

Rec'd 8/17/94

August 17, 1994

SEACOR
Science & Engineering
Analysis Corporation

BY COURIER

Barney Chan
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Second Floor
Alameda, California 94502

Dr. Ravi Arulanantham
Staff Toxicologist
California Regional Water Quality Control Board, San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland, California 94612

Transmittal of Tar-Like Substance, Fill Soil and Shallow Groundwater Monitoring Well Analytical Results and Conclusions


Dear Mr. Chan and Dr. Arulanantham:

Attached please find a copy of a letter report prepared by the Science & Engineering Analysis Corporation (*SEACOR*) and submitted for your review on behalf of Coliseum Way 8000, Inc. The attached has been prepared on the basis of guidance received during our meeting of July 27, 1994.

Please call me if you have any questions.

Sincerely yours,

Science & Engineering Analysis Corporation



Jonathon C. Goldman, P.E.
Principal Civil Engineer

JCG:jg

Distribution:

- Meng, Zhaokun -- **Coliseum Way 8000, Inc.**
- Robert Quintella -- **Oakland-Alameda County Coliseum Complex**

CW4.TMT
50102-001-01

August 17, 1994

SEACOR
Science & Engineering
Analysis Corporation

Meng, Zhaokun
Coliseum Way 8000, Inc.
1411 Harbor Bay Parkway, Suite 2008
Alameda, California 94501

**Tar-Like Substance, Soil, and
Shallow Groundwater Monitoring Well Sample Analytical Results and Conclusions
Coliseum Way Site
Oakland, California**

Dear Mr. Meng:

With your authorization, samples of the tar-like substance, fill soils, and shallow groundwater were collected from locations in the northeastern portion of the property owned by Coliseum Way 8000, Inc. at 8000 South Coliseum Way in Oakland, California (the Site). These locations were selected on the basis of proximity to borings installed previously by Science & Engineering Analysis Corporation (*SEACOR*) and the visible presence of tar-like substance on the ground surface at or near those locations. The sample of the tar-like substance was collected at the ground surface in conjunction with sampling by Mr. Barney Chan of the Alameda County Department of Environmental Health (ACDEH).

The laboratory analytical methods performed on the samples collected 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. That meeting was attended on behalf of Coliseum Way 8000, Inc. by Ms. Judy Chu of Goodjob Properties, and Xiao Xia Zhu and Jonathon Goldman of *SEACOR*.

The results of the laboratory analyses of the samples with emphasis on chemicals detected are summarized in the following tables and discussed below. The laboratory analysis reports are attached for reference.

Results of Tar-Like Substance Analyses

As indicated on Table 1, results of analysis of the tar-like substance sample 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 milligrams per kilogram (mg/kg).

CW8ST4.RPT
50102-001-01

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

*not sole source of
 ↓ lead contamination*

TPHg ⁽¹⁾ (mg/Kg) ⁽²⁾	TPHd ⁽³⁾ (mg/Kg)	TPHmo ⁽⁴⁾ (mg/Kg)	Benzene / Toluene / Ethyl- benzene / Xylenes ⁽⁵⁾ (mg/Kg)	Benzene / Toluene / Ethyl- benzene / Xylenes ⁽⁶⁾ (mg/Kg)	Total Lead ⁽⁷⁾ (mg/Kg)	PCBs ⁽⁸⁾ (mg/Kg)	Phenanthrene ⁽⁹⁾ (mg/Kg)
80	180,000 <i>18%</i>	670,000 <i>67%</i>	2.0 / 6.3 / 2.8 / 11	2.1 / 5.1 / 3 / 6.3	<u>2,000</u>	7.0	600

Notes:

TCL - 100 50ppm

- (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).

Results of Soil Sample Analyses

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 soil sample (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 soil sample SB-32-4.5. As indicated on Table 2, only low levels of substance constituents were detected in the soil sample analyzed. 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.

Results of Shallow Groundwater Sample Analyses

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. All borings and wells were completed under permits issued by the Alameda County Zone 7 Water Agency. The shallow monitoring well which produces water is denoted as MW-19 on Figure 1. 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. The following laboratory analyses were performed on one of the sets of shallow groundwater samples collected:

- 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

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

Sample Number	TPHg ⁽¹⁾ (mg/kg) ⁽²⁾	Benzene ⁽³⁾ (mg/kg)	Toluene ⁽³⁾ (mg/kg)	Ethylbenzene ⁽³⁾ (mg/kg)	Total Xylenes ⁽³⁾ (mg/kg)	Method 8270 ⁽⁴⁾ (mg/kg)	Aroclor 1260 (PCBs) ⁽⁵⁾ (mg/kg)
SB-32-4.5'	ND < 1	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.
- (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).

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

Sample Number	TPHg ⁽¹⁾ (ug/l) ⁽²⁾	TPHd ⁽³⁾ (ug/l)	TPHmo ⁽⁴⁾ (ug/l)	Methylene Chloride ⁽⁵⁾ (ug/l)	Other Method 8240 ⁽⁶⁾ (ug/l)	Dissolved Lead ⁽⁷⁾ (ug/l)	Method 8080 (PCBs) ⁽⁸⁾ (ug/l)	Method 8270 ⁽⁹⁾ (ug/l)	TDS ⁽¹⁰⁾ (mg/l) ⁽¹¹⁾
MW-19-2	ND < 50	1,100	1,200	6 (B)	ND < 5	ND < 3	ND < 1	ND <	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).
 (11) mg/l: Milligrams per liter.

the shallow groundwater 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.

The TDS concentration of more than 9,200 milligram per liter (mg/l) 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.

Conclusions

On the basis of available information, the property immediately adjacent to the Site on the east (upgradient) is the subject of ongoing investigation regarding possible releases of diesel fuel, gasoline, and waste oil. In the absence of dissolved constituents known to be associated with the tar-like substance (which would be expected to be at least as mobile as diesel fuel and related heavy hydrocarbons in the aqueous environment), the TPH detected in the shallow groundwater sample analyzed is likely a result of offsite release(s).

Therefore, management of the tar-like substance in-place is an appropriate measure for protection of public health and the environment. A final plan for such management is in preparation and will be submitted to you at the earliest possible convenience. The plan will include the requirement that a deed notice be recorded (1) informing all future owners of the Site of the known presence and potentially hazardous characteristics of the tar-like substance, and (2) establishing the need for notification of the ACDEH and provision of worker and community health and safety plans in the event that Site soils will be disturbed by demolition, excavation or construction activities.

Meng, Zhaokun
Coliseum Way 8000, Inc.
August 17, 1994
Page 7

Please call me if you have any questions.

Sincerely yours,

Science & Engineering Analysis Corporation

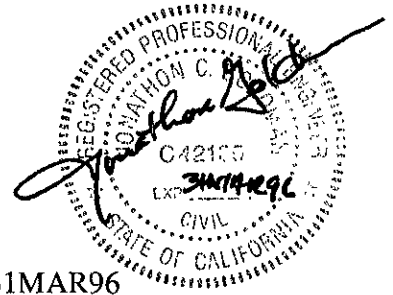


Jonathon C. Goldman, P.E.
Principal Civil Engineer

JCG:jg

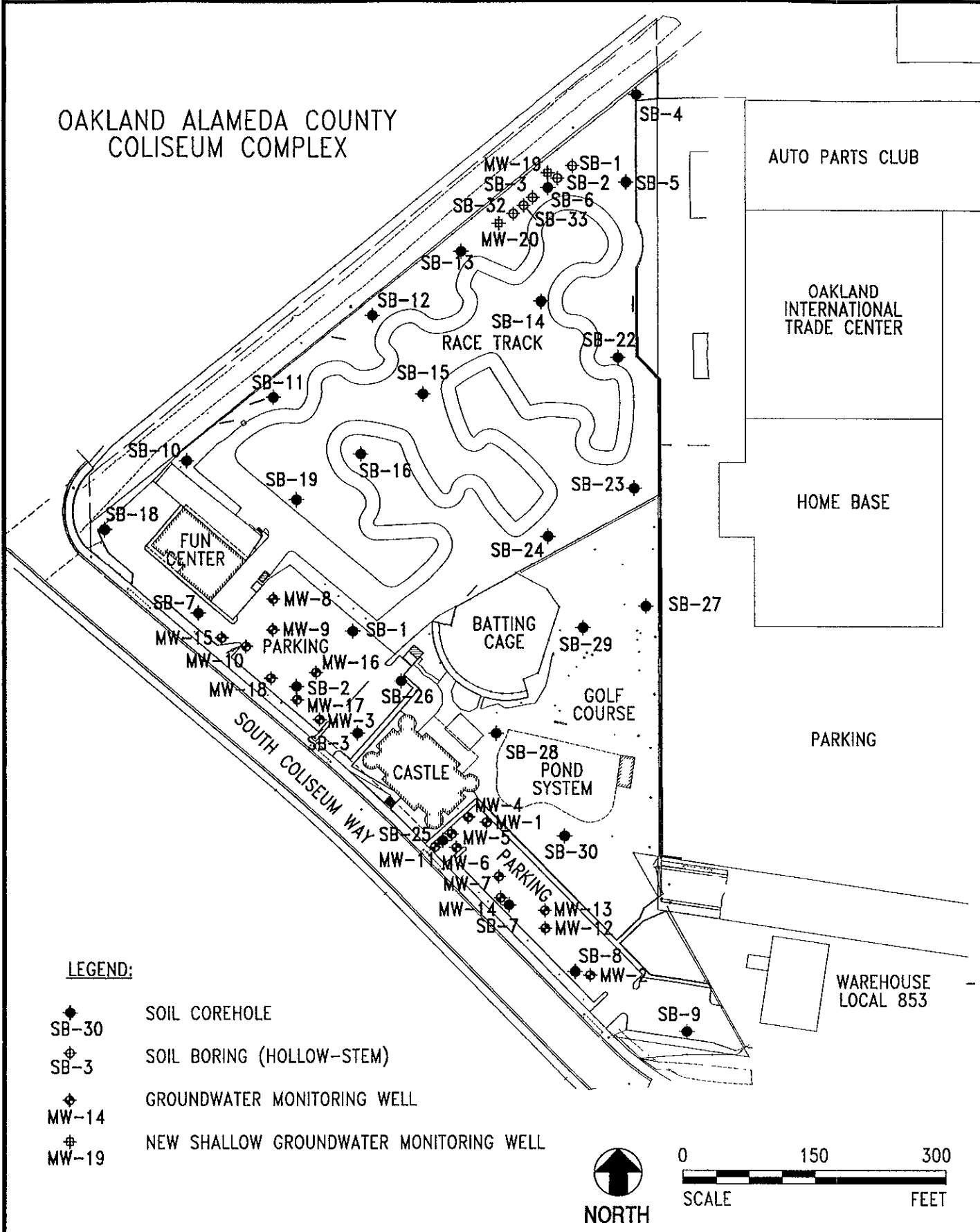
Attachments: Laboratory Analysis Reports

SEAL:



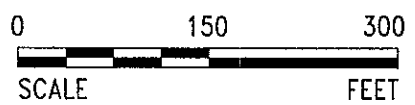
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Expires 31MAR96

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



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SEACOR
ENVIRONMENTAL
ENGINEERING

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

FIGURE 1
MALIBU GRAND PRIX
8000 SOUTH COLISEUM WAY
OAKLAND, CALIFORNIA
**SOIL BORING AND GROUNDWATER
MONITORING WELL LOCATIONS**

Attachment to *SEACOR*'s letter to
Meng, Zhaokun
Coliseum Way 8000, Inc.
dated August 17, 1994

ATTACHMENT A
LABORATORY ANALYSIS REPORTS FOR SAMPLE OF TAR-LIKE
SUBSTANCE

**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 #
U-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.GOLDMAN

Project 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 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



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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



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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%
t-1,3-Dichloropropene:	ND<15	15			
Bromoform:	ND<15	15			
4-Methyl-2-Pentanone:	ND<50	50			
2-Hexanone:	ND<50	50			



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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.

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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

bis(2-chloroethyl)ethane: 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-propylamine: ND<500
 4-methylphenol: ND<500
 nitrobenzene: ND<500
 isophorone: ND<500
 2-nitrophenol: ND<500
 2,4-dimethylphenol: ND<500
 bis(2-chloroethoxy)methane: 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-methylphenol: ND<500
 2-methyl-naphthalene: ND<500
 hexachlorocyclopentadiene: ND<500
 2,4,6-trichlorophenol: ND<500
 2,4,5-trichlorophenol: ND<500

Concentration: mg/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 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.

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			
hexaolorocyclopentadie:	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 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:	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:	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. Joaguis 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. 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 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 GOLDMANProject 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:	180,000	18%
Motor Oil Range:	670,000	67%
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. Joagum 7/29/94
Senior Chemist
Account Manager

Attachment to *SEACOR*'s letter to
Meng, Zhaokun
Coliseum Way 8000, Inc.
dated August 17, 1994

ATTACHMENT C
LABORATORY ANALYSIS REPORTS FOR GROUNDWATER SAMPLE
FROM SHALLOW MONITORING WELL



ANAMETRIX, INC.

1961 Concourse Dr. San Jose, CA. 95131
Phone: (408) 432-8192 Fax: (408) 432-8198

METHOD 608/8080 VERBAL REPORT FORM (BENCH SHEET)

LK
8-15-94

WORKORDER: 9408097

PROJECT I.D.: 50102.001.01

UNITS: µg/L

CAS NO.	COMPOUND	R.L. WATER UG/L	R.L. SOIL UG/KG	SAMPLE I.D.				
				MW-19-2				
319-84-6	alpha-BHC	.050	1.7	ND				
319-85-7	beta-BHC	.050	1.7					
319-86-8	delta-BHC	.050	1.7					
319-87-9	gamma-BHC	.050	1.7					
76-44-8	Heptachlor	.050	1.7					
309-00-2	Aldrin	.050	1.7					
1024-57-3	Heptachlor epoxide	.050	1.7					
959-98-8	Endosulfan I	.050	1.7					
60-57-1	Dieldrin	.10	3.3					
72-55-9	4,4'-DDE	.10	3.3					
72-20-8	Endrin	.10	3.3					
33213-65-9	Endosulfan II	.10	3.3					
72-54-8	4,4'-DDD	.10	3.3					
1031-07-8	Endosulfan sulfate	.10	3.3					
50-29-3	4,4'-DDT	.10	3.3					
72-43-5	Methoxychlor	.50	17					
53494-70-5	Endrin ketone	.10	3.3					
7421-33-4	Endrin aldehyde	.10	3.3					
8001-35-2	Toxaphene	5.0	170					
12674-11-2	Aroclor 1016	1.0	33					
11104-28-2	Aroclor 1221	2.0	67					
11141-16-5	Aroclor 1232	1.0	33					
53469-21-9	Aroclor 1242	1.0	33					
12672-29-6	Aroclor 1248	1.0	33					
11097-69-1	Aroclor 1254	1.0	33					
11096-82-5	Aroclor 1260	1.0	33					
12789-03-6	Technical chlordane	1.0	33	↓				

% SURROGATE RECOVERY (DCB)	(33-126) (46-151)	55%				
DILUTION FACTOR	None					
INSTRUMENT I.D.	HP22					
DATE ANALYZED	8/12/94					

ANALYST: Jelink **DATE:** 8/15/94

PAGE | OF |

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 Baerman 8/12/94
Department Supervisor Date

CRP 08/12/94
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS AS DIESEL
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	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 08/12/94
Analyst Date

Cheyl Balmer 8/10/94
Supervisor 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.

CRlat
Analyst
08/12/94
Date

Cheryl Salinas
Supervisor
8/12/94
Date



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 "A", 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 "A", 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.

PC/3374

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.
- Recovery of several compounds in the LCS and LCSD are outside QC limits. The LCS and LCSD will be reanalyzed and if still outside QC limits, the batch will be reextracted and analyzed.

David L. Schermy 8/12/94
Department Supervisor Date

Shirley Wright 8/12/94
Chemist Date

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

Anametrix ID : 9408097-02
Analyst : GV
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 : GJ
 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 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 : ~~M~~
Supervisor : ~~DL~~
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

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 Analytes, 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

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 : *MW*
 Supervisor : *MW*
 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 :
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.

Attachment to *SEACOR*'s letter to
Meng, Zhaokun
Coliseum Way 8000, Inc.
dated August 17, 1994

ATTACHMENT B
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 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 ZhuProject 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

Laboratory Number: RESULTS OF ANALYSIS
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.

A member of ESSECON 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)eth: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
 hexaclorocyclopentadie:ND<3000
 2,4,6-trichlorophenol: ND<3000
 2,4,5-trichlorophenol: ND<3000

Concentration: ug/kg



Superior Precision Analytical, Inc.

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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.

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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.

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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.

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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.

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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:

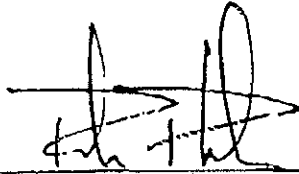
ND = Not Detected

RPD = Relative Percent Difference

RL = Reporting Limit

ug/kg = Parts per billion (ppb)

QC File No. 58547

 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

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

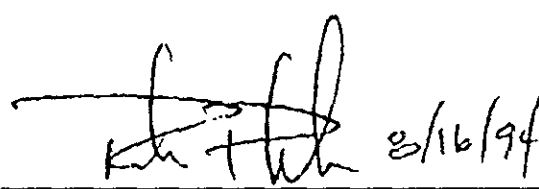
Polychlorinated Biphenyls by EPA Method 8080
Quality Assurance and Control Data - Soil

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