Clark & Witham, Inc.

Phone:
(510) 659-1805
Fax:
(510) 659-6344

3499 Edison Way, Fremont, CA. 94538

Consulting Engineering Geologists

TRANSMITTAL FORM

TO: Ms. Eva Chu
Alameda County
Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, California 94621

DATE: April 28, 1994
PROJECT NUMBER: CHO002-C
SUBJECT: Letter Report

FROM: Rodger Witham
TITLE: Project Manager

WE ARE SENDING YOU:

COPIES	DATED	Job No.	DESCRIPTION
1	4/28/94	CHO002-C	Report on Ground-Water Monitoring in March 1994 at Former Okada Property, 16109 Ashland Avenue, San Lorenzo, California

THESE ARE TRANSMITTED as checked below:

[ ] For review and comment

[ ] As requested

[ ] For approval

[X] For your files

[ ] Other:

REMARKS: As requested by Mr. Martin Petersen, Citation Homes Central.

Copies: 1 to CWI project file no.: CHO002-C

Rodger C. Witham

Rodger C. Witham, Project Manager

Clark & Witham, Inc.

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April 28, 1994
CHO002-C

Mr. Martin Petersen
Citation Homes Central
404 Saratoga Avenue, Suite 100
Santa Clara, California 95050

Subject: Report on Ground-Water Monitoring in March 1994 at Former Okada Property, 16109 Ashland Avenue, San Lorenzo, California.

Mr. Petersen:

Citation Homes Central (Citation) has requested that Clark & Witham, Inc. perform ground-water monitoring at the former Okada property. The 16-acre site is located on the west side of Ashland Avenue between Bertero Avenue and East 14th Street in San Lorenzo, California (Plate 1). Citation is currently constructing residential housing on the property. According to information provided by Citation, the site formerly was a nursery, which contained various greenhouses, fields, a chemical storage shed, a boiler, aboveground tanks, and several residences. In addition, two underground storage tanks (USTs) were located in the northeastern portion of the site. One 250-gallon tank was used to store gasoline and the other 3,000-gallon tank was used to store fuel oil. The two tanks were excavated and removed in January 1989.

Three ground-water monitoring wells were subsequently installed in the area of the two USTs; Terratech, Inc., of San Jose, California, observed installation of wells MW-1 and MW-2 in March 1989, and MW-3 in August 1989. Wells MW-1 and MW-2 were each installed to a depth of 13 feet, and MW-3 was installed to a depth of 16 feet below the ground surface. According to Citation, well MW-1 was probably removed sometime in 1992 during excavation and placement of underground utilities for the residential development. The top of the casing of MW-2 also had been damaged during Citation's site work. Clark & Witham, Inc. repaired the wellhead of MW-2 in September 1992. Plate 2 shows the northeastern portion of the property and includes the locations of former nursery structures, former UST locations, former well MW-1, and wells MW-2 and MW-3. Ground-water sampling and analysis were performed by others at various times during 1989 and 1990, and has been conducted by Clark & Witham, Inc. between 1992 and 1994.

Ground-Water Monitoring and Results

Ground-water monitoring by Clark & Witham, Inc. includes measuring depth to water, examining samples of water collected from the air/water interface for evidence of petroleum hydrocarbons, purging the wells, and sampling and analyzing water from the wells. Work was performed using the procedures described in the Appendix. The latest ground-water monitoring episode was performed on March 22, 1994.

The static water level in MW-2 and MW-3 on March 22, 1994 was 7.93 and 7.67 feet below the tops of the well casings, respectively. Water level beneath the site was an average 0.94 foot higher in March 1994 than at the previous monitoring episode in September 1993. No floating product or sheen was noted on water samples from the two wells. No gradient and direction of ground-water flow can be estimated because only two wells are available to measure the ground-water level. Ground-water was previously reported to flow generally toward the west at gradients of 0.0018 to 0.0025. Table 1 presents the cumulative results of monitoring data from former well MW-1 and wells MW-2 and MW-3.

Laboratory Analysis and Results

The water samples collected on March 22, 1994 were delivered to Trace Analysis Laboratory, Inc. of Hayward, California (Hazardous Waste Testing Laboratory Certification No. 1199) using appropriate chain-of-custody procedures. The water samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) and as diesel (TPHd) using Environmental Protection Agency (EPA) modified Method 8015, and for benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method 8020.

The results of laboratory analyses show no detectable TPHg, TPHd, or BTEX in the samples collected from MW-2 and MW-3. Data from the latest two monitoring episodes (September 1993 and March 1994) have indicated no detectable gasoline and diesel hydrocarbons in MW-2 and MW-3, except one instance of residual TPHg. These results show a continuing trend of predominantly nondetectable petroleum hydrocarbons. Table 2 presents the cumulative results of laboratory data. The Chain of Custody and laboratory analysis report for the latest sampling episode are included in the Appendix.

Recommendations

Clark & Witham, Inc. concludes that further action at the former Okada property with respect to ground-water quality appears unnecessary. We recommend that the latest results be reviewed with previous data presented in Clark & Witham, Inc. report *Request for Case Closure, Former Okada Property, 16109 Ashland Avenue, San Lorenzo, California,* dated June 9, 1993, and that case closure be approved for this site. We also recommend that Citation submit copies of this report to Ms. Eva Chu, Alameda County Department of Environmental Health, Hazardous Materials Division, 80 Swan Way, Room 200, Oakland, California 94621; and Mr. John Kizer, California Regional Water Quality Control Board, San Francisco Bay Region, 2101 Webster Street, Suite 500, Oakland, California 94612.

Please call if you have any questions.

Sincerely,
Clark & Witham, Inc.

Rodger C. Witham

REGISTERED GEOLOGIST
RODGER C. WITHAM
6/94
Nº EG1566
CERTIFIED
ENGINEERING
GEOLOGIST
STATE OF CALIFORNIA

Rodger C. Witham
Project Manager

Enclosures: Table 1, Cumulative Results of Well Monitoring Data
Table 2, Cumulative Results of Laboratory Analyses of Water Samples
Plate 1, Site Vicinity Map
Plate 2, Site Plan - Northeast Portion

Appendix: Field Procedures
Chain of Custody
Laboratory Analysis Report

TABLE 1
CUMULATIVE RESULTS OF WELL MONITORING DATA

Date	Floating Product	Sheen	Wellhead Elevation*	Depth to Water	Ground-Water Elevation*
MW-1					
8/21/89	--	--	100.03	8.00	92.03
11/20/89	--	--		7.80	92.23
2/22/89	--	--		6.81	93.22
7/6/90	None	None		7.81	92.22
9/2/92		Well excavated, no measurement made			
9/13/93		Well excavated, no measurement made			
3/22/94		Well excavated, no measurement made			
MW-2					
8/21/89	--	--	100.00	7.65	92.35
11/20/89	--	--		7.43	92.57
2/22/90	--	--		6.56	93.44
7/6/90	None	None		6.05	93.95
9/2/92	None	None	--**	9.23	--**
9/13/93	None	None		8.86	--**
3/22/94	None	None		7.93	92.07
MW-3					
8/21/89	--	--	101.38	8.63	92.75
11/20/89	--	--		8.39	92.99
2/22/90	--	--		7.58	93.80
7/6/90	None	None		8.56	92.82
9/2/92	None	None		9.01	92.37
9/13/93	None	None		8.61	92.77
3/22/94	None	None		7.67	93.71

Depth to water measured in feet below the top of the well casing.
* Wellhead and ground-water elevation relative to an arbitrary datum of 100.00.
-- = not measured or not reported.
** = no ground-water elevation calculated because well casing not resurveyed after repair.

TABLE 2
CUMULATIVE RESULTS OF LABORATORY ANALYSES
OF WATER SAMPLES

Date	TPHg	TPHd	Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-1						
3/89	<1,000	<1,000	0.4	1.8	<0.3	<0.3
11/89	<50	<50	<0.5	<0.5	<0.5	<1.0
2/90	<50	<50	<0.5	<0.5	<0.5	<1.0
7/90	<500	<500	<0.5	<0.5	<0.5	<0.5
9/92			Well excavated, no sample collected			
9/93			Well excavated, no sample collected			
3/94			Well excavated, no sample collected			
MW-2						
3/89	<1,000	<1,000	0.4	1.8	0.4	1.8
11/89	<50	<50	<0.5	<0.5	<0.5	<1.0
2/90	<50	<50	<0.5	<0.5	<0.5	1.0
7/90	<500	<500	<0.5	<0.5	<0.5	<0.5
9/92	<50	97	<0.5	16	<0.68	<1.8
9/93	<50	<50	<0.5	<0.5	<0.5	<1.5
3/94	<50	<50	<0.5	<0.5	<0.5	<1.5
MW-3						
8/89	<50	<50	<0.5	<0.5	<0.5	<1.0
11/89	<50	80	<0.5	<0.5	<0.5	<1.0
2/90	280	1,100	<0.5	<0.5	<0.5	<1.0
7/90	<500	<500	<0.5	<0.5	<0.5	<0.5
9/92	<50	<50	<0.5	<0.5	<0.5	<1.5
9/93	51	<50	<0.5	<0.5	<0.5	<1.5
3/94	<50	<50	<0.5	<0.5	<0.5	<1.5

Results in micrograms per liter or parts per billion.
TPHg = total petroleum hydrocarbons as gasoline
TPHd = total petroleum hydrocarbons as diesel
< = less than the detection limit of the analytical method used

Source: U.S. Geological Survey
7.5–Minute Quadrangle
Hayward/San Leandro, California
Photorevised 1980

N

Approximate Scale

2000 1000 0 2000 4000

feet

CLARK & WITHAM, INC.

PROJECT NO. CHO002-C

SITE VICINITY MAP
Former Okada Property
16109 Ashland Avenue
San Lorenzo, California

PLATE 1

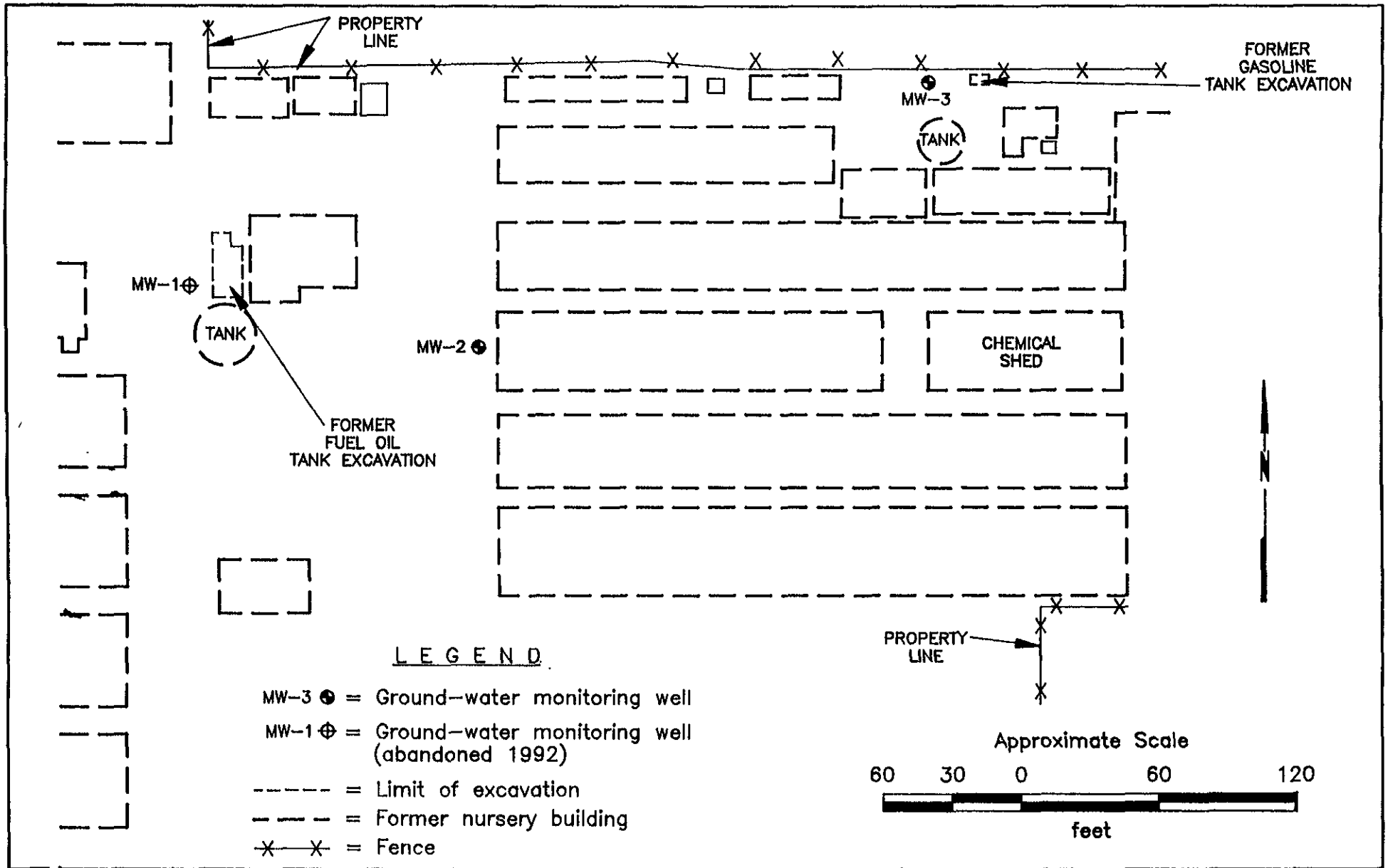

PLATE 2

SITE PLAN – NORTHEAST PORTION
Former Okada Property
16109 Ashland Avenue
San Lorenzo, California

CLARK & WITHAM, INC.

PROJECT NO. CH0002-C

APPENDIX

FIELD PROCEDURES

Monitoring Water in Wells

The static water level in each well was measured to the nearest 0.01 foot using an electronic water-level indicator. After static ground-water level was recorded, an initial water sample was collected from the well and examined for floating product and sheen. The sample was collected by gently lowering approximately half the length of a clean, disposable plastic bailer past the air-water interface and retrieving a sample at the surface of the water in the well.

Sampling of Water from Wells

Well MW-2 was purged using a bailer and MW-3 was purged using a submersible pump. More than 5 casing volumes were removed from the wells. Temperature, pH, and conductivity were monitored during purging, which continued until these parameters were relatively stable. Water level in the wells was allowed to recover to at least 80 percent of the amount of drawdown before sampling. Water samples for laboratory analysis were then collected from near the water surface in the wells with a clean disposable bailer. For analysis for total petroleum hydrocarbons as gasoline and benzene, toluene, ethylbenzene, and total xylenes, the water samples were transferred to clean, 40-milliliter glass volatile organic analysis vials, which contained concentrated hydrochloric acid for preservation. For analysis for total petroleum hydrocarbons as diesel, the water samples were transferred to clean 1-liter, brown glass bottles containing no preservative. The sample containers were filled completely to displace any air bubbles, and the samples were sealed with Teflon-lined caps, stored on ice, and delivered to a State-certified laboratory. A Chain of Custody was initiated by the sampler and accompanied the samples to the laboratory.

4223

{0805CoC.WK1}

CLARK & WITHAM, INC. CHAIN OF CUSTODY

Project No.	Project Name/Site
CH0022-C.QM	Former Okada Property

Sampler: Julie Scheve (Print) — Julie A Scheve (Signature)

Turn Around Time: normal

P.O. #

Sample Id.	Date	Time	Compst.	Grab	Iced	Num.Cont.	O&G (5520EF)	BTEX (EPA602)	TPHd	TPHg
W-8-MW3	3-22-94	3:35p		X		4	X	X	X	
W-8-MW2	3-22-94	4:00p		X		4	X	X	X	

Comments:

Please return original Chain of Custody and include chromatograms with laboratory reports.

Relinquished By:	Date	Time	Received By:
Julie A. Scheve	3-22-94	4:37	
Relinquished By:	Date	Time	Received By:
Relinquished By:	Date	Time	Received By:
Relinquished By:	Date 3/22/94	Time 4:37	Received By Laboratory: Scott T. Fenn

Call Results To: ☐ (510) 659-1805

Project Manager: R. Witham

Condition When Received: Cold - 4°-6°

Laboratory Name: TAL

Send Results To:

Clark & Witham, Inc.
3499 Edison Way
Fremont, CA 94538

FAX: (510) 659-6344

walking, water, #-E, 3 VOAs each, white, Reg TAT

Trace Analysis Laboratory, Inc.
3423 Investment Boulevard, #8 • Hayward, California 94545
Telephone (510) 783-6960
Facsimile (510) 783-1512

TAL

April 14, 1994

Mr. Rodger Witham
Clark and Witham, Inc.
3499 Edison Way
Fremont, CA 94538

Dear Mr. Witham:

Trace Analysis Laboratory received two water samples on March 22, 1994 for your Project No. CH0002-C.QM, Former Okada Property (our custody log number 4223).

These samples were analyzed for Total Petroleum Hydrocarbons as Diesel and Gasoline, Benzene, Toluene, Ethylbenzene, and Xylenes. Our analytical report and the completed chain of custody form are enclosed for your review.

Trace Analysis Laboratory is certified under the California Environmental Laboratory Accreditation Program. Our certification number is 1199.

If you should have any questions or require additional information, please call me.

Sincerely yours,

Scott T. Ferriman

Scott T. Ferriman
Project Specialist

Enclosures

Trace Analysis Laboratory, Inc.
3423 Investment Boulevard, #8 • Hayward, California 94545
Telephone (510) 783-6960
Facsimile (510) 783-1512

TAL

LOG NUMBER: 4223
DATE SAMPLED: 03/22/94
DATE RECEIVED: 03/22/94
DATE EXTRACTED: 03/23/94
DATE ANALYZED: 03/25/94
DATE REPORTED: 04/14/94

CUSTOMER: Clark and Witham, Inc.

REQUESTER: Rodger Witham

PROJECT: No. CH0002-C.QM, Former Okada Property

Sample Type: Water

Method and Constituent:	Units	W-8-MW2 Concentration	W-8-MW2 Reporting Limit	W-8-MW3 Concentration	W-8-MW3 Reporting Limit	Method Blank Concentration	Method Blank Reporting Limit
DHS Method:							
Total Petroleum Hydrocarbons as Diesel	ug/l	ND	50	ND	50	ND	50

QC Summary:

% Recovery: 94
% RPD: 6.3

Concentrations reported as ND were not detected at or above the reporting limit.

TAL Trace Analysis Laboratory, Inc.

LOG NUMBER: 4223
DATE SAMPLED: 03/22/94
DATE RECEIVED: 03/22/94
DATE ANALYZED: 03/30/94
DATE REPORTED: 04/14/94
PAGE: Two

Sample Type: Water

Method and Constituent:	Units	W-8-MW2 Concentration	W-8-MW2 Reporting Limit	W-8-MW3 Concentration	W-8-MW3 Reporting Limit	Method Blank Concentration	Method Blank Reporting Limit
DHS Method:							
Total Petroleum Hydrocarbons as Gasoline	ug/l	ND	50	ND	50	ND	50
Modified EPA Method 8020 for:							
Benzene	ug/l	ND	0.50	ND	0.50	ND	0.50
Toluene	ug/l	ND	0.50	ND	0.50	ND	0.50
Ethylbenzene	ug/l	ND	0.50	ND	0.50	ND	0.50
Xylenes	ug/l	ND	1.5	ND	1.5	ND	1.5

QC Summary:

% Recovery: 105
% RPD: 5.9

Concentrations reported as ND were not detected at or above the reporting limit.

Louis W. DuPuis
Quality Assurance/Quality Control Manager