Bill Cox Cadillac · Buick

January 30, 1995

Mr. Thomas Peacock
Alameda County Health Care Services Agency
Department of Environmental Health
1731 Harbor Bay Parkway
Alameda, CA 94502

SUBJECT: Well Conversion and First Quarterly Monitoring Report
Cox Cadillac, 230 Bay Place, Oakland, California

Dear Mr. Peacock:

Enclosed is one copy of the "Well Conversion and First Quarterly Monitoring Report" for the Cox Cadillac, 230 Bay Place, Oakland, California site. The report was completed according to Task III of the approved *Work Plan for Further Investigation, 230 Bay Place, Oakland, California* (Work Plan), dated March 1994. As recommended in your June 7, 1994 Work Plan approval letter, well TW-2 was used as an upgradient well for the purpose of estimating groundwater flow direction only, and well TW-6 was sampled for groundwater analyses. EOA, Inc. will continue measuring groundwater elevations monthly and sampling these wells on a quarterly basis.

Please call me if you have any questions regarding the report.

Sincerely,

Mr. Bill Cox
Owner Cox Cadillac

Attachment

F:\CC03\dehcvr.ltr

27th and Harrison Streets • P.O. Box 1376 • Oakland, CA 94604 • (415) 451-2400

EOA, Inc.

Eisenberg, Olivieri, & Associates
Environmental and Public Health Engineering

January 26, 1995

Mr. Bill Cox
230 Bay Place
Oakland, CA 94612

SUBJECT: Well Conversion and First Quarterly Monitoring Report

Dear Mr. Cox:

This letter report summarizes the results of the well conversion and first quarterly monitoring of wells on December 22, 1994 at the property located at 230 Bay Place, Oakland, California. The report was completed according to Task III of the approved *Work Plan for Further Investigation, 230 Bay Place, Oakland, California* (Work Plan), dated March 1994. The Work Plan was approved by the Alameda County Department of Environmental Health, Environmental Protection Division (County) with two exceptions. The County suggested using well TW-2 as an upgradient well, if needed, and the County suggested sampling well TW-6 for groundwater analyses.

Three main tasks were completed for this report; 1) wells MW-1, TW-2, TW-6, and TW-7 were checked for free product, then depth to groundwater was measured in them, 2) temporary wells, TW-2, TW-6 and TW-7, which were installed by PES in October of 1993, were converted to permanent wells and permit applications were filed with the County; and 3) wells MW-1, TW-6, and TW-7 were purged and sampled for groundwater analyses. As subcontractors to EOA, Inc., Subsurface Consultants, Inc. (SCI) performed the field tasks and Curtis and Tompkins Laboratory, a California-Certified Laboratory, performed the groundwater analyses.

Methodology

The field methods used to perform the tasks listed above are described in Attachment 1, "Quarterly Groundwater Monitoring" Report (SCI, January 17, 1995). As reported by SCI, no free product was observed in any of the wells that were monitored. The depth to groundwater was measured and contoured (see Figure 1). For the groundwater surface contour map, the data points were referenced to an arbitrary datum of 100' for the top of casing (TOC) in MW-1. The wells have not been surveyed to date and this methodology is consistent with that used by PES in a prior report.

Wells TW-2, TW-6, and TW-7 were retrofitted at grade with water-tight, traffic-rated, utility boxes set in concrete in anticipation of performing periodic groundwater monitoring. The methods for well conversion are described in Attachment 1.

Because the temporary wells, TW-2, TW-6, and TW-7 were not originally permitted, Alameda County Water District (Zone 7) drilling permit applications were completed,

1410 Jackson Street • Oakland, CA 94612 • (510) 832-2852 • Fax 832-2856

signed, and mailed to Zone 7, along with a copy of the boring logs as found in "Soil and Groundwater Investigation Report", (PES, December 23, 1993). Diagrams of the surface traffic utility boxes were added to the boring log with the date of installation indicated. Copies of the drilling permit applications are in Attachment 2.

Wells MW-1, TW-6, and TW-7 were purged and samples were collected for the following analyses: 1) Total Volatile Hydrocarbons as gasoline and Benzene, Toluene, Ethylbenzene, and total Xylenes (TVH/BTEX) (by California DOHS Method and LUFT Manual methodology, and by EPA 5030/8020) and 2) 1,1-, and 1,2-dichloroethane (DCA) (by EPA Method 8010). A copy of the original laboratory analytical report is in Attachment 3 and the results of the groundwater analyses are summarized in Table 1, "Summary of Groundwater Analyses". Locations of the sampled wells with groundwater analyses results are indicated on Figure 2.

Results

Based on data collected on December 22, 1994, the general direction of groundwater flow is in a southwesterly direction, toward Lake Merritt; this result is similar to previous observations at this site. The concentrations of chemicals in groundwater are the same order of magnitude as were found in a previous sampling event (*Soil and Groundwater Investigation, Bill Cox Cadillac, 230 Bay Place, Oakland, California*, PES, December 23, 1993). The highest concentrations of all chemicals, with the exception of 1,1- and 1,2-DCA, were found in well TW-7, which is located adjacent to, and downgradient from, the former underground storage tank location. 1,2-DCA was detected only in well MW-1, which is located next to the former waste oil tank location. The lowest concentrations of all chemicals, except ethylbenzene, were found in samples from well TW-6, which is located in a cross-gradient direction from the former underground storage tank location.

Please call me or Sherris Ragsdale if you have any questions concerning this report.

Sincerely,
EOA, Inc.

Don Eisenberg, PhD., P.E.
President

Attachments

Limitations

The services performed by EOA, Inc. for this report have been performed using that degree of care and skill ordinarily exercised by reputable professionals practicing under similar circumstances in this or similar localities. No other warranty, expressed or implied, is made by providing these consulting services. This report has been prepared by EOA, Inc. for Mr. Cox for submittal to Alameda County Health Department and other regulatory agencies. This report has not been prepared for use by other parties, and may not contain sufficient information for the purposes of other parties or uses.

It should be recognized that subsurface conditions may vary from those encountered at the location where samples are collected. The data, interpretation and recommendations of EOA, Inc. are based solely on the information available to EOA, Inc. during the project. EOA, Inc. will be responsible for those data, interpretations and recommendations, but shall not be responsible for the interpretation by others of the information developed.

Because of the limitations inherent in sampling, and the variability of natural materials, determining the absence of any chemical except in the immediate vicinity of a sample can rarely be done with complete certainty. The only way to determine that a site is absolutely free of chemicals of concern is to sample and analyze all the soil and groundwater at the site, which is impractical and costly. Balancing the level of confidence required against the budgetary constraints is difficult. The sampling and analysis in this investigation were approved by the Alameda County Health Department and are consistent with State regulations and guidelines.

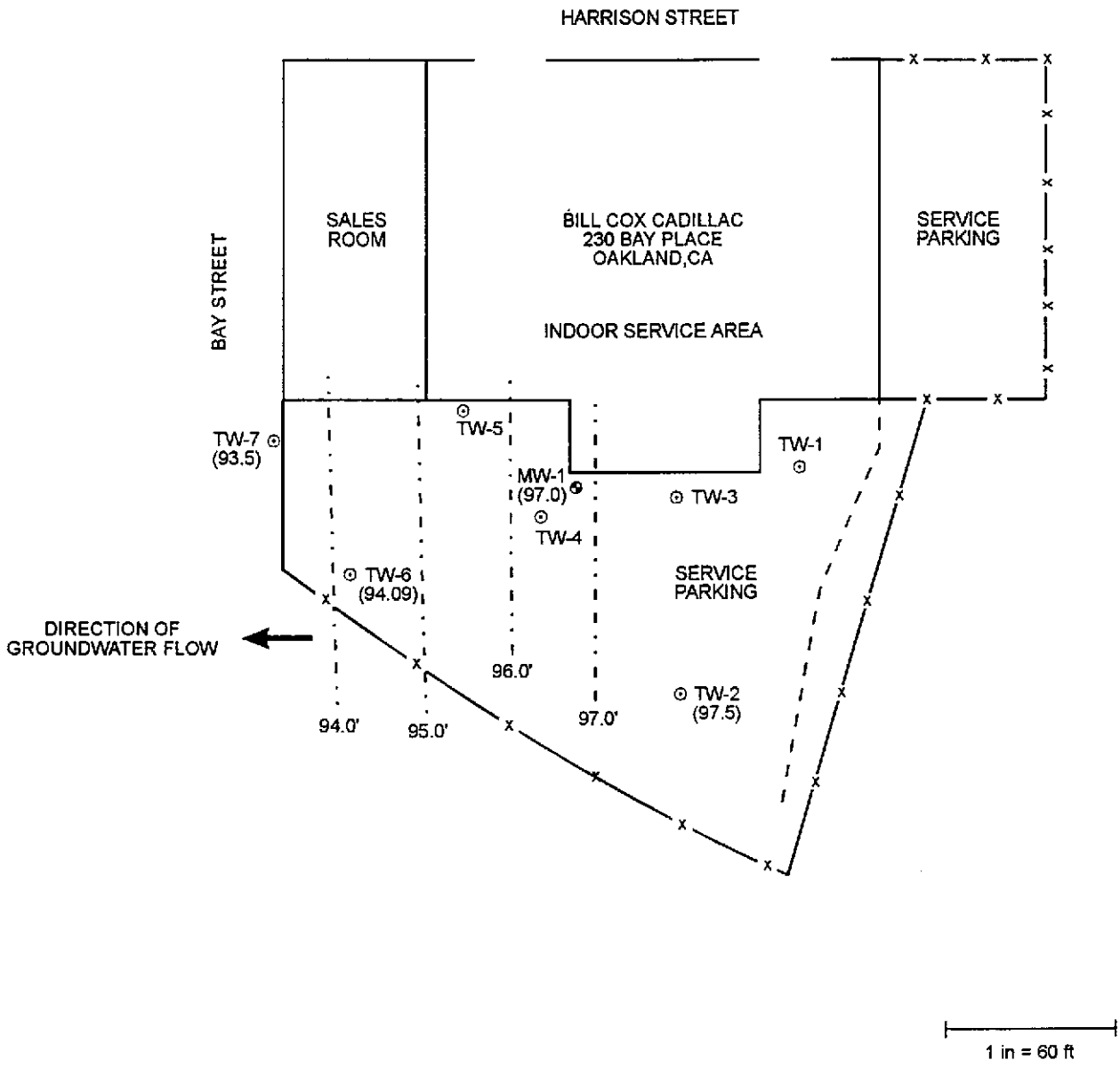


Figure 1: GROUNDWATER GRADIENT

ALL ELEVATIONS RELATIVE TO AN ARBITRARY REFERENCE DATUM OF 100.00 FEET AT MW-1 TOC.

Sources: SCI (Jan '95)
PES (Nov '93)

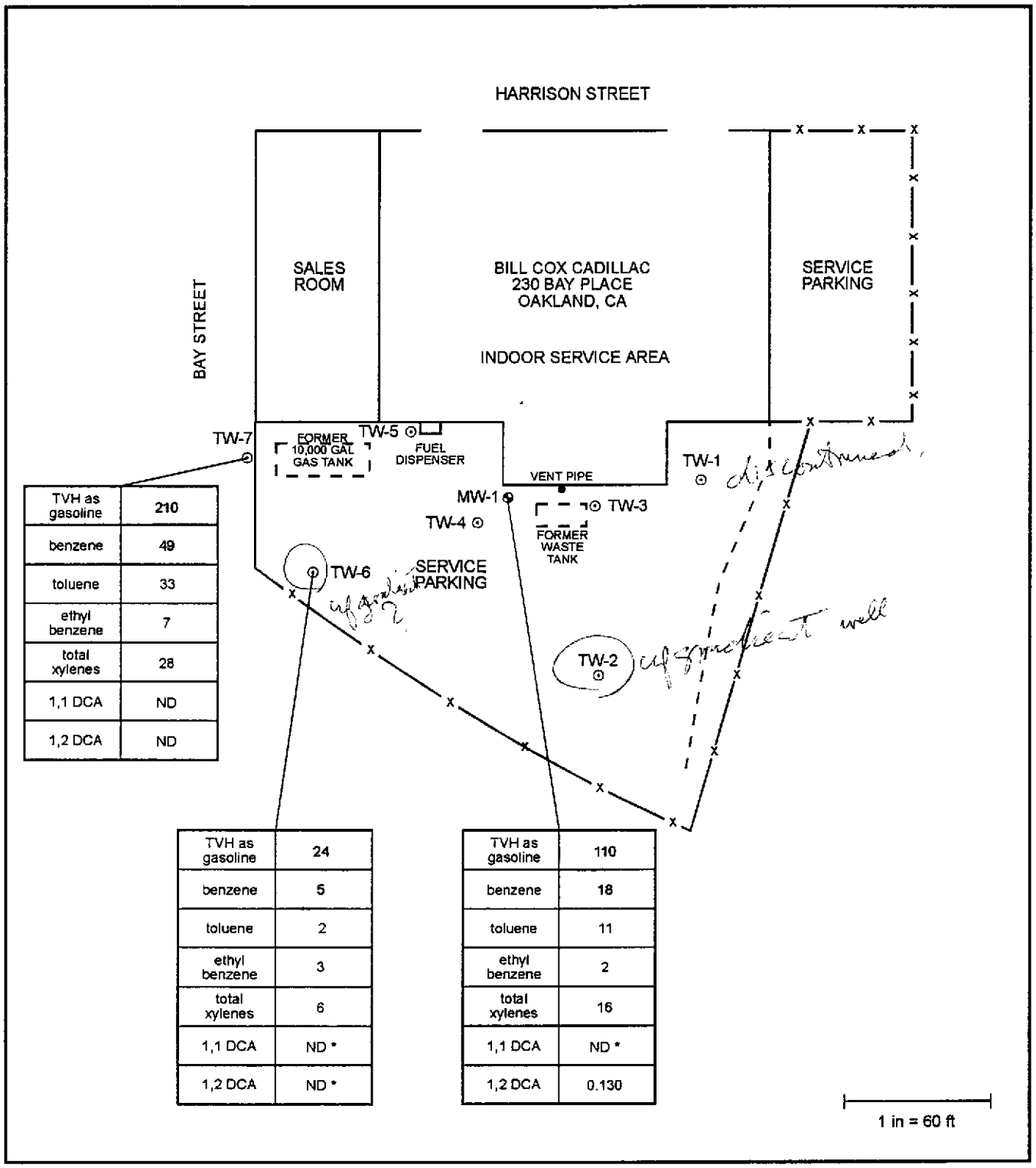
Monitoring Well
Temporary Welll Location
Fence
Retaining Wall

N

EOA, Inc.

January 1995

F:\CC03\COX-GRAD.CDR



TVH as gasoline	210
benzene	49
toluene	33
ethyl benzene	7
total xylenes	28
1,1 DCA	ND
1,2 DCA	ND

TVH as gasoline	24
benzene	5
toluene	2
ethyl benzene	3
total xylenes	6
1,1 DCA	ND *
1,2 DCA	ND *

TVH as gasoline	110
benzene	18
toluene	11
ethyl benzene	2
total xylenes	16
1,1 DCA	ND *
1,2 DCA	0.130

Figure 2: RESULTS OF GROUNDWATER ANALYSES
DEC. 22, 1994

All values in milligrams per liter (ppm)

* Detection limit of 0.001 ppm

Source for base map PES (Nov '93)

Monitoring Well

Temporary Welll Location

Fence

Retaining Wall

EOA, Inc.

January 1995

F:\CC03\RSLT-COX.CDR

Table 1
Summary of Groundwater Analyses
Cox Cadillac
December 22, 1994

	TVH as gasoline	benzene	toluene	ethyl benzene	total xylenes	1,1 DCA	1,2 DCA
MW-1	110	18	11	2	16	ND at .001	.130
TW-6	24	5	2	3	6	ND at .001	ND at .001
TW-7	210	49	33	7	28	ND at .001	ND at .001

All values in milligrams per liter (ppm).

110,000
24,000
210,000

18,000
5,000
49,000

Benzene

F:\CC02\gw.tbl

LIST OF ATTACHMENTS

R. William Rudolph, Jr., PE
Thomas E. Cundey, PE
Jeriann N. Alexander, PE

January 17, 1995
SCI 805.007

Ms. Sherris Ragsdale
Eisenberg, Olivieri, and Associates
1410 Jackson Street
Oakland, California 94612

Quarterly Groundwater Monitoring
December 1994 Event
Cox Cadillac Facility
230 Bay Street
Oakland, California

Dear Ms. Ragsdale:

This letter presents the results of the December 1994 groundwater monitoring event for the referenced site. Subsurface Consultants, Inc. (SCI) performed the event at the request of Eisenberg, Olivieri, and Associates (EOA). In general, SCI's services included:

1. Checking wells TW-2, TW-6, TW-7 and MW-1 for free floating product.
2. Measuring groundwater depths in wells TW-2, TW-6, TW-7 and MW-1.
3. Developing and sampling wells TW-6 and TW-7.
4. Purging and sampling well MW-1.
5. Retrofitting the well heads for wells TW2, TW-6 and TW-7.

Groundwater Sampling

On December 22, 1994, wells TW-2, TW-6, TW-7 and MW-1 were monitored. Initially, the wells were checked for free product and the depth to groundwater using a steel tape and water and petroleum sensitive pastes. No free product was observed. Groundwater level data is summarized in Table 1. Groundwater surface contours are shown on the Site Plan, Plate 1.

Prior to sampling, well MW-1 was purged of about 4 well volumes of water by using a new disposable bailer and wells TW-6 and TW-7 were each developed by bailing them dry with new disposable bailers Once the wells had recovered to at least 80 percent of their initial levels, they were sampled with new disposable bailers. Purge and development water were placed in 55-gallon drums which were labeled and left on-site for later disposal by others.

The samples were retained in glass containers pre-cleaned by the supplier in accordance with EPA protocol. The containers were placed in an ice filled cooler and remained iced until delivered to EOA. Well sampling forms are attached.

Well Retrofitting

During sampling it was observed that the top of casing for wells TW-2, TW-6 and TW-7 were each finished below the surface with either a slip cap or a locking cap, covered with 2 to 3 inches of pea gravel. Water had accumulated in the pea gravel layer and had to be removed prior to removing the well caps. The pea gravel was covered with asphalt concrete. After completion of sampling activities, these wells were retrofitted as follows:

1. The pea gravel was removed to a depth of about 3 inches below the TOC.

2. The existing caps were replaced with locking caps with keyed alike locks.

3. The well heads were completed at grade with water-tight traffic-rated utility boxes set in concrete.

On-going Services

Groundwater levels in wells TW-2, TW-6, TW-7 and MW-1 will be measured on a monthly basis and wells TW-6, TW-7 and MW-1 will be sampled on a quarterly basis through December 1995. As a result, the next monthly event will be performed during the week of January 23, 1995 and the next quarterly event will be performed during the week of March 20, 1995.

If you have any questions, please call.

Yours very truly,

Subsurface Consultants, Inc.

Jeriann N. Alexander
Civil Engineer 40469 (expires 3/31/95)

JNA:RWR:sld

Attachments: Table 1. Groundwater Elevation Data
Plate 1. Site Plan
Well Sampling Forms

2 copies submitted

Table 1. Groundwater Elevation Data

Well Number	Date	TOC Elevation* (feet)	Depth to Water (feet)	Groundwater Elevation (feet)
TW-1	10/13/93	100.91	0.06	100.85
TW-2	10/13/93	100.43	2.32	98.11
	12/22/94		2.88	97.55
TW-3	10/13/93	100.46	4.43	96.03
TW-4	10/13/93	99.35	2.73	96.62
TW-5	10/13/93	99.40	4.84	94.56
TW-6	10/13/93	98.75	5.40	93.35
	12/22/94		4.66	94.09
TW-7	10/14/93	97.96	5.40	92.56
	12/22/94		4.50	93.46
MW-1	10/13/93	100.00	3.55	96.45
	12/22/94		2.96	97.04

Depths are measured below Top of Casing (TOC)

* Elevations are referenced to the TOC for MW-1, which was assumed by others to have an elevation 100.00 feet

WELL SAMPLING FORM

Project Name: Cox Cadillac Well Number: MW 1

Job No.: _____ Well Casing Diameter: 2 inch

Sampled By: RDiaz Date: 12/22/94

TOC Elevation: _____ Weather: Clear

Depth to Casing Bottom (below TOC) 10 feet

Depth to Groundwater (below TOC) 2' 11½" feet

Feet of Water in Well 7' 1½" feet

Depth to Groundwater When 80% Recovered _____ feet

Casing Volume (feet of water x Casing DIA ^{2} x 0.0408) 1.3 gallons

Depth Measurement Method Tape & Paste / Electronic Sounder / Other

Free Product none

Purge Method teflon bailer

FIELD MEASUREMENTS

Gallons Removed	pH	Temp (°c)	Conductivity (micromhos/cm)	Salinity S%	Comments
1	7.08	59.9	1269		Gasoline
2	7.16	61.7	1176		odor
3	7.06	63.9	1349		✓
4	7.03	63.4	1466		✓

Total Gallons Purged 5 gallons

Depth to Groundwater Before Sampling (below TOC) _____ feet

Sampling Method teflon bailer

Containers Used 3 (40 ml) / 1 Poly 250 ml (liter) / _____ (pint)

Subsurface Consultants	JOB NUMBER	DATE	APPROVED	PLATE

WELL SAMPLING FORM

Project Name: Cox Cadillac Well Number: TW 6

Job No.: _____ Well Casing Diameter: 2 inch

Sampled By: CODea Date: 12/22/96

TOC Elevation: _____ Weather: Clear

Depth to Casing Bottom (below TOC) 10 feet

Depth to Groundwater (below TOC) 4' 7 7/8" feet

Feet of Water in Well 5' 4 1/8" feet

Depth to Groundwater When 80% Recovered _____ feet

Casing Volume (feet of water x Casing DIA ^{2} x 0.0408) 0.89 gallons

Depth Measurement Method (Tape & Paste) / Electronic Sounder / Other

Free Product None

Purge Method teflon bailer

FIELD MEASUREMENTS

Gallons Removed	pH	Temp (°c)	Conductivity (micromhos/cm)	Salinity S%	Comments
1	6.74	56.5	1046		
2-3	6.72	60.6	975		

Total Gallons Purged 3 bailed dry gallons

Depth to Groundwater Before Sampling (below TOC) _____ feet

Sampling Method teflon bailer

Containers Used 4 (40 ml) / 1 250 ml poly (liter) / _____ (pint)

Subsurface Consultants	JOB NUMBER	DATE	APPROVED	PLATE

WELL SAMPLING FORM

Project Name: Cox Cadillac Well Number: TW 7

Job No.: _____ Well Casing Diameter: 2 inch

Sampled By: CODea Date: 12/22/94

TOC Elevation: _____ Weather: Clear

Depth to Casing Bottom (below TOC) 10 feet

Depth to Groundwater (below TOC) 4' ½" (w/bailer in well) feet

Feet of Water in Well 5' 11½" feet

Depth to Groundwater When 80% Recovered _____ feet

Casing Volume (feet of water x Casing DIA ² x 0.0408) .98 gallons

Depth Measurement Method Tape & Paste / Electronic Sounder / Other

Free Product none

Purge Method teflon bailer

FIELD MEASUREMENTS

Gallons Removed	pH	Temp (°c)	Conductivity (micromhos/cm)	Salinity S%	Comments
1	6.78	60.0	545		Gasoline
2	6.65	60.6	372		odor
3	6.55	61.9	534		↓
4	6.57	62.1	630		↓

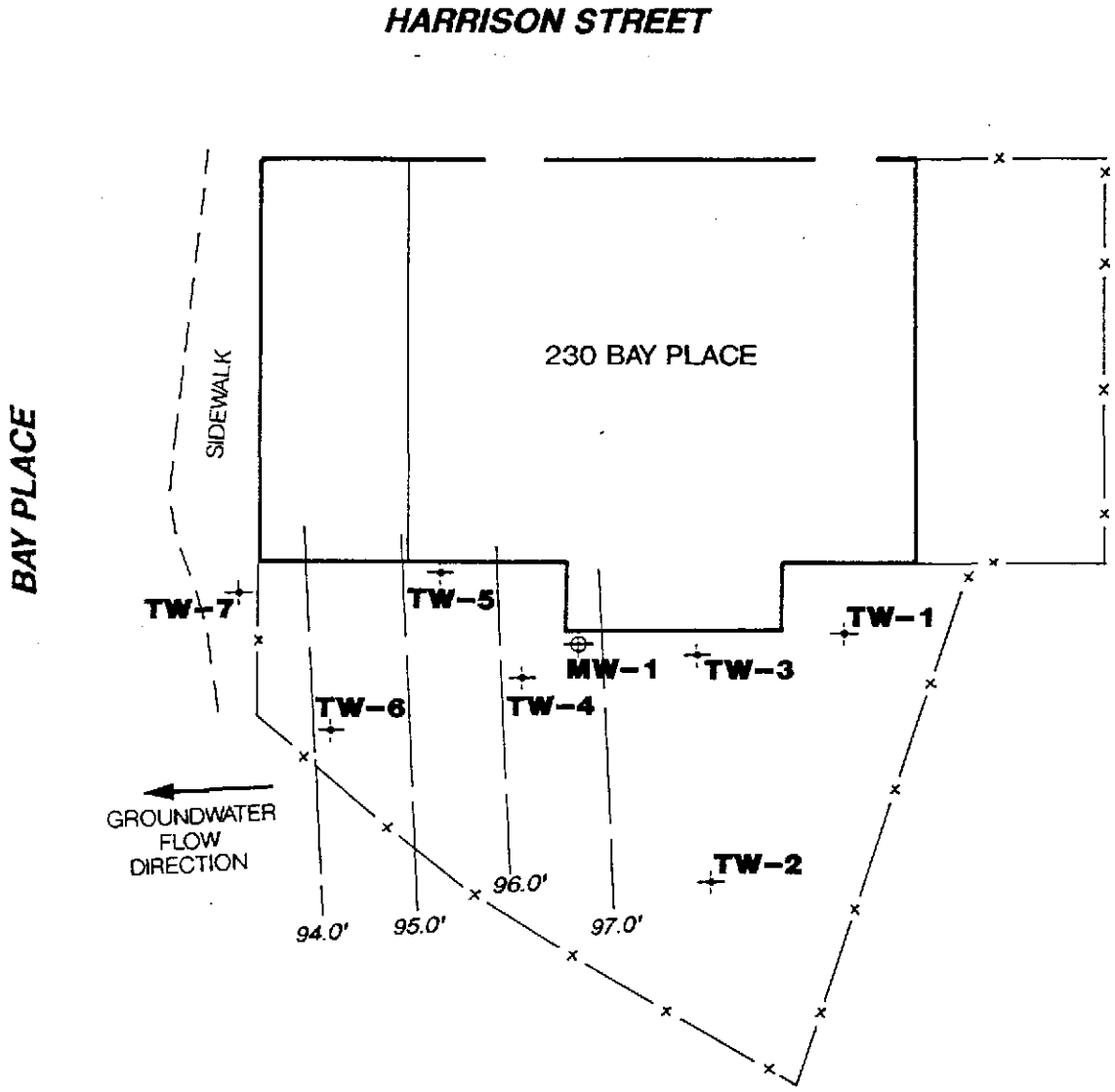
Total Gallons Purged 4 bailed dry gallons

Depth to Groundwater Before Sampling (below TOC) _____ feet

Sampling Method teflon bailer

Containers Used 4 (40 ml) / 1 250 ml amber (liter) / _____ (pint)

Subsurface Consultants	JOB NUMBER	DATE	APPROVED	PLATE



TEMPORARY WELL BY OTHERS

MONITORING WELL BY OTHERS

GROUNDWATER CONTOURS DECEMBER 1994

FENCE

APPROXIMATE SCALE (feet)

0 60 120

NOTE: ALL ELEVATION RELATIVE TO AN ARBITRARY REFERENCE DATUM OF 100.00 FEET AT MW-1 TOC.

SITE PLAN

Subsurface Consultants

230 BAY PLACE – OAKLAND, CA

JOB NUMBER	DATE	APPROVED
805.007	1/16/95	

PLATE 1

ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588 VOICE (510) 484-2600
FAX (510) 462-3914

DRILLING PERMIT APPLICATION

for well TW-2

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 130 Bay Place
Oakland, CA. 94612

CLIENT
Name Bill Cox
Address 130 Bay Place Voice
City Oakland, CA Zip 94612

APPLICANT
Name same as client
Fax
Address Voice
City Zip

TYPE OF PROJECT

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

PROPOSED WATER SUPPLY WELL USE
Domestic Industrial Other
Municipal Irrigation

DRILLING METHOD:
Mud Rotary Air Rotary Auger X
Cable Other

DRILLER'S LICENSE NO. 467904 - Clearheart Construction

WELL PROJECTS
Drill Hole Diameter 8 in. Maximum
Casing Diameter in. Depth ft.
Surface Seal Depth ft. Number

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

ESTIMATED STARTING DATE 10/11/93
ESTIMATED COMPLETION DATE 10/11/93
utility box added 11/22/94

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

APPLICANT'S SIGNATURE Don Eisenberg as agent for Bill Cox Date 1/26/95

FOR OFFICE USE

PERMIT NUMBER
LOCATION NUMBER

PERMIT CONDITIONS

Circled Permit Requirements Apply

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

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

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

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

E. WELL DESTRUCTION. See attached.

Approved Date

91992

ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588 VOICE (510) 484-2600
FAX (510) 462-3914

DRILLING PERMIT APPLICATION

for well TW-6

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 130 Bay Place
Oakland, CA. 94612

CLIENT
Name Bill Cox
Address 130 Bay Place Voice
City Oakland, CA Zip 94612

APPLICANT
Name same as client
Fax
Address Voice
City Zip

TYPE OF PROJECT

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

PROPOSED WATER SUPPLY WELL USE
Domestic ___ Industrial ___ Other ___
Municipal ___ Irrigation ___

DRILLING METHOD:
Mud Rotary ___ Air Rotary ___ Auger X
Cable ___ Other ___

DRILLER'S LICENSE NO. 467904 - Clearheart Construction

WELL PROJECTS
Drill Hole Diameter 8 in. Maximum
Casing Diameter ___ in. Depth ___ ft.
Surface Seal Depth ___ ft. Number ___

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

ESTIMATED STARTING DATE 10/11/93
ESTIMATED COMPLETION DATE 10/11/93
utility box added 11/22/94

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

APPLICANT'S SIGNATURE Don Essig as agent for Date 1/26/95

FOR OFFICE USE

PERMIT NUMBER ___
LOCATION NUMBER ___

PERMIT CONDITIONS

Circled Permit Requirements Apply

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

B. WATER WELLS, INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
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C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

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

E. WELL DESTRUCTION. See attached.

Approved ___ Date ___

91992

ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588 VOICE (510) 484-2600
FAX (510) 462-3914

DRILLING PERMIT APPLICATION

for well TW-7

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 330 Bay Place
Oakland, CA. 94612

CLIENT
Name Bill Cox
Address 330 Bay Place Voice
City Oakland, CA Zip 94612

APPLICANT
Name same as client
Fax
Address Voice
City Zip

TYPE OF PROJECT

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

PROPOSED WATER SUPPLY WELL USE
Domestic ___ Industrial ___ Other ___
Municipal ___ Irrigation ___

DRILLING METHOD:
Mud Rotary ___ Air Rotary ___ Auger X
Cable ___ Other ___

DRILLER'S LICENSE NO. 467904 - Clearheart Construction

WELL PROJECTS
Drill Hole Diameter 8 in. Maximum
Casing Diameter ___ in. Depth ___ ft.
Surface Seal Depth ___ ft. Number ___

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

ESTIMATED STARTING DATE 10/11/93
ESTIMATED COMPLETION DATE 10/11/93
utility box added 4/22/94

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

APPLICANT'S Don Eason as agent for

FOR OFFICE USE

PERMIT NUMBER ___
LOCATION NUMBER ___

PERMIT CONDITIONS

Circled Permit Requirements Apply

A. GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling logs and location sketch for geotechnical projects.
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1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
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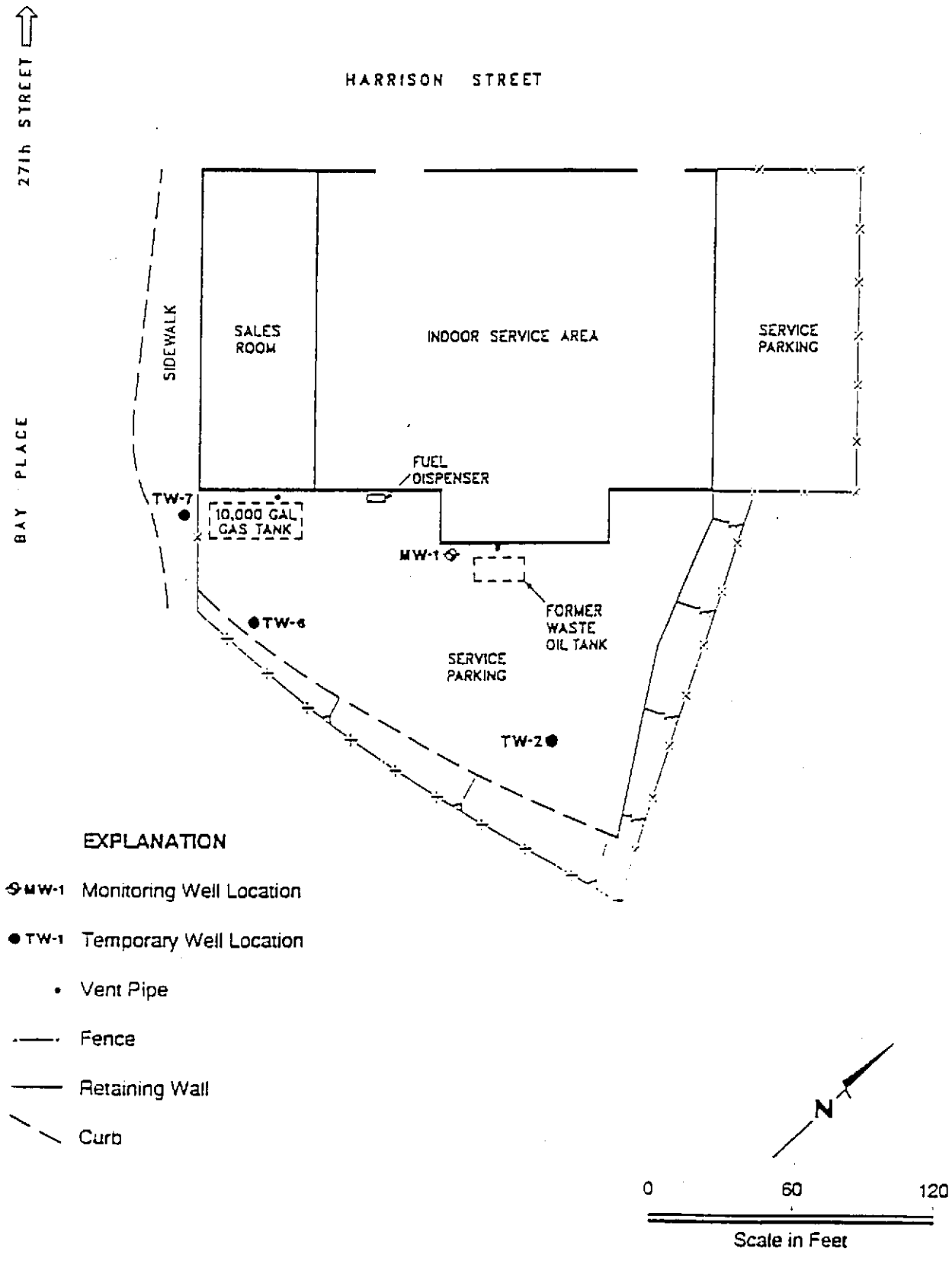
C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

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

E. WELL DESTRUCTION. See attached.

Approved ___ Date ___

91093



SITE PLAN

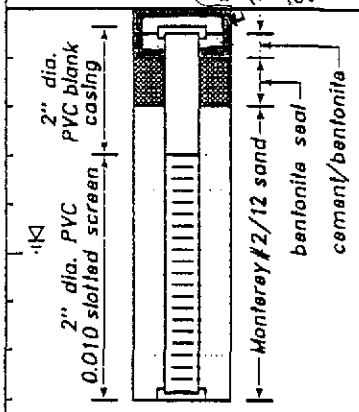
Bill Cox Cadillac
230 Bay Place
Oakland, California

SOURCE: PES Environmental, Inc. 11/93

FIGURE 1

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF WELL TW-2

WELL CONSTRUCTION DETAIL	PID (PPM)	BLOWS/6"	DEPTH (FT)	SYMBOLS	MATERIALS DESCRIPTION
					ASPHALTIC CONCRETE 2"; AGGREGATE BASE 4" DARK YELLOWISH BROWN CLAYEY GRAVEL (GC) 10YR 4/6, moist, dense, fine-grained gravel. LIGHT OLIVE BROWN SILTY CLAY (CL) 2.5Y 5/4, moist, medium stiff.
	0				LIGHT OLIVE BROWN SANDY SILTY CLAY (CL) 2.5Y 5/3, moist, stiff, very fine-grained sand.
	0		5		LIGHT OLIVE BROWN SAND (SP) 2.5Y 5/4, wet, medium dense, very fine-grained to medium-grained sand. LIGHT OLIVE BROWN SILTY CLAYEY SAND (SC) 2.5Y 5/3, wet, medium dense.
	0				*Bottom of Boring at 8 feet below ground surface.*
			10		

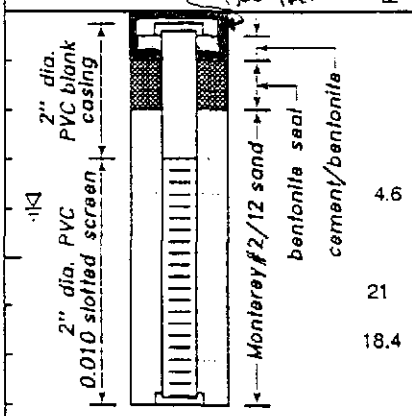
CLIENT	Cox Cadillac	DIAMETER OF HOLE	8 inches
LOCATION	230 Bay Place, Oakland, California	TOTAL DEPTH OF HOLE	8 feet
JOB NUMBER	167.0200.002	TOP OF CASING ELEVATION	0.3 feet below ground level
GEOLOGIST/ENGINEER	D. Trumbly	DATE STARTED	10/11/93
DRILL RIG	Deep Rock 10K with 8" Hollow Stem Auger	DATE COMPLETED	10/11/93

PLATE

A-4

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF WELL TW-6

WELL CONSTRUCTION DETAIL	PID (PPM)	BLOWS/6"	DEPTH (FT)	SYMBOLS	MATERIALS DESCRIPTION
	4.6 21 18.4		5 10		ASPHALTIC CONCRETE 2"; AGGREGATE BASE 2" DARK YELLOWISH BROWN GRAVELLY SAND (SW) 10YR 4/6, moist, loose, fine-grained to coarse-grained sand, fine-grained gravel. LIGHT OLIVE BROWN SANDY CLAY (CL) 2.5Y 5/3, moist, medium stiff, very fine-grained and fine-grained sand. GREENISH GRAY SILTY SAND (SM) 5GY 6/1, moist to wet, medium dense, very fine-grained and fine-grained sand. GREENISH GRAY SAND (SW) 5GY 5/1, wet, medium dense, very fine-grained to coarse-grained sand. GREENISH GRAY AND DARK YELLOWISH BROWN SILTY SAND (SM) - 5GY 5/1 & 10YR 4/5, wet loose to medium dense, very fine-grained and fine-grained sand. *Bottom of Boring at 8 feet below ground surface.*

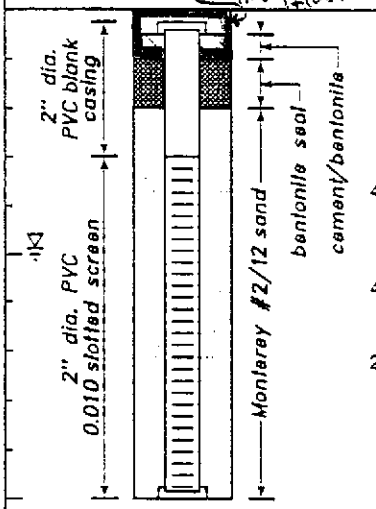
CLIENT	Cox Cadillac	DIAMETER OF HOLE	8 inches
LOCATION	230 Bay Place, Oakland, California	TOTAL DEPTH OF HOLE	8 feet
JOB NUMBER	167.0200.002	TOP OF CASING ELEVATION	0.25 feet below ground level
GEOLOGIST/ENGINEER	D. Trumbly	DATE STARTED	10/12/93
DRILL RIG	Deep Rock 10K with 8" Hollow Stem Auger	DATE COMPLETED	10/12/93

PLATE

A-8

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF WELL TW-7



PID (PPM)	BLOWS/6"
	3
435	4
	6
	3
447	5
	5
	3
238	4
	8

DEPTH (FT): 5, 10

SYMBOLS

MATERIALS DESCRIPTION

CONCRETE SLAB 4"; BEDDING MATERIAL: CONCRETE SLAB 4"
VERY DARK GRAY SANDY CLAY (CL)
7.5YR N3/, moist, soft, very fine-grained sand.
DARK GREENISH GRAY SILTY CLAY (CL) WITH SAND
5GY 4/1, moist, medium stiff, very fine-grained sand, with light hydrocarbon odor.
LIGHT OLIVE BROWN SILTY CLAY (CL) WITH SAND
2.5Y 5/4, moist, medium stiff, very fine-grained sand, with **moderate hydrocarbon odor.**
LIGHT OLIVE BROWN SILTY SAND (SM) WITH CLAY
2.5Y 5/4, moist to wet, loose, very fine-grained to medium-**grained sand, with strong hydrocarbon odor.**

Bottom of Boring at 10 feet below ground surface.

CLIENT	Cox Cadillac	DIAMETER OF HOLE	8 inches
LOCATION	230 Bay Place, Oakland, California	TOTAL DEPTH OF HOLE	10 feet
JOB NUMBER	167.0200.002	TOP OF CASING ELEVATION	0.25 feet below ground level
GEOLOGIST/ENGINEER	D. Trumbly	DATE STARTED	10/12/93
DRILL RIG	Deep Rock 10K with 8" Hollow Stem Auger	DATE COMPLETED	10/12/93

PLATE

A-9

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L R E P O R T

Prepared for:

EOA, Inc.
1410 Jackson Street
Oakland, CA 94612

Date: 24-JAN-95
Lab Job Number: 119254
Project ID: CC02
Location: Cox Cadillac

Reviewed by: _____

Reviewed by: _____

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 119254
CLIENT: EOA, INC.
PROJECT ID: CC02
LOCATION: COX CADILLAC

DATE SAMPLED: 12/22/94
DATE RECEIVED: 12/22/94
DATE ANALYZED: 12/31/94
DATE REPORTED: 01/10/95
DATE REVISED: 01/24/95
BATCH NO: 18348

Total Volatile Hydrocarbons with BTXE in Aqueous Solutions
TVH by California DOHS Method/LUFT Manual October 1989
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL BENZENE (ug/L)	TOTAL XYLENES (ug/L)
119254-001	MW-1	110,000	18,000	11,000	2,800	16,000
119254-002	TW6	24,000	5,400	2,700	3,100	6,800
119254-003	TW7	210,000	49,000	33,000	7,300	28,000
METHOD BLANK	N/A	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY: BS/BSD

RPD, %	<1
RECOVERY, %	98

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 119254-001
CLIENT: EOA, INC.
PROJECT ID:CC02
LOCATION: COX CADILLAC
SAMPLE ID: MW1

DATE SAMPLED: 12/22/94
DATE RECEIVED: 12/22/94
DATE ANALYZED: 01/03/95
DATE REPORTED: 01/10/95
DATE REVISED: 01/24/95
BATCH NO: 18363

ANALYSIS	RESULT	UNITS	REPORTING LIMIT	METHOD
1,1-Dichloroethane	ND	ug/L	1.0	EPA 8240
1,2-Dichloroethane	130	ug/L	1.0	EPA 8240

ND = Not detected at or above reporting limit.

SURROGATE RECOVERY

1,2-Dichloroethane-d4	89 %

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 119254-002
CLIENT: EOA, INC.
PROJECT ID:CC02
LOCATION: COX CADILLAC
SAMPLE ID: TW6

DATE SAMPLED: 12/22/94
DATE RECEIVED: 12/22/94
DATE ANALYZED: 01/03/95
DATE REPORTED: 01/10/95
DATE REVISED: 01/24/95
BATCH NO: 18363

ANALYSIS	RESULT	UNITS	REPORTING LIMIT	METHOD
1,1-Dichloroethane	ND	ug/L	1.0	EPA 8240
1,2-Dichloroethane	ND	ug/L	1.0	EPA 8240

ND = Not detected at or above reporting limit.

SURROGATE RECOVERY

1,2-Dichloroethane-d4	83 %

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 119254-003
CLIENT: EOA, INC.
PROJECT ID:CC02
LOCATION: COX CADILLAC
SAMPLE ID: TW7

DATE SAMPLED: 12/22/94
DATE RECEIVED: 12/22/94
DATE ANALYZED: 01/04/95
DATE REPORTED: 01/10/95
DATE REVISED: 01/24/95
BATCH NO: 18363

ANALYSIS	RESULT	UNITS	REPORTING LIMIT	METHOD
1,1-Dichloroethane	ND	ug/L	1.0	EPA 8240
1,2-Dichloroethane	ND	ug/L	1.0	EPA 8240

ND = Not detected at or above reporting limit.

SURROGATE RECOVERY

1,2-Dichloroethane-d4	85 %

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 119254 METHOD BLANK
CLIENT: EOA, INC.
PROJECT ID:CC02
LOCATION: COX CADILLAC
SAMPLE ID: N/A

DATE SAMPLED: N/A
DATE RECEIVED: N/A
DATE ANALYZED: 01/03/95
DATE REPORTED: 01/10/95
DATE REVISED: 01/24/95
BATCH NO: 18363

ANALYSIS	RESULT	UNITS	REPORTING LIMIT	METHOD
1,1-Dichloroethane	ND	ug/L	1.0	EPA 8240
1,2-Dichloroethane	ND	ug/L	1.0	EPA 8240

ND = Not detected at or above reporting limit.

SURROGATE RECOVERY

1,2-Dichloroethane-d4	79 %

119254

EDA, Inc.

Eisenberg, Olivieri, & Associates
Environmental and Public Health Engineers
1410 Jackson Street, Oakland, CA 94612 (415) 832-3852

Post-It® Fax Note 7671 | Date 12/6/95 | # of pages ▶
To Cynthia | From Sherri Pagedale
Co./Dept. CET | Co. EDA
Phone # 486-0900 | Phone # 832-3852
Fax # 486-0532 | Fax # 832-3852

Project ID: 0002 Sampled By: COD (SCI)
Sampling Date: 12/5/95 Laboratory Name: CET
22 OR 11/24/95

NOTES TO LAB
a) Specify analytic method and detectio
b) Notify us if there are any anomalou
c) Duplicates are listed in parentheses.
d) ANY QUESTIONS/CALIFICATIONS: CALL US

Sample ID	Sampling Date	Sample Container Type (1)	Analyze/ Hold (2)	Turn-around (3)	Analyze For:	Analytic Method/ Detection Limit	Comments
MW1-1	12/5/95	2-40ml VOA	A	N	TVH-gas/BTEX		
MW1-2		1-40ml VOA			DCA	8010	
MW1-3		250ml poly			sol. Pb		
TW2-1		2-40ml VOA			TVH-gas/BTEX		
TW2-2		2-40ml VOA			DCA	8010	
TW2-3		250ml poly			sol. Pb		
TW1-1		2-40ml VOA			TVH-gas/BTEX		
TW1-2		1-40ml VOA			DCA	8010	
TW1-3		250ml poly			sol. Pb		

Valerie Tarkee 12/6/95 3:50
A. Released By (Signature), Date, Time

B. Released By (Signature), Date, Time

A. Received By (Signature), Date, Time

B. Received By (Signature), Date, Time

Received By Lab Personnel, Date, Time | Lab Telephone | Shipping Carrier, Method, Date

(1) - Sample Type Codes: W = Water, S = Soil, O = Other (specify).
Container Type Codes: V = VOA Bottle, P = Plastic Bottle, G = Glass Bottle, T = Brass Tube, O = Other (specify)

(2) - Analyze/Hold: A = Analyze, HOLD (spell out) = Do not analyze unless necessary or requested.

(3) - Turnaround: N = Normal turnaround, F = 1 week turnaround, R = 24 hour turnaround.

01-24-1995 12:44PM