COPY

GROUND-WATER SAMPLING

AT

750 HIGH STREET

OAKLAND, CALIFORNIA

Prepared For:

MR. JOHN BACON

September 8, 1993

S30257/11968B

CERTIFIED–

COPY

September 8, 1993

Ms. Madhulla Logan
Alameda County Department of Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

Subject: Ground-Water Sampling, 750 High Street, Oakland, California (CERTIFIED/Earth Metrics file reference 330257/11988B)

Dear Ms. Logan:

On behalf of the owner of the above-referenced site, Mr. John Bacon, enclosed is CERTIFIED/Earth Metrics report of Ground-Water Sampling for Polychlorinated Biphenyls (PCBs) for 750 High Street (formerly, 744 and 752 High Street), Oakland. Work was in accordance with the Work Plan submitted August 18, 1993. Standard operating procedures are provided herein as Appendix A.

CERTIFIED/Earth Metrics completed its field work on the subject site on August 19, 1993. Laboratory analyses by U.S. EPA Method 608/8080 for PCBs in six monitoring wells determined no detectable amounts of PCBs present. The laboratory analytical report, Sample Chain-of-Custody, and Well Sampling Logs are included as Appendix B.

Having determined no PCBs to be present, CERTIFIED/Earth Metrics recommends case closure at this time and requests same on behalf of the owner. Please call if you have any questions about the report.

Sincerely,

Marc R. Papineau
Project Manager

Michael McDonald, P.E.
Project Engineer

cc. Mr. Richard Hiett, California RWQCB

Certified Engineering & Testing® Company

Environmental Consultants & Laboratory Services

7000 Marina Boulevard
4th Floor
Brisbane, CA
94005
(415) 742-9900
Fax (415) 742-1033

Boston
Providence
New York
Memphis
Dallas
San Francisco
Los Angeles

GROUND-WATER SAMPLING

AT

750 HIGH STREET

OAKLAND, CALIFORNIA

Prepared For:

MR. JOHN BACON

September 8, 1993

Prepared By:

CERTIFIED/EARTH METRICS
7000 Marina Boulevard, 4th Floor
Brisbane, CA 94005
(415) 742-9900

S30257/11968B

1. INTRODUCTION, PURPOSE, AND SCOPE OF WORK

The subject site, 750 High Street (formerly 744 and 752 High Street) in Oakland is presently occupied by a warehouse building, a parking lot with stacked wood and customer parking areas.

The purpose of this ground-water sampling and analysis event was to determine the presence or absence of Polychlorinated Biphenyls (PCBs) in ground water on site. Based upon the Work Plan submitted August 16, 1993 and agreement with Alameda County, the laboratory analysis results are to be used in consideration of the appropriateness of case closure. Upon determination of no detectable amounts of Polychlorinated Biphenyls (PCBs) in ground water, monitoring wells are to be considered for closure by grouting them to the surface and the open case is to be recommended by Alameda County to RWQCB for closure.

2. LOCATION AND SITE DESCRIPTION

The subject site is located at 750 High Street, Oakland, California, and is presently occupied by a warehouse building, and asphalt-paved, wood and construction materials storage areas.

The subject property is immediately adjacent to the Southern Pacific railroad tracks to the east, a building supply business to the west, and High Street to the north.

3. BACKGROUND

The subject site was previously used as a metal salvage yard. Surface soil contamination with PCBs was discovered and remediated by Southern Pacific Transportation Company (SPTC) in June 1990. Monitoring wells were installed and first sampled in May 1989. Soil was scraped and transported off site in June 1990. The site was paved in 1991.

Prior to being covered with pavement, the six on-site monitoring wells were sampled and tested on at least five (5) previous monitoring events, May 1989, July 1989, December 1989, June 1990, and September 1990 and four of the six wells were then found to contain no detectable amounts of PCBs. Monitoring well C-2 was found to contain 0.61 to 1.0 ppb in May and July 1989; however, subsequently in December 1989, June 1990, and September 1990, well C-2 was found to contain no detectable PCBs. Well C-6 was found to contain no detectable PCBs in four events and then 0.59 ppb in September 1990 (See Table 1, Summary of Analytical Ground-Water Data). The detection limit was reported by the laboratory of previous test events (ENSECO) to be 0.50 ppb for Arochlor 1260.

4. GROUND-WATER SAMPLING

A representitive of CERTIFIED/Earth Metrics arrived on site the morning of Thursday, August 19, 1993. After adequately addressing Site safety concerns, depth-to-water level to top of casing was measured in each well using an electronic probe. The following are depth-to-water measurements taken by CERTIFIED/Earth Metrics from on-site monitoring wells on August 19, 1993:

MW Number	Depth-to-Water (feet below top of casing*)
A-1	7.47
B-2	6.79
A-5	8.45
C-2	10.77
C-6	9.62
C-5	11.52

* Note: Casing heights relative to grade surface were variable owing to upper casing damage. Wells which had been inadvertently covered with pavement overlay were located by survey and uncovered. Lost upper casing was as much as 12 inches.

Purging and sampling wells was performed in accordance with CERTIFIED/Earth Metrics standard procedure outlined in Appendix A. Wells were purged of at least three well volumes and temperature, pH, and conductivity measurements were taken after each well volume. All purge water was collected in one 55-gallon drum on site. The 55-gallon drum was labeled and stored temporarily on site for appropriate safe disposal. Recharge of ground water in monitoring wells on site was slow and approximately 20 minutes was allowed prior to purging each well volume.

Ground-water sampling was accomplished from each well by filling two (2) one-liter amber bottles using new dedicated disposable polyethylene bailers. Sample pH was monitored to be 7.1 to 7.3 (near neutral). All downhole equipment was washed with trisodium phosphate (TSP) and distilled water, before use in each well. The well sampling order was A-1, B-2, A-5, C-2, C-5, and C-6, in order of increasing historic levels of PCBs. All ground-water samples were cooled with ice in a cooler and transported to an California-certified laboratory for analysis. A Chain-of-Custody form accompanied ground-water samples to the laboratory.

Before sampling, minimum of three well volumes was purged from each well or until ground-water turbidity, temperature, pH, and electrical conductivity remained relatively constant (within 10%). Care to minimize silt in ground-water samples was taken during sampling. A polyvinyl chloride (PVC) bailer was used to purge, and a disposable dedicated polyethylene bailer was used to sample each well. The PVC bailer was washed thoroughly with TSP and water and triple-rinsed prior to use in each well.

Proper sample containers, sampling techniques, labeling, preservation, and Chain of Custody was used, according to CERTIFIED/Earth Metrics protocol, to reduce the chance of an error in sampling. Sequoia Analytical Laboratory, Redwood City, a California DHS-certified laboratory, performed all analytical testing.

Site safety measures and equipment were used to minimize potential for injury during monitoring well sampling. Safety cones were set near each monitoring well location prior to sampling, to designate the work zone. Because the site is currently used as a lumber yard, the safety cones were also used to direct traffic around field personnel. Safety goggles, steel-toed boots, and gloves were used to protect workers.

5. GROUND-WATER ANALYSIS

Ground-water samples were analyzed for Polychlorinated Biphenyls (PCBs) (U.S. EPA method 608/8080). Results are summarized below in Table 1. Previous results are summarized in Table 2 for previous monitoring events from May 1989 to April 1992.

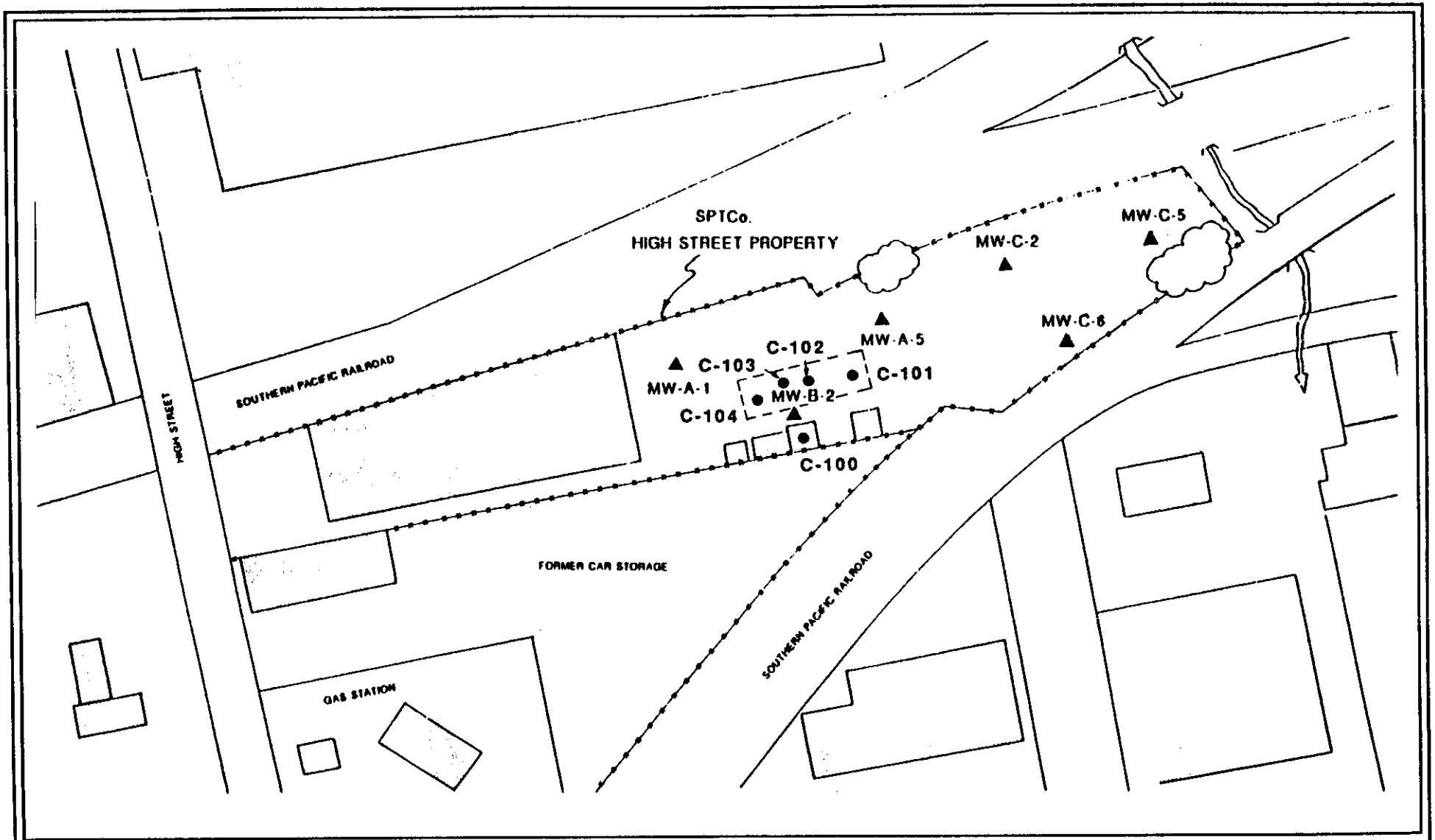


FIGURE 2.
SITE PLAN SHOWING WELL LOCATIONS

TABLE 1
AUGUST 1993 ANALYTICAL GROUND-WATER DATA
750 HIGH STREET
OAKLAND, CALIFORNIA
(August 19, 1993)

Monitoring Well Number	Date	Polychlorinated Biphenyls (PCBs) (ppb)
A-1	8/19/93	ND
B-2	8/19/93	ND
A-5	8/19/93	ND
C-2	8/19/93	ND
C-5	8/19/93	ND
C-6	8/19/93	ND

Results are expressed in parts per billion (ppb)
Polychlorinated Biphenyls (PCBs) by EPA method 608/8080
SOURCE: Sequoia Analytical, 1993

TABLE 2. ANALYTICAL RESULTS OF INVESTIGATION FROM WELLS AT 744 HIGH STREET, OAKLAND, CALIFORNIA (ppb)

SAMPLE ID DATE	PCBs IN WATER ppb	NOTES
A-1		
5-26-89	ND	ND means not
7-28-89	NT	detected
12-4-89*	ND	
6-25-90	ND	NT means not
9-6-90	ND	tested
A-5		
5-26-89	ND	
7-28-89	ND	
12-4-89*	ND	
6-25-90	ND	
9-6-90	ND	
B-2		
5-26-89	ND	
7-28-89	ND	
12-4-89*	ND	
6-25-90	ND	
9-6-90	ND	
C-2		
5-26-89	1.0	
7-28-89	0.61	
12-4-89*	ND	
6-25-90	ND	
9-6-90	ND	

(CONTINUED)

TABLE 2 (CONTINUED). ANALYTICAL RESULTS OF INVESTIGATION FROM WELLS AT 744 HIGH STREET, OAKLAND, CALIFORNIA

SAMPLE ID DATE	PCBs IN WATER (ppb)	NOTES
C-5		
5-26-89	ND	
7-28-89	ND	
12-4-89*	ND	
6-25-90	ND	
9-6-90	ND	
4-8-92	ND	
C-6		
5-26-89	ND	
7-28-89	ND	
12-4-89*	ND	*12-4-89 was reported by Ecology and Environment as 12-4-90
6-25-90	ND	
9-6-90	0.59	

ppb = parts per billion

Source: Ecology & Environment
Enseco, 1990
CERTIFIED/Earth Metrics, 1992

APPENDIX A
CERTIFIED/Earth Metrics Field Investigation Procedures

GROUND-WATER SAMPLE COLLECTION PROCEDURE

Prior to sampling, the depth-to water was measured to within one-hundredth of a foot to top of casing in each monitoring well location using an electronic probe. Casing damage was noted. Each monitoring well was purged of at least three well volumes or until temperature, pH, and conductivity remained relatively constant (within 10%). Any floating product, sheen, turbidity or unusual odor was recorded if present; none was observed. A reusable PVC bailer used for purging, prior to sampling, was cleaned with trisodium phosphate (TSP) and triple rinsed with distilled water prior to bailing. A separate bailer was used in each well for sampling.

Ground-water was allowed to recharge and settle for 20 minutes before a dedicated disposable polyethylene bailer was placed carefully below water surface to collect a ground-water sample, to minimize the amount of sediment in the ground-water sample. A ground-water sample was then carefully poured into an appropriate container, labeled and placed in iced storage, for transport to a State of California certified laboratory for the required testing for Polychlorinated Biphenyls (PCBs) (EPA method 608/8080). A Chain of Custody record for all samples was initiated by the field technician and is included in Appendix B.

All sampling data, direct measurements, a map of the site, location of drums, any noticeable odor, sheen and other visual observations made at the time of sampling were recorded on Well Sampling Logs by the CERTIFIED/Earth Metrics technician. Well purge water was stored temporarily on site in a labeled 55-gallon drum pending test results.

APPENDIX B

Laboratory Ground-Water Test Reports, Chain-of-Custody, and Well Sampling Logs

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Certified Earth Metrics	Client Project ID:	PO #13325, 530257 - Oakland	Sampled:	Aug 19, 1993
7000 Marina Blvd.	Sample Descript:	Water, A-1-893	Received:	Aug 20, 1993
Brisbane, CA 94005	Analysis Method:	EPA 8080	Extracted:	Aug 26, 1993
Attention: Mario Sternad	Lab Number:	3HA7101	Analyzed:	Aug 30, 1993
			Reported:	Sep 1, 1993

POLYCHLORINATED BIPHENYLS (EPA 8080)

Analyte	Detection Limit µg/L	Sample Results µg/L
PCB 1016	0.50	N.D.
PCB 1221	2.0	N.D.
PCB 1232	0.50	N.D.
PCB 1242	0.50	N.D.
PCB 1248	0.50	N.D.
PCB 1254	0.50	N.D.
PCB 1260	0.50	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Nokowhat D. Herrera
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Certified Earth Metrics	Client Project ID:	PO #13325, 530257 - Oakland	Sampled:	Aug 19, 1993
7000 Marina Blvd.	Sample Descript:	Water, B-2	Received:	Aug 20, 1993
Brisbane, CA 94005	Analysis Method:	EPA 8080	Extracted:	Aug 26, 1993
Attention: Mario Sternad	Lab Number:	3HA7102	Analyzed:	Aug 30, 1993
			Reported:	Sep 1, 1993

POLYCHLORINATED BIPHENYLS (EPA 8080)

Analyte	Detection Limit µg/L	Sample Results µg/L
PCB 1016	0.50	N.D.
PCB 1221	2.0	N.D.
PCB 1232	0.50	N.D.
PCB 1242	0.50	N.D.
PCB 1248	0.50	N.D.
PCB 1254	0.50	N.D.
PCB 1260	0.50	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Nokowhat D. Herrera
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Certified Earth Metrics	Client Project ID:	PO #13325, 530257 - Oakland	Sampled:	Aug 19, 1993
7000 Marina Blvd.	Sample Descript:	Water, A-5	Received:	Aug 20, 1993
Brisbane, CA 94005	Analysis Method:	EPA 8080	Extracted:	Aug 30, 1993
Attention: Mario Sternad	Lab Number:	3HA7103	Analyzed:	Aug 31, 1993
			Reported:	Sep 1, 1993

POLYCHLORINATED BIPHENYLS (EPA 8080)

Analyte	Detection Limit µg/L	Sample Results µg/L
PCB 1016	0.50	N.D.
PCB 1221	2.0	N.D.
PCB 1232	0.50	N.D.
PCB 1242	0.50	N.D.
PCB 1248	0.50	N.D.
PCB 1254	0.50	N.D.
PCB 1260	0.50	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Nokowhat D. Herrera
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Certified Earth Metrics	Client Project ID:	PO #13325, 530257 - Oakland	Sampled:	Aug 19, 1993
7000 Marina Blvd.	Sample Descript:	Water, C2	Received:	Aug 20, 1993
Brisbane, CA 94005	Analysis Method:	EPA 8080	Extracted:	Aug 30, 1993
Attention: Mario Sternad	Lab Number:	3HA7104	Analyzed:	Aug 31, 1993
			Reported:	Sep 1, 1993

POLYCHLORINATED BIPHENYLS (EPA 8080)

Analyte	Detection Limit µg/L	Sample Results µg/L
PCB 1016	0.50	N.D.
PCB 1221	2.0	N.D.
PCB 1232	0.50	N.D.
PCB 1242	0.50	N.D.
PCB 1248	0.50	N.D.
PCB 1254	0.50	N.D.
PCB 1260	0.50	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Nokowhat D. Herrera
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Certified Earth Metrics	Client Project ID:	PO #13325, 530257 - Oakland	Sampled:	Aug 19, 1993
7000 Marina Blvd.	Sample Descript:	Water, C-5	Received:	Aug 20, 1993
Brisbane, CA 94005	Analysis Method:	EPA 8080	Extracted:	Aug 30, 1993
Attention: Mario Sternad	Lab Number:	3HA7105	Analyzed:	Aug 31, 1993
			Reported:	Sep 1, 1993

POLYCHLORINATED BIPHENYLS (EPA 8080)

Analyte	Detection Limit µg/L	Sample Results µg/L
PCB 1016	0.50	N.D.
PCB 1221	2.0	N.D.
PCB 1232	0.50	N.D.
PCB 1242	0.50	N.D.
PCB 1248	0.50	N.D.
PCB 1254	0.50	N.D.
PCB 1260	0.50	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Nokowhat D. Herrera
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Certified Earth Metrics	Client Project ID:	PO #13325, 530257 - Oakland	Sampled:	Aug 19, 1993
7000 Marina Blvd.	Sample Descript:	Water, C-6	Received:	Aug 20, 1993
Brisbane, CA 94005	Analysis Method:	EPA 8080	Extracted:	Aug 30, 1993
Attention: Mario Sternad	Lab Number:	3HA7106	Analyzed:	Aug 31, 1993
			Reported:	Sep 1, 1993

POLYCHLORINATED BIPHENYLS (EPA 8080)

Analyte	Detection Limit µg/L	Sample Results µg/L
PCB 1016	0.50	N.D.
PCB 1221	2.0	N.D.
PCB 1232	0.50	N.D.
PCB 1242	0.50	N.D.
PCB 1248	0.50	N.D.
PCB 1254	0.50	N.D.
PCB 1260	0.50	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Nokowhat D. Herrera
Project Manager

SEQUOIA ANALYTICAL
680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Certified Earth Metrics	Client Project ID:	PO #13325, 530257 - Oakland
7000 Marina Blvd.	Matrix:	Water
Brisbane, CA 94005		
Attention: Mario Sternad	QC Sample Group: 3HA7101-06	Reported: Sep 1, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	PCB 1248
Method:	EPA 8080
Analyst:	L. Laikhtman
Conc. Spiked:	500
Units:	µg/L
LCS Batch#:	BLK082693
Date Prepared:	8/26/93
Date Analyzed:	8/26/93
Instrument I.D.#:	GCHP-10
LCS % Recovery:	64
Control Limits:	50-150

MS/MSD Batch #:	PBLK082693
Date Prepared:	8/26/93
Date Analyzed:	8/26/93
Instrument I.D.#:	GCHP-10
Matrix Spike % Recovery:	64
Matrix Spike Duplicate % Recovery:	64
Relative % Difference:	0.0

SEQUOIA ANALYTICAL

Nokowhat D. Herrera
Project Manager

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation and analytical methods employed for the samples. The LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

CHAIN OF CUSTODY RECORD

CERTIFIED
Environmental Consultants & Laboratory Services
A SHP GROUP COMPANY

Certified Engineering & Testing® Company
25 Mathewson Drive • Weymouth, MA 02189
(617) 337-7807 • Fax (617) 337-8237

SAMPLE SERIES #: _____ - _____ - _____

DUE DATE: 8 - 30 - 93

COMPANY: CERTIFIED
7000 MARINA BLVD 4th FLOOR
BRISBANE CA 94005
PHONE #: (415) 742-9900 FAX #: (415) 742-1033
P.O. #: 13325
CLIENT CONTACT: MARIO STERNAD
CERTIFIED PROJECT #: 930257 ; 750 HIGH ST. OAKLAND

SAMPLE TYPE
(1) WATER
2. SOIL
3. SLUDGE
4. OIL

CONTAINER TYPE
P - PLASTIC
(G) GLASS
V - VOA

CERTIFIED SAMPLE #	CLIENT SAMPLE IDENTIFICATION	SAMPLE TYPE	CONTAINER SIZE	CONTAINER TYPE	CONTAINER #	SAMPLING DATE	SAMPLING TIME	PRESERVATIVES	ANALYSES: PCB's (EPA 608 / 8080)	ANALYSES: PCB's (ONLY)	COMMENTS
	A-1-893	WATER	AMBER	LTR	2	8/19/93	10:35	Cool	X		930871
	B-2	↓	↓	↓	↓	↓	11:15	↓	X		
	A-5						12:15		X		
	C-2						1:10		X		
	C-5						2:00		X		
	C-6	↓	↓	↓	↓	↓	2:40	↓	X		

RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
Mario Sternad	8/20/93		
	TIME: 12:00 NOON		TIME:
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE: 8-20-93
	TIME:		TIME: 1200

SPECIAL INSTRUCTIONS:
☒ RUSH DATE REQUIRED (ADDITIONAL COST MAY APPLY) 7 DAY TAT
☐ REGULAR (10 BUSINESS DAYS)

• Shade areas for laboratory use only
Retain Pink copy and submit White and Yellow copies to the Laboratory

ACCUFORMS, INC., BRAINTREE, MA (617) 356-2626

CERTIFIED ENGINEERING & TESTING CO., INC.
Environmental Consultants

Groundwater Monitor Well Sampling & Field Data Sheet

Location No. C-6
Sample No. C-6
Project/Client: JOHN BANNISTER
Location: 750 HIGH ST. OAKLAND, CA
Job No. 530257

Date: 8/19/93 Time: 9:55 A.M.
Weather:
Conditions FAIR
Air Temperature
Personnel MARIO STERNAD

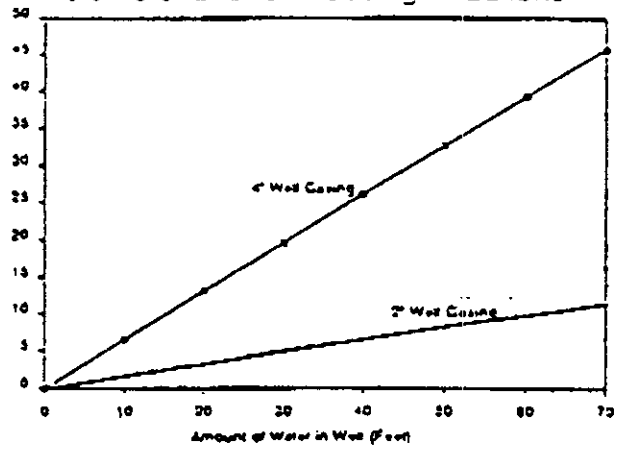
DEPTH TO WATER

WELL INFORMATION

Casing, Dia.: 2" INCH
( ) Stainless Steel
( ) Steel
(✓) PVC
( ) Teflon
( ) Other
Water Level: 9.62
Total Depth: 22.42
Measuring Device
( ) M-Scope
( ) Other
Volume of Water in Casing 2.1 GAL
Datum:
( ) Top of Surf. Casing
( ) Top of Well Casing
( ) Other

Intake, Diameter:
( ) Stainless Steel
( ) Steel
( ) PVC
( ) Teflon
( ) Other
Well Conditions:
Well Clean to Bottom
( ) yes, ( ) no
Well in Good Condition
( ) yes, (✓) no HEAD BROKEN
Surface Protection:
Clean ( ) yes, (✓) no
Condition ABSENT
Lock ( ) yes, (✓) no

Volume of 2" and 4" Casing in Gallons



Purging Data:

Method:
( ) Bladder Pump
(✓) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials:
Pump/Bailer
( ) Teflon
( ) Stainless Steel
(✓) PVC
( ) Other

Tubing/rope
( ) Teflon
( ) Polypropylene
(✓) Nylon
( ) Other
Pumping Rate
Elapsed Time 30 MINUTES
Volume Pumped 6.5 GAL
Well Evacuated ( ) yes, ( ) no
Number of Well Volumes Purged 3+

Purging Equipment
( ) Dedicated
( ) Prepared Off-Site
(✓) Field Cleaned

Time Series Data	2:10 PM	2:20 PM	2:30 PM	
Measurement	1	2	3	4
Well Volumes	1	2	3+	
Water Temp.	72.0	66.9	66.8	
pH	7.00	7.24	7.24	
Other E-C	1670	1630	1650	

Sampling Data:

Method:
( ) Bladder Pump
(✓) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials: Pump/Bailer
( ) Teflon
( ) Stainless Steel
( ) PVC
(✓) Other Polyethylene
Materials: Tubing/rope

( ) Teflon
( ) Polypropylene
(✓) Nylon
( ) Other
Sampling Equipment
(✓) Dedicated
( ) Prepared Off-Site
( ) Field Cleaned
Metals Sample Field Filtered N/A
( ) Yes
( ) No
Method

Physical & Chemical Data:

Appearance:
( ) Clear
(✓) Turbid
( ) Color
( ) Immiscible Product
( ) Other
Filed Condition of Sample
Temp
pH
Other 2:40 8/19/93

Certification: Mario Sternad
This sample was collected and handled in accordance with standard regulatory and corporate procedures

CERTIFIED ENGINEERING & TESTING CO., INC.
Environmental Consultants

Groundwater Monitor Well Sampling & Field Data Sheet

Location No. C-5
Sample No. C-5
Project/Client: JOHN BANNISTER
Location: 750 HIGH STREET OAKLAND, CA
Job No. 530257

Date: 8/19/93 Time: 9:55 A.M.
Weather:
Conditions FAIR
Air Temperature
Personnel MARIO STERNAD

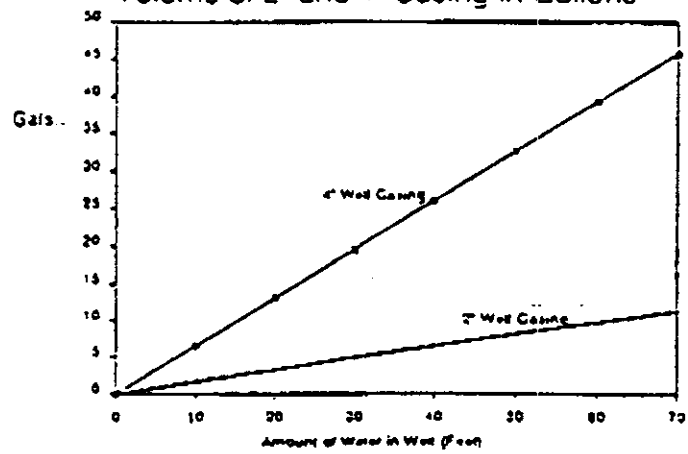
DEPTH TO WATER

WELL INFORMATION

Casing, Dia.: 2 INCH
( ) Stainless Steel
( ) Steel
(✓) PVC
( ) Teflon
( ) Other
Water Level: 11.52 FEET
Total Depth: 21.87
Measuring Device
( ) M-Scope
(✓) Other Elec. Depth
Volume of Water in Casing 1.7 GAL
Datum:
( ) Top of Surf. Casing
( ) Top of Well Casing
( ) Other

Intake, Diameter:
( ) Stainless Steel
( ) Steel
( ) PVC
( ) Teflon
( ) Other
Well Conditions:
Well Clean to Bottom
( ) yes, ( ) no
Well in Good Condition
(✓) yes, ( ) no
Surface Protection:
Clean (✓) yes, ( ) no
Condition
Lock ( ) yes, (✓) no

Volume of 2" and 4" Casing in Gallons



Purging Data:

Method:
( ) Bladder Pump
(✓) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials:
Pump/Bailer
( ) Teflon
( ) Stainless Steel
(✓) PVC
( ) Other

Tubing/rope
( ) Teflon
( ) Polypropylene
(✓) Nylon
( ) Other
Pumping Rate
Elapsed Time 40 MINUTES
Volume Pumped 4.5 GAL
Well Evacuated ( ) yes, ( ) no
Number of Well Volumes Purged 3

Purging Equipment
( ) Dedicated
( ) Prepared Off-Site
(✓) Field Cleaned

Time Series Data

Measurement	1	2	3	4
Well Volumes	1	2	3	
Water Temp.	66.1	64.4	64.3	
pH	7.48	7.29	7.33	
Other Elec. Conductivity	1270	1220	1220	

Sampling Data:

Method:
( ) Bladder Pump
(✓) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials: Pump/Bailer
( ) Teflon
( ) Stainless Steel
( ) PVC
(✓) Other Polyethylene
Materials: Tubing/rope
( ) Teflon
( ) Polypropylene
(✓) Nylon
( ) Other
Sampling Equipment
(✓) Dedicated
( ) Prepared Off-Site
( ) Field Cleaned
Metals Sample Field Filtered N/A
( ) Yes
( ) No
Method

Physical & Chemical Data:

Appearance:
( ) Clear
(✓) Turbid
( ) Color
( ) Immiscible Product
( ) Other
Filed Condition of Sample
Temp
pH
Other 2:00 P.M. 8/19/93

Certification: Mario Sternad
This sample was collected and handled in accordance with standard regulatory and corporate procedures

Groundwater Monitor Well Sampling & Field Data Sheet

Environmental Consultants

Location No. C-2
Sample No. C-2
Project/Client: JOHN BANNISTER
Location: 750 HIGH STREET OAKLAND
Job No. 530257

Date: 8/19/93 Time: 9:50 A.M.
Weather:
Conditions FAIR
Air Temperature
Personnel MARIO STERNAD

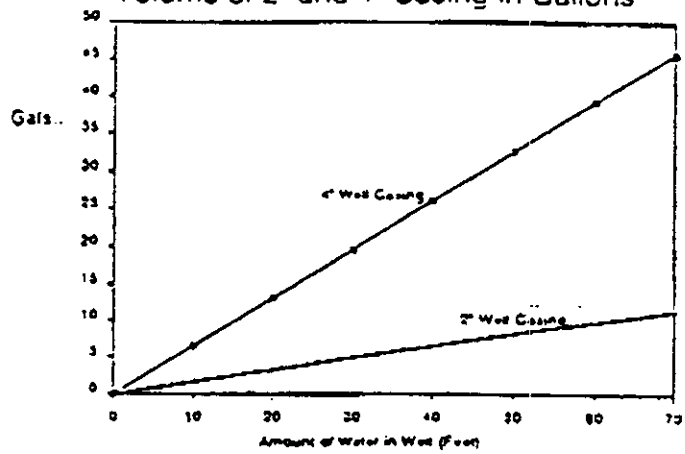
DEPTH-TO-WATER

WELL INFORMATION

Casing, Dia.:
( ) Stainless Steel
( ) Steel
( ) PVC
( ) Teflon
( ) Other
Water Level: 10.77 FEET
Total Depth: 22.93 FEET
Measuring Device
( ) M-Scope
(✓) Other Elec. Depth
Volume of Water in Casing 2 GALLONS
Datum:
( ) Top of Surf. Casing
(✓) Top of Well Casing
( ) Other

Intake, Diameter:
( ) Stainless Steel
( ) Steel
( ) PVC
( ) Teflon
( ) Other
Well Conditions:
Well Clean to Bottom
( ) yes, ( ) no
Well in Good Condition
( ) yes, ( ) no
Surface Protection:
Clean ( ) yes, ( ) no
Condition
Lock ( ) yes, ( ) no

Volume of 2" and 4" Casing in Gallons



Purging Data:

Method:
( ) Bladder Pump
(✓) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials:
Pump/Bailer
( ) Teflon
( ) Stainless Steel
(✓) PVC
( ) Other

Tubing/rope
( ) Teflon
( ) Polypropylene
(✓) Nylon
( ) Other
Pumping Rate
Elapsed Time 40 MINUTES
Volume Pumped 7.5 GALLONS
Well Evacuated ( ) yes, ( ) no
Number of Well Volumes Purged 3.75

Purging Equipment
( ) Dedicated
( ) Prepared Off-Site
(✓) Field Cleaned

Time Series Data

Measurement	1 (12:35 PM)	2 (12:45)	3 (12:55)	4
Well Volumes	1.25	2.5	3.75	
Water Temp.	65.4	65.8	64.8	
pH	7.09	7.07	7.05	
Other E-C	1100	1150	1130	

Sampling Data:

Method:
( ) Bladder Pump
(✓) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials: Pump/Bailer
( ) Teflon
( ) Stainless Steel
( ) PVC
(✓) Other Polyethylene
Materials: Tubing/rope
( ) Teflon
( ) Polypropylene
(✓) Nylon
( ) Other
Sampling Equipment
(✓) Dedicated
( ) Prepared Off-Site
( ) Field Cleaned
Metals Sample Field Filtered N/A
( ) Yes
( ) No
Method

Physical & Chemical Data:

Appearance:
( ) Clear
(✓) Turbid
( ) Color
( ) Immiscible Product
( ) Other
Filed Condition of Sample
Temp
pH
Other 1:10 PM 8/19/93

Certification: Mario Sternad
This sample was collected and handled in accordance with standard regulatory and corporate procedures

CERTIFIED ENGINEERING & TESTING CO., INC.
Environmental Consultants

Groundwater Monitor Well Sampling & Field Data Sheet

Location No. A-5
Sample No. A-5
Project/Client: JOHN BANNISTER
Location: 750 HIGH STREET OAKLAND, CA
Job No. 530257

Date: 8/19/93 Time: 9:35 A.M.
Weather:
Conditions
Air Temperature
Personnel MARIO STERNAD

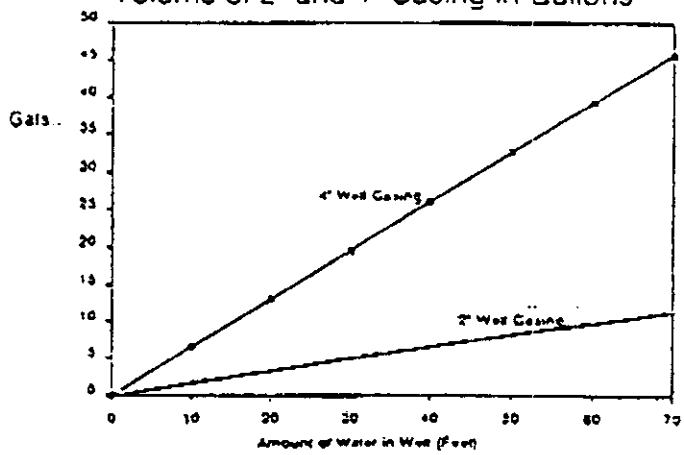
DEPTH-TO-WATER

WELL INFORMATION

Casing, Dia.: 2 INCH
( ) Stainless Steel
( ) Steel
(✓) PVC
( ) Teflon
( ) Other
Water Level: 9.45 FEET
Total Depth: 24.69 FT
Measuring Device
( ) M-Scope
(✓) Other Elec. Depth
Volume of Water in Casing 2.5 GAL
Datum:
( ) Top of Surf. Casing
(✓) Top of Well Casing
( ) Other

Intake, Diameter:
( ) Stainless Steel
( ) Steel
( ) PVC
( ) Teflon
( ) Other
Well Conditions:
Well Clean to Bottom
( ) yes, ( ) no
Well in Good Condition
( ) yes, ( ) no
Surface Protection:
Clean ( ) yes, ( ) no
Condition
Lock ( ) yes, ( ) no

Volume of 2" and 4" Casing in Gallons



Purging Data:

Method:
( ) Bladder Pump
(✓) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials:
Pump/(Bailer)
( ) Teflon
( ) Stainless Steel
(✓) PVC
( ) Other

Tubing/rope
( ) Teflon
( ) Polypropylene
(✓) Nylon
( ) Other
Pumping Rate
Elapsed Time 40 MINUTES
Volume Pumped 8 GALLONS
Well Evacuated ( ) yes, ( ) no
Number of Well Volumes Purged 3+

Purging Equipment
( ) Dedicated
( ) Prepared Off-Site
(✓) Field Cleaned

Time Series Data

Measurement	1 (11:35 AM)	2 (11:45)	3 (12:10 PM)	4
Well Volumes	1	2	3+	
Water Temp.	69.3	67.3	66.0	
pH	7.09	6.98	7.17	
Other E-C	1640	1600	1580	

Sampling Data:

Method:
( ) Bladder Pump
(✓) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials: Pump/Bailer
( ) Teflon
( ) Stainless Steel
( ) PVC
(✓) Other Polyethylene
Materials: Tubing/rope
( ) Teflon
( ) Polypropylene
(✓) Nylon
( ) Other
Sampling Equipment
(✓) Dedicated
( ) Prepared Off-Site
( ) Field Cleaned
Metals Sample Field Filtered N/A
( ) Yes
( ) No
Method

Physical & Chemical Data:

Appearance:
( ) Clear
( ) Turbid
( ) Color
( ) Immiscible Product
( ) Other
Filed Condition of Sample
Temp
pH
Other 12:15 PM 8/19/93

Certification: Mario Sternad
This sample was collected and handled in accordance with standard regulatory and corporate procedures

Groundwater Monitor Well Sampling & Field Data Sheet

Environmental Consultants

Location No. A-1
Sample No. A-1-893
Project/Client: JOHN BANNISTER
Location: 750 HIGH STREET, OAKLAND
Job No. S 30257

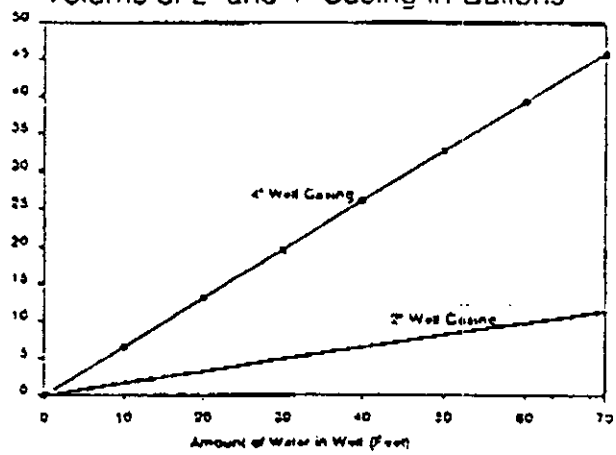
Date: 8/19/93 Time: 9:30 A.M.
Weather: DEPTH-TO-WATER/TIME
Conditions FAIR
Air Temperature
Personnel MARIO STERNAD

WELL INFORMATION

Casing, Dia.: 2-INCH
( ) Stainless Steel
( ) Steel
(✓) PVC
( ) Teflon
( ) Other
Water Level: 7.47 FEET
Total Depth: 22.64 FT.
Measuring Device
( ) M-Scope
(✓) Other Elec. Depth
Volume of Water in Casing 2.5 GALLONS
Datum:
( ) Top of Surf. Casing
(✓) Top of Well Casing
( ) Other

Intake, Diameter:
( ) Stainless Steel
( ) Steel
( ) PVC
( ) Teflon
( ) Other
Well Conditions:
Well Clean to Bottom
(✓) yes, ( ) no
Well in Good Condition
( ) yes, (✓) no BROKEN HEAD
Surface Protection:
Clean ( ) yes, (✓) no
Condition ABSENT
Lock ( ) yes, (✓) no

Volume of 2" and 4" Casing in Gallons



Purging Data:

Method:
( ) Bladder Pump
(✓) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials:
Pump/Bailer
( ) Teflon
( ) Stainless Steel
(✓) PVC
( ) Other

Tubing/rope
( ) Teflon
( ) Polypropylene
(✓) Nylon
( ) Other
Pumping Rate
Elapsed Time 60 MINUTES
Volume Pumped 7.5 GAL
Well Evacuated ( ) yes, ( ) no
Number of Well Volumes Purged 3

Purging Equipment
( ) Dedicated
( ) Prepared Off-Site
(✓) Field Cleaned

Time Series Data

	9:02	10:15	10:25	
Measurement	1	2	3	4
Well Volumes	0.5	2	3	
Water Temp.	71.0	69.1	67.9	
pH	6.71	6.98	7.11	
Other Elec. Conductivity	1240	1050	1000	

Sampling Data:

Method:
( ) Bladder Pump
(✓) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials: Pump/Bailer
( ) Teflon
( ) Stainless Steel
( ) PVC
(✓) Other Polyethylene
Materials: Tubing/rope
( ) Teflon
( ) Polypropylene
(✓) Nylon
( ) Other
Sampling Equipment
(✓) Dedicated
( ) Prepared Off-Site
( ) Field Cleaned
Metals Sample Field Filtered N/A
( ) Yes
( ) No
Method

Physical & Chemical Data:

Appearance:
( ) Clear
(✓) Turbid
( ) Color
( ) Immiscible Product
( ) Other
Filed Condition of Sample
Temp
pH
Other 10:35 A.M. 8/19/93

Certification: Mario Sternad
This sample was collected and handled in accordance with standard regulatory and corporate procedures

CERTIFIED
S30257/11968B

APPENDIX C

Work Plan Dated August 16, 1993

CERTIFIED

CERTIFIED
S30257/11968B

August 16, 1993

Ms. Madhulla Logan
Alameda County Environmental Health Services
Hazardous Materials and Storage Tanks Division
80 Swan Way, Room 200
Oakland, CA 94621

Subject: Ground-Water Sampling and Testing at 750 High Street, Oakland, California for the Presence of Polychlorinated Biphenyls (PCBs) (CERTIFIED/Earth Metrics file reference S30257/11968B)

Dear Ms. Logan:

Enclosed please find the Work Plan to sample and analyze ground water collected from six (6) existing wells for Polychlorinated Biphenyls (PCBs) at the above-mentioned site. Destruction and grouting of monitoring wells on-site to grade surface will not occur the same day as sampling, but will be performed pending reportage of laboratory results to your office.

Please call me to let me know if you will attend the well sampling proposed to begin on August 17, 1993.

Sincerely,

Marc Papineau
Manager, Physical Sciences Department

Certified Engineering & Testing® Company

Environmental Consultants & Laboratory Services

7000 Marina Boulevard
4th Floor
Brisbane, CA 94005
415-742-9900
Fax 415-742-1033

Boston
Providence
New York
Memphis
Dallas
San Francisco
Los Angeles

LOCATION AND SITE DESCRIPTION

The subject site is located at 750 High Street (formerly 744 and 752 High Street), Oakland, California, and is presently occupied by a warehouse building and asphalt-paved lumber and materials storage areas. Six monitoring wells exist throughout the paved area, made accessible to sampling personnel by the recent resurvey and uncovering of asphalt pavement.

The subject property is immediately adjacent to the Southern Pacific Transportation Company railroad tracks to the east, a building supply business to the west, and High Street to the north.

BACKGROUND

The subject site was previously used as a metal salvage yard. Soil was scraped and off-hauled for proper disposal in June 1990 to remove PCB-affected soil. Six monitoring wells were installed in 1989. The six on-site monitoring wells were sampled and tested for PCBs and all except C-6 were found to contain no detectable amounts of PCB in 1990. Well C-6 was found to contain 0.59 parts per billion (ppb) PCBs.

PURPOSE AND SCOPE OF WORK

The purpose of this ground-water sampling is to perform final sampling of the six wells and then to perform will closure of the six wells. The presence of low concentration Polychlorinated Biphenyls (PCBs) in ground water in well C-6 is believed to be an artifact of drilling the wells through surface contamination. Pending determination and reportage of final results of PCBs in ground water, monitoring wells will be grouted to surface. Ground-water sampling described herein will be accomplished from six monitoring wells on-site.

MOBILIZATION

A representative of CERTIFIED/Earth Metrics will be on-site during one day, the morning of Tuesday, August 17, 1993, or at the next date available date convenient to Alameda County Hazardous Materials Unit. After adequately addressing site safety concerns, purging and sampling wells will commence at each of six separate monitoring well locations. All purge water will be collected in one labeled 55-gallon drum on-site, for future safe disposal.

Site safety equipment will include: safety cones to mark the work zone boundary, gloves, boots, and safety glasses.

GROUND-WATER SAMPLING

Field investigation procedures are summarized in Attachment 1.

Depth-of-water to top of casing or top of asphalt in all monitoring well locations will be accomplished prior to sampling using an electronic probe. Approximately three well volumes (approximately 5.0 gallons) will be purged from each monitoring well using a cleaned PVC bailer. Purged ground water will be placed into a labeled 55-gallon barrel for future disposal.

Ground-water samples from each well will then be taken by filling two amber liter bottles using a dedicated disposable bailer. Caution will be taken to wash all equipment with TSP and distilled water before entering another well. The well sampling order will be MW1 - MW6. All ground-water samples will be cooled with ice in a cooler and transported to a California Certified laboratory for analysis. A Chain-of-Custody form will be filed out in the field and accompany samples to the laboratory.

GROUND-WATER ANALYSIS

All ground-water samples taken will be tested for Polychlorinated Biphenyls (PCBs) (EPA Method 8080) on a seven workday turnaround plus additional sample for quality control.

ATTACHMENT 1
CERTIFIED FIELD INVESTIGATION PROCEDURES

GROUND-WATER SAMPLE COLLECTION PROCEDURE

Prior to sampling, the depth-to water is measured to within one-hundredth of a foot to grade surface in each monitoring well using an electronic probe. Each screened boring is purged of at least three well volumes or until temperature, pH, and conductivity remains relatively constant (within 10%). Any floating product, sheen, turbidity or unusual odor is recorded. Reusable metal, PVC or teflon bailers are cleaned prior to bailing purge water.

Monitoring wells are allowed to settle for 10-20 minutes before a dedicated polyethylene disposable bailer is placed carefully below water surface to extract a ground-water sample. A ground-water sample will then be taken from each well location, placed into an appropriate container, labeled, and placed in iced storage, for transport to a State of California Certified laboratory to undergo the required testing for Polychlorinated Biphenyls (PCBs) (EPA Method 8080). A Chain-of-Custody record for all samples will be initiated by the field geologist and will be included in the final report.

All sampling data, direct measurements, a map of the site location of drums, any noticeable odor, sheen and other visual observations made at the time of sampling are recorded in a field notebook by CERTIFIED/Earth Metrics personnel. Well purge water is stored in a labeled drum on-site until results are computed to determine if safe removal and disposal is needed.

APPENDIX D

Letter Dated June 16, 1992 (Revised May 18, 1993)
to Alameda County Health Agency

CERTIFIED

June 16, 1992
Revised May 18, 1993

Mr. Britt Johnson
Hazardous Materials Specialist
Alameda County Health Agency
Department of Environmental Health
80 Swan Way, Room #200
Oakland, CA 94621

Subject: Request for Your Review of the Enclosed Statement of Work Completed, Test Results of Samples Taken, and Well Monitoring of MW-5 (C-5) at the New Lumber Yard at 744 High Street, Oakland, California on April 8, 1992 (CERTIFIED/Earth Metrics file reference 11968) Which Will Hopefully Result in your Recommendation of Letter of Closure to RWQCB

Certified Engineering & Testing® Company

Environmental Consultants & Laboratory Services

7000 Marina Boulevard
4th Floor
Brisbane, CA 94005
415-742-9900
Fax 415-742-1033

Boston
Providence
New York
Memphis
Dallas
San Francisco
Los Angeles

Dear Mr. Johnson:

We are writing you at the request of John Bacon, owner of the property fronting on High Street adjacent to the westerly boundary of the Southern Pacific Railroad main line right-of-way, formerly known as 744 and 758 High Street. The subject property is now known, along with an unrelated contiguous parcel to the west, as 750 High Street. CERTIFIED/Earth Metrics recommends case closure and closure of all six monitoring wells based upon monitoring results on consecutive sampling events (see Table 1), soil verification sampling results (see Table 2), and apparent absence of any significant health or environmental risks.

BACKGROUND INFORMATION

Surface soil contamination with PCBs was discovered and remediated by Southern Pacific Transportation Company (SPTC). Ecology and Environment Inc. (consultant to SPTC) scraped the site and removed the soil from the site (see transportation documentation attached). Ecology and Environment has indicated that their remedial action at the subject site has been completed, as evidenced by post-excavation soil verification sampling and testing (see Table 2).

The site was paved in 1991 and the six wells installed by Ecology and Environment remain on site (see Figure 1). The ground-water direction at the site is known to be from the northeast to the southwest. Remedial action, as stated by Ecology and Environment, is complete.

As per the Statement of Work between CERTIFIED/Earth Metrics and Mr. John Bacon, CERTIFIED/Earth Metrics repaired, purged, and sampled one well (C-5), the farthest downgradient, to assess the presence of potential polychlorinated biphenyls (PCBs). The investigation involved repair, purging, and sampling one existing well (C-5) on site. The well was purged and sampled on six previous dates (see Table 1). On May 26, July 28 and December 4, 1989 and on June 25 and September 6, 1990, no PCBs were detected in well C-5. Additional ground water sampling and analysis of MW-5 (C-5) performed by CERTIFIED/Earth Metrics for Mr. John Bacon at the above-referenced site on April 8, 1992, showed no detectable PCBs in well C-5.

C-5 WELL MONITORING RESULTS

The analytical results of April 8, 1992, supplemental sampling of the ground water from C-5 on the subject site showed no detectable PCBs. The following procedure was followed during well purging and sampling.

Four well volumes of ground water were purged from the well. Temperature/ conductivity and pH readings were taken for the water being discharged from the bailers.

After allowing the well to recover to 80 percent or more of the initial casing volume, a disposable bailer was lowered down the boring until water was encountered in the boring. The bailer was then slowly lowered half the distance of the length of the bailer and then removed from the boring. All samples were taken the same day as the purge event.

Monitoring well C-5 was purged and sampled in the following fashion. Sample water was gathered in one-liter glass jars. Samples were preserved by placing all the samples on ice to chill. A Chain of Custody was initiated and accompanied the samples to the laboratory. The samples were delivered to Sequoia Analytical Laboratory in good condition, at the correct temperature, and at the correct pH.

CONCLUSION

The Non-Detection status of PCBs in monitoring wells A-1, A-5, B-2, C-2, MW-5 (C-5), and C-6 on four to five consecutive sampling events, post excavation soil verification/ test results, and absence of any apparent health or environmental risks are reasons to close this case at 750 High Street (formerly 744 High Street), Oakland. Ground water sampled from well C-6 on September 6, 1990, contained 0.59 ppb which is marginally above detection limit (0.5 ppb). Therefore, CERTIFIED/Earth Metrics recommends closure of all wells including well C-6 and also recommends case closure.

The assessment was prepared in conformance with accepted practices for such studies and the in-house quality assurance program of CERTIFIED/Earth Metrics. The undersigned under penalty of perjury pledge that the facts presented herein are based upon available information discovered by CERTIFIED/Earth Metrics or presented to CERTIFIED/Earth Metrics and represent existing conditions at the site at the time of the investigation.

Sincerely,

Marc R. Papineau
Manager, Physical Sciences Department
Registered Environmental Assessor 00791

Enclosed: Chain of Custody, Lab Results, Water Well Data Sheet (Attachment 1)
Soil Transportation/Disposal Documentation (Attachment 2)
Lab Results, Soil Sampling Location Map (Attachment 3)

cc: Mr. John Bacon, Owner
Mr. Richard Hiett, RWQCB

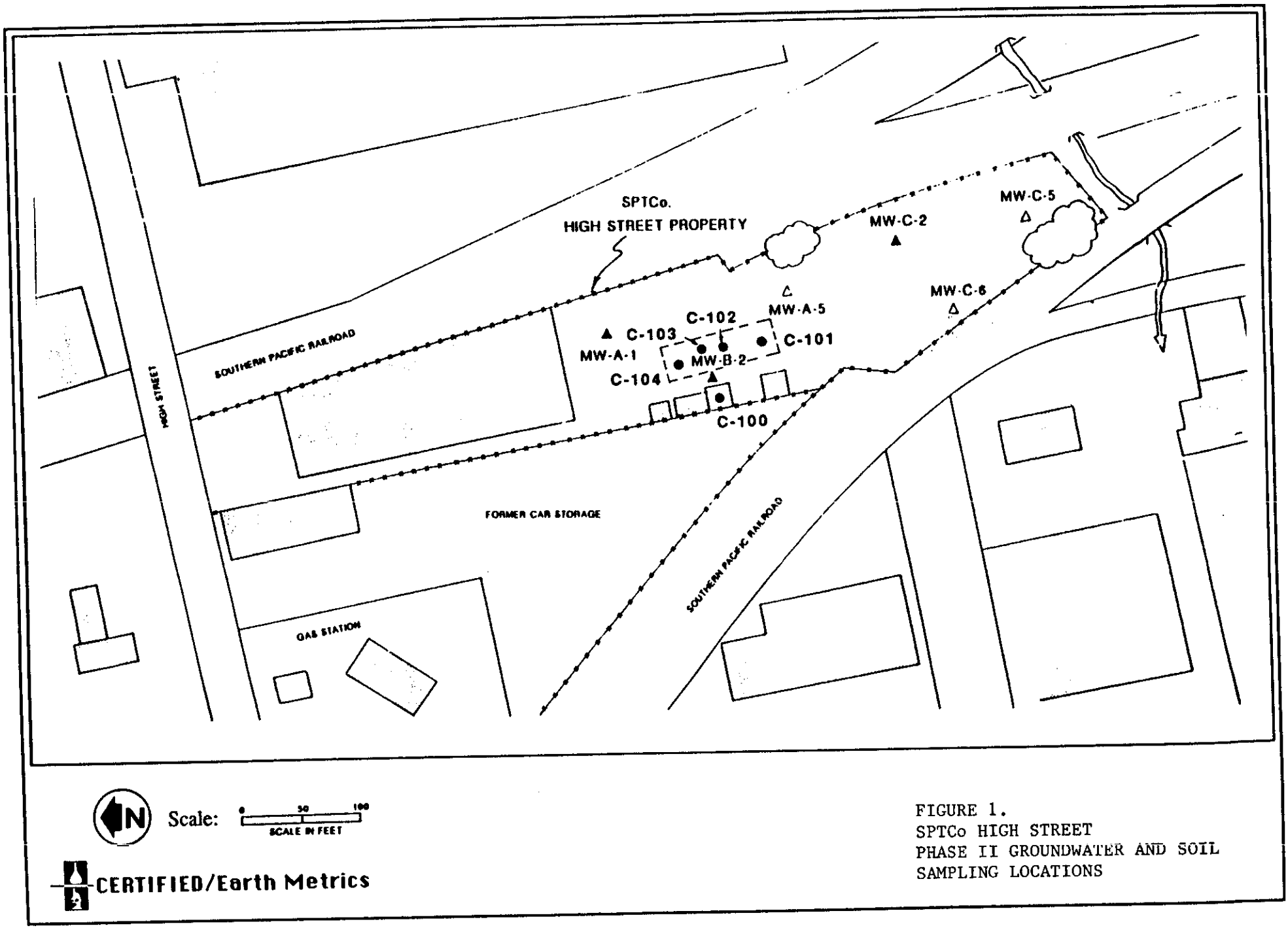


FIGURE 1.
SPTCo HIGH STREET
PHASE II GROUNDWATER AND SOIL
SAMPLING LOCATIONS

TABLE 1. ANALYTICAL RESULTS OF INVESTIGATION FROM WELLS AT 744 HIGH STREET, OAKLAND, CALIFORNIA (ppb)

SAMPLE ID DATE	PCBs IN WATER ppb	NOTES
A-1		
5-26-89	ND	ND means not
7-28-89	NT	detected
12-4-89*	ND	
6-25-90	ND	NT means not
9-6-90	ND	tested
A-5		
5-26-89	ND	
7-28-89	ND	
12-4-89*	ND	
6-25-90	ND	
9-6-90	ND	
B-2		
5-26-89	ND	
7-28-89	ND	
12-4-89*	ND	
6-25-90	ND	
9-6-90	ND	
C-2		
5-26-89	1.0	
7-28-89	0.61	
12-4-89*	ND	
6-25-90	ND	
9-6-90	ND	

(CONTINUED)

TABLE 1 (CONTINUED). ANALYTICAL RESULTS OF INVESTIGATION FROM WELLS AT 744 HIGH STREET, OAKLAND, CALIFORNIA

SAMPLE ID DATE	PCBs IN WATER (ppb)	NOTES
C-5		
5-26-89	ND	
7-28-89	ND	
12-4-89*	ND	
6-25-90	ND	
9-6-90	ND	
4-8-92	ND	
C-6		
5-26-89	ND	
7-28-89	ND	
12-4-89*	ND	*12-4-89 was reported by Ecology and Environment as 12-4-90
6-25-90	ND	
9-6-90	0.59	

ppb = parts per billion

Source: Ecology & Environment
Enseco, 1990
CERTIFIED/Earth Metrics, 1992

TABLE 2. ANALYTICAL RESULTS OF APRIL 30/MAY 1, 1990 POST-EXCAVATION SAMPLING AT 744 HIGH STREET, OAKLAND, CALIFORNIA (PPM)

SAMPLE ID	TOTAL PCBs IN SOIL (ppm)	NOTES
C-100	0.6	Arochlor 1242 & 1260
C-101	2.5	Arochlor 1254
C-102	1.5	Arochlor 1254
C-103	1.6	Arochlor 1260
C-104	ND (0.02)	

ND = None detected above 0.02 ppm
PPM = parts per million

Source: Reported by Ecology and Environment, Inc., Curtis & Tomkins, Ltd., May 2, 1990

Attachment 1

Chain of Custody, Lab Results, and Water Well Data Sheet

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

8 MD

Earth Metrics	Client Project ID:	#11968	Sampled: Apr 7, 1992
7000 Marina Blvd.	Sample Descript:	Water, #1, W-9-MW85 C-5 MD	Received: Apr 8, 1992
Brisbane, CA 94005	Analysis Method:	EPA 8080	
Attention: Mark Armstrong	Lab Number:	204-1447	Analyzed: Apr 14, 1992
			Reported: Apr 20, 1992

POLYCHLORINATED BIPHENYLS (EPA 8080)

Analyte	Detection Limit µg/L	Sample Results µg/L.
PCB 1016	0.50	N.D.
PCB 1221	2.0	N.D.
PCB 1232	0.50	N.D.
PCB 1242	0.50	N.D.
PCB 1248	0.50	N.D.
PCB 1254	0.50	N.D.
PCB 1260	0.50	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Nokowhat D. Herrera
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Earth Metrics
7000 Marina Blvd.
Brisbane, CA 94005
Attention: Mark Armstrong

Client Project ID: #11968

QC Sample Group: 204-1447

Reported: Apr 20, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	AR 1260

Method:	EPA 8080
Analyst:	D.Dreblow
Reporting Units:	µg/L
Date Analyzed:	Apr 10, 1992
QC Sample #:	GBLK040892

Sample Conc.:	N.D.
Spike Conc. Added:	500
Conc. Matrix Spike:	510
Matrix Spike % Recovery:	100
Conc. Matrix Spike Dup.:	350
Matrix Spike Duplicate % Recovery:	70
Relative % Difference:	37

SEQUOIA ANALYTICAL

Nokowhat D. Herrera
Project Manager

% Recovery: $\frac{\text{Conc. of M.S. - Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$

Relative % Difference: $\frac{\text{Conc. of M.S. - Conc. of M.S.D.}}{\text{(Conc. of M.S. + Conc. of M.S.D.) / 2}} \times 100$

CHAIN OF CUSTODY RECORD

PROJ. NO.	SITE NAME AND ADDRESS
11968	750 High

SAMPLERS: SIGNATURE

STA.NO. (LABEL)	DATE	TIME	COMP.	GRAB	STATION LOCATION (NARRATIVE DESCRIPTION)	TYPE/ NUMBER CON- TAINERS	PCB's (8080)	REMARKS
1	4-8-92	11:00		✓	W-9-MW#5 C-5 sump	2 1 l. Hr.	✓	

Relinquished by: Signature	Date/Time	Received by: Signature	Date/Time	REMARKS: 15 day TAT
	4-8-92 / 12:30		4-8-92 / 1230	Provide QA/QC Report & Calibration
Relinquished by: Signature	Date/Time	Received by: Signature	Date/Time	
Relinquished by: Signature	Date/Time	Received by: Signature	Date/Time	

EARTH METRICS INCORPORATED
7000 Marina Blvd., 4th Floor
Brisbane, California 94005
Tel (415) 742-9900 Fax (415) 742-1033

WATER WELL DATA SHEET

earth metrics

A-8-92

DATE 4-8-92 JMP

SAMPLER AMA

WELL #	DEPTH H2O	SUBJECTIVE ANALYSIS				PURGE VOLUME	TEMP.	pH	CONDUCTIVITY
		PRO	SHEEN	EMULS	ODOR				
MW 65	9'2.1"	-	-	-	-	0	65	7.1	1.1×10^3
C-5	DRY					5	62	7.2	1.18×10^3
						10	60	7.3	1.26×10^3

QC LOT ASSIGNMENT REPORT
Semivolatile Organics by GC

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
054710-0001-SA	AQUEOUS	PCB-A	12 SEP 90-A	12 SEP 90-A
054710-0002-SA	AQUEOUS	PCB-A	12 SEP 90-A	12 SEP 90-A
054710-0003-SA	AQUEOUS	PCB-A	12 SEP 90-A	12 SEP 90-A
054710-0004-SA	AQUEOUS	PCB-A	12 SEP 90-A	12 SEP 90-A
054710-0005-SA	AQUEOUS	PCB-A	12 SEP 90-A	12 SEP 90-A
054710-0006-SA	AQUEOUS	PCB-A	12 SEP 90-A	12 SEP 90-A
054710-0007-SA	AQUEOUS	PCB-A	12 SEP 90-A	12 SEP 90-A
054710-0008-SA	AQUEOUS	PCB-A	12 SEP 90-A	12 SEP 90-A

METHOD BLANK REPORT
Semivolatile Organics by GC

Analyte	Result	Units	Reporting Limit
Test: 608-PCB-A			
Matrix: AQUEOUS			
QC Lot: 12 SEP 90-A QC Run: 12 SEP 90-A			
Aroclor 1016	ND	ug/L	0.065
Aroclor 1221	ND	ug/L	0.065
Aroclor 1232	ND	ug/L	0.065
Aroclor 1242	ND	ug/L	0.065
Aroclor 1248	ND	ug/L	0.065
Aroclor 1254	ND	ug/L	0.50
Aroclor 1260	ND	ug/L	0.50

DUPLICATE CONTROL SAMPLE REPORT
Semivolatile Organics by GC

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	AVG	Accuracy Average(%) DCS	Limits	Precisio (RPD) DCS	Limi
Category: PCB-A Matrix: AQUEOUS QC Lot: 12 SEP 90-A Concentration Units: ug/L								
Aroclor 1254	5.0	3.93	4.11	4.02	80	52-136	4.5	3(

Calculations are performed before rounding to avoid round-off errors in calculated results.

SAMPLE DESCRIPTION INFORMATION
for
Ecology and Environment

Lab ID	Client ID	Matrix	Sampled Date	Sampled Time	Received Date
054710-0001-SA	MWA-1	AQUEOUS	06 SEP 90		07 SEP 90
054710-0002-SA	MWA-5	AQUEOUS	06 SEP 90		07 SEP 90
054710-0003-SA	MWB-2	AQUEOUS	06 SEP 90		07 SEP 90
054710-0004-SA	MWB-3	AQUEOUS	06 SEP 90		07 SEP 90
054710-0005-SA	MWB-4	AQUEOUS	06 SEP 90		07 SEP 90
054710-0006-SA	MWC-2	AQUEOUS	06 SEP 90		07 SEP 90
054710-0007-SA	MWC-5	AQUEOUS	06 SEP 90		07 SEP 90
054710-0008-SA	MWC-6	AQUEOUS	06 SEP 90		07 SEP 90

Enseco

PCBs

Method 608

Client Name: Ecology and Environment
Client ID: MWA-1
Lab ID: 054710-0001-SA Enseco ID: 164820
Matrix: AQUEOUS Sampled: 06 SEP 90 Received: 07 SEP 90
Authorized: 10 SEP 90 Prepared: 12 SEP 90 Analyzed: 18 SEP 90

Parameter	Result	Units	Reporting Limit
Aroclor 1016	ND	ug/L	0.065
Aroclor 1221	ND	ug/L	0.065
Aroclor 1232	ND	ug/L	0.065
Aroclor 1242	ND	ug/L	0.065
Aroclor 1248	ND	ug/L	0.065
Aroclor 1254	ND	ug/L	0.50
Aroclor 1260	ND	ug/L	0.50

ND = Not detected
NA = Not applicable

Reported By: Lisa Weiskopf Approved By: Lisa Stafford

The cover letter is an integral part of this report.
Rev 230787

Enseco

PCBs

Method 608

Client Name: Ecology and Environment
Client ID: MWA-5
Lab ID: 054710-0002-SA Enseco ID: 164821
Matrix: AQUEOUS Sampled: 06 SEP 90 Received: 07 SEP 90
Authorized: 10 SEP 90 Prepared: 12 SEP 90 Analyzed: 18 SEP 90

Parameter	Result	Units	Reporting Limit
Aroclor 1016	ND	ug/L	0.065
Aroclor 1221	ND	ug/L	0.065
Aroclor 1232	ND	ug/L	0.065
Aroclor 1242	ND	ug/L	0.065
Aroclor 1248	ND	ug/L	0.065
Aroclor 1254	ND	ug/L	0.50
Aroclor 1260	ND	ug/L	0.50

ND = Not detected
NA = Not applicable

Reported By: Lisa Weiskopf Approved By: Lisa Stafford

The cover letter is an integral part of this report.
Rev 230787

Enseco

PCBs

Method 608

Client Name: Ecology and Environment
Client ID: MWB-2
Lab ID: 054710-0003-SA Enseco ID: 164822
Matrix: AQUEOUS Sampled: 06 SEP 90 Received: 07 SEP 90
Authorized: 10 SEP 90 Prepared: 12 SEP 90 Analyzed: 18 SEP 90

Parameter	Result	Units	Reporting Limit
Aroclor 1016	ND	ug/L	0.065
Aroclor 1221	ND	ug/L	0.065
Aroclor 1232	ND	ug/L	0.065
Aroclor 1242	ND	ug/L	0.065
Aroclor 1248	ND	ug/L	0.065
Aroclor 1254	ND	ug/L	0.50
Aroclor 1260	ND	ug/L	0.50

ND = Not detected
NA = Not applicable

Reported By: Lisa Weiskopf Approved By: Lisa Stafford

The cover letter is an integral part of this report.
Rev 230787

PCBs

Method 608

Client Name: Ecology and Environment
Client ID: MW8-3
Lab ID: 054710-0004-SA
Matrix: AQUEOUS
Authorized: 10 SEP 90

Enseco ID: 164823
Sampled: 06 SEP 90
Prepared: 12 SEP 90

Received: 07 SEP 90
Analyzed: 18 SEP 90

Parameter	Result	Units	Reporting Limit
Aroclor 1016	ND	ug/L	0.065
Aroclor 1221	ND	ug/L	0.065
Aroclor 1232	ND	ug/L	0.065
Aroclor 1242	ND	ug/L	0.065
Aroclor 1248	ND	ug/L	0.065
Aroclor 1254	ND	ug/L	0.50
Aroclor 1260	ND	ug/L	0.50

ND = Not detected
NA = Not applicable

Reported By: Lisa Weiskopf

Approved By: Lisa Stafford

The cover letter is an integral part of this report.
Rev 230787

Enseco

PCBs

Method 608

Client Name: Ecology and Environment
Client ID: MWB-4
Lab ID: 054710-0005-SA Enseco ID: 164824
Matrix: AQUEOUS Sampled: 06 SEP 90 Received: 07 SEP 90
Authorized: 10 SEP 90 Prepared: 12 SEP 90 Analyzed: 18 SEP 90

Parameter	Result	Units	Reporting Limit
Aroclor 1016	ND	ug/L	0.065
Aroclor 1221	ND	ug/L	0.065
Aroclor 1232	ND	ug/L	0.065
Aroclor 1242	ND	ug/L	0.065
Aroclor 1248	ND	ug/L	0.065
Aroclor 1254	ND	ug/L	0.50
Aroclor 1260	ND	ug/L	0.50

ND = Not detected
NA = Not applicable

Reported By: Lisa Weiskopf Approved By: Lisa Stafford

The cover letter is an integral part of this report.
Rev 230787

Ensec

PCBs

Method 608

Client Name: Ecology and Environment
Client ID: MWC-2
Lab ID: 054710-0006-SA Enseco ID: 164825
Matrix: AQUEOUS Sampled: 06 SEP 90 Received: 07 SEP 90
Authorized: 10 SEP 90 Prepared: 12 SEP 90 Analyzed: 18 SEP 90

Parameter	Result	Units	Reporting Limit
Aroclor 1016	ND	ug/L	0.065
Aroclor 1221	ND	ug/L	0.065
Aroclor 1232	ND	ug/L	0.065
Aroclor 1242	ND	ug/L	0.065
Aroclor 1248	ND	ug/L	0.065
Aroclor 1254	ND	ug/L	0.50
Aroclor 1260	ND	ug/L	0.50

ND = Not detected
NA = Not applicable

Reported By: Lisa Weiskopf Approved By: Lisa Stafford

The cover letter is an integral part of this report.
Rev 230787

Enseco

PCBs

Method 608

Client Name: Ecology and Environment
Client ID: MWC-5
Lab ID: 054710-0007-SA Enseco ID: 164826
Matrix: AQUEOUS Sampled: 06 SEP 90 Received: 07 SEP 90
Authorized: 10 SEP 90 Prepared: 12 SEP 90 Analyzed: 18 SEP 90

Parameter	Result	Units	Reporting Limit
Aroclor 1016	ND	ug/L	0.065
Aroclor 1221	ND	ug/L	0.065
Aroclor 1232	ND	ug/L	0.065
Aroclor 1242	ND	ug/L	0.065
Aroclor 1248	ND	ug/L	0.065
Aroclor 1254	ND	ug/L	0.50
Aroclor 1260	ND	ug/L	0.50

ND = Not detected
NA = Not applicable

Reported By: Lisa Weiskopf Approved By: Lisa Stafford

The cover letter is an integral part of this report.
Rev 230787

Enseco

PCBs

Method 608

Client Name: Ecology and Environment
Client ID: MWC-6
Lab ID: 054710-0008-SA Enseco ID: 164827
Matrix: AQUEOUS Sampled: 06 SEP 90 Received: 07 SEP 90
Authorized: 10 SEP 90 Prepared: 12 SEP 90 Analyzed: 18 SEP 90

Parameter	Result	Units	Reporting Limit
Aroclor 1016	ND	ug/L	0.065
Aroclor 1221	ND	ug/L	0.065
Aroclor 1232	ND	ug/L	0.065
Aroclor 1242	ND	ug/L	0.065
Aroclor 1248	ND	ug/L	0.065
Aroclor 1254	ND	ug/L	0.50
Aroclor 1260	0.59	ug/L	0.50

1000

ND = Not detected
NA = Not applicable

Reported By: Lisa Weiskopf Approved By: Lisa Stafford

The cover letter is an integral part of this report.
Rev 230787

ecology and environment, inc.
360 PLEASANTVIEW DRIVE, LANCASTER, NEW YORK 14086, TEL. 716/684-8060
International Specialists in the Environment

CHAIN-OF-CUSTODY RECORD

Page 1 of _

Project No.:	Project Name:	Project Manager:
SP-8060	SP.-HIGH STREET	COLIN MOY

Samplers: (Signatures) Bob Enkeboll

Field Team Leader: Bob Enkeboll

STATION NUMBER	DATE	TIME	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE TYPE AIR	SAMPLE INFORMATION EXPECTED COMPOUNDS (Concentration)*	STATION LOCATION	NUMBER OF CON-TAINERS	PCBs	REMARKS
	9/6			X		MWA-1	low	1	X	Received in good condition
	9/6			X		MWA-5	low	1	X	
	9/6			X		MWB-2	low	1	X	
	9/6			X		MWB-3	low	1	X	
	9/6			X		MWB-4	low	1	X	
	9/6			X		MWC-2	low	1	X	
	9/6			X		MWC-5	low	1	X	
	9/6			X		MWC-6	low	1	X	

Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Relinquished By: (Signature)	Date/Time:	Received By: (Signature)
Bob Enkeboll	9/6/90; 1550				
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Relinquished By: (Signature)	Date/Time:	Received By: (Signature)
Relinquished By: (Signature)	Date/Time:	Received For Laboratory By: (Signature) Nigel Mohabeer 9-7-90 0910	Relinquished By: (Signature)	Date/Time:	Received For Laboratory By: (Signature)

Ship Via: FEDERAL EXPRESS

BL/Airbill Number: 833654667 6

Date: 9/6/90

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

*See CONCENTRATION RANGE on back of form.

23408

GROUND-WATER SAMPLING

AT

750 HIGH STREET

OAKLAND, CALIFORNIA

Prepared For:

MR. JOHN BACON

September 8, 1993

S30257/11968B

September 8, 1993

Ms. Madhulla Logan
Alameda County Department of Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

Subject: Ground-Water Sampling, 750 High Street, Oakland, California (CERTIFIED/Earth Metrics file reference S30257/11968B)

Dear Ms. Logan:

On behalf of the owner of the above-referenced site, Mr. John Bacon, enclosed is CERTIFIED/Earth Metrics report of Ground-Water Sampling for Polychlorinated Biphenyls (PCBs) for 750 High Street (formerly, 744 and 752 High Street), Oakland. Work was in accordance with the Work Plan submitted August 16, 1993. Standard operating procedures are provided herein as Appendix A.

CERTIFIED/Earth Metrics completed its field work on the subject site on August 19, 1993. Laboratory analyses by U.S. EPA Method 608/8080 for PCBs in six monitoring wells determined no detectable amounts of PCBs present. The laboratory analytical report, Sample Chain-of-Custody, and Well Sampling Logs are included as Appendix B.

Having determined no PCBs to be present, CERTIFIED/Earth Metrics recommends case closure at this time and requests same on behalf of the owner. Please call if you have any questions about the report.

Sincerely,

Marc R. Papineau
Project Manager

Michael McDonald, P.E.
Project Engineer

cc. Mr. Richard Hiett, California RWQCB

CERTIFIED

September 8, 1993

Ms. Madhulla Logan
Alameda County Department of Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

Subject: Ground-Water Sampling, 750 High Street, Oakland, California (CERTIFIED/Earth Metrics file reference 930257/11988B)

Dear Ms. Logan:

On behalf of the owner of the above-referenced site, Mr. John Bacon, enclosed is CERTIFIED/Earth Metrics report of Ground-Water Sampling for Polychlorinated Biphenyls (PCBs) for 750 High Street (formerly, 744 and 752 High Street), Oakland. Work was in accordance with the Work Plan submitted August 16, 1993. Standard operating procedures are provided herein as Appendix A.

CERTIFIED/Earth Metrics completed its field work on the subject site on August 19, 1993. Laboratory analyses by U.S. EPA Method 608/8080 for PCBs in six monitoring wells determined no detectable amounts of PCBs present. The laboratory analytical report, Sample Chain-of-Custody, and Well Sampling Logs are included as Appendix B.

Having determined no PCBs to be present, CERTIFIED/Earth Metrics recommends case closure at this time and requests same on behalf of the owner. Please call if you have any questions about the report.

Sincerely,

Marc R. Papineau
Project Manager

Michael McDonald, P.E.
Project Engineer

cc. Mr. Richard Hiett, California RWQCB

Certified Engineering & Testing Company

Environmental Consultants & Laboratory Services

7000 Marina Boulevard
4th Floor
Brisbane, CA
94005
(415) 742-9900
Fax (415) 742-1033

Boston
Providence
New York
Memphis
Dallas
San Francisco
Los Angeles

A GROUP COMPANY

GROUND-WATER SAMPLING

AT

750 HIGH STREET

OAKLAND, CALIFORNIA

Prepared For:

MR. JOHN BACON

September 8, 1993

Prepared By:

CERTIFIED/EARTH METRICS
7000 Marina Boulevard, 4th Floor
Brisbane, CA 94005
(415) 742-9900

S30257/11968B

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

EXECUTIVE SUMMARY

The subject site is located at 750 High Street (formerly 744 and 752 High Street), in Oakland, California (see Figures 1 and 2). Six monitoring wells on site were located by survey and uncovered, and then were inspected by CERTIFIED/Earth Metrics. Depths to ground water were measured by CERTIFIED/Earth Metrics using an electronic probe on August 19, 1993. The six monitoring wells were then purged and sampled by CERTIFIED/Earth Metrics on August 19, 1993 in accordance with the approved Work Plan, using standard operating procedures (see Appendix A).

Samples were transported under an appropriate sample Chain-of-Custody to a California-certified laboratory for analysis of potential Polychlorinated Biphenyls (PCBs). None of the six ground-water samples collected were found by means of laboratory analysis using U.S. EPA Method 608/8080 to have detectable amounts of PCBs. The detection limit was 0.5 parts per billion (ppb) except for Arochlor 1221 for which the detection limit was 2.0 ppb.

Sampling and analysis were performed by CERTIFIED/Earth Metrics and Sequoia Analytical in accordance with the Work Plan submitted August 16, 1993 to Ms. Madhulla Logan of the Alameda County Health Agency, Department of Environmental Health. The Work Plan specified the well purging and sampling protocol and the proposed use of the monitoring results. Monitoring results were agreed by Alameda County and CERTIFIED/Earth Metrics to be used in agency determination of the appropriateness of well closure and case closure by the Alameda County Department of Environmental Health and California Regional Water Quality Control Board (RWQCB).

Based upon review of the well monitoring results for August 1993, which were nondetectable for PCBs, and review of the previous well monitoring results, CERTIFIED/Earth Metrics recommends well closure and case closure at this time.

1. INTRODUCTION, PURPOSE, AND SCOPE OF WORK

The subject site, 750 High Street (formerly 744 and 752 High Street) in Oakland is presently occupied by a warehouse building, a parking lot with stacked wood and customer parking areas.

The purpose of this ground-water sampling and analysis event was to determine the presence or absence of Polychlorinated Biphenyls (PCBs) in ground water on site. Based upon the Work Plan submitted August 16, 1993 and agreement with Alameda County, the laboratory analysis results are to be used in consideration of the appropriateness of case closure. Upon determination of no detectable amounts of Polychlorinated Biphenyls (PCBs) in ground water, monitoring wells are to be considered for closure by grouting them to the surface and the open case is to be recommended by Alameda County to RWQCB for closure.

2. LOCATION AND SITE DESCRIPTION

The subject site is located at 750 High Street, Oakland, California, and is presently occupied by a warehouse building, and asphalt-paved, wood and construction materials storage areas.

The subject property is immediately adjacent to the Southern Pacific railroad tracks to the east, a building supply business to the west, and High Street to the north.

3. BACKGROUND

The subject site was previously used as a metal salvage yard. Surface soil contamination with PCBs was discovered and remediated by Southern Pacific Transportation Company (SPTC) in June 1990. Monitoring wells were installed and first sampled in May 1989. Soil was scraped and transported off site in June 1990. The site was paved in 1991.

Prior to being covered with pavement, the six on-site monitoring wells were sampled and tested on at least five (5) previous monitoring events, May 1989, July 1989, December 1989, June 1990, and September 1990 and four of the six wells were then found to contain no detectable amounts of PCBs. Monitoring well C-2 was found to contain 0.61 to 1.0 ppb in May and July 1989; however, subsequently in December 1989, June 1990, and September 1990, well C-2 was found to contain no detectable PCBs. Well C-6 was found to contain no detectable PCBs in four events and then 0.59 ppb in September 1990 (See Table 1, Summary of Analytical Ground-Water Data). The detection limit was reported by the laboratory of previous test events (ENSECO) to be 0.50 ppb for Arochlor 1260.

4. GROUND-WATER SAMPLING

A representitive of CERTIFIED/Earth Metrics arrived on site the morning of Thursday, August 19, 1993. After adequately addressing Site safety concerns, depth-to-water level to top of casing was measured in each well using an electronic probe. The following are depth-to-water measurements taken by CERTIFIED/Earth Metrics from on-site monitoring wells on August 19, 1993:

MW Number	Depth-to-Water (feet below top of casing*)
A-1	7.47
B-2	6.79
A-5	8.45
C-2	10.77
C-6	9.62
C-5	11.52

* Note: Casing heights relative to grade surface were variable owing to upper casing damage. Wells which had been inadvertently covered with pavement overlay were located by survey and uncovered. Lost upper casing was as much as 12 inches.

Purging and sampling wells was performed in accordance with CERTIFIED/Earth Metrics standard procedure outlined in Appendix A. Wells were purged of at least three well volumes and temperature, pH, and conductivity measurements were taken after each well volume. All purge water was collected in one 55-gallon drum on site. The 55-gallon drum was labeled and stored temporarily on site for appropriate safe disposal. Recharge of ground water in monitoring wells on site was slow and approximately 20 minutes was allowed prior to purging each well volume.

Ground-water sampling was accomplished from each well by filling two (2) one-liter amber bottles using new dedicated disposable polyethylene bailers. Sample pH was monitored to be 7.1 to 7.3 (near neutral). All downhole equipment was washed with trisodium phosphate (TSP) and distilled water, before use in each well. The well sampling order was A-1, B-2, A-5, C-2, C-5, and C-6, in order of increasing historic levels of PCBs. All ground-water samples were cooled with ice in a cooler and transported to an California-certified laboratory for analysis. A Chain-of-Custody form accompanied ground-water samples to the laboratory.

Before sampling, minimum of three well volumes was purged from each well or until ground-water turbidity, temperature, pH, and electrical conductivity remained relatively constant (within 10%). Care to minimize silt in ground-water samples was taken during sampling. A polyvinyl chloride (PVC) bailer was used to purge, and a disposable dedicated polyethylene bailer was used to sample each well. The PVC bailer was washed thoroughly with TSP and water and triple-rinsed prior to use in each well.

Proper sample containers, sampling techniques, labeling, preservation, and Chain of Custody was used, according to CERTIFIED/Earth Metrics protocol, to reduce the chance of an error in sampling. Sequoia Analytical Laboratory, Redwood City, a California DHS-certified laboratory, performed all analytical testing.

Site safety measures and equipment were used to minimize potential for injury during monitoring well sampling. Safety cones were set near each monitoring well location prior to sampling, to designate the work zone. Because the site is currently used as a lumber yard, the safety cones were also used to direct traffic around field personnel. Safety goggles, steel-toed boots, and gloves were used to protect workers.

5. GROUND-WATER ANALYSIS

Ground-water samples were analyzed for Polychlorinated Biphenyls (PCBs) (U.S. EPA method 608/8080). Results are summarized below in Table 1. Previous results are summarized in Table 2 for previous monitoring events from May 1989 to April 1992.

N SCALE: 1" = .5 MI.

FIGURE 1.
SITE LOCATION MAP

CERTIFIED/Earth Metrics

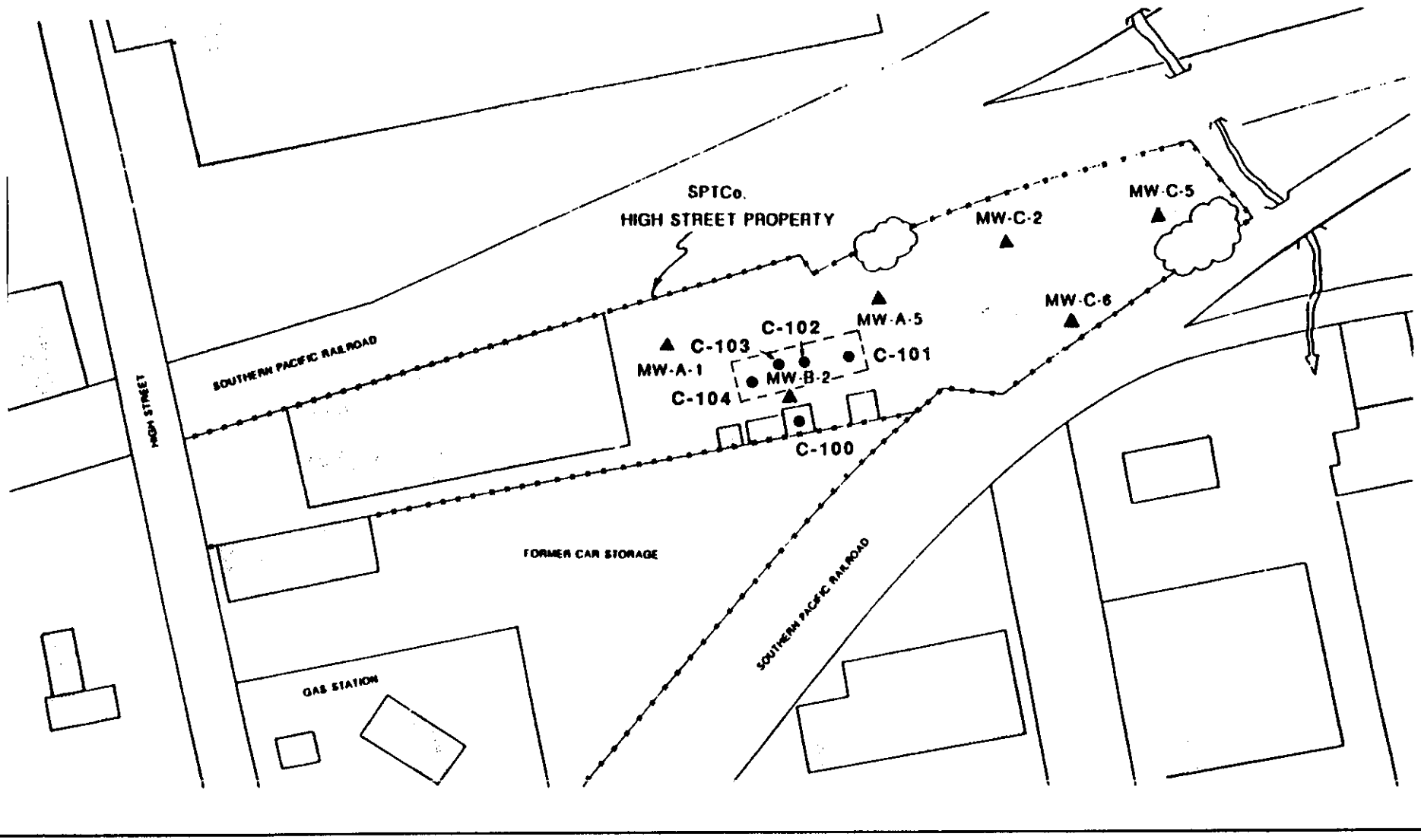


FIGURE 2.
SITE PLAN SHOWING WELL LOCATIONS

TABLE 1
AUGUST 1993 ANALYTICAL GROUND-WATER DATA
750 HIGH STREET
OAKLAND, CALIFORNIA
(August 19, 1993)

Monitoring Well Number	Date	Polychlorinated Biphenyls (PCBs) (ppb)
A-1	8/19/93	ND
B-2	8/19/93	ND
A-5	8/19/93	ND
C-2	8/19/93	ND
C-5	8/19/93	ND
C-6	8/19/93	ND

Results are expressed in parts per billion (ppb)
Polychlorinated Biphenyls (PCBs) by EPA method 608/8080
SOURCE: Sequoia Analytical, 1993

TABLE 2. ANALYTICAL RESULTS OF INVESTIGATION FROM WELLS AT 744 HIGH STREET, OAKLAND, CALIFORNIA (ppb)

SAMPLE ID DATE	PCBs IN WATER ppb	NOTES
A-1		
5-26-89	ND	ND means not detected
7-28-89	NT	
12-4-89*	ND	
6-25-90	ND	NT means not tested
9-6-90	ND	
A-5		
5-26-89	ND	
7-28-89	ND	
12-4-89*	ND	
6-25-90	ND	
9-6-90	ND	
B-2		
5-26-89	ND	
7-28-89	ND	
12-4-89*	ND	
6-25-90	ND	
9-6-90	ND	
C-2		
5-26-89	1.0	
7-28-89	0.61	
12-4-89*	ND	
6-25-90	ND	
9-6-90	ND	

(CONTINUED)

TABLE 2 (CONTINUED). ANALYTICAL RESULTS OF INVESTIGATION FROM WELLS AT 744 HIGH STREET, OAKLAND, CALIFORNIA

SAMPLE ID DATE	PCBs IN WATER (ppb)	NOTES
C-5		
5-26-89	ND	
7-28-89	ND	
12-4-89*	ND	
6-25-90	ND	
9-6-90	ND	
4-8-92	ND	
C-6		
5-26-89	ND	
7-28-89	ND	
12-4-89*	ND	*12-4-89 was reported by Ecology and Environment as 12-4-90
6-25-90	ND	
9-6-90	0.59	

ppb = parts per billion

Source: Ecology & Environment
Enseco, 1990
CERTIFIED/Earth Metrics, 1992

APPENDIX A
CERTIFIED/Earth Metrics Field Investigation Procedures

GROUND-WATER SAMPLE COLLECTION PROCEDURE

Prior to sampling, the depth-to water was measured to within one-hundredth of a foot to top of casing in each monitoring well location using an electronic probe. Casing damage was noted. Each monitoring well was purged of at least three well volumes or until temperature, pH, and conductivity remained relatively constant (within 10%). Any floating product, sheen, turbidity or unusual odor was recorded if present; none was observed. A reusable PVC bailer used for purging, prior to sampling, was cleaned with trisodium phosphate (TSP) and triple rinsed with distilled water prior to bailing. A separate bailer was used in each well for sampling.

Ground-water was allowed to recharge and settle for 20 minutes before a dedicated disposable polyethylene bailer was placed carefully below water surface to collect a ground-water sample, to minimize the amount of sediment in the ground-water sample. A ground-water sample was then carefully poured into an appropriate container, labeled and placed in iced storage, for transport to a State of California certified laboratory for the required testing for Polychlorinated Biphenyls (PCBs) (EPA method 608/8080). A Chain of Custody record for all samples was initiated by the field technician and is included in Appendix B.

All sampling data, direct measurements, a map of the site, location of drums, any noticeable odor, sheen and other visual observations made at the time of sampling were recorded on Well Sampling Logs by the CERTIFIED/Earth Metrics technician. Well purge water was stored temporarily on site in a labeled 55-gallon drum pending test results.

APPENDIX B

Laboratory Ground-Water Test Reports, Chain-of-Custody, and Well Sampling Logs

placeholder for App. B. encl. (14 pages?)

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Certified Earth Metrics	Client Project ID:	PO #13325, 530257 - Oakland	Sampled:	Aug 19, 1993
7000 Marina Blvd.	Sample Descript:	Water, A-1-893	Received:	Aug 20, 1993
Brisbane, CA 94005	Analysis Method:	EPA 8080	Extracted:	Aug 26, 1993
Attention: Mario Sternad	Lab Number:	3HA7101	Analyzed:	Aug 30, 1993
			Reported:	Sep 1, 1993

POLYCHLORINATED BIPHENYLS (EPA 8080)

Analyte	Detection Limit µg/L	Sample Results µg/L
PCB 1016	0.50	N.D.
PCB 1221	2.0	N.D.
PCB 1232	0.50	N.D.
PCB 1242	0.50	N.D.
PCB 1248	0.50	N.D.
PCB 1254	0.50	N.D.
PCB 1260	0.50	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Nokowhat D. Herrera
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Certified Earth Metrics	Client Project ID:	PO #13325, 530257 - Oakland	Sampled:	Aug 19, 1993
7000 Marina Blvd.	Sample Descript:	Water, B-2	Received:	Aug 20, 1993
Brisbane, CA 94005	Analysis Method:	EPA 8080	Extracted:	Aug 26, 1993
Attention: Mario Sternad	Lab Number:	3HA7102	Analyzed:	Aug 30, 1993
			Reported:	Sep 1, 1993

POLYCHLORINATED BIPHENYLS (EPA 8080)

Analyte	Detection Limit µg/L	Sample Results µg/L
PCB 1016	0.50	N.D.
PCB 1221	2.0	N.D.
PCB 1232	0.50	N.D.
PCB 1242	0.50	N.D.
PCB 1248	0.50	N.D.
PCB 1254	0.50	N.D.
PCB 1260	0.50	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Nokowhat D. Herrera
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Certified Earth Metrics	Client Project ID:	PO #13325, 530257 - Oakland	Sampled:	Aug 19, 1993
7000 Marina Blvd.	Sample Descript:	Water, A-5	Received:	Aug 20, 1993
Brisbane, CA 94005	Analysis Method:	EPA 8080	Extracted:	Aug 30, 1993
Attention: Mario Sternad	Lab Number:	3HA7103	Analyzed:	Aug 31, 1993
			Reported:	Sep 1, 1993

POLYCHLORINATED BIPHENYLS (EPA 8080)

Analyte	Detection Limit µg/L	Sample Results µg/L
PCB 1016	0.50	N.D.
PCB 1221	2.0	N.D.
PCB 1232	0.50	N.D.
PCB 1242	0.50	N.D.
PCB 1248	0.50	N.D.
PCB 1254	0.50	N.D.
PCB 1260	0.50	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Nokowhat D. Herrera
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Certified Earth Metrics	Client Project ID:	PO #13325, 530257 - Oakland	Sampled:	Aug 19, 1993
7000 Marina Blvd.	Sample Descript:	Water, C2	Received:	Aug 20, 1993
Brisbane, CA 94005	Analysis Method:	EPA 8080	Extracted:	Aug 30, 1993
Attention: Mario Sternad	Lab Number:	3HA7104	Analyzed:	Aug 31, 1993
			Reported:	Sep 1, 1993

POLYCHLORINATED BIPHENYLS (EPA 8080)

Analyte	Detection Limit µg/L	Sample Results µg/L
PCB 1016	0.50	N.D.
PCB 1221	2.0	N.D.
PCB 1232	0.50	N.D.
PCB 1242	0.50	N.D.
PCB 1248	0.50	N.D.
PCB 1254	0.50	N.D.
PCB 1260	0.50	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Nokowhat D. Herrera
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Certified Earth Metrics	Client Project ID:	PO #13325, 530257 - Oakland	Sampled:	Aug 19, 1993
7000 Marina Blvd.	Sample Descript:	Water, C-5	Received:	Aug 20, 1993
Brisbane, CA 94005	Analysis Method:	EPA 8080	Extracted:	Aug 30, 1993
Attention: Mario Sternad	Lab Number:	3HA7105	Analyzed:	Aug 31, 1993
			Reported:	Sep 1, 1993

POLYCHLORINATED BIPHENYLS (EPA 8080)

Analyte	Detection Limit µg/L	Sample Results µg/L
PCB 1016	0.50	N.D.
PCB 1221	2.0	N.D.
PCB 1232	0.50	N.D.
PCB 1242	0.50	N.D.
PCB 1248	0.50	N.D.
PCB 1254	0.50	N.D.
PCB 1260	0.50	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Nokowhat D. Herrera
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Certified Earth Metrics	Client Project ID:	PO #13325, 530257 - Oakland	Sampled:	Aug 19, 1993
7000 Marina Blvd.	Sample Descript:	Water, C-6	Received:	Aug 20, 1993
Brisbane, CA 94005	Analysis Method:	EPA 8080	Extracted:	Aug 30, 1993
Attention: Mario Sternad	Lab Number:	3HA7106	Analyzed:	Aug 31, 1993
			Reported:	Sep 1, 1993

POLYCHLORINATED BIPHENYLS (EPA 8080)

Analyte	Detection Limit µg/L	Sample Results µg/L
PCB 1016	0.50	N.D.
PCB 1221	2.0	N.D.
PCB 1232	0.50	N.D.
PCB 1242	0.50	N.D.
PCB 1248	0.50	N.D.
PCB 1254	0.50	N.D.
PCB 1260	0.50	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Nokowhat D. Herrera
Project Manager

SEQUOIA ANALYTICAL
680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Certified Earth Metrics	Client Project ID:	PO #13325, 530257 - Oakland
7000 Marina Blvd.	Matrix:	Water
Brisbane, CA 94005		
Attention: Mario Sternad	QC Sample Group: 3HA7101-06	Reported: Sep 1, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	PCB 1248
Method:	EPA 8080
Analyst:	L. Laikhtman
Conc. Spiked:	500
Units:	µg/L
LCS Batch#:	BLK082693
Date Prepared:	8/26/93
Date Analyzed:	8/26/93
Instrument I.D.#:	GCHP-10
LCS % Recovery:	64
Control Limits:	50-150

MS/MSD Batch #:	PBLK082693
Date Prepared:	8/26/93
Date Analyzed:	8/26/93
Instrument I.D.#:	GCHP-10
Matrix Spike % Recovery:	64
Matrix Spike Duplicate % Recovery:	64
Relative % Difference:	0.0

SEQUOIA ANALYTICAL

Nokowhat D. Herrera
Project Manager

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation and analytical methods employed for the samples. The LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

CHAIN OF CUSTODY RECORD

CERTIFIED
Environmental Consultants & Laboratory Services
A SHP GROUP COMPANY

Certified Engineering & Testing® Company
25 Mathewson Drive • Weymouth, MA 02189
(617) 337-7887 • Fax (617) 337-8237

SAMPLE SERIES #: _____

DUE DATE: 8 - 30 - 93

COMPANY: CERTIFIED
7000 MARINA BLVD 4th FLOOR
BRISBANE CA 94005
PHONE #: (415) 742-9900 FAX #: (415) 742-1033
P.O. #: 13325
CLIENT CONTACT: MARIO STERNAD
CERTIFIED PROJECT #: 930257 ; 750 HIGH ST. OAKLAND

SAMPLE TYPE
1. WATER
2. SOIL
3. SLUDGE
4. OIL

CONTAINER TYPE
P - PLASTIC
G GLASS
V - VOA

CERTIFIED SAMPLE #	CLIENT SAMPLE IDENTIFICATION	SAMPLE TYPE	CONTAINER SIZE	CONTAINER TYPE	CONTAINER #	SAMPLING DATE	SAMPLING TIME	PRESERVATIVES	ANALYSES: PCB's (ONLY)	EPA 608 / 8080	COMMENTS
	A-1-893	WATER	AMBER	LTR	2	8/19/93	10:35	Cool	X		930884-71
	B-2	↓	↓	↓	↓	↓	11:15	↓	X		
	A-5						12:15		X		
	C-2						1:10		X		
	C-5						2:00		X		
	C-6						2:40		X		

RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
Mario Sternad	8/20/93		
	TIME: 12:00 NOON		TIME:
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE: 8-20-93
	TIME:		TIME: 1200

SPECIAL INSTRUCTIONS:
☒ RUSH DATE REQUIRED (ADDITIONAL COST MAY APPLY) 7 DAY TAT
☐ REGULAR (10 BUSINESS DAYS)

• Shade areas for laboratory use only
Retain Pink copy and submit White and Yellow copies to the Laboratory

ACCUFORMS, INC., BRAINTREE, MA (617) 356-2626

CERTIFIED ENGINEERING & TESTING CO., INC.
Environmental Consultants

Groundwater Monitor Well Sampling & Field Data Sheet

Location No. C-6
Sample No. C-6
Project/Client: JOHN RANNISTER
Location: 750 HIGH ST. OAKLAND, CA
Job No. 530257

Date: 8/19/93 Time: 9:55 A.M.
Weather:
Conditions FAIR
Air Temperature
Personnel MARIO STERNAD

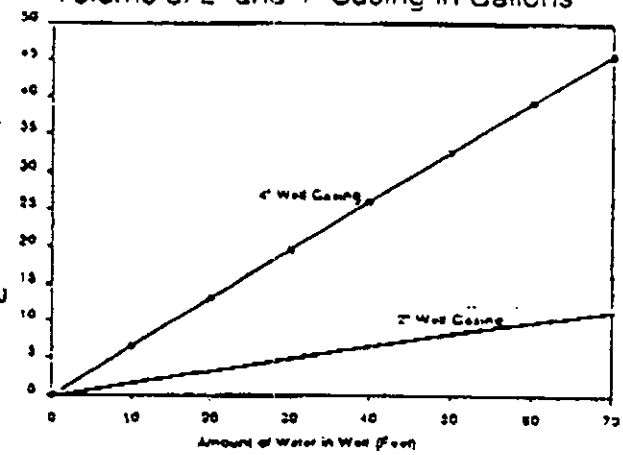
DEPTH TO WATER

WELL INFORMATION

Casing, Dia.: 2" Inch
( ) Stainless Steel
( ) Steel
(✓) PVC
( ) Teflon
( ) Other
Water Level: 9.62
Total Depth: 22.42
Measuring Device
( ) M-Scope
( ) Other
Volume of Water in Casing 2.1 GAL
Datum:
( ) Top of Surf. Casing
( ) Top of Well Casing
( ) Other

Intake, Diameter:
( ) Stainless Steel
( ) Steel
( ) PVC
( ) Teflon
( ) Other
Well Conditions:
Well Clean to Bottom
( ) yes, ( ) no
Well in Good Condition
( ) yes, (✓) no HEAD BROKEN
Surface Protection:
Clean ( ) yes, (✓) no
Condition ABSENT
Lock ( ) yes, (✓) no

Volume of 2" and 4" Casing in Gallons



Purging Data:

Method:
( ) Bladder Pump
(✓) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials:
Pump/Bailer
( ) Teflon
( ) Stainless Steel
(✓) PVC
( ) Other

Tubing/rope
( ) Teflon
( ) Polypropylene
(✓) Nylon
( ) Other
Pumping Rate
Elapsed Time 30 MINUTES
Volume Pumped 6.5 GAL
Well Evacuated ( ) yes, ( ) no
Number of Well Volumes Purged 3+

Purging Equipment
( ) Dedicated
( ) Prepared Off-Site
(✓) Field Cleaned

Time Series Data

Measurement	1 (2:10 PM)	2 (2:20 PM)	3 (2:30 PM)	4
Well Volumes	1	2	3+	
Water Temp.	72.0	66.9	66.8	
pH	7.00	7.24	7.24	
Other E-C	1870	1650	1680	

Samoling Data:

Method:
( ) Bladder Pump
(✓) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials: Pump/Bailer
( ) Teflon
( ) Stainless Steel
( ) PVC
(✓) Other Polyethylene
Materials: Tubing/rope
( ) Teflon
( ) Polypropylene
(✓) Nylon
( ) Other
Sampling Equipment
(✓) Dedicated
( ) Prepared Off-Site
( ) Field Cleaned
Metals Sample Field Filtered N/A
( ) Yes
( ) No
Method

Physical & Chemical Data:

Appearance:
( ) Clear
(✓) Turbid
( ) Color
( ) Immiscible Product
( ) Other
Filed Condition of Sample
Temp
pH
Other 2:40 8/19/93

Certification: Mario Sternad
This sample was collected and handled in accordance with standard regulatory and corporate proceaures

CERTIFIED ENGINEERING & TESTING CO., INC.
Environmental Consultants

Groundwater Monitor Well Sampling & Field Data Sheet

Location No. C-5
Sample No. C-5
Project/Client: JOHN BANNISTER
Location: 750 HIGH STREET OAKLAND CA
Job No. 530257

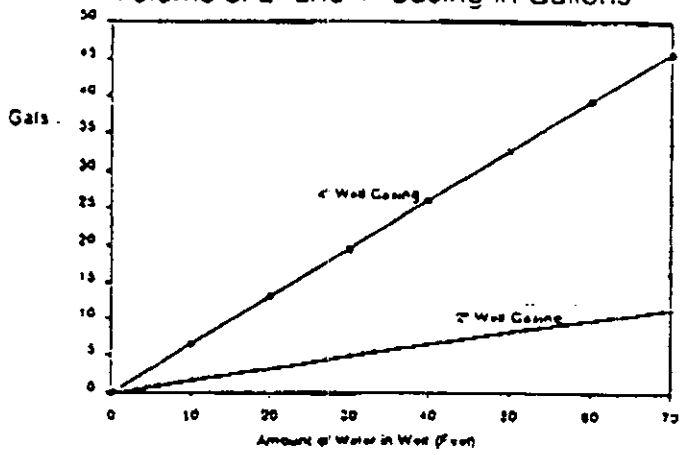
Date: 8/19/93 Time: 9:55 A.M.
Weather: DEPTH TO WATER
Conditions FAIR
Air Temperature
Personnel MARIO STERNAD

WELL INFORMATION

Casing, Dia.: 2 INCH
( ) Stainless Steel
( ) Steel
(✓) PVC
( ) Teflon
( ) Other
Water Level: 11.52 FEET
Total Depth: 21.87
Measuring Device
( ) M-Scope
(✓) Other Elec. Depth
Volume of Water in Casing 1.7 GAL
Datum:
( ) Top of Surf. Casing
( ) Top of Well Casing
( ) Other

Intake, Diameter:
( ) Stainless Steel
( ) Steel
( ) PVC
( ) Teflon
( ) Other
Well Conditions:
Well Clean to Bottom
( ) yes, ( ) no
Well in Good Condition
(✓) yes, ( ) no
Surface Protection:
Clean (✓) yes, ( ) no
Condition
Lock ( ) yes, (✓) no

Volume of 2" and 4" Casing in Gallons



Purging Data:

Method:
( ) Bladder Pump
(✓) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials:
Pump/Bailer
( ) Teflon
( ) Stainless Steel
(✓) PVC
( ) Other

Tubing/rope
( ) Teflon
( ) Polypropylene
(✓) Nylon
( ) Other
Pumping Rate
Elapsed Time 40 MINUTES
Volume Pumped 4.5 GAL
Well Evacuated ( ) yes, ( ) no
Number of Well Volumes Purged 3

Purging Equipment
( ) Dedicated
( ) Prepared Off-Site
(✓) Field Cleaned

Time Series Data

Measurement	1	2	3	4
Well Volumes	1	2	3	
Water Temp.	(clear)	64.4	64.3	
pH	7.48	7.29	7.33	
Other Elec. Conductivity	1270	1220	1220	

Sampling Data:

Method:
( ) Bladder Pump
(✓) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials: Pump/Bailer
( ) Teflon
( ) Stainless Steel
( ) PVC
(✓) Other Polyethylene
Materials: Tubing/rope
( ) Teflon
( ) Polypropylene
(✓) Nylon
( ) Other
Sampling Equipment
(✓) Dedicated
( ) Prepared Off-Site
( ) Field Cleaned
Metals Sample Field Filtered N/A
( ) Yes
( ) No
Method

Physical & Chemical Data:

Appearance:
( ) Clear
(✓) Turbid
( ) Color
( ) Immiscible Product
( ) Other
Filed Condition of Sample
Temp
pH
Other 2:00 P.M. 8/19/93

Certification: Mario Sternad
This sample was collected and handled in accordance with standard regulatory and corporate procedures

Groundwater Monitor Well
Sampling & Field Data Sheet

CERTIFIED ENGINEERING & TESTING CO., INC.
Environmental Consultants

Location No. C-2
Sample No. C-2
Project/Client: JOHN BANNISTER
Location: 750 HIGH STREET OAKLAND
Job No. 530257

Date: 8/19/93 Time: 9:50 A.M.
Weather:
Conditions FAIR
Air Temperature
Personnel MARIO STERNAD

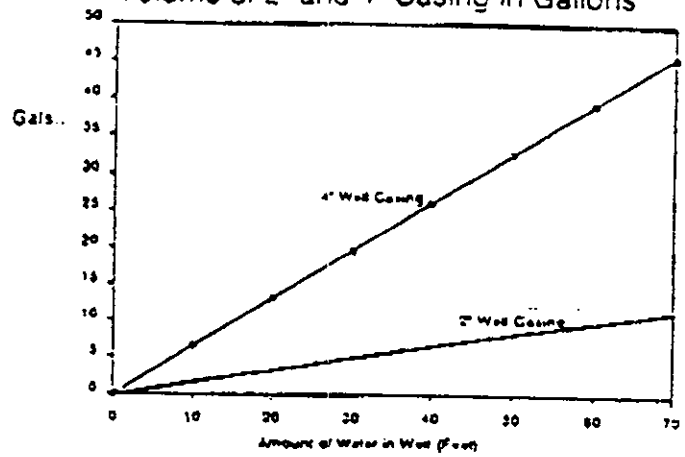
DEPTH-TO-WATER

WELL INFORMATION

Casing, Dia.: ____
( ) Stainless Steel
( ) Steel
( ) PVC
( ) Teflon
( ) Other
Water Level: 10.77 FEET
Total Depth: 22.93 FEET
Measuring Device
( ) M-Scope
(✓) Other Elec. Depth
Volume of Water in Casing 2 GALLONS
Datum:
( ) Top of Surf. Casing
(✓) Top of Well Casing
( ) Other ____

Intake, Diameter: ____
( ) Stainless Steel
( ) Steel
( ) PVC
( ) Teflon
( ) Other
Well Conditions:
Well Clean to Bottom
( ) yes, ( ) no
Well in Good Condition
( ) yes, ( ) no
Surface Protection:
Clean ( ) yes, ( ) no
Condition ____
Lock ( ) yes, ( ) no

Volume of 2" and 4" Casing in Gallons



Purging Data:

Method:
( ) Bladder Pump
(✓) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other ____
Materials:
Pump/Bailer
( ) Teflon
( ) Stainless Steel
(✓) PVC
( ) Other ____

Tubing/rope
( ) Teflon
( ) Polypropylene
(✓) Nylon
( ) Other ____
Pumping Rate ____
Elapsed Time 40 MINUTES
Volume Pumped 7.5 GALLONS
Well Evacuated ( ) yes, ( ) no
Number of Well Volumes Purged 3.75

Purging Equipment
( ) Dedicated
( ) Prepared Off-Site
(✓) Field Cleaned

Time Series Data

Measurement	1 (12:35 PM)	2 (12:45)	3 (12:55)	4
Well Volumes	1.25	2.5	3.75	
Water Temp.	65.4	65.8	64.8	
pH	7.09	7.07	7.05	
Other E-C	1100	1150	1130	

Sampling Data:

Method:
( ) Bladder Pump
(✓) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other ____
Materials: Pump/Bailer
( ) Teflon
( ) Stainless Steel
( ) PVC
(✓) Other Polypropylene
Materials: Tubing/rope
( ) Teflon
( ) Polypropylene
(✓) Nylon
( ) Other ____
Sampling Equipment
(✓) Dedicated
( ) Prepared Off-Site
( ) Field Cleaned
Metals Sample Field Filtered N/A
( ) Yes
( ) No
Method ____

Physical & Chemical Data:

Appearance:
( ) Clear
(✓) Turbid
( ) Color ____
( ) Immiscible Product
( ) Other ____
Filed Condition of Sample
Temp ____
pH ____
Other 1:10 PM 8/19/93

Certification: Mario Sternad
This sample was collected and handled in accordance with standard regulatory and corporate procedures

CERTIFIED ENGINEERING & TESTING CO., INC.
Environmental Consultants

Groundwater Monitor Well Sampling & Field Data Sheet

Location No. A-5
Sample No. A-5
Project/Client: JOHN BANNISTER
Location: 750 HIGH STREET OAKLAND, CA
Job No. 530257

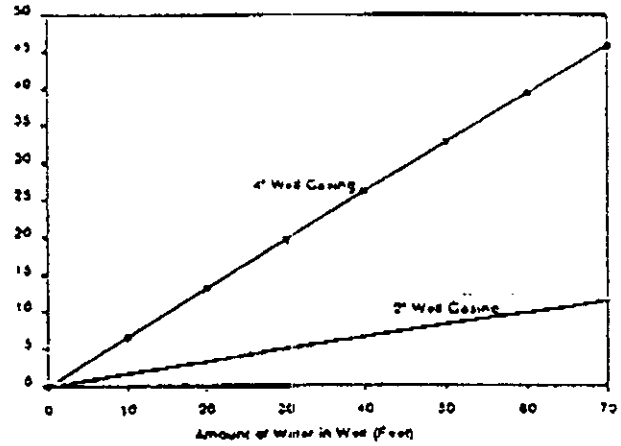
Date: 8/19/93 Time: 9:35 A.M.
Weather: DEPTH TO WATER
Conditions
Air Temperature
Personnel MARIO STERNAD

WELL INFORMATION

Casing, Dia.: 2 INCH
( ) Stainless Steel
( ) Steel
(✓) PVC
( ) Teflon
( ) Other
Water Level: 9.45 FEET
Total Depth: 24.69 FT
Measuring Device
( ) M-Scope
(✓) Other Elec. Depth
Volume of Water in Casing 2.5 GAL
Datum:
( ) Top of Surf. Casing
(✓) Top of Well Casing
( ) Other

Intake, Diameter:
( ) Stainless Steel
( ) Steel
( ) PVC
( ) Teflon
( ) Other
Well Conditions:
Well Clean to Bottom
( ) yes, ( ) no
Well in Good Condition
( ) yes, ( ) no
Surface Protection:
Clean ( ) yes, ( ) no
Condition
Lock ( ) yes, ( ) no

Volume of 2" and 4" Casing in Gallons



Purging Data:

Method:
( ) Bladder Pump
(✓) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials:
Pump/Bailer
( ) Teflon
( ) Stainless Steel
(✓) PVC
( ) Other

Tubing/rope
( ) Teflon
( ) Polypropylene
(✓) Nylon
( ) Other
Pumping Rate
Elapsed Time 40 MINUTES
Volume Pumped 8 GALLONS
Well Evacuated ( ) yes, ( ) no
Number of Well Volumes Purged 3+

Purging Equipment
( ) Dedicated
( ) Prepared Off-Site
(✓) Field Cleaned

Time Series Data	1 (9:35 AM)	2 (11:45)	3 (12:10 PM)	4
Measurement				
Well Volumes	1	2	3+	
Water Temp.	69.3	67.3	66.0	
pH	7.09	6.98	7.17	
Other E-C	1640	1600	1580	

Sampling Data:

Method:
( ) Bladder Pump
(✓) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials: Pump/Bailer
( ) Teflon
( ) Stainless Steel
( ) PVC
(✓) Other Polyethylene
Materials: Tubing/rope
( ) Teflon
( ) Polypropylene
(✓) Nylon
( ) Other
Sampling Equipment
(✓) Dedicated
( ) Prepared Off-Site
( ) Field Cleaned
Metals Sample Field Filtered N/A
( ) Yes
( ) No
Method

Physical & Chemical Data:

Appearance:
( ) Clear
( ) Turbid
( ) Color
( ) Immiscible Product
( ) Other
Filed Condition of Sample
Temp
pH
Other 12:15 PM 8/19/93

Certification: Mario Sternad
This sample was collected and handled in accordance with standard regulatory and corporate procedures

CERTIFIED ENGINEERING & TESTING CO., INC.
Environmental Consultants

Groundwater Monitor Well Sampling & Field Data Sheet

Location No. A-1
Sample No. A-1-893
Project/Client: JOHN BANNISTER
Location: 750 HIGH STREET, OAKLAND
Job No. S30257

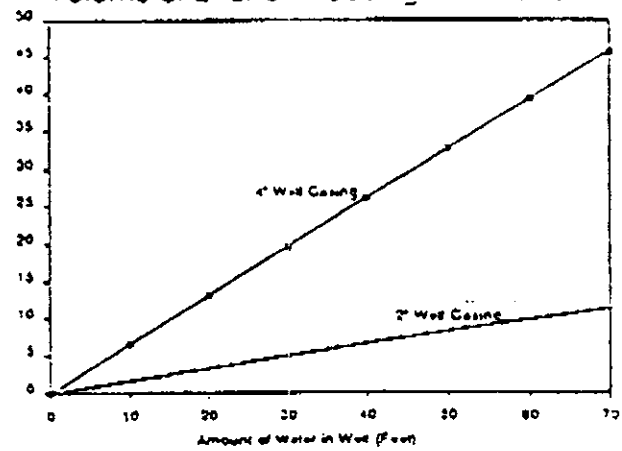
Date: 8/19/93 Time: 9:30 A.M.
Weather: DEPTH-TO-WATER TIME
Conditions FAIR
Air Temperature
Personnel MARIO STERNAD

WELL INFORMATION

Casing, Dia.: 2-INCH
( ) Stainless Steel
( ) Steel
(✓) PVC
( ) Teflon
( ) Other
Water Level: 7.47 FEET
Total Depth: 22.64 FT.
Measuring Device
( ) M-Scope
(✓) Other Elec. Depth
Volume of Water in Casing 2.5 GALLONS
Datum:
( ) Top of Surf. Casing
(✓) Top of Well Casing
( ) Other

Intake, Diameter:
( ) Stainless Steel
( ) Steel
( ) PVC
( ) Teflon
( ) Other
Well Conditions:
Well Clean to Bottom
(✓) yes, ( ) no
Well in Good Condition
( ) yes, (✓) no BROKEN HEAD
Surface Protection:
Clean ( ) yes, (✓) no
Condition ABSENT
Lock ( ) yes, (✓) no

Volume of 2" and 4" Casing in Gallons



Purging Data:

Method:
( ) Bladder Pump
(✓) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials:
Pump/Bailer
( ) Teflon
( ) Stainless Steel
(✓) PVC
( ) Other

Tubing/rope
( ) Teflon
( ) Polypropylene
(✓) Nylon
( ) Other
Pumping Rate
Elapsed Time 60 MINUTES
Volume Pumped 7.5 GAL
Well Evacuated ( ) yes, ( ) no
Number of Well Volumes Purged 3

Purging Equipment
( ) Dedicated
( ) Prepared Off-Site
(✓) Field Cleaned

Time Series Data

	10:02	10:15	10:25	
Measurement	1	2	3	4
Well Volumes	0.5	2	3	
Water Temp.	71.0	69.1	67.9	
pH	6.71	6.98	7.11	
Other Elec. Conductivity	1240	1050	1000	

Sampling Data:

Method:
( ) Bladder Pump
(✓) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials: Pump/Bailer
( ) Teflon
( ) Stainless Steel
( ) PVC
(✓) Other Polyethylene
Materials: Tubing/rope
( ) Teflon
( ) Polypropylene
(✓) Nylon
( ) Other
Sampling Equipment
(✓) Dedicated
( ) Prepared Off-Site
( ) Field Cleaned
Metals Sample Field Filtered N/A
( ) Yes
( ) No
Method

Physical & Chemical Data:

Appearance:
( ) Clear
(✓) Turbid
( ) Color
( ) Immiscible Product
( ) Other
Filed Condition of Sample
Temp
pH
Other 10:35 A.M. 8/19/93

Certification: Mario Sternad
This sample was collected and handled in accordance with standard regulatory and corporate procedures

CERTIFIED ENGINEERING & TESTING CO., INC.
Environmental Consultants

Groundwater Monitor Well Sampling & Field Data Sheet

Location No. B-2
Sample No. B-2
Project/Client: JOHN BANNISTER
Location: 750 HIGH STREET OAKLAND
Job No. S30257

Date: 8/19/93 Time: 9:40 A.M.
Weather:
Conditions FAIR
Air Temperature
Personnel

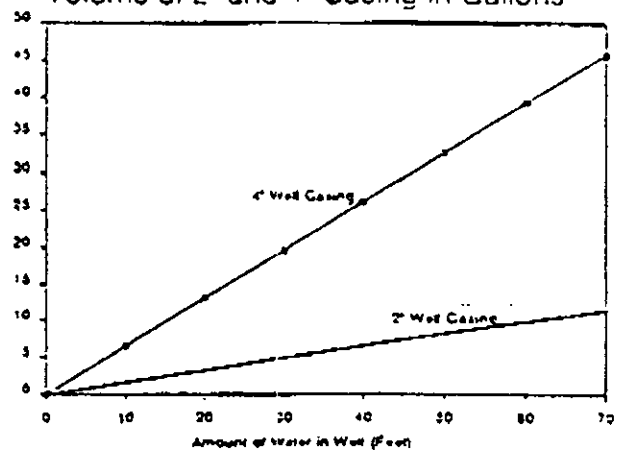
DEPTH TO WATER

WELL INFORMATION

Casing, Dia.: 2 INCH
( ) Stainless Steel
( ) Steel
(✓) PVC
( ) Teflon
( ) Other
Water Level: 6.79
Total Depth: 13.72
Measuring Device
( ) M-Scope
(✓) Other Elec. Depth
Volume of Water in Casing 1.1 GALLONS
Datum:
( ) Top of Surf. Casing
(✓) Top of Well Casing
( ) Other

Intake, Diameter:
( ) Stainless Steel
( ) Steel
( ) PVC
( ) Teflon
( ) Other
Well Conditions:
Well Clean to Bottom
(✓) yes, ( ) no
Well in Good Condition
( ) yes, (✓) no BROKEN HEAD
Surface Protection:
Clean ( ) yes, (✓) no
Condition ABSENT
Lock ( ) yes, (✓) no

Volume of 2" and 4" Casing in Gallons



Purging Data:

Method:
( ) Bladder Pump
(✓) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials:
Pump/Bailer
( ) Teflon
( ) Stainless Steel
(✓) PVC
( ) Other

Tubing/rope
( ) Teflon
( ) Polypropylene
(✓) Nylon
( ) Other
Pumping Rate
Elapsed Time 40 MINUTES
Volume Pumped 5.5 GAL
Well Evacuated ( ) yes, ( ) no
Number of Well Volumes Purged 5

Purging Equipment
( ) Dedicated
( ) Prepared Off-Site
(✓) Field Cleaned

Time Series Data

	11:00	11:05	11:15	
Measurement	1	2	3	4
Well Volumes	2	3	5	
Water Temp.	68.3	67.6	67.1	
pH	7.06	7.11	7.11	
Other Elec. Conductivity	960	1030	980	

Sampling Data:

Method:
( ) Bladder Pump
(✓) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials: Pump/Bailer
( ) Teflon
( ) Stainless Steel
( ) PVC
(✓) Other Polyethylene
Materials: Tubing/rope
( ) Teflon
( ) Polypropylene
(✓) Nylon
( ) Other
Sampling Equipment
(✓) Dedicated
( ) Prepared Off-Site
( ) Field Cleaned
Metals Sample Field Filtered N/A
( ) Yes
( ) No
Method

Physical & Chemical Data:

Appearance:
( ) Clear
(✓) Turbid
( ) Color
( ) Immiscible Product
( ) Other
Filed Condition of Sample
Temp
pH
Other 11:15 AM 8/19/93

Certification: Maria Stewart
This sample was collected and handled in accordance with standard regulatory and corporate procedures

CERTIFIED
S30257/11968B

APPENDIX C

Work Plan Dated August 16, 1993

CERTIFIED
S30257/11968B

August 16, 1993

Ms. Madhulla Logan
Alameda County Environmental Health Services
Hazardous Materials and Storage Tanks Division
80 Swan Way, Room 200
Oakland, CA 94621

Subject: Ground-Water Sampling and Testing at 750 High Street, Oakland, California for the Presence of Polychlorinated Biphenyls (PCBs) (CERTIFIED/Earth Metrics file reference S30257/11968B)

Dear Ms. Logan:

Enclosed please find the Work Plan to sample and analyze ground water collected from six (6) existing wells for Polychlorinated Biphenyls (PCBs) at the above-mentioned site. Destruction and grouting of monitoring wells on-site to grade surface will not occur the same day as sampling, but will be performed pending reportage of laboratory results to your office.

Please call me to let me know if you will attend the well sampling proposed to begin on August 17, 1993.

Sincerely,

Marc Papineau
Manager, Physical Sciences Department

LOCATION AND SITE DESCRIPTION

The subject site is located at 750 High Street (formerly 744 and 752 High Street), Oakland, California, and is presently occupied by a warehouse building and asphalt-paved lumber and materials storage areas. Six monitoring wells exist throughout the paved area, made accessible to sampling personnel by the recent resurvey and uncovering of asphalt pavement.

The subject property is immediately adjacent to the Southern Pacific Transportation Company railroad tracks to the east, a building supply business to the west, and High Street to the north.

BACKGROUND

The subject site was previously used as a metal salvage yard. Soil was scraped and off-hauled for proper disposal in June 1990 to remove PCB-affected soil. Six monitoring wells were installed in 1989. The six on-site monitoring wells were sampled and tested for PCBs and all except C-6 were found to contain no detectable amounts of PCB in 1990. Well C-6 was found to contain 0.59 parts per billion (ppb) PCBs.

PURPOSE AND SCOPE OF WORK

The purpose of this ground-water sampling is to perform final sampling of the six wells and then to perform will closure of the six wells. The presence of low concentration Polychlorinated Biphenyls (PCBs) in ground water in well C-6 is believed to be an artifact of drilling the wells through surface contamination. Pending determination and reportage of final results of PCBs in ground water, monitoring wells will be grouted to surface. Ground-water sampling described herein will be accomplished from six monitoring wells on-site.

MOBILIZATION

A representative of CERTIFIED/Earth Metrics will be on-site during one day, the morning of Tuesday, August 17, 1993, or at the next date available date convenient to Alameda County Hazardous Materials Unit. After adequately addressing site safety concerns, purging and sampling wells will commence at each of six separate monitoring well locations. All purge water will be collected in one labeled 55-gallon drum on-site, for future safe disposal.

Site safety equipment will include: safety cones to mark the work zone boundary, gloves, boots, and safety glasses.

GROUND-WATER SAMPLING

Field investigation procedures are summarized in Attachment 1.

Depth-of-water to top of casing or top of asphalt in all monitoring well locations will be accomplished prior to sampling using an electronic probe. Approximately three well volumes (approximately 5.0 gallons) will be purged from each monitoring well using a cleaned PVC bailer. Purged ground water will be placed into a labeled 55-gallon barrel for future disposal.

Ground-water samples from each well will then be taken by filling two amber liter bottles using a dedicated disposable bailer. Caution will be taken to wash all equipment with TSP and distilled water before entering another well. The well sampling order will be MW1 - MW6. All ground-water samples will be cooled with ice in a cooler and transported to a California Certified laboratory for analysis. A Chain-of-Custody form will be filed out in the field and accompany samples to the laboratory.

GROUND-WATER ANALYSIS

All ground-water samples taken will be tested for Polychlorinated Biphenyls (PCBs) (EPA Method 8080) on a seven workday turnaround plus additional sample for quality control.

ATTACHMENT 1
CERTIFIED FIELD INVESTIGATION PROCEDURES

GROUND-WATER SAMPLE COLLECTION PROCEDURE

Prior to sampling, the depth-to water is measured to within one-hundredth of a foot to grade surface in each monitoring well using an electronic probe. Each screened boring is purged of at least three well volumes or until temperature, pH, and conductivity remains relatively constant (within 10%). Any floating product, sheen, turbidity or unusual odor is recorded. Reusable metal, PVC or teflon bailers are cleaned prior to bailing purge water.

Monitoring wells are allowed to settle for 10-20 minutes before a dedicated polyethylene disposable bailer is placed carefully below water surface to extract a ground-water sample. A ground-water sample will then be taken from each well location, placed into an appropriate container, labeled, and placed in iced storage, for transport to a State of California Certified laboratory to undergo the required testing for Polychlorinated Biphenyls (PCBs) (EPA Method 8080). A Chain-of-Custody record for all samples will be initiated by the field geologist and will be included in the final report.

All sampling data, direct measurements, a map of the site location of drums, any noticeable odor, sheen and other visual observations made at the time of sampling are recorded in a field notebook by CERTIFIED/Earth Metrics personnel. Well purge water is stored in a labeled drum on-site until results are computed to determine if safe removal and disposal is needed.

CERTIFIED
S30257/11968B

APPENDIX D

Letter Dated June 16, 1992 (Revised May 18, 1993) to Alameda County Health Agency