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BILL COX SAN LEANDRO CHRYSLER · PLYMOUTH

232 East 14th St. • San Leandro, CA 94577 510-562-4871 • Fax 562-6070

12 September 1995

Thomas Peacock Alameda County Health Care Services Agency Department of Environmental Health 1731 Harbor Bay Parkway Alameda, CA 94502 SUBJECT: Offsite Groundwater "Hydropunch" Sampling report Bill Cox Cadillac, 230 Bay Place, Oakland, CAN

Dear Mr. Peacock:

Enclosed is one copy of the "Offsite Groundwater "Hydropunch" Sampling Report for the Bill Cox Cadillac, 230 Bay Place, Oakland, California site. The report was completed according to the approved Work Plan for Furthur Investigation, 230 Bay Place, Oakland, California (Work Plan), dated March 1994. As discussed in a meeting held with you on May 17th and confirmed by the verbal approval of a follow-up letter dated June 22nd, Task II soil vapor analysis was replaced with Hydropunch sampling.

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

Sincerely,

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William L. Cox President

WLC/ceg

Attachment

CC: Andy Briefer, PES Rory Campbell



Bill Cox, President 232 East 14th St. • San Leandro, CA 94577 510-562-4871 • Fax 562-6070



August 25, 1995

Eisenberg, Olivieri, & Associates Environmental and Public Health Engineering

Mr. Bill Cox 232 E. 14th St. San Leandro, CA 93477

SUBJECT: Offsite Groundwater "Hydropunch" Sampling 230 Bay Place, Oakland, California

Dear Mr. Cox:

This letter report summarizes results of the offsite groundwater "hydropunch" sampling that occurred on July 19 and 21, 1995 at the property located at 230 Bay Place, Oakland, California. This work was completed in fulfillment of Task 2, Down Gradient Investigation, of the March 1994 *Work Plan for Further Investigation, 230 Bay Place, Oakland California* (Work Plan) prepared by EOA, Inc. As discussed with the Alameda County Department of Environmental Health (DEH) in a meeting held on May 17 and as confirmed by the verbal approval of a letter dated June 22, 1995 to the DEH, the Task 2 soil vapor analysis was replaced with hydropunch sampling.

Purpose

The purpose of the hydropunch sampling was to provide information on the distribution of hydrocarbons in the downgradient direction from the 230 Bay Place property. During previous quarterly groundwater sampling events, Total Volatile Hydrocarbons, Benzene, Toluene, Xylene, and Ethylbenzene (TVH/BTXE) were detected in Well TW-7, located downgradient of a former underground storage tank (see quarterly monitoring reports, EOA, Inc, January 1995, April 1995, and June 1995). Results of the groundwater analyses were intended to investigate the limits of TVH/BTXE in groundwater.

Scope of Work

EOA, Inc. coordinated the work for this task, including the following:

- obtaining bids for the sampling;
- coordinating location of sample sites with SCI;
- coordinating laboratory analyses;
- overseeing sampling; and
- preparing sampling report.

EOA, Inc. requested and received three bids for the hydropunch sampling activities. SCI was selected by Bill Cox to perform the following tasks:

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- obtain two excavation permits from the City of Oakland (as required);
- locate utilities;
- select hydropunch sample locations;
- subcontract for the hydropunch work; and
- provide a report on field methods, including a map of sampling locations, to EOA, Inc.

Curtis and Tompkins Analytical Laboratory, a California state-certified laboratory, performed the analyses.

Sample Locations

Six sample locations were identified in the downgradient direction from Well TW-7 in order to investigate the extent of chemicals in groundwater. This downgradient area of investigation is located in the City of Oakland right-of-way where Bay Place and Vernon Street intersect. Two excavation permits were obtained from the City of Oakland as required for work in right-of-ways. Selecting sample locations was especially difficult in this area due to the heavy traffic and the high density of utility lines, sewer lines, and storm drain systems. In addition, major utility trunk lines run through the area.

Several potential locations were marked, Underground Services Alert (USA) was notified for utility locating by the various utility companies, and City of Oakland Engineering Department drawings were consulted for the locations of sewer lines and storm drain systems. From the relatively limited options that were available after clear areas were identified, six sample locations were selected by SCI and EOA, Inc. Locations were based on the objective of trying to better define the extent of groundwater pollution, while making sure to avoid all known underground utilities. The selected sample locations were reviewed by both Bill Cox and Tom Peacock of the DEH.

Hydropunch Sampling

Borings were installed at the marked locations by means of a portable sampling system that is driven by a hydraulic hammer. Outer drill rods, driven in increments of three feet, served as temporary conductor casing for a temporary well screen. Soil was removed from the casing with a three-foot-long sample barrel. After each three-foot drive interval, the inner drill rods were removed from the borehole with a hydraulic winch and the soil was removed from the barrel. All drilling and sampling equipment was thoroughly steam-cleaned prior to each use to reduce the likelihood of cross-contamination between borings.

After the outer drill rods were removed from the boring, temporary PVC casing, having five to ten feet of screen in the lower section, was placed in the boring. Water samples were collected within the casing by means of a steam-cleaned stainless-steel bailer. The samples were placed in pre-cleaned glass containers, then placed on ice in a cooler for delivery to the laboratory for analysis.

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Figure 1 shows the locations of the hydropunch borings. The sample locations were designated HP-1 through HP-6, in order of installation. Table 1 summarizes the hydropunch boring information, including approximate amount of water in each boring, and total depth. The borings were installed to depths ranging from 7 - 10 feet below ground surface (bgs), except HP-1 which was 15' deep. HP-1 was the first boring installed. During installation of HP-1, no distinct groundwater-bearing zone was readily identifiable, and water did not enter the boring as rapidly as expected. Therefore, the boring was drilled to a greater depth than was believed necessary (19'), in order to confirm that the depth was sufficient. Because no more productive water-bearing zone was encountered, HP-1 was backfilled with bentonite pellets to 15', then screened for groundwater sampling. The subsequent borings were installed to a depth of 7' to 10' bgs, consistent with the expected water level based on static water level in TW-7.

Groundwater entered the borings slowly. HP-1 required several hours for the groundwater to accumulate. Enough groundwater was available to collect samples in locations HP-1 through HP-4 on the day that the borings were installed, July 19, 1995. However, not enough groundwater was available for sampling in location HP-6 until two days after installation, at which time the location was sampled. Further, as of August 10, 1995, no groundwater was present in HP-5. Therefore HP-5 was not sampled.

All soil cuttings and rinseate water generated during the sampling were placed in separate Department of Transportation-approved drums, which were labeled and left onsite for later disposal. On the same day as sampling, the temporary casings in locations HP-1 through HP-4 were removed, the holes were backfilled with cement/bentonite grout, and the surface was sealed to match existing conditions. In order to remain in compliance with City of Oakland regulations (which require backfilling within three weeks), the temporary casings in locations HP-5 and HP-6 were removed on August 10, 1995 and the holes were finished in the same manner as in locations HP-1 through HP-4.

Sample Analysis and Findings

The samples were analyzed for TVH/BTXE. Results of the sample analyses are summarized in Table 2 and shown on Figure 2. TVH were not detected in groundwater from any of the borings at the laboratory-reported detection limits of 50 micrograms per liter (parts per billion) for TVH. Benzene, toluene, xylene, and ethylbenzene (BTXE) were not detected in locations HP-2, HP-3, HP-4, and HP-5 at the laboratory-reported detection limits of 0.5 micrograms per liter (parts per billion). In location HP-1, benzene, toluene, and xylene were detected at 1.3, 3.1, and 0.8 ppb, respectively.

Discussion

It was not the intent of this study to obtain information on groundwater elevation and gradient. The borings were not left open long enough for water levels to stabilize, and any

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groundwater elevation measurements from these borings would have provided only rough estimates of gradient. The sampling depth of the borings, however, which ranged in depth from 7' - 15' bgs, are in the same range as groundwater depths measured Well TW-7.

The results of this limited sampling suggest that the hydrocarbon pollution of groundwater which is being investigated at the subject site have apparently not migrated offsite in the direction suggested by the on-site groundwater flow. This conclusion must be considered tentative, since it is based on sampling from borings during the dry season.

The dramatic discontinuity between pollution levels in TW-7 and the locations sampled in this study may be the result of natural attenuation or, more likely, a result of the shallowest groundwater being intercepted and drained by porous materials in pipe trench backfills associated with the numerous utilities which are known to run through the immediate area of TW-7 and HP-1, in a direction approximately perpendicular to the direction of on-site groundwater flow. The construction details of those utilities were not determined, but given the depth of groundwater measured in TW-7 (2.98' to 5.4' *Third Quarterly Monitoring Report*, EOA, Inc., July 25, 1995), it is reasonable that telephone and storm sewer utilities, which are known to exist at that location may be intercepting the shallowest groundwater.

If you have any questions regarding this report, please call me or Sherris Ragsdale at 832-2852.

Sincerely, EOA, Inc.

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Don Eisenberg, Ph.D., P.E. President

Attachments

Groundwater Sampling Services Report, SCI, August 10, 1995 Laboratory Analytical Report

Limitations

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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.

Table 1 Summary of Hydropunch Boring Information Cox Cadillac July 1995

Hydropunch Boring Number	Approximate Amount of Groundwater in Boring	Total Depth (feet)	
HP-1	several inches (by end day)	19 (grouted to 15)	
HP-2	several inches	10	
HP-3	several inches	10	
HP-4	one foot	7	
HP-5	none	7	_ ≪
HP-6	<1 inch	7	\

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Table 2 Summary of Groundwater Analyses Hydropunch Samples Cox Cadillac July 1995

Sample	TVH as gasoline	benzene	toluene	ethyl benzene	total xylenes
HP-1	ND (50)	1.3	3.1	ND (0.5)	0.8
HP-2	ND (50)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
HP-3	ND (50)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
HP-4	ND (50)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
HP-5	ND (50)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
HP-6	No Sample	No Sample	No Sample	No Sample	No Sample

ND - not detected at the indicated detection limit

All analyses are reported in micrograms per liter (parts per billion)

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August 10, 1995 SCI 980.001

Mr. Bill Cox 232 East 14th Street San Leandro, California 94577

Groundwater Sampling Services Bill Cox Cadillac 230 Bay Place Oakland, California

Dear Mr. Cox:

This letter presents the results of groundwater sampling services conducted by Subsurface Consultants, Inc. (SCI) in conjunction with Eisenberg, Olivieri and Associate's (EOA's) ongoing study of the referenced site. In general, SCI's services consisted of obtaining water samples from 6 shallow borings within the right-of-way downgradient from the site.

Sampling Locations

As requested by EOA, six sampling locations were to be selected from which to obtain groundwater samples. The locations were to be sited within the city right-of-way on Bay Place and Vernon Street. This intersection is heavily traveled and numerous utilities traverse the area.

Several possible locations were initially selected in consultation with EOA and Underground Services Alert (USA) was notified to contact their subscribers to check the locations for utilities. In addition, the City of Oakland's Engineering Department was visited to obtain a drawing showing layouts of sewer lines and storm drains.

Subsurface Consultants, Inc.

171 12th Street • Suite 201 • Oakland, California 94607 • Telephone 510-268-0461 • FAX 510-268-0137

Mr. Bill Cox August 10, 1995 SCI 980.001 Page 2

Groundwater Sampling

Prior to performing the field work, two excavation permits were obtained from the City of Oakland as required for work in the right-of-way. Six sampling locations were selected upon a review of the utility companies field markings. Boring locations are shown on the attached Site Plan, Plate 1.

Groundwater samples were obtained from within temporary well casings placed inside borings drilled at the six locations. The borings were advanced using a portable cuttingless sampling system driven by a hydraulic hammer. The borings were extended to depths of 7 to 19 feet below the groundsurface.

The outer rods of the cuttingless sampling system were driven to serve as temporary conductor casings for the temporary well screen. Soil was removed from the conductor casing by driving a 3-foot-long sample barrel into the soil. After each 3-foot drive interval, the inner rods were removed from the borehole with a hydraulic winch, and the soil was removed form the barrel. Drilling and sampling equipment was thoroughly steam-cleaned prior to each use to reduce the likelihood of cross-contamination between borings.

After removing the outer drill rods, temporary PVC casing having the lower 5 to 10 feet screened was placed in the borings. Water samples were collected from within the casing using a steam-cleaned stainless-steel bailer. The samples were retained in pre-cleaned glass containers which were placed in ice-filled coolers and remained iced until delivery to EOA.

The sampling locations were designated HP-1 through HP-6. Water was readily available to sample at HP-1 through HP-4 on the day the temporary casings were installed. The temporary casings in HP-5 and HP-6 were left in-place to allow groundwater to stabilize. HP-6 was sampled on July 21, 1995, two days after drilling. The samples were placed in an ice filled cooler and remained iced until delivery to EOA later that day. As of August 10, 1995, no water had been produced in HP-5.

Temporary Well Removal

All cuttings and rinsate water generated during the study were placed in DOT-approved containers which were labeled and left on-site for later disposal by others. The temporary casings at locations HP-1 through HP-4 were removed and the resulting holes were backfilled with cement/bentonite grout and sealed to match existing conditions on the same day the locations were sampled. Temporary casings at the other two locations, HP-5 and HP-6, remained in place for 3 weeks. To obtain compliance with city regulations, these temporary casings were removed on August 10, 1995. The resulting holes were backfilled with cement/bentonite grout and sealed to match existing conditions.

Mr. Bill Cox August 10, 1995 SCI 980.001 Page 3

If you have any questions, please call.

Yours very truly,

Subsurface Consultants, Inc.

Jeriann alexander

Jeriann N. Alexander Civil Engineer 40469 (expires 3/31/99)

MM:JNA:sld

cc: Ms. Sherris Ragsdale Eisenberg, Olivieri & Associates 1410 Jackson Street Oakland, California 94612

Attachment: Site Plan



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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: 30-JUL-95 Lab Job Number: 121837 Project ID: CC03 Location: Cox Cadillac



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Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 121837 CLIENT: EOA, INC. PROJECT ID: CCO3 LOCATION: COX CADILLAC DATE SAMPLED: 07/19/95 DATE RECEIVED: 07/20/95 DATE ANALYZED: 07/21/95 DATE REPORTED: 07/30/95 BATCH NO.: 22091

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	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES
		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
121837-001	HP-1	ND(50)	1.3	3.1	ND(0.5)	0.8
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.

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LABORATORY NUMBER: 121837 CLIENT: EOA, INC. PROJECT ID: CC03 LOCATION: COX CADILLAC DATE SAMPLED: 07/19/95 DATE RECEIVED: 07/20/95 DATE ANALYZED: 07/24/95 DATE REPORTED: 07/30/95 BATCH NO.: 22133

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)
121837-002 121837-003 121837-004	HP-2 HP-3 HP-4	ND (50) ND (50) ND (50)	ND(0.5) ND(0.5) ND(0.5)	ND(0.5) ND(0.5) ND(0.5)	ND(0.5) ND(0.5) ND(0.5)	ND(0.5) ND(0.5) ND(0.5)
METHOD BLAN	K 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.

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Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 121887 CLIENT: EOA, INC. PROJECT ID: CC03 LOCATION: COX CADILLAC

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DATE SAMPLED: 07/24/95 DATE RECEIVED: 07/24/95 DATE ANALYZED: 07/25/95 DATE REPORTED: 07/30/95 BATCH NO.: 22163

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)
121887-001	HP-6	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
METHOD BLAN	K 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.

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