BLOCK ENVIRONMENTAL SERVICES



1221 Thames Drive Concord, California 94518 (510) 682-7200 FAX 682-8360

September 14, 1994

Mr. Brian P. Oliva Hazardous Materials Specialist Alameda County Health Agency Division of Hazardous Materials Department of Environmental Health 80 Swan Way, Room 200 Oakland, CA 94621

Subject: Soil and Groundwater Sampling Results for the Two Sumps Located at Oakland National Engraving, 1010 41st St., Emeryville, California. Project No. 306

Dear Mr. Oliva:

ONE Color Communications (ONE), formerly Oakland National Engraving is pleased to submit this soil and groundwater sampling report for the two sumps that are on the property that was formerly leased by Rockridge Antiques. ONE desires to close the two sumps which serve no utility. ONE plans to use the area in which the sumps are located as a lunch area for their employees.

Block Environmental Services (BES) prepared and submitted a workplan to evaluate the possibility of release of solvents from the former sumps. The workplan for soil and groundwater sampling was submitted to Alameda County Health Agency (ACHA) on December 15, 1993, amended on March 14, 1994 and approved by ACHA on January 25, 1994.

Although we believe that the sumps have held their integrity based on groundwater sampling data collected by Environmental Strategies Corporation (ESE) on May 21, 1993 (See letter dated September 27, 1993 from BES to Ms. Susan Hugo, Alameda County Department of Environmental Health {ACDEH}), ONE would like the concurrence of the ACHA that no chemical releases have occurred from the sumps that would impact the environment or human health. BES is pleased to provide ACHA with the following results from soil and groundwater samples collected adjacent to the two sumps.

INTRODUCTION

Site location and description

The subject property is located at 1010 41st St., Emeryville, California. The location of the



site is shown on Plate 1 (Attachment) and specific site features are shown on Plate 2 (Attachment). The site was formerly owned by Boysen Paint Company, which ceased operations in the early 1980's and was subsequently merged into the Ameritone Paint Corporation, a wholly owned subsidy of Grow Group. The site is now owned by Mr. and Mrs. Edward Kozel and operated by Oakland National Engraving (ONE). The property formerly contained a furniture restoration shop until July, 1993 which operated as Rockridge Antiques (Rockridge).

The two sumps located adjacent to the truck loading area are lined with what appears to be 0.5 inch steel. The larger sump is approximately 5 feet deep with a two foot diameter.

The smaller sump is about 2 feet deep with a diameter of about eight inches. The sumps appear to be part of a stormwater drainage system from the former Boysen Paint Company. In the area were the sumps are located, Rockridge stripped furniture in a trough containing a mixture of methylene chloride. The sumps do not have any utility to ONE.

Background

Sludge found in the bottom of the smaller sump was tested by Environmental Strategies Corporation (ESC) on May 21, 1993. ESC reported Total Petroleum Hydrocarbons (TPH) concentrations as a non-gasoline mix at 130 mg/Kg, toluene concentration at 1.1 mg/kg, ethylbenzene at 1.4 mg/kg, xylene at 14 mg/kg, trichloroethylene at 0.46 mg/kg and methylene chloride at 17 mg/kg. Neither methylene chloride or trichloroethylene were found in the groundwater from the monitoring wells tested down gradient to the sumps (ESC report to ACHCSA, August, 1993). The larger sump contained about 110 gallons of liquid which was removed from the sump on August 10, 1993. The liquid was manifested and sent for recycling by Rockridge. ONE sampled and analyzed the liquid waste using EPA Method 624. The liquid contained 79 mg/L methylene chloride, 1.2 mg/L trichloroethylene with trace amounts of 1,2-dichloroethylene.

FIELD INVESTIGATION

BES has conducted a field investigation to address the potential for methylene chloride and trichloroethylene, which was found in the water from the larger sump and the sludge from the smaller slump, to potentially impact the soil and groundwater beneath the sumps. The investigation included the construction of one monitoring well adjacent to the two sumps, collection of two soil samples at 3 feet and at 8 feet, and the sampling of one groundwater sample. The location of the monitoring well is presented on Plate 3. The samples were analyzed for volatile organic compounds and Total Petroleum Hydrocarbons (TPH) as diesel and mineral spirits. A description of the field investigative activities are discussed below.



Installation of Boring

Subsurface conditions were investigated by drilling a single test boring to a depth of 30 feet. A well construction permit was obtained from Zone 7 Water Agency prior to drilling (Appendix). On April 14, 1994, the test boring was drilled using a CME All Terrain drilling rig equipped with eight inch hollow stem augers. This type of rig was required due to the low overhang roof located above the test boring location. Drilling and sampling equipment were thoroughly steamed-cleaned prior to their use to reduce the likelihood of cross-contamination. A field geologist observed drilling operations, prepared detailed logs of the test borings and obtained grab samples of the soil for lithologic characterization. Soil sampling was conducted by visual field examinations of cuttings brought to the surface by the auger. A test boring log is presented in the Appendix. Soils were classified in accordance with the United Soil Classification System described in the Appendix.

Soil samples were collected from cuttings brought up from minus 3 and eight feet below surface elevation. These depths represent about one foot below the small sump and three feet below the large sump. The soil samples were placed in pre-cleaned glass containers, placed on ice and transported to a Department of Health Services accredited laboratory under chain of custody documentation.

Groundwater Monitoring Well

At the completion of the drilling, a monitoring well was installed in the test boring. The monitoring well was constructed in accordance with Zone 7 and California Department of Water Resources guidelines. A well schematic is shown in the Appendix, In general, the well consist of 2-inch diameter, Schedule 40 PVC pipe having flush-threaded joints. The pipe was steamed-cleaned prior to being placed in the borehole. The lower 20 feet of the well consists of machine-slotted well screen having 0.02-inch slots. The remaining portion of the well consists of blank pipe. The well was provided with a bottom cap and locking top cap. The well screen was encased in a filter composed of Lonestar No. 3 washed sand. The filter sand was placed by carefully pouring it through the annulus between the hollow-stem of the auger and the well casing. Periodically, the augers were raised to allow the sand to fill the annulus between the casing and the borehole. The filter extends from just below the bottom of the well to one foot above the top of the screened section. A one foot thick bentonite pellet seal was placed above the sand filter. The annulus above the seal was backfilled with cement grout. The grout mixture consists of Portland cement mixed with clean water. The monitoring well was completed below grade and was protected with a traffic-rated valve box.

The well was developed on April 19, 1994. This was at least 48 hours after drilling. Initially, the depth to water was measured below the top of the well casing using an electric sounder. The well was then developed by removing water with a Teflon disposable bailer.



Approximately 17 gallons of water was removed from the well.

Prior to sampling on April 21, 1994, the well was purged of about 17 gallons of water which represents at least five well casing volumes. When the well had recharged to approximately 80 percent of its initial level, it was sampled with a disposable bailer and nylon rope. Well development and purge water were placed in 55-gallon drums at the well site until receipt of analytical test results.

Groundwater samples were retained in pre-cleaned containers supplied by the laboratory. Samples were placed in ice-filled coolers and remained iced until delivery to the analytical laboratory. Chain-of-Custody records accompanied the samples to the laboratory and may be found in the Appendix.

Analytical Testing and Results

The soil and groundwater samples were analyzed by Pace Laboratory, a laboratory accredited for hazardous waste and water testing by the California Department of Health Services. A copy of the laboratory analytical data may be found in the Appendix. The soil and groundwater samples were analyzed for halogenated VOCs using EPA Method 8010 and for TPH as mineral spirits using EPA Method 3550 and 8015.

No halogenated VOCs were found in the groundwater sample above the Method Detection Limit (MDL). TPH as diesel was found at 18 mg/L and TPH as mineral spirits at 12 mg/L in the groundwater sample.

Trichloroethylene was found in the three foot soil sample at 9.5 μ g/Kg and in the eight foot soil sample at 13 μ g/Kg. Trans-1,2-dichloroethylene was found in the eight foot soil sample at 0.044 mg/Kg and trans-1,2-dichloroethylene was found at 0.053 mg/Kg. TPH as mineral spirits was not found in the three foot soil sample, but was found at 1400 mg/Kg in the eight foot soil sample.

DISCUSSION

Presented in Table 1 is a comparison of the results of the groundwater and soil sample data with sample data collected from water that was contained in the large sump and with sample data that was contained in the sludge of the smaller sump. Based on concentrations of trichloroethylene (TCE) and methylene chloride found in the two sumps prior to cleaning, it appears that both sumps have retained their integrity and did not contribute to localize soil contamination or to the area wide groundwater contamination. The concentration of TPH as mineral spirits found in the soil sample at a depth of eight feet is probably caused by increased groundwater levels during the wet months. The insignificant concentrations of TCE



TABLE 1. COMPARISON OF GROUNDWATER AND SOIL SAMPLE DATA WITH SAMPLE DATA COLLECTED FROM SUMPWATER AND SUMP SLUDGE

SUBSTANCE	Groundwater µg/L	Soil - 3 ft µg/Kg	Soil- 8 ft µg/Kg	Water in large sump µg/Kg*	Sludge in small sump µg/Kg**
TCE	ND	9.5	13	1,200	460
MC	ND	ND	ND	79,000	17,000
cis-DCE	ND	ND	53	130	ND
trans-DCE	ND	ND	44	ND	ND
TPH-diesel	18,000	ND	ND	NA	130,000
TPH-min spirits	12,000	ND	1,400,000	NA	10,000,000

TCE; Trichloroethylene MC; Methylene chloride

cis-DCE; cis-1,2-dichloroethylene trans-DCE; trans-1,2-dichlroethylene TPH-diesel; extractable fuels as diesel

TPH-min spirits; extractable fuels as mineral spirits

ND; Nondetectable NA; Not available

* sample collected by ONE, November, 1993 (Data attached)

** Environmental Strategies Corporation report to ACHA, August 16, 1993



found in the soil at depths of three and eight feet are not due to seepage from the sumps since methylene choride is not found in the soil at these depths.

CONCLUSIONS AND RECOMMENDATIONS

ONE has cleaned the sludge from the small sump and disposed of it along with the drill cuttings (manifest in Appendix). Approximately two pounds of sludge was removed from the sump. The sump was also rinsed with water. The larger sump was cleaned during the summer of 1993 by Rockridge. ONE intends to close both of the sumps by filling with concrete. The larger sump connects with the storm drain. ONE intends to keep the storm drain connection in the larger sump in order to provide for drainage during storm events. ONE would like approval from ACHA for closure of the two sumps.

If you have an questions concerning this report and ONE's request for closure of the sumps, please do not hesitate to contact me.

Very truly yours,

BLOCK ENVIRONMENTAL SERVICES, INC

Ronald M. Block, Ph.D.

President

cc: Mr. Gary Leach-ONE

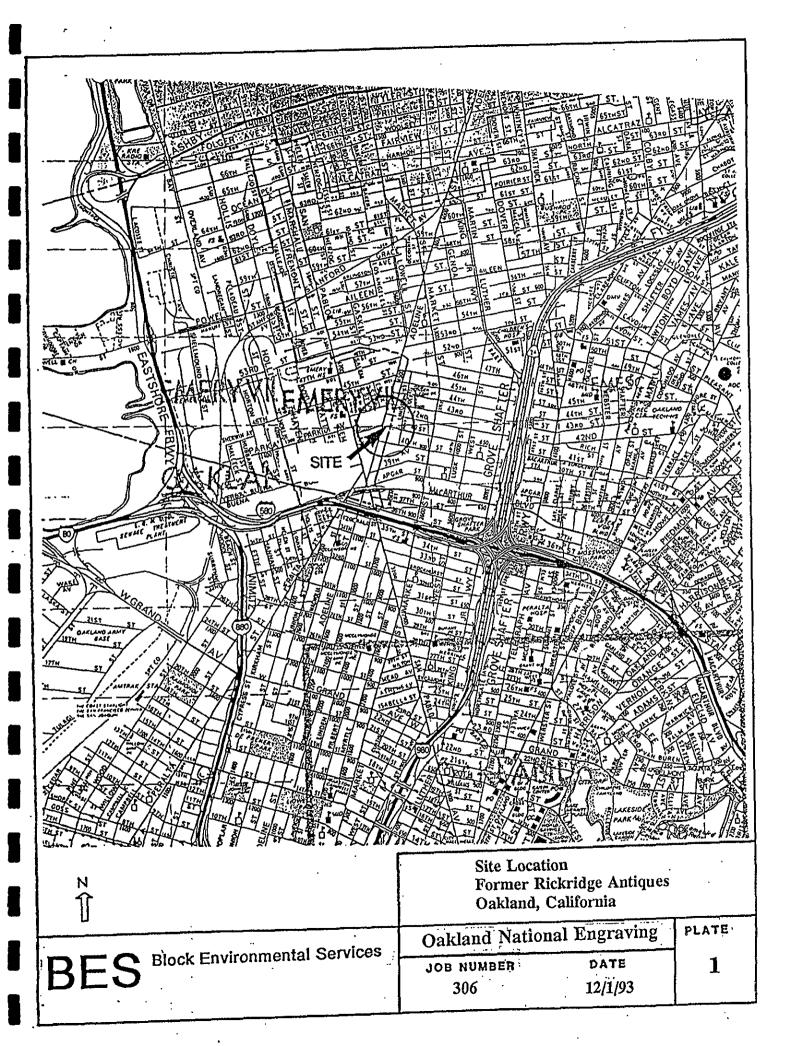
Konall Bleed

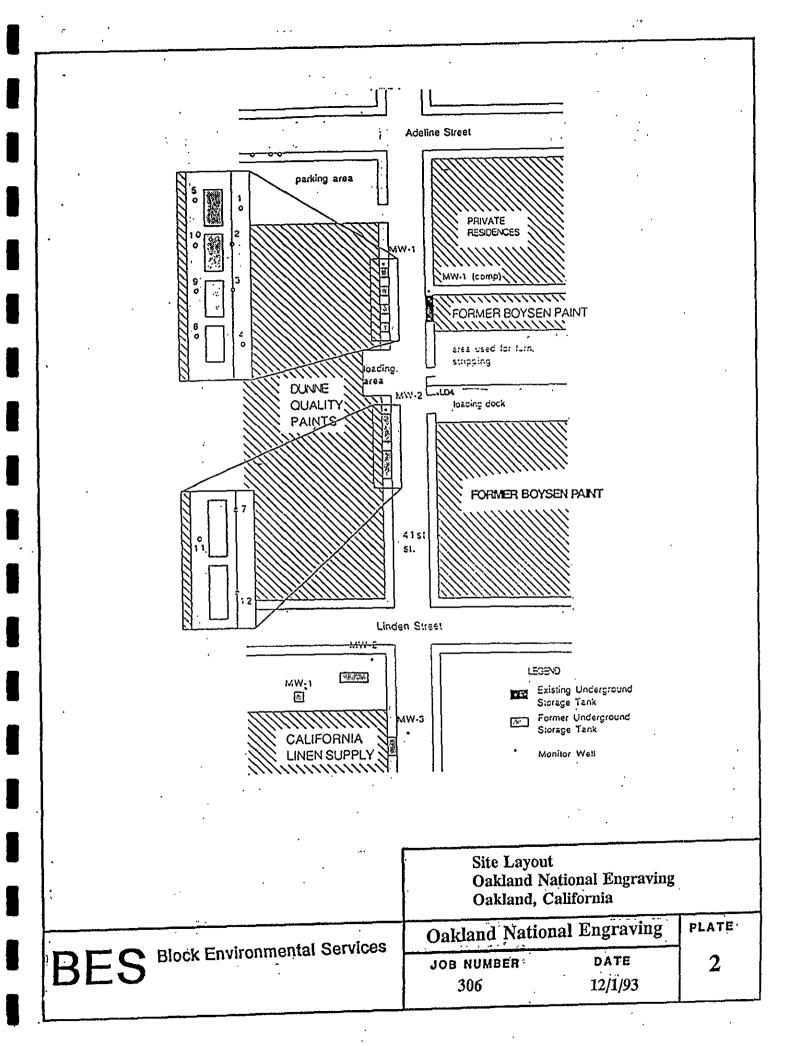
Mr. Randolph L. Harris McInerney & Dillon

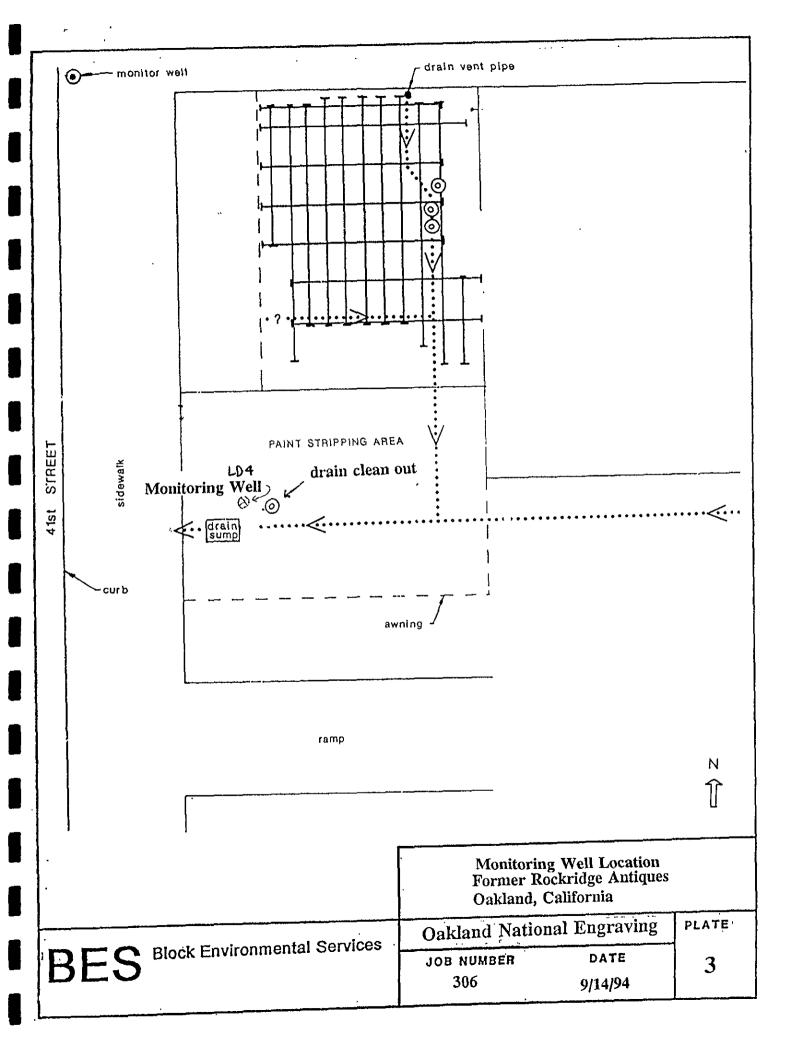
APPENDIX



PLATES







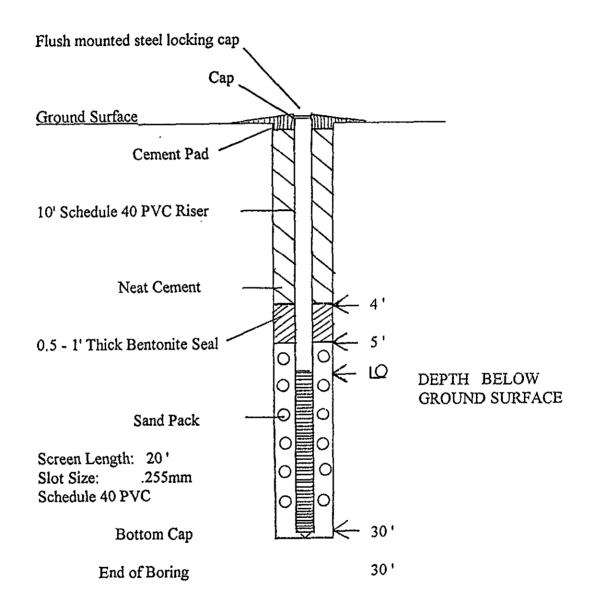
AS BUILT WELL DIAGRAM

Project Name: One Color

Project Location: 1001 42nd ST., Oakland, CA

Project Number: 94003

Date Constructed: 4/14/94



P.O. Box 2556, Novato, CA 94948

Office (415) 892-4620

Fax (415) 892-3920

LOG OF BORING

Project Name: One Color

Boring Number: #1

Job Number: 94003

Equipment: 8" hollow stem

Date Drilled: 4/14/94

Elevation: na

Depth	in Feet	<u>Sample</u>	Notes	<u>Observations</u>
0 -2	Surface	2 X Soil	Loading Dock	Reinforced concrete 5" thick over 4" agg. base. Brown Silty Sand, (SM), moist. 2 grab samples taken from cuttings spun from -3' below surface level.
-4 -5			Soil Change	Gray Brown Silty Sand, (SM), moist with
-7 -8		2 X Soil	Soil Change	petroleum odor. Driller reports soil becoming denser/stiff. Gray Sandy Silt, (ML), moist-wet, stiff, strong petroleum odor. 2 grab samples.
-10	<u>v</u>		Soil Change	Cuttings become saturated, watertable?.
-14			Soil Change	Gray Green Sandy Silt, (ML), wet, stiff mild petroleum odor.
-15				same ML
-20				same ML
-24			Soil Change	Yellow Gray Clayey Silt, (ML), saturated mild petroleum odor
-30				Bottom of hole at -30'.

WELL DEVELOPMENT FORM

Project Name: One Color Well Number: #1

Job Number:

94003

Casing Diameter: 2"

Developed By: Kenneth H. Loer

Date: 4/19/94

TOC Elevation: no data

Depth To Casing Bottom (below TOC): 30'

Depth To Measured Groundwater (below TOC): 9.83'

Feet Of Water In Casing: 20.17

Casing Volume (3.14 x .083'^2 x 20.17'): .44 cubic feet

Casing Capacity (.44 cubic feet x 7.48): 3.3 U.S. gallons

Development Method: Polypropylene Bailer

Total Gallons Removed: 17 U.S. gallons, 5.15 casing volumes.

Remarks: Noticeable petroleum odor from bailed water and petroleum sheen on water surface in storage drum.

WELL SAMPLING FORM

One Color Project Name:

Well Number: #1

Job Number:

94003

Casing Diameter: 2"

Developed By: Kenneth H. Loer

Date: 4/21/94

TOC Elevation: no data

Depth To Casing Bottom (below TOC): 30'

Depth To Measured Groundwater (below TOC): 10.08'

Feet Of Water In Casing: 19.92'

Casing Volume (3.14 x .083'^2 x 19.92'): .43 cubic feet

Casing Capacity (.43 cubic feet x 7.48): 3.2 U.S. gallons

Purge Method: Polypropylene Bailer

Total Gallons Purged Prior To Sampling: 17 U.S. gallons, 5.3 casing volumes.

Remarks: Noticeable petroleum odor from bailed water and petroleum sheen on water surface in storage drum.

WELL PERMIT

APPLICANTS

SIGNATURE Kuneth H. Loer Date 4/8/94

ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588

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

91992

DRILLING PERMIT APPLICATION

	•
FOR APPLICANT TO COMPLETE	FOR OFFICE USE
LOCATION OF PROJECT	PERMIT NUMBER 94237
1001 42ND ST	LOCATION NUMBER
OAKLAND CA	
U 7 M M M M M M M M M M M M M M M M M M	
CLIENT	
Name ONE COLOR COMMUNICATION	S PERMIT CONDITIONS
Address 1001 42nd ST Voice	
City OAKLAND CA Zip	Circled Permit Requirements Apply
STOR LOADET	
APPLICANT Name APPLIED SOIL TECHNOLOGIES	A. GENERAL
(KEN LOER) Fax 415 892 -39 Address (0.86x 2556 Voice 1) 892-46	
City NOVATO, CA ZIP 94948	2. Submit to Zone 7 within 60 days after completion of permitted
	work the original Department of Water Resources Water Well
TYPE OF PROJECT	Drillers Report or equivalent for well Projects, or drilling logs
Well Construction Geotechnical Investigation	and location sketch for geotechnical projects.
Cathodic Protection General	3. Permit Is void if project not begun within 90 days of approval
Water Supply Contamination	date. B. WATER WELLS, INCLUDING PIEZOMETERS
Monitoring Well Destruction	Minimum surface seal thickness is two inches of cement grout
PROPOSED WATER SUPPLY WELL USE	placed by tremie.
Domestic Industrial Other	Minimum seal depth is 50 feet for municipal and industrial well
Municipal Intigation	or 20 feet for domestic and irrigation wells unless a lesser
	depth is specially approved. Minimum seal depth for
DRILLING METHOD:	monitoring wells is the maximum depth practicable or 20 feet.
Mud Rotary Air Rotary Auger	C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or
Cable Other	heavy bentonite and upper two feet with compacted material. In
PRILLEDIC LICENICS NO. # 22 C C D 7	areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.
DRILLER'S LICENSE NO. # 336582	D. CATHODIC. Fill hole above anode zone with concrete placed by
WELL PROJECTS	tremie.
Drill Hole Diameter g in. Maximum	E. WELL DESTRUCTION. See attached.
	ft.
Surface Seal Depth 5 ft. Number	
	
GEOTECHNICAL PROJECTS	
Number of Borings Maximum	
Hole Diameter in. Depth	ft,
ESTIMATED STARTING DATE 4/15/94	
ESTIMATED COMPLETION DATE 4/15/94	Mr. Alexan
م منظینا اسلامانیا ا ماندانیا اسلامانیا	Approved Wyman Wond Date 14 Apr 9
I hereby agree to comply with all requirements of this permit and Alam	eda // Wyman Hong
County Ordinance No. 73-68.	V

SOIL CLASSIFICATION

UNITED SOIL CLASSIFICATION SYSTEM

•	ENERAL SOIL	CATEGORIES	SYM	BOL3	TYPICAL SOIL TYPES
		Clean Gravel with	gw S		Well Graded Gravel, Gravel-Sand Mixtures
• A	GRAVEL	little or no fines	GP		Poorly Graded Gravel, Gravel-Sand Mixtures
SOILS Fo. 200	coarse fraction is larger than No. 4 selve size	Gravel with more	ам		Sity Gravel, Poorly Graded Gravel-Sand-Silt Mixares
GRAINED SOILS lerger than No. 200	!	than 12% fines	GC		Clayey Gravel, Poorly Graded Gravel-Sand-Clay Mixtures
		Clean Sand with	wa		Well Graded Sand, Gravelly Sand
COARSE than half is	1	little or no fines	вР		Poorty Graded Sand, Gravelly Sand
Kox	coarse fraction is smaller than No. 4 selve size	s smaller than	SM		Silty Sand, Poorty Craded Sand-Sit Mixtures
			sc		Clayey Sand, Poorly Graded Sand-Clay Mixtures
active			ML		Inorganic Silt and Very Fine Sand, Rock Flour, Silty or Clayer Fine Sand, or Clayer Silt with Slight Plasticity
L. 208 a.		IND CLAY	СL		inorganic Clay of Low to Medium Plasticity, Gravelly Clay, Sandy Clay, Sitty Clay, Lean Clay
FINE GRAINED SOIL. In half is smaller than No.			OL.		Organia City and Organia Silty City of Low Plasticity
GRAIN M small	SILT AND CLAY Liquid Limit Leas than 50% SILT AND CLAY Liquid Limit Greater than 50% Liquid Limit Greater than 50%		мн		Inorganic Sitt, Micacoous or Diatomacoous Fine Sandy or Sitty Solis, Eleatic Sit
FINE (CH		Inorganic Clay of High Plasticity, Fat Clay
n soon			он		Organio Ciay of Medium to High Plassicity, Organio Silt
	HIGHLY ORGA	NIC SOILS	PT		Peat and Other Highly Organic Soils

LABORATORY DATA



April 22, 1994

Mr. Gary Leach Oakland National Engraving 1001 42nd St. Oakland, CA 94608

RE: PACE Project No. 440414.505 Client Reference: Proj 306-0.N.E.

Dear Mr. Leach:

Enclosed is the report of laboratory analyses for samples received April 14, 1994.

Footnotes are given at the end of the report.

If you have any questions concerning this report, please feel free to contact us.

Sincerely.

Ronald M. Chew Project Manager

Enclosures



Oakland National Engraving 1001 42nd St. Oakland, CA 94608 April 22, 1994

PACE Project Number: 440414505

Attn: Mr. Gary Leach

Client Reference: Proj 306-0.N.E.

PACE Sample Number: 70 0303290
Date Collected: 04/14/94
Date Received: 04/14/94
Client Sample ID: 0NE-3

MDL Parameter Units DATE ANALYZED ORGANIC ANALYSIS HALOGENATED VOLATILE COMPOUNDS EPA 8010 04/18/94 Dichlorodifluoromethane 20 ND ug/kg 04/18/94 **Chloromethane** 20 ND ug/kg 20 ND 04/18/94 Vinvl Chloride uq/kq 20 ND 04/18/94 Bromomethane uq/kq 04/18/94 20 Chloroethane ug/kg ND 04/18/94 Trichlorofluoromethane 20 ND uq/kq 1.1-Dichloroethene uq/kg 5.0 ND 04/18/94 20 ND 04/18/94 Methylene Chloride ug/kg 5.0 ND 04/18/94 ug/kg trans-1,2-Dichloroethene cis-1,2-Dichloroethene ug/kg 5.0 ND 04/18/94 04/18/94 5.0 ND 1.1-Dichloroethane uq/kq 5.0 ND 04/18/94 Chloroform. ug/kg 1,1,1-Trichloroethane (TCA) 5.0 ND 04/18/94 uq/kg 5.0 ИD 04/18/94 Carbon Tetrachloride uq/kg 1,2-Dichloroethane (EDC) 5.0 ND 04/18/94 uq/kq 04/18/94 Trichloroethene (TCE) ug/kg 5.0 9.5 04/18/94 1.2-Dichloropropane 5.0 ND ug/kg 04/18/94 5.0 ND Bromodichloromethane ug/kg 5.0 ND 2-Chloroethylvinyl ether ug/kg 04/18/94 5.0 ND 04/18/94 cis-1.3-Dichloropropene uq/kq 04/18/94 trans-1,3-Dichloropropene ug/kg 5.0 ND 5.0 ND 04/18/94 1,1,2-Trichloroethane ug/kg 04/18/94 Tetrachloroethene 5.0 ND uq/kq Dibromochloromethane 04/18/94 5.0 ND ug/kg ND 04/18/94 Chlorobenzene 5.0 ug/kg 04/18/94 Bromoform 5.0 ND ug/kg 1,1,2,2-Tetrachloroethane ug/kg 5.0 ND 04/18/94 04/18/94 5.0 ND 1.3-Dichlorobenzene ug/kg 1.4-Dichlorobenzene ug/kg 5.0 ND 04/18/94



Mr. Gary Leach

Page

April 22, 1994

PACE Project Number: 440414505

Client Reference: Proj 306-0.N.E.

PACE Sample Number:

Date Collected: Date Received:

Client Sample ID:

Parameter

70 0303290 04/14/94 04/14/94

ONE-3

Units MDL DATE ANALYZED

ug/kg

mg/kg

%

%

ORGANIC ANALYSIS

HALOGENATED VOLATILE COMPOUNDS EPA 8010

1,2-Dichlorobenzene Bromochloromethane (Surrogate Recovery)

1,4-Dichlorobutane (Surrogate Recovery)

EXTRACTABLE FUELS EPA 3550/8015 Extractable Fuels, as Kerosene Date Extracted

5.0 ND 134

04/18/94 143 04/18/94

ND 04/18/94

8.3

04/20/94

04/18/94



Mr. Gary Leach Page 3 April 22, 1994

PACE Project Number: 440414505

Client Reference: Proj 306-0.N.E.

PACE	Sample Number:
Date	Collected:
Date	Received:

70 0303303 04/14/94 04/14/94

MDL

ONE-8 DATE ANALYZED

Date Received:	:
Client Sample	ID:
Parameter	

g/kg	40	ND 113	
g/kg	40	ND 113	
g/kg	40	A1F3 117	
J 1 J			04/18/94
<i>(</i> 1			04/18/94
J, J			04/18/94
J, J			04/18/94
			04/18/94
g/kg	40	ND	04/18/94
g/kg			04/18/94
g/kg	10	ND	04/18/94
g/kg	10	ND	04/18/94
g/kg	10	ND	04/18/94
g/kg	10	ND	04/18/94
g/kg		13	04/18/94
g/kg			04/18/94
g/kg			04/18/94
a/ka	10	ND	04/18/94
			04/18/94
			04/18/94
			04/18/94
ig/kg			04/18/94
g/kg	10		04/18/94
ıa/ka	10	ND	04/18/94
			04/18/94
			04/18/94
			04/18/94
			04/18/94
ig/kg	10	ND	04/18/94
5		163	04/18/94
1999 99999 99999 969969 96666	/kg /kg /kg /kg /kg /kg /kg /kg 	//kg 40 //kg 40 //kg 40 //kg 40 //kg 40 //kg 40 //kg 10	

Units



Mr. Gary Leach

Page 4

April 22, 1994

PACE Project Number: 440414505

Client Reference: Proj 306-0.N.E.

PACE Sample Number:

Date Collected:

Date Received:

Client Sample ID:

70 0303303 04/14/94

04/14/94 ONE-8

Parameter

Units MDL

DATE ANALYZED

ORGANIC ANALYSIS

HALOGENATED VOLATILE COMPOUNDS EPA 8010

1,4-Dichlorobutane (Surrogate Recovery) %

153

04/18/94

EXTRACTABLE FUELS EPA 3550/8015

Extractable Fuels, as Kerosene

mg/kg

41

1400

04/20/94

04/18/94

These data have been reviewed and are approved for release.

C. com

Darrell C. Cain

Date Extracted

Regional Director



Mr. Gary Leach Page

FOOTNOTES 1 through for pages

April 22, 1994 PACE Project Number: 440414505

Client Reference: Proj 306-0.N.E.

Sample was diluted due to high levels of hydrocarbons present. Method Detection Limit $\,$ H1

MDL

Not detected at or above the MDL. ND

Quantitation was based upon a one point calibration. Q1



Mr. Gary Leach

QUALITY CONTROL DATA

April 22, 1994

PACE Project Number: 440414505 Page 6

Client Reference: Proj 306-0.N.E.

EXTRACTABLE FUELS EPA 3550/8015

Batch: 70 29789

Samples: 70 0303290, 70 0303303

METHOD BLANK:

Method Units MDL Blank Parameter

5.0 Extractable Fuels, as Diesel mg/kg ND

SPIKE AND SPIKE DUPLICATE:

Spike Dupl 700303672 Spike Units MDL Parameter Recv Recv RPD 2% 164% Extractable Fuels, as Diesel 5.0 33.3 20% mq/kq

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Reference Dupl Recv Recv RPD Parameter Units MDL Value Extractable Fuels, as Diesel 5.0 33.3 103% 101% mq/kg

Spike



Mr. Gary Leach Page

QUALITY CONTROL DATA

April 22, 1994

PACE Project Number: 440414505

Client Reference: Proj 306-0.N.E.

HALOGENATED VOLATILE COMPOUNDS EPA 8010

Batch: 70 29575 Samples: 70 0303290, 70 0303303

METHOD BLANK:

METHOD BLANK:			Markhad
Parameter Dichlorodifluoromethane Chloromethane Vinyl Chloride Bromomethane Chloroethane Trichlorofluoromethane	Units ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg	MDL 20 20 20 20 20 20 20 20	Method Blank ND ND ND ND ND ND ND
1,1-Dichloroethene Methylene Chloride trans-1,2-Dichloroethene cis-1,2-Dichloroethene 1,1-Dichloroethane Chloroform	ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg	5.0 20 5.0 5.0 5.0 5.0	ND ND ND ND ND ND
1,1,1-Trichloroethane (TCA) Carbon Tetrachloride 1,2-Dichloroethane (EDC) Trichloroethene (TCE) 1,2-Dichloropropane Bromodichloromethane	ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg	5.0 5.0 5.0 5.0 5.0	ND ND ND ND ND ND
2-Chloroethylvinyl ether cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,1,2-Trichloroethane Tetrachloroethene Dibromochloromethane	ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg	5.0 5.0 5.0 5.0 5.0 5.0	ND ND ND ND ND ND
Chlorobenzene Bromoform 1,1,2,2-Tetrachloroethane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg	5.0 5.0 5.0 5.0 5.0	ND ND ND NO ND ND
Bromochloromethane (Surrogate Recovery) 1,4-Dichlorobutane (Surrogate Recovery)	% %		108 114



Mr. Gary Leach

QUALITY CONTROL DATA

April 22, 1994

PACE Project Number: 440414505

Page 8

Client Reference: Proj 306-0.N.E.

HALOGENATED VOLATILE COMPOUNDS EPA 8010

Batch: 70 29575

Samples: 70 0303290, 70 0303303

SPIKE AND SPIKE DUPLICATE:

						Spike	
					Spike	Dupl	
Parameter	Units	MDL	700297532	Spike	Recv	Recv	RPD
1,1-Dichloroethane	ug/kg	$\overline{5.0}$	ND	20	105%	121%	14%
Trichloroethene (TCE)	ug/kg	5.0	ND	20	96%	114%	17%
1,1,2-Trichloroethane	ug/kg	5.0	ND	20	120%	117%	3%
Tetrachloroethene	ug/kg	5.0	ND	20	95%	94%	1%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

			Reference		Dup1	
Parameter	Units	MDL	Value	Recv	Recv R	
1,1-Dichloroethane	ug/kg	5.0	20	98%	99%	1%
Trichloroethene (TCE)	ug/kg	5.0	20	95%	95%	0%
1,1,2-Trichloroethane	ug/kg	5.0	20	103%	110%	7%
Tetrachloroethene	ug/kg	5.0	20	91%	91%	0%



Mr. Gary Leach Page

FOOTNOTES 6 through for pages

April 22, 1994 PACE Project Number: 440414505

Client Reference: Proj 306-0.N.E.

MDL

Method Detection Limit

ND

Not detected at or above the MDL.

RPD

Relative Percent Difference

INCORPORATED THE ASSURANCE OF QUALITY	Block Enguented Server 1221 Thomas Dr. Concurd, CA 94518	CHAIN-OF-CUSTODY RECORD Analytical Request
ddress 1001 42 rd St. and lawd CH 24	Report To: Row Bluck - Rluck ENV. Service Bill To: GARY LEASH - ON E P.O. #/Billing Reference	Pace Client No. Pace Project Manager Pace Project No.
ampler Signature TIME MATRIX PACENO.	Project Name / No. Project Name	*Requested Due Date:
1 0,4E-3 404 JAR 1030 Soil 30329,0 2 04E-3-802 JAR 1030 Soil 30329,0 3 0NE-B-404 JAR 1050 Soil 30330,3 4 0NE-B 26 0 JAR 1050 Soil 30330,3 5 6 7	SMERRY A SERVICE AND	
SHIPMENT METHOD OUT / DATE RETURNED / D Additional Comments	al Rame Bled Kenton all Kentow ad T Morly	backer 41414.1520

150866



May 04, 1994

Mr. Gary Leach Oakland National Engraving 1001 42nd St. Oakland, CA 94608

RE: PACE Project No. 440421.508

Client Reference: Prog 306 ONE

Dear Mr. Leach:

Enclosed is the report of laboratory analyses for samples received April 21, 1994.

Footnotes are given at the end of the report.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

Ronald M. Chew-Project Manager

malel M. Chew

Enclosures



Oakland National Engraving 1001 42nd St. Oakland, CA 94608 May 04, 1994

PACE Project Number: 440421508

Attn: Mr. Gary Leach

Client Reference: Prog 306 ONE

PACE Sample Number:		70 0307686
Date Collected:	•	04/21/94
Date Received:		04/21/94
Client Sample ID:		Samp "2"
	11 * 6. = 44	DI .

Client Sample ID: Parameter	<u>Units</u>	MDL	Samp "2"	DATE ANALYZED
ORGANIC ANALYSIS				
HALOGENATED VOLATILE ORGANICS BY 8010			HI	
VOLATILE HALOCARBONS BY EPA 8010			-	05/02/94
Dichlorodifluoromethane	ug/L	200	ND	05/02/94
Chloromethane	ug/L	200	ND	05/02/94
Vinyl Chloride	ug/L	200	ND ND	05/02/94
Bromomethane	ug/L	200	ND ND	05/02/94
Chloroethane	ug/L	200	ИD	05/02/94
Trichlorofluoromethane (Freon 11)	ug/L	200	ND	05/02/94
1,1-Dichloroethene	ug/L	50	ND	05/02/94
Methylene Chloride	ug/L	200	ND	05/02/94
trans-1,2-Dichloroethene	ug/L	50	ND	05/02/94
1,1-Dichloroethane	ug/L	50	ND	05/02/94
cis-1,2-Dichloroethene	ug/L	50	ND	05/02/94
Chloroform	ug/L	50	ND	05/02/94
1,1,1-Trichloroethane (TCA)	ug/L ug/L	50	ND	05/02/94
Carbon Tetrachloride	ug/L ug/L	50	ND	05/02/94
1,2-Dichloroethane (EDC)	ug/L	50	ND	05/02/94
Trichloroethene (TCE)	ug/L	50	ND	05/02/94
1,2-Dichloropropane	ug/L	50	ND	05/02/94
, , ,				
Bromodichloromethane	ug/L	50	ND	05/02/94
Dibromomethane	ug/L	50	ND	05/02/94
2-Chloroethylvinyl ether	ug/L	50	ND	05/02/94
cis-1,3-Dichloropropene	ug/L	50	ИD	05/02/94
trans-1,3-Dichloropropene	ug/L	50	ND	05/02/94
1,1,2-Trichloroethane	ug/L	50	ND	05/02/94
Tetrachloroethene	ug/L	50	ND	05/02/94
Dibromochloromethane	ug/L	50	ND	05/02/94
Chlorobenzene	ug/L	50	ND	05/02/94
1,1,1,2-Tetrachloroethane	ug/L	50	ND	05/02/94
Bromoform	ug/L	50	ND	05/02/94



Mr. Gary Leach Page

May 04, 1994

PACE Project Number: 440421508

Client Reference: Prog 306 ONE

PACE Sample Number:	70 0307686
Date Collected:	04/21/94
Date Received:	04/21/94
Client Camala ID.	Samp "2"

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
ORGANIC ANALYSIS			
HALOCENATED VOLATILE OPERATOS BY 8010			H1

HALOGENATED VOLATILE ORGANICS BY 8010 1,1,2,2-Tetrachloroethane 1,2,3-Trichloropropane Bromobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Benzyl Chloride	ug/L ug/L ug/L ug/L ug/L ug/L	50 50 50 50 50 50	H1 ND ND ND ND ND ND	05/02/94 05/02/94 05/02/94 05/02/94 05/02/94
1,2-Dichlorobenzene Bromochloromethane (Surrogate Recovery) 1,4-Dichlorobutane (Surrogate Recovery)	ug/L % %	50	ND 109 105	05/02/94 05/02/94 05/02/94
EXTRACTABLE FUELS EPA 3510/8015 Extractable Fuels, as Diesel Extractable, as Mineral Spirits	mg/L mg/L	0.25 0.25	18 12	04/26/94 04/26/94

04/22/94

These data have been reviewed and are approved for release.

Darrell C. Cain Regional Director

Date Extracted

Extractable, as Mineral Spirits



Mr. Gary Leach

FOOTNOTES

May 04, 1994

Page

for pages 1 through

2

PACE Project Number: 440421508

Client Reference: Prog 306 ONE

H1

Sample was diluted due to high levels of hydrocarbons present.

MDL

Method Detection Limit

ND

Not detected at or above the MDL.



Mr. Gary Leach

QUALITY CONTROL DATA

May 04, 1994

PACE Project Number: 440421508

Page 4

Client Reference: Prog 306 ONE

EXTRACTABLE FUELS EPA 3510/8015 Batch: 70 29932

Samples: 70 0307686

METHOD BLANK:

Parameter Extractable Fuels, as Diesel Units mg/L

MDL $\overline{0.05}$ Method Blank ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Reference Dupl Value MDL Recv Recv RPD Units Parameter EXTRACTABLE FUELS EPA 3510/8015 (1)184% Extractable Fuels, as Diesel 0.05 1.00 178% 3% mg/L



Mr. Gary Leach Page 5 QUALITY CONTROL DATA

May 04, 1994

PACE Project Number: 440421508

Client Reference: Prog 306 ONE

HALOGENATED VOLATILE ORGANICS 8010/8020

Batch: 70 30045 Samples: 70 0307686

METHOD BLANK:

Parameter	Units	MDL	Method Blank
VOLATILE HALOCARBONS BY EPA 8010 Dichlorodifluoromethane Chloromethane Vinyl Chloride Bromomethane Chloroethane Chloroethane	ug/L ug/L ug/L ug/L ug/L	2.0 2.0 2.0 2.0 2.0	ND ND ND ND ND ND
Trichlorofluoromethane (Freon 11) 1,1-Dichloroethene Methylene Chloride trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene	ug/L ug/L ug/L ug/L ug/L ug/L	2.0 0.5 2.0 0.5 0.5	ND ND ND ND ND ND
Chloroform 1,1,1-Trichloroethane (TCA) Carbon Tetrachloride 1,2-Dichloroethane (EDC) Trichloroethene (TCE) 1,2-Dichloropropane	ug/L ug/L ug/L ug/L ug/L ug/L	0.5 0.5 0.5 0.5 0.5	ND ND ND ND ND ND
Bromodichloromethane Dibromomethane 2-Chloroethylvinyl ether cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,1,2-Trichloroethane	ug/L ug/L ug/L ug/L ug/L ug/L	0.5 0.5 0.5 0.5 0.5	ND ND ND ND NO ND
Tetrachloroethene Dibromochloromethane Chlorobenzene 1,1,1,2-Tetrachloroethane Bromoform 1,1,2,2-Tetrachloroethane	ug/L ug/L ug/L ug/L ug/L ug/L	0.5 0.5 0.5 0.5 0.5	ND ND ND ND ND ND
1,2,3-Trichloropropane Bromobenzene	ug/L ug/L	0.5 0.5	ND ND



Mathad

Mr. Gary Leach Page 6 QUALITY CONTROL DATA

May 04, 1994

PACE Project Number: 440421508

Client Reference: Prog 306 ONE

HALOGENATED VOLATILE ORGANICS 8010/8020

Batch: 70 30045 Samples: 70 0307686

METHOD BLANK:

Parameter 1,3-Dichlorobenzene 1,4-Dichlorobenzene Benzyl Chloride 1,2-Dichlorobenzene Bromochloromethane (Surrogate Recovery) 1,4-Dichlorobutane (Surrogate Recovery)	Units ug/L ug/L ug/L ug/L %	MDL 0.5 0.5 0.5 0.5	Blank ND ND ND ND ND 109
VOLATILE AROMATICS BY EPA 8020 Benzene Toluene Chlorobenzene Ethylbenzene Xylenes, Total	ug/L ug/L ug/L ug/L ug/L	0.3 0.3 0.5 0.5	- ND ND ND ND
1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene a,a,a-Trifluorotoluene (Surro. Recovery	ug/L ug/L ug/L %	0.5 0.5 0.5	ND ND ND 106

SPIKE AND SPIKE DUPLICATE:

					Spike	Spike Dupl	
Parameter	Units	MDL	700309344	Spike	Recv	Recv	RPD
1,1-Dichloroethane 1,1-Dichloroethane	ug/L ug/L	0.50 25	ND DS	1000	101%	101%	0%
Trichloroethene (TCE)	ug/L	0.50	3.40 DS		2.250		
Trichloroethene (TCE) 1,1,2-Trichloroethane	ug/L ug/L	25 0.50	ND DS	1000	115%	124%	8%
1,1,2-Trichloroethane	ug/L	25		1000	101%	102%	1%
Tetrachloroethene	ug/L	0.50	22.00 DS				
Tetrachloroethene Benzene	ug/L ug/L	25 0.30	ND DS	1000	196%	195%	1%
Benzene	ug/L	15		1000	101%	109%	8%
Toluene Toluene	ug/L ug/L	0.30 15	ND DS	1000	105%	109%	4%



Mr. Gary Leach Page 7 QUALITY CONTROL DATA

May 04, 1994

PACE Project Number: 440421508

Client Reference: Prog 306 ONE

HALOGENATED VOLATILE ORGANICS 8010/8020

Batch: 70 30045 Samples: 70 0307686

SPIKE AND SPIKE DUPLICATE:

OF ARE AND OF THE DOT ETOMET						Spike	
					Spike	Dupl	
Parameter	Units	MDL	700309344	<u>Spike</u>	<u>Recv</u>	Recv	RPD
Xylenes, Total	ug/L	$\overline{0.50}$	ND DS	_			
Xylenes, Total	ug/L	25		3000	108%	111%	3%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

				Reference		Dupl	
Parameter	•	Units	MDL	Value	Recv	Recv RPD	
1,1-Dichloroethane		ug/L	$\overline{0.5}$	20	104%	102% 2%	
Trichloroethene (TCE)		ug/L	0.5	20	101%	93% 8%	
1,1,2-Trichloroethane		ug/L	0.5	20	100%	97% 3%	
Tétrachloroethene		ug/L	0.5	20	101%	99% 2%	
Benzene		ug/L	0.3	20	102%	99% 3%	
Toluene		ug/L	0.3	20	103%	101% 2%	
Xylenes, Total		ug/L	0.5	60	104%	101% 3%	



Mr. Gary Leach Page 8 FOOTNOTES

May 04, 1994

for pages 4 through 7 PACE Project Number: 440421508

Client Reference: Prog 306 ONE

DS Concentration found on diluted sample.

MDL Method Detection Limit

ND Not detected at or above the MDL.

RPD Relative Percent Difference

(1) High recoveries for LCS and LCSD due to double spike. Results were qualified based on precision (RPD), and surrogate recoveries, 128% and 120% respectively.



INCORPORATED THE ASSURANCE OF QUALITY		1221 THB	MES DR.	CHAIN-OF-CUSTODY RECORD Analytical Request
Client OARLAND NATIONAL ENGR.	AVINE	CONCORD C Report To: RON BLOC	K (ATABOVE)	Pace Client No.
Address 1001 2nd 57		Bill To: GARY LEAC		Pace Project Manager
OAKLARO CA		P.O. # / Billing Reference		Pace Project No.44042 .58
Phone CONTACT RON BLOCK (510)	691-7200	Project Name / No. Prog	306-ONE	*Requested Due Date:
Sampled By (PRINT): LEN 14. LOER Kea 11. La 4/2/19 Sampler Signature Date Sampled	S CONTAINERS	PRESERVATIVES ANALYSES REQUEST		
ITEM SAMPLE DESCRIPTION T NO.	IME MATRIX PACE NO. 9	HHOO NOA		/ REMARKS
2 11 19T Jar 12 3 11 40ml vile 12 4. 11 11 11 116 12	220 120 125 225	Andrew Company of the Company of the Angre of the Company of the C	Mineral Spirits	
6 7 7 8				
COOLER NOS. BAILERS Additional Comments		RELINQUISHED BY AFFILI	Merexpo	TAPPILIATION DATE TIME
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6 REPORTER	, ,	SEE REV	ERSE SIDE FOR INST	RUCTIONS



November 12, 1993

Mr. Gary Leach Oakland National Engraving 1001 42nd St. Oakland, CA 94608

RE: PACE Project No. 431028.505

Client Reference: Okland National Engraving/07-20-93

Dear Mr. Leach:

Enclosed is the report of laboratory analyses for samples received October 28, 1993.

Footnotes are given at the end of the report.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

Ronald M. Chew

mald M. Ce heus

Project Manager

Enclosures



Oakland National Engraving 1001 42nd St. Oakland, CA 94608

November 12, 1993

PACE Project Number: 431028505

Attn: Mr. Gary Leach

Client Reference: Okland National Engraving/07-20-93

PACE Sample Number: Date Collected: Date Received:

70 0182670 07/20/93 10/28/93

•	Client Sample ID:			Water Sample	
	Parameter	<u>Units</u>	MDL	Rockfridge	DATE ANALYZED
	ORGANIC ANALYSIS				
	HALOGENATED VOLATILE COMPOUNDS EPA 8010 Dichlorodifluoromethane Chloromethane Vinyl Chloride Bromomethane Chloroethane Trichlorofluoromethane (Freon 11)	ug/L ug/L ug/L ug/L ug/L ug/L	40 40 40 40 40 40	ND ND ND ND ND	11/02/93 11/02/93 11/02/93 11/02/93 11/02/93
	1,1-Dichloroethene Methylene Chloride trans-1,2-Dichloroethene cis-1,2-Dichloroethene 1,1-Dichloroethane Chloroform	ug/L ug/L ug/L ug/L ug/L ug/L	10 4000 10 100 10	ND 79000 ND 130 170 ND	11/02/93 11/02/93 11/02/93 11/02/93 11/02/93 11/02/93
	1,1,1-Trichloroethane (TCA) Carbon Tetrachloride 1,2-Dichloroethane (EDC) Trichloroethene (TCE) 1,2-Dichloropropane Bromodichloromethane	ug/L ug/L ug/L ug/L ug/L ug/L	10 10 10 100 100 10	48 ND ND 1200 ND ND	11/02/93 11/02/93 11/02/93 11/02/93 11/02/93 11/02/93
	2-Chloroethylvinyl ether cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,1,2-Trichloroethane Tetrachloroethene Dibromochloromethane	ug/L ug/L ug/L ug/L ug/L ug/L	10 100 10 10 10 10	ND ND ND ND ND ND	11/02/93 11/02/93 11/02/93 11/02/93 11/02/93 11/02/93
1	Chlorobenzene Bromoform 1,1,2,2-Tetrachloroethane 1,3-Dichlorobenzene	ug/L ug/L ug/L ug/L	10 10 10 10	ND ND ND ND	11/02/93 11/02/93 11/02/93 11/02/93



Mr. Gary Leach

November 12, 1993

PACE Project Number: 431028505

Page

Client Reference: Okland National Engraving/07-20-93

PACE Sample Number: Date Collected:

Date Received: Client Sample ID: 70 0182670 07/20/93

10/28/93 Water

MDL

Sample Rockfridge DATE ANALYZED

ORGANIC ANALYSIS

Parameter

HALOGENATED VOLATILE COMPOUNDS EPA 8010 11/02/93 ND 10 ug/L 1.4-Dichlorobenzene 11/02/93 ND 10 1,2-Dichlorobenzene uq/L 11/02/93 128% Bromochloromethane (Surrogate Recovery) 11/02/93 101% 1.4-Dichlorobutane (Surrogate Recovery)

Units

These data have been reviewed and are approved for release.

Darrell C. Cain

Regional Director



2

Mr. Gary Leach Page 3 FOOTNOTES for pages 1 through

November 12, 1993

PACE Project Number: 431028505

Client Reference: Okland National Engraving/07-20-93

MDL ND Method Detection Limit

Not detected at or above the MDL.



Mr. Gary Leach Page

QUALITY CONTROL DATA

November 12, 1993 PACE Project Number: 431028505

Client Reference: Okland National Engraving/07-20-93

VOLATILE HALOCARBONS AND AROMATICS

Batch: 70 26081 Samples: 70 0182670

METHOD BLANK:

METHOD BLANK:			Method
Parameter	<u>Units</u>	MDL	<u>Blank</u>
VOLATILE HALOCARBONS BY EPA 8010	ug/L	2.0	- ND
Dichlorodifluoromethane Chloromethane	ug/L ug/L	2.0	ND
Vinyl Chloride	ug/L ug/L	2.0	ND
Bromomethane	ug/L	2.0	ND
Chloroethane	ug/L	2.0	ND
Twichlowefluoremethane (Even 11)	ug/L	2.0	ND
Trichlorofluoromethane (Freon 11) 1,1-Dichloroethene	ug/L ug/L	0.5	ND
Methylene Chloride	ug/L	2.0	ND
trans-1,2-Dichloroethene	ug/L	0.5	ND
cis-1,2-Dichloroethene	ug/L	0.5	ND
1,1-Dichloroethane	ug/L	0.5	ND
Chloroform	ug/L	0.5	ND
1,1,1-Trichloroethane (TCA)	ug/L	0.5	Ф
Carbon Tetrachloride	ug/L	0.5	ND
1,2-Dichloroethane (EDC)	ug/L	0.5	ПD
Trichloroethene (TCE)	ug/L	0.5	ND
1,2-Dichloropropane	ug/L	0.5	ND
Bromodichloromethane	ug/L	0.5	ND
2-Chloroethylvinyl ether	ug/L	0.5	ND
cis-1,3-Dichloropropene	ug/L	0.5	ND
trans-1,3-Dichloropropene	ug/L	0.5	ND
1,1,2-Trichloroethane	ug/L	0.5	ND
Tetrachloroethene	ug/L	0.5	ND
Dibromochloromethane	ug/L	0.5	ND
Chlorobenzene	ug/L	0.5	ND
Bromoform	ug/L	0.5	ND
1,1,2,2-Tetrachloroethane	ug/L	0.5	ND
1,3-Dichlorobenzene	ug/L	0.5	ND
1,4-Dichlorobenzene	ug/L	0.5	ND
1,2-Dichlorobenzene	ug/L	0.5	ND
Bromochloromethane (Surrogate Recovery)			126%



Mr. Gary Leach Page

QUALITY CONTROL DATA

November 12, 1993 PACE Project Number: 431028505

Client Reference: Okland National Engraving/07-20-93

VOLATILE HALOCARBONS AND AROMATICS

Batch: 70 26081 Samples: 70 0182670

METHOD BLANK:

METHOU BLANK:			Method
Parameter	<u>Units</u>	MDL	Blank 106%
1,4-Dichlorobutane (Surrogate Recovery)			100%
VOLATILE AROMATICS BY EPA 8020	ug/L	0.3	ND
Benzene Toluene	ug/L	0.3	ND
Ethylbenzene	ug/L	0.5	ND
Xylenes, Total	ug/L	0.5	ND

Fluorobenzene (Surrogate Recovery)

96%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

•	LABORATORY CONTROL SAMPLE AND CONTROL	Still LE DOI		Reference		Dupl	
	Parameter 1,1-Dichloroethane Trichloroethene (TCE) 1,1,2-Trichloroethane Tetrachloroethene Benzene Toluene	Units ug/L ug/L ug/L ug/L ug/L ug/L	MDL 0.5 0.5 0.5 0.5 0.3 0.3	Value 20 20 20 20 20 20 20	Recv 102% 101% 94% 102% 102% 104%	Recv 95% 92% 99% 92% 94% 97%	RPD 7% 9% 5% 10% 8% 6%
	Xylenes, Total	ug/L	0.5	60	119%	110%	7%



Mr. Gary Leach fage

FOOTNOTES 4 through for pages

November 12, 1993 PACE Project Number: 431028505

Client Reference: Okland National Engraving/07-20-93

MDL

Method Detection Limit

ND

Not detected at or above the MDL.

Relative Percent Difference RPD

58<u>871</u> *



431028.505

CHAIN-OF-CUSTODY RECORD Analytical Request	
·	

Client Oakland National Engraving	g (O.N.E.)	Report To: Gary Leach	<u>Pa</u>	ce Client No. CN 18 [653
Address1001 42nd Street		Bill To: O.N.E.		ce Project Manager Ron Chew
Oakland, CA 94608		P.O. # / Billing Reference 3292	<u>د Pa</u>	ce Project No. 4347.517
Phone (510) 450-7224		Project Name / No.	** *******************************	quested Due Date:
Sampled By (PRINT): Sampler Signature Date Sampled TEM SAMPLE DESCRIPTION NO.	7/20/43 PST STAINED OF CONTAINED	PRESERVATIVES ANALYSES REQUEST ON TO THE PROPERTY OF THE PROPE		REMARKS
1 Water Sample - Bump, 2 3	THE STATE OF THE S			(0.N.E.) today, The analyses he need is ENA 601. He will fox over note latin on stating he under- stand nample is way out of Holding Time 4 he still need it sun
COOLER NOS. BAILERS Additional Comments	SHIPMENT METHOD STEM NUMBER OUT / DATE RETURNED / DATE	RELINQUISHED BY / AFFILIATION THE STATE OF	ACCEPTED BY/A	أ المنظلات كالسنتيج التصنيحات

MANIFESTS

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14. GENERATOR'S	CERTIFICATION: I here d, and labeled, and are in	by declare that the contents a all respects in proper cond	of the consignment or transport by t	e fully and a unimay occo	corately or raing to a	loscribod pplicable	above by professional states	and internate ber stipping r	ome and are clar
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