL) with black organic material, asphalt-like odor		
			3						
		20	4				black flaky material with asphalt-like odor		
			5						
			6				BAYMUD (OH)		
			7				Bottom of boring @ 6 feet		
			8						
			9						
			10						
			11						
			12						
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			14						
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:  <b>SB-12</b>  Comments:
Boring Location: MALIBU GRAND PRIX			
Subcontractor and Equipment: POWERCORE		Logged By: KEC	
Sampling Method: CONTINUOUS CORE		Monitoring Device: OVM 580B	
Start Date/Time: 4/6/94//0820		Finish Date/Time: 4/6/94//0830	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
			0				BROWN, TOP SOIL		 <p>Grout</p>
	8		1				REDDISH BROWN, CLAY (CL) with sand and gravel, asphalt-like odor in sand and gravel from 3' to 4'		
		120	2				encountered rock @ 4.3'		
			3				asphalt-like odor-fibrous, brown black material		
			4				BAYMUD (OH) with asphalt-like odor		
		1000	5				Bottom of boring @ 8 feet		
			6						
			7						
			8						
			9						
			10						
			11						
			12						
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: MALIBU GRAND PRIX			<b>SB-13</b>
Subcontractor and Equipment: POWERCORE		Logged By: KEC	
Sampling Method: CONTINUOUS CORE		Monitoring Device: OVM 580B	Comments:
Start Date/Time: 4/6/94//0840		Finish Date/Time: 4/6/94//0855	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
			0						
		500	1				BROWN, TOPSOIL, moist		
			2	X			BROWN, GRAVEL (GW) with asphalt-like material (FILL)		
		110	3				dark brown to black fibrous material with asphalt-like odor, H2S odor		 Grout
		140	4				GRAY GREEN, CLAY (OH) with gravel, asphalt-like odor (BAYMUD)		
		170	5				Bottom of boring @ 6 feet		
			6						
			7						
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: MALIBU GRAND PRIX			<b>SB-14</b>
Subcontractor and Equipment: POWERCORE		Logged By: KEC	
Sampling Method: CONTINUOUS CORE		Monitoring Device: OVM 580B	Comments:
Start Date/Time: 4/6/94//0910		Finish Date/Time: 4/6/94//0935	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
			0				BROWN, TOPSOIL, moist		 <p>Grout</p>
	250		1				BROWN, SANDY GRAVEL (GW) moist to very moist (FILL)		
		150	2						
			3				black fibrous material mix with clay, asphalt-like odor		
			4						
			48				GRAY, CLAY (OH) asphalt-like odor (BAYMUD)		
			70						
							Bottom of boring @ 8 feet		
			9						
			10						
			11						
			12						
			13						
			14						
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY	Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: MALIBU GRAND PRIX		<b>SB-15</b>
Subcontractor and Equipment: POWERCORE	Logged By: KEC	
Sampling Method: CONTINUOUS CORE	Monitoring Device: OVM 580B	Comments:
Start Date/Time: 4/6/94//1035	Finish Date/Time: 4/6/94//1106	
First Water (bgs): NA	Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
SB-15-12	18		0				BROWN, TOPSOIL, moist		 <p>Grout</p>
			1						
		<1	2				DARK BROWN, CLAYEY SANDY GRAVEL (GW) with wood chips, moist (FILL)		
		<1	3						
		<1	4						
		<1	5						
		<1	6				DARK GRAY, SANDY CLAY (CL) with wood chips, very moist		
		<1	7				black tar-like substance mixed with woodchips		
		<1	8						
		<1	9				black fibrous material (CARDBOARD) very moist		
		2	10						
			11						
			12				GRAY GREEN, CLY (OH) very moist (BAYMUD)		
			13				Bottom of boring @ 14 feet		
		14							
		15							
		16							
		17							
		18							
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: MALIBU GRAND PRIX			<b>SB-16</b>
Subcontractor and Equipment: POWERCORE		Logged By: KEC	
Sampling Method: CONTINUOUS CORE		Monitoring Device: OVM 580B	Comments:
Start Date/Time: 4/6/94//1035		Finish Date/Time: 4/6/94//1106	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)									

			0				BROWN, TOPSOIL, slightly moist		 <p>Grout</p>
		0	1				DARK BROWN, GRAVELLY SAND (SW) with concrete debris, moist (FILL)		
		8	2						
			3				becomes black and very moist		
			4						
			5				BLACK SAND, very moist		
			6						
		2	7				GRAY GREEN, CLAY (OH) very moist (BAYMUD)		
			8						
			9				Bottom of boring @ 12 feet		
			10						
			11						
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Project: MALIBU GRAND PRIX -- 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: MALIBU GRAND PRIX			<b>SB-17A</b>
Subcontractor and Equipment: POWERCORE		Logged By: KEC	
Sampling Method: CONTINUOUS CORE		Monitoring Device: OVM 580B	Comments:
Start Date/Time: 4/6/94//1345		Finish Date/Time: 4/6/94//1410	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
			0				BROWN, SAND AND GRAVEL (SW/GW) moist (FILL)		 <p>Grout</p>
	20		1						
			2						
		22	3				DARK GRAY, CLAY (CL) with some gravel, very moist (FILL)		
			4						
		665	5				becomes greenish		
			6						
			7				Bottom of boring @ 8 feet (appears to be blocked by piece of wood)		
			8						
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: ADJACENT TO GARAGE AT MGP			<b>SB-17B</b>
Subcontractor and Equipment: POWERCORE		Logged By: KEC	
Sampling Method: CONTINUOUS CORE		Monitoring Device: OVM 580B	Comments:
Start Date/Time: 4/6/94//1455		Finish Date/Time: 4/6/94//1520	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
			0						
	15		1				BROWN, SAND AND GRAVEL (SW/GW) moist		
	400		2				DARK GRAY, SANDY CLAY (CL) with gravel, moist (FILL)		 <p>Grout</p>
			3						
			4						
			5						
	105		6						
			7				becomes medium gray		
	72		8						
			9						
	30		10						
			11				GRAY GREEN, CLAY (OH) (BAYMUD)		
	80		12				Bottom of boring @ 12 feet		
			13						
			14						
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			18						
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY	Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: ADJACENT TO GARAGE AT MGP		<b>SB-18A</b>
Subcontractor and Equipment: POWERCORE	Logged By: KEC	
Sampling Method: CONTINUOUS CORE	Monitoring Device: OVM 580B	Comments:
Start Date/Time: 4/6/94//1530	Finish Date/Time: 4/6/94//1550	
First Water (bgs): NA	Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
		100	0				BROWN, GRAVEL (GW) with sand and clay, moist		 <p>Grout</p>
		250	1				MEDIUM GRAY, SANDY CLAY (CL) moist becomes greenish gray		
			2						
			3						
			4						
			5						
			6						
			7				Bottom of boring @ 7 feet		
			8						
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:  <b>SB-18B</b>
Boring Location: FUN CENTER PARKING LOT			
Subcontractor and Equipment: POWERCORE		Logged By: KEC	
Sampling Method: CONTINUOUS CORE		Monitoring Device: OVM 580B	
Start Date/Time: 4/6/94//1555		Finish Date/Time: 4/6/94//1620	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	Comments:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
			0						
	50		1				BROWNISH TAN, CLAY (CL) with sand and gravel, moist		 <p>Grout</p>
			2				RUST SAND (SP) poorly graded, moist (FILL)		
	125		3				GRAY GREEN, CLAY (CL) moist (FILL)		
			4						
			5						
			6						
	128		7						
			8				increasing sand and gravel		
	80		9						
			10						
			11				Bottom of boring @ 11 feet		
			12						
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			15						
			16						
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: INFIELD AT MGP			<b>SB-19</b>
Subcontractor and Equipment: POWERCORE		Logged By: GOL	
Sampling Method: CONTINUOUS CORE		Monitoring Device: OVM 580B	Comments:
Start Date/Time: 4/7/94//0725		Finish Date/Time: 4/7/94//07	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
			0				DARK BROWN, CLAY (CL) slightly moist		 <p>Grout</p>
			1				LIGHT BROWN, CLAY (CL) with sand and gravel (FILL)		
			2				dark brown color with sand lenses		
			3						
			4						
			5				GREEN, SANDY GRAVEL (GW) with clay, moist (FILL)		
			6				wet at 6 feet		
			7						
			8				DARK BROWN, CLAY (OH) moist		
			9						
			10				Bottom of boring @ 10 feet		
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Project: MALIBU GRAND PRIX -- 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: INFIELD AT MGP			<b>SB-20</b>
Subcontractor and Equipment: POWERCORE		Logged By: GOL	
Sampling Method: CONTINUOUS CORE		Monitoring Device: OVM 580B	Comments:
Start Date/Time: 4/7/94//0725		Finish Date/Time: 4/7/94//07	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
			0				DARK BROWN, CLAYEY SAND (SC) dry		 <p>Grout</p>
	12		1			GRAY, SAND (SP) with some clay, hard, dry			
			2			DARK BROWN, CLAYEY SAND (SC) moist, petroleum-like odor			
	61		3			oily sheen on soil			
	9		4			DARK BROWN, CLAY (CL) moist			
			5			GREEN, SAND (SP) moist			
	2		6			becomes CLAYEY SAND (SC) with brick debris, wet			
			7			GREEN GRAY, CLAY (OH) (BAYMUD)			
	550		8			Bottom of boring @ 10 feet			
			9						
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: INFIELD AT MGP			<b>SB-21</b>
Subcontractor and Equipment: POWERCORE		Logged By: GOL	
Sampling Method: CONTINUOUS CORE		Monitoring Device: OVM 580B	Comments:
Start Date/Time: 4/7/94//0830		Finish Date/Time: 4/7/94//0855	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
		124	0				LIGHT BROWN, CLAYEY SAND (SC) with gravel, dry (FILL) becomes brown		
		7.3	1				DARK BROWN CLAY (CL) moist		
		360	2				DARK BROWN, CLAYEY SAND (SC) moist		
			3				GRAY, SAND (SP) coarse, wet		
			4				DARK GREEN, GRAY SANDY CLAY (CL) moist		
			5				GREEN GRAY, CLAY (OH) (BAYMUD)		
			6				Bottom of boring @ 8 feet		
			7						
			8						
			9						
			10						
			11						
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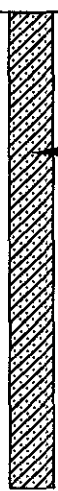
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:  <b>SB-22</b>
Boring Location: INFIELD AT MGP			
Subcontractor and Equipment: POWERCORE		Logged By: GOL	Comments:
Sampling Method: CONTINUOUS CORE		Monitoring Device: OVM 580B	
Start Date/Time: 4/7/94//0910		Finish Date/Time: 4/7/94//0930	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
SB-22-6	26	24	0				LIGHT BROWN, SAND (SP) dry		 Grout
			1				BROWN, SANDY CLAY (CL) with brick fragments, moist becomes dark brown		
			2				DARK BROWN, CLAYEY SAND (SC) with gray rock fragments		
			3				grades darker brown with more sand, and tar-like substance with degraded cardboard		
			4				DARK BROWN, CLAY (CL) with sand, wet, petroleum odor		
			5				GRAY GREEN, CLAY (CL) (BAYMUD)		
SB-22-10	73	24	6			Bottom of boring @ 10 feet			
			7						
			8						
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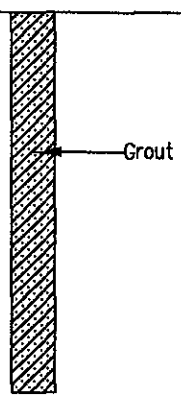
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: INFIELD AT MGP			<b>SB-23</b>
Subcontractor and Equipment: POWERCORE		Logged By: GOL	
Sampling Method: CONTINUOUS CORE		Monitoring Device: OVM 580B	Comments:
Start Date/Time: 4/7/94//0940		Finish Date/Time: 4/7/94//1010	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
	6		0				BROWN, CLAYEY SAND (SC) with rock and glass fragments, dry (FILL)		 <p>Grout</p>
	52		1				becomes tan		
			2						
			3						
		1860	4				becomes dark brown		
			5						
	33		6				DARK BROWN, SANDY CLAY (CL) slight petroleum odor, moist		
	80		7				increasing moisture		
			8						
			9				DARK GRAY, SANDY CLAY (OH) moist		
			10				Bottom of boring @ 10 feet		
			11						
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			16						
			17						
			18						
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: INFIELD AT MGP			<b>SB-24</b>
Subcontractor and Equipment: POWERCORE		Logged By: GOL	
Sampling Method: CONTINUOUS CORE		Monitoring Device: OVM 580B	Comments:
Start Date/Time: 4/7/94//1020		Finish Date/Time: 4/7/94//1040	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
	6		0				TAN, CLAYEY SAND (SC) with gravel, dry (FILL)		
			1				BROWN, SANDY CLAY (CL) dry		
	3.2		2				becomes dark brown, moist		
			3				BROWN, CLAYEY SAND (SC) moist, loose		
			4				GREEN, SAND (SP) coarse, red staining, wet		
	0.7		5				GREEN GRAY, CLAY (OH) (BAYMUD)		
			6				Bottom of boring @ 8 feet		
			7						
			8						
			9						
			10						
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			12						
			13						
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY	Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: EAST SIDE OF CASTLE INN DRIVE		<b>SB-25</b>
Subcontractor and Equipment: POWERCORE	Logged By: GOL	
Sampling Method: CONTINUOUS CORE	Monitoring Device: OVM 580B	Comments:
Start Date/Time: 4/7/94//1410	Finish Date/Time: 4/7/94//1445	
First Water (bgs): NA	Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
			0	X			ASPHALT		
	1		1				LIGHT BROWN, CLAYEY SAND (SC) dry		 <p>Grout</p>
	2		2				DARK GRAY, SANDY CLAY (CL) moist occasional clayey sand pockets		
	37		3						
	4		4						
	27		5						
	6		6						
	7		7	X			GRAY, CLAY (OH) (BAYMUD)		
	3.5		8				GRAY, CLAYEY SAND (SC) with abundant organic plant matter (BAYMUD)		
	9		9	X					
	<1		10						
	<1		11						
			12				Bottom of boring @ 13 feet		
			13						
			14						
			15						
			16						
			17						
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: GOLF PARKING LOT			<b>SB-26</b>
Subcontractor and Equipment: POWERCORE		Logged By: GOL	
Sampling Method: CONTINUOUS CORE		Monitoring Device: OVM 580B	Comments:
Start Date/Time: 4/7/94//1520		Finish Date/Time: 4/7/94//15	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
			0				ASPHALT		
	<1		1				BROWN, CLAYEY SAND (SC) coarse, dry becomes moist becomes dark gray to green		 <p>Grout</p>
	0.3		2						
			3						
			4						
	<1		5						
			6				GRAY AND BROWN SAND (SP) with fine white material, moist		
	<1		7				GRAY CLAY (CL) moist		
			8				DARK BROWN, CLAYEY SAND (SC) with leaves and copper wire, very moist		
	<1		9				GRAY GREEN, CLAY (OH) (BAYMUD)		
			10				Bottom of boring @ 10 feet		
			11						
			12						
			13						
			14						
			15						
			16						
			17						
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: GOLF PARKING LOT			<b>SB-27</b>
Subcontractor and Equipment: POWERCORE		Logged By: XZ	
Sampling Method: CONTINUOUS CORE		Monitoring Device: OVM 580B	Comments: * OVM CAN NOT BE CALIBRATED DUE TO HIGH MOISTURE BY RAIN
Start Date/Time: 4/8/94//		Finish Date/Time: 4/8/94//	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
	<1		0				BROWN, SAND (SP) (FILL)		 <p>Grout</p>
			1				becomes dark brown		
			2				DARK BROWN, CLAYEY SAND (SC)		
	80		3						
			4						
			5						
	70		6				BLACK, CLAY (CL) grease		
			7						
	190		8						
			9				BLACK, CLAY (OH) (BAYMUD)		
	7000*		10				Bottom of boring @ 10 feet		
	400*		11						
			12						
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: GOLF PARKING LOT			<b>SB-28</b>
Subcontractor and Equipment: POWERCORE		Logged By: XZ	
Sampling Method: CONTINUOUS CORE		Monitoring Device: OVM 580B	Comments:
Start Date/Time: 4/8/94//		Finish Date/Time: 4/8/94//	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
	5		0				BROWN, SAND (SP) (FILL)		 <p>Grout</p>
			1				becomes yellow brown		
	10		2						
			3						
	8		4						
			5						
			6	X					
			7				BLACK, CLAY (CL) with concrete		
			8						
			9				GRAY GREEN, CLAY (OH) moist (BAYMUD)		
			10				Bottom of boring @ 10 feet		
			11						
			12						
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: GOLF PARKING LOT			<b>SB-29</b>
Subcontractor and Equipment: POWERCORE		Logged By: GOL	
Sampling Method: CONTINUOUS CORE		Monitoring Device: OVM 580B	Comments:
Start Date/Time: 4/8/94//1340		Finish Date/Time: 4/8/94//1400	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
		52	0				LIGHT BROWN, CLAYEY SAND (SC) slightly moist		 <p>Grout</p>
			1						
			2						
			3						
			4						
			5						
			6						
			7				DARK BROWN, CLAYEY SAND (SC) with gray and green rock fragments, moist		
			8						
			9				GREENISH GRAY, CLAYEY SAND (SC) with abundant glass fragments		
			10				BROWN, CLAY (CL) dry		
			11				DARK GRAY, SAND (SP) with rock and brick fragments, wet		
			12						
			13				GRAY GREEN, CLAY (OH)		
			14				Bottom of boring @ 14 feet		
			15						
			16						
			17						
			18						
			19						
			20						
			21						
			22						
			23						
			24						
			25						
			26						
			27						
			28						
			29						
			30						


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Project: MALIBU GRAND PRIX -- 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: NEXT TO HOLE 3			<b>SB-30</b>
Subcontractor and Equipment: POWERCORE		Logged By: GOL	
Sampling Method: CONTINUOUS CORE		Monitoring Device: OVM 580B	Comments:
Start Date/Time: 4/7/94//1445		Finish Date/Time: 4/7/94//1510	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
			0						 <p>Grout</p>
			1				BROWN, CLAYEY SAND (SC)		
			2				becomes greenish gray		
			3						
			4						
			5						
			6						
			7				sand contains oil-like staining with layer of oil and tar-like material		
			8						
			9				GREENISH GRAY, SAND (SP) with some clay, moist		
			10				GREENISH CLAY, GRAVEL (GP) petroleum-like odor		
			11						
			12				becomes wet becomes dark gray to black		
			13				GREENISH GRAY, CLAY (OH) (BAYMUD)		
			14				Bottom of boring @ 14 feet		
			15						
			16						
			17						
			18						
			19						
			20						
			21						
			22						
			23						
			24						
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			27						
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			30						


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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:  <b>SB-32</b>
Boring Location: MALIBU GRAND PRIX			
Subcontractor and Equipment: BAYLANDS DRILLING/CME 55		Logged By: SEB	
Sampling Method: CA MOD. SPLIT SPOON		Monitoring Device: OVM 540	
Start Date/Time: 8/8/94//1100		Finish Date/Time: 8/8/94//1230	
First Water (bgs): DRY		Stabilized Water Level (bgs): DRY	Comments:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
			0						 <p>Grout</p>
			1				BROWN, GRAVELLY SAND (FILL) dry, no odor		
			2				BROWN, GREASY, SANDY SILT (FILL) dry tar odor		
			3				BROWN, SANDY SILT (FILL) dry, no odor		
SB-32-4.5			4						
			5						
			6				BROWN, GRAVELLY SILT (GM) dry, no odor		
			7						
			8						
			9						
SB-32-9.5			10				GRAY, CLAY (OH) moist (BAYMUD) Bottom of boring @ 10.5 feet		
			11						
			12						
			13						
			14						
			15						
			16						
			17						
			18						
			19						
			20						
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: MALIBU GRAND PRIX			<b>SB-33</b>
Subcontractor and Equipment: BAYLANDS DRILLING/CME 55		Logged By: SEB	
Sampling Method: CA MOD. SPLIT SPOON		Monitoring Device: OVM 540	Comments:
Start Date/Time: 8/8/94//1300		Finish Date/Time: 8/8/94//1430	
First Water (bgs): DRY		Stabilized Water Level (bgs): DRY	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
SB-33-4.5			0	[X]	[dots]		BROWN, GRAVELLY SAND (FILL) dry, no odor		 <p>Grout</p>
			1				BROWN, GREASY, SANDY SILT (FILL) dry, no odor		
2	BROWN, SANDY SILT (FILL) dry, no odor								
3									
4									
5									
6									
7									
8									
9									
SB-33-9.5			10	[X]	[diagonal lines]		GRAY, CLAY (OH) soft, moist (BAYMUD) Bottom of boring @ 10.5 feet		
			11						
			12						
			13						
			14						
			15						
			16						
			17						
			18						
			19						
			20						
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			25						
			26						
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: MALIBU GRAND PRIX			<b>SB-34</b>
Subcontractor and Equipment: BAYLANDS DRILLING/CME 55		Logged By: SEB	
Sampling Method: CA MOD. SPLIT SPOON		Monitoring Device: OVM 580B	Comments:
Start Date/Time: 7/26/94//0945		Finish Date/Time: 7/26/94//1145	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
		<1	0				BROWN, GRAVELLY SAND (FILL) dry		
		38.1	1				BROWN, GREASY, SANDY SILT (SM) dry, tar odor		
			2				BROWN, SANDY SILT (SM) dry, tar odor		
			3				becomes moist		
			4						
			5						
			6						
			7						
		16.6	8				becomes wet		
		<1	9				BROWN, SANDY GRAVEL (GW) tar odor		
			10				GRAY, GRAVEL (GW) no odor		
		<1	11				GRAY, CLAY (OH) soft (BAYMUD)		
			12				Bottom of boring @ 12 feet		
			13						
			14						
			15						
			16						
			17						
			18						
			19						
			20						
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			25						
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			29						
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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:  <b>SB-35</b>
Boring Location: MALIBU GRAND PRIX			
Subcontractor and Equipment: BAYLANDS DRILLING/CME 55		Logged By: SEB	
Sampling Method: CA MOD. SPLIT SPOON		Monitoring Device: OVM 540	
Start Date/Time: 7/26/94//1445		Finish Date/Time: 7/26/94//1630	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	Comments:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
SB-35-2.5			0				BROWN, GRAVELLY SAND (FILL) dry		 Grout
			1.5						
SB-35-5.5			2				BROWN, GREASY, SANDY SILT (SM) dry, tar odor		
			3				BROWN, SANDY SILT (SM) dry, tar odor		
			4				becomes moist		
SB-35-10			5				BROWNISH GRAY, COARSE SAND (SP) moist, no odor		
			6				GRAY, CLAY (OH) soft, wet (BAYMUD)		
			7				Bottom of boring @ 10.5 feet		
			8						
			9						
			10						
			11						
			12						
			13						
			14						
			15						
			16						
			17						
			18						
			19						
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			29						
			30						

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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:
Boring Location: MALIBU GRAND PRIX			<b>SB-36</b>
Subcontractor and Equipment: BAYLANDS DRILLING/CME 55		Logged By: SEB	
Sampling Method: CA MOD. SPLIT SPOON		Monitoring Device: OVM 540	Comments:
Start Date/Time: 7/26/94//1445		Finish Date/Time: 7/26/94//1630	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
			0				BROWN, GRAVELLY SAND (FILL) dry, no odor		 Grout
			1						
	32.8		2				BROWN, GREASY, SANDY SILT (SM) dry, tar odor		
			3				GRAY, SANDY SILT (SM) dry, tar odor becomes Olive Brown, moist		
			4						
			5						
			6						
			7						
			8						
			9						
			10						
SB-36-11.5			11				OLIVE BROWN, CLAY (MH) dry, no odor		
			12				OLIVE BROWN, SANDY SILT (SM) dry, no odor		
			13						
			14						
			15						
			16						
			17				becomes soft		
			18						
			19						
			20				GRAY, CLAY (OH) dry, no odor Bottom of boring @ 20 feet		
			21						
			22						
			23						
			24						
			25						
			26						
			27						
			28						
			29						
			30						

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Project: MALIBU GRAND PRIX - 8000 SOUTH COLISEUM WAY		Project No.: 50102-001-01	Log of Boring/Monitoring Well:  <b>MW-19</b>
Boring Location: MALIBU GRAND PRIX			
Subcontractor and Equipment: BAYLANDS DRILLING/CME 55		Logged By: SEB	Comments:
Sampling Method: CA MOD. SPLIT SPOON		Monitoring Device: OVM 540	
Start Date/Time: 8/8/94//0830		Finish Date/Time: 8/8/94//1030	
First Water (bgs): 6.5 FEET		Stabilized Water Level (bgs): 5.5 FEET	

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
							LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
			0				BROWN, GRAVELLY SAND (FILL) dry, no odor		<p>2" Ø Blank Casing Sch. 40 PVC Grout Bentonite Pellets #2/12 Lonestar Sand 2" Ø Sch. 40 0.010" Slot Screen End Cap</p>
			1				BROWN, GREASY, SANDY SILT (FILL) dry, tar odor		
			2				BROWN, SANDY SILT (SM) dry, no odor		
			3						
			4						
			5						
			6				OLIVE BROWN, CLAY (MH) moist, no odor		
			7				OLIVE BROWN, GRAVELLY SAND (GP) wet, no odor		
			8						
			9						
			10				GRAY, CLAY (OH) soft, wet (BAYMUD) Bottom of boring @ 10.5 feet		
			11						
			12						
			13						
			14						
			15						
			16						
			17						
			18						
			19						
			20						
			21						
			22						
			23						
			24						
			25						
			26						
			27						
			28						
			29						
			30						

Reviewed By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Revised By: \_\_\_\_\_ Date: \_\_\_\_\_

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**Site Management Plan**  
8000 Coliseum Way  
August 19, 1994

**APPENDIX C**

**Soil Boring and Shallow Groundwater Monitoring Well Permits**



# ZONE 7 WATER AGENCY

5987 PARKSIDE DRIVE

PLEASANTON, CALIFORNIA 94588

VOICE (510) 484-2600

FAX (510) 462-3914

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 8000 South Coliseum Way  
Oakland, California

PERMIT NUMBER 94215

LOCATION NUMBER \_\_\_\_\_

CLIENT

Name Coliseum Way 8000, Inc.  
Address 1411 Harbor Bay Plaza Voice 510-748-6120  
City Alameda Zip 94501

PERMIT CONDITIONS

Circled Permit Requirements Apply

APPLICANT

Name Kelly Cook  
SEACOR Suite 2008  
Address 4922 Fax (415) 691-9837  
City Los Altos, CA Voice (415) 813-3450  
Zip 94022  
4984 El Camino Real #101

A. GENERAL

- 1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
- 2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling logs and location sketch for geotechnical projects.
- 3. Permit is void if project not begun within 90 days of approval date.

B. WATER WELLS, INCLUDING PIEZOMETERS

- 1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
- 2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

E. WELL DESTRUCTION. See attached.

TYPE OF PROJECT

Well Construction	_____	Geotechnical Investigation	_____
Cathodic Protection	_____	General	_____
Water Supply	_____	Contamination	<u>X</u>
Monitoring	_____	Well Destruction	_____

PROPOSED WATER SUPPLY WELL USE

Domestic	_____	Industrial	_____	Other	_____
Municipal	_____	Irrigation	_____		

DRILLING METHOD:

Mud Rotary \_\_\_\_\_ Air Rotary \_\_\_\_\_ Auger \_\_\_\_\_  
 Cable \_\_\_\_\_ Other hydraulic sampler

DRIILLER'S LICENSE NO. \_\_\_\_\_

WELL PROJECTS

Drill Hole Diameter	_____ in.	Maximum	
Casing Diameter	_____ in.	Depth	_____ ft.
Surface Seal Depth	_____ ft.	Number	_____

GEOTECHNICAL PROJECTS

Number of Borings	<u>32</u>	Maximum	
Hole Diameter	<u>2-3</u> in.	Depth	<u>15</u> ft. (or to top of Bay Mud)

ESTIMATED STARTING DATE 4/1/94

ESTIMATED COMPLETION DATE 4/7/94

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-88.

Approved \_\_\_\_\_

Wyman Hong  
Wyman Hong

Date 6 Apr 94

APPLICANT'S 111011



# ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588

VOICE (510) 484-2600  
FAX (510) 462-3914

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 8000 GARTH COLISEUM WY  
Oakland, California

PERMIT NUMBER 94464  
LOCATION NUMBER \_\_\_\_\_

### CLIENT

Name Coliseum Way 1000, Inc.  
Address 1411 Harbor Bay Pkwy (510) 218-6120  
City Ste # 2008, Alameda Zip 94501

### PERMIT CONDITIONS

Circled Permit Requirements Apply

### APPLICANT

Name SANDRA E. BRUNI FOR  
SEACOR Fax (415) 882-4406  
Address 90 NEW MONTGOMERY (415) 882-1548 x229  
City Ste. U20 SAN FRANCISCO Zip 94121

### A. GENERAL

1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

### B. WATER WELLS, INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

E. WELL DESTRUCTION. See attached.

### TYPE OF PROJECT

Well Construction	Geotechnical Investigation
Cathodic Protection	General
Water Supply	Contamination
Monitoring	Well Destruction

Well Construction  
 Cathodic Protection  
 Water Supply  
 Monitoring  
 Geotechnical Investigation  
 General  
 Contamination  
 Well Destruction

### PROPOSED WATER SUPPLY WELL USE

Domestic  Industrial  Other NA  
 Municipal  Irrigation

### DRILLING METHOD:

Mud Rotary  Air Rotary  Auger   
 Cable  Other

DRILLER'S LICENSE NO. 374 152

### WELL PROJECTS

Drill Hole Diameter	<u>10</u> in.	Maximum	
Casing Diameter	<u>NA</u> in.	Depth	<u>20</u> ft.
Surface Seal Depth	<u>20</u> ft.	Number	<u>3</u>

### GEOTECHNICAL PROJECTS

Number of Borings		Maximum	
Hole Diameter	___ in.	Depth	___ ft.

ESTIMATED STARTING DATE 7-26-94  
 ESTIMATED COMPLETION DATE 7-26-94

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

Approved Wyman Hong Date 8 Aug 94  
Wyman Hong



ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588 (415) 484-2600

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 8000 South Coliseum Way Oakland, CA

PERMIT NUMBER 94447 LOCATION NUMBER

CLIENT Coliseum Way 8000, Inc. 441 HARBOR BAY PKWY ALAMEDA 94501

PERMIT CONDITIONS

Circled Permit Requirements Apply

APPLICANT JONATHAN GOLDMAN SEACOR SUITE 620 90 NEW MONTGOMERY SF 94105-4503

PH: 415 882-1548 x231 FAX: 415 882-4406

TYPE OF PROJECT Construction Geotechnical Investigation Cathodic Protection General Water Supply Contamination Monitoring [checked] Well Destruction

PROPOSED WATER SUPPLY WELL USE Domestic Industrial Other Municipal Irrigation

DRILLING METHOD: Mud Rotary Air Rotary [checked] Auger Cable Other

DRILLER'S LICENSE NO. C57 306291

WELL PROJECTS Min Drill Hole Diameter 8 in. Max Casing Diameter 4 in. Min Surface Seal Depth 5 ft. EST Depth 15 ft. MAX Number 1

GEOTECHNICAL PROJECTS Number of Borings Hole Diameter in. Maximum Depth ft.

ESTIMATED STARTING DATE 4 AUG 94 ESTIMATED COMPLETION DATE 4 AUG 94

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-69.

- A. GENERAL 1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date. 2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects. 3. Permit is void if project not begun within 90 days of approval date. B. WATER WELLS, INCLUDING PIEZOMETERS 1. Minimum surface seal thickness is two inches of cement grout placed by tremie. 2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet. C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings. D. CATHODIC. Fill hole above anode zone with concrete placed by tremie. E. WELL DESTRUCTION. See attached.

Approved: [Signature] Date 3 Aug 94 Wyman Hong

APPLICANT'S [Signature]

**Site Management Plan**  
8000 Coliseum Way  
August 19, 1994

**APPENDIX D**

**Analytical Laboratory Reports and Chain-of-Custody Records**



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: J.GOLDMAN

Project 50102-001-01  
Reported 29-July-1994

ANALYSIS FOR TOTAL LEAD  
by EPA Method SW-846 6010

Chronology

Laboratory Number 58492

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
T-1	07/26/94	07/27/94	07/27/94	07/28/94		1

**Superior Precision Analytical, Inc.**

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: J.GOLDMANProject 50102-001-01  
Reported 29-July-1994

## ANALYSIS FOR TOTAL LEAD

Laboratory Number	Sample Identification	Matrix
58492 1	T-1	Soil

## RESULTS OF ANALYSIS

Laboratory Number: 58492- 1

Lead (Pb): 2000  
Concentration: mg/Kg





# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

## ANALYSIS FOR TOTAL LEAD Quality Assurance and Control Data - Extract

Laboratory Number 58492

Compound		Method Blank (mg/Kg)	RL (mg/Kg)	Spike Recovery (%)	Limits (%)	RPD (%)
Lead	(Pb):	ND<5	5	99/101	75-125	28

### Definitions:

ND - Not Detected

RPD - Relative Percent Difference

RL - Reporting Limit

mg/Kg - Parts per million (ppm)

QC File No. 58492

*Antonio L. Salas*  
Senior Chemist  
Account Manager

Page 3 of 3  
Certified Laboratories

**Superior Precision Analytical, Inc.**

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: JONATHAN GOLDMAN

Project 50102-001-01  
Reported 29-July-1994

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS  
by GAS CHROMATOGRAPHY - MASS SPECTROMETRY

**Chronology****Laboratory Number 58492**

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
T-1	07/26/94	07/27/94	07/29/94	07/29/94		1



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: JONATHAN GOLDMAN

Project 50102-001-01  
Reported 29-July-1994

## EPA SW-846 METHOD 8240 - VOLATILE ORGANICS

Laboratory Number	Sample Identification	Matrix
58492- 1	T-1	Soil

### RESULTS OF ANALYSIS

Laboratory Number: 58492- 1

Chloromethane:	ND<500
Bromomethane:	ND<500
Vinyl Chloride:	ND<500
Chloroethane:	ND<500
Methylene Chloride:	ND<500
Acetone:	ND<1000
Carbon Disulfide:	ND<150
Trichlorofluoromethane:	ND<150
1,1-Dichloroethene:	ND<150
1,1-Dichloroethane:	ND<150
t-1,2-Dichloroethene:	ND<150
Chloroform:	ND<150
1,2-Dichloroethane:	ND<50
2-Butanone:	ND<1000
1,1,1-Trichloroethane:	ND<150
Carbon tetrachloride:	ND<150
Vinyl Acetate:	ND<500
Bromodichloromethane:	ND<150
1,2-Dichloropropane:	ND<150
c-1,2-Dichloroethene:	ND<150
c-1,3-Dichloropropene:	ND<150
Trichloroethene:	ND<150
Dibromochloromethane:	ND<150
1,1,2-Trichloroethane:	ND<150
Benzene:	2100
t-1,3-Dichloropropene:	ND<150
Bromoform:	ND<150
4-Methyl-2-Pentanone:	ND<500
2-Hexanone:	ND<500

Concentration: ug/kg



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: JONATHAN GOLDMAN

Project 50102-001-01  
Reported 29-July-1994

## EPA SW-846 METHOD 8240 - VOLATILE ORGANICS

Laboratory Number	Sample Identification	Matrix
58492- 1	T-1	Soil

### RESULTS OF ANALYSIS

Laboratory Number: 58492- 1

Tetrachloroethene:	ND<150
1,1,2,2-Tetracl-ethane:	ND<150
Toluene:	5100
Chlorobenzene:	ND<150
Ethyl Benzene:	3000
Styrene:	ND<150
Xylenes:	6300
1,3-Dichlorobenzene:	ND<150
1,4-Dichlorobenzene:	ND<150
1,2-Dichlorobenzene:	ND<150

Concentration: ug/kg

-- Surrogate % Recoveries --  
 1,2-Dichloroethane-d4: 109  
 Toluene-d8: 101  
 Bromofluorobenzene: 95



# Superior Precision Analytical, Inc.

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EPA SW-846 METHOD 8240 - VOLATILE ORGANICS  
Quality Assurance and Control Data - Soil

Laboratory Number 58492

Compound	Method Blank (ug/kg)	RL (ug/kg)	Spike Recovery (%)	Limits (%)	RPD (%)
Chloromethane:	ND<50	50			
Bromomethane:	ND<50	50			
Vinyl Chloride:	ND<50	50			
Chloroethane:	ND<50	50			
Methylene Chloride:	ND<50	50			
Acetone:	ND<100	100			
Carbon Disulfide:	ND<15	15			
Trichlorofluoromethane:	ND<15	15			
1,1-Dichloroethene:	ND<15	15	101/104	77-133	3%
1,1-Dichloroethane:	ND<15	15			
t-1,2-Dichloroethene:	ND<15	15			
Chloroform:	ND<15	15			
1,2-Dichloroethane:	ND<5	5			
2-Butanone:	ND<100	100			
1,1,1-Trichloroethane:	ND<15	15			
Carbon tetrachloride:	ND<15	15			
Vinyl Acetate:	ND<50	50			
Bromodichloromethane:	ND<15	15			
1,2-Dichloropropane:	ND<15	15			
c-1,2-Dichloroethene:	ND<15	15			
c-1,3-Dichloropropene:	ND<15	15			
Trichloroethene:	ND<15	15	99/101	69-111	2%
Dibromochloromethane:	ND<15	15			
1,1,2-Trichloroethane:	ND<15	15			
Benzene:	ND<5	5	101/104	78-119	3%
c-1,3-Dichloropropene:	ND<15	15			
Bromoform:	ND<15	15			
4-Methyl-2-Pentanone:	ND<50	50			
2-Hexanone:	ND<50	50			



# Superior Precision Analytical, Inc.

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EPA SW-846 METHOD 8240 - VOLATILE ORGANICS  
Quality Assurance and Control Data - Soil

Laboratory Number 58492

Compound	Method Blank (ug/kg)	RL (ug/kg)	Spike Recovery (%)	Limits (%)	RPD (%)
Tetrachloroethene:	ND<15	15			
1,1,2,2-Tetracl-ethane:	ND<15	15			
Toluene:	ND<15	15	96/103	76-124	7%
Chlorobenzene:	ND<15	15	92/103	82-118	11%
Ethyl Benzene:	ND<15	15			
Styrene:	ND<15	15			
Xylenes:	ND<15	15			
1,3-Dichlorobenzene:	ND<15	15			
1,4-Dichlorobenzene:	ND<15	15			
1,2-Dichlorobenzene:	ND<15	15			
1,2-Dichloroethane-d4:	90			70-121	
Toluene-d8:	99			81-117	
Bromofluorobenzene:	89			74-121	

#### Definitions:

ND = Not Detected  
RPD = Relative Percent Difference  
RL = Reporting Limit  
ug/kg = Parts per billion (ppb)  
QC File No. 58492

*Cecilia G. Joaquin* 7/29/94  
Senior Chemist  
Account Manager



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: JONATHAN GOLDMAN

Project 50102-001-01  
Reported 29-July-1994

EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

### Chronology

Laboratory Number 58492

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
T-1	07/26/94	07/27/94	07/27/94	07/28/94		1



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: JONATHAN GOLDMAN

Project 50102-001-01  
Reported 29-July-1994

## EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Laboratory Number	Sample Identification	Matrix
58492- 1	T-1	Soil

### RESULTS OF ANALYSIS

Laboratory Number: 58492- 1

bis(2-chloroethyl)eth:ND<500  
 aniline: ND<500  
 phenol: ND<500  
 2-chlorophenol: ND<500  
 1,3-dichlorobenzene: ND<500  
 1,4-dichlorobenzene: ND<500  
 1,2-dichlorobenzene: ND<500  
 benzyl alcohol: ND<500  
 bis-(2-chloroisopropyl):ND<500  
 2-methylphenol: ND<500  
 hexachloroethane: ND<500  
 n-nitroso-di-n-propyla:ND<500  
 4-methylphenol: ND<500  
 nitrobenzene: ND<500  
 isophorone: ND<500  
 2-nitrophenol: ND<500  
 2,4-dimethylphenol: ND<500  
 bis(2-chloroethoxy)met:ND<500  
 2,4-dichlorophenol: ND<500  
 1,2,4-trichlorobenzene:ND<500  
 naphthalene: ND<500  
 benzoic acid: ND<500  
 4-chloroaniline: ND<500  
 hexachlorobutadiene: ND<500  
 4-chloro-3-methylpheno:ND<500  
 2-methyl-naphthalene: ND<500  
 hexaclorocyclopentadie:ND<500  
 2,4,6-trichlorophenol: ND<500  
 2,4,5-trichlorophenol: ND<500

Concentration: mg/kg





# Superior Precision Analytical, Inc.

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SEACOR  
Attn: JONATHAN GOLDMAN

Project 50102-001-01  
Reported 29-July-1994

## EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Laboratory Number	Sample Identification	Matrix
58492- 1	T-1	Soil

### RESULTS OF ANALYSIS

Laboratory Number: 58492- 1

2-chloronaphthalene:	ND<500
2-nitroaniline:	ND<500
acenaphthylene:	ND<500
dimethylphthlate:	ND<500
2,6-dinitrotoluene:	ND<500
acenaphthene:	ND<500
3-nitroaniline:	ND<500
2,4-dinitrophenol:	ND<500
dibenzofuran:	ND<500
2,4-dinitrotoluene:	ND<500
4-nitrophenol:	ND<500
fluorene:	ND<500
4-chlorophenyl-phenyle:	ND<500
diethylphthlate:	ND<500
4-nitroaniline:	ND<500
4,6-dinitro-2-methylph:	ND<500
n-nitrosodiphenylamine:	ND<500
1,2-diphenylhydrazine:	ND<500
4-bromo-phenyl-phenyle:	ND<500
hexachlorobenzene:	ND<500
pentachlorophenol:	ND<500
phenanthrene:	600
anthracene:	ND<500
di-n-butylphthlate:	ND<500
fluoranthene:	ND<500
benzidine:	ND<500
pyrene:	ND<500
butylbenzylphthlate:	ND<500
3,3'-dichlorobenzidine:	ND<500

Concentration: mg/kg



# Superior Precision Analytical, Inc.

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SEACOR  
Attn: JONATHAN GOLDMAN

Project 50102-001-01  
Reported 29-July-1994

## EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Laboratory Number	Sample Identification	Matrix
58492- 1	T-1	Soil

### RESULTS OF ANALYSIS

Laboratory Number: 58492- 1

benzo[a]anthracene: ND<500  
 chrysene: ND<500  
 bis(2-ethylhexyl)phtha:ND<500  
 di-n-octylphthalate: ND<500  
 benzo(b,k)fluoranthene:ND<500  
 benzo[a]pyrene: ND<500  
 indeno[1,2,3-cd]pyrene:ND<500  
 dibenzo[a,h]anthracene:ND<500  
 benzo[g,h,i]perylene: ND<500

Concentration: mg/kg

-- Surrogate % Recoveries --  
 2-fluorophenol: 86  
 phenol-d6: 94  
 nitrobenzene-d5: 100  
 2-fluorobiphenyl: 110  
 2,4,6-tribromophenol: 120  
 terphenyl-d14: 103



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS  
Quality Assurance and Control Data - Soil

Laboratory Number 58492

Compound	Method Blank (ug/kg)	RL (ug/kg)	Spike Recovery (%)	Limits (%)	RPD (%)
bis(2-chloroethyl) ethe:	ND<300	300			
aniline:	ND<300	300			
phenol:	ND<300	300	74/73	44-107	1%
2-chlorophenol:	ND<300	300	69/68	44-107	1%
1,3-dichlorobenzene:	ND<300	300			
1,4-dichlorobenzene:	ND<300	300	74/74	32-115	0%
1,2-dichlorobenzene:	ND<300	300			
benzyl alcohol:	ND<300	300			
bis-(2-chloroisopropyl):	ND<300	300			
2-methylphenol:	ND<300	300			
hexachloroethane:	ND<300	300			
n-nitroso-di-n-propyla:	ND<300	300	80/79	40-123	1%
4-methylphenol:	ND<300	300			
nitrobenzene:	ND<300	300			
isophorone:	ND<300	300			
2-nitrophenol:	ND<300	300			
2,4-dimethylphenol:	ND<300	300			
bis(2-chloroethoxy)met:	ND<300	300			
2,4-dichlorophenol:	ND<300	300			
1,2,4-trichlorobenzene:	ND<300	300	89/92	40-104	3%
naphthalene:	ND<300	300			
benzoic acid:	ND<300	300			
4-chloroaniline:	ND<300	300			
hexachlorobutadiene:	ND<300	300			
4-chloro-3-methylpheno:	ND<300	300	74/74	47-113	0%
2-methyl-naphthalene:	ND<300	300			
hexaclorocyclopentadie:	ND<300	300			
2,4,6-trichlorophenol:	ND<300	300			
2,4,5-trichlorophenol:	ND<300	300			



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EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS  
Quality Assurance and Control Data - Soil

Laboratory Number 58492

Compound	Method Blank (ug/kg)	RL (ug/kg)	Spike Recovery (%)	Limits (%)	RPD (%)
2-chloronaphthalene:	ND<300	300			
2-nitroaniline:	ND<300	300			
acenaphthylene:	ND<300	300			
dimethylphthlate:	ND<300	300			
2,6-dinitrotoluene:	ND<300	300			
acenaphthene:	ND<300	300	75/75	43-110	0%
3-nitroaniline:	ND<300	300			
2,4-dinitrophenol:	ND<300	300			
dibenzofuran:	ND<300	300			
2,4-dinitrotoluene:	ND<300	300	65/56	35-100	15%
4-nitrophenol:	ND<300	300	54/53	36-117	2%
fluorene:	ND<300	300			
4-chlorophenyl-phenyle:	ND<300	300			
diethylphthlate:	ND<300	300			
4-nitroaniline:	ND<300	300			
4,6-dinitro-2-methylph:	ND<300	300			
n-nitrosodiphenylamine:	ND<300	300			
1,2-diphenylhydrazine:	ND<300	300			
4-bromo-phenyl-phenyle:	ND<300	300			
hexachlorobenzene:	ND<300	300			
pentachlorophenol:	ND<300	300	78/75	20-122	4%
phenanthrene:	ND<300	300			
anthracene:	ND<300	300			
di-n-butylphthlate:	ND<300	300			
fluoranthene:	ND<300	300			
benzidine:	ND<300	300			
pyrene:	ND<300	300	82/81	62-117	1%
butylbenzylphthlate:	ND<300	300			
3,3'-dichlorobenzidine:	ND<300	300			



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS  
Quality Assurance and Control Data - Soil

Laboratory Number 58492

Compound	Method Blank (ug/kg)	RL (ug/kg)	Spike Recovery (%)	Limits (%)	RPD (%)
benzo[a]anthracene:	ND<300	300			
chrysene:	ND<300	300			
bis(2-ethylhexyl) phtha: di-n-octylphthalate:	ND<300	300			
benzo(b,k) fluoranthene:	ND<300	300			
benzo[a]pyrene:	ND<300	300			
indeno[1,2,3-cd]pyrene:	ND<300	300			
dibenzo[a,h]anthracene:	ND<300	300			
benzo[g,h,i]perylene:	ND<300	300			
2-fluorophenol:	61			25-121	
phenol-d6:	71			24-113	
nitrobenzene-d5:	67			23-120	
2-fluorobiphenyl:	79			30-115	
2,4,6-tribromophenol:	115			19-122	
terphenyl-d14:	81			18-137	

#### Definitions:

ND = Not Detected

RPD = Relative Percent Difference

RL = Reporting Limit

ug/kg = Parts per billion (ppb)

QC File No. 58492

*Cecilia G. Joazeiro* 7/29/94  
Senior Chemist  
Account Manager



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: JONATHAN GOLDMAN

Project 50102-001-01  
Reported 28-July-1994

ANALYSIS FOR GASOLINE, BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES  
by EPA SW-846 Methods 5030/8015M/8020.

## Chronology

Laboratory Number 58492

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
T-1	07/26/94	07/27/94	07/28/94	07/28/94		1

**Superior Precision Analytical, Inc.***A member of ESSCON Environmental Support Service Consortium*SEACOR  
Attn: JONATHAN GOLDMANProject 50102-001-01  
Reported 28-July-1994

---

ANALYSIS FOR GASOLINE, BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES

---

Laboratory Number	Sample Identification	Matrix
58492- 1	T-1	Soil

---

## RESULTS OF ANALYSIS

Laboratory Number: 58492- 1

---

Gasoline_Range:	80
Benzene:	2.0
Toluene:	6.3
Ethyl Benzene:	2.8
Total Xylenes:	11

Concentration: mg/kg

-- Surrogate % Recoveries --  
Trifluorotoluene (SS): 98



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

ANALYSIS FOR GASOLINE, BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES  
Quality Assurance and Control Data - Soil

Laboratory Number 58492

Compound	Method Blank (mg/kg)	RL (mg/kg)	Spike Recovery (%)	Limits (%)	RPD (%)
Gasoline Range:	ND<1	1	92/91	55-139	1%
Benzene:	ND<.005	.005	90/90	67-141	0%
Toluene:	ND<.005	.005	95/95	67-141	0%
Ethyl Benzene:	ND<.005	.005	85/85	67-141	0%
Total Xylenes:	ND<.005	.005	96/96	67-141	0%

**Definitions:**

ND = Not Detected

RPD = Relative Percent Difference

RL = Reporting Limit

mg/kg = Parts per million (ppm)

QC File No. 58492

*Cecilia G. Joaguen* 7/29/94  
Senior Chemist  
Account Manager





# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: JONATHAN GOLDMAN

Project 50102-001-01  
Reported 28-July-1994

---

## Total Petroleum Hydrocarbons by Modified Method 8015

### Chronology

Laboratory Number 58492

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
T-1	07/26/94	07/27/94	07/27/94	07/28/94		1



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: JONATHAN GOLDMAN

Project 50102-001-01  
Reported 28-July-1994

## Total Petroleum Hydrocarbons by Modified Method 8015

Laboratory Number	Sample Identification	Matrix
58492- 1	T-1	Soil

### RESULTS OF ANALYSIS

Laboratory Number: 58492- 1

Diesel Range: 180000  
Motor Oil Range: 670000

Concentration: mg/kg



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

Total Petroleum Hydrocarbons by Modified Method 8015  
Quality Assurance and Control Data - Soil

Laboratory Number 58492

Compound	Method Blank (mg/kg)	RL (mg/kg)	Spike Recovery (%)	Limits (%)	RPD (%)
Diesel Range:	ND<10	10	89/115	50-150	25%
Motor Oil Range:	ND<10	10			

**Definitions:**

ND = Not Detected

RPD = Relative Percent Difference

RL = Reporting Limit

mg/kg = Parts per million (ppm)

QC File No. 58492

*Cecilia G. Joaquin* 7/29/94  
Senior Chemist  
Account Manager



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: JONATHAN GOLDMAN

Project 50102-001-01  
Reported 29-July-1994

---

## Polychlorinated Biphenyls by EPA Method 8080

### Chronology

Laboratory Number 58492

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
T-1	07/26/94	07/27/94	07/28/94	07/29/94		1



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: JONATHAN GOLDMAN

Project 50102-001-01  
Reported 29-July-1994

## Polychlorinated Biphenyls by EPA Method 8080

Laboratory Number	Sample Identification	Matrix
58492- 1	T-1	oil

### RESULTS OF ANALYSIS

Laboratory Number: 58492- 1

AROCLOR 1016:	ND<4.5
AROCLOR 1221:	ND<4.5
AROCLOR 1232:	ND<4.5
AROCLOR 1242:	ND<4.5
AROCLOR 1248:	ND<4.5
AROCLOR 1254:	ND<4.5
AROCLOR 1260:	7.0

Concentration: mg/kg

-- Surrogate % Recoveries --

Tetrachloro-m-xylene:	89
Decachlorobiphenyl:	73



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

## Polychlorinated Biphenyls by EPA Method 8080 Quality Assurance and Control Data - Soil

Laboratory Number 58492

Compound	Method Blank (ug/kg)	RL (ug/kg)	Spike Recovery (%)	Limits (%)	RPD (%)
AROCLOR 1016:	ND<30	30			
AROCLOR 1221:	ND<30	30			
AROCLOR 1232:	ND<30	30			
AROCLOR 1242:	ND<30	30			
AROCLOR 1248:	ND<30	30			
AROCLOR 1254:	ND<30	30	106/108	67-151	2%
AROCLOR 1260:	ND<30	30			
Tetrachloro-m-xylene:	132		127/144	60-146	13%
Decachlorobiphenyl:	103		116/114	60-150	2%

### Definitions:

ND = Not Detected  
 RPD = Relative Percent Difference  
 RL = Reporting Limit  
 ug/kg = Parts per billion (ppb)  
 QC File No. 58492

*Cecilia G. Joergensen* 7/29/94  
 Senior Chemist  
 Account Manager

# SEACOR Chain-of-Custody Record

Address 11201 NW 47th Ave, Fort Lauderdale, FL 33321

Project # <u>11201-01</u> Task # <u>00</u>				Analysis Request													Number of Containers
Project Manager <u>[Signature]</u>				TPHg/BTEX 8015 (modified)/8020	TPHd 8015 (modified)	TPH 418.1	Aromatic Volatiles 602/8020	Volatile Organics 624/8240 (GC/MS)	Halogenated Volatiles 601/8010	Semi-volatile Organics 625/8270 (GC/MS)	Pesticides/PCB's 608/8080	Total Lead 7421	Priority Pollutant Metals (13)	TCLP Metals	Comments/ Instructions		
Sample ID	Date	Time	Matrix														
T-1	7/27/94	11:00	Soil							X							
T-1-0.5'																	
T-1-1.5'																	
T-1-3.0'																	
T-1-4.5'																	
T-1-6.0'																	
T-1-7.5'																	
T-1-9.0'																	
T-1-10.5'																	

Special Instructions/Comments:  
4 samples each at T-1

Relinquished by:  
 Sign [Signature]  
 Print [Signature]  
 Company SEACOR  
 Time 0945 Date 7/27/94

Received by:  
 Sign [Signature]  
 Print [Signature]  
 Company [Signature]  
 Time 0945 Date 7/27/94

Sample Receipt  
 Total no. of containers 12  
 Chain of custody seals:  
 Rec'd good condition/cold:  
 Conforms to record:  
 Client:  
 Client Contact:  
 Client Phone Number:

**LABORATORY ANALYSIS REPORTS FOR SAMPLE OF FILL SOIL**





# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: Xiaoxia Zhu

Project 50102-001-02  
Reported 17-August-1994

---

## Total Petroleum Hydrocarbons by Modified Method 8015

Chronology

Laboratory Number 58547

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
SB-32-4.5'	08/08/94	08/08/94	08/16/94	08/17/94		1



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: Xiaoxia Zhu

Project 50102-001-02  
Reported 17-August-1994

## Total Petroleum Hydrocarbons by Modified Method 8015

Laboratory Number	Sample Identification	Matrix
58547- 1	SB-32-4.5'	Soil

### RESULTS OF ANALYSIS

Laboratory Number: 58547- 1

Diesel Range: \*1500

Motor Oil Range: 4000

Concentration: mg/kg

\* - DOES NOT MATCH TYPICAL DIESEL PATTERN - HEAVIER HYDROCARBONS PRESENT.



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

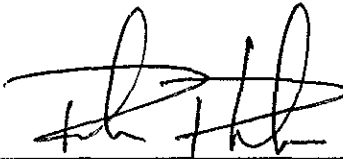
## Total Petroleum Hydrocarbons by Modified Method 8015 Quality Assurance and Control Data - Soil

Laboratory Number 58547

Compound	Method Blank (mg/kg)	RL (mg/kg)	Spike Recovery (%)	Limits (%)	RPD (%)
Diesel Range:	ND<10	10	128/104	50-150	21%
Motor Oil Range:	ND<10	10			

### Definitions:

- ND = Not Detected
- RPD = Relative Percent Difference
- RL = Reporting Limit
- mg/kg = Parts per million (ppm)
- QC File No. 58547

 8/17/94  
 Senior Chemist  
 Account Manager



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: Xiaoxia Zhu

Project 50102-001-02  
Reported 16-August-1994

---

ANALYSIS FOR GASOLINE, BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES  
by EPA SW-846 Methods 5030/8015M/8020.

Chronology

Laboratory Number 58547

---

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
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SB-32-4.5'	08/08/94	08/08/94	08/13/94	08/13/94		1
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# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: Xiaoxia Zhu

Project 50102-001-02  
Reported 16-August-1994

---

ANALYSIS FOR GASOLINE, BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES

---

Laboratory Number	Sample Identification	Matrix
58547- 1	SB-32-4.5'	Soil

---

RESULTS OF ANALYSIS  
Laboratory Number: 58547- 1

---

Gasoline\_Range: ND<1  
Benzene: 0.006  
Toluene: 0.012  
Ethyl Benzene: 0.009  
Total Xylenes: 0.026

Concentration: mg/kg

-- Surrogate % Recoveries --  
Trifluorotoluene (SS): 112



# Superior Precision Analytical, Inc.

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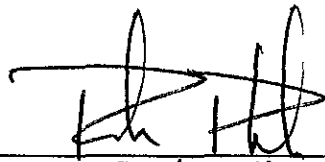
## ANALYSIS FOR GASOLINE, BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES Quality Assurance and Control Data - Soil

Laboratory Number 58547

Compound	Method		Spike Recovery (%)	Limits (%)	RPD (%)
	Blank (mg/kg)	RL (mg/kg)			
Gasoline_Range:	ND<1	1	93/96	55-139	3%
Benzene:	ND<.005	.005	86/87	67-141	1%
Toluene:	ND<.005	.005	86/87	67-141	1%
Ethyl Benzene:	ND<.005	.005	85/85	67-141	0%
Total Xylenes:	ND<.005	.005	93/93	67-141	0%

### Definitions:

ND = Not Detected  
 RPD = Relative Percent Difference  
 RL = Reporting Limit  
 mg/kg = Parts per million (ppm)  
 QC File No. 58547

  
 8/16/94  
 Senior Chemist  
 Account Manager



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: Xiaoxia Zhu

Project 50102-001-02  
Reported 16-August-1994

---

EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Chronology

Laboratory Number 58547

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
SB-32-4.5'	08/08/94	08/08/94	08/13/94	08/15/94		1



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: Xiaoxia Zhu

Project 50102-001-02  
Reported 16-August-1994

## EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Laboratory Number	Sample Identification	Matrix
58547- 1	SB-32-4.5'	Soil

### RESULTS OF ANALYSIS

Laboratory Number: 58547- 1

bis(2-chloroethyl) ethe:ND<3000  
aniline: ND<3000  
phenol: ND<3000  
2-chlorophenol: ND<3000  
1,3-dichlorobenzene: ND<3000  
1,4-dichlorobenzene: ND<3000  
1,2-dichlorobenzene: ND<3000  
benzyl alcohol: ND<3000  
bis-(2-chloroisopropyl):ND<3000  
2-methylphenol: ND<3000  
hexachloroethane: ND<3000  
n-nitroso-di-n-propyla:ND<3000  
4-methylphenol: ND<3000  
nitrobenzene: ND<3000  
isophorone: ND<3000  
2-nitrophenol: ND<3000  
2,4-dimethylphenol: ND<3000  
bis(2-chloroethoxy)met:ND<3000  
2,4-dichlorophenol: ND<3000  
1,2,4-trichlorobenzene:ND<3000  
naphthalene: ND<3000  
benzoic acid: ND<3000  
4-chloroaniline: ND<3000  
hexachlorobutadiene: ND<3000  
4-chloro-3-methylpheno:ND<3000  
2-methyl-naphthalene: ND<3000  
hexaachlorocyclopentadie:ND<3000  
2,4,6-trichlorophenol: ND<3000  
2,4,5-trichlorophenol: ND<3000

Concentration: ug/kg





# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: Xiaoxia Zhu

Project 50102-001-02  
Reported 16-August-1994

## EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Laboratory Number	Sample Identification	Matrix
58547- 1	SB-32-4.5'	Soil

### RESULTS OF ANALYSIS

Laboratory Number: 58547- 1

2-chloronaphthalene:	ND<3000
2-nitroaniline:	ND<3000
acenaphthylene:	ND<3000
dimethylphthlate:	ND<3000
2,6-dinitrotoluene:	ND<3000
acenaphthene:	ND<3000
3-nitroaniline:	ND<3000
2,4-dinitrophenol:	ND<3000
dibenzofuran:	ND<3000
2,4-dinitrotoluene:	ND<3000
4-nitrophenol:	ND<3000
fluorene:	ND<3000
4-chlorophenyl-phenyle:	ND<3000
diethylphthlate:	ND<3000
4-nitroaniline:	ND<3000
4,6-dinitro-2-methylph:	ND<3000
n-nitrosodiphenylamine:	ND<3000
1,2-diphenylhydrazine:	ND<3000
4-bromo-phenyl-phenyle:	ND<3000
hexachlorobenzene:	ND<3000
pentachlorophenol:	ND<3000
phenanthrene:	ND<3000
anthracene:	ND<3000
di-n-butylphthlate:	ND<3000
fluoranthene:	ND<3000
benzidine:	ND<3000
pyrene:	ND<3000
butylbenzylphthlate:	ND<3000
3,3'-dichlorobenzidine:	ND<3000

Concentration: ug/kg



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: Xiaoxia Zhu

Project 50102-001-02  
Reported 16-August-1994

---

EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Laboratory Number	Sample Identification	Matrix
58547- 1	SB-32-4.5'	Soil

---

RESULTS OF ANALYSIS

Laboratory Number: 58547- 1

---

benzo[a]anthracene: ND<3000  
chrysene: ND<3000  
bis(2-ethylhexyl)phtha:ND<3000  
di-n-octylphthalate: ND<3000  
benzo(b,k)fluoranthene:ND<3000  
benzo[a]pyrene: ND<3000  
indeno[1,2,3-cd]pyrene:ND<3000  
dibenzo[a,h]anthracene:ND<3000  
benzo[g,h,i]perylene: ND<3000

Concentration: ug/kg

-- Surrogate % Recoveries --

2-fluorophenol: 82  
phenol-d5: 102  
nitrobenzene-d5: 96  
2-fluorobiphenyl: 106  
2,4,6-tribromophenol: 107  
terphenyl-d14: 106



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS  
Quality Assurance and Control Data - Soil

Laboratory Number 58547

Compound	Method Blank (ug/kg)	RL (ug/kg)	Spike Recovery (%)	Limits (%)	RPD (%)
bis(2-chloroethyl) ethe:	ND<300	300			
aniline:	ND<300	300			
phenol:	ND<300	300	76/82	48-106	8%
2-chlorophenol:	ND<300	300	74/78	40-113	5%
1,3-dichlorobenzene:	ND<300	300			
1,4-dichlorobenzene:	ND<300	300	75/76	43-111	1%
1,2-dichlorobenzene:	ND<300	300			
benzyl alcohol:	ND<300	300			
bis-(2-chloroisopropyl):	ND<300	300			
2-methylphenol:	ND<300	300			
hexachloroethane:	ND<300	300			
n-nitroso-di-n-propyla:	ND<300	300	72/74	43-115	3%
4-methylphenol:	ND<300	300			
nitrobenzene:	ND<300	300			
isophorone:	ND<300	300			
2-nitrophenol:	ND<300	300			
2,4-dimethylphenol:	ND<300	300			
bis(2-chloroethoxy)met:	ND<300	300			
2,4-dichlorophenol:	ND<300	300			
1,2,4-trichlorobenzene:	ND<300	300	89/91	39-124	2%
naphthalene:	ND<300	300			
benzoic acid:	ND<300	300			
4-chloroaniline:	ND<300	300			
hexachlorobutadiene:	ND<300	300			
4-chloro-3-methylpheno:	ND<300	300	78/80	43-115	3%
2-methyl-naphthalene:	ND<300	300			
hexaclorocyclopentadie:	ND<300	300			
2,4,6-trichlorophenol:	ND<300	300			
2,4,5-trichlorophenol:	ND<300	300			



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS  
Quality Assurance and Control Data - Soil

Laboratory Number 58547

Compound	Method Blank (ug/kg)	RL (ug/kg)	Spike Recovery (%)	Limits (%)	RPD (%)
2-chloronaphthalene:	ND<300	300			
2-nitroaniline:	ND<300	300			
acenaphthylene:	ND<300	300			
dimethylphthlate:	ND<300	300			
2,6-dinitrotoluene:	ND<300	300			
acenaphthene:	ND<300	300	76/73	35-137	4%
3-nitroaniline:	ND<300	300			
2,4-dinitrophenol:	ND<300	300			
dibenzofuran:	ND<300	300			
2,4-dinitrotoluene:	ND<300	300	78/79	28-118	1%
4-nitrophenol:	ND<300	300	82/83	1-111	1%
fluorene:	ND<300	300			
4-chlorophenyl-phenyle:	ND<300	300			
diethylphthlate:	ND<300	300			
4-nitroaniline:	ND<300	300			
4,6-dinitro-2-methylph:	ND<300	300			
n-nitrosodiphenylamine:	ND<300	300			
1,2-diphenylhydrazine:	ND<300	300			
4-bromo-phenyl-phenyle:	ND<300	300			
hexachlorobenzene:	ND<300	300			
pentachlorophenol:	ND<300	300	88/89	14-123	1%
phenanthrene:	ND<300	300			
anthracene:	ND<300	300			
di-n-butylphthlate:	ND<300	300			
fluoranthene:	ND<300	300			
benzidine:	ND<300	300			
pyrene:	ND<300	300	80/84	41-131	5%
butylbenzylphthlate:	ND<300	300			
3,3'-dichlorobenzidine:	ND<300	300			



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

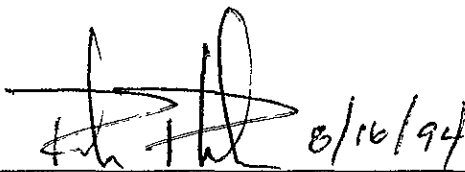
EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS  
Quality Assurance and Control Data - Soil

Laboratory Number 58547

Compound	Method Blank (ug/kg)	RL (ug/kg)	Spike Recovery (%)	Limits (%)	RPD (%)
benzo[a]anthracene:	ND<300	300			
chrysene:	ND<300	300			
bis(2-ethylhexyl)phtha:	ND<300	300			
di-n-octylphthalate:	ND<300	300			
benzo(b,k)fluoranthene:	ND<300	300			
benzo[a]pyrene:	ND<300	300			
indeno[1,2,3-cd]pyrene:	ND<300	300			
dibenzo[a,h]anthracene:	ND<300	300			
benzo[g,h,i]perylene:	ND<300	300			
2-fluorophenol:	66			25-121	
phenol-d5:	78			24-113	
nitrobenzene-d5:	79			23-120	
2-fluorobiphenyl:	77			30-115	
2,4,6-tribromophenol:	81			19-122	
terphenyl-d14:	74			18-137	

### Definitions:

- ND = Not Detected
- RPD = Relative Percent Difference
- RL = Reporting Limit
- ug/kg = Parts per billion (ppb)
- QC File No. 58547

  
 Senior Chemist  
 Account Manager



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: Xiaoxia Zhu

Project 50102-001-02  
Reported 16-August-1994

---

## Polychlorinated Biphenyls by EPA Method 8080

Chronology

Laboratory Number 58547

---

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
SB-32-4.5'	08/08/94	08/08/94	08/15/94	08/16/94		1

---



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: Xiaoxia Zhu

Project 50102-001-02  
Reported 16-August-1994

---

## Polychlorinated Biphenyls by EPA Method 8080

Laboratory Number	Sample Identification	Matrix
58547- 1	SB-32-4.5'	Soil

---

### RESULTS OF ANALYSIS

Laboratory Number: 58547- 1

---

AROCLOR 1016:	ND<150
AROCLOR 1221:	ND<150
AROCLOR 1232:	ND<150
AROCLOR 1242:	ND<150
AROCLOR 1248:	ND<150
AROCLOR 1254:	ND<150
AROCLOR 1260:	660

Concentration: ug/kg

-- Surrogate % Recoveries --

Tetrachloro-m-xylene: DO

Decachlorobiphenyl: DO

DO - SURROGATE DILUTED OUT



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

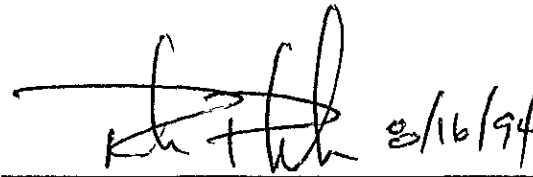
## Polychlorinated Biphenyls by EPA Method 8080 Quality Assurance and Control Data - Soil

Laboratory Number 58547

Compound	Method Blank (ug/kg)	RL (ug/kg)	Spike Recovery (%)	Limits (%)	RPD (%)
AROCLOR 1016:	ND<30	30			
AROCLOR 1221:	ND<30	30			
AROCLOR 1232:	ND<30	30			
AROCLOR 1242:	ND<30	30			
AROCLOR 1248:	ND<30	30			
AROCLOR 1254:	ND<30	30	101/97	58-141	4%
AROCLOR 1260:	ND<30	30			
Tetrachloro-m-xylene:	91		84/60	60-146	33%
Decachlorobiphenyl:	82		82/85	60-150	4%

### Definitions:

ND = Not Detected  
 RPD = Relative Percent Difference  
 RL = Reporting Limit  
 ug/kg = Parts per billion (ppb)  
 QC File No. 58547

  
 Senior Chemist  
 Account Manager



### SEACOR Chain-of-Custody Record

Field Office: SAN FRANCISCO, CA  
 Address: 90 NEW MONTGOMERY STREET  
SUITE No. 620  
SAN FRANCISCO, CA 94105

Additional documents are attached, and are a part of this Record.

Job Name: MOP - COLISEUM  
 Location: 8000 S. COLISEUM WAY  
OAKLAND, CA

Project: # 50102-001-02 Task # 00  
 Project Manager: Xia Xian Zhu  
 Laboratory: SUPERIOR ANALYTICAL  
 Turnaround Time: NA

Analysis Request

Samplers Name: SANDRA F BRUNI  
 Samplers Signature: Sandra Brunni

Sample ID	Date	Time	Matrix	HClD	TPH19/BTEX/TPH-G 6015 (modified)/8020	TPH19/BTEX/TPH-G + m.oil 6015 (modified)	TPH 418.1/MTPH 418.1	Aromatic Volatiles 602/8020	Volatile Organics 624/8240 (GCMS)	Halogenated Volatiles 601/8010	Semi-volatile Organics 625/8270 (GCMS)	Pesticides (PCBs 608/6080)	Total Lead 7421	Priority Pollutant Metals (13)	TCLP Metals	Comments/ Instructions	Number of Containers
<del>SB-32-5'</del>	<del>8/8/99</del>		Soil	X	X						X	X				HOLD	1
SB-32-5'																	1
SB-32-9.5'																	1
SB-32-10'																	1
SB-33-4.5'		1500															1
SB-33-5'																	1
SB-33-9.5'																	1
SB-33-10'																	1

Special Instructions/Comments:

HOLD FOR ANALYSES.

Relinquished by: SANDRA F. BRUNNI  
 Sign: Sandra Brunni  
 Print: SANDRA F. BRUNNI  
 Company: SEACOR  
 Time: 5:00 P Date: 8/8/99

Received by: [Signature]  
 Sign: [Signature]  
 Print: [Signature]  
 Company: [Signature]  
 Time: [Signature] Date: [Signature]

Sample Receipt  
 Total no. of containers: 8  
 Chain of custody seals: 1  
 Rec'd. good condition/cold: 1  
 Confirms to record: 1

Relinquished by: \_\_\_\_\_  
 Sign: \_\_\_\_\_  
 Print: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Time: \_\_\_\_\_ Date: \_\_\_\_\_

Received by: [Signature]  
 Sign: WIEHLE  
 Print: \_\_\_\_\_  
 Company: SPASF  
 Time: 5:00 P Date: 8/12/99

Client: \_\_\_\_\_  
 Client Contact: \_\_\_\_\_  
 Client Phone: \_\_\_\_\_

(2°C)

P.01  
 01234567890123456789  
 08/12/99 12:15  
 00/12/99 12:15  
 SEACOR Q37876; Rev. 098

**LABORATORY ANALYSIS REPORTS FOR GROUNDWATER SAMPLE  
FROM SHALLOW MONITORING WELL**



# Inchcape Testing Services

## Anamatrix Laboratories

1961 Concourse Drive  
 Suite E  
 San Jose, CA 95131  
 Tel: 408-432-8192  
 Fax: 408-432-8198

MR. J. C. GOLDMAN  
 SEACOR  
 90 NEW MONTGOMERY SUITE 620  
 SAN FRANCISCO, CA 94105-4503

Workorder # : 9408097  
 Date Received : 08/09/94  
 Project ID : 50102.001.01  
 Purchase Order: N/A

The following samples were received at Anamatrix for analysis :

ANAMATRIX ID	CLIENT SAMPLE ID
9408097- 1	MW-19-1
9408097- 2	MW-19-2

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

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

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

If you have any further questions or comments on this report, please call us as soon as possible. Thank you for using Anamatrix.

*Judd Gringer for*  
 Doug Robbins  
 Laboratory Director

8-17-94  
 Date

This report consists of 44 pages.



## ANAMETRIX REPORT DESCRIPTION GCMS

### Organic Analysis Data Sheets (OADS)

OADS forms contain tabulated results for target compounds. The OADS are grouped by method and, within each method, organized sequentially in order of increasing Anametrix ID number.

### Tentatively Identified Compounds (TICs)

TIC forms contain tabulated results for non-target compounds detected in GC/MS analyses. TICs must be requested at the time samples are submitted at Anametrix. TIC forms immediately follow the OADS form for each sample. If TICs are requested but not found, then TIC forms will not be included with the report.

### Surrogate Recovery Summary (SRS)

SRS forms contain quality assurance data. An SRS form will be printed for each method, if the method requires surrogate compounds. They will list surrogate percent recoveries for all samples and any method blanks. Any surrogate recovery outside the established limits will be flagged with an "\*\*", and the total number of surrogates outside the limits will be listed in the column labelled "Total Out".

### Matrix Spike Recovery Form (MSR)

MSR forms contain quality assurance data. They summarize percent recovery and relative percent difference information for matrix spikes and matrix spike duplicates. This information is a statement of both accuracy and precision. Any percent recovery or relative percent difference outside established limits will be flagged with an "\*\*", and the total number outside the limits will be listed at the bottom of the page. Not all reports will contain an MSR form.

### Qualifiers

Anametrix uses several data qualifiers (Q) in its report forms. These qualifiers give additional information on the compounds reported. They should help a data reviewer to verify the integrity of the analytical results. The following is a list of qualifiers and their meanings:

- U - Indicates that the compound was analyzed for, but was not detected at or above the specified reporting limit.
- B - Indicates that the compound was detected in the associated method blank.
- J - Indicates that the compound was detected at an amount below the specified reporting limit. Consequently, the amount should be considered an approximate value. Tentatively identified compounds will always have a "J" qualifier because they are not included in the instrument calibration.
- E - Indicates that the amount reported exceeded the linear range of the instrument calibration.
- D - Indicates that the compound was detected in an analysis performed at a secondary dilution.
- A - Indicates that the tentatively identified compound is a suspected aldol condensation product. This is common in EPA Method 8270 soil analyses.

Absence of a qualifier indicates that the compound was detected at a concentration at or above the specified reporting limit.

### REPORTING CONVENTIONS

- Due to a size limitation in our data processing step, only the first eight (8) characters of your project ID and sample ID will be printed on the report forms. However, the report cover letter and report summary pages display up to twenty (20) characters of your project and sample IDs.
- Amounts reported are gross values, i.e., not corrected for method blank contamination.

REPORT SUMMARY  
ANAMETRIX, INC. (408)432-8192

MR. J. C. GOLDMAN  
SEACOR  
90 NEW MONTGOMERY SUITE 620  
SAN FRANCISCO, CA 94105-4503

Workorder # : 9408097  
Date Received : 08/09/94  
Project ID : 50102.001.01  
Purchase Order: N/A  
Department : GCMS  
Sub-Department: GCMS

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9408097- 2	MW-19-2	WATER	08/09/94	8240
9408097- 2	MW-19-2	WATER	08/09/94	8270

REPORT SUMMARY  
ANAMETRIX, INC. (408)432-8192

MR. J. C. GOLDMAN  
SEACOR  
90 NEW MONTGOMERY SUITE 620  
SAN FRANCISCO, CA 94105-4503

Workorder # : 9408097  
Date Received : 08/09/94  
Project ID : 50102.001.01  
Purchase Order: N/A  
Department : GCMS  
Sub-Department: GCMS

QA/QC SUMMARY :

- No QA/QC problems were encountered for EPA Method 8240.
- No QA/QC problems were encountered for EPA Method 8270.

David L. Schwab 8/15/94  
Department Supervisor Date

Scott Vogt 8/15/94  
Chemist Date

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8270  
ANAMETRIX, INC. (408)432-8192

Project ID : 50102.00  
Sample ID : MW-19-2  
Matrix : WATER  
Date Sampled : 8/ 9/94  
Date Extracted : 8/ 9/94  
Amount Extracted : 1000.0 mL  
Date Analyzed : 8/12/94  
Instrument ID : MSD5

Anamatrix ID : 9408097-02  
Analyst : GJ  
Supervisor : DC

Dilution Factor : 1.0  
Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
62-75-9	N-Nitrosodimethylamine	10.	ND	U
108-95-2	Phenol	10.	ND	U
4165-61-1	Aniline	10.	ND	U
111-44-4	bis(2-Chloroethyl) ether	10.	ND	U
95-57-8	2-Chlorophenol	10.	ND	U
541-73-1	1,3-Dichlorobenzene	10.	ND	U
106-46-7	1,4-Dichlorobenzene	10.	ND	U
100-51-6	Benzyl Alcohol	10.	ND	U
95-48-7	2-Methylphenol	10.	ND	U
95-50-1	1,2-Dichlorobenzene	10.	ND	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	ND	U
106-44-5	4-Methylphenol	10.	ND	U
621-64-7	N-Nitroso-di-n-propylamine	10.	ND	U
67-72-1	Hexachloroethane	10.	ND	U
98-95-3	Nitrobenzene	10.	ND	U
78-59-1	Isophorone	10.	ND	U
105-67-9	2,4-Dimethylphenol	10.	ND	U
88-75-5	2-Nitrophenol	10.	ND	U
65-85-0	Benzoic Acid	50.	ND	U
111-91-1	bis(2-Chloroethoxy)methane	10.	ND	U
120-83-2	2,4-Dichlorophenol	10.	ND	U
120-82-1	1,2,4-Trichlorobenzene	10.	ND	U
91-20-3	Naphthalene	10.	ND	U
106-47-8	4-Chloroaniline	10.	ND	U
87-68-3	Hexachlorobutadiene	10.	ND	U
59-50-7	4-Chloro-3-methylphenol	10.	ND	U
91-57-6	2-Methylnaphthalene	10.	ND	U
77-47-4	Hexachlorocyclopentadiene	10.	ND	U
88-06-2	2,4,6-Trichlorophenol	10.	ND	U
95-95-4	2,4,5-Trichlorophenol	50.	ND	U
91-58-7	2-Chloronaphthalene	10.	ND	U
88-74-4	2-Nitroaniline	50.	ND	U
131-11-3	Dimethylphthalate	10.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8270  
 ANAMETRIX, INC. (408)432-8192

Project ID : 50102.00  
 Sample ID : MW-19-2  
 Matrix : WATER  
 Date Sampled : 8/ 9/94  
 Date Extracted : 8/ 9/94  
 Amount Extracted : 1000.0 mL  
 Date Analyzed : 8/12/94  
 Instrument ID : MSD5

Anamatrix ID : 9408097-02  
 Analyst : GV  
 Supervisor : DC

Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
606-20-2	2,6-Dinitrotoluene	10.	ND	U
208-96-8	Acenaphthylene	10.	ND	U
99-09-2	3-Nitroaniline	50.	ND	U
83-32-9	Acenaphthene	10.	ND	U
51-28-5	2,4-Dinitrophenol	50.	ND	U
100-02-7	4-Nitrophenol	50.	ND	U
132-64-9	Dibenzofuran	10.	ND	U
121-14-2	2,4-Dinitrotoluene	10.	ND	U
84-66-2	Diethylphthalate	10.	ND	U
7005-72-3	4-Chlorophenyl-phenylether	10.	ND	U
86-73-7	Fluorene	10.	ND	U
100-01-6	4-Nitroaniline	50.	ND	U
534-52-1	4,6-Dinitro-2-methylphenol	50.	ND	U
86-30-6	N-Nitrosodiphenylamine (1)	10.	ND	U
103-33-3	Azobenzene	10.	ND	U
101-55-3	4-Bromophenyl-phenylether	10.	ND	U
118-74-1	Hexachlorobenzene	10.	ND	U
87-86-5	Pentachlorophenol	50.	ND	U
85-01-8	Phenanthrene	10.	ND	U
120-12-7	Anthracene	10.	ND	U
84-74-2	Di-n-butylphthalate	10.	ND	U
206-44-0	Fluoranthene	10.	ND	U
92-87-5	Benzidine	10.	ND	U
129-00-0	Pyrene	10.	ND	U
85-68-7	Butylbenzylphthalate	10.	ND	U
117-81-7	bis(2-Ethylhexyl)phthalate	10.	ND	U
91-94-1	3,3'-Dichlorobenzidine	20.	ND	U
56-55-3	Benzo(a)anthracene	10.	ND	U
218-01-9	Chrysene	10.	ND	U
117-84-0	Di-n-octylphthalate	10.	ND	U
205-99-2	Benzo(b)fluoranthene	10.	ND	U
207-08-9	Benzo(k)fluoranthene	10.	ND	U
50-32-8	Benzo(a)pyrene	10.	ND	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	ND	U
53-70-3	Dibenz(a,h)anthracene	10.	ND	U
191-24-2	Benzo(g,h,i)perylene	10.	ND	U



ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8270  
 ANAMETRIX, INC. (408)432-8192

Project ID : 50102.  
 Sample ID : SBLKLO  
 Matrix : WATER  
 Date Sampled : 0/ 0/ 0  
 Date Extracted : 8/ 9/94  
 Amount Extracted : 1000.0 mL  
 Date Analyzed : 8/12/94  
 Instrument ID : MSD5

Anamatrix ID : BG0911B1  
 Analyst : CJ  
 Supervisor : DC

Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
62-75-9	N-Nitrosodimethylamine	10.	ND	U
108-95-2	Phenol	10.	ND	U
4165-61-1	Aniline	10.	ND	U
111-44-4	bis(2-Chloroethyl) ether	10.	ND	U
95-57-8	2-Chlorophenol	10.	ND	U
541-73-1	1,3-Dichlorobenzene	10.	ND	U
106-46-7	1,4-Dichlorobenzene	10.	ND	U
100-51-6	Benzyl Alcohol	10.	ND	U
95-48-7	2-Methylphenol	10.	ND	U
95-50-1	1,2-Dichlorobenzene	10.	ND	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	ND	U
106-44-5	4-Methylphenol	10.	ND	U
621-64-7	N-Nitroso-di-n-propylamine	10.	ND	U
67-72-1	Hexachloroethane	10.	ND	U
98-95-3	Nitrobenzene	10.	ND	U
78-59-1	Isophorone	10.	ND	U
105-67-9	2,4-Dimethylphenol	10.	ND	U
88-75-5	2-Nitrophenol	10.	ND	U
65-85-0	Benzoic Acid	50.	ND	U
111-91-1	bis(2-Chloroethoxy)methane	10.	ND	U
120-83-2	2,4-Dichlorophenol	10.	ND	U
120-82-1	1,2,4-Trichlorobenzene	10.	ND	U
91-20-3	Naphthalene	10.	ND	U
106-47-8	4-Chloroaniline	10.	ND	U
87-68-3	Hexachlorobutadiene	10.	ND	U
59-50-7	4-Chloro-3-methylphenol	10.	ND	U
91-57-6	2-Methylnaphthalene	10.	ND	U
77-47-4	Hexachlorocyclopentadiene	10.	ND	U
88-06-2	2,4,6-Trichlorophenol	10.	ND	U
95-95-4	2,4,5-Trichlorophenol	50.	ND	U
91-58-7	2-Chloronaphthalene	10.	ND	U
88-74-4	2-Nitroaniline	50.	ND	U
131-11-3	Dimethylphthalate	10.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8270  
 ANAMETRIX, INC. (408)432-8192

Project ID : 50102.  
 Sample ID : SBLKLO  
 Matrix : WATER  
 Date Sampled : 0/ 0/ 0  
 Date Extracted : 8/ 9/94  
 Amount Extracted : 1000.0 mL  
 Date Analyzed : 8/12/94  
 Instrument ID : MSD5

Anamatrix ID : BG0911B1  
 Analyst : GJ  
 Supervisor : DCS

Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
606-20-2	2,6-Dinitrotoluene	10.	ND	U
208-96-8	Acenaphthylene	10.	ND	U
99-09-2	3-Nitroaniline	50.	ND	U
83-32-9	Acenaphthene	10.	ND	U
51-28-5	2,4-Dinitrophenol	50.	ND	U
100-02-7	4-Nitrophenol	50.	ND	U
132-64-9	Dibenzofuran	10.	ND	U
121-14-2	2,4-Dinitrotoluene	10.	ND	U
84-66-2	Diethylphthalate	10.	ND	U
7005-72-3	4-Chlorophenyl-phenylether	10.	ND	U
86-73-7	Fluorene	10.	ND	U
100-01-6	4-Nitroaniline	50.	ND	U
534-52-1	4,6-Dinitro-2-methylphenol	50.	ND	U
86-30-6	N-Nitrosodiphenylamine (1)	10.	ND	U
103-33-3	Azobenzene	10.	ND	U
101-55-3	4-Bromophenyl-phenylether	10.	ND	U
118-74-1	Hexachlorobenzene	10.	ND	U
87-86-5	Pentachlorophenol	50.	ND	U
85-01-8	Phenanthrene	10.	ND	U
120-12-7	Anthracene	10.	ND	U
84-74-2	Di-n-butylphthalate	10.	1.0	J
206-44-0	Fluoranthene	10.	ND	U
92-87-5	Benzidine	10.	ND	U
129-00-0	Pyrene	10.	ND	U
85-68-7	Butylbenzylphthalate	10.	ND	U
117-81-7	bis(2-Ethylhexyl)phthalate	10.	ND	U
91-94-1	3,3'-Dichlorobenzidine	20.	ND	U
56-55-3	Benzo(a)anthracene	10.	ND	U
218-01-9	Chrysene	10.	ND	U
117-84-0	Di-n-octylphthalate	10.	ND	U
205-99-2	Benzo(b)fluoranthene	10.	ND	U
207-08-9	Benzo(k)fluoranthene	10.	ND	U
50-32-8	Benzo(a)pyrene	10.	ND	U
193-39-5	Indeno(1,2,3-cd)pyrene	10.	ND	U
53-70-3	Dibenz(a,h)anthracene	10.	ND	U
191-24-2	Benzo(g,h,i)perylene	10.	ND	U

SURROGATE RECOVERY SUMMARY -- EPA METHOD 8270  
ANAMETRIX, INC. (408)432-8192

Project ID : 50102.00  
Matrix : LIQUID

Anamatrix ID : 9408097  
Analyst : GV  
Supervisor : DC

	SAMPLE ID	SU1	SU2	SU3	SU4	SU5	SU6
1	SBLKLO	83	84	84	83	88	138
2	SLCSLD	86	89	89	90	115	148 *
3	SLCSDE4	81	84	84	83	113	135
4	MW-19-2	75	85	79	85	106	101
5							
6							
7							
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QC LIMITS

SU1 = 2-Fluorophenol (21-100)  
 SU2 = Phenol-d5 (10- 94)  
 SU3 = Nitrobenzene-d5 (35-114)  
 SU4 = 2-Fluorobiphenyl (43-116)  
 SU5 = 2,4,6-Tribromophenol (10-123)  
 SU6 = Terphenyl-d14 (33-141)

\* Values outside of Anamatrix QC limits

LABORATORY CONTROL SPIKE RECOVERY FORM --- EPA METHOD 625  
ANAMETRIX, INC. (408)432-8192

Project/Case	:		Anamatrix ID	:	MG0911B1/NA0911B1
Matrix	:	WATER	Analyst	:	GV
Date Sampled	:	00/00/00	Supervisor	:	DLS
Date Extracted	:	08/09/94	SDG/Batch	:	
Date Analyzed	:	08/12/94		:	
Instrument ID	:	MSD5	Samplpe I.D.	:	SLCSD/SLCSDE4

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	%REC LIMITS
Phenol	75	0	62	83	22-96
2-Chlorophenol	75	0	68	91	21-96
1,4-Dichlorobenzene	50	0	40	80	17-88
N-nitroso-di-n-propylamine	50	0	41	82	19-98
1,2,4-Trichlorobenzene	50	0	43	86	18-92
4-Chloro-3-methylphenol	75	0	74	99	21-103
Acenaphthene	50	0	49	98	24-104
4-Nitrophenol	75	0	78	104	22-132
2,4-Dinitrotoluene	50	0	51	102	30-114
Pentachlorophenol	75	0	103	137	16-141
Pyrene	50	0	63	126	30-133

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD PERCENT RECOVERY	% RPD	%RPD LIMITS
Phenol	75	58	77	7	25
2-Chlorophenol	75	64	85	6	25
1,4-Dichlorobenzene	50	37	74	8	25
N-nitroso-di-n-propylamine	50	39	78	5	25
1,2,4-Trichlorobenzene	50	39	78	10	25
4-Chloro-3-methylphenol	75	71	95	4	25
Acenaphthene	50	44	88	11	25
4-Nitrophenol	75	81	108	-4	25
2,4-Dinitrotoluene	50	49	98	4	25
Pentachlorophenol	75	102	136	1	25
Pyrene	50	57	114	10	25



## ANAMATRIX REPORT DESCRIPTION GCMS

### Organic Analysis Data Sheets (OADS)

OADS forms contain tabulated results for target compounds. The OADS are grouped by method and, within each method, organized sequentially in order of increasing Anamatrix ID number.

### Tentatively Identified Compounds (TICs)

TIC forms contain tabulated results for non-target compounds detected in GC/MS analyses. TICs must be requested at the time samples are submitted at Anamatrix. TIC forms immediately follow the OADS form for each sample. If TICs are requested but not found, then TIC forms will not be included with the report.

### Surrogate Recovery Summary (SRS)

SRS forms contain quality assurance data. An SRS form will be printed for each method, if the method requires surrogate compounds. They will list surrogate percent recoveries for all samples and any method blanks. Any surrogate recovery outside the established limits will be flagged with an "e", and the total number of surrogates outside the limits will be listed in the column labelled "Total Out".

### Matrix Spike Recovery Form (MSR)

MSR forms contain quality assurance data. They summarize percent recovery and relative percent difference information for matrix spikes and matrix spike duplicates. This information is a statement of both accuracy and precision. Any percent recovery or relative percent difference outside established limits will be flagged with an "e", and the total number outside the limits will be listed at the bottom of the page. Not all reports will contain an MSR form.

### Qualifiers

Anamatrix uses several data qualifiers (Q) in its report forms. These qualifiers give additional information on the compounds reported. They should help a data reviewer to verify the integrity of the analytical results. The following is a list of qualifiers and their meanings:

- U - Indicates that the compound was analyzed for, but was not detected at or above the specified reporting limit.
- B - Indicates that the compound was detected in the associated method blank.
- J - Indicates that the compound was detected at an amount below the specified reporting limit. Consequently, the amount should be considered an approximate value. Tentatively identified compounds will always have a "J" qualifier because they are not included in the instrument calibration.
- E - Indicates that the amount reported exceeded the linear range of the instrument calibration.
- D - Indicates that the compound was detected in an analysis performed at a secondary dilution.
- A - Indicates that the tentatively identified compound is a suspected aldol condensation product. This is common in EPA Method 8270 soil analyses.

Absence of a qualifier indicates that the compound was detected at a concentration at or above the specified reporting limit.

### REPORTING CONVENTIONS

- Due to a size limitation in our data processing step, only the first eight (8) characters of your project ID and sample ID will be printed on the report forms. However, the report cover letter and report summary pages display up to twenty (20) characters of your project and sample IDs.
- Amounts reported are gross values, i.e., not corrected for method blank contamination.

REPORT SUMMARY  
ANAMETRIX, INC. (408)432-8192

MR. J. C. GOLDMAN  
SEACOR  
90 NEW MONTGOMERY SUITE 620  
SAN FRANCISCO, CA 94105-4503

Workorder # : 9408097  
Date Received : 08/09/94  
Project ID : 50102.001.01  
Purchase Order: N/A  
Department : GCMS  
Sub-Department: GCMS

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9408097- 2	MW-19-2	WATER	08/09/94	8240
9408097- 2	MW-19-2	WATER	08/09/94	8270

REPORT SUMMARY  
ANAMETRIX, INC. (408)432-8192

MR. J. C. GOLDMAN  
SEACOR  
90 NEW MONTGOMERY SUITE 620  
SAN FRANCISCO, CA 94105-4503

Workorder # : 9408097  
Date Received : 08/09/94  
Project ID : 50102.001.01  
Purchase Order: N/A  
Department : GCMS  
Sub-Department: GCMS

QA/QC SUMMARY :

- No QA/QC problems encountered for EPA Method 8240.

David L. Schenberg      8/11/94  
Department Supervisor      Date

Sam Liang      8-11-94  
Chemist      Date

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
ANAMETRIX, INC. (408)432-8192

Project ID : 50102.00  
Sample ID : MW-19-2  
Matrix : WATER  
Date Sampled : 8/ 9/94  
Date Analyzed : 8/10/94  
Instrument ID : MSD2

Anamatrix ID : 9408097-02  
Analyst :  
Supervisor :  
Dilution Factor : 1.0  
Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	6.	B
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	ND	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U



ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
 ANAMETRIX, INC. (408)432-8192

Project ID : 50102.  
 Sample ID : VBLK3R  
 Matrix : WATER  
 Date Sampled : 0/ 0/ 0  
 Date Analyzed : 8/10/94  
 Instrument ID : MSD2

Anamatrix ID : BG1003A1  
 Analyst : SJ  
 Supervisor : DCS  
 Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	8.	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	ND	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U

SURROGATE RECOVERY SUMMARY -- EPA METHOD 8240  
ANAMETRIX, INC. (408)432-8192

Project ID : 50102.00  
Matrix : LIQUID

Anamatrix ID : 9408097  
Analyst : *SC*  
Supervisor : *DLS*

	SAMPLE ID	SU1	SU2	SU3
1	VBLK3R	95	102	99
2	MW-19-2	99	105	99
3	VLCSJS	97	103	99
4				
5				
6				
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9				
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QC LIMITS

-----  
 SU1 = 1,2-Dichloroethane-d4 (75-113)  
 SU2 = Toluene-d8 (83-110)  
 SU3 = 1,4-Bromofluorobenzene (82-114)

\* Values outside of Anamatrix QC limits

LABORATORY CONTROL SPIKE RECOVERY FORM --- EPA METHOD 8240  
 ANAMETRIX, INC. (408)432-8192

Project/Case : Anamatrix ID : MG1001A1.D  
 Matrix : WATER Analyst : *SL*  
 Date Sampled : Supervisor : *DCS*  
 Date Analyzed : 10 Aug 94 1:39 pm SDG/Batch :  
 Instrument ID : MSD2  
 Sample ID : VLCSJS @ 50ug/L

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	%REC LIMITS
1,1-Dichloroethene	50	0	42	85	78-150
Benzene	50	0	46	93	85-120
Trichloroethene	50	0	38	77	64-135
Toluene	50	0	46	93	88-119
Chlorobenzene	50	0	43	86	86-116

REPORT SUMMARY  
ANAMETRIX, INC. (408)432-8192

MR. J. C. GOLDMAN  
SEACOR  
90 NEW MONTGOMERY SUITE 620  
SAN FRANCISCO, CA 94105-4503

Workorder # : 9408097  
Date Received : 08/09/94  
Project ID : 50102.001.01  
Purchase Order: N/A  
Department : GC  
Sub-Department: PEST

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9408097- 2	MW-19-2	WATER	08/09/94	8080

REPORT SUMMARY  
ANAMETRIX, INC. (408)432-8192

MR. J. C. GOLDMAN  
SEACOR  
90 NEW MONTGOMERY SUITE 620  
SAN FRANCISCO, CA 94105-4503

Workorder # : 9408097  
Date Received : 08/09/94  
Project ID : 50102.001.01  
Purchase Order: N/A  
Department : GC  
Sub-Department: PEST

QA/QC SUMMARY :

- The first extraction batch was re-extracted due to recoveries out of QA/QC control limits. The re-extracted batch has no QA/QC problems.

Steve Bona 8/17/94  
Department Supervisor Date

Kham Jelic 8/17/94  
Chemist Date

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8080  
 ANAMETRIX, INC. (408)432-8192

Project ID : 50102.00  
 Sample ID : MW-19-2R  
 Matrix : WATER  
 Date Sampled : 8/ 9/94  
 Date Extracted : 8/11/94  
 Amount Extracted : 1000.0 mL  
 Date Analyzed : 8/16/94  
 Instrument ID : HP22

Anamatrix ID : 9408097-02  
 Analyst : FK  
 Supervisor : M

Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
319-84-6	alpha-BHC	.05	ND	U
319-85-7	beta-BHC	.05	ND	U
319-86-8	delta-BHC	.05	ND	U
58-89-9	gamma-BHC	.05	ND	U
76-44-8	Heptachlor	.05	ND	U
309-00-2	Aldrin	.05	ND	U
1024-57-3	Heptachlor Epoxide	.05	ND	U
959-98-8	Endosulfan I	.05	ND	U
60-57-1	Dieldrin	.10	ND	U
72-55-9	4,4'-DDE	.10	ND	U
72-20-8	Endrin	.10	ND	U
33213-65-9	Endosulfan II	.10	ND	U
72-54-8	4,4'-DDD	.10	ND	U
1031-07-8	Endosulfan Sulfate	.10	ND	U
50-29-3	4,4'-DDT	.10	ND	U
72-43-5	Methoxychlor	.50	ND	U
53494-70-5	Endrin Ketone	.10	ND	U
8001-35-2	Toxaphene	5.0	ND	U
12674-11-2	Aroclor-1016	1.0	ND	U
11104-28-2	Aroclor-1221	2.0	ND	U
11141-16-5	Aroclor-1232	1.0	ND	U
53469-21-9	Aroclor-1242	1.0	ND	U
12672-29-6	Aroclor-1248	1.0	ND	U
11097-69-1	Aroclor-1254	1.0	ND	U
11096-82-5	Aroclor-1260	1.0	ND	U
7421-93-4	Endrin Aldehyde	.10	ND	U
57-74-9	Technical Chlordane	1.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8080  
 ANAMETRIX, INC. (408)432-8192

Project ID : 50102.00  
 Sample ID : MW-19-2  
 Matrix : WATER  
 Date Sampled : 8/ 9/94  
 Date Extracted : 8/ 9/94  
 Amount Extracted : 1000.0 mL  
 Date Analyzed : 8/11/94  
 Instrument ID : HP22

Anamatrix ID : 9408097-02  
 Analyst : FK  
 Supervisor : A  
 Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
319-84-6	alpha-BHC	.05	ND	U
319-85-7	beta-BHC	.05	ND	U
319-86-8	delta-BHC	.05	ND	U
58-89-9	gamma-BHC	.05	ND	U
76-44-8	Heptachlor	.05	ND	U
309-00-2	Aldrin	.05	ND	U
1024-57-3	Heptachlor Epoxide	.05	ND	U
959-98-8	Endosulfan I	.05	ND	U
60-57-1	Dieldrin	.10	ND	U
72-55-9	4,4'-DDE	.10	ND	U
72-20-8	Endrin	.10	ND	U
33213-65-9	Endosulfan II	.10	ND	U
72-54-8	4,4'-DDD	.10	ND	U
1031-07-8	Endosulfan Sulfate	.10	ND	U
50-29-3	4,4'-DDT	.10	ND	U
72-43-5	Methoxychlor	.50	ND	U
53494-70-5	Endrin Ketone	.10	ND	U
8001-35-2	Toxaphene	5.0	ND	U
12674-11-2	Aroclor-1016	1.0	ND	U
11104-28-2	Aroclor-1221	2.0	ND	U
11141-16-5	Aroclor-1232	1.0	ND	U
53469-21-9	Aroclor-1242	1.0	ND	U
12672-29-6	Aroclor-1248	1.0	ND	U
11097-69-1	Aroclor-1254	1.0	ND	U
11096-82-5	Aroclor-1260	1.0	ND	U
7421-93-4	Endrin Aldehyde	.10	ND	U
57-74-9	Technical Chlordane	1.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8080  
 ANAMETRIX, INC. (408)432-8192

Project ID : 50102.  
 Sample ID : BLANK  
 Matrix : WATER  
 Date Sampled : 0/ 0/ 0  
 Date Extracted : 8/11/94  
 Amount Extracted : 1000.0 mL  
 Date Analyzed : 8/16/94  
 Instrument ID : HP22

Anamatrix ID : BG1111P1  
 Analyst : *FK*  
 Supervisor : *JD*

Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
319-84-6	alpha-BHC	.05	ND	U
319-85-7	beta-BHC	.05	ND	U
319-86-8	delta-BHC	.05	ND	U
58-89-9	gamma-BHC	.05	ND	U
76-44-8	Heptachlor	.05	ND	U
309-00-2	Aldrin	.05	ND	U
1024-57-3	Heptachlor Epoxide	.05	ND	U
959-98-8	Endosulfan I	.05	ND	U
60-57-1	Dieldrin	.10	ND	U
72-55-9	4,4'-DDE	.10	ND	U
72-20-8	Endrin	.10	ND	U
33213-65-9	Endosulfan II	.10	ND	U
72-54-8	4,4'-DDD	.10	ND	U
1031-07-8	Endosulfan Sulfate	.10	ND	U
50-29-3	4,4'-DDT	.10	ND	U
72-43-5	Methoxychlor	.50	ND	U
53494-70-5	Endrin Ketone	.10	ND	U
8001-35-2	Toxaphene	5.0	ND	U
12674-11-2	Aroclor-1016	1.0	ND	U
11104-28-2	Aroclor-1221	2.0	ND	U
11141-16-5	Aroclor-1232	1.0	ND	U
53469-21-9	Aroclor-1242	1.0	ND	U
12672-29-6	Aroclor-1248	1.0	ND	U
11097-69-1	Aroclor-1254	1.0	ND	U
11096-82-5	Aroclor-1260	1.0	ND	U
7421-93-4	Endrin Aldehyde	.10	ND	U
57-74-9	Technical Chlordane	1.0	ND	U



ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8080  
 ANAMETRIX, INC. (408)432-8192

Project ID : 50102.  
 Sample ID : BLANK  
 Matrix : WATER  
 Date Sampled : 0/ 0/ 0  
 Date Extracted : 8/ 9/94  
 Amount Extracted : 1000.0 mL  
 Date Analyzed : 8/11/94  
 Instrument ID : HP22

Anamatrix ID : BG0911P1  
 Analyst : FR  
 Supervisor : M

Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
319-84-6	alpha-BHC	.05	ND	U
319-85-7	beta-BHC	.05	ND	U
319-86-8	delta-BHC	.05	ND	U
58-89-9	gamma-BHC	.05	ND	U
76-44-8	Heptachlor	.05	ND	U
309-00-2	Aldrin	.05	ND	U
1024-57-3	Heptachlor Epoxide	.05	ND	U
959-98-8	Endosulfan I	.05	ND	U
60-57-1	Dieldrin	.10	ND	U
72-55-9	4,4'-DDE	.10	ND	U
72-20-8	Endrin	.10	ND	U
33213-65-9	Endosulfan II	.10	ND	U
72-54-8	4,4'-DDD	.10	ND	U
1031-07-8	Endosulfan Sulfate	.10	ND	U
50-29-3	4,4'-DDT	.10	ND	U
72-43-5	Methoxychlor	.50	ND	U
53494-70-5	Endrin Ketone	.10	ND	U
8001-35-2	Toxaphene	5.0	ND	U
12674-11-2	Aroclor-1016	1.0	ND	U
11104-28-2	Aroclor-1221	2.0	ND	U
11141-16-5	Aroclor-1232	1.0	ND	U
53469-21-9	Aroclor-1242	1.0	ND	U
12672-29-6	Aroclor-1248	1.0	ND	U
11097-69-1	Aroclor-1254	1.0	ND	U
11096-82-5	Aroclor-1260	1.0	ND	U
7421-93-4	Endrin Aldehyde	.10	ND	U
57-74-9	Technical Chlordane	1.0	ND	U

SURROGATE RECOVERY SUMMARY -- EPA METHOD 8080  
 ANAMETRIX, INC. (408)432-8192

Project ID : 50102.00  
 Matrix : LIQUID

Anamatrix ID : 9408097  
 Analyst : *FK*  
 Supervisor : *M*

	SAMPLE ID	SU1	SU2	SU3	SU4	SU5	SU6
1	BLANK	120	101				
2	LCS	59	93				
3	LCSD	98	82				
4	MW-19-2R	65	91				
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

QC LIMITS

SU1 = Decachlorobiphenyl (33-126)  
 SU2 = Tetrachloro-m-xylene (30-130)

\* Values outside of Anamatrix QC limits

SURROGATE RECOVERY SUMMARY -- EPA METHOD 8080  
ANAMETRIX, INC. (408)432-8192

Project ID : 50102.00  
Matrix : LIQUID

Anamatrix ID : 9408097  
Analyst : FK  
Supervisor : AD

	SAMPLE ID	SU1	SU2	SU3	SU4	SU5	SU6
1	MW-19-2	25 *	39				
2	BLANK	109	96				
3	LCS	111	97				
4	LCSD	111	98				
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

QC LIMITS

-----  
SU1 = Decachlorobiphenyl (33-126)  
SU2 = Tetrachloro-m-xylene (30-130)

\* Values outside of Anamatrix QC limits

LABORATORY CONTROL SPIKE RECOVERY FORM -- METHOD 8080  
ANAMETRIX, INC. (408) 432-8192

Project ID : 50102.001.01  
SDG : N/A  
Sample ID : LCS/LCSD  
Matrix : WATER  
Date Extracted : 8/11/94  
Date Analyzed : 8/16/94  
Instrument ID : HP22

Anametrix ID : M/NG1111P1  
Analyst : *FK*  
Supervisor : *JD*  
Volume ext. : 1000 mL  
Final Vol. : 10000 uL  
Inj. Vol. : 1 uL  
Dilution : NONE

LCS COMPOUND NAME	AMOUNT ADDED (ug/L)	AMOUNT FOUND (ug/L)	PERCENT RECOVERY	RECOVERY LIMITS
gamma-BHC	0.50	0.59	118	47-120
Heptachlor	0.50	0.48	96	44-125
Aldrin	0.50	0.59	118	41-125
Dieldrin	1.0	1.3	130	53-133
Endrin	1.0	1.30	130	51-134
4,4'-DDT	1.0	1.10	110	49-134
LCSD COMPOUND NAME	AMOUNT ADDED (ug/L)	AMOUNT FOUND (ug/L)	PERCENT RECOVERY	RECOVERY LIMITS
gamma-BHC	0.50	0.54	108	47-120
Heptachlor	0.50	0.45	90	44-125
Aldrin	0.50	0.52	104	41-125
Dieldrin	1.0	1.3	130	53-133
Endrin	1.0	1.3	130	51-134
4,4'-DDT	1.0	1.1	110	49-134
COMPOUND NAME	RPD	RPD LIMITS		
gamma-BHC	6	25		
Heptachlor	4	25		
Aldrin	8	25		
Dieldrin	0	25		
Endrin	0	25		
4,4'-DDT	0	25		

LABORATORY CONTROL SPIKE RECOVERY FORM -- METHOD 8080  
ANAMETRIX, INC. (408) 432-8192

Project ID : 50102.001.01  
 SDG : N/A  
 Sample ID : LCS/LCSD  
 Matrix : WATER  
 Date Extracted : 8/9/94  
 Date Analyzed : 8/11/94  
 Instrument ID : HP22

Anametrix ID : M/NG0911P1  
 Analyst : FR  
 Supervisor : M  
 Volume ext. : 1000 mL  
 Final Vol. : 10000 uL  
 Inj. Vol. : 1 uL  
 Dilution : NONE

LCS COMPOUND NAME	AMOUNT ADDED (ug/L)	AMOUNT FOUND (ug/L)	PERCENT RECOVERY	RECOVERY LIMITS
gamma-BHC	0.50	0.65	130	47-120
Heptachlor	0.50	0.56	112	44-125
Aldrin	0.50	0.63	126	41-125
Dieldrin	1.0	1.4	140	53-133
Endrin	1.0	1.50	150	51-134
4,4'-DDT	1.0	1.20	120	49-134
LCSD COMPOUND NAME	AMOUNT ADDED (ug/L)	AMOUNT FOUND (ug/L)	PERCENT RECOVERY	RECOVERY LIMITS
gamma-BHC	0.50	0.66	132	47-120
Heptachlor	0.50	0.57	114	44-125
Aldrin	0.50	0.62	124	41-125
Dieldrin	1.0	1.4	140	53-133
Endrin	1.0	1.5	150	51-134
4,4'-DDT	1.0	1.2	120	49-134
COMPOUND NAME	RPD	RPD LIMITS		
gamma-BHC	1	25		
Heptachlor	1	25		
Aldrin	1	25		
Dieldrin	0	25		
Endrin	0	25		
4,4'-DDT	0	25		

REPORT SUMMARY  
ANAMETRIX, INC. (408)432-8192

MR. J. C. GOLDMAN  
SEACOR  
90 NEW MONTGOMERY SUITE 620  
SAN FRANCISCO, CA 94105-4503

Workorder # : 9408097  
Date Received : 08/09/94  
Project ID : 50102.001.01  
Purchase Order: N/A  
Department : GC  
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9408097- 2	MW-19-2	WATER	08/09/94	TPHd
9408097- 2	MW-19-2	WATER	08/09/94	TPHg

REPORT SUMMARY  
ANAMETRIX, INC. (408)432-8192

MR. J. C. GOLDMAN  
SEACOR  
90 NEW MONTGOMERY SUITE 620  
SAN FRANCISCO, CA 94105-4503

Workorder # : 9408097  
Date Received : 08/09/94  
Project ID : 50102.001.01  
Purchase Order: N/A  
Department : GC  
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for this sample.

Cheryl Belmer                      8/12/94  
Department Supervisor                      Date

(Pete)    08/12/94  
Chemist    Date





**Matrix Spike Report**  
**Total Petroleum Hydrocarbons as Gasoline**  
**ITS - Anamatrix Laboratories - (408)432-8192**

Project ID : 50102.001.01  
 Sample ID : MW-19-2  
 Matrix : WATER  
 Date Sampled : 08/09/94

Laboratory ID : 9408097-02  
 Analyst : *PRC*  
 Supervisor : *CS*  
 Instrument ID : HP12  
 Units : ug/L

COMPOUND NAME	SPIKE AMOUNT	SAMPLE RESULTS	MS RECOVERY	MSD RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS
Gasoline	500	ND	102%	102%	50-139	0%	30
Surrogate Recovery		98%	109%	103%			
Date Analyzed		08/11/94	08/11/94	08/11/94			
Multiplier		1	1	1			
Filename Reference		FPG09702.D	FMG09702.D	FDG09702.D			

Limits established by Inchcape Testing Services, Anamatrix Laboratories.

Laboratory Control Spike Report  
 Total Petroleum Hydrocarbons as Gasoline  
 ITS - Anametrix Laboratories - (408)432-8192

Instrument ID : HP12

Analyst : *APL*

Matrix : LIQUID

Supervisor : *CS*

Units : ug/L

COMPOUND NAME	SPIKE AMOUNT	LCS RECOVERY	RECOVERY LIMITS
Gasoline	500	106%	56-141
Surrogate Recovery		107%	61-139
Date Analyzed		08/11/94	
Multiplier		1	
Filename Reference		MG1002E1.D	

\* Limits established by Inchcape Testing Services, Anametrix Laboratories.

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS AS DIESEL  
ANAMETRIX, INC. (408) 432-8192

Anametrix W.O.: 9408097  
Matrix : WATER  
Date Sampled : 08/09/94  
Date Extracted: 08/10/94

Project Number : 50102.001.01  
Date Released : 08/12/94  
Instrument I.D.: HP9

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (ug/L)	Amount Found (ug/L)	Surrogate %Rec
9408097-02	MW-19-2	08/11/94	50	1100	90%
BG1011F9	METHOD BLANK	08/10/94	50	ND	93%

Note : Reporting limit is obtained by multiplying the dilution factor times 50 ug/L.  
The surrogate recovery limits for o-terphenyl are 47-114%.

ND - Not detected at or above the practical quantitation limit for the method.  
TPhd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following sample extraction by EPA Method 3510.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

CR Patel  
Analyst  
08/12/94  
Date

Cheryl Balmer  
Supervisor  
8/12/94  
Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL  
ANAMETRIX, INC. (408) 432-8192

Anamatrix W.O.: 9408097  
Matrix : WATER  
Date Sampled : 08/09/94  
Date Extracted: 08/10/94

Project Number : 50102.001.01  
Date Released : 08/12/94  
Instrument I.D.: HP9

Anamatrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (ug/L)	Amount Found (ug/L)	Surrogate %Rec
9408097-02	MW-19-2	08/11/94	50	1200	90%
BG1011F9	METHOD BLANK	08/10/94	50	ND	93%

Note : Reporting limit is obtained by multiplying the dilution factor times 50 ug/L.  
The surrogate recovery limits for o-terphenyl are 47-114%.

ND - Not detected at or above the practical quantitation limit for the method.  
TPHd - Total Petroleum Hydrocarbons as motor oil is determined by GCFID following sample extraction by EPA Method 3510.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

CR Pat 08/12/94  
Analyst Date

Cheyl Balmer 8/12/94  
Supervisor Date

TOTAL EXTRACTABLE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT  
 EPA METHOD 3510 WITH GC/FID  
 ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE  
 Matrix : WATER  
 Date Sampled : N/A  
 Date Extracted: 08/10/94  
 Date Analyzed : 08/10/94

Anamatrix I.D. : MG1011F9  
 Analyst : *ARC*  
 Supervisor : *CS*  
 Date Released : 08/12/94  
 Instrument I.D.: HP9

COMPOUND	SPIKE AMT (ug/L)	LCS REC (ug/L)	% REC LCS	LCSD REC (ug/L)	% REC LCSD	RPD	% REC LIMITS
DIESEL	1250	810	65%	1070	86%	28%	38-96
SURROGATE			81%		97%		47-114

\* Quality control limits established by Anamatrix, Inc.

# ANAMETRIX REPORT DESCRIPTION

## INORGANICS

### Analytical Data Report (ADR)

The ADR contains tabulated results for inorganic analytes. All field samples, QC samples and blanks were prepared and analyzed according to procedures in the following references:

- "Test Methods for Evaluating Solid Waste," SW-846, EPA, 3rd Edition, November 1986.
- "Methods for Chemical Analysis of Water and Wastes," EPA, 3rd Edition, 1983.
- CCR Title 22, Section 66261, Appendix II, California Waste Extraction Test.
- CCR Title 22, Section 66261, Appendix XI, Organic Lead.
- "Standard Methods for the Examination of Water and Wastewater," APHA, AWWA, WEF, 18th Edition, 1992.
- USEPA Contract Laboratory Program Statement of Work for Inorganic Analyses, ILM02.1, 1991.

### Matrix Spike Report (MSR)

The MSR summarizes percent recovery and relative percent difference information for matrix spikes and matrix spike duplicates. This information is a statement of both accuracy and precision. MSRs may not be provided with all analytical reports. Anamatrix control limit for MSR is 75-125% with 25% for RPD limits, except for Method 6010A, which is 80-120% with 25% RPD limits.

### Laboratory Control Sample Report (LCSR)

The LCSR summarizes percent recovery information for laboratory control spikes on reagent water or soil. This information is a statement of performance for the method, i.e., the samples are properly prepared and analyzed according to the applicable methods. Anamatrix control limit for LCSR is 80-120%.

### Method Blank Report (MBR)

The MBR summarizes quality control information for reagents used in preparing samples. The absolute value of each analyte measured in the method blank should be below the method reporting limit for that analyte.

### Post Digestion Spike Report (PDSR)

The PDSR summarizes percent recovery information for post digestion spikes. A post digestion spike is performed for a particular analyte if the matrix spike recovery is outside of established control limits. Any percent recovery for a post digestion spike outside of established limits for an analyte indicates probable matrix effects and interferences for that analyte. Anamatrix control limit for PDSR is 85-115%.

### Qualifiers (Q)

Anamatrix uses several data qualifiers in inorganic reports. These qualifiers give additional information on the analytes reported. The following is a list of qualifiers and their meanings:

- I - Sample was analyzed at the stated dilution due to spectral interferences.
- U - Analyte concentration was below the method reporting limit. For matrix and post digestion spike reports, a value of "0.0" is entered for calculation of the percent recovery.
- B - Sample concentration was below the reporting limit but above the instrument detection limit. Result is entered for calculation of the percent recovery only.
- H - Spike percent recovery was outside of Anamatrix control limits due to interferences from relatively high concentration level of the analyte in the unspiked sample.
- L - Reporting limit was increased to compensate for background absorbances or matrix interferences.

### Comment Codes

In addition to qualifiers, the following codes are used in the comment section of all reports to give additional information about sample preparation methods:

- A - Sample was prepared for silver based on the silver digestion method developed by the Southern California Laboratory, Department of Health Services, "Acid Digestion for Sediments, Sludges, Soils and Solid Wastes. A Proposed Alternative to EPA SW846, Method 3050." Environmental Science and Technology, 1989, 23, 898-900.
- T - Spikes were prepared after extraction by the Toxicity Characteristic Leaching Procedure (TCLP).
- C - Spikes were prepared after extraction by the California Waste Extraction Test (CWET) method.
- D - Reported results are dissolved, not total, metals.

### Reporting Conventions

Analytical values reported are gross values, i.e., not corrected for method blank contamination. Solid matrices are reported on a wet weight basis, unless specifically requested otherwise.

REPORT SUMMARY  
ANAMETRIX, INC. (408)432-8192

MR. J. C. GOLDMAN  
SEACOR  
90 NEW MONTGOMERY SUITE 620  
SAN FRANCISCO, CA 94105-4503

Workorder # : 9408097  
Date Received : 08/09/94  
Project ID : 50102.001.01  
Purchase Order: N/A  
Department : METALS  
Sub-Department: METALS

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9408097- 2	MW-19-2	WATER	08/09/94	160.1
9408097- 2	MW-19-2	WATER	08/09/94	7421

REPORT SUMMARY  
ANAMETRIX, INC. (408)432-8192

MR. J. C. GOLDMAN  
SEACOR  
90 NEW MONTGOMERY SUITE 620  
SAN FRANCISCO, CA 94105-4503

Workorder # : 9408097  
Date Received : 08/09/94  
Project ID : 50102.001.01  
Purchase Order: N/A  
Department : METALS  
Sub-Department: METALS

QA/QC SUMMARY :

- No QA/QC problems encountered for this workorder.

W. Goldman 8/12/94  
Department Supervisor | Date

X. Kim 8/12/94  
Chemist | Date



INORGANIC ANALYSIS DATA SHEET  
 ANAMETRIX, INC. (408) 432-8192

Analyte-Method: Total Dissolved Solids-160.1  
 Project I.D. : 50102.001.01  
 Matrix : WATER  
 Reporting Unit: mg/L

Analyst : *MM*  
 Supervisor : *MM*  
 Date Sampled : 08/09/94  
 Date Released : 08/12/94  
 Instrument I.D. : N/A

ANAMETRIX SAMPLE I.D.	CLIENT I.D.	DATE PREPARED	DATE ANALYZED	REP. LIMIT	DIL. FACTOR	RESULT	Q
9408097-02	MW-19-2	08/10/94	08/11/94	10.0		9260	
9408097-02D	MW-19-2 (Dup)	08/10/94	08/11/94	10.0		9220	
BG104WA	Method Blank	08/10/94	08/11/94	10.0		ND	

COMMENT:

INORGANIC ANALYSIS DATA SHEET  
 ANAMETRIX, INC. (408) 432-8192

Analyte-Method: Dissolved Lead-7421  
 Project I.D. : 50102.001.01  
 Matrix : WATER  
 Reporting Unit: ug/L

Analyst : *MN*  
 Supervisor : *PKJ*  
 Date Sampled : 08/09/94  
 Date Released : 08/12/94  
 Instrument I.D. : AA3

ANAMETRIX SAMPLE I.D.	CLIENT I.D.	DATE PREPARED	DATE ANALYZED	REP. LIMIT	DIL. FACTOR	RESULT	Q
9408097-02	MW-19-2	08/10/94	08/11/94	3.0	1	ND	
BG104WA	Method Blank	08/10/94	08/11/94	3.0	1	ND	

COMMENT: Sample was analyzed by method of standard addition.

MATRIX SPIKE REPORT  
 ANAMETRIX, INC. (408) 432-8192

Spike I.D. : 9408097-02MS,MD  
 Client I.D. : MW-19-2  
 Project I.D. : 50102.001.01  
 Matrix : WATER  
 Reporting Unit: ug/L

Date Prepared : 08/10/94  
 Date Analyzed : 08/11/94  
 Analyst : *MW*  
 Supervisor : *MW*  
 Date Released : 08/12/94  
 Instrument I.D. : AA3

ANALYTE-METHOD	SPIKE AMOUNT	SAMPLE CONC.	M.S. CONC.	% REC.	M.S.D. CONC.	% REC.	RPD	Q
Dissolved Lead-7421	20.0	0.0	16.9	84.5	16.9	84.5	0.0	U

COMMENT:

MATRIX SPIKE REPORT  
 ANAMETRIX, INC. (408) 432-8192

Spike I.D. : 9408097-02MS  
 Client I.D. : MW-19-2  
 Project I.D. : 50102.001.01  
 Matrix : WATER  
 Reporting Unit: mg/L

Date Prepared : 08/10/94  
 Date Analyzed : 08/11/94  
 Analyst : MKW  
 Supervisor :  
 Date Released : 08/12/94  
 Instrument I.D. : N/A

ANALYTE-METHOD	SPIKE AMOUNT	SAMPLE CONC.	M.S. CONC.	% REC.	Q
TDS-160.1	1500	9260	10700	96.0	

COMMENT:

LABORATORY CONTROL SAMPLE REPORT  
ANAMETRIX, INC. (408) 432-8192

Anamatrix W.O.# : 9408097  
 Spike I.D. : LG104WA  
 Project I.D. : 50102.001.01  
 Matrix : WATER  
 Reporting Unit : ug/L

Analyst : *MW*  
 Supervisor : *MW*  
 Date Released : 08/12/94  
 Instrument I.D. : AA3

ANALYTE-METHOD	DATE PREPARED	DATE ANALYZED	SPIKE AMT.	METHOD SPIKE	% REC.	Q
Dissolved Lead-7421	08/10/94	08/11/94	20.0	20.8	104	
IDS-160.1 (mg/L)	08/10/94	08/11/94	1500	1520	101	

COMMENT:

3359  
SEA

9408097

10/4 18 16

1920

Chain-of-Custody Number:

# SEACOR Chain-of-Custody Record

Field Office: \_\_\_\_\_  
Address: \_\_\_\_\_

Additional documents are attached, and are a part of this Record.  
Job Name: COLISEUM WAY 8000, INC.  
Location: OAKLAND CA

Project # 50102-001-01 Task # ✓  
Project Manager JCG  
Laboratory \_\_\_\_\_  
Turnaround Time 48HR

Sampler's Name SEB/JCG  
Sampler's Signature [Signature]

### Analysis Request

Sample ID	Date	Time	Matrix	HCID	TPH <sub>g</sub> /BTEX/WTPH-G 8015 (modified)/8020	TPH <sub>D</sub> /WTPH-D 8015 (modified) + MD	TPH 418.1/WTPH 418.1	Aromatic Volatiles 602/8020	Volatile Organics 624/8240 (GC/MS)	Halogenated Volatiles 601/8010	Semi-volatile Organics 625/8270 (GC/MS)	Pesticides/PCBs 608/8080	Total Lead 7421	Priority Pollutant Metals (13)	TCLP Metals	Comments/ Instructions	Number of Containers
① MW-19-1	9 AUG	13:30	W	A		HOLD										5x 1 liter + 6x 40ml	11
② MW-19-2	9 AUG	13:45	W		X	X		X	X	X	X	X			X	5x 1 liter + 6x 40ml	11

Special Instructions/Comments:  
CALL JCGOLDMAN @  
415 882.1548  
W/QUESTIONS  
48HR TURN AROUND  
IF POSSIBLE

Relinquished by: [Signature]  
Sign \_\_\_\_\_  
Print \_\_\_\_\_  
Company SEACOR  
Time 14:45 Date 9 AUG 94

Received by: [Signature]  
Sign \_\_\_\_\_  
Print JOSUE PEREZ  
Company Anametric  
Time 1441 Date 8/9/94

Sample Receipt  
Total no. of containers: 22  
Chain of custody seals: no  
Rec'd. good condition/cold: yes  
Conforms to record: yes

Relinquished by: [Signature]  
Sign \_\_\_\_\_  
Print [Signature]  
Company Anametric  
Time 1805 Date 8/9/94

Received by: [Signature]  
Sign \_\_\_\_\_  
Print Maria Barajas  
Company Anametric  
Time 1805 Date 8/9/94

Client: \_\_\_\_\_  
Client Contact: \_\_\_\_\_  
Client Phone: \_\_\_\_\_

## GROUND WATER SAMPLE FIELD DATA SHEET

PROJECT NO: 50102-001-01WELL ID: MW-19CLIENT/STATION #: 8000 S. CAUSEWAY WY

ADDRESS: \_\_\_\_\_

CASING DIAMETER (inches): 2 3 4 6 8 12 Other \_\_\_\_\_GALLON/LINEAR FOOT: 0.17 0.38 0.66 1.5 2.6 5.8 Other \_\_\_\_\_TD 10' - DTW 4.21 X  $\frac{\text{GALLON}}{\text{LINEAR FT.}}$  \_\_\_\_\_ X  $\frac{\text{CASING VOLUME}}{\text{VOLUME}}$  \_\_\_\_\_ =  $\frac{\text{CALCULATED PURGE}}{\text{PURGE}}$  \_\_\_\_\_ACTUAL  
PURGEDATE PURGED: 8.9.94 START (2400 Hr) \_\_\_\_\_ END (2400 Hr) \_\_\_\_\_

DATE SAMPLED: \_\_\_\_\_ START (2400 Hr) \_\_\_\_\_ END (2400 Hr) \_\_\_\_\_

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. ( $\mu\text{mhos/cm @ 25}^\circ\text{C}$ )	TEMPERATURE ( $^\circ\text{F}$ )	COLOR (visual)	TURBIDITY (visual)
<u>1730</u>	<u>15</u>	<u>7.00</u>	<u>128600</u>	<u>70.2</u>	<u>CLOUDY</u>	<u>SOME</u>
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1): \_\_\_\_\_

## PURGING EQUIPMENT

2" Bladder Pump       Bailer (Teflon®)  
 Centrifugal Pump       Bailer (PVC)  
 Submersible Pump       Bailer (Stainless Steel)  
 Dedicated

Other: \_\_\_\_\_

## SAMPLING EQUIPMENT

2" Bladder Pump       Bailer (Teflon®)  
 DDL Sampler       Bailer (Stainless Steel)  
 Dipper       Submersible Pump  
 Bailer Disposable       Dedicated

Other: \_\_\_\_\_

REMARKS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

PRINT NAME: SANDRA E. BRUNIPAGE 1 OF 1 SIGNATURE: Sandra E. Bruni

**LABORATORY ANALYSIS REPORTS FOR SAMPLE OF GRAB  
GROUNDWATER**





# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: JONATHAN GOLDMAN

Project 50102-001-01  
Reported 01-August-1994

ANALYSIS FOR GASOLINE, BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES  
by EPA SW-846 Methods 5030/8015M/8020.

Chronology

Laboratory Number 58494

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
SB-1	07/26/94	07/27/94	08/01/94	08/01/94		1
SB-2	07/26/94	07/27/94	07/29/94	07/29/94		2
SB-3	07/26/94	07/27/94	07/29/94	07/29/94		3

1555 Burke St., Unit 1 • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: JONATHAN GOLDMAN

Project 50102-001-01  
Reported 01-August-1994

## ANALYSIS FOR GASOLINE, BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES

Laboratory Number	Sample Identification	Matrix
58494- 1	SB-1	Water
58494- 2	SB-2	Water
58494- 3	SB-3	Water

### RESULTS OF ANALYSIS

Laboratory Number: 58494- 1 58494- 2 58494- 3.

Gasoline_Range:	98	ND<50	ND<50
Benzene:	5.7	ND<0.5	ND<0.5
Toluene:	1.7	ND<0.5	ND<0.5
Ethyl Benzene:	1.5	ND<0.5	ND<0.5
Total Xylenes:	3.1	ND<0.5	ND<0.5

Concentration: ug/L ug/L ug/L

-- Surrogate % Recoveries --  
Trifluorotoluene (SS): 102 98 98



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

## ANALYSIS FOR GASOLINE, BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES Quality Assurance and Control Data - Water

Laboratory Number 58494

Compound	Method Blank (ug/L)	RL (ug/L)	Spike Recovery (%)	Limits (%)	RPD (%)
Gasoline_Range:	ND<50	50	91/90	61-134	1%
Benzene:	ND<0.5	0.5	90/87	60-135	3%
Toluene:	ND<0.5	0.5	89/86	60-135	3%
Ethyl Benzene:	ND<0.5	0.5	86/84	60-135	2%
Total Xylenes:	ND<0.5	0.5	93/89	60-135	4%

### Definitions:

- ND = Not Detected
- RPD = Relative Percent Difference
- RL = Reporting Limit
- ug/L = Parts per billion (ppb)
- QC File No. 58494

*Cecilia G. Joaquin* 8/1/94  
 Senior Chemist  
 Account Manager



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

## C E R T I F I C A T E O F A N A L Y S I S

Laboratory No.: 58494  
 Client : SEACOR  
 Client job No.: 50102-001-01

Date received : 07/27/94  
 Date reported : 07/31/94

### TOTAL DISSOLVED SOLIDS BY EPA METHOD 160.1

Lab Sample ID	Date Sampled	Date Analyzed	Analyte	Conc.	RL	Unit
1 SB-1	07/26/94	07/29/94	TDS	8900	10	mg/L
2 SB-2	07/26/94	07/29/94	TDS	12000	10	mg/L
3 SB-3	07/26/94	07/29/94	TDS	21000	10	mg/L
QC METHOD BLANK	Water	07/29/94	TDS	ND	10	mg/L

mg/L = parts per million (ppm)  
 ND = Not Detected  
 NA = Not Applicable  
 RL = Reporting Limit

*Cecilia L. Joaquin* 8/1/94  
 Senior Chemist  
 Account Manager

Note: Samples for TDS were field filtered and preserved with nitric acid.  
 Sediment was observed in the filtered water sample.



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: JONATHAN GOLDMAN

Project 50102-001-01  
Reported 01-Aug-1994

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS  
by GAS CHROMATOGRAPHY - MASS SPECTROMETRY

Chronology		Laboratory Number 58494				
Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
SB-2	07/26/94	07/27/94	07/29/94	07/29/94		2



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: JONATHAN GOLDMAN

Project 50102-001-01  
Reported 01-Aug-1994

## EPA SW-846 METHOD 8240 - VOLATILE ORGANICS

Laboratory Number	Sample Identification	Matrix
58494- 2	SB-2	Water

### RESULTS OF ANALYSIS

Laboratory Number: 58494- 2

Chloromethane:	ND<10
Bromomethane:	ND<10
Vinyl Chloride:	ND<10
Chloroethane:	ND<10
Methylene Chloride:	ND<10
Acetone:	ND<20
Carbon Disulfide:	ND<3
Trichlorofluoromethane:	ND<3
1,1-Dichloroethene:	ND<3
1,1-Dichloroethane:	ND<3
t-1,2-Dichloroethene:	ND<3
Chloroform:	ND<3
1,2-Dichloroethane:	ND<1
2-Butanone:	ND<20
1,1,1-Trichloroethane:	ND<3
Carbon tetrachloride:	ND<3
Vinyl Acetate:	ND<10
Bromodichloromethane:	ND<3
1,2-Dichloropropane:	ND<3
c-1,2-Dichloroethene:	ND<3
c-1,3-Dichloropropene:	ND<3
Trichloroethene:	ND<3
Dibromochloromethane:	ND<3
1,1,2-Trichloroethane:	ND<3
Benzene:	ND<1
t-1,3-Dichloropropene:	ND<3
Bromoform:	ND<3
4-Methyl-2-Pentanone:	ND<10
2-Hexanone:	ND<10

Concentration: ug/L



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: JONATHAN GOLDMAN

Project 50102-001-01  
Reported 01-Aug-1994

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS

Laboratory Number	Sample Identification	Matrix
58494- 2	SB-2	Water

## RESULTS OF ANALYSIS

Laboratory Number: 58494- 2

Tetrachloroethene:	ND<3
1,1,2,2-Tetracl-ethane:	ND<3
Toluene:	ND<3
Chlorobenzene:	ND<3
Ethyl Benzene:	ND<3
Styrene:	ND<3
Xylenes:	ND<3
1,3-Dichlorobenzene:	ND<3
1,4-Dichlorobenzene:	ND<3
1,2-Dichlorobenzene:	ND<3

Concentration: ug/L

-- Surrogate % Recoveries --

1,2-Dichloroethane-d4:	103
Toluene-d8:	99
Bromofluorobenzene:	91





# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS  
Quality Assurance and Control Data - Water

Laboratory Number 58494

Compound	Method Blank (ug/L)	RL (ug/L)	Spike Recovery (%)	Limits (%)	RPD (%)
Chloromethane:	ND<10	10			
Bromomethane:	ND<10	10			
Vinyl Chloride:	ND<10	10			
Chloroethane:	ND<10	10			
Methylene Chloride:	ND<10	10			
Acetone:	ND<20	20			
Carbon Disulfide:	ND<3	3			
Trichlorofluoromethane:	ND<3	3			
1,1-Dichloroethene:	ND<3	3	110/105	79-127	5%
1,1-Dichloroethane:	ND<3	3			
t-1,2-Dichloroethene:	ND<3	3			
Chloroform:	ND<3	3			
1,2-Dichloroethane:	ND<1	1			
2-Butanone:	ND<20	20			
1,1,1-Trichloroethane:	ND<3	3			
Carbon tetrachloride:	ND<3	3			
Vinyl Acetate:	ND<10	10			
Bromodichloromethane:	ND<3	3			
1,2-Dichloropropane:	ND<3	3			
c-1,2-Dichloroethene:	ND<3	3			
c-1,3-Dichloropropene:	ND<3	3			
Trichloroethene:	ND<3	3	97/94	69-117	3%
Dibromochloromethane:	ND<3	3			
1,1,2-Trichloroethane:	ND<3	3			
Benzene:	ND<1	1	101/101	78-122	0%
t-1,3-Dichloropropene:	ND<3	3			
Bromoform:	ND<3	3			
4-Methyl-2-Pentanone:	ND<10	10			
2-Hexanone:	ND<10	10			



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS  
Quality Assurance and Control Data - Water

Laboratory Number 58494

Compound	Method Blank (ug/L)	RL (ug/L)	Spike Recovery (%)	Limits (%)	RPD (%)
Tetrachloroethene:	ND<3	3			
1,1,2,2-Tetracl-ethane:	ND<3	3			
Toluene:	ND<3	3	98/98	78-120	0%
Chlorobenzene:	ND<3	3	97/96	78-122	1%
Ethyl Benzene:	ND<3	3			
Styrene:	ND<3	3			
Xylenes:	ND<3	3			
1,3-Dichlorobenzene:	ND<3	3			
1,4-Dichlorobenzene:	ND<3	3			
1,2-Dichlorobenzene:	ND<3	3			
1,2-Dichloroethane-d4:	95			76-114	
Toluene-d8:	98			88-110	
Bromofluorobenzene:	91			86-115	

Definitions:  
 ND = Not Detected  
 RPD = Relative Percent Difference  
 RL = Reporting Limit  
 ug/L = Parts per billion (ppb)  
 QC File No. 58494

*Cecilia Joaquin 8/1/94*  
 Senior Chemist  
 Account Manager



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: JONATHAN GOLDMAN

Project 50102-001-01  
Reported 28-July-1994

## Total Petroleum Hydrocarbons by EPA Method 8015M

### Chronology

Laboratory Number 58494

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
SB-1	07/26/94	07/27/94	07/27/94	07/28/94		1
SB-3	07/26/94	07/27/94	07/27/94	07/28/94		3



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: JONATHAN GOLDMAN

Project 50102-001-01  
Reported 28-July-1994

## Total Petroleum Hydrocarbons by EPA Method 8015M

Laboratory Number	Sample Identification	Matrix
58494- 1	SB-1	Water
58494- 3	SB-3	Water

### RESULTS OF ANALYSIS

Laboratory Number: 58494- 1 58494- 3

Diesel Range:	76000	ND<50
Motor Oil Range:	220000	ND<500
Concentration:	ug/L	ug/L



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

Total Petroleum Hydrocarbons by EPA Method 8015M  
Quality Assurance and Control Data - Water

Laboratory Number 58494

Compound	Method Blank (ug/L)	RL (ug/L)	Spike Recovery (%)	Limits (%)	RPD (%)
Diesel Range:	ND<50	50	86/88	50-150	2%
Motor Oil Range:	ND<500	500			

### Definitions:

ND = Not Detected

RPD = Relative Percent Difference

RL = Reporting Limit

ug/L = Parts per billion (ppb)

QC File No. 58494

*Cecilia Joaquin* 8/1/94  
Senior Chemist  
Account Manager



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: JONATHAN GOLDMAN

Project 50102-001-01  
Reported 02-August-1994

EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

### Chronology

Laboratory Number 58494

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
SB-2	07/26/94	07/27/94	07/30/94	08/02/94		2



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: JONATHAN GOLDMAN

Project 50102-001-01  
Reported 02-August-1994

## EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Laboratory Number	Sample Identification	Matrix
58494- 2	SB-2	Water

### RESULTS OF ANALYSIS

Laboratory Number: 58494- 2

bis(2-chloroethyl)eth:ND<10  
 aniline: ND<10  
 phenol: ND<10  
 2-chlorophenol: ND<10  
 1,3-dichlorobenzene: ND<10  
 1,4-dichlorobenzene: ND<10  
 1,2-dichlorobenzene: ND<10  
 benzyl alcohol: ND<10  
 bis-(2-chloroisopropyl):ND<10  
 2-methylphenol: ND<10  
 hexachloroethane: ND<10  
 n-nitroso-di-n-propyla:ND<10  
 4-methylphenol: ND<10  
 nitrobenzene: ND<10  
 isophorone: ND<10  
 2-nitrophenol: ND<10  
 2,4-dimethylphenol: ND<10  
 bis(2-chloroethoxy)met:ND<10  
 2,4-dichlorophenol: ND<10  
 1,2,4-trichlorobenzene:ND<10  
 naphthalene: ND<10  
 benzoic acid: ND<10  
 4-chloroaniline: ND<10  
 hexachlorobutadiene: ND<10  
 4-chloro-3-methylpheno:ND<10  
 2-methyl-naphthalene: ND<10  
 hexaachlorocyclopentadie:ND<10  
 2,4,6-trichlorophenol: ND<10  
 2,4,5-trichlorophenol: ND<10

Concentration: ug/L



# Superior Precision Analytical, Inc.

A member of ESSECON Environmental Support Service Consortium

SEACOR  
Attn: JONATHAN GOLDMAN

Project 50102-001-01  
Reported 02-August-1994

## EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Laboratory Number	Sample Identification	Matrix
58494- 2	SB-2	Water

### RESULTS OF ANALYSIS

Laboratory Number: 58494- 2

2-chloronaphthalene:	ND<10
2-nitroaniline:	ND<10
acenaphthylene:	ND<10
dimethylphthlate:	ND<10
2,6-dinitrotoluene:	ND<10
acenaphthene:	ND<10
3-nitroaniline:	ND<10
2,4-dinitrophenol:	ND<10
dibenzofuran:	ND<10
2,4-dinitrotoluene:	ND<10
4-nitrophenol:	ND<10
fluorene:	ND<10
4-chlorophenyl-phenyle:	ND<10
diethylphthlate:	ND<10
4-nitroaniline:	ND<10
4,6-dinitro-2-methylph:	ND<10
n-nitrosodiphenylamine:	ND<10
1,2-diphenylhydrazine:	ND<10
4-bromo-phenyl-phenyle:	ND<10
hexachlorobenzene:	ND<10
pentachlorophenol:	ND<10
phenanthrene:	ND<10
anthracene:	ND<10
di-n-butylphthlate:	ND<10
fluoranthene:	ND<10
benzidine:	ND<10
pyrene:	ND<10
butylbenzylphthlate:	ND<10
3,3'-dichlorobenzidine:	ND<10

Concentration: ug/L





# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: JONATHAN GOLDMAN

Project 50102-001-01  
Reported 02-August-1994

## EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Laboratory Number	Sample Identification	Matrix
58494- 2	SB-2	Water

### RESULTS OF ANALYSIS

Laboratory Number: 58494- 2

benzo[a]anthracene: ND<10  
 chrysene: ND<10  
 bis(2-ethylhexyl)phtha:ND<10  
 di-n-octylphthalate: ND<10  
 benzo(b,k)fluoranthene:ND<10  
 benzo[a]pyrene: ND<10  
 indeno[1,2,3-cd]pyrene:ND<10  
 dibenzo[a,h]anthracene:ND<10  
 benzo[g,h,i]perylene: ND<10

Concentration: ug/L

-- Surrogate % Recoveries --  
 2-fluorophenol: 55  
 phenol-d5: 66  
 nitrobenzene-d5: 70  
 2-fluorobiphenyl: 73  
 2,4,6-tribromophenol: 106  
 terphenyl-d14: 70



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS  
Quality Assurance and Control Data - Water

Laboratory Number 58494

Compound	Method Blank (ug/L)	RL (ug/L)	Spike Recovery (%)	Limits (%)	RPD (%)
bis(2-chloroethyl) ethe:	ND<10	10			
aniline:	ND<10	10			
phenol:	ND<10	10	51/52	10-72	2%
2-chlorophenol:	ND<10	10	77/78	55-93	1%
1,3-dichlorobenzene:	ND<10	10			
1,4-dichlorobenzene:	ND<10	10	61/61	50-103	0%
1,2-dichlorobenzene:	ND<10	10			
benzyl alcohol:	ND<10	10			
bis-(2-chloroisopropyl):	ND<10	10			
2-methylphenol:	ND<10	10			
hexachloroethane:	ND<10	10			
m-nitroso-di-n-propyla:	ND<10	10	80/78	45-121	3%
4-methylphenol:	ND<10	10			
nitrobenzene:	ND<10	10			
isophorone:	ND<10	10			
2-nitrophenol:	ND<10	10			
2,4-dimethylphenol:	ND<10	10			
bis(2-chloroethoxy)met:	ND<10	10			
2,4-dichlorophenol:	ND<10	10			
1,2,4-trichlorobenzene:	ND<10	10	79/77	53-92	3%
naphthalene:	ND<10	10			
benzoic acid:	ND<10	10			
4-chloroaniline:	ND<10	10			
hexachlorobutadiene:	ND<10	10			
4-chloro-3-methylpheno:	ND<10	10	79/78	56-94	1%
2-methyl-naphthalene:	ND<10	10			
hexaclorocyclopentadie:	ND<10	10			
2,4,6-trichlorophenol:	ND<10	10			
2,4,5-trichlorophenol:	ND<10	10			



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS  
Quality Assurance and Control Data - Water

Laboratory Number 58494

Compound	Method Blank (ug/L)	RL (ug/L)	Spike Recovery (%)	Limits (%)	RPD (%)
2-chloronaphthalene:	ND<10	10			
2-nitroaniline:	ND<10	10			
acenaphthylene:	ND<10	10			
dimethylphthlate:	ND<10	10			
2,6-dinitrotoluene:	ND<10	10			
acenaphthene:	ND<10	10	72/71	60-100	1%
3-nitroaniline:	ND<10	10			
2,4-dinitrophenol:	ND<10	10			
dibenzofuran:	ND<10	10			
2,4-dinitrotoluene:	ND<10	10	73/70	43-94	4%
4-nitrophenol:	ND<10	10	41/40	1-75	2%
fluorene:	ND<10	10			
4-chlorophenyl-phenyle:	ND<10	10			
diethylphthlate:	ND<10	10			
4-nitroaniline:	ND<10	10			
4,6-dinitro-2-methylph:	ND<10	10			
n-nitrosodiphenylamine:	ND<10	10			
1,2-diphenylhydrazine:	ND<10	10			
4-bromo-phenyl-phenyle:	ND<10	10			
hexachlorobenzene:	ND<10	10			
pentachlorophenol:	ND<10	10	72/75	36-109	4%
phenanthrene:	ND<10	10			
anthracene:	ND<10	10			
di-n-butylphthlate:	ND<10	10			
fluoranthene:	ND<10	10			
benzidine:	ND<10	10			
pyrene:	ND<10	10	80/79	66-124	1%
butylbenzylphthlate:	ND<10	10			
3,3'-dichlorobenzidine:	ND<10	10			



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A member of ESSCON Environmental Support Service Consortium

EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS  
Quality Assurance and Control Data - Water

Laboratory Number 58494

Compound	Method Blank (ug/L)	RL (ug/L)	Spike Recovery (%)	Limits (%)	RPD (%)
benzo[a]anthracene:	ND<10	10			
chrysene:	ND<10	10			
bis(2-ethylhexyl) phtha:	ND<10	10			
di-n-octylphthalate:	ND<10	10			
benzo(b,k)fluoranthene:	ND<10	10			
benzo[a]pyrene:	ND<10	10			
indeno[1,2,3-cd]pyrene:	ND<10	10			
4-benzo[a,h]anthracene:	ND<10	10			
benzo[g,h,i]perylene:	ND<10	10			
2-fluorophenol:	32			21-110	
phenol-d5:	39			10-110	
m-trobenzene-d5:	47			35-114	
2-fluorobiphenyl:	50			43-116	
2,4,6-tribromophenol:	39			10-123	
4-bromophenyl-d14:	48			33-141	

## Definitions:

ND = Not Detected

RPD = Relative Percent Difference

RL = Reporting Limit

ug/L = Parts per billion (ppb)

File No. 58494

*Cecilia A. Joazeiro* 8/2/94  
Senior Chemist  
Account Manager

**Superior Precision Analytical, Inc.**

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: J. GOLDMANProject 50102-001-01  
Reported 29-July-1994ANALYSIS FOR TOTAL LEAD  
by EPA Method SW-846 7421

Chronology Laboratory Number 58494

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
SB-1	07/26/94	07/28/94	07/28/94	07/29/94		1
SB-2	07/26/94	07/28/94	07/28/94	07/29/94		2
SB-3	07/26/94	07/28/94	07/28/94	07/29/94		3

Page 1 of 3  
Certified Laboratories

825 Arnold Dr., Suite 114 • Martinez, California 94553 • (510) 313-0850 / fax (510) 229-1526



# Superior Precision Analytical, Inc.

A member of ESACON Environmental Support Service Consortium

SRACOR  
Attn: J. GOLDMAN

Project 50102-001-01  
Reported 29-July-1994

## ANALYSIS FOR TOTAL LEAD

Laboratory Number	Sample Identification	Matrix
58494- 1	SR-1	Water
58494 2	SR 2	Water
58494- 3	SR-3	Water

## RESULTS OF ANALYSIS

Laboratory Number: 58494- 1 58494- 2 58494 3

Total Lead (Pb):	.210	.008	.041
Concentration:	mg/L	mg/L	mg/L

Page 2 of 3  
Certified Laboratories

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**Superior Precision Analytical, Inc.**

A member of ES&amp;CON Environmental Support Service Consortium

ANALYSIS FOR TOTAL LEAD  
Quality Assurance and Control Data - Water

Laboratory Number 58494

Compound	Method		Spike Recovery (%)	Limits (%)	RPD (%)
	Blank (mg/L)	RL (mg/L)			
Total Lead (Ph):	ND<.005	.005	97/97	75-125	0%



Definitions:


ND = Not Detected

RPD = Relative Percent Difference

RL = Reporting Limit

mg/L = Parts per million (ppm)

QC File No. 58494

  
Senior Chemist  
Account Manager

Page 3 of 3  
Certified Laboratories

825 Arnold Dr., Suite 114 • Martinez, California 94553 • (510) 313-0850 / fax (510) 227-1570



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: J.GOLDMAN

Project 50102-001-01  
Reported 10-August-1994

ANALYSIS FOR SOLUBLE LEAD  
by EPA Method 1311 & SW-846 6010  
Extraction by Toxicity Characteristic Leachate Procedure

Chronology

Laboratory Number 92280

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
SB-1F	07/26/94	08/01/94	08/04/94	08/04/94		1
SB-2F	07/26/94	08/01/94	08/04/94	08/04/94		2



SEACOR  
Attn: J.GOLDMAN

Project 50102-001-01  
Reported 10-August-1994

ANALYSIS FOR SOLUBLE LEAD

Laboratory Number	Sample Identification	Matrix
92280- 1	SB-1F	Water
92280- 2	SB-2F	Water

RESULTS OF ANALYSIS

Laboratory Number: 92280- 1 92280- 2

Soluble Lead (Pb): ND<0.5 ND<0.5  
Concentration: mg/L mg/L



# Superior Precision Analytical, Inc.

A member of ~~ESSCON Environmental Support Service Consortium~~  
ANALYSIS FOR SOLUBLE LEAD

Quality Assurance and Control Data - Water

Laboratory Number 92280

Compound	Method Blank (mg/L)	RL (mg/L)	Spike Recovery (%)	Limits (%)	RPD (%)
Soluble Lead (Pb):	ND<0.5	0.5	88/81	75-125	8%

Definitions:  
 ND = Not Detected  
 RPD = Relative Percent Difference  
 RL = Reporting Limit  
 mg/L = Parts per million (ppm)  
 Q File No. 92280

---

Senior Chemist  
 Account Manager

02280

# SEACOR Chain-of-Custody Record

Address  
 90 NEW MONTGOMERY ST  
 # 620  
 SAN FRANCISCO, CA 94105

Project # 51102-001-01 Task # 00  
 Project Manager JONATHAN FOUQUAIS  
 Laboratory SUPERIOR  
 Turn-around time: N/A

## Analysis Request

Sampler's Name: SANDRA E. BELNI  
 Sampler's Signature: Sandra E. Belni

Sample ID	Date	Time	Matrix	TPHs/PHEs 8015 (modified)/8020	TPHd + motor oil 8015 (modified)	TPH 4IR.1	Aromatic Volatiles 602/8020	Volatile Organics 624/8240 (GC/MS)	Halogenated Volatiles 601/8010	Semi-volatile Organics 625/8270 (GC/MS)	Pesticides/PCB's 608/8080	Total Lead 7421	Priority Pollutant Metals (13)	TCLP Metals	TDS (PRE-FILTER IN LAB)	Comments/ Instructions	Number of Containers
SB-3	7-21-98		WASTE	X	X							X				HOLD FOR ANALYSIS FIELD FILTERS	6
SB-1F												X		X			1
SB-2F												X		X			1
SB-3F												X		X			1
Please initial: <u>MB</u> <u>2 GC</u> Samples Stored in ice: <u>YES</u> Appropriate containers: <u>YES</u> Samples preserved: <u>YES</u> VOA's without headspace: <u>N/A</u> Comments: <u>2 - BAGS OF WATERS REQUIRED</u>																	

Special Instructions/Comments:  
 PLEASE LAB FILTER  
 SAMPLES SB-1F, &  
 SB-2F, & ~~SB-3F~~ PRIOR  
 TO ANALYZING.  
 ANALYZE SB-1F, SB-2F,  
 & ~~SB-3F~~ @ a 24-hr. TA.

Relinquished by:  
 Sign Sandra E. Belni  
 Print SANDRA BELNI  
 Company SEACOR  
 Time 1000 Date 7-27-98

Received by:  
 Sign \_\_\_\_\_  
 Print \_\_\_\_\_  
 Company \_\_\_\_\_  
 Time \_\_\_\_\_ Date \_\_\_\_\_

Relinquished by:  
 Sign \_\_\_\_\_  
 Print \_\_\_\_\_  
 Company \_\_\_\_\_  
 Time \_\_\_\_\_ Date \_\_\_\_\_

Received by:  
 Sign [Signature]  
 Print PAUL OR  
 Company SPACE  
 Time 1000 Date 7/27/98

## Sample Receipt

Total no. of containers: 9  
 Chain of custody seals: N/A  
 Rec'd good condition/cold: Y/48  
 Conforms to record: YES

Client: \_\_\_\_\_  
 Client Contact: \_\_\_\_\_  
 Client Phone Number: \_\_\_\_\_

**LABORATORY ANALYSIS REPORTS FOR SELECTED SOIL SAMPLES**



# Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

SEACOR  
Attn: XIAOXIA ZHU

Project 50102-001-02  
Reported 13-June-1994

ANALYSIS FOR TOTAL LEAD  
by EPA Method SW-846 6010

Chronology

Laboratory Number 58207

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
SB-22-6	04/07/94	06/08/94	06/10/94	06/13/94		1
SB-22-10	04/07/94	06/08/94	06/10/94	06/13/94		2
SB-15-12	04/06/94	06/08/94	06/10/94	06/13/94		3
SB-6-1	04/05/94	06/08/94	06/10/94	06/13/94		4
SB-6-4.5	04/05/94	06/08/94	06/10/94	06/13/94		5

RECEIVED

JUN 17 1994



# Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

SEACOR  
Attn: XIAOXIA ZHU

Project 50102-001-02  
Reported 13-June-1994

## ANALYSIS FOR TOTAL LEAD

Laboratory Number	Sample Identification	Matrix
58207- 1	SB-22-6	Soil
58207- 2	SB-22-10	Soil
58207- 3	SB-15-12	Soil
58207- 4	SB-6-1	Soil
58207- 5	SB-6-4.5	Soil

## RESULTS OF ANALYSIS

Laboratory Number:	58207- 1	58207- 2	58207- 3	58207- 4	58207- 5
TOTAL LEAD:	22000	11	7	5800	57
Concentration:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg





# Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

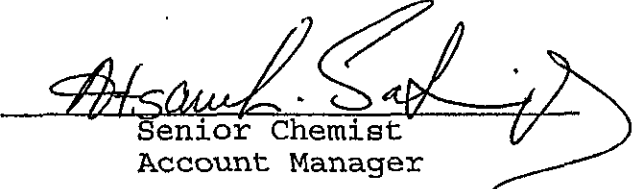
## ANALYSIS FOR TOTAL LEAD Quality Assurance and Control Data - Soil

Laboratory Number 58207

Compound	Method Blank (mg/Kg)	RL (mg/Kg)	Spike Recovery (%)	Limits (%)	RPD (%)
TOTAL LEAD:	ND<5	5	88/84	75-125	5%

### Definitions:

ND = Not Detected  
RPD = Relative Percent Difference  
RL = Reporting Limit  
mg/Kg = Parts per million (ppm)  
QC File No. 58207

  
Senior Chemist  
Account Manager

Superior Precision Analytical  
 1555 Burke Street, Unit I  
 San Francisco, CA 94124  
 Phone: (415) 647-2081 Fax: (415) 821-7123  
 Contact:

TURN AROUND TIME  
 Same Day 72 Hrs.  
 24 Hrs. 48 Hrs.  
5 Day 10 Day

Bill To:  
 Superior Precision Analytical Inc.  
 P.O. Box 1545  
 Martinez, California 94553

Project No.: \_\_\_\_\_ P.O. No. \_\_\_\_\_

Analysis Request

Work Subcontracted to: Martinez

Laboratory Sample ID	Client Sample ID	S-Soil A-Air W-Water	Reactivity	CAM 17	Metals	COB	Ammobila	TOC	1. Total suspended solids	8010	Total pb (6010)	Date Sampled	# of Containers	Preservatives	COMMENTS
58207-1	SB-22-6	S									X	4/8/94	1		<input type="checkbox"/> Please fax invoice or quote ASAP <input checked="" type="checkbox"/> Please fax results to Superior, San Francisco <input checked="" type="checkbox"/> Please fax results to our client (see attached COC)
-2	SB-22-10										X	4/07/94	1		
-3	SB-15-12										X	4/06/94	1		
-4	SB-6-1										X	4/05/94	1		
-5	SB-6-4.5	S									X	4/05/94	1		

Relinquished By: Dawn A. Mroga  
 Organization: Superior SF

Relinquished By: \_\_\_\_\_  
 Organization: \_\_\_\_\_

Relinquished By: \_\_\_\_\_  
 Organization: \_\_\_\_\_

Date Time  
4/18/94 8:10  
 am/pm

Date Time  
 / / :  
 am/pm

Date Time  
 / / :  
 am/pm

Received By: \_\_\_\_\_  
 Organization: \_\_\_\_\_

Received By: \_\_\_\_\_  
 Organization: \_\_\_\_\_

Received By: L. Carleton  
 Organization: SAF MTC2

Date Time  
 / / :  
 am/pm

Date Time  
 / / :  
 am/pm

Date Time  
4/19/94 9:00  
 am/pm

Lab - Please initial the following:

Samples Stored in Ice: OK 6°C

Appropriate Containers: \_\_\_\_\_

Samples Preserved: \_\_\_\_\_

VOAs without headspace: \_\_\_\_\_

Comments: 5 CONT.



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: Xiaoxia Zhu

Project 50102-001-02  
Reported 11-June-1994

EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

## Chronology

Laboratory Number 58207

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
SB-22-6	04/07/94	06/08/94	06/09/94	06/10/94		1
SB-22-10	04/07/94	06/08/94	06/09/94	06/10/94		2
SB-15-12	04/06/94	06/08/94	06/09/94	06/10/94		3
SB-6-1	04/05/94	06/08/94	06/09/94	06/10/94		4
SB-6-4.5	04/05/94	06/08/94	06/09/94	06/10/94		5



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: Xiaoxia Zhu

Project 50102-001-02  
Reported 11-June-1994

## EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Laboratory Number	Sample Identification	Matrix
58207- 1	SB-22-6	Soil
58207- 2	SB-22-10	Soil
58207- 3	SB-15-12	Soil
58207- 4	SB-6-1	Soil
58207- 5	SB-6-4.5	Soil

### RESULTS OF ANALYSIS

Laboratory Number:	58207- 1	58207- 2	58207- 3	58207- 4	58207- 5
--------------------	----------	----------	----------	----------	----------

bis(2-chloroethyl) ethe:	ND<500	ND<3000	ND<300	ND<500	ND<3000
aniline:	ND<500	ND<3000	ND<300	ND<500	ND<3000
phenol:	ND<500	ND<3000	ND<300	ND<500	ND<3000
2-chlorophenol:	ND<500	ND<3000	ND<300	ND<500	ND<3000
1,3-dichlorobenzene:	ND<500	ND<3000	ND<300	ND<500	ND<3000
1,4-dichlorobenzene:	ND<500	ND<3000	ND<300	ND<500	ND<3000
1,2-dichlorobenzene:	ND<500	ND<3000	ND<300	ND<500	ND<3000
benzyl alcohol:	ND<500	ND<3000	ND<300	ND<500	ND<3000
bis-(2-chloroisopropyl):	ND<500	ND<3000	ND<300	ND<500	ND<3000
2-methylphenol:	ND<500	ND<3000	ND<300	ND<500	ND<3000
hexachloroethane:	ND<500	ND<3000	ND<300	ND<500	ND<3000
n-nitroso-di-n-propyla:	ND<500	ND<3000	ND<300	ND<500	ND<3000
4-methylphenol:	ND<500	ND<3000	ND<300	ND<500	ND<3000
nitrobenzene:	ND<500	ND<3000	ND<300	ND<500	ND<3000
isophorone:	ND<500	ND<3000	ND<300	ND<500	ND<3000
2-nitrophenol:	ND<500	ND<3000	ND<300	ND<500	ND<3000
2,4-dimethylphenol:	ND<500	ND<3000	ND<300	ND<500	ND<3000
bis(2-chloroethoxy)met:	ND<500	ND<3000	ND<300	ND<500	ND<3000
2,4-dichlorophenol:	ND<500	ND<3000	ND<300	ND<500	ND<3000
1,2,4-trichlorobenzene:	ND<500	ND<3000	ND<300	ND<500	ND<3000
naphthalene:	ND<500	ND<3000	ND<300	ND<500	ND<3000
benzoic acid:	ND<500	ND<3000	ND<300	ND<500	ND<3000
4-chloroaniline:	ND<500	ND<3000	ND<300	ND<500	ND<3000
hexachlorobutadiene:	ND<500	ND<3000	ND<300	ND<500	ND<3000
4-chloro-3-methylpheno:	ND<500	ND<3000	ND<300	ND<500	ND<3000
2-methyl-naphthalene:	ND<500	ND<3000	ND<300	ND<500	ND<3000
hexaclorocyclopentadie:	ND<500	ND<3000	ND<300	ND<500	ND<3000
2,4,6-trichlorophenol:	ND<500	ND<3000	ND<300	ND<500	ND<3000
2,4,5-trichlorophenol:	ND<500	ND<3000	ND<300	ND<500	ND<3000

Concentration:	mg/kg	ug/kg	ug/kg	mg/kg	ug/kg
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Page 2 of 7

Certified Laboratories



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: Xiaoxia Zhu

Project 50102-001-02  
Reported 11-June-1994

## EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Laboratory Number	Sample Identification	Matrix
58207- 1	SB-22-6	Soil
58207- 2	SB-22-10	Soil
58207- 3	SB-15-12	Soil
58207- 4	SB-6-1	Soil
58207- 5	SB-6-4.5	Soil

### RESULTS OF ANALYSIS

Laboratory Number:	58207- 1	58207- 2	58207- 3	58207- 4	58207- 5
2-chloronaphthalene:	ND<500	ND<3000	ND<300	ND<500	ND<3000
2-nitroaniline:	ND<500	ND<3000	ND<300	ND<500	ND<3000
acenaphthylene:	ND<500	ND<3000	ND<300	ND<500	ND<3000
dimethylphthlate:	ND<500	ND<3000	ND<300	ND<500	ND<3000
2,6-dinitrotoluene:	ND<500	ND<3000	ND<300	ND<500	ND<3000
acenaphthene:	ND<500	ND<3000	ND<300	ND<500	ND<3000
3-nitroaniline:	ND<500	ND<3000	ND<300	ND<500	ND<3000
2,4-dinitrophenol:	ND<500	ND<3000	ND<300	ND<500	ND<3000
dibenzofuran:	ND<500	ND<3000	ND<300	ND<500	ND<3000
2,4-dinitrotoluene:	ND<500	ND<3000	ND<300	ND<500	ND<3000
4-nitrophenol:	ND<500	ND<3000	ND<300	ND<500	ND<3000
fluorene:	ND<500	ND<3000	ND<300	ND<500	ND<3000
4-chlorophenyl-phenyle:	ND<500	ND<3000	ND<300	ND<500	ND<3000
diethylphthlate:	ND<500	ND<3000	ND<300	ND<500	ND<3000
4-nitroaniline:	ND<500	ND<3000	ND<300	ND<500	ND<3000
4,6-dinitro-2-methylph:	ND<500	ND<3000	ND<300	ND<500	ND<3000
n-nitrosodiphenylamine:	ND<500	ND<3000	ND<300	ND<500	ND<3000
4-bromo-phenyl-phenyle:	ND<500	ND<3000	ND<300	ND<500	ND<3000
hexachlorobenzene:	ND<500	ND<3000	ND<300	ND<500	ND<3000
pentachlorophenol:	ND<500	ND<3000	ND<300	ND<500	ND<3000
phenanthrene:	ND<500	ND<3000	ND<300	ND<500	ND<3000
anthracene:	ND<500	ND<3000	ND<300	ND<500	ND<3000
di-n-butylphthlate:	ND<500	ND<3000	ND<300	ND<500	ND<3000
fluoranthene:	ND<500	ND<3000	ND<300	ND<500	ND<3000
benzidine:	ND<500	ND<3000	ND<300	ND<500	ND<3000
pyrene:	ND<500	ND<3000	ND<300	ND<500	ND<3000
butylbenzylphthlate:	ND<500	ND<3000	ND<300	ND<500	ND<3000
3,3'-dichlorobenzidine:	ND<500	ND<3000	ND<300	ND<500	ND<3000
benzo[a]anthracene:	ND<500	ND<3000	ND<300	ND<500	ND<3000

Concentration:	mg/kg	ug/kg	ug/kg	mg/kg	ug/kg
----------------	-------	-------	-------	-------	-------



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

SEACOR  
Attn: Xiaoxia Zhu

Project 50102-001-02  
Reported 11-June-1994

## EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Laboratory Number	Sample Identification	Matrix
58207- 1	SB-22-6	Soil
58207- 2	SB-22-10	Soil
58207- 3	SB-15-12	Soil
58207- 4	SB-6-1	Soil
58207- 5	SB-6-4.5	Soil

### RESULTS OF ANALYSIS

Laboratory Number:	58207- 1	58207- 2	58207- 3	58207- 4	58207- 5
chrysene:	ND<500	ND<3000	ND<300	ND<500	ND<3000
bis(2-ethylhexyl)phtha:	ND<500	ND<3000	ND<300	ND<500	ND<3000
di-n-octylphthalate:	ND<500	ND<3000	ND<300	ND<500	ND<3000
benzo(b,k)fluoranthene:	ND<500	ND<3000	ND<300	ND<500	ND<3000
benzo[a]pyrene:	ND<500	ND<3000	ND<300	ND<500	ND<3000
indeno[1,2,3-cd]pyrene:	ND<500	ND<3000	ND<300	ND<500	ND<3000
dibenzo[a,h]anthracene:	ND<500	ND<3000	ND<300	ND<500	ND<3000
benzo[g,h,i]perylene:	ND<500	ND<3000	ND<300	ND<500	ND<3000
Concentration:	mg/kg	ug/kg	ug/kg	mg/kg	ug/kg
-- Surrogate % Recoveries --					
2-fluorophenol:	101	83	66	53	89
phenol-d6:	100	88	74	52	94
nitrobenzene-d5:	100	76	69	52	73
2-fluorobiphenyl:	111	92	78	77	88
2,4,6-tribromophenol:	130*	105	84	58	91
terphenyl-d14:	142*	101	80	89	108

\*=Matrix Interference



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

EPA SW-846 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS  
Quality Assurance and Control Data - Soil

Laboratory Number 58207

Compound	Method Blank (ug/kg)	RL (ug/kg)	Spike Recovery (%)	Limits (%)	RPD (%)
bis(2-chloroethyl) ethe:	ND<300	300			
aniline:	ND<300	300			
phenol:	ND<300	300	73/76	44-107	4%
2-chlorophenol:	ND<300	300	77/80	44-107	4%
1,3-dichlorobenzene:	ND<300	300			
1,4-dichlorobenzene:	ND<300	300	71/73	32-115	3%
1,2-dichlorobenzene:	ND<300	300			
benzyl alcohol:	ND<300	300			
bis-(2-chloroisopropyl):	ND<300	300			
2-methylphenol:	ND<300	300			
hexachloroethane:	ND<300	300			
n-nitroso-di-n-propyla:	ND<300	300	78/85	40-123	9%
4-methylphenol:	ND<300	300			
nitrobenzene:	ND<300	300			
isophorone:	ND<300	300			
2-nitrophenol:	ND<300	300			
2,4-dimethylphenol:	ND<300	300			
bis(2-chloroethoxy)met:	ND<300	300			
2,4-dichlorophenol:	ND<300	300			
1,2,4-trichlorobenzene:	ND<300	300	77/80	40-104	4%
naphthalene:	ND<300	300			
benzoic acid:	ND<300	300			
4-chloroaniline:	ND<300	300			
hexachlorobutadiene:	ND<300	300			
4-chloro-3-methylpheno:	ND<300	300	81/86	47-113	6%
2-methyl-naphthalene:	ND<300	300			
hexafluorocyclopentadie:	ND<300	300			
2,4,6-trichlorophenol:	ND<300	300			
2,4,5-trichlorophenol:	ND<300	300			



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Compound	Method Blank (ug/kg)	RL (ug/kg)	Spike Recovery (%)	Limits (%)	RPD (%)
2-chloronaphthalene:	ND<300	300			
2-nitroaniline:	ND<300	300			
acenaphthylene:	ND<300	300			
dimethylphthlate:	ND<300	300			
2,6-dinitrotoluene:	ND<300	300			
acenaphthene:	ND<300	300	81/85	43-110	5%
3-nitroaniline:	ND<300	300			
2,4-dinitrophenol:	ND<300	300			
2-benzofuran:	ND<300	300			
2,4-dinitrotoluene:	ND<300	300	60/68	35-100	13%
4-nitrophenol:	ND<300	300	74/85	36-117	14%
fluorene:	ND<300	300			
4-chlorophenyl-phenyle:	ND<300	300			
diethylphthlate:	ND<300	300			
4-nitroaniline:	ND<300	300			
4,6-dinitro-2-methylph:	ND<300	300			
n-nitrosodiphenylamine:	ND<300	300			
4-bromo-phenyl-phenyle:	ND<300	300			
hexachlorobenzene:	ND<300	300			
pentachlorophenol:	ND<300	300	85/94	20-122	10%
phenanthrene:	ND<300	300			
anthracene:	ND<300	300			
di-n-butylphthlate:	ND<300	300			
fluoranthene:	ND<300	300			
benzidine:	ND<300	300			
pyrene:	ND<300	300	87/94	62-117	8%
butylbenzylphthlate:	ND<300	300			
2,3'-dichlorobenzidine:	ND<300	300			
benzo[a]anthracene:	ND<300	300			





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Laboratory Number 58207

Compound	Method Blank (ug/kg)	RL (ug/kg)	Spike Recovery (%)	Limits (%)	RPD (%)
chrysene:	ND<300	300			
bis(2-ethylhexyl)phtha:	ND<300	300			
di-n-octylphthalate:	ND<300	300			
benzo(b,k)fluoranthene:	ND<300	300			
benzo[a]pyrene:	ND<300	300			
indeno[1,2,3-cd]pyrene:	ND<300	300			
dibenzo[a,h]anthracene:	ND<300	300			
benzo[g,h,i]perylene:	ND<300	300			
2-fluorophenol:	59			25-121	
phenol-d6:	67			24-113	
nitrobenzene-d5:	52			23-120	
2-fluorobiphenyl:	62			30-115	
2,4,6-tribromophenol:	71			19-122	
terphenyl-d14:	74			18-137	

### Definitions:

ND = Not Detected  
 RPD = Relative Percent Difference  
 RL = Reporting Limit  
 ug/kg = Parts per billion (ppb)  
 QC File No. 58207

Senior Chemist  
 Account Manager

# SEACOR Chain-of-Custody Record

Address: SEACOR  
90 New Montgomery, #620  
San Francisco, CA 94105

Project # 50102-001-02 Task # —  
 Project Manager Xiaoxia Zhu  
 Laboratory Superior  
 Turn-around time: 5 days  
 Sampler's Name: SEACOR  
 Sampler's Signature: \_\_\_\_\_

## Analysis Request

Sample ID	Date	Time	Matrix	TPHg/BTEX 8015 (modified)/8020	TPHd 8015 (modified)	TPH 418.1	Aromatic Volatiles 602/8020	Volatile Organics 624/8240 (GC/MS)	Halogenated Volatiles 601/8010	Semi-volatile Organics 626/8270 (GC/MS)	Pesticides/PCB's 608/8080	Total Lead 604/6010	Priority Pollutant Metals (13)	TCLP Metals	Comments/ Instructions	Number of Containers
SB-22-6	4/7/94		S							X		X				1
SB-22-10	4/7/94		S							X		X				1
SB-15-12	4/6/94		S							X		X				1
SB-6-1	4/5/94		S							X		X				1
SB-6-4.5	4/5/94		S							X		X				1
SB-6-2.5	4/5/94		S											N/A hold		
SB-22-8	4/7/94		S											N/A		
SB-3-7.5	4/5/94		S											N/A		
SB-3-10.5	4/5/94		S											N/A		

Special Instructions/Comments:

Relinquished by:  
 Sign Xiaoxia Zhu  
 Print Xiaoxia Zhu  
 Company SEACOR  
 Time \_\_\_\_\_ Date 6/8/94

Received by:  
 Sign Virginia Brown  
 Print Virginia Brown  
 Company AERO  
 Time 3:58 Date 6-8-94

**Sample Receipt**

Total no. of containers \_\_\_\_\_  
 Chain of custody seals: \_\_\_\_\_  
 Rec'd good condition/cold: \_\_\_\_\_  
 Conforms to record: \_\_\_\_\_

Relinquished by:  
 Sign Dorothy Kersman  
 Print Dorothy Kersman  
 Company SEACOR  
 Time 3:58 Date 6/8/94

Received by:  
 Sign Onij A Nwogu  
 Print Onij A Nwogu  
 Company SUPERIOR SF  
 Time 4:45 Date 6/8/94

SEACOR

Client: Xiaoxia Zhu  
 Client Contact: (415) 882-1548  
 Client Phone Number: \_\_\_\_\_

Relinquished: Virginia Brown  
445-6894



# Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

Xiaoxia Zhu  
Seacor  
90 New Montgomery St. #620  
San Francisco, CA. 94105

July 1, 1994

Dear Xiaoxia,

This is in regards to our conversation about 8270 analyses for Seacor's project 50102-001-02. The detection limits were increased significantly for samples designated as SB-22-6 and SB-6-1. This was due to matrix interferences resulting from large concentrations of heavy hydrocarbons (oil and grease) in the samples.

Xiaoxia, if you have any questions please give me a call at (415) 647-2081.

Best regards,

Richard Phaler  
Senior Chemist  
Account Manager

Certified Laboratories

1555 Burke St., Unit 1 • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123