PES Environmental, Inc.
Engineering & Environmental Services

March 3, 2010

RECEIVED

9:07 am, Mar 04, 2010

Alameda County
Environmental Health

881.060.07.001

Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Attention: Ms. Donna Drogos

Transmittal
Reconciliation of Fuel Leak Case Numbers and Request for Closure
Former Eastmont Automotive
7250 Bancroft Avenue
Oakland, California
RO0000614 and RO0000788 (StID 27 and 114)

Dear Ms. Drogos:

On behalf of SKB-Eastmont Oakland Associates, LLC, PES Environmental has prepared the attached letter to facilitate resolving a reported open fuel leak case for the subject property. I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

We trust that this is the information that you require at this time. Please contact us with any further questions.

Yours very truly,

PES ENVIRONMENTAL, INC.



William W. Mast, P.G.
Associate Engineer

cc: Ms. Kathleen Schulz - SKB – Eastmont Oakland Associates, LLC

88106007T001.docx

PES Environmental, Inc.
Engineering & Environmental Services

February 26, 2010

881.060.07.001

Alameda County
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Attention: Mr. Steven Plunkett

RECONCILIATION OF FUEL LEAK CASE NUMBERS AND REQUEST FOR CLOSURE
FORMER EASTMONT AUTOMOTIVE
7250 BANCROFT AVENUE
OAKLAND, CALIFORNIA
RO0000614 AND RO0000788 (STID 27 AND 114)

Dear Mr. Plunkett:

On behalf of Eastmont Oakland Associates, LLC (EOA), PES Environmental, Inc. (PES) has prepared this letter to respond to correspondence from Alameda County Environmental Health Services (ACEH) regarding a reported open fuel leak case for an underground storage tank (UST) at the subject property. EOA is the current owner of the property known as Eastmont Town Center (previously known as Eastmont Mall), which contains the former Eastmont Automotive facility located at 7250 Bancroft Avenue in Oakland, California.

In a letter[1] dated July 24, 2009, ACEH requested that Eastmont Mall Associates (a former owner), in order to stay in compliance with directives from the California State Water Resources Control Board, claim the fuel leak case for Eastmont Auto Goodyear (Case No. RO0000614 [StID 27]). A copy of the ACEH letter is included on the attached CD-ROM. After conducting a thorough review of historical environmental documents for the Eastmont Site, it is PES' conclusion that this leaking underground storage tank (LUST) case was previously closed under a different case number (i.e., Case No. RO0000788 [StID 114]). The purpose of this response letter is to: (1) provide ACEH with sufficient documentation to support the conclusion; and (2) request that ACEH concur there is no open LUST case at the Site and notify EOA of this finding.

DOCUMENTATION SOURCE

During the summer of 2006, PES performed environmental due diligence services for EOA prior to its acquisition of Eastmont Town Center. As part of those services, PES obtained

[1] ACEH, 2009. *Fuel Leak Case No. RO0000614 and Geotracker Global ID T0600102224, Eastmont Auto Goodyear, 7250 Bancroft Ave, Oakland CA 94605-Groundwater Monitoring Requirements.* July 24.

from ACEH an electronic copy of scanned documents for the Eastmont site. The records were contained in two files (00000281.tif and 00000282.tif) that corresponded to two facilities at the subject Site (Firestone/JC Penney and Goodyear/Eastmont Auto), each with USTs. Copies of the files, including all environmental documents referenced in the following sections, are provided on the enclosed CD-ROM. Additionally, PES has converted both files to PDF format and added bookmarks to facilitate identification and review of the documents included therein. Copies of the PDF files are also provided on the CD-ROM. It should be noted there appears to be a minor amount of cross-filing of the documents between the Firestone/JC Penney and the Goodyear/Eastmont Auto sites; however, this issue does not materially affect the findings described below.

Firestone/JC Penney Facility

The documents in the 000281 files pertain to a former Firestone/JC Penney facility located on the eastern portion of the Eastmont property. The facility has previously been associated with the street addresses of 1 Eastmont Mall and 2701 73rd Avenue. This LUST case is currently identified as RO0001026 and was historically identified as StID 26. Case closure for the Firestone/JC Penney Site was provided by ACEH in a letter dated February 10, 1995 (refer to file 000281.pdf). There appear to be no questions or confusion associated with the closure documentation of the Firestone/JC Penney LUST case. This summary is provided for completeness.

Goodyear/Eastmont Automotive Facility

The documents in the 000282 files pertain to a former Goodyear/Eastmont Automotive facility located at the southern end of the large western mall building on the Eastmont property. The facility has previously been associated with the street addresses of 1 Eastmont Mall, 7100 Bancroft Avenue, and 7250 Bancroft Avenue. According to the ACEH July 24, 2009 letter, this LUST case is currently identified by ACEH as RO0000614 and was historically identified as StID 27. ACEH considers this Site to be an open LUST case.

The StID 27 case number is listed on the ACEH Hazardous Materials Inspection (HMI) Form dated October 23, 1995 that was prepared during removal of the 500-gallon waste oil UST at Eastmont Automotive by Artesian Environmental (Artesian) on behalf of the property owner. This case number also is shown on the ACEH HMI form dated December 19, 1995 that was prepared during over-excavation of soil at this UST location. Subsequent to the tank removal, Artesian prepared a report titled *500-Gallon Waste Oil Underground Storage Tank Removal and Soil Remediation Report* and dated January 19, 1996. According to this tank removal report, soil sampling was performed during the October 23 and December 19 field activities. Figures provided in the report show soil sampling locations at the UST location, which was near the southeast corner of the former Eastmont Automotive facility. Additional soil and grab groundwater sampling (i.e., three borings) was performed near the former UST location by

Artesian in early 1996, as documented in a report titled *Report of Phase II Soil and Groundwater*, dated June 10, 1996. The ACEH HMI forms and the reports prepared by Artesian form the basis for linking case StID 27 (RO0000614) to the former waste oil tank at the Goodyear/Eastmont Automotive facility.

Case number StID 114 (now RO000788) is listed on the ACEH Remedial Action Completion Certification letter dated April 16, 1998. This letter provided case closure for a 500-gallon waste oil tank removed from 1 Eastmont Mall on October 23, 1995. Attachments to the closure letter include tables and plates from the Artesian tank removal report (dated January 19, 1996) and from the Artesian soil/groundwater investigation report (dated June 10, 1996). The ACEH certification letter forms the basis for linking case StID 114 (RO0000614) to the former waste oil tank at the Goodyear/Eastmont Automotive facility.

CONCLUSION AND REQUEST FOR CASE CLOSURE

Historical correspondence from ACEH and documents prepared by environmental consultants on behalf of Eastmont Mall demonstrate that fuel leak case numbers StID 27 (RO000614) and StID 114 (RO000788) refer to the same waste oil tank formerly located at the southeast corner of the former Goodyear/Eastmont Automotive facility. On behalf of Eastmont Oakland Associates, PES Environmental respectfully requests that ACEH review the findings above and the supporting documentation on the attached CD-ROM, and provide administrative documentation that the open LUST case (RO000614) is in fact closed.

We trust this is the information that you require at this time. Please contact us if you have any questions.

Very truly yours,

PES ENVIRONMENTAL, INC.

William W. Mast, P.G.
Associate Engineer

cc: Kathleen Schultz - Eastmont Oakland Associates, LLC
Leroy Griffin – Oakland Fire Department
Donna Drogos - ACEH

Attachment: CD-ROM with electronic files from ACEH

ATTACHMENT

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RECEIVED JUL 27 2009

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

July 24, 2009

DAVID MORGAN
EASTMONT MALL ASSOCIATES
1 EASTMONT MALL
OAKLAND CA 94605

Subject: Fuel Leak Case No. RO0000614 and Geotracker Global ID T0600102224, EASTMONT AUTO GOODYEAR, 7250 BANCROFT AVE, Oakland CA 94605– Groundwater Monitoring Requirements

Dear Responsible Party:

The purpose of this correspondence is to inform you of changes to groundwater monitoring requirements for all fuel leak cases in California. The California State Water Resources Control Board (State Water Board) has approved Resolution No. 2009-0042 (*Actions to Improve Administration of the UST Cleanup Fund and UST Cleanup Program*). Resolution No. 2009-0042 states that, "*Regional Water Board and LOP agencies shall reduce quarterly groundwater monitoring requirements to semiannual or less frequent monitoring at all sites unless site-specific needs warrant otherwise and shall notify all responsible parties of the new requirements no later than August 1, 2009. If more than semiannual monitoring is required for a case, the responsible party and State Water board shall be notified of the rationale and the notice shall be posted on Geotracker.*"

If your site does not have monitoring wells, the new groundwater monitoring requirements in State Water Board Resolution No. 2009-0042 do not affect you at this time. These new groundwater monitoring requirements potentially may apply if monitoring wells are installed at your site in the future.

If you have any questions, please call me at (510) 383-1767 or send me an electronic mail message at steven.plunkett@acgov.org.

Sincerely,

Steven Plunkett
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Tina Hariu, PES Environmental Inc., 1682 Novato Boulevard, Novato, CA 94947-7021
Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032 (*Sent via E-mail to:* lgriffin@oaklandnet.com)
Donna Drogos, ACEH (*Sent via E-mail to: donna.drogos@acgov.org*)
Steven Plunkett, ACEH (*Sent via E-mail to: steven.plunkett@acgov.org*)
Geotracker, File

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

NOTICE OF VIOLATION

July 24, 2009

DAVID MORGAN
EASTMONT MALL ASSOCIATES
1 EASTMONT MALL
OAKLAND CA 94605

Subject: GeoTracker Status for Fuel Leak Case No. RO0000614 and GeoTracker Global ID T0600102224, EASTMONT AUTO GOODYEAR, 7250 BANCROFT AVE, Oakland CA 94605

Dear Responsible Party:

On July 3, 2008, Alameda County Environmental Health (ACEH) sent a correspondence to you identifying that your site, Case Name from Envision, located at Street Address, CITY has not been claimed in the State Water Resources Control Board's (SWRCB) GeoTracker database. It was further stated that the site must be claimed by August 15, 2008 in order to remain in compliance. A review of the case file and the State's GeoTracker database indicate that the site still has not been "claimed," and your site is out of compliance with directives from this agency. Pursuant to California Code of Regulations, Title 23, Division 3, Chapter 30, Articles 1 and 2, Sections 3893, 3894, and 3895, you are required to claim your site and subsequently electronically transmit reports and other site data, as required.

In order to regain compliance, please claim the site (www.geotracker.waterboards.ca.gov) and submit verification to ACEH by **August 10, 2009**. Failure to claim the site by the due date specified above may result in referral and possible enforcement action by the District Attorney and/or ineligibility for reimbursement of corrective action costs incurred at the site from the Underground Storage Tank Clean-up Fund. Pursuant to Chapter 6.7, California Health and Safety code, civil penalties up to $10,000 for each UST for each day of violation may be imposed. Once removed from the Clean-up Fund, the costs associated with the subsurface investigation and/or cleanup work that may be required at your site will not be reimbursed. Please note that civil penalties for non-compliance are assessed from the original due date (August 15, 2008).

If you have any questions, please call me at (510) 383-1767 or send me an electronic mail message at Steven.Plunkett@acgov.org.

Sincerely,

Steven Plunkett
Hazardous Materials Specialist

cc: Tina Hariu, PES Environmental Inc., 1682 Novato Boulevard, Novato, CA 94947-7021

Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032 (*Sent via E-mail to:* lgriffin@oaklandnet.com)
Donna Drogos, ACEH (*Sent via E-mail to: donna.drogos@acgov.org*)
Steven Plunkett, ACEH (*Sent via E-mail to: steven.plunkett@acgov.org*)
Geotracker, File

RESPONSIBLE PARTY OF RECORD AS OF 07/22/2009

RO0000614, EASTMONT AUTO GOODYEAR, 7250 BANCROFT AVE , Oakland, CA, 94605

Alameda County Environmental Health (ACEH) has the following information on record regarding the Responsible Party(ies) for the above referenced site. Please update the following information for our records. Should you have contact information regarding additional Responsible Parties, please correct the information accordingly. Also, please check the "e-mail preferred" box to receive all future correspondences and notifications by e-mail.

☐ E-mail Preferred ☐ Hardcopy Preferred

ACEH is requesting your e-mail address so that we can correspond with you quickly and efficiently regarding your case. Please note that ACEH respects your privacy. Your e-mail address will remain confidential and will not be provided to any third party.

Current Information

DAVID MORGAN
EASTMONT MALL ASSOCIATES
1 EASTMONT MALL
OAKLAND CA 94605

Corrections or Additions

Name: _____
Company: _____
Address: _____
City: _____ State: _____ Zip: _____
E-mail: _____
Home Phone: (____) _____
Office Phone: (____) _____
Cell Phone: (____) _____

FILE OR ENVELOPE No. 1 of 1

PER NO.

☐ OWNER J. C. Penney

Address Eastwood Mall

Phone

☐ Contractor

Address

Phone

☐ OTHER (Specify)

Address

Phone

☒ CONTACT FOR INVESTIGATION

Air

PLAN REVIEW — By — Date

$ 200 Rec'd.

No. Plans Rec'd.

Plans Approved

Layout Made

Rejected

Applicant Notified

Plans Returned

Permit Issued

CONSTRUCTION PROGRESS ACCEPTANCE — By — Date

FOOD: Pre-Plaster/drywall; Pre-Final; Final

POOL: Pre-Concrete/Gunite; Pre-Plaster; Final

EXCAVATION: Septic Tank; Absorption Field; Absorption Bed

FINAL: House Sewer; Septic Tank; Absorption Field; Absorption Bed

OTHER:

UG. TANKS: Pre-Covering; Final

COR

62

REMARKS — Date — By

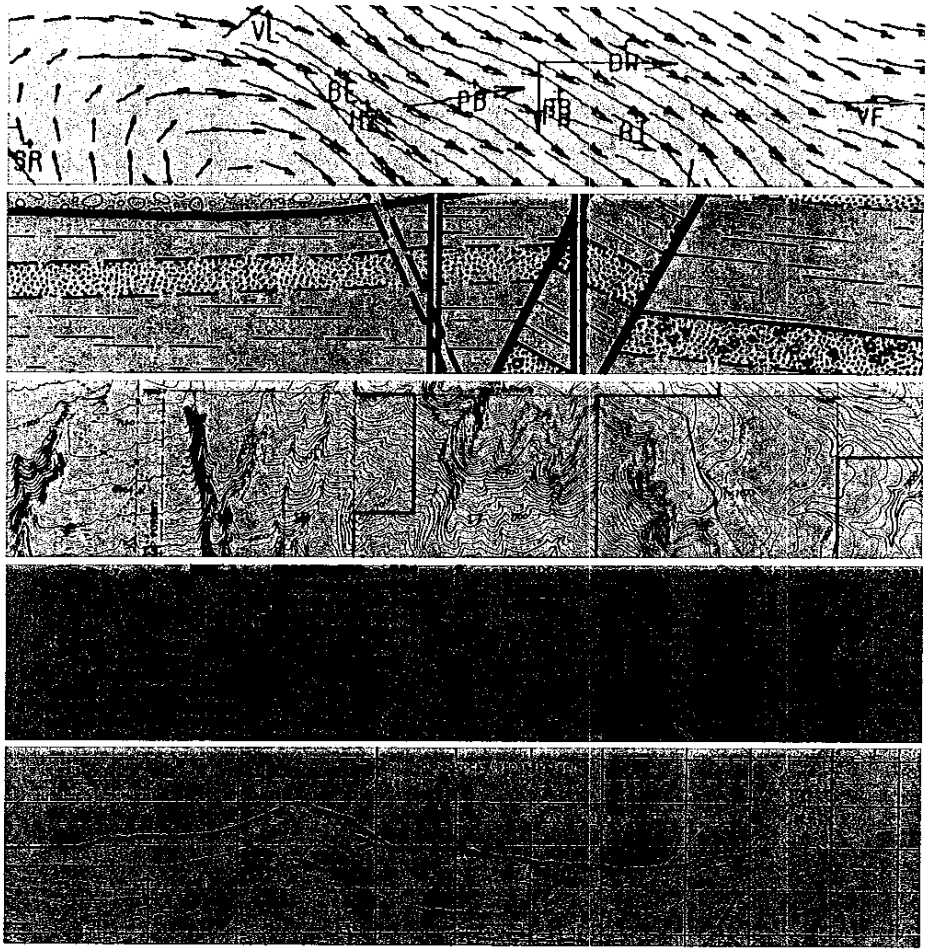
REMARKS — Date — By

CLOSED 26

LOCATION

Vicinity Map

00000281.tif 1 / 543



DAMES & MOORE

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, Assistant Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Division
80 Swan Way, Rm. 200
Oakland, CA 94621
(510) 271-4320

February 10, 1995

STID # 26

REMEDIAL ACTION COMPLETION CERTIFICATION

Kathleen Scheutzow
Bridgestoen/firestone Inc.
1200 Firestone Pkwy,
Akron, Oh 44317

Bob Gerber, Real Est
J.C. Penney
p.o. Box 4015
Buena Park, Ca - 90624

Ref: J.C. Penney Store, 1 Eastmont Mall, Oakland, CA

Dear Mr. Scheutzow and Mr. Gerber:

This letter confirms the completion of site investigation and remedial action for the five underground storage tanks at the above mentioned location.

Based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground tank release is required.

This notice is issued pursuant to a regulation contained in Title 23, Division 3, Chapter 16, Section 2721 (e) of the California Code of Regulations.

Please contact Madhulla Logan at (510) 271-4320 if you have any questions regarding this matter.

Very truly yours,

Rafat A. Shahid
Assistant Agency Director

cc: Edgar B. Howell, Chief, Hazardous Materials Division
Kevin Graves, RWQCB
Mike Harper, SWRCB (with attachment)
files

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Agency name: **Alameda County-HazMat**
City/State/Zip: **Alameda, CA - 94502**
Responsible staff person: **Thomas peacock**
Date: **11/1/94**
Address: **1131 Harbor Bay Pkwy**
Phone: **(510) 271-4320**
Title: **Supervising HMS**

II. CASE INFORMATION

Site facility name: J.C. Penney Store, No. 836
Site facility address: 1 Eastmont Mall, Oakland, CA
RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: **26**
URF filing date: 12/20/89 SWEEPS No: **N/A**

Responsible Parties:	Addresses:	Phone Numbers:
Bob Gerber, Real Est J.C. Penney	P.O. Box 4015 Buena Park, CA - 90624	
Kathleen Scheutzow Firestone Inc	1200 Firestone Pkwy Akron, Oh-44317	
Jim Given Argonaut Financial Services	#1 Eastmont Mall, Oakland, CA - 94605	

Tank No:	Size in gal.:	Contents:	Closed in-place or removed?:	Date:
1	* 550	waste oil	removed	1987 (no date)
2	10000	gasoline/diesel	removed	1985 (no date)
3	10000	gasoline/diesel	removed	1985 (no date)
4	10000	gasoline/diesel	removed	1985 (no date)
5	550	waste oil	removed	Dec 1991

* Previous closure was for waste oil tank only (dated March 30, 1991)

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: Overfilling-TPH as gasoline, BTEX

Site characterization complete? YES

Date approved by oversight agency: December 1992

Monitoring wells installed? YES Number: 3 (MW-4, DW-1, DW-2). I have not considereed wells MW-2 and MW-3, since they were not part of J.C. Penney site.

Proper screened interval? YES MW-4 - 8 to 25 feet (gw at 17 ft)
DM-1 - 13 to 28 ft
DM-2 - 10 to 25 ft

Leaking Underground Fuel Storage Tank Program

Highest GW depth below ground surface: 15 Lowest depth: 37 ft

Flow direction: Fluctuating, has changed from south to south east to now towards west(final)

Most sensitive current use: Not Drinking (others not determined)

Are drinking water wells affected? No Aquifer name:

Is surface water affected? NO Nearest affected SW name:N/A

Off-site beneficial use impacts (addresses/locations): Not Known

Report(s) on file? **YES** Where is report(s) filed? **Alameda County**
1131 Harbor Bay Parkway
Alameda, CA - 94502

Treatment and Disposal of Affected Material:

Material	Amount (include units)	Action (Treatment of Disposal w/destination)	Date
NO EXCAVATION PERFORMED ON SITE			
Soil	29.37 tons	Liquid Waste Mgmt, McKittrick CA	2/14/91

III. RELEASE AND SITE CHARACTERIZATION INFORMATION (Continued)
Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm) Before	Soil (ppm) After	Water (ppm) Before	Water (ppm) After
TPH (Gas)	2000		2.7	ND
TPH (Diesel)	NA	-	0.028	NA
Benzene	1.4	-	0.021	ND
Toluene	4.3	-	0.050	ND
Xylene	23	-	0.29	ND
Ethylbenzene	150	-	ND	0.0008
Oil & Grease	ND	-	ND	NA
Stoddard Solvent	ND	-	-	-
1,2 dichloroethene			8	
PCE			210	

Comments (Depth of Remediation, etc.):
The above mentioned soil sample results were collected from boring MW-4 at 15 feet depth. The "before" groundwater results are also from monitoring well MW-4. 1,2 DCE and PCE were found in MW-2.

Leaking Underground Fuel Storage Tank Program

Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Undetermined

Does corrective action protect public health for current land use? YES
Site management requirements: NA

Should corrective action be reviewed if land use changes? No

Monitoring wells Decommisioned: No, pending site closure

Number Decommisioned: Number Retained: 3(MW-4,DM-2,and DM-1)

List enforcement actions taken:N/A

List enforcement actions rescinded:N/A

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Thomas Peacock
Signature: Thomas Peacock
Title: Supervisor, LOP Spec
Date: 1/27/95

Reviewed by
Name: Madhulla Logan
Signature: Madhulla Logan
Title: Hazardous Materials Spec
Date: 1/26/95

Name: Eva Chu
Signature: Eva Chu
Title: Hazardous Materials Spec
Date: 1/27/95

VI. RWQCB NOTIFICATION

Date Submitted to RB: RB Response:
RWQCB Staff Name: Kevin Graves Title: San. Engineering Asso. Date:

VII. ADDITIONAL COMENTS

In December 1989, a phase II Environmental audit was performed for the Eastmont Mall. One boring B-1 and 3 monitoring wells MW-2, MW-3, and MW-4 was installed on-site. Monitoring wells MW-2, and MW-3 were drilled near the dry cleaners store, and the BP service station, respectively. Monitoring well MW-4 was installed near the Firestone site which was leased by J.C. Penney Stores. MW-4 was installed downgradient to the former waste oil tank. The soil and groundwater samples collected from MW-4, near the Firestone site indicated significant amounts of TPH expressed as gasoline or diesel and BTEX. The TPHg&d concentrations in soil was 2000 ppm, and the BTEX concentrations in soil were 1.4 ppm, 4.3 ppm, 23 ppm, and 150 ppm respectively. The groundwater samples had 2.2 ppm TPH, .028 ppm Benzene, 0.021 ppm Toluene, 0.050 ppm Xylene, and 0.29 ppm Ethylbenzene. No constituents were detected in any of the other soil and groundwater samples, except for 8 ppb 1,2 DCE and 210 ppb PCE was detected in MW-2 mear

the dry cleaner store. There are two other projects, one of them is the BP oil site that are being handled separately from this project.

Based on previous records, three 10000 gallon underground storage tanks were excavated and removed from the Eastmont Mall by Firestone in 1985. These tanks used to supply gasoline to the pump island formerly located at the south end of the facility. According to reports, J.C. Penney has no records of tank excavation at the site and no information was found in any of the local agencies about this tank removal. Also, the contractor who completed the removal operation, "Dor-Am Builders, Inc" is no longer in business and does not have a forwarding phone message. The original waste oil tank, that was formerly located at the northeast corner of the site was removed by Firestone and replaced in 1987. One soil sample was collected at the bottom of the pit and the laboratory analysis of the sample did not indicate the presence of hydrocarbons. A new waste oil tank was installed in the same location and was later removed in December 1990. The sample collected from the bottom of the pit did not contain any hydrocarbons but samples collected from the stockpiled soil detected 40 ppm TPH-d and 820 ppm TOG. Based on these results, the excavated soils were removed and the excavation was filled with cleaned soil.

On September 25, 1990, monitoring well MW-4 (the well concerned with the tanks in J.C. Penney) was re-sampled for BTEX only and all constituents were non-detectable.

In July 1991, 6 soil borings B1 to B4, DM1, and DM2, were drilled on site out of which 2 borings DM-1 and DM-2 were converted into monitoring wells. Monitoring well DM-1 was located north and upgradient of the former underground storage tanks, while boring DM-2 was located 90 feet south and downgradient to the UST's. Only one soil sample collected from boring B-1 at 15 feet bgs contained TPHg at 7.7 ppm, tolune at 0.070 ppm, total xylenes at 0.030 ppm. None of the ground water samples collected from the 3 monitoring wells showed any detectable levels of TPH or BTEX. Since this groundwater monitoring event was conducted 16 months apart from the previous sampling conducted in 1989, the reports attribute retardation, dispersion, natural biodegradation, etc., as primary reasons for the non-detectable levels of BTEX in monitoring well MW-4 in the current sampling event. Two more rounds of groundwater monitoring was conducted in Feburary 1992 and June 1992. Benzene and ethylbenzene was present at 0.0019 and 0.0025 ppm respectively in MW-4 during the February 1992 sampling event and ethylbenzene was present at 0.0008 ppm during the June 1992 sampling event. No other constituents were detected.

The reports also mention a groundwater discontinuity across the site . Out of the 6 borings installed in July 1991, boring B-4 was drilled to a depth of 50 feet without encountering groundwater while in monitoring well MW-4 which about 30 feet away from B-4, groundwater was encountered at 17 feet. There appears to be a groundwater discontinuity between monitoring well MW-4 and Boring B-4. The report suggests that the near surface groundwater is perched in a localized discontinuous unconfined aquifer above the regional confined aquifer which in encountered at greater depths.

Reasons for site closure:

1. The presence of a localized perched aquifer due to groundwater discontinuity.

2. Soil samples from boring B-1 drilled downgradient to MW-4 did not contain significant concentrations of TPHg or BTEX.

3. Also borings drilled downgradient to B-1 and MW-4 did not detect any hydrocarbons in the soil samples. Based on this data it appears that the residual hydrocarbon contamination is localized in the vicinity of former UST.

4. The last 2 rounds of groundwater sampling did not detect significant concentrations of hydrocarbons.

letter out today –
* cc Mary King wants copy of this letter
Fax to J.C. Penney
Lease only to J.C. Penney → 2000
Letter turnaround ASAP same day review
* cc Mayor office
* Plus cc:
Rall
Consultant
J.C. Penney
Firestone
Let know when ~~work~~ ~~complete~~ ~~without~~ in accordance with our agreement

Julie Lauver
City of Oakland
238-6361
Environmental

REPORT
SUBSURFACE INVESTIGATION
J.C. PENNEY STORE NO. 836
EASTMONT MALL
OAKLAND, CALIFORNIA

July 10, 1991
Job No. 00443-090-043

DAMES & MOORE

RBW-O-3.012

DAMES & MOORE
[illegible] LOESTER STREET, SUITE 300, OAKLAND, CALIFORNIA 94612 (415) 839-3600
[illegible] (415) 834-5461

August 5, 1991
Job No. 00443-090-043

Eastmont Mall
One Eastmont Mall
Oakland, CA 94605

Attention: Mr. Jim Givin

Dear Mr. Givin:

2701 [illegible] 94605

Report
Subsurface Investigation
J.C. Penney Store No. 836
Eastmont Mall
Oakland, California 94605

At J.C. Penney Company's request, Dames & Moore is pleased to present the above referenced report for J.C. Penney Store No. 836 (TBA 5250-6), located at the Eastmont Mall in Oakland, California. This report presents the findings of our field investigation conducted on April 1-5, 1990, at the J.C. Penney TBA.

Please contact us if you have any questions.

Very truly yours,

DAMES & MOORE

Raymond H. Rice

Raymond H. Rice
Partner (Ltd.)

Richard B. Ward

Richard B. Ward
Project Geologist (R.G. #5170)

RBW-O-4.005

JCPenney
(714) 523-6853 Fax (714) 523-6814

July 31, 1991

Mr. Richard Ward,
Project Coordinator
DAMES & MOORE
2101 Webster St., Suite 300
Oakland, CA 94612

Re: ***JCPenney Store #835 - Oakland, CA***
Eastmont Mall
Subsurface Investigation Report

Dear Mr. Ward:

Your Subsurface Investigation Report, dated July 12, 1991, for the above captioned facility, has been reviewed by this writer and reviewed and/or discussed with the associates in the JCPenney Legal and Real Estate Departments.

We have no comments and require no changes, with the exception of a typo on the last paragraph on page 26. This should be changed to read 20 years of operation, not 40 years as printed.

We are requesting you please submit, on behalf of the JCPenney Company, a copy of this report to the Regional Water Quality Board, the Alameda County Health Department - Environmental Services Division, and any other governmental agency that requires this information. We would also ask that you submit a copy of this report to Mr. Jim Gavin at the mall. His address is:

One Eastmont Mall
Oakland, CA 94605.

J. C. Penney Company Inc., 6131 Orangethorpe Ave. at Valley View Buena Park California 90624

Please submit all these reports registered mail and include a copy of this request letter with each copy. Provide this office with copies of your submittal letters, along with copies of the registration receipts. This needs to be done as soon as possible.

Should you require further information, please advise.

Sincerely,

JCPENNEY COMPANY, INC.

Bob Arneson
Construction Services
Field Engineering Rep

BA:cm
cc: R. Sherry, Gas file
J. Andrew, Esquire
R. Gerber
D. Mosley
R. Rice, Dames & Moore
B. Troutman, Dames & Moore
G. Wright

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1.0 INTRODUCTION

This report describes Dames & Moore's soil and groundwater investigation of the J.C. Penney TBA (Store #836, TBA #5250-6) at the Eastmont Mall in Oakland, California (the site). The site is located on the corner of Foothill Boulevard and 73rd Avenue, as shown on Plate 1-1 and 1-2. The property leased by J.C. Penney includes the TBA and parking lots.

This report is divided into eight sections. Section 2.0 describes the purpose and the scope of the investigation. Section 3.0 describes previous investigations and additional site background information to supplement our understanding of the site. Section 4.0 describes the field work that was performed at the site and Section 5.0 summarizes the results of the recent field investigation. Section 6.0 summarizes the significant findings of both the background information that was gathered and the field investigation. Section 7.0 presents our conclusions about the site contamination and Section 8.0 provides recommendations for further work intended to lead to the closure of the site.

2.0 PURPOSE AND SCOPE OF SERVICES

The purpose of this subsurface investigation is to evaluate the results of a previous environmental investigation performed for mall management by Hunter Environmental Services and summarized in a report dated December 20, 1989 and to further characterize the concentration and extent of residual gasoline hydrocarbons in the soil and groundwater at the site.

In order to accomplish the above objectives, Dames & Moore completed the following scope of work essentially as outlined in our proposal of February 14, 1991.

- Conducted a document and agency file review for possible off-site sources of contamination;

- Requested U.S. Alert survey of the site in an attempt to locate shallow subsurface structures and utilities in the vicinity of the proposed soil borings and monitoring well;

- Drilled and sampled four soil borings to an approximate total depth of 20 feet in the vicinity of the former gasoline tanks and pump island;

- Drilled and sampled one boring to an approximate depth of 7 feet in the vicinity of the former waste oil tank;

- Drilled one boring upgradient of the former underground storage tank (UST) excavation;

- Analyzed 9 soil samples collected above the water table from selected soil borings for total petroleum hydrocarbons (TPH) as gasoline and diesel using EPA Method 8015, and benzene, toluene, ethyl benzene, and total xylenes (BTEX) using EPA Method 8020;

- Installed groundwater monitoring wells in two of the borings.

- Developed the two new monitoring wells, and sampled the two monitoring wells and existing well MW-4;

- Analyzed four groundwater samples (including one quality control sample) for TPH as gasoline using EPA Method 5030/8015, diesel using EPA Method 8015, and BTEX using EPA Method 5030/8020;

- Professionally surveyed the location and elevation of MW-4 and newly installed onsite groundwater monitoring wells relative to mean sea level;

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- Collected a round of water level measurements using an electronic water level indicator;

- Performed slug tests on all site wells to evaluate the hydraulic conductivity of the near surface aquifer; and

- Prepared this report for submittal to the California Regional Water Quality Control Board (RWQCB), San Francisco Region, documenting our findings and presenting our recommendations for further action at the site.

Prior to the start of field activities, well permits were obtained from the Alameda County Flood Control and Water Conservation District and a site Health and Safety Plan was prepared for use by all Dames & Moore field personnel in the performance of the investigation activities.

During the investigation, Dames & Moore discovered that the site was formerly occupied by the Chevrolet Fisher Body Plant. The probability of environmental contamination related to this former industrial facility was considered high; therefore J.C. Penney agreed to expand the scope of the site background study to include a more detailed history of the site and vicinity.

3.0 SITE BACKGROUND

Information regarding the geology and hydrogeology of the site and vicinity was reviewed to assist in our understanding of potential migratory pathways of gasoline hydrocarbons in the subsurface. In addition, the history of Eastmont Mall, including excavation and removal of the underground tanks, was researched by reviewing historical aerial photographs, previous site investigations, searching agency files, and researching water well data for the site vicinity. The results of these tasks are discussed below.

3.1 REGIONAL GEOLOGY AND HYDROGEOLOGY

The Bay Plain lies west of the Hayward Fault Zone and is comprised of coalescing alluvial fans, extending from Oakland south to the Fremont area. The alluvial sediments in the Bay Plain consist of a mixture of gravels, sands and clays that are Pliocene-Pleistocene to late Pleistocene in age and were laid down on the alluvial cones west of the foothills. In general the particle size and bed thickness of the alluvium decreases westward from the apexes of the alluvial cones where the watercourses exit the foothills.

The site is located in the Coast Ranges Geologic Province of California. The region is characterized by northwest trending mountain ranges and valleys. The site is situated on the Bay Plain alluvial fan complex which is located between the San Francisco Bay and Oakland Hills.

The geology of western Alameda County is dominated by effects of the Hayward Fault Zone and associated transpressional/transtensional structural features (Maslonkowski, 1984). The active Hayward Fault trends northwest-southeast, extending along the east side of the San Francisco Bay from Richmond south to San Jose. Traces of the Hayward fault are located 2,000 to 4,000 feet north east of the TBA site as shown on Plate 1-1.

The foothills east of the Hayward Fault Zone are underlain by Jurassic and Cretaceous sedimentary and igneous rocks of the Franciscan Assemblage and Knoxville Formation with local bodies of Quaternary Leona Rhyolite. These rocks do not contain significant water-producing units (California Department of Water Resources, 1967).

Water producing zones (aquifers) are present throughout the soil Bay Plain sequence as sand and gravel layers, separated both vertically and horizontally by silt and clay of lower permeability. Aquifers in the Oakland area are generally discontinuous and interfinger with less permeable layers, as is typical of alluvial systems. These aquifers

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are composed of gently westward-sloping sand and gravel beds that were deposited by streams which shifted and braided on the alluvial cones over a period of hundreds of thousands of years (Maslonkowski, 1984).

Shallow aquifers within 50 feet of the ground surface are found throughout the Bay Plain Alluvial Fan. These minor aquifers are generally limited in areal extent and are usually composed of silty sand. These deposits yield small quantities of water to wells, generally less than 35 gallons per minute. Most of the shallow groundwater exists under perched conditions contained above a clay aquitard unit which separates this near surface groundwater from the saturated soils at the groundwater table and the underlying aquifers (Maslonkowski, 1984).

The J.C. Penney Oakland TBA Center is located within the proximal (upstream) reaches of the Bay Plain alluvial fan. The site is north of the Arroyo Viejo and San Leandro Creeks. Both the Arroyo Viejo and San Leandro Creek channels are entrenched below the level of the surrounding plain. This condition is believed to have existed since late Pleistocene time. The deposition of alluvial sediments on this area of the plain, therefore, has been limited to times of overbank flood flow (Maslonkowski, 1984). Alluvial overbank sediments are predominantly fine-grained sands or silts with a clay matrix. Near surface groundwater at the site and vicinity is hydraulically separated from underlying aquifers by fine grained clay rich sediments. A comparison of water levels measured in shallow and deep wells in East Oakland suggests that most near surface groundwater in the site area is perched.

Little accurate information is available to evaluate the direction and rate of flow of shallow groundwater in the Oakland Bay Plain sediments. However, the regional groundwater flow direction is likely to be toward the west, from the foothills down the Bay Plain alluvial fan toward San Francisco Bay. However, in the area of the J.C. Penney TBA site the variable stratigraphy, aquifer systems, topographic relief and the

proximity of this site to the Hayward Fault complicate the interpretation of the localized near surface groundwater gradient and flow direction at the site.

3.2 SITE TOPOGRAPHY AND PHYSIOGRAPHY

The Oakland J. C. Penney TBA site is located in the northwest corner of the Eastmont Mall. The site is triangular in shape. It is bounded on the north by Foothill Boulevard; the south eastern boundary is 73rd Avenue and the south western boundary is a retaining wall which supports an underground and elevated parking structure just west of the site. The northern half of the site was excavated approximately five feet below grade to level the lot. A five foot retaining wall was constructed across the northern boundary of the site. The surface elevation in the eastern corner of the site is 75 feet above sea level, while the surface elevation of the western boundary is 70 feet above mean sea level. The surface elevation of the underground parking structure located just west of the site is approximately 50 feet above sea level.

The site is located at the base of the Oakland hills which rise up to 1,175 feet above sea level to the north east. Two thousand feet south of the site lies the Arroyo Viejo stream channel.

3.3 EASTMONT MALL SITE HISTORY

A review of old topographic maps of Oakland shows that the Eastmont Mall site was a residential neighborhood prior to 1916. In 1916, the site was excavated and leveled for the construction of an automobile assembly plant. According to the Sanborn Insurance Map of 1926, much of the plant was completed in 1916 and presumably began operations in that year (Plate 3-1).

The Sanborn Map shows that the plant was constructed around three separate railroad spurs which entered the factory at ground level from the southwest. In order to

maintain a level assembly floor, the northeastern portion of the plant was excavated into the gently sloping topography to a minimum of 20 feet below ground surface (bgs). On this side of the plant, the floor of the third story was level with the ground surface along the outside of the building.

The assembly floors of the plant were divided into three separate elongate structures separated by three railroad spurs. Each of the three separate assembly areas were connected together along the back of the plant by a building which housed a fourth assembly area.

All of the structures in the main plant appear to have been three stories high. The manufacturing activity that occurred on each level was not available in the records; however, the Sanborn maps of 1925-1949 do note certain manufacturing practices that were performed in the four buildings (Plate 3-1).

The southern most assembly area housed the preliminary painting room on the first floor and the final painting and drying area on the second floor. A 50,000 gallon steel water tower sat above this section of the factory presumably storing water for use in the plant and as a precaution against fire.

The central assembly floor housed the chassis assembling area, the trim painting area, the Japanning ovens, the sanding area, the assembly conveyor, and the fender enameling area which included two large dip tanks. The factory power plant and boiler room were located in the northern corner of the central assembly floor. Beneath this section of the factory, five underground storage tanks (USTs) were buried. These tanks included a 13,000 gallon gasoline tank, a 12,000 gallon motor oil tank, a 13,000 gallon fuel tank, a 10,000 gallon kerosene tank and a 125,000 gallon reservoir for the hydrant system.

Above this central section of the plant sat two more steel tanks. A 50,000 gallon tank was supported 105 feet above the ground and a 25,000 gallon tank was supported 69 feet above the ground. These tanks were filled with water and serviced the sprinkler system installed throughout the factory to fight fires.

The northwest assembly floor was serviced by two railroad spurs and housed the frame assembling department, the fender department, the final test department and the conditioning shed. A 13,000 gallon underground oil tank was located north of the northern spur at the center line of the building. The northwestern corner of this wing of the factory was excavated into the hillside so that the second and third floors were level with the ground surface along the outside of the building.

The building connecting the three assembly areas of the plant along the northern face of the factory housed the body assembling area. The third floor of this building was at ground level.

Based on periodic Sanborn map updates, the plant appears to have maintained the same general floor plan throughout its life. Between 1925 and 1945 a paint mixing building and a drum rack were added to the southern corner of the property. A woodworking shop was leveled on the western corner of the property. Various assembly floors were reconfigured for different manufacturing uses. All the underground storage tanks remained in place and presumably contained product throughout the life of the factory.

Aerial photos taken of the site in 1965 show the partial demolition of the Chevrolet Fisher Body Plant (Plates 3-2 and 3-3). No records were found that gave the specific factory closing date; however, this presumably occurred in the early 1960s. The aerial photos of the factory demolition show the former traces of the rail spurs, the general outlines of the northern and southern wings and the connecting structure of the factory. Still standing is the central part of the factory which housed the fender dipping racks.

This part of the factory was built above the five underground storage tanks. The excavation along the northern side of the plant is visible. The plant site sat vacant from 1965 to 1969. Construction of the Eastmont Mall began in 1969.

The Eastmont Mall was built in two phases. Construction of Phase I began in 1969 concentrating on the southeastern half of the property. The rest of the mall was built according to the Phase II plan which began in 1970 and included the Penney's (now Firestone) TBA site and the J.C. Penney store. Detailed architectural plans for the Eastmont Mall are included as Plates 3-4 and 3-5. These plans were prepared by Burke Kober Nicolais Archuleta in 1969. Plate 3-4 is a plan of the Upper Mall level; Plate 3-5 is a plan of the Lower Mall level.

The layout of the assembly plant can be related to the present configuration of the Eastmont Mall buildings and parking lots (Plate 3-2). The J.C. Penney TBA site is located northeast of the mall and northeast of the former location of the Chevrolet plant. Prior to 1916 this site was presumably undeveloped or residential. After the car plant was built in 1916, this area was paved for parking and remained a parking lot until the construction of the Eastmont Mall began in 1969.

The J.C. Penney store is presently located just north of the former location of the Chevrolet plant central assembly area. This area housed fender dipping racks, Japanning ovens and sanding facilities. Beneath this area were five underground storage tanks containing gasoline, fuel oil, kerosene, motor oil and fire fighting solution (presumably water). The Eastmont Mall parking structure was built over much of the central assembly area.

3.4 UNDERGROUND STORAGE TANK EXCAVATION AT THE TBA SITE

Underground storage tanks (USTs) were located beneath opposite corners of the TBA building. Beneath the southwest corner of the facility gasoline was stored in buried

fuel tanks. Beneath the northeast corner of the building waste oil was stored in an underground tank.

3.4.1 Underground Fuel Tank Removal

Three 10,000 gallon underground fuel tanks were excavated and removed from the TBA site by Firestone in 1985. These tanks were located at the southwest corner of the Firestone TBA building (Plate 4-1) and supplied gasoline to the pump island formerly located at the south end of the facility.

Dames & Moore made inquiries at the Alameda County Department of Environmental Health and the Oakland Fire Department fire prevention group about information on these tanks. Environmental health had no records on file concerning the UST removal. The Oakland City Fire Department files contained an UST permit but no information regarding the tank removal operation or the condition of the UST's at the time of removal, or whether soil and water sampling had been conducted.

J.C. Penney has no record of tank excavations at the site. According to Mr. Bob Arneson of J.C. Penney Co., Firestone disbanded the construction services group that managed UST removal and did not organize a system to recover their UST files.

Kurt Jeurgens and Kathleen Scheutzow of Firestone were contacted for information concerning the tank removal. They indicated that Dor-Am Builders, Inc. of Sacramento was contracted in 1985 to remove the tanks in accordance with federal, state and local regulations and codes. Dor-Am Builders, Inc. completed the removal operation. However, neither Mr. Jeurgens nor Ms. Scheutzow had records or field logs of the excavation and tank removal operation. Dor-Am Builders, Inc. is no longer in business and does not have a forwarding phone message.

According to Mr. Jim Given, the Eastmont Mall manager, the underground tanks were excavated in 1985 when Firestone decided to discontinue selling gasoline after acquiring the J.C. Penney TBA. He has no records or knows of any other details concerning the tank removal.

3.4.2 Waste Oil Tank Removal

According to Ms. Kathleen Scheutzow of Firestone, the original waste oil tank formerly located at the northeast corner of the TBA building was removed by a Firestone subcontractor and replaced in 1987. Following the excavation and removal of this tank, a soil sample was taken at the bottom of the tank pit. The soil was analyzed for petroleum hydrocarbons by EPA Methods 8020, 8015, 503E and 8010. No hydrocarbon constituents were detected above the reporting limit of 0.1 mg/kg. A new waste oil tank was installed in the same location.

This waste oil tank, installed in 1987, was subsequently removed on December 12, 1991. The Alameda County Department of Environmental Health has a complete file on the excavation and removal of this second waste oil tank. Two samples of soil from the bottom of the excavation were analyzed for total petroleum hydrocarbons (TPH) as waste oil and TPH as diesel. One sample did not contain detectable hydrocarbons while the other sample contained 820 mg/kg THP as waste oil and 40 mg/kg THP as diesel. Based on these results, the excavated soils were removed and the excavation was filled with clean fill. The Alameda County Department of Health Services signed off on this tank removal on March 20, 1991.

3.5 PREVIOUS INVESTIGATIONS

Hunter Environmental Services, Inc. (Hunter) of Martinez, California performed a Phase II environmental audit of the Eastmont Mall property and submitted a report to Topa Savings Bank of Los Angeles, California on December 20, 1989. The Hunter

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investigation included an asbestos survey of the mall structures and a soil and groundwater investigation beneath areas of suspected hydrocarbon contamination.

Four soil borings were drilled by Hunter on the mall property (Plate 5-5). Three of these borings were completed as monitoring wells. Boring HB-1 was drilled to a depth of 54 feet near the southeast corner of Church Street and Foothill Boulevard. This boring did not encounter groundwater. Soil samples retrieved during drilling were screened on site using an organic vapor meter (OVM). None of the soil samples yielded detectible OVM readings. Samples taken from 10 and 30 feet bgs were analyzed for TPH (Method 8015) and benzene, toluene, ethylbenzene and total xylenes(BTEX) (Method 8020). No hydrocarbon was detected in the soils in boring HB-1.

MW-2 was drilled to a total depth of 35 feet immediately west of the bank as shown on Plate 5-5. Groundwater was encountered at 29 feet below ground surface (bgs). Soils were screened with an OVM during drilling and no hydrocarbon vapors were detected. Soil samples taken from 10 and 20 feet bgs were analyzed for TPH (Method 8015) and BTEX (Method 8020); none of these hydrocarbons were detected above the reporting limit (1 ppm-TPH, 3 ppb-BTEX). After completing the boring as a monitoring well, groundwater was sampled and analyzed for volatile organic compounds using EPA Method 8240. 1-2 Dichloroethene (1-2 DCE) was detected at 8 parts per billion (ppb), trichloroethene (TCE) was detected at 19 ppb, and tetrachloroethene (PCE) was detected at 210 ppb. No other volatile organic compounds were detected above the reporting limit (3-10 ppb).

No soil analysis for Cl-HCs

MW-3 was drilled to a total depth of 45 feet to the west of the BP service station located on the corner of 73rd Avenue and Bancroft Avenue. Groundwater was encountered at 37 feet bgs. Soils were screened with an OVM during drilling and no hydrocarbon vapors were detected. Soil samples from 10 and 20 feet bgs were analyzed for TPH and BTEX; none of these hydrocarbon compounds were detected above the reporting limit (1 ppm-TPH, 3 ppb-BTEX). After completing the boring as a monitoring

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well, groundwater was sampled and analyzed for total volatile organics using EPA Method 8240. No hydrocarbon compounds were detected above the reporting limit (3-10 ppb) by this method. Although Method 8240 does analyze for benzene, toluene, ethylbenzene and total xylenes, water samples were also analyzed for TPH by Method 8015 and BTEX by Method 8020. Results from these analyses include 2.7 parts per million (ppm) TPH and 530, 16, 150, 59 ppb for BTEX, respectively.

MW-4 was drilled to a total depth of 25 feet to the south and downgradient of the former J.C. Penney TBA USTs location. Groundwater was encountered at 17 feet bgs. Soils were screened with an OVM during drilling. All soil samples registered non-detectable on the OVM except for a sample taken at 15 feet bgs which indicated a level of 230 ppm. Soil samples taken from 10 and 15 feet bgs were analyzed for TPH (Method 8015) and BTEX (Method 8020). The sample taken from 10 feet contained no detectable hydrocarbon constituents above the reporting limit; the sample taken from 15 feet contained TPH at 2000 ppm, benzene at 1.4 ppm, toluene at 4.3 ppm, ethylbenzene at 23.0 ppm and total xylenes at 150 ppm. After completing the boring as a monitoring well, groundwater was sampled and analyzed for volatile organic compounds. TPH was found at 2.2 ppm by Method 8015; BTEX was found at 28, 21, 50 and 290 ppb, respectively, by Method 8020, and at 440, 19, 130 and 54 ppb, respectively, by Method 8240. The relative ratios and absolute concentrations of these compounds analyzed by methods 8015 and 8020 do not agree.

The presence of hydrocarbon compounds in soils and groundwater from well MW-4 resulted in the Eastmont Mall management requesting further investigation of the TBA site by J.C. Penney.

3.6 AGENCY FILE SEARCH

An agency file review was performed to identify potential off-site sources of contamination that could adversely impact the site. A review of local, state and federal

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agency lists of sites with known or potential hazardous waste or underground tank problems was conducted to identify whether such sites exist with one-half mile of the Eastmont TBA location. The lists that were reviewed included: the U.S. EPA National Priority List ("Federal Superfund") and CERCLIS list; State of California Bond Expenditures Plan List ("California Superfund"), Department of Health Services, Abandoned Sites Program Information (ASPIS) List; Hazardous Waste and Substances Sites List Pursuant to AB 3750; the RWQCB's List of Leaking Underground Storage Tanks, and North Bay Counties Toxics List; and the California Waste Management Boards' Solid Waste Information System (SWIS) List.

The agency list review did not identify any sites located with one-half mile of the TBA site.

3.7 GROUNDWATER WELL INVENTORY IN THE VICINITY OF THE SITE

An inventory of groundwater wells drilled in the vicinity of the Eastmont Mall was obtained from the Alameda County Public Works Agency to assess groundwater use within one-half mile of the site. No municipal, domestic, industrial or livestock wells were identified within one-half mile of the site. An irrigation well was drilled near the corner of 64th Avenue and MacArthur Boulevard at the Evergreen Cemetery. This well is located 2,700 feet northwest cross gradient from the site. Other than this single irrigation well, groundwater is apparently not used as a resource within one-half mile of the TBA site.

Non-supply wells that are worth noting include an array of seven groundwater monitoring wells located at 6455 Foothill Boulevard on Oakland Community Housing property. These monitoring wells were drilled in 1991 and are located about 2,600 feet west, cross gradient to the TBA site. The presence of the monitoring wells at 6455 Foothill Boulevard suggests that a groundwater investigation is in progress. This location was not noted in Dames & Moore's review of agency lists of potential hazardous waste

sites or leaking UST sites. The nature of the investigation at this site is not known; however, all the wells are drilled to depths of 27 to 32 feet and are screened in the uppermost saturated zone at 13 to 18 feet bgs suggesting that the investigation is concentrating on the near surface groundwater resource zone.

The groundwater well inventory also listed a 400 foot deep abandoned well (well 2S/3W 10Q1) drilled 550 feet east of Bancroft and 450 feet north of 73rd Avenue on Eastmont Mall property. This well was drilled on March 9, 1951 and was operated by the Chevrolet Oakland Division as an industrial water well. The well serviced the assembly plant until it sanded up in 1954. Depth to groundwater in the well was recorded at 96 feet bgs (56 feet below sea level). Following a 30 hour pump test, the well's yield was 170 gallons per minute out of a 12-inch diameter casing perforated from 90 feet to 393 feet bgs. The driller's log from this well is included in Appendix A.

The large disparity between water levels measured in this well and the monitoring wells drilled on the site suggests that the 1951 industrial water well tapped a separate lower aquifer not in hydraulic equilibrium with respect to the shallow groundwater zone encountered at the site.

Four other deep wells located near the site which are completed in the lower aquifer(s) also show a large disparity between the water level measurements of deep confined groundwater and near surface (0 to 50 feet bgs) unconfined water. The water level in deep wells is generally encountered tens of feet below sea level while the water level in shallow wells is almost always above sea level. In some areas, borings drilled in the shallow zone did not encounter groundwater at all.

4.0 FIELD INVESTIGATION

Dames & Moore conducted a field investigation at the site on April 1 through 5, 1991 to address the objectives described in Section 2.0. This section describes the field operations and procedures that were followed in conducting this investigation. During this investigation the planned locations of borings and wells had to be moved slightly due to the presence of underground structures and utilities.

4.1 SOIL BORINGS

Six soil borings were drilled by Kvilhaug Well Drilling and Pump Company, Inc., of Concord, California, on April 1, 2 and 3, 1991 under the supervision of a Dames & Moore geologist. Soil and well boring locations are shown on Plate 4-1. Borings were drilled using an 8-inch outer diameter hollow stem auger.

Boring DM-1 was located due north and upgradient of the former UST location. This boring was completed as a background well to assess the quality of groundwater flowing onto the site. Boring DM-2 was completed as a monitoring well about 90 feet south of the former UST location. This boring/well was drilled to assess the lateral extent of suspected hydrocarbons in soils and ground•20
water. The location of DM-2 was selected to avoid blocking traffic at the mall entrance and to avoid the concrete retaining walls of the underground parking structure. Boring B-4 is located downgradient of the former UST location and was drilled for the same reason as DM-2. This boring was intended to be completed as a monitoring well; however, it was drilled to a depth of 50 feet and did not encounter groundwater. Deeper drilling was beyond the scope of this investigation.

Located in the center of the former pump island, Boring B-1 was drilled to sample and analyze the soils beneath this facility for hydrocarbon content. Soil Boring B-2 was located and drilled in the center of the former UST location to assess whether the fill in

the tank pit or soils beneath the tank pit contained residual hydrocarbon contamination. Soil Boring B-3 was drilled in the center of the former waste oil pit located at the northeast corner of the TBA building. This boring was drilled to assess whether the fill in the tank pit or soils beneath the former waste oil tank contained residual hydrocarbon contamination. Boring logs and well construction details are presented in Appendix B and Table 5-2.

4.2 SOIL SAMPLING

During advancement of each of the six borings, soil samples were collected using a modified California sampler at five foot intervals from five feet bgs to the bottom of the boring. The sampler was driven into undisturbed soil below the open boring with a 140-pound hammer falling 30 inches. Samples were retained in six-inch-long brass sleeves. Upon completion, borings B-1, B-2, B-3, and B-4 were grouted to the ground surface with cement.

The field geologist analyzed the collected soil samples with an organic vapor monitor (HNu) to assess the presence of organic vapors. The soil samples in areas of suspected contamination or with a measurable HNu reading from each well were selected for analysis. The ends of the sample tubes were covered with Teflon sheeting, capped, sealed and labeled. The samples were placed in an ice-filled cooler for shipment to the analytical laboratory under chain of custody control.

Three soil samples were analyzed from boring B-1 drilled beneath the former pump island at 5, 10 and 15 feet bgs. One sample was analyzed from boring B-2, taken from the bottom of the former UST pit at 10.5 feet bgs. One sample was analyzed from boring B-3, from the bottom of the former waste oil tank pit at 5.5 feet bgs. Two samples were analyzed from B-4 at 15.5 and 40.0 bgs. This boring is located downgradient of the former UST. One sample was analyzed from boring DM-1 located

130 feet upgradient from the former UST location. This sample was taken at 15 feet bgs very near the water table.

One sample was analyzed from DM-2 located about 90 feet downgradient of the former UST. This sample was taken at 15 feet bgs very near the water table. All the soil samples were chemically analyzed by ACCULAB Environmental Services of Petaluma, California. Samples were analyzed for TPH as diesel, TPH as gasoline, and BTEX. The soil analytical results are discussed in Section 5.1 and summarized in Table 5-1. Complete laboratory reports are presented in Appendix C.

A soil sample taken at 10 feet bgs from boring B-1 was submitted for grain size analysis by a wash sieve method. Results of this test are discussed in Section 5.1.2 and included in Appendix C.

4.3 MONITORING WELL INSTALLATION

Two monitoring wells were installed at boring locations DM-1 and DM-2. DM-1 was installed to investigate the possible existence of offsite sources for diesel and/or gasoline contamination upgradient from the site. DM-2 was installed to assess the lateral distribution of the suspected groundwater gasoline contamination at the site.

The borings were reamed with a 12-inch diameter auger. A capped, threaded, 10-foot length of 4-inch I.D. Schedule 40 PVC piping with machined 0.020-inch horizontal slots was joined to steam-cleaned, threaded, unslotted 4-inch I.D. Schedule 40 PVC pipe and installed through the augers into the boring. Well casing and screen were steam cleaned prior to installation. The screened interval for well DM-1 extended from a depth of 13 feet to 28 feet bgs. The screened interval for well DM-2 extended from a depth of 10 feet to 25 feet bgs. A sand pack consisting of graded Monterey #2 sand was placed in the annulus to a height of 6 inches above the slotted interval. Approximately one foot of bentonite pellets was placed in the annular space above the sand pack. The

remaining annular space was filled with cement grout to a height of 6 inches below the ground surface. The well was completed with a 12-inch diameter Christy box and a locking well cap. Well construction details are presented in Appendix B.

Following installation, wells DM-1 and DM-2 were developed by surging and bailing. One-hundred-ten gallons of water were bailed from DM-1. Water appeared cloudy tan after bailing. One-hundred-ten gallons were also bailed from DM-2. Water appeared clear after bailing.

4.4 GROUNDWATER SAMPLING AND ANALYSIS

Groundwater samples were collected from monitoring wells DM-1, DM-2 and MW-4 on April 4, 1991. A duplicate QA/QC sample was collected from MW-4. Wells were purged of three to five casing volumes of water by bailing or by pumping with a submersible pump. The filed geologist measured pH, conductivity and temperature until the readings stabilized. Samples were collected by disposable teflon bailers and transferred into 40 milliliter VOA containers, stored on ice, and shipped to ACCULAB Environmental Services under chain of custody procedures. The groundwater samples were analyzed for TPH as diesel (method 8015), TPH as gasoline (method 5030/8015), and BTEX (method 5030/8020). The analytical results of water samples are discussed in Section 5.2 and summarized in Table 5-3. Complete laboratory reports are presented in Appendix D.

The field QA/QC program for groundwater sampling included the collection and analysis of a duplicate sample from well MW-4. The duplicate sample was submitted to the laboratory for analysis to evaluate the reproducibility of the results obtained from the analytical procedures.

4.5 WATER LEVEL MEASUREMENTS

In wells DM-1, DM-2 and MW-4 measurements were taken between the static water level and the top of the PVC casing. The elevation of the PVC casing for each well was professionally surveyed. Using this information, the elevations of the static water level in wells at this site were calculated. This data is presented on table 5-2.

A previous investigation conducted by Hunter Environmental Services in 1989 advanced four borings on four corners of the Eastmont Mall complex. Three of the borings encountered groundwater between 17 to 35 feet bgs while boring HB-1 located on the northwest corner of the complex did not encounter groundwater at a total depth of 50 feet.

4.6 SLUG TESTS

Both rising and falling head slug tests were performed on wells DM-1, DM-2 and MW-4. These tests were conducted to gather necessary data for the calculation of the aquifer hydraulic conductivity in the vicinity of the bore hole for each well.

Prior to conducting the test, a pressure transducer was lowered into the well 7 feet below the static water surface. The transducer cord was then connected to a data logger. The test was started by lowering the slug into the well below the static water level and recording on the data logger the change in head with time. This test is called the falling head test.

The slugs used in wells DM-1 and DM-2 consisted of a 5 foot section of double capped 3-inch diameter PVC filled with distilled water. The slug used in MW-4 was of similar construction except that the PVC diameter was 1½ inches. The smaller diameter slug was used because MW-4 is a 2-inch diameter well.

After the static water level in the well recovered with the slug submerged, the slug was removed and the change in head with time was recorded by the data logger. This test is called the rising head test.

5.0 INVESTIGATIVE RESULTS

The results of the field investigation and laboratory analysis program are summarized below.

5.1 SOIL

5.1.1 Stratigraphy

Two geologic cross sections were constructed across the site using available well and boring data. The cross section locations are shown on plate 4-1, and the cross sections are presented on Plates 5-2 and 5-3. Cross section A-A' is oriented south to north and includes wells MW-4, DM-1 and boring B-2 as shown on Plate 5-1. Cross section B-B' runs west to east and includes borings B-4, B-1 and wells MW-4 and DM-2 as shown on Plate 5-2.

The location and analytical results of soil samples taken from each boring are presented on both cross sections. If TPH as gasoline and BTEX constituents were not detected in the sample, a ND symbol is posted on the section next to the sample location. If hydrocarbons were detected, the results are summarized for each constituent in a box. In comparing analytical results across the sections, it is important to note that boring MW-4 was drilled, sampled and analyzed in December of 1989, sixteen months prior to this investigation (April 1991).

Soils at the site are predominantly clays with a high sand or gravel content. The color of the soils range from yellow-red, yellow-brown to yellow-brown, red-brown, dark brown. The lack of lateral continuity and the yellow-red color of the site soils is typical of subaerially deposited alluvial fan sediments. The predominance of fine grained soils at this site suggests that these sediments were primarily laid down under low flow regime conditions as overbank deposits.

5.1.2 Analytical Results of Soil Samples

No benzene or ethylbenzene compounds were detected above the reporting limit of 0.005 mg/kg in all nine samples submitted for analyses. Only one sample from B-1 taken at 15.0 feet bgs contained detectable levels of TPH gasoline at 7.7 mg/kg, toluene at 0.070 mg/kg and total xylenes at 0.036 mg/kg. The reporting limit for BTEX was 0.005 mg/kg; the reporting limit for TPH as gasoline was 0.2 mg/kg. The soil analytical results are summarized on Plate 5-3 and in Table 5-1. Complete laboratory analytical reports are presented in Appendix C.

A sieve analysis of a sample collected at 10 feet bgs from boring B-1 was performed to characterize the soil grain size distribution in the vadose zone. This sample contained 32.2% clay, 27.5% fine sand, 17.7% medium sand, 8.7% coarse sand and 13.9% gravel. The soil sample is classified as a gravelly clayey sand, however the percentage of total sand and clay is quite similar.

Soil descriptions on boring logs classify soils at the site as predominantly gravelly sandy clays. These descriptions are based on observation and an estimation of clay, sand and gravel content. Field observations cannot determine the distinction between a sandy clay and clayey sand when grain size percentages are nearly equivalent. Soils were qualitatively classified in the field for the boring log descriptions.

5.2 GROUNDWATER

5.2.1 Groundwater Occurrence and Flow Direction

Groundwater was measured at a depth ranging from 12 to 14 feet bgs in wells MW-4, DM-1, and DM-2. Borings B-2 and B-3 were not drilled deep enough to encounter groundwater while boring B-4 was drilled to a depth of 50 feet without encountering groundwater. Soils in boring B-4 appeared dry from the surface to the total depth. Water level measurements are tabulated on Table 5-2.

Water level data measured in the three monitoring wells are presented in Table 5-2, in map view on Plate 5-4 and in cross section on Plates 5-1 and 5-2. These plates illustrate a discontinuity of the groundwater surface between borings B-4 and the other borings and wells at the TBA site. Plate 5-5 presents water level data from both the 1989 Hunter Environmental Services investigation and water level data from this investigation. Near surface groundwater is found between 37 and 13 feet bgs (1 and 56 feet above mean sea level) over most of the site. Across the northern quarter of the site groundwater was not encountered in two borings drilled to 50 and 53 feet bgs. These borings are located in an area where near surface groundwater was expected between 13 and 17 feet bgs. Based on these data a groundwater discontinuity apparently extends across the TBA site and the mall complex (Plate 5-5).

An industrial well drilled in 1951 near the southern corner of the mall property encountered groundwater at 96 feet bgs (56 feet below mean sea level). Casing installed in this well was perforated from depths of 95 to 395 feet screening clays, sands and gravels. The driller's log suggests that these water bearing sediments are separated from groundwater contained in surface soils by a thick sequence of clayey deposits which appear to act as an aquitard between shallow and deep groundwater (the driller's report is included in Appendix A).

Based on very limited data, our interpretation of the conditions beneath the TBA site suggests that the gradient of near surface groundwater is to the southwest roughly parallel to 73rd Avenue (Plate 5-4). The variable relief of the groundwater beneath the site, the extremely heterogeneous stratigraphy of site soils, the variable topographic relief in the area of the site and the proximity of the site to the Hayward Fault complicates the interpretation of the localized groundwater gradient and flow direction. The flow direction and gradient illustrated on Plate 5-4 are based on limited data, essentially three data points.

5.2.2 Analytical Results of Groundwater Samples

One groundwater sample from DM-1, DM-2, MW-4, and one blind duplicate from well MW-4 were submitted for chemical analysis to ACCULAB Environmental Services in Petaluma, California. The groundwater samples were analyzed for TPH as diesel (EPA Method 8015), TPH as gasoline (EPA Method 5030/8015) and BTEX (EPA Method 5030/602).

Results of these groundwater analyses are presented on Plate 5-6 and in Table 5-3. Complete laboratory analytical reports are presented in Appendix D. Hydrocarbons, including TPH as diesel, TPH as gasoline, and BTEX were not detected in concentrations above the reporting limit in any of the three water samples and one duplicate sample analyzed by the laboratory. The reporting limits for TPH diesel and TPH gasoline were 0.05 mg/l. The reporting limits for BTEX were 0.0005 mg/l or 0.5 ppb. The results from the duplicate sample analysis were judged to be consistent with the results of the primary sample suggesting that the field sampling and laboratory analysis procedures were reproducible.

5.2.3 Slug Test Analyses

The Bower and Rice Method was developed to measure the hydraulic conductivity of aquifers or water bearing zones around boreholes (Bower and Rice, 1976; Bower, 1989). This method considers the relation between the rate of water elevation change inside the well and the rate of flow into the well. Rate of water elevation change inside the well is a function of the rate of flow into the well and the diameter of the well. The rate of flow into the well is calculated by the steady radial flow formula derived by Theim and Forcheimer using Darcy's Law and Dupuit's Assumption.

The slug test creates an instantaneous water elevation change inside the well relative to the static water elevation outside the well by inserting or removing a solid cylinder with known volume in or out of the well. Inserting a cylinder into the well is equivalent to adding a same volume of water into the well. Measuring the subsequent rate of fall of the water level in the well provides data to evaluate the hydraulic conductivity of the aquifer in the vicinity of the well. This process is called the falling head slug test.

Similarly, removing the cylinder out of the well is equivalent to removing the same volume of water from the well. The subsequent rate of rising of the water level in the well also provides the same type of data that can be used to evaluate the hydraulic conductivity of the aquifer. This process is called the rising head slug test.

The measured time-dependent water elevation data in the well after the cylinder is inserted or removed and the well completion data for wells DM-1, DM-2, and MW-4 constituted the database that was used in the analysis by the Bower and Rice Method. Some abnormal data points were removed from the data set prior to the use of the Bower and Rice Method. These abnormal date points are responses caused by movement of the transducer or by a localized instantaneous water pressure fluctuation

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around the transducer. The hydraulic conductivities of the aquifer around wells DM-1, DM-2 and MW-4 based on the Bower and Rice Method are shown below:

Based on Slug Test Results
(cm/sec)

Well	Rising Head	Falling Head
DM-1	1.6×10^{-3}	8.8×10^{-4}
DM-2	4.9×10^{-3}	6.1×10^{-3}
MW-4	4.0×10^{-3}	6.3×10^{-4}

6.0 DISCUSSION OF RESULTS

6.1 HISTORICAL SITE USE

As stated in Section 3.2, the Eastmont Mall property was formerly occupied by the Fisher Body Plant of Oakland Chevrolet. The J.C. Penney TBA site was historically used as a parking lot which was located hydrogeologically upgradient from the Chevrolet plant. For this reason, the likelihood of contamination beneath the TBA site due to past plant practices is judged to be low.

In contrast, the J.C. Penney store site is located directly on top of the former Chevrolet plant. Drawings of the plant show that at least five underground fuel tanks existed beneath the facility and were presumably in operation for 40 years from 1920 to 1940. The Chevrolet auto factory undoubtedly used and generated hazardous materials during the period of plant operation. Compared to today, few regulatory guidelines existed at that time for handling and disposing of hazardous materials. For these reasons, contamination of soils and possibly groundwater beneath the J.C. Penney store and Eastmont Mall due to site usage prior to J.C. Penney's occupancy is considered high.

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During the Hunter Environmental Phase II investigation, analyses of groundwater beneath the former Chevrolet plant sampled from well MW-2 found chlorinated hydrocarbon compounds at relatively low concentrations. These compounds are commonly found in degreasers and solvents which might have been used at the plant.

6.2 POTENTIAL OFFSITE SOURCES

Well DM-1 installed upgradient and near the TBA site boundary did not contain detectable levels of hydrocarbons in either the soil or groundwater. The lack of hydrocarbons in this well suggests that an active offsite source is not responsible for the relatively low concentration of hydrocarbons found in onsite soils and previously detected dissolved hydrocarbons in the groundwater.

A review of local, state and federal agency lists of sites with suspected groundwater contamination revealed no sites within one-half mile of the Eastmont Mall. However, according to the well inventory list of groundwater usage compiled by Alameda County Water District, seven groundwater monitoring wells were recently installed (February 27, 1991) at 6455 Foothill Boulevard. The presence of these wells at the 6455 Foothill Boulevard location suggests that a groundwater investigation of suspected hazardous materials is in progress. This address is located approximately 2600 feet to the west, cross gradient to the J.C. Penney TBA site. Thus it is considered unlikely that the groundwater quality beneath the TBA site could be affected by the suspected contamination beneath the Foothill Boulevard property.

6.3 GROUNDWATER OCCURRENCE

Water level measurements in shallow wells, borings and the single deep well drilled on mall property show a large variation in depth to water which appears to be related to the depth of the screened interval. These results suggest that near surface groundwater

is perched in a localized discontinuous unconfined aquifer above the regional confined aquifer which is encountered at depth. The near surface groundwater present beneath the site is here after referred to as the shallow perched zone.

The review of regional water level data from groundwater wells drilled in the vicinity of the Eastmont Mall supports the above interpretation. Groundwater measured in wells screened near the surface (10-50 feet bgs) is much higher than the levels in wells completed in deeper aquifers. Generally water levels in deep wells are measured at tens of feet below sea level while water levels in shallow wells are typically above sea level. Based on these findings, it appears that shallow groundwater in the vicinity of the site is also perched above the regional water table.

This interpretation is consistent with independent studies on the hydrogeology of the Bay Plain. Maslonkowski (1984) found that shallow aquifers within 50 feet of the ground surface are common throughout the Bay Plain Environment. These minor aquifers are limited in areal extent and generally yield small quantities of water from wells (less than 35 gallons per minute). According to Maslonkowski, most shallow groundwater beneath the Bay Plain exists under perched conditions contained above a clay aquitard unit which separates this near surface groundwater from the saturated soils at the groundwater table and underlying aquifers.

6.4 RESIDUAL HYDROCARBONS IN SOILS

Both this investigation and the 1989 Hunter Environmental Services Phase II study encountered residual hydrocarbons in soils near the water table. Concentrations of TPH as gasoline found at 15 feet bgs in borings MW-4 and B-1 ranged from 2000 ppm to 7.7 ppm, respectively. Benzene and ethylbenzene were detected at 1.4 and 23.0 ppm in boring MW-4, but were not found in boring B-1.

Borings drilled downgradient from B-1 and MW-4 did not detect hydrocarbons in soil samples. During this investigation groundwater analyzed from wells completed in and near borings MW-4 and B-1 did not detect soluble hydrocarbons. Based on these results, it appears that the residual hydrocarbons in soils are limited in areal extent to the vicinity of the former UST.

During this investigation boring B-2 was advanced to 10.5 feet bgs within the filled excavation of the former USTs. The boring met refusal at this depth presumably encountering a concrete pad (tank crib) that was laid beneath the USTs to strap down the tanks. A sample was taken at the bottom of the boring and analyzed for TPH gasoline, TPH diesel and BTEX. None of these constituents were detected in the soils. Based on this soil sample, the excavation was apparently filled with uncontaminated fill.

6.5 DISSOLVED HYDROCARBONS IN GROUNDWATER

The Hunter Report of 1989 indicates that groundwater beneath the site from well MW-4 contained dissolved hydrocarbons at concentrations above the DHS approved drinking water standards. Our recent investigation found no detectable hydrocarbon compounds in the groundwater from MW-4 and two additional newly installed wells. These results also suggest that the volume of spilled hydrocarbons at the site was relatively small.

Because groundwater investigations were conducted 16 months apart, it is possible that in this time frame the natural processes of water washing, oxidation, biodegradation, retardation and dispersion of the hydrocarbons beneath the site has reduced their concentrations in the groundwater below detectable levels.

It should be noted that it is not considered likely that contaminated groundwater in the shallow perched zone will adversely affect deeper groundwater resources. The

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shallow perched zone appears to be isolated from the regional confined aquifer by a low permeability aquitard unit.

6.6 REGULATORY OVERSIGHT

Chapter 6.7, Division 20 of the Health and Safety Code, and California Underground Storage Tank Regulations (Subchapter 16 of Title 23 of the California Code of Regulations), established a regulatory program which requires local implementing agencies to oversee cleanup of contaminated soil and groundwater resulting from a leak or unauthorized discharge from an underground storage tank or appurtenant piping. The local agency that has jurisdiction over the Eastmont Mall site is the California Regional Water Quality Control Board (RWQCB), San Francisco Bay Region (Region 2).

The State Water Resources Control Board prepared a Leaking Underground Fuel Tank (LUFT) manual as a state and interagency guidance document for hydrocarbon fuel contamination of soils. Three regional boards including Region 2 prepared a supplementary document to the LUFT manual which is intended to expand on, clarify, and, in some cases, present alternatives to LUFT recommendations. This supplementary document is titled the "Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites."

According to both of these guidance documents, an UST site with confirmed hydrocarbon saturation in soils and dissolved hydrocarbons in groundwater must be characterized to examine the vertical and lateral extent of suspected contamination. It is Dames & Moore's opinion that this investigation has satisfied the requirements of the Tri-Regional Recommendations for site characterization; however, additional investigative work might be necessary in the future if the RWQCB requires active remedial measures.

Results from this investigation and the Hunter Environmental Services investigation have established that soils near the groundwater table contain residual hydrocarbon contamination. According to both the LUFT manual and the Tri-Regional Recommendations, this site must be reported to the RWQCB. This agency will evaluate the results and recommendations from this investigation to determine if further investigation is necessary. The RWQCB has the ultimate authority to make a determination regarding the necessity of further investigation or remedial action at the site.

7.0 CONCLUSIONS

Soils located near the former underground storage tanks and beneath the former pump island contain minor amounts of hydrocarbons as gasoline. These residual hydrocarbons appear to be limited in areal extent to the immediate vicinity of the former USTs. Because the hydrocarbons in soils are localized, limited in areal extent and do not appear to represent a large volume of liquid, the source of the contamination may have been a small discharge of fuel.

Groundwater beneath the site occurs in an unconfined perched zone of limited lateral extent. This perched zone is not found 30 feet west of the former tanks in the vicinity of boring B-1. Slug test data shows that the shallow zone has a relatively low transmissivity. Due to the limited lateral extent and the low transmissivity of the shallow perched zone, it is unlikely that perched groundwater would be suitable as an irrigation or drinking water supply. A review of shallow water wells drilled in the vicinity of the site did not identify any wells that use the shallow perched groundwater for industrial, irrigation, domestic or municipal purposes.

Contaminated groundwater within this shallow perched zone will probably not affect deeper groundwater resources. Chemical analyses of groundwater quality beneath the site indicates that soluble hydrocarbons are not present above detection limits. These

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results suggest that the groundwater quality is not adversely affected by residual hydrocarbons in soils at and below the water table.

8.0 RECOMMENDATIONS

Dames & Moore recommends that wells at the site be resampled and chemically analyzed for TPH as gasoline and BTEX to re-evaluate the groundwater quality. This sampling and analysis are intended to confirm that groundwater beneath the site does not contain dissolved hydrocarbons above DHS drinking water standards. At the time of sampling, water levels from site wells will be measured, mapped and contoured in an attempt to further understand the hydraulics of the shallow groundwater.

If this confirmation sampling round shows that the groundwater hydrology and chemistry at the site is relatively constant, then Dames & Moore will recommend that no further action be taken at the site. This recommendation is based on the following findings:

- Shallow groundwater occurs in an unconfined perched zone of limited extent that does not appear to be used as an industrial, irrigation, domestic or municipal drinking water resource;

- Perched shallow water appears to be separated from the contained above the regional water table and lower confined aquifers by several tens of feet of low permeability sediments;

- Hydrocarbons were not detected in the groundwater beneath the site during this investigation, and

- Low levels of residual hydrocarbons were detected in only one of six soil samples taken at the site during this investigation.

9.0 REFERENCES

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Bouwer, H., 1988. The Bouwer and Rice Slug Test — An Update: Ground Water, Vol. 12, pp. 423-428.

California Department of Water Resources, 1960, Intrusion of Salt Water Into Groundwater Basins of Southern Alameda County: California Water Resources Bulletin 118-1, 44 p.

California Department of Water Resources, 1967, Evaluation of Groundwater Resources: South Bay, Appendix A: Geology, California Water Resources Bulletin 118-1, 153 p.

Maslonkowski, Dennis, P., 1984, Groundwater in the San Leandro and San Lorenzo Cones of the East Bay Plain of Alameda County: Alameda County Flood Control and Water Conservation District, Hayward, California.

TABLE 5-1

SUMMARY OF ANALYTICAL RESULTS
SOIL SAMPLES, MARCH 1991
TBA SITE, EASTMONT MALL
OAKLAND, CALIFORNIA

Constituent	Units	Detection Limit	B-1			B-2	B-3	DM-1	DM-2	B-4	
			Depth								
			5.5	10.0	15.0	10.5	5.5	15.0	15.5	15.5	40.0
TPH Gasoline	mg/kg	0.2	ND	ND	7.7	ND	ND	ND	ND	ND	ND
Benzene	mg/kg	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	mg/kg	0.005	ND	ND	0.070	ND	ND	ND	ND	ND	ND
Ethylbenzene	mg/kg	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	mg/kg	0.005	ND	ND	0.036	ND	ND	ND	ND	ND	ND

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TABLE 5-2

COMPLETION DATA AND WATER LEVEL MEASUREMENTS FOR MONITORING WELLS AND BORINGS TBA SITE, EASTMONT MALL OAKLAND, CALIFORNIA

Monitoring Well	Date Installed	Well Depth	Elevation Top of PVC	Well Diameter	Screen Interval	Effective Interval	Depth to Water	Groundwater Elevation (MSL)*
DM-1	4-1-91	28.0'	71.96	4"	13'-28'	11'-28'	12.85	59.11
DM-2	4-2-91	26.5'	68.60	4"	10'-25'	8.5'-26.5'	12.34	56.26
MW-4	12-6-89	25.0'	70.0	2"	10'-25'	8.0'-25'	13.74	56.26

Boring	Date Drilled	Boring Depth	Estimated Ground Surface Elevation
B-1	4-2-91	17.5'	71
B-2	4-1-91	11.5'	70
B-3	4-1-91	6.0'	75.6
B-4	4-2-91	50.0'	70

Notes: *MSL - Mean sea level.
NR - Not reached.

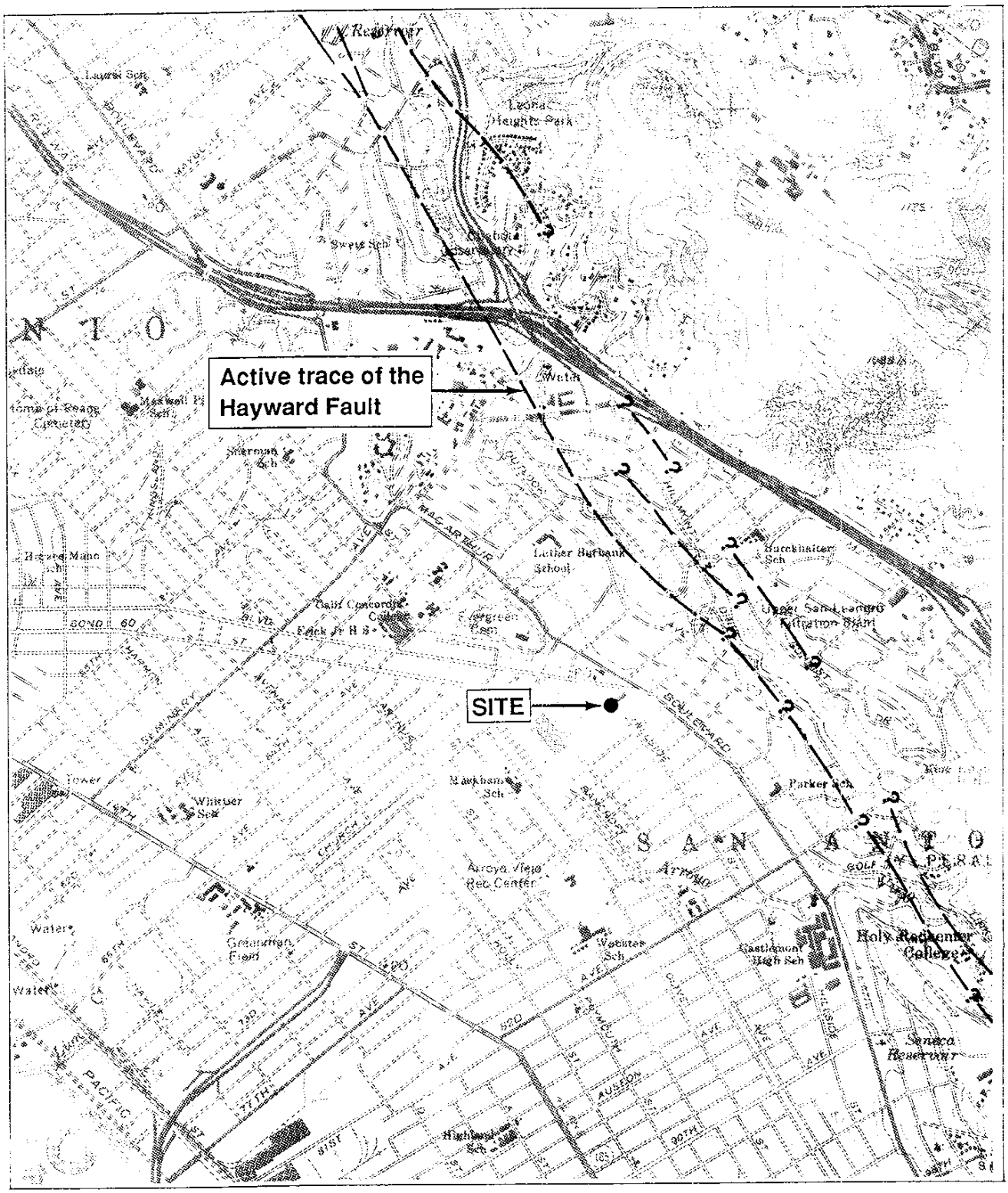
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TABLE 5-3

SUMMARY OF ANALYTICAL RESULTS
GROUNDWATER SAMPLES, MARCH 1991
TBA SITE, EASTMONT MALL
OAKLAND, CALIFORNIA

Constituent	Units	Detection Limit	DM-1	DM-2	MW-4	MW-4 Duplicate
TPH/Diesel	mg/l	0.05	ND	ND	ND	ND
TPH/Gasoline	mg/l	0.05	ND	ND	ND	ND
Benzene	mg/l	0.0005	ND	ND	ND	ND
Toluene	mg/l	0.0005	ND	ND	ND	ND
Ethylbenzene	mg/l	0.0005	ND	ND	ND	ND
Total Xylene	mg/l	0.0005	ND	ND	ND	ND

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Reference: Oakland East, California SW/4 Concord 15' Quadrangle, 198D

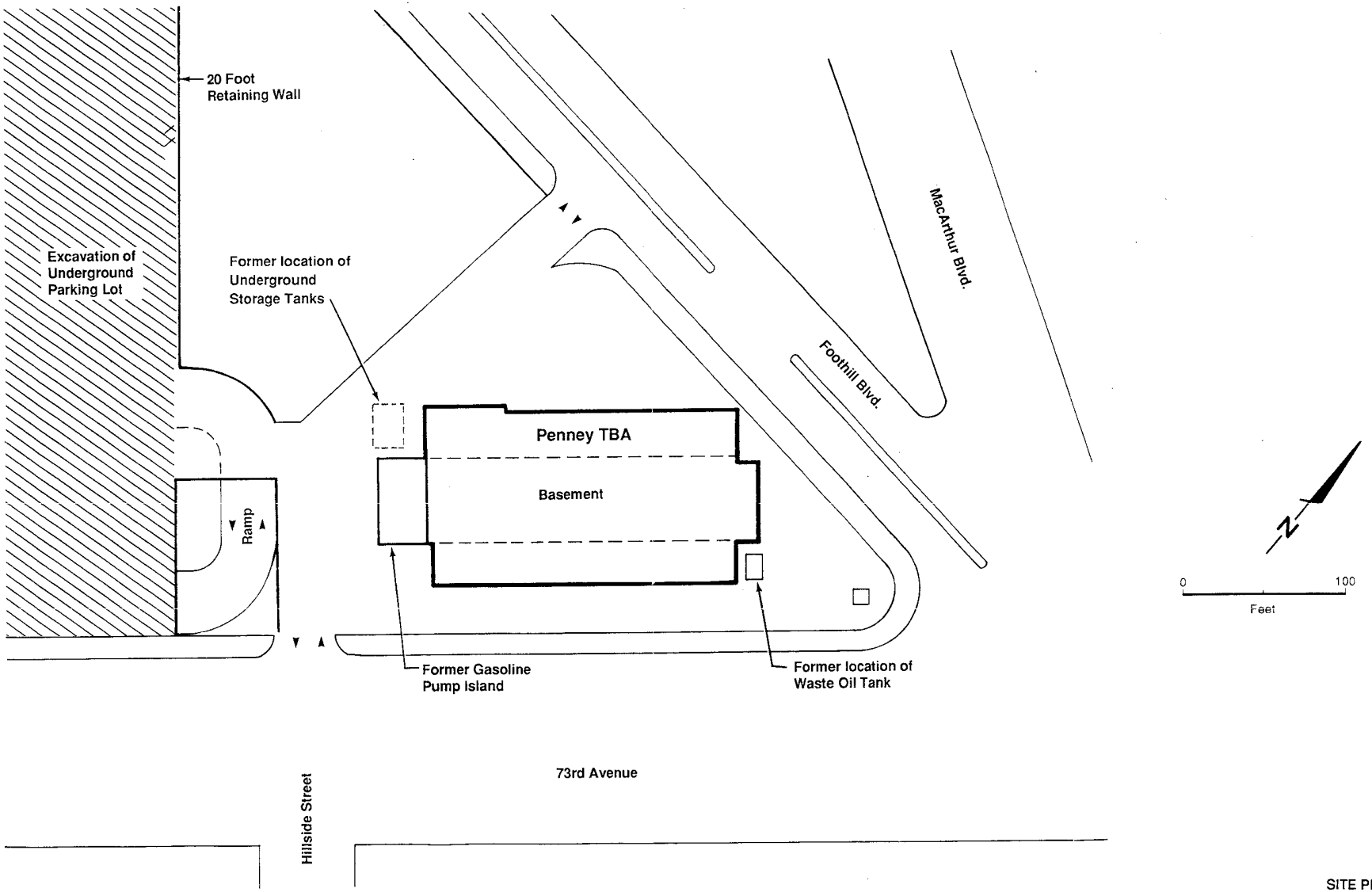
SITE LOCATION

TBA Site
Eastmont Mall
Oakland, California

June 1991
443-090-043

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PLATE 1-1



SITE PLOT PLAN

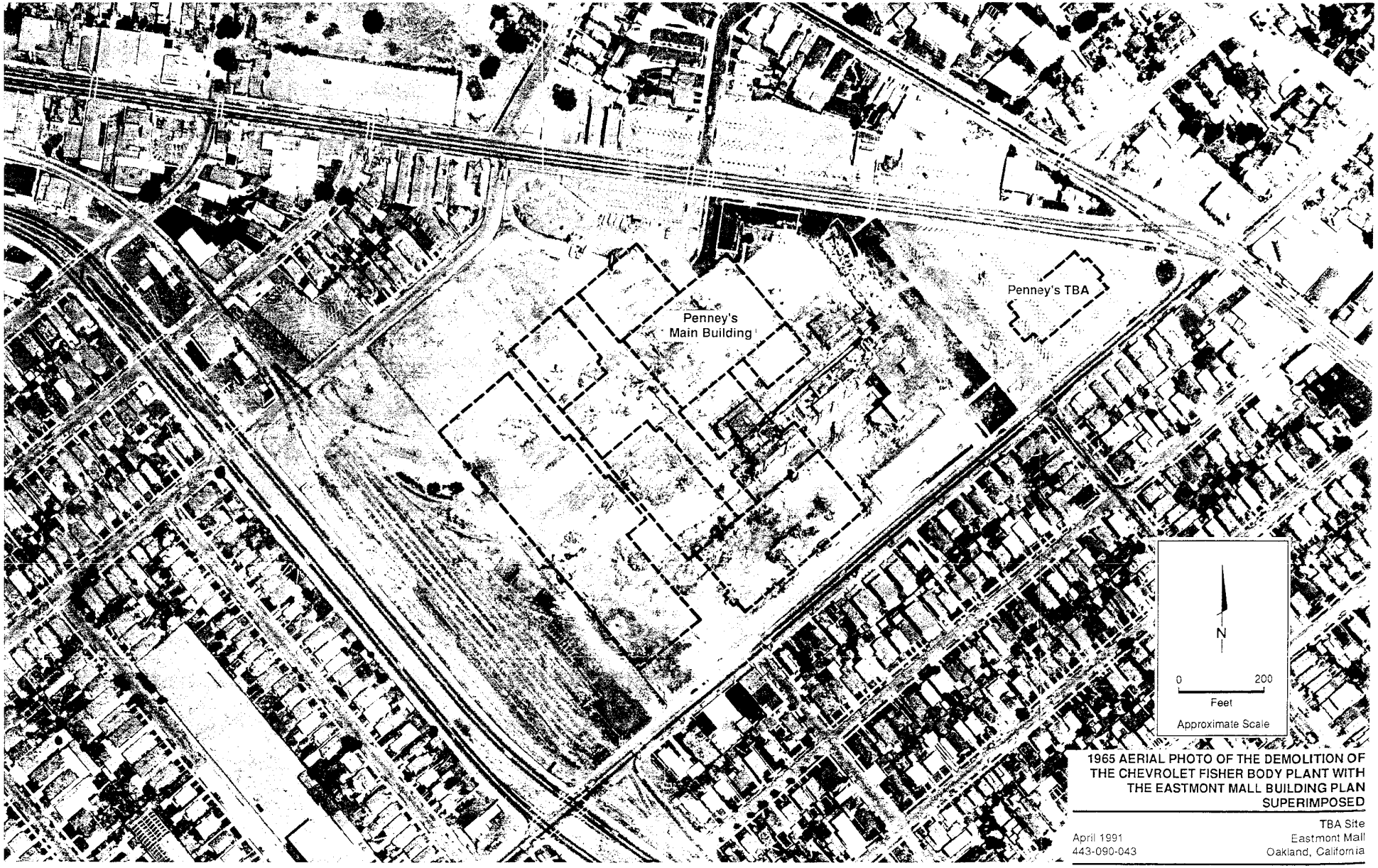
TBA Site
Eastmont Mall
Oakland, California

April 1991
443-090-043

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PLATE 1-2

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1965 AERIAL PHOTO OF THE DEMOLITION OF THE CHEVROLET FISHER BODY PLANT WITH THE EASTMONT MALL BUILDING PLAN SUPERIMPOSED

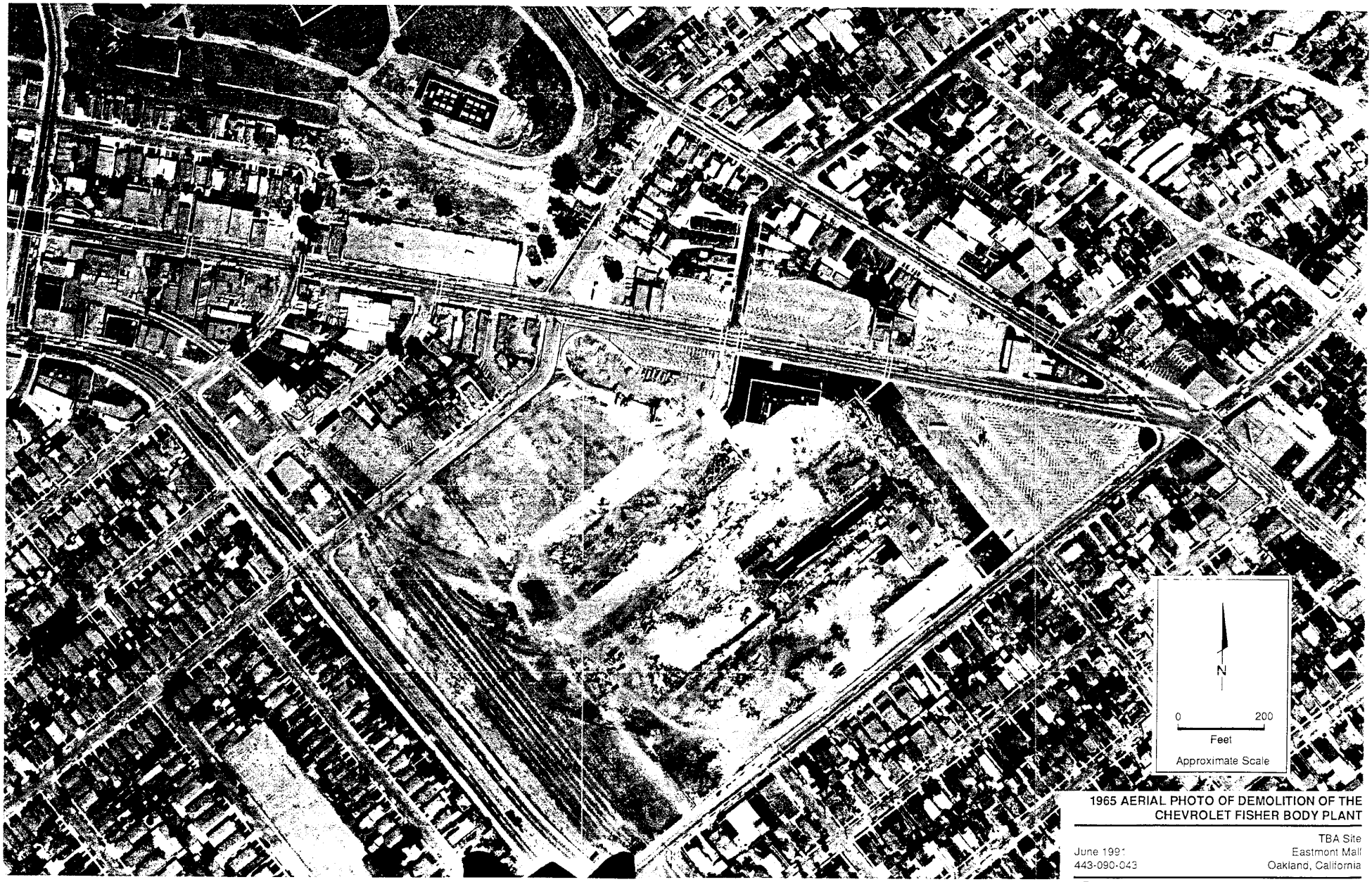
April 1991
443-090-043

TBA Site
Eastmont Mall
Oakland, California

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PLATE 3-2

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1965 AERIAL PHOTO OF DEMOLITION OF THE CHEVROLET FISHER BODY PLANT

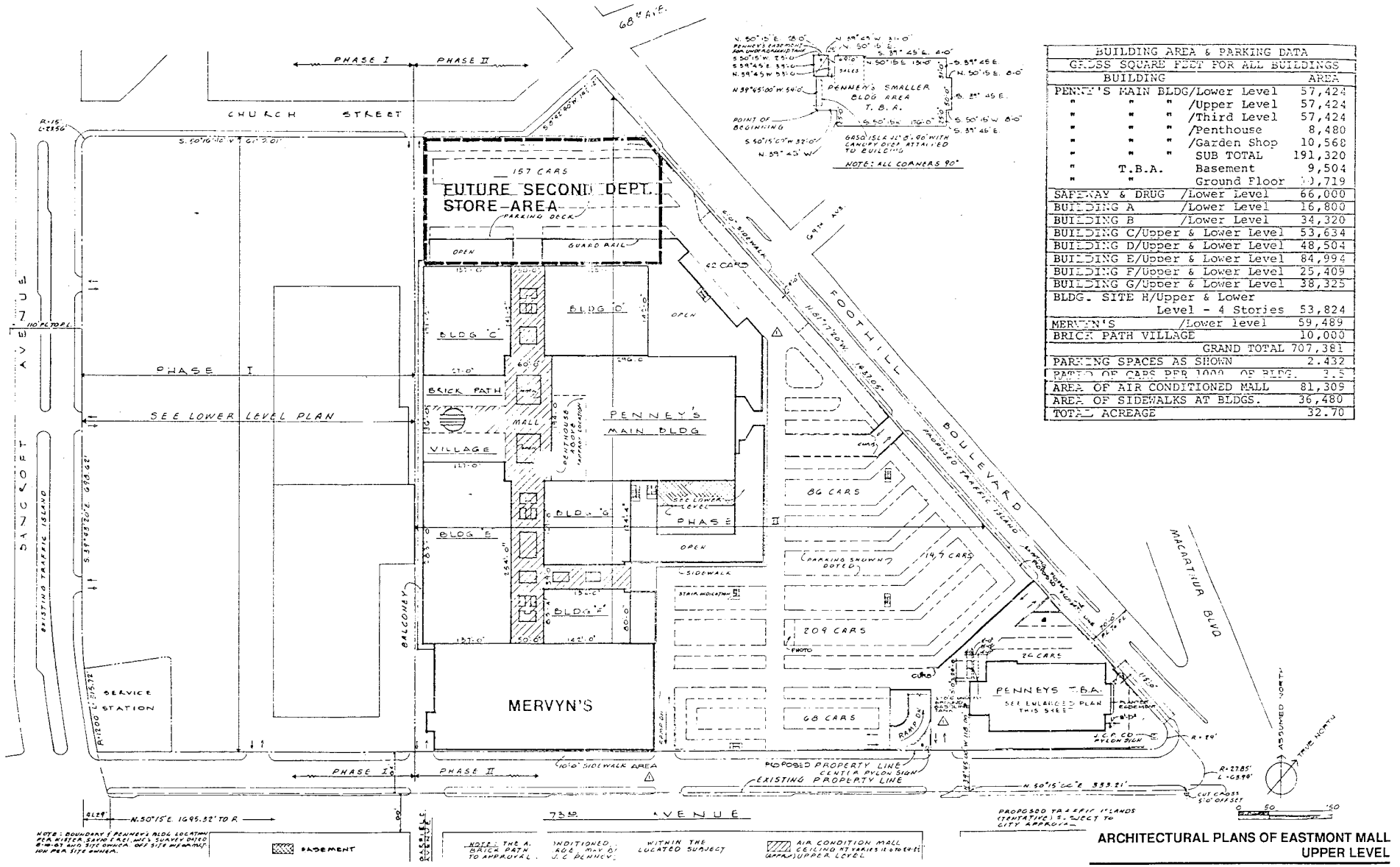
June 1991
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TBA Site
Eastmont Mall
Oakland, California

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PLATE 3-3

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BUILDING AREA & PARKING DATA	
GROSS SQUARE FEET FOR ALL BUILDINGS	
BUILDING	AREA
PENNEY'S MAIN BLDG/Lower Level	57,424
" " " /Upper Level	57,424
" " " /Third Level	57,424
" " " /Penthouse	8,480
" " " /Garden Shop	10,568
" " " SUB TOTAL	191,320
" T.B.A. Basement	9,504
" " Ground Floor	10,719
SAFEWAY & DRUG /Lower Level	66,000
BUILDING A /Lower Level	16,800
BUILDING B /Lower Level	34,320
BUILDING C/Upper & Lower Level	53,634
BUILDING D/Upper & Lower Level	48,504
BUILDING E/Upper & Lower Level	84,994
BUILDING F/Upper & Lower Level	25,409
BUILDING G/Upper & Lower Level	38,325
BLDG. SITE H/Upper & Lower Level - 4 Stories	53,824
MERVYN'S /Lower level	59,489
BRICK PATH VILLAGE	10,000
GRAND TOTAL	707,381
PARKING SPACES AS SHOWN	2,432
RATIO OF CARS PER 1000 OF BLDG.	3.5
AREA OF AIR CONDITIONED MALL	81,309
AREA OF SIDEWALKS AT BLDGS.	36,480
TOTAL ACREAGE	32.70

ARCHITECTURAL PLANS OF EASTMONT MALL UPPER LEVEL

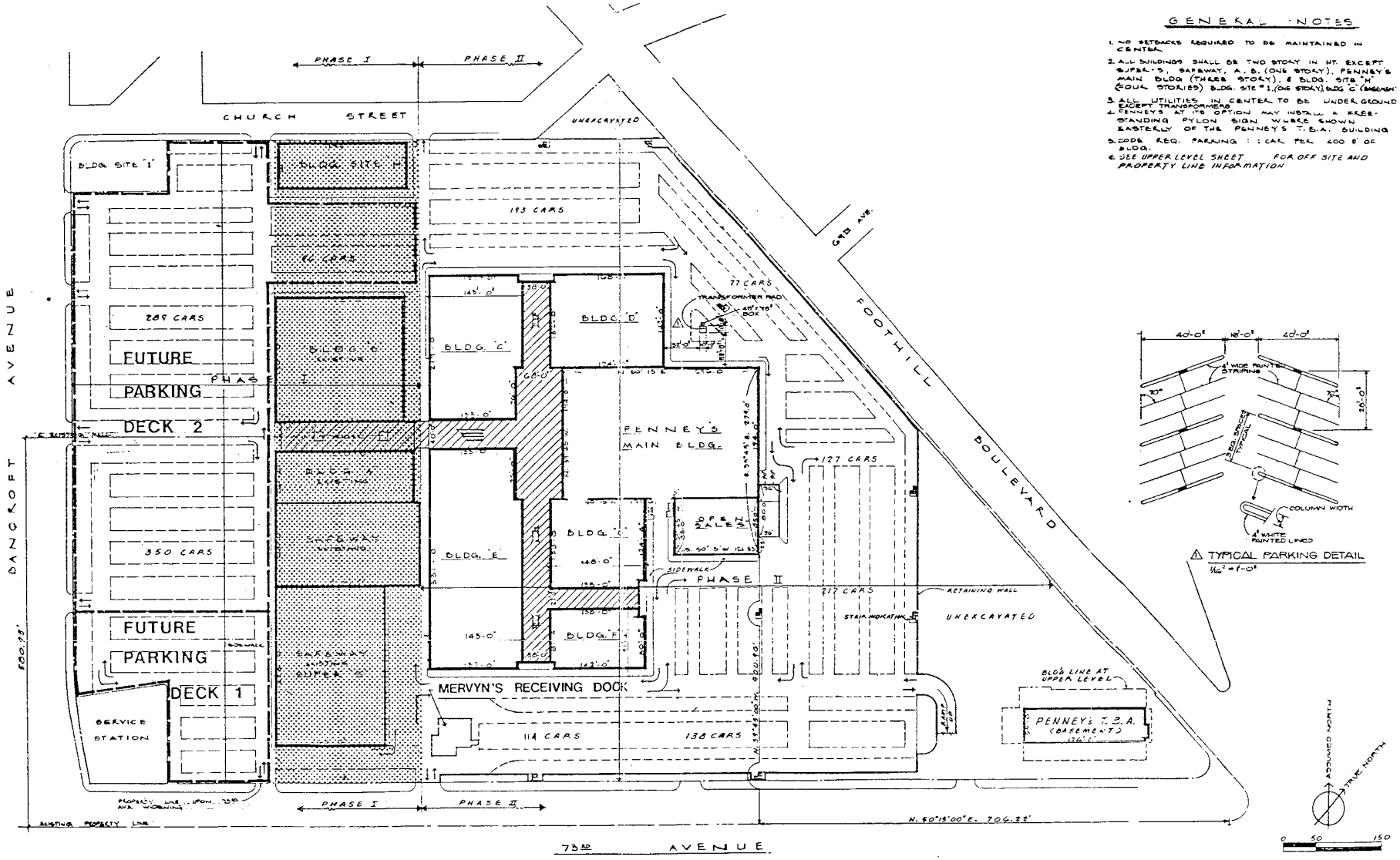
TBA Site
Eastmont Mall
Oakland, California

June 1991
443-090-043

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PLATE 3-4

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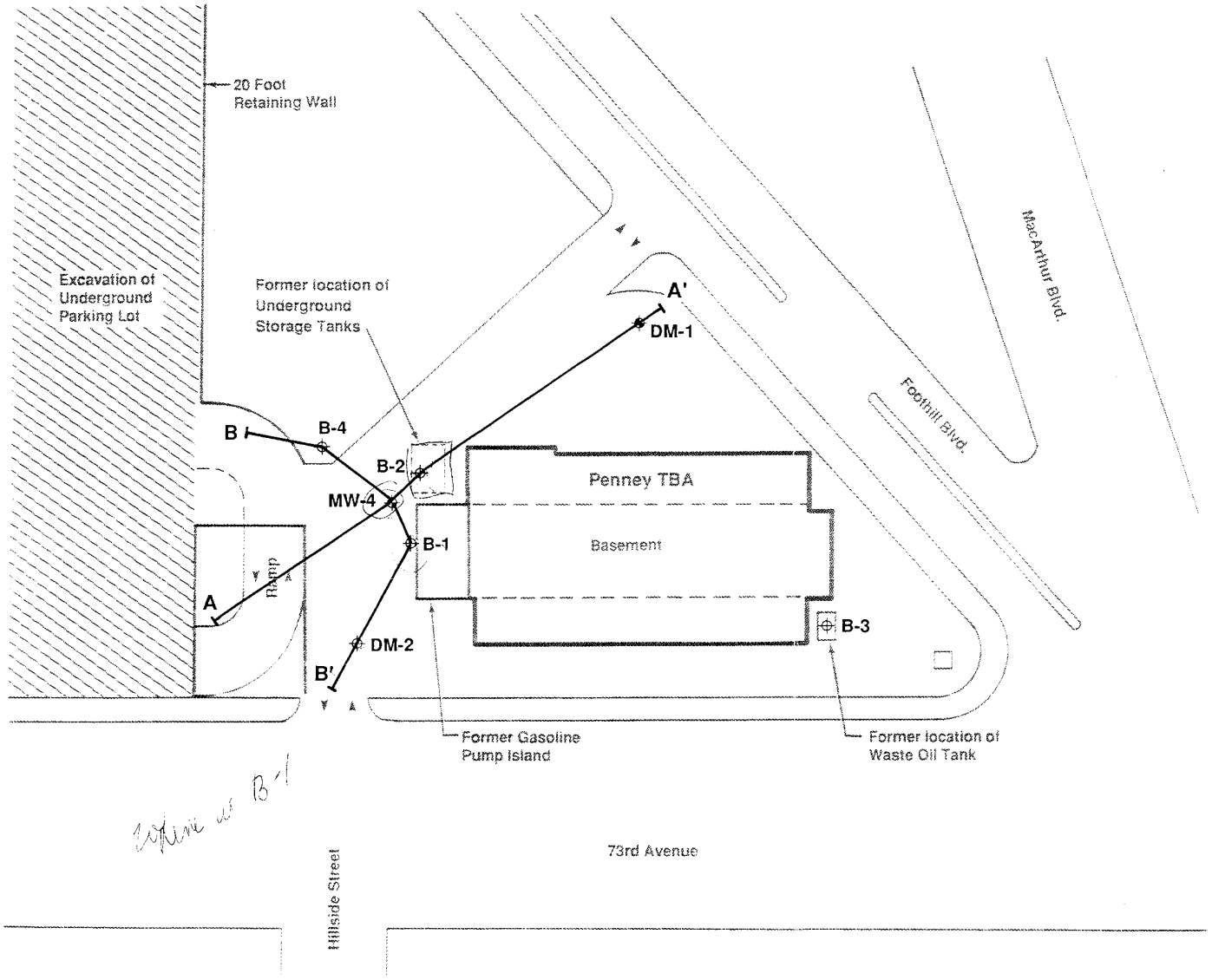


ARCHITECTURAL PLANS OF EASTMONT MALL
LOWER LEVEL

TBA Site
June 1991 — Eastmont Mall
443-090-043 — Oakland, California

DAMES & MOORE — PLATE 3-5

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KEY

- Monitoring Well
- Boring

N

0 100

Feet

SITE MAP SHOWING LOCATION OF CROSS SECTIONS

TBA Site
Eastmont Mall
Oakland, California

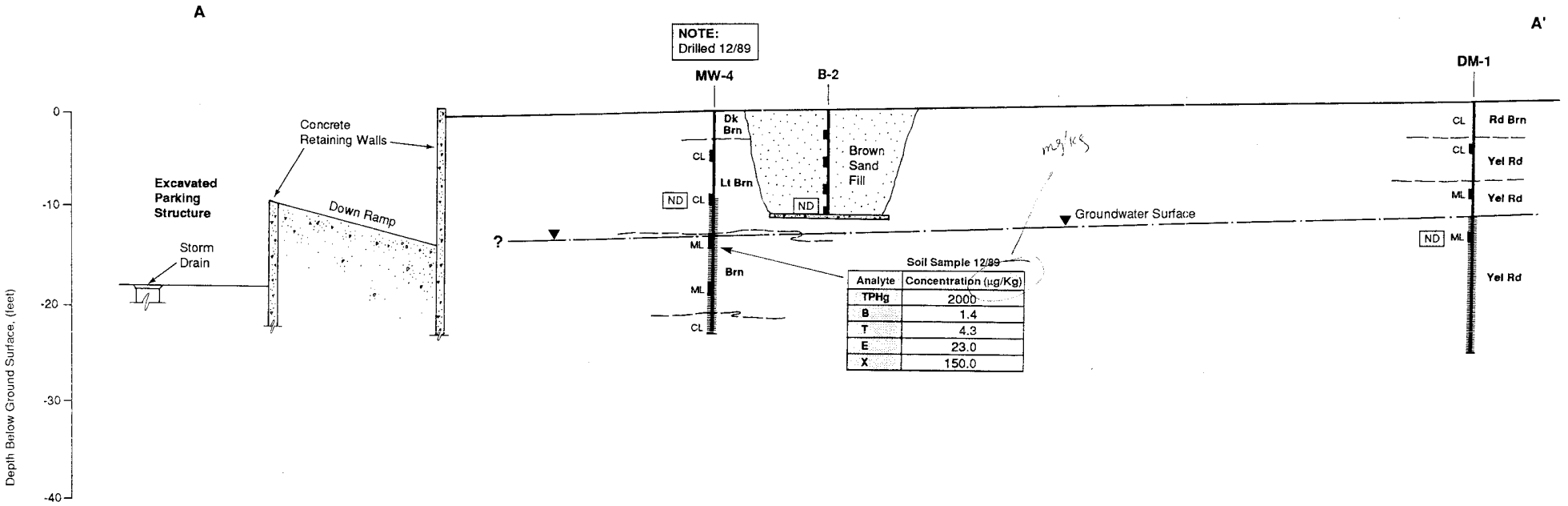
June 1991
443-090-043

DAMES & MOORE

PLATE 4-1

00000281.tif 58 / 543

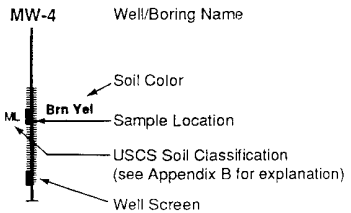
00000281.tif 59 / 543

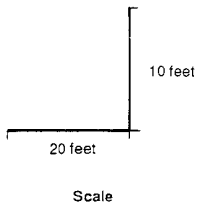


KEY

Constituents

TPHg	Total Petroleum Hydrocarbon as gasoline
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total Xylenes
ND	Soil sample analyzed by laboratory for TPH gasoline and BTEX. No constituents detected.





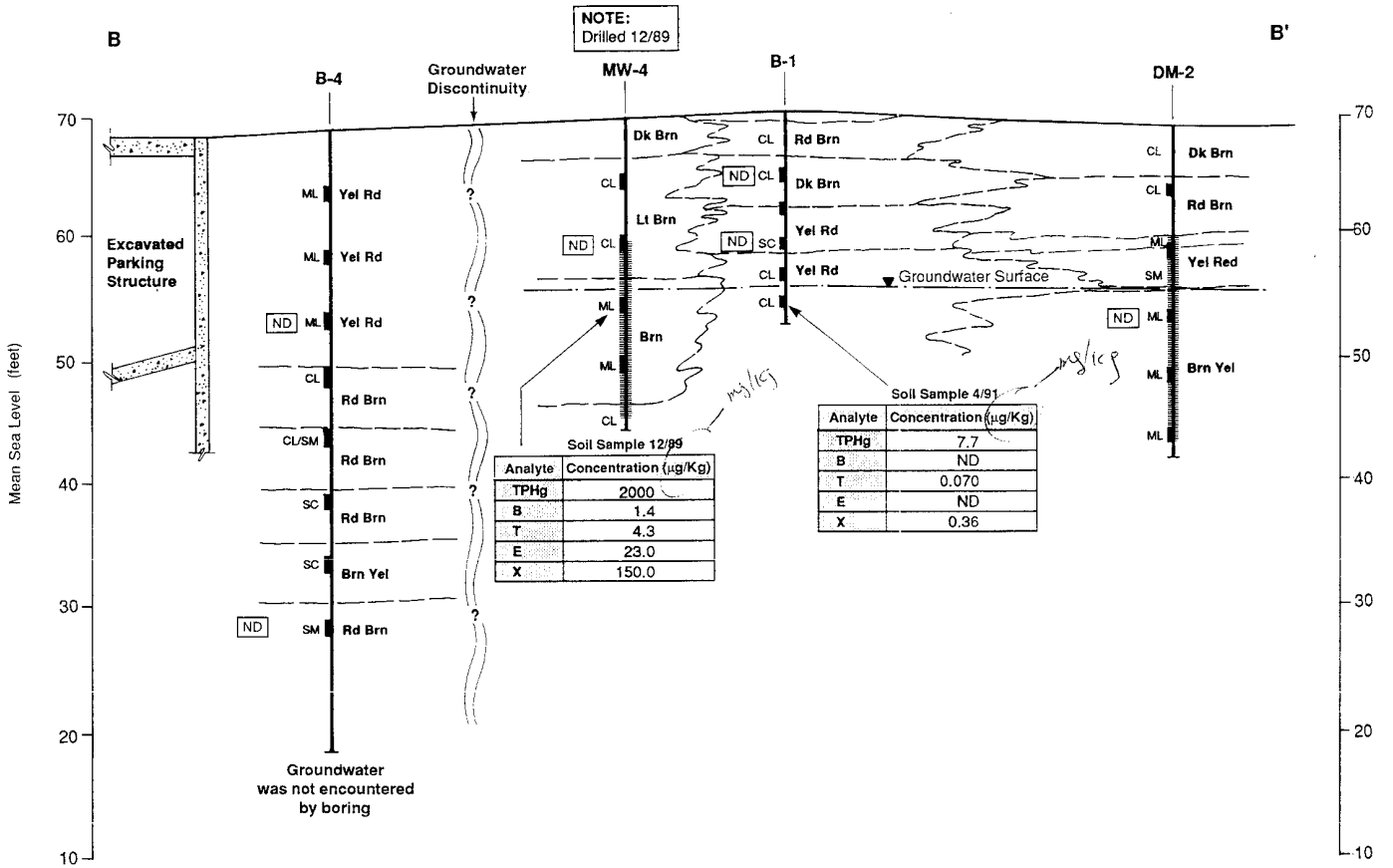
CROSS SECTION A-A'

TBA Site
Eastmont Mall
Oakland, California

June 1991
443-090-043

DAMES & MOORE

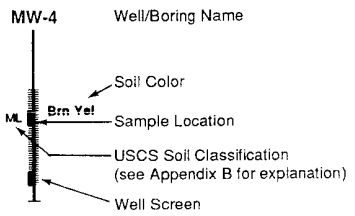
PLATE 5-1

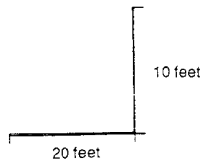


KEY

Constituents

TPHg	Total Petroleum Hydrocarbon as gasoline
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total Xylenes
ND	Soil sample analyzed by laboratory for TPH gasoline and BTEX. No constituents detected.





Scale

CROSS SECTION B-B'

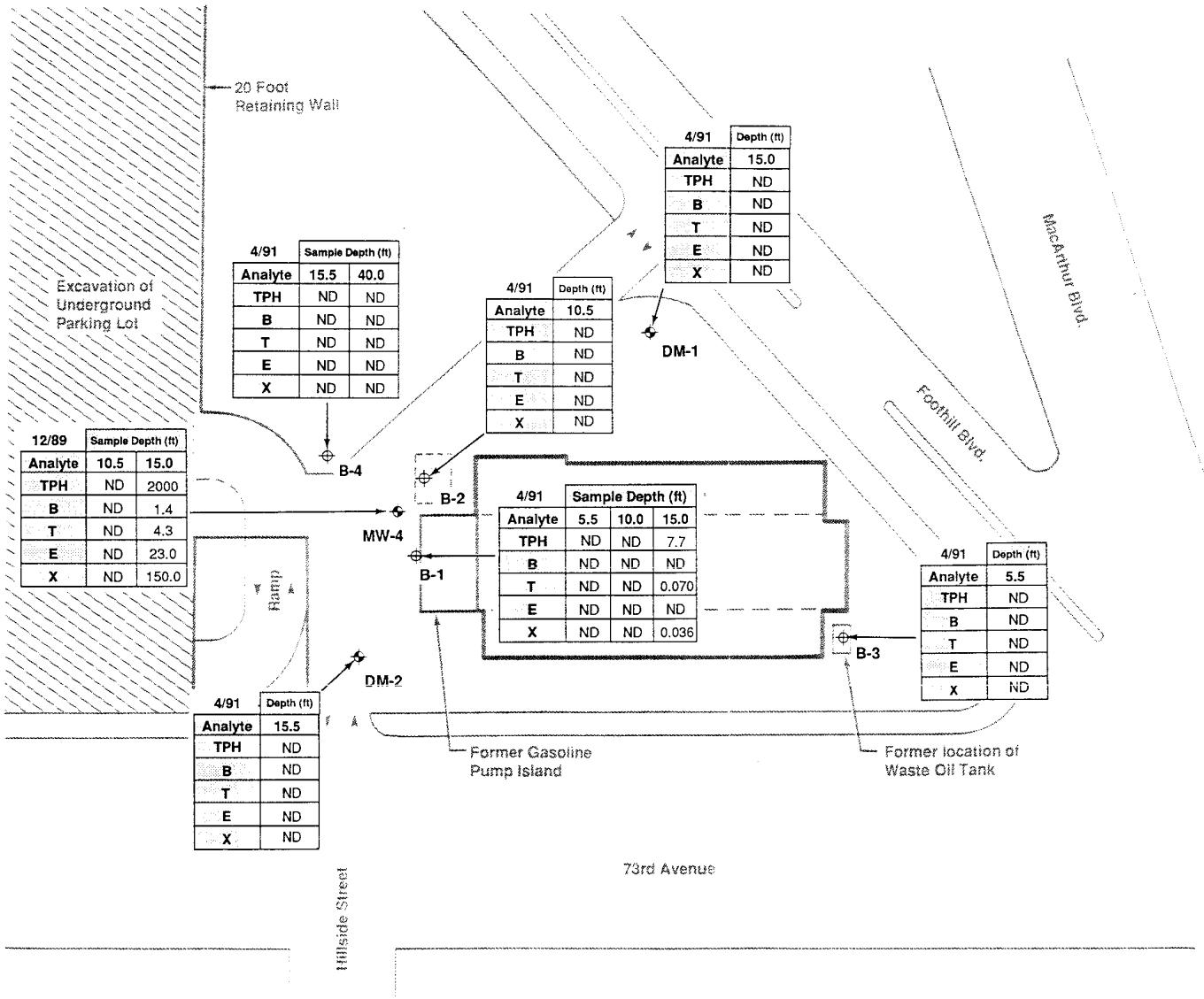
TBA Site
Eastmont Mall
Oakland, California

June 1991
443-090-043

DAMES & MOORE

PLATE 5-2

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4/91	Sample Depth (ft)	
Analyte	15.5	40.0
TPH	ND	ND
B	ND	ND
T	ND	ND
E	ND	ND
X	ND	ND

4/91	Depth (ft)
Analyte	10.5
TPH	ND
B	ND
T	ND
E	ND
X	ND

4/91	Depth (ft)
Analyte	15.0
TPH	ND
B	ND
T	ND
E	ND
X	ND

12/89	Sample Depth (ft)	
Analyte	10.5	15.0
TPH	ND	2000
B	ND	1.4
T	ND	4.3
E	ND	23.0
X	ND	150.0

4/91	Sample Depth (ft)		
Analyte	5.5	10.0	15.0
TPH	ND	ND	7.7
B	ND	ND	ND
T	ND	ND	0.070
E	ND	ND	ND
X	ND	ND	0.036

4/91	Depth (ft)
Analyte	5.5
TPH	ND
B	ND
T	ND
E	ND
X	ND

4/91	Depth (ft)
Analyte	15.5
TPH	ND
B	ND
T	ND
E	ND
X	ND

KEY

DM-5 Monitoring Well
B-1 Boring

Investigation

Mo./Year	Sample Depth (ft)		
Analyte	5.0	10.0	15.0
TPH	86	450	200
B	0.2	0.8	7.0
T	ND	30	24
E	0.9	10	ND
X	1.3	100	38

← Concentration (µg/Kg)
← Not Detected

CONSTITUENTS

TPH - TPH as Gasoline
B - Benzene
T - Toluene
E - Ethylbenzene
X - Xylene

N

0 100
Feet

RESULTS OF CHEMICAL ANALYSES OF SOILS
(1989 and 1991 Investigations)

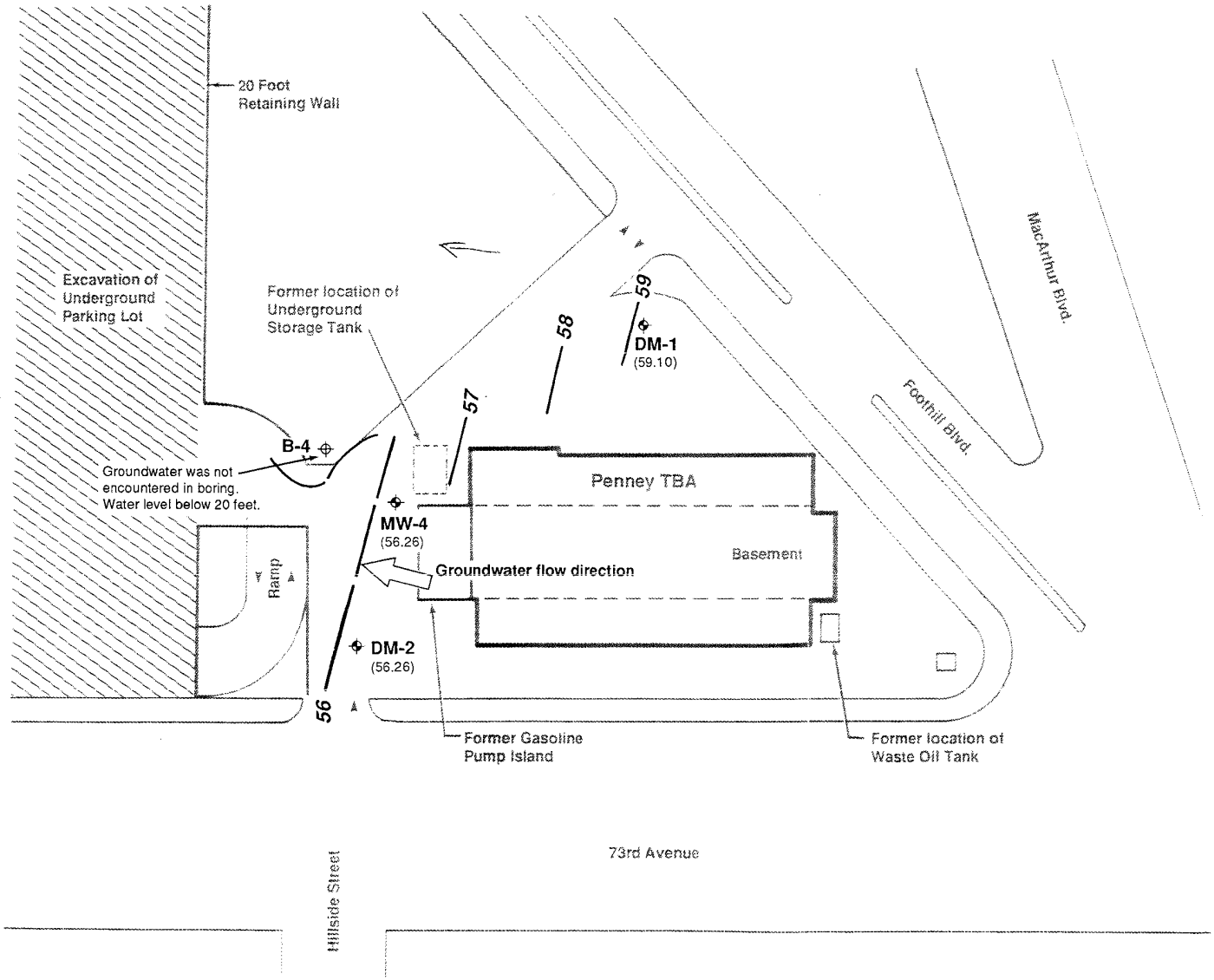
TBA Site
Eastmont Mall
Oakland, California

June 1991
443-090-043

DAMES & MOORE

PLATE 5-3

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KEY

(59.10)	Groundwater elevation above mean sea level (feet)
	Groundwater Contour
	Monitoring Well
	Boring
	Boundary of groundwater discontinuity

N

0 100

Feet

CONTOUR MAP OF THE GROUNDWATER TABLE / PERCHED AQUIFER

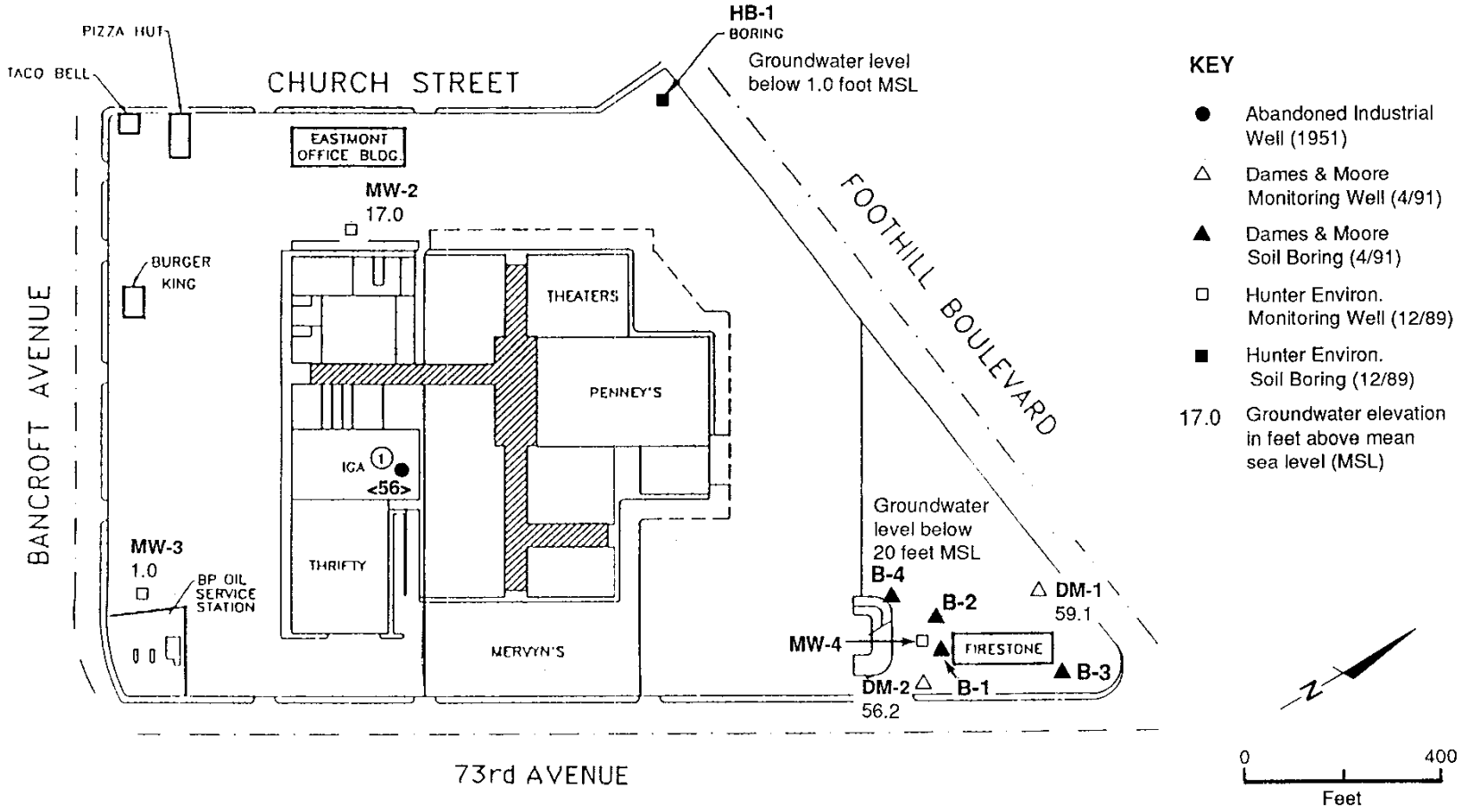
TBA Site
Eastmont Mall
Oakland, California

June 1991
443-090-043

DAMES & MOORE

PLATE 5-4

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NOTE:

1. ① Groundwater measured in industrial well at 96 feet below ground surface (bgs) or 56 feet below mean sea level. Perforated in lower aquifer from 90 to 393 feet bgs.
2. Plate modified from Hunter Environmental Services, December 20, 1989.

WATER LEVEL MEASUREMENTS AT THE EASTMONT MALL (1989, 1991 INVESTIGATIONS)

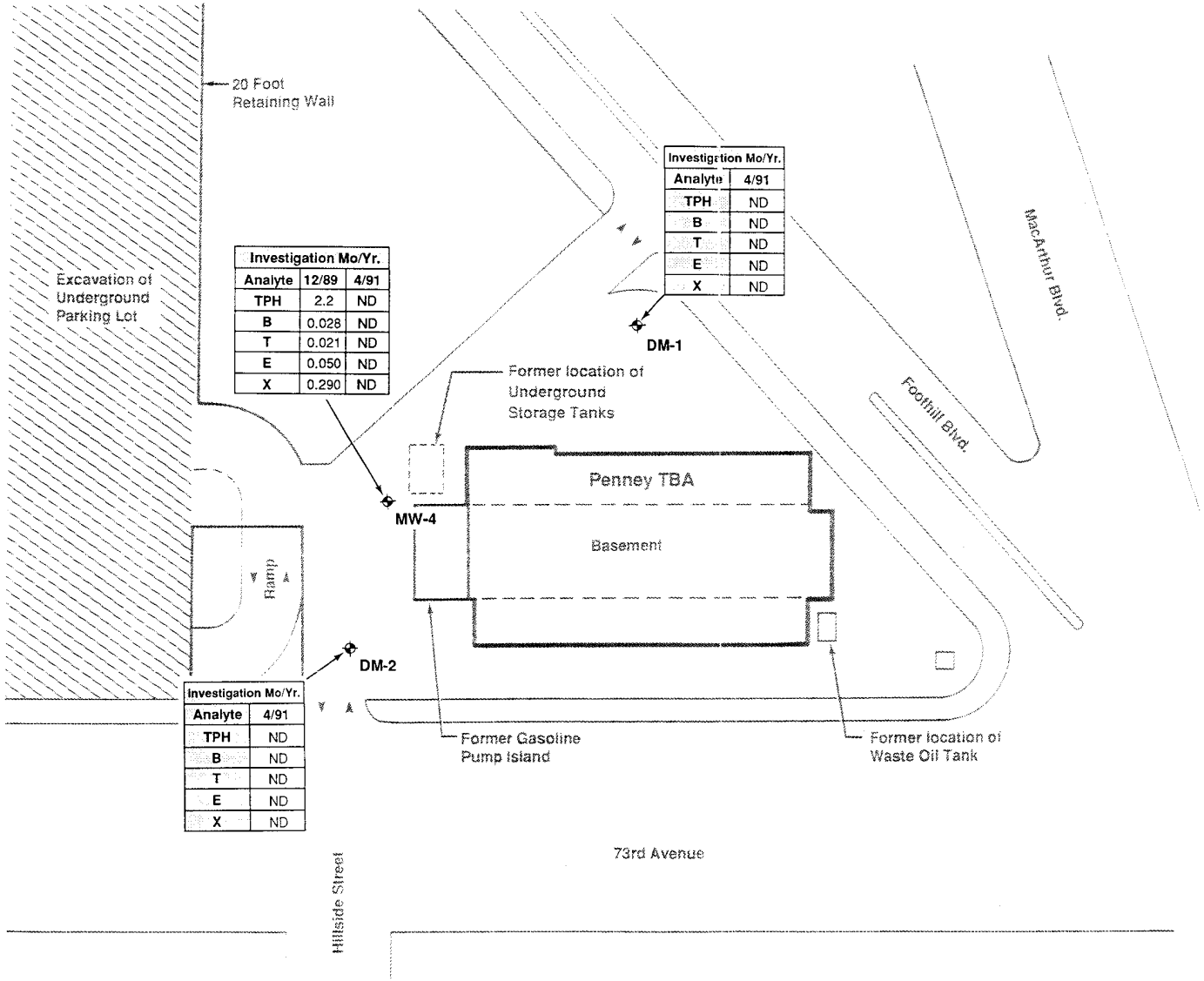
June 1991
443-090-043

TBA Site
Eastmont Mall
Oakland, California

DAMES & MOORE

PLATE 5-5

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KEY

W-3 Monitoring Well

Investigation Mo/Yr.		
Analyte	12/89	4/91
TPH	86	450
B	0.2	0.8
T	ND	30
E	0.9	ND
X	1.3	100

Concentration (µg/L)

Not Detected

CONSTITUENTS

TPH - TPH as Gasoline
B - Benzene
T - Toluene
E - Ethylbenzene
X - Xylene

N

0 100

Feet

RESULTS OF CHEMICAL ANALYSES OF GROUNDWATER (1989 and 1991 Investigations)

TBA Site
Eastmont Mall
Oakland, California

June 1991
443-090-043

DAMES & MOORE

PLATE 5-6

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Well Inventory Report

The information presented in the Well Inventory Report has been obtained mainly from Water Well Drillers Reports (DWR Form No. 188). The Alameda County Flood Control and Water Conservation District (ACFC & WCD) assumes no responsibility for the accuracy of the data presented.

Definitions and abbreviations for items listed in the Well Inventory Report are as follows:

WELL NUMBER - Wells are numbered according to their location in the rectangular system of the Public Land Survey. The part of the number preceding the slash indicates the township; the part following the slash indicates the range and section number; the letter following the section number indicates the 40-acre subdivision; and the final digit is a serial number for wells in each 40-acre subdivision.

DATE (MO/YR) - The month and year when drilling or boring was completed. A "?" indicates that the date is unknown.

SURFACE ELEV. (FT) - The surface elevation of the well, if known, in feet above mean sea level. A "0" designates an unknown elevation.

TOTAL WELL DEPTH (FT) - The depth of the well. This usually designates the completed well depth. If the well has a well log available on file, then the total drilled depth of the well is given. The Well Inventory Report does not show total depth data for geotechnical borings. This is because only one state well number is assigned to one boring at a site, and there usually are several borings of different depth.

DEPTH TO WATER (FT) - This category usually indicates the standing groundwater level in the well on the date of well completion. The "depth to first water encountered" is recorded in the Well Inventory Report when it is the only water level data reported on the Well Drillers Report.

DTW (MSL) - The elevation of the standing groundwater level in the well on the date of well completion (in feet) relative to Mean Sea Level. This is calculated by the equation: DTW (MSL) = SURFACE ELEV. (FT) - DEPTH TO WATER (FT). If the surface elevation is unknown (as indicated by a "0" in the SURFACE ELEV. column) a "0" will also appear in this column.

USE - The well use (or in the case of cathodic protection wells and geotechnical borings, the reason for the excavation) as indicated in the Well Drillers Report or data sheets. A plus sign (+) after the well use indicates a well in the current ACFC&WCD monitoring network.

ABN - Abandoned well. A well whose use has been permanently discontinued or which is in such a state of disrepair that no water can be produced. In the Well Inventory Report, this may include wells which are covered or capped but not properly destroyed.

DES - Destroyed well. A well that has been properly filled so that it cannot produce water nor act as a vertical conduit for the movement of groundwater.

DOM - Domestic well. A water well which is used to supply water for the domestic needs of an individual residence or systems of four or less service connections or "hook-ups".

INA - Inactive well. A well not routinely operating but capable of being made operable with a minimum effort. Also called a "standby well".

IND - Industrial well. A water well used to supply industry on an individual basis.

IRR - Irrigation well. A water well used to supply water only for irrigation or other agricultural purposes. In the Well Inventory Report, this category includes large capacity wells as well as small capacity wells for lawn irrigation.

MON - Monitoring or observation well. Wells constructed for the purpose of observing or monitoring groundwater conditions. (See "PIE" below).

MUN - Municipal well. A water well used to supply water for domestic purposes in systems subject to Chapter 7, Part 1, Division 5 of the California Health and Safety Code. Included, are wells supplying public water systems classified by the Department of Health Services. Also referred to as community water supply wells.

PIE - Piezometer. A piezometer is a well specially designated to measure the hydraulic head within a zone small enough to be considered essentially a point as contrasted with a well that reflects the average head of the aquifer for the screened interval.

STO - Stock. A water well used primarily for livestock.

TES - Test well and test hole. A test well is constructed for the purpose of obtaining the information needed to design a well prior to its construction. Such wells are not to be confused with "test holes" which are temporary in nature (i.e., uncased excavations whose purpose is the immediate determination of existing geologic and hydrologic conditions). Test wells are cased and can be converted to observation or monitor wells and, under certain circumstances, to production wells. In the inventory, "TES", includes both test wells and test holes.

CAT - Cathodic protection well. Any artifical excavation constructed by any method for the purpose of installing equipment or facilities for the protection from corrosion by electrochemical methods of metallic equipment (usually piping) in contact with the ground; commonly referred to as cathodic protection.

GEO - Geotechnical boring. A temporary boring made to determine certain engineering properties of soils. An asterisk (*) indicates that the state well number assigned to the boring represents more than one boring at a particular site.

"?" - Unidentified use. This indicates that the use of these water wells could not be determined from the available well data.

LOG - This category indicates the nature of the geologic record, or log, for the well or boring available in the ACFC & WCD files. Abbreviations are as follows:

D - well driller's log
G - geotechnical boring log
E - electric (resistivity) log or other subsurface geophysical logs.
? - no log available

WQ - This category indicates which wells have water quality data available in ACFC & WCD files. The numbers 1 through 9 signify the number of sets of water quality data available. A plus sign (+) indicates that 10 or more sets of data are available for that well. A "0" indicates that no water quality data is available.

WL - This category indicates which wells have water level data other than the data reported on the Well Drillers Reports. The numbers 1 through 9 signify the number of water level measurements available. A plus sign (+) indicates that 10 or more measurements are available for that well. A "0" indicates that no data is available.

YIELD (GPM) - The maximum pumping rate in gallons per minute that can be supplied by a well without lowering the water level in the well below the pump intake. This information is taken from pump test data recorded in the Well Drillers Reports. Some of the yield data indicates current production rates and does not reflect maximum yield values determined in a capacity test. A "0" indicates that the yield is unknown.

DIA (IN) - The diameter (in inches) of the main casing in a well. May also indicate the diameter of a hand-dug well. Diameter data is not recorded for geotechnical borings. A "0" indicates that the diameter is unknown.

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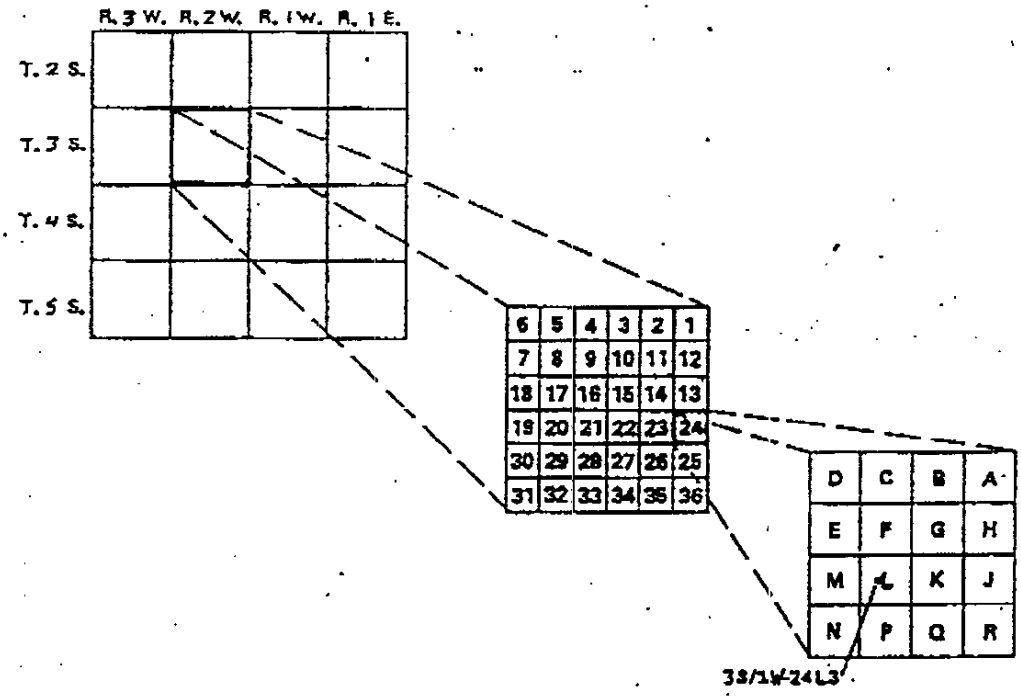
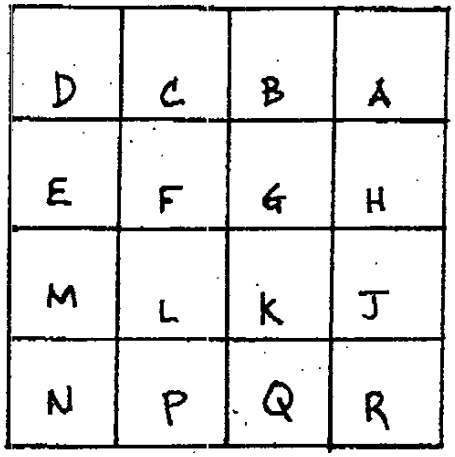


Figure 1: Well numbering system.


D C B A
E F G H
M L K J
N P Q R

ALAMEDA COUNTY -- BAY PLAIN GROUNDWATER STUDY -- WELL INVENTORY REPORT

WELL NUMBER	DATE (MO/YR)	SURFACE ELEV. (FT)	TOTAL WELL DEPTH (FT)	DEPTH TO WATER (FT)	DTW (MSL)	WELL USE	LOG	WQ	WL	YIELD (GPM)	DIA. (IN)
2S/3W 10C 1	?	C	0	83	0	ABN	?	0	1	C	6
2S/3W 10C 2	5/74	C	120	C	0	CAT	D	C	0	0	0
2S/3W 10G 1	?	93	440	55	0	IRR+	D	C	+	0	10
2S/3W 10J 1	12/69	C	25	13	0	TES	X	C	0	C	2
2S/3W 10K 1	12/69	C	35	20	0	TES	X	C	0	C	2
2S/3W 10L 1	8/77	C	50	C	0	CAT	D	C	0	C	0
2S/3W 10L 2	11/90	0	27	15	0	MON	X	0	0	0	2
2S/3W 10L 3	11/90	0	32	18	0	MON	X	C	0	0	2
2S/3W 10L 4	11/90	C	27	C	0	MON	X	0	0	C	2
2S/3W 10L 5	11/90	C	27	13	0	MON	X	C	0	C	2
2S/3W 10P 1	6/74	C	120	C	0	CAT	D	C	0	C	0
2S/3W 10Q 1	3/51	60	400	96	-36	ABN	D	C	0	170	12
2S/3W 10Q 2	6/81	C	65	C	0	CAT	D	C	0	C	0
2S/3W 10Q 3	12/89	C	45	34	0	TES	X	0	0	0	2
2S/3W 10R 1	5/74	C	120	C	0	CAT	D	C	0	0	0
2S/3W 11E 1	1/78	C	27	21	0	IRR	D	C	0	5	6
2S/3W 11J	12/69	C	7	C	0	BOR*	X	C	0	C	C
2S/3W 11J 1	3/77	C	65	C	0	CAT	D	C	0	C	0
2S/3W 11J 2	3/77	C	65	C	0	CAT	D	C	0	C	0
2S/3W 11J 3	7/78	C	108	7	0	IRR	D	C	0	C	6
2S/3W 14B 1	?	C	533	C	0	MUN	D	C	0	C	12
2S/3W 14B 2	1/76	C	120	C	0	CAT	D	C	0	C	0
2S/3W 14D 1	8/76	C	120	C	0	CAT	D	C	0	C	0
2S/3W 14F 1	7/82	C	65	C	0	CAT	D	C	0	C	0
2S/3W 14J80	1/76	C	120	C	0	CAT	D	C	0	C	0
2S/3W 14N 1	6/77	C	60	25	0	DOM	D	C	0	C	6
2S/3W 14N 2	10/77	C	62	26	0	IRR	D	C	0	C	8
2S/3W 14Q 1	5/76	C	120	C	0	CAT	D	C	0	C	0
2S/3W 15C 1	2/76	C	65	C	0	CAT	D	C	0	C	0
2S/3W 15F 1	?	C	22	12	0	ABN	?	C	0	C	8
2S/3W 15G 1	1/74	C	120	C	0	CAT	D	C	0	C	0
2S/3W 15K	03/88	26	42	13	13	BOR	G	C	0	C	0
2S/3W 15K 1	5/77	C	35	2	0	IRR	D	C	0	C	8
2S/3W 15K 2	5/87	C	25	13	0	MON	D			C	7
2S/3W 15K 3	5/87	C	25	12	0	MON	D			C	7
2S/3W 15K 4	07/88	25	23	16	0	MON	G	C	0	C	2
2S/3W 15K 5	07/88	24	18	14	0	MON	G	C	0	C	2
2S/3W 15K 6	07/88	22	18	11	0	MON	G	C	0	C	2
2S/3W 15K 7	07/88	22	18	11	0	MON	G	C	0	C	2
2S/3W 15N 1	/45	C	400	69	0	IND	D	C	1	C	12
2S/3W 15N 2	/41	C	128	78	0	IRR	?	C	1	C	8
2S/3W 15P 1	/25	C	90	8	C	IRR	?	C	1	C	6
2S/3W 15P 2	5/73	C	120	C	0	CAT	D	C	0	0	0

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ALAMEDA COUNTY--GRCLNDWATER WELLS--LOCATIONS

WELL NUMBER	WELL OWNER	WELL ADDRESS	CITY	PHONE NUMBER	DATE OF LAST UPDATE
2S/3W 10C 1	MILLS CCLLEGE	5000 MACARTHER BLVD	O	0	12/13/1984
2S/3W 10C 2	PG&E	MCARTHUR BLVD & 61TH ST	O	0	7/30/1984
2S/3W 10G 1	EVERGREEN CEMEMTARY	64TH & MACARTHER	O	0	7/30/1984
2S/3W 10J 1	TOPA SAVINGS & LCANS	EASTMONT MALL	OAK	0	7/13/1990
2S/3W 10K 1	TOPA SAVINGS & LCANS	EASTMONT MALL	OAK	0	7/13/1990
2S/3W 10L 1	EXXON OIL USA	BANCROFT & 68TH	O	0	7/30/1984
2S/3W 10L 2	OAKLAND COMMUNITY HOUSING	6455 FOOTHILL BLVD.	OAK	0	2/27/1991
2S/3W 10L 3	OAKLAND COMMUNITY HOUSING	6455 FOOTHILL BLVD.	OAK	0	2/27/1991
2S/3W 10L 4	OAKLAND COMMUNITY HOUSING	6455 FOOTHILL BLVD.	OAK	0	2/27/1991
2S/3W 10L 5	OAKLAND COMMUNITY HOUSING	6455 FOOTHILL BLVD.	OAK	0	2/27/1991
2S/3W 10P 1	PG&E	CHURCH ST	O	0	7/30/1984
2S/3W 10Q 1	CHEVROLET-OAK. DIV.	FOOTHILL & 69TH	C	0	12/13/1984
2S/3W 10Q 2	EBMUD	73RD & GARFIELD	O	0	7/30/1984
2S/3W 10Q 3	TOPA SAVINGS & LOANS	EASTMONT MALL	OAK	0	7/13/1990
2S/3W 10R 1	PG&E	HILLSIDE & 76TH AVE	O	0	7/30/1984
2S/3W 11E 1	CHAE SAN YIM	3971 BURCKHALTER AVE	O	0	12/13/1984
2S/3W 11J	EXXON CORPORATION	8008 MOUNTAIN BLVD.	OAK	0	7/16/1990
2S/3W 11J 1	PROGRESSIVE ELEC.	SHONE & FONTAINE	O	0	7/30/1984
2S/3W 11J 2	PROGRESSIVE ELE.	HOLMES & FONTIANE	O	0	7/30/1984
2S/3W 11J 3	AL PONTE	7972 MT. BLVD	SLZ	0	7/30/1984
2S/3W 14B 1	UNION WATER CO.	1201 E 12TH ST	O	0	7/30/1984
2S/3W 14E 2	PG&E	NEY & EL MONTE AVE	C	0	7/30/1984
2S/3W 14D 1	PG&E	DOWLING & 80TH AVE	O	0	7/30/1984
2S/3W 14M 1	EBMUD	BLANDON RD	C	0	7/30/1984
2S/3W 14J80	PG&E	OAKNOLL & CASTLEWOOD	O	0	7/30/1984
2S/3W 14N 1	HUEKO MICLS	1840 90TH AVE	C	0	7/30/1984
2S/3W 14N 2	MR. GRUMBS	1910 90TH AVE	O	0	7/30/1984
2S/3W 14Q 1	PG&E	94TH & HILLSIDE	O	0	7/30/1984
2S/3W 15C 1	EBMUD	73TH AVE W/O FRESNO ST	C	0	7/30/1984
2S/3W 15F 1	MRS. HARTMAN	1477 76TH AVE	C	0	7/30/1984
2S/3W 15G 1	PG&E	PLYMOUTH & 80TH AVE	O	0	7/30/1984
2S/3W 15K	KAISER ENGINEERS	8200 E. 14TH ST	O	0	8/ 8/1988
2S/3W 15K 1	ALPHONSE PERKINS	1431 82TH AVE	O	0	1/15/1985
2S/3W 15K 2	CROSBY & OVERTON	82ND AVE. & 14TH ST.	OAK	0	2/ 3/1988
2S/3W 15K 3	CROSBY & OVERTON	82ND AVE. & E. 14TH ST.	OAK	0	2/ 3/1988
2S/3W 15K 4	E. OAK. YOUTH DEVE. CEN.	CRN OF E. 82ND & E. 14TH	OAK	0	12/16/1988
2S/3W 15K 5	E. OAK. YOUTH DEVE. CEN.	CRN OF E. 82ND & E. 14TH	OAK	0	12/16/1988
2S/3W 15K 6	E. OAK. YOUTH DEVE. CEN.	CRN OF E. 82ND & E. 14TH	OAK	0	12/16/1988
2S/3W 15K 7	E. OAK. YOUTH DEVE. CEN.	CRN OF E. 82ND & E. 14TH	OAK	0	12/16/1988
2S/3W 15N 1	VINCENTSMARY SCONZA-OWNR	919 81ST ST	C	0	7/30/1984
2S/3W 15N 2	A.R. COMPAGLIA	1001 81ST AVE	C	0	7/30/1984
2S/3W 15P 1	MANUEL JESUS	1218 82ND ST	O	0	7/30/1984
2S/3W 15P 2	PG&E	E ST S/E 86TH	O	0	7/30/1984

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6/10/91 PAGE 1

ALAMEDA COUNTY -- BAY PLAIN GROUNDWATER STUDY -- WELL INVENTORY REPORT

WELL NUMBER	DATE (MO/YR)	SURFACE ELEV. (FT)	TOTAL WELL DEPTH (FT)	DEPTH TO WATER (FT)	DTW (MSL)	WELL USE	LOG	WQ	WL	YIELD (GPM)	DIA. (IN)
2S/3W 9C 1	7/76	C	120	0	0	CAT	D	C	0	C	0
2S/3W 9D	3/86	C	30	26	0	BOR	G	0	0	0	0
2S/3W 9D 1	6/75	C	120	0	0	CAT	D	0	0	0	0
2S/3W 9K 1	10/77	C	102	61	0	IRR	D	0	0	C	4
2S/3W 9N 1	2/85	13	30	0	0	GEO	G	0	0	C	6
2S/3W 9N 2	C1/90	C	21	10	0	MON	X	0	0	0	2
2S/3W 9N 3	C1/90	C	21	10	0	MON	X	0	0	C	2
2S/3W 9N 3	C3/90	C	0	0	0	DES	X	0	0	0	2
2S/3W 9N 4	C1/90	C	21	10	0	MON	X	C	0	C	2
2S/3W 9N 5	C1/90	C	24	10	0	MON	X	C	0	C	2
2S/3W 9N 6	C2/90	C	21	10	0	MON	X	0	0	C	2
2S/3W 9P 1	/41	C	204	79	0	ABN	?	0	0	C	12
2S/3W 9P 2	6/76	C	120	0	0	CAT	D	0	0	0	0
2S/3W 9R 1	7/76	C	120	0	0	CAT	D	1	0	C	0
2S/3W 16A 1	C6/88	95	20	10	0	MON	G	C	0	C	2
2S/3W 16A 1	5/88	C	25	C	0	DES	G	C	0	C	2
2S/3W 16A 2	C6/88	95	20	11	0	MONM	G	0	0	C	2
2S/3W 16A 2	5/88	C	25	C	0	DES	G	C	0	C	2
2S/3W 16A 3	C6/88	99	26	10	0	MON	G	0	0	C	2
2S/3W 16A 3	5/88	C	25	C	0	DES	G	0	0	C	2
2S/3W 16C 1	5/76	C	120	C	0	CAT	D	C	0	C	0
2S/3W 16D	4/87	C	12	8	C	BOR	G	C	0	C	9
2S/3W 16D	C3/88	C	12	10	0	DES	G	C	0	C	0
2S/3W 16D	4/87	C	5	0	0	BOR	G	C	0	C	2
2S/3W 16D 1	/35	C	1,025	79	0	IND	N	C	1	250	18
2S/3W 16D 2	6/76	C	120	C	0	CAT	D	0	0	C	0
2S/3W 16D 3	C1/87	C	15	7	0	TES	D	0	0	C	2
2S/3W 16D 4	C1/87	C	22	13	0	MON	D	C	0	C	2
2S/3W 16D 5	C1/87	C	15	5	0	MON	D	C	0	C	2
2S/3W 16D 6	C3/87	C	15	6	0	MON	D	C	0	C	2
2S/3W 16D 7	3/87	C	16	5	0	MON	G			C	4
2S/3W 16D 8	3/87	C	19	4	0	MON	G			C	4
2S/3W 16D 9	3/87	C	19	3	0	MON	G			C	4
2S/3W 16D10	8/88	C	20	11	0	TES	G	C	0	C	2
2S/3W 16D11	8/88	C	20	11	0	TES	G	C	0	C	2
2S/3W 16D12	8/88	C	15	10	0	TES	G	C	0	C	2
2S/3W 16D13	C3/90	C	0	C	0	DES	X	C	0	C	0
2S/3W 16F 1	?	C	300	94	C	IND	?	C	1	C	8
2S/3W 16F 2	/30	C	610	76	0	DES	?	C	1	C	12
2S/3W 16G 1	?	C	71	12	0	IND	0	C	0	C	0
2S/3W 16L	C4/90	C	9	9	C	ECR	X	C	0	C	2
2S/3W 16L 1	C4/90	C	21	14	0	MON	X	C	0	C	2
2S/3W 16L 2	C4/90	C	23	13	0	MON	X	0	0	C	2
2S/3W 16L 3	C4/90	C	22	11	0	MON	X	C	0	C	2
2S/3W 16L 4	8/90	C	11	5	0	MON	X	C	0	C	2
2S/3W 16L 5	8/90	C	11	6	C	MON	X	C	0	C	2
2S/3W 16L 6	8/90	C	11	C	C	MON	X	0	0	C	2
2S/3W 16R	C4/89	C	0	C	0	BOR*	G	C	0	0	6

ALAMEDA COUNTY -- BAY PLAIN GROUNDWATER STUDY -- WELL INVENTORY REPORT

WELL NUMBER	DATE (MO/YR)	SURFACE ELEV. (FT)	TOTAL WELL DEPTH (FT)	DEPTH TO WATER (FT)	DTW (MSL)	WELL USE	LOG	NO	WL	YIELD (GPM)	DIA. (IN)
2S/3W 16M 1	11/86	C	31	5	0	MON	G			0	0
2S/3W 16M 2	11/86	C	27	5	0	MON	G			0	0
2S/3W 16M 3	11/86	C	36	10	0	MON	G			0	0
2S/3W 16P 1	9/90	C	74	16	0	MON	X	0	0	0	4
2S/3W 16P 2	9/90	C	100	18	0	MON	X	0	0	0	4
2S/3W 16P 3	9/90	C	95	18	0	MON	X	0	0	0	4
2S/3W 16P 4	9/90	C	102	17	0	MON	X	0	0	0	4
2S/3W 16P 5	9/90	C	78	19	0	MON	X	0	0	0	4
2S/3W 16P 6	9/90	C	83	14	0	MON	X	0	0	0	4
2S/3W 16P 7	9/90	C	75	14	0	MON	X	0	0	0	1
2S/3W 16P 8	9/90	C	74	17	0	MON	X	0	0	0	1
2S/3W 16P 9	9/90	C	83	15	0	MON	X	0	0	0	4
2S/3W 16P10	9/90	C	72	22	0	MON	X	0	0	0	4
2S/3W 16P11	9/90	C	98	19	0	MON	X	0	0	0	4
2S/3W 16R 1	3/77	C	510	83	0	IND+	DE	0	0	1,000	14
2S/3W 16R 2	01/89	C	0	11	0	MON	D	Y	0	C	8
2S/3W 16R-2	01/89	C	26	11	0	MON	D	Y	0	C	8
2S/3W 16R 3	8/89	7	19	7	0	TES	X	0	0	C	2
2S/3W 16R 4	8/89	7	23	7	0	TES	X	C	0	0	2
2S/3W 16R-5	8/89	6	25	8	-2	TES	X	0	0	C	2

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ALAMEDA COUNTY--GROUNDWATER WELLS--LOCATIONS

WELL NUMBER	WELL OWNER	WELL ADDRESS	CITY	PHONE NUMBER	DATE OF LAST UPDATE
2S/3W 9C 1	PG&E	MONTICELLO & FAIRFAX	0	0	7/30/1984
2S/3W 9D	COUNTY OF ALAMEDA	COURTLAND AVE/TYRELL ST	0	0	7/22/1986
2S/3W 9D 1	PG&E	S/S VICKSBURG	0	0	7/30/1984
2S/3W 9K 1	FRANK ELAN	2232 SEMINARY AVE	0	0	7/30/1984
2S/3W 9N 1	GENERAL ELECTRIC	5461 E. 14TH ST	0	4366900	3/16/1985
2S/3W 9N 2	QUAKER OATS COMPANY	5625 EAST 14TH STREET	OAK	0	6/27/1990
2S/3W 9N 3	QUAKER OATS COMPANY	5625 EAST 14TH STREET	OAK	0	6/27/1990
2S/3W 9N 3	QUAKER OATS COMPANY	5625 EAST 14TH STREET	OAK	0	7/ 3/1990
2S/3W 9N 4	QUAKER OATS COMPANY	5625 EAST 14TH STREET	OAK	0	6/27/1990
2S/3W 9N 5	QUAKER OATS COMPANY	5625 EAST 14TH STREET	OAK	0	6/27/1990
2S/3W 9N 6	QUAKER OATS COMPANY	5625 EAST 14TH STREET	OAK	0	7/ 3/1990
2S/3W 9P 1	SAFEWAY STORE	5725 E 14TH ST	0	0	7/30/1984
2S/3W 9P 2	PG&E	55TH & E 15TH ST	0	0	7/30/1984
2S/3W 9R 1	PG&E	62ND AVE. & HILTON	0	0	7/30/1984
2S/3W 16A 1	TEXACO STA #6248800C220	6630 EAST 14TH ST	OAK	0	12/16/1988
2S/3W 16A 2	TEXACO STA #6248800C220	6630 EAST 14TH ST	OAK	0	12/16/1988
2S/3W 16A 3	TEXACO STA #6248800C220	6630 EAST 14TH ST	OAK	0	12/16/1988
2S/3W 16C 1	PG&E	62ND AVE S/E 14TH ST	0	0	7/30/1984
2S/3W 16D	AC TRANSIT	1100 SEMINARY AVE	OAK	0	12/16/1988
2S/3W 16D	CEPHUS & JESSIE M BAYLIS	1154 57TH AVE.	OAK	0	6/28/1989
2S/3W 16D 1	STOKELY-VAN CAMPS	1175 57TH AVE.	0	2615800	7/30/1984
2S/3W 16D 2	PG&E	TEVIS ST W/O 62ND ST	0	0	8/ 2/1984
2S/3W 16D 3	A/C TRANSIT	1100 SEMINARY AVE	0	0	3/ 6/1987
2S/3W 16D 4	A/C TRANSIT	1100 SEMINARY AVE	0	0	3/ 6/1987
2S/3W 16D 5	A/C TRANSIT	1100 SEMINARY AVE	0	0	3/ 6/1987
2S/3W 16D 6	A/C TRANSIT	1100 SEMINARY AVE	0	0	4/15/1987
2S/3W 16D 7	A.C. TRANSIT	1100 SEMINARY AVE.	OAK	0	2/ 8/1988
2S/3W 16D 8	A.C. TRANSIT	1100 SEMINARY AVE.	OAK	0	2/ 8/1988
2S/3W 16D 9	A.C. TRANSIT	1100 SEMINARY AVE.	OAK	0	2/ 8/1988
2S/3W 16D10	CEPHUS & JESSIE M BAYLIS	1154 57TH AVE.	OAK	0	6/28/1989
2S/3W 16D11	CEPHUS & JESSIE M BAYLIS	1154 57TH AVE.	OAK	0	6/28/1989
2S/3W 16D12	CEPHUS & JESSIE M BAYLIS	1154 57TH AVE.	OAK	0	6/28/1989
2S/3W 16D13	QUAKER OATS COMPANY	1201 57TH AVENUE	OAK	0	7/30/1990
2S/3W 16F 1	K.D. COMPANY	6235 TEVIS ST	0	0	7/30/1984
2S/3W 16F 2	FRUITVALE CANNERY	905 66TH AV	0	0	7/30/1984
2S/3W 16G 1	GENERAL ELECTRIC	1034 66TH AV	0	0	7/30/1984
2S/3W 16L	UNOCAL S/S 43135	845-66TH AVE	OAK	0	7/31/1990
2S/3W 16L 1	UNOCAL S/S 43135	845-66TH AVE	OAK	0	7/31/1990
2S/3W 16L 2	UNOCAL S/S 43135	845-66TH AVENUE	OAK	0	7/31/1990
2S/3W 16L 3	UNOCAL S/S 43135	845-66TH AVENUE	OAK	0	7/31/1990
2S/3W 16L 4	7-UP BOTTLING COMPANY	6505 SAN LEANDRO STREET	OAK	0	1/15/1991
2S/3W 16L 5	7-UP BOTTLING COMPANY	6505 SAN LEANDRO STREET	OAK	0	1/15/1991
2S/3W 16L 6	7-UP BOTTLING COMPANY	6505 SAN LEANDRO STREET	OAK	0	1/15/1991
2S/3W 16M	CONSOLIDATED FREIGHTWAYS	6345 COLISEUM WAY	OAK	0	1/22/1990
2S/3W 16M 1	MCGUIRE & NESTER	796 66TH AVE.	OAK	0	2/ 3/1988
2S/3W 16M 2	MCGUIRE & NESTER	796 66TH AVE	OAK	0	2/ 3/1988
2S/3W 16M 3	MCGUIRE & NESTER	796 66TH AVE	OAK	0	2/ 3/1988
2S/3W 16P 1	OAKLAND COLISEUM	NIMITZ FWY & HEGENBURGER	OAK	0	1/15/1991

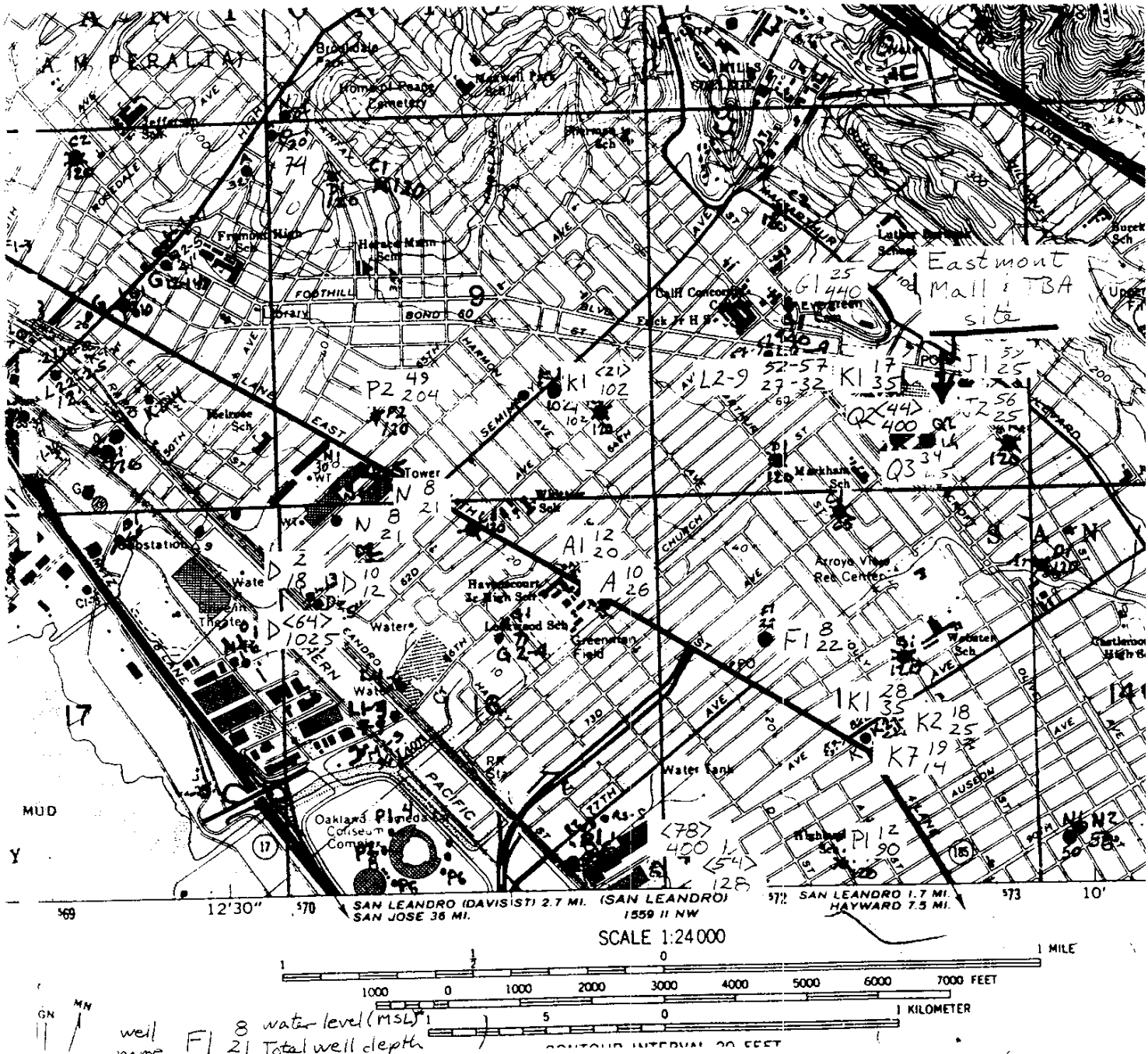
JUN 10 '91 13:05 FROM ALAMEDA COUNTY PWA PAGE.008

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ALAMEDA COUNTY--GROUNDWATER WELLS--LOCATIONS

WELL NUMBER	WELL OWNER	WELL ADDRESS	CITY	PHONE NUMBER	DATE OF LAST UPDATE
2S/3W 16P 2	OAKLAND COLISEUM	NIMITZ FWY. & HEGENBURGER	OAK	0	1/15/1991
2S/3W 16R 3	OAKLAND COLISEUM	NIMITZ FWY. & HEGENBURGER	OAK	0	1/15/1991
2S/3W 16P 4	OAKLAND COLISEUM	NIMITZ FWY. & HEGENBURGER	OAK	0	1/15/1991
2S/3W 16P 5	OAKLAND COLISEUM	NIMITZ FWY. & HEGENBURGER	OAK	0	1/15/1991
2S/3W 16P 6	OAKLAND COLISEUM	NIMITZ FWY. & HEGENBURGER	OAK	0	1/15/1991
2S/3W 16R 7	OAKLAND COLISEUM	NIMITZ FWY. & HEGENBURGER	OAK	0	1/15/1991
2S/3W 16P 8	OAKLAND COLISEUM	NIMITZ FWY. & HEGENBURGER	OAK	0	1/15/1991
2S/3W 16R 9	OAKLAND COLISEUM	NIMITZ FWY. & HEGENBURGER	OAK	0	1/15/1991
2S/3W 16P10	OAKLAND COLISEUM	NIMITZ FWY. & HEGENBURGER	OAK	0	1/15/1991
2S/3W 16P11	OAKLAND COLISEUM	NIMITZ FWY. & HEGENBURGER	OAK	0	1/15/1991
2S/3W 16R 1	AMER. BRASSIRON FOUNDRY	7825 SAN LEANDRO ST	SLZ	0	7/30/1984
2S/3W 16R 2	COUNTY RECYC. SVC.	800 77 AV.	OAK	0	6/15/1989
2S/3W 16R 3	CHIP & STEAK (VAO CHENEY)	958 77TH AVENUE	OAK	0	5/30/1990
2S/3W 16R 4	CHIP & STEAK (VAO CHENEY)	958 77TH STREET	OAK	0	5/30/1990
2S/3W 16R 5	CHIP & STEAK (VAO CHENEY)	958 77TH AVENUE	OAK	0	5/30/1990

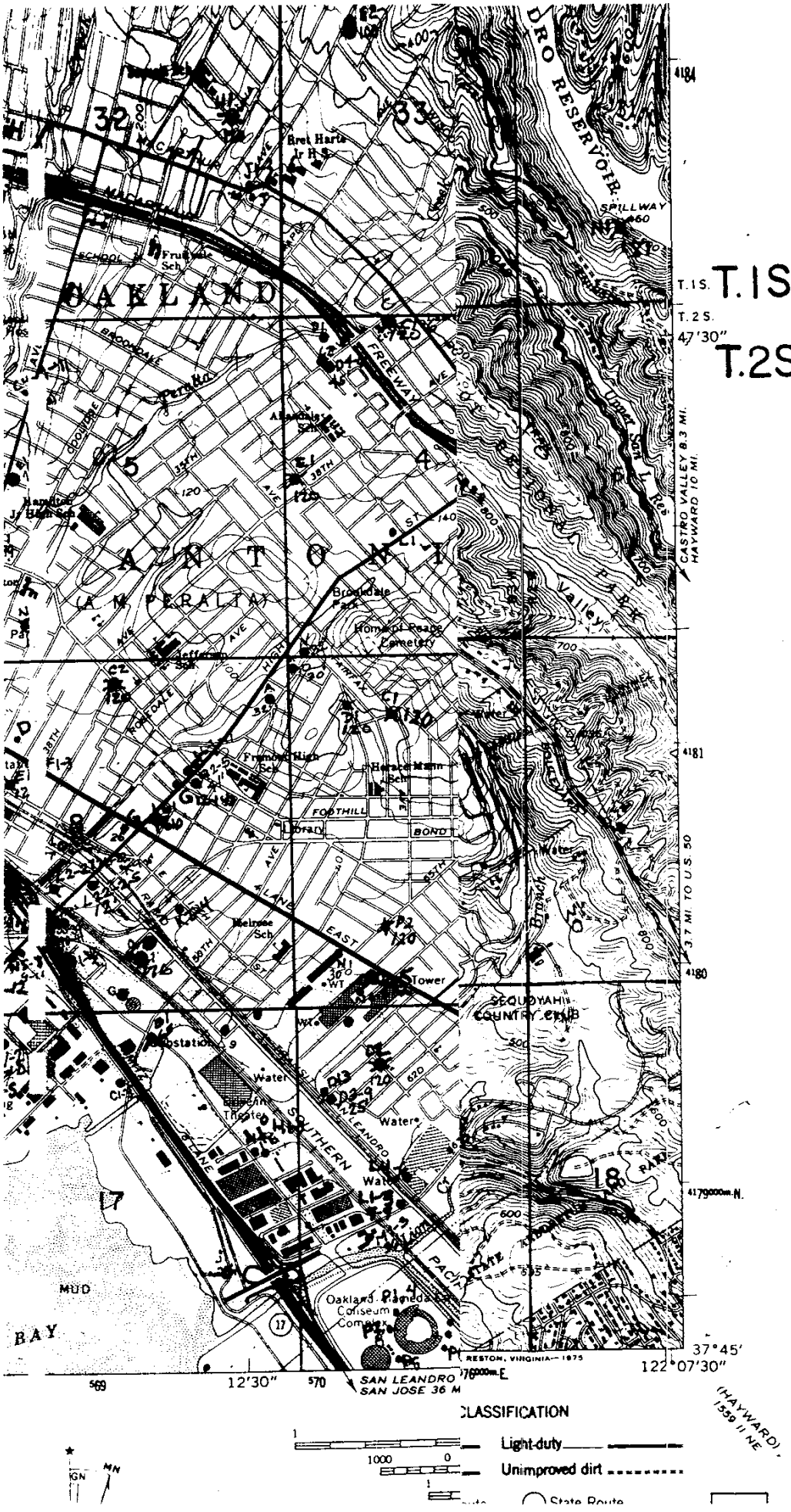
** TOTAL PAGE.009 **



well name F1 8 water level (MSL)* 21 Total well depth

* water level above mean sea level. Well elevation estimated from regional contour map

San Leandro Topographic map


OAKLAND
ANTIOCH
(AMPERALTA)
DRO RESERVOIR
SPILLWAY
T.1S.
T.2S.
47'30"
FREEWAY
Bret Harte Jr. H. Sch.
Fruitvale Sch.
Alameda Sch.
Hamilton Jr. High Sch.
Jefferson Sch.
Frank Havens Jr. High Sch.
Melrose Sch.
Brookdale Park
Home of Peace Cemetery
Library
Tower
Substation
Water
Oakland Coliseum Complex
SEQUOYAH COUNTRY CLUB
SOUTHERN PACIFIC
MUD
BAY
CASTRO VALLEY 8.3 MI.
HAYWARD 10 MI.
3.7 MI TO U.S. 50
(HAYWARD) 1559 II NE
RESTON, VIRGINIA—1975
37°45'
122°07'30"
12'30"
SAN LEANDRO
SAN JOSE 36 M
CLASSIFICATION
Light-duty
Unimproved dirt
State Route

L-1SW - [illegible] 1021

QUINTUPLICATE
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DIVISION OF WATER RESOURCES
P. O. BOX 1079
SACRAMENTO 5, CALIFORNIA

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RESOURCES

SHEET 1

Do Not Fill In
State Well No.
Other Well No.
Region

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

(1) Driller:
Name W. H. Pitcher Co.
Address 7103 Mission St.
Daly City, California
License No. 6955 Classification C-57

(2) Proposed use or uses (*check*):
Domestic ☐ Municipal ☐
Irrigation ☐ Industrial ☒
Domestic and Irrigation ☐ Test well ☐
Other

(3) Equipment used (*check*):
Rotary ☐
Cable ☒
Dug well ☐
Other

Owner:
Name Chevrolet-Oakland Div of General Motors
Address Foothill Blvd. and 69th Ave.
Oakland, California

(4) Type of work (*check*):
New well ☒ Reconditioning of well ☐
Deepening existing well ☐

(5) Well log:
Total depth of well 400 ft.

Give details of formations penetrated, such as silt, peat, muck, sand, gravel, clay, shale, sandstone, hardpan, rock. Include size of gravel (diameter) and sand (fine, medium, coarse), color of material, structure (loose, packed, cemented, soft, hard, brittle).

Depth From Ground Surface			
0 ft. to	1 ft.		Concrete
1 " "	14 "		Fill
14 " "	45 "		Firm sand and gravel, some clay
45 " "	52 "		Sand and gravel
52 " "	59 "		Clay, yellow, some gravel
59 " "	78 "		Yellow clay
78 " "	82 "		Sand and gravel w/little clay--gravel to 2"
82 " "	87 "		Clay w/some gravel and rock fragments
87 " "	121 "		Gravel w/clay streaks
121 " "	142 "		Yellow and grey clay
142 " "	150 "		Yellow and grey clay, sandy
150 " "	161 "		Clay and gravel
161 " "	177 "		Yellow clay, sandy
177 " "	183 "		Sand, gravel w/some clay (water)
183 " "	195 "		Clay w/streaks of gravel
195 " "	205 "		Grey clay
205 " "	250 "		Grey clay, firm
250 " "	256 "		Grey clay w/streak of brown clay & gravel
256 " "	276 "		Sand and fine gravel very little clay (water)
276 " "	286 "		Grey and brown clay w/some stringers of fine gravel to 1/4"
286 " "	294 "		Cemented gravel, hard
294 " "	298 "		Yellow clay
298 " "	305 "		Yellow clay, very little gravel, firm
305 " "	315 "		Cemented gravel hard
315 " "	400 "		Yellow clay w/streaks of gravel (fine) firm

If additional space is required, continue on DWR Form No. 246—Supplement, and attach to respective report copies.

(6) Casing left in well:

LENGTH FT.	DIAMETER INCHES	SINGLE, DOUBLE, WELDED, OTHER	LBS. PER FOOT OR GAGE OF CASING	SEATING BELOW GROUND SURFACE, FT.
400	12	Double	10 ga.	396

Type and size of shoe or well ring 1 x 12 Welded joints—☐ Yes ☒ No

D.W.R. Form No. 246

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2S/3W 10Q1

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...O. BOX 1079
...CRAMENTO 5, CALIFORNIA

SUPPLEMENTAL SHEET

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

Do Not Fill In
State Well No.
Other Well No.
Region

(5) Well log (continued): Total depth of well 400 ft.

Give details of formations penetrated, such as silt, peat, muck, sand, gravel, clay, shale, sandstone, hardpan, rock. Include size of gravel (diameter) and sand (fine, medium, coarse), color of material, structure (loose, packed, cemented, soft, hard, brittle).

Depth From Ground Surface			
315	ft. to	317	ft. Clay, yellow, firm
317	" "	328	" Sandy clay, soft
328	" "	330	" Clay, brown, firm
330	" "	335	" Gravel, sand, clay and gravel
335	" "	345	" Hard grey and brown clay w/gravel and rock fragments
345	" "	347	" Brown and grey clay, some gravel and rock fragments
347	" "	351	" Brown and grey clay, soft
351	" "	354	" Green and grey clay, stiff
354	" "	379	" Green clay, very gummy
379	" "	390	" Green clay
390	" "	393	" Green sandy clay
393	" "	400	" Blue green clay

If additional space is required continue on DWR Form No. 246—Supplement, and attach to respective report copies.

D.W.R. FORM NO. 246—SUPPLEMENT

Form DWR 429

State No. _____

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

WELL DATA

Owner Chevrolet Div. Of General Motors
Address 69th & Foothill
Tenant Plant No. 1
Address Bancroft and 73rd Ave. - Oakland

State No. 2S/3W-10Q1
Other No. _____

Type of Well: Hydrograph ☐ Key ☐ Index ☐ Semiannual ☐
Location: County Alameda Basin _____ No. _____
U.S.G.S. Quad. Oakland East Quad. No. 2756
SW ¼ SE ¼ Section 7, Twp. 2S, Rge. 3W MD B&M Base & Meridian

Description 550' E/O Bancroft
450' N/O 73rd Avenue

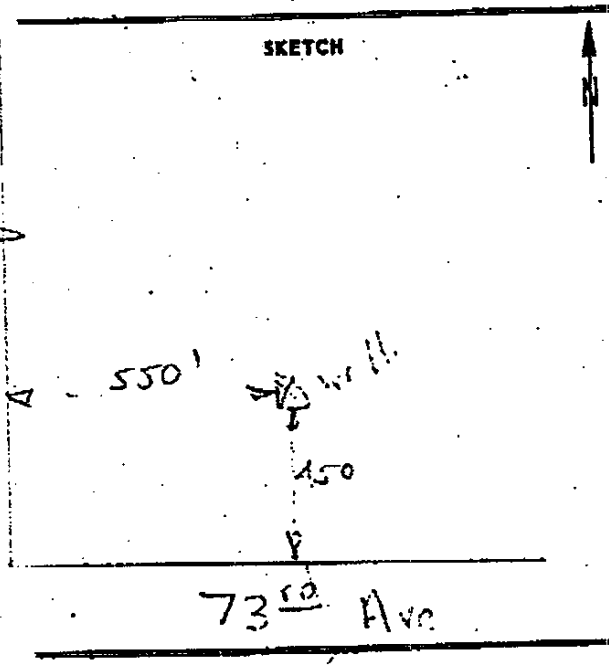
Reference Point description none

which is _____ ft. above/below land surface. Ground Elevation 60 ft.
Reference Point Elev. _____ ft. Determined from U.S.G.S. Contour
Well: Use Abandoned Condition _____ Depth 400 ft.
Casing: size 12 in., perforations 90- 5??

Measurements By: DWR ☐ USGS ☐ USBR ☐ County ☐ Irr. Dist. ☐ Water Dist. ☐ Cons. Dist. ☐
Chief Aquifer: Name _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
Type of Material _____ Perm. Rating _____ Thickness _____
Gravel Packed? Yes ☐ No ☒ Depth to Top Gr. _____ Depth to Bot. Gr. _____
Supp. Aquifer _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
Driller Pitcher
Date drilled 3-9-51 Log, filed D.W.R. open (1) _____ confidential (2) _____
Equipment: Pump, type D.W.T. make _____
Serial No. _____ Size of discharge pipe _____ in.
Power, Kind Elec. Make U.S.
H. P. 25 Motor Serial No. 892609
Elec. Meter No. _____ Transformer No. _____
Yield _____ G.P.M. Pumping level _____ ft.

Water Analysis: Min. (1) _____ San. (2) _____ H.M. (3) _____
Water Levels available: Yes (1) _____ No _____
Period of Record: Begin _____ End _____
Collecting Agency _____
Prod. Rec. (1) _____ Pump Test (2) _____ Yield (3) _____

SKETCH



REMARKS

Not in use because it sanded in 1953-54.

Recorded by H. Sperber
Date September 1962

...PLICATE
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...ION OF WATER RESOURCES
...O. BOX 1079
SACRAMENTO 5, CALIFORNIA

SHEET 2

Do Not Fill In
State Well No.
Other Well No.
Region

WATER WELL DRILLERS REPORT

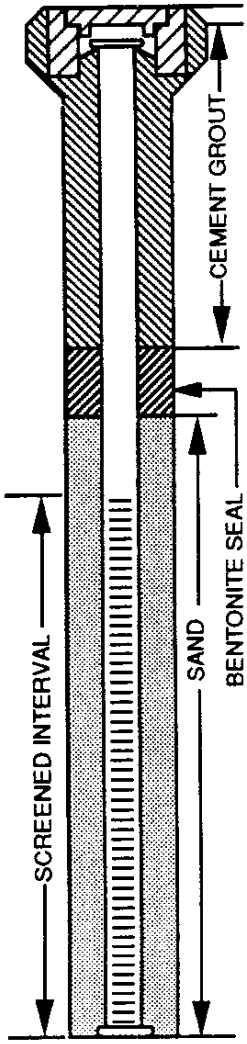
(Sections 7074, 7077, 7078, Water Code)

(7) Perforations:
Type of perforator used Mills
Perforated 90 ft. to 393 ft. Hole size 3/4" x 3/8" No. of holes 6 around per ft.
" " " "

DM-1

DATE DRILLED: 4/1/91

DEPTH IN FEET	SAMPLING: HNu (ppm)	SAMPLING: TYPE OF SAMPLER	SAMPLING: SAMPLING RESISTANCE	SAMPLES	SYMBOLS	DESCRIPTION
0						ASPHALT
					CL	REDDISH BROWN SILTY CLAY with some gravel (moist) (stiff)
5	0	U	70		CL	YELLOWISH RED SILTY CLAY with some coarse sand (moist) (very stiff)
10		U	95		ML	YELLOWISH RED TO BROWNISH YELLOW CLAYEY SILT with poorly graded, medium-grained sand (moist) (dense)
15		U	90			Grades with angular cobbles
20						
25						
30						
35						



NOTES:

1. Boring completed at a depth of 28.0 feet on 4/1/91.
2. 4-inch PVC observation well installed to a depth of 28.0 feet; screened interval from 13.0 to 28.0 feet.
3. Sampling resistance is measured in blows per foot required to drive the sampler 12 inches with a 140 lb. hammer falling 30 inches after sampler has been seated 6 inches.
4. Boring log indicates interpreted subsurface conditions only at the location and the time the boring was drilled.
5. For an explanation of terms used see the Soil Classification Chart and Key to Test Data.

LOG OF BORING

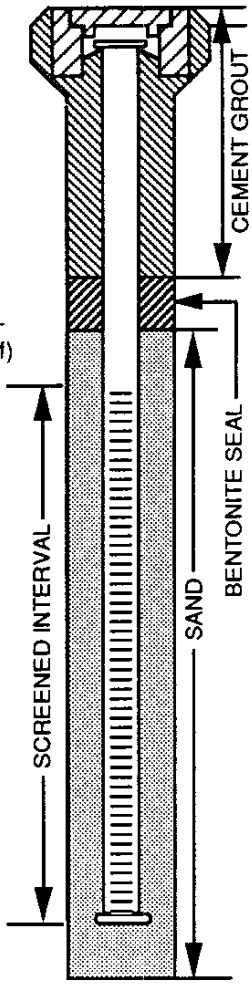
Dames & Moore

443-090-043

DM-2

DATE DRILLED:

DEPTH IN FEET	SAMPLING: HNu (ppm)	SAMPLING: TYPE OF SAMPLER	SAMPLING: SAMPLING RESISTANCE	SAMPLES	SYMBOLS	DESCRIPTION
0						ASPHALT
					CL	DARK BROWN SILTY CLAY with trace medium to fine-grained sand (moist) (stiff)
5		U	43		CL	REDDISH BROWN SILTY CLAY (moist) (very stiff)
	0	U	67		ML	YELLOWISH RED SANDY SILTY with fine to coarse-grained sand and trace pea gravel (moist) (very stiff)
10					SM	YELLOWISH RED SILTY SAND with gravel (moist) (dense)
	0	U	80		ML	BROWNISH YELLOW CLAYEY SILT (moist) (very stiff)
15						
	0	U	—			Grades with 1-2 inch gravel lens.
20						
25	0	U	—			
30						
35						



NOTES:

1. Boring completed at a depth of 28.0 feet on 4/1/91.
2. 4-inch PVC observation well installed to a depth of 30.0 feet; screened interval from 23.0 to 28.5 feet.
3. Sampling resistance is measured in blows per foot required to drive the sampler 12 inches with a 140 lb. hammer falling 30 inches after sampler has been seated 6 inches.
4. Boring log indicates interpreted subsurface conditions only at the location and the time the boring was drilled.
5. For an explanation of terms used see the Soil Classification Chart and Key to Test Data.

LOG OF BORING

Dames & Moore

443-090-043

BORING 1

DATE DRILLED: 3/1/90

DEPTH IN FEET	SAMPLING			SAMPLES	SYMBOLS	DESCRIPTION
	HNu (ppm)	SAMPLER TYPE	SAMPLING RESISTANCE			
0						ASPHALT
					GP	BROWNISH YELLOW SANDY GRAVEL (moist) (dense)
					CL	REDDISH BROWN SILTY CLAY with pea gravel (moist) (stiff)
	0	U	70		CL	DARK BROWN SILTY CLAY (moist) (stiff)
5	0	U	70		CL	YELLOWISH RED SILTY CLAY with some coarse sands (moist) (very stiff)
		U	70		SC	YELLOWISH RED CLAYEY SAND, fine to medium-grained with some pea gravel (moist) (dense)
10	0	U	75		CL	YELLOWISH RED SILTY CLAY with some small gravel (moist) (dense)
	0	U	92			
15	30	U	97			
20						
25						
30						
35						

NOTES:

1. Boring completed at a depth of 17.5 feet.
2. Sampling resistance is measured in blows per foot required to drive the sampler 12 inches with a 140 lb. hammer falling 30 inches after sampler has been seated 6 inches.
3. Boring log indicates interpreted subsurface conditions only at the location and the time the boring was drilled.
4. For an explanation of terms used see Soil Classification Chart and Key to Test Data.

LOG OF BORING

Dames & Moore

443-090-043

BORING 2

DATE DRILLED: 4/1/91

DEPTH IN FEET	SAMPLING			SAMPLES	SYMBOLS	DESCRIPTION
	HN_u (ppm)	SAMPLER TYPE	SAMPLING RESISTANCE			
0						ASPHALT
	0	U	14		FILL	BROWN SAND, poorly sorted (moist) (loose) [FILL]
5	0	U	15			Grades gravelly
	0	U	12			
10	0	U	--			
30						
35						

NOTES:

1. Boring completed at a depth of 11.5 feet on 4/1/91.
2. Sampling resistance is measured in blows per foot required to drive the sampler 12 inches with a 140 lb. hammer falling 30 inches after sampler has been seated 6 inches.
3. Boring log indicates interpreted subsurface conditions only at the location and the time the boring was drilled.
4. For an explanation of terms used see the Soil Classification Chart and Key to Test Data, Plate —.
5. Boring met refusal at 12 feet below ground surface (possible concrete tank crib).

LOG OF BORING

Dames & Moore

BORING LOGS/Templates/3-Col Boring Log

PLATE A-2

BORING 3

DATE DRILLED: 4/1/91

DEPTH IN FEET	SAMPLING			SAMPLES	SYMBOLS	DESCRIPTION
	HN_u (ppm)	SAMPLER TYPE	SAMPLING RESISTANCE			
0						ASPHALT
	0	U	14		FILL	BROWN GRAVEL, pea-sized (wet) (loose) [FILL]
5	0	U	15			Grades clayey with asphalt debris
	0	U	12			Obstruction - augers met refusal
10	0	U	--			
15						
30						
35						

NOTES:

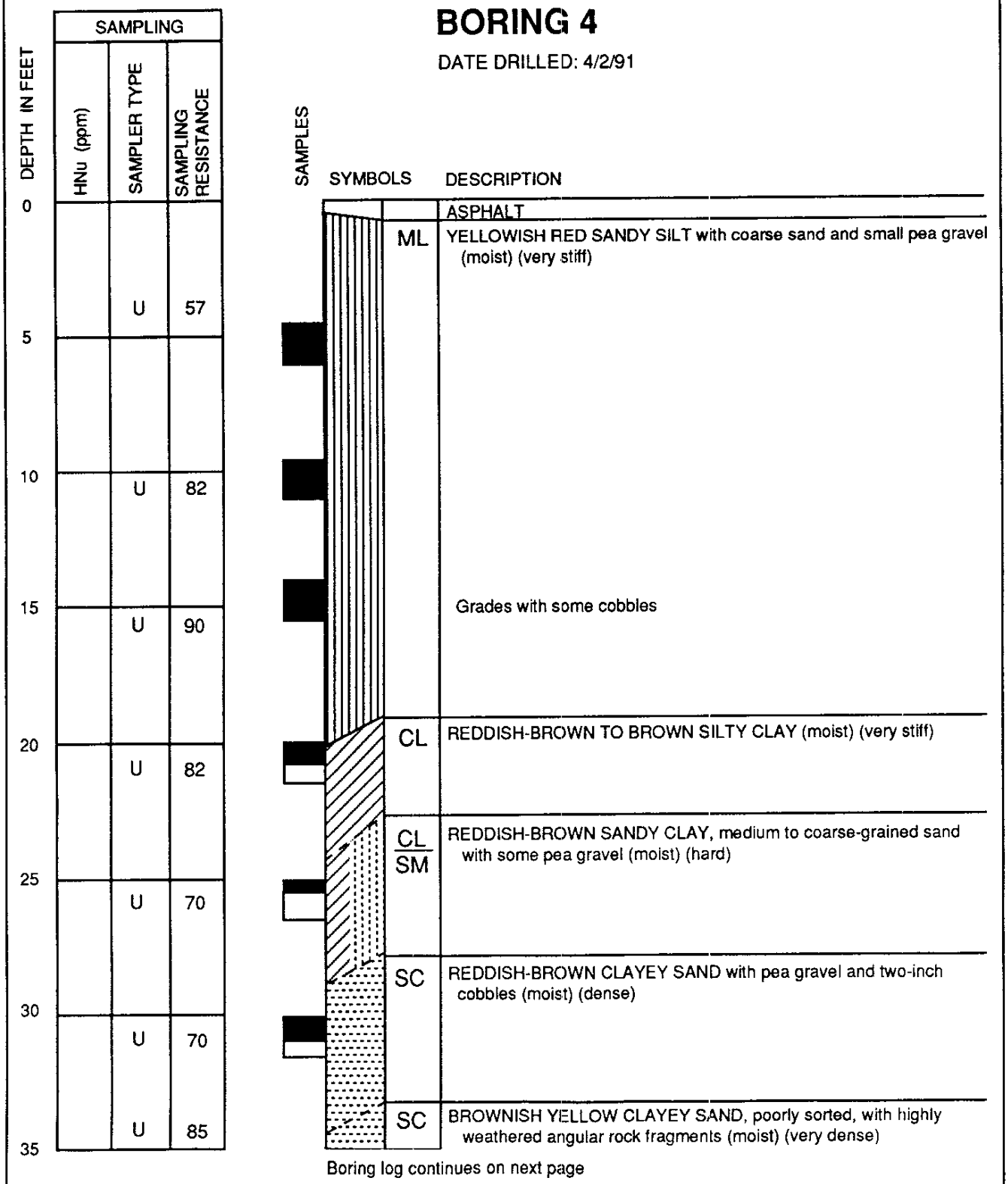
1. Boring completed at a depth of 6.5 feet on 4/1/91.
2. Sampling resistance is measured in blows per foot required to drive the sampler 12 inches with a 140 lb. hammer falling 30 inches after sampler has been seated 6 inches.
3. Boring log indicates interpreted subsurface conditions only at the location and the time the boring was drilled.
4. For an explanation of terms used see the Soil Classification Chart and Key to Test Data, Plate —.
5. Boring met refusal at 7 feet below ground surface (possible tank crib).

LOG OF BORING

Dames & Moore

BORING 4

DATE DRILLED: 4/2/91



Boring log continues on next page

LOG OF BORING

Dames & Moore

443-090-043

BORING 4 (continued)

DATE DRILLED: 4/2/91

DEPTH IN FEET	SAMPLING: HNu (ppm)	SAMPLING: SAMPLER TYPE	SAMPLING: SAMPLING RESISTANCE	SAMPLES	SYMBOLS	DESCRIPTION
35		U	85			
					SM	REDDISH BROWN SILTY SAND, medium-grained, poorly graded (moist) (very dense)
40		U	—			
45						
50						

NOTES:

1. Boring completed at a depth of 50.0 feet on 4/2/91.
2. Sampling resistance is measured in blows per foot required to drive the sampler 12 inches with a 140 lb. hammer falling 30 inches after sampler has been seated 6 inches.
3. Boring log indicates interpreted subsurface conditions only at the location and the time the boring was drilled.
4. For an explanation of terms used see the Soil Classification Chart and Key to Test Data.

LOG OF BORING

Dames & Moore

443-090-043

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP SYMBOLS	DESCRIPTION	GRAPHIC LOG
COARSE GRAINED SOILS: 50% or more retained on the No. 200 sieve.	GRAVELS: More than half of coarse fraction retained on the No. 4 sieve.	Clean sands	GW	Well-graded gravels, gravel-sand mixtures, little or no fines.	
			GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines.	
		Gravels with fines	GM	Silty gravels, gravel-sand mixtures.	
			GC	Clayey gravels, gravel-sand-clay mixtures.	
	SANDS: More than half of coarse fraction passing the No. 4 sieve.	Clean sands	SW	Well-graded sands, gravelly sands, little or no fines.	
			SP	Poorly-graded sands, gravelly sands, little or no fines.	
		Sands with fines	SM	Silty sands, sand-silt mixtures.	
			SC	Clayey sands, sand clay mixtures.	
FINE GRAINED SANDS: More than 50% passing the No. 200 sieve.	SILTS AND CLAYS	Liquid Limit below 50%	ML	Inorganic silts and very fine sands.	
			CL	Inorganic clays, gravelly clays, sandy clays, lean clays.	
			OL	Organic silts and organic clays	
			MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.	
		Liquid Limit 50% and above	CH	Inorganic fat clays.	
			OH	Organic clays or organic silts.	
Highly organic soils			Pt	Peat, organic content greater than 60%.	

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LEGEND TO LOGS

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LOG OF BORING NO. B-1

PAGE 1 of 2

PROJECT NO: 02-401-002
DATE: 12/5/89
CLIENT: TOPA
REF. ELEV. –
SITE LOCATION: EASTMONT MALL, OAKLAND, CA.
METHOD: HOLLOW STEM AUGER
BORING LOCATION: SEE FIG 1
HOLE DIA: 8"
DRILLER: GREGG DRILLING & TESTING
LOGGED BY: J. BRYSON
SUPERVISOR: S. WICKHAM Susan Wickham RG 3851

DEPTH (FT)	GRAPHIC LOG	BLOW/FT	VAPOR (PPM)	SAMPLE TYPE AND DEPTH	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	WELL CONSTRUCTION
0						GRAVEL & SOIL @ SURFACE	
2					CL	SILTY CLAY, black, gravelly, hard, slightly moist, no odor.	
4			ND	RING @ 5'	ML	CLAYEY SILT, brown with some gravel, stiff, slightly moist, no odor.	
8			ND	RING @ 10'	ML	As above.	
12						Cobbles from 12'–14'.	
14			ND	RING @ 15'	ML	CLAYEY SILT, brown with black mottling, stiff, slightly moist, no odor.	
18			ND	RING @ 20'	ML	As above with some gravel.	
24			ND	RING @ 25'	ML	As above, moist.	
28							

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LOG OF BORING NO. B-1 PAGE 2 of 2
PROJECT NO: 02-401-002 DATE: 12/5/89
CLIENT: TOPA REF. ELEV. -
SITE LOCATION: EASTMONT MALL OAKLAND, CA. METHOD: HOLLOW STEM AUGER
BORING LOCATION: SEE FIG 1 HOLE DIA: 8"
DRILLER: GREGG DRILLING & TESTING
LOGGED BY: J. BRYSON
SUPERVISOR: S. WICKHAM Susan Wickham P63651

DEPTH (FT)	GRAPHIC LOG	BLOW/FT	VAPOR (PPM)	SAMPLE TYPE AND DEPTH	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	WELL CONSTRUCTION
29							
30			ND	RING @ 30'	ML	As above, no gravel.	
32							
34			ND	RING @ 35'	ML	As above.	
36							
38							
40			ND	RING @ 40'	SW	SAND, dark brown, fine-coarse grained, medium dense, moist, no odor.	
42							
44					SC	CLAYEY SAND, brown with gravel and some cobbles, dense, moist, no odor.	
46							
48					SC	As above.	
50							
52							
54							
56						TOTAL DEPTH - 55'	
						Hole backfilled with 19 bags of holeplug bentonite.	

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LOG OF BORING NO. MW-2

PAGE 1 of 2

PROJECT NO: 02-401-002
DATE: 12/5/89
CLIENT: TOPA
REF. ELEV. –
SITE LOCATION: EASTMONT MALL OAKLAND, CA.
METHOD: HOLLOW STEM AUGER
BORING LOCATION: SEE FIG 1
HOLE DIA: 8"
DRILLER: GREGG DRILLING & TESTING
LOGGED BY: J. BRYSON
SUPERVISOR: S. WICKHAM Susan Wickham RG3851

DEPTH (FT)	GRAPHIC LOG	BLOW/FT	VAPOR (PPM)	SAMPLE TYPE AND DEPTH	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	WELL CONSTRUCTION
0						3" Asphalt @ Surface	
2					CL	CLAY, brown, stiff, trace of silt, slightly moist, no odor.	
4			ND	RING @ 5'	CL	SILTY CLAY, brown, stiff, silty, slightly moist, no odor.	
6							
8							
10			ND	RING @ 10'	SC	CLAYEY SAND, brown, well graded, medium dense, moist, no odor.	
12							
14			ND	RING @ 15'	CL	SANDY CLAY, brown, very stiff, slightly moist, no odor.	
16							
18							
20			ND	RING @ 20'	SC	CLAYEY SAND, brown, medium dense, very well graded, gravelly, moist, no odor.	
22							
24			ND	RING @ 25'	CL	SILTY-SANDY CLAY, brown, stiff, moist, no odor.	
26							
28							

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LOG OF BORING NO. MW-2 PAGE 2 of 2

PROJECT NO: 02-401-002 DATE: 12/5/89

CLIENT: TOPA REF. ELEV. –

SITE LOCATION: EASTMONT MALL OAKLAND, CA. METHOD: HOLLOW STEM AUGER

BORING LOCATION: SEE FIG 1 HOLE DIA: 8"

DRILLER: GREGG DRILLING & TESTING

LOGGED BY: J. BRYSON

SUPERVISOR: S. WICKHAM Susan Wickham RG 3851

DEPTH (FT)	GRAPHIC LOG	BLOW/FT	VAPOR (PPM)	SAMPLE TYPE AND DEPTH	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	WELL CONSTRUCTION
29			ND	RING @ 30'	ML	▽ CLAYEY SAND, brown, gravelly, saturated.	
31							
33							
35						TOTAL DEPTH – 35'	
37						Well Construction: 2" (0.02") slotted PVC 35'–20'; 2" blank PVC 20'–0; #3 lonestar sand 35'–15'; enviroplug bentonite 15'–3'; cement 3'–0.	
39							
41							
43							
45							
47							
49							
51							
53							
55							
57							

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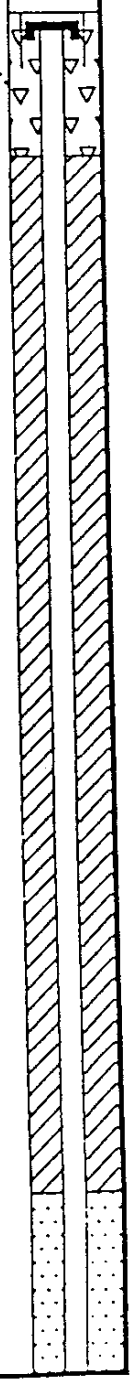
LOG OF BORING NO. MW-3

PAGE 1 of 2

PROJECT NO: 02-401-002
DATE: 12/6/89
CLIENT: TOPA
REF. ELEV. –
SITE LOCATION: EASTMONT MALL, OAKLAND, CA.
METHOD: HOLLOW STEM AUGER
BORING LOCATION: SEE FIG 1
HOLE DIA: 8"
DRILLER: GREGG DRILLING & TESTING
LOGGED BY: J. BRYSON
SUPERVISOR: S. WICKHAM Susan Wickham 12/6/89

DEPTH (FT)	GRAPHIC LOG	BLOW/FT	VAPOR (PPM)	SAMPLE TYPE AND DEPTH	UNIFIED SOIL CLASSIFICATION	DESCRIPTION
0						3" Asphalt @ Surface
2					CL	CLAY, black–gray, stiff, slightly moist, some silt, no odor.
4			ND	RING @ 5'	CL	SILTY CLAY, brown, stiff, slightly moist, trace of gravel, no odor.
6						
8						
10			ND	RING @ 10'	CL	As above, some medium sand to coarse gravel.
12						
14			ND	RING @ 15'	SM	SILTY SAND, brown, some clay & gravel, medium to coarse grained, medium dense, slightly moist, no odor.
16						
18						
20			ND	RING @ 20'	SM	As above.
22						
24			ND	RING @ 25'	SW	SAND, brown with silt and small gravel, moist, medium dense, no odor.
26						
28						

WELL CONSTRUCTION



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LOG OF BORING NO. MW-3 PAGE 2 of 2

PROJECT NO: 02-401-002 DATE: 12/6/89

CLIENT: TOPA REF. ELEV. –

SITE LOCATION: EASTMONT MALL OAKLAND, CA. METHOD: HOLLOW STEM AUGER

BORING LOCATION: SEE FIG 1 HOLE DIA: 8"

DRILLER: GREGG DRILLING & TESTING

LOGGED BY: J. BRYSON

SUPERVISOR: S. WICKHAM Susan Wickham RG 3851

DEPTH (FT)	GRAPHIC LOG	BLOW/FT	VAPOR (PPM)	SAMPLE TYPE AND DEPTH	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	WELL CONSTRUCTION
29			ND	RING @ 30'	SW	As above.	
31							
33							
35			ND	RING @ 35'	SW	As above, moist.	
37						▽	
39						As above, saturated.	
41							
43						CLAY, silty, light brown, firm, slightly moist, no odor.	
45						TOTAL DEPTH – 45'	
47						Well Construction: 2" (0.02") slotted PVC 45'–30'; blank 2" PVC 30'–0; #3 lonestar sand 45'–25'; bentonite 25'–3'; cement 3'–0.	
49							
51							
53							
55							
57							

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LOG OF BORING NO. MW-4 PAGE 1 of 1

PROJECT NO: 02-401-002 DATE: 12/6/89

CLIENT: TOPA REF. ELEV. –

SITE LOCATION: EASTMONT MALL, OAKLAND, CA. METHOD: HOLLOW STEM AUGER

BORING LOCATION: SEE FIG 1 HOLE DIA: 8"

DRILLER: GREGG DRILLING & TESTING

LOGGED BY: J. BRYSON

SUPERVISOR: S. WICKHAM Susan Wickham PG3851

DEPTH (FT)	GRAPHIC LOG	BLOW/FT	VAPOR (PPM)	SAMPLE TYPE AND DEPTH	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	WELL CONSTRUCTION
0						3" Asphalt @ Surface	
2					CL	SILTY CLAY, dark brown with black mottling, trace of coarse sand, firm, slightly moist, no odor.	
4		35	ND	RING @ 5'	CL	As above, light brown, some gravel	
6							
8							
10			ND	RING @ 10'	CL	As above.	
12							
14			230	RING @ 15'	ML	CLAYEY SILT, brown, some gravel, firm, moist, very strong odor. (bottom of sample was a sandy clayey silt and had dark gray coloring with oily sheen and very strong gas odor.	
16						▽	
18							
20				NO SAMPLE	ML	CLAYEY SILT, brown, some gravel, firm, saturated, odor.	
22							
24				NO SAMPLE	CL	SILTY CLAY, dark brown, firm, slightly moist, trace of sand, no odor.	
26						TOTAL DEPTH 25'	
28						Well Construction: 2"(0.02") slotted PVC 25'-10'; 2" blank PVC 10'-0; #3 sand 25'-8'; bentonite 8'-3'; cement 3'-0.	

ENVIRONMENTAL SERVICES

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Richard Ward
Dames & Moore
221 Main Street, Ste. 600
San Francisco, CA 94105

Client Code: DAME67
Survey # J.C. Penny
Project/Release # 00443-090-043

L A B O R A T O R Y R E S U L T S

Date Collected: 04/01/91
Date Extracted: 04/09/91
Date Analyzed: 04/10/91

Laboratory Job No.: 911715
Date Received: 04/03/91
Date Reported: 04/18/91

ASSAY: TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (SM 503E)
MATRIX: SOIL

LABNO	SMPLNO-ID	TRPH mg/kg	DET. LIM. mg/kg
12486	B-3-B	140	20
12489	CM	ND	20
12490	CMS	820	20
12491	CMSD	820	20
12492	MB	ND	20

NOTE: CMS AND CMSD WERE SPIKED AT 830 mg/kg.

THIS REPORT HAS BEEN REVIEWED AND APPROVED FOR RELEASE.

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L A B O R A T O R Y R E S U L T S

Date Collected: 04/01/91
Date Extracted: 04/08/91
Date Analyzed: 04/08/91

Laboratory Job No.: 911715
Date Received: 04/03/91
Date Reported: 04/18/91

ASSAY: TPH/GASOLINE (EPA 5030/8015)
MATRIX: SOIL

LABNO	SMPLNO-ID	RESULTS mg/kg	DET. LIM. mg/kg
12480	B-1-B GASOLINE	ND	0.2
12481	B-1-D GASOLINE	ND	0.2
12482	B-1-F 15' below ground surface GASOLINE	7.7	0.2
12483	B-2-C GASOLINE	ND	0.2
12484	DM-1-C GASOLINE	ND	0.2
12485	DM-2-C GASOLINE	ND	0.2
12486	B-3-B GASOLINE	ND	0.2
12487	DM-3-C GASOLINE	ND	0.2
12488	DM-3-H GASOLINE	ND	0.2
12489	CM GASOLINE	ND	0.2

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L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 911715

ASSAY: TPH/GASOLINE (EPA 5030/8015)
MATRIX: SOIL

LABNO SMPLNO-ID	RESULTS mg/kg	DET. LIM. mg/kg
12490 CMS GASOLINE	2.0	0.2
12491 CMSD GASOLINE	2.2	0.2
12492 MB GASOLINE	ND	0.2

NOTE: CMS AND CMSD WERE SPIKED AT 2.0 mg/kg.

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L A B O R A T O R Y R E S U L T S

Date Collected: 04/01/91
Date Extracted: 04/08/91
Date Analyzed: 04/08/91

Laboratory Job No.: 911715
Date Received: 04/03/91
Date Reported: 04/18/91

ASSAY: BTEX (EPA 5030/8020)
MATRIX: SOIL

LABNO SMPLNO-ID	RESULTS mg/kg	DET. LIM. mg/kg
12480 B-1-B		
BENZENE	ND	0.005
TOLUENE	ND	0.005
ETHYLBENZENE	ND	0.005
XYLENES	ND	0.005
12481 B-1-D		
BENZENE	ND	0.005
TOLUENE	ND	0.005
ETHYLBENZENE	ND	0.005
XYLENES	ND	0.005
12482 B-1-F		
BENZENE	ND	0.005
TOLUENE	0.070	0.005
ETHYLBENZENE	ND	0.005
XYLENES	0.036	0.005
12483 B-2-C		
BENZENE	ND	0.005
TOLUENE	ND	0.005
ETHYLBENZENE	ND	0.005
XYLENES	ND	0.005
12484 DM-1-C		
BENZENE	ND	0.005
TOLUENE	ND	0.005
ETHYLBENZENE	ND	0.005
XYLENES	ND	0.005

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L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 911715

ASSAY: BTEX (EPA 5030/8020)
MATRIX: SOIL

LABNO SMPLNO-ID	RESULTS mg/kg	DET. LIM. mg/kg
12485 DM-2-C		
BENZENE	ND	0.005
TOLUENE	ND	0.005
ETHYLBENZENE	ND	0.005
XYLENES	ND	0.005
12486 B-3-B		
BENZENE	ND	0.005
TOLUENE	ND	0.005
ETHYLBENZENE	ND	0.005
XYLENES	ND	0.005
12487 DM-3-C		
BENZENE	ND	0.005
TOLUENE	ND	0.005
ETHYLBENZENE	ND	0.005
XYLENES	ND	0.005
12488 DM-3-H		
BENZENE	ND	0.005
TOLUENE	ND	0.005
ETHYLBENZENE	ND	0.005
XYLENES	ND	0.005
12489 CM		
BENZENE	ND	0.005
TOLUENE	ND	0.005
ETHYLBENZENE	ND	0.005
XYLENES	ND	0.005
12490 CMS		
BENZENE	0.018	0.005
TOLUENE	0.019	0.005
ETHYLBENZENE	0.019	0.005
XYLENES	0.056	0.005

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L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 911715

ASSAY: BTEX (EPA 5030/8020)
MATRIX: SOIL

LABNO SMPLNO-ID	RESULTS mg/kg	DET. LIM. mg/kg
12491 CMSD		
BENZENE	0.019	0.005
TOLUENE	0.019	0.005
ETHYLBENZENE	0.020	0.005
XYLENES	0.058	0.005
12492 MB		
BENZENE	ND	0.005
TOLUENE	ND	0.005
ETHYLBENZENE	ND	0.005
XYLENES	ND	0.005

NOTE: CMS AND CMSD WERE SPIKED AT 0.020 mg/kg FOR ALL ANALYTES EXCEPT XYLENES, WHICH WERE SPIKED AT 0.060 mg/kg.

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QUALITY CONTROL REPORT

As part of ACCULAB Environmental Services' continuing efforts to provide the best possible product to our clients, we are now including with each analysis report, the results of the Quality Control samples analyzed along with your samples.

ACCULAB is following a Quality Assurance Program that includes control matrix sample analysis. In brief, we use tap water as the control matrix for liquid samples and washed sand as the control matrix for solid samples. We analyze three portions of the control matrix, one portion as the control matrix blank (CMB), one portion as the control matrix spike (CMS), and one portion as the control matrix spike duplicate (CMSD). These analyses are performed as part of our routine Quality Assurance program, at no additional charge to our clients. In addition, matrix spike and matrix spike duplicate analyses can be run on your samples, however these analyses would be charged as additional samples.

During the initial stages of the implementation of this program we will be reporting the actual results of these three control matrix samples along with the level of spike that was added to the spike and spike duplicate samples. From this information, percent recovery (accuracy) data and relative percent difference (precision) data can be calculated. In the near future, calculated accuracy and precision results along with control limits will be reported.

Due to the nature of the control matrix materials, certain positive results can be expected in the control matrix blank (CMB) results. The tap water source may contain trihalomethanes, anions, major cations, and some trace metals. The washed sand may also contain anions, major cations and some trace metals. These positive results represent inherent concentrations and in no way reflect upon your sample results, or upon laboratory background levels.

We hope you will find this quality control information useful in your review of our reports. This quality control information is the first in a series of many steps we are taking to improve our service to our clients. If you have any questions concerning this information, please contact a Project Manager for further information.

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Method blanks are designed to monitor the level of contamination introduced by reagents, extracting solvents, glassware, etc. They are prepared and processed in exactly the same manner as samples and spikes, except that no standard is spiked into them.

We are also changing the name of the unspiked control matrix sample from Control Matrix Blank (CMB) to Control Matrix (CM) to more accurately describe the nature of the sample.

Due to the nature of the control matrix materials, certain positive values can be expected in the control matrix (CM) results. The tap water we use for liquids may contain trihalomethanes, anions, major cations, and some trace metals. The control matrix we use for solids may also contain anions, major cations and some trace metals. These positive results represent inherent concentrations and in no way reflect upon your sample results, or upon laboratory background levels.

We continue to strive to improve the quality of service to our clients. We welcome any questions or comments you may have about this information, or about ACCULAB in general. Please contact a Project Manager for further information.

C. AIN-OF-CUSTODY RECORD

WHITE - PY - Original (Accompanies Samples) YELLOW COPY - Collector PINK COPY - Project Manager

Boring or Well Number	Sample Number	Depth	Time	Sample Type	Container Type	VOA 601/8010	VOA 602/8020 *	VOA 624/8240	Semi Vol 625/8270	TPH 418.1	TPH 8015 (M) *	TITLE 22 METALS	WET Test	PNA 610/8100	PEST/PCBs 8080	HEX CHROME	ORGANIC LEAD	TCLP	pH	ASBESTOS	O&G 503E	Total Number Of Containers	Laboratory Note Number
B-1	A	3'	0840	Soil	S.S. Tube																	1	
B-1	B	5'	0848			X				X												1	
B-1	C	8'	0900																			1	
B-1	D	10'	0905			X				X												1	
B-1	E	13'	0915																			1	
B-1	F	15'	0925			X				X												1	
B-2	A	2'	0957																				
B-2	B	5'	1000																				
B-2	C	10'	1015			X				X													
DM-1	A	5'	1202																				
DM-1	B	10'	1212																				
DM-1	C	15'	1225			X				X													
DM-2	A	5'	0810																				
DM-2	B	10'	0830																				
DM-2	C	15'	0840			X				X													
B-3	A	3'	1045																				
B-3	B	5'	1050			X				X											X		

RECEIVED ACCULAB
1991 APR FIELD NOTES 2-59

SAMPLES RECEIVED IN GOOD CONDITION
NO BROKEN OR LEAKING CONTAINERS

1991 APR -3 PM 9:12
RECEIVED ACCULAB

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)
[signature] 4/2/91 1800 9918569194

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)
9918569194

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY NOTES:
Hold for analysis —
* 8015/GAS, 602 BTEX / DAVID MYERS 2:45 3/3/gn
REPORT TO: RICH WARD
D+M, S.F.

ANALYTICAL LABORATORY: Acculab.
LABORATORY CONTACT: ~~Debbie Fisher~~ GREG NAGLE
D&M CONTACT: Rich Ward / David Myers PHONE: (415) 708 1354

DAMES & MOORE
~~1290 Oakmead Parkway~~
~~Suite 301~~
~~Sunnyvale, California 94086~~
~~Telephone: 408/245-4050 FAX: 408/736-0545~~

JOB NO.: 00443 090 043 SHEET ... OF ...
PROJECT: J.C. Penney
LOCATION: Oakland
COLLECTOR: David Myers DATE OF COLLECTION: 4/1/91

00000281.tif 105 / 543

C AIN-OF-CUSTODY RECORD

WHIT PY - Original (Accompanies Samples) YELLOW COPY - Collector PINK COP Project Manager

Boring or Well Number	Sample Number	Depth	Time	Sample Type	Container Type	VOA 601/8010	VOA 602/8020 *	VOA 624/8240	Semi Vol 625/8270	TPH 418.1	TPH 8015 (M) *	TITLE 22 METALS	WET Test	PNA 610/8100	PEST/PCBs 8080	HEX CHROME	ORGANIC LEAD	TCLP	pH	ASBESTOS	FIELD NOTES:	Total Number Of Containers	Laboratory Note Number
DM-3	A	5'	1145	SOIL	S.S. Ring																		
DM-3	B	10'	1203																				
DM-3	C	15'	1215			X				X													
DM-3	D	20'	1235																				
DM-3	E	24'	1245																				
DM-3	F	30'	1420																				
DM-3	G	35'	1435																				
DM-3	H	40'	1450			X				X													

1991 APR -3 PM 2:59
RECEIVED ACCULAB

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)
Dan Myers 4/2/91 1800 FedEx 9918569194

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

ANALYTICAL LABORATORY: Acculab

LABORATORY CONTACT: ~~Bob Fox~~ ~~Flotion~~ GREG NAGLE

D&M CONTACT: Rich Ward / David Myers PHONE: 208 1354

DAMES & MOORE
1290 Oakmead Parkway
Suite 301
Sunnyvale, California 94086
Telephone: 408/245-4959 FAX: 408/736-0545

gn

LABORATORY NOTES:
Hold for analysis
* 8015/GAS, 602/BTEX / DAVID MYERS
2:45 3-3 / gn
Report to: Rich Ward
DrM, SF

1991 APR -3 AM 9:12
RECEIVED ACCULAB

JOB NO.: 00443 090 043 SHEET 2 OF 2

PROJECT J.C. Penney

LOCATION Oakland

COLLECTOR David Myers DATE OF COLLECTION 4/2/91

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****
* *
* EQUISITION FOR SUPPLIES *
* *
****
ordered from Sunnyvale

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ATTENTION: David Meyers
CLIENT: D&M-~~Sunnyvale~~ S.F.
ADDRESS: _____

TELEPHONE: _____
JOB # OR NAME: _____
NOTES: _____

DATE ORDERED: 3/27/91
TIME ORDERED: 2:45 pm
ORDER TAKEN BY: D. Fisher
DATED NEEDED: send out by 3/28

SHIPPING INFORMATION
CARRIER: UPS-ground
ACCOUNT NUMBER: _____
WEIGHT: _____
COST: _____
ENTERED: _____
DATE/INITIALS: DP 3-28-91

ITEM/SIZE	PART NUMBER	QTY	LABEL	PRESERVATIVE
40 ml voa's		10	gas	
40 ml voa's		10	8020	
1 L. glass		5	diesel	
40 ml voa's filled w/ org. free water		3	gas, 8020	
1 L. glass "	" " " "	1	diesel	

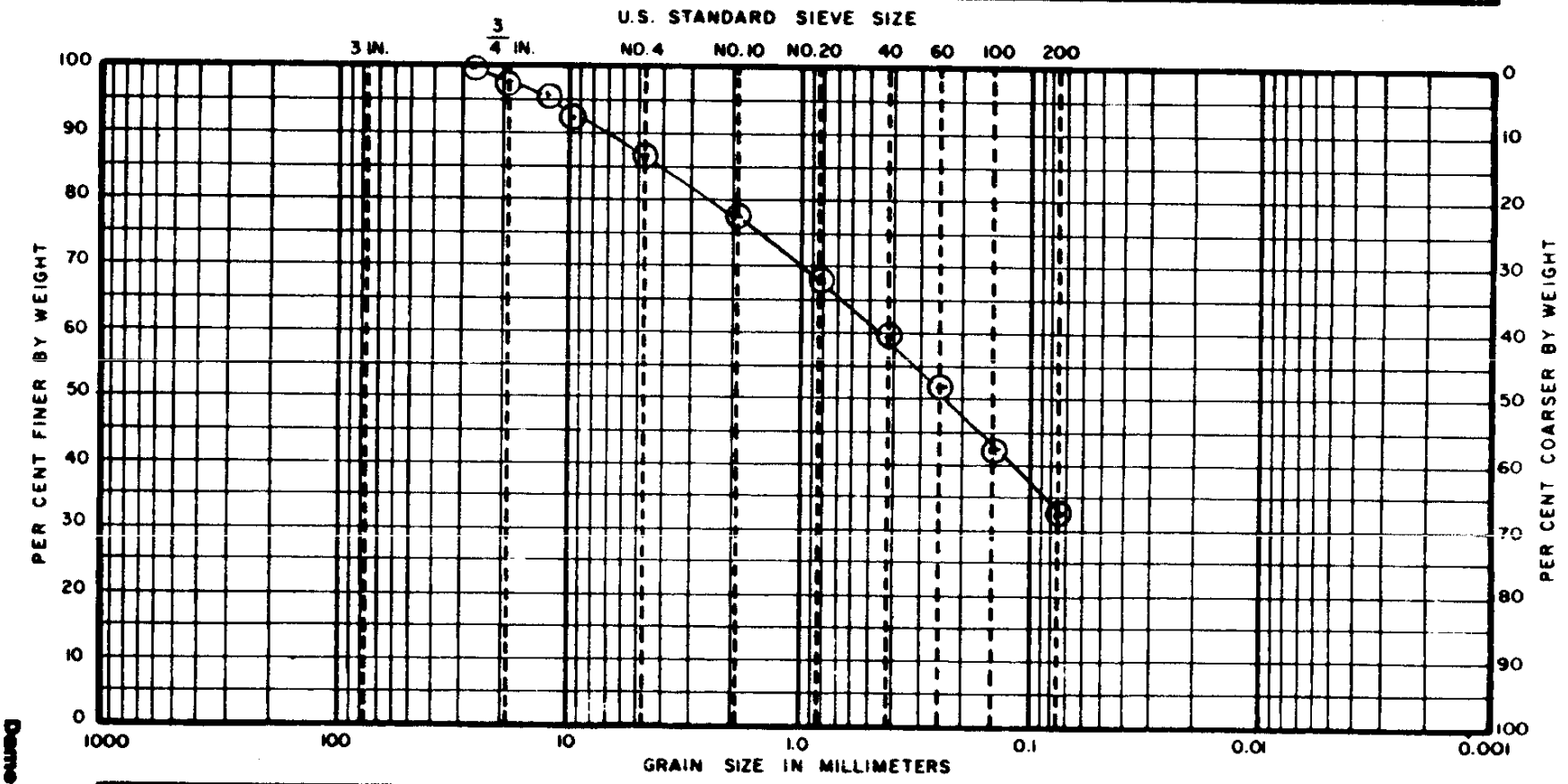
SEND IN ICE CHEST? yes no ICE CHEST # _____

SEND PRESERVATIVE KIT? yes no

757.8

JC PENNY -0443-090-043

BORING	DEPTH	ELEV.	SAMPLE	LIQUID LIMIT	PLASTIC LIMIT	SYMBOL	SOIL CLASSIFICATION	KEY
B-1	10		1D			SC	BROWN GRAVELLY CLAYEY SAND	



Dames & Moore

GRAIN-SIZE DISTRIBUTION
(UNIFIED SOIL CLASSIFICATION SYSTEM)

00000281.tif 108 / 543

DAMES & MOORE

Job No: 5043-090-043 Client J.C. PENNY Boring B-1 Sample 10 Depth _____
Date Sampled _____ By D.M. Date Tested 9/4/91 By AFR Checked By _____
Soil Classification BROWN SC
Wash Sieve ✓ Dry Sieve _____

SIEVE TEST

Dish Number	Weight Of Sample Oven Dried Before Washing (gm)	Sieve Opening (mm)	Sieve No. U.S. Equivalent	Individual Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % Retained (%)	Cumulative % Passing (%)	Correction Factor	Corrected Cumulative % Passing (%)
		76.10	3"						
		50.80	2"						
		38.10	1 1/2"						
SSB-8	473.0	25.40	1"		0	0	100		
	- 82.6	19.00	3/4"		9.23	2.4	97.6		
	390.4	12.70	1/2"		18.97	4.8	95.2		
		9.51	3/8"		30.05	7.7	92.3		
		4.76	#4		54.36	13.9	86.1		
		2.00	#10		88.43	22.6	77.4		
		0.841	#20		124.20	31.8	68.2		
		0.420	#40		157.18	40.3	59.7		
		0.250	#60		190.18	48.7	51.3		
		0.149	#100		226.47	58.0	42.0		
		0.074	#200		264.63	67.8	32.2		

HYDROMETER TEST

Hydrometer No. ASTM #152H
G_s (Determined/Assumed) _____
Deflocculant 125 cc Of _____
Weight Of Dry Soil (Passing #10) _____ gms.
Cylinder No. _____

Date	Time	Elapsed Time (min.)	T °C	Reading (Top Of Meniscus)
		0		
		½		
		1		
		2		
		5		
		15		
		30		
		60		
		120		
		250		
		1440		

DATA REDUCTION

Percentage Finer	Diameter (mm)	Corrected % Finer

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Richard Ward
Dames & Moore
221 Main Street, Ste. 600
San Francisco, CA 94105

Client Code: DAME67
Survey # J.C. Penny
Project/Release # 00443-090-043

L A B O R A T O R Y R E S U L T S

Date Collected: 04/04/91
Date Extracted: 04/16/91
Date Analyzed: 04/17/91

Laboratory Job No.: 911744
Date Received: 04/05/91
Date Reported: 04/22/91

ASSAY: TPH/DIESEL (EPA 8015)
MATRIX: WATER

AB NUMBER	SAMPLE NUMBER	RESULTS mg/L	DET.LIM. mg/L
12614	DM-1-A DIESEL	ND	0.05
12615	DM-2-A DIESEL	ND	0.05
12616	DM-5-A DIESEL	ND	0.05
12617	MW-4-A DIESEL	ND	0.05
12619	CM DIESEL	ND	0.05
12620	CMS DIESEL	0.77	0.05
12621	CMSD DIESEL	0.73	0.05

THIS REPORT HAS BEEN REVIEWED AND APPROVED FOR RELEASE.

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L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 911744

LAB NUMBER	SAMPLE NUMBER	RESULTS mg/L	DET.LIM. mg/L
12622 MB			
	DIESEL	ND	0.05

NOTE: CMS AND CMSD WERE SPIKED AT 0.83 mg/L.

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L A B O R A T O R Y R E S U L T S

Date Collected: 04/04/91
Date Extracted: 04/11/91
Date Analyzed: 04/11/91

Laboratory Job No.: 911744
Date Received: 04/05/91
Date Reported: 04/22/91

ASSAY: TPH/GASOLINE (EPA 5030/8015)
MATRIX: LIQUID

LABNO SMPLNO-ID	RESULTS mg/L	DET. LIM. mg/L
12614 DM-1-B GASOLINE	ND	0.05
12615 DM-2-B GASOLINE	ND	0.05
12616 DM-5-B GASOLINE	ND	0.05
12617 MW-4-B GASOLINE	ND	0.05
12618 TRIP-BLANK GASOLINE	ND	0.05
12619 CM GASOLINE	ND	0.05
12620 CMS GASOLINE	0.36	0.05
12621 CMSD GASOLINE	0.34	0.05
12622 MB GASOLINE	ND	0.05

NOTE: CMS AND CMSD WERE SPIKED AT 0.40 mg/L.

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L A B O R A T O R Y R E S U L T S

Date Collected: 04/04/91
Date Extracted: 04/11/91
Date Analyzed: 04/11/91

Laboratory Job No.: 911744
Date Received: 04/05/91
Date Reported: 04/22/91

ASSAY: BTEX (EPA 5030/8020)
MATRIX: LIQUID

LABNO SMPLNO-ID	RESULTS mg/L	DET. LIM. mg/L
12614 DM-1-C		
BENZENE	ND	0.0005
TOLUENE	ND	0.0005
ETHYLBENZENE	ND	0.0005
XYLENES	ND	0.0005
12615 DM-2-C		
BENZENE	ND	0.0005
TOLUENE	ND	0.0005
ETHYLBENZENE	ND	0.0005
XYLENES	ND	0.0005
12616 DM-5-C		
BENZENE	ND	0.0005
TOLUENE	ND	0.0005
ETHYLBENZENE	ND	0.0005
XYLENES	ND	0.0005
12617 MW-4-C		
BENZENE	ND	0.0005
TOLUENE	ND	0.0005
ETHYLBENZENE	ND	0.0005
XYLENES	ND	0.0005
12618 TRIP-BLANK		
BENZENE	ND	0.0005
TOLUENE	ND	0.0005
ETHYLBENZENE	ND	0.0005
XYLENES	ND	0.0005

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L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 911744

ASSAY: BTEX (EPA 5030/8020)
MATRIX: LIQUID

LABNO SMPLNO-ID	RESULTS mg/L	DET. LIM. mg/L
12619 CM		
BENZENE	ND	0.0005
TOLUENE	ND	0.0005
ETHYLBENZENE	ND	0.0005
XYLENES	ND	0.0005
12620 CMS Spike		
BENZENE	0.0046	0.0005
TOLUENE	0.0045	0.0005
ETHYLBENZENE	0.0045	0.0005
XYLENES	0.014	0.0005
12621 CMSD Spike Duplicate		
BENZENE	0.0044	0.0005
TOLUENE	0.0043	0.0005
ETHYLBENZENE	0.0043	0.0005
XYLENES	0.013	0.0005
12622 MB		
BENZENE	ND	0.0005
TOLUENE	ND	0.0005
ETHYLBENZENE	ND	0.0005
XYLENES	ND	0.0005

NOTE: CMS AND CMSD WERE SPIKED AT 0.0050 mg/L FOR ALL ANALYTES EXCEPT XYLENES, WHICH WERE SPIKED AT 0.015 mg/L.

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QUALITY CONTROL REPORT - UPDATE

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CHAIN-OF-CUSTODY RECORD 91-1744

WHITE COPY - Original (Accompanies Samples) YELLOW COPY - Collector PINK COPY - Project Manager

Boring or Well Number	Sample Number	Depth	Time	Sample Type	Container Type	VOA 601/8010	VOA 602/8020	VOA 624/8240	Semi Vol 625/8270	TPH 418.1	TPH 8015 (M)	TITLE 22 METALS	WET Test	PNA 610/8100	PEST/PCBs 8080	HEX CHROME	ORGANIC LEAD	TCLP	pH	ASBESTOS	Gas & Diesel				FIELD NOTES:	Total Number Of Containers	Laboratory Note Number
DM-1	A		1030	Water	1 x 1l Amber																X					1	
DM-1	B		1030		2x40ml VOA															X						2	
DM-1	C		1030		2x40ml VOA		X																			2	
DM-2	A		1500		1x1l Amber																X					1	
DM-2	B		1500		2x40ml VOA															X						2	
DM-2	C		1500		2x40ml VOA		X																			2	
DM-5	A		1445		1 x 1l Amber																X					1	
DM-5	B		1445		2x40ml VOA															X						2	
DM-5	C		1445		2x40ml VOA		X																			2	
MW-4	A		1345		1x1l Amber																X					1	
MW-4	B		1345		2x40ml VOA															X						2	
MW-4	C		1345		2x40ml VOA		X																			2	
Trip Blanks					3x40ml VOA		X														X					3	

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

David Myers 4/4/91 Federal Express

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

V.D. Wilson 10:00

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY NOTES:

Please note Fed Ex #

1991 APR -5 AM 9:21

RECEIVED ACCULAB

ANALYTICAL LABORATORY: Acculab

LABORATORY CONTACT: Greg Nagle

D&M CONTACT: David Myers PHONE: 243 3793

DAMES & MOORE

1290 Oakmead Parkway
Suite 301
Sunnyvale, California 94086
Telephone: 408/245-4959 FAX: 408/736-0545

S.F.

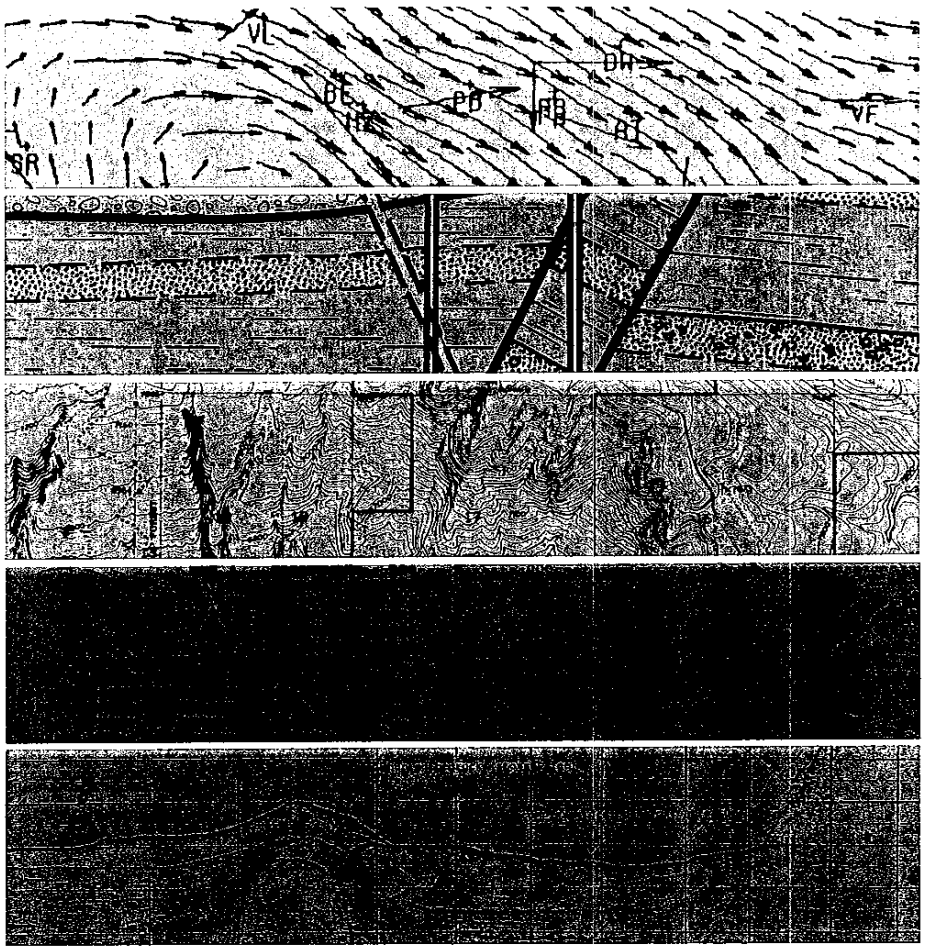
JOB NO.: 00443 090 043 SHEET 1 OF

PROJECT: J.C. Penney - C

LOCATION: Oakland

COLLECTOR: David Myers DATE OF COLLECTION: 4-4-91

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DAMES & MOORE

SUMMARY REPORT
GROUNDWATER MONITORING
J.C. PENNEY STORE #836
EASTMONT MALL
OAKLAND, CALIFORNIA
FOR J.C. PENNEY COMPANY, INC.

March 3, 1992
Job No. 00443-090-043

DAMES & MOORE

CBS2.010

DAMES & MOORE
221 MAIN STREET, SUITE 600, SAN FRANCISCO, CALIFORNIA 94105 (415) 896-5858

March 3, 1992
Job No. 00443-090-043

J.C. Penney Company, Inc.
6131 Orangethorpe Avenue
Buena Park, California 90624

Attention: Mr. Robert Arneson

Gentlemen:

Summary Report
Groundwater Monitoring
J.C. Penney Store #836
Eastmont Mall
Oakland, California
For J.C. Penney Company, Inc.

This summary report presents the results of the groundwater monitoring conducted at J.C. Penney Company, Inc.'s (JCP's) Store #836, which is located at the Eastmont Mall in Oakland, California (Plate 1). This groundwater monitoring was conducted to further assess the potential presence of gasoline and selected volatile organic compounds in groundwater in the vicinity of former underground storage tanks (USTs) at the site. The monitoring was planned and conducted as specified in Dames & Moore's Change Order #2, dated January 28, 1992, submitted to and authorized by JCP.

The JCP store was most recently a Firestone Tire, Brake, and Automotive (TBA) service center, but is currently vacant. Three 10,000-gallon USTs were excavated and removed from the TBA site by Firestone in 1985. These tanks were located at the western corner of the TBA building and supplied gasoline to the adjacent pump island, as shown on Plate 2. No information regarding the tank removal is available from local regulatory

agencies (Alameda County Department of Environmental Health, Oakland Fire Department), from J. C. Penney, Firestone, or the contractor who removed the tanks (Dor-Am Builders).

According to Firestone personnel, a waste oil tank formerly located at the eastern corner of the TBA building was removed by a Firestone subcontractor and replaced in 1987. Reportedly, no hydrocarbon constituents were detected in soil samples collected from the tank, and the replacement waste oil tank was installed in the same location. This replacement waste oil tank excavation was subsequently removed on December 12, 1990 according to Alameda County Department of Environmental Health files. Some soil excavation was required due to the presence of Total Petroleum Hydrocarbons (TPH) as waste oil and diesel in soils adjacent to the excavation. The excavation was subsequently backfilled with clean material. The Alameda County Department of Environmental Health approved the tank removal on March 20, 1991.

Hunter Environmental Services, Inc. (Hunter) of Martinez, California performed a Phase II environmental audit of the Eastmont Mall property in 1989. The Hunter investigation included a soil and groundwater investigation beneath areas of suspected hydrocarbon contamination.

One of three monitoring wells (MW-4) installed at the mall property by Hunter was used to assess the extent of hydrocarbon contamination near the TBA facility. The boring for well MW-4 was drilled to a total depth of 25 feet below ground surface (bgs), at a location south and downgradient of the former gasoline UST locations. A soil sample collected from 15 feet bgs contained TPH as gasoline at a concentration of 2,000 milligrams per kilogram (mg/kg), benzene at 1.4 mg/kg, toluene at 4.3 mg/kg, ethylbenzene at 23.0 mg/kg and total xylenes at 150 mg/kg. Groundwater collected from the subsequently installed monitoring well contained TPH as gasoline at a concentrations of 2.2 mg/kg, and BTEX at concentrations of 0.028, 0.021, 0.050 and 0.29 mg/L, respectively.

At J. C. Penney's request, Dames & Moore performed additional soil and groundwater investigation at the TBA site in April 1991. Details of this investigation were

presented in Dames & Moore's report, entitled "Subsurface Investigation, J. C. Penney Store No. 836, Eastmont Mall, Oakland, California" (July 10, 1991), and are summarized below.

Dames & Moore's investigation included six borings, two of which were converted to groundwater monitoring wells. Boring DM-1, located due north and upgradient of the former UST location, was completed as a background well to assess the quality of groundwater flowing onto the site. Boring DM-2, also completed as a monitoring well, is located about 90 feet south of the former UST location. This well was drilled to assess the lateral extent of suspected hydrocarbons in soils and groundwater.

Soil samples collected during this investigation were chemically analyzed for TPH as diesel and gasoline, and BTEX. Detections were limited to one sample from boring B-1, collected from 15.0 feet bgs below the center of the former pump island. Analysis of this sample detected TPH as gasoline at a concentration of 7.7 mg/kg, toluene at 0.070 mg/kg and total xylenes at 0.005 mg/kg. Dames & Moore collected groundwater samples from monitoring wells DM-1, DM-2 and MW-4 on April 4, 1991. A duplicate sample was also collected from MW-4. All samples were analyzed for BTEX and TPH as gasoline and diesel. No detections were reported for these samples.

Although no detections were reported for well MW-4 during the April 1991 sampling round, the Alameda County Department of Environmental Health requested in a letter to J.C. Penney dated January 22, 1992 that one more round of water sampling and analysis be performed on well MW-4.

On February 6 and 7, 1992, Dames & Moore collected a third round of groundwater samples for chemical analysis from wells DM-1, DM-2, and MW-4. Appendix A describes the sampling procedure. Water levels were measured in each well prior to sampling and are presented in Table 1. Based on the calculated water elevations presented in Table 1, groundwater in the perched water-bearing zone beneath the site appears to flow to the west. The approximate groundwater gradient is 0.02.

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Following measurement of the water levels, each well was purged so that a sample representative of actual formation water could be collected for chemical analysis. Field measurements of groundwater temperature, pH, specific conductivity, and turbidity are presented in Table 2. Quality assurance/quality control measures included collection of a duplicate set of samples from well MW-4, a set of samples as an equipment blank, and previously prepared de-ionized water samples as a trip blank. The samples were chemically analyzed by D&M Laboratories in Petaluma, California, which is a California-certified laboratory. The three groundwater samples, duplicate sample, trip blank and equipment blank were analyzed for TPH as gasoline by EPA Method 8015 (modified), and BTEX by EPA Method 8020.

The results of the analyses are presented in Appendix B and summarized on Table 3. The groundwater sample from MW-4 contained benzene at a concentration of 0.0019 mg/L and ethylbenzene at 0.0025 mg/L. The duplicate sample (MD-4) from this well also contained benzene (0.0011 mg/L) and ethylbenzene (0.0010 mg/L). TPH as gasoline was not detected in the sample from MW-4. The results from the duplicate sample analysis were judged to be consistent with the results of the primary sample, which suggests that the field sampling and laboratory analysis procedures were reproducible. None of the other samples contained TPH as gasoline or BTEX above laboratory detection limits. Similarly, the equipment blanks and trip blanks had no detections for TPH as gasoline or BTEX, indicating that neither the equipment used nor the methods of handling, storage or transportation of the samples were sources of contaminants detected in the sample and duplicate from well MW-4.

We appreciate the opportunity for assisting JCP with this project. If you have any questions, please do not hesitate to call.

Very truly yours,

DAMES & MOORE

Eugenia M. Sangines, R.G.
Senior Geologist

Charles B. Snell
Project Geologist

Attachments:

Table 1 - Groundwater Elevations
Table 2 - Summary of Field Measurements
Table 3 - Summary of Chemical Analyses

Plate 1 - Site Location
Plate 2 - Contour Map of the Groundwater Table/Perched Aquifer

Appendix A - Groundwater Sampling Procedure
Appendix B - Laboratory Analytical Results

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TABLE 1

GROUNDWATER ELEVATIONS

J.C. Penney Store No. 836
Eastmont Mall
Oakland, California
For J.C. Penney Company

Well Number	Top-of-Casing Elevation (feet)	Depth to Water (feet)	Water Elevation (feet)
DM-1	71.96	14.27	57.69
DM-2	68.60	12.82	55.78
MW-4	70.0	14.27	55.73

Notes: Water levels measured on February 6 and 7, 1992 by Dames & Moore using an electronic water level indicator.

Elevations are in feet above mean sea level. Water depths are referenced to the top of the PVC casing.

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TABLE 2

SUMMARY OF FIELD MEASUREMENTS

J.C. Penney Store No. 836
Eastmont Mall
Oakland, California
For J.C. Penney Company

Well Number	Temperature (°F)	pH	Specific Conductivity (μmhos/cm)	Turbidity (N.T.U.)
DM-1	63.5	7.2	1,050	>200
DM-2	69.4	7.0	1,330	60
MW-4	64.1	7.1	1,260	5

Notes: Measurements indicate stabilized groundwater conditions after purging and prior to sample collection.

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TABLE 3

SUMMARY OF CHEMICAL ANALYSES

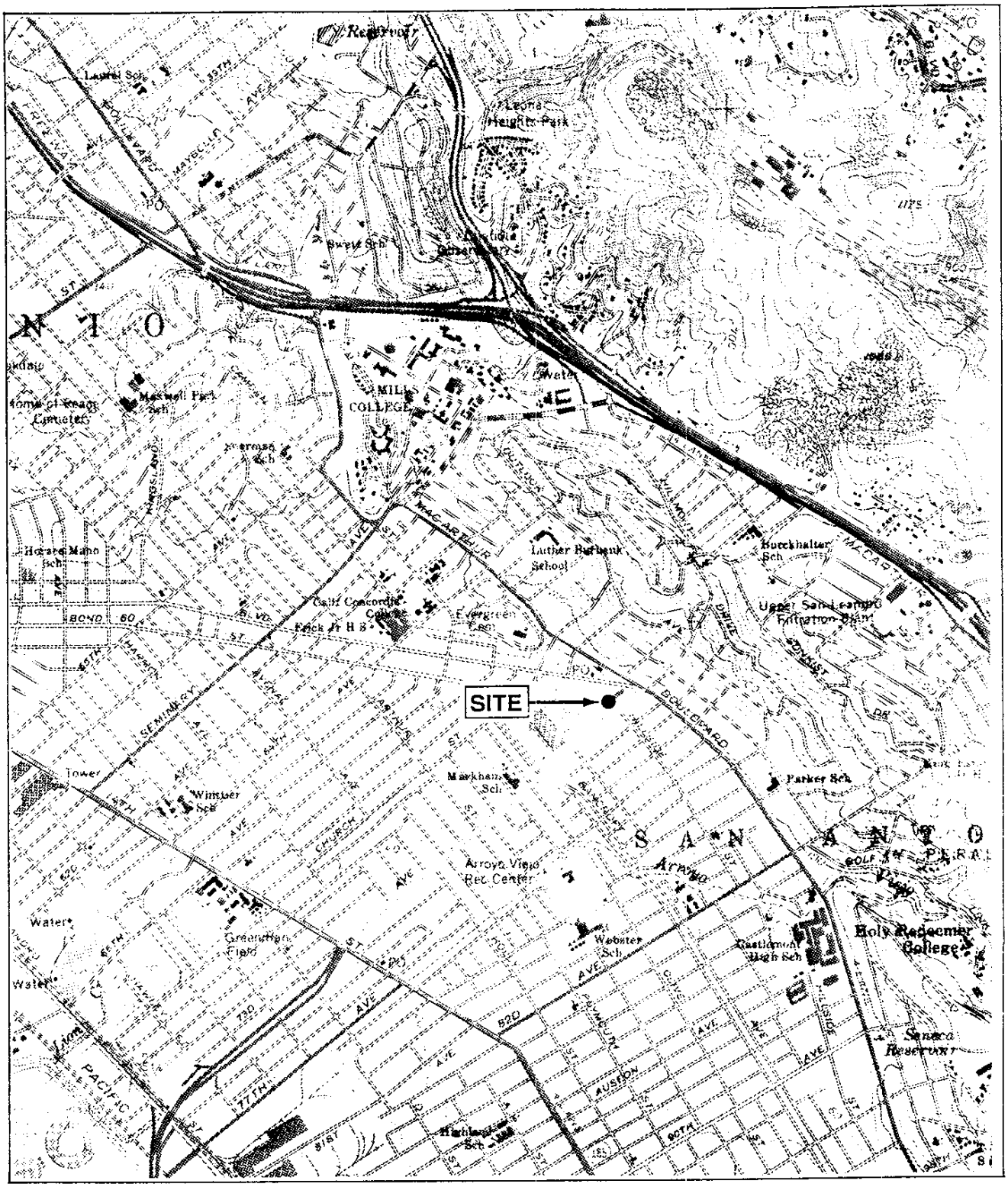
J.C. Penney Store No. 836
Eastmont Mall
Oakland, California
For J.C. Penney Company

Sample	TPH/Gasoline mg/L	B	T	E	X
		mg/L			
DM-1	ND	ND	ND	ND	ND
DM-2	ND	ND	ND	ND	ND
MW-4 (Duplicate)	ND (ND)	0.0019 (0.0011)	ND (ND)	0.0025 (0.0010)	ND (ND)
Equipment Blank (EW-4)	ND	ND	ND	ND	ND
Trip Blank	ND	ND	ND	ND	ND
MCL	--	0.001	Unregulated	0.680	1.750
Detection Limits	0.050	0.0005	0.0005	0.0005	0.0005

mg/L = Milligrams per Liter
ND = Not Detected
TPH = Total Petroleum Hydrocarbons as Gasoline (EPA Method 8015 modified)
BTEX = Benzene, Toluene, Ethylbenzene, Total Xylenes (EPA Method 8020)
MCL = Maximum Contaminant Limit
-- = Not Applicable

Note: Duplicate analyses for well MW-4 shown in parentheses. Duplicate sample number is "MD-4" in analytical reports (Appendix B).

CBS2.010



Reference: Oakland East, California SW/4 Concord 15' Quadrangle, 1980

N

0 2000

Feet

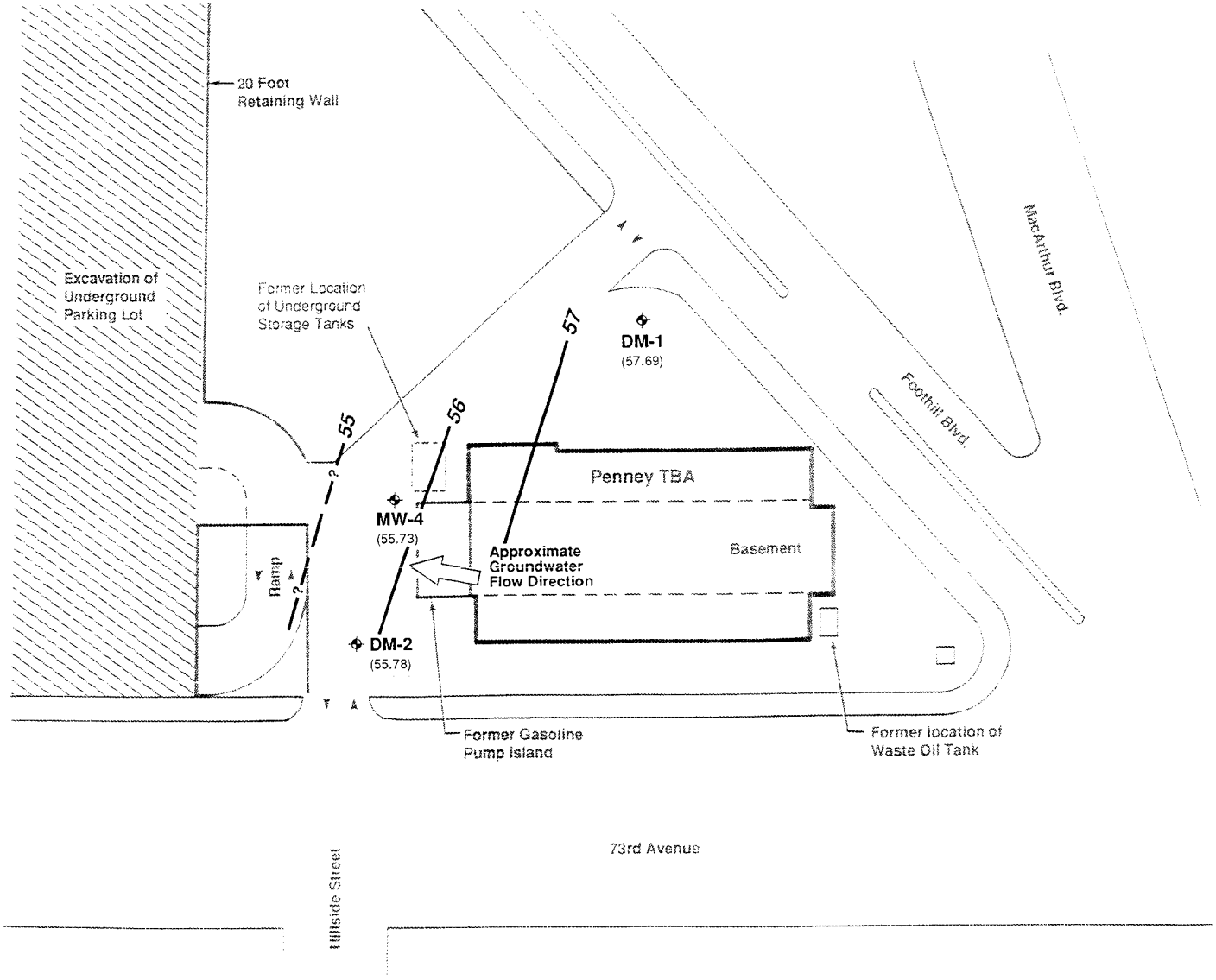
SITE LOCATION

March 1992
443-090-043

J. C. Penney Company
Eastmont Mall
Oakland, California

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PLATE 1



KEY

(57.69) Groundwater elevation above mean sea level (feet)

57 Groundwater Contour

Monitoring Well

N

0 100

Feet

CONTOUR MAP OF THE GROUNDWATER TABLE / PERCHED AQUIFER

J. C. Penney Company
Eastmont Mall
Oakland, California

March 1992
443-090-043

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PLATE 2

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APPENDIX A

Groundwater Sampling Procedure

Groundwater monitoring activities consisted of measuring water levels with an electronic water-level indicator, and collecting groundwater samples from each of three wells located at the site for chemical analysis. The samples were analyzed by D&M Laboratories of Petaluma, California, which is a California-certified laboratory. Analyses included total petroleum hydrocarbons (TPH) as gasoline by EPA Method 8015 (modified), and benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8020.

The electronic water-level indicator was decontaminated with a trisodium phosphate wash and two rinses with deionized water prior to measuring the water level in each well to prevent possible cross-contamination.

In order to obtain samples representative of groundwater in the formation, each monitoring well was purged prior to sample collection until (1) at least three casing volumes of water had been removed; and (2) the field-measured parameters including pH, specific conductivity and temperature had substantially stabilized. As used here, the term "casing volume" means the volume of water being stored inside the well casing at the time the well was visited for purging and sampling. One casing volume (CV) is calculated using:

$CV = (\pi r^2 d)(7.48\ gal/ft^3)$, where:

π = 3.14;

r = the radius measured from the center of the well to the inside surface of the well casing (feet); and

d = the difference in depth between the water level in the well and the bottom of the well casing (feet).

The wells were purged with a small pump using new plastic tubing for each well to prevent possible cross-contamination between wells. The purged water was retained in two new 55-gallon drums (D.O.T.-approved for liquids), labeled, and temporarily stored on-site until laboratory results were received and proper disposal could be arranged. Water samples were obtained from each well by lowering a new disposable bailer, using new clean twine, below the water table. The samples were collected in 40-ml glass vials equipped with teflon-lined septa which were supplied by the laboratory. The vials were filled using a submerged-fill technique to minimize aeration of the samples and to eliminate head space. Samples were labeled with location, date and time of collection, owner, and analysis required, and immediately placed in a cooler containing "blue ice." Additionally, a set of blind duplicate samples were collected from MW-4 for the purpose of assessing the quality of the field and laboratory techniques. An equipment blank was also collected for analysis by rinsing deionized water through a new section of pump hose and a new bailer. The purpose of this blank was to assess whether the equipment used for sampling was a possible source of contaminants. To assess whether contaminants were introduced to the collected water

samples during handling, storage, and transportation of the samples, trip blanks were provided by the laboratory prior to the field investigation. These blanks were handled, stored, transported and analyzed in the same manner as samples collected from the site. A chain-of-custody record was maintained for all samples and blanks collected, and accompanied the samples during overnight transport to the lab.

ENVIRONMENTAL AND INDUSTRIAL HYGIENE SERVICES

3700 Lakeville Highway, Petaluma, CA 94954
P.O. Box 808024, Petaluma, CA 94975-8024
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FAX (707) 763-4065

Charles Snell
Dames & Moore
221 Main Street, Ste. 600
San Francisco, CA 94105

Client Code: DAME37
Survey # J.C.PENNEY'S
Project/Release # 04430-090-043

L A B O R A T O R Y R E S U L T S

Date Collected: 02/06/92
Date Extracted: 02/17/92
Date Analyzed: 02/17/92

Laboratory Job No.: 920395
Date Received: 02/08/92
Date Reported: 02/20/92

ASSAY: TPH/GASOLINE (EPA 5030/MOD. 8015)
MATRIX: LIQUID

LABNO	SMPLNO-ID	RESULTS mg/L	DET. LIM. mg/L
3317	DM-1 GASOLINE	ND	0.050
3319	EW-4 GASOLINE	ND	0.050
3321	MW-4 GASOLINE	ND	0.050
3325	DM-2 GASOLINE	ND	0.050
3327	TRIP BLANK GASOLINE	ND	0.050
3328	MB GASOLINE	ND	0.050
3329	MBS GASOLINE	0.77	0.050

THIS REPORT HAS BEEN REVIEWED AND APPROVED FOR RELEASE. DLF

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L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 920395

ASSAY: TPH/GASOLINE (EPA 5030/MOD. 8015)
MATRIX: LIQUID

LABNO SMPLNO-ID	RESULTS mg/L	DET. LIM. mg/L
3330 MX GASOLINE	ND	0.050
3331 MS GASOLINE	0.77	0.050
3332 MSD GASOLINE	0.73	0.050
3363 MD-4 GASOLINE	ND	0.050

NOTE: MBS, MS AND MSD WERE SPIKED AT 0.80 mg/L.

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Date Reported: 02/20/92

ASSAY: BTEX (EPA 5030/8020)
MATRIX: LIQUID

LABNO SMPLNO-ID	RESULTS mg/L	DET. LIM. mg/L
3317 DM-1		
BENZENE	ND	0.0005
TOLUENE	ND	0.0005
ETHYLBENZENE	ND	0.0005
XYLENES	ND	0.0005
3319 EW-4		
BENZENE	ND	0.0005
TOLUENE	ND	0.0005
ETHYLBENZENE	ND	0.0005
XYLENES	ND	0.0005
3321 MW-4		
BENZENE	0.0019	0.0005
TOLUENE	ND	0.0005
ETHYLBENZENE	0.0025	0.0005
XYLENES	ND	0.0005
3325 DM-2		
BENZENE	ND	0.0005
TOLUENE	ND	0.0005
ETHYLBENZENE	ND	0.0005
XYLENES	ND	0.0005

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L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 920395

ASSAY: BTEX (EPA 5030/8020)
MATRIX: LIQUID

LABNO SMPLNO-ID	RESULTS mg/L	DET. LIM. mg/L
3327 TRIP BLANK		
BENZENE	ND	0.0005
TOLUENE	ND	0.0005
ETHYLBENZENE	ND	0.0005
XYLENES	ND	0.0005
3328 MB		
BENZENE	ND	0.0005
TOLUENE	ND	0.0005
ETHYLBENZENE	ND	0.0005
XYLENES	ND	0.0005
3329 MBS		
BENZENE	0.0049	0.0005
TOLUENE	0.0050	0.0005
ETHYLBENZENE	0.0048	0.0005
XYLENES	0.015	0.0005
3330 MX		
BENZENE	ND	0.0005
TOLUENE	ND	0.0005
ETHYLBENZENE	ND	0.0005
XYLENES	ND	0.0005
3331 MS		
BENZENE	0.0050	0.0005
TOLUENE	0.0049	0.0005
ETHYLBENZENE	0.0046	0.0005
XYLENES	0.015	0.0005

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MATRIX: LIQUID

LABNO SMPLNO-ID	RESULTS mg/L	DET. LIM. mg/L
3332 MSD		
BENZENE	0.0050	0.0005
TOLUENE	0.0048	0.0005
ETHYLBENZENE	0.0046	0.0005
XYLENES	0.014	0.0005
3363 MD-4		
BENZENE	0.0011	0.0005
TOLUENE	ND	0.0005
ETHYLBENZENE	0.0010	0.0005
XYLENES	ND	0.0005

NOTES: (1) MBS, MS AND MSD WERE SPIKED AT 0.0050 mg/L FOR ALL ANALYTES EXCEPT FOR XYLENES WHICH WERE SPIKED AT 0.015 mg/L.

(2) POSITIVE SAMPLE RESULTS WERE CONFIRMED ON A SECONDARY COLUMN.

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QUALITY CONTROL REPORT

In order to provide you with the means of assessing the quality of the data in our report, **D&M Laboratories** reports the results of Quality Control samples analyzed with your samples.

The Quality Control samples provide the following QC information:

The Method Blank (**MB**) monitors the level of contamination introduced by reagents or glassware. A minimum of one MB is run per batch of 20 samples or less.

The Method Blank Spike (**MBS**) measures the accuracy of analytical techniques and is not subject to matrix effects. A minimum of one MBS is run per batch of 20 samples or less.

The Matrix Spike (**MS**) measures the accuracy of the method for a matrix type. Due to the high variability within matrix types and the necessity of batching samples from varied sources, matrix spike information from one sample is not necessarily relevant to other samples on the batch. A minimum of two matrix spikes, MS and MSD, are run per batch of 20 samples or less. The sample selected for the matrix spike is designated **MX**.

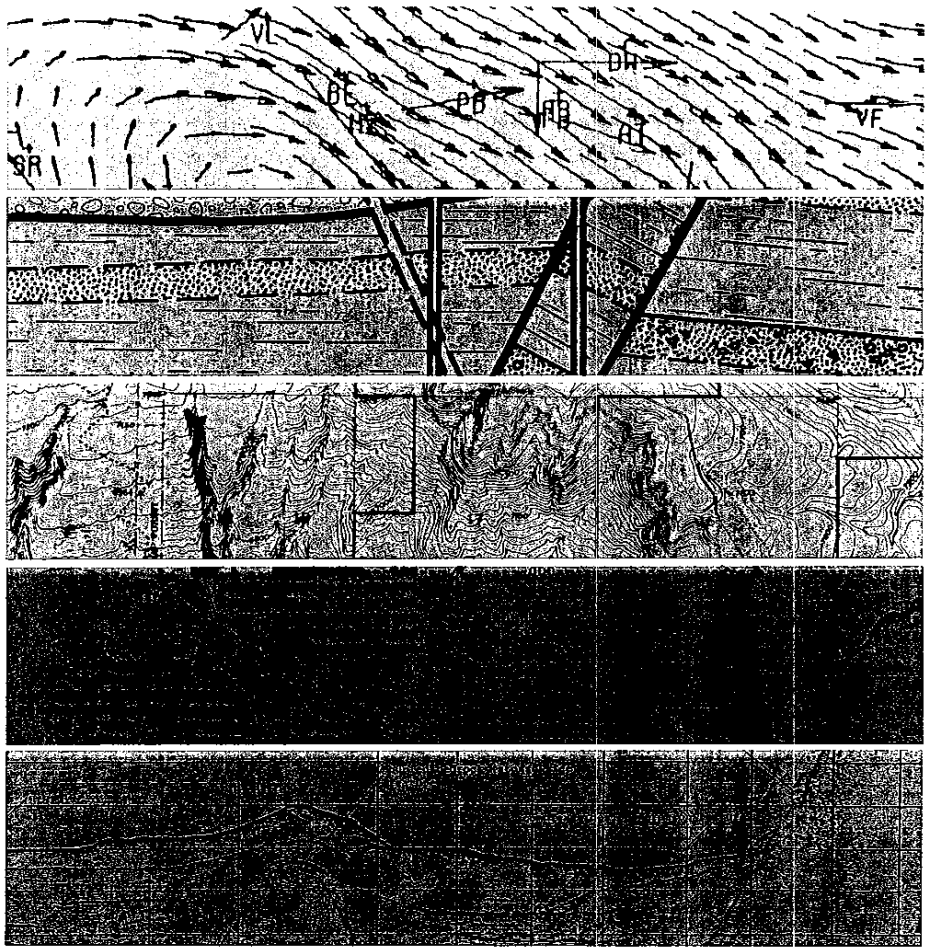
The Matrix Spike Duplicate (**MSD**), along with the MS, is used to monitor the precision (**RPD**) of the method and to indicate possible non homogeneity of the sample matrix.

Equations used for determining percent recovery and relative percent difference (RPD) are as follows:

MBS % Recovery = MBS result / MBS spike level X 100
MS % Recovery = (MS - sample) / MS spike level X 100
RPD = | MS - MSD | / ((MS + MSD) / 2) X 100

We continue to strive to improve the quality of service to our clients. We welcome any questions or comments you may have about this information, or about **D&M Laboratories** in general. Please contact a Project Manager for further information.

QCRep.3\91\7



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SUMMARY REPORT
GROUNDWATER MONITORING
J.C. PENNEY STORE #836
EASTMONT MALL
OAKLAND, CALIFORNIA
FOR J.C. PENNEY COMPANY, INC.

July 15, 1992
Job No. 00443-090-043

DAMES & MOORE

b:CBS3.027

DAMES & MOORE
221 MAIN STREET, SUITE 600, SAN FRANCISCO, CALIFORNIA 94105-1917
(415) 896-5858 FAX: (415) 882-9261

July 15, 1992
Job No. 00443-090-043

J.C. Penney Company, Inc.
6131 Orangethorpe Avenue
Buena Park, California 90624

Attention: Mr. Robert Arneson
Field Engineering Rep.

Gentlemen:

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The JCP store was most recently a Firestone Tire, Brake, and Automotive (TBA) service center, but is currently vacant. Three 10,000-gallon USTs were excavated and removed from the TBA site by Firestone in 1985. These tanks were located at the western corner of the TBA building and supplied gasoline to the adjacent pump island, as shown on Plate 2. No information regarding the tank removal is available from local regulatory agencies including the Alameda County Department of Environmental Health (ACDEH) and

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In September 1990, Environmental Science & Engineering, Inc. (ESE) of Martinez, California performed verification sampling of groundwater for the three monitoring wells installed by Hunter at the Eastmont Mall. During this investigation, ESE sampled well MW-4 and analyzed the groundwater for BTEX. No analyte was discovered above the laboratory detection limit of 0.0005 mg/L for BTEX. ESE did not analyze samples from this well for TPH as gasoline.

b:CBS3.027

At the request of JCP, Dames & Moore performed additional soil and groundwater investigation at the TBA site in April 1991. Details of this investigation were presented in Dames & Moore's report, entitled "Subsurface Investigation, J. C. Penney Store No. 836, Eastmont Mall, Oakland, California" (July 10, 1991), and are summarized below.

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Although no detections were reported for well MW-4 during the April 1991 sampling round, the ACDEH requested in a letter to JCP dated January 22, 1992 that one more round of water sampling and analysis be performed on well MW-4.

On February 6 and 7, 1992, Dames & Moore collected another round of groundwater samples for chemical analysis from wells DM-1, DM-2, and MW-4. The three groundwater samples were analyzed for TPH as gasoline and BTEX. The groundwater sample from well MW-4 contained benzene at a concentration of 0.0019 mg/L and ethylbenzene at 0.0025 mg/L. The duplicate sample of well MW-4 also contained benzene (0.0011 mg/L) and ethylbenzene (0.0010 mg/L). No other analytes were detected in samples from wells MW-4, DM-1, DM-2, trip blanks or equipment blanks.

b:CBS3.027

The most recent quarterly sampling of the site was performed by Dames & Moore on June 4, 1992. Groundwater samples were collected for chemical analysis from wells DM-1, DM-2, and MW-4. Appendix A describes the sampling procedure. Water levels were measured in each well prior to sampling and are presented in Table 1. Based on the calculated water elevations presented in Table 1, groundwater in the perched water-bearing zone beneath the site appears to flow to the west at an approximate gradient of 0.02. This flow direction is consistent with that estimated from the February 1992 water levels.

Following measurement of the water levels, each well was purged so that a sample representative of actual formation water could be collected for chemical analysis. Field measurements of groundwater temperature, pH, specific conductivity, and turbidity are presented in Table 2. Quality assurance/quality control measures included collection of a duplicate set of samples from well MW-4, a set of samples as an equipment blank, and previously prepared de-ionized water samples as a trip blank. The samples were chemically analyzed by D&M Laboratories in Petaluma, California, which is a California-certified laboratory. The three groundwater samples, duplicate sample, and equipment blank were analyzed for TPH as gasoline by EPA Method 8015 (modified), and BTEX by EPA Method 8020. The trip blank water sample was only tested for BTEX.

The results of the most recent analyses are presented in Appendix B and summarized on Table 3. The groundwater samples from MW-4 contained no analyte above the detection limit. The duplicate sample (MD-4) from this well contained ethylbenzene at a concentration of 0.0008 mg/L, which was slightly greater than the detection limit of 0.0005 mg/L. The results from the duplicate sample analysis were judged to be consistent with the results of the primary sample, which suggests that the field sampling and laboratory analysis procedures were reproducible. None of the other groundwater samples contained TPH as gasoline or BTEX above laboratory detection limits. Similarly, the trip blank had no detections for BTEX, indicating that neither the methods of handling, storage or transportation of the samples were sources of ethylbenzene detected in the duplicate sample from well MW-4. The equipment blank contained TPH as gasoline (0.19 mg/L), toluene (0.091 mg/L), and xylenes (0.0007 mg/L). A review of the sample collection procedures and analytical data did not reveal a source of the hydrocarbons detected in the equipment blank. However, none of the hydrocarbons present in the equipment blank were detected in the groundwater samples or trip blank. Based on these results, the detections in the equipment blank do not appear to

be related to the test results of the groundwater samples and trip blank. Therefore, it is our opinion that the detections in the equipment blank do not impact the groundwater sample results presented in this report.

We appreciate the opportunity for assisting JCP with this project. If you have any questions, please do not hesitate to call.

Very truly yours,

DAMES & MOORE

Eugenia M. Sangines, R.G.
Senior Geologist

Charles B. Snell, C.E.G.
Project Geologist

Attachments:

Table 1 - Groundwater Elevations
Table 2 - Summary of Field Measurements
Table 3 - Summary of Chemical Analyses

Plate 1 - Site Location
Plate 2 - Contour Map of the Groundwater Table/Perched Aquifer

Appendix A - Groundwater Sampling Procedure
Appendix B - Laboratory Analytical Results

b:CBS3.027

TABLE 1

GROUNDWATER ELEVATIONS

J.C. Penney Store No. 836
Eastmont Mall
Oakland, California
For J.C. Penney Company

Well Number	Top-of-Casing Elevation (feet)	Depth to Water (feet)	Water Elevation (feet)
DM-1	71.96	13.75	58.21
DM-2	68.60	12.81	55.79
MW-4	70.0	14.16	55.84

Notes: Water levels measured on June 4, 1992 by Dames & Moore using an electronic water level indicator.

Elevations are in feet above mean sea level. Water depths are referenced to the top of the PVC casing.

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TABLE 2

SUMMARY OF FIELD MEASUREMENTS

J.C. Penney Store No. 836
Eastmont Mall
Oakland, California
For J.C. Penney Company

Well Number	Temperature (°F)	pH	Specific Conductivity (μmhos/cm)	Turbidity (N.T.U.)
DM-1	71.7	6.9	295	25
DM-2	72.3	7.1	365	8
MW-4	72.0	7.0	375	1

Notes: Measurements indicate stabilized groundwater conditions after purging and prior to sample collection.

b:CBS3.027

TABLE 3

SUMMARY OF CHEMICAL ANALYSES

J.C. Penney Store No. 836
Eastmont Mall
Oakland, California
For J.C. Penney Company

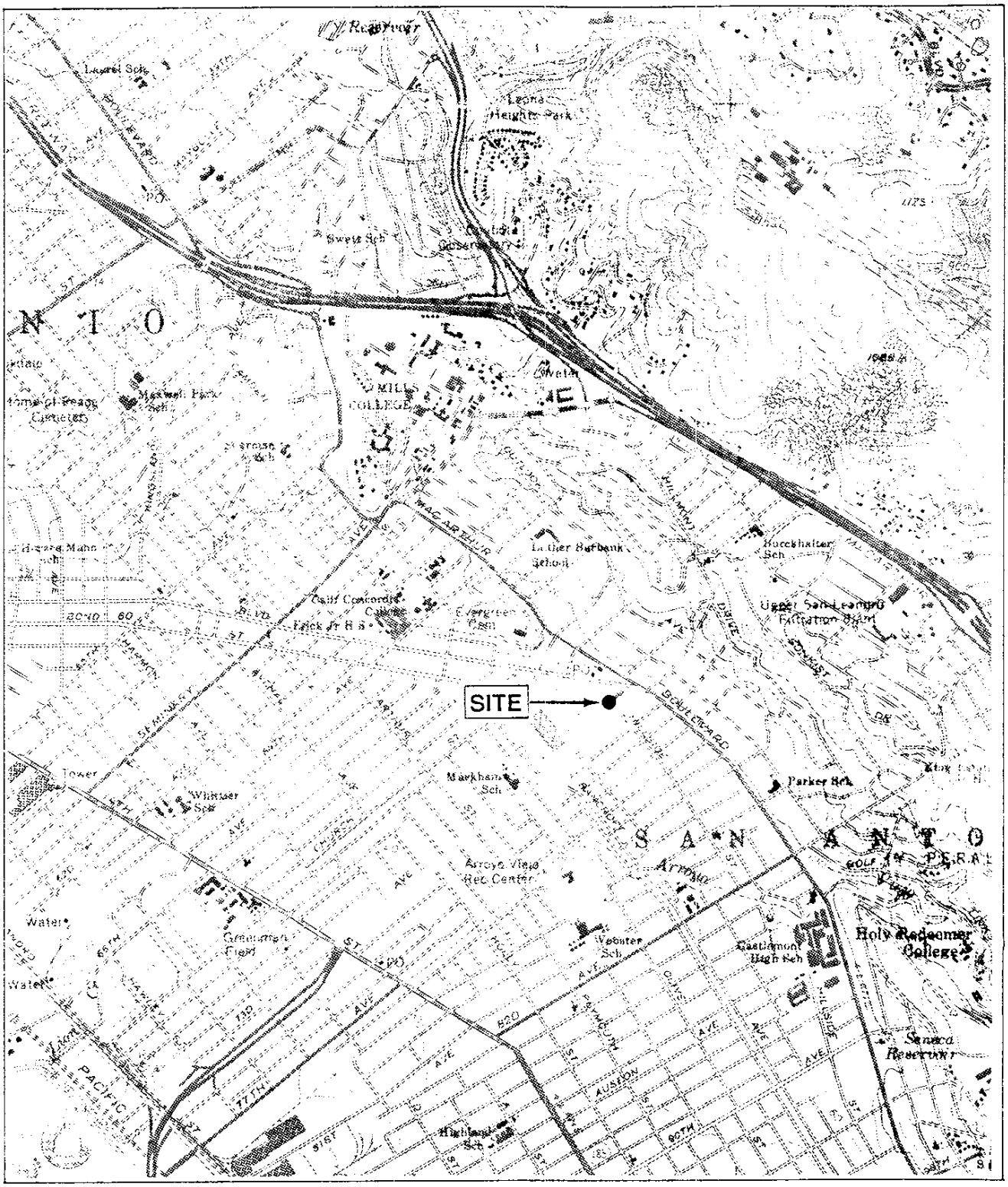
Sample[1]	TPH/Gasoline mg/L	B	T	E	X
		mg/L			
DM-1	ND	ND	ND	ND	ND
DM-2	ND	ND	ND	ND	ND
MW-4	ND (ND)[2]	ND (ND)	ND (ND)	ND (0.0008)	ND (ND)
Equipment Blank	0.19	ND	0.091	ND	0.0007
Trip Blank	NA	ND	ND	ND	ND
MCL	--	0.001	Unregulated	0.680	1.750
Detection Limits	0.050	0.0005	0.0005	0.0005	0.0005

mg/L = Milligrams per Liter
ND = Not Detected
NA = Not Analyzed
TPH = Total Petroleum Hydrocarbons as Gasoline (EPA Method 8015 modified)
BTEX = Benzene, Toluene, Ethylbenzene, Total Xylenes (EPA Method 8020)
MCL = Maximum Contaminant Limit
-- = Not Applicable

Notes:

(1) Sample nomenclature cross-reference is included in Appendix B.
(2) Duplicate analyses for well MW-4 shown in parentheses.

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SITE LOCATION

J. C. Penney Company
Eastmont Mall
Oakland, California

July 1992
443-090-043

DAMES & MOORE

PLATE 1

APPENDIX A

Groundwater Sampling Procedure

Groundwater monitoring activities consisted of measuring water levels with an electronic water-level indicator, and collecting groundwater samples from each of three wells located at the site for chemical analysis. The samples were analyzed by D&M Laboratories of Petaluma, California, which is a California-certified laboratory. Analyses included total petroleum hydrocarbons (TPH) as gasoline by EPA Method 8015 (modified), and benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8020.

The electronic water-level indicator was decontaminated with a trisodium phosphate wash and rinsed with deionized water prior to measuring the water level in each well to prevent possible cross-contamination.

In order to obtain samples representative of groundwater in the formation, each monitoring well was purged prior to sample collection until (1) at least three casing volumes of water had been removed; and (2) the field-measured parameters including pH, specific conductivity and temperature had substantially stabilized. As used here, the term "casing volume" means the volume of water being stored inside the well casing at the time the well was visited for purging and sampling. One casing volume (CV) is calculated using:

$CV = (\pi r^2 d)(7.48\ gal/ft^3)$, where:
π = 3.14;
r = the radius measured from the center of the well to the inside surface of the well casing (feet); and
d = the difference in depth between the water level in the well and the bottom of the well casing (feet).

The wells were purged with a small pump using new plastic tubing for each well to prevent possible cross-contamination between wells. The purged water was retained in two new 55-gallon drums (D.O.T.-approved for liquids), labeled, and temporarily stored on-site until laboratory results were received and proper disposal could be arranged. Water samples were obtained from each well by lowering a new disposable bailer, using new clean twine, below the water table. The samples were collected in 40-ml glass vials equipped with teflon-lined septa which were supplied by the laboratory. The vials were filled using a submerged-fill technique to minimize aeration of the samples and to eliminate head space. Samples were labeled with location, date and time of collection, owner, and analysis required, and immediately placed in a chilled cooler. Additionally, a set of blind duplicate samples were collected from MW-4 for the purpose of assessing the quality of the field and laboratory techniques. An equipment blank was also collected for analysis by rinsing deionized water through a new section of pump hose and a new bailer. The purpose of this blank was to assess whether the equipment used for sampling was a possible source of contaminants. To assess whether contaminants were introduced to the collected water samples during handling,

storage, and transportation of the samples, trip blanks were provided by the laboratory prior to the field investigation. These blanks were handled, stored, transported and analyzed in the same manner as samples collected from the site. A chain-of-custody record was maintained for all samples and blanks collected, and accompanied the samples during overnight transport to the lab.

Sample Identification Key

Sample Identification Number	Description
DM-1	Monitoring Well DM-1
DM-2	Monitoring Well DM-2
MW-4	Monitoring Well MW-4
MD-4	Duplicate Sample for Well MW-4
EW-4	Equipment Rinsate Blank
Trip Blank	Trip Blank
MB	Method Blank
MBS	Method Blank Spike
MX	Matrix Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate

CBS3.027

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Charles Snell
Dames & Moore
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San Francisco, CA 94105

Client Code: DAME37
Survey # J.C.PENNEY
Project/Release # 00443-090-043

L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 921719
Date Collected: 06/04/92
Date Received: 06/05/92
Date Analyzed: 06/11/92
Date Reported: 06/19/92

ASSAY: TPH/GASOLINE (EPA 5030/MOD. 8015)
MATRIX: LIQUID

LABNO SMPLNO-ID	RESULTS mg/L	DET. LIM. mg/L
14935 DM-1 GASOLINE	ND	0.050
14936 DM-2 GASOLINE	ND	0.050
14937 MW-4 GASOLINE	ND	0.050
14938 MD-4 GASOLINE	ND	0.050
14939 EW-4 GASOLINE	0.19	0.050
MB GASOLINE	ND	0.050
MBS GASOLINE	0.77	0.050

THIS REPORT HAS BEEN REVIEWED
AND APPROVED FOR RELEASE.

L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 921719

ASSAY: TPH/GASOLINE (EPA 5030/MOD. 8015)
MATRIX: LIQUID

LABNO	SMPLNO-ID	RESULTS mg/L	DET. LIM. mg/L
	MX		
	GASOLINE	ND	0.050
	MS		
	GASOLINE	0.68	0.050
	MSD		
	GASOLINE	0.70	0.050

NOTE: MBS, MS AND MSD WERE SPIKED AT 0.80 mg/L.

L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 921719
Date Collected: 06/04/92
Date Received: 06/05/92
Date Analyzed: 06/11/92
Date Reported: 06/19/92

ASSAY: BTEX (EPA 5030/8020)
MATRIX: LIQUID

LABNO SMPLNO-ID	RESULTS mg/L	DET. LIM. mg/L
14935 DM-1		
BENZENE	ND	0.0005
TOLUENE	ND	0.0005
ETHYLBENZENE	ND	0.0005
XYLENES	ND	0.0005
14936 DM-2		
BENZENE	ND	0.0005
TOLUENE	ND	0.0005
ETHYLBENZENE	ND	0.0005
XYLENES	ND	0.0005
14937 MW-4		
BENZENE	ND	0.0005
TOLUENE	ND	0.0005
ETHYLBENZENE	ND	0.0005
XYLENES	ND	0.0005
14938 MD-4		
BENZENE	ND	0.0005
TOLUENE	ND	0.0005
ETHYLBENZENE	0.0008	0.0005
XYLENES	ND	0.0005
14939 EW-4		
BENZENE	ND	0.0005
TOLUENE	0.091	0.0025
ETHYLBENZENE	ND	0.0005
XYLENES	0.0007	0.0005

L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 921719

ASSAY: BTEX (EPA 5030/8020)
MATRIX: LIQUID

LABNO SMPLNO-ID	RESULTS mg/L	DET. LIM. mg/L
14940 TRIP BLANK		
BENZENE	ND	0.0005
TOLUENE	ND	0.0005
ETHYLBENZENE	ND	0.0005
XYLENES	ND	0.0005
MB		
BENZENE	ND	0.0005
TOLUENE	ND	0.0005
ETHYLBENZENE	ND	0.0005
XYLENES	ND	0.0005
MBS		
BENZENE	0.0044	0.0005
TOLUENE	0.0046	0.0005
ETHYLBENZENE	0.0045	0.0005
XYLENES	0.014	0.0005
MX		
BENZENE	ND	0.0005
TOLUENE	ND	0.0005
ETHYLBENZENE	ND	0.0005
XYLENES	ND	0.0005
MS		
BENZENE	0.0046	0.0005
TOLUENE	0.0046	0.0005
ETHYLBENZENE	0.0047	0.0005
XYLENES	0.014	0.0005

L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 921719

ASSAY: BTEX (EPA 5030/8020)
MATRIX: LIQUID

LABNO SMPLNO-ID	RESULTS mg/L	DET. LIM. mg/L
MSD		
BENZENE	0.0044	0.0005
TOLUENE	0.0044	0.0005
ETHYLBENZENE	0.0044	0.0005
XYLENES	0.014	0.0005

NOTE: MBS, MS AND MSD WERE SPIKED AT 0.0050 mg/L FOR ALL ANALYTES EXCEPT FOR XYLENES WHICH WERE SPIKED AT 0.015 mg/L.

D&M LABORATORIES
ENVIRONMENTAL AND INDUSTRIAL HYGIENE SERVICES

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QUALITY CONTROL REPORT

In order to provide you with the means of assessing the quality of the data in our report, **D&M Laboratories** reports the results of Quality Control samples analyzed with your samples.

The Quality Control samples provide the following QC information:

The Method Blank (**MB**) monitors the level of contamination introduced by reagents or glassware. A minimum of one MB is run per batch of 20 samples or less.

The Method Blank Spike (**MBS**) measures the accuracy of analytical techniques and is not subject to matrix effects. A minimum of one MBS is run per batch of 20 samples or less.

The Matrix Spike (**MS**) measures the accuracy of the method for a matrix type. Due to the high variability within matrix types and the necessity of batching samples from varied sources, matrix spike information from one sample is not necessarily relevant to other samples on the batch. A minimum of two matrix spikes, MS and MSD, are run per batch of 20 samples or less. The sample selected for the matrix spike is designated **MX**, and may or may not have been submitted by the recipient of this report.

The Matrix Spike Duplicate (**MSD**), along with the MS, is used to monitor the precision (**RPD**) of the method and to indicate possible non homogeneity of the sample matrix.

Equations used for determining percent recovery and relative percent difference (RPD) are as follows:

MBS % Recovery = (MBS result / MBS spike level) x 100
MS % Recovery = [(MS result - MX result) / MS spike level] x 100
RPD ={ | MS result - MSD result | / [(MS result + MSD result) / 2]} x 100

We continue to strive to improve the quality of service to our clients. We welcome any questions or comments you may have about this information, or about **D&M Laboratories** in general. Please contact a Project Manager for further information.

CHAIN-OF-CUSTODY RECORD

WHITE COPY - Progoma; (Ac[illegible]panies Samples) YELLOW COPY - Collector PINK COPY - Project Manager

Sample Number	Date	Depth	Time	Sample Type	Container Type	ANALYSES: VOA 8010	VOA 8020	VOA 8240	Semi Vol 8270	TPH 418.1	TPH 8015 (M)	pH	CCR Metals					FIELD NOTES:	Total Number of Containers	Laboratory Note Number
DM-1	6/4/92	13.76	1100	W	40 ml VOA		✓				✓								4	
DM-2	6/4/92	12.85	1230	W	40 ml VOA		✓				✓								4	
MW-4	6/4/92	14.22	1426	W	40 ml VOA		✓				✓								4	
MD-4	6/4/92	14.22	1427	W	40 ml VOA		✓				✓							DUPE OF MW-4	4	
EW-4	6/4/92	—	1410	W	40 ml VOA		✓				✓								4	
TRIP BLANK	6/2/92	—		W	40 ml VOA		✓				✓								4	

RECEIVED FOR LABORATORY BY: [illegible] DATE: 6-5-92 TIME: 0715

RELINQUISHED BY: (Signature) [signature] DATE/TIME: 6-5-92 RECEIVED BY: (Signature) [signature]

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY NOTES:

CONTACT CHUCK SVEC FOR TURNAROUND TIMES

ANALYTICAL LABORATORY PACE LABORATORIES

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JOB NO.: 00443-090-043 SHEET 1 OF 1

PROJECT J.C. PENNEY

LOCATION EASTMONT MALL, OAKLAND, CA

COLLECTOR MICHAEL DOSSEY DATE OF COLLECTION 6-4-92

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Environmental Science & Engineering, Inc.



EASTMONT MALL
GROUND-WATER RE-SAMPLING
SEPTEMBER 1990

EASTMONT MALL
OAKLAND, CALIFORNIA

Prepared For:

Eastmont Mall, Inc.
One Eastmont Mall
Oakland, California 94605

Prepared By:

Environmental Science & Engineering, Inc.
597 Center Avenue, Suite 350
Martinez, California 94553

Project No. 6-90-5102

October 15, 1990

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This report, including all related activities, was prepared and conducted by personnel of the Martinez, California office of Environmental Science & Engineering, Inc., (ESE) under the direct supervision of Emilio Gonzalez, Jr., California Certified Engineering Geologist No. EG-1543. Review for this report was provided by Ms. Susan S. Wickham, California Registered Geologist No. 3851 and ESE, Martinez office Director of Geosciences. Our professional services have been performed using that degree of care and skill ordinarily exercised under similar circumstances by other hydrogeologists and engineers practicing in this field. No other warranty, expressed or implied, is made as to the professional advice in this report.

Emilio Gonzalez, Jr., CEG No. EG-1543
Staff Geologist

Date 10-15-90

Susan S. Wickham, RG No. 3851
Director, Geosciences

Date Oct 15, 1990

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2 Site Plan

3 Ground-Water Elevations - September 1990

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1 Ground-Water Elevations - September 1990

2 Analytical Results - September 1990

APPENDICES

Appendix

A Water Sample Logs

B Analytical Results and Chain of Custody Documents

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1.0 EXECUTIVE SUMMARY

Environmental Science & Engineering, Inc. (ESE) conducted verification sampling of ground water (ground-water re-sampling) for three existing monitoring wells at the Eastmont Mall on September 24, 1990. The Eastmont Mall (site) is located at the corner of 73rd and Bancroft Avenues, Oakland, Alameda County, California (Figures 1, 2).

Depth to ground water at the site ranged from 14.55 to 32.06 feet below ground surface (Table 1). Relative ground-water elevations, calculated from depth to water values, range from 67.9 to 117.0 feet. ESE infers a ground-water flow direction oriented to the south-southeast. The ground-water flow direction is inferred from wells MW-2 and MW-3; ground water at well MW-4 may be dammed by a site parking structure.

Ground-water samples were analyzed for fuel constituents (Total Petroleum Hydrocarbons as gasoline [TPH-g] and Benzene, Ethylbenzene, Toluene and Total Xylenes [BETX], and for Total Volatile Organics (TVOs), such as the solvents Trichloroethene (also known as Trichloroethylene, TCE) and Tetrachloroethene (also known as Perchloroethene, PCE) analyzed by EPA Method 624. Constituent concentrations detected in the site ground-water re-sampling include:

TPH-g	4.5 milligrams per Liter (mg/L), MW-3
Benzene	620 micrograms per Liter (ug/L), MW-3
Toluene	19 ug/L, MW-3
Total Xylenes	100 ug/L, MW-3
TCE	6.2 ug/L, MW-2
PCE	100 ug/L, MW-2.

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The ground-water sample from MW-2 contained a reported 25 ug/L Methylene Chloride. This constituent was also detected in the Trip Blank, analyzed by EPA Method 624, at 10 ug/L (Appendix B). ESE attributes the result obtained in the MW-2 ground-water sample in part to laboratory error.

All other analyses results were non-detectable (ND) at the analytical laboratory reporting limits. The low concentrations detected, and for MW-4 not detected, are of note, since results of a ground-water sample obtained for that well in December 1989 yielded elevated concentrations for fuel constituents.

The result for benzene concentration in ground water for MW-3 exceeded the State of California's Action Level for Drinking Water (Action Level) of 5 ug/L (California Regional Water Quality Control Board, 1989). Concentrations for toluene and total xylenes in MW-3 were below Action Level. Reported concentration for TCE in MW-2 ground water was marginally above Action Level (5 ug/L); PCE concentration in MW-2 was above Action Level (2 ug/L). No Action Level is available for methylene chloride.

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2.0 INTRODUCTION

Environmental Science & Engineering, Inc. (ESE) sampled ground water from three monitoring wells at the Eastmont Mall (site) to verify results of previous ground-water samples obtained at the site by Hunter Environmental Services (Hunter) in December 1989. The wells sampled by ESE are found at three locations on site: MW-2, located near a dry cleaners store (cleaners), MW-3, located southeast of a BP service station(BP), and MW-4, located south of a former Firestone tire store (Firestone). ESE performed ground-water re-sampling at the site in general accordance with Regional Water Quality Control Board (Regional Board) guidelines for investigations of underground tank sites (Regional Board, 1990).

2.1 Background

In December 1989, Hunter Environmental Services, Inc. (Hunter) performed a Phase II Environmental Audit at the site (Hunter, 1989). Hunter drilled, installed and sampled one monitoring well at each of the three site locations mentioned above. Hunter also drilled and sampled a soil boring at a presumed upgradient location within the mall property. Hunter's investigation did not include soil or ground-water sampling at other areas of concern on site, such as the location of a waste oil tank at Eastmont Auto and the location of a small waste oil storage tank northeast of BP.

The object of Hunter's sampling program had been to investigate potential soil and ground-water contamination associated with subsurface storage tanks for solvents (cleaners), fuels (BP) and waste oil (Firestone). The December 1989 ground-water samples taken by Hunter had shown detectable levels of Total Petroleum Hydrocarbons, expressed as gasoline or diesel (TPH-d, TPH-g). The concentration of trichloroethene (TCE) detected in ground-water samples for monitoring well MW-2 (cleaners) had been greater than the State of California Action Level for Drinking Water (Action Level) (California Regional Water

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Quality Control Board [Regional Board], 1989). Reported concentrations of benzene in ground-water samples from monitoring wells MW-3 (BP) and MW-4 (Firestone) had also exceeded the Action Level (Hunter, 1989).

2.2 Current Investigation

ESE's current investigation consisted of monitoring ground-water elevations and sampling ground water from the three existing on-site monitoring wells. ESE's on-site activities included these tasks:

- Secure work site.
- Inspect the condition of each well head and surface seal.
- Measure depth to ground water in each well. Measure thickness of product, if present. Calculate well volume, calculate ground-water elevation. Record ground-water level survey elevation in field logs and forms.
- Purge each well by pumping or bailing. While purging, measure ground-water temperature, pH and specific conductance, and observe ground-water color, odor, turbidity and the presence/absence of hydrocarbon product. Record ground-water quality measurements and observations in field logs and forms (Appendix A). Temporarily store purged ground water in a 55-gallon drum on site. ESE assumes that Eastmont Mall will dispose of the purged ground water properly.
- Sample each well by bailing. Collect ground-water samples in pre-cleaned containers. Keep filled sample containers chilled in a cooler for transport to the analytical laboratory.

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- Record final ground-water quality parameters and depth to ground water. Prepare Chain of Custody documents to accompany the samples.

- Clean work site. Secure and label temporary ground-water storage drum.

- Submit ground-water samples through proper Chain of Custody protocol to NET Pacific, Inc. (NET), a California State-certified analytical laboratory. NET will analyze the ground-water samples as listed below.

Analytical Laboratory Schedule

Well Number	Proposed Analyses
MW-2	Total Volatile Organics (TVO, Method 624)
MW-3	Total Petroleum Hydrocarbons as gasoline (TPH-g, Method GC FID/5030) Benzene, Ethylbenzene, Toluene, Total Xylenes (BETX, Method 8020)
MW-4	BETX

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3.0 SEPTEMBER 1990 RE-SAMPLING EVENT

3.1 Inspection of Site Monitoring Wells

The existing site monitoring wells (MW-2, -3, -4) were installed below pavement level. Each well head consists of a traffic-rated steel box, also known as a Christy box. Within the Christy box, each well casing is capped with a locked, expanding-seal cap and padlock. The surface seal at each well consists of cement/bentonite grout. The level of the surface seal at each well is approximately 1 foot below the top of the Christy box.

For the September 1990 re-sampling, ESE found each well head in good condition. The bolts fastening each Christy box top were clean, except for those at MW-3, which had some asphalt on them. The inside of each well head was dry. There was no product, grease or obviously contaminated water or soil in any of the well heads.

3.2 Ground-Water Elevations

Depth to ground water and relative ground-water elevations are presented in Table 1 and Figure 3; Ground-Water Sample logs are found in Appendix A. On September 24, 1990, depths to ground water measured in the on-site wells were 14.55 feet below the top of well casing (TOC, approximately the level of pavement) in MW-4, 22.68 feet below TOC (MW-2) and 32.06 below TOC (MW-3). These values correspond to relative groundwater elevations of 117.0, 83.9 and 67.9 feet below Mean Sea Level (MSL), in MW-4, -2 and -3, respectively.

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3.3 Ground-Water Purging, Sampling and Analyses

ESE found no free product in ground water. Ground water in MW-3 smelled faintly of hydrocarbons, but there was no sheen on it (Appendix A). There was no evidence of hydrocarbon or solvent odors in ground water purged from MW-2 and MW-4.

ESE collected and submitted three ground-water samples for analysis to NET on September 25, 1990. Analytical results are summarized in Table 2. The table lists results for TPH concentrations in milligrams per liter (mg/L), TVO and BETX concentrations in micrograms per liter (ug/L). Results of sample analyses are presented in Appendix B. Detectable results for ground-water analyses were:

MW-2	Tetrachloroethene (PCE)	100 ug/L
	Trichloroethene (TCE)	6.2 ug/L
	Methylene Chloride	25 ug/L*
MW-3	TPH-g	4.5 mg/L
	Benzene	620 ug/L
	Toluene	19 ug/L
	Total Xylenes	100 ug/L.

---

* Methylene chloride was detected in the trip blank provided by the analytical laboratory at 10 ug/L.

All other constituents analyzed: BETX in MW-4, ethylbenzene in MW-3, the remaining VOCs in MW-2, were non-detectable (ND) or below analytical laboratory reporting limits.

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4.0 DISCUSSION

4.1 Ground-Water Elevations

Depth to ground water data and calculated ground-water elevations for the September re-sampling event are presented in Table 1 and Figure 3. There is not enough information available to calculate a site ground-water gradient or to produce a ground-water gradient contour map. The water in the vicinity of MW-4 (Firestone) may be dammed behind an entrance ramp for the site underground parking structure, and therefore not indicative of true regional ground-water elevation.

The ground-water flow direction presented in Figure 3 was inferred from the elevation difference between ground water in MW-2 (83.9 feet MSL) and MW-3 (67.9 feet MSL). This inferred ground-water flow direction, representative only for the southern portion of the site, is approximately south-southeast. The inferred direction is similar to the southerly direction assumed for site ground-water flow by Hunter (1989) in December.

4.2 Analytical Results

Results of ground-water sample analyses from MW-4 were all ND at the analytical laboratory reporting limits. Those results are in contrast with the elevated concentrations for fuel constituents (BETX) reported for this well in the Phase II Site Environmental Audit (Hunter, 1989).

The reported concentrations of TPH-g, benzene, toluene and total xylenes in MW-3 were comparable to results reported in December 1989.

Reported TCE concentration in MW-2 was similar to that reported earlier. PCE, detected at an elevated concentration, had not been detected earlier. The questionable reported concentration for methylene chloride in MW-2 may be attributable to laboratory error.

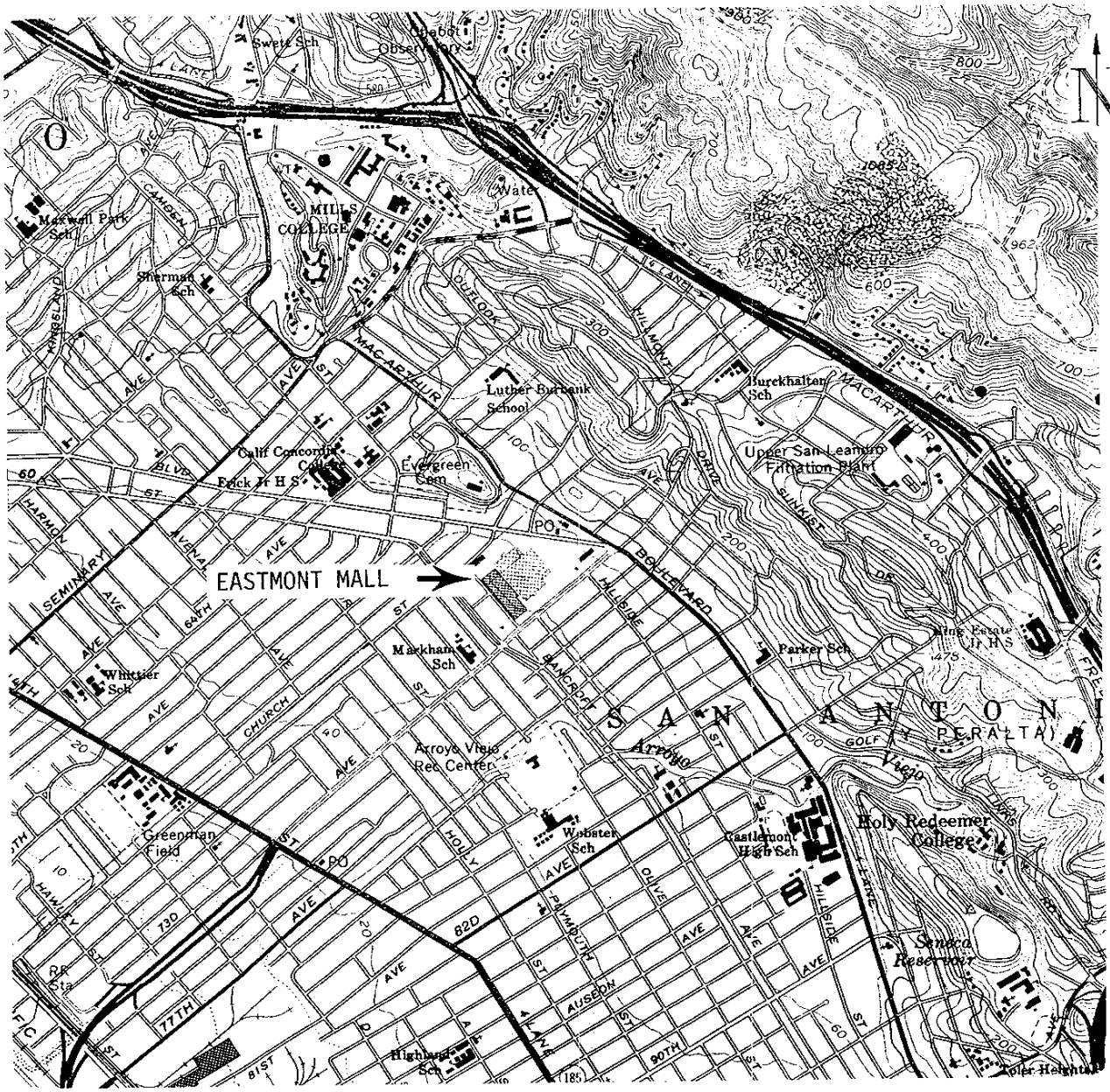
00000281.tif 171 / 543

5.0 REFERENCES

California Regional Water Quality Control Board, 1989, A Compilation of Water Quality Goals. California Regional Water Quality Control Board Staff Report; May 1989.

California Regional Water Quality Control Board, 1990, Regional Board Staff Recommendations for Initial Evaluation of Underground Tanks; Tri-Regional Recommendations. Prepared by staff of San Francisco Bay Regional Water Quality Control Board, Oakland, California; 10 August 1990.

Hunter Environmental Services, Inc., 1989, Phase II Environmental Audit, Eastmont Mall Property, Oakland, Alameda County, California. Prepared for TOPA Savings Bank, Los Angeles, California; December 20, 1989.



SCALE

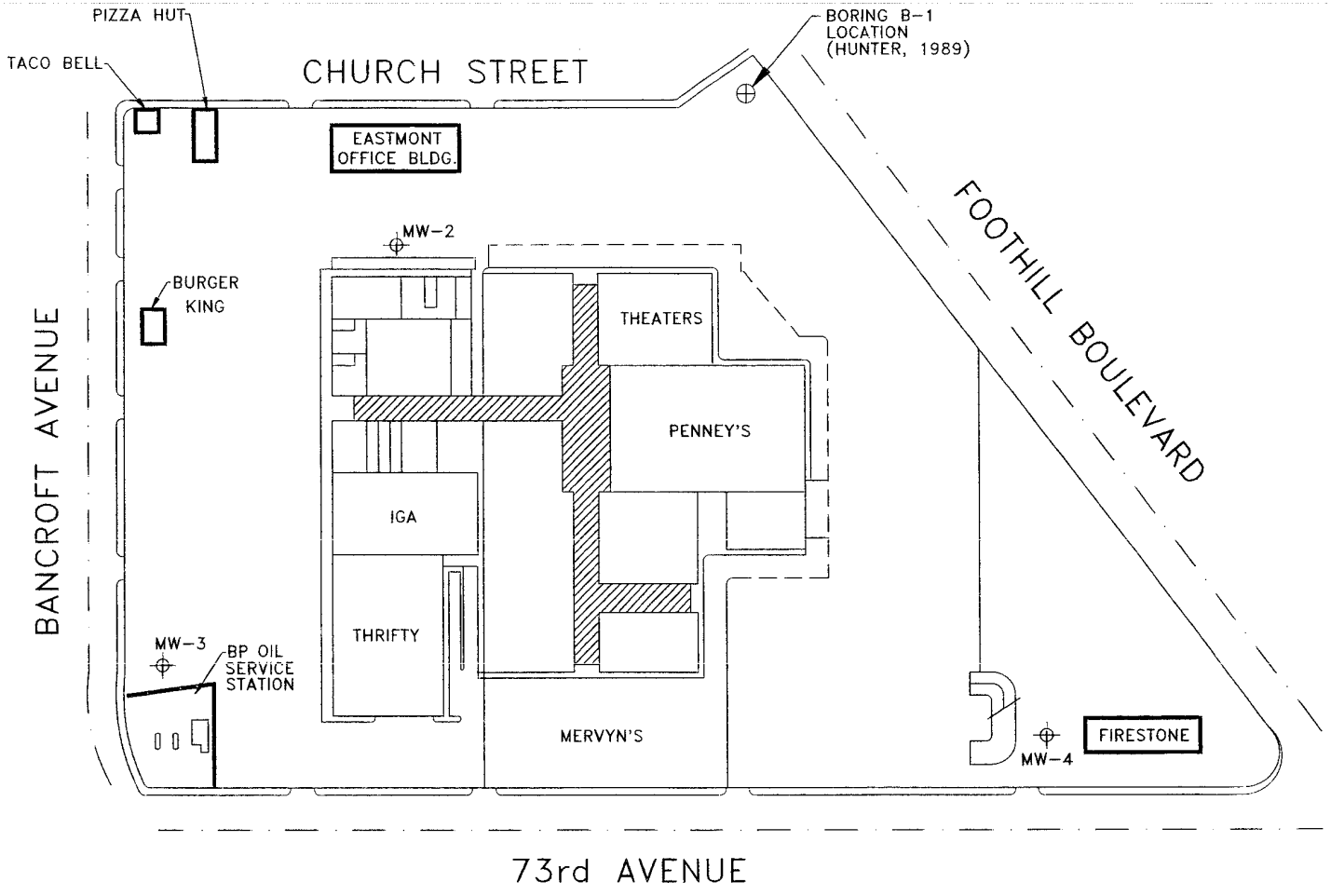
0 2,000 FEET

BASE MAP: U.S.G.S.(1980): OAKLAND EAST QUADRANGLE

ESE A CH2M HILL COMPANY	Environmental Science & Engineering, Inc
EASTMONT MALL OAKLAND, CA	
FIGURE 1 LOCATION MAP	

DRAWN BY	APPROVED BY	REVISED
DWR		10/90

DATE	FILE NAME	PROJ. NO.
8/90	F1LM10	6-90-5102



LEGEND:

⊕ MW-3 MONITORING WELL (HUNTER 1989)

LOCATIONS APPROXIMATE
BASE MAP SOURCE: HUNTER (1989)

SCALE
0 200 FEET

ESE A CH2M HILL COMPANY
Environmental Science & Engineering, Inc.

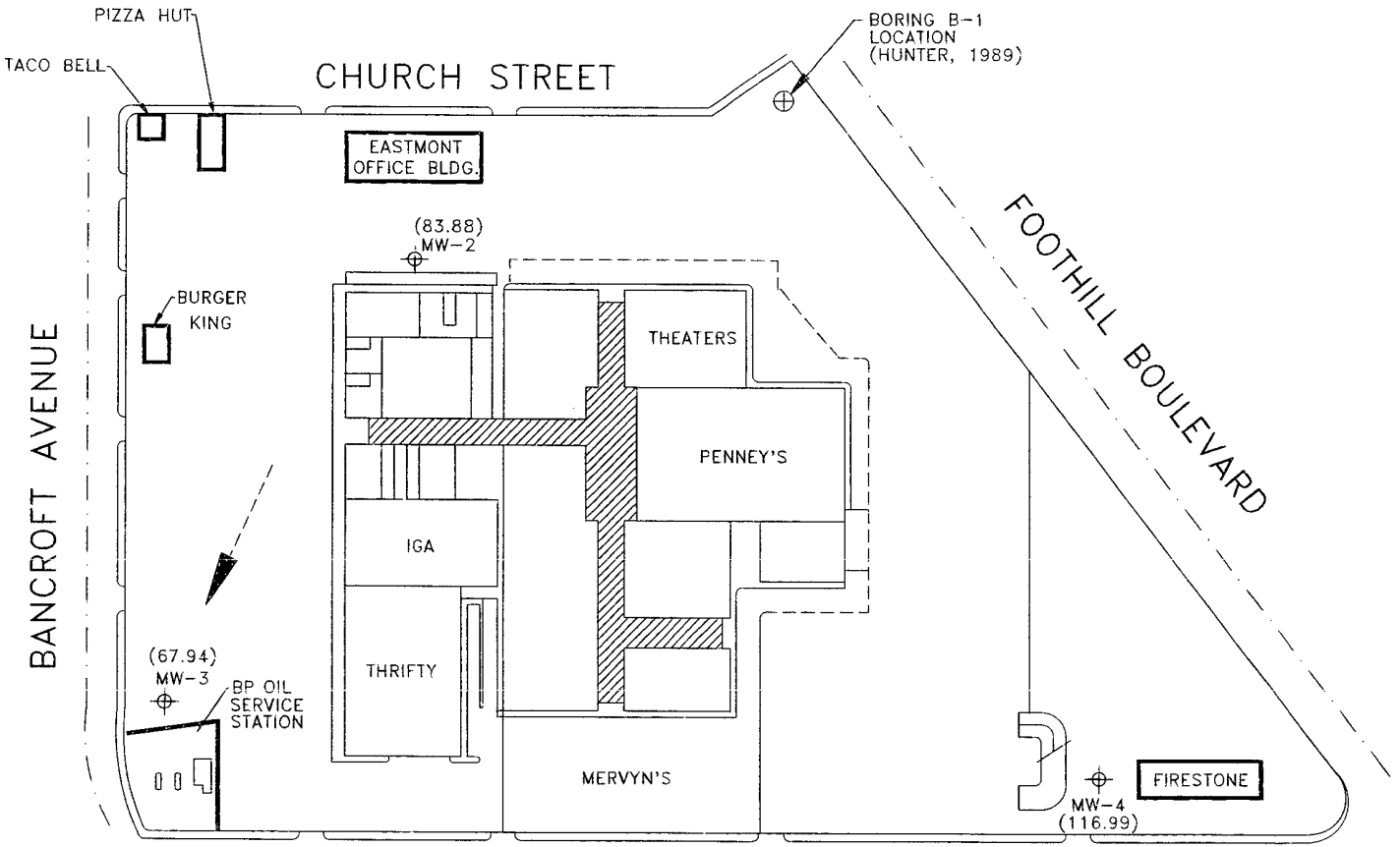
EASTMONT MALL
OAKLAND, CA

FIGURE 2
SITE PLAN

DRAWN BY	APPROVED BY	REVISED
DWR		10/90

DATE	FILE NAME	PROJ. NO.
12/89	F2SP10	6-90-5102

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LEGEND

⊕ MW-3 MONITORING WELL (HUNTER 1989)

(83.88) WATER ELEVATION, FEET, MEASURED BY ESE, 9/24/90

INFERED GROUND-WATER FLOW DIRECTION

LOCATIONS APPROXIMATE

BASE MAP SOURCE: HUNTER (1989)

SCALE

0 200 FEET

ESE A DI GIOSE COMPANY

Environmental Science & Engineering, Inc

EASTMONT MALL
OAKLAND, CA

FIGURE 3
GROUND-WATER ELEVATIONS
SEPTEMBER 1990

DRAWN BY	APPROVED BY	REVISED
DWR		10/90

DATE	FILE NAME	PROJ NO
12/89	F3GWE10	6-90-5102

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TABLE 1

GROUND-WATER ELEVATIONS
for
EASTMONT MALL RE-SAMPLING - PROJECT NO. 6-90-5102

SEPTEMBER 1990

Well Number [a]	Reference Elevation [b] (Feet)	Depth to Ground Water[c] (Feet)	Relative Ground-Water Elevation[d] (Feet)
MW-2	106.56	22.68	83.9
MW-3	100.00	32.06	67.9
MW-4	131.54	14.55	117.0

Notes:

a. MW-2 and MW-3 are vadose zone wells, not monitored for ground water (see Figure 2).
b. Datum elevation: MW-1 Reference Point assigned elevation of 33.00 feet.
c. Depth to ground water measured by Environmental Science & Engineering, Inc.,on September 24, 1990.
d. Ground-water elevations are accurate to one decimal place.

TABLE 2

ANALYTICAL RESULTS
for
EASTMONT MALL RE-SAMPLING - PROJECT NO. 6-90-5102

SEPTEMBER 1990

Sample Number	TPH-g (mg/L)	B/E/T/X (ug/L)	TCE (ug/L)	PCE (ug/L)
MW-2-1[a]	--	--/--/--/--	6.2	100
MW-3-1	4.5	620/ND/19/100	--	--
MW-4-1	--	ND/ND/ND/ND	--	--

Notes and abbreviations:

a) Sample MW-2-1 result reported 25 ug/L methylene chloride. This constituent was also detected in the trip blank sample submitted to the analytical laboratory, at 10 ug/L.

BETX Benzene, Ethyl Benzene, Toluene and Total Xylenes (Method 602)
mg/L Milligrams per liter, or parts per million
ND Below detection limit
PCE Tetrachloroethene, also known as perchloroethene (Method 624)
TCE Trichloroethene, also known as trichloroethylene (Method 624)
TPH-g Total Petroleum Hydrocarbons, gasoline (Method GC FID/5030)
ug/L Micrograms per liter, or parts per billion

Detection Limits: BETX = 0.5 ug/L, Methylene Chloride = 10 ug/L
PCE = 4.1 ug/L, TCE = 1.9 ug/L, TPH-g = 0.05 mg/L,

Samples collected by Environmental Science & Engineering, Inc., on July 27, 1990, and analyzed by NET Pacific Laboratories. Laboratory reports and chain of custody documents are included in Appendix C.

WATER SAMPLE/WELL DEVELOPMENT LOG

SAMPLE NO. MW-2-1 WELL NO. MW-2 P½

PROJECT NAME Eastmont Mall Resampling

PROJECT NO. 6-90-5102 DATE 9/24/90

Sample/Well Location: Parking space, about 9 feet from corner of Bank of America building, in front of building

Weather Conditions: Breezy, cool, partly cloudy

Field Personnel: Shannon O'Hare Emilie Gonzulez

Prepared by: Shannon O'Hare Reviewed by:

Time	Cumm Dschg (gallons)	~~pH~~/O_2	Temp (°C)	Spec. Conduct. (umhos/cm)	Color	Odor	Turbidity ~~(NTU)~~	Remarks
1120	5	8.2	20	554	Yellow brown	None	Medium	Well slow to recover
1129	10	9.8	20.5	537	"	"	"	
1132	12	9.4	20.5	515	"	"	Med/High	
1342	12	8.4	22	536	Yellow	None	Trans-lucent	Final reading @ SAMPLE time

Reference Point (RP): Description Top of well casing

RP Elevation (feet)/Datum 106.56 / MW3 ≡ 100.00

Total Depth (TD, feet): 35.15

Depth to Water (DTW, feet): START 22.68 END 26.62

Water Level (WL, feet): Start 83.88

Water Column (TD-DTW, feet): 12.47

Casing Volume (gallons)*: 1.99

Well Volume (gallons)*: 7.18

Total Discharge (gallons): 12

Casing Volumes Removed: ~~N/A~~ 6

Well Volumes Removed: 1.7

Flow Estimate (gallons per minute)**: N/A

Method Used for Estimate**: N/A

QUALITY ASSURANCE

Method Used to Measure Water Level: Solinst well sounder

Sampling Method(s): Plastic Bailer (polyethylene)

Sample Time: 1342

Bailer ~~or Pump~~ Line: (New) Cleaned

Method of Cleaning Bailer/Pump: Alconox, DI water, methanol, DI water

pH Meter No.: —

Conductivity Meter No.: RP 158

Other Instrument No.: O_2 Meter: F9003480

Calibration Date(s) and Results: O_2 Meter calibrated to sea level (9/24);

Number, Size of Sample Containers: 3 X 40 ml (VOA) vials

Method of Disposal of Discharged Water: 55-gallon drum (BP station)

DEVELOPMENT

Time Start: Time End:

Development Method(s) & Equipment:

Description of Surge Block or Pump: N/A

Summary of Development Procedures***:

* See Notes and Calculations.

** Use Flow Estimate for Surface Water Samples only. Describe in Notes and Calculations.

*** Note Details of Well Development Procedures in Notes and Calculations.

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WATER SAMPLE/WELL DEVELOPMENT LOG

SAMPLE NO. MW-2-1 WELL NO.. MW-2 P2/2

PROJECT NAME. Eastmont Mall Re-Sampling

PROJECT NO. 6-90-5102 DATE 9/24/90

NOTES AND CALCULATIONS

CASING VOLUME/WELL VOLUME CALCULATIONS

Borehole Diameter (inches):	8
Height of Water Column or Borehole Annulus within Aquifer (feet):	12.47
Borehole Volume (gallons):	9.17
Height of Water Column in Casing (feet):	12.47
Casing Volume (gallons):	1.99
Well Volume (Borehole Volume - Casing Volume, gallons):	7.18
Number of (Well) Casing Volumes to Remove (gallons):	2 (14 gal.)
Total Volume to Remove (gallons):	14.3

1107 Set up @ well. Purge well. Pancho pumps; Shannon takes notes. 2-inch well; Dolphin lock

1135 ~~wt~~ = DTW = 32.15 after purging. Slow recovery.

1138 Pull out pump.

1335-1350 Sample well. Sample Time = 1342.

Prepared by: Shannon O'Hare Reviewed by: [signature] Date: 10-11-90

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WATER SAMPLE/WELL DEVELOPMENT LOG

SAMPLE NO. MW-3-1 WELL NO. MW-3 P 1/2

PROJECT NAME Eastmont Mall Re-Sampling

PROJECT NO. 6-90-5102 DATE 9/24/90

Sample/Well Location: West of BP gasoline station, about 5 feet from sidewalk

Weather Conditions: Cool, breezy, partly cloudy, humid

Field Personnel: Shannon O'Hare Emilio Gonzalez

Prepared by: Shannon O'Hare Reviewed by:

Time	Cumm Dschg (gallons)	~~pH~~/O_2	Temp (°C)	Spec. Conduct. (umhos/cm)	Color	Odor	Turbidity (NTU)	Remarks
1027	4	3.2	21	793	gray-green	Hydro-carbon	High	HC odor; no sheen silty water
1030	8	2.9	20	~~779~~ 778	"	"	"	Same
1032	15	4.1	20	810	"	"	"	Same
1300	15	3.4	23	800	gray-green	Faint odor	Medium	Slight HC odor

Reference Point (RP): Description Top of well casing

RP Elevation (feet)/Datum 100.00 / MW-3 ≡ 100.00'

Total Depth (TD, feet): 44.25

Depth to Water (DTW, feet): START 32.06 END 32.05

Water Level (WL, feet): Start 67.94

Water Column (TD-DTW, feet): 12.19

Casing Volume (gallons)*: 1.95

Well Volume (gallons)*: ~~2.44~~ 6.9

Total Discharge (gallons): 15

Casing Volumes Removed: 7.7

Well Volumes Removed: 2.2

Flow Estimate (gallons per minute)**: N/A

Method Used for Estimate**: N/A

QUALITY ASSURANCE

Method Used to Measure Water Level: Solinst well sounder

Sampling Method(s): Polyethylene bailer

Sample Time: 1300

Bailer ~~or Pump~~ Line: (New) Cleaned

Method of Cleaning Bailer/~~Pump~~: Alconox/DI water/Methanol/DDI water

pH Meter No.: NA

Conductivity Meter No.: RP 158

Other Instrument No.: O_2 Meter: F9003480

Calibration Date(s) and Results: O_2 meter: calibrated to sea level (9/24/90)

Number, Size of Sample Containers: 3 X 40 ml (VOA) vials

Method of Disposal of Discharged Water: 55-gallon drum @ BP site

DEVELOPMENT

Time Start: Time End:

Development Method(s) & Equipment:

Description of Surge Block or Pump: N/A

Summary of Development Procedures***:

* See Notes and Calculations.

** Use Flow Estimate for Surface Water Samples only. Describe in Notes and Calculations.

*** Note Details of Well Development Procedures in Notes and Calculations.

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WATER SAMPLE/WELL DEVELOPMENT LOG

SAMPLE NO. MW-3-1 WELL NO. MW-3 P2/2

PROJECT NAME Eastmont Mall Re-Sampling

PROJECT NO. 6-90-5102 DATE 9/24/90

NOTES AND CALCULATIONS

CASING VOLUME/WELL VOLUME CALCULATIONS

Borehole Diameter (inches):	8
Height of Water Column or Borehole Annulus within Aquifer (feet):	12.19
Borehole Volume (gallons):	8.9
Height of Water Column in Casing (feet):	12.19
Casing Volume (gallons):	1.95
Well Volume (Borehole Volume - Casing Volume, gallons):	6.9
Number of Well/Casing Volumes to Remove (gallons):	2
Total Volume to Remove (gallons):	13.9

0935 Set up at well; bolts have some tar on top.

Met Jim Given & chat while we set up at well.

Took time to fill out forms; Pancho instructs Shannon, revised some QA/QC procedures.

Crew @ BP station setting up signs.

1025 Purge well. Pancho @ pump; Shannon takes notes & water quality readings.

1043 Done! Decon pump, etc.

1300 (approx.) Sample well.

Prepared by: Shannon O'Hara Reviewed by: Ernest Hu Date: 10-11-90

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WATER SAMPLE/WELL DEVELOPMENT LOG

SAMPLE NO. MW-4-1 WELL NO. MW-4 P1/2

PROJECT NAME Eastmont Mall Re-Sampling

PROJECT NO. 6-90-5102 DATE 9/24/90

Sample/Well Location: South of former Firestone building, near down ramp to Eastmont Mall underground parking.

Weather Conditions: Partly cloudy, breezy, cool

Field Personnel: Shannon O'Hare Emilio Gonzalez

Prepared by: Shannon O'Hare Reviewed by: Emilio Gonzalez

Time	Cumm Dschg (gallons)	~~pH~~/O_2	Temp (°C)	Spec. Conduct. (umhos/cm)	Color	Odor	Turbidity (NTU)	Remarks
1217	5	2.4	22	1024	Orange-brown	None	High	Silty water
1220	10	2.6	21.5	1156	"	"	"	"
1224	15	2.6	21.5	1133	"	"	"	"
1322	15	2.8	21.5	1140	light brown	None	High	

Reference Point (RP): Description Top of well Casing

RP Elevation (feet)/Datum 131.54 / MW-3 ≡ 100.00

Total Depth (TD, feet): 26.6

Depth to Water (DTW, feet) START 14.55 END 14.59

Water Level (WL, feet) Start 116.99

Water Column (TD-DTW, feet): 12.05

Casing Volume (gallons)*: 1.93

Well Volume (gallons)*: 6.93

Total Discharge (gallons): 15

Casing Volumes Removed: 7.8

Well Volumes Removed: 2.2

Flow Estimate (gallons per minute)**: N/A

Method Used for Estimate**: N/A

QUALITY ASSURANCE

Method Used to Measure Water Level: Solinst well sounder

Sampling Method(s): Polyethylene bailer

Sample Time: 1322

Bailer ~~or Pump~~ Line: (New) Cleaned

Method of Cleaning Bailer/~~Pump~~: Alconox/DI water/Methanol/DDI water

pH Meter No.: N/A

Conductivity Meter No.: RP 158

Other Instrument No.: O_2 Meter: F9003480

Calibration Date(s) and Results: 9/24/9 O_2 Meter calibrated to sea level

Number, Size of Sample Containers: 3X 40 ml (VOA) vials

Method of Disposal of Discharged Water: 55-gallon drum @ BP station

DEVELOPMENT

Time Start: Time End:

Development Method(s) & Equipment:

Description of Surge Block or Pump: N/A

Summary of Development Procedures***:

* See Notes and Calculations.

** Use Flow Estimate for Surface Water Samples only. Describe in Notes and Calculations.

*** Note Details of Well Development Procedures in Notes and Calculations.

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WATER SAMPLE/WELL DEVELOPMENT LOG

SAMPLE NO. MW-4-1 WELL NO. MW-4 P2/2

PROJECT NAME Eastmont Mall Re-Sampling

PROJECT NO. 6-90-5102 DATE 9/24/90

NOTES AND CALCULATIONS

CASING VOLUME/WELL VOLUME CALCULATIONS

Borehole Diameter (inches):

Height of Water Column or Borehole Annulus within Aquifer (feet):

Borehole Volume (gallons):

Height of Water Column in Casing (feet):

Casing Volume (gallons):

Well Volume (Borehole Volume - Casing Volume, gallons):

Number of Well/Casing Volumes to Remove (gallons):

Total Volume to Remove(gallons):

1204 Set up @ well. 2-inch casing; lock & top OK

Shannon @ pump; Pancho takes readings.

1228 Finish purging well. Decon pump @ BP station.

1315-1330 Sample well Sample time = 1322.

Prepared by: Shannon O'Hara Reviewed by: Ernest Lee Date: 10-11-90

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APPENDIX B

Analytical Results

Chain of Custody Documents

RECEIVED OCT 1 2 1990

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Pancho Gonzalez
Env. Science & Engineering
597 Center Ave, Ste 350
Martinez, CA 94553

Date: 10-08-90
NET Client Acct. No: 691
NET Pacific Log No: 4017
Received: 09-26-90 0800

REVISED 10-11-90

Client Reference Information

Eastmont Mall, Oakland; Project: 02-587-001

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Jules Skamarack
Laboratory Manager

Enclosure(s)

Ref: Eastmont Mall, Oakland; Project: 02-587-001

SAMPLE DESCRIPTION: MW3-1 09-24-90 1300
LAB Job No: (-63774)

Parameter	Method	Reporting Limit	Results	Units
PETROLEUM HYDROCARBONS			--	
VOLATILE (WATER)			--	
DILUTION FACTOR *			10	
DATE ANALYZED			10-04-90	
METHOD GC FID/5030			--	
as Gasoline		0.05	4.5	mg/L
METHOD 602			--	
DILUTION FACTOR *			10	
DATE ANALYZED			10-04-90	
Benzene		0.5	620	ug/L
Ethylbenzene		0.5	ND	ug/L
Toluene		0.5	19	ug/L
Xylenes, total		0.5	100	ug/L

Ref: Eastmont Mall, Oakland; Project: 02-587-001

SAMPLE DESCRIPTION: MW4-1 09-24-90 1322
LAB Job No: (-63775)

Parameter	Method	Reporting Limit	Results	Units
PETROLEUM HYDROCARBONS			--	
VOLATILE (WATER)			--	
DILUTION FACTOR *			1	
DATE ANALYZED			10-03-90	
METHOD 602			--	
Benzene		0.5	ND	ug/L
Ethylbenzene		0.5	ND	ug/L
Toluene		0.5	ND	ug/L
Xylenes, total		0.5	ND	ug/L

Ref: Eastmont Mall, Oakland; Project: 02-587-001

SAMPLE DESCRIPTION: MW2-1 09-24-90 1342
LAB Job No: (-63776)

Parameter	Method	Reporting Limit	Results	Units
METHOD 624				
DATE ANALYZED			10-02-90	
DILUTION FACTOR *			1	
Benzene		4.4	ND	ug/L
Bromodichloromethane		2.2	ND	ug/L
Bromoform		4.7	ND	ug/L
Bromomethane		5.0	ND	ug/L
Carbon tetrachloride		2.8	ND	ug/L
Chlorobenzene		6.0	ND	ug/L
Chloroethane		5.0	ND	ug/L
2-Chloroethyl Vinyl Ether		7.0	ND	ug/L
Chloroform		1.6	ND	ug/L
Chloromethane		5.0	ND	ug/L
Dibromochloromethane		3.1	ND	ug/L
1,2-Dichlorobenzene		6.0	ND	ug/L
1,3-Dichlorobenzene		6.0	ND	ug/L
1,4-Dichlorobenzene		6.0	ND	ug/L
1,1-Dichloroethane		4.7	ND	ug/L
1,2-Dichloroethane		2.8	ND	ug/L
1,1-Dichloroethene		2.8	ND	ug/L
trans-1,2-Dichloroethene		1.6	ND	ug/L
1,2-Dichloropropane		6.0	ND	ug/L
cis-1,3-Dichloropropene		5.0	ND	ug/L
trans-1,3-Dichloropropene		5.0	ND	ug/L
Ethylbenzene		7.2	ND	ug/L
Methylene chloride		10	25 B	ug/L
1,1,2,2-Tetrachloroethane		6.9	ND	ug/L
Tetrachloroethene		4.1	100	ug/L
Toluene		6.0	ND	ug/L
1,1,1-Trichloroethane		3.8	ND	ug/L
1,1,2-Trichloroethane		5.0	ND	ug/L
Trichloroethene		1.9	6.2	ug/L
Trichlorofluoromethane		5.0	ND	ug/L
Vinyl chloride		5.0	ND	ug/L
Xylenes, total		5.0	ND	ug/L
SURROGATE RESULTS			--	
Toluene-d8			102	% Rec.
Bromofluorobenzene			102	% Rec.
1,2-Dichloroethane-d4			104	% Rec.

Ref: Eastmont Mall, Oakland; Project: 02-587-001

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Gasoline	0.05	mg/L	113	ND	104	106	1.9
Benzene	0.5	ug/L	90	ND	87	90	3.4
Toluene	0.5	ug/L	90	ND	95	96	1.0
COMMENT: Blank Results were ND on other analytes tested.							
Gasoline	0.05	mg/L	115	ND	109	107	1.9
Benzene	0.5	ug/L	98	ND	103	97	6.0
Toluene	0.5	ug/L	104	ND	100	98	2.0
COMMENT: Blank Results were ND on other analytes tested.							
Benzene	4.4	ug/L	100	ND	101	111	9.1
Chlorobenzene	6.0	ug/L	88	ND	114	118	3.2
1,1-Dichloroethene	2.8	ug/L	100	ND	101	103	1.7
Toluene	6.0	ug/L	99	ND	103	109	5.5
Trichloroethene	1.9	ug/L	82	ND	108	116	6.9

COMMENT: Blank Results were ND on other analytes tested except Methylene Chloride which was at a level of 10 ug/Kg in the blank.

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
ICVS	:	Initial Calibration Verification Standard (External Standard).
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater, 16th Edition, APHA, 1985.

(4017)

CHAIN OF CUSTODY RECORD

DATE 9-24-90 PAGE 1 OF 1

PROJECT NAME Eastmont Mall

ADDRESS Oakland

PROJECT NO. 02-587-001

SAMPLED BY S. O'Hare / E. Gonzalez

LAB NAME NET Pacific

ANALYSES TO BE PERFORMED: TPH/G + BETX; BETX; VOC's (EPA n. 624)

SAMPLE #	DATE	TIME	LOCATION	MATRIX	NUMBER OF CONTAINERS
MW3-1	9/24/90	13:00	BP	W	3
MW4-1	9/24/90	13:22	Firestone	W	3
MW2-1	9/24/90	13:42	Cleaners	W	3
Trip Blank	NA	NA	NA	W	2

REMARKS (CONTAINER, SIZE, ETC.)

10 day Turnaround

Time - All Samples

Do Not analyze trip blank

Call Pancho/Shannon at 415-372-3637 for questions + results

Bottles Kept under ice.

custody seal 9/25/90 @ 19:00

TOTAL NUMBER OF CONTAINERS: 11

RELINQUISHED BY: (signature)	RECEIVED BY: (signature)	date	time
1.	Jeff a Winkler (MACTEC)	9/25/90	17:20
2. Jeff a Winkler 9/25			
3.			
4.			
5.	K Kemple NET Pacific	9/26/90	0830

REPORT RESULTS TO: Pancho

SPECIAL SHIPMENT REQUIREMENTS: None NET Courier

SAMPLE RECEIPT

CHAIN OF CUSTODY SEALS	
REC'D GOOD CONDTN/COLD	
CONFORMS TO RECORD	

INSTRUCTIONS TO LABORATORY (handling, analyses, storage, etc.):

Include QA/QC Report.

ESE Environmental Science & Engineering, Inc.
A CILCORP Company
597 Center Avenue
Suite 350
Martinez, CA 94553
(415) 372-3637
Fax (415) 372-3790

00000281.tif 191 / 543

File I.D. 14

Leaking Underground Fuel Tank Data Collection Checklist

LUSTIS: 26
Local Agency: 26
RWQCB: 01-0889
Lead Agency: Local

SITE: FIRESTONE
ADDRESS: 2701 73RD AVE
CITY: OAKLAND COUNTY: ALAMEDA REG. BOARD No: 02
REVIEWED BY: Thomas Peacock (Name) ACEH (Agency) DATE: 12-16-94

I. RELEASE INFORMATION (FROM TECHNICAL REPORTS OR OTHER FILE DOCUMENTS)

a) Check [X] type of product(s) which leaked: [X] *Gasoline* [ ] *Diesel* [ ] *Waste Oil* [ ] *Other* _____

b) Was source of leak identified? YES (NO)
If YES, check [X] source location(s): [ ] *Tank* [ ] *Piping* [ ] *Overfill* [ ] *Other* _____

c) Was rate of release estimated? YES (NO)
If YES, specify rate: _____

d) Was mass/volume of release estimated? YES (NO)
If YES, specify mass/volume (note unit of measurement): _____

e) Was tank removed? (YES) · NO
If YES, specify date removed: 1985 - no other information

COMMENTS: _____

II. SITE INVESTIGATION INFORMATION (FROM REPORTS OR OTHER FILE DOCUMENTS)

a) Was "free product" reported? YES (NO)
If YES, check [X] location(s) where free product was noted: [ ] *Excavation* [ ] *Soil Sample* [ ] *Monitoring Well*

If MONITORING WELL, specify maximum thickness reported (note unit of measurement): _____

b) Was a soil vapor survey conducted? YES (NO)

c) Was an aquifer test (e.g., pumping or slug test) performed? (YES) (NO)

d) Number of monitoring wells installed at the site 3

e) Number of soil (or "Hydropunch") borings NOT completed as wells 3

COMMENTS: _____

Form No: 1104

X. SAFETY RULES FOR THE CLANDESTINE LABORATORY INVESTIGATORS

1. A trained criminalist should accompany the investigators. The criminalist should be responsible for shutting down the operations and the indication of possible dangerous chemicals.

2. Make sure the clandestine laboratory is well ventilated by opening doors and windows.

3. Do not turn on lights to location until it is well ventilated.

4. Do not smoke at the scene.

5. Do not allow acid and cyanide to be mixed or come together. This mixture can kill you (used in Gas Chamber).

6. Do not remove any flasks from ice baths.

7. Due to the potential explosion hazard, the Fire Department should be notified of all laboratory locations and requested to standby whenever possible.

III. REMEDIATION INFORMATION (FROM TECHNICAL REPORTS OR OTHER FILE DOCUMENTS)

a) Was source area "over-excavated"? YES (NO)

If YES, specify volume of soil removed or dimensions of excavation: _____

b) Check [X] if any other active remediation at site:

		Date Started	Date Stopped
[ ]	Soil Vapor Extraction/Bioventing		
[ ]	Pump and Treat		
[ ]	Air sparging		
[ ]	Hydrogen peroxide injection		
[ ]	Nutrient injection		
[ ]	Slurry wall		
[ ]	Other		

Mass/volume of free product removed (if applicable) _____

Mass/volume of dissolved product removed (if applicable) _____

COMMENTS: _____

IV. INFORMATION ITEMS TO COPY FROM REPORTS OR OTHER FILE DOCUMENTS, INCLUDING TABLES, FIGURES ETC. (check [X] if available)

- [ ] Leak history narrative (including most recent summary account of remedial actions to date, if available)
- [ ] Site map(s) showing leak "source" area(s)
- [✓] Site map(s) showing monitoring well locations
- [ ] Site map showing representative ground water elevation contours
- [ ] Site map(s) showing pollution concentration isocontours in ground water (initial and most recent)
- [ ] Site map(s) showing soil boring locations (if not present on any of the above maps)
- [ ] Site map(s) showing isocontours of benzene concentration in soil at representative depths
- [✓] Ground water sample analytical data from each well through time (i.e. time series)
- [✓] Ground water elevation and depth-to-groundwater measurements from wells thru time (i.e.time series)
- [ ] Soil analytical data from tank pit (including over-excavation confirmation samples)
- [ ] Soil analytical data from soil boring samples
- [ ] Soil boring logs
- [✓] Monitoring well construction logs
- [ ] Geologic cross-sections
- [ ] Aquifer yield test data (e.g., results from pumping or slug tests)
- [ ] Other soil or ground water test data (e.g., porosity, soil moisture content, TOC, cone penetrometer, etc.)
- [ ] Soil vapor analytical data (if available), including site map showing soil vapor survey locations
- [ ] Biological indicator parameters (e.g., dissolved oxygen, etc.), if available
- [ ] Local "background" ground water quality, if available

COMMENTS: _____

IX. WRITING THE REPORT

One of the responsibilities of the criminalist is to make an itemized list of all the chemicals, glassware and apparatus located at the clandestine scene. The patrol or investigating officer will place in his report that a supplemental report will be prepared by the criminalistics laboratory. When listing the chemicals, please list the chemical name as well as the manufacturer's name if a label is located on the container (See Appendix "A").

PROJECT # 5777120

ALAMEDA COUNTY HEALTH CARE SERVICES
HAZARDOUS MATERIALS PROGRAM/ENVIRONMENTAL HEALTH SERVICES

SERVICE REQUESTED: Removal

NAME OF SITE : Freestone

ADDRESS : 2701 - 73rd Ave.
Oakland CA 94605

CONTRACTOR : Ryan-Murphy

ADDRESS : 211 Grante, Suite E.
Corona CA 91719 PHONE # (714) 279-6210

CONTACT PERSON : Charles Bentley PHONE #

DATE OF DEPOSIT : Nov. 13, 90 AMOUNT OF DEPOSIT 375.00

DATE	ACTION TAKEN	IN	OUT	HRS.	X56	SUB/TOT	BALANCE
11/20/90	Plan review and Approval			1	x60	60	315
12/2/90	Tank pull, travel time and database adjustment			1.5	x60	90	225
12/19	Billing			1.5	x60	90	135
1/10/90	Report received, conversation letter			1.5	x60	90	
	01.18.91						
3/25/91	Report review, closure letter			1	x67	67	68
	Close out						

PROJECT COMPLETED BY : Cynthia Chapman

DATE OF COMPLETION : 3/26/91 DATE SENT TO BILLING: 3-21-91

TOTAL COST OF PROJECT: $307 REFUND AMOUNT : $68.00

TO BE REPORTED WEEKLY TO THE ACCOUNTING DEPARTMENT FOR CASHFLOW ADJUSTMENT

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Program
80 Swan Way, Rm. 200
Oakland, CA 94621
(415)

March 20, 1991

Mr. Vern Willrich
Bridgestone/Firestone Tire & Rubber
7857 Florence Avenue, Suite 200
Downey, CA 90240

RE: Firestone Tire Store No. 2701 73rd Avenue, Oakland

Dear Mr. Willrich:

The Alameda County Environmental Health Department, Hazardous Materials Division, has completed its review of the tank closure activities for the above referenced site. Based on the review of the information made available to the Division, it appears no further investigative or remedial work is necessary.

Further work remains a possibility if conditions change or a water quality threat is discovered at the site.

If your have any questions concerning this site, please contact the undersigned at 415/271-4320.

Sincerely,

Cynthia Chapman

Cynthia Chapman
Hazardous Materials Specialist

c: Jack Schmitz, Ryan-Murphy, Inc.

RMH
Ryan-Murphy, Incorporated
Environmental Construction

Fuel Systems Consulting

Underground Storage Tank Management Programs

Fuel Systems Construction and Service

General Contracting and Complete Build-Up

Site Remedial Action

The Good Earth Machine™

P. O. Box 16863
5867 Broadway
Denver, Colorado 80216
(303) 293-Fuel (3835)
Fax (303) 296-7911

211 Granite, Suite E
Corona, California 91719
(714) 279-6210
Fax (714) 279-6215

March 14, 1991

91 MAR 15 AM 10:57

Ms. Cynthia Chapman
Alameda County Helath Care Services
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621

RE: Request for Site Closure - Firestone Tire Store No. 2701
73rd Avenue, Oakland, CA 94605.

Ms. Chapman,

At this time Ryan-Murphy, Inc., agents for Bridgestone/Firestone Tire & Rubber, formally request a site closure for the above site. Upon removal of one 550 gallon waste oil tank, limited soil contamination was found in the immediate area around the tank. The tank hole was over excavated and the spoils pile (S2) and tank hole bottom samples (S1) were taken. Plastic sheeting was placed in the excavation and the spoils pile and was then put back into the hole. S1 was found to be non-detect in all categories. S.2 was found to be above accepted action limits.

Per our phone conversation on January 25, 1991, the spoils pile was removed by Dillard Trucking on February 14, 1991, and taken to Liquid Waste Management. The site was backfilled with clean native soil, compacted, and resurfaced.

The following documents are attached for your review:

11/07/91	Tank removal permit
11/26/91	Alameda County Underground Tank Closure\ Modification Plan
11/26/91	Health and Safety Plan
12/07/91	H & H Environmental Services Tank Manifest Certificate of Destruction
12/12/91	Laboratory Analyses
02/14/91	Soil Removal Manifest

We trust that the above information will satisfy any requirements for a complete site closure for this site.

Your prompt attention to this matter is greatly appreciated and if you have any questions or concerns, please do not hesitate to call.

RYAN-MURPHY, INC.

Jack Schmitz
California Operations

JS:mrq

1857 Florence Ave Ste 200
Delivery CA 90240

cc: Vern Willrich
Kathleen Scheutzow

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Program
80 Swan Way, Rm. 200
Oakland, CA 94621
(415)

January 10, 1991

Mr. Jack Schmitz
Ryan-Murphy, Inc.
211 Granite, Suite E
Corona, CA 91719

Dear Mr. Schmitz:

This letter is to confirm our conversation of January 9, 1991. Our office has reviewed the laboratory analyses for the samples taken during the underground waste oil tank removal at Firestone, 2701 - 73rd Avenue in Oakland. At the time of the tank removal, the stockpiled soil was placed back in the hole with the stipulation that if the soil analyses showed contamination, we would require the soil to be reexcavated and properly disposed of.

The laboratory analyses indicate that the soil sample from the bottom of the pit had no detectable amounts of hydrocarbon oil and grease, benzene, toluene, ethyl benzene, and xylenes. The sample taken from the stockpiled soils had hydrocarbon oil and grease concentration of 820 ppm. Because this value is above allowable limits, the soil must be excavated and disposed of. Per our conversation, you indicated that the soil would be reexcavated and manifested, and the hole would be backfilled with clean material, which is acceptable to our office.

We are requesting a time frame for this to occur, and would like to have the soil reexcavated within 45 days of the date of this letter. The excavation and disposal of the soil can be included in the tank closure report which includes a description of the tank removal, laboratory analyses, copies of manifests, etc. (refer to the closure plan for report requirements). Also, please call me to let me know when you will be excavating.

If you have any questions, please call me at 415/271-4320.

Sincerely,

Cynthia Chapman

Cynthia Chapman
Hazardous Materials Specialist

c: V. Willrich, Firestone, Inc.

RMH
Ryan-Murphy, Incorporated
Environmental Construction

91 JAN -7 AM 8:52

Fuel Systems Consulting

Underground Storage Tank Management Programs

Fuel Systems Construction and Service

General Contracting and Complete Build-Up

Site Remedial Action

The Good Earth Machine™

January 4, 1991

Alameda County Health Agency
Division of Hazarouds Materials
Department of Environmental Health
80 Swan Way, Room 200
Oakland, Ca 94621

Att: Cynthia Chapman

Subject: Firestone, Inc.
2701 73rd Street
Oakland, CA

Enclosed find the soil results from the above site. Please advise us on how to proceed.

If you have any questions, please call the California office at (714) 279-6210.

Thank you,

Jack Schmitz
Operations

JS/lmk
enclosures

cc: V.Willrich
Firestone, Inc.

5867 Broadway
Denver, Colorado 80216
(303) 293-Fuel (3835)
Fax (303) 296-7911

211 Granite, Suite E
Corona, California 91719
(714) 279-6210
Fax (714) 279-6215

91 JAN -7 AM 8:52

ALAMEDA COUNTY HEALTH AGENCY
CARE SERVICES

Cynthia Chapman
Hazardous Materials Specialist

DIVISION OF HAZARDOUS MATERIALS
DEPARTMENT OF ENVIRONMENTAL HEALTH
80 Swan Way, Rm. 200, Oakland, CA 94621 • (415) 271-4320

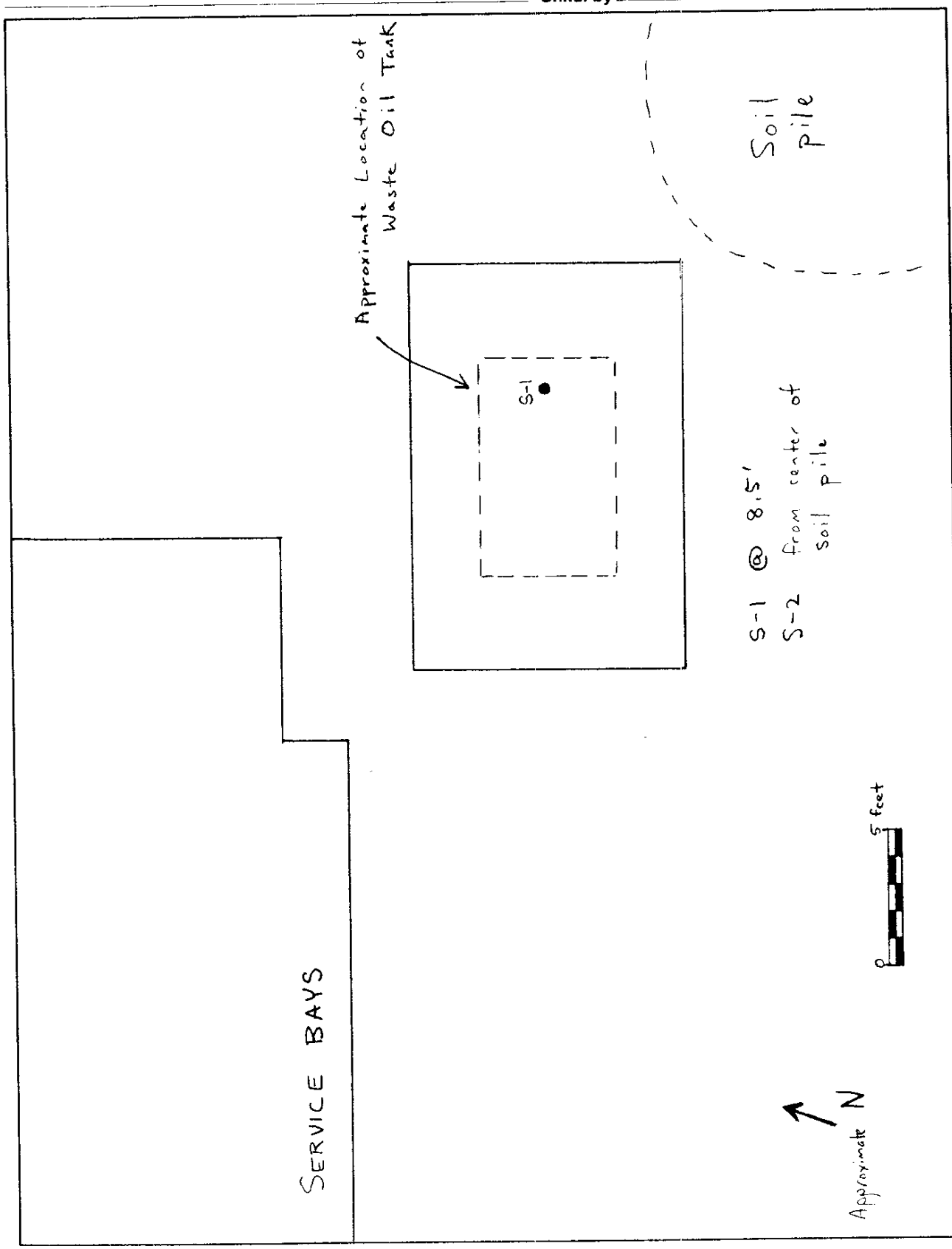
OAKLAND — 73rd
FIRESTONE

ERM-West, Inc. Suite 260 • 1777 Botelho Drive • Walnut Creek, CA 94596-5042 • (415) 946-0455

Project Firestone, 2701 73rd, Oakland W.O. No. 1206 Sheet ___ of ___

Subject Waste Oil Tank removal By ___ Date 12/12/90

Chkd. by ___ Date ___



PHASE II ENVIRONMENTAL AUDIT

EASTMONT MALL PROPERTY

OAKLAND, ALAMEDA COUNTY, CALIFORNIA

for

Mr. Steve Gardner
Topa Savings Bank
1800 Avenue of the Stars
Los Angeles, CA 90067

by

Hunter Environmental Services, Inc.
597 Center Avenue, Suite 350
Martinez, CA 94553

Project Number 02-401-002

December 20, 1989

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Appendix B: Drilling and Sampling Procedures

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PHASE II ENVIRONMENTAL AUDIT
EASTMONT MALL PROPERTY

1.0 INTRODUCTION

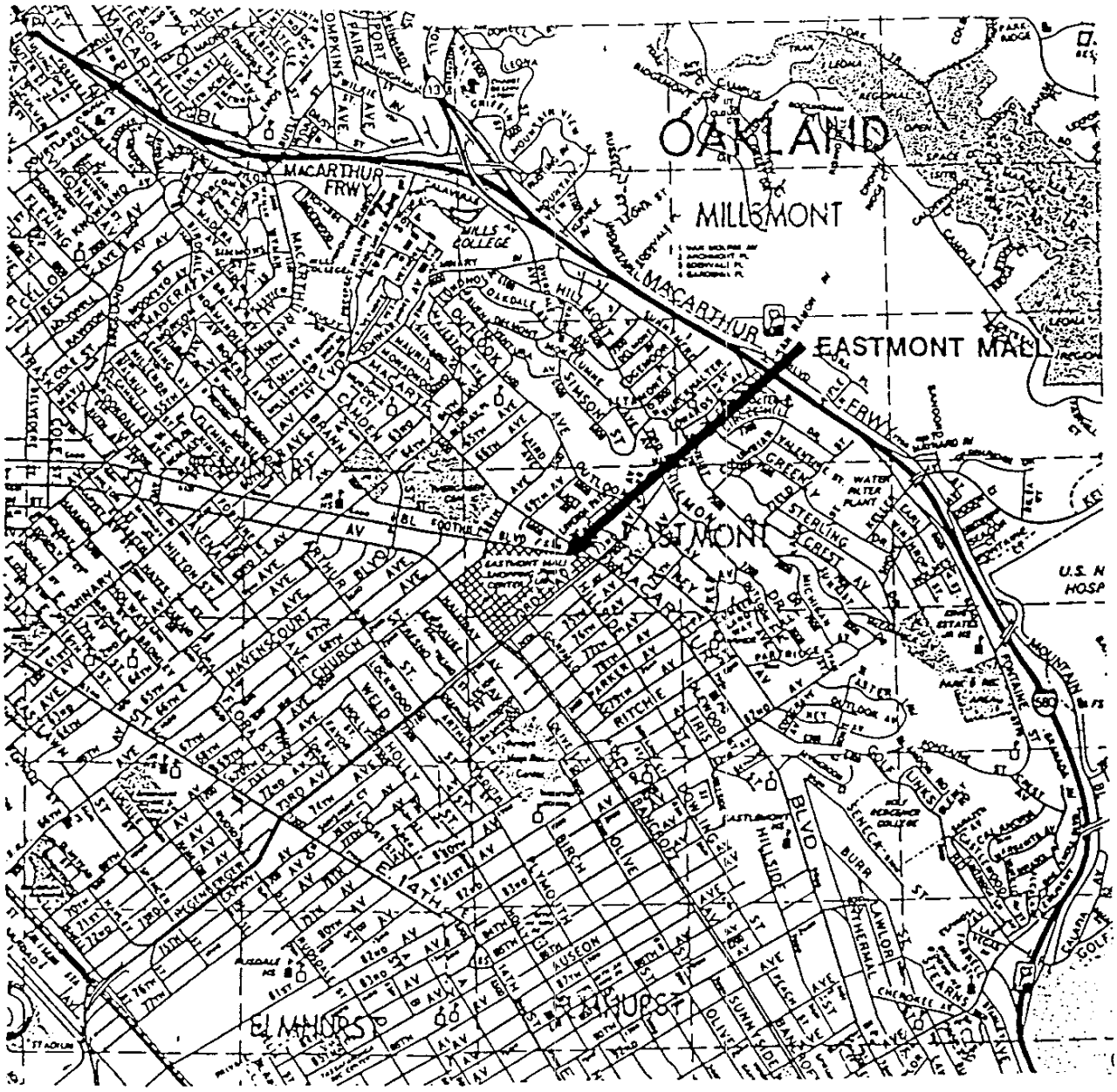
This report presents the results of a Phase II Environmental Property Audit for the Eastmont Mall property located between Foothill Boulevard, 73rd Street, Bancroft Avenue and Church Street in Oakland, Alameda County, California (see Figure 1 -Site Map). Mr. Steve Gardner, of Topa Savings Bank, retained Hunter Environmental Services, Inc. (Hunter) to conduct a Phase II Environmental Audit. The audit included a site reconnaissance of the property to observe hazardous materials or evidence of hazardous materials, identify from observation suspect asbestos containing material (ACM), and a subsurface investigation to determine the local groundwater conditions. The results of this audit are submitted in this report of the findings. The purpose of the study was to identify hazardous substances in onsite soil, ground water or buildings that may affect the property's acquisition value. The scope of work included interview of onsite personnel, site walk, ACM observation survey, subsurface investigation of ground water conditions and preparation of a written report of the findings.

Hunter is pleased to assist Topa Savings Bank in managing the environmental risks involved in the Eastmont Mall property site by conducting a limited investigation of the property. Hunter can offer no assurances and assumes no responsibility for site conditions or activities which were outside the scope of the inquiry requested by Topa Savings Bank as outlined by Hunter Proposal 89-M-200, dated November 29, 1989. In performing its investigations, Hunter has used reasonable care and has performed its work in keeping with industry standards and standard agency procedures as appropriate.

It is understood by Topa Savings Bank that environmental testing generally cannot and does not in this case lead to a full knowledge of site conditions, but indicates conditions only for those exact locations and specific times where samples were collected and analyzed. There can be no assurance and Hunter offers no assurance that site conditions do not exist or could not exist in the future which were undetected and which could lead to liability in connection with the site.

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Based on these analyses, Hunter found no reason to suspect that the property contains regulated hazardous substances in onsite soil, ground water or buildings other than those described in this report. There can be no assurance and Hunter offers no assurance that site conditions do not exist or could not exist in the future which were undetected and which could lead to liability in connection with the site. Similarly, past and present activities on the site indicating potential onsite hazardous substance concerns may not have been discovered by Hunter's inquiry. Such activities may include those that would indicate the potential for regulated hazardous substances at the site. Hunter analyzed the information obtained in its limited audit in keeping with existing environmental standards and enforcement practices, but cannot accurately predict what actions any given agency may take presently or what standards and practices may apply to the site in the future.



HunTer	EASTMONT MALL OAKLAND, CA.

FIGURE 1
LOCATION MAP

12/89 02-401-0(

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2.0 PROPERTY DESCRIPTION

2.1 SITE FEATURES

2.1.1 Site Location

The Eastmont Mall property is located in the southeast part of the City of Oakland, Alameda County, California, between Foothill Boulevard, 73rd Street, Bancroft Avenue and Church Street, approximately 0.75 mile west of Interstate 580, and approximately two miles east of Interstate 880. Access to the 27.6 acre property is by exiting I-580 on Edwards Ave, proceeding west where Edwards becomes 73rd Street to Eastmont Mall, which is on the right (North). Figure 1 shows the site location.

2.1.2 Soils

The geologic materials in the vicinity are reported by the State Division of Mines and Geology to be predominantly Quaternary alluvial deposits. These consist of unconsolidated clays, silts, sands, and gravels. The source of these alluvial deposits is the Berkeley Hills approximately one-half mile to the east. The site is located within the Hayward Fault Zone.

2.1.3 Topography and Drainage

The original topography of the area is was gently sloping west towards the San Francisco Bay. With the construction of the Mall and its parking lots the property is essentially flat and terraced. Drainage from the property is collected by storm sewers on in the parking lots. The adjacent properties are developed as mixed commercial and residential sites. Therefore, it appears that surface run-on from these properties during a heavy rain will not occur. Elevation of the Eastmont Mall study property is approximately 60 feet above mean sea level, as interpreted from a U. S. Geologic Survey topographic map of the area (Oakland East Quadrangle, 7.5 Minute, 1980).

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2.1.4 Hydrogeology

Ground water will be discussed in Section 3.3, Ground Water Investigation.

2.2 CURRENT AND HISTORICAL LAND USES

2.2.1 Current Land Use

The property is currently developed as a regional shopping center. Buildings on the property include the main mall complex, a four story office building, three fast food satellite buildings, a gas station and an auto repair business. There is a two-story parking garage on the north and east side of the main mall building, and additional paved parking areas cover the rest of the property. On the corner of Church St. and Foothill Blvd. is a bare area which is not developed at the time of this report.

2.2.2 Historical Land Uses

The property was formerly used for single family residences prior to the construction of Eastmont Mall property in 1966 and 1967. Portions of some public streets were closed and abandoned to make way for the mall construction. These streets are: 69th, 71st, and 72nd Avenues; Hillside and Beck Streets; and Garfield Avenue.

2.2.3 Adjacent Land Uses

The adjacent land uses are varied around the study property. The properties to the north and east of Eastmont Mall property are part of the commercial business corridors along Foothill Boulevard and 73rd Street, respectively. Properties to the south and west of the Eastmont Mall property are mixed commercial and multi-family residential.

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3.0 AREAS OF INVESTIGATION

3.1 HAZARDOUS MATERIALS

The site walk for the observation of hazardous materials (HM) on the Eastmont Mall property was performed on December 5, 6, and 10, 1989. Ms. Loida, manager of the mall provided access to construction drawings and other pertinent information necessary to perform the site walk. Figure 2, Site Plan, was developed from plats and maps contained in an Appraisal Report, dated July 7, 1938, by Van Arsdale & Associates, Inc.

Hazardous materials observed during the site walk were usually the typical HM found in retail groceries, drug stores and hobby stores. Some examples of this HM are, oils, solvents, cleaners, aerosol pesticides, pesticides and paints. All containers of these materials observed were in one gallon containers or smaller. Used (spent) fluorescent bulbs were stored in closets in the office building, in mall closets and back rooms, and in the Firestone building. The fluorescent bulbs release mercury when broken. Larger quantities of HM are listed below:

Item or Material	Location
Waste Oil Tank (in use)	Firestone Store
Car Batteries (est 200+)	Firestone Store
Oil Tank (275 gl)	Firestone Store
Waste Oil Tank (not in use)	Eastmont Auto
Used Oil Drums (18)	Eastmont Auto
Car Batteries (est 60+)	Eastmont Auto
Pressurized 20 gl tank (solvent)	Dry Cleaners
Petroleum Tanks, gas & diesel (4)	B.P. Station
Refrigerant Gas, Freon, empty and part full (30 gl)	Various roof locations
Transformer Dielectric Fluid (possible PCBs)	Transformers outside by Fantasy Gifts Store

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Evidence of spills such as pavement or floor stains were not observed during the site walk. Electric transformers may contain polychlorinated biphenyls (PCB) in their coolant oils. PCBs are highly toxic and extremely persistent in the environment causing ecological damage via water pollution. Their manufacture was discontinued in the U.S. in 1976. The use of PCBs in transformers, while still allowed in certain situations, is strictly regulated by the EPA. PCBs are a cause for concern because of the potential environmental damage if a transformer leaks or bursts. Pacific Gas and Electric was contacted concerning the condition of the dielectric fluid in the transformers. They stated that all transformers in Oakland are non-PCB, they all have mineral oil as their dielectric cooling fluid. The rest of the HM in Eastmont Mall did not appear to be a cause for concern, but has the potential to degrade the environment if released to the air, soil or ground water.

3.2 ASBESTOS

The observation of suspect asbestos containing material (ACM) was performed by Hunter on December 5,6, and 8, 1989. Asbestos can be in roofing materials, air conditioning ducts, ceiling tiles, acoustic wall tiles, floor tiles and linoleum, elevator and fire doors, wall texturing and joint compound, pipe insulation, spray-on ceiling materials and spray-on fire proofing, among others. Asbestos is only a problem when the material is disturbed to create airborne fibers, from which inhalation occurs. Since the Eastmont Mall was constructed in 1966 and 1967, the probability of ACM used for construction is very high.

Most of the suspect ACM in the Eastmont property was in satisfactory condition, however, the J. C. Penny building has spray-on fire proofing on all observed structural steel. The suspect ACM is also accessible to disturbance in the roof entry to the J. C. Penny roof. On the top floor of the J. C. Penny building, the spray-on material was stained and appeared to have sustained water damage. These conditions may cause the suspect spray-on ACM to de-laminate from the steel and become airborne.

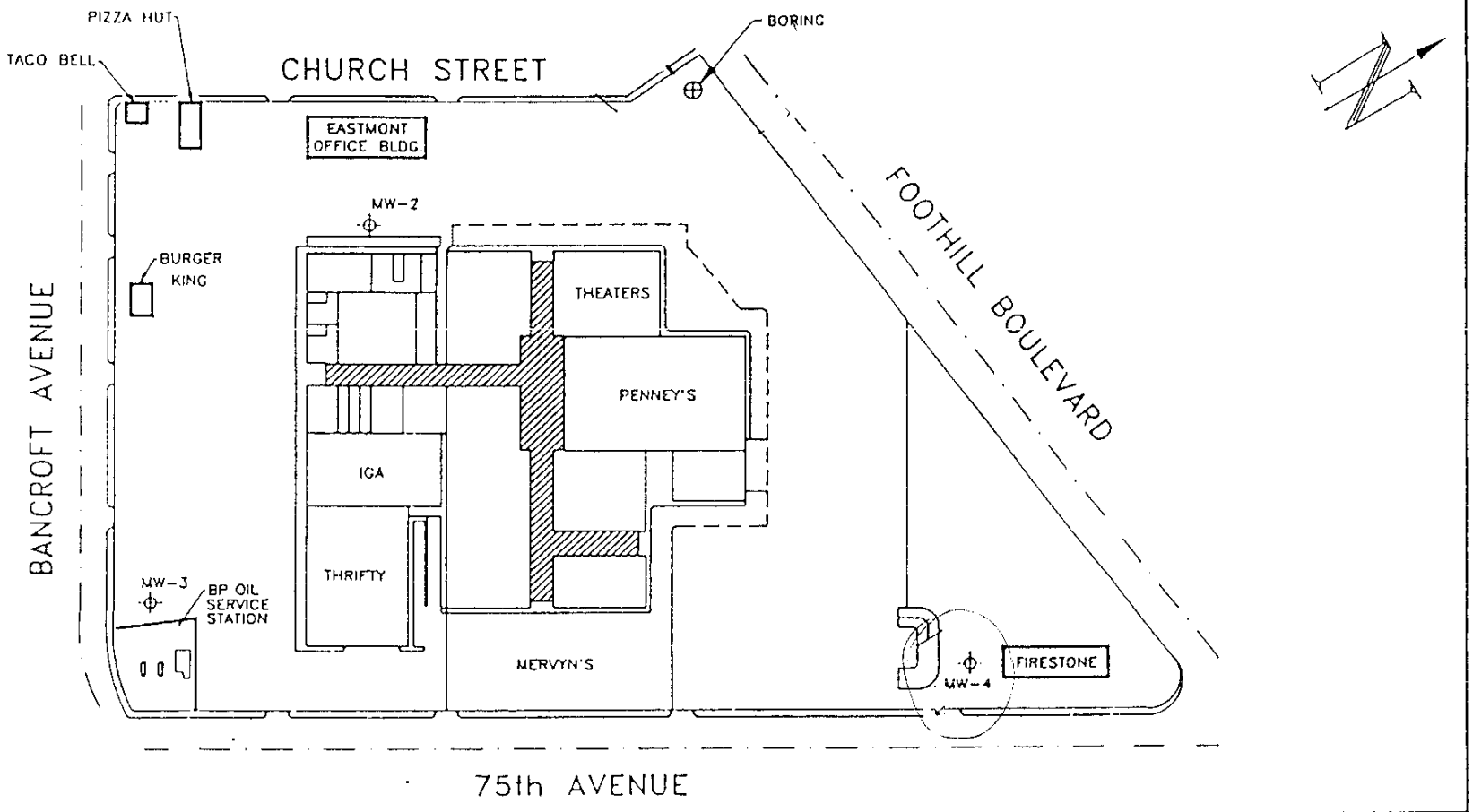
A detailed list of observed suspect asbestos containing materials is included in Appendix A. No samples were taken, and no demolition of wall, ceiling or floor finishes was performed to visually survey hidden building materials.

3.3 SUBSURFACE INVESTIGATION

On December 5 and 6, 1989, one soil boring (B-1, designated as MW-1 for laboratory analyses), and three ground-water monitoring wells, MW-2, MW-3, and MW-4, were completed at the locations shown on Figure 2 - Site Plan. The wells and soil boring were completed using a truck mounted Mobile Drill B-53 hollow-stem auger drill rig. The drilling and sampling procedures are included in Appendix B -Drilling and Sampling Procedures.

Monitoring wells MW-2, MW-3, and MW-4 were drilled to sample the soil beneath the site and to install monitoring wells to sample ground water beneath the site. MW-2 was drilled to a total depth of 35 feet because first ground water was found at approximately 29 feet

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Hunton

EASTMONT MALL
OAKLAND, CA.

FIGURE 2
SITE MAP

12/89 02-401-002

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below the surface. First ground water was found in MW-3 at approximately 37 feet below the ground surface and well MW-3 was drilled to a total depth of 45 feet. MW-4 was drilled to a total depth of 25 feet as first ground water was found at approximately 17 feet below the surface. Boring B-1 (Figure 2) was intended to be a monitoring well but ground water was not found to a depth of 55 feet so the boring was backfilled with Enviroplug bentonite to the surface.

3.3.1 Soil

The soil materials observed during drilling indicate that the site is underlain by a brown to black silty clay to depths ranging from approximately 5 to 13 feet below the surface. The materials below the clay varied from silty clay to well graded sand. A thin, two foot thick, section of cobbles were found from 12 to 14 feet in B-1, see Appendix C - Boring Logs.

The soil samples retrieved during drilling were screened on site using a Thermo Environmental Instruments Model 580A organic vapor meter (OVM). All soil samples registered non-detectable results on the OVM except for the 15 foot soil sample from Well MW-4 which indicated a level of 230 parts per million (ppm) or milligrams per kilogram (mg/kg). This soil sample, MW-4 at 15 feet, also had dark gray staining with an oily sheen and a strong gasoline odor at the bottom of the sample, which was near the elevation that ground water was found in that boring.

3.3.2 Ground Water

Ground water in the vicinity was found during drilling at depths ranging from 17 to 37 feet below the ground surface. After the well installation was completed the ground-water levels ranged from 15 to 35 feet below the ground surface. The water levels in wells MW-2, MW-3, and MW-4 were measured by a geologist from Hunter/Gregg on December 11, 1989 and the relative elevations of the three wells were surveyed by Hunter/Gregg personnel on December 14, 1989. The well elevations and depth to water is shown on Figure 2. Based on the relative well elevations and depth to water in the three monitoring

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wells it appears that the ground water beneath the site is in two or three zones which are most likely affected by faulting and changes in lithology. The ground-water gradient appears to be to the south.

3.3.3 Laboratory Analysis

Laboratory analyses of the soil and water samples were performed by Superior Analytical Laboratories, Inc., a State-Certified, independent testing laboratory, located in Martinez, California. Selected soil samples from the three monitoring wells and one soil boring, MW-2, MW-3, MW-4, and B-1 respectively, were analyzed for Total Petroleum Hydrocarbons (TPH) using EPA Method 8015; Benzene, Toluene, Ethyl Benzene, and Total Xylenes (BTEX) using EPA Method 8020; and Oil and Grease (O&G) using State Method 503-E. Ground-water samples from the three wells, MW-2, MW-3, and MW-4, were analyzed for TPH, BTEX, and for Total Volatile Organics (TVO) using EPA Method 8240. One water sample, MW-2, was analyzed for Stoddard Solvent (Stoddard) using EPA Method 8015. The results of the laboratory analyses are presented in Tables 1 through 6.

3.3.3.1 Soil Analysis Results

All laboratory analyses for the soil samples from the monitoring wells (MW-2, MW-3, and MW-4) and one soil boring (B-1) were non-detectable for all compounds analyzed except the 15 foot sample from MW-4. The 15 foot sample from MW-4 had a TPH level of 2000 ppm; BTEX levels ranging from 1,400 to 150,000 ppb; and was non-detectable for Stoddard Solvent (Stoddard) and Oil and Grease (O&G). The results of the laboratory analyses on soil samples are summarized in Tables 1 and 2.

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TABLE 1. RESULTS OF TPH, BTEX, AND STODDARD ANALYSES ON SOIL SAMPLES TAKEN DECEMBER 5 AND 6, 1989 AT EASTMONT MALL, OAKLAND, CALIFORNIA

SAMPLE ID	DATE SAMPLED	TPH (ppm)	B T E X (ppb)				STODDARD (ppm)
			BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	
MW-1@10'	12/5/89	ND<1	ND<3	ND<3	ND<3	ND<3	-
MW-1@30'		ND<1	ND<3	ND<3	ND<3	ND<3	-
MW-2@10'		ND<1	ND<3	ND<3	ND<3	ND<3	ND<10
MW-2@20'		ND<1	ND<3	ND<3	ND<3	ND<3	ND<10
MW-3@10'	12/6/89	ND<1	ND<3	ND<3	ND<3	ND<3	-
MW-3@20'		ND<1	ND<3	ND<3	ND<3	ND<3	-
MW-4@10'		ND<1	ND<3	ND<3	ND<3	ND<3	-
MW-4@15'		2000	1400	4300	23,000	150,000	-

NOTES: ppm - Parts per million or milligrams per kilogram
ppb - Parts per billion or micrograms per kilogram
ND<1 - Not detected at indicated detection limit

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TABLE 2. RESULTS OF OIL AND GREASE (O&G) ANALYSES
ON SOIL SAMPLES TAKEN DECEMBER 6, 1989
AT EASTMONT MALL, OAKLAND, CALIFORNIA

SAMPLE ID	DATE SAMPLED	OIL & GREASE (ppm)
MW-3@10'	12/6/89	ND<20
MW-3@20'		ND<20
MW-4@10'		ND<20
MW-4@15'		ND<20

Notes: ppm - Parts per million or milligrams per kilogram (mg/kg)
ND<20 - Not detected at indicated detection limit

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3.3.3.2 Ground Water Analysis Results

The water samples from the three ground-water monitoring wells, MW-2, MW-3, and MW-4, showed detectable levels of Total Petroleum Hydrocarbons (TPH). The TPH levels ranged from 0.2 to 2.7 parts per million (ppm) or milligrams per liter (mg/L). The BTEX analyses showed non-detectable levels of BTEX for MW-2 at a detection limit of 0.3 parts per billion (ppb) or micrograms per liter (ug/L), and showed BTEX levels in Wells MW-3 and MW-4 ranging from 16 to 530 ppb. Sample MW-2 showed non-detectable levels of Stoddard at a detection limit of 1 ppm. The results of the TPH, BTEX, and Stoddard analyses are presented in Table 3.

TABLE 3. RESULTS OF TPH, BTEX, AND STODDARD ANALYSES ON WATER SAMPLES TAKEN DECEMBER 11, 1989 AT EASTMONT MALL, OAKLAND, CALIFORNIA

SAMPLE ID	DATE SAMPLED	TPH (ppm)	B T E X (ppb)				STODDARD (ppm)
			BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	
MW-2	12/11/89	0.2	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<1
MW-3		2.7	530	16	150	59	-
MW-4		2.2	28	21	50	290	-

Notes: ND<0.3 - Not detected at indicated detection limit
ppm - Parts per million or milligrams per kilogram
ppb - Parts per billion or micrograms per kilogram

The Total Volatile Organic (TVO) (EPA 8240) analysis for water from MW-3 was non-detectable for all 38 compounds analyzed. The TVO analysis for water from MW-4 was non-detectable for all compounds except 1,2-Dichloroethene (total), Benzene, Toluene, Ethyl Benzene, and Total Xylenes. The results of the TVO analyses are presented in Tables 4, 5, and 6.

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TABLE 4. RESULTS OF TOTAL VOLATILE ORGANIC ANALYSES FOR WATER SAMPLE FROM MW-2 COLLECTED DECEMBER 11, 1989

SAMPLE: MW-2

Compound	ug/l	Compound	ug/l
Chloromethane	ND<10	Cis-1,3-Dichloropropene	ND<3
Bromoethane	ND<10	Trichloroethene	19
Vinyl Chloride	ND<10	Dibromochloromethane	ND<3
Chloroethane	ND<10	1,1,2-Trichloroethane	ND<3
Methylene Chloride	ND<10	Benzene	ND<2
Acetone	ND<10	Trans-1,3-Dichloropropene	ND<3
Carbon disulfide	ND<3	2-Chloroethyl vinyl ether	ND<3
Trichlorofluoromethane	ND<3	Bromoform	ND<3
1,1-Dichloroethene	ND<3	4-Methyl-2-Pentanone	ND<10
1,1-Dichloroethane	ND<3	2-Hexanone	ND<10
1,2-Dichloroethene (total)	8	Tetrachloroethene	210
Chloroform	ND<3	1,1,2,2-Tetrachloroethane	ND<3
1,2-Dichloroethane	ND<3	Toluene	ND<3
2-Butanone	ND<20	Chlorobenzene	ND<3
1,1,1-Trichloroethane	ND<3	Ethylbenzene	ND<3
Carbon Tetrachloride	ND<3	Styrene	ND<3
Vinyl Acetate	ND<10	Total Xylenes	ND<3
Bromodichloromethane	ND<3	1,3-Dichlorobenzene	ND<3
1,2-Dichloropropane	ND<3	1,2&1,4-Dichlorobenzenes	ND<3

Notes: ug/l - Micrograms per liter or parts per billion (ppb)
ND<10 - Non-detectable at indicated detection limit

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TABLE 5. RESULTS OF TOTAL VOLATILE ORGANIC ANALYSES FOR WATER SAMPLE FROM MW-3 COLLECTED DECEMBER 11, 1989

SAMPLE: MW-3

Compound	ug/l	Compound	ug/l
Chloromethane	ND<10	Cis-1,3-Dichloropropene	ND<3
Bromoethane	ND<10	Trichloroethene	ND<3
Vinyl Chloride	ND<10	Dibromochloromethane	ND<3
Chloroethane	ND<10	1,1,2-Trichloroethane	ND<3
Methylene Chloride	ND<10	Benzene	ND<2
Acetone	ND<10	Trans-1,3-Dichloropropene	ND<3
Carbon disulfide	ND<3	2-Chloroethyl vinyl ether	ND<3
Trichlorofluoromethane	ND<3	Bromoform	ND<3
1,1-Dichloroethene	ND<3	4-Methyl-2-Pentanone	ND<10
1,1-Dichloroethane	ND<3	2-Hexanone	ND<10
1,2-Dichloroethene (total)	ND<3	Tetrachloroethene	ND<3
Chloroform	ND<3	1,1,2,2-Tetrachloroethane	ND<3
1,2-Dichloroethane	ND<3	Toluene	ND<3
2-Butanone	ND<20	Chlorobenzene	ND<3
1,1,1-Trichloroethane	ND<3	Ethylbenzene	ND<3
Carbon Tetrachloride	ND<3	Styrene	ND<3
Vinyl Acetate	ND<10	Total Xylenes	ND<3
Bromodichloromethane	ND<3	1,3-Dichlorobenzene	ND<3
1,2-Dichloropropane	ND<3	1,2&1,4-Dichlorobenzenes	ND<3

Notes: ug/l - Micrograms per liter or parts per billion (ppb)
ND<10 - Non-detectable at indicated detection limit

TABLE 6. RESULTS OF TOTAL VOLATILE ORGANIC ANALYSES FOR WATER SAMPLE FROM MW-4 COLLECTED DECEMBER 11, 1989

SAMPLE: MW-4

Compound	ug/l	Compound	ug/l
Chloromethane	ND<10	Cis-1,3-Dichloropropene	ND<3
Bromoethane	ND<10	Trichloroethene	ND<3
Vinyl Chloride	ND<10	Dibromochloromethane	ND<3
Chloroethane	ND<10	1,1,2-Trichloroethane	ND<3
Methylene Chloride	ND<10	Benzene	440
Acetone	ND<10	Trans-1,3-Dichloropropene	ND<3
Carbon disulfide	ND<3	2-Chloroethyl vinyl ether	ND<3
Trichlorofluoromethane	ND<3	Bromoform	ND<3
1,1-Dichloroethene	ND<3	4-Methyl-2-Pentanone	ND<10
1,1-Dichloroethane	ND<3	2-Hexanone	ND<10
1,2-Dichloroethene (total)	4	Tetrachloroethene	ND<3
Chloroform	ND<3	1,1,2,2-Tetrachloroethane	ND<3
1,2-Dichloroethane	ND<3	Toluene	19
2-Butanone	ND<20	Chlorobenzene	ND<3
1,1,1-Trichloroethane	ND<3	Ethylbenzene	130
Carbon Tetrachloride	ND<3	Styrene	ND<3
Vinyl Acetate	ND<10	Total Xylenes	54
Bromodichloromethane	ND<3	1,3-Dichlorobenzene	ND<3
1,2-Dichloropropane	ND<3	1,2&1,4-Dichlorobenzenes	ND<3

Notes: ug/l - Micrograms per liter or parts per billion (ppb)
ND<10 - Non-detectable at indicated detection limit

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4.0 SUMMARY AND CONCLUSIONS

This Report is based on our observations made during the weeks of December 4-8 and 11-15, 1989, while performing hazardous material and suspect asbestos containing material surveys. The subsurface information is based on borings, wells, and analysis of soil and ground water samples.

The Eastmont Mall property is currently in use as a regional retail center. Past property use appears to have caused adverse environmental problems with the property. Recent changes in environmental law have also caused some previously existing conditions to become an environmental liability for the property.

> Levels of benzene in two of the three monitoring well samples exceed the Regional Water Quality Control Board's (RWQCB) action levels. The land owner is required to notify the Alameda County Health Department of these results. Asbestos in the Eastmont Mall property may be a problem because of Prop 65 notification requirements, and Cal-OSHA asbestos notification requirements.

Hazardous materials (HM) observed during the site walk were usually the typical HM found in retail groceries, drug stores and hobby stores. Some examples of this HM are, oils, solvents, cleaners, aerosol pesticides, pesticides and paints. All containers of these materials observed were in one gallon containers or smaller. Used (spent) fluorescent bulbs were stored in closets in the office building, in mall closets and back rooms, and in the Firestone building.

Most of the suspect ACM in the Eastmont property was in satisfactory condition, however, the J. C. Penny building has spray-on fire proofing on all observed structural steel. The suspect ACM is also accessible to disturbance in the roof entry to the J. C. Penny roof. On the top floor of the J. C. Penny building, the spray-on material was stained and appeared to have sustained water damage. These conditions in may cause the suspect spray-on ACM to become airborne.

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The ground water sampling found elevated levels of total petroleum hydrocarbons, Benzene, Ethyl Benzene, Toluene, Xylenes, 1,2,-Dichloroethene, Trichloroethene, and Tetrachloroethene. Benzene, a known carcinogen, is far above the RWQCB action level of 0.7 parts per billion. The chlorinated hydrocarbons may indicate solvents or pesticides in the subsurface area.

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OBSERVED SUSPECT ASBESTOS CONTAINING MATERIAL (ACM) - EASTMONT MALL

TABLE I - FLOOR COVERINGS

(all measurements in sq. ft.)

BUILDING	9"X9" VFT*	12"X12"VFT*	LINOLEUM SHEETS	6"X4" FIRE BRICKS	4"X4" BRICK
Office Bldg.	188	20,788	2,336		
Burger King					
Taco Bell					
Pizza Hut					
Firestone		3,089			
B.P. Station					
Mall Common Areas	251				
J.C. Penny	96	14,075	12,732		
Mervyns	13,000	14,018			
Upper Level Mall Stores	200	22,121	260		
Lower Level Mall Stores	6,290	47,854	1,290	238	333

* VFT = VINYL FLOOR TILE

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OBSERVED SUSPECT ASBESTOS CONTAINING MATERIAL (ACM) - EASTMONT MALL

TABLE II - CEILING MATERIALS

(all measurements in sq. ft.)

BUILDING	2'X4' SCT*	2'X2' SCT*	1'X2' SCT*	12"X12" ACOUSTIC	ACOUSTIC SPRAY-ON MATERIAL
Office Bldg.	39,220			3,304	
Burger King	498				
Taco Bell		700			
Pizza Hut				670	
Firestone	2,816			312	
B. P. Station	456				
Mall Common Areas					64,900
J. C. Penny					
Mervyns	62,226				
Upper Level Mall Stores	34,000	1,060			7,190
Lower Level Mall Stores	66,185	2,863	34,410	2,142	2,892

* SCT = Suspended Ceiling Tile

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OBSERVED ASBESTOS CONTAINING MATERIAL (ACM) - EASTMONT MALL
TABLE III - MISCELLANEOUS MATERIALS

ITEM NAME	LOCATION	AMOUNT
Structural Fireproofing	J. C. Penny	191,000 sq.ft.
	Office Building, 1st floor beams	Unknown
Transite	Roof of J.C. Penny	640 sq.ft.
	Firestone basement pipes	58 lin.ft.
Air Conditioning Dampers	All roof areas	79 Units
Elevator Doors	Main Mall	(8) 8'X16'
Hard Pipe Elbows	Lower Mall, IGA & Thrifty	(6) elbows

HUNTER/GREGG, INC

MARTINEZ, CALIFORNIA

DRILLING AND SAMPLING PROCEDURES

Drilling Procedures - Hollow Stem Auger Rigs

The borings are drilled with a minimum outside diameter 7 1/4 inch Hollow-stem auger. The auger flights are steam cleaned prior to their arrival on site and after each use. During drilling a retractable plug prevents soil from entering the central shaft of the auger flight. Undisturbed soil samples shall be recovered from the borings without introducing liquid into the borings.

Soil Sampling Procedures

Relatively undisturbed soil samples shall be collected from the borings for chemical analysis and visual description. When the target depth is reached a Modified California Sampler, consisting of an outer sampler barrel lined with two 6-inch long rings (OD 2.5 inch) placed end to end, is used to collect the soil samples. The Modified California Sampler and brass rings are cleaned prior to each assembly. The equipment is washed with tri-sodium phosphate solution, rinsed in tap water and allowed to air dry. The sampler is attached to the drive hammer, lowered through the hollow-stem auger, and driven 12 inches into undistrubed soil ahead of the auger. The sampler is then retrieved and the rings removed.

The soil in the lower six-inch ring of the sampler is used for laboratory analysis. Immediately after the rings are retrieved, the lower ring is sealed with a teflon lined end cap and secured with tape. The sample is then labeled and placed in an ice chest for cold transport under proper chain of custody to a state certified chemical laboratory for analyses. The soil in the upper six-inch ring is used for lithologic description

and olfactory examination. Soil is described using the Unified Soil Classification System. A portion of this soil may be temporarily placed in a plastic bag and used for examination with a portable organic vapor analyzer. All field descriptions and measurements are documented on the Borehole Logs, example attached.

Ground-Water Monitoring Well Construction

Ground-water monitoring wells are constructed according to the general specifications shown on the attached Well Construction Diagram. The wells shall extend a minimum of 10 feet into the upper aquifer, unless a clay layer greater than five feet in thickness is found. The wells shall not extend through a laterally extensive clay layer below the upper aquifer unless circumstances warrent the investigation of deeper aquifers. In the event an extensive clay layer must be penetrated care shall be taken to assure that mixing of water or contaminated soil does not occur.

For single-cased wells, the monitoring well casing, with an end cap, shall extend to the base of the borehole or into a bentonite plug. The casings shall be factory perforated to the specifications delineated in the site work plan and compatible with the lithology of the aquifer found in the field. The perforated casing will extend five feet above the top of the aquifer or known high water level. Properly graded, clean filter sand will be used in the annulus of the well and prevent the migration of fine particles into the well. The filter sand will extend at three to five feet above the perforated interval in the well. A seal of at least three to five feet of bentonite shall be placed above the filter. Sack or neat cement will be used to seal the annulus from the bentonite pellets to the ground surface where a well box will be installed. All sand, bentonite, and cement will be placed with a tremie pipe.

Double cased wells may be specified where the wells are screen below an upper aquifer. In this situation, a minimum 10 inch diameter borehole is drilled to the base of the first aquifer and at least two feet into the aquitard. A conductor casing is then grouted in place and allowed to set for at least 72 hours. Drilling shall then continue within the conductor casing, with a drill bit smaller than the inside diameter of the conductor casing to the desired completion depth.

All wellheads shall be completed with a watertight structure and furnished with a watertight cap which shall be enclosed in a locked well covering device.

Ground-Water Well Development

Well development of a newly installed well shall begin 24 to 48 hours after the well is installed to allow cement to harden sufficiently. The well is cleared of disturbed sediment and water before water samples are collected. All well development tools are thoroughly cleaned prior to use. Well development tools may be either a stainless steel, teflon, or PVC bailer, hand pumps or submersible pumps. Surging may be required to remove loose sediments. For complete development, the wells will be pumped until the discharge is clear or the turbidity has not noticeably changed within one half hour. A pH and conductivity meter may be utilized to determine if the groundwater parameters have stabilized.

Ground-water sampling

Prior to sampling, the wells are sounded to determine product levels, water levels, and total volume of water. Each ground-water monitoring well is purged of at least 3 well volumes of water using a mechanical or hand-operated pump, or bailer. Conductivity, pH, and temperature are generally measured during the purging procedure to verify that these

characteristics are stable prior to sampling. Stable in this situation is three consecutive readings within 15% of each other. If the wells are emptied before three well volumes are removed, the sample shall be taken when the water level in the well recovers to at least 80% of its initial water level.

Samples are then taken immediately after purging using a teflon bailer and transferred into 40 milliliter (ml) glass vials with Teflon septum lids using a collection procedure that precludes air from entering the 40 ml sample vials and prevent the release of volatile organic compounds. To prevent cross-contamination of the ground-water samples, the Teflon bailer is washed with tri-sodium phosphate solution, rinsed with tap water, then distilled water, and allowed to air dry before sampling the next well. The samples are then labeled and placed immediately in a cooler for delivery to a state certified analytical laboratory. A chain of custody shall accompany the samples and contain the information concerning the source of the samples. Field identification of the samples, date and time of sample collection, analyses required, and signatures of the sampler and other handlers. For the purpose of quality assurance, one or more duplicate ground-water samples are taken for each five wells sampled. A sample is taken of distilled water from the final bailer rinse. Trip blanks furnished by the laboratory are also utilized.

Additional Ground-Water Parameters

Dissolved Oxygen Content

The dissolved oxygen content of the ground water is measured with a Yellow Springs Instrument, Model 51B dissolved oxygen meter which is calibrated on site taking into account temperature and salinity. After purging, a ground water sample is taken with a teflon bailer. The sample is immediately transferred into a jar in a manner that precludes air from being introduced into the sample. The dissolved oxygen probe is than placed in the jar, directly measuring the water temperature and the dissolved oxygen content.

Well bore vapor sampling

After the wells have been purged and allowed to equilibrate, vapor samples may be collected with a small vacuum pump from just above ground water in each of the well bores. Teflon tubing is lowered to approximately one foot above the ground-water surface, the well bore is covered, and air is pumped through the tubing into a chemically inert Tedlar bag that has been pre-cleaned and purged. The Tedlar bags are then labeled and transported to a state certified analytical laboratory to be analyzed for carbon dioxide content.

HUNTER
ENVIRONMENTAL SERVICES, INC.

597 Center Avenue, Suite 350
Martinez, California 94553
415-372-3637

LOG OF BORING NO. MW-4 | PAGE 1 of 1

PROJECT NO: 02-401-002 | DATE: 12/6/89

CLIENT: TOPA | REF. ELEV. –

SITE LOCATION: EASTMONT MALL, OAKLAND, CA. | METHOD: HOLLOW STEM AUGER

BORING LOCATION: SEE FIG 1 | HOLE DIA: 8"

DRILLER: GREGG DRILLING & TESTING

LOGGED BY: J. BRYSON

SUPERVISOR: S. WICKHAM Susan Wickham PG3851

DEPTH (FT)	GRAPHIC LOG	BLOW/FT	VAPOR (PPM)	SAMPLE TYPE AND DEPTH	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	WELL CONSTRUCTION
0						3" Asphalt @ Surface	
					CL	SILTY CLAY, dark brown with black mottling, trace of coarse sand, firm, slightly moist, no odor.	
2							
4		35	ND	RING @ 5'	CL	As above, light brown, some gravel	
6							
8							
10			ND	RING @ 10'	CL	As above.	
12							
14			230	RING @ 15'	ML	CLAYEY SILT, brown, some gravel, firm, moist, very strong odor.	
16						(bottom of sample was a sandy clayey silt and had dark gray coloring with oily sheen and very strong gas odor. ▽	
18							
20				NO SAMPLE	ML	CLAYEY SILT, brown, some gravel, firm, saturated, odor.	
22							
24				NO SAMPLE	CL	SILTY CLAY, dark brown, firm, slightly moist, trace of sand, no odor.	
26						TOTAL DEPTH 25'	
28						Well Construction: 2"(0.02") slotted PVC 25'-10'; 2" blank PVC 10'-0; #3 sand 25'-8'; bentonite 8'-3'; cement 3'-0.	

RMH
Ryan-Murphy, Incorporated
Environmental Construction

Fuel Systems Consulting

Underground Storage Tank Management Programs

Fuel Systems Construction and Service

General Contracting and Complete Build-Up

Site Remedial Action

The Good Earth Machine™

TANK CLOSURE REPORT

for the

FIRESTONE FACILITY
1021 North Hacienda Boulevard
County of Los Angeles - La Puente, California

Permit: # 6043B - Firestone # 5039 R/C 6J

P. O. Box 16863
5867 Broadway
Denver, Colorado 80216
(303) 293-Fuel (3835)
Fax (303) 296-7911

211 Granite, Suite E
Corona, California 91719
(714) 279-6210
Fax (714) 279-6215

Prepared by:
RYAN-MURPHY, INC.

March 1991

CITY OF OAKLAND
FIRE MARSHAL'S OFFICE
ROOM 201, CITY HALL
OAKLAND, CALIFORNIA 94612
273-3851

Permit No. 9411
Copies to
Date Issued 11/30/90

APPLICATION for PERMIT to INSTALL, REMOVE or REPAIR TANKS

IN THE CITY OF OAKLAND

Date 11/7/90

Application is hereby made for permit to (remove) / install / repair gasoline / fuel oil / WASTE OIL tank and excavate, commencing four feet inside the curb line / inside the property line

on the WEST side of 73 RD (St.) / Ave. 50 feet SOUTH of FOOT HILL (BLVD St.) / Ave.

House No. and Street 2701 73 RD (Street / Avenue) Present storage WASTE OIL

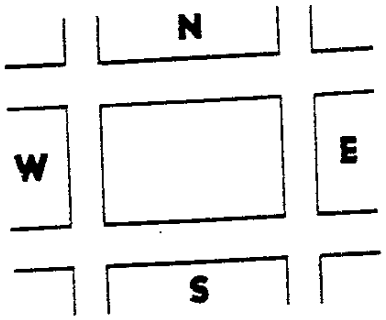
Owner FIRESTONE Address 7857 FLORENCE, DOWNEY CA. 90240 Phone 213-927-7010

Applicant RYAN-MURPHY INC. Address 211 GRANITE S. E CORONA CA. 91719 Phone 714-279-6210

Remarks SEE ATTACHED PLOT PLAN

Sidewalk surface to be disturbed ~~0~~ x ~~0~~ Number of Tanks 1 Capacity 550 Gallons each

Signature Charles M Bentley

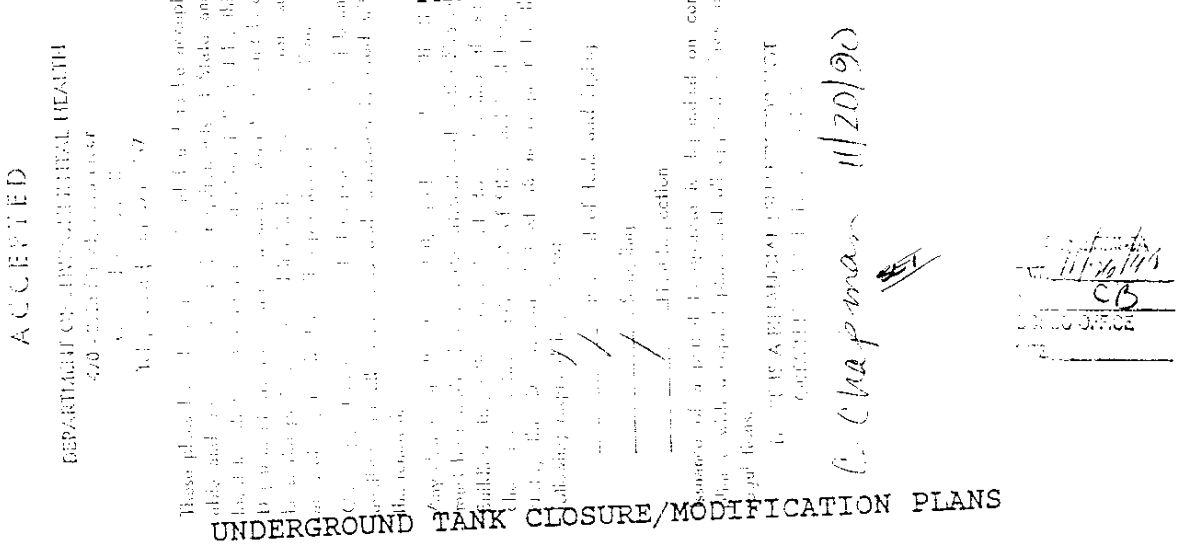


11-6-90 DISCOUNT WAIVER / WED - DEC 12 11 AM A.M. / HOLD CAR BACK

538-67 (8/67) 93



ALAmEDA COUNTY HEALTH CARE SER..CES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS DIVISION
80 SWAN WAY, ROOM 200
OAKLAND, CA 94621
PHONE NO. 415/271-4320



UNDERGROUND TANK CLOSURE/MODIFICATION PLANS

1. Business Name FIRESTONE TIRE
   Business Owner BRIDGESTONE FIRESTONE INC.
2. Site Address 2701 73 RD AVE
   City OAKLAND Zip 94605 Phone NONE
3. Mailing Address CLOSED SITE
   City _____ Zip _____ Phone _____
4. Land Owner BRIDGESTONE FIRESTONE INC.
   Address 7857 FLORENCE S.200 City, State DOWNEY CA Zip 90240
5. EPA I.D. No. CAD 982 001 729
6. Contractor RYAN-MURPHY INC.
   Address 211 GRANITE SUITE E
   City CORONA CA 91719 Phone 714-279-6210
   License Type A,B,C-61 D40, HAZ ID# 516337
7. Consultant ERM WEST
   Address 1777 BOTELLO SUITE 260
   City WALNUT CREEK CA 94596 Phone 415-946-0455
   CONTACT - DENNIS MILLER

8. Contact Person for Investigation

Name CHARLES M BENTLEY Title OPER. MANAGER RYAN MURPHY

Phone 714-279-6210

9. Total No. of Tanks at facility 1

10. Have permit applications for all tanks been submitted to this office? Yes [✓] No [ ]

11. State Registered Hazardous Waste Transporters/Facilities

a) Product/Waste Tranporter

Name H+H SHIPSERVICE EPA I.D. No. CAD004771168

Address 220 CHINA BASIN

City SAN FRANCISCO State CA Zip 94107

b) Rinsate Transporter

Name H+H SHIPSERVICE EPA I.D. No. CAD004771168

Address 220 CHINA BASIN

City SAN FRANCISCO State CA Zip 94107

c) Tank Transporter

Name H+H SHIPSERVICE EPA I.D. No. CAD004771168

Address 220 CHINA BASIN

City SAN FRANCISCO State CA Zip 94107

d) Tank Disposal Site

Name H+H SHIP SERVICE EPA I.D. No. CAD004771168

Address 220 CHINA BASIN

City SAN FRANCISCO State CA Zip 94107

e) Contaminated Soil Transporter

Name H+H SHIP SERVICE EPA I.D. No. CAD004771168

Address 220 CHINA BASIN

City SAN FRANCISCO State CA Zip 94107

12. Sample Collector

Name DENNIS MILLER

Company ERM WEST

Address 1777 BOTELLO S. 275

City WALNUT CREEK State CA Zip 94596 Phone 415-946-0455

13. Sampling Information for each tank or area

Tank or Area		Material sampled	Location & Depth
Capacity	Historic Contents (past 5 years)		
550 GAL.	WASTE OIL	SOIL + GROUND WATER IF PRESENT	2' BELOW TANK

14. Have tanks or pipes leaked in the past? Yes [ ] No [X]

If yes, describe.

15. NFPA methods used for rendering tank inert? Yes [X] No [ ]

If yes, describe. CO_2 15 lbs / 1,000 GAL (M.N.)
Check w/ Oakland Fire Department for their required LEL & O_2 values

An explosion proof combustible gas meter shall be used to verify tank inertness.

16. Laboratories

Name CURTISS + TOMPKINS

Address 2323 5TH ST.

City BERKLEY State CA Zip 94710

State Certification No. 159

17. Chemical Meth to be used for Analyzing amples

Contaminant Sought	EPA, DHS, or Other Sample Preparation Method Number	EPA, DHS, or Other Analysis Number
TPH (GAS + DIESEL)	DHS METHOD	
OIL + GREASE	503 E	
	8020M	

Waste and Used Oil or Unknown

(All analyses must be completed and submitted)

	SOIL		WATER
TPH G	GCFID(5030)	TPH G	GCFID(5030)
TPH D	GCFID(3550)	TPH D	GCFID(3510)

or TPH AND BTX&E by 8260 CRYOGENIC FOCUSING

O & G	5520 D&F	O & G	5520 C&F
BTX&E	8020 or 8240	BTX&E	602, 624 or 8260
CL HC	8010 or 8240	CL HC	601 or 624

ICAP or AA TO DETECT METALS: Cd, Cr, Pb, Zn, Ni

METHOD 8270 FOR SOIL OR WATER TO DETECT:

PCB*	PCB*
PCP*	PCP*
PNA	PNA
CREOSOTE	CREOSOTE

*If found, analyze for dibenzofurans (PCBs) or dioxins (PCP)

10 AUGUST, 1990

PER TRI-REGIONAL BOARD 17 STAFF RECOMMENDATIONS FOR PRELIMINARY EVALUATION AND INVESTIGATION OF UNDERGROUND TANK SITES

18

19. Workman's Compensation: Yes [X] No [ ]

Copy of Certificate enclosed? Yes [✓] No [ ]

Name of Insurer AIG

20. Plot Plan submitted? Yes [✓] No [ ]

21. Deposit enclosed? Yes [✓] No [ ]

22. Please forward to this office the following information within 60 days after receipt of sample results.

a) Chain of Custody Sheets

b) Original Signed Laboratory Reports

c) TSD to Generator copies of wastes shipped and received

d) Attachment A summarizing laboratory results

I declare that to the best of my knowledge and belief the statements and information provided above are correct and true. I understand that information in addition to that provided above may be needed in order to obtain an approval from the Department of Environmental Health and that no work is to begin on this project until this plan is approved.

I understand that any changes in design, materials or equipment will void this plan if prior approval is not obtained.

I understand that all work performed during this project will be done in compliance with all applicable OSHA (Occupational Saftey and Health Administration) requirements concerning personnel and safety.

I will notify the Department of Environmental Health at least two (2) working days (48 hours) after approval of this closure plan in advance to schedule any required inspections. I understand that site and worker safety are solely the responsibility of the property owner or his agent and that this responsibility is not shared nor assumed by the County of Alameda.

Signature of Contractor

Name (please type) CHARLES M BENTLEY

Signature Charles M Bentley

Date 11/6/90

Signature of Site Owner or Operator

Name (please type) V. M. WILLRICH

Signature V. M. Willrich

Date 11/7/90

NOTES:

1. Any changes in this document must be approved by this Department.

2. Any leaks discovered must be submitted to this office on an underground storage tank unauthorized leak/contamination site report form within 5 days of its discovery.

3. Three (3) copies of this plan must be submitted to this Department. One copy must be at the construction site at all times.

4. After approval of plan, notification of at least two (2) working days (48 hours) must be given to this Department prior to removal of tank(s).

5. A copy of your approved plan must be sent to the landowner.

6. Triple rinse means that:

   a) Final rinse must contain less than 100 ppm of Gasoline (EPA method 8020 for soil, or EPA method 602 for water) or Diesel (EPA method 418.1). Other methods for halogenated volatile organics (EPA method 8010 for soil, EPA method 601 for water) may be required. The composition of the final rinse must be demonstrated by an original or facsimile report from a laboratory certified for the above analyses.

   b) Tank interior is shown to be free from deposits or residues upon a visual examination of tank interior.

   c) Tank should be labelled as "tripled rinsed; laboratory certified analysis available upon request" with the name and address of the contractor.

   If all the above requirements cannot be met, the tank must be transported as a hazardous waste.

7. Any cutting into tanks requires local fire department approval.

UNDERGROUND TANK CLOSURE/MODIFICATION PLANS

ATTACHMENT A

SAMPLING RESULTS

Tank or Area	Contaminant	Location & Depth	Results (specify units)

INSTRUCTIONS

2. SITE ADDRESS
Address at which closure or modification is taking place.

5. EPA I.D. NO.
This number may be obtained from the State Department of Health Services, 916/324-1781.

6. CONTRACTOR
Prime contractor for the project.

7. OTHER
List professional consultants here.

12. SAMPLE COLLECTOR
Persons who are collecting samples.

13. SAMPLING INFORMATION
Historic contents - the principal product(s) used in the last 5 years.

Material sampled - i.e., water, oil, sludge, soil, etc.

16. LABORATORIES
Laboratories used for chemical and geotechnical analyses.

17. CHEMICAL METHODS:
All sample collection methods and analyses should conform to EPA or DHS methods.

Contaminant - Specify the chemical to be analyzed.

Sample Preparation Method Number - The means used to prepare the sample prior to analyses - i.e., digestion techniques, solvent extraction, etc. Specify number of method and reference if not an EPA or DHS method.

Analysis Method Number - The means used to analyze the sample - i.e., GC, GC-MS, AA, etc. Specify number of method and reference if not a DHS or EPA method.

NOTE:
Method Numbers are available from certified laboratories.

18. SITE SAFETY PLAN
A plan outlining protective equipment and additional specialized personnel in the event that significant amount of hazardous materials are found. The plan should consider the availability of respirators, respirator cartridges, self-contained breathing apparatus (SCBA) and industrial hygienists.

19. ATTACH COPY OF WORKMAN'S COMPENSATION

20. PLOT PLAN
The plan should consists of a scaled view of the facility at which the tank(s) are located and should include the following information:

a) Scale

b) North Arrow

c) Property Line

d) Location of all Structures

e) Location of all relevant existing equipment including tanks and piping to be removed

f) Streets

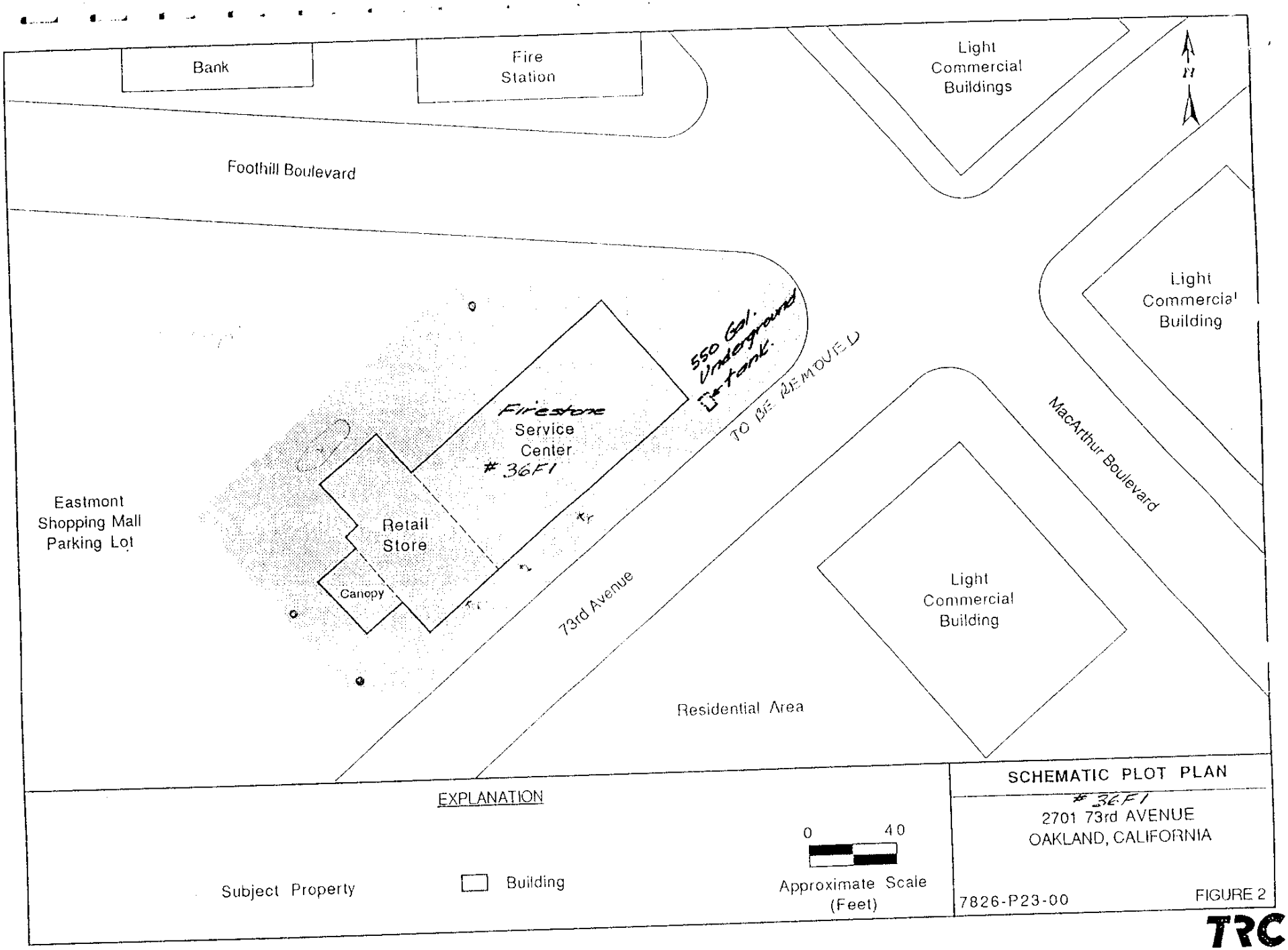
g) Underground conduits, sewers, water lines, utilities

h) Existing wells (drinking, monitoring, etc.)

i) Depth to ground water

j) All existing tanks in addition to the ones being pulled

rev. 9/88
mam



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HEALTH AND SAFETY PLAN

TANK REMOVAL PROJECT

FIRESTONE STORE # 36F1
2701 73rd Avenue
Oakland, CA 94605

prepared by:
Neal H. Holdridge
California Division
Ryan-Murphy, Inc.

OVERVIEW:

The purpose of this health and safety plan is to protect Firestone, Ryan-Murphy, and other related personnel, from the hazards associated with; the underground tank excavation, removal, and site finishing activities that are a part of this project. The plan details specific procedures, protective equipment, and monitoring devices, which Ryan-Murphy and its subcontractors will follow, to ensure the safety of Firestone personnel and associated other personnel. In general, all work activities will be in compliance with all applicable OSHA regulations, and procedures.

ENVIRONMENTAL PROTECTION PLAN:

It is the concern of Ryan-Murphy, Inc. to ensure the protection, preservation, and general conditions of the surrounding environment as it exists near and around the work area involved. All trees, plants, and shrubs close to the work area will be barricaded and/or covered, if necessary, in order to provide them with optimum protection against construction debris and damage, such as that that may be generated by the use of jackhammers and backhoes. Every effort will be made to preserve the natural resources within the project boundaries and outside the limits of permanent work. All construction activities will be confined to the specified limits of the work area indicated.

Existing water resources will be protected by making sure all residual liquids are removed from the tank and lines before and during the disconnects. This will help to prevent any contamination of existing groundwater from this source. All rinse water will be vacuumed and contained in a vacuum truck for manifested transportation and disposal.

Measures for dust control shall be taken and performed in compliance with section 01560, 2.4 . The area will be sprinkled with dust suppressant from time to time to prevent dust from being transported through the air to other areas creating discomfort in the surrounding environment.

All machinery used will be in compliance with the EPA

requirements for low noise emission, and kept to a minimum.

Generated hazardous waste will be handled in accordance with 40 CFR 262 and disposed of in compliance with 40 CFR 263 and 264.

SAFETY RESPONSIBILITIES:

The Project Manager has the ultimate responsibility for site safety for this project. The Project Manager will also have authorization to enforce all safety regulations.

The Site Safety Officer has the authority to stop all work in the event an unsafe situation arises. Work will not resume until the Site Safety Officer is assured that the unsafe situation has been remedied.

It is the responsibility of all site personnel to work in a safe, responsible manner. Site personnel will report all unsafe situations to the Site Safety Officer. In addition, if a site worker feels he or she has been placed in an unsafe situation, they retain the right to refuse to enter the situation until they have discussed it with the Site Safety Officer and the Project Manager.

DEMOLITION:

The removal of above ground structures, equipment, and surface materials related to the underground tank, will be performed in a manner so as not to interfere with existing work operations, and in compliance with all State and Local regulations.

Utilities: All related and non related utilities above and below ground in and around the work area will be located through visual or ground penetrating radar methods. The utilities directly related will be shut off and disconnected before demolition. Those directly in the work area, but not related, will be dealt with in a manner so as to not interrupt their

function for any length of time that is not deemed appropriate and necessary for the performance of the work.

Structures: All above ground structures that need to be dismantled in order to proceed with the tank removal will be disconnected and removed with the appropriate piece of equipment such as; a small crane, forklift, or backhoe. Concrete and asphalt will be removed by breaking up the material with a jackhammer, and loading the debris into a dumptruck for proper disposal. Materials to be re-used in accordance with the specifications will be stored on site in a pre-determined area.

All existing work that is to remain in place will be protected by temporary covers, shoring, or bracing of an approved kind. Appropriate action will be taken to avoid the spread of dust to occupied portions of the building and the surrounding areas. Water will only be used for dust control if it its use does not result in a hazardous or objectionable condition, such as flooding or environmental impairment. Compliance will be in accordance with the local APCD agency.

Backfilling will be in compliance with the manufacturers specifications and recommendations in and around the new tank and piping areas. Backfilling and compaction in areas outside the fueling excavation will be in compliance with ASTM requirements for materials and methods as per section 0221-3.4 and 0225 if applicable.

Cleanup: Debris and rubbish will be removed and transported in a manner that will prevent spillage on the streets or adjacent areas. Materials of this nature will be removed daily or stored in an approved roll-off for periodic pick up.

EXCAVATION AND REMOVAL OF TANK:

During excavation and removal of the tank, no personnel will enter the trench below the top of the tank, which is set at a depth of approximately four feet. If personnel do find it necessary to enter the trench below this depth, appropriate measures will be taken to protect individuals from cave-in as stipulated by OSHA 29 CFR 1920. At the present time, it is not

anticipated that personnel will be required to enter the trench below four feet.

Prior to the excavation, Ryan-Murphy will ensure that all buried gas lines, water lines, electric cables, and other underground utilities have been located. This information will be confirmed with the Firestone Site Manager. If necessary, local utility companies will be consulted.

Prior to the removal of the tank, the atmosphere within shall be tested for explosivity and oxygen content. At that time the vessel will be rendered inert by introducing air into the tank until it is purged free of combustible vapors. The tank atmosphere will be monitored with an explosimeter, which will also have the capability of measuring the oxygen level. The tank will then be removed and loaded onto a transport truck, for manifested transport as hazardous waste, by H & H Ship Services to their facility for proper cleaning and scrapping. The tank atmosphere will be measured again before transport, and if safe, the tank will be transported to H & H Ship Services scrapping facility, at 220 China Basin, San Francisco, CA 94107 (CAD #004771168) If necessary, carbon dioxide ice will be placed into the tank at the rate of fifteen pounds per thousand gallons of capacity, to ensure inertion during the tank transport. This will be determined at the time of removal by the Regulatory Agency Site Inspector.

All personnel will stand clear of the tank as it is pulled from the trench and until it is firmly in place upon the transport vehicle, in case of cables breaking or the tank coming loose and falling. The backhoe operator will ensure that all personnel are clear before initiating tank removal activities.

The excavated area will remain barricaded until the proper soil sample analyses have been performed, and the next course of action determined. If the soil samples show the site to be below action limits, the excavated area will be backfilled and compacted with clean backfill material. During working hours, the Site Safety Officer will ensure that no unauthorized personnel inadvertently wander into the work area. The Officer may determine that it is necessary to install a fence around the perimeter to insure that level of safety.

All site personnel will be required to wear hard hats and safety boots while in the work area or within reach of the backhoe arm and bucket. It is not anticipated that other personnel protective equipment will be necessary. However, the Site Safety Officer will continuously monitor the work site with an organic vapor detector and explosimeter, in addition to visually inspecting the area to determine if additional personal protective equipment is necessary.

SAMPLE COLLECTION:

Once the tank is removed, Ryan-Murphy will collect soil samples and visually inspect the trench from above, to determine the spread of contamination from leaking product. Soil samples will be collected initially by the backhoe bucket to get the soil up to grade level. Then the sample will be taken using a driven tube type sampler such as a "California brass sampler". The sample tube will be wrapped, and transported in a cooler packed with blue ice. No personnel will enter the trench to collect samples. Ryan-Murphy personnel collecting samples will wear disposable latex rubber gloves to avoid possible skin contact with fuel product, and for quality assurance/quality control (QA/QC) purposes. Analysis will include all or some of the following analyses methods: DHS method for TPH, EPA method 503E for oil and grease, EPA method 8010 for chlorinated hydrocarbons, EPA method 8020 for BTXE. Results, conclusions, and recommendations will be submitted. The testing laboratory that RMI will be using will be Trace Analysis Lab of Hayward, CA. Soil sampling will be in compliance with the Alameda County Hazardous Materials Management District requirements.

DISPOSAL OF THE TANK:

Ryan-Murphy will relinquish the tank to an approved scrapping facility for decommissioning (H & H Ship Services). The tank will be properly cut up for scrap, and rendered non-usable for any storage of petroleum or any other liquid. The tank will be properly labeled for transportation as scrap.

CONTAMINATED SOIL REMOVAL PROCEDURES:

Any soils encountered requiring disposal at a Class I or II landfill as contaminated hazardous, or contaminated non-hazardous waste, will be handled accordingly. The extent of contamination as found, will be excavated and loaded onto approved and licensed haulers of hazardous waste, for transportation to a certified landfill. Safety requirements shall be followed in compliance with OSHA 29 CFR 1910.120.

The excavated materials will be continuously monitored with an organic vapor detector, and sampled periodically at the direction of the Health Inspector. All contaminated soils slated for disposal will be properly manifested and documented. Soil that is stockpiled for testing or transportation at a later date, will be set on impermeable plastic and covered with the same. Barricades will be placed to protect Firestone personnel and others from entering this exclusion zone.

Proper clothing will be worn by the personnel directly involved with the removal and loading of contaminated soils. Stand-by APR masks will be available, along with rubber boots, gloves, and tivac, in the event that the Site Safety Officer deems it necessary to enter into a level "C" for gear and clothing.

GENERAL SAFETY PROCEDURES:

In addition to the safety procedures outlined above, the following general safety procedures will be observed;

- No fire or source ignition shall be allowed in the work area.
- No unauthorized personnel will be allowed in the work area.
- Hard hats and steel toed shoes will be worn at all times in the work area.
- No work will be conducted in inclement weather as determined by the Site Safety Officer.
- The buddy system will be in effect at all times.
- A ten pound ABC fire extinguisher and industrial first aid kit will be at the site at all times.

SITE SPECIFIC PLAN SUMMARY:

The following attached forms summarize the safety procedures for the Firestone project in Oakland, CA;

A. General Information
B. Site/Waste Characteristics
C. Hazard Evaluation
D. Work Plan Instructions
E. Equipment Check-Out

A. GENERAL INFORMATION

Date:	February 13, 1990
Prepared By:	Neal Holdridge
Site:	Firestone Store #36F1
Location:	2701 73rd Avenue Oakland, CA 94605
Investigative Objectives:	Remove one underground storage tank, and remediate contaminated soil if required.
Proposed Date of Investigation:	To be determined.
Background Review:	Complete.
Documentation Summary:	Overall Hazard = Low

B. SITE/WASTE CHARACTERISTICS

Waste Types:	Liquid:	yes
	Solid:	yes
	Sludge:	yes
	Gas:	no
Characteristics:	Corrosive:	no
	Ignitable:	yes
	Radioactive:	no
	Volatile:	no
	Toxic:	yes
	Reactive:	no
Facility Description:	Retail tire store	
Topography:	relatively flat	
Principal Disposal Method:	If found, and upon approval by Firestone, contaminated soil will be excavated, loaded, and transported to an approved facility.	
Unusual Features:	Site area has space restrictions for work, with limited access and exit routing. Place of business must remain operational.	
Status:	Tank is out of use.	

C. HAZARD EVALUATION

The major hazards for this project involve cave-in of the open trench, contact with waste oil contaminated soil, inhalation of organic vapors, potential explosive atmosphere inside the tank, and overhead hazards from heavy equipment.

The safety procedures to protect from these hazards are detailed in the Health and Safety Plan discussion.

D. WORK PLAN INSTRUCTIONS

PERIMETER ESTABLISHMENT:

map attached:	see plans
site control:	yes
perimeter identified:	yes
zone of contamination identified:	see notes

Notes: RMI is prepared to remove contaminated soil.

PERSONAL CLOTHING:

Level of protection:	A:___ B:___ C:___ D:_X_
modifications:	will be made as necessary.
Surveillance equipment and materials:	Explosimeter, Oxygen detector, and photoionization detector.

DECONTAMINATION PROCEDURES:

Hot line location:	will be barricaded
Command post location:	on site
PDS stations:	N/A
Equipment and materials /special facilities:	possible backhoe decontamination area, dewatering rinse water.

SITE ENTRY PROCEDURES:

Team size:	2
Entry briefing date:	to be determined
Station designation:	N/A
Work schedule limitations:	Work will be completed during daylight hours only, unless adequate lighting is provided. Work during inclement weather will be determined by the Site Safety Officer.

D. WORK PLAN INSTRUCTIONS - CONTINUED

EMERGENCY PRECAUTIONS:

Acute exposure symptoms	First Aid
Contact with fuel - irritation and drying of skin.	Rinse with water.
Inhalation of organic vapors - headache, nausea, fainting.	Remove to fresh air, seek medical attention.

HOSPITALS/POISON CONTROL CENTERS:

Medical Emergency: Highland General Hospital
1411 E. 31st Street
Oakland, CA 94602
(415) 437-4563

Poison Control Center: as above

EMERGENCY TRANSPORTATION SYSTEMS:

Fire, Police, Ambulance: 911
Electric:
Water:
Gas:
Dig:

EMERGENCY ROUTES:

West from jobsite on MacArthur Blvd. approximately 4.5 miles to 14th street. South on 14th street approximately four blocks to 31st street and the hospital.

E. EQUIPMENT CHECK-OUT

SCBA	___	Cylinders	___
Air purifying respirator	___	Cartridges	___
Explos./vapor detector	yes	Eye wash unit	yes
O-2 Indicator	yes	First Aid kit	yes
Air sample pump & tubes	___	Drinking water	___
Radiation survey meter	___	Personal clothing	___
Radiation cont. meter	___	Decontam. materials	___
Fire extinguisher	yes	Radios	___
Life jackets	___	Detector tubes	___
Personal escape units	___		
Organic vapor detector	yes	type: Gas-Tech	

PO # 12057

Date 12/12/90 Weather Clear + Sunny Page 1 of 1

ERM-West

1777 Botelho Drive • Suite 260 • Walnut Creek, CA • 94596 • (415) 946-0455

Chain of Custody Record

Job #	1206.00
Job Location	Firestone, Oakland
Sampler (signature)	John A. Lucio
Printed name	John A. Lucio
Lab Report Recipient	John Lucio
Telephone No.	(415) 946-0455
Receiving Lab	Curtis & Tompkins
Address	2323 5th St, Berkeley

Sample ID#	Time	Water G-soil	Comp G-grab	Volume	Container type	ICED	Preservative	Sampling method	TPH-Extraction Diesel	BTEX/Total Fuel HCs	601 / 8010 Halocarbons	602 / 8020 Aromatics	604 / 8040 Phenols	608 / 8080 Pest/PCBs	Oil and Grease	8270 - Screening	624-8240 Purgeables	625-8270 BNAs & Pest (SVs)	Dioxins	TVH - BTXE	Metals Cd Cr Pb Zn	Wet Chemistry	TPH - Extraction	Number of Containers	Remarks
S-1	11:45	S	G	6" Brass tube	Brass tube	4	No	Hand	X		X				X	X				X	X		X		7 day Turn around time
S-2	11:55	S	G	"	"	"	"	"	X	X					X										

Precautions:

Conc: ☒ Lo ☐ Med ☐ Hi

Ship Via

Total Number of Containers:

Reason for Transfer (List Shipping Bill Number)

Sample Relinquished By	Date	Time	Received By	Date	Time
John A. Lucio	12/12/90	13:00	Mary Trustee	12/12/90	8:10
Company ERM-West			Company C&T		
Company			Company		

LABORATORY— Please Complete

Lab sample custodian ☐ Samples Intact ☐ Samples at 4°C ☐ Samples not leaking ☐ # of containers matches C-of-C ☐ Container tags match C-of-C ☐ Cooler seals intact

Signature Date Time

Sample Disposition ☐ Return to Site ☐ Discard ☐ Hold ___ days

JAN 30 '91 13:42 P.11/12

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1B

ENVIRONMENTAL SERVICES
(DIVISION OF H&H SHIP SERVICE CO., INC.)
220 CHINA BASIN, SAN FRANCISCO, CA 94107 • DAY AND NIGHT: 543-4835

WASTE CHARACTERIZATION FORM

LAB: (415)543-0906

I. WASTE GENERATOR

US EPA IDN: CAD (CAD 982-001-729) ~~00477116E~~

Facility: FIRESTONE

Address: 2701 73RD AVE

City/State: OAKLAND CA Zip: 94605

Contact: CLOSED SITE Telephone: ( )

II. DESCRIPTION OF WASTE

1. General Description: OILY WASTE WATER
2. Process Generating this Waste: TANK CLEANING
3. Is this listed under F, K, P, or U? yes ___ no ✓
4. Quantity: _____ tons ___ yards ___ gallons ✓
5. Frequency: weekly ___ monthly ___ annually ___ once ✓
   other _____
6. Shipment Mode: bulk ✓ drums ___ other _____

III. WASTE CLASSIFICATION & SHIPPING DESCRIPTION

1. California Waste Category Number: 133
2. EPA Waste Code Number: N/A
3. Proper DOT Shipping Name: HAZARDOUS WASTE LIQUID NOS-ORME-NA 9189

IV. HAZARD CLASS

Toxic ✓ Corrosive ___ Radioactive ___

Reactive ___ Ignitable ___ Etiological ___

V. CHARACTERISTICS OF WASTE

1. Is this a: liquid ✓ sludge ___ solid ___
   Stratification: none ___ two ___ multi- ✓ (layers)
2. Viscosity (Liquids) Similar to: water ✓ motor oil ___ honey
3. Odor: none ___ mild ✓ strong ___ describe: _____
   Specific Gravity (range): .7 - .9
4. pH: < 3 ___ > 12 ___ Actual _____ Range 5 - 7
5. Flash Point: < 70°F ___ > 140°F ✓ Actual _____
   Determined by: Closed Cup ✓ Open Cup ___

VI. CHEMICAL COMPOSITION

		RANGE MIN. - MAX.	
1.	WATER	75 - 85	%
	OIL	15 - 20	%
	SOLIDS	1 - 5	%
		-	%
		-	%
		-	%
		-	%
		-	%
		-	%
		-	%
		-	%

Must be equal or greater than 100% - Total: 110 %

2. Indicate if this waste contains any of the following:

Cyanides	no ✓	yes ____	____ ppm
PCBs	no ✓	yes ____	____ ppm
Phenolics	no ✓	yes ____	____ ppm
Sulfides	no ✓	yes ____	____ ppm

3. Indicate if this waste contains any of the following (total concentration of each metal must be given):

Arsenic	no ✓	yes ____	____ ppm
Barium	no ✓	yes ____	____ ppm
Beryllium	no ✓	yes ____	____ ppm
Cadmium	no ✓	yes ____	____ ppm
Chromium	no ✓	yes ____	____ ppm
Chromium-Hex	no ✓	yes ____	____ ppm
Cobalt	no ✓	yes ____	____ ppm
Copper	no ✓	yes ____	____ ppm
Lead	no ✓	yes ____	____ ppm
Mercury	no ✓	yes ____	____ ppm
Molybdenum	no ✓	yes ____	____ ppm
Nickel	no ✓	yes ____	____ ppm
Selenium	no ✓	yes ____	____ ppm
Silver	no ✓	yes ____	____ ppm
Thallium	no ✓	yes ____	____ ppm
Vanadium	no ✓	yes ____	____ ppm
Zinc	no ✓	yes ____	____ ppm
Other	____		____ ppm

VII. ADDITIONAL INFORMATION

Provide additional comments, analyses or wastestream information necessary for proper safe handling of this waste.

VIII. CERTIFICATION

I hereby certify that all information submitted in this and all attached documents contains true and accurate descriptions of this waste material, and all relevant information regarding known or suspected hazards in the possession of the generator has been disclosed.

Charles M Bentley
(Signature)

12/7/90
(Date)

OPER. Controller RMI AGENT FOR FIRESTONE
(Title)

ENVIRONMENTAL SERVICES
(DIVISION OF M&M SHIP SERVICE CO., INC.)
220 CHINA BASIN, SAN FRANCISCO, CA 94107 • DAY AND NIGHT: 543-4835

WASTE CHARACTERIZATION FORM

LAB: (415)543-0906

I. WASTE GENERATOR

US EPA IDN: CAD004771168
Facility: FIRESTONE
Address: 2201 73RD AVE
City/State: OAKLAND CA Zip: 94605
Contact: CLOSED SITE Telephone: (____)____

II. DESCRIPTION OF WASTE

1. General Description: WASTE OIL TANK (EMPTY U.G. TANK)
2. Process Generating this Waste: TANK REMOVAL SIZE: 550 GALLON FIBERGLA
3. Is this listed under F, K, P, or U? yes ___ no ✓
4. Quantity: _____ tons ___ yards ___ gallons ✓
5. Frequency: weekly ___ monthly ___ annually ___ once ✓
   other _____
6. Shipment Mode: bulk ✓ drums ___ other _____

III. WASTE CLASSIFICATION & SHIPPING DESCRIPTION

1. California Waste Category Number: 512
2. EPA Waste Code Number: N/A
3. Proper DOT Shipping Name: NON RCRA HAZARDOUS WASTE SOLID

IV. HAZARD CLASS

Toxic ✓ Corrosive ___ Radioactive ___
Reactive ___ Ignitable ___ Etiological ___

V. CHARACTERISTICS OF WASTE N/A

1. Is this a: liquid ___ sludge ___ solid ___
   Stratification: none ___ two ___ multi- ___ (layers)
2. Viscosity (Liquids) Similar to: water ___ motor oil ___ honey
3. Odor: none ___ mild ___ strong ___ describe: _____
   Specific Gravity (range): _____
4. pH: < 3 ___ > 12 ___ Actual _____ Range _____
5. Flash Point: < 70°F ___ > 140°F ___ Actual _____
   Determined by: Closed Cup ___ Open Cup ___

VI. CHEMICAL COMPOSITION

		RANGE MIN. - MAX.	
1.	N/A	-	%
		-	%
		-	%
		-	%
		-	%
		-	%
		-	%
		-	%
		-	%
		-	%

Must be equal or greater than 100% - Total: _____ %

2. Indicate if this waste contains any of the following: N/A

Cyanides	no ___	yes ___	_____ ppm
PCBs	no ___	yes ___	_____ ppm
Phenolics	no ___	yes ___	_____ ppm
Sulfides	no ___	yes ___	_____ ppm

3. Indicate if this waste contains any of the following (total concentration of each metal must be given): N/A

Arsenic	no ___	yes ___	_____ ppm
Barium	no ___	yes ___	_____ ppm
Beryllium	no ___	yes ___	_____ ppm
Cadmium	no ___	yes ___	_____ ppm
Chromium	no ___	yes ___	_____ ppm
Chromium-Hex	no ___	yes ___	_____ ppm
Cobalt	no ___	yes ___	_____ ppm
Copper	no ___	yes ___	_____ ppm
Lead	no ___	yes ___	_____ ppm
Mercury	no ___	yes ___	_____ ppm
Molybdenum	no ___	yes ___	_____ ppm
Nickel	no ___	yes ___	_____ ppm
Selenium	no ___	yes ___	_____ ppm
Silver	no ___	yes ___	_____ ppm
Thallium	no ___	yes ___	_____ ppm
Vanadium	no ___	yes ___	_____ ppm
Zinc	no ___	yes ___	_____ ppm
Other	_____		_____ ppm

VII. ADDITIONAL INFORMATION

Provide additional comments, analyses or wastestream information necessary for proper safe handling of this waste.

VIII. CERTIFICATION

I hereby certify that all information submitted in this and all attached documents contains true and accurate descriptions of this waste material, and all relevant information regarding known or suspected hazards in the possession of the generator has been disclosed.

Charles M Bentley — 12/7/90
(Signature) (Date)

OPER. CONTROLLER RMI AGENT FOR FIRESTONE
(Title)

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30
Please print or type. *Form designed for use on elit pitch typewriter).*

See Instructions on B of Page 6 and Front of 7 2-36 F1-V

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of	Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address [illegible]	A. State Manifest Document Number 905332033
4. Generator's Phone ( )	B. State Generator's ID
5. Transporter 1 Company Name	6. US EPA ID Number / C. State Transporter's ID 103568
	D. Transporter's Phone
7. Transporter 2 Company Name	8. US EPA ID Number / E. State Transporter's ID
	F. Transporter's Phone
9. Designated Facility Name and Site Address [illegible]	10. US EPA ID Number / G. State Facility's ID
	H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. HAZARDOUS WASTE LIQUID N O S [illegible] NA 9189	001	TT	005010		State 331 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above	K. Handling Codes for Wastes Listed Above	
FUEL, OIL AND WATER	a. 01	b.
	c.	d.

15. Special Handling Instructions and Additional Information

JOB 86683

JOB SITE: FIRESTONE TIRE STORE
2701 - 73rd Avenue
Oakland California

APPROPRIATE PROTECTIVE CLOTHING AND RESPIRATOR

16.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
MICHAEL WATTS for Rob Fortner	[signature]	11	21	90

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
ROBERT V. PETRUCCI	Robert V. Petrucci	11	21	90

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year

Do Not Write Below This Line

DHS 8022 A
EPA 8700—22
(Rev. 6-89) Previous editions are obsolete.

YELLOW: GENERATOR RETAINS

GENERATOR

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL R[illegible]NSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30
Please print or type. Form designed for use on elit -pitch typewriter).

See Instructions on B of Page 6 and Front of I 3 7 236 F1-B

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of	Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

5. Transporter 1 Company Name — 6. US EPA ID Number

7. Transporter 2 Company Name — 8. US EPA ID Number

9. Designated Facility Name and Site Address — 10. US EPA ID Number

A. State Manifest Document Number: 90538970
B. State Generator's ID
C. State Transporter's ID: 103762
D. Transporter's Phone
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone: (415) 261-1935

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE OIL TANK WASTE MATERIAL WITH OIL					State 412 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
PUMPED OUT 55# gallon tank last containing waste oil. Tank treated with dry ice for transport.

K. Handling Codes for Wastes Listed Above
a. 07 b. c. d.

15. Special Handling Instructions and Additional Information
JOB #6624 JOB SITE: FIRESTONE TIRE STORE 3701 - 73rd Avenue Oakland, California
APPROPRIATE PROTECTIVE CLOTHING AND RESPIRATOR

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR — Printed/Typed Name: Jeffrey Dolence Erwin — Signature — Month Day Year: 1 2 1 2 9 0

TRANSPORTER
17. Transporter 1 Acknowledgement of Receipt of Materials — Printed/Typed Name: FRED EDWARD VOCAN JR. — Signature — Month Day Year: 1 2 1 2 9 0
18. Transporter 2 Acknowledgement of Receipt of Materials — Printed/Typed Name — Signature — Month Day Year

FACILITY
19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name — Signature — Month Day Year

Do Not Write Below This Line

DHS 8022 A
EPA 8700—22
(Rev. 6-89) Previous editions are obsolete.

YELLOW: GENERATOR RETAINS

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

H&H
ENVIRONMENTAL SERVICES
(DIVISION OF H&H SHIP SERVICE CO., INC.)

220 CHINA BASIN, SAN FRANCISCO, CA 94107 • DAY AND NIGHT: 543-4835

CERTIFICATE OF DISPOSAL

DECEMBER 17, 1990

H & H Ship Service Company hereby certifies to RYAN - MURPHY that:

1. The storage tank(s), size(s) ONE (1) 550 GALS. FIBERGLASS removed from the FIRESTONE TIRE STORE facility at 2701 - 73RD AVENUE OAKLAND, CALIFORNIA were transported to H & H Ship Service Company, 220 China Basin St., San Francisco, California 94107.
2. The following tank(s), H & H Job Number 6624 have been steamed cleaned, rendered harmless, demolished and disposed of as general refuse.
3. Disposal site: SANITARY FILL COMPANY, SAN FRANCISCO, CALIFORNIA.
4. The foregoing method of destruction/disposal is suitable for the materials involved, and fully complies with all applicable regulatory and permit requirements.
5. Should you require further information, please call (415) 543-4835.

Very Truly Yours,

Cleveland Valrey
Operations Coordinator

H&H
ENVIRONMENTAL SERVICES
(DIVISION OF H&H SHIP SERVICE CO., INC.)

220 CHINA BASIN, SAN FRANCISCO, CA 94107 • DAY AND NIGHT: 543-4835

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5. Should you require further information, please call (415) 543-4835.

Very Truly Yours,

Cleveland Valrey
Operations Coordinator

Curtis & Tompkins, Ltd.

LAB NUMBER: 102531
CLIENT: ERM-WEST
PROJECT # : 1206.00
LOCATION: FIRESTONE, OAKLAND

DATE RECEIVED: 12/12/90
DATE ANALYZED: 12/14/90
DATE REPORTED: 12/19/90

ANALYSIS: HYDROCARBON OIL AND GREASE
METHOD: SMWW 17:5520EF

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
102531-1	S-1	ND	mg/Kg	50
102531-2	S-2	820	mg/Kg	50

ND = Not detected at or above reporting limit

QA/QC SUMMARY

RPD, %	3
RECOVERY, %	90

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 102531
CLIENT: ERM-WEST
PROJECT ID: 1206.00
JOB LOCATION: FIRESTONE, OAKLAND

DATE RECEIVED: 12/12/90
DATE ANALYZED: 12/14/90
DATE REPORTED: 12/19/90

Total Volatile Hydrocarbons with BTXE in Soils & Wastes
TVH by California DOHS Method/LUFT Manual October 1989
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
102531-1	S-1	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

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

QA/QC SUMMARY	
RPD, %	3
RECOVERY, %	87

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 102531
CLIENT: ERM-WEST
PROJECT ID: 1206.00
JOB LOCATION: FIRESTONE, OAKLAND

DATE RECEIVED: 12/12/90
DATE ANALYZED: 12/13/90
DATE REPORTED: 12/19/90

Benzene, Toluene, Ethyl Benzene, Xylenes by EPA 8020
Extraction by EPA 5030 Purge and Trap

LAB ID	SAMPLE ID	BENZENE (ug/kg)	TOLUENE (ug/kg)	TOTAL XYLENES (ug/kg)	ETHYL BENZENE (ug/kg)	REPORTING LIMIT * (ug/kg)
102531-2	S-2	ND	ND	ND	ND	5.0

ND = Not detected at or above reporting limit.

* Reporting Limit applies to all analytes.

QA/QC SUMMARY	
RPD, %	16
RECOVERY, %	101

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 102531
CLIENT: ERM-WEST
PROJECT ID: 1206.00
LOCATION: FIRESTONE, OAKLAND

DATE RECEIVED: 12/12/90
DATE EXTRACTED: 12/14/90
DATE ANALYZED: 12/19/90
DATE REPORTED: 12/19/90

Extractable Petroleum Hydrocarbons in Soils & Wastes
California DOHS Method
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
102531-1	S-1	ND	3.1	1.0
102531-2	S-2	ND	40	10

ND = Not Detected at or above reporting limit.

*Reporting limit applies to all analytes.

QA/QC SUMMARY	
RPD, %	1
RECOVERY, %	99

Curtis & Tompkins, LTD.

LABORATORY NUMBER: 102531-1
CLIENT: ERM-WEST
PROJECT ID: 1206.00
SAMPLE ID: S-1

DATE RECEIVED: 12/12/90
DATE ANALYZED: 12/18/90
DATE REPORTED: 12/19/90

PARAMETER	RESULT	UNITS	REPORTING LIMIT	METHOD
Cadmium	1.3	mg/Kg	0.5	EPA 6010
Chromium	44	mg/Kg	0.5	EPA 6010
Lead	ND	mg/Kg	2.5	EPA 7420
Zinc	27	mg/Kg	0.5	EPA 6010

QA/QC SUMMARY

	RPD, %	RECOVERY, %
Cadmium	8	99
Chromium	<1	102
Lead	7	88
Zinc	2	96

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 102531-1
CLIENT: ERM-WEST
PROJECT ID: 1206.00
SAMPLE ID: S-1

DATE RECEIVED: 12/12/90
DATE ANALYZED: 12/14/90
DATE REPORTED: 12/19/90

EPA 8010: Volatile Halocarbons in Soil & Wastes
Extraction Method: EPA 5030 - Purge & Trap

Compound	RESULT ug/Kg	REPORTING LIMIT ug/Kg
chloromethane	ND	10
bromomethane	ND	10
vinyl chloride	ND	10
chloroethane	ND	10
methylene chloride	ND	5.0
trichlorofluoromethane	ND	5.0
1,1-dichloroethene	ND	5.0
1,1-dichloroethane	ND	5.0
1,2-dichloroethene (total)	ND	5.0
chloroform	ND	5.0
freon 113	ND	5.0
1,2-dichloroethane	ND	5.0
1,1,1-trichloroethane	ND	5.0
carbon tetrachloride	ND	5.0
bromodichloromethane	ND	5.0
1,2-dichloropropane	ND	5.0
cis-1,3-dichloropropene	ND	5.0
trichloroethylene	ND	5.0
1,1,2-trichloroethane	ND	5.0
trans-1,3-dichloropropene	ND	5.0
dibromochloromethane	ND	10
2-chloroethylvinyl ether	ND	5.0
bromoform	ND	5.0
tetrachloroethylene	ND	5.0
1,1,2,2-tetrachloroethane	ND	5.0
chlorobenzene	ND	5.0
1,3-dichlorobenzene	ND	5.0
1,2-dichlorobenzene	ND	5.0
1,4-dichlorobenzene	ND	5.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Duplicate: Relative % Difference	9 %
Spike: Average % Recovery	88 %

Curtis & Tompkins, Ltd.

EPA 8270

LABORATORY NUMBER: 102531-1
SAMPLE ID: S-1

BASE/NEUTRAL COMPOUNDS	RESULT ug/kg	REPORTING LIMIT ug/kg
Dimethylphthalate	ND	330
Acenaphthylene	ND	330
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	1650
Acenaphthene	ND	330
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
4-Chlorophenyl-phenylether	ND	330
Fluorene	ND	330
4-Nitroaniline	ND	1650
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Phenanthrene	ND	330
Anthracene	ND	330
Di-n-butylphthalate	ND	330
Fluoranthene	ND	330
Benzidine	ND	330
Pyrene	ND	330
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	1650
Benzo (a) anthracene	ND	330
Chrysene	ND	330
Bis (2-ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo (b) fluoranthene	ND	330
Benzo (k) fluoranthene	ND	330
Benzo (a) pyrene	ND	330
Indeno (1,2,3-cd) pyrene	ND	330
Dibenzo (a,h) anthracene	ND	330
Benzo (g,h,i) perylene	ND	330

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: SURROGATE RECOVERIES

2-Fluorophenol	101 %	Nitrobenzene-d5	84 %
Phenol-d6	104 %	2-Fluorobiphenyl	91 %
2,4,6-Tribromophenol	100 %	Terphenyl-d14	54 %

NON-HAZARDOUS WASTE DATA FORM

TO BE COMPLETED BY GENERATOR

NAME: Firestone Tire and Rubber Co. EPA I.D. NO.: EPA EXEMPT

ADDRESS: 1701 Third ~~Street~~ 402

CITY, STATE, ZIP: Oakland, California PHONE NO.: 415 834-6850

CONTAINERS: No. 105/113/105/14 VOLUME: 2040 WEIGHT:

TYPE: ☐ TANK TRUCK ☒ DUMP TRUCK ☐ DRUMS ☐ CARTONS ☐ OTHER

WASTE DESCRIPTION: Soil with Waste Oil GENERATING PROCESS: Removal of underground tank

COMPONENTS OF WASTE	PPM	%	COMPONENTS OF WASTE	PPM	%
1. Soil		99.9	5.		
2. Waste oil		<0.1	6.		
3.			7.		
4.			8.		

PROPERTIES: Neutral pH ☒ SOLID ☐ LIQUID ☐ SLUDGE ☐ SLURRY ☐ OTHER

HANDLING INSTUCTIONS: Approval 20189199

THE GENERATOR CERTIFIES THAT THE WASTE AS DESCRIBED IS 100% NON-HAZARDOUS.

MIKE ROGERSEN Mike Rogersen FOR RMI/FIRESTONE 2/14/91
TYPED OR PRINTED FULL NAME & SIGNATURE DATE

TRANSPORTER

NAME: Dillard Trucking, Inc. EPA I.D. NO.: CAD981692809

ADDRESS: Route 1 Box 73 SERVICE ORDER NO.:

CITY, STATE, ZIP: Byron, California 94514 PICK UP DATE: 2/14/91

PHONE NO.: (415) 634-0567

ROBERT R. DAVIS Robert R. Davis 2/14/91
TYPED OR PRINTED FULL NAME & SIGNATURE DATE

TRUCK, UNIT, I.D. NO.: J71

TSD FACILITY

NAME: Liquid Waste Management, Inc. EPA I.D. NO.: CAD980636831

DISPOSAL METHOD: ☒ LANDFILL ☐ OTHER

ADDRESS: Star Route Box 4

CITY, STATE, ZIP: McKittrick, Ca. 93251

PHONE NO.: 805 762-7366

THELMA VILLINES Thelma Villines 2-14-91
TYPED OR PRINTED FULL NAME & SIGNATURE DATE

PH # 6.0

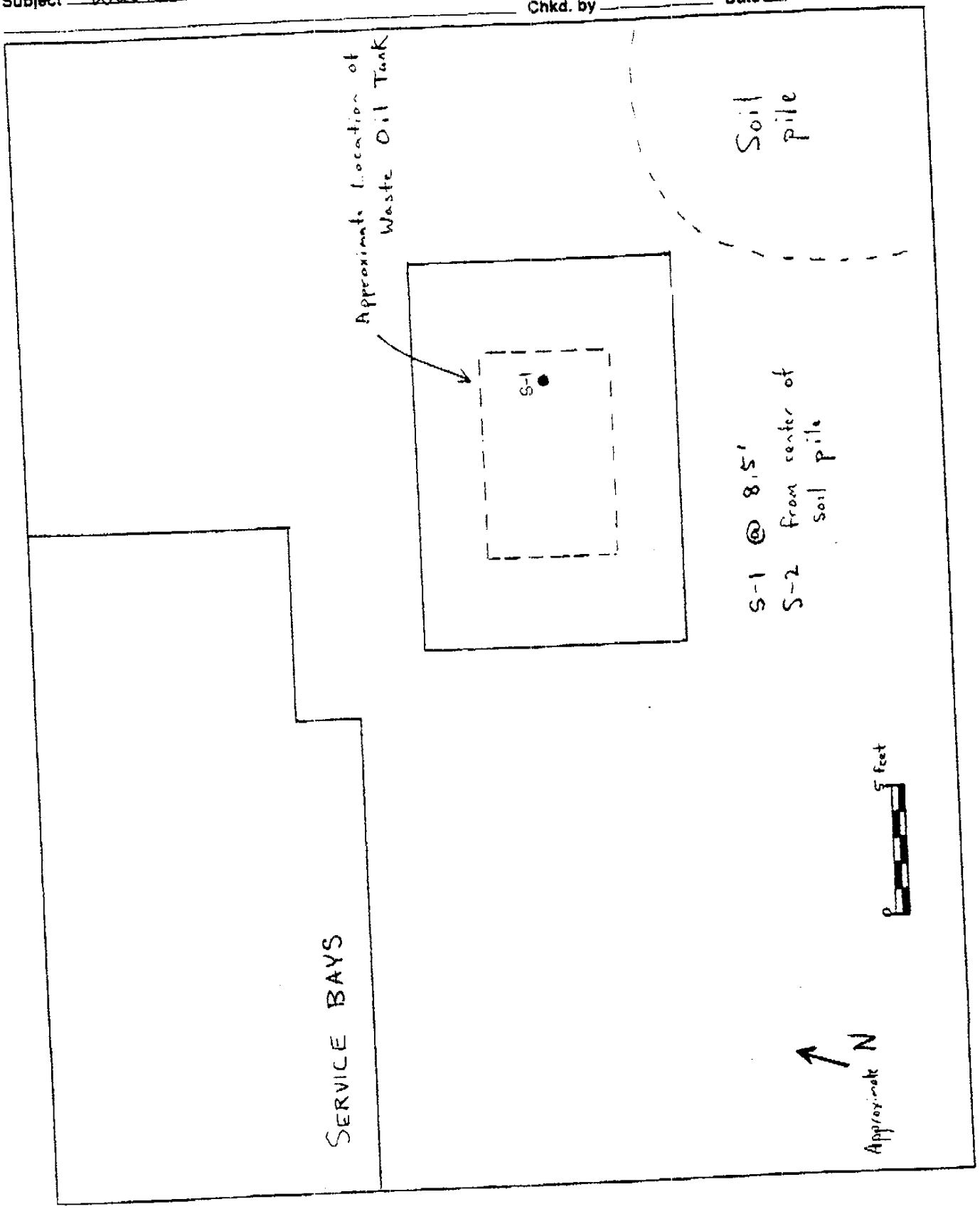
GEN	OLD/NEW	L A	TONS	
TRANS		S B	29.37	
C/O		RT/CD	HWDF NONE	DISCREPANCY

ERM-West, Inc. Suite 260 • 1777 Botelho Drive • Walnut Creek, CA 94596-5042 • (415) 946-0455

Project Firestone, 2701 73rd, Oakland W.O. No. 1206 Sheet ___ of ___

Subject Waste Oil Tank removal By ___ Date 12/12/90

Chkd. by ___ Date ___



WEIGHMASTER CERTIFICATE

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

LIQUID WASTE MANAGEMENT, INC. — WEIGHMASTER
STAR ROUTE BOX 4 • McKittrick, CA 93251
(805) 762-7366

15227

WEIGHING LOCATION:
HIGHWAY 58, ¼ MILE WEST OF HIGHWAY 33
McKITTRICK, CALIFORNIA

If Waste Is Weighed it is100% Nonhazardous

GROSS BY Thelma Williams DEPUTY
TARE BY Thelma Williams DEPUTY
WEIGHED FOR / SELLER Firestone Tire & Rubber Co
DELIVERED TO / BUYER F.W.M.
DRIVER Robert R. Davis

DATE	TIME	WEIGHT IN LBS.	
2-14-91	3:24PM	88760	GROSS
2-14-91	3:49PM	30020	TARE
		58740	NET
		29.37	TONS

VEHICLE LIC. NOS.	TRAILER LIC.	TRAILER LIC.	COMMODITY	UNITS	B/L NO.
2V39291	VL7756	—	Soil	20-yds	3781

CARRIER Willard # J-71

FEE: ☐ PD ☐ CHG $ _____

REPORT
SUBSURFACE INVESTIGATION
J.C. PENNEY STORE NO. 836
EASTMONT MALL
OAKLAND, CALIFORNIA

July 10, 1991
Job No. 00443-090-043

DAMES & MOORE

RBW-O-3.012

DAMES & MOORE A PROFESSIONAL LIMITED PARTNERSHIP
2101 WEBSTER STREET, SUITE 300, OAKLAND, CALIFORNIA 94612 (415) 839-3600
FAX NO. (415) 839-4461

August 5, 1991
Job No. 00443-090-043

Regional Water Quality Control Board
2101 Webster, Room 500
Oakland, CA 94612

Attention: Mr. Richard Hiett

Dear Mr. Hiett:

Report
Subsurface Investigation
J.C. Penney Store No. 836
Eastmont Mall
Oakland, California

Dames & Moore is pleased to present the above referenced report for J.C. Penney Store No. 836 (TBA 5250-6), located at the Eastmont Mall in Oakland, California. This report presents the findings of our field investigation conducted on April 1-5, 1990, at the J.C. Penney TBA.

If you have any questions please contact Bob Arneson, J.C. Penney Construction Services, (714) 523-6853 or Richard Ward, Dames & Moore, (415) 839-3600.

Very truly yours,

DAMES & MOORE

Raymond H. Rice

Raymond H. Rice
Partner (Ltd.)

Richard B. Ward

Richard B. Ward
Project Geologist (R.G. #5170)

RBW-O-4.005

JCPenney
(714) 523-6853

July 31, 1991

Mr. Richard Ward,
Project Coordinator
DAMES & MOORE
2101 Webster St., Suite 300
Oakland, CA 94612

Re: ***JCPenney Store #835 - Oakland, CA***
Eastmont Mall
Subsurface Investigation Report

Dear Mr. Ward:

Your Subsurface Investigation Report, dated July 12, 1991, for the above captioned facility, has been reviewed by this writer and reviewed and/or discussed with the associates in the JCPenney Legal and Real Estate Departments.

We have no comments and require no changes, with the exception of a typo on the last paragraph on page 26. This should be changed to read 20 years of operation, not 40 years as printed.

We are requesting you please submit, on behalf of the JCPenney Company, a copy of this report to the Regional Water Quality Board, the Alameda County Health Department - Environmental Services Division, and any other governmental agency that requires this information. We would also ask that you submit a copy of this report to Mr. Jim Gavin at the mall. His address is:

One Eastmont Mall
Oakland, CA 94605.

Please submit all these reports registered mail and include a copy of this request letter with each copy. Provide this office with copies of your submittal letters, along with copies of the registration receipts. This needs to be done as soon as possible.

Should you require further information, please advise.

Sincerely,

JCPENNEY COMPANY, INC.

Bob Arneson
Construction Services
Field Engineering Rep

BA:cm
cc: R. Sherry, Gas file
J. Andrew, Esquire
R. Gerber
D. Mosley
R. Rice, Dames & Moore
B. Troutman, Dames & Moore
G. Wright

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1.0 INTRODUCTION

This report describes Dames & Moore's soil and groundwater investigation of the J.C. Penney TBA (Store #836, TBA #5250-6) at the Eastmont Mall in Oakland, California (the site). The site is located on the corner of Foothill Boulevard and 73rd Avenue, as shown on Plate 1-1 and 1-2. The property leased by J.C. Penney includes the TBA and parking lots.

This report is divided into eight sections. Section 2.0 describes the purpose and the scope of the investigation. Section 3.0 describes previous investigations and additional site background information to supplement our understanding of the site. Section 4.0 describes the field work that was performed at the site and Section 5.0 summarizes the results of the recent field investigation. Section 6.0 summarizes the significant findings of both the background information that was gathered and the field investigation. Section 7.0 presents our conclusions about the site contamination and Section 8.0 provides recommendations for further work intended to lead to the closure of the site.

2.0 PURPOSE AND SCOPE OF SERVICES

The purpose of this subsurface investigation is to evaluate the results of a previous environmental investigation performed for mall management by Hunter Environmental Services and summarized in a report dated December 20, 1989 and to further characterize the concentration and extent of residual gasoline hydrocarbons in the soil and groundwater at the site.

In order to accomplish the above objectives, Dames & Moore completed the following scope of work essentially as outlined in our proposal of February 14, 1991.

- Conducted a document and agency file review for possible off-site sources of contamination;

- Requested U.S. Alert survey of the site in an attempt to locate shallow subsurface structures and utilities in the vicinity of the proposed soil borings and monitoring well;

- Drilled and sampled four soil borings to an approximate total depth of 20 feet in the vicinity of the former gasoline tanks and pump island;

- Drilled and sampled one boring to an approximate depth of 7 feet in the vicinity of the former waste oil tank;

- Drilled one boring upgradient of the former underground storage tank (UST) excavation;

- Analyzed 9 soil samples collected above the water table from selected soil borings for total petroleum hydrocarbons (TPH) as gasoline and diesel using EPA Method 8015, and benzene, toluene, ethyl benzene, and total xylenes (BTEX) using EPA Method 8020;

- Installed groundwater monitoring wells in two of the borings.

- Developed the two new monitoring wells, and sampled the two monitoring wells and existing well MW-4;

- Analyzed four groundwater samples (including one quality control sample) for TPH as gasoline using EPA Method 5030/8015, diesel using EPA Method 8015, and BTEX using EPA Method 5030/8020;

- Professionally surveyed the location and elevation of MW-4 and newly installed onsite groundwater monitoring wells relative to mean sea level;

- Collected a round of water level measurements using an electronic water level indicator;

- Performed slug tests on all site wells to evaluate the hydraulic conductivity of the near surface aquifer; and

- Prepared this report for submittal to the California Regional Water Quality Control Board (RWQCB), San Francisco Region, documenting our findings and presenting our recommendations for further action at the site.

Prior to the start of field activities, well permits were obtained from the Alameda County Flood Control and Water Conservation District and a site Health and Safety Plan was prepared for use by all Dames & Moore field personnel in the performance of the investigation activities.

During the investigation, Dames & Moore discovered that the site was formerly occupied by the Chevrolet Fisher Body Plant. The probability of environmental contamination related to this former industrial facility was considered high; therefore J.C. Penney agreed to expand the scope of the site background study to include a more detailed history of the site and vicinity.

3.0 SITE BACKGROUND

Information regarding the geology and hydrogeology of the site and vicinity was reviewed to assist in our understanding of potential migratory pathways of gasoline hydrocarbons in the subsurface. In addition, the history of Eastmont Mall, including excavation and removal of the underground tanks, was researched by reviewing historical aerial photographs, previous site investigations, searching agency files, and researching water well data for the site vicinity. The results of these tasks are discussed below.

3.1 REGIONAL GEOLOGY AND HYDROGEOLOGY

The Bay Plain lies west of the Hayward Fault Zone and is comprised of coalescing alluvial fans, extending from Oakland south to the Fremont area. The alluvial sediments in the Bay Plain consist of a mixture of gravels, sands and clays that are Pliocene-Pleistocene to late Pleistocene in age and were laid down on the alluvial cones west of the foothills. In general the particle size and bed thickness of the alluvium decreases westward from the apexes of the alluvial cones where the watercourses exit the foothills.

The site is located in the Coast Ranges Geologic Province of California. The region is characterized by northwest trending mountain ranges and valleys. The site is situated on the Bay Plain alluvial fan complex which is located between the San Francisco Bay and Oakland Hills.

The geology of western Alameda County is dominated by effects of the Hayward Fault Zone and associated transpressional/transtensional structural features (Maslonkowski, 1984). The active Hayward Fault trends northwest-southeast, extending along the east side of the San Francisco Bay from Richmond south to San Jose. Traces of the Hayward fault are located 2,000 to 4,000 feet north east of the TBA site as shown on Plate 1-1.

The foothills east of the Hayward Fault Zone are underlain by Jurassic and Cretaceous sedimentary and igneous rocks of the Franciscan Assemblage and Knoxville Formation with local bodies of Quaternary Leona Rhyolite. These rocks do not contain significant water-producing units (California Department of Water Resources, 1967).

Water producing zones (aquifers) are present throughout the soil Bay Plain sequence as sand and gravel layers, separated both vertically and horizontally by silt and clay of lower permeability. Aquifers in the Oakland area are generally discontinuous and interfinger with less permeable layers, as is typical of alluvial systems. These aquifers

are composed of gently westward-sloping sand and gravel beds that were deposited by streams which shifted and braided on the alluvial cones over a period of hundreds of thousands of years (Maslonkowski, 1984).

Shallow aquifers within 50 feet of the ground surface are found throughout the Bay Plain Alluvial Fan. These minor aquifers are generally limited in areal extent and are usually composed of silty sand. These deposits yield small quantities of water to wells, generally less than 35 gallons per minute. Most of the shallow groundwater exists under perched conditions contained above a clay aquitard unit which separates this near surface groundwater from the saturated soils at the groundwater table and the underlying aquifers (Maslonkowski, 1984).

The J.C. Penney Oakland TBA Center is located within the proximal (upstream) reaches of the Bay Plain alluvial fan. The site is north of the Arroyo Viejo and San Leandro Creeks. Both the Arroyo Viejo and San Leandro Creek channels are entrenched below the level of the surrounding plain. This condition is believed to have existed since late Pleistocene time. The deposition of alluvial sediments on this area of the plain, therefore, has been limited to times of overbank flood flow (Maslonkowski, 1984). Alluvial overbank sediments are predominantly fine-grained sands or silts with a clay matrix. Near surface groundwater at the site and vicinity is hydraulically separated from underlying aquifers by fine grained clay rich sediments. A comparison of water levels measured in shallow and deep wells in East Oakland suggests that most near surface groundwater in the site area is perched.

Little accurate information is available to evaluate the direction and rate of flow of shallow groundwater in the Oakland Bay Plain sediments. However, the regional groundwater flow direction is likely to be toward the west, from the foothills down the Bay Plain alluvial fan toward San Francisco Bay. However, in the area of the J.C. Penney TBA site the variable stratigraphy, aquifer systems, topographic relief and the

proximity of this site to the Hayward Fault complicate the interpretation of the localized near surface groundwater gradient and flow direction at the site.

3.2 SITE TOPOGRAPHY AND PHYSIOGRAPHY

The Oakland J. C. Penney TBA site is located in the northwest corner of the Eastmont Mall. The site is triangular in shape. It is bounded on the north by Foothill Boulevard; the south eastern boundary is 73rd Avenue and the south western boundary is a retaining wall which supports an underground and elevated parking structure just west of the site. The northern half of the site was excavated approximately five feet below grade to level the lot. A five foot retaining wall was constructed across the northern boundary of the site. The surface elevation in the eastern corner of the site is 75 feet above sea level, while the surface elevation of the western boundary is 70 feet above mean sea level. The surface elevation of the underground parking structure located just west of the site is approximately 50 feet above sea level.

The site is located at the base of the Oakland hills which rise up to 1,175 feet above sea level to the north east. Two thousand feet south of the site lies the Arroyo Viejo stream channel.

3.3 EASTMONT MALL SITE HISTORY

A review of old topographic maps of Oakland shows that the Eastmont Mall site was a residential neighborhood prior to 1916. In 1916, the site was excavated and leveled for the construction of an automobile assembly plant. According to the Sanborn Insurance Map of 1926, much of the plant was completed in 1916 and presumably began operations in that year (Plate 3-1).

The Sanborn Map shows that the plant was constructed around three separate railroad spurs which entered the factory at ground level from the southwest. In order to

maintain a level assembly floor, the northeastern portion of the plant was excavated into the gently sloping topography to a minimum of 20 feet below ground surface (bgs). On this side of the plant, the floor of the third story was level with the ground surface along the outside of the building.

The assembly floors of the plant were divided into three separate elongate structures separated by three railroad spurs. Each of the three separate assembly areas were connected together along the back of the plant by a building which housed a fourth assembly area.

All of the structures in the main plant appear to have been three stories high. The manufacturing activity that occurred on each level was not available in the records; however, the Sanborn maps of 1925-1949 do note certain manufacturing practices that were performed in the four buildings (Plate 3-1).

The southern most assembly area housed the preliminary painting room on the first floor and the final painting and drying area on the second floor. A 50,000 gallon steel water tower sat above this section of the factory presumably storing water for use in the plant and as a precaution against fire.

The central assembly floor housed the chassis assembling area, the trim painting area, the Japanning ovens, the sanding area, the assembly conveyor, and the fender enameling area which included two large dip tanks. The factory power plant and boiler room were located in the northern corner of the central assembly floor. Beneath this section of the factory, five underground storage tanks (USTs) were buried. These tanks included a 13,000 gallon gasoline tank, a 12,000 gallon motor oil tank, a 13,000 gallon fuel tank, a 10,000 gallon kerosene tank and a 125,000 gallon reservoir for the hydrant system.

Above this central section of the plant sat two more steel tanks. A 50,000 gallon tank was supported 105 feet above the ground and a 25,000 gallon tank was supported 69 feet above the ground. These tanks were filled with water and serviced the sprinkler system installed throughout the factory to fight fires.

The northwest assembly floor was serviced by two railroad spurs and housed the frame assembling department, the fender department, the final test department and the conditioning shed. A 13,000 gallon underground oil tank was located north of the northern spur at the center line of the building. The northwestern corner of this wing of the factory was excavated into the hillside so that the second and third floors were level with the ground surface along the outside of the building.

The building connecting the three assembly areas of the plant along the northern face of the factory housed the body assembling area. The third floor of this building was at ground level.

Based on periodic Sanborn map updates, the plant appears to have maintained the same general floor plan throughout its life. Between 1925 and 1945 a paint mixing building and a drum rack were added to the southern corner of the property. A woodworking shop was leveled on the western corner of the property. Various assembly floors were reconfigured for different manufacturing uses. All the underground storage tanks remained in place and presumably contained product throughout the life of the factory.

Aerial photos taken of the site in 1965 show the partial demolition of the Chevrolet Fisher Body Plant (Plates 3-2 and 3-3). No records were found that gave the specific factory closing date; however, this presumably occurred in the early 1960s. The aerial photos of the factory demolition show the former traces of the rail spurs, the general outlines of the northern and southern wings and the connecting structure of the factory. Still standing is the central part of the factory which housed the fender dipping racks.

This part of the factory was built above the five underground storage tanks. The excavation along the northern side of the plant is visible. The plant site sat vacant from 1965 to 1969. Construction of the Eastmont Mall began in 1969.

The Eastmont Mall was built in two phases. Construction of Phase I began in 1969 concentrating on the southeastern half of the property. The rest of the mall was built according to the Phase II plan which began in 1970 and included the Penney's (now Firestone) TBA site and the J.C. Penney store. Detailed architectural plans for the Eastmont Mall are included as Plates 3-4 and 3-5. These plans were prepared by Burke Kober Nicolais Archuleta in 1969. Plate 3-4 is a plan of the Upper Mall level; Plate 3-5 is a plan of the Lower Mall level.

The layout of the assembly plant can be related to the present configuration of the Eastmont Mall buildings and parking lots (Plate 3-2). The J.C. Penney TBA site is located northeast of the mall and northeast of the former location of the Chevrolet plant. Prior to 1916 this site was presumably undeveloped or residential. After the car plant was built in 1916, this area was paved for parking and remained a parking lot until the construction of the Eastmont Mall began in 1969.

The J.C. Penney store is presently located just north of the former location of the Chevrolet plant central assembly area. This area housed fender dipping racks, Japanning ovens and sanding facilities. Beneath this area were five underground storage tanks containing gasoline, fuel oil, kerosene, motor oil and fire fighting solution (presumably water). The Eastmont Mall parking structure was built over much of the central assembly area.

3.4 UNDERGROUND STORAGE TANK EXCAVATION AT THE TBA SITE

Underground storage tanks (USTs) were located beneath opposite corners of the TBA building. Beneath the southwest corner of the facility gasoline was stored in buried

fuel tanks. Beneath the northeast corner of the building waste oil was stored in an underground tank.

3.4.1 Underground Fuel Tank Removal

Three 10,000 gallon underground fuel tanks were excavated and removed from the TBA site by Firestone in 1985. These tanks were located at the southwest corner of the Firestone TBA building (Plate 4-1) and supplied gasoline to the pump island formerly located at the south end of the facility.

Dames & Moore made inquiries at the Alameda County Department of Environmental Health and the Oakland Fire Department fire prevention group about information on these tanks. Environmental health had no records on file concerning the UST removal. The Oakland City Fire Department files contained an UST permit but no information regarding the tank removal operation or the condition of the UST's at the time of removal, or whether soil and water sampling had been conducted.

J.C. Penney has no record of tank excavations at the site. According to Mr. Bob Arneson of J.C. Penney Co., Firestone disbanded the construction services group that managed UST removal and did not organize a system to recover their UST files.

Kurt Jeurgens and Kathleen Scheutzow of Firestone were contacted for information concerning the tank removal. They indicated that Dor-Am Builders, Inc. of Sacramento was contracted in 1985 to remove the tanks in accordance with federal, state and local regulations and codes. Dor-Am Builders, Inc. completed the removal operation. However, neither Mr. Jeurgens nor Ms. Scheutzow had records or field logs of the excavation and tank removal operation. Dor-Am Builders, Inc. is no longer in business and does not have a forwarding phone message.

According to Mr. Jim Given, the Eastmont Mall manager, the underground tanks were excavated in 1985 when Firestone decided to discontinue selling gasoline after acquiring the J.C. Penney TBA. He has no records or knows of any other details concerning the tank removal.

3.4.2 Waste Oil Tank Removal

According to Ms. Kathleen Scheutzow of Firestone, the original waste oil tank formerly located at the northeast corner of the TBA building was removed by a Firestone subcontractor and replaced in 1987. Following the excavation and removal of this tank, a soil sample was taken at the bottom of the tank pit. The soil was analyzed for petroleum hydrocarbons by EPA Methods 8020, 8015, 503E and 8010. No hydrocarbon constituents were detected above the reporting limit of 0.1 mg/kg. A new waste oil tank was installed in the same location.

This waste oil tank, installed in 1987, was subsequently removed on December 12, 1991. The Alameda County Department of Environmental Health has a complete file on the excavation and removal of this second waste oil tank. Two samples of soil from the bottom of the excavation were analyzed for total petroleum hydrocarbons (TPH) as waste oil and TPH as diesel. One sample did not contain detectable hydrocarbons while the other sample contained 820 mg/kg THP as waste oil and 40 mg/kg THP as diesel. Based on these results, the excavated soils were removed and the excavation was filled with clean fill. The Alameda County Department of Health Services signed off on this tank removal on March 20, 1991.

3.5 PREVIOUS INVESTIGATIONS

Hunter Environmental Services, Inc. (Hunter) of Martinez, California performed a Phase II environmental audit of the Eastmont Mall property and submitted a report to Topa Savings Bank of Los Angeles, California on December 20, 1989. The Hunter

investigation included an asbestos survey of the mall structures and a soil and groundwater, investigation beneath areas of suspected hydrocarbon contamination.

Four soil borings were drilled by Hunter on the mall property (Plate 5-5). Three of these borings were completed as monitoring wells. Boring HB-1 was drilled to a depth of 54 feet near the southeast corner of Church Street and Foothill Boulevard. This boring did not encounter groundwater. Soil samples retrieved during drilling were screened on site using an organic vapor meter (OVM). None of the soil samples yielded detectible OVM readings. Samples taken from 10 and 30 feet bgs were analyzed for TPH (Method 8015) and benzene, toluene, ethylbenzene and total xylenes(BTEX) (Method 8020). No hydrocarbon was detected in the soils in boring HB-1.

MW-2 was drilled to a total depth of 35 feet immediately west of the bank as shown on Plate 5-5. Groundwater was encountered at 29 feet below ground surface (bgs). Soils were screened with an OVM during drilling and no hydrocarbon vapors were detected. Soil samples taken from 10 and 20 feet bgs were analyzed for TPH (Method 8015) and BTEX (Method 8020); none of these hydrocarbons were detected above the reporting limit (1 ppm-TPH, 3 ppb-BTEX). After completing the boring as a monitoring well, groundwater was sampled and analyzed for volatile organic compounds using EPA Method 8240. 1-2 Dichloroethene (1-2 DCE) was detected at 8 parts per billion (ppb), trichloroethene (TCE) was detected at 19 ppb, and tetrachloroethene (PCE) was detected at 210 ppb. No other volatile organic compounds were detected above the reporting limit (3-10 ppb).

MW-3 was drilled to a total depth of 45 feet to the west of the BP service station located on the corner of 73rd Avenue and Bancroft Avenue. Groundwater was encountered at 37 feet bgs. Soils were screened with an OVM during drilling and no hydrocarbon vapors were detected. Soil samples from 10 and 20 feet bgs were analyzed for TPH and BTEX; none of these hydrocarbon compounds were detected above the reporting limit (1 ppm-TPH, 3 ppb-BTEX). After completing the boring as a monitoring

well, groundwater was sampled and analyzed for total volatile organics using EPA Method 8240. No hydrocarbon compounds were detected above the reporting limit (3-10 ppb) by this method. Although Method 8240 does analyze for benzene, toluene, ethylbenzene and total xylenes, water samples were also analyzed for TPH by Method 8015 and BTEX by Method 8020. Results from these analyses include 2.7 parts per million (ppm) TPH and 530, 16, 150, 59 ppb for BTEX, respectively.

MW-4 was drilled to a total depth of 25 feet to the south and downgradient of the former J.C. Penney TBA USTs location. Groundwater was encountered at 17 feet bgs. Soils were screened with an OVM during drilling. All soil samples registered non-detectable on the OVM except for a sample taken at 15 feet bgs which indicated a level of 230 ppm. Soil samples taken from 10 and 15 feet bgs were analyzed for TPH (Method 8015) and BTEX (Method 8020). The sample taken from 10 feet contained no detectable hydrocarbon constituents above the reporting limit; the sample taken from 15 feet contained TPH at 2000 ppm, benzene at 1.4 ppm, toluene at 4.3 ppm, ethylbenzene at 23.0 ppm and total xylenes at 150 ppm. After completing the boring as a monitoring well, groundwater was sampled and analyzed for volatile organic compounds. TPH was found at 2.2 ppm by Method 8015; BTEX was found at 28, 21, 50 and 290 ppb, respectively, by Method 8020, and at 440, 19, 130 and 54 ppb, respectively, by Method 8240. The relative ratios and absolute concentrations of these compounds analyzed by methods 8015 and 8020 do not agree.

The presence of hydrocarbon compounds in soils and groundwater from well MW-4 resulted in the Eastmont Mall management requesting further investigation of the TBA site by J.C. Penney.

3.6 AGENCY FILE SEARCH

An agency file review was performed to identify potential off-site sources of contamination that could adversely impact the site. A review of local, state and federal

agency lists of sites with known or potential hazardous waste or underground tank problems was conducted to identify whether such sites exist with one-half mile of the Eastmont TBA location. The lists that were reviewed included: the U.S. EPA National Priority List ("Federal Superfund") and CERCLIS list; State of California Bond Expenditures Plan List ("California Superfund"), Department of Health Services, Abandoned Sites Program Information (ASPIS) List; Hazardous Waste and Substances Sites List Pursuant to AB 3750; the RWQCB's List of Leaking Underground Storage Tanks, and North Bay Counties Toxics List; and the California Waste Management Boards' Solid Waste Information System (SWIS) List.

The agency list review did not identify any sites located with one-half mile of the TBA site.

3.7 GROUNDWATER WELL INVENTORY IN THE VICINITY OF THE SITE

An inventory of groundwater wells drilled in the vicinity of the Eastmont Mall was obtained from the Alameda County Public Works Agency to assess groundwater use within one-half mile of the site. No municipal, domestic, industrial or livestock wells were identified within one-half mile of the site. An irrigation well was drilled near the corner of 64th Avenue and MacArthur Boulevard at the Evergreen Cemetery. This well is located 2,700 feet northwest cross gradient from the site. Other than this single irrigation well, groundwater is apparently not used as a resource within one-half mile of the TBA site.

Non-supply wells that are worth noting include an array of seven groundwater monitoring wells located at 6455 Foothill Boulevard on Oakland Community Housing property. These monitoring wells were drilled in 1991 and are located about 2,600 feet west, cross gradient to the TBA site. The presence of the monitoring wells at 6455 Foothill Boulevard suggests that a groundwater investigation is in progress. This location was not noted in Dames & Moore's review of agency lists of potential hazardous waste

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sites or leaking UST sites. The nature of the investigation at this site is not known; however, all the wells are drilled to depths of 27 to 32 feet and are screened in the uppermost saturated zone at 13 to 18 feet bgs suggesting that the investigation is concentrating on the near surface groundwater resource zone.

The groundwater well inventory also listed a 400 foot deep abandoned well (well 2S/3W 10Q1) drilled 550 feet east of Bancroft and 450 feet north of 73rd Avenue on Eastmont Mall property. This well was drilled on March 9, 1951 and was operated by the Chevrolet Oakland Division as an industrial water well. The well serviced the assembly plant until it sanded up in 1954. Depth to groundwater in the well was recorded at 96 feet bgs (56 feet below sea level). Following a 30 hour pump test, the well's yield was 170 gallons per minute out of a 12-inch diameter casing perforated from 90 feet to 393 feet bgs. The driller's log from this well is included in Appendix A.

The large disparity between water levels measured in this well and the monitoring wells drilled on the site suggests that the 1951 industrial water well tapped a separate lower aquifer not in hydraulic equilibrium with respect to the shallow groundwater zone encountered at the site.

Four other deep wells located near the site which are completed in the lower aquifer(s) also show a large disparity between the water level measurements of deep confined groundwater and near surface (0 to 50 feet bgs) unconfined water. The water level in deep wells is generally encountered tens of feet below sea level while the water level in shallow wells is almost always above sea level. In some areas, borings drilled in the shallow zone did not encounter groundwater at all.

4.0 FIELD INVESTIGATION

Dames & Moore conducted a field investigation at the site on April 1 through 5, 1991 to address the objectives described in Section 2.0. This section describes the field operations and procedures that were followed in conducting this investigation. During this investigation the planned locations of borings and wells had to be moved slightly due to the presence of underground structures and utilities.

4.1 SOIL BORINGS

Six soil borings were drilled by Kvilhaug Well Drilling and Pump Company, Inc., of Concord, California, on April 1, 2 and 3, 1991 under the supervision of a Dames & Moore geologist. Soil and well boring locations are shown on Plate 4-1. Borings were drilled using an 8-inch outer diameter hollow stem auger.

Boring DM-1 was located due north and upgradient of the former UST location. This boring was completed as a background well to assess the quality of groundwater flowing onto the site. Boring DM-2 was completed as a monitoring well about 90 feet south of the former UST location. This boring/well was drilled to assess the lateral extent of suspected hydrocarbons in soils and ground•20
water. The location of DM-2 was selected to avoid blocking traffic at the mall entrance and to avoid the concrete retaining walls of the underground parking structure. Boring B-4 is located downgradient of the former UST location and was drilled for the same reason as DM-2. This boring was intended to be completed as a monitoring well; however, it was drilled to a depth of 50 feet and did not encounter groundwater. Deeper drilling was beyond the scope of this investigation.

Located in the center of the former pump island, Boring B-1 was drilled to sample and analyze the soils beneath this facility for hydrocarbon content. Soil Boring B-2 was located and drilled in the center of the former UST location to assess whether the fill in

the tank pit or soils beneath the tank pit contained residual hydrocarbon contamination. Soil Boring B-3 was drilled in the center of the former waste oil pit located at the northeast corner of the TBA building. This boring was drilled to assess whether the fill in the tank pit or soils beneath the former waste oil tank contained residual hydrocarbon contamination. Boring logs and well construction details are presented in Appendix B and Table 5-2.

4.2 SOIL SAMPLING

During advancement of each of the six borings, soil samples were collected using a modified California sampler at five foot intervals from five feet bgs to the bottom of the boring. The sampler was driven into undisturbed soil below the open boring with a 140-pound hammer falling 30 inches. Samples were retained in six-inch-long brass sleeves. Upon completion, borings B-1, B-2, B-3, and B-4 were grouted to the ground surface with cement.

The field geologist analyzed the collected soil samples with an organic vapor monitor (HNu) to assess the presence of organic vapors. The soil samples in areas of suspected contamination or with a measurable HNu reading from each well were selected for analysis. The ends of the sample tubes were covered with Teflon sheeting, capped, sealed and labeled. The samples were placed in an ice-filled cooler for shipment to the analytical laboratory under chain of custody control.

Three soil samples were analyzed from boring B-1 drilled beneath the former pump island at 5, 10 and 15 feet bgs. One sample was analyzed from boring B-2, taken from the bottom of the former UST pit at 10.5 feet bgs. One sample was analyzed from boring B-3, from the bottom of the former waste oil tank pit at 5.5 feet bgs. Two samples were analyzed from B-4 at 15.5 and 40.0 bgs. This boring is located downgradient of the former UST. One sample was analyzed from boring DM-1 located

130 feet upgradient from the former UST location. This sample was taken at 15 feet bgs very near the water table.

One sample was analyzed from DM-2 located about 90 feet downgradient of the former UST. This sample was taken at 15 feet bgs very near the water table. All the soil samples were chemically analyzed by ACCULAB Environmental Services of Petaluma, California. Samples were analyzed for TPH as diesel, TPH as gasoline, and BTEX. The soil analytical results are discussed in Section 5.1 and summarized in Table 5-1. Complete laboratory reports are presented in Appendix C.

A soil sample taken at 10 feet bgs from boring B-1 was submitted for grain size analysis by a wash sieve method. Results of this test are discussed in Section 5.1.2 and included in Appendix C.

4.3 MONITORING WELL INSTALLATION

Two monitoring wells were installed at boring locations DM-1 and DM-2. DM-1 was installed to investigate the possible existence of offsite sources for diesel and/or gasoline contamination upgradient from the site. DM-2 was installed to assess the lateral distribution of the suspected groundwater gasoline contamination at the site.

The borings were reamed with a 12-inch diameter auger. A capped, threaded, 10-foot length of 4-inch I.D. Schedule 40 PVC piping with machined 0.020-inch horizontal slots was joined to steam-cleaned, threaded, unslotted 4-inch I.D. Schedule 40 PVC pipe and installed through the augers into the boring. Well casing and screen were steam cleaned prior to installation. The screened interval for well DM-1 extended from a depth of 13 feet to 28 feet bgs. The screened interval for well DM-2 extended from a depth of 10 feet to 25 feet bgs. A sand pack consisting of graded Monterey #2 sand was placed in the annulus to a height of 6 inches above the slotted interval. Approximately one foot of bentonite pellets was placed in the annular space above the sand pack. The

remaining annular space was filled with cement grout to a height of 6 inches below the ground surface. The well was completed with a 12-inch diameter Christy box and a locking well cap. Well construction details are presented in Appendix B.

Following installation, wells DM-1 and DM-2 were developed by surging and bailing. One-hundred-ten gallons of water were bailed from DM-1. Water appeared cloudy tan after bailing. One-hundred-ten gallons were also bailed from DM-2. Water appeared clear after bailing.

4.4 GROUNDWATER SAMPLING AND ANALYSIS

Groundwater samples were collected from monitoring wells DM-1, DM-2 and MW-4 on April 4, 1991. A duplicate QA/QC sample was collected from MW-4. Wells were purged of three to five casing volumes of water by bailing or by pumping with a submersible pump. The filed geologist measured pH, conductivity and temperature until the readings stabilized. Samples were collected by disposable teflon bailers and transferred into 40 milliliter VOA containers, stored on ice, and shipped to ACCULAB Environmental Services under chain of custody procedures. The groundwater samples were analyzed for TPH as diesel (method 8015), TPH as gasoline (method 5030/8015), and BTEX (method 5030/8020). The analytical results of water samples are discussed in Section 5.2 and summarized in Table 5-3. Complete laboratory reports are presented in Appendix D.

The field QA/QC program for groundwater sampling included the collection and analysis of a duplicate sample from well MW-4. The duplicate sample was submitted to the laboratory for analysis to evaluate the reproducibility of the results obtained from the analytical procedures.

4.5 WATER LEVEL MEASUREMENTS

In wells DM-1, DM-2 and MW-4 measurements were taken between the static water level and the top of the PVC casing. The elevation of the PVC casing for each well was professionally surveyed. Using this information, the elevations of the static water level in wells at this site were calculated. This data is presented on table 5-2.

A previous investigation conducted by Hunter Environmental Services in 1989 advanced four borings on four corners of the Eastmont Mall complex. Three of the borings encountered groundwater between 17 to 35 feet bgs while boring HB-1 located on the northwest corner of the complex did not encounter groundwater at a total depth of 50 feet.

4.6 SLUG TESTS

Both rising and falling head slug tests were performed on wells DM-1, DM-2 and MW-4. These tests were conducted to gather necessary data for the calculation of the aquifer hydraulic conductivity in the vicinity of the bore hole for each well.

Prior to conducting the test, a pressure transducer was lowered into the well 7 feet below the static water surface. The transducer cord was then connected to a data logger. The test was started by lowering the slug into the well below the static water level and recording on the data logger the change in head with time. This test is called the falling head test.

The slugs used in wells DM-1 and DM-2 consisted of a 5 foot section of double capped 3-inch diameter PVC filled with distilled water. The slug used in MW-4 was of similar construction except that the PVC diameter was 1½ inches. The smaller diameter slug was used because MW-4 is a 2-inch diameter well.

After the static water level in the well recovered with the slug submerged, the slug was removed and the change in head with time was recorded by the data logger. This test is called the rising head test.

5.0 INVESTIGATIVE RESULTS

The results of the field investigation and laboratory analysis program are summarized below.

5.1 SOIL

5.1.1 Stratigraphy

Two geologic cross sections were constructed across the site using available well and boring data. The cross section locations are shown on plate 4-1, and the cross sections are presented on Plates 5-2 and 5-3. Cross section A-A' is oriented south to north and includes wells MW-4, DM-1 and boring B-2 as shown on Plate 5-1. Cross section B-B' runs west to east and includes borings B-4, B-1 and wells MW-4 and DM-2 as shown on Plate 5-2.

The location and analytical results of soil samples taken from each boring are presented on both cross sections. If TPH as gasoline and BTEX constituents were not detected in the sample, a ND symbol is posted on the section next to the sample location. If hydrocarbons were detected, the results are summarized for each constituent in a box. In comparing analytical results across the sections, it is important to note that boring MW-4 was drilled, sampled and analyzed in December of 1989, sixteen months prior to this investigation (April 1991).

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Soils at the site are predominantly clays with a high sand or gravel content. The color of the soils range from yellow-red, yellow-brown to yellow-brown, red-brown, dark brown. The lack of lateral continuity and the yellow-red color of the site soils is typical of subaerially deposited alluvial fan sediments. The predominance of fine grained soils at this site suggests that these sediments were primarily laid down under low flow regime conditions as overbank deposits.

5.1.2 Analytical Results of Soil Samples

No benzene or ethylbenzene compounds were detected above the reporting limit of 0.005 mg/kg in all nine samples submitted for analyses. Only one sample from B-1 taken at 15.0 feet bgs contained detectable levels of TPH gasoline at 7.7 mg/kg, toluene at 0.070 mg/kg and total xylenes at 0.036 mg/kg. The reporting limit for BTEX was 0.005 mg/kg; the reporting limit for TPH as gasoline was 0.2 mg/kg. The soil analytical results are summarized on Plate 5-3 and in Table 5-1. Complete laboratory analytical reports are presented in Appendix C.

A sieve analysis of a sample collected at 10 feet bgs from boring B-1 was performed to characterize the soil grain size distribution in the vadose zone. This sample contained 32.2% clay, 27.5% fine sand, 17.7% medium sand, 8.7% coarse sand and 13.9% gravel. The soil sample is classified as a gravelly clayey sand, however the percentage of total sand and clay is quite similar.

Soil descriptions on boring logs classify soils at the site as predominantly gravelly sandy clays. These descriptions are based on observation and an estimation of clay, sand and gravel content. Field observations cannot determine the distinction between a sandy clay and clayey sand when grain size percentages are nearly equivalent. Soils were qualitatively classified in the field for the boring log descriptions.

5.2 GROUNDWATER

5.2.1 Groundwater Occurrence and Flow Direction

Groundwater was measured at a depth ranging from 12 to 14 feet bgs in wells MW-4, DM-1, and DM-2. Borings B-2 and B-3 were not drilled deep enough to encounter groundwater while boring B-4 was drilled to a depth of 50 feet without encountering groundwater. Soils in boring B-4 appeared dry from the surface to the total depth. Water level measurements are tabulated on Table 5-2.

Water level data measured in the three monitoring wells are presented in Table 5-2, in map view on Plate 5-4 and in cross section on Plates 5-1 and 5-2. These plates illustrate a discontinuity of the groundwater surface between borings B-4 and the other borings and wells at the TBA site. Plate 5-5 presents water level data from both the 1989 Hunter Environmental Services investigation and water level data from this investigation. Near surface groundwater is found between 37 and 13 feet bgs (1 and 56 feet above mean sea level) over most of the site. Across the northern quarter of the site groundwater was not encountered in two borings drilled to 50 and 53 feet bgs. These borings are located in an area where near surface groundwater was expected between 13 and 17 feet bgs. Based on these data a groundwater discontinuity apparently extends across the TBA site and the mall complex (Plate 5-5).

An industrial well drilled in 1951 near the southern corner of the mall property encountered groundwater at 96 feet bgs (56 feet below mean sea level). Casing installed in this well was perforated from depths of 95 to 395 feet screening clays, sands and gravels. The driller's log suggests that these water bearing sediments are separated from groundwater contained in surface soils by a thick sequence of clayey deposits which appear to act as an aquitard between shallow and deep groundwater (the driller's report is included in Appendix A).

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Based on very limited data, our interpretation of the conditions beneath the TBA site suggests that the gradient of near surface groundwater is to the southwest roughly parallel to 73rd Avenue (Plate 5-4). The variable relief of the groundwater beneath the site, the extremely heterogeneous stratigraphy of site soils, the variable topographic relief in the area of the site and the proximity of the site to the Hayward Fault complicates the interpretation of the localized groundwater gradient and flow direction. The flow direction and gradient illustrated on Plate 5-4 are based on limited data, essentially three data points.

5.2.2 Analytical Results of Groundwater Samples

One groundwater sample from DM-1, DM-2, MW-4, and one blind duplicate from well MW-4 were submitted for chemical analysis to ACCULAB Environmental Services in Petaluma, California. The groundwater samples were analyzed for TPH as diesel (EPA Method 8015), TPH as gasoline (EPA Method 5030/8015) and BTEX (EPA Method 5030/602).

Results of these groundwater analyses are presented on Plate 5-6 and in Table 5-3. Complete laboratory analytical reports are presented in Appendix D. Hydrocarbons, including TPH as diesel, TPH as gasoline, and BTEX were not detected in concentrations above the reporting limit in any of the three water samples and one duplicate sample analyzed by the laboratory. The reporting limits for TPH diesel and TPH gasoline were 0.05 mg/l. The reporting limits for BTEX were 0.0005 mg/l or 0.5 ppb. The results from the duplicate sample analysis were judged to be consistent with the results of the primary sample suggesting that the field sampling and laboratory analysis procedures were reproducible.

5.2.3 Slug Test Analyses

The Bower and Rice Method was developed to measure the hydraulic conductivity of aquifers or water bearing zones around boreholes (Bower and Rice, 1976; Bower, 1989). This method considers the relation between the rate of water elevation change inside the well and the rate of flow into the well. Rate of water elevation change inside the well is a function of the rate of flow into the well and the diameter of the well. The rate of flow into the well is calculated by the steady radial flow formula derived by Theim and Forcheimer using Darcy's Law and Dupuit's Assumption.

The slug test creates an instantaneous water elevation change inside the well relative to the static water elevation outside the well by inserting or removing a solid cylinder with known volume in or out of the well. Inserting a cylinder into the well is equivalent to adding a same volume of water into the well. Measuring the subsequent rate of fall of the water level in the well provides data to evaluate the hydraulic conductivity of the aquifer in the vicinity of the well. This process is called the falling head slug test.

Similarly, removing the cylinder out of the well is equivalent to removing the same volume of water from the well. The subsequent rate of rising of the water level in the well also provides the same type of data that can be used to evaluate the hydraulic conductivity of the aquifer. This process is called the rising head slug test.

The measured time-dependent water elevation data in the well after the cylinder is inserted or removed and the well completion data for wells DM-1, DM-2, and MW-4 constituted the database that was used in the analysis by the Bower and Rice Method. Some abnormal data points were removed from the data set prior to the use of the Bower and Rice Method. These abnormal date points are responses caused by movement of the transducer or by a localized instantaneous water pressure fluctuation

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around the transducer. The hydraulic conductivities of the aquifer around wells DM-1, DM-2 and MW-4 based on the Bower and Rice Method are shown below:

Based on Slug Test Results
(cm/sec)

Well	Rising Head	Falling Head
DM-i	1.6×10^{-3}	8.8×10^{-4}
DM-2	4.9×10^{-3}	6.1×10^{-3}
MW-4	4.0×10^{-3}	6.3×10^{-4}

6.0 DISCUSSION OF RESULTS

6.1 HISTORICAL SITE USE

As stated in Section 3.2, the Eastmont Mall property was formerly occupied by the Fisher Body Plant of Oakland Chevrolet. The J.C. Penney TBA site was historically used as a parking lot which was located hydrogeologically upgradient from the Chevrolet plant. For this reason, the likelihood of contamination beneath the TBA site due to past plant practices is judged to be low.

In contrast, the J.C. Penney store site is located directly on top of the former Chevrolet plant. Drawings of the plant show that at least five underground fuel tanks existed beneath the facility and were presumably in operation for 40 years from 1920 to 1940. The Chevrolet auto factory undoubtedly used and generated hazardous materials during the period of plant operation. Compared to today, few regulatory guidelines existed at that time for handling and disposing of hazardous materials. For these reasons, contamination of soils and possibly groundwater beneath the J.C. Penney store and Eastmont Mall due to site usage prior to J.C. Penney's occupancy is considered high.

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TABLE 5-1

SUMMARY OF ANALYTICAL RESULTS
SOIL SAMPLES, MARCH 1991
TBA SITE, EASTMONT MALL
OAKLAND, CALIFORNIA

Constituent	Units	Detection Limit	B-1			B-2	B-3	DM-1	DM-2	B-4	
			Depth								
			5.5	10.0	15.0	10.5	5.5	15.0	15.5	15.5	40.0
TPH Gasoline	mg/kg	0.2	ND	ND	7.7	ND	ND	ND	ND	ND	ND
Benzene	mg/kg	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	mg/kg	0.005	ND	ND	0.070	ND	ND	ND	ND	ND	ND
Ethylbenzene	mg/kg	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	mg/kg	0.005	ND	ND	0.036	ND	ND	ND	ND	ND	ND

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During the Hunter Environmental Phase II investigation, analyses of groundwater beneath the former Chevrolet plant sampled from well MW-2 found chlorinated hydrocarbon compounds at relatively low concentrations. These compounds are commonly found in degreasers and solvents which might have been used at the plant.

6.2 POTENTIAL OFFSITE SOURCES

Well DM-1 installed upgradient and near the TBA site boundary did not contain detectable levels of hydrocarbons in either the soil or groundwater. The lack of hydrocarbons in this well suggests that an active offsite source is not responsible for the relatively low concentration of hydrocarbons found in onsite soils and previously detected dissolved hydrocarbons in the groundwater.

A review of local, state and federal agency lists of sites with suspected groundwater contamination revealed no sites within one-half mile of the Eastmont Mall. However, according to the well inventory list of groundwater usage compiled by Alameda County Water District, seven groundwater monitoring wells were recently installed (February 27, 1991) at 6455 Foothill Boulevard. The presence of these wells at the 6455 Foothill Boulevard location suggests that a groundwater investigation of suspected hazardous materials is in progress. This address is located approximately 2600 feet to the west, cross gradient to the J.C. Penney TBA site. Thus it is considered unlikely that the groundwater quality beneath the TBA site could be affected by the suspected contamination beneath the Foothill Boulevard property.

6.3 GROUNDWATER OCCURRENCE

Water level measurements in shallow wells, borings and the single deep well drilled on mall property show a large variation in depth to water which appears to be related to the depth of the screened interval. These results suggest that near surface groundwater

is perched in a localized discontinuous unconfined aquifer above the regional confined aquifer which is encountered at depth. The near surface groundwater present beneath the site is here after referred to as the shallow perched zone.

The review of regional water level data from groundwater wells drilled in the vicinity of the Eastmont Mall supports the above interpretation. Groundwater measured in wells screened near the surface (10-50 feet bgs) is much higher than the levels in wells completed in deeper aquifers. Generally water levels in deep wells are measured at tens of feet below sea level while water levels in shallow wells are typically above sea level. Based on these findings, it appears that shallow groundwater in the vicinity of the site is also perched above the regional water table.

This interpretation is consistent with independent studies on the hydrogeology of the Bay Plain. Maslonkowski (1984) found that shallow aquifers within 50 feet of the ground surface are common throughout the Bay Plain Environment. These minor aquifers are limited in areal extent and generally yield small quantities of water from wells (less than 35 gallons per minute). According to Maslonkowski, most shallow groundwater beneath the Bay Plain exists under perched conditions contained above a clay aquitard unit which separates this near surface groundwater from the saturated soils at the groundwater table and underlying aquifers.

6.4 RESIDUAL HYDROCARBONS IN SOILS

Both this investigation and the 1989 Hunter Environmental Services Phase II study encountered residual hydrocarbons in soils near the water table. Concentrations of TPH as gasoline found at 15 feet bgs in borings MW-4 and B-1 ranged from 2000 ppm to 7.7 ppm, respectively. Benzene and ethylbenzene were detected at 1.4 and 23.0 ppm in boring MW-4, but were not found in boring B-1.

Borings drilled downgradient from B-1 and MW-4 did not detect hydrocarbons in soil samples. During this investigation groundwater analyzed from wells completed in and near borings MW-4 and B-1 did not detect soluble hydrocarbons. Based on these results, it appears that the residual hydrocarbons in soils are limited in areal extent to the vicinity of the former UST.

During this investigation boring B-2 was advanced to 10.5 feet bgs within the filled excavation of the former USTs. The boring met refusal at this depth presumably encountering a concrete pad (tank crib) that was laid beneath the USTs to strap down the tanks. A sample was taken at the bottom of the boring and analyzed for TPH gasoline, TPH diesel and BTEX. None of these constituents were detected in the soils. Based on this soil sample, the excavation was apparently filled with uncontaminated fill.

6.5 DISSOLVED HYDROCARBONS IN GROUNDWATER

The Hunter Report of 1989 indicates that groundwater beneath the site from well MW-4 contained dissolved hydrocarbons at concentrations above the DHS approved drinking water standards. Our recent investigation found no detectable hydrocarbon compounds in the groundwater from MW-4 and two additional newly installed wells. These results also suggest that the volume of spilled hydrocarbons at the site was relatively small.

Because groundwater investigations were conducted 16 months apart, it is possible that in this time frame the natural processes of water washing, oxidation, biodegradation, retardation and dispersion of the hydrocarbons beneath the site has reduced their concentrations in the groundwater below detectable levels.

It should be noted that it is not considered likely that contaminated groundwater in the shallow perched zone will adversely affect deeper groundwater resources. The

shallow perched zone appears to be isolated from the regional confined aquifer by a low permeability aquitard unit.

6.6 REGULATORY OVERSIGHT

Chapter 6.7, Division 20 of the Health and Safety Code, and California Underground Storage Tank Regulations (Subchapter 16 of Title 23 of the California Code of Regulations), established a regulatory program which requires local implementing agencies to oversee cleanup of contaminated soil and groundwater resulting from a leak or unauthorized discharge from an underground storage tank or appurtenant piping. The local agency that has jurisdiction over the Eastmont Mall site is the California Regional Water Quality Control Board (RWQCB), San Francisco Bay Region (Region 2).

The State Water Resources Control Board prepared a Leaking Underground Fuel Tank (LUFT) manual as a state and interagency guidance document for hydrocarbon fuel contamination of soils. Three regional boards including Region 2 prepared a supplementary document to the LUFT manual which is intended to expand on, clarify, and, in some cases, present alternatives to LUFT recommendations. This supplementary document is titled the "Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites."

According to both of these guidance documents, an UST site with confirmed hydrocarbon saturation in soils and dissolved hydrocarbons in groundwater must be characterized to examine the vertical and lateral extent of suspected contamination. It is Dames & Moore's opinion that this investigation has satisfied the requirements of the Tri-Regional Recommendations for site characterization; however, additional investigative work might be necessary in the future if the RWQCB requires active remedial measures.

Results from this investigation and the Hunter Environmental Services investigation have established that soils near the groundwater table contain residual hydrocarbon contamination. According to both the LUFT manual and the Tri-Regional Recommendations, this site must be reported to the RWQCB. This agency will evaluate the results and recommendations from this investigation to determine if further investigation is necessary. The RWQCB has the ultimate authority to make a determination regarding the necessity of further investigation or remedial action at the site.

7.0 CONCLUSIONS

Soils located near the former underground storage tanks and beneath the former pump island contain minor amounts of hydrocarbons as gasoline. These residual hydrocarbons appear to be limited in areal extent to the immediate vicinity of the former USTs. Because the hydrocarbons in soils are localized, limited in areal extent and do not appear to represent a large volume of liquid, the source of the contamination may have been a small discharge of fuel.

Groundwater beneath the site occurs in an unconfined perched zone of limited lateral extent. This perched zone is not found 30 feet west of the former tanks in the vicinity of boring B-1. Slug test data shows that the shallow zone has a relatively low transmissivity. Due to the limited lateral extent and the low transmissivity of the shallow perched zone, it is unlikely that perched groundwater would be suitable as an irrigation or drinking water supply. A review of shallow water wells drilled in the vicinity of the site did not identify any wells that use the shallow perched groundwater for industrial, irrigation, domestic or municipal purposes.

Contaminated groundwater within this shallow perched zone will probably not affect deeper groundwater resources. Chemical analyses of groundwater quality beneath the site indicates that soluble hydrocarbons are not present above detection limits. These

results suggest that the groundwater quality is not adversely affected by residual hydrocarbons in soils at and below the water table.

8.0 RECOMMENDATIONS

Dames & Moore recommends that wells at the site be resampled and chemically analyzed for TPH as gasoline and BTEX to re-evaluate the groundwater quality. This sampling and analysis are intended to confirm that groundwater beneath the site does not contain dissolved hydrocarbons above DHS drinking water standards. At the time of sampling, water levels from site wells will be measured, mapped and contoured in an attempt to further understand the hydraulics of the shallow groundwater.

If this confirmation sampling round shows that the groundwater hydrology and chemistry at the site is relatively constant, then Dames & Moore will recommend that no further action be taken at the site. This recommendation is based on the following findings:

- Shallow groundwater occurs in an unconfined perched zone of limited extent that does not appear to be used as an industrial, irrigation, domestic or municipal drinking water resource;

- Perched shallow water appears to be separated from the contained above the regional water table and lower confined aquifers by several tens of feet of low permeability sediments;

- Hydrocarbons were not detected in the groundwater beneath the site during this investigation, and

- Low levels of residual hydrocarbons were detected in only one of six soil samples taken at the site during this investigation.

9.0 REFERENCES

Bouwer, H. and R.C. Rice, 1976, A Slug Test for Determining Hydraulic Conductivity of Unconfined Aquifers with Completely or Partially Penetrating Wells: Water Resources Research, Vol. 12, pp. 423-428.

Bouwer, H., 1988. The Bouwer and Rice Slug Test — An Update: Ground Water, Vol. 12, pp. 423-428.

California Department of Water Resources, 1960, Intrusion of Salt Water Into Groundwater Basins of Southern Alameda County: California Water Resources Bulletin 118-1, 44 p.

California Department of Water Resources, 1967, Evaluation of Groundwater Resources: South Bay, Appendix A: Geology, California Water Resources Bulletin 118-1, 153 p.

Maslonkowski, Dennis, P., 1984, Groundwater in the San Leandro and San Lorenzo Cones of the East Bay Plain of Alameda County: Alameda County Flood Control and Water Conservation District, Hayward, California.

TABLE 5-2

COMPLETION DATA AND WATER LEVEL MEASUREMENTS FOR MONITORING WELLS AND BORINGS TBA SITE, EASTMONT MALL OAKLAND, CALIFORNIA

Monitoring Well	Date Installed	Well Depth	Elevation Top of PVC	Well Diameter	Screen Interval	Effective Interval	Depth to Water	Groundwater Elevation (MSL)*
DM-1	4-1-91	28.0'	71.96	4"	13'-28'	11'-28'	12.85	59.11
DM-2	4-2-91	26.5'	68.60	4"	10'-25'	8.5'-26.5'	12.34	56.26
MW-4	12-6-89	25.0'	70.0	2"	10'-25'	8.0'-25'	13.74	56.26

Boring	Date Drilled	Boring Depth	Estimated Ground Surface Elevation
B-1	4-2-91	17.5'	71
B-2	4-1-91	11.5'	70
B-3	4-1-91	6.0'	75.6
B-4	4-2-91	50.0'	70

Notes: *MSL - Mean sea level.
NR - Not reached.

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TABLE 5-3

SUMMARY OF ANALYTICAL RESULTS
GROUNDWATER SAMPLES, MARCH 1991
TBA SITE, EASTMONT MALL
OAKLAND, CALIFORNIA

Constituent	Units	Detection Limit	DM-1	DM-2	MW-4	MW-4 Duplicate
TPH/Diesel	mg/l	0.05	ND	ND	ND	ND
TPH/Gasoline	mg/l	0.05	ND	ND	ND	ND
Benzene	mg/l	0.0005	ND	ND	ND	ND
Toluene	mg/l	0.0005	ND	ND	ND	ND
Ethylbenzene	mg/l	0.0005	ND	ND	ND	ND
Total Xylene	mg/l	0.0005	ND	ND	ND	ND

E-1 DW - 027 1021

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P. O. BOX 1979
SACRAMENTO 8, CALIFORNIA

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

DIVISION OF WATER RESOURCES

SHEET 1

Do Not Fill In
State Well No.
Other Well No.
Region

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

(1) Driller:
Name W. H. Pitcher Co.
Address 7303 Mission Ste.
Daly City, California
License No. 6955 Classification C-57

(2) Proposed use or uses *(check)*: Domestic ☐ Municipal ☐ Irrigation ☐ Industrial ☒ Domestic and Irrigation ☐ Test well ☐ Other

(3) Equipment used *(check)*: Rotary ☐ Cable ☒ Dug well ☐ Other

Owner:
Name Chevrolet-Oakland Div. of General Motors
Address Foothill Blvd. and 69th Ave.
Oakland, California

(4) Type of work *(check)*: New well ☒ Reconditioning of well ☐ Deepening existing well ☐

(5) Well log:
Total depth of well 400 ft.

Give details of formations penetrated, such as silt, peat, muck, sand, gravel, clay, shale, sandstone, hardpan, rock. Include size of gravel (diameter) and sand (fine, medium, coarse), color of material, structure (loose, packed, cemented, soft, hard, brittle).

Depth From Ground Surface			
0 ft.	to 1 ft.	= 1	Concrete
1 "	" 14 "	= 13	Fill
14 "	" 45 "	= 31	Firm sand and gravel, some clay
45 "	" 59 "	= 14	Sand and gravel
59 "	" 78 "	= 19	Clay, yellow, sand, gravel
78 "	" 82 "	= 4	Yellow clay
82 "	" 87 "	= 5	Sand and gravel w/little clay—gravel to 2"
87 "	" 121 "	= 34	Clay w/sm o gravel and rock fragments
121 "	" 142 "	= 21	Gravel w/clay stringers
142 "	" 150 "	= 8	Yellow and grey clay
150 "	" 161 "	= 11	Yellow and grey clay, sandy
161 "	" 166 "	= 5	Clay and gravel
166 "	" 177 "	= 11	Yellow clay, sandy
177 "	" 183 "	= 6	Sand, gravel w/some clay (water)
183 "	" 195 "	= 12	Clay w/stringers of gravel
195 "	" 208 "	= 13	Grey clay
208 "	" 240 "	= 32	Grey clay, firm
240 "	" 250 "	= 10	Grey clay w/stringers of brown clay & gravel
250 "	" 256 "	= 6	Sand and fine gravel very little clay (water)
256 "	" 276 "	= 20	Grey and brown clay w/some stringers of fine gravel to 1/4"
276 "	" 286 "	= 10	Cemented gravel, hard
286 "	" 294 "	= 8	Yellow clay
294 "	" 298 "	= 4	Yellow clay, very little gravel, firm
298 "	" 308 "	= 10	Cemented gravel hard
308 "	" 400 "	= 92	Yellow clay w/stringers of gravel (fine) firm

If additional space is required, continue on DWR Form No. 246—Supplement, and attach to respective report copies.

(6) Casing left in well:

LENGTH FT.	DIAMETER INCHES	SINGLE, DOUBLE, WELDED, OTHER	LBS. PER FOOT OR GAGE OF CASING	SEATING BELOW GROUND SURFACE, FT.
400	22	Double	30 ga.	398

Type and size of shoe or well ring 1 x 2 Welded joints—☐ Yes ☒ No

D.W.R. Form No. 246

2S/3W 10Q1

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ACRAMENTO 5, CALIFORNIA

SUPPLEMENTAL SHEET

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

Do Not Fill In
State Well No.
Other Well No.
Region

(5) Well log (continued): Total depth of well 400 ft.

Give details of formations penetrated, such as silt, peat, muck, sand, gravel, clay, shale, sandstone, hardpan, rock. Include size of gravel (diameter) and sand (fine, medium, coarse), color of material, structure (loose, packed, cemented, soft, hard, brittle).

Depth From Ground Surface			
315	ft. to	317	ft. Clay, yellow, firm
317	" "	328	" Sandy clay, soft
328	" "	330	" Clay, brown, firm
330	" "	336	" Shaly, sandy, clay and gravel
336	" "	345	" Hard grey and brown clay w/gravel and rock fragments
345	" "	347	" Brown and grey clay, some gravel and rock fragments
347	" "	351	" Brown and grey clay, soft
351	" "	354	" Green and grey clay, stiff
354	" "	379	" Brown cla , very sandy
379	" "	390	" Brown clay
390	" "	393	" Brown sandy clay
393	" "	400	" Blue green clay

If additional space is required continue on DWR Form No. 246—Supplement, and attach to respective report copies.

D.W.R. Form No. 246—(SUPPLEMENT)

Form DWR 429

State No. _____

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

WELL DATA

State No. 2S/3W-7Q1
Other No. _____

Owner Chevrolet Div. Of General Motors
Address 69th & Foothill
Tenant Plant No. 1
Address Bancroft and 73rd Ave. - Oakland

Type of Well: Hydrograph ☐ Key ☐ Index ☐ Semiannual ☐ No. _____
Location: County Alameda Basin _____ Quad. No. 275C
U.S.G.S. Quad. Oakland East
SW ¼ SE ¼ Section 7, Twp. 2S, Rge. 3W MD B&M

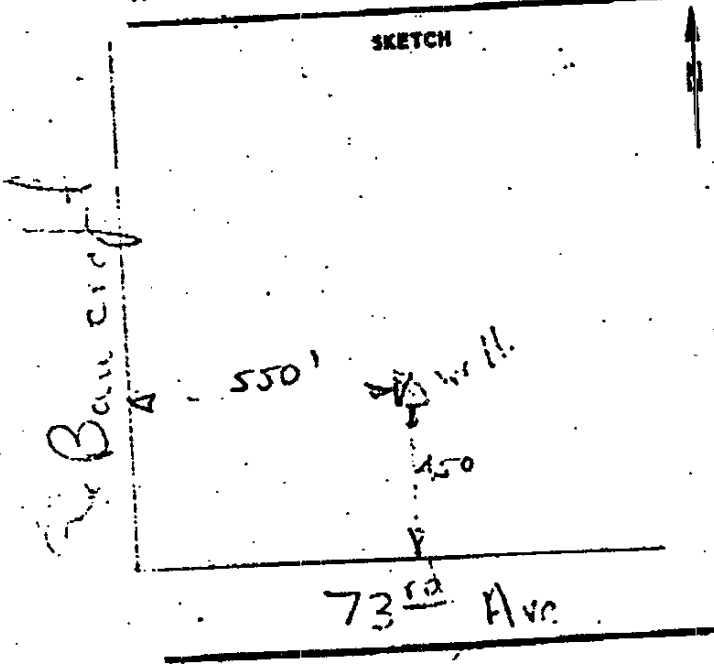
Description 550' E/O Bancroft
450' N/O 73rd Avenue

Reference Point description none

which is _____ ft. above/below land surface. Ground Elevation 60 ft.
Reference Point Elev. _____ ft. Determined from U.S.G.S. Contour
Well: Use Abandoned Condition _____ Depth 100 ft.
Casing: size 12 in., perforations 90-5...

Measurements By: DWR ☐ USGS ☐ USBR ☐ County ☐ Irr. Dist. ☐ Water Dist. ☐ Cons. Dist. ☐
Chief Aquifer: Name _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
Type of Material _____ Perm. Rating _____ Thickness _____
Gravel Packed? Yes ☐ No ☒ Depth to Top Gr. _____ Depth to Bot. Gr. _____
Supp. Aquifer _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
Driller Pitcher D.W.R. open (1) _____ confidential (2) _____
Date drilled 3-9-51 Log, filed _____ make _____
Equipment: Pump, type D.W.T. Size of discharge pipe _____ in. Water Analysis: Min. (1) _____ San. (2) _____ H.M. (3) _____
Serial No. _____ Make U.S. Water Levels available: Yes (1) _____ No _____
Power, Kind Elec. Motor Serial No. 892809 Period of Record: Begin _____ End _____
H. P. 25 Transformer No. _____ Collecting Agency _____
Elec. Meter No. _____ G.P.M. Pumping level _____ ft. Prod. Rec. (1) _____ Pump Test (2) _____ Yield (3) _____
Yield _____

SKETCH



REMARKS

Not in use because it sanded in 1953-54.

Recorded by: H. Sperber
Date September 1962

JUN 16 51

PLICATE
Copy
ION OF WATER RESOURCES
O. BOX 1028
SACRAMENTO 5, CALIFORNIA

SHEET 2

Do Not Fill In
State Well No.
Other Well No.
Region

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

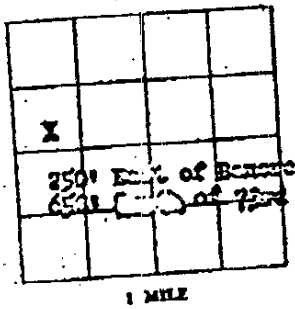
(7) Perforations:
Type of perforator used Mills
Perforated 90 ft. to 393 ft. Hole size 3/4" x 3/8" No. of holes 6 around per ft.

(8) Water levels:
Depth at which water first encountered 89 ft.
Depth to water before perforating 96 ft.
Depth to water after perforating 96 ft.
Note any change in water level while drilling

(9) Well pumping test:
Date of test 3/9/51 By whom J. H. Pitcher Co.
Depth to water when test started 96 ft.
G.P.M. at beginning of test 1150
Drawdown from standing level 89 ft.
G.P.M. at completion of test 1270
Drawdown at completion of test 96 ft.
Length of time tested 30 hrs.
Temperature of water unknown
Was gas present in water? ☐ Yes ☒ No

(10) General:
Was well gravel packed? No Size of rock Thickness of pack
Was a surface sanitary seal provided? No
Were any strata sealed against pollution? ☐ Yes ☒ No If yes, attach detailed description.
Strata sealed None
Was analysis made of water? ☐ Yes ☒ No If yes, attach copy.
Was electric log made of well? ☐ Yes ☒ No If yes, attach copy.
If well abandoned, was it plugged and sealed?
Method of plugging and sealing

(11) Location: Chevrolet Plant
Foothill Blvd. and 69th Ave.
Oakland Calif.
Section No.
Township
Range
Base & Meridian
Show location of well in Section, thus (X)
Distance to section lines from well, N or S ft.
A and E or W ft.
Show location of nearest known well, thus (O)
Distance to nearest known well 1 mile ft. West



(12) Time of work:
Work started date 3/12/51 Completed date 3/9/51
Date of this report 3/19/51

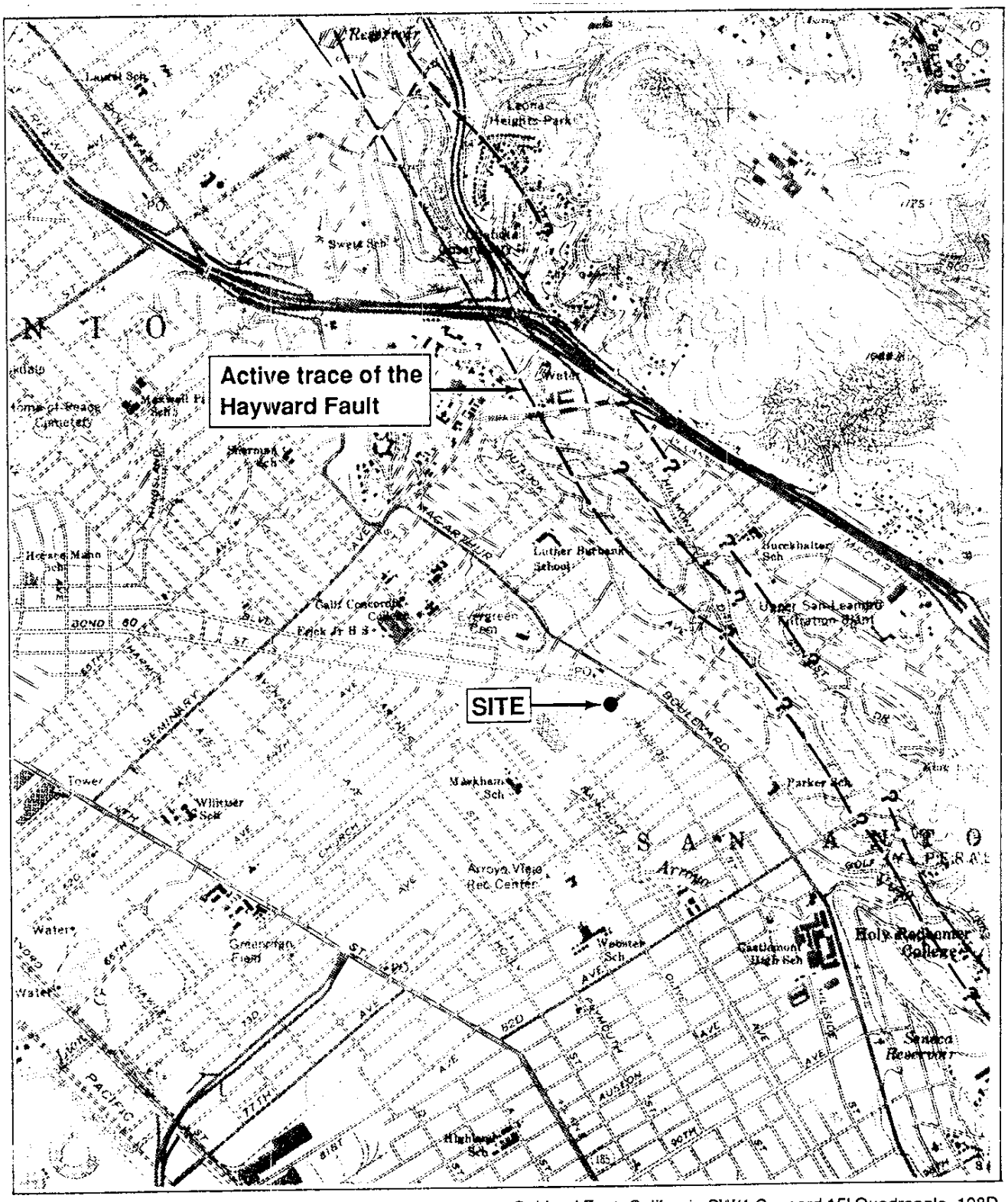
WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

[SIGNED] J. H. PITCHER CO.
Well Driller
By
License No. 69055 Classification C-57
Dated , 19

D.W.R. Form No. 246

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00000281.tif 327 / 543



Reference: Oakland East, California SW/4 Concord 15' Quadrangle, 198D

N

0 2000

Feet

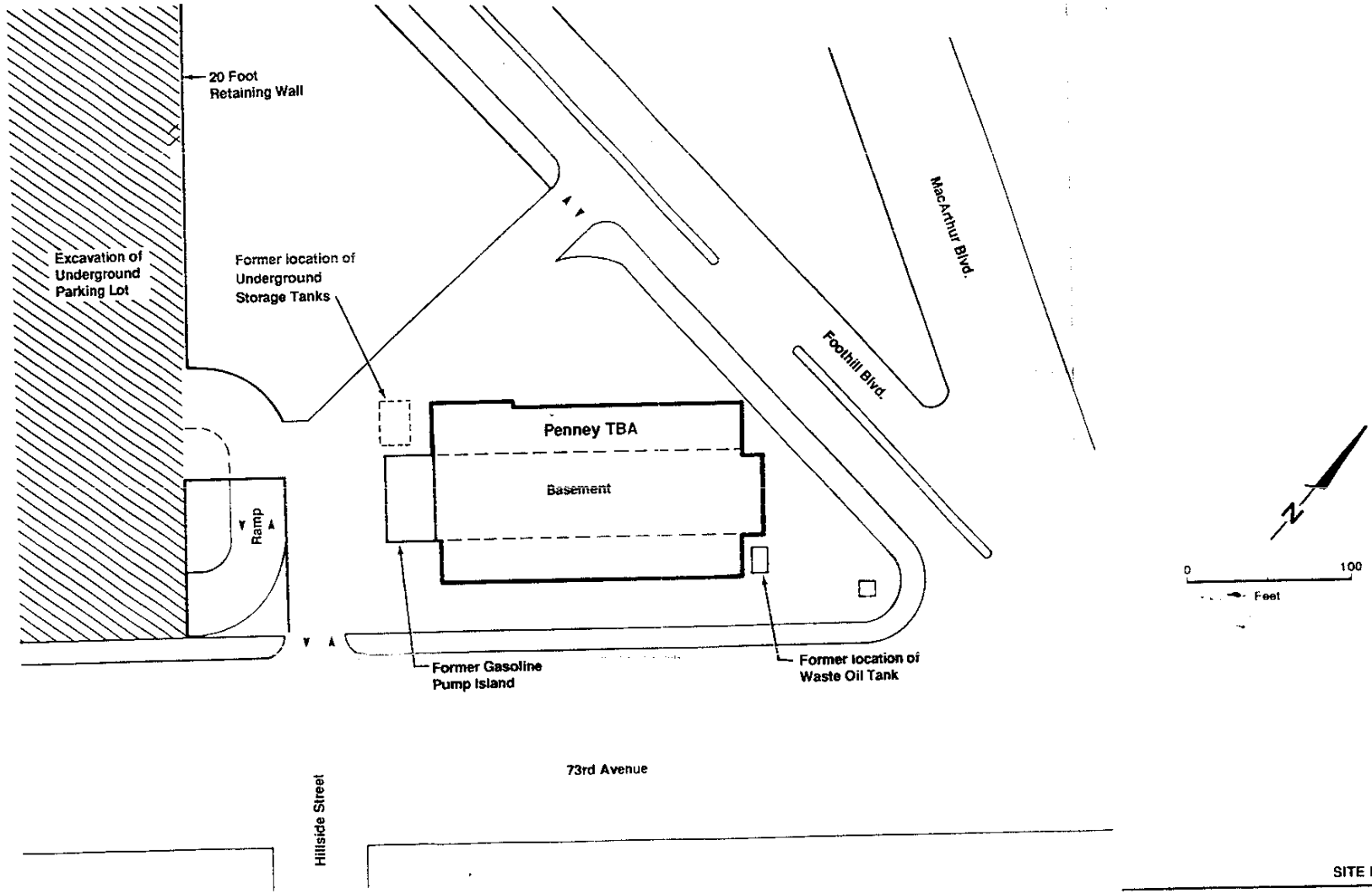
SITE LOCATION

TBA Site
Eastmont Mall
Oakland, California

June 1991
443-090-043

DAMES & MOORE

PLATE 1-1



SITE PLOT PLAN

TBA Site
Eastmont Mall
Oakland, California

April 1991
443-090-043

DAMES & MOORE

PLATE 1-2

00000281.tif 329 / 543

1965 AERIAL PHOTO OF THE DEMOLITION OF THE CHEVROLET FISHER BODY PLANT WITH THE EASTMONT MALL BUILDING PLAN SUPERIMPOSED

TBA Site
Eastmont Mall
Oakland, California

DAMES & MOORE

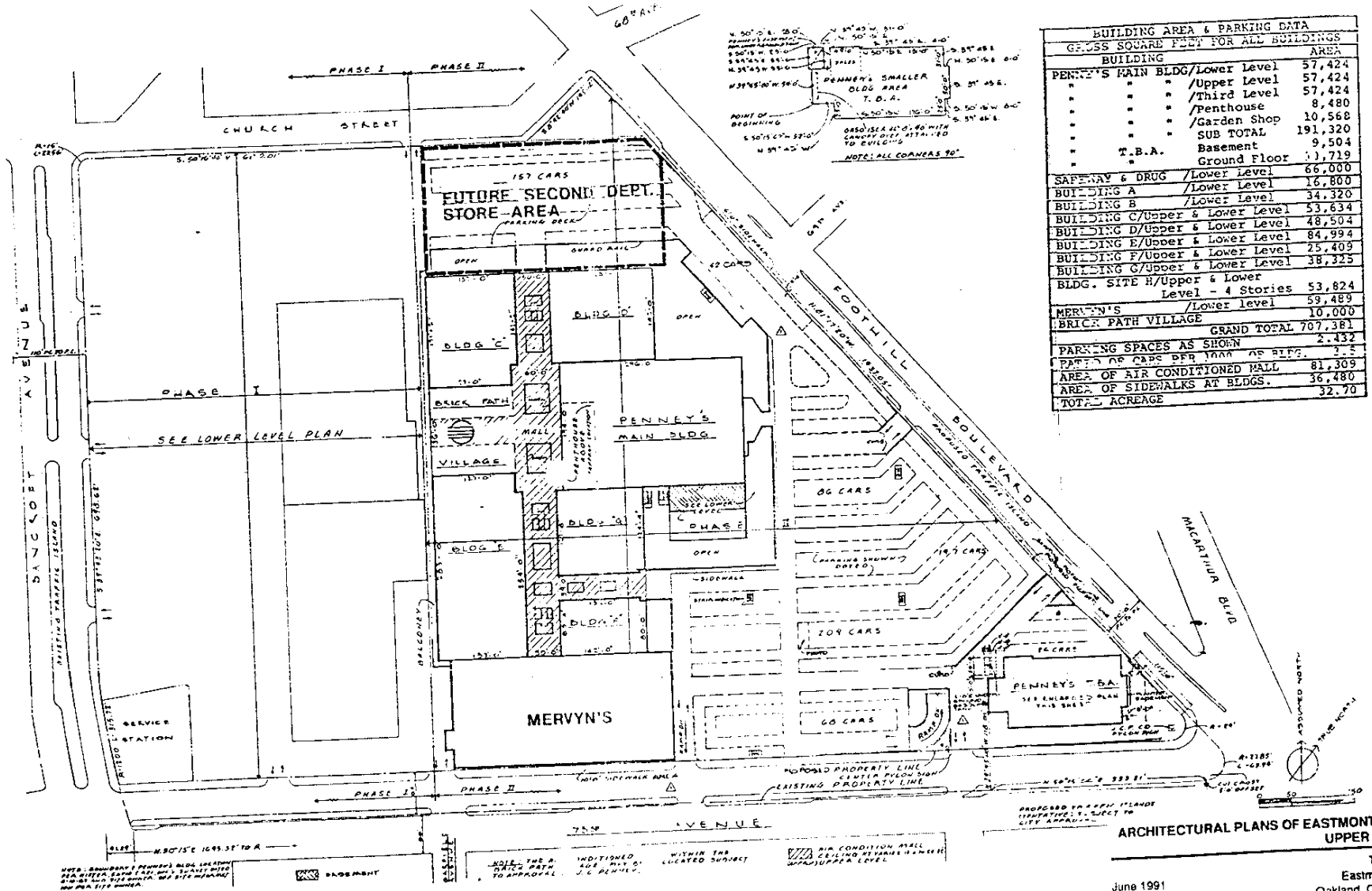
PLATE 3.2

00000281.tif 330 / 543

1965 AERIAL PHOTO OF DEMOLITION OF THE CHEVROLET FISHER BODY PLANT

DAMES & MOORE

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BUILDING AREA & PARKING DATA		
GROSS SQUARE FEET FOR ALL BUILDINGS		
BUILDING		AREA
PENNEY'S MAIN BLDG	/Lower Level	57,424
" " "	/Upper Level	57,424
" " "	/Third Level	57,424
" " "	/Penthouse	8,480
" " "	/Garden Shop	10,568
" " "	SUB TOTAL	191,320
" T.B.A.	Basement	9,504
" "	Ground Floor	11,719
SAFEWAY & DRUG	/Lower Level	66,000
BUILDING A	/Lower Level	16,800
BUILDING B	/Lower Level	34,320
BUILDING C/Upper & Lower Level		53,634
BUILDING D/Upper & Lower Level		48,504
BUILDING E/Upper & Lower Level		84,994
BUILDING F/Upper & Lower Level		25,409
BUILDING G/Upper & Lower Level		38,325
BLDG. SITE H/Upper & Lower Level - 4 Stories		53,824
MERVYN'S	/Lower level	59,489
BRICK PATH VILLAGE		10,000
GRAND TOTAL		707,381
PARKING SPACES AS SHOWN		2,432
PARKED CARS PER 1000 SQ FEET		3.5
AREA OF AIR CONDITIONED MALL		81,309
AREA OF SIDEWALKS AT BLDGS.		36,480
TOTAL ACREAGE		32.70

ARCHITECTURAL PLANS OF EASTMONT MALL
UPPER LEVEL

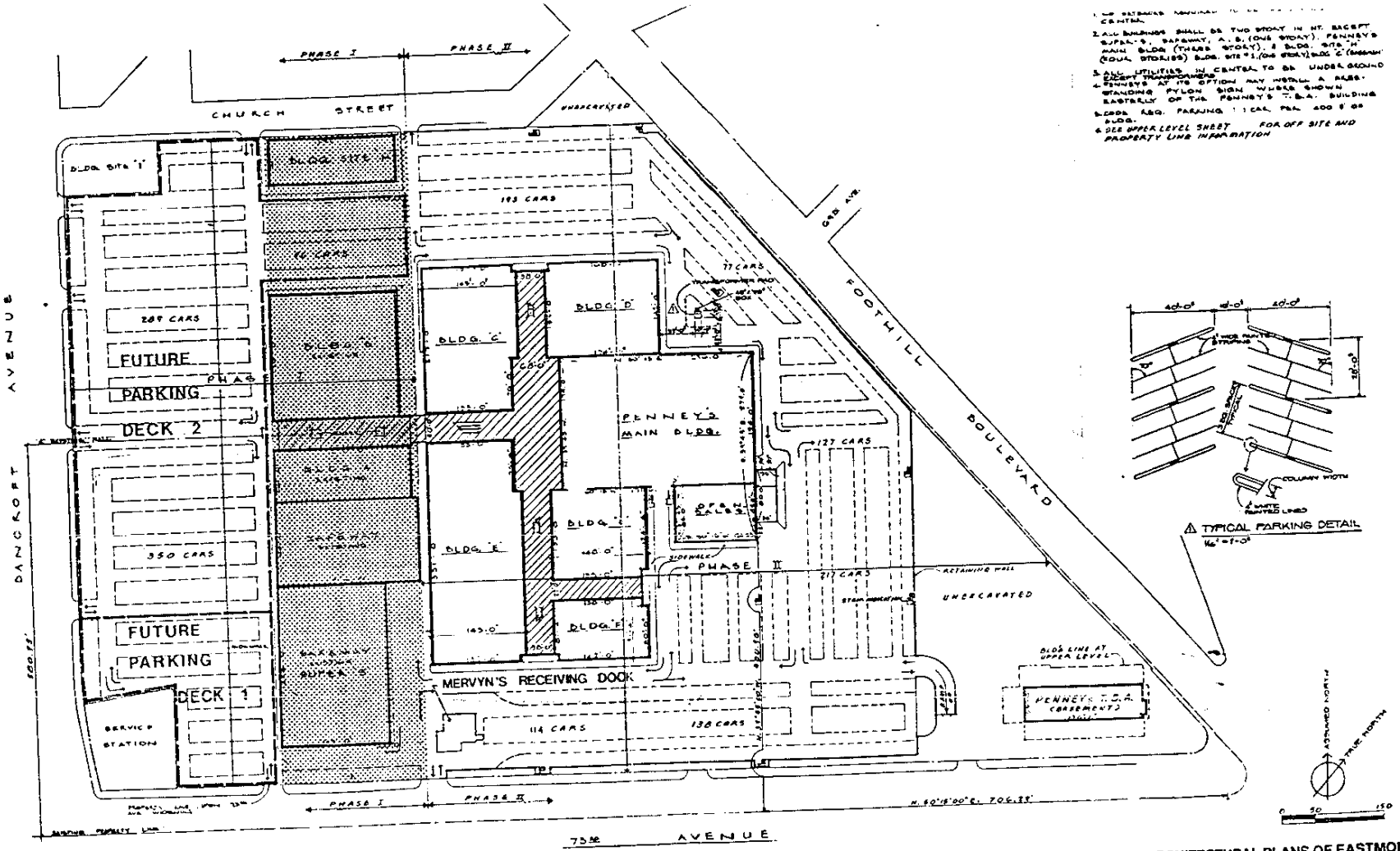
June 1991
443-090-043

TBA Site
Eastmont Mall
Oakland, California

DAMES & MOORE

PLATE 3-4

00000281.tif 332 / 543



ARCHITECTURAL PLANS OF EASTMONT MALL
LOWER LEVEL

June 1991
443-090-043

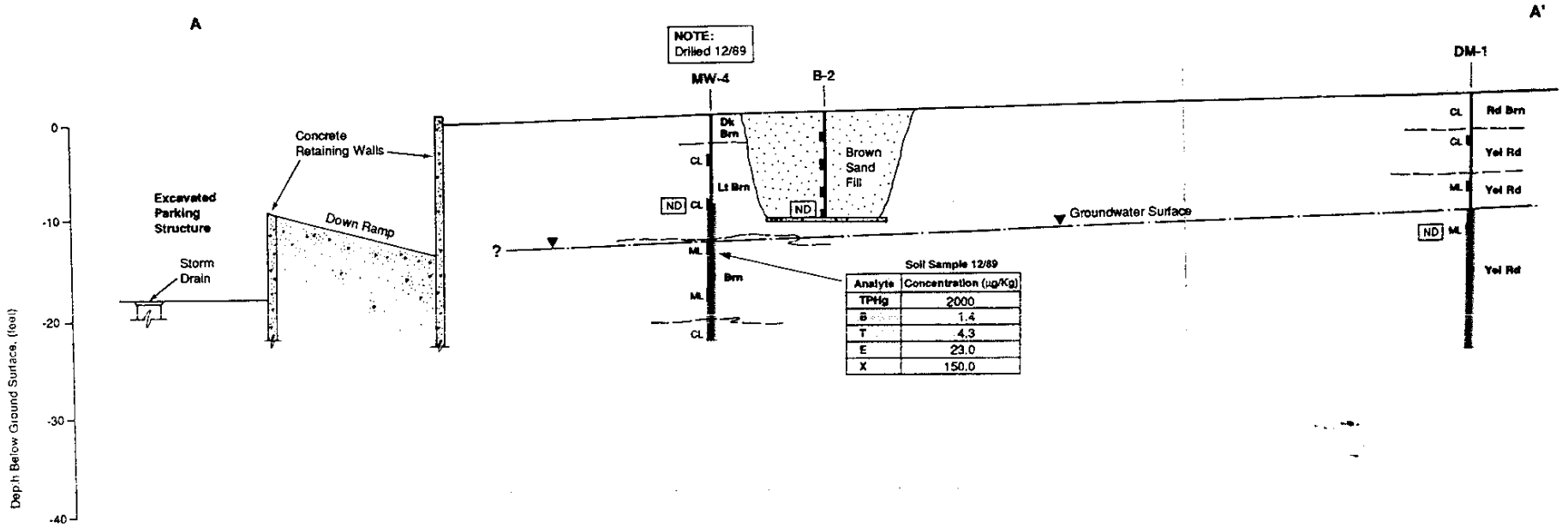
TBA Site
Eastmont Mall
Oakland, California

DAMES & MOORE

PLATE 3-5

00000281.tif 333 / 543

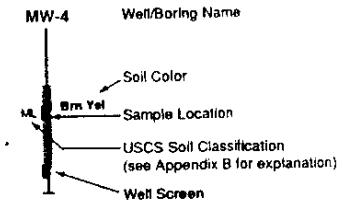
00000281.tif 334 / 543

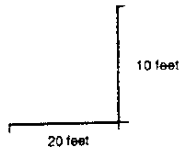


KEY

Constituents

TPHg	Total Petroleum Hydrocarbon as gasoline
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total Xylenes
ND	Soil sample analyzed by laboratory for TPH gasoline and BTEX. No constituents detected.





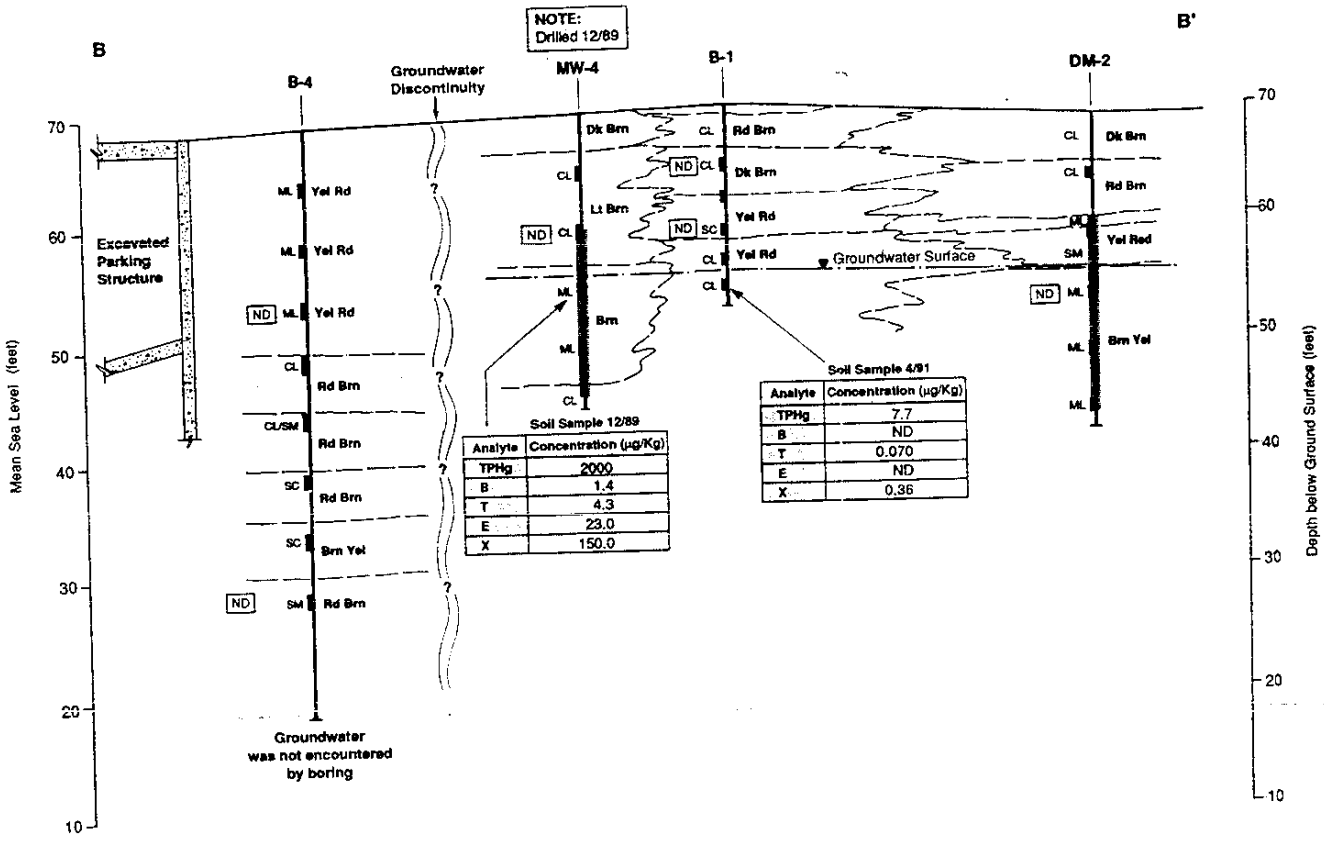
CROSS SECTION A-A'

TBA Site
Eastmont Mall
Oakland, California

June 1991
443-090-043

DAMES & MOORE

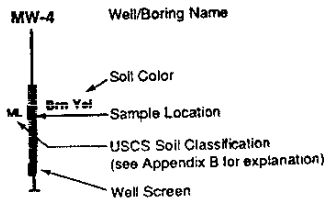
PLATE 5-1

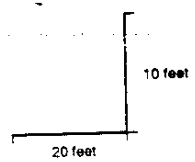


KEY

Constituents

TPHg	Total Petroleum Hydrocarbon as gasoline
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total Xylenes
ND	Soil sample analyzed by laboratory for TPH gasoline and BTEX. No constituents detected.





CROSS SECTION B-B'

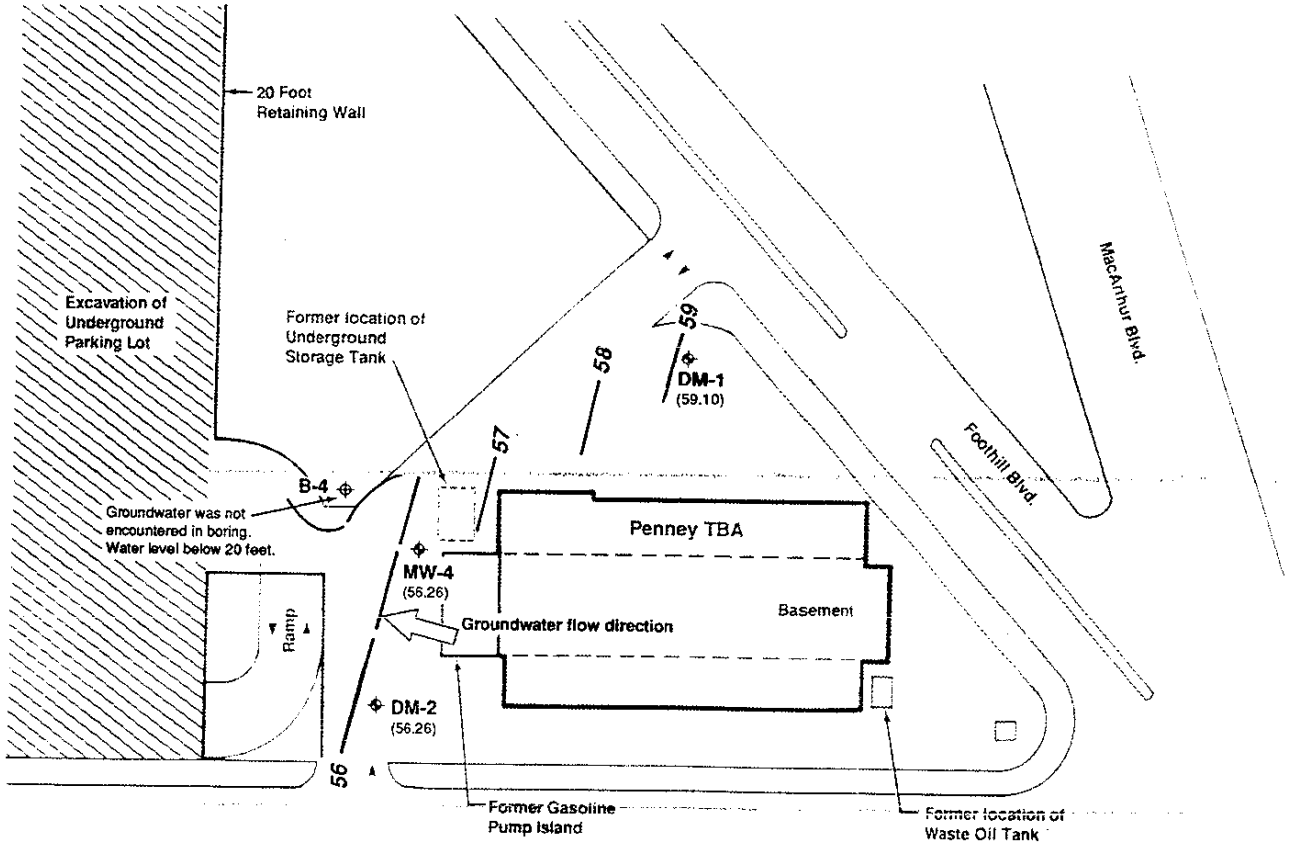
TBA Site
Eastmont Mall
Oakland, California

June 1991
443-090-043

DAMES & MOORE

PLATE 5-2

00000281.tif 335 / 543



KEY

(59.10)	Groundwater elevation above mean sea level (feet)
	Groundwater Contour
	Monitoring Well
	Boring
	Boundary of groundwater discontinuity

N

0 100

Feet

CONTOUR MAP OF THE GROUNDWATER TABLE / PERCHED AQUIFER

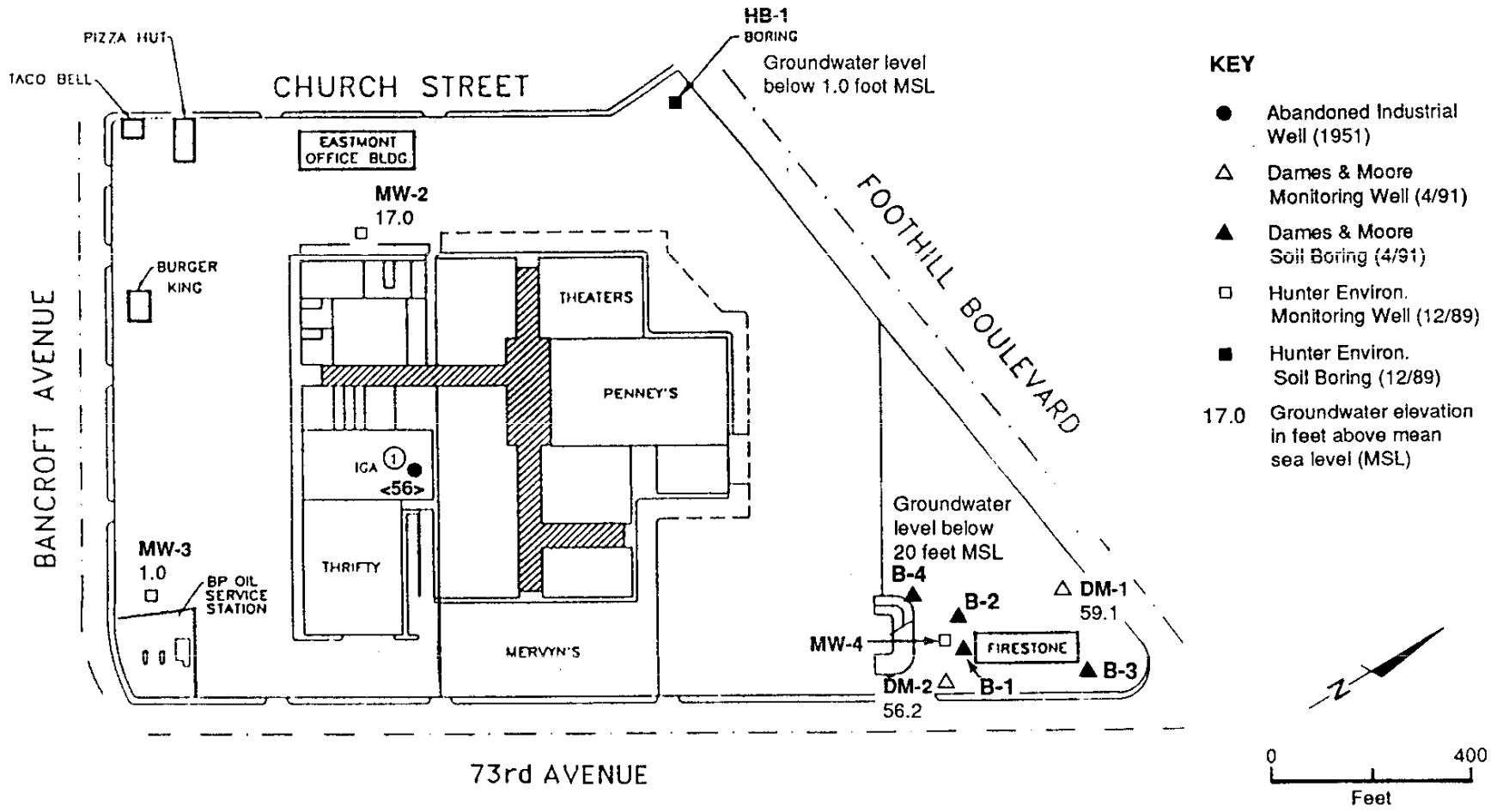
June 1991
443-090-043

TBA Site
Eastmont Mall
Oakland, California

DAMES & MOORE

PLATE 5-4

00000281.tif 336 / 543



NOTE:

1. ① Groundwater measured in industrial well at 96 feet below ground surface (bgs) or 56 feet below mean sea level. Perforated in lower aquifer from 90 to 393 feet bgs.
2. Plate modified from Hunter Environmental Services, December 20, 1989.

WATER LEVEL MEASUREMENTS AT THE EASTMONT MALL (1989, 1991 INVESTIGATIONS)

June 1991
443-090-043

TBA Site
Eastmont Mall
Oakland, California

DAMES & MOORE

PLATE 5-5

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Appendix A

Inventory of Groundwater Wells Drilled in the Vicinity of the Eastmont Mall

RBW-O-3.019

Well Inventory Report

The information presented in the Well Inventory Report has been obtained mainly from Water Well Drillers Reports (DWR Form No. 188). The Alameda County Flood Control and Water Conservation District (ACFC & WCD) assumes no responsibility for the accuracy of the data presented.

Definitions and abbreviations for items listed in the Well Inventory Report are as follows:

WELL NUMBER - Wells are numbered according to their location in the rectangular system of the Public Land Survey. The part of the number preceding the slash indicates the township; the part following the slash indicates the range and section number; the letter following the section number indicates the 40-acre subdivision; and the final digit is a serial number for wells in each 40-acre subdivision.

DATE (MO/YR) - The month and year when drilling or boring was completed. A "?" indicates that the date is unknown.

SURFACE ELEV. (FT) - The surface elevation of the well, if known, in feet above mean sea level. A "0" designates an unknown elevation.

TOTAL WELL DEPTH (FT) - The depth of the well. This usually designates the completed well depth. If the well has a well log available on file, then the total drilled depth of the well is given. The Well Inventory Report does not show total depth data for geotechnical borings. This is because only one state well number is assigned to one boring at a site, and there usually are several borings of different depth.

DEPTH TO WATER (FT) - This category usually indicates the standing groundwater level in the well on the date of well completion. The "depth to first water encountered" is recorded in the Well Inventory Report when it is the only water level data reported on the Well Drillers Report.

DTW (MSL) - The elevation of the standing groundwater level in the well on the date of well completion (in feet) relative to Mean Sea Level. This is calculated by the equation: DTW (MSL) = SURFACE ELEV. (FT) - DEPTH TO WATER (FT). If the surface elevation is unknown (as indicated by a "0" in the SURFACE ELEV. column) a "0" will also appear in this column.

USE - The well use (or in the case of cathodic protection wells and geotechnical borings, the reason for the excavation) as indicated in the Well Drillers Report or data sheets. A plus sign (+) after the well use indicates a well in the current ACFC&WCD monitoring network.

ABN - Abandoned well. A well whose use has been permanently discontinued or which is in such a state of disrepair that no water can be produced. In the Well Inventory Report, this may include wells which are covered or capped but not properly destroyed.

DES - Destroyed well. A well that has been properly filled so that it cannot produce water nor act as a vertical conduit for the movement of groundwater.

DOM - Domestic well. A water well which is used to supply water for the domestic needs of an individual residence or systems of four or less service connections or "hook-ups".

INA - Inactive well. A well not routinely operating but capable of being made operable with a minimum effort. Also called a "standby well".

IND - Industrial well. A water well used to supply industry on an individual basis.

IRR - Irrigation well. A water well used to supply water only for irrigation or other agricultural purposes. In the Well Inventory Report, this category includes large capacity wells as well as small capacity wells for lawn irrigation.

MON - Monitoring or observation well. Wells constructed for the purpose of observing or monitoring groundwater conditions. (See "PIE" below).

MUN - Municipal well. A water well used to supply water for domestic purposes in systems subject to Chapter 7, Part 1, Division 5 of the California Health and Safety Code. Included, are wells supplying public water systems classified by the Department of Health Services. Also referred to as community water supply wells.

PIE - Piezometer. A piezometer is a well specially designated to measure the hydraulic head within a zone small enough to be considered essentially a point as contrasted with a well that reflects the average head of the aquifer for the screened interval.

STO - Stock. A water well used primarily for livestock.

TES - Test well and test hole. A test well is constructed for the purpose of obtaining the information needed to design a well prior to its construction. Such wells are not to be confused with "test holes" which are temporary in nature (i.e., uncased excavations whose purpose is the immediate determination of existing geologic and hydrologic conditions). Test wells are cased and can be converted to observation or monitor wells and, under certain circumstances, to production wells. In the inventory, "TES", includes both test wells and test holes.

CAT - Cathodic protection well. Any artifical excavation constructed by any method for the purpose of installing equipment or facilities for the protection from corrosion by electrochemical methods of metallic equipment (usually piping) in contact with the ground; commonly referred to as cathodic protection.

GEO - Geotechnical boring. A temporary boring made to determine certain engineering properties of soils. An asterisk (*) indicates that the state well number assigned to the boring represents more than one boring at a particular site.

"?" - Unidentified use. This indicates that the use of these water wells could not be determined from the available well data.

LOG - This category indicates the nature of the geologic record, or log, for the well or boring available in the ACFC & WCD files. Abbreviations are as follows:

D - well driller's log
G - geotechnical boring log
E - electric (resistivity) log or other subsurface geophysical logs.
? - no log available

WQ - This category indicates which wells have water quality data available in ACFC & WCD files. The numbers 1 through 9 signify the number of sets of water quality data available. A plus sign (+) indicates that 10 or more sets of data are available for that well. A "0" indicates that no water quality data is available.

WL - This category indicates which wells have water level data other than the data reported on the Well Drillers Reports. The numbers 1 through 9 signify the number of water level measurements available. A plus sign (+) indicates that 10 or more measurements are available for that well. A "0" indicates that no data is available.

YIELD (GPM) - The maximum pumping rate in gallons per minute that can be supplied by a well without lowering the water level in the well below the pump intake. This information is taken from pump test data recorded in the Well Drillers Reports. Some of the yield data indicates current production rates and does not reflect maximum yield values determined in a capacity test. A "0" indicates that the yield is unknown.

DIA (IN) - The diameter (in inches) of the main casing in a well. May also indicate the diameter of a hand-dug well. Diameter data is not recorded for geotechnical borings. A "0" indicates that the diameter is unknown.

JAL10A3-5

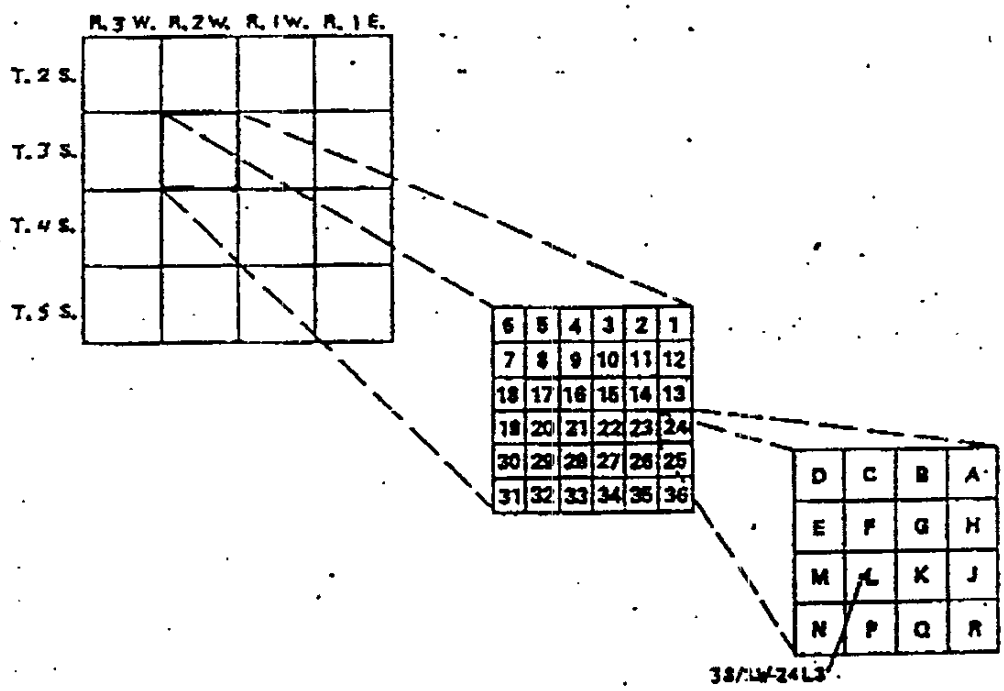
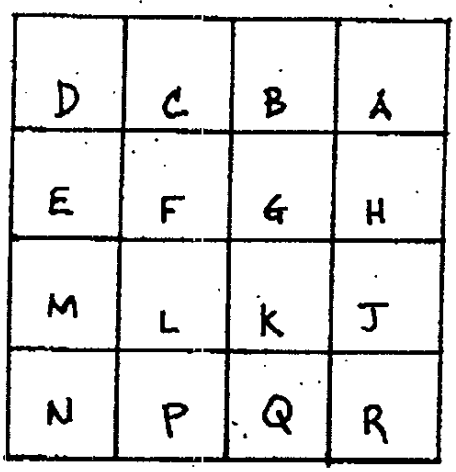


Figure 1: Well numbering system.


D C B A
E F G H
M L K J
N P Q R

07 5/91

ALAMEDA COUNTY -- BAY PLAIN GROUNDWATER STUDY -- WELL INVENTORY REPORT

WELL NUMBER	DATE (MO/YR)	SURFACE ELEV. (FT)	TOTAL WELL DEPTH (FT)	DEPTH TO WATER (FT)	DTW (MSL)	WELL USE	LOG	WC	WL	YIELD (GPM)	DIA. (IN)
2S/3W 10C 1	?	C	0	83	0	ABN	?	0	1	C	6
2S/3W 10C 2	5/74	C	120	C	0	CAT	D	C	0	0	0
2S/3W 10G 1	-?	93	440	55	0	IRR+	D	C	+	0	10
2S/3W 10J 1	12/89	C	25	13	0	TES	X	0	0	C	2
2S/3W 10K 1	12/89	C	35	20	0	TES	X	C	0	C	2
2S/3W 10L 1	8/77	C	50	C	0	CAT	D	C	0	C	0
2S/3W 10L 2	11/90	0	27	15	0	MON	X	C	0	C	2
2S/3W 10L 3	11/90	0	32	18	0	MON	X	C	0	0	2
2S/3W 10L 4	11/90	C	27	0	0	MON	X	C	0	C	2
2S/3W 10L 5	11/90	C	27	13	0	MON	X	C	0	C	2
2S/3W 10P 1	6/74	C	120	C	0	CAT	D	C	0	C	0
2S/3W 10Q 1	3/51	60	400	96	-36	ABN	D	C	0	170	12
2S/3W 10Q 2	6/81	C	65	C	0	CAT	D	C	0	C	0
2S/3W 10Q 3	12/89	C	45	34	0	TES	X	C	0	0	2
2S/3W 10R 1	8/74	C	120	C	0	CAT	D	C	0	0	0
2S/3W 11E 1	1/78	C	27	22	0	IRR	D	C	0	5	6
2S/3W 11J	12/89	C	7	C	0	BOR*	X	C	0	C	C
2S/3W 11J 1	3/72	C	65	C	0	CAT	D	C	0	C	0
2S/3W 11J 2	3/77	C	65	C	0	CAT	D	0	0	C	0
2S/3W 11J 3	7/78	C	108	7	0	IRR	D	0	0	C	6
2S/3W 14B 1	?	C	533	C	0	MUN	D	0	0	C	12
2S/3W 14E 2	1/76	C	120	C	C	CAT	D	C	0	C	0
2S/3W 14D 1	8/76	C	120	C	C	CAT	D	C	0	C	C
2S/3W 14H 1	7/82	C	65	C	0	CAT	D	C	0	C	C
2S/3W 14J80	1/76	C	120	C	0	CAT	D	C	0	C	0
2S/3W 14N 1	6/77	C	60	25	0	DOM	D	C	0	C	6
2S/3W 14N 2	10/77	C	62	26	0	IRR	D	C	0	C	8
2S/3W 14Q 1	5/76	C	120	C	C	CAT	D	C	0	C	0
2S/3W 15C 1	2/76	C	65	C	0	CAT	D	C	0	C	0
2S/3W 15F 1	?	C	22	12	0	ABN	?	C	0	C	8
2S/3W 15G 1	1/74	C	120	C	0	CAT	D	C	0	C	0
2S/3W 15K	03/88	26	42	13	13	BOR	G	C	0	C	0
2S/3W 15K 1	5/77	C	35	2	0	IRR	D	C	0	C	8
2S/3W 15K 2	5/87	C	25	13	C	MON	D			C	7
2S/3W 15K 3	5/87	C	25	12	0	MON	D			C	?
2S/3W 15K 4	07/88	25	23	16	0	MON	G	C	0	C	2
2S/3W 15K 5	07/88	24	18	14	0	MON	G	C	0	C	2
2S/3W 15K 6	07/88	22	18	11	0	MON	G	C	0	C	2
2S/3W 15K 7	07/88	22	19	11	0	MON	G	C	0	C	2
2S/3W 15N 1	/45	C	400	69	0	IND	D	C	1	C	12
2S/3W 15N 2	/41	C	128	78	0	IRR	?	C	1	C	8
2S/3W 15P 1	/25	C	90	8	C	IRR	?	C	1	C	6
2S/3W 15P 2	5/73	C	120	C	0	CAT	D	C	0	0	0

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of 3/91

ALAMEDA COUNTY--GRCLNDWATER WELLS--LOCATIONS

WELL NUMBER	WELL OWNER	WELL ADDRESS	CITY	PHONE NUMBER	DATE OF LAST UPDATE
2S/3W 10C 1	MILLS CCLLEGE	5000 MACARTHER BLVD	O	0	12/13/1984
2S/3W 10C 2	PG&E	MCARTHUR BLVD & 61TH ST	O	0	7/3C/1984
2S/3W 10G 1	EVERGREEN CEMENTARY	64TH & MACARTHER	O	0	7/3C/1984
2S/3W 10J 1	TOPA SAVINGS & LCANS	EASTPCNT MALL	OAK	0	7/13/1990
2S/3W 10K 1	TOPA SAVINGS & LCANS	EASTPCNT MALL	OAK	0	7/13/1990
2S/3W 10L 1	EXXCN OIL USA	BANCRCFT & 68TH	O	0	7/3C/1984
2S/3W 10L 2	OAKLAND COMMUNITY HOUSING	6455 FOOTHILL BLVD.	OAK	0	2/27/1991
2S/3W 10L 3	OAKLAND COMMUNITY HCUSING	6455 FOOTHILL BLVD.	OAK	0	2/27/1991
2S/3W 10L 4	OAKLAND COMMUNITY HCUSING	6455 FOOTHILL BLVD.	OAK	0	2/27/1991
2S/3W 10L 5	OAKLAND COMMUNITY HCUSING	6455 FOOTHILL BLVD.	OAK	0	2/27/1991
2S/3W 10P 1	PG&E	CHURCH ST	O	0	7/3C/1984
2S/3W 10Q 1	CHEVROLET-OAK. DIV.	FOOTHILL & 69TH	C	0	12/13/1984
2S/3W 10Q 2	EBMUD	73RD & GARFIELD	O	0	7/30/1984
2S/3W 10Q 3	TOPA SAVINGS & LOANS	EASTPONT MALL	OAK	0	7/13/1990
2S/3W 10R 1	PG&E	HILLSIDE & 76TH AVE	O	0	7/30/1984
2S/3W 11E 1	CHAE SAN YIM	3971 BURCKHALTER AVE	O	0	12/13/1984
2S/3W 11J	EXXCN CCRPORATION	8008 MOUNTAIN BLVD.	OAK	0	7/16/1990
2S/3W 11J 1	PROGRESSIVE ELEC.	SHONE & FONTAINE	O	0	7/3C/1984
2S/3W 11J 2	PROGRESSIVE ELE.	HOLMES & FONTIANE	O	0	7/30/1984
2S/3W 11J 3	AL PONTE	7972 MT. BLVD	O	0	7/30/1984
2S/3W 14B 1	UNION WATER CO.	1201 E 12TH ST	SLZ	0	7/30/1984
2S/3W 14B 2	PG&E	NEY & EL MONTE AVE	O	0	7/30/1984
2S/3W 14D 1	PG&E	DOWLING & 80TH AVE	C	0	7/30/1984
2S/3W 14H 1	EBMUD	BLANDON RD	O	0	7/3C/1984
2S/3W 14J80	PG&E	OAKNOLL & CASTLEWOOD	C	0	7/3C/1984
2S/3W 14N 1	HUEKC MICLS	1840 90TH AVE	O	0	7/30/1984
2S/3W 14N 2	MR. GRUMBS	1910 90TH AVE	O	0	7/30/1984
2S/3W 14Q 1	PG&E	94TH & HILLSIDE	C	0	7/3C/1984
2S/3W 15C 1	EBMUD	73TH AVE W/O FRESNO ST	C	0	7/3C/1984
2S/3W 15F 1	MRS. HARTMAN	1477 76TH AVE	C	0	7/3C/1984
2S/3W 15G 1	PG&E	PLYMOUTH & 80TH AVE	O	0	7/3C/1984
2S/3W 15K	KAISER ENGINEERS	8200 E. 14TH ST	O	0	8/ 8/1988
2S/3W 15K 1	ALPHONSE PERKINS	1431 82TH AVE	O	0	1/15/1985
2S/3W 15K 2	CROSEY & OVERTON	82ND AVE. & 14TH ST.	OAK	0	2/ 3/1988
2S/3W 15K 3	CROSEY & OVERTON	82ND AVE. & E. 14TH ST.	OAK	0	2/ 3/1988
2S/3W 15K 4	E. OAK. YOUTH DEVE. CEN.	CRN OF E. 82ND & E. 14TH	OAK	0	12/16/1988
2S/3W 15K 5	E. OAK. YOUTH DEVE. CEN.	CRN OF E. 82ND & E. 14TH	OAK	0	12/16/1988
2S/3W 15K 6	E. OAK. YOUTH DEVE. CEN.	CRN OF E. 82ND & E. 14TH	OAK	0	12/16/1988
2S/3W 15K 7	E. OAK. YOUTH DEVE. CEN.	CRN OF E. 82ND & E. 14TH	OAK	0	12/16/1988
2S/3W 15N 1	VINCENT&MARY SCCNZA-OWNR	919 81ST ST	C	0	7/3C/1984
2S/3W 15N 2	A.R. COMPAGLIA	1CC1 81ST AVE	O	0	7/3C/1984
2S/3W 15P 1	MANUEL JESUS	1218 82ND ST	O	0	7/3C/1984
2S/3W 15P 2	PG&E	E ST S/E 86TH	O	0	7/3C/1984

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6/10/91 ALAMEDA COUNTY --BAY PLAIN GROUNDWATER STUDY -- WELL INVENTORY REPORT PAGE 1

WELL NUMBER	DATE (MO/YR)	SURFACE ELEV. (FT)	TOTAL WELL DEPTH (FT)	DEPTH TO WATER (FT)	DTW (MSL)	WELL USE	LOG	LG	AL	YIELD (GPM)	DIA. (IN)
2S/3W 9C 1	7/76	C	120	0	0	BOR	6	0	0	0	0
2S/3W 9D 1	6/75	C	120	0	0	CAT	9	0	0	0	0
2S/3W 9K 1	10/77	C	102	61	0	IRR	0	0	0	0	6
2S/3W 9K 2	4/65	C	30	13	0	MON	X	0	0	0	0
2S/3W 9K 3	C1/90	C	21	10	0	MON	X	0	0	0	0
2S/3W 9K 4	C1/90	C	21	10	0	MON	X	0	0	0	0
2S/3W 9K 5	C1/90	C	24	10	0	MON	X	0	0	0	0
2S/3W 9M 1	C2/90	C	0	0	0	BRS	X	0	0	0	0
2S/3W 9M 2	C1/90	C	24	10	0	MON	X	0	0	0	0
2S/3W 9M 3	C1/90	C	21	10	0	MON	X	0	0	0	0
2S/3W 9M 4	C1/90	C	21	10	0	MON	X	0	0	0	0
2S/3W 9M 5	C1/90	C	24	10	0	MON	X	0	0	0	0
2S/3W 9N 1	7/76	C	120	0	0	CAT	9	0	0	0	0
2S/3W 9P 1	/67	0	204	79	0	ABN	7	0	0	0	12
2S/3W 9P 2	6/76	C	120	0	0	CAT	9	0	0	0	0
2S/3W 9R 1	7/76	C	120	0	0	CAT	9	0	0	0	0
2S/3W 16A 1	C4/88	C	25	11	0	MON	6	0	0	0	0
2S/3W 16A 1	5/38	C	25	0	0	DES	6	0	0	0	0
2S/3W 16A 2	C4/88	C	25	11	0	MOPW	6	0	0	0	0
2S/3W 16A 2	5/38	C	25	0	0	DES	6	0	0	0	0
2S/3W 16A 3	C6/85	C	24	10	0	MCN	6	0	0	0	0
2S/3W 16A 3	5/38	C	25	0	0	DES	6	0	0	0	0
2S/3W 16C 1	5/76	C	120	0	0	CAT	9	0	0	0	0
2S/3W 16D 1	4/87	C	12	8	0	BOR	6	0	0	0	0
2S/3W 16D 2	C3/88	C	12	10	0	DES	6	0	0	0	0
2S/3W 16Q 1	4/87	C	5	0	0	BOR	6	0	0	0	0
2S/3W 16Q 1	/35	C	1,025	79	0	INO	N	0	0	250	18
2S/3W 16Q 2	6/76	C	120	0	0	CAT	9	0	0	0	0
2S/3W 16Q 3	C1/87	C	22	12	0	MCN	9	0	0	0	0
2S/3W 16Q 4	C1/87	C	22	12	0	MCN	9	0	0	0	0
2S/3W 16Q 5	C1/87	C	13	7	0	TES	9	0	0	0	0
2S/3W 16Q 6	C3/87	C	15	6	0	MCN	9	0	0	0	0
2S/3W 16Q 7	3/87	C	16	5	0	MON	6	0	0	0	0
2S/3W 16Q 8	3/87	C	19	4	0	MON	6	0	0	0	0
2S/3W 16Q 9	3/37	C	19	3	0	MON	6	0	0	0	0
2S/3W 16Q10	2/43	C	20	11	0	TES	6	0	0	0	0
2S/3W 16Q11	2/38	C	20	11	0	TES	6	0	0	0	0
2S/3W 16Q12	2/38	C	15	10	0	TES	6	0	0	0	0
2S/3W 16Q13	C3/90	C	0	0	0	DES	X	0	0	0	0
2S/3W 16F1	?	C	300	84	0	IRR	7	0	1	0	8
2S/3W 16F2	/35	C	410	74	0	DES	7	0	1	0	12
2S/3W 16G1	?	C	21	12	0	IRR	0	0	0	0	0
2S/3W 16J1	C4/90	C	9	0	0	BCR	X	0	0	0	0	0
2S/3W 16L1	C4/90	C	21	14	0	MON	X	0	0	0	0	0
2S/3W 16L2	C4/90	C	23	13	0	MON	X	0	0	0	0	0
2S/3W 16L3	C4/90	C	22	11	0	MON	X	0	0	0	0	0
2S/3W 16L4	3/90	C	11	5	0	MON	X	0	0	0	0	0
2S/3W 16L5	3/90	C	11	6	0	MCN	X	0	0	0	0	0
2S/3W 16L6	3/90	C	11	0	0	MCN	X	0	0	0	0	0
2S/3W 16R	C4/89	C	0	0	0	BOR*	6	0	0	0	0	6

ALAMEDA COUNTY - DAY PLAIN GROUNDWATER STUDY -- WELL INVENTORY REPORT

WELL NUMBER	DATE (MO/YR)	SURFACE ELEV (FT)	TOTAL WELL DEPTH (FT)	DEPTH TO WATER (FT)	DTW (MSL)	WELL USE	LOG	WQ	WL	YIELD (GPM)	DIA. (IN)
2S/3W 16M 1	12/84	C	51	5	0	NON	X			0	0
2S/3W 16M 2	12/84	C	107	5	0	NON	X			0	0
2S/3W 16M 3	12/84	C	86	10	0	NON	X			0	0
2S/3W 16P 1	9/90	C	94	14	0	NON	X	0	0	0	4
2S/3W 16P 2	9/90	C	100	18	0	NON	X	0	0	0	4
2S/3W 16P 3	9/90	C	95	15	0	NON	X	0	0	0	4
2S/3W 16P 4	9/90	C	102	17	0	NON	X	0	0	0	4
2S/3W 16P 5	9/90	C	73	19	0	NON	X	0	0	0	4
2S/3W 16P 6	9/90	C	83	14	0	NON	X	0	0	0	4
2S/3W 16P 7	9/90	C	75	14	0	NON	X	0	0	0	1
2S/3W 16P 8	9/90	C	74	17	0	NON	X	0	0	0	1
2S/3W 16P 9	9/90	C	83	15	0	NON	X	0	0	0	4
2S/3W 16P10	9/90	C	72	22	0	NON	X	0	0	0	4
2S/3W 16P11	9/90	C	98	19	0	NON	X	0	0	0	4
2S/3W 16R 1	3/77	C	510	83	0	IND+	DE	D	D	1,000	14
2S/3W 16R 2	C1/85	C	0	11	0	NON	D	Y	0	C	8
2S/3W 16R 2	C1/85	C	26	11	0	NON	D	Y	0	C	8
2S/3W 16R 3	8/89	7	19	7	0	TES	X	0	0	C	2
2S/3W 16R 4	8/89	7	23	7	0	TES	X	C	0	0	2
2S/3W 16R 5	8/86	6	25	8	-2	TES	X	0	0	C	2

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ALAMEDA COUNTY--GROUNDWATER WELLS--LOCATIONS

WELL NUMBER	WELL OWNER	WELL ADDRESS	CITY	PHONE NUMBER	DATE OF LAST UPDATE
2S/3W 9C 1	PG&E	MONTICELLO & FAIRFAX	0	0	7/30/1984
2S/3W 9E 1	COUNTY OF ALAMEDA	COURTLAND AVE/TYRELL ST	0	0	7/22/1986
2S/3W 9D 1	PG&E	S/S VICKSBURG	0	0	7/30/1984
2S/3W 9K 1	FRANK ELAN	2232 SEMINARY AVE	0	0	7/30/1984
2S/3W 9K 2	GENERAL ELECTRIC	5441 E 14TH ST	0	4366900	5/14/1985
2S/3W 9N/9P 1	QUAKER OATS COMPANY	5625 EAST 14TH STREET	OAK	0	6/27/1990
2S/3W 9N 3	QUAKER OATS COMPANY	5625 EAST 14TH STREET	OAK	0	6/27/1990
2S/3W 9N 3	QUAKER OATS COMPANY	5625 EAST 14TH STREET	OAK	0	7/ 3/1990
2S/3W 9N 4	QUAKER OATS COMPANY	5625 EAST 14TH STREET	OAK	0	6/27/1990
2S/3W 9N 5	QUAKER OATS COMPANY	5625 EAST 14TH STREET	OAK	0	6/27/1990
2S/3W 9N 6	QUAKER OATS COMPANY	5625 EAST 14TH STREET	OAK	0	7/ 3/1990
2S/3W 9P 1	SAFEWAY STORE	5725 E 14TH ST	0	0	7/30/1984
2S/3W 9P 2	PG&E	55TH & E 15TH ST	0	0	7/30/1984
2S/3W 9A 1	PG&E	62ND AVE. & HILTON	0	0	7/30/1984
2S/3W 16A 1	TEXACO STA #6248800C220	6630 EAST 14TH ST	OAK	0	12/16/1988
2S/3W 16A 2	TEXACO STA #6248800C220	6630 EAST 14TH ST	OAK	0	12/16/1988
2S/3W 16A 3	TEXACO STA #6248800C220	6630 EAST 14TH ST	OAK	0	12/16/1988
2S/3W 16C 1	PG&E	62ND AVE S/E 14TH ST	0	0	7/30/1984
2S/3W 16D	AC TRANSIT	1100 SEMINARY AVE	OAK	0	12/16/1988
2S/3W 16D	CEPHUS & JESSIE M BAYLIS	1154 57TH AVE.	OAK	0	6/28/1989
2S/3W 16D 1	STOKELY-VAN CAMPS	1175 57TH AVE.	0	2615800	7/30/1984
2S/3W 16D 2	PG&E	TEVIS ST N/O 62ND ST	C	0	8/ 2/1984
2S/3W 16D 3	A/C TRANSIT	1100 SEMINARY AVE	0	0	3/ 6/1987
2S/3W 16D 4	A/C TRANSIT	1100 SEMINARY AVE	0	0	3/ 6/1987
2S/3W 16D 5	A/C TRANSIT	1100 SEMINARY AVE	0	0	3/ 6/1987
2S/3W 16D 6	A/C TRANSIT	1100 SEMINARY AVE	0	0	4/15/1987
2S/3W 16D 7	A.C. TRANSIT	1100 SEMINARY AVE.	OAK	0	2/ 8/1988
2S/3W 16D 8	A.C. TRANSIT	1100 SEMINARY AVE.	OAK	0	2/ 8/1988
2S/3W 16D 9	A.C. TRANSIT	1100 SEMINARY AVE.	OAK	0	2/ 8/1988
2S/3W 16D10	CEPHUS & JESSIE M BAYLIS	1154 57TH AVE.	OAK	0	6/28/1989
2S/3W 16D11	CEPHUS & JESSIE M BAYLIS	1154 57TH AVE.	OAK	0	6/28/1989
2S/3W 16D12	CEPHUS & JESSIE M BAYLIS	1154 57TH AVE.	OAK	0	6/28/1989
2S/3W 16D13	QUAKER OATS COMPANY	1201 57TH AVENUE	OAK	0	7/30/1990
2S/3W 16F 1	K.D. COMPANY	6235 TEVIS ST	C	0	7/30/1984
2S/3W 16E 2	FRUITVALE CANNERY	905 66TH AV	0	0	7/30/1984
2S/3W 16G 1	GENERAL ELECTRIC	1034 66TH AV	0	0	7/30/1984
2S/3W 16L	UNOCAL S/S 43135	845-66TH AVE	OAK	0	7/31/1990
2S/3W 16L 1	UNOCAL S/S 43135	845-66TH AVE	OAK	0	7/31/1990
2S/3W 16L 2	UNOCAL S/S 43135	845-66TH AVENUE	OAK	0	7/31/1990
2S/3W 16L 3	UNOCAL S/S 43135	845-66TH AVENUE	OAK	0	7/31/1990
2S/3W 16L 4	7-UP BOTTLING COMPANY	6505 SAN LEANDRO STREET	OAK	0	1/15/1991
2S/3W 16L 5	7-UP BOTTLING COMPANY	6505 SAN LEANDRO STREET	OAK	0	1/15/1991
2S/3W 16L 6	7-UP BOTTLING COMPANY	6505 SAN LEANDRO STREET	OAK	0	1/15/1991
2S/3W 16M	CONSOLIDATED FREIGHTWAYS	6345 COLISEUM WAY	OAK	0	1/22/1990
2S/3W 16M 1	MCGUIRE & HESTER	796 66TH AVE.	OAK	0	2/ 3/1988
2S/3W 16M 2	MCGUIRE & HESTER	796 66TH AVE	OAK	0	2/ 3/1988
2S/3W 16M 3	MCGUIRE & HESTER	796 66TH AVE	OAK	0	2/ 3/1988
2S/3W 16P 1	OAKLAND COLISEUM	NIMITZ FWY & HEGENBERGER	OAK	0	1/15/1991

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ALAMEDA COUNTY--GROUNDWATER WELLS--LOCATIONS

WELL NUMBER	WELL OWNER	WELL ADDRESS	CITY	PHONE NUMBER	DATE OF LAST UPDATE
2S/3W 16P 2	OAKLAND COLISEUM	NIMITZ FWY. & HEGENBURGER	OAK	0	1/15/1991
2S/3W 16P 3	OAKLAND COLISEUM	NIMITZ FWY. & HEGENBURGER	OAK	0	1/15/1991
2S/3W 16P 4	OAKLAND COLISEUM	NIMITZ FWY. & HEGENBURGER	OAK	0	1/15/1991
2S/3W 16P 5	OAKLAND COLISEUM	NIMITZ FWY. & HEGENBURGER	OAK	0	1/15/1991
2S/3W 16P 6	OAKLAND COLISEUM	NIMITZ FWY. & HEGENBURGER	OAK	0	1/15/1991
2S/3W 16P 7	OAKLAND COLISEUM	NIMITZ FWY. & HEGENBURGER	OAK	0	1/15/1991
2S/3W 16P 8	OAKLAND COLISEUM	NIMITZ FWY. & HEGENBURGER	OAK	0	1/15/1991
2S/3W 16P 9	OAKLAND COLISEUM	NIMITZ FWY. & HEGENBURGER	OAK	0	1/15/1991
2S/3W 16P10	OAKLAND COLISEUM	NIMITZ FWY. & HEGENBURGER	OAK	0	1/15/1991
2S/3W 16P11	OAKLAND COLISEUM	NIMITZ FWY. & HEGENBURGER	OAK	0	1/15/1991
2S/3W 16R 1	KNER BRASS&IRON FOUNDRY	7825 SAN LEANDRO ST	SLZ	0	7/30/1984
2S/3W 16R 2	COUNTY RECYC. SVC.	800 77 AV	OAK	0	6/15/1989
2S/3W 16R 3	CHIP & STEAK (VAO CHENEY)	958 77TH AVENUE	OAK	0	5/30/1990
2S/3W 16R 4	CHIP & STEAK (VAO CHENEY)	958 77TH STREET	OAK	0	5/30/1990
2S/3W 16R 5	CHIP & STEAK (VAO CHENEY)	958 77TH AVENUE	OAK	0	5/30/1990

** TOTAL PAGE.009 **

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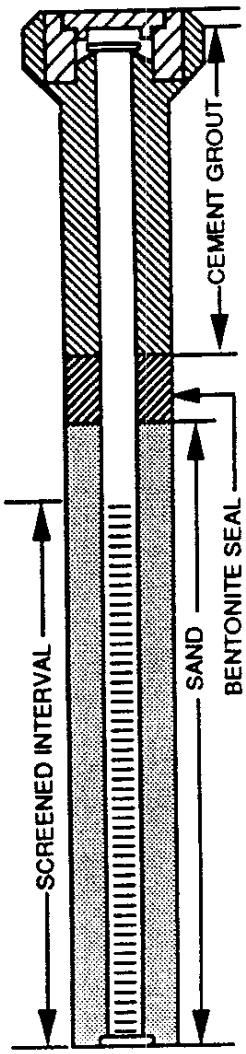
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DM-1

DATE DRILLED: 4/1/91

DEPTH IN FEET	SAMPLING: HNu (ppm)	SAMPLING: TYPE OF SAMPLER	SAMPLING: SAMPLING RESISTANCE	SAMPLES
0				
5	0	U	70	
10		U	95	
15		U	90	
20				
25				
30				
35				

SYMBOLS	DESCRIPTION
	ASPHALT
CL	REDDISH BROWN SILTY CLAY with some gravel (moist) (stiff)
CL	YELLOWISH RED SILTY CLAY with some coarse sand (moist) (very stiff)
ML	YELLOWISH RED TO BROWNISH YELLOW CLAYEY SILT with poorly graded, medium-grained sand (moist) (dense)
	Grades with angular cobbles



NOTES:

1. Boring completed at a depth of 28.0 feet on 4/1/91.
2. 4-inch PVC observation well installed to a depth of 28.0 feet; screened interval from 13.0 to 28.0 feet.
3. Sampling resistance is measured in blows per foot required to drive the sampler 12 inches with a 140 lb. hammer falling 30 inches after sampler has been seated 6 inches.
4. Boring log indicates interpreted subsurface conditions only at the location and the time the boring was drilled.
5. For an explanation of terms used see the Soil Classification Chart and Key to Test Data.

LOG OF BORING

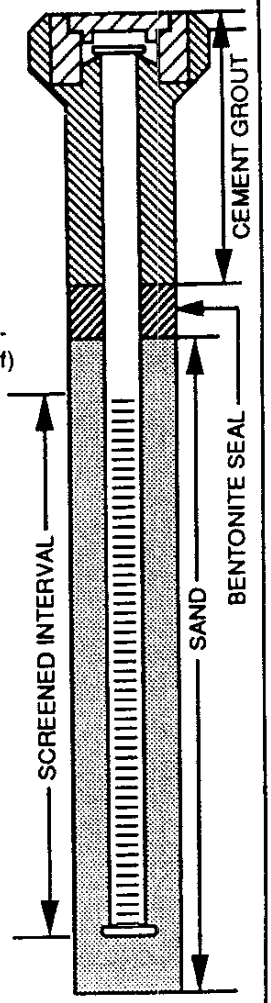
Dames & Moore

443-090-043

DM-2

DATE DRILLED:

DEPTH IN FEET	SAMPLING: HNu (ppm)	SAMPLING: TYPE OF SAMPLER	SAMPLING: SAMPLING RESISTANCE	SAMPLES	SYMBOLS	DESCRIPTION
0						ASPHALT
		U	43		CL	DARK BROWN SILTY CLAY with trace medium to fine-grained sand (moist) (stiff)
5					CL	REDDISH BROWN SILTY CLAY (moist) (very stiff)
	0	U	67		ML	YELLOWISH RED SANDY SILTY with fine to coarse-grained sand and trace pea gravel (moist) (very stiff)
10					SM	YELLOWISH RED SILTY SAND with gravel (moist) (dense)
	0	U	80		ML	BROWNISH YELLOW CLAYEY SILT (moist) (very stiff)
15						
	0	U	—			Grades with 1-2 inch gravel lens.
20						
	0	U	—			
25						
30						
35						



NOTES:

1. Boring completed at a depth of 28.0 feet on 4/1/91.
2. 4-inch PVC observation well installed to a depth of 30.0 feet; screened interval from 23.0 to 28.5 feet.
3. Sampling resistance is measured in blows per foot required to drive the sampler 12 inches with a 140 lb. hammer falling 30 inches after sampler has been seated 6 inches.
4. Boring log indicates interpreted subsurface conditions only at the location and the time the boring was drilled.
5. For an explanation of terms used see the Soil Classification Chart and Key to Test Data.

LOG OF BORING

Dames & Moore

443-090-043

BORING 1

DATE DRILLED: 3/1/90

DEPTH IN FEET	SAMPLING: HNu (ppm)	SAMPLING: SAMPLER TYPE	SAMPLING: SAMPLING RESISTANCE
0	0	U	70
5	0	U	70
		U	70
10	0	U	75
	0	U	92
15	30	U	97
20			
25			
30			
35			



SAMPLES	SYMBOLS	DESCRIPTION
		ASPHALT
	GP	BROWNISH YELLOW SANDY GRAVEL (moist) (dense)
	CL	REDDISH BROWN SILTY CLAY with pea gravel (moist) (stiff)
	CL	DARK BROWN SILTY CLAY (moist) (stiff)
	CL	YELLOWISH RED SILTY CLAY with some coarse sands (moist) (very stiff)
	SC	YELLOWISH RED CLAYEY SAND, fine to medium-grained with some pea gravel (moist) (dense)
	CL	YELLOWISH RED SILTY CLAY with some small gravel (moist) (dense)

NOTES:

1. Boring completed at a depth of 17.5 feet.
2. Sampling resistance is measured in blows per foot required to drive the sampler 12 inches with a 140 lb. hammer falling 30 inches after sampler has been seated 6 inches.
3. Boring log indicates interpreted subsurface conditions only at the location and the time the boring was drilled.
4. For an explanation of terms used see Soil Classification Chart and Key to Test Data.

LOG OF BORING

Dames & Moore

443-090-043

BORING 2

DATE DRILLED: 4/1/91

DEPTH IN FEET	SAMPLING			SAMPLES	SYMBOLS	DESCRIPTION
	HN_u (ppm)	SAMPLER TYPE	SAMPLING RESISTANCE			
0						ASPHALT
	0	U	14		FILL	BROWN SAND, poorly sorted (moist) (loose) [FILL]
5	0	U	15			Grades gravelly
	0	U	12			
10	0	U	--			
30						
35						

NOTES:

1. Boring completed at a depth of 11.5 feet on 4/1/91.
2. Sampling resistance is measured in blows per foot required to drive the sampler 12 inches with a 140 lb. hammer falling 30 inches after sampler has been seated 6 inches.
3. Boring log indicates interpreted subsurface conditions only at the location and the time the boring was drilled.
4. For an explanation of terms used see the Soil Classification Chart and Key to Test Data, Plate —.
5. Boring met refusal at 12 feet below ground surface (possible concrete tank crib).

LOG OF BORING

Dames & Moore

PLATE A-2

BORING LOGS/Templates/3-Col Boring Log

BORING 3

DATE DRILLED: 4/1/91

DEPTH IN FEET	SAMPLING			SAMPLES	SYMBOLS	DESCRIPTION
	HIN_u (ppm)	SAMPLER TYPE	SAMPLING RESISTANCE			
0						ASPHALT
	0	U	14		FILL	BROWN GRAVEL, pea-sized (wet) (loose) [FILL]
5	0	U	15			Grades clayey with asphalt debris
	0	U	12			Obstruction - augers met refusal
10	0	U	--			
15						
30						
35						

NOTES:

1. Boring completed at a depth of 6.5 feet on 4/1/91.
2. Sampling resistance is measured in blows per foot required to drive the sampler 12 inches with a 140 lb. hammer falling 30 inches after sampler has been seated 6 inches.
3. Boring log indicates interpreted subsurface conditions only at the location and the time the boring was drilled.
4. For an explanation of terms used see the Soil Classification Chart and Key to Test Data, Plate —.
5. Boring met refusal at 7 feet below ground surface (possible tank crib).

LOG OF BORING

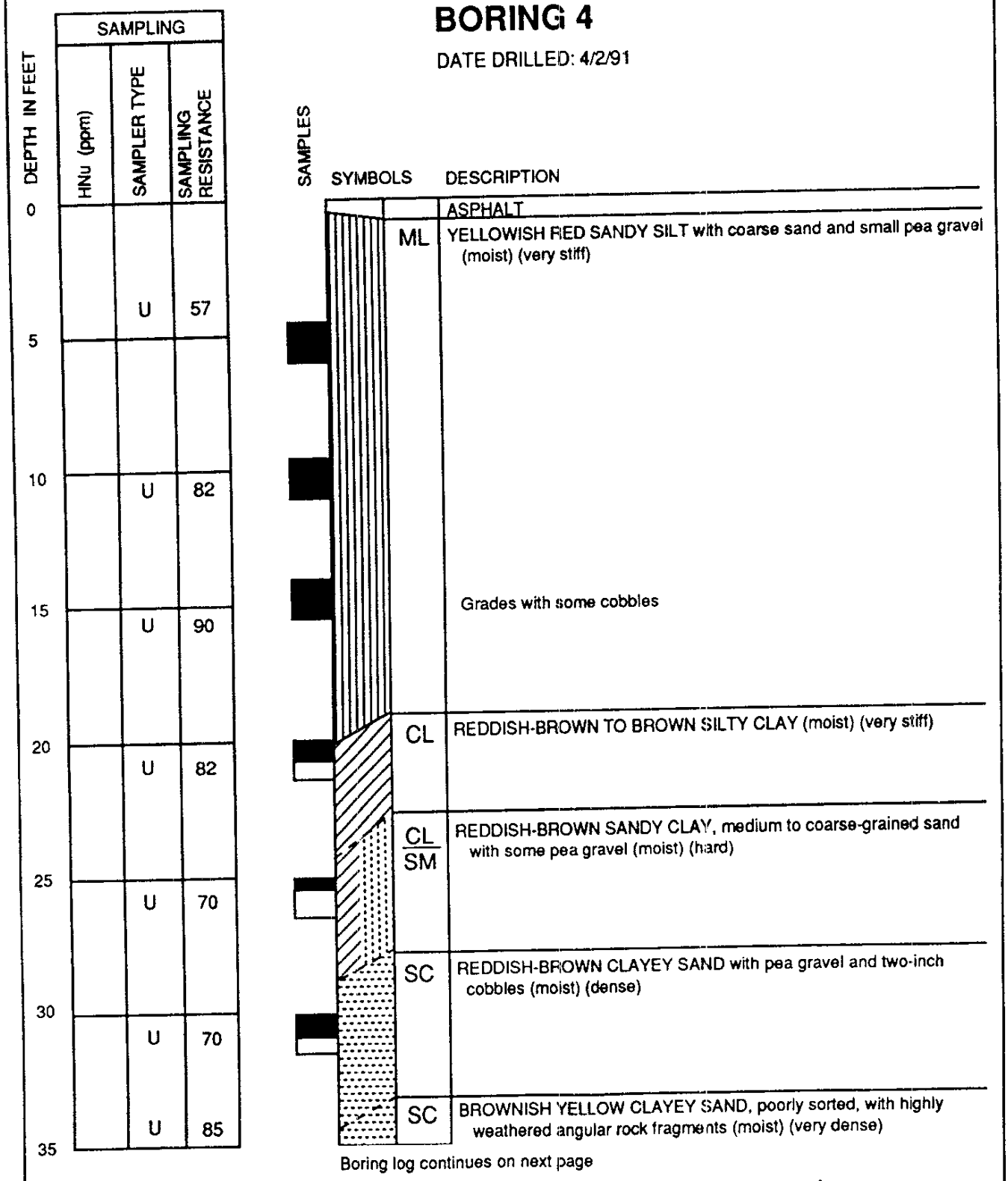
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PLATE A-2

BORING LOGS/Templates/3-Col Boring Log

BORING 4

DATE DRILLED: 4/2/91



Boring log continues on next page

LOG OF BORING

Dames & Moore

443-090-043

BORING 4 (continued)

DATE DRILLED: 4/2/91

DEPTH IN FEET	SAMPLING: HNu (ppm)	SAMPLING: SAMPLER TYPE	SAMPLING: SAMPLING RESISTANCE	SAMPLES	SYMBOLS	DESCRIPTION
35		U	85			
40		U	—		SM	REDDISH BROWN SILTY SAND, medium-grained, poorly graded (moist) (very dense)
45						
50						

NOTES:

1. Boring completed at a depth of 50.0 feet on 4/2/91.
2. Sampling resistance is measured in blows per foot required to drive the sampler 12 inches with a 140 lb. hammer falling 30 inches after sampler has been seated 6 inches.
3. Boring log indicates interpreted subsurface conditions only at the location and the time the boring was drilled.
4. For an explanation of terms used see the Soil Classification Chart and Key to Test Data.

LOG OF BORING

Dames & Moore

443-090-043

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP SYMBOLS	DESCRIPTION	GRAPHIC LOG
COARSE GRAINED SOILS — 50% or more retained on the No. 200 sieve.	GRAVELS — More than half of coarse fraction retained on the No. 4 sieve.	Clean gravels	GW	Well-graded gravels, gravel-sand mixtures, little or no fines.	
			GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines.	
		Gravels with fines	GM	Silty gravels, gravel-sand mixtures.	
			GC	Clayey gravels, gravel-sand-clay mixtures.	
	SANDS — More than half of coarse fraction passing the No. 4 sieve.	Clean sands	SW	Well-graded sands, gravelly sands, little or no fines.	
			SP	Poorly-graded sands, gravelly sands, little or no fines.	
		Sands with fines	SM	Silty sands, sand-silt mixtures.	
			SC	Clayey sands, sand clay mixtures.	
FINE GRAINED SANDS — More than 50% passing the No. 200 sieve.	SILTS AND CLAYS	Liquid Limit below 50%	ML	Inorganic silts and very fine sands.	
			CL	Inorganic clays, gravelly clays, sandy clays, lean clays.	
			OL	Organic silts and organic clays	
		Liquid Limit 50% and above	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.	
			CH	Inorganic fat clays.	
			OH	Organic clays or organic silts.	
Highly organic soils			Pt	Peat, organic content greater than 60%	

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LEGEND TO LOGS

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LOG OF BORING NO. B-1 PAGE 1 of 2

PROJECT NO: 02-401-002 DATE: 12/5/89

CLIENT: TOPA REF. ELEV. –

SITE LOCATION: EASTMONT MALL OAKLAND, CA. METHOD: HOLLOW STEM AUGER

BORING LOCATION: SEE FIG 1 HOLE DIA: 8"

DRILLER: GREGG DRILLING & TESTING

LOGGED BY: J. BRYSON

SUPERVISOR: S. WICKHAM Susan Wickham RG 3851

DEPTH (FT)	GRAPHIC LOG	BLOW/FT	VAPOR (PPM)	SAMPLE TYPE AND DEPTH	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	WELL CONSTRUCTION
						GRAVEL & SOIL @ SURFACE	
0							
					CL	SILTY CLAY, black, gravelly, hard, slightly moist, no odor.	
2							
4			ND	RING @ 5'	ML	CLAYEY SILT, brown with some gravel, stiff, slightly moist, no odor.	
6							
8							
			ND	RING @ 10'	ML	As above.	
10							
12						Cobbles from 12'–14'.	
					-		
14			ND	RING @ 15'	ML	CLAYEY SILT, brown with black mottling, stiff, slightly moist, no odor.	
16							
18							
			ND	RING @ 20'	ML	As above with some gravel.	
20							
22							
24			ND	RING @ 25'	ML	As above, moist.	
26							
28							

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LOG OF BORING NO. B-1

PAGE 2 of 2

PROJECT NO: 02-401-002 | DATE: 12/5/89

CLIENT: TOPA | REF. ELEV. –

SITE LOCATION: EASTMONT MALL, OAKLAND, CA. | METHOD: HOLLOW STEM AUGER

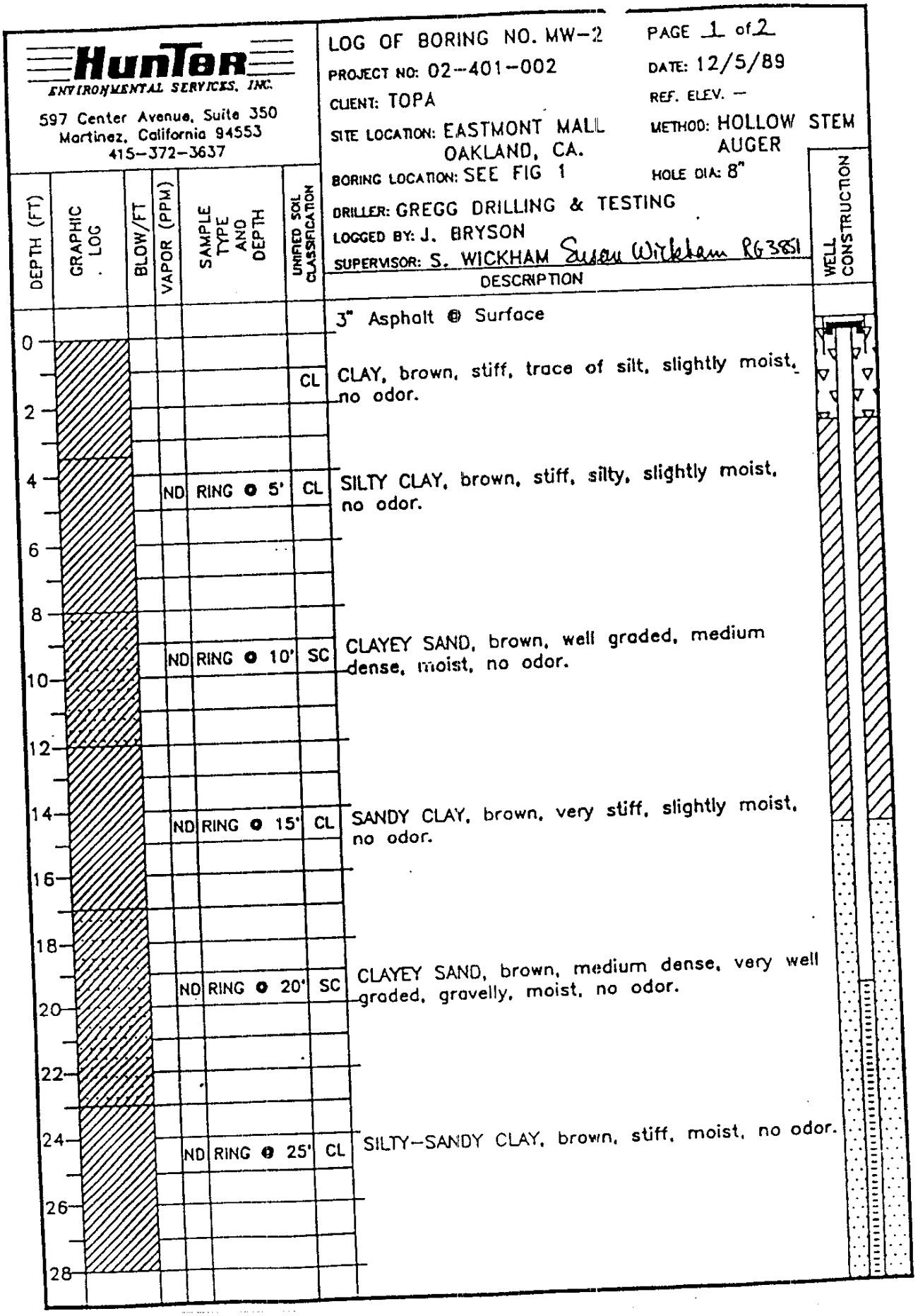
BORING LOCATION: SEE FIG 1 | HOLE DIA: 8"

DRILLER: GREGG DRILLING & TESTING

LOGGED BY: J. BRYSON

SUPERVISOR: S. WICKHAM Susan Wickham 6/3851

DEPTH (FT)	GRAPHIC LOG	BLOW/FT	VAPOR (PPM)	SAMPLE TYPE AND DEPTH	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	WELL CONSTRUCTION
29							
30			ND	RING @ 30'	ML	As above, no gravel.	
32							
34			ND	RING @ 35'	ML	As above.	
36							
38							
40			ND	RING @ 40'	SW	SAND, dark brown, fine-coarse grained, medium dense, moist, no odor.	
42							
44					SC	CLAYEY SAND, brown with gravel and some cobbles, dense, moist, no odor.	
46							
48					SC	As above.	
50							
52							
54							
						TOTAL DEPTH – 55'	
56						Hole backfilled with 19 bags of holeplug bentonite.	


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LOG OF BORING NO. MW-2
PAGE 1 of 2
PROJECT NO: 02-401-002
DATE: 12/5/89
CLIENT: TOPA
REF. ELEV. —
SITE LOCATION: EASTMONT MALL OAKLAND, CA.
METHOD: HOLLOW STEM AUGER
BORING LOCATION: SEE FIG 1
HOLE DIA: 8"
DRILLER: GREGG DRILLING & TESTING
LOGGED BY: J. BRYSON
SUPERVISOR: S. WICKHAM Susan Wickham RG3851
DEPTH (FT)
GRAPHIC LOG
BLOW/FT
VAPOR (PPM)
SAMPLE TYPE AND DEPTH
UNIFIED SOIL CLASSIFICATION
DESCRIPTION
WELL CONSTRUCTION
3" Asphalt @ Surface
CL
CLAY, brown, stiff, trace of silt, slightly moist, no odor.
ND RING @ 5'
CL
SILTY CLAY, brown, stiff, silty, slightly moist, no odor.
ND RING @ 10'
SC
CLAYEY SAND, brown, well graded, medium dense, moist, no odor.
ND RING @ 15'
CL
SANDY CLAY, brown, very stiff, slightly moist, no odor.
ND RING @ 20'
SC
CLAYEY SAND, brown, medium dense, very well graded, gravelly, moist, no odor.
ND RING @ 25'
CL
SILTY-SANDY CLAY, brown, stiff, moist, no odor.
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28

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LOG OF BORING NO. MW--2 PAGE 2 of 2

PROJECT NO: 02--401-002 DATE: 12/5/89

CLIENT: TOPA REF. ELEV. –

SITE LOCATION: EASTMONT MALL OAKLAND, CA. METHOD: HOLLOW STEM AUGER

BORING LOCATION: SEE FIG 1 HOLE DIA: 8"

DRILLER: GREGG DRILLING & TESTING

LOGGED BY: J. BRYSON

SUPERVISOR: S. WICKHAM Susan Wickham PG 3851

DEPTH (FT)	GRAPHIC LOG	BLOW/FT	VAPOR (PPM)	SAMPLE TYPE AND DEPTH	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	WELL CONSTRUCTION
29			ND	RING @ 30'	ML	▽ CLAYEY SAND, brown, gravelly, saturated.	
31							
33							
35						TOTAL DEPTH – 35'	
37						Well Construction: 2" (0.02") slotted PVC 35'–20'; 2" blank PVC 20'–0; #3 lonestar sand 35'–15'; enviroplug bentonite 15'–3'; cement 3'–0.	
39							
41							
43							
45							
47							
49							
51							
53							
55							
57							

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LOG OF BORING NO. MW-3

PAGE 1 of 2

PROJECT NO: 02-401-002
DATE: 12/6/89
CLIENT: TOPA
REF. ELEV. –
SITE LOCATION: EASTMONT MALL OAKLAND, CA.
METHOD: HOLLOW STEM AUGER
BORING LOCATION: SEE FIG 1
HOLE DIA: 8"
DRILLER: GREGG DRILLING & TESTING
LOGGED BY: J. BRYSON
SUPERVISOR: S. WICKHAM Susan Wickham 12/6/89

DEPTH (FT)	GRAPHIC LOG	BLOW/FT	VAPOR (PPM)	SAMPLE TYPE AND DEPTH	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	WELL CONSTRUCTION
						3" Asphalt @ Surface	
0							
					CL	CLAY, black-gray, stiff, slightly moist, some silt, no odor.	
2							
4			ND	RING @ 5'	CL	SILTY CLAY, brown, stiff, slightly moist, trace of gravel, no odor.	
6							
8							
10			ND	RING @ 10'	CL	As above, some medium sand to coarse gravel.	
12							
14			ND	RING @ 15'	SM	SILTY SAND, brown, some clay & gravel, medium to coarse grained, medium dense, slightly moist, no odor.	
16							
18							
20			ND	RING @ 20'	SM	As above.	
22							
24			ND	RING @ 25'	SW	SAND, brown with silt and small gravel, moist, medium dense, no odor.	
26							
28							

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LOG OF BORING NO. MW-3 PAGE 2 of 2
PROJECT NO: 02-401-002 DATE: 12/6/89
CLIENT: TOPA REF. ELEV. -
SITE LOCATION: EASTMONT MALL, OAKLAND, CA. METHOD: HOLLOW STEM AUGER
BORING LOCATION: SEE FIG 1 HOLE DIA: 8"
DRILLER: GREGG DRILLING & TESTING
LOGGED BY: J. BRYSON
SUPERVISOR: S. WICKHAM Stillman Wickham RG3851

DEPTH (FT)	GRAPHIC LOG	BLOW/FT	VAPOR (PPM)	SAMPLE TYPE AND DEPTH	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	WELL CONSTRUCTION
29			ND	RING @ 30'	SW	As above.	
31							
33							
35			ND	RING @ 35'	SW	As above, moist.	
37						▽	
39						As above, saturated.	
41							
43						CLAY, silty, light brown, firm, slightly moist, no odor.	
45						TOTAL DEPTH - 45'	
47						Well Construction: 2" (0.02") slotted PVC 45'-30'; blank 2" PVC 30'-0; #3 lonestar sand 45'-25'; bentonite 25'-3'; cement 3'-0.	
49							
51							
53							
55							
57							

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LOG OF BORING NO. MW-4

PAGE 1 of 1

PROJECT NO: 02-401-002
DATE: 12/6/89
CLIENT: TOPA
REF. ELEV. –
SITE LOCATION: EASTMONT MALL, OAKLAND, CA.
METHOD: HOLLOW STEM AUGER
BORING LOCATION: SEE FIG 1
HOLE DIA: 8"
DRILLER: GREGG DRILLING & TESTING
LOGGED BY: J. BRYSON
SUPERVISOR: S. WICKHAM Susan Wickham 863651

DEPTH (FT)	GRAPHIC LOG	BLOW/FT	VAPOR (PPM)	SAMPLE TYPE AND DEPTH	UNIFIED SOIL CLASSIFICATION	DESCRIPTION
0						3" Asphalt @ Surface
2					CL	SILTY CLAY, dark brown with black mottling, trace of coarse sand, firm, slightly moist, no odor.
4		35	NO	RING @ 5'	CL	As above, light brown, some gravel
6						
8						
10			40	RING @ 10'	CL	As above.
12						
14			230	RING @ 15'	ML	CLAYEY SILT, brown, some gravel, firm, moist, very strong odor. (bottom of sample was a sandy clayey silt and had dark gray coloring with oily sheen and very strong gas odor.
16						▽
18						
20				NO SAMPLE	ML	CLAYEY SILT, brown, some gravel, firm, saturated, odor.
22						
24				NO SAMPLE	CL	SILTY CLAY, dark brown, firm, slightly moist, trace of sand, no odor.
26						TOTAL DEPTH 25'
28						Well Construction: 2" (0.02") slotted PVC 25'-10'; 2" blank PVC 10'-0; #3 sand 25'-8'; bentonite 8'-3'; cement 3'-0.

WELL CONSTRUCTION

ENVIRONMENTAL SERVICES

3700 Lakeville Highway, Petaluma, CA 94954
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Telephone: (707) 763-8245 FAX: (707) 763-4065

Richard Ward
Dames & Moore
221 Main Street, Ste. 600
San Francisco, CA 94105

Client Code: DAME67
Survey # J.C. Penny
Project/Release # 00443-090-043

L A B O R A T O R Y R E S U L T S

Date Collected: 04/01/91
Date Extracted: 04/09/91
Date Analyzed: 04/10/91

Laboratory Job No.: 911715
Date Received: 04/03/91
Date Reported: 04/18/91

ASSAY: TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (SM 503E)
MATRIX: SOIL

LABNO	SMPLNO-ID	TRPH mg/kg	DET. LIM. mg/kg
12486	B-3-B	140	20
12489	CM	ND	20
12490	CMS	820	20
12491	CMSD	820	20
12492	MB	ND	20

NOTE: CMS AND CMSD WERE SPIKED AT 830 mg/kg.

THIS REPORT HAS BEEN REVIEWED AND APPROVED FOR RELEASE.

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L A B O R A T O R Y R E S U L T S

Date Collected: 04/01/91
Date Extracted: 04/08/91
Date Analyzed: 04/08/91

Laboratory Job No.: 911715
Date Received: 04/03/91
Date Reported: 04/18/91

ASSAY: TPH/GASOLINE (EPA 5030/8015)
MATRIX: SOIL

LABNO	SMPLNO-ID	RESULTS mg/kg	DET. LIM. mg/kg
12480	B-1-B GASOLINE	ND	0.2
12481	B-1-D GASOLINE	ND	0.2
12482	B-1-F GASOLINE (15' below ground surface)	7.7	0.2
12483	B-2-C GASOLINE	ND	0.2
12484	DM-1-C GASOLINE	ND	0.2
12485	DM-2-C GASOLINE	ND	0.2
12486	B-3-B GASOLINE	ND	0.2
12487	DM-3-C GASOLINE	ND	0.2
12488	DM-3-H GASOLINE	ND	0.2
12489	CM GASOLINE	ND	0.2

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L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 911715

ASSAY: TPH/GASOLINE (EPA 5030/8015)
MATRIX: SOIL

LABNO	SMPLNO-ID	RESULTS mg/kg	DET. LIM. mg/kg
12490	CMS GASOLINE	2.0	0.2
12491	CMSD GASOLINE	2.2	0.2
12492	MB GASOLINE	ND	0.2

NOTE: CMS AND CMSD WERE SPIKED AT 2.0 mg/kg.

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L A B O R A T O R Y R E S U L T S

Date Collected: 04/01/91
Date Extracted: 04/08/91
Date Analyzed: 04/08/91

Laboratory Job No.: 911715
Date Received: 04/03/91
Date Reported: 04/18/91

ASSAY: BTEX (EPA 5030/8020)
MATRIX: SOIL

LABNO SMPLNO-ID	RESULTS mg/kg	DET. LIM. mg/kg
12480 B-1-B		
BENZENE	ND	0.005
TOLUENE	ND	0.005
ETHYLBENZENE	ND	0.005
XYLENES	ND	0.005
12481 B-1-D		
BENZENE	ND	0.005
TOLUENE	ND	0.005
ETHYLBENZENE	ND	0.005
XYLENES	ND	0.005
12482 B-1-F		
BENZENE	ND	0.005
TOLUENE	0.070	0.005
ETHYLBENZENE	ND	0.005
XYLENES	0.036	0.005
12483 B-2-C		
BENZENE	ND	0.005
TOLUENE	ND	0.005
ETHYLBENZENE	ND	0.005
XYLENES	ND	0.005
12484 DM-1-C		
BENZENE	ND	0.005
TOLUENE	ND	0.005
ETHYLBENZENE	ND	0.005
XYLENES	ND	0.005

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L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 911715

ASSAY: BTEX (EPA 5030/8020)
MATRIX: SOIL

LABNO SMPLNO-ID	RESULTS mg/kg	DET. LIM. mg/kg
12485 DM-2-C		
BENZENE	ND	0.005
TOLUENE	ND	0.005
ETHYLBENZENE	ND	0.005
XYLENES	ND	0.005
12486 B-3-B		
BENZENE	ND	0.005
TOLUENE	ND	0.005
ETHYLBENZENE	ND	0.005
XYLENES	ND	0.005
12487 DM-3-C		
BENZENE	ND	0.005
TOLUENE	ND	0.005
ETHYLBENZENE	ND	0.005
XYLENES	ND	0.005
12488 DM-3-H		
BENZENE	ND	0.005
TOLUENE	ND	0.005
ETHYLBENZENE	ND	0.005
XYLENES	ND	0.005
12489 CM		
BENZENE	ND	0.005
TOLUENE	ND	0.005
ETHYLBENZENE	ND	0.005
XYLENES	ND	0.005
12490 CMS		
BENZENE	0.018	0.005
TOLUENE	0.019	0.005
ETHYLBENZENE	0.019	0.005
XYLENES	0.056	0.005

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L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 911715

ASSAY: BTEX (EPA 5030/8020)
MATRIX: SOIL

LABNO SMPLNO-ID	RESULTS mg/kg	DET. LIM. mg/kg
12491 CMSD		
BENZENE	0.019	0.005
TOLUENE	0.019	0.005
ETHYLBENZENE	0.020	0.005
XYLENES	0.058	0.005
12492 MB		
BENZENE	ND	0.005
TOLUENE	ND	0.005
ETHYLBENZENE	ND	0.005
XYLENES	ND	0.005

NOTE: CMS AND CMSD WERE SPIKED AT 0.020 mg/kg FOR ALL ANALYTES EXCEPT XYLENES, WHICH WERE SPIKED AT 0.060 mg/kg.

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QUALITY CONTROL REPORT

As part of ACCULAB Environmental Services' continuing efforts to provide the best possible product to our clients, we are now including with each analysis report, the results of the Quality Control samples analyzed along with your samples.

ACCULAB is following a Quality Assurance Program that includes control matrix sample analysis. In brief, we use tap water as the control matrix for liquid samples and washed sand as the control matrix for solid samples. We analyze three portions of the control matrix, one portion as the control matrix blank (CMB), one portion as the control matrix spike (CMS), and one portion as the control matrix spike duplicate (CMSD). These analyses are performed as part of our routine Quality Assurance program, at no additional charge to our clients. In addition, matrix spike and matrix spike duplicate analyses can be run on your samples, however these analyses would be charged as additional samples.

During the initial stages of the implementation of this program we will be reporting the actual results of these three control matrix samples along with the level of spike that was added to the spike and spike duplicate samples. From this information, percent recovery (accuracy) data and relative percent difference (precision) data can be calculated. In the near future, calculated accuracy and precision results along with control limits will be reported.

Due to the nature of the control matrix materials, certain positive results can be expected in the control matrix blank (CMB) results. The tap water source may contain trihalomethanes, anions, major cations, and some trace metals. The washed sand may also contain anions, major cations and some trace metals. These positive results represent inherent concentrations and in no way reflect upon your sample results, or upon laboratory background levels.

We hope you will find this quality control information useful in your review of our reports. This quality control information is the first in a series of many steps we are taking to improve our service to our clients. If you have any questions concerning this information, please contact a Project Manager for further information.

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QUALITY CONTROL REPORT - UPDATE

For the past few months, ACCULAB Environmental Services' has been reporting the results of Quality Control sample analysis along with your sample results. This has been done to provide you with the means of assessing the quality of the data in our report. In order to improve your ability to make this assessment, we will also be providing the results of the method blank (MB) that was run with your samples.

Method blanks are designed to monitor the level of contamination introduced by reagents, extracting solvents, glassware, etc. They are prepared and processed in exactly the same manner as samples and spikes, except that no standard is spiked into them.

We are also changing the name of the unspiked control matrix sample from Control Matrix Blank (CMB) to Control Matrix (CM) to more accurately describe the nature of the sample.

Due to the nature of the control matrix materials, certain positive values can be expected in the control matrix (CM) results. The tap water we use for liquids may contain trihalomethanes, anions, major cations, and some trace metals. The control matrix we use for solids may also contain anions, major cations and some trace metals. These positive results represent inherent concentrations and in no way reflect upon your sample results, or upon laboratory background levels.

We continue to strive to improve the quality of service to our clients. We welcome any questions or comments you may have about this information, or about ACCULAB in general. Please contact a Project Manager for further information.

C. AIN-OF-CUSTODY RECORD

WHITE PY - Original (Accompanies Samples) YELLOW COPY - Collector PINK COP' Project Manager

Boring or Well Number	Sample Number	Depth	Time	Sample Type	Container Type	VOA 601/8010	VOA 602/8020 *	VOA 624/8240	Semi Vol 625/8270	TPH 418.1	TPH 8015 (M) *	TITLE 22 METALS	WET Test	PNA 610/8100	PEST/PCBs 8080	HEX CHROME	ORGANIC LEAD	TCLP	pH	ASBESTOS	O&G 503 E	Total Number Of Containers	Laboratory Note Number
B-1	A	3.5	0840	Soil	S.S. Tube																	1	
B-1	B	5.5	0848			X				X												1	
B-1	C	8.0	0900																			1	
B-1	D	10.0	0905			X				X												1	
B-1	E	13.0	0915																			1	
B-1	F	15.0	0925			X				X												1	
B-2	A	2.5	0957																				
B-2	B	5.0	1000																				
B-2	C	10.5	1015			X				X													
DM-1	A	5.0	1202																				
DM-1	B	10.0	1212																				
DM-1	C	15.0	1225			X				X													
DM-2	A	5.5	0810																				
DM-2	B	10.5	0830																				
DM-2	C	15.5	0840			X				X													
B-3	A	2.5	1045																				
B-3	B	5.5	1050			X				X											X		

RECEIVED ACCUTAB 1991 APR -2 PM 2:59

FIELD NOTES:

SAMPLES RECEIVED IN GOOD CONDITION
NO BROKEN OR LEAKING CONTAINERS

RECEIVED ACCUTAB 1991 APR -3 AM 9:12

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

[signature] 4/2/91 1800 9918569194

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

9918569194

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY NOTES:

Hold for analysis —
* 8015/GAS, 602 BTEX / DAVID MYERS 2:45 3/3/gn

REPORT TO: RICH WARD, D&M, S.F.

ANALYTICAL LABORATORY: Acculab.

LABORATORY CONTACT: ~~Debbie Fisher~~ GREG NAGLE

D&M CONTACT: Rich Ward / David Myers PHONE: (415) 708 1354

DAMES & MOORE

1290 Oakmead Parkway
~~Suite 301~~
Sunnyvale, ~~California 94086~~
~~Telephone: 408/245-4050 FAX: 408/736-0545~~

JOB NO.: 00443 020 043 SHEET ____ OF ____

PROJECT: J.C. Penney

LOCATION: Oakland

COLLECTOR: David Myers DATE OF COLLECTION: 4/1/91

00000281.tif 373 / 543

C AIN-OF-CUSTODY RECORD

WHIT)PY - Original (Accompanies Samples) YELLOW COPY - Collector PINK COF Project Manager

Boring or Well Number	Sample Number	Depth	Time	Sample Type	Container Type	VOA 601/8010	VOA 602/8020 *	VOA 624/8240	Semi Vol 625/8270	TPH 418.1	TPH 8015 (M) *	TITLE 22 METALS	WET Test	PNA 610/8100	PEST/PCBs 8080	HEX CHROME	ORGANIC LEAD	TCLP	pH	ASBESTOS	FIELD NOTES	Total Number Of Containers	Laboratory Note Number
DM-3	A	5'	1145	SOIL	S.S. Ring																		
DM-3	B	10'	1203																				
DM-3	C	15'	1215			X				X													
DM-3	D	20'	1235																				
DM-3	E	24'	1245																				
DM-3	F	30'	1420																				
DM-3	G	35'	1435																				
DM-3	H	40'	1450			X				X													

RECEIVED
APR -3 PM 2:59

RECEIVED
APR -3 PM 9:12

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)
4/2/91 1800 99185691 94

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY NOTES:
Hold for analysis
* 8015/GAS, 602/BTEX / DAVID MYERS
2:45 3-3 / gr
REPORT TO: RICH WARD
DrM, SF

ANALYTICAL LABORATORY: Acculab
LABORATORY CONTACT: ~~Bob Fox~~ ~~Foster~~ GREG NAGLE
D&M CONTACT: Rich Ward David Myers PHONE: 208 1354

DAMES & MOORE
1290 Oakmead Parkway
Suite 301
Sunnyvale, California 94086
Telephone: 408/245-4859 FAX: 408/736-0545

gr

JOB NO: 00443 090 043 SHEET 2 OF 2
PROJECT: J.C Penney
LOCATION: Oakland
COLLECTOR: David Myers DATE OF COLLECTION: 4/2/91

00000281.tif 374 / 543

****
*
* EQUISITION FOR SUPPLIES *
*
****
ordered from Sunnyvale

ENVIRONMENTAL SERVICES
3700 Lakeville Highway, Petaluma, CA 94954
P.O. Box 808024, Petaluma, CA 94975-8024
Telephone: (707) 763-8245 FAX: (707) 763-4065

ATTENTION: David Mayers
CLIENT: D&M-~~Sunnyvale~~ S.F.
ADDRESS: _____

TELEPHONE: _____
JOB # OR NAME: _____
NOTES: _____

DATE ORDERED: 3/27/91
TIME ORDERED: 2:45 pm
ORDER TAKEN BY: D. Fisher
DATED NEEDED: send out 3/28

SHIPPING INFORMATION
CARRIER: UPS-ground
ACCOUNT NUMBER: _____
WEIGHT: _____
COST: _____
ENTERED: _____
DATE/INITIALS: DP 3-28-91

ITEM/SIZE	PART NUMBER	QTY	LABEL	PRESERVATIVE
40 ml voa's		10	gas	
40 ml voa's		10	8080	
1 L. glass		5	diesel	
40 ml voa's filled w/ org. free water		3	gas, 8020	
1 L. glass "	" " " "	1	diesel	

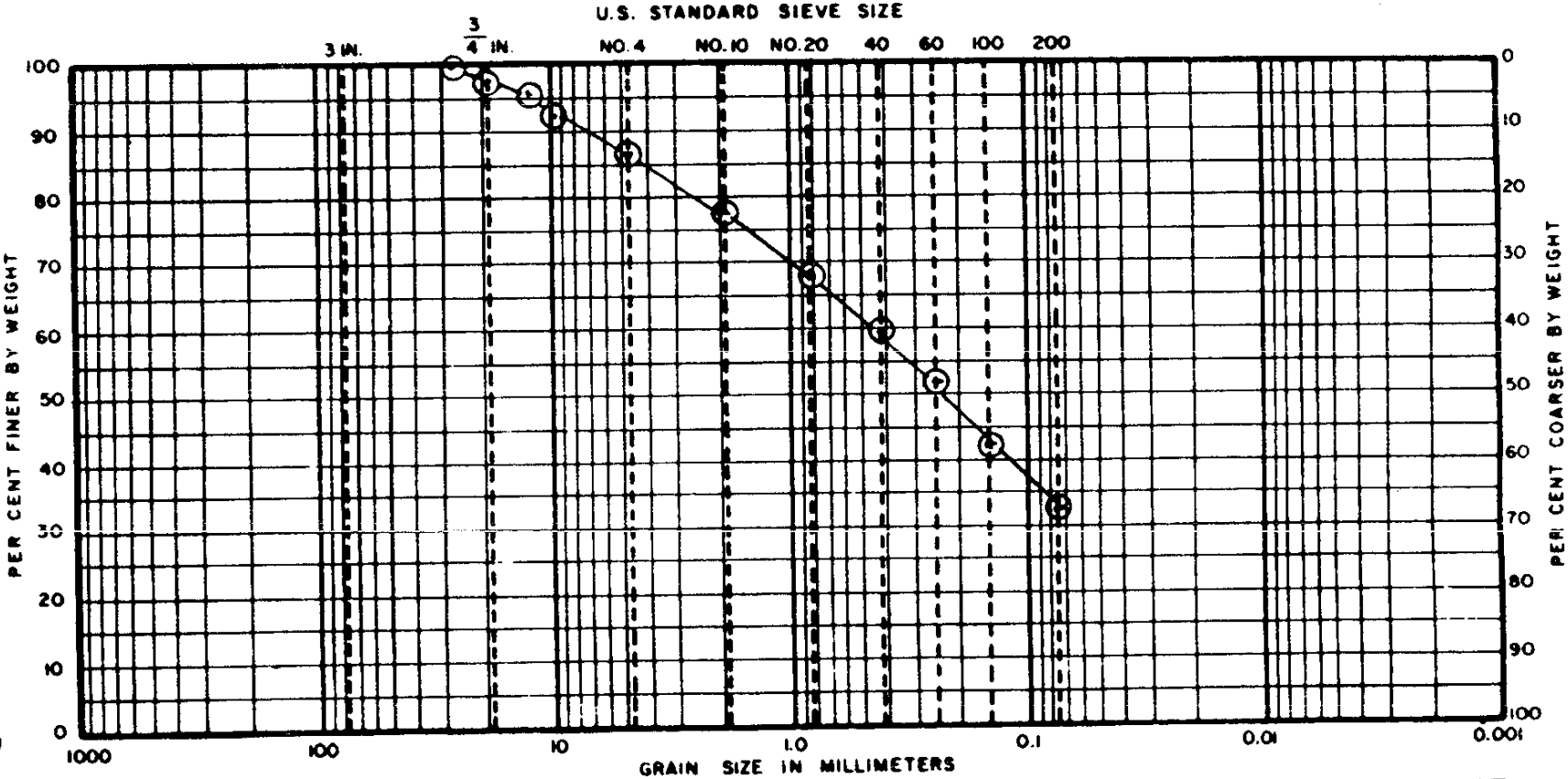
SEND IN ICE CHEST? yes no ICE CHEST # _____

SEND PRESERVATIVE KIT? yes no

757.8

JC PENNY - 0443 - 090 - 043

BORING	DEPTH	ELEV.	SAMPLE	LIQUID LIMIT	PLASTIC LIMIT	SYMBOL	SOIL CLASSIFICATION	KEY
B-1	10		1D			SC	BROWN GRAVELLY CLAYEY SAND	



Dames & Moore

GRAIN-SIZE DISTRIBUTION
(UNIFIED SOIL CLASSIFICATION SYSTEM)

00000281.tif 376 / 543

DAMES & MOORE

Job No. 0943-090-063 Client V.C. PENNY Boring B-1 Sample 10 Depth _____

Date Sampled _____ By D.M. Date Tested 9/4/91 By AFR Checked By _____

Soil Classification BROWN SC

Wash Sieve ✓ Dry Sieve _____

SIEVE TEST

Dish Number	Weight Of Sample Oven Dried Before Washing (gm)	Sieve Opening (mm)	Sieve No. U.S. Equivalent	Individual Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % Retained (%)	Cumulative % Passing (%)	Correction Factor	Corrected Cumulative % Passing (%)
		76.10	3"						
		50.80	2"						
		38.10	1 1/2"						
SSB-8	473.0	25.40	1"		0	0	100		
	- 82.6	19.00	3/4"		9.23	2.4	97.6		
	390.4	12.70	1/2"		18.97	4.8	95.2		
		9.51	3/8"		30.05	7.7	92.3		
		4.76	#4		54.36	13.9	86.1		
		2.00	#10		88.43	22.6	77.4		
		0.841	#20		124.20	31.8	68.2		
		0.420	#40		157.18	40.3	59.7		
		0.250	#60		190.18	48.7	51.3		
		0.149	#100		226.47	58.0	42.0		
		0.074	#200		264.63	67.8	32.2		

HYDROMETER TEST

Hydrometer No. ASTM #152H

G_s (Determined/Assumed) _____

Deflocculant 125 cc Of _____

Weight Of Dry Soil (Passing #10) _____ gms.

Cylinder No. _____

Date	Time	Elapsed Time (min.)	T °C	Reading (Top Of Meniscus)
		0		
		½		
		1		
		2		
		5		
		15		
		30		
		60		
		120		
		250		
		1440		

DATA REDUCTION

Percentage Finer	Diameter (mm)	Corrected % Finer

ENVIRONMENTAL SERVICES

3700 Lakeville Highway, Petaluma, CA 94954
P.O. Box 808024, Petaluma, CA 94975-8024
Telephone: (707) 763-8246 FAX: (707) 763-4066

Richard Ward
Dames & Moore
221 Main Street, Ste. 600
San Francisco, CA 94105

Client Code: DAME67
Survey # J.C. Penny
Project/Release # 00443-090-043

L A B O R A T O R Y R E S U L T S

Date Collected: 04/04/91
Date Extracted: 04/16/91
Date Analyzed: 04/17/91

Laboratory Job No.: 911744
Date Received: 04/05/91
Date Reported: 04/22/91

ASSAY: TPH/DIESEL (EPA 8015)
MATRIX: WATER

LAB NUMBER	SAMPLE NUMBER	RESULTS mg/L	DET.LIM. mg/L
12614	DM-1-A DIESEL	ND	0.05
12615	DM-2-A DIESEL	ND	0.05
12616	DM-5-A DIESEL	ND	0.05
12617	MW-4-A DIESEL	ND	0.05
12619	CM DIESEL	ND	0.05
12620	CMS DIESEL	0.77	0.05
12621	CMSD DIESEL	0.73	0.05

THIS REPORT HAS BEEN REVIEWED AND APPROVED FOR RELEASE.

ENVIRONMENTAL SERVICES

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P.O. Box 808024, Petaluma, CA 94975-8024
Telephone: (707) 763-8246 FAX: (707) 763-4065

L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 911744

LAB NUMBER	SAMPLE NUMBER	RESULTS mg/L	DET.LIM. mg/L
12622 MB			
	DIESEL	ND	0.05

NOTE: CMS AND CMSD WERE SPIKED AT 0.83 mg/L.

ENVIRONMENTAL SERVICES

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Telephone: (707) 763-8245 FAX: (707) 763-4065

L A B O R A T O R Y R E S U L T S

Date Collected: 04/04/91
Date Extracted: 04/11/91
Date Analyzed: 04/11/91

Laboratory Job No.: 911744
Date Received: 04/05/91
Date Reported: 04/22/91

ASSAY: TPH/GASOLINE (EPA 5030/8015)
MATRIX: LIQUID

LABNO SMPLNO-ID	RESULTS mg/L	DET. LIM. mg/L
12614 DM-1-B GASOLINE	ND	0.05
12615 DM-2-B GASOLINE	ND	0.05
12616 DM-5-B GASOLINE	ND	0.05
12617 MW-4-B GASOLINE	ND	0.05
12618 TRIP-BLANK GASOLINE	ND	0.05
12619 CM GASOLINE	ND	0.05
12620 CMS GASOLINE	0.36	0.05
12621 CMSD GASOLINE	0.34	0.05
12622 MB GASOLINE	ND	0.05

NOTE: CMS AND CMSD WERE SPIKED AT 0.40 mg/L.

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L A B O R A T O R Y R E S U L T S

Date Collected: 04/04/91
Date Extracted: 04/11/91
Date Analyzed: 04/11/91

Laboratory Job No.: 911744
Date Received: 04/05/91
Date Reported: 04/22/91

ASSAY: BTEX (EPA 5030/8020)
MATRIX: LIQUID

LABNO SMPLNO-ID		RESULTS mg/L	DET. LIM. mg/L
12614	DM-1-C		
	BENZENE	ND	0.0005
	TOLUENE	ND	0.0005
	ETHYLBENZENE	ND	0.0005
	XYLENES	ND	0.0005
12615	DM-2-C		
	BENZENE	ND	0.0005
	TOLUENE	ND	0.0005
	ETHYLBENZENE	ND	0.0005
	XYLENES	ND	0.0005
12616	DM-5-C		
	BENZENE	ND	0.0005
	TOLUENE	ND	0.0005
	ETHYLBENZENE	ND	0.0005
	XYLENES	ND	0.0005
12617	MW-4-C		
	BENZENE	ND	0.0005
	TOLUENE	ND	0.0005
	ETHYLBENZENE	ND	0.0005
	XYLENES	ND	0.0005
12618	TRIP-BLANK		
	BENZENE	ND	0.0005
	TOLUENE	ND	0.0005
	ETHYLBENZENE	ND	0.0005
	XYLENES	ND	0.0005

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L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 911744

ASSAY: BTEX (EPA 5030/8020)
MATRIX: LIQUID

LABNO SMPLNO-ID	RESULTS mg/L	DET. LIM. mg/L
12619 CM		
BENZENE	ND	0.0005
TOLUENE	ND	0.0005
ETHYLBENZENE	ND	0.0005
XYLENES	ND	0.0005
12620 CMS		
BENZENE	0.0046	0.0005
TOLUENE	0.0045	0.0005
ETHYLBENZENE	0.0045	0.0005
XYLENES	0.014	0.0005
12621 CMSD		
BENZENE	0.0044	0.0005
TOLUENE	0.0043	0.0005
ETHYLBENZENE	0.0043	0.0005
XYLENES	0.013	0.0005
12622 MB		
BENZENE	ND	0.0005
TOLUENE	ND	0.0005
ETHYLBENZENE	ND	0.0005
XYLENES	ND	0.0005

NOTE: CMS AND CMSD WERE SPIKED AT 0.0050 mg/L FOR ALL ANALYTES EXCEPT XYLENES, WHICH WERE SPIKED AT 0.015 mg/L.

ENVIRONMENTAL SERVICES

3700 Lakeville Highway, Petaluma, CA 94954
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QUALITY CONTROL REPORT

As part of ACCULAB Environmental Services' continuing efforts to provide the best possible product to our clients, we are now including with each analysis report, the results of the Quality Control samples analyzed along with your samples.

ACCULAB is following a Quality Assurance Program that includes control matrix sample analysis. In brief, we use tap water as the control matrix for liquid samples and washed sand as the control matrix for solid samples. We analyze three portions of the control matrix, one portion as the control matrix blank (CMB), one portion as the control matrix spike (CMS), and one portion as the control matrix spike duplicate (CMSD). These analyses are performed as part of our routine Quality Assurance program, at no additional charge to our clients. In addition, matrix spike and matrix spike duplicate analyses can be run on your samples, however these analyses would be charged as additional samples.

During the initial stages of the implementation of this program we will be reporting the actual results of these three control matrix samples along with the level of spike that was added to the spike and spike duplicate samples. From this information, percent recovery (accuracy) data and relative percent difference (precision) data can be calculated. In the near future, calculated accuracy and precision results along with control limits will be reported.

Due to the nature of the control matrix materials, certain positive results can be expected in the control matrix blank (CMB) results. The tap water source may contain trihalomethanes, anions, major cations, and some trace metals. The washed sand may also contain anions, major cations and some trace metals. These positive results represent inherent concentrations and in no way reflect upon your sample results, or upon laboratory background levels.

We hope you will find this quality control information useful in your review of our reports. This quality control information is the first in a series of many steps we are taking to improve our service to our clients. If you have any questions concerning this information, please contact a Project Manager for further information.

ENVIRONMENTAL SERVICES

3700 Lakeville Highway, Petaluma, CA 94954
P.O. Box 808024, Petaluma, CA 94975-8024
Telephone: (707) 763-8245 FAX: (707) 763-4065

QUALITY CONTROL REPORT - UPDATE

For the past few months, ACCULAB Environmental Services' has been reporting the results of Quality Control sample analysis along with your sample results. This has been done to provide you with the means of assessing the quality of the data in our report. In order to improve your ability to make this assessment, we will also be providing the results of the method blank (MB) that was run with your samples.

Method blanks are designed to monitor the level of contamination introduced by reagents, extracting solvents, glassware, etc. They are prepared and processed in exactly the same manner as samples and spikes, except that no standard is spiked into them.

We are also changing the name of the unspiked control matrix sample from Control Matrix Blank (CMB) to Control Matrix (CM) to more accurately describe the nature of the sample.

Due to the nature of the control matrix materials, certain positive values can be expected in the control matrix (CM) results. The tap water we use for liquids may contain trihalomethanes, anions, major cations, and some trace metals. The control matrix we use for solids may also contain anions, major cations and some trace metals. These positive results represent inherent concentrations and in no way reflect upon your sample results, or upon laboratory background levels.

We continue to strive to improve the quality of service to our clients. We welcome any questions or comments you may have about this information, or about ACCULAB in general. Please contact a Project Manager for further information.

CHAIN-OF-CUSTODY RECORD 91-1744

WHITE COPY - Original (Accompanies Samples) YELLOW COPY - Collector PINK COPY - Project Manager

Boring or Well Number	Sample Number	Depth	Time	Sample Type	Container Type	VOA 601/8010	VOA 602/8020	VOA 624/8240	Semi Vol 625/8270	TPH 418.1	TPH 8015 (M)	TITLE 22 METALS	WET Test	PNA 610/8100	PEST/PCBs 8080	HEX CHROME	ORGANIC LEAD	TCLP	pH	ASBESTOS	Gas & Diesel	FIELD NOTES:	Total Number Of Containers	Laboratory Note Number
DM-1	A		1030	Water	1 x 1l Amber																X		1	
DM-1	B		1030		2 x 40ml VOA															X			2	
DM-1	C		1030		2 x 40ml VOA	X																	2	
DM-2	A		1500		1 x 1l Amber																X		1	
DM-2	B		1500		2 x 40ml VOA															X			2	
DM-2	C		1500		2 x 40ml VOA	X																	2	
DM-5	A		1445		1 x 1l Amber																X		1	
DM-5	B		1445		2 x 40ml VOA															X			2	
DM-5	C		1445		2 x 40ml VOA	X																	2	
MW-4	A		1345		1 x 1l Amber																X		1	
MW-4	B		1345		2 x 40ml VOA															X			2	
MW-4	C		1345		2 x 40ml VOA	X																	2	
Trip Blanks					3 x 40ml VOA	X															X		3	

RELINQUISHED BY: (Signature) Dan Myers DATE/TIME 4/4/91 RECEIVED BY: (Signature) Federal Express

RELINQUISHED BY: (Signature) DATE/TIME 4/5/91 10:00 RECEIVED BY: (Signature) V.D. Wilson

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY NOTES: Please note Fed Ex #

RECEIVED ACCULAB 1991 APR -5 AM 9:21

ANALYTICAL LABORATORY: Acculab

LABORATORY CONTACT: Greg Nagle

D&M CONTACT: David Myers PHONE: 243 3793

DAMES & MOORE
1290 Oakmead Parkway
Suite 301
Sunnyvale, California 94086
Telephone: 408/245-4959 FAX: 408/736-0545
S.F.

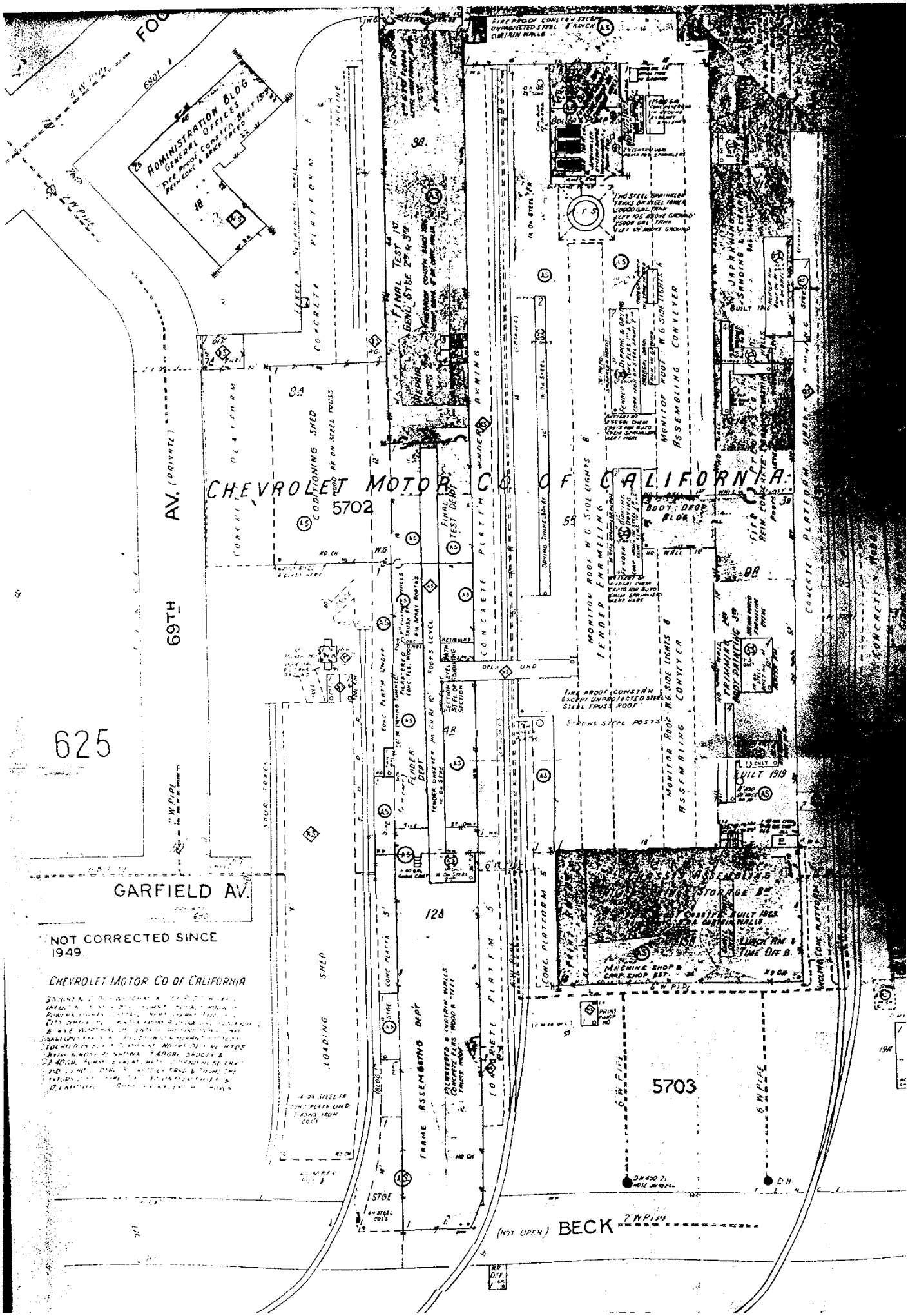
JOB NO.: 00443 090 043 SHEET 1 OF

PROJECT: J.C. Penney - C

LOCATION: Oakland

COLLECTOR: David Myers DATE OF COLLECTION: 4-4-91

00000281.tif 385 / 543


CHEVROLET MOTOR CO OF CALIFORNIA
5702
5703
625
69TH AV. (PRIVATE)
GARFIELD AV.
ADMINISTRATION BLDG
GENERAL OFFICES
FIRE PROOF CONSTR. BUILT 1918
REIN CONC & BRICK FACED
CONDITIONING SHED
FINAL TEST DEPT
MONITOR ROOF W.G. SIDE LIGHTS
ASSEMBLING CONVEYER
BODY DROP BLDG
FENDER DEPT
FRAME ASSEMBLING DEPT
LOADING SHED
CONCRETE PLATFORM
BUILT 1919
MACHINE SHOP & CRIB-SHOP SET
LUNCH RM & TIME OFF B.
(NOT OPEN) BECK
NOT CORRECTED SINCE 1949.
CHEVROLET MOTOR CO OF CALIFORNIA

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, Assistant Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Division
80 Swan Way, Rm. 200
Oakland, CA 94621
(510) 271-4320

Certified Mailer # P 113 815 438

93 SEP 13 PM 1:09

June 2, 1993

Mr. David Norwitt
One Eastmont Mall
Oakland, CA 94605

Re: Eastmont Plan of Investigation

Dear Mr. Norwitt:

This letter is in response to a telephone conversation that I had with one of your associates Jack Sumski regarding your new property the Eastmont Mall in Oakland on May 26, 1993. It is also in response to two letters dated May 14 and May 19, 1993 that were received from the previous property owner Jim Givens referring me to you as the new property owner. On January 28, 1993, Jim sent this office a request to review a plan of investigation for the subsurface contamination that was previously found on the property. On February 17, 1993, a letter was sent back to him requesting that he submit a check for $750.00 to this department to open a deposit/refund account for the regulatory oversight of this site mitigation project. A copy of this letter has been enclosed for your reference. As the new property owner, you will now have to do this within 30 days of the receipt of this letter.

In addition, an inspection of the Eastmont Auto Goodyear facility on March 17, 1993, revealed that there is an abandoned 500 gallon underground waste oil tank on the mall property adjacent to their space that was never used by their business and will now have to be removed by the property owner. There was a previous Notice of Violation sent from this department on this back in August of 1990. In accordance with the California Code of Regulations, Title 23, Chapter 3, Subchapter 16, Article 7, Section 2670, you are now required to submit an underground tank closure plan to this department within 30 days of the receipt of this letter. I have enclosed a copy of this form along with a form letter that outlines the underground tank removal process in Alameda County. In addition, please submit a separate deposit/refund account check for $483.00 made payable to the County of Alameda to cover our costs of review of this project. This deposit is also authorized by Section 3-141.6 of the Ordinance Code of Alameda County. Upon completion, any remaining balance will be returned to you.

If you have any questions, please contact me at (510) 271-3420.

Sincerely,

Ronald J. Owcarz

Ronald J. Owcarz, REHS
Hazardous Materials Specialist

Enclosures

cc: Larry Blazer, Alameda County District Attorney's Office
Jack Sumski, Eastmont Mall
Rich Hiett, RWQCB
Ariu Levi - file

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, Assistant Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Division
80 Swan Way, Rm. 200
Oakland, CA 94621
(510) 271-4320

93 SEP 13 PM 1:09

Certified Mailer # P 113 815 438

June 2, 1993

Mr. David Norwitt
One Eastmont Mall
Oakland, CA 94605

Re: Eastmont Plan of Investigation

Dear Mr. Norwitt:

This letter is in response to a telephone conversation that I had with one of your associates Jack Sumski regarding your new property the Eastmont Mall in Oakland on May 26, 1993. It is also in response to two letters dated May 14 and May 19, 1993 that were received from the previous property owner Jim Givens referring me to you as the new property owner. On January 28, 1993, Jim sent this office a request to review a plan of investigation for the subsurface contamination that was previously found on the property. On February 17, 1993, a letter was sent back to him requesting that he submit a check for $750.00 to this department to open a deposit/refund account for the regulatory oversight of this site mitigation project. A copy of this letter has been enclosed for your reference. As the new property owner, you will now have to do this within 30 days of the receipt of this letter.

In addition, an inspection of the Eastmont Auto Goodyear facility on March 17, 1993, revealed that there is an abandoned 500 gallon underground waste oil tank on the mall property adjacent to their space that was never used by their business and will now have to be removed by the property owner. There was a previous Notice of Violation sent from this department on this back in August of 1990. In accordance with the California Code of Regulations, Title 23, Chapter 3, Subchapter 16, Article 7, Section 2670, you are now required to submit an underground tank closure plan to this department within 30 days of the receipt of this letter. I have enclosed a copy of this form along with a form letter that outlines the underground tank removal process in Alameda County. In addition, please submit a separate deposit/refund account check for $483.00 made payable to the County of Alameda to cover our costs of review of this project. This deposit is also authorized by Section 3-141.6 of the Ordinance Code of Alameda County. Upon completion, any remaining balance will be returned to you.

If you have any questions, please contact me at (510) 271-3420.

Sincerely,

Ronald J. Owcarz

Ronald J. Owcarz, REHS
Hazardous Materials Specialist

Enclosures

cc: Larry Blazer, Alameda County District Attorney's Office
Jack Sumski, Eastmont Mall
Rich Hiett, RWQCB
Ariu Levi - file

Charles B. Snell
Project Geologist

DAMES & MOORE

[illegible]

Jim Given
General Manager

One Eastmont Mall
Oakland, California 94605-1970
(415) 632-1131
(415) 683-1818 Fax

Michael Swartz
Project Mana
California

Ryan-Murphy, Inc.
Petroleum Equipment Installation
Fueling Construction & Design

5351 Lincoln
Denver, CO 80216
(303) 293-FUEL (3835)
FAX (303) 296-7911

211 Granite Street Suite E
Corona, CA 91719
(714) 279-6210
FAX (714) 279-6215

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: August 22, 1994

Agency name: **Alameda County-HazMat**
City/State/Zip: **Alameda, CA 94502**
Responsible staff person: **Eva Chu**
Address: **1131 Harbor Bay Pkwy**
Phone: **(510) 567-6700**
Title: **Hazardous Materials Spec.**

II. CASE INFORMATION

Site facility name:
Site facility address:
RB LUSTIS Case No: **N/A**
URF filing date:
Local Case No./LOP Case No.:
SWEEPS No: **N/A**

Responsible Parties:	Addresses:	Phone Numbers:

Tank No:	Size in gal.:	Contents:	Closed in-place or removed?:	Date:

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release:
Site characterization complete? **YES**
Date approved by oversight agency:
Monitoring Wells installed? Number:
Proper screened interval?
Highest GW depth below ground surface: Lowest depth:
Flow direction:
Most sensitive current use:
Are drinking water wells affected? Aquifer name:
Is surface water affected? Nearest affected SW name:
Off-site beneficial use impacts (addresses/locations):

Report(s) on file? **YES** Where is report(s) filed? **Alameda County**
1131 Harbor Bay Pkwy
Alameda, CA 94502

Treatment and Disposal of Affected Material:

Material	Amount (include units)	Action (Treatment or Disposal w/destination)	Date
Tank			
Piping			
Free Product			
Soil			
Groundwater			
Barrels			

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm) Before	Soil (ppm) After	Water (ppb) Before	Water (ppb) After
TPH (Gas)				
TPH (Diesel)				
Benzene				
Toluene				
Ethylbenzene				
Xylenes				
Oil & Grease				
Heavy metals				
Other				

Comments (Depth of Remediation, etc.):

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? **YES**
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? **YES**
Does corrective action protect public health for current land use? **YES**
Site management requirements:

Should corrective action be reviewed if land use changes? **YES**
Monitoring wells Decommissioned:
Number Decommissioned: Number Retained:
List enforcement actions taken:

List enforcement actions rescinded:

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: **Eva Chu** Title: **Haz Mat Specialist**

Signature: Date:

Reviewed by

Name: Title:

Signature: Date:

Name: Title:

Signature: Date:

VI. RWQCB NOTIFICATION

Date Submitted to RB: RB Response:

RWQCB Staff Name: **Kevin Graves** Title: **AWRCE**

Signature: Date:

VII. ADDITIONAL COMMENTS, DATA, ETC.

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: August 22, 1994

Agency name: Alameda County-HazMat
City/State/Zip: Alameda, CA 94502
Responsible staff person: Eva Chu
Address: 1131 Harbor Bay Pkwy
Phone: (510) 567-6700
Title: Hazardous Materials Spec.

II. CASE INFORMATION

Site facility name:
Site facility address:
RB LUSTIS Case No: N/A
URF filing date:
Local Case No./LOP Case No.:
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VII. ADDITIONAL COMMENTS, DATA, ETC.

RO 4447 21

Eastmont Mall Property - Foothill & 73rd Ave., Oakland.

JC Penny Store No. ~~836~~

3 x 10,000 gal tank removal in 1985 & 1 waste oil tank removal in 1991

- TPH @ 15' were 2,000 ppm in soil + 14,000 ppb. Benz in ~~soil~~ soil
- TPH in GW = 2,200 ppb, Benz 28 ppb.

ACHD ~~[illegible]~~ opinion that the site is contaminated.

ACHD's comments: If another sampling event shows no contamination, this office would consider that no further action would be needed. Should the next sampling event show no contam. then the process of final closure & sign off of the site would follow.

Reports:

1. TCCR for Firestone facility ~~1021 N. Hacienda Blvd~~ 3/1991 (RMI)
2. Ph II Envir Audit - Eastmont Mall Property, Oakland. 11/20/89 (Hunter Environ. Sc
   GW depths 17'~37' (after stabilization, GW depth ~15'-35'
   Soil - silty clay. 5'-13' bgs
   Soil sample from well MW-4 indicated a level of ~~250~~ 2000 ppm.
   MW-4 @ 15' had dark gray staining with oily sheen + strong gasoline odor at the bottom of the sample, near the GW elevation
   All other soil samples from MW-2, MW-3 & MW-4 + soil boring B-1 were ND for all compounds except for MW-4 @ 15'.
3. Envir Science + Engineering, Inc. (ESE) - Eastmont Mall GW re-sampling 9/1990
   - GW flow direction - SSE (inferred from wells MW-2 & MW-3
   MW-3 = 45,000 ppb TPHg, 620 ppb Benz. ~~TCE 60 ppb~~
   MW-2 = 100 ppb PCE, 6.2 ppb TCE.

Foothill Blvd JC Penney T.B.A.

Bird Ave

e. SSIR – JC Penney Store # 836, Eastmont Mall, by Dames + Moore (7/10/91)

- drilled 4 soil borings to ~20' in the vicinity of the former gasoline tanks + G/P island
- drilled + sampled 1 SB to ~7' in the vicinity of former WO tank.
- drilled 1 SB' upgradient of former UST excavation.
- installed GW wells in 2 of the borings.

— In 1916, the site was excavated + leveled for the construction of an auto assembly plant : 5 USTs were buried.

- JC Penny TBA site was constructed as a parking lot since the Chevrolet Fisher Body plant ~~operated in 1916~~ built in 1916 until 1964 when the Eastmont Mall is constructed. (TBA site is NE to Body Plant where GW flow southerly !)

DM-1 @ GWdp ≅ 13'

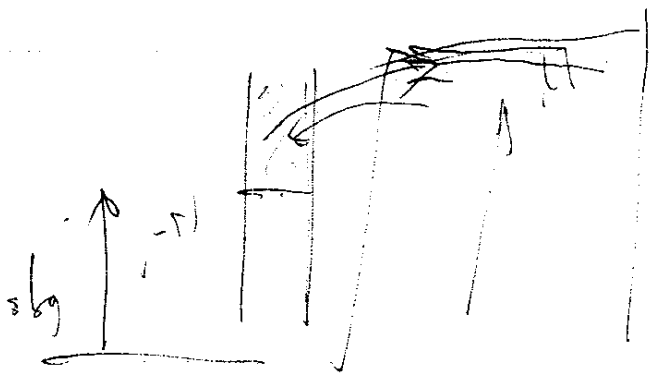
DM-2 GWdp ≅ 12'

MW-4 GWdp ≅ 14'

GW flow direction is difficult to measure ∵ of the proximity to Hayward fault, extremely heterogeneously stratigraphy of site soils, variable topographic relief in the area of the site.

GW conditions:

- likely to have a near surface localized perched unconfined aquifer which is discontinuous
- a deeper regional confined aquifer.
- D & M recommended that wells at the site be resampled & chemical analyses are req'd to re-evaluate the GW quality.



GW analyses:

MW 4

12/1989. 2200 ppb TPHg. 38 ppb Benz. 41 ppb T
4/1991 ND TPHg. ND Benz. ND T.
9/1990. ND. ND Benz ND. T. - water in the vicinity of MW-4
2/1992. ND. 1-1 Benz may be dammed behind an entrance ramp for the fire underground parking str
∴ not indicative of true regional GW elevation.

Soil boring (MW4)

12/1989 3000 ppm TPHg. 1400 ppb Benz @ 15'

Comments: in 12/1989

(1) Levels of contam. as TPHg found in MW4 @ 15' & in GW in MW-4
(2) DM investigation found some low level of contamination in soil boring in B-1. Both B-1 & MW4 are downgrad. of former USTs + soil contam. are at 15', close to GW level.
(3) Have 2 events shown ND in MW4, 1 event shown 2200 TPHg. (GW data.)
(4) ∴ recommended at least one more sampling event to be done prior to considering case closure.
(5) No objection to develop the land
(6) However, no info if any over-excavation of the USTs pit had been done. Yet the additional soil boring B-1, B-2 B-4 soil samples at 10.5' & 15.5' respectively showing nothing detected.

ALAMEDA COUNTY - DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS DIVISION

02/18/93

LIST OF RESPONSIBLE PARTIES FOR

SITE

StID: 26
Firestone
2701 - 73rd Ave.
Oakland, CA 94605

Date First Reported 12/20/89
Substance: Gasoline
Petroleum (X)Yes

Kathleen Scheutzow
Bridgestone/firestone Inc.
1200 Firestone Pkwy.
Akron, Oh 44317

Responsible Party #1
Property Owner

Bob Gerber, Real Est
J. C. Penney
P. O. Box 4015
Buena Park, Ca 90624

Responsible Party #2
Contact Person
Contact Company

Jim Given
Argonaut Financial Service Inc
#1 Eastmont Mall
Oakland, Ca 94605

Responsible Party #3
Contact Person
Contact Company

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
80 Swan Way, Rm 200
Oakland, CA 94621
(510) 271-4530

Certified Mail #

02/18/93
STID# 26

Notice of Requirement to Reimburse

Kathleen Scheutzow
Bridgestone/firestone Inc.
1200 Firestone Pkwy.
Akron, Oh 44317

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SITE

Date First Reported 12/20/89
Substance: Gasoline
Petroleum: (X)Yes

The federal Petroleum Leaking Underground Storage Tank Trust Fund (Federal Trust Fund) provides funding to pay the local and state agency administrative and oversight costs associated with the cleanup of releases from underground storage tanks. The legislature has authorized funds to pay the local and state agency administrative and oversight costs associated with the cleanup of releases from underground storage tanks. The direct and indirect costs of site investigation or remedial action at the above site are funded, in whole or in part, from the Federal Trust Fund. The above individual(s) or entity(ies) have been identified as the party or parties responsible for investigation and cleanup of the above site. YOU ARE HEREBY NOTIFIED that pursuant to Title 42 of the United States Code, Section 6991b(h)(6) and Sections 25297.1 and 25360 of the California Health and Safety Code, the above Responsible Party or Parties must reimburse the State Water Resources Control Board not more than 150 percent of the total amount of site specific oversight costs actually incurred while overseeing the cleanup of the above underground storage tank site, and the above Responsible Party or Parties must make full payment of such costs within 30 days of receipt of a detailed invoice from the State Water Resources Control Board.

Please contact Tom PEACOCK, Supervising Hazardous Materials Specialist at this office if you have any questions concerning this matter.

for Edgar B. Howell, III, Chief
Contract Project Director

cc: Sandra Malos, SWRCB

SWRCB Use: Update : X Reason: New RP #1 Address

ALAMEDA COUNTY - DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS DIVISION

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Contact Company

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery
Consult postmaster for fee.

3. Article Addressed to: (TP) #26

Kathleen Scheutzow
Bridgestone/Firestone Inc
1200 Firestone Pkwy.
Akron OH 44317

4a. Article Number
P 113 815 372

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
3-1-93

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)
Jernice M. Mineard

PS Form 3811, December 1991 ☆ U.S.G.P.O.: 1992-307-530 DOMESTIC RETURN RECEIPT

Thank you for using Return Receipt Service.

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

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SWRCB Use: Update: X Reason: New RP #1 Address

One Eastmont Mall
Oakland, California 94605
510 632-1131

EASTMONT FAX# 510/638-6656

Eastmont

TO: Tom Pesack

FAX#: 569-4757

FROM: Jim Given

DATE: 2/11/93

TOTAL NUMBER OF PAGES (including this cover): 2

COMMENTS: Bridgestone/Firestone Inc. 200 Firestone Pkwy Akron Ohio 44317 attn Environmental Affairs PH: 216 379 7000

The information contained in this facsimile message may be confidential and/or legally privileged information intended only for the use of the individual or entity named above. If the reader of this message is not the intended recipient, you are hereby notified that any copying, dissemination or distribution of confidential or privileged information is strictly prohibited. If you have received this communication in error, please immediately notify us by telephone, and we will arrange for the return of the facsimile. Thank you.

(0.2)

Kathleen A. Scheutzow

IMPORTANT MESSAGE

FOR Tom

DATE 7/21 TIME 1:25 A.M. P.M.

M Jim GIBBON

OF

PHONE 632-1131
AREA CODE NUMBER EXTENSION

TELEPHONED	X	PLEASE CALL	X
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL		SPECIAL ATTENTION	

MESSAGE Eastmont Dr. →

SIGNED

LITHO IN U.S.A.

TOPS FORM 3002S

J. C. Penny / Eastmont Mall → sublease to Firestone

Outstanding Issues "(5)" — By D&M

W.O. TANK: (B-3, drilled in 4/91, GWD@ NA → only to 6.5' w/ excavation to -? TPH to 140ppm (TOG)

① tank removed: 820ppm TPH (W.O.)

② No add. excavation, no confirmation samples

③ ② Co. does not have authority to close cases of this type. ① Bd. not notified by Co.

④ no CL- solvent analysis done, metals, PNA's (624 or 8240), (TCAP), (8270) Ryan Murphy, was consultant to —

— no GW data for this tank, ✓

STs (petroleum fuel). GW @ 16.5-17.0' bgs in 12/6/89

— Based on ref. g.w elevations MW-4 is not ↓ downgradient. ✓

<> 2000ppm TPH found @ 15' in boring for MW (B @ 1.4ppm? or ~~ppb~~ ppm

T 4.3 " " "

E 23.0

X 150 X

A. was this excavated

ii> GW: TPH to 2,200 ppb (not specified if ↓ or ↓) B to 440 (8020)

T 1921 (8240)

E 3130 (8240)

X 290 (8240)

— Add. investigations by D&M in tank backfill / B-2 to 12' encountered tank crib

— lat. & vert. extent of cont. ? ? no reporting in rpt.

PHASE 2, (Hunter investigation in 1989)

MW-2 (35'): GW results; PCE 210 ppb
1,2-DCE 8 ppb
TCE - 19 ppb

— source?

10/28/92 9:50 A

Spoke w/ Chuck Snell @ Dames & Moore about previous investigations and fax'd Re "Case Closure" referral letter (ref. contents) to him. He said he would be in contact w/ Re consultant



IMPORTANT MESSAGE

FOR T. P.

DATE 10/20 TIME 2:00 A.M. P.M.

M Jim Givens

OF

PHONE 632-1131
AREA CODE NUMBER EXTENSION

TELEPHONED		PLEASE CALL	—
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL		SPECIAL ATTENTION	

MESSAGE
No Rush

SIGNED

LITHO IN U.S.A.

TOPS FORM 3002S

MPORTANT MESSAGE

FOR T.P

DATE 11/3 TIME 9:15 A.M. P.M.

M Bob Gerber

OF J.C Penney

PHONE 714 / 523-6431
AREA CODE NUMBER EXTENSION

TELEPHONED	—	PLEASE CALL	—
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL		SPECIAL ATTENTION	

MESSAGE Status - J.C Penney -
Bob Arnison -

SIGNED

LITHO IN U.S.A.

TOPS FORM 30025

IMPORTANT MESSAGE

FOR TP

DATE 11/2 TIME 3:35 A.M. / P.M.

M Bob Gerber

OF

PHONE 714-523-6431
AREA CODE NUMBER EXTENSION

TELEPHONED		PLEASE CALL	✓
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL	✓	SPECIAL ATTENTION	

MESSAGE RE 2701-73rd
OAKland
Eastmont Mall

SIGNED SMS

LITHO IN U.S.A.

TOPS FORM 3002S

MPORTANT MESSAGE

FOR Tom

DATE 10/27/97 TIME 8:39 A.M. P.M.

M Jim Givens

OF

PHONE 632-1131
AREA CODE NUMBER EXTENSION

TELEPHONED	X	PLEASE CALL	X
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL		SPECIAL ATTENTION	

MESSAGE RC, LM 11-3

SIGNED

LITHO IN U.S.A.

TOPS FORM 3002S

MPORTANT MESSAGE

FOR T.P.

DATE 12/3 TIME 3:40 A.M. P.M.

M Jim Gibbon

OF Eastman

PHONE 632 - 1131
AREA CODE NUMBER EXTENSION

TELEPHONED	✓	PLEASE CALL	←
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL		SPECIAL ATTENTION	

MESSAGE Re LM

SIGNED

LITHO IN U.S.A.

TOPS FORM 3002S

IMPORTANT MESSAGE

FOR TP

DATE 11/6 TIME 9:55 A.M. P.M.

M Jim Givens

OF

PHONE 632 1131
AREA CODE NUMBER EXTENSION

TELEPHONED	X	PLEASE CALL	
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL		SPECIAL ATTENTION	

MESSAGE

SIGNED JMS

LITHO IN U.S.A.

TOPS FORM 3002S

MPORTANT MESSAGE

FOR Tom P.

DATE 11/10 TIME 11 A.M. P.M.

M Jim Gibbons

OF EAST West.

PHONE 632 1131
AREA CODE NUMBER EXTENSION

TELEPHONED	✓	PLEASE CALL	X
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL		SPECIAL ATTENTION	

MESSAGE RG LM 11-12

SIGNED

LITHO IN U.S.A.

TOPS FORM 3002S

DAMES & MOORE
221 MAIN STREET, SUITE 600, SAN FRANCISCO, CALIFORNIA 94105-1917
(415) 896-5858 FAX: (415) 882-9261

July 17, 1992
Job No. 00443-090-043

Mr. Thomas Peacock
Alameda County Department of Environmental Health
80 Swan Way, Suite 200
Oakland, California 94621

Dear Mr. Peacock:

Quarterly Groundwater Monitoring
J.C. Penney Company Store
Eastmont Mall
Oakland, California

At the request of our client, J.C. Penney Company, Inc., we are submitting to you a copy of Dames & Moore's report entitled "Groundwater Monitoring, J.C. Penney Store #836, Eastmont Mall, Oakland, California" dated July 15, 1992. This report documents the results of the groundwater monitoring round performed on June 4, 1992. Please call us if you have any questions regarding this report.

Sincerely,

DAMES & MOORE

Charles B. Snell
Project Manager

Enclosure

cc: Mr. Robert Arneson, J.C. Penney Company (w/o enclosure)

9:30 11:26 6-24-92

Sampled 1 wk ago

results due any day —

7/6-92

J.C. Penney -

TPH gas ethelbenzene
MW 4 0.8 ppb

FAX (415) 882-9761

Post-It™ brand fax transmittal memo 7671 | # of pages ▸ 1

To Chuck Snell	From Tom Peacock
Co. Dames & Moore	Co. Alameda
Dept.	Phone #
Fax # (415) 882-9761	Fax #

IPORTANT MESSAGE

FOR TP

DATE 7/8 TIME 3:30 A.M. P.M.

M Chuck Snell

OF

PHONE 415 243-3809
AREA CODE NUMBER EXTENSION

TELEPHONED		PLEASE CALL	✓
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL		SPECIAL ATTENTION	

MESSAGE

SIGNED SMS

LITHO IN U.S.A.

TOPS FORM 3002S

IMPORTANT MESSAGE

FOR T.P.

DATE 7/6 TIME 3:23 A.M. (P.M.)

M Chuck Snell

OF

PHONE 415 243-3809
AREA CODE NUMBER EXTENSION

TELEPHONED		PLEASE CALL	—
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL		SPECIAL ATTENTION	

MESSAGE Dames & Moore
RCVD; 7-8-92

COP 26

SIGNED

LITHO IN U.S.A.

TOPS FORM 30025

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program

RAFAT A. SHAHID, Assistant Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Division
80 Swan Way, Rm. 200
Oakland, CA 94621
(510) 271-4320

March 13, 1992

Bob Gerber, Real Estate Dept., J. C. Penney
P.O. Box 4015 (6131 Orangethorpe Ave.)
Buena Park, CA 90624

Re: Firestone TBA, 2701 - 73rd Ave., Oakland, CA 94605
STID # 26

Dear Bob Gerber:

This office has reviewed the Summary Report Groundwater Monitoring dated March 3, 1992 by Dames & Moore and consulted with **Eddie So** of the Regional Water Quality Control Board. There were two previous rounds of sampling that were non-detect with the last round being on April 4, 1991. There was 1.9 ppb and 1.1 ppb of benzene found in the water in well MW-4 during this round. There is no information in this Department, the Oakland Fire Department, J.C. Penney, Firestone, or the tank removal contractor (Dor-Am Builders) concerning the tank removal at the above site. **One more round of quarterly sampling is required** so that there will be 4 quarters, the routine and minimal requirement used by the Water Board. If the next round of sampling is also non-detect then a letter of no further action needed will be issued.

There is no known reason why occupancy and use of the building on the surface would be impacted by another round of sampling. Use of the building should also have no impact on another round of sampling.

If you have any questions please contact Thomas Peacock, Supervising Hazardous Material Specialist, at this office.

Sincerely,

Edgar B. Howell, III, Chief
Hazardous Material Division

c: Kurt Jergens, Firestone, 205 N. Michigan #34-000,Chicago,IL 60601
Jim Given,#1 Eastmont Mall, Oakland, CA 94605
Rafat Shahid, Asst. Agency Director
Eugenia Sangines, Dames & Moore,221 Main St.,Suite 600, San Francisco, CA 94105

3-16-92

Post-It™ brand fax transmittal memo 7671	# of pages ▸ 1
To Mary Ling	From Tom Peacock
Co. 305	Co. Alameda Co.
Dept.	Phone #
Fax # 465-7627	Fax # 569-4757

3-16-92

Post-It™ brand fax transmittal memo 7671	# of pages ▸ 1
To Felicia Harris	From Tom Peacock
Co. Raytor	Co. Alameda Co.
Dept.	Phone #
Fax # 238-4731	Fax # 569-4757

IMPORTANT MESSAGE

FOR T.P.

DATE 2/27 TIME 2:17 AM P.M

M Eddie

OF

PHONE 464 - 4366
AREA CODE NUMBER EXTENSION

TELEPHONED	✓	PLEASE CALL	✓
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL		SPECIAL ATTENTION	

MESSAGE

SIGNED

LITHO IN U.S.A.

TOPS FORM 3002S

IMPORTANT MESSAGE

FOR T.P.

DATE 2/27 TIME 11:38 A.M. P.M.

M Jim Given

OF East Mont

PHONE 032 1131 - _____
AREA CODE NUMBER EXTENSION

TELEPHONED	✓	PLEASE CALL	✓
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL		SPECIAL ATTENTION	

MESSAGE RG LM 2-27-92

SIGNED SMS

LITHO IN U.S.A.

TOPS FORM 3002S

IMPORTANT MESSAGE

FOR Tom Peacock

DATE 2/28 TIME 9:28 A.M. P.M.

M Jim Givens

OF W/ Eastmont

PHONE 632-1131
AREA CODE NUMBER EXTENSION

TELEPHONED	✓	PLEASE CALL	✓
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL		SPECIAL ATTENTION	

MESSAGE

SIGNED C.P.

LITHO IN U.S.A.

TOPS FORM 3002S

IMPORTANT MESSAGE

FOR 3-2-92

DATE ~~2/28~~ TIME A.M. P.M.

M Jim Green

OF J.C. Penney

PHONE AREA CODE NUMBER EXTENSION

TELEPHONED		PLEASE CALL	
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL		SPECIAL ATTENTION	

MESSAGE check BP site

0,3

SIGNED

LITHO IN U.S.A.

TOPS FORM 3002S

IMPORTANT MESSAGE

FOR ED

DATE 3/6 TIME 10:05 A.M. / P.M.

M Steve Colvin

OF City of Ala.

PHONE 748-4595
AREA CODE NUMBER EXTENSION

TELEPHONED	✓	PLEASE CALL	
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL		SPECIAL ATTENTION	

MESSAGE RE
1435 - Webster St

Tom

SIGNED SMS

LITHO IN U.S.A.

TOPS FORM 30025

IMPORTANT MESSAGE

FOR TP

DATE 3/5 TIME 10:03 A.M. P.M.

M Colin Lacon

OF City of Oakland / Mayor ofc.

PHONE 238 3141
AREA CODE NUMBER EXTENSION

TELEPHONED	✓	PLEASE CALL	
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL		SPECIAL ATTENTION	

MESSAGE RE: Eastmont Mall
Firestone Bldg.
5086-

SIGNED SMS

LITHO IN U.S.A.

TOPS FORM 3002S

IMPORTANT MESSAGE

FOR T.P.

DATE 3/5 TIME 4:05 A.M. P.M.

M Glory

OF Mary King

PHONE 26694
AREA CODE NUMBER EXTENSION

TELEPHONED	—	PLEASE CALL	—
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL		SPECIAL ATTENTION	

MESSAGE

SIGNED

LITHO IN U.S.A.

TOPS FORM 3002S

IMPORTANT MESSAGE

FOR T. P.

DATE 3/6 TIME 11:01 A.M. P.M.

M ~~Gloria~~ Gloria

OF B of Sups.

PHONE 26694
AREA CODE NUMBER EXTENSION

TELEPHONED	✓	PLEASE CALL	
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL		SPECIAL ATTENTION	

MESSAGE J. C. Penney —
Call Colin —
O.4

SIGNED

LITHO IN U.S.A.

TOPS FORM 3002S

white -env.health
yellow -facility
pink -files

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

Hazardous Materials Inspection Form

80 Swan Way, #200
Oakland, CA 94621
(415) 271-4320

II,III

Site ID # 26 Site Name J.C. Penney Today's Date 2/6/92

Site Address 2701 73rd Ave. Oak

City Oakland Zip 94605 Phone _____

____ MAX AMT stored > 500 lbs, 55 gal., 200 cft.?

Inspection Categories:
____ I. Haz. Mat/Waste GENERATOR/TRANSPORTER
____ II. Business Plans, Acute Hazardous Materials
+ III. Underground Tanks → Sit mit

* Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

II.A BUSINESS PLANS (Title 19)

___	1. Immediate Reporting	2703
___	2. Bus. Plan Stds.	25503(b)
___	3. RR Cars > 30 days	25503.7
___	4. Inventory Information	25504(a)
___	5. Inventory Complete	2730
___	6. Emergency Response	25504(b)
___	7. Training	25504(c)
___	8. Deficiency	25505(a)
___	9. Modification	25505(b)

II.B ACUTELY HAZ. MAT'LS

___	10. Registration Form Filed	25533(a)
___	11. Form Complete	25533(b)
___	12. RMPP Contents	25534(c)
___	13. Implement Sch. Req'd? (Y/N)	___
___	14. OffSite Conseq. Assess.	25524(c)
___	15. Probable Risk Assessment	25534(d)
___	16. Persons Responsible	25534(g)
___	17. Certification	25534(l)
___	18. Exemption Request? (Y/N)	25536(b)
___	19. Trade Secret Requested?	25538

III. UNDERGROUND TANKS (Title 23)

General

___	1. Permit Application	25284 (H&S)
___	2. Pipeline Leak Detection	25292 (H&S)
___	3. Records Maintenance	2712
___	4. Release Report	2651
___	5. Closure Plans	2670

Monitoring for Existing Tanks

___ 6. Method
1) Monthly Test
2) Daily Vadose
Semi-annual gndwater
One time soils
3) Daily Vadose
One time soils
Annual tank test
4) Monthly Gndwater
One time soils
5) Daily Inventory
Annual tank testing
Cont pipe leak det
Vadose/gndwater mon.
6) Daily Inventory
Annual tank testing
Cont pipe leak det
7) Weekly Tank Gauge
Annual tank tsting
8) Annual Tank Testing
Daily Inventory
9) Other _____

___	7. Precis Tank Test Date: _____	2643
___	8. Inventory Rec.	2644
___	9. Soil Testing .	2646
___	10. Ground Water.	2647

New Tanks

___	11. Monitor Plan	2632
___	12. Access. Secure	2634
___	13. Plans Submit Date: _____	2711
___	14. As Built Date: _____	2635

Rev 6/88

Comments:
Visited site. 37896 37888 8
wells being sampled by Dames & Moore - Charles Snell
2-3 wks for results
Sampling DM-1, DM-2, MW-4

H, III

Contact: _____

Title: _____

Signature: _____

Inspector: _____

Signature: _____

IMPORTANT MESSAGE

FOR TF

DATE 1/22 TIME 12:30 A.M. P.M.

M Ugenia

OF Danco & Morris

PHONE 243 3794
AREA CODE NUMBER EXTENSION

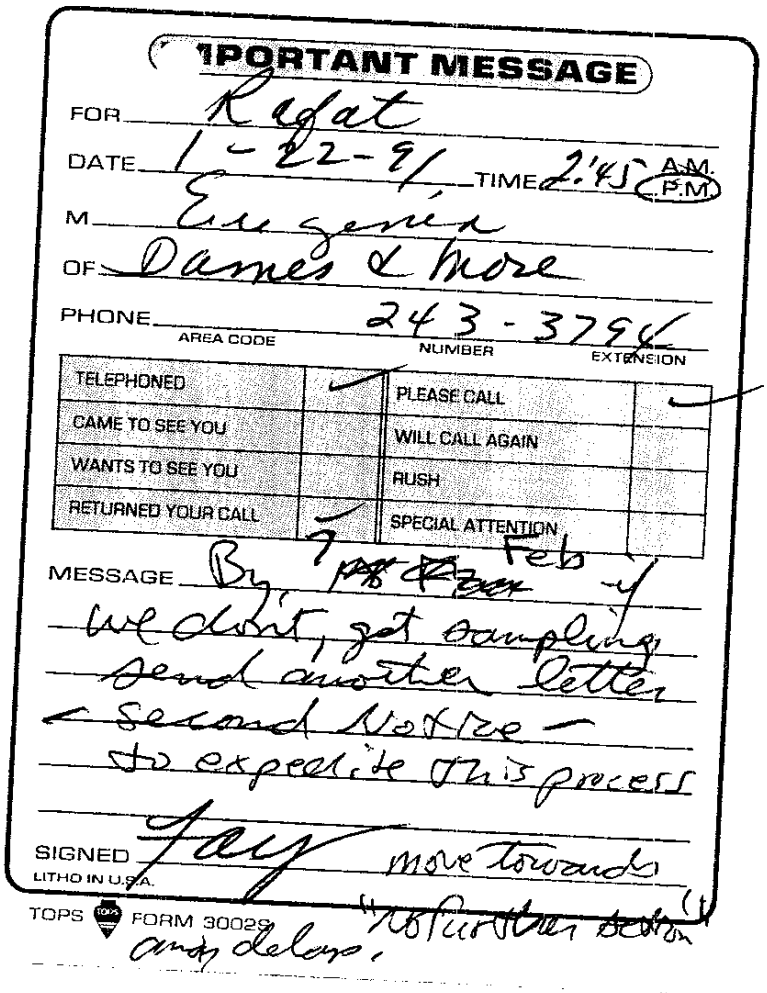
TELEPHONED	✓	PLEASE CALL	
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL		SPECIAL ATTENTION	

MESSAGE RC, M 1-29-92

SIGNED SMS

LITHO IN U.S.A.

TOPS FORM 3002S



IMPORTANT MESSAGE

FOR Rafat

DATE 1-22-91 TIME 2:45 A.M. P.M.

M Eric Jensen

OF Dames & Moore

PHONE 243-3796
AREA CODE NUMBER EXTENSION

TELEPHONED	✓	PLEASE CALL	✓
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL		SPECIAL ATTENTION	

MESSAGE By ? Feb 4
We don't get sampling
send another letter
- Second Notice -
to expedite this process
Jay move towards
"No further delays.

SIGNED

LITHO IN U.S.A.

TOPS FORM 3002S

IMPORTANT MESSAGE

FOR T.P.

DATE 2/5 TIME 4:10 A.M. P.M.

M Chuck Snell

OF Dames & Moore

PHONE 415 · 243·3809
AREA CODE NUMBER EXTENSION

TELEPHONED		PLEASE CALL	
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL		SPECIAL ATTENTION	

MESSAGE

RE: sampling @ Eastmont
to start 1:00pm

SIGNED

LITHO IN U.S.A.

TOPS FORM 3002S

TOM R

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY

MEMORANDUM

DATE: January 22, 1992

TO: Supervisor Mary King, President of the Board of Supervisors

FROM: David J. Kears, Director, HCSA

SUBJECT: Request for Status of FIRESTONE TBA (Tires, Batteries & Accessories), 2701 73rd Avenue, Oakland, CA. 94605 STID #26 UPDATE

In response to a request from your office regarding the status of the Firestone site at 2701 73rd Avenue in Oakland, the Environmental Health Department is currently overseeing clean up of a petroleum leak from some underground storage tanks that used to be at that site.

The department is working closely with the consultant on this site to perform an additional ground water sampling event. If the samples show no contamination, the department would consider that no further action would be needed and the final closure and sign off of the site will follow. The "no further action" letter could be mailed within two weeks of the receipt of the confirmatory sample results.

The issue of the ground water contamination should not prevent the City of Oakland from the use of the building at 2701 73rd Avenue, Oakland for a police substation.

Please let me know if I can be of any further assistance.

DJK:RAS:fh

c: Each Member of the Board of Supervisors
County Administrator
Rafat A. Shahid, Asst. Agency Director, DEH

FIRESTSU

IMPORTANT MESSAG

FOR Tom

DATE 1-22-92 TIME 10:40 A.M. / P.M.

M Eugenia

OF Dassed and More

PHONE 243-3794
AREA CODE NUMBER EXTENSION

TELEPHONED	✓	PLEASE CALL	
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL		SPECIAL ATTENTION	

MESSAGE Mary Ling - 465-7628
Fax Eastmont - 568-3706
Major 238-4731
Richard Ward - 882-9261

SIGNED Jay

LITHO IN U.S.A.

TOPS FORM 3002S

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program

RAFAT A. SHAHID, Assistant Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
80 Swan Way, Rm. 210
Oakland, CA 94621
(415) 271-4320 XXXXXXXXXX (510) 271-4320

January 22, 1992

Bob Gerber, Real Estate Dept.
J. C. Penney
P.O. Box 4015 (6131 Orangethorpe Ave.)
Buena Park, CA 90624

Re: Firestone TBA, 2701 - 73rd Ave., Oakland, CA 94605
STID # 26

Dear Bob Gerber:

This office has reviewed the Ground-Water Resampling report dated Oct. 15, 1990 (received Jan. 9, 1992) by Environmental Science & Engineering, Inc. and the Subsurface Investigation Report dated July 10, 1991 by Dames & Moore. The Recommendations section, page 32, of the latter report recommends that monitoring well MW-4 be resampled for TPHg and BTEX. This would normally be done for 4 quarters of "clean" sampling results before any letter of "No further action needed " would be issued by this office. Since the last round of sampling was done Apr 4., 1991 there was not another quarterly event done to date. This would have been due in Jul. 1991.

You are requested to have performed one more round of sampling and analysis for TPHg and BTXE. A duplicate must be analyzed from that well for QA/QC. Please have your sampling personnel call this office 48 hours prior to the sampling event.

If you have any questions please contact Thomas Peacock, Supervising Hazardous Material Specialist, at this office.

Sincerely,

Thomas F. Peacock

Edgar B. Howell, III, Chief
Hazardous Material Division

cc: Kurt Jergens, Firestone, 205 N. Michigan #34-000, Chicago, IL 60601
Jim Given,#1 Eastmont Mall, Oakland, CA 94605
Rafat Shahid, Asst. Agency Director
Eugenia Sangines, Dames & Moore,221 Main St.,Suite 600, San Francisco, CA 94105

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Program
80 Swan Way, Rm. 200
Oakland, CA 94621
(415)

FACSIMILE TRANSMITTAL

TO:

~~510~~ - 238-4731
Fax Phone Number

Floor/Room # _____

Name: Elihu Harris
Title/Section

Agency: Mayor's Office

Address: _____

Phone #: ( ) _____

FROM:

538-3706
Fax Phone Number

Floor/Room # _____

Date: 1-22-92

Time Sent: _____

Sender: Don Deaver
Title/Section

Phone #: ( ) 271-4320

Number of Pages Including Transmittal Sheet: 2

Special Instructions/Comments:

enforcement agency, shall be used on each container that is processed to indicate the attainment of adequate sterilization conditions.

(4) The biological indicator Bacillus stearothermophilus, or other indicator of adequate sterilization as approved by the department, shall be placed at the center of a load processed under standard operating conditions at least monthly to confirm the attainment of adequate sterilization conditions.

(5) Records of the procedures specified in paragraphs (1), (2), and (4) shall be maintained for a period of not less than three years.

(d) Other alternative medical waste treatment methods which are both of the following:

(1) Approved by the department.

(2) Result in the destruction of pathogenic microorganisms.

Any alternative medical waste treatment method proposed to the department shall be evaluated by the department and either approved or rejected pursuant to the criteria specified in this subdivision.

25090.5. Recognizable human anatomical remains, with the exception of teeth not deemed infectious by the attending physician and surgeon, or dentist shall be disposed of by incineration or interment unless otherwise hazardous.

25091. Hypodermic needles shall be either incinerated and disposed of as solid waste, or otherwise rendered noninfectious, encased in a solid or semisolid material, and disposed of as solid waste. Disposal of this waste as solid waste shall be permitted if the waste is not otherwise hazardous.

25091.5. An operator of a hazardous waste incinerator permitted pursuant to Section 25200 may also accept medical waste for incineration.

25092. Each medical waste treatment facility issued a medical waste permit shall provide the enforcement agency with an emergency action plan which the facility shall follow to ensure the proper disposal of medical waste in the event of equipment breakdowns, natural disasters, or other occurrences.

25093. Notwithstanding Section 9141 of the Food and Agricultural Code, animals that die from infectious diseases shall be treated in accordance with Section 25090 if, in the opinion of the attending veterinarian or local health officer, the carcass presents a danger of infection to humans.

25094. The department shall charge an application fee for evaluation of an alternative treatment technology pursuant to subdivision (d) of Section 25090 equal to one hundred dollars ($100) per hour for each hour the department spends processing the application, but not more than a total of one thousand dollars ($1,000), or as provided in the regulations adopted by the department.

SEC. 9. Article 10 (commencing with Section 25095) is added to

00000281.tif 450 / 543

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Program
80 Swan Way, Rm. 200
Oakland, CA 94621
(415)

FACSIMILE TRANSMITTAL

TO:

(714) 523-6373
Fax Phone Number

Floor/Room # _____

Name: Bob Gerber
Title/Section

Agency: J.C. Penney

Address: _____

Phone #: ( ) _____

FROM:

(510) 568-3706
Fax Phone Number

Floor/Room # _____

Date: 1-22-92

Time Sent: _____

Sender: Tom Reamer
Title/Section

Phone #: (510) 271-4320

Number of Pages Including Transmittal Sheet: 2

Special Instructions/Comments:

25099.3. The enforcement agency may temporarily suspend a medical waste permit prior to any hearing, when it has determined that this action is necessary to protect the public welfare. The enforcement agency shall notify the permittee of the temporary suspension and the effective date thereof and, at the same time, shall serve the permittee with an accusation.

Upon receipt of a notice of defense by the permittee, the matter shall, within 15 days, be set for hearing. The hearing shall be held as soon as possible, but not later than 30 days after receipt of the notice.

The temporary suspension shall remain in effect until the hearing is completed and the enforcement agency has made a final determination on the merits. However, the temporary suspension is vacated if the enforcement agency fails to make a final determination on the merits within 60 days after the original hearing has been completed.

SEC. 11. Section 25117.5 of the Health and Safety Code is repealed.

SEC. 12. Section 25117.5 is added to the Health and Safety Code, to read:

25117.5. Waste which is hazardous only because it is medical waste as defined in the Medical Waste Management Act (Chapter 6.1 (commencing with Section 25015)) shall not be governed by, subject to fees assessed by, or otherwise subject to, the requirements of this chapter or regulations adopted pursuant to this chapter.

SEC. 13. Section 25117.6 of the Health and Safety Code is repealed.

SEC. 14. Section 25157.3 of the Health and Safety Code is repealed.

SEC. 15. Section 25173.5 of the Health and Safety Code is amended to read:

25173.5. (a) Except as provided in subdivision (b), the legislative body of a city or county may impose and enforce a tax, for general purposes, or may impose a user fee on the operation of an offsite, multiuser hazardous waste facility located within the jurisdiction of the city or county. The tax or the user fee imposed shall not exceed 10 percent of the facility's annual gross receipts for the treatment, storage, or disposal of hazardous waste at the facility.

If a city or county imposes a tax pursuant to this section, the city or county may use the revenues collected from the tax to fund those activities reasonably necessary for the city or county to carry out its duties related to the operation of the hazardous waste facility upon which the tax is imposed and for support of the city's or county's fire and emergency response capabilities and emergency medical services, to the extent the city or county determines that this funding should be given priority.

(b) A city or county shall not impose a tax or a user fee adopted pursuant to subdivision (a) upon any of the following:

(1) An existing hazardous waste facility for which a tax is

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ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Program
80 Swan Way, Rm. 200
Oakland, CA 94621
(415)

FACSIMILE TRANSMITTAL

TO:

(312) 819-8950
Fax Phone Number

Floor/Room # _____

Name: Kurt Jergens
Title/Section

Agency: Firestone

Address: _____

Phone #: ( ) _____

FROM:

(510) 568-3706
Fax Phone Number

Floor/Room # _____

Date: 1-22-92

Time Sent: _____

Sender: Tom Peacock
Title/Section

Phone #: 510) 271-4320

Number of Pages Including Transmittal Sheet: 2

Special Instructions/Comments:

shall adopt regulations which specify the requirements for providing notice to persons to whom orders are issued and for administrative hearings and fines concerning these orders.

SEC. 10. Article 11 (commencing with Section 25099.1) is added to Chapter 6.1 of Division 20 of the Health and Safety Code, as added by Assembly Bill 109, to read:

Article 11. Suspension or Revocation

25099.1. The enforcement agency may suspend, amend, or revoke any medical waste permit issued by the enforcement agency for any of the following reasons:

(a) Violation by the permittee of any of the provisions of this chapter or any regulation adopted pursuant to this chapter.

(b) Violation of any term or condition of the permit.

(c) Aiding, abetting, or permitting the violation specified in subdivision (a) or (b) or interference in the performance of the duty of the enforcement officer.

(d) Proof that the permittee has intentionally made false statements, or failed to disclose fully all relevant facts, in any material regard, on the application for a medical waste permit.

(e) The conviction of a permittee, or the person in charge of the activity subject to the medical waste permit, of any crime which is substantially related to the qualifications or duties of the permittee or the person in charge of the activity, or which is substantially related to the functions which are subject to the medical waste permit.

For purposes of this section, a conviction means a plea or verdict of guilty or a conviction following a plea of nolo contendere. An action to revoke or suspend the medical waste permit may be taken when the time for appeal has elapsed or the judgment of conviction has been affirmed on appeal. That action may also be taken when an order granting probation is made suspending the imposition of sentence, notwithstanding any subsequent order pursuant to Section 1203.4 of the Penal Code. The enforcement agency shall take into account all competent evidence of rehabilitation furnished by the permittee or person in charge of the permitted activity.

(f) A change in any condition that requires either a temporary or permanent modification, reduction, or termination of the permitted operation to bring it into compliance with the requirements of this chapter and the regulations adopted pursuant to the chapter.

25099.2. Proceedings conducted by the department for the suspension or revocation of a medical waste permit shall commence with the filing of any accusation and shall be conducted in accordance with Chapter 5 (commencing with Section 11500) of Part 1 of Division 3 of Title 2 of the Government Code, and the department shall have all the powers granted to a department in that chapter.

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ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Program
80 Swan Way, Rm. 200
Oakland, CA 94621
(415)

FACSIMILE TRANSMITTAL

TO:

638-1818
Fax Phone Number

Floor/Room # _____

Name: Jim Given
Title/Section

Agency: Eastmont Mall

Address: _____

Phone #: ( ) _____

FROM:

568-3706
Fax Phone Number

Floor/Room # _____

Date: 1-22-92

Time Sent: _____

Sender: Don Reuck
Title/Section

Phone #: ( ) 271-4320

Number of Pages Including Transmittal Sheet: 2

Special Instructions/Comments:

Chapter 6.1 of Division 20 of the Health and Safety Code, as added by Assembly Bill 109, to read:

Article 10. Enforcement

25095. (a) In order to carry out the purpose of this chapter, any authorized representative of the enforcement agency may do any of the following:

(1) Enter and inspect a facility for which a medical waste permit or registration has been issued, for which a medical waste permit or registration application has been filed, or which is subject to registration or permitting requirements pursuant to this chapter. Enter and inspect a vehicle for which a hazardous waste hauler registration has been issued or a limited-quantity exemption granted, for which an application has been filed for a hazardous waste hauler registration or a limited-quantity exemption, or which is subject to registration requirements pursuant to this chapter.

(2) Inspect and copy any records, reports, test results, or other information related to the requirements of this chapter or the regulations adopted pursuant to this chapter.

(b) The inspection shall be made with the consent of the owner or possessor of the facilities or, if consent is refused, with a warrant duly issued pursuant to Title 13 (commencing with Section 1822.50) of Part 3 of the Code of Civil Procedure. However, in the event of an emergency affecting the public health or safety, an inspection may be made without consent or the issuance of a warrant.

25096. An enforcement agency may bring an action to enjoin the violation, or threatened violation, of this chapter or the regulations adopted pursuant to this chapter, in the superior court in the county in which the violation occurred or is about to occur. Any proceeding under this section shall be in accordance with Chapter 3 (commencing with Section 525) of Title 7 of Part 2 of the Code of Civil Procedure, except that the enforcement agency is not required to allege facts necessary to show or tending to show the lack of an adequate remedy at law or irreparable damage or loss.

With respect to any action brought pursuant to this section alleging actual violation of this chapter or the regulations adopted pursuant to this chapter, the court shall, if it finds the allegations to be true, issue its order enjoining the continuance of the violation.

25096.1. Whenever the enforcement agency determines that a violation or threatened violation of this chapter or the regulations adopted pursuant to this chapter has resulted, or is likely to result, in a release of medical waste into the environment, the agency may issue an order to the responsible person specifying a schedule for compliance or imposing an administrative penalty of not more than one thousand dollars ($1,000) per violation. Any person who, after notice and an opportunity for hearing, violates an order issued pursuant to this section is guilty of a misdemeanor. The department

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ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Program
80 Swan Way, Rm. 200
Oakland, CA 94621
(415)

FACSIMILE TRANSMITTAL

TO:

465-7628 — Floor/Room # _____
Fax Phone Number

Name: Mary King — Title/Section

Agency: Chairman, BOS

Address: _____

Phone #: ( ) _____

FROM:

568-3706 — Floor/Room # _____
Fax Phone Number

Date: 1-22-92 — Time Sent: _____

Sender: Tom Peacock — Title/Section

Phone #: ( ) 271-4320

Number of Pages Including Transmittal Sheet: 2

Special Instructions/Comments:

6. Contractor _____

Address _____

City _____ Phone _____

License Type _____ ID# _____

7. Submit Worker's Compensation Certificate copy

Name of Insurer _____

8. Contact person for installation_____

Phone_____ Title_____

9. Submit 3 set of scaled Blue Prints: consisting of detailed engineering descriptions of the installation and must include the following information:

a) North Arrow, property Lines, location of all structures;
b) plan views and elevations of tanks, piping runs, and dispensers, as well as schematics of all appurtenant equipment and monitoring devices to be installed, utilities;
c) Existing wells (drinking, monitoring, etc.);
d) Depth to ground water; and
e) All existing tanks and piping in addition to the ones being installed/modified.
f) electrical and wiring diagrams, including emergency shutoff.
g) installation specifications and construction standards to be followed.

10. Enclose Deposit
A deposit, payable to Alameda County for the amount indicated on the Alameda County Underground Storage Tank Fee Schedule, must accompany the plans. The time spent on the project will be charged on an hourly basis at the current service rate. Any refund at the conclusion of the project will be refunded to the owner or his/her designee.

* One complete copy of your approved plan must be at the construction site at all times; a copy of your approved plan must also be sent to the landowner.

11. Of the three sets of plans submitted, two will be returned after review and approval. Next you must contact the appropriate fire and building departments for any required permits. You must schedule at least 3 days in advance for the following inspections: piping inspection prior to covering, and final inspection prior to operating. A precision test will be required on the system to assure it does not leak. Any questions or problems should be refered directly to the specialist assigned to your project.

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Program
80 Swan Way, Rm. 200
Oakland, CA 94621
(415)

FACSIMILE TRANSMITTAL

TO: 415 882-9761
Fax Phone Number

Floor/Room #: _____

Name: Eugenia Sanchez
Title/Section

Agency: Dames & Moore

Address: _____

Phone #: ( ) _____

FROM: 568-3506
Fax Phone Number

Floor/Room #: _____

Date: 1-22-92

Time Sent: _____

Sender: Dan Deaver
Title/Section

Phone #: ( ) 271-4320

Number of Pages Including Transmittal Sheet: 2

Special Instructions/Comments:

5. Tank Information: Note: any special treatment to prevent corrosion, details of cathodic protection, piping coatings, and any special or unique equipment not otherwise noted. 15 gallon minimum overfill protection is required. Attach appropriate manufacturer brochures and instructions for clarity.

Manufacturer	Model	Size(gal.)	Material/Design	Contents

Monitoring Eq*	Model	Manual/Auto	line leak Detect	Monitoring Meth

* a copy of the manufacturer's brochure must be submitted with tank installation diagrams. It must show test methods and procedures.

One Eastmont Mall
Oakland, California 94605
415 632-1131

Eastmont

By FAX only
569-3708

ENVIRONMENTAL HEALTH
ENTALS UNIT

Orangeburn
24
774
3

841-000
601
2741
8930

We look forward to

Best regards

Jim Glaser
for Pat Cas

JG:dc

wp/files/AlaCoua.let

eastmont

[illegible] OAKLAND, CALIFORNIA 94605 (415) [illegible]

FACSIMILE TRANSMISSION

TO

FAX

Fax 638-1818

If you have [illegible]

re-send it to you.

Number of pages including face sheet 2

JUL 18 '91 13:06 PAGE.001

State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program

XXXXXXXXXX (510) 271-4320

January 22, 1992

Bob Gerber, Real Estate Dept.
J. C. Penney
P.O. Box 4015 (6131 Orangethorpe Ave.)
Buena Park, CA 90624

Re: Firestone TBA, 2701 - 73rd Ave., Oakland, CA 94605
STID # 26

Dear Bob Gerber:

This office has reviewed the Ground-Water Resampling report dated Oct. 15, 1990 (received Jan. 9, 1992) by Environmental Science & Engineering, Inc. and the Subsurface Investigation Report dated July 10, 1991 by Dames & Moore. The Recommendations section, page 32, of the latter report recommends that monitoring well MW-4 be resampled for TPHg and BTEX. This would normally be done for 4 quarters of "clean" sampling results before any letter of "No further action needed " would be issued by this office. Since the last round of sampling was done Apr 4., 1991 there was not another quarterly event done to date. This would have been due in Jul. 1991.

You are requested to have performed one more round of sampling and analysis for TPHg and BTXE. A duplicate must be analyzed from that well for QA/QC. Please have your sampling personnel call this office 48 hours prior to the sampling event.

If you have any questions please contact Thomas Peacock, Supervising Hazardous Material Specialist, at this office.

Sincerely,

Edgar B. Howell, III, Chief
Hazardous Material Division

cc: Kurt Jergens, Firestone, 205 N. Michigan #34-000, Chicago, IL 60601
Jim Given,#1 Eastmont Mall, Oakland, CA 94605
Rafat Shahid, Asst. Agency Director
Eugenia Sangines, Dames & Moore,221 Main St.,Suite 600, San Francisco, CA 94105

Site Brief for U N D E R G R O U N D T A N K S
for the City of Oakland as of 09/30/91
pg 6

UTID/ Status FillID	Name of Site	Site Address	#Tanks	PERMITS:
C TC1214	Supreme Parts Unlimited	1255 - 21st St. Oakland , CA 94607	1	I:12/14/89 F:
C T21047	Herrington Olson Inc.	769 - 22nd St. Oakland , CA 94612	1	I:02/09/88 F:
C T91037	Oakland Plant	333 - 23rd Ave. Oakland , CA 94606	1	I:09/27/88 F:
191 C R51237	Bay Area Petroleum	421 - 23rd Ave. Oakland , CA 94606	5	I:05/22/89 F:
1125 C TB1215	B & J Forklift, Inc.	430 - 23rd Ave. Oakland , CA 94606	1	I:11/06/89 F:
C TB1075	Right Away Redy Mix	435 - 23rd Ave. Oakland , CA 94606	1	I:04/07/88 F:
215 R	Exchange Linen Service Of	527 - 23rd Ave. Oakland , CA 94606	0	I: F:
234 C TA1026	SF Newspaper Agency	534 - 23rd Ave. Oakland , CA 94606	1	I:05/25/88 F:
34 C T91207	Eandi Metal Works, Inc.	976 - 23rd Ave. Oakland , CA 94606	2	I:01/15/91 F:
208 R -0-	Discount Gasoline	1951 - 23rd Ave. Oakland , CA 94606	0	I: F:
693 R	Yellow Cab Co.	1685 - 24th St. Oakland , CA 94607	0	I: F:
C T31030	Cereske Electric Cable Co	1688 - 24th St. Oakland , CA 94607	2	I:03/21/88 F:
R	Pacific Supply Oakland	1735 - 24th St. Oakland , CA 94607	0	I: F:
502 N	Wagner & Pigozzi, Inc.	465 - 25th St. Oakland , CA 94612		I: F:
R TB1095	United Glass Co.	477 - 25th St. Oakland , CA 94612	0	I:11/10/88 F:
1081 C T91021		375 - 26th St. Oakland , CA 94612	1	I:09/14/88 F:
456 F	The Benz Shop	381 - 26th St. Oakland , CA 94612		I: F:
38 F	Ron Simmerman	1051 - 26th St. Oakland , CA 94607		I: F:
C T31087	Western Seafare Company	1301 - 26th St. Oakland , CA 94607	1	I:03/12/90 F:
487 R T91210	Label Art	290 - 27th St. Oakland , CA 94612	0	I:09/11/90 F:
480 C T12042	Oakland Acura	294 - 27th St. Oakland , CA 94612	1	I:01/16/90 F:
C T71046	Oakland Fire Station #15	455 - 27th St. Oakland , CA 94612	1	I: F:
1079 C T51240	N. Schoonbrood,J. Barbage	554 - 27th St. Oakland , CA 94612	3	I:06/14/91 F:
C T61044	Golden Gate Associates, I	695 - 27th St. Oakland , CA 94612	1	I:06/10/88 F:
R	Servisco, Golden State Li	958 - 28th St. Oakland , CA 94608	0	I: F:
345 F	Jackson's Repair Shop	1101 - 28th St. Oakland , CA 94608		I: F:
R	Del Monte,Oakland Plant #	1100 - 29th Ave Oakland , CA 94601	0	I: F:

ALAMEDA COUNTY - ENVIRONMENTAL HEALTH - HAZARDOUS MATERIALS DIVISION

MEMORANDUM

DATE: **January 16, 1992**

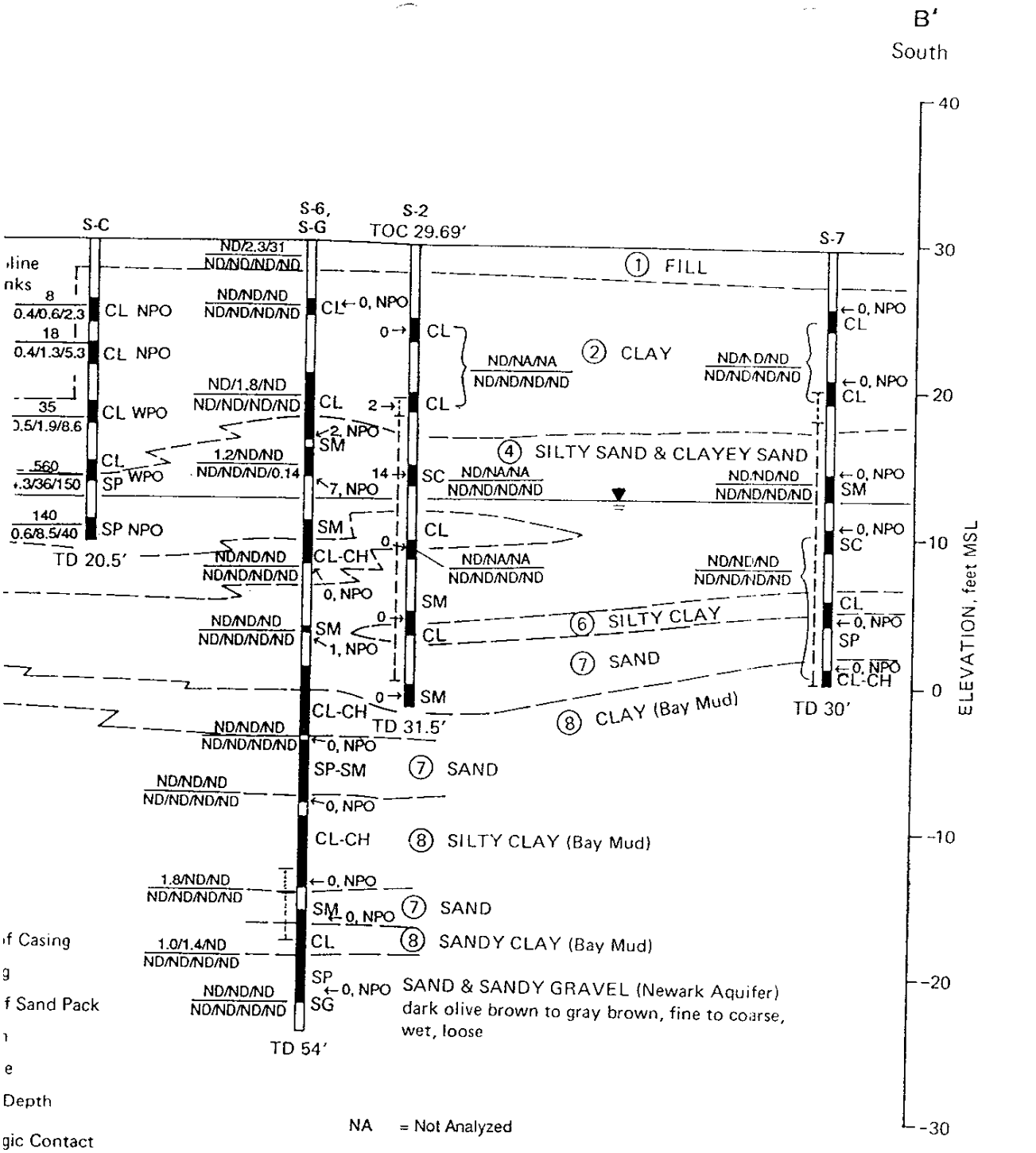
TO : **Rafat Shahid**

FROM: **Tom Peacock**

SUBJ: **Request for Status of Firestone case, 2701 - 73rd Ave., Oakland, CA 94605 STID # 26 Update**

The following sequence of actions and current status is made as a result of a request for information from the Chairman, Alameda County Board of Supervisors:

1. 11-20-90 Closure Plan approved for 550 gal. waste oil tank.
2. 12-12-90 Tank removed.
3. 1-7-91 lab results on soil samples received.
4. 1-10-91 letter from this office concerning re-excavation and disposal of contaminated soils.
5. 3-14-91 request from RMI to this office for site closure.
6. 3-91 Tank Closure report from Ryan Murphy Inc.
7. 3-20-91 letter this office: no further action needed. If new information is presented the case could be reopened.
8. 7-18-91 Fax giving site contacts to Paul Smith of this office.
9. 8-7-91 **New Report received** from Dames & Moore: Subsurface Investigation dated 7-10-91. Report elaborates about three 10,000 fuel tanks removed from the site in 1985 as well as a waste oil tank removed in 1987, replaced, and then removed again in 1991. The report mentions wells drilled in 1989 and sampled. **Total Petroleum hydrocarbon levels at 15 feet were 2000 ppm and benzene was 1,400 ppb. TPH and benzene were found in ground water at 2.2 ppm and 28 ppb respectively.** Due to the presence of hydrocarbons in the soil and groundwater Mall management has requested further investigation by J.C.Penney.
10. 1-2-92 Responsible Parties notified that the site was being placed in the Local Oversight Program for site cleanup.
11. 1-7-92 Site reports are currently being reviewed for the issuance of a request for further investigation and remediation.
12. 1-9-92 Environmental Science & Engineering report dated October 15, 1990 received. Samples from MW-4 taken in Sep. 90 were found to be ND (non-detectable) for TPHg and BTXE.
13. Samples taken on Aug. 4, 1991 and reported in the Dames & Moore report in #9 above were found to be ND for TPHg and BTXE.
14. Standard procedure would require two additional sampling events over two additional quarters. This might be modified since the period of sampling with ND results would exceed 16 months.



Project No. 8910011A	Shell Bass	CROSS SECTION B-B' WITH SOIL CONTAMINATION DATA SHELL SERVICE STATION 5489 THORNTON AVE., NEWARK, CA	Figure 10
Woodward-Clyde Consultants			

TO: Supervisor Don Perata

1. The Department of Environmental Health, Hazardous Material Division, has been asked about the possible health significance of the City of Oakland using the former Firestone TBA (Tires, Batteries, & Accessories) building, located at 2701 - 73rd Ave. in Oakland, for a Police Substation. This office is currently overseeing cleanup of a petroleum leak from some underground storage tanks that used to be at that facility. Groundwater contamination was first discovered 2 years ago in a shallow aquifer approximately 15 feet below the surface of the ground. This office has no objection to the occupancy of the building for any purpose as a result of this contamination. The last two monitoring events have detected no contamination in groundwater beneath the site. This office offers no judgement on any other aspect of the building, as nothing else has been submitted for our evaluation, nor is anything required to be.

2. The Consultant, Dames & Moore, was recently told by this office that at least one additional groundwater sampling event must be performed. The last sampling event occured in August 1991; the next quarterly event would have been in November. This did not occur. If another sampling event shows no contamination, this office would consider that no further action would be needed. Should the next sampling event show no contamination, then the process of final closure and sign off of the site would follow. This could occur within weeks of the receipt of confirmatory sample results.

cc: Each member, Board of Supervisors
County Administrator's Office

\TER RESOURCES CONTROL BO[illegible]
DIVISION OF WATER QUALITY - UST CLE[illegible]NUP PROGRAM
SITE SPECIFIC QUARTERLY REPORT
AGENCY NO: 10000
10/15/91 THROUGH 01/15/92

SOURCE OF FUNDS: F
StID : 26
SITE NAME: Firestone
ADDRESS : 2701 - 73rd Ave.
CITY/ZIP : Oakland 94605
SUBSTANCE: gas 6619

MULTIPLE RP's?: Y
DATE REPORTED: 12/20/89
DATE CONFIRMED: 12/20/89

SITE STATUS S

CASE TYPE: G	CONTRACT STATUS:		EMERGENCY RESP:
RP SEARCH: S	DATE UNDERWAY:		DATE COMPLETED: 1/2/92
PRELIMINARY ASMNT: U/C	DATE UNDERWAY:	12/20/89	DATE COMPLETED: 7/10/91
REM INVESTIGATION: U	DATE UNDERWAY:	7/10/91	DATE COMPLETED:
REMEDIAL ACTION:	DATE UNDERWAY:		DATE COMPLETED:
POST RA MON:	DATE UNDERWAY:		DATE COMPLETED:

ENFORCEMENT ACTION TYPE : S DATE TAKEN: 1/2/92
LUFT FIELD MANUAL CONSID: 3 HSCA WG
CASE CLOSED: DATE CLOSED:
DATE EXCAVATION STARTED: 12/12/91 REMEDIAL ACTIONS TAKEN: ED,

RESPONSIBLE PARTY

RP#1-CONTACT NAME: Kurt Jergens
COMPANY NAME: Firestone
ADDRESS: 205 N. Michigan #34-000
CITY/STATE: Chicago, IL 60601
PHONE:

RP#2-CONTACT NAME: Bob Gerber, Real Estate Dept.
COMPANY NAME: J.C. Penney
ADDRESS: P.O. Box 4015 (6131 Orangethorpe Ave.)
CITY/STATE: Buena Park, CA 90624
PHONE:

RP#3-CONTACT NAME: Jim Given
COMPANY NAME: Argonaut Financial Services, Inc.
ADDRESS: #1 Eastmont Mall
CITY/STATE: Oakland, CA 94605
PHONE:

RP#4-CONTACT NAME:
COMPANY NAME:
ADDRESS:
CITY/STATE:
PHONE:

HAZARDOUS MATERIALS ALAMEDA COUNTY

Site Brief for G E N E R A T O R S as of 09/30/91 page 1

for the City of Fremont

StID#	Name of Site	Site Address	Zip	LastInsp	#Empl	Sta
2258	Reynold Aluminum	40595 Albrae St.	538	09/08/88	2	C
3315	Top Quality BMW	40861 Albrae St.	538	03/19/91	1	C
3316	Mercedes Only	40863 Albrae St.	538	03/11/91	1	C
3344	BNP Foreign Auto Cli	40869 Albrae St.	538	04/02/91	1	C
3345	Econo Lube n' Tune	40871 Albrae St.	538	04/02/91	4	C
3368	Bay Area Auto Connec	40921 Albrae St.	538	04/29/91	1	C
3388	Tire Service Co. Eur	40975 Albrae St.	538	05/10/91	3	C
2257	INTELMATEC Corporati	41353 Albrae St.	538	09/08/88	4	C
2252	Hi-Pro Manufacturing	41703 Albrae St.	538	09/13/88	5	C
2253	Oreta Graphics	41811 Albrae St.	538	09/13/88	2	C
2254	ReederType	41841 Albrae St.	538	09/08/88	2	C
2255	Olympic Painting Com	41907 Albrae St.	538	09/08/88	3	C
2256	Outboard Motor Shop	41945 Albrae St.	538	07/11/91	4	I
3227	West Coast Quartz Co	41969 Albrae St.	538	12/18/90	16	C
785	PG&E - Irvington Sta	0 Albrae St., Off Durh	538	09/19/91	0	I
2723	Dave Prichard & Son	4050 Alder Ave.	536		1	I
3432	Technology Communica	34175 Ardenwood Blvd.	555	06/13/91	10	C
2420	Electrofusion Corpor	34325 Ardenwood Blvd.	555	04/21/89	44	C
2421	Mylex	34551 Ardenwood Blvd.	555	06/06/91	40	C
3504	Deico Electronics	2800 Bayview Dr.	538	08/06/91	50	C
2509	Debbie's Honda Servi	37311 Blacow Rd.	536	12/03/90	2	I
2510	Tri-City Body & Pain	37349 Blacow Rd.	536	05/31/89	8	C
2471	Ethyl VisQueen Film	37350 Blacow Rd.	536	05/17/89	8	I
3207	B&J Automotive	37355 Blacow Rd.	536	12/14/90	0	C
2525	Tom's BP	37630 Blacow Rd.	536	01/16/91	2	C
2508	Lido Exxon Tow Servi	37635 Blacow Rd.	536	05/31/89	2	C
1893	Arco Station #02147	40055 Blacow Rd.	538	01/09/91	4	C
2128	Blacow Chevron	41500 Blacow Rd.	538	08/17/88	7	C
2110	Fremont Automotive	42450 Blacow Rd.	539	08/09/88	3	C
1992	Dorso's Automotive R	3750 Bonde Way #1	536	03/26/91	2	C
2758	East Bay Radiatr&Air	3750 Bonde Way #2	536	11/17/89	0	C
2757	Accurate Automotive	3750 Bonde Way #3	536	11/17/89	1	C
2760	Transmission of Frem	3710 Bonde Way #4	536	11/17/89	2	C
2761	Allied Carburetor Co	3710 Bonde Way #5	536	11/17/89	0	C
2759	Cat's Radiator & Aut	3710 Bonde Way #6	536	11/17/89	2	C
3453	Chaides Construction	42027 Boscell Rd.	538	07/18/91	5	C
3300	McClanahan Trailer&T	42251 Boscell Rd.	538	03/14/91	9	C
3508	Tri Valley Growers	41099 Boyce Rd.	538		250	C
1362	Borden Chemical Div.	41100 Boyce Rd.	538	02/15/91	44	C
632	PG&E - Gas Meter Rep	42100 Boyce Rd.	538	09/22/86	80	C
630	PG&E - Bulk Distribu	42105 Boyce Rd.	538	09/22/86	57	C
3033	WMI Services	42600 Boyce Rd.	538	07/30/91	20	C
2200	Lewis & Tibbits, Inc	42700 Boyce Rd.	538	05/08/89	80	C
3493	Bay Bobcat	42800 Boyce Rd.	538	07/19/91	13	C
3499	Scott Specialty Gase	5121 Brandin Ct.	538	07/30/91	7	C
2721	Center Square Cleane	120 Center Square	536	10/04/89	1	C
3205	Oakland ARTCC	5125 Central Ave.	536	11/27/90	12	C
2518	Budget Rent-A-Car	5307 Central Ave.	536	06/05/89	2	C
3384	Atanque Automotive	37555 -C Centralmont P	536	05/03/91	2	C
2467	Fremont Auto Air & E	37555 -A Centralmont P	536	05/09/89	4	C
2439	T.J. Bros., Inc. Bod	37477 -B Centralmont P	536	05/09/91	9	C
2440	Fremont Sport & Fore	37555 -B Centralmont P	536	08/15/91	2	C

STATUS: C = Current I = Inactive Q = need Q'naire

IMPORTANT MESSAGE

FOR Rafat

DATE 1/8 TIME 3:05 A.M. P.M.

M. Colin Lacon

OF Mayor Elihu Harris Off.

PHONE 238-3141
AREA CODE NUMBER EXTENSION

TELEPHONED	✓	PLEASE CALL	✓
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL		SPECIAL ATTENTION	

MESSAGE RE: East Mont Mall
Fax - 238-4731

SIGNED SMS

LITHO IN U.S.A.

TOPS FORM 3002S

IMPORTANT MESSAGE

FOR TP

DATE 1/13 TIME 9:17 A.M. P.M.

M Jim Given

OF EastMont

PHONE 632-1131
AREA CODE NUMBER EXTENSION

TELEPHONED	✓	PLEASE CALL	
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL		SPECIAL ATTENTION	

MESSAGE

SIGNED SMS

LITHO IN U.S.A.

TOPS FORM 3002S

ALAMEDA COUNTY - ENVIRONMENTAL HEALTH - HAZARDOUS MATERIALS DIVISION

MEMORANDUM

DATE: **January 7, 1992**

TO : **Rafat Shahid**

FROM: **Tom Peacock**

SUBJ: **Request for Status of Firestone case, 2701 - 73rd Ave., Oakland, CA 94605 STID # 26**

The following sequence of actions and current status is made as a result of a request for information from the Chairman, Alameda County Board of Supervisors:

1. 11-20-90 Closure Plan approved for 550 gal. waste oil tank.
2. 12-12-90 Tank removed.
3. 1-7-91 lab results on soil samples received.
4. 1-10-91 letter from this office concerning re-excavation and disposal of contaminated soils.
5. 3-14-91 request from RMI to this office for site closure.
6. 3-91 Tank Closure report from Ryan Murphy Inc.
7. 3-20-91 letter this office: no further action needed. If new information is presented the case could be reopened.
8. 7-18-91 Fax giving site contacts to Paul Smith of this office.
9. 8-7-91 **New Report received** from Dames & Moore: Subsurface Investigation dated 7-10-91. Report elaborates about three 10,000 fuel tanks removed from the site in 1985 as well as a waste oil tank removed in 1987, replaced, and then removed again in 1991. The report mentions wells drilled in 1989 and sampled. **Total Petroleum hydrocarbon levels at 15 feet were 2000 ppm and benzene was 1,400 ppb. TPH and benzene were found in ground water at 2.2 ppm and 28 ppb respectively.** Due to the presence of hydrocarbons in the soil and groundwater Mall management has requested further investigation by J.C.Penney.
10. 1-2-92 Responsible Parties notified that the site was being placed in the Local Oversight Program for site cleanup.
11. 1-7-92 Site reports are currently being reviewed for the issuance of a request for further investigation and remediation. Letter expected to be issued within a week.

Conclusion: In response to your request for information and current status on the above site it is this Departments opinion that **the site is contaminated** and if it is transfered to a new owner **the current owner will accept any liability commensurate with that contamination.**

EMERGENCY RESPONSE PROCEDURES

In the event of a fire, spill, or a leak or suspected leak in the tanks and/or piping, the following steps are to be taken as applicable:

1. TURN OFF PUMPS using the Emergency Pump Shut-Off Switch.

2. If there is any immediate danger, ANNOUNCE to all persons on the site: "There is an emergency. Please turn off your engines and leave the station on foot immediately."

3. CALL FOR HELP in case of an emergency by dialing 9-1-1 and giving the following information:

   "THERE IS A FIRE / GASOLINE SPILL at the SHELL station at (give address)." If anyone is trapped or needs medical attention, tell the answering dispatcher. Stay on the phone and be prepared to answer any questions concerning the situation.

4. LOOK AROUND to assure that all others have left the station if necessary, particularly those in vehicles who may need assistance or may not have heard the emergency announcement. Assist, or direct assistance to, anyone having difficulty leaving the station area, and anyone who may be injured.

5. ATTEMPT TO EXTINGUISH any small or incipient fire if you can do so safely. Have the fire extinguisher ready to use in the event of any spill. Try to contain any large spill, or use absorbent on smaller spills. Activate nearest fire alarm if applicable.

6. REPORT to arriving emergency response personnel to provide them with any information or assistance they might need.

7. CONTACT the station dealer if s/he is not already at the station. Use the list below for emergency contacts:
   1. Name/Bus Phone/Home Phone: Richard Tejada 415-839-0784/415-982-4079
   2. Name/Bus Phone/Home Phone: STAN ROLLER/ 415-676-1414 x127/ 415-449-1406
   3. Name/Bus Phone/Home Phone: RAY NEWSOME/ 415-676-1414 x128/ 415-529-0439

8. NOTIFY your SHELL OIL District Engineer by phone WITHIN 24 HOURS

   1. SHELL OIL District Engineer: Ray Newsome
      PHONE NUMBER: (415) 676-1414 x128
      You must mail a completed Unauthorized Release Report to SHELL within 24 hours.

   SHELL will notify the appropriate State and Local agencies unless the situation requires urgent immediate response by the agencies, in which case the DEALER should notify these agencies:

   1. LOCAL AGENCY: ALAMEDA COUNTY DEPT. OF ENVIRONMENTAL HEALTH, HAZARDOUS MATERIALS DIV.
      PHONE NUMBER: 415-271-4320
   2. CALIFORNIA OFFICE OF EMERGENCY SERVICES, (800) 852-7550 (24 HOURS)

9. Dealer should attempt to isolate leak location by inspection.

10. SHELL will coordinate whatever corrective actions need to be taken beyond the Dealer's capabilities. SHELL will file whatever reports need to be filed with local and state agencies, and send a copy to the station for the Dealer's files.

A COPY OF THIS PAGE MUST BE FILLED OUT AND POSTED CONSPICUOUSLY ON SITE.

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☒ Show to whom delivered, date, and addressee's address. *(Extra charge)*
2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:

Argonaut Financial Srvc
attn: Jim Given
#1 Eastmont Mall
Oakland, CA 94605

4. Article Number
P 6

Type of Service:
- ☐ Registered
- ☐ Insured
- ☒ Certified
- ☐ COD
- ☐ Express Mail
- ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X [signature]

6. Signature — Agent
X

7. Date of Delivery
1-7-92

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form **3811**, Mar. 1988 * U.S.G.P.O. 1988-212-865 **DOMESTIC RETURN RECEIPT**

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Program
80 Swan Way, Rm. 200
Oakland, CA 94621
~~(415)~~(510) 271-4320

certified mailer #P 367 604 632

January 2, 1992
STID# 26

Notice of Requirement to Reimburse

Firestone
ATTN: Kurt Jergens
205 N. Michigan #34-000
Chicago, IL 60601

Responsible Party
Contact Person
Contact Company

J.C. Penney
ATTN: Bob Gerber, Real Estate Dept.
P.O.Box 4015(6131 Orangethorpe Ave.)
Buena Park, CA 90624

Responsible Party
Contact Person
Contact Company

Argonaut Financial Services, Inc.
ATTN: Jim Given
#1 Eastmont Mall
Oakland, CA 94605

Responsible Party
Property Owner

Former Firestone Store
2701 73rd Ave.
Oakland, CA 94605

SITE

Date First Reported 12/20/89
Substance: gasoline
Petroleum (X)Yes

The federal Petroleum Leaking Underground Storage Tank Trust Fund (Federal Trust Fund) provides funding to pay the local and state agency administrative and oversight costs associated with the cleanup of releases from underground storage tanks. The legislature has authorized funds to pay the local and state agency administrative and oversight costs associated with the cleanup of releases from underground storage tanks. The direct and indirect costs of overseeing removal or remedial action at the above site are funded, in whole or in part, from the Federal Trust Fund. The above individual(s) or entity(ies) have been identified as the party or parties responsible for investigation and cleanup of the above site. **YOU ARE HEREBY NOTIFIED** that pursuant to Title 42 of the United States Code, Section 6991b(h)(6) and Sections 25297.1 and 25360 of the California Health and Safety Code, the above Responsible Party or Parties must reimburse the State Water Resources Control Board not more than 150 percent of the total amount of site specific oversight costs actually incurred while overseeing the cleanup of the above underground storage tank site, and the above Responsible Party or Parties must make full payment of such costs within 30 days of receipt of a detailed invoice from the State Water Resources Control Board.

If you have any questions concerning this matter please contact Thomas Peacock, Supervising Hazardous Material Specialist, at this office.

Sincerely,

for Edgar B. Howell, III, Chief
Contract Project Director

cc: Sandra Malos, SWRCB

SWRCB Use : | add: X Reason: New case |

8/18
Tom,
Jim Cervino called. Call him back at 632-7131.
Juliet

It sounds as though I should write a letter to Firestone re: 2 additional UST's

525 - 14th St Suite 601
Oakland
Bayport office

P 367 604 634

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Argonaut Financial Srvc	
Street and No. #1 Eastmont Mall	
P.O., State and ZIP Code Oakland, CA 90624	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$ 2.29
Postmark or Date Jan 6, 1992 430pm	

PS Form 3800, June 1985 U.S.G.P.O. 1989-234-555

P 367 604 633

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to J C Penney	
Street and No. P.O. Box 4015	
P.O., State and ZIP Code Buena Park, CA 90624	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$ 2.29
Postmark or Date Jan 6, 1992	

Begum

PS Form 3800, June 1985

U.S.G.P.O. 1989-234-555

P 367 604 632

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

Sent to Firestone	
Street and No. 205 N. Michigan #34-000	
P.O., State and ZIP Code Chicago, IL 60601	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$2.24
Postmark or Date Jan 6, 1992 4:30pm	

PS Form 3800, June 1985 U.S.G.P.O. 1989-234-555

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☒ Show to whom delivered, date, and addressee's address. *(Extra charge)*
2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:

Firestone
attn: Kurt Jergens
205 N. Michigan #34-000
Chicago, IL 60601

4. Article Number
P 367 604 632

Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Address
X K. Bogen

6. Signature – Agent
X

7. Date of Delivery 1/9/90

8. Addressee's Address *(ONLY if requested and fee paid)*
205 N. Michigan
60601

PS Form **3811**, Mar. 1988 * U.S.G.P.O. 1988-212-865 **DOMESTIC RETURN RECEIPT**

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. 2. ☐ Restricted Delivery *(Extra charge)* *(Extra charge)*

3. Article Addressed to:

J C Penney
attn: Bob Gerber
P.O.Box 4015
Buena Park, CA 90624

4. Article Number
2b

Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

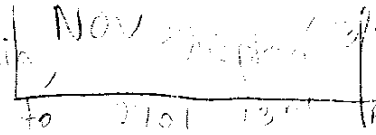
5. Signature — Address
X

6. Signature — Agent
X

7. Date of Delivery
JAN 9 1992

8. Addressee's Address *(ONLY if requested and fee paid)*
fee not paid

PS Form **3811**, Mar. 1988 ★ U.S.G.P.O. 1988-212-865 **DOMESTIC RETURN RECEIPT**



[illegible] resumed to [illegible] 13th [illegible]

A Sig by the name of [illegible] with Cabinet municipal buildings [illegible] Said that there are [illegible] (2) 12,000 gal tks on the grounds [illegible] records of Sch tanks [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

DATE:

TO : Local Oversight Program

FROM:

SUBJ: Transfer of Elligible Oversight Case

6929 Foothill Blvd. Oakland 94605

7201-73rd Ave. Firestone

Site name: J.C. Penney Store #836

Address: Eastmont Mall City Oakland Zip 94605

Closure plan attached? Y N DepRef remaining $ 0

DepRef Project # STID #(if any) ~~221~~ 26

Number of Tanks: removed? Y N Date of removal

Samples received? Y N Contamination:

Petroleum Y N Types: Avgas Jet ~~leaded~~ unleaded Diesel
fuel oil ~~waste oil~~ kerosene solvents

Monitoring wells on site Monitoring schedule? Y N 4 Q's every 30 Dec 89

LUFT category 1 2 3 * H S C A R W G O

Briefly describe the following:

Preliminary Assessment

Remedial Action

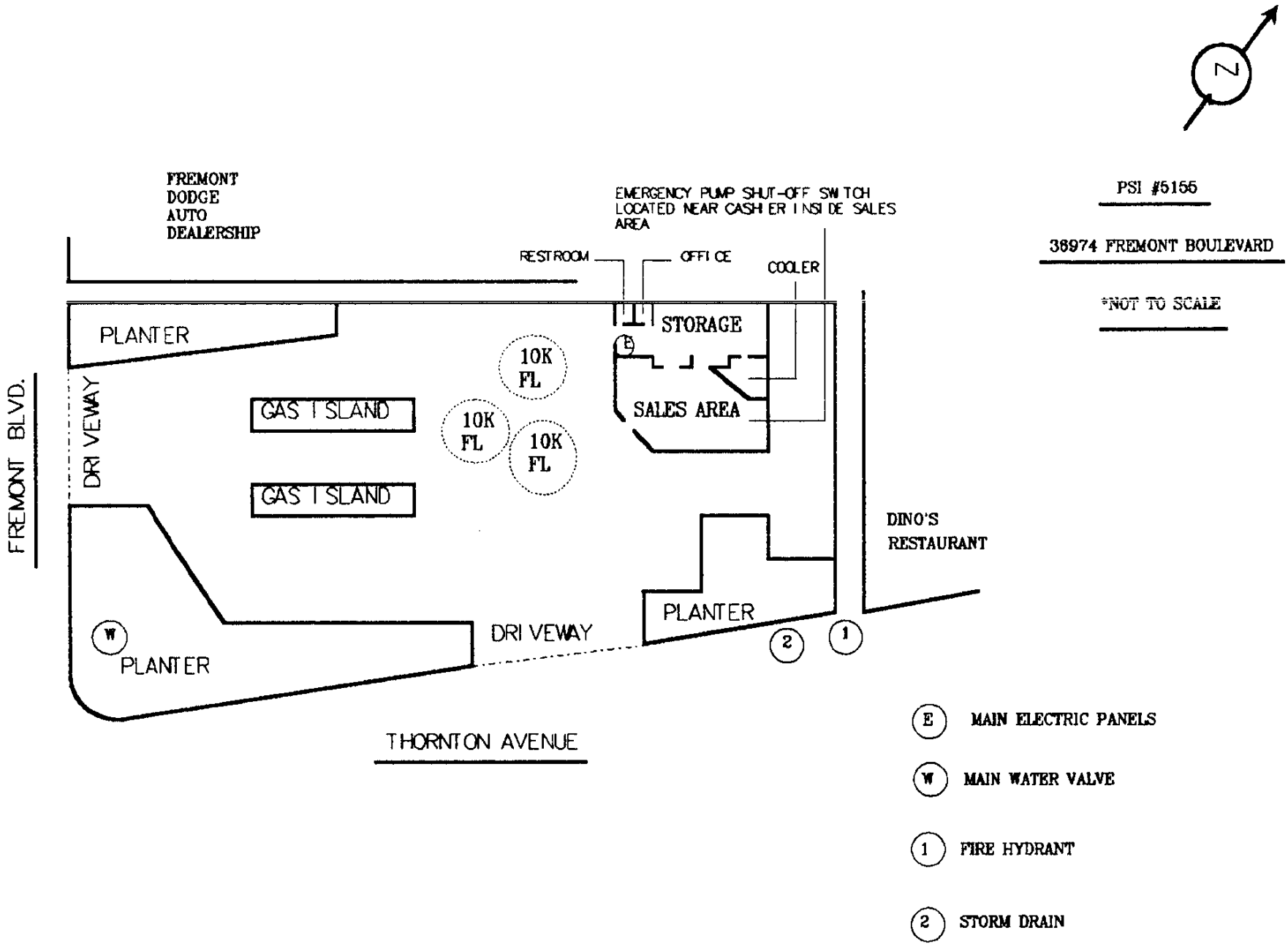
Post Remedial Action Monitoring

Enforcement Action

Proj. 3020 PS Removal

Assessors:
Argonaut Financial Services Inc.
1611 Telegraph Ave. #1500
Oakland, CA 94612
Formerly: Eastmont Mall Associates

J.C. Penney
Firestone



00000281.tif 484 / 543

DAMES & MOORE
2101 WEBSTER STREET, SUITE 300, OAKLAND, CALIFORNIA 94612 (415) 839-3600
FAX NO. (415) 839-4461

August 5, 1991
Job No. 00443-090-043

Alameda County Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621

Attention: Mr. Paul Smith

Eugenia

Dear Mr. Smith:

Report
Subsurface Investigation
J.C. Penney Store No. 836
Eastmont Mall
Oakland, California

Dames & Moore is pleased to present the above referenced report for J.C. Penney Store No. 836 (TBA 5250-6), located at the Eastmont Mall in Oakland, California. This report presents the findings of our field investigation conducted on April 1-5, 1990, at the J.C. Penney TBA.

If you have any questions, please contact Bob Arneson, J.C. Penney Construction Services, (714) 523-6853 or Richard Ward, Dames & Moore, (415) 839-3600.

Very truly yours,

DAMES & MOORE

Raymond H. Rice by RBWard

Raymond H. Rice
Partner (Ltd.)

Richard B. Ward

Richard B. Ward
Project Geologist (R.G. #5170)

RBW-O-4.005

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 12/12/90
DATE REPORTED: 12/19/90

LAB NUMBER: 102531

CLIENT: ERM-WEST

REPORT ON: 2 SOIL SAMPLES

PROJECT #: 1206.00
LOCATION: FIRESTONE, OAKLAND

RESULTS: SEE ATTACHED

QA/QC Approval

Final Approval

Curtis & Tompkins, Ltd.

LAB NUMBER: 102531
CLIENT: ERM-WEST
PROJECT # : 1206.00
LOCATION: FIRESTONE, OAKLAND

DATE RECEIVED: 12/12/90
DATE ANALYZED: 12/14/90
DATE REPORTED: 12/19/90

ANALYSIS: HYDROCARBON OIL AND GREASE
METHOD: SMWW 17:5520EF

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
102531-1	S-1	ND	mg/Kg	50
102531-2	S-2	820	mg/Kg	50

ND = Not detected at or above reporting limit

QA/QC SUMMARY

RPD, %	3
RECOVERY, %	90

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 102531
CLIENT: ERM-WEST
PROJECT ID: 1206.00
JOB LOCATION: FIRESTONE, OAKLAND

DATE RECEIVED: 12/12/90
DATE ANALYZED: 12/14/90
DATE REPORTED: 12/19/90

Total Volatile Hydrocarbons with BTXE in Soils & Wastes
TVH by California DOHS Method/LUFT Manual October 1989
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
102531-1	S-1	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

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

QA/QC SUMMARY

RPD, %	3
RECOVERY, %	87

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 102531
CLIENT: ERM-WEST
PROJECT ID: 1206.00
JOB LOCATION: FIRESTONE, OAKLAND

DATE RECEIVED: 12/12/90
DATE ANALYZED: 12/13/90
DATE REPORTED: 12/19/90

Benzene, Toluene, Ethyl Benzene, Xylenes by EPA 8020
Extraction by EPA 5030 Purge and Trap

LAB ID	SAMPLE ID	BENZENE (ug/kg)	TOLUENE (ug/kg)	TOTAL XYLENES (ug/kg)	ETHYL BENZENE (ug/kg)	REPORTING LIMIT * (ug/kg)
102531-2	S-2	ND	ND	ND	ND	5.0

ND = Not detected at or above reporting limit.

* Reporting Limit applies to all analytes.

QA/QC SUMMARY

RPD, %	16
RECOVERY, %	101

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 102531
CLIENT: ERM-WEST
PROJECT ID: 1206.00
LOCATION: FIRESTONE, OAKLAND

DATE RECEIVED: 12/12/90
DATE EXTRACTED: 12/14/90
DATE ANALYZED: 12/19/90
DATE REPORTED: 12/19/90

Extractable Petroleum Hydrocarbons in Soils & Wastes
California DOHS Method
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
102531-1	S-1	ND	3.1	1.0
102531-2	S-2	ND	40	10

ND = Not Detected at or above reporting limit.

*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	99

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 102531-1
CLIENT: ERM-WEST
PROJECT ID:1206.00
SAMPLE ID: S-1

DATE RECEIVED: 12/12/90
DATE ANALYZED: 12/18/90
DATE REPORTED: 12/19/90

PARAMETER	RESULT	UNITS	REPORTING LIMIT	METHOD
Cadmium	1.3	mg/Kg	0.5	EPA 6010
Chromium	44	mg/Kg	0.5	EPA 6010
Lead	ND	mg/Kg	2.5	EPA 7420
Zinc	27	mg/Kg	0.5	EPA 6010

QA/QC SUMMARY

	RPD, %	RECOVERY, %
Cadmium	8	99
Chromium	<1	102
Lead	7	88
Zinc	2	96

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 102531-1
CLIENT: ERM-WEST
PROJECT ID: 1206.00
SAMPLE ID: S-1

DATE RECEIVED: 12/12/90
DATE ANALYZED: 12/14/90
DATE REPORTED: 12/19/90

EPA 8010: Volatile Halocarbons In Soil & Wastes
Extraction Method: EPA 5030 - Purge & Trap

Compound	RESULT ug/Kg	REPORTING LIMIT ug/Kg
chloromethane	ND	10
bromomethane	ND	10
vinyl chloride	ND	10
chloroethane	ND	10
methylene chloride	ND	5.0
trichlorofluoromethane	ND	5.0
1,1-dichloroethene	ND	5.0
1,1-dichloroethane	ND	5.0
1,2-dichloroethene (total)	ND	5.0
chloroform	ND	5.0
freon 113	ND	5.0
1,2-dichloroethane	ND	5.0
1,1,1-trichloroethane	ND	5.0
carbon tetrachloride	ND	5.0
bromodichloromethane	ND	5.0
1,2-dichloropropane	ND	5.0
cis-1,3-dichloropropene	ND	5.0
trichloroethylene	ND	5.0
1,1,2-trichloroethane	ND	5.0
trans-1,3-dichloropropene	ND	5.0
dibromochloromethane	ND	5.0
2-chloroethylvinyl ether	ND	10
bromoform	ND	5.0
tetrachloroethylene	ND	5.0
1,1,2,2-tetrachloroethane	ND	5.0
chlorobenzene	ND	5.0
1,3-dichlorobenzene	ND	5.0
1,2-dichlorobenzene	ND	5.0
1,4-dichlorobenzene	ND	5.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Duplicate: Relative % Difference	9 %
Spike: Average % Recovery	88 %

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 102531-1
CLIENT: ERM-WEST
PROJECT ID : 1206.00
SAMPLE ID: S-1

DATE RECEIVED: 12/12/90
DATE EXTRACTED: 12/17/90
DATE ANALYZED: 12/19/90
DATE REPORTED: 12/21/90

EPA 8270: Base/Neutral and Acid Extractables in Soils & Wastes
Extraction Method: EPA 3550 Sonication

	RESULT ug/kg	REPORTING LIMIT ug/kg
ACID COMPOUNDS		
Phenol	ND	330
2-Chlorophenol	ND	330
Benzyl Alcohol	ND	330
2-Methylphenol	ND	330
4-Methylphenol	ND	330
2-Nitrophenol	ND	1650
2,4-Dimethylphenol	ND	330
Benzoic Acid	ND	1650
2,4-Dichlorophenol	ND	1650
4-Chloro-3-methylphenol	ND	330
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	1650
2,4-Dinitrophenol	ND	1650
4-Nitrophenol	ND	1650
4,6-Dinitro-2-methylphenol	ND	1650
Pentachlorophenol	ND	1650
BASE/NEUTRAL COMPOUNDS		
N-Nitrosodimethylamine	ND	330
Aniline	ND	330
Bis(2-chloroethyl)ether	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
1,2-Dichlorobenzene	ND	330
Bis(2-chloroisopropyl)ether	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
Bis(2-chloroethoxy)methane	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	330
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
2-Methylnaphthalene	ND	330
Hexachlorocyclopentadiene	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	1650

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 102531-1
SAMPLE ID: S-1

EPA 8270

BASE/NEUTRAL COMPOUNDS	RESULT ug/kg	REPORTING LIMIT ug/kg
Dimethylphthalate	ND	330
Acenaphthylene	ND	330
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	1650
Acenaphthene	ND	330
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
4-Chlorophenyl-phenylether	ND	330
Fluorene	ND	330
4-Nitroaniline	ND	1650
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Phenanthrene	ND	330
Anthracene	ND	330
Di-n-butylphthalate	ND	330
Fluoranthene	ND	330
Benzidine	ND	330
Pyrene	ND	330
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	1650
Benzo (a) anthracene	ND	330
Chrysene	ND	330
Bis (2-ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo (b) fluoranthene	ND	330
Benzo (k) fluoranthene	ND	330
Benzo (a) pyrene	ND	330
Indeno (1,2,3-cd) pyrene	ND	330
Dibenzo (a,h) anthracene	ND	330
Benzo (g,h,i) perylene	ND	330

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: SURROGATE RECOVERIES

2-Fluorophenol	101 %	Nitrobenzene-d5	84 %
Phenol-d6	104 %	2-Fluorobiphenyl	91 %
2,4,6-Tribromophenol	100 %	Terphenyl-d14	54 %

PO # 12057

Date 12/12/90 Weather Clear + Sunny Page 1 of 1

ERM-West

1777 Botelho Drive • Suite 260 • Walnut Creek, CA • 94596 • (415) 946-0455

Chain of Custody Record

Job #	1206.00
Job Location	Firestone, Oakland
Sampler (signature)	John A. Lucio
Printed name	John A. Lucio
Lab Report Recipient	John Lucio
Telephone No.	(415) 946-0455
Receiving Lab	Curtis & Tompkins
Address	2323 5th St, Berkeley

Sample ID#	Time	W-water S-soil	C-comp G-grab	Volume	Container type	ICED	Preservative	Sampling method	TPH-Extraction Diesel	BTEX/Total Fuel HCs	601 / 8010 Halocarbons	602 / 8020 Aromatics	624 / 8240 Purgeables	625 / 8270 Phenols	608 / 8080 Pest/PCBs	Oil and Grease	9270 - Creosote	624-8240 Purgeables	625-8270 BNAs & Pest (8Vs)	Diesel	TVH - BTXE gasoline	Metals Cd, Cr, Pb, Zn	Wet Chemistry	TPH gasoline	Number of Containers	Remarks
S-1	11:45	S	G	6" Brass tube	Brass tube	Y	No	Hand	X		X					X	X				X	X		X		7 day Turn around time
S-2	11:55	S	G	"	"	"	"	"	X	X						X										

Precautions: Conc: ☑ Lo ☐ Med ☐ Hi Ship Via

Total Number of Containers:

Reason for Transfer (List Shipping Bill Number)

Sample Relinquished By	Date	Time	Received By	Date	Time
John A. Lucio	12/12/90	13:00	Mary Printup	12/12/90	8:10
Company ERM-West			Company C&T		
Company			Company		

LABORATORY—Please Complete: ☐ Samples Intact ☐ Samples at 4°C ☐ Samples not leaking ☐ # of containers matches C-of-C ☐ Container tags match C-of-C ☐ Cooler seals intact

Lab sample custodian Signature Date Time

Sample Disposition: ☐ Return to Site ☐ Disard ☐ Hold ___ days

DEC 26 '90 08:50 C&T BERKELEY P.11

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Time = 1 hour

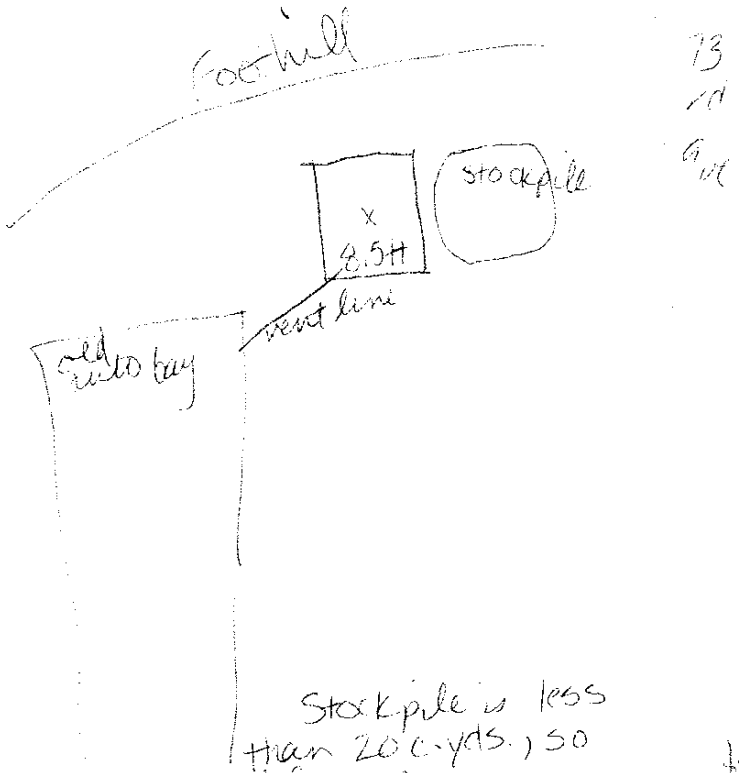
8601
8504

12/12/90 Tank pull Firestone

500 gallon double walled fiberglass tank. sitting in pea gravel backfill Had a spill containment box
Stockpiled sample was field tested by [redacted] and they didn't get any readings. Tank was pumped out.

Close out Firestone account all the way around
Tank hauled by [redacted], and liquid pumped out by [redacted]

No LEL
OZ = 3.5



Backfill had no obvious odor, no obvious staining anywhere

Tank removed 11:20, and in excellent shape

Stockpile is less than 200 c-yds.) so I asked for one sample from the center

Stockpile sample run for 8 BTEX + TPHd

Informed Michael and John that if stockpile samples come back dirty, they need to reexcavate

Soil sample fairly wet, although "ponded" water not present, so there really was no water to sample

RMH
Ryan-Murphy, Incorporated
Environmental Construction

90 NOV 13 PM 2:35

Alamenda County Health Care Services Agency
Department of Enviromental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621

Sirs,

Please find enclosed 3 sets of tank closure plans for the removal of one-550 gallon waste oil tank located at 2701 73rd street, Oakland. Also enclosed is a check for 375.00 for fees associated with the removal.

If you have any questions, Please call.

Thank you,

Chuck Bentley

Chuck Bentley

Operation Controller

Fuel Systems Consulting

Underground Storage Tank Management Programs

Fuel Systems Construction and Service

General Contracting and Complete Build-Up

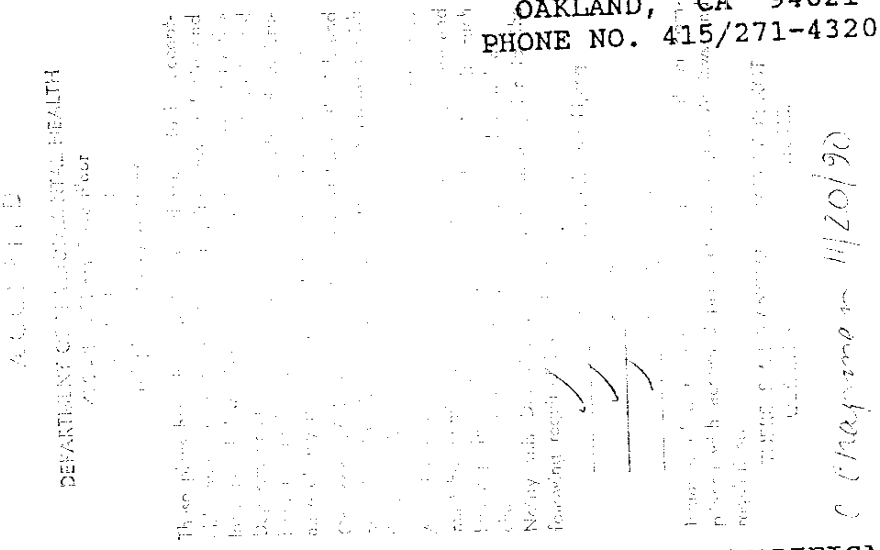
Site Remedial Action

The Good Earth Machine™

5867 Broadway
Denver, Colorado 80216
(303) 293-Fuel (3835)
Fax (303) 296-7911

211 Granite, Suite E
Corona, California 91719
(714) 279-6210
Fax (714) 279-6215

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS DIVISION
80 SWAN WAY, ROOM 200
OAKLAND, CA 94621
PHONE NO. 415/271-4320



UNDERGROUND TANK CLOSURE/MODIFICATION PLANS

1. Business Name FIRESTONE TIRE
   Business Owner BRIDGESTONE FIRESTONE INC.
2. Site Address 2701 73RD AVE
   City OAKLAND Zip 94605 Phone NONE
3. Mailing Address CLOSED SITE
   City _____ Zip _____ Phone _____
4. Land Owner BRIDGESTONE FIRESTONE INC.
   Address 7857 FLORENCE S.200 City, State DOWNEY CA Zip 90240
5. EPA I.D. No. CAD 982 001 729
6. Contractor RYAN-MURPHY INC.
   Address 211 GRANITE SUITE E
   City CORONA CA 91719 Phone 714-279-6210
   License Type A,B,C-61 D40, HAZ ID# 516337
7. Consultant ERM WEST
   Address 1777 BOTELLO SUITE 260
   City WALNUT CREEK CA 94596 Phone 415-946-0455
   CONTACT - DENNIS MILLER

8. Contact Person for Investigation

Name CHARLES M BENTLEY Title OPER. MANAGER RYAN MURPHY

Phone 714-279-6210

9. Total No. of Tanks at facility 1

10. Have permit applications for all tanks been submitted to this office? Yes [✓] No [ ]

11. State Registered Hazardous Waste Transporters/Facilities

a) Product/Waste Tranporter

Name H+H SHIPSERVICE EPA I.D. No. CAD004771168

Address 220 CHINA BASIN

City SAN FRANCISCO State CA Zip 94107

b) Rinsate Transporter

Name H+H SHIPSERVICE EPA I.D. No. CAD004771168

Address 220 CHINA BASIN

City SAN FRANCISCO State CA Zip 94107

c) Tank Transporter

Name H+H SHIPSERVICE EPA I.D. No. CAD004771168

Address 220 CHINA BASIN

City SAN FRANCISCO State CA Zip 94107

d) Tank Disposal Site

Name H+H SHIP SERVICE EPA I.D. No. CAD004771168

Address 220 CHINA BASIN

City SAN FRANCISCO State CA Zip 94107

e) Contaminated Soil Transporter

Name H+H SHIP SERVICE EPA I.D. No. CAD004771168

Address 220 CHINA BASIN

City SAN FRANCISCO State CA Zip 94107

12. Sample Collector

Name DENNIS MILLER

Company ERM WEST

Address 1777 BOTELLO S. 275

City WALNUT CREEK State CA Zip 94596 Phone 415-946-0455

13. Sampling Information for each tank or area

Tank or Area		Material sampled	Location & Depth
Capacity	Historic Contents (past 5 years)		
550 GAL.	WASTE OIL	SOIL + GROUND WATER IF PRESENT	2' BELOW TANK

14. Have tanks or pipes leaked in the past? Yes [ ] No [X]

If yes, describe.

15. NFPA methods used for rendering tank inert? Yes [X] No [ ]

If yes, describe. CO_2 15 lbs / 1,000 GAL (M.N.)

Check w/ Oakland Fire Dept for LEL and O_2 levels

An explosion proof combustible gas meter shall be used to verify tank inertness.

16. Laboratories

Name CURTISS + TOMPKINS

Address 2323 5TH ST.

City BERKLEY State CA Zip 94710

State Certification No. 159

17. Chemical Methods to be used for Analyzing Samples

Contaminant Sought	EPA, DHS, or Other Sample Preparation Method Number	EPA, DHS, or Other Analysis Number
TPH (GAS + DIESEL)	DHS METHOD for gas + diesel	
OIL & GREASE	~~503 E~~ 5520 D&F	
BTXE + VOC	8020M	
CHLORINATED HYDROCARBONS	8010	
	BTEX 8020 or 8240	
	CL HC 8010 or 8240	

Waste and Used Oil or Unknown

(All analyses must be completed and submitted)

TPH G	GCFID(5030)	TPH G WATER	GCFID(5030)
TPH D	GCFID(3550)	TPH D	GCFID(3510)

or TPH AND BTX&E by 8260 CRYOGENIC FOCUSING

O & G	5520 D&F	O & G	5520 C&F
BTX&E	8020 or 8240	BTX&E	602, 624 or 8260
CL HC	8010 or 8240	CL HC	601 or 624

ICAP or AA TO DETECT METALS: Cd, Cr, Pb, Zn, Ni

METHOD 8270 FOR SOIL OR WATER TO DETECT:

PCB*	PCB*
PCP*	PCP*
PNA	PNA
CREOSOTE	CREOSOTE

10 AUGUST, 19

*If found, analyze for dibenzofurans (PCBs) or dioxins (PCP)

PER TRI-REGIONAL BOARD 17 STAFF RECOMMENDATIONS FOR PRELIMINARY EVALUATION AND INVESTIGATION OF UNDERGROUND TANK SITES 18

Name of Insurer AIG

20. Plot Plan submitted? Yes [✓] No [ ]

21. Deposit enclosed? Yes [✓] No [ ]

22. Please forward to this office the following information within 60 days after receipt of sample results.

a) Chain of Custody Sheets

b) Original Signed Laboratory Reports

c) TSD to Generator copies of wastes shipped and received

d) Attachment A summarizing laboratory results

I declare that to the best of my knowledge and belief the statements and information provided above are correct and true. I understand that information in addition to that provided above may be needed in order to obtain an approval from the Department of Environmental Health and that no work is to begin on this project until this plan is approved.

I understand that any changes in design, materials or equipment will void this plan if prior approval is not obtained.

I understand that all work performed during this project will be done in compliance with all applicable OSHA (Occupational Saftey and Health Administration) requirements concerning personnel and safety.

I will notify the Department of Environmental Health at least two (2) working days (48 hours) after approval of this closure plan in advance to schedule any required inspections. I understand that site and worker safety are solely the responsibility of the property owner or his agent and that this responsibility is not shared nor assumed by the County of Alameda.

Signature of Contractor

Name (please type) CHARLES M BENTLEY

Signature Charles M Bentley

Date 11/6/90

Signature of Site Owner or Operator

Name (please type) V. M. WILLRICH

Signature V. M. Willrich

Date 11/7/90

NOTES:

1. Any changes in this document must be approved by this Department.

2. Any leaks discovered must be submitted to this office on an underground storage tank unauthorized leak/contamination site report form within 5 days of its discovery.

3. Three (3) copies of this plan must be submitted to this Department. One copy must be at the construction site at all times.

4. After approval of plan, notification of at least two (2) working days (48 hours) must be given to this Department prior to removal of tank(s).

5. A copy of your approved plan must be sent to the landowner.

6. Triple rinse means that:

   a) Final rinse must contain less than 100 ppm of Gasoline (EPA method 8020 for soil, or EPA method 602 for water) or Diesel (EPA method 418.1). Other methods for halogenated volatile organics (EPA method 8010 for soil, EPA method 601 for water) may be required. The composition of the final rinse must be demonstrated by an original or facsimile report from a laboratory certified for the above analyses.

   b) Tank interior is shown to be free from deposits or residues upon a visual examination of tank interior.

   c) Tank should be labelled as "tripled rinsed; laboratory certified analysis available upon request" with the name and address of the contractor.

   If all the above requirements cannot be met, the tank must be transported as a hazardous waste.

7. Any cutting into tanks requires local fire department approval.

UNDERGROUND TANK CLOSURE/MODIFICATION PLANS

ATTACHMENT A

SAMPLING RESULTS

Tank or Area	Contaminant	Location & Depth	Results (specify units)

INSTRUCTIONS

2. SITE ADDRESS
Address at which closure or modification is taking place.

5. EPA I.D. NO.
This number may be obtained from the State Department of Health Services, 916/324-1781.

6. CONTRACTOR
Prime contractor for the project.

7. OTHER
List professional consultants here.

12. SAMPLE COLLECTOR
Persons who are collecting samples.

13. SAMPLING INFORMATION
Historic contents - the principal product(s) used in the last 5 years.

Material sampled - i.e., water, oil, sludge, soil, etc.

16. LABORATORIES
Laboratories used for chemical and geotechnical analyses.

17. CHEMICAL METHODS:
All sample collection methods and analyses should conform to EPA or DHS methods.

Contaminant - Specify the chemical to be analyzed.

Sample Preparation Method Number - The means used to prepare the sample prior to analyses - i.e., digestion techniques, solvent extraction, etc. Specify number of method and reference if not an EPA or DHS method.

Analysis Method Number - The means used to analyze the sample - i.e., GC, GC-MS, AA, etc. Specify number of method and reference if not a DHS or EPA method.

NOTE:
Method Numbers are available from certified laboratories.

18. SITE SAFETY PLAN
A plan outlining protective equipment and additional specialized personnel in the event that significant amount of hazardous materials are found. The plan should consider the availability of respirators, respirator cartridges, self-contained breathing apparatus (SCBA) and industrial hygienists.

19. ATTACH COPY OF WORKMAN'S COMPENSATION

20. PLOT PLAN
The plan should consists of a scaled view of the facility at which the tank(s) are located and should include the following information:

a) Scale

b) North Arrow

c) Property Line

d) Location of all Structures

e) Location of all relevant existing equipment including tanks and piping to be removed

f) Streets

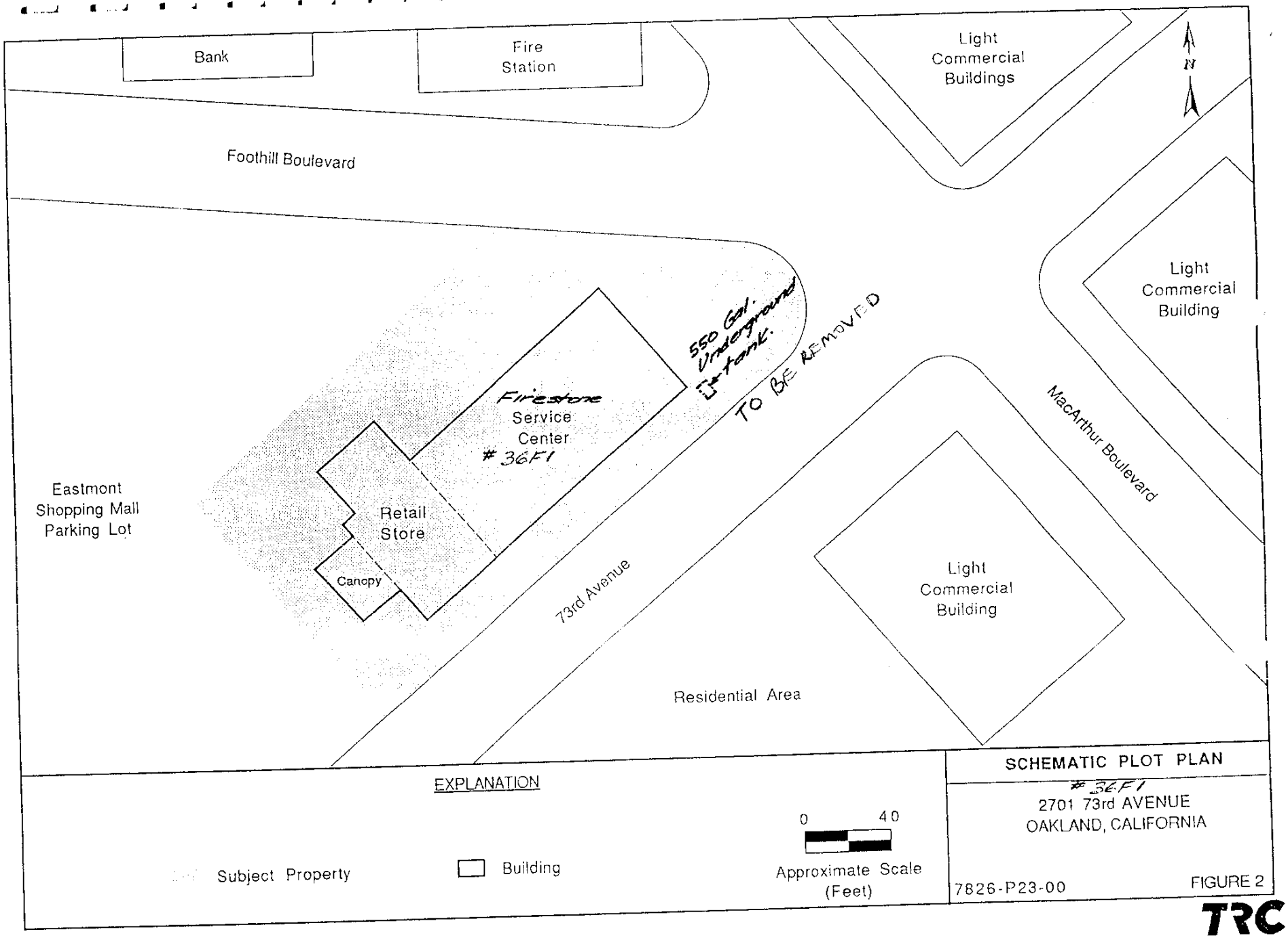
g) Underground conduits, sewers, water lines, utilities

h) Existing wells (drinking, monitoring, etc.)

i) Depth to ground water

j) All existing tanks in addition to the ones being pulled

rev. 9/88
mam



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ACORD CERTIFICATE OF INSURANCE

ISSUE DATE (MM/DD/YY)
9/10/90

PRODUCER

Alexander & Alexander Inc.
12120 Shamrock Plaza
P.O. Box 3388
Omaha, NE 68103-0388
402-691-6000

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW

INSURED

Ryan Murphy, Inc.
211 Granite Street
Corona

CA 91719

COMPANIES AFFORDING COVERAGE

COMPANY LETTER A — Hartford Insurance Company
COMPANY LETTER B
COMPANY LETTER C
COMPANY LETTER D
COMPANY LETTER E

mph

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	ALL LIMITS IN THOUSANDS
	GENERAL LIABILITY				GENERAL AGGREGATE $
	COMMERCIAL GENERAL LIABILITY				PRODUCTS-COMP/OPS AGGREGATE $
	CLAIMS MADE OCCUR.				PERSONAL & ADVERTISING INJURY $
	OWNER'S & CONTRACTOR'S PROT.				EACH OCCURRENCE $
					FIRE DAMAGE (Any one fire) $
					MEDICAL EXPENSE (Any one person) $
	AUTOMOBILE LIABILITY				COMBINED SINGLE LIMIT $
	ANY AUTO				BODILY INJURY (Per person) $
	ALL OWNED AUTOS				
	SCHEDULED AUTOS				BODILY INJURY (Per accident) $
	HIRED AUTOS				
	NON-OWNED AUTOS				PROPERTY DAMAGE $
	GARAGE LIABILITY				
					EACH OCCURRENCE $ / AGGREGATE $
	EXCESS LIABILITY				
	OTHER THAN UMBRELLA FORM				
	WORKER'S COMPENSATION AND				STATUTORY
A	EMPLOYERS' LIABILITY	91WBAK5993	8/31/90	8/31/91	$ 1,000 (EACH ACCIDENT)
					$ 1,000 (DISEASE—POLICY LIMIT)
					$ 1,000 (DISEASE—EACH EMPLOYE
	OTHER				

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

CERTIFICATE HOLDER

Alameda County
Dept. of Environmental Health
80 Swan Way, Room #200
Oakland, CA 94621

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE
Mark A. Hermanek

01335600

©ACORD CORPORATION 198

ACORD 25-S (11/89)

TOTAL P.02

HEALTH AND SAFETY PLAN

TANK REMOVAL PROJECT

FIRESTONE STORE # 36F1
2701 73rd Avenue
Oakland, CA 94605

prepared by:
Neal H. Holdridge
California Division
Ryan-Murphy, Inc.

OVERVIEW:

The purpose of this health and safety plan is to protect Firestone, Ryan-Murphy, and other related personnel, from the hazards associated with; the underground tank excavation, removal, and site finishing activities that are a part of this project. The plan details specific procedures, protective equipment, and monitoring devices, which Ryan-Murphy and its subcontractors will follow, to ensure the safety of Firestone personnel and associated other personnel. In general, all work activities will be in compliance with all applicable OSHA regulations, and procedures.

ENVIRONMENTAL PROTECTION PLAN:

It is the concern of Ryan-Murphy, Inc. to ensure the protection, preservation, and general conditions of the surrounding environment as it exists near and around the work area involved. All trees, plants, and shrubs close to the work area will be barricaded and/or covered, if necessary, in order to provide them with optimum protection against construction debris and damage, such as that that may be generated by the use of jackhammers and backhoes. Every effort will be made to preserve the natural resources within the project boundaries and outside the limits of permanent work. All construction activities will be confined to the specified limits of the work area indicated.

Existing water resources will be protected by making sure all residual liquids are removed from the tank and lines before and during the disconnects. This will help to prevent any contamination of existing groundwater from this source. All rinse water will be vacuumed and contained in a vacuum truck for manifested transportation and disposal.

Measures for dust control shall be taken and performed in compliance with section 01560, 2.4 . The area will be sprinkled with dust suppressant from time to time to prevent dust from being transported through the air to other areas creating discomfort in the surrounding environment.

All machinery used will be in compliance with the EPA

requirements for low noise emission, and kept to a minimum.

Generated hazardous waste will be handled in accordance with 40 CFR 262 and disposed of in compliance with 40 CFR 263 and 264.

SAFETY RESPONSIBILITIES:

The Project Manager has the ultimate responsibility for site safety for this project. The Project Manager will also have authorization to enforce all safety regulations.

The Site Safety Officer has the authority to stop all work in the event an unsafe situation arises. Work will not resume until the Site Safety Officer is assured that the unsafe situation has been remedied.

It is the responsibility of all site personnel to work in a safe, responsible manner. Site personnel will report all unsafe situations to the Site Safety Officer. In addition, if a site worker feels he or she has been placed in an unsafe situation, they retain the right to refuse to enter the situation until they have discussed it with the Site Safety Officer and the Project Manager.

DEMOLITION:

The removal of above ground structures, equipment, and surface materials related to the underground tank, will be performed in a manner so as not to interfere with existing work operations, and in compliance with all State and Local regulations.

Utilities: All related and non related utilities above and below ground in and around the work area will be located through visual or ground penetrating radar methods. The utilities directly related will be shut off and disconnected before demolition. Those directly in the work area, but not related, will be dealt with in a manner so as to not interrupt their

function for any length of time that is not deemed appropriate and necessary for the performance of the work.

Structures: All above ground structures that need to be dismantled in order to proceed with the tank removal will be disconnected and removed with the appropriate piece of equipment such as; a small crane, forklift, or backhoe. Concrete and asphalt will be removed by breaking up the material with a jackhammer, and loading the debris into a dumptruck for proper disposal. Materials to be re-used in accordance with the specifications will be stored on site in a pre-determined area.

All existing work that is to remain in place will be protected by temporary covers, shoring, or bracing of an approved kind. Appropriate action will be taken to avoid the spread of dust to occupied portions of the building and the surrounding areas. Water will only be used for dust control if it its use does not result in a hazardous or objectionable condition, such as flooding or environmental impairment. Compliance will be in accordance with the local APCD agency.

Backfilling will be in compliance with the manufacturers specifications and recommendations in and around the new tank and piping areas. Backfilling and compaction in areas outside the fueling excavation will be in compliance with ASTM requirements for materials and methods as per section 0221-3.4 and 0225 if applicable.

Cleanup: Debris and rubbish will be removed and transported in a manner that will prevent spillage on the streets or adjacent areas. Materials of this nature will be removed daily or stored in an approved roll-off for periodic pick up.

EXCAVATION AND REMOVAL OF TANK:

During excavation and removal of the tank, no personnel will enter the trench below the top of the tank, which is set at a depth of approximately four feet. If personnel do find it necessary to enter the trench below this depth, appropriate measures will be taken to protect individuals from cave-in as stipulated by OSHA 29 CFR 1920. At the present time, it is not

anticipated that personnel will be required to enter the trench below four feet.

Prior to the excavation, Ryan-Murphy will ensure that all buried gas lines, water lines, electric cables, and other underground utilities have been located. This information will be confirmed with the Firestone Site Manager. If necessary, local utility companies will be consulted.

Prior to the removal of the tank, the atmosphere within shall be tested for explosivity and oxygen content. At that time the vessel will be rendered inert by introducing air into the tank until it is purged free of combustible vapors. The tank atmosphere will be monitored with an explosimeter, which will also have the capability of measuring the oxygen level. The tank will then be removed and loaded onto a transport truck, for manifested transport as hazardous waste, by H & H Ship Services to their facility for proper cleaning and scrapping. The tank atmosphere will be measured again before transport, and if safe, the tank will be transported to H & H Ship Services scrapping facility, at 220 China Basin, San Francisco, CA 94107 (CAD #004771168) If necessary, carbon dioxide ice will be placed into the tank at the rate of fifteen pounds per thousand gallons of capacity, to ensure inertion during the tank transport. This will be determined at the time of removal by the Regulatory Agency Site Inspector.

All personnel will stand clear of the tank as it is pulled from the trench and until it is firmly in place upon the transport vehicle, in case of cables breaking or the tank coming loose and falling. The backhoe operator will ensure that all personnel are clear before initiating tank removal activities.

The excavated area will remain barricaded until the proper soil sample analyses have been performed, and the next course of action determined. If the soil samples show the site to be below action limits, the excavated area will be backfilled and compacted with clean backfill material. During working hours, the Site Safety Officer will ensure that no unauthorized personnel inadvertently wander into the work area. The Officer may determine that it is necessary to install a fence around the perimeter to insure that level of safety.

All site personnel will be required to wear hard hats and safety boots while in the work area or within reach of the backhoe arm and bucket. It is not anticipated that other personnel protective equipment will be necessary. However, the Site Safety Officer will continuously monitor the work site with an organic vapor detector and explosimeter, in addition to visually inspecting the area to determine if additional personal protective equipment is necessary.

SAMPLE COLLECTION:

Once the tank is removed, Ryan-Murphy will collect soil samples and visually inspect the trench from above, to determine the spread of contamination from leaking product. Soil samples will be collected initially by the backhoe bucket to get the soil up to grade level. Then the sample will be taken using a driven tube type sampler such as a "California brass sampler". The sample tube will be wrapped, and transported in a cooler packed with blue ice. No personnel will enter the trench to collect samples. Ryan-Murphy personnel collecting samples will wear disposable latex rubber gloves to avoid possible skin contact with fuel product, and for quality assurance/quality control (QA/QC) purposes. Analysis will include all or some of the following analyses methods: DHS method for TPH, EPA method 503E for oil and grease, EPA method 8010 for chlorinated hydrocarbons, EPA method 8020 for BTXE. Results, conclusions, and recommendations will be submitted. The testing laboratory that RMI will be using will be Trace Analysis Lab of Hayward, CA. Soil sampling will be in compliance with the Alameda County Hazardous Materials Management District requirements.

DISPOSAL OF THE TANK:

Ryan-Murphy will relinquish the tank to an approved scrapping facility for decommissioning (H & H Ship Services). The tank will be properly cut up for scrap, and rendered non-usable for any storage of petroleum or any other liquid. The tank will be properly labeled for transportation as scrap.

CONTAMINATED SOIL REMOVAL PROCEDURES:

Any soils encountered requiring disposal at a Class I or II landfill as contaminated hazardous, or contaminated non-hazardous waste, will be handled accordingly. The extent of contamination as found, will be excavated and loaded onto approved and licensed haulers of hazardous waste, for transportation to a certified landfill. Safety requirements shall be followed in compliance with OSHA 29 CFR 1910.120.

The excavated materials will be continuously monitored with an organic vapor detector, and sampled periodically at the direction of the Health Inspector. All contaminated soils slated for disposal will be properly manifested and documented. Soil that is stockpiled for testing or transportation at a later date, will be set on impermeable plastic and covered with the same. Barricades will be placed to protect Firestone personnel and others from entering this exclusion zone.

Proper clothing will be worn by the personnel directly involved with the removal and loading of contaminated soils. Stand-by APR masks will be available, along with rubber boots, gloves, and tivac, in the event that the Site Safety Officer deems it necessary to enter into a level "C" for gear and clothing.

GENERAL SAFETY PROCEDURES:

In addition to the safety procedures outlined above, the following general safety procedures will be observed;

- No fire or source ignition shall be allowed in the work area.
- No unauthorized personnel will be allowed in the work area.
- Hard hats and steel toed shoes will be worn at all times in the work area.
- No work will be conducted in inclement weather as determined by the Site Safety Officer.
- The buddy system will be in effect at all times.
- A ten pound ABC fire extinguisher and industrial first aid kit will be at the site at all times.

SITE SPECIFIC PLAN SUMMARY:

The following attached forms summarize the safety procedures for the Firestone project in Oakland, CA;

A. General Information
B. Site/Waste Characteristics
C. Hazard Evaluation
D. Work Plan Instructions
E. Equipment Check-Out

A. GENERAL INFORMATION

Date:	February 13, 1990
Prepared By:	Neal Holdridge
Site:	Firestone Store #36F1
Location:	2701 73rd Avenue Oakland, CA 94605
Investigative Objectives:	Remove one underground storage tank, and remediate contaminated soil if required.
Proposed Date of Investigation:	To be determined.
Background Review:	Complete.
Documentation Summary:	Overall Hazard = Low

B. SITE/WASTE CHARACTERISTICS

Waste Types:	Liquid:	yes
	Solid:	yes
	Sludge:	yes
	Gas:	no
Characteristics:	Corrosive:	no
	Ignitable:	yes
	Radioactive:	no
	Volatile:	no
	Toxic:	yes
	Reactive:	no
Facility Description:	Retail tire store	
Topography:	relatively flat	
Principal Disposal Method:	If found, and upon approval by Firestone, contaminated soil will be excavated, loaded, and transported to an approved facility.	
Unusual Features:	Site area has space restrictions for work, with limited access and exit routing. Place of business must remain operational.	
Status:	Tank is out of use.	

C. HAZARD EVALUATION

The major hazards for this project involve cave-in of the open trench, contact with waste oil contaminated soil, inhalation of organic vapors, potential explosive atmosphere inside the tank, and overhead hazards from heavy equipment.

The safety procedures to protect from these hazards are detailed in the Health and Safety Plan discussion.

D. WORK PLAN INSTRUCTIONS

PERIMETER ESTABLISHMENT:

map attached:	see plans
site control:	yes
perimeter identified:	yes
zone of contamination identified:	see notes

Notes: RMI is prepared to remove contaminated soil.

PERSONAL CLOTHING:

Level of protection:	A:___ B:___ C:___ D:_X_
modifications:	will be made as necessary.
Surveillance equipment and materials:	Explosimeter, Oxygen detector, and photoionization detector.

DECONTAMINATION PROCEDURES:

Hot line location:	will be barricaded
Command post location:	on site
PDS stations:	N/A
Equipment and materials /special facilities:	possible backhoe decontamination area, dewatering rinse water.

SITE ENTRY PROCEDURES:

Team size:	2
Entry briefing date:	to be determined
Station designation:	N/A
Work schedule limitations:	Work will be completed during daylight hours only, unless adequate lighting is provided. Work during inclement weather will be determined by the Site Safety Officer.

D. WORK PLAN INSTRUCTIONS - CONTINUED

EMERGENCY PRECAUTIONS:

Acute exposure symptoms	First Aid
Contact with fuel - irritation and drying of skin.	Rinse with water.
Inhalation of organic vapors - headache, nausea, fainting.	Remove to fresh air, seek medical attention.

HOSPITALS/POISON CONTROL CENTERS:

Medical Emergency: Highland General Hospital
1411 E. 31st Street
Oakland, CA 94602
(415) 437-4563

Poison Control Center: as above

EMERGENCY TRANSPORTATION SYSTEMS:

Fire, Police, Ambulance: 911
Electric:
Water:
Gas:
Dig:

EMERGENCY ROUTES:

West from jobsite on MacArthur Blvd. approximately 4.5 miles to 14th street. South on 14th street approximately four blocks to 31st street and the hospital.

E. EQUIPMENT CHECK-OUT

SCBA	___	Cylinders	___
Air purifying respirator	___	Cartridges	___
Explos./vapor detector	yes	Eye wash unit	yes
O-2 Indicator	yes	First Aid kit	yes
Air sample pump & tubes	___	Drinking water	___
Radiation survey meter	___	Personal clothing	___
Radiation cont. meter	___	Decontam. materials	___
Fire extinguisher	yes	Radios	___
Life jackets	___	Detector tubes	___
Personal escape units	___		
Organic vapor detector	yes	type: Gas-Tech	

IMPORTANT MESSAGE

FOR Tom

DATE 10/29/90 TIME 1:15 A.M. (P.M.)

M Mr. Tom Lesher

OF Firestone

PHONE (312) 819-8921
AREA CODE NUMBER EXTENSION

TELEPHONED	✓	PLEASE CALL	✓
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL		SPECIAL ATTENTION	

MESSAGE needs more info. about an address of a Firestone Park you sent a letter about.

SIGNED [signature]

LITHO IN U.S.A.

TOPS FORM 3002S

October 26, 1990

The Firestone Tire & Rubber Co.
Legal Counsel Real Estate Department
205 N. Michigan Ave.,Suite 3800
Chicago, Il 60601-5965

Re: Facility #98-7290-02/5710,7100 Bancroft Ave., Oakland,CA

NOTICE OF VIOLATION

Dear Sir:

Our records indicate that there are underground tank(s) at your site at the above facility. You were notified of this situation months ago and have not taken the appropriate action as described below.

In accordance with the California Code of Regulations, Title 23, Chapter 3, Subchapter 16 Underground Tank Regulations you must perform one of the following actions:

1. Submit a tank closure plan to this Department as required by Article 7, 2670, forms available from this office, or
2. Apply for a permit as required by Article 10, 2710. Permit applications Part A and B are available from this office.

Please note that section 25299 of the California Health and Safety Code states that any operator or owner of an undergound storage tank is liable for a civil penalty of not less than five hundred dollars or more than five thousand dollars per day for failure to obtain a permit, or failing to properly close an undergound storage tank, as required by section 25298.

If you have any questions concerning this matter, please contact this office at 271-4320.

Sincerely,

Thomas F. Peacock, Senior HMS
Hazardous Materials Division

TFP:tfp

cc: Gil Jensen, Alameda County District Attorney, Consumer and Environmental Protection Agency
Lester Feldman, RWQCB

```
*( test is my name )
write "you've begun."
list tables
fillin nt using "Which table? "
cls
list .nt
fillin s using "Sorted by? "
fillin w using "Where?      "
set v sb to " "
set v wc to " "
IF s Exists THEN
  SET v sb to ("sorted by" & .s)
ENDIF
IF w Exists THEN
  SET v wc to ("Where" & .w)
ENDIF
set v wr text
set v wr to .nt &s &w &sb &wc
write .wr
project tmptbl from .nt using all where (.w)
quit
```

PROPERTY DEVELOPMENT ASSOCIATES

7677 Oakport Street, Suite 520
Oakland, CA 94621
Fax: 415/430-0550
415/729-5000

September 13, 1990

Mr. Thomas F. Peacock
Hazardous Materials Division
Alameda County Health Care Services
Department of Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

Re: Facility #98-7290-02/5710
7100 Bancroft Avenue
Oakland, CA

Dear Mr. Peacock:

Enclosed is a copy of your Second Notice of Violation dated April 18, 1990. Please be advised that the party responsible for installing the tank(s) is the Firestone Tire and Rubber Company. Please send the Notice of Violation to:

The Firestone Tire and Rubber Company
Legal Counsel Real Estate Department
205 North Michigan Avenue, Suite 3800
Chicago, IL 60601-5965

We will give Firestone permission to enter upon the above-referenced property to remove the tank(s) therefrom.

If you have any questions, please contact the undersigned at 415/729-5000.

Very truly yours,

Viola Wong
Regional Property Manager

VW:npkh/Admin.
Enclosure

cc: Thomas S. Smith
David Meckler

RECEIVED
APR 25 1990
CONST/MAINT

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

DEPARTMENT OF ENVIRONMENTAL HE
Hazardous Materials Program
80 Swan Way, Rm. 200
Oakland, CA 94621
(415) 271-4320

April 18, 1990

Safeway Facility #7290-02
7100 Bancroft Ave.
Oakland, CA 94605

Re: 7250 Bancroft Ave., Oakland

SECOND NOTICE OF VIOLATION

Dear owner/operator:

Our records indicate that there are underground tank(s) at your site at the above facility. You were notified of this situation months ago and have not taken the appropriate action as described below.

In accordance with the California Code of Regulations, Title 23, Chapter 3, Subchapter 16 Underground Tank Regulations you must perform one of the following actions:

1. Submit a tank closure plan to this Department as required b Article 7, 2670, or
2. Apply for a permit as required by Article 10, 2710.

You are directed to notify this Department within 10 days of your intentions and to obtain the necessary instructions and forms.

Please note that section 25299 of the California Health and Safety Code states that any operator or owner of an undergound storage ta is liable for a civil penalty of not less than five hundred dollar or more than five thousand dollars per day for failure to obtain a permit, or failing to properly close an undergound storage tank, a required by section 25298.

If you have any questions concerning this matter, please contact t office at 271-4320.

Sincerely,

Thomas F. Peacock, Senior HMS
Hazardous Materials Division

TFP:tfp

cc: Gil Jensen, Alameda County District Attorney, Consumer and Environmental Protection Agency
Lester Feldman, RWQCB

P 113 815 372

Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

(TP) #26

Sent to
Kathleen Scheutzow

Street or PO
1200 Firestone Pkwy

P.O., State and ZIP Code
Akron OH 44317

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

PS Form 3800, June 1991

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
80 Swan Way, Rm 200
Oakland, CA 94621
(510) 271-4530

Certified Mail # P 113 815 372

02/18/93
STID# 26

Notice of Requirement to Reimburse

Kathleen Scheutzow
Bridgestone/firestone Inc.
1200 Firestone Pkwy.
Akron, Oh 44317

Responsible Party #1
Property Owner

Bob Gerber, Real Est
J. C. Penney
P. O. Box 4015
Buena Park, Ca 90624

Responsible Party #2
Contact Person
Contact Company

Firestone
2701 - 73rd Ave.
Oakland, CA 94605

SITE

Date First Reported 12/20/89
Substance: Gasoline
Petroleum: (X)Yes

The federal Petroleum Leaking Underground Storage Tank Trust Fund (Federal Trust Fund) provides funding to pay the local and state agency administrative and oversight costs associated with the cleanup of releases from underground storage tanks. The legislature has authorized funds to pay the local and state agency administrative and oversight costs associated with the cleanup of releases from underground storage tanks. The direct and indirect costs of site investigation or remedial action at the above site are funded, in whole or in part, from the Federal Trust Fund. The above individual(s) or entity(ies) have been identified as the party or parties responsible for investigation and cleanup of the above site. YOU ARE HEREBY NOTIFIED that pursuant to Title 42 of the United States Code, Section 6991b(h)(6) and Sections 25297.1 and 25360 of the California Health and Safety Code, the above Responsible Party or Parties must reimburse the State Water Resources Control Board not more than 150 percent of the total amount of site specific oversight costs actually incurred while overseeing the cleanup of the above underground storage tank site, and the above Responsible Party or Parties must make full payment of such costs within 30 days of receipt of a detailed invoice from the State Water Resources Control Board.

Please contact Tom PEACOCK, Supervising Hazardous Materials Specialist at this office if you have any questions concerning this matter.

for Edgar B. Howell, III, Chief
Contract Project Director

cc: Sandra Malos, SWRCB

SWRCB Use: Update : X Reason: New RP #1 Address

ALAMEDA COUNTY - DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS DIVISION

02/18/93

LIST OF RESPONSIBLE PARTIES FOR

SITE

StID: 26
Firestone
2701 - 73rd Ave.
Oakland, CA 94605

Date First Reported 12/20/89
Substance: Gasoline
Petroleum (X)Yes

Kathleen Scheutzow
Bridgestone/firestone Inc.
1200 Firestone Pkwy.
Akron, Oh 44317

Responsible Party #1
Property Owner

Bob Gerber, Real Est
J. C. Penney
P. O. Box 4015
Buena Park, Ca 90624

Responsible Party #2
Contact Person
Contact Company

Jim Given
Argonaut Financial Service Inc
#1 Eastmont Mall
Oakland, Ca 94605

Responsible Party #3
Contact Person
Contact Company

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director



State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program

RAFAT A. SHAHID, Assistant Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Division
80 Swan Way, Rm. 200
Oakland, CA 94621
(510) 271-4320

August 5, 1992
STID# 26

REGIONAL BOARD REFERRAL

Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster St., 4th Floor
Oakland, CA 94612

SUBJECT: Firestone TBA, 2701 - 73rd Ave., Oakland, CA 94605

This office has reviewed site investigation and remedial action for the underground storage tanks at the above site. With the provision that the information provided to this agency was accurate and representative of existing conditions, it is the position of this office that no further action is required at this time.

This office requests that the Regional Water Quality Control Board reviews this site and gives final site closure and/or remedial action completion. This agency also requests notification of final site closure.

If you have any questions regarding this matter, please contact this office.

Sincerely,

Thomas F. Peacock, Supervising HMS
Hazardous Material Division

cc: Bob Gerber, Real Estate Dept., J.C. Penney, P.O. Box 4015 (6131 Orangethorpe Ave.) Buena Park, CA 90624
Kurt Jergens, Firestone, 205 N. Michigan #34-000, Chicago, Il 60601
Jim Given, Argonaut Financial Services, Inc., #1 Eastmont Mall, Oakland, CA 94605

Files

DAMES & MOORE
221 Main Street, Suite 600
San Francisco, California 94105-1907
Telephone: 415/896-5858
FAX: 415/882-9261

Transmittal Letter No. _____

Reference: Job #: 00443-090-4008-043

Date 3/4/92

File No.	
Project:	
Subject:	

TO: Alameda County Dept. of Environmental Health
80 Swan Way, Suite 200
Oakland, CA 94621

Attn: Thomas Peacock

We are sending you the following items: ☒ attached ☐ under separate cover via ☐ Hand Carry ☐ USPS ☒ Courier

☐ Plans
☐ Specifications
☒ Reports
☐ Prints
☐ Calculations/Data
☐ Test Results
☐ Proposal Request
☐ Estimate
☐ Copy of Letter/Transmittal
☐ _____

Item	Copies	Date	Description
1	one	3/3/92	Summary Report - Groundwater Monitoring J. C. Penney Store #836, Eastmont Mall, Oakland, CA.

☐ For your approval
☐ For your review & comments
☒ For your information
☐ For your signature
☐ For your use
☐ For your quotation
☐ _____
☐ Approval/Comments as noted
☐ As Requested
☐ Returned
☐ Executed
☐ Response Requested
☐ Please Return

Remarks: _____

By: _____

Title Project Assistant

cc:

LOP - CHANGE RECORD REQUEST FORM

printed: 12/16/94

Mark Out What Needs Changing and Hand to LOP Data Entry
(Name/Address changes go to Annual Programs Data Entry)

AGENCY # : 10000 SOURCE OF FUNDS: F SUBSTANCE: 8006619
StID : 26
SITE NAME: Firestone DATE REPORTED : 12/20/89
ADDRESS : 2701 73rd Ave DATE CONFIRMED: 12/20/89
CITY/ZIP : Oakland 94605 MULTIPLE RPs : Y

SITE STATUS

CASE TYPE: G CONTRACT STATUS: 5 PRIOR CODE:3A2 EMERGENCY RESP:
RP SEARCH: S DATE COMPLETED: 01/02/92
PRELIMINARY ASMNT: C DATE UNDERWAY: 12/20/89 DATE COMPLETED: 07/10/91
REM INVESTIGATION: C DATE UNDERWAY: 07/10/91 DATE COMPLETED:
REMEDIAL ACTION: DATE UNDERWAY: DATE COMPLETED:
POST REMED ACT MON:C DATE UNDERWAY: DATE COMPLETED: 07/15/92

ENFORCEMENT ACTION TYPE: 5 DATE ENFORCEMENT ACTION TAKEN: 01/02/92
LUFT FIELD MANUAL CONSID: 3HSCAWG
CASE CLOSED: DATE CASE CLOSED:
DATE EXCAVATION STARTED : 12/12/91 REMEDIAL ACTIONS TAKEN: ED

RESPONSIBLE PARTY INFORMATION

RP#1-CONTACT NAME: Kathleen Scheutzow
COMPANY NAME: Bridgestone/ Firestone Inc.
ADDRESS: 1200 Firestone Pkwy.
CITY/STATE: Akron, O H 44317

RP#2-CONTACT NAME: Bob Gerber, Real Est
COMPANY NAME: J. C. Penney
ADDRESS: P. O. Box 4015
CITY/STATE: Buena Park, C A 90624

RP#3-CONTACT NAME: Jim Given
COMPANY NAME: Argonaut Financial Service Inc
ADDRESS: #1 Eastmont Mall
CITY/STATE: Oakland, C A 94605

INSPECTOR VERIFICATION:

NAME _____ SIGNATURE _____ DATE _____

DATA ENTRY INPUT:

Name/Address Changes Only

ANNPGMS _____ LOP_____ DATE _____

Case Progress Changes

LOP _____ DATE _____

the tank was exposed and subsequently removed. The tank was disposed as scrap iron for recycling at H&H Ship Services, San Francisco, California as indicated in Appendix A.

Additional soil was excavated until the tank bottom was reached. This soil was also stockpiled. The soil in the tank excavation was reported to consist primarily of silty clay. With the exception of the staining of soils at the top of the tank, it was reported that there was no visual evidence of traces of heating oil in the deeper soils.

As shown on Drawing 2, four soil samples were removed from the stockpiled soils and they were composited into one sample (WOA). The compsoite was analyzed for oil and grease, total petroleum hydrocarbons (diesel fraction), metals, organic lead, and volatile organics including benzene, toluene, xylene, and ethylene benzene (common constituent of gasoline). Table 1 presents the analytical results of the composite sample.

The stockpiled soil, occupying a volume of approximately 24 cubic yards (or 33 tons) was disposed of as a non-hazardous waste soil, EPA Exempt, to Liquid Waste Management, McKittrick, California an indicated in the attached bills of lading (Appendix A).

Under the direction of the agency representatives and in compliance with California underground tank regulations, two soil samples (HO1, HO2) were taken from the bottom of the excavation (11 feet beneath grade) and one sample (SWA) was taken from the side wall (SWA) (8.5 feet below grade) as shown on Drawing 2. The samples were analyzed for oil and grease, total petroleum hydrocarbons (diesel and gasoline fractions), and benzene, toluene, xylene, and ethyl benzene. Table 2 presents the analytical results of this sampling.

DAMES & MOORE
221 MAIN STREET, SUITE 600, SAN FRANCISCO, CALIFORNIA 94105-1917
(415) 896-5858 FAX: (415) 882-9261

December 11, 1992
Job No. 443-090-043

CALIF. REG. WATER
DEC 11 1992
QLTY. CONTROL BOARD

Mr. Richard Heitt
California Regional Water Quality Control Board
2101 Webster Street, Suite 500
Oakland, CA 94612

Dear Mr. Heitt:

J.C. Penney Store No. 836
Eastmont Mall
Oakland, California

Pursuant to our telephone conversation of October 28, 1992 regarding the J.C. Penney Company, Inc. (JCP) site at the Eastmont Mall in Oakland, California, we are providing further information regarding investigations at the JCP site in an effort to expedite site closure. Enclosed are the following:

1) Dames & Moore, Summary Report, Groundwater Monitoring, J.C. Penney Store No. 836, Eastmont Mall, March 3, 1992;

2) Dames & Moore, Summary Report, Groundwater Monitoring, J.C. Penney Store No. 836, Eastmont Mall, July 15, 1992;

3) Hunter Environmental Services, Inc. (Hunter), Phase II Environmental Audit, Eastmont Mall Property, December 20, 1989; and,

4) Environmental Science and Engineering, Inc.(ESE), Groundwater Re-Sampling, Eastmont Mall, October 15, 1990.

The following section is our responses to your specific questions.

Waste Oil Tank

Closure Documentation — We have not obtained further information regarding the tank excavation and the extent of soil characterization performed during tank removal. Section

RECYCLED PAPER

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3.4.2 of our Subsurface Investigation Report dated July 10, 1991 discusses our knowledge of the tank closure performed. A subsequent soil boring B-3 at the waste oil tank location did not detect Total Petroleum Hydrocarbons (TPH) as gasoline, benzene, toluene, ethylbenzene and xylenes in the soil sample analyzed (Dames & Moore, July 1991).

Chemical Analyses — Two soil samples from the bottom of the waste oil tank excavation were analyzed for total petroleum hydrocarbons (TPH) as waste oil and TPH-diesel. One sample did not contain detectable hydrocarbons while the other sample contained 820 parts per million (ppm) TPH-waste oil and 40 ppm TPH-diesel. Soil samples from a soil boring performed in March 1991 at this location did not detect TPH-gasoline or BTEX.

Chemical analyses for groundwater in wells MW-4 and DM-2 located downgradient of the former waste oil tank location are summarized in the attached table.

Chlorinated Hydrocarbons — It does not appear that analysis of chlorinated hydrocarbons was performed on soil samples collected during tank removal. Volatile organic analyses of groundwater samples was performed by Hunter (December 1989). The only chlorinated hydrocarbon detected was 1,2-Dichloroethene (total) at 0.004 ppm, a level very close to the detection limit for this analysis.

Gasoline Tank

Groundwater Gradient — Groundwater sampling for the entire Eastmont Mall site, including MW-4 on the JCP property, is discussed in the Hunter (12/89) and the ESE (10/90) reports. Dames & Moore installed two wells on the JCP property and collected groundwater samples from the three on-site groundwater monitoring wells in March 1991, February 1992, and June 1992. The groundwater elevation surveys and groundwater contours presented in these reports indicate that monitoring wells MW-4 and DM-2 are consistently located downgradient of the former waste oil tank, and monitoring well MW-4 is also downgradient of the former gasoline tanks.

Absence of Groundwater at Boring B-4 — No groundwater was encountered in boring B-4 to a depth of 50 feet, although the anticipated depth to groundwater was approximately 15 feet below ground surface. Possible explanations for the absence of water could be: a potential dewatering system associated with the nearby underground parking structure; borehole smearing during drilling; and a hydrogeologic discontinuity.

TPH Analyses in December 1989 - It is unclear from the Hunter report whether a TPH-gasoline or TPH-diesel analysis was performed during their sampling of MW-4 in December 1989. The Dames & Moore March and July 1992 Summary Reports incorrectly indicate that TPH-gasoline analysis was performed.

Summary of Groundwater Chemical Data — A summary of the groundwater sampling analytical results performed to date at the JCP site is presented on the attached Table 1.

Please feel free to contact us if you have any further questions regarding the investigations performed at the JCP site.

Very truly yours,

DAMES & MOORE

Charles B. Snell, C.E.G.
Project Geologist

for Jeffrey S. Palmer, R.E.P.
Associate

cc: Mr. Robert Arneson, JCP

b:CBS4.014

TABLE 1

SUMMARY OF GROUNDWATER CHEMICAL ANALYSES

J.C. Penney Store No. 836
Eastmont Mall
Oakland, California
For J.C. Penney Company

Monitoring Well	Sample Date	TPH/Diesel	TPH/Gasoline mg/L	B	T	E	X	Volatile Organic Compounds (VOCs) (mg/L)
				mg/L				
DM-1	4/4/91	ND	ND	ND	ND	ND	ND	--
	2/6/92	--	ND	ND	ND	ND	ND	--
	6/4/92	--	ND	ND	ND	ND	ND	--
DM-2	4/4/91	ND	ND	ND	ND	ND	ND	--
	2/6/92	--	ND	ND	ND	ND	ND	--
	6/4/92	--	ND	ND	ND	ND	ND	--
MW-4	12/11/89[1][2]	2.2?[3]	NA	0.44	0.019	0.13	0.054	1,2-Dichloroethane
			2.2?[3]	0.028	0.021	0.050	0.29	0.004
	9/25/90[4]	--	NA	ND	ND	ND	ND	--
	4/4/91	ND	ND	ND	ND	ND	ND	--
	2/6/92	--	ND	0.0019	ND	0.0025	ND	--
			(ND)[5]	(0.0011)	(ND)	(0.0010)	(ND)	
	6/4/92	--	ND	ND	ND	ND	ND	--
			(ND)[5]	(ND)	(ND)	(0.0008)	(ND)	
MCL		N/A	N/A	0.001	Unregulated	0.680	1.750	0.0005[6]
Detection Limits		0.050	0.050	0.0005	0.0005	0.0005	0.0005	

mg/L = Milligrams per Liter
ND = Not Detected
-- = Not Analyzed
TPH = Total Petroleum Hydrocarbons as Gasoline (EPA Method 8015 modified)
Total Petroleum Hydrocarbons as Diesel (EPA Method 8015 modified)
BTEX = Benzene, Toluene, Ethylbenzene, Total Xylenes (EPA Method 8020 unless otherwise specified)
VOCs = Volatile Organic Compounds (EPA Method 8240)
MCL = Maximum Contaminant Level
N/A = Not Applicable

Notes:

(1) BTEX analysis performed using EPA Method 8240
(2) The December 11, 1989 sampling round was performed by Hunter Environmental Services, Inc. and documented in their report entitled "Phase II Environmental Audit, Eastmont Mall Property" dated December 20, 1989.
(3) It is unclear whether analysis was performed for TPH-gasoline or TPH-diesel.
(4) The September 25, 1990 sampling round was performed by Environmental Science & Engineering, Inc. and documented in their report entitled "Eastmont Mall Groundwater Re-sampling, September 1990" dated October 15, 1990.
(5) Duplicate analyses for well MW-4 shown in parentheses.
(6) MCL for 1,2-Dichloroethane.

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XII. CHEMICAL PRECURSORS FOUND IN OTHER CLANDESTINE LABORATORIES

Chemical Precursors

Type Laboratory	Chemicals	Appearance	Street Forms
Amphetamine C H N 9 13	Phenylacetone	clear liquid	powder,
	Hydroxylamine	white powder	white double
	Methanol	clear liquid	scored tablets,
	Lithium Aluminum Hydride	tan powder	capsules
	Sodium Acetate	white powder	
	Potassium Hydroxide	white pellets	
	Ether, Ethyl	clear liquid	
	Sulfuric Acid	clear liquid	
Methamphetamine C H N 10 15	Phenylacetone	clear liquid	powder
	Methylamine	off-white liquid	liquid
	Ephedrine	white powder	
	zinc	dull metal	
	Hydrochloric Acid	clear liquid	
	Palladium metal	dark metal	
Lysergic Acid C H N O 20 25 3	Lysergic Acid	white crystalline	small tablets,
	Ergotamine	white crystalline	paper-dots and soaked,
	Benzene	clear liquid	window panes
	Hydrazine	white powder	
Methaqualone C H N O 16 14 2	O-toluidine	clear liquid	powder
	Anthranilic Acid	white powder	single scored tablets,
	Acetic Anhydride	white powder	Rorer 714
	Toluene	yellow liquid	
	Phosphorous Trichloride	clear liquid	
	Sodium carbonate	white powder	

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program

RAFAT A. SHAHID, Assistant Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Division
80 Swan Way, Rm. 200
Oakland, CA 94621
(510) 271-4320

August 3, 1992
STID# 26

REMEDIAL ACTION COMPLETION CERTIFICATE

Bob Gerber, Real Estate Dept., J.C. Penney
P.O. Box 4015 (6131 Orangethorpe Ave.)
Buena Park, CA 90624

SUBJECT: Firestone TBA, 2701 - 73rd Ave., Oakland, 94605

Dear Bob Gerber:

This letter confirms the completion of site investigation and remedial action for the underground storage tanks at the above site. With the provision that the information provided to this agency was accurate and representative of existing conditions, it is the position of this office that no further action is required at this time.

Please be advised that this letter does not relieve you of any liability under the California Health and Safety Code or Water Code for past, present, or future operations at the site. Nor does it relieve you of the responsibility to clean up existing, additional or previously unidentified conditions at the site, which cause or threaten to cause pollution or nuisance or otherwise pose a threat to water quality or public health.

Additionally, be advised that changes in the present or proposed use of the site may require further site characterization and mitigation activities. You may also be required to satisfy requirements of the Regional Water Quality Control Board for final site closure. Please check with that office as necessary. It is the property owner's responsibility to notify this agency of any changes in report content, future contamination findings, or site usage.

If you have any questions regarding this matter, please contact this office.

Sincerely,

Thomas F. Peacock, Supervising HMS
Hazardous Material Division

cc: Regional Water Quality Control Board

ALAMEDA COUNTY
HEALTH SERVICES
AGENCY

State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program

RAFAT A. SHAHID, Assistant Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Division
80 Swan Way, Rm. 200
Oakland, CA 94621
(510) 271-4320

July 21, 1992
STID# 26

REMEDIAL ACTION COMPLETION CERTIFICATE
(Without Regional Board Concurrence)

Bob Gerber, Real Estate Dept., J.C.Penney
P.O.Box 4015 (6131 Orangethorpe Ave.)
Buena Park, CA 90624

SUBJECT: Firestone TBA, 2701 - 73rd Ave., Oakland, CA 94605

Dear Bob Gerber:

This letter confirms the completion of site investigation and remedial action for the underground storage tanks at the above site. With the provision that the information provided to this agency was accurate and representative of existing conditions, it is the position of this office that no further action is required at this time.

Please be advised that this letter does not relieve you of any liability under the California Health and Safety Code or Water Code for past, present, or future operations at the site. Nor does it relieve you of the responsibility to clean up existing, additional or previously unidentified conditions at the site, which cause or threaten to cause pollution or nuisance or otherwise pose a threat to water quality or public health.

Additionally, be advised that changes in the present or proposed use of the site may require further site characterization and migration activity. It is the property owner's responsibility to notify this agency of any changes in report content, future contamination findings, or site usage.

If you have any questions regarding this matter, please contact this office.

Sincerely,

Thomas F. Peacock, Supervising HMS
Hazardous Material Division

cc: Lester Feldman, RWQCB

DAMES & MOORE
221 MAIN STREET, SUITE 600, SAN FRANCISCO, CALIFORNIA 94105-1917
(415) 896-5858 FAX: (415) 882-926

August 28, 1992
Job No. 00443-090-043

Mr. Richard Heitt
California Regional Water Quality Control Board
2101 Webster Street, Suite 500
Oakland, California 94612

Dear Mr. Heitt:

Investigation Report
J.C. Penney Store No. 836
Eastmont Mall
Oakland, California

At your request, Dames & Moore is submitting to you a copy of our report entitled "Subsurface Investigation, J.C. Penney Store No. 836, Eastmont Mall, Oakland, California" dated July 10, 1991. This report, prepared on behalf of our client, J.C. Penney Company, Inc., presents the results of Dames & Moore's April 1991 soil and groundwater investigation at the site, and includes a summary of previous investigations performed at the site by other consultants. If you have any questions regarding this report, please do not hesitate to call us.

Very truly yours,

DAMES & MOORE

Charles B. Snell, C.E.G.
Project Manager

Eugenia M. Sangines, R.G.
Senior Geologist

cc: Mr. Robert Arneson, J.C. Penney Company

Alameda County Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Rm. 200, Oakland, CA 94621
Ph: 510-271-4320

BILLING FOR SERVICES

StID# .....

A. Site Name See below Phone .....

Site Address (If no address, description of area) ..... Number Street City Zip

Prior Business Name ..... Prior Owner's Name .....

B. Service Requestor Bob Bogan, Century West 510-551-7774
Contact Person Company Name Phone

Billing Address 7950 Dublin Blvd, Suite 203, Dublin CA 94568
Number Street City Zip

Category of Service

✓ Site Search
..... File Search
..... Other .....

#Hours (Whole Hours Only) 1 x $ 75 /Hr $ 75

#Copies ____ x $ ____ /Copy $ ____

____ (Other) ____ x $ ____ $ ____

TOTAL CHARGE: $ 75

REMARKS: ① Better Homes Realty, 6821 Foothill Blvd, Oakland (# 28
② Oakland Firehouse #23, 7100 Foothill Blvd, " (# 403
③ JC Penney, Eastmont Mall, 2701-73rd Av., Oakland (# 26

pls File

You will receive an invoice in accordance with Article 11 of Chapter 6, Title 3 of the Ordinance Code of Alameda County

Service Requestor Bob Bogan (printed name) Bob Bogan (signature) Date 9-21-93

HazMat Specialist Jennifer Eberle (printed name) Jennifer Eberle (signature) Date 9-21-93

HM Bill for Svcs 4/92 mk

COPIES: White - Billing Yellow - Office Pink - Svc. Requestor

CASE TYPE:

STID 1124

PLAN REVIEW INFORMATION:

SITE NAME Eastmont Mall

ADDRESS 1 Eastmont Mall

CITY, ZIP CODE Oakland 94605

DEPOSIT DATE _____

AMOUNT OF DEPOSIT _____

RECEIPT # _____

INSPECTOR'S NAME _____

CONTRACTOR/PAYOR _____

ADDRESS _____

CITY, STATE, ZIP CODE _____

Closed

ADDITIONAL FOLDERS? YES NO

If YES, this FOLDER # _____

PERIOD COVERED: _____

DATE	BY	REMARKS

DATE	BY	REMARKS

00000282.tif 1 / 639

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

StID 114

April 16, 1998

Mr. Jack Sumski
1 Eastmont Mall
Oakland, CA 94605

Re: Fuel Leak Site Case Closure for Eastmont Mall at 1 Eastmont Mall, Oakland, CA 94605

Dear Mr. Sumski:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25299.37[h]). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Environmental Protection Division is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. The subject fuel leak case is closed.

SITE INVESTIGATION AND CLEANUP SUMMARY

Please be advised that the following conditions exist at the site:

- up to 160 ppm TPH as diesel, 610 ppm TPH as motor oil, and 1,500 ppm Total Oil and Grease remain in soil beneath the site; and,

- a site safety plan should be prepared for construction workers in the event excavation/trenching is proposed in the vicinity of the former waste oil tank.

If you have any questions, please contact me at (510) 567-6762.

eva chu
Hazardous Materials Specialist

enlosure:
1. Case Closure Letter
2. Case Closure Summary

c: Frank Kliewer
City of Oakland-Planning
1330 Broadway, 2nd Floor
Oakland, CA 94612

files (eastmont-5)

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

REMEDIAL ACTION COMPLETION CERTIFICATION

StID 114 - 1 Eastmont Mall, Oakland, CA
(1-500 gallon waste oil tank removed in October 23, 1995)

April 16, 1998

Mr. Jack Sumski
1 Eastmont Mall
Oakland, CA 94605

Dear Mr. Sumski:

This letter confirms the completion of site investigation and remedial action for the underground storage tank formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground tank release is required.

This notice is issued pursuant to a regulation contained in Title 23, Section 2721(e) of the California Code of Regulations.

Please contact our office if you have any questions regarding this matter.

Sincerely,

Mee Ling Tung, Director

cc: Richard Pantages, Chief of Division of Environmental Protection
Chuck Headlee, RWQCB
Dave Deaner, SWRCB
Leroy Griffin, OFD
files-ec (eastmont-4)

LOP - RECORD CHANGE REQUEST FORM

printe
08/06/9

Mark Out What Needs Changing and Hand to LOP Data Entry
(Name/Address changes go to Annual Programs Data Entry)

Insp: ML

AGENCY # : 10000 SOURCE OF FUNDS: F SUBSTANCE: 8006619
StID : 114 LOC:
SITE NAME: Eastmont Mall DATE REPORTED : 09/26/95
ADDRESS : 1 Eastmont Mall DATE CONFIRMED:
CITY/ZIP : Oakland 94605 MULTIPLE RPs : N

SITE STATUS

CASE TYPE: O CONTRACT STATUS: 4 PRIOR CODE:2a3 EMERGENCY RESP:
RP SEARCH: S DATE COMPLETED: 09/26/95
PRELIMINARY ASMNT: C DATE UNDERWAY: DATE COMPLETED:
REM INVESTIGATION: DATE UNDERWAY: DATE COMPLETED:
REMEDIAL ACTION: DATE UNDERWAY: DATE COMPLETED:
POST REMED ACT MON: DATE UNDERWAY: DATE COMPLETED:

ENFORCEMENT ACTION TYPE: 1 DATE ENFORCEMENT ACTION TAKEN: 09/26/95
LUFT FIELD MANUAL CONSID:
CASE CLOSED: DATE CASE CLOSED:
DATE EXCAVATION STARTED : REMEDIAL ACTIONS TAKEN:

RESPONSIBLE PARTY INFORMATION

RP#1-CONTACT NAME: David Norwitt
COMPANY NAME:
ADDRESS: 1 Eastmont Mall
CITY/STATE: Oakland, C A 94605

INSPECTOR VERIFICATION:

NAME _____ SIGNATURE _____ DATE _____

DATA ENTRY INPUT:

Name/Address Changes Only

ANNPGMS _____ LOP ____ DATE _____

Case Progress Changes

LOP _____ DATE _____

TABLE 2
CUMULATIVE RESULTS OF LABORATORY ANALYSES
OF GROUNDWATER
ARCO Station 601
San Leandro, California
(Page 2 of 2)

Sample	TPHg	TPHd	B	T	E	X	TOG	BNAs	VOCs	Cd	Cr	Pb	Ni	Zn
MW-6														
06/10/91						Not sampled--dry								
10/10/91						Not sampled--dry								
03/23/92	75,000	NA	19,000	10,000	1,600	8,600	NA	NA	NA	NA	NA	NA	NA	NA
06/08/93						Not sampled--dry								
MW-7														
06/10/91						Not sampled--dry								
10/10/91						Not sampled--dry								
03/23/92	270	NA	10	0.5	3.0	13	NA	NA	NA	NA	NA	NA	NA	NA
06/08/92						Not sampled--dry								
MW-8														
06/10/91	5,800	NA	73	7.2	150	21	<5,000	NA	NA	NA	NA	NA	NA	NA
10/10/91	2,800	NA	31	6.1	4.5	3.9	NA	NA	NA	NA	NA	NA	NA	NA
03/23/92	8,000	NA	18 (23**)	<5.0‾ (<5.0‾)	320 (450**)	42 (23**)	NA	NA	ND	NA	NA	NA	NA	NA
06/08/92	4,000	NA	<10**	<10**	110	<10**	NA	NA	NA	NA	NA	NA	NA	NA
DWAL:	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MCLs:	—	—	1	NA	680	1,750	—	—	—	10	50	50	—	5,000
Als:	—	—	—	100	—	—	—	—	—	—	—	—	—	

Results in micrograms per liter (ug/L) = parts per billion (ppb).

NA: Not analyzed.

<: Results reported as less than the detection limit.

*: Applied analytical laboratories reports that the chromatograph resembled gasoline not diesel.

‾: Laboratory reported raised maximum reporting limit due to high analyte concentration requiring sample dilution.

( ): BTEX results analyzed as VOCs.

TPHg: Total petroleum hydrocarbons as gasoline by EPA method 8015.

TPHd: Total petroleum hydrocarbons as diesel by EPA method 3550/3510.

B: Benzene, T: Toluene, E: Ethylbenzene, X: Total Xylene isomers.

BTEX: Measured by EPA method 8020/602.

TOG: Total oil and grease measured by Standard Method 503A/E.

BNAs: Base neutral and acid extractables including polynuclear aromatics concentrations are below laboratory reporting limits for respective compounds except as indicated. ([a] = naphthalene, [b] = 2-methylnaphthalene)

VOCs: volatile organics except for BTEX concentrations are below laboratory reporting limits for respective compounds except as indicated. ([c] = methylene chloride) ([d] = 1,2-DCA)

Cd: Cadmium

Cr: Chromium

Pb: Lead (by EPA Method 7421)

Zn: Zinc

ND: Below detection limits. Detection limits for VOCs varied according to analyte.

DWAL: California Department of Health Services recommended drinking water action levels (October 1990).

MCLs: Maximum Contaminant Level in ppb (October 1990).

Als: Action Levels in ppb.

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
(510) 337-9335 (FAX)

StID 114

August 22, 1997

Mr. David Norwitt
1 Eastmont Mall
Oakland, CA 94605

RE: Well Decommission at 1 Eastmont Mall, Oakland, CA

Dear Mr. Norwitt:

This office and the San Francisco RWQCB have reviewed the case closure summary for the above referenced site and concur that no further action related to the underground tank release is required at this time. Before a remedial action completion letter is sent, the onsite monitoring wells (MW-5 through MW-9) should be decommissioned, if they will no longer be monitored. Please notify this office upon completion of well destruction so a closure letter can be issued.

Well destruction permits may be obtained from Alameda County Public Works. They can be reached at (510) 670-5575.

If you have any questions, I can be reached at (510) 567-6762.

Sincerely,

eva chu
Hazardous Materials Specialist

eastmont.2

BERG, ZIEGLER, ANDERSON & PARKER, LLP
ATTORNEYS AT LAW
FOUR EMBARCADERO CENTER, SUITE 1400
SAN FRANCISCO, CALIFORNIA 94111
TELEPHONE (415) 397-6000
TELECOPIER (415) 397-9449

F. GALE CONNOR
EXT. 221

June 4, 1997

For Eastmont Mall Site - Additional information

Madhulla Logan
Hazardous Materials Specialist
Alameda County Environmental
Health Service
1131 Harbor Bay Parkway, No. 250
Alameda, CA 94502

Re: **Eastmont Mall/Oakland, California 94605**

Dear Ms. Logan:

In our last telephone conversation, you indicated that you had not been able to locate the last four quarterly ground water monitoring reports from AllWest. Accordingly, I have obtained copies of these reports and enclose them herewith.

If you need any additional information, please feel free to contact me at any time. Otherwise, we look forward to receiving a site closure letter for the shopping center.

Very truly yours,

F. Gale Connor

FGC:F
706F018

ALAMEDA
HEALTH CARE SERVICES

HEALTH SERVICES

StID 114

August 22, 1997

Mr. David Norwitt
1 Eastmont Mall
Oakland, CA 94605

change address

RE: Well Decommission at 1 Eastmont Mall, Oakland, CA

Dear Mr. Norwitt:

This office and the San Francisco RWQCB have reviewed the case closure summary for the above referenced site and concur that no further action related to the underground tank release is required at this time. Before a remedial action completion letter is sent, the onsite monitoring wells (MW-5 through MW-9) should be decommissioned, if they will no longer be monitored. Please notify this office upon completion of well destruction so a closure letter can be issued.

Well destruction permits may be obtained from Alameda County Public Works. They can be reached at (510) 670-5575.

If you have any questions, I can be reached at (510) 567-6762.

Sincerely,

eva chu
Hazardous Materials Specialist

eastmont.2

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

StID 114

September 10, 1997

Mr. Jack Sumski
1 Eastmont Town Center
Oakland, CA 94605

RE: Well Decommission at 1 Eastmont Mall, Oakland, CA

Dear Mr. Sumski:

This office and the San Francisco RWQCB have reviewed the case closure summary for the above referenced site and concur that no further action related to the underground tank release is required at this time. Before a remedial action completion letter is sent, the onsite monitoring wells (MW-5 through MW-9) should be decommissioned, if they will no longer be monitored. Please notify this office upon completion of well destruction so a closure letter can be issued.

Well destruction permits may be obtained from Alameda County Public Works. They can be reached at (510) 670-5575.

If you have any questions, I can be reached at (510) 567-6762.

Sincerely,

eva chu
Hazardous Materials Specialist

c: Gale Connor, 4 Embarcadero Center, Suite 1400, San Francisco, CA 94111

eastmont.2

LOP - RECORD CHANGE REQUEST FORM

printed: 04/15/98

Mark Out What Needs Changing and Hand to LOP Data Entry
(Name/Address changes go to Annual Programs Data Entry)

Insp: ML

AGENCY # : 10000 SOURCE OF FUNDS: F SUBSTANCE: 8006619
StID : 114 LOC:
SITE NAME: Eastmont Mall DATE REPORTED : 09/26/95
ADDRESS : 1 Eastmont Mall DATE CONFIRMED:
CITY/ZIP : Oakland 94605 MULTIPLE RPs : N

SITE STATUS

CASE TYPE: O CONTRACT STATUS: 4 PRIOR CODE:2a3 EMERGENCY RESP:
RP SEARCH: S DATE COMPLETED: 09/26/95
PRELIMINARY ASMNT: C DATE UNDERWAY: DATE COMPLETED: 10/23/95
REM INVESTIGATION: DATE UNDERWAY: DATE COMPLETED:
REMEDIAL ACTION: DATE UNDERWAY: DATE COMPLETED:
POST REMED ACT MON: DATE UNDERWAY: DATE COMPLETED:

ENFORCEMENT ACTION TYPE: 1 DATE ENFORCEMENT ACTION TAKEN: 09/26/95
LUFT FIELD MANUAL CONSID: 3HSCAWG
CASE CLOSED: Y DATE CASE CLOSED: 04/16/98
DATE EXCAVATION STARTED : 12/15/95 REMEDIAL ACTIONS TAKEN: ED

RESPONSIBLE PARTY INFORMATION

RP#1-CONTACT NAME: Jack Sumski
COMPANY NAME:
ADDRESS: 1 Eastmont Town Center
CITY/STATE: Oakland, C A 94605

INSPECTOR VERIFICATION:

NAME _____ SIGNATURE _____ DATE _____

DATA ENTRY INPUT:

Name/Address Changes Only

ANNPGMS _____ LOP ____ DATE _____

Case Progress Changes

LOP _____ DATE _____

97 AUG 21 PM 2:52

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION Date: July 8, 1997

Agency name: **Alameda County-HazMat** Address: **1131 Harbor Bay Pkwy**
City/State/Zip: **Alameda, CA 94502** Phone: **(510) 567-6700**
Responsible staff person: **M. Logan** Title: **Hazardous Materials Spec.**

II. CASE INFORMATION

Site facility name: **Eastmont Mall**
Site facility address: **1 Eastmont Mall, Oakland, CA 94605**
RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: **114**
URF filing date: SWEEPS No: **N/A**

Responsible Parties:	Addresses:	Phone Numbers:
David Norwitt	1 Eastmont Mall, Oakland, CA 94605	

Tank No:	Size in gal.:	Contents:	Closed in-place or removed?:	Date:
1	500	Waste Oil	Removed	10/23/95

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: **Unknown**
Site characterization complete? **YES**
Date approved by oversight agency: **7/3/97**
Monitoring Wells installed? **Yes** Number: 3-5
Proper screened interval? **Yes, 35' to 50'bgs in MW-9**
Highest GW depth below ground surface: **26.01'** Lowest depth: **33.97' in MW-9**
Flow direction: **WNW**
Most sensitive current use: **Commercial**
Are drinking water wells affected? **No** Aquifer name: **Unknown**
Is surface water affected? **No** Nearest affected SW name: **NA**
Off-site beneficial use impacts (addresses/locations): **None**

Report(s) on file? **YES** Where is report(s) filed? **Alameda County**
1131 Harbor Bay Pkwy
Alameda, CA 94502

Treatment and Disposal of Affected Material:

Material	Amount (include units)	Action (Treatment or Disposal w/destination)	Date
Tank	1 UST	Disposed by H & H, San Francisco	10/23/95
Soil	31.75 cy	Incinerated at Remco, Richmond	12/19/95

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm) Before[1]	Soil (ppm) After[1]	Water (ppb) Before[2]	Water (ppb) After[3]
TPH (Gas)	ND	ND	78	ND
TPH (Diesel)	160	160	200	ND
TPH (Motor Oil)	610	610	4,300	4,300
Benzene	ND	ND	13	ND
Toluene	ND	ND	ND	ND
Ethylbenzene	ND	ND	1.5	ND
Xylenes	ND	ND	ND	ND
Oil & Grease	1,500	1,500	ND	NA
Other HVOC	ND	ND	237[4]	ND
Benzo(a)pyrene				ND
Naphthalene				ND

NOTE: 1 soil samples collected from waste oil pit during UST removal (10/95) and after limited overexcavation (12/95)
2 results from grab water from soil borings or initial two quarters of groundwater sampling
3 results from final quarters of groundwater sampling
4 8ppb 1,2 DCE, 19ppb TCE, and 210ppb PCE

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? _____
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? _____
Does corrective action protect public health for current land use? **YES**
Site management requirements: **A site safety plan must be prepared for construction workers in the event excavation/trenching is proposed in the vicinity of residual soil and groundwater contamination.**
Should corrective action be reviewed if land use changes? **YES**
Monitoring wells Decommissioned: **No, pending site closure**
Number Decommissioned: 0 Number Retained: 3/5
List enforcement actions taken: **None**
List enforcement actions rescinded: **NA**

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Eva Chu Title: Haz Mat Specialist

Signature: [signature] Date: 8/11/97

Reviewed by

Name: Madhulla Logan Title: Haz Mat Specialist

Signature: Madhulla Logan Date: 8/4/97

Name: Thomas Peacock Title: Supervisor

Signature: [signature] Date: 8-7-97

VI. RWQCB NOTIFICATION

Date Submitted to RB: 8/12/97 RB Response: Approved

RWQCB Staff Name: Kevin Graves Title: AWRCE

Signature: [signature] Date: 8-18-97

VII. ADDITIONAL COMMENTS, DATA, ETC.

In 1916 the site was occupied by an automobile assembly plant (Chevrolet Fisher Body Plant) where auto body parts were sanded, painted, and assembled. At this time five USTs were in use (12-K gasoline, 12K motor oil, 13-K fuel oil, 10K kerosene, and a 13K oil tank). The plant was demolished in 1965. Construction of the Eastmont Mall began in 1969. The mall consists of several commercial retailers, including clothing stores, car repair shops, a dry cleaner, fast food restaurants, and a supermarket. A gasoline station (BP Oil) is located at the south corner of the site. (See Figs 1 and 2)

Subsurface contamination has been identified at four areas of the site: 1) JC Penny area (also known as Firestone on site plan), 2) BP service Station, 3) Sparkle Cleaner, and 4) Eastmont Auto Center (in vicinity of Thrifty). **Contamination at JC Penny and at BP service station is under a separate investigation, therefore, this closure summary only covers contamination in the vicinity of Sparkle Cleaner and Eastmont Auto Center.**

In December 1989 Hunter Environmental Services, Inc. advanced four soil borings, of which three were completed as groundwater monitoring wells (MW-2 through MW-4). The monitoring wells are located at the JC Penny site (well MW-4), the BP service station (well MW-3), and by Sparkle Cleaners (well MW-2). Well MW-2 was drilled to 35'bgs. Groundwater was encountered at ~29'bgs. Soil samples from 10' and 20' bgs were analyzed for TPH and BTEX. None was identified. The groundwater was analyzed for TPH and VOCs.

Up to 8ppb 1-2 DCE, 19ppb TCE, 210ppb PCE and 200ppb TPH were identified. BTEX was not found above the detection limits. (See Fig 2, Tables 1 through 4)

In September 1993 five soil borings (B-5 through B-9) were drilled around the mall buildings and converted into monitoring wells MW-5 through MW-9, respectively. Well MW-6 is downgradient of the dry cleaners, and well MW-9 is near the location of the waste oil UST at Eastmont Auto Center. Soil samples were only collected from the capillary fringe (at 30' to 40'bgs). Soil and groundwater samples were analyzed for TPHd, TPHg, BTEX, and HVOCs. Contaminants were not detected above the detection limit. (See Fig 3, Tables 5 and 6, and Well Logs)

Wells MW-5 through MW-9 were sampled for seven quarters (Sep 1993 to September 1996) without detecting hydrocarbon contamination (except for low TPHg and benzene concentrations in December 1993, and 1.4ppb TCE in October 1995). Groundwater flows to the west-northwest. It appears the UST operated by the former auto assemble plant and dry cleaner did not adversely impact groundwater quality beneath the site. (See Tables 7 and 8)

In October 1995 two soil borings (AW-1 and AW-2) were drilled in the vicinity of Sparkle Cleaner, to verify that soil was not impacted by solvent use at the facility. Six selected soil samples (from 6' and 10.5'bgs and from the capillary fringe) were analyzed for HVOCs. None was detected. (See Fig 4, Table 9)

Also in October 1995 the 500 gallon waste oil UST was removed from the Eastmont Auto Center. A soil sample S1 was collected from the center of the pit bottom at 8'bgs. Elevated TPHd and TOG were identified. HVOCs and SVOCs were below detection limits. One to two feet of soil were removed from three of the four sidewalls. And the bottom of the pit was overexcavated to 10'bgs. A confirmatory soil sample (S2) was collected from the pit bottom. Up to 1,300ppm non-polar O&G and 610ppm TPH-mo were identified. (See Figs 5 and 6, Table 10)

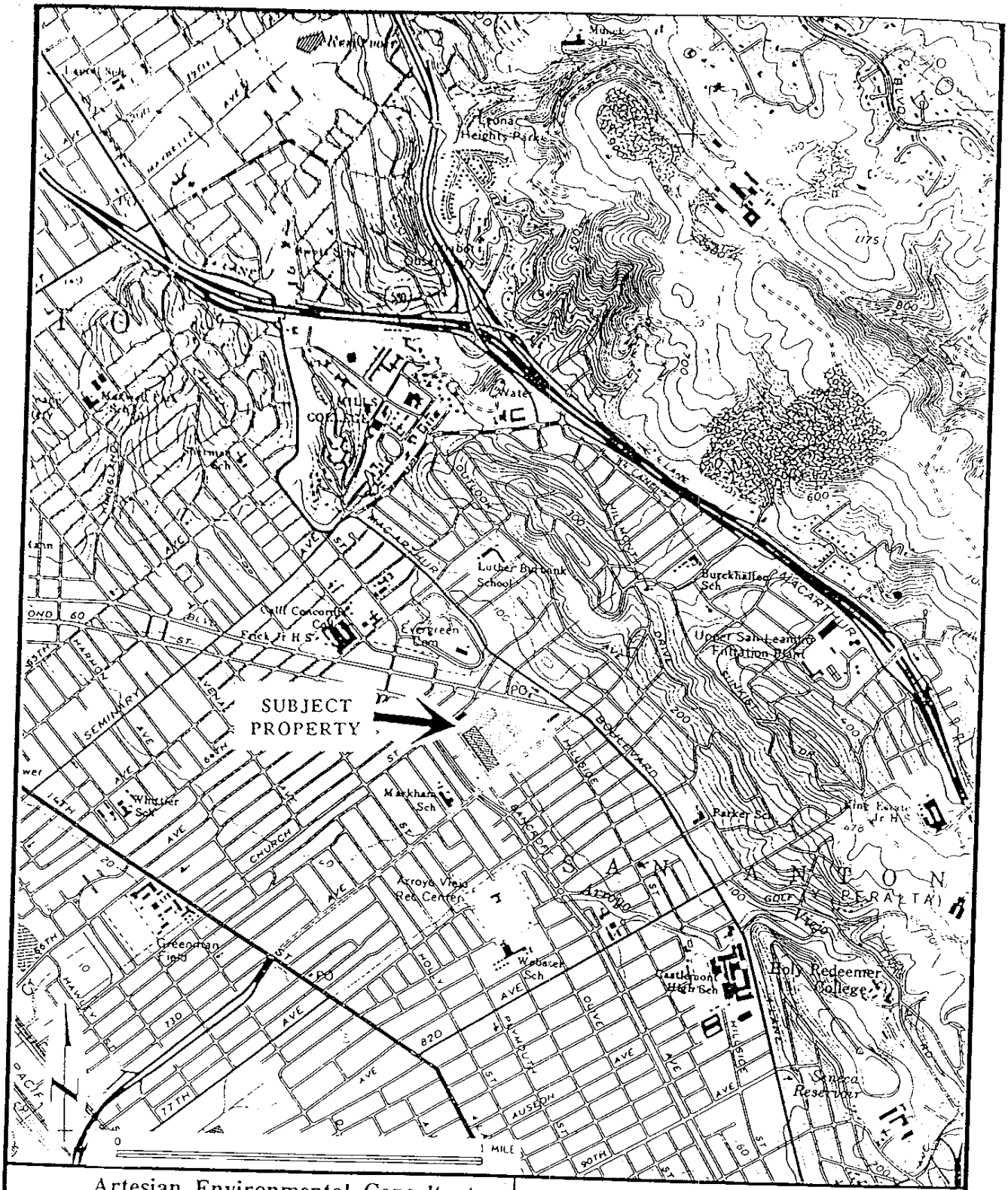
In April 1996 three soil borings (B1, B2 and B3) were advanced just outside of the former waste oil UST to 40'bgs. Soil samples were collected at 15' and 25' to 35'bgs. Soil and grab water samples were analyzed for TPH-mo and TOG. No hydrocarbons were detected in the soil samples. Only water from boring B1 contained TPH-mo (at 4,300ppb). The laboratory reported that the contaminant appeared to be a lubricating oil, lighter than motor oil. (See Fig 7, Table 11, and Boring Logs)

The low levels of TPH in groundwater identified from boring B1 appears limited in extent because well MW-9, located ~200' downgradient of the former waste oil UST, has not identified any TPHg, TPHd, BTEX, benzo(a)pyrene or naphthalene in groundwater. Continued groundwater sampling is not warranted.

In summary, case closure is recommended because:

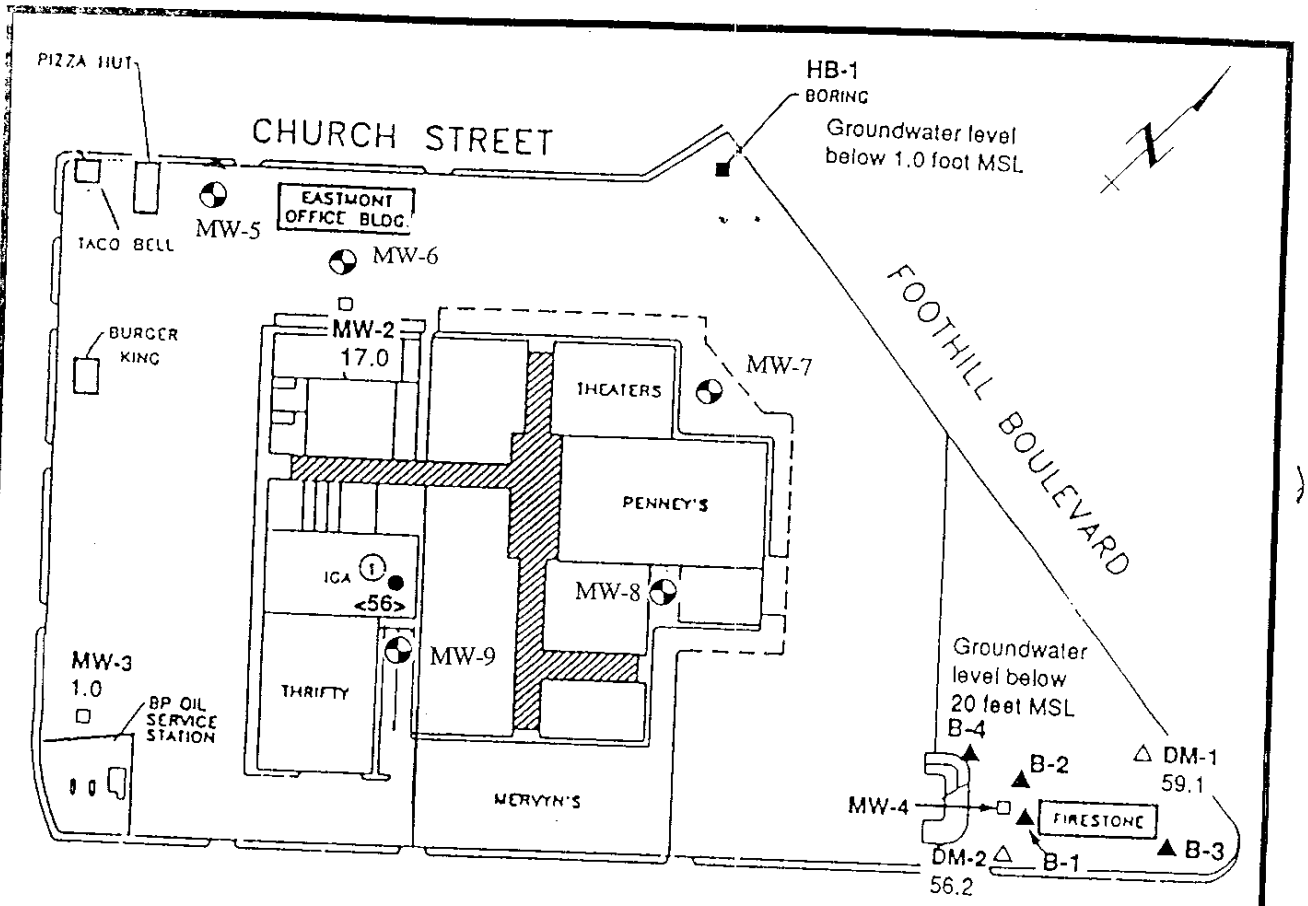
- the leak and ongoing sources have been removed;
- the site has been adequately characterized;
- the dissolved plume is not migrating;
- no water wells, surface water, or other sensitive receptors are likely to be impacted; and,
- the site presents no significant risk to human health or the environment.

eastmont.1



Artesian Environmental Consultants 3100 Kerner Blvd., Suite C San Rafael, California 94901 415-257-4801 Fax 257-4805	REGIONAL MAP One Eastmont Mall Oakland, California 94605

Project No: 93-001-01	Date: 8/27/93	Drawn by: BIM	Figure 1



NOTE:

① Groundwater measured in industrial well at 96 feet below ground surface (bgs) or 56 feet below mean sea level. Perforated in lower aquifer from 90 to 393 feet bgs.

Installed Monitor Wells
Artesian Environmental

0 400
Feet

KEY

- ● Abandoned Industrial Well (1951)
- △ Dames & Moore Monitoring Well (4/91)
- ▲ Dames & Moore Soil Boring (4/91)
- □ Hunter Environ. Monitoring Well (12/89)
- ■ Hunter Environ. Soil Boring (12/89)
- 17.0 Groundwater elevation in feet above mean sea level (MSL)

After Dames & Moore, 1991

Artesian Environmental Consultants 3175 Kerner Blvd., Suite E San Rafael, California 94901 415-257-4801 Fax 257-4805		SITE MAP One Eastmont Mall Oakland, California 94605	
Project No: 93-001-01	Date: 8/27/93	Drawn by: BIM	Figure 2

TABLE 1. RESULTS OF TPH, BTEX, AND STODDARD ANALYSES
ON SOIL SAMPLES TAKEN DECEMBER 5 AND 6, 1989
AT EASTMONT MALL, OAKLAND, CALIFORNIA

SAMPLE ID	DATE SAMPLED	TPH (ppm)	B T E X (ppb)				STODDARD (ppm)
			BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	
MW-1@10'	12/5/89	ND<1	ND<3	ND<3	ND<3	ND<3	-
MW-1@30'		ND<1	ND<3	ND<3	ND<3	ND<3	-
MW-2@10'		ND<1	ND<3	ND<3	ND<3	ND<3	ND<10
MW-2@20'		ND<1	ND<3	ND<3	ND<3	ND<3	ND<10
MW-3@10'	12/6/89	ND<1	ND<3	ND<3	ND<3	ND<3	-
MW-3@20'		ND<1	ND<3	ND<3	ND<3	ND<3	-
MW-4@10'		ND<1	ND<3	ND<3	ND<3	ND<3	-
MW-4@15'		2000	1400	4300	23,000	150,000	-

NOTES: ppm - Parts per million or milligrams per kilogram
ppb - Parts per billion or micrograms per kilogram
ND<1 - Not detected at indicated detection limit

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Martinez, CA 94553

TABLE 2. RESULTS OF OIL AND GREASE (O&G) ANALYSES
ON SOIL SAMPLES TAKEN DECEMBER 6, 1989
AT EASTMONT MALL, OAKLAND, CALIFORNIA

SAMPLE ID	DATE SAMPLED	OIL & GREASE (ppm)
MW-3@10'	12/6/89	ND<20
MW-3@20'		ND<20
MW-4@10'		ND<20
MW-4@15'		ND<20

Notes: ppm - Parts per million or milligrams per kilogram (mg/kg)
ND<20 - Not detected at indicated detection limit

Hunter Environmental Services, In
597 Center Avenue, Suite 350
Martinez, CA 94553

TABLE 3. RESULTS OF TPH, BTEX, AND STODDARD ANALYSES ON WATER SAMPLES TAKEN DECEMBER 11, 1989 AT EASTMONT MALL, OAKLAND, CALIFORNIA

SAMPLE ID	DATE SAMPLED	TPH (ppm)	B T E X (ppb)				STODDARD (ppm)
			BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	
MW-2	12/11/89	0.2	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<1
MW-3		2.7	530	16	150	59	-
MW-4		2.2	28	21	50	290	-

Notes: ND<0.3 - Not detected at indicated detection limit
ppm - Parts per million or milligrams per kilogram
ppb - Parts per billion or micrograms per kilogram

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Martinez, CA 94553

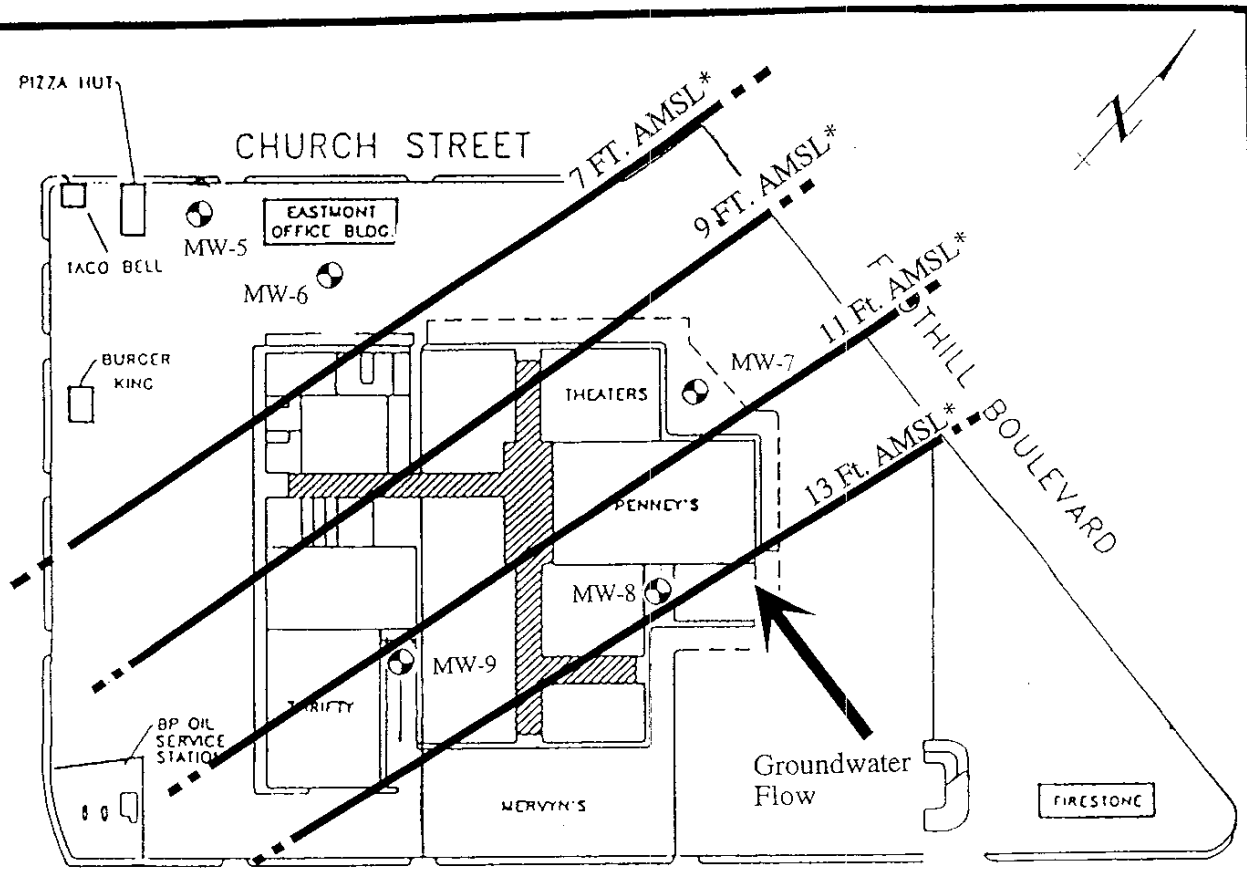
TABLE 4. RESULTS OF TOTAL VOLATILE ORGANIC ANALYSES FOR WATER SAMPLE FROM MW-2 COLLECTED DECEMBER 11, 1989

SAMPLE: MW-2

Compound	ug/l	Compound	ug/l
Chloromethane	ND<10	Cis-1,3-Dichloropropene	ND<3
Bromoethane	ND<10	Trichloroethene	19
Vinyl Chloride	ND<10	Dibromochloromethane	ND<3
Chloroethane	ND<10	1,1,2-Trichloroethane	ND<3
Methylene Chloride	ND<10	Benzene	ND<2
Acetone	ND<10	Trans-1,3-Dichloropropene	ND<3
Carbon disulfide	ND<3	2-Chloroethyl vinyl ether	ND<3
Trichlorofluoromethane	ND<3	Bromoform	ND<3
1,1-Dichloroethene	ND<3	4-Methyl-2-Pentanone	ND<10
1,1-Dichloroethane	ND<3	2-Hexanone	ND<10
1,2-Dichloroethene (total)	8	Tetrachloroethene	210
Chloroform	ND<3	1,1,2,2-Tetrachloroethane	ND<3
1,2-Dichloroethane	ND<3	Toluene	ND<3
2-Butanone	ND<20	Chlorobenzene	ND<3
1,1,1-Trichloroethane	ND<3	Ethylbenzene	ND<3
Carbon Tetrachloride	ND<3	Styrene	ND<3
Vinyl Acetate	ND<10	Total Xylenes	ND<3
Bromodichloromethane	ND<3	1,3-Dichlorobenzene	ND<3
1,2-Dichloropropane	ND<3	1,2&1,4-Dichlorobenzenes	ND<3

Notes: ug/l - Micrograms per liter or parts per billion (ppb)
ND<10 - Non-detectable at indicated detection limit

Hunter Environmental Services, Inc
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Martinez, CA 94553



*Above Mean Sea Level

Installed Monitor Wells
Artesian Environmental

0 400
Feet

Groundwater Elevation
Above Mean Sea Level

MW-5	6.82 Feet
MW-6	6.50 Feet
MW-7	10.95 Feet
MW-8	12.80 Feet
MW-9	11.18 Feet

After Dames & Moore, 1991

Artesian Environmental Consultants 3175 Kerner Blvd., Suite E San Rafael, California 94901 415-257-4801 Fax 257-4805	**GROUNDWATER GRADIENT MAP** One Eastmont Mall Oakland, California 94605
Project No: 93-001-01 / Date: 8/27/93	Drawn by: BIM / Figure 3

Table 5 Summary of Soil Analytical Results

Boring Number	Sample Depth	TPH-d ppb	TPH-g ppm	Benzene ppb	Toluene ppb	Ethel Benzene ppb	Total Xylenes ppb
B-5-35'	35'	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
B-6-35'	35'	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
B-7-30'	30'	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
B-8-30'	30'	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
B-9-40'	40'	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Compound Name	B-5-35' ppb	B-6-35' ppb	B-7-30' ppb	B-8-30' ppb	B-9-40' ppb
Chloromethane	N.D.	N.D.	N.D.	N.D.	N.D.
Vinyl Chloride	N.D.	N.D.	N.D.	N.D.	N.D.
Bromochloromethane	N.D.	N.D.	N.D.	N.D.	N.D.
Chloroethane	N.D.	N.D.	N.D.	N.D.	N.D.
Trichlorofluoromethane	N.D.	N.D.	N.D.	N.D.	N.D.
1, 1-Dichloroethene	N.D.	N.D.	N.D.	N.D.	N.D.
Methylene Chloride	N.D.	N.D.	N.D.	N.D.	N.D.
1, 2-Dichloroethene (Trans)	N.D.	N.D.	N.D.	N.D.	N.D.
1, 2-Dichloroethene (Cis)	N.D.	N.D.	N.D.	N.D.	N.D.
1, 1-Dichloroethane	N.D.	N.D.	N.D.	N.D.	N.D.
Chloroform	N.D.	N.D.	N.D.	N.D.	N.D.
1,1,1- Trichloroethane	N.D.	N.D.	N.D.	N.D.	N.D.
Carbon Tetrachloride	N.D.	N.D.	N.D.	N.D.	N.D.
1, 2-Dichloroethane	N.D.	N.D.	N.D.	N.D.	N.D.
Trichloroethene	N.D.	N.D.	N.D.	N.D.	N.D.
1, 2-Dichloropropane	N.D.	N.D.	N.D.	N.D.	N.D.
Bromodichloromethane	N.D.	N.D.	N.D.	N.D.	N.D.
2-chloroethylvinylether	N.D.	N.D.	N.D.	N.D.	N.D.
Trans-1, 3-Dichloropropene	N.D.	N.D.	N.D.	N.D.	N.D.
Cis-1, 3-Dichloropropene	N.D.	N.D.	N.D.	N.D.	N.D.
1,1,2-Trichloroethane	N.D.	N.D.	N.D.	N.D.	N.D.
Tetrachloroethene	N.D.	N.D.	N.D.	N.D.	N.D.
Dibromochloromethane	N.D.	N.D.	N.D.	N.D.	N.D.
Chlorobenzene	N.D.	N.D.	N.D.	N.D.	N.D.
Bromoform	N.D.	N.D.	N.D.	N.D.	N.D.
1,1,2,2-tetrachloroethane	N.D.	N.D.	N.D.	N.D.	N.D.
1,3-Dichlorobenzene	N.D.	N.D.	N.D.	N.D.	N.D.
1,4-Dichlorobenzene	N.D.	N.D.	N.D.	N.D.	N.D.
1,2-Dichlorobenzene	N.D.	N.D.	N.D.	N.D.	N.D.
Freon 113	N.D.	N.D.	N.D.	N.D.	N.D.

TPH-d= total petroleum hydrocarbons as diesel
TPH-g= total petroleum hydrocarbons as gasoline
B-T-E-X= benzene, toluene, ethyl benzene, and total xylenes

N.D.= non-detect
ppb= parts per billion
ppm=parts per million
All soil sampling done on 9/13-14/93.

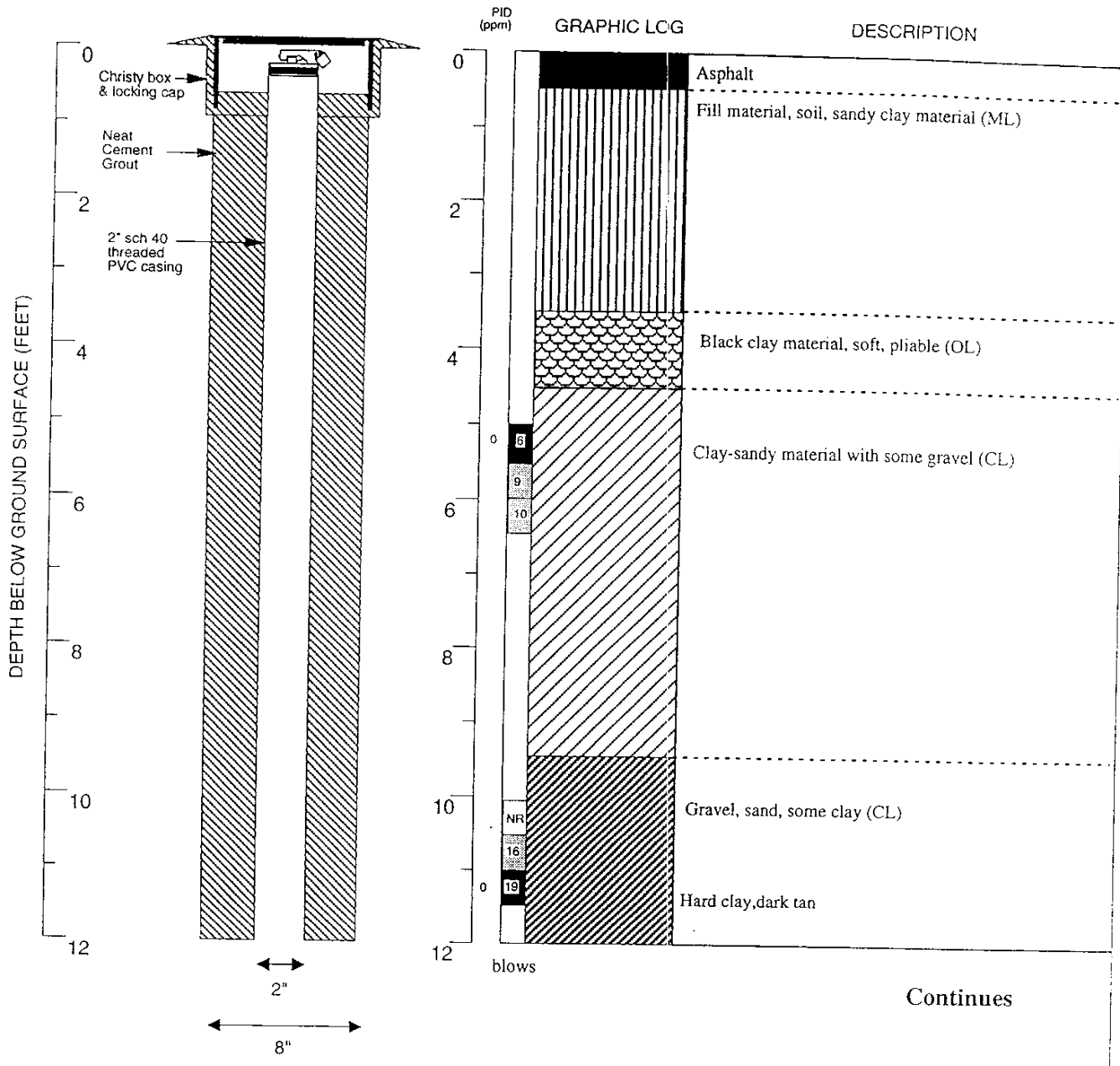
Table 16 Summary of Water Analytical Results

Monitor Well	TPH-d ppm	TPH-g ppm	Benzene ppb	Toluene ppb	Ethel Benzene ppb	Total Xylenes ppb
MW-5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
MW-6	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
MW-7	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
MW-8	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
MW-9	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Compound Name	MW-5 ppb	MW-6 ppb	MW-7 ppb	MW-8 ppb	MW-9 ppb
Chloromethane	N.D.	N.D.	N.D.	N.D.	N.D.
Vinyl Chloride	N.D.	N.D.	N.D.	N.D.	N.D.
Bromochloromethane	N.D.	N.D.	N.D.	N.D.	N.D.
Chloroethane	N.D.	N.D.	N.D.	N.D.	N.D.
Trichlorofluoromethane	N.D.	N.D.	N.D.	N.D.	N.D.
1, 1-Dichloroethene	N.D.	N.D.	N.D.	N.D.	N.D.
Methylene Chloride	N.D.	N.D.	N.D.	N.D.	N.D.
1, 2-Dichloroethene (Trans)	N.D.	N.D.	N.D.	N.D.	N.D.
1, 2-Dichloroethene (Cis)	N.D.	N.D.	N.D.	N.D.	N.D.
1, 1-Dichloroethane	N.D.	N.D.	N.D.	N.D.	N.D.
Chloroform	N.D.	N.D.	N.D.	N.D.	N.D.
1,1,1- Trichloroethane	N.D.	N.D.	N.D.	N.D.	N.D.
Carbon Tetrachloride	N.D.	N.D.	N.D.	N.D.	N.D.
1, 2-Dichloroethane	N.D.	N.D.	N.D.	N.D.	N.D.
Trichloroethene	N.D.	N.D.	N.D.	N.D.	N.D.
1, 2-Dichloropropane	N.D.	N.D.	N.D.	N.D.	N.D.
Bromodichloromethane	N.D.	N.D.	N.D.	N.D.	N.D.
2-chloroethylvinylether	N.D.	N.D.	N.D.	N.D.	N.D.
Trans-1, 3-Dichloropropene	N.D.	N.D.	N.D.	N.D.	N.D.
Cis-1, 3-Dichloropropene	N.D.	N.D.	N.D.	N.D.	N.D.
1,1,2-Trichloroethane	N.D.	N.D.	N.D.	N.D.	N.D.
Tetrachloroethene	N.D.	N.D.	N.D.	N.D.	N.D.
Dibromochloromethane	N.D.	N.D.	N.D.	N.D.	N.D.
Chlorobenzene	N.D.	N.D.	N.D.	N.D.	N.D.
Bromoform	N.D.	N.D.	N.D.	N.D.	N.D.
1,1,2,2-tetrachloroethane	N.D.	N.D.	N.D.	N.D.	N.D.
1,3-Dichlorobenzene	N.D.	N.D.	N.D.	N.D.	N.D.
1,4-Dichlorobenzene	N.D.	N.D.	N.D.	N.D.	N.D.
1,2-Dichlorobenzene	N.D.	N.D.	N.D.	N.D.	N.D.
Freon 113	N.D.	N.D.	N.D.	N.D.	N.D.

TPH-d= total petroleum hydrocarbons as diesel
TPH-g= total petroleum hydrocarbons as gasoline
B-T-E-X= benzene, toluene, ethyl benzene, and total xylenes

N.D.= non-detect
ppb= parts per billion
ppm=parts per million
All water sampling done on 9/28/93.



Logged by:	Benjamin I. Mira	Drilling Company:	West HazMat	Well Head Completion:	Christy box & locking cap
Inspector:		Drilling Method:	Hollow Stem Auger	Type of Sampler:	California Split Spoon
Dates Drilled:	9/13/93	Driller:	Bill Smith	TD (Total Depth):	50.0 ft.

EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Contacts: Solid where certain
- Dotted where approximate
- Dashed where uncertain
- est K — Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR — No recovery

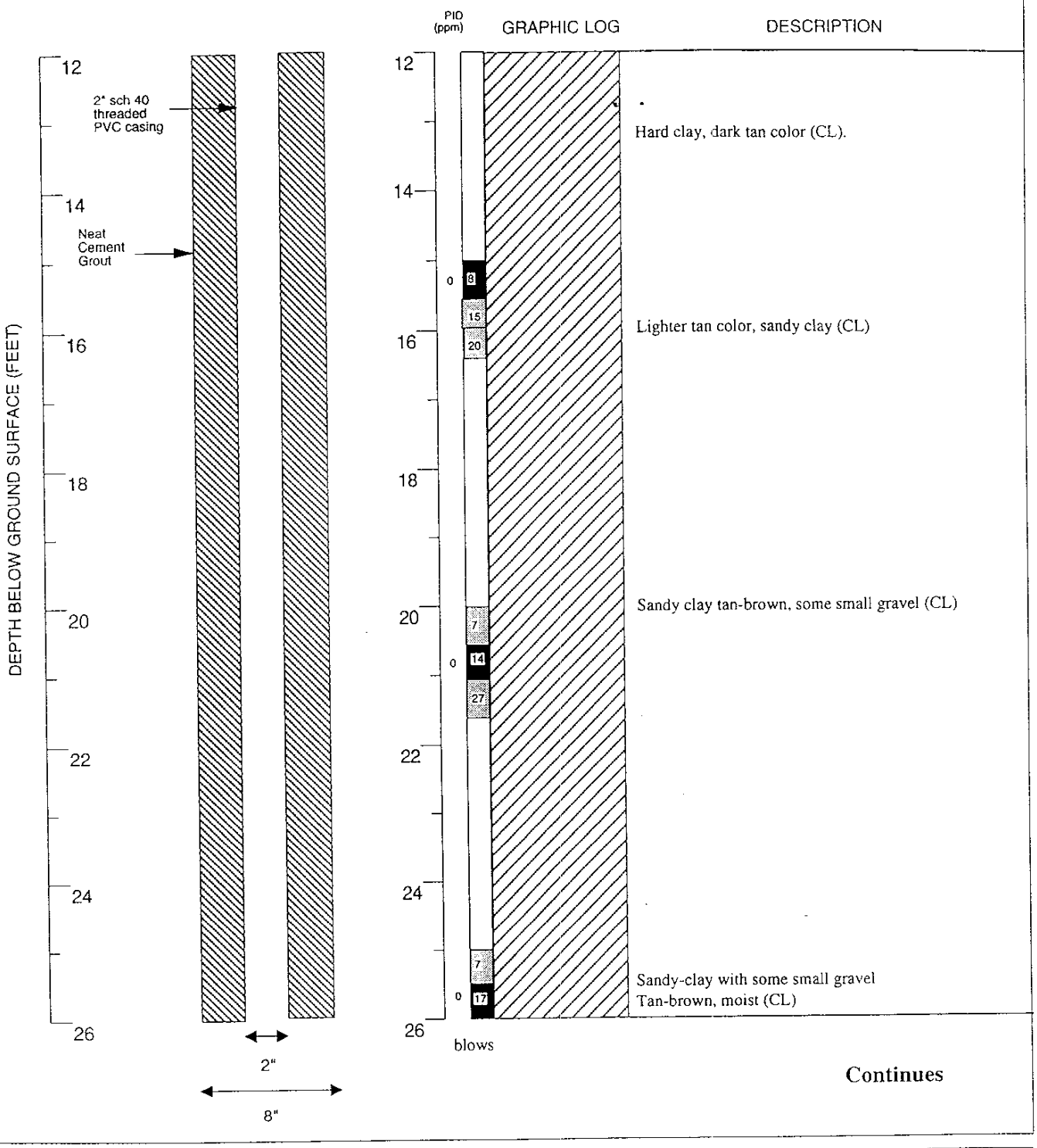
Boring Log and Well Completion Details
MW-6

One Eastmont Mall
Oakland, California

MONITOR WELL
6

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110-01-01



EXPLANATION

- Water level during drilling
- Water level in completed well
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- Sieve sample
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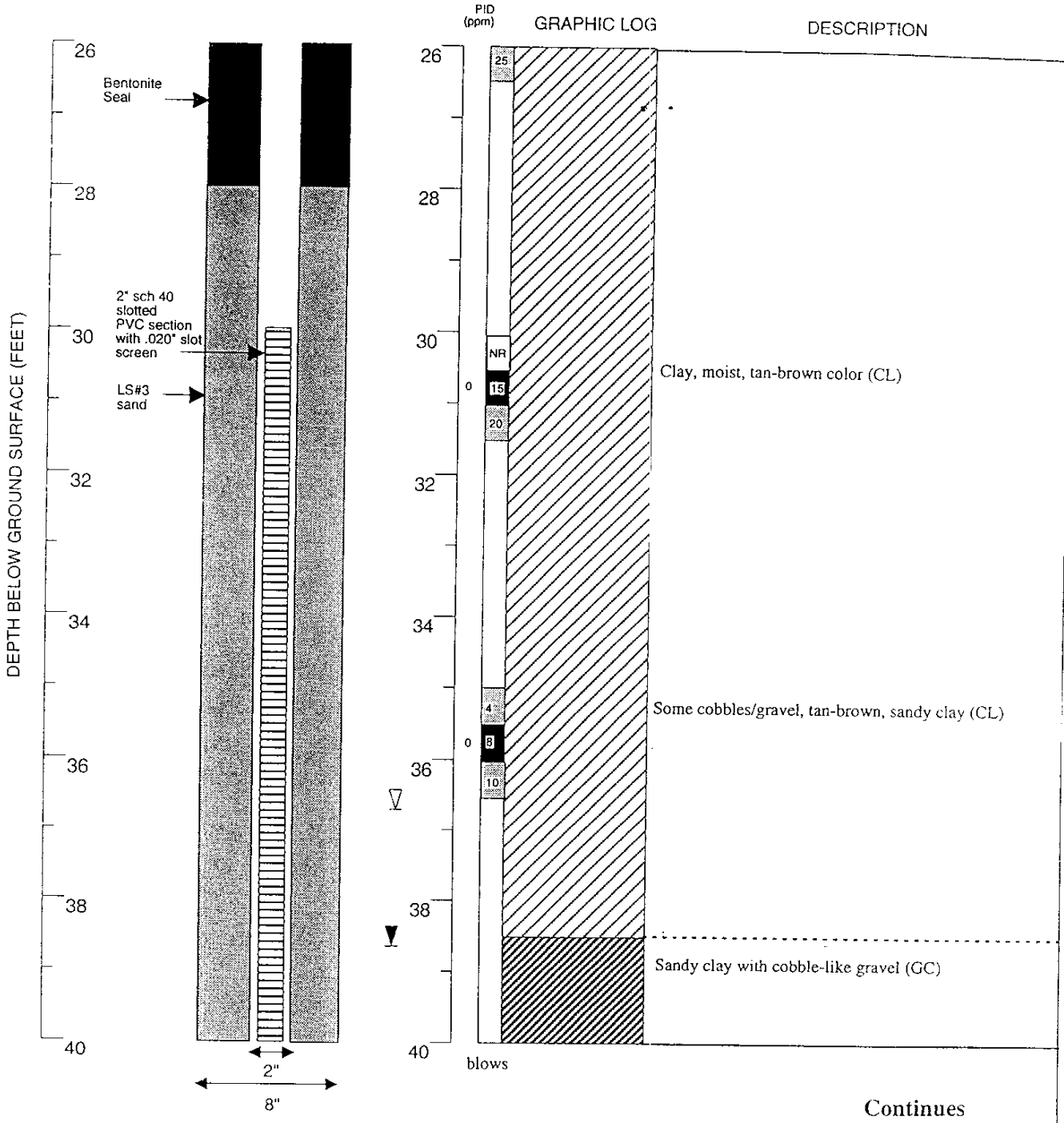
Boring Log and Well Completion Details
MW-6

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EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of recovered drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample

Contacts:
- Solid where certain
- Dotted where approximate
- Dashed where uncertain

- est K: Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR: No recovery

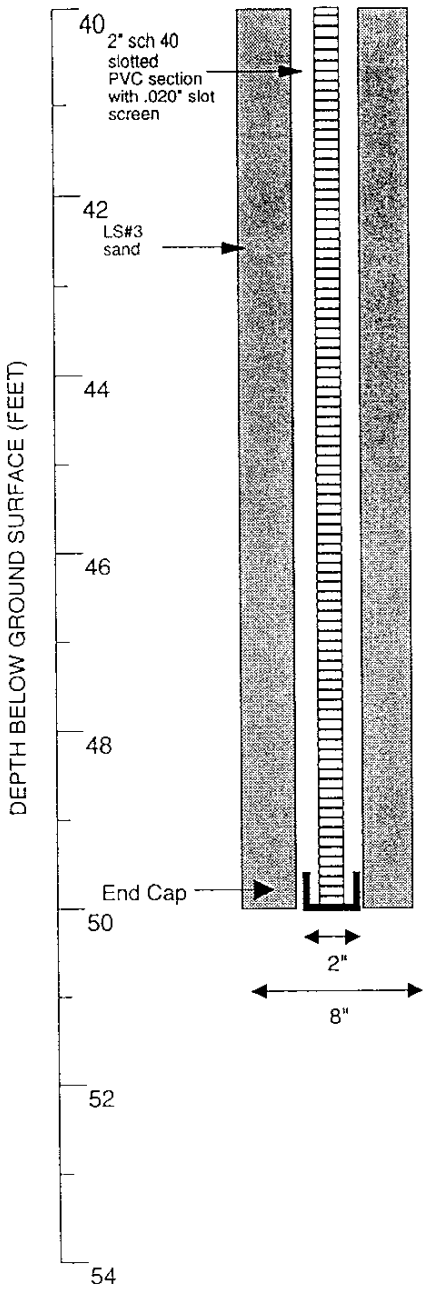
Boring Log and Well Completion Details
MW-6

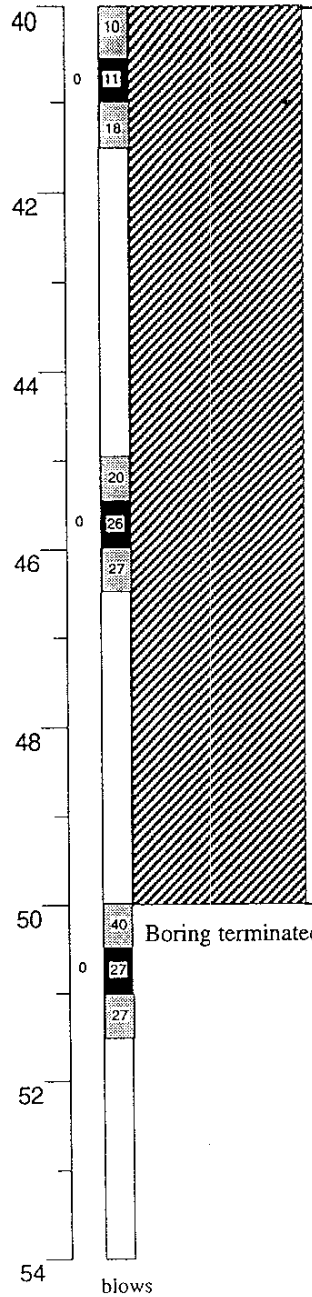
One Eastmont Mall
Oakland, California

MONITOR WELL
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Final Page

EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of recovered drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample

Contacts:
- Solid where certain
- Dotted where approximate
- Dashed where uncertain

est K — Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary

NR — No recovery

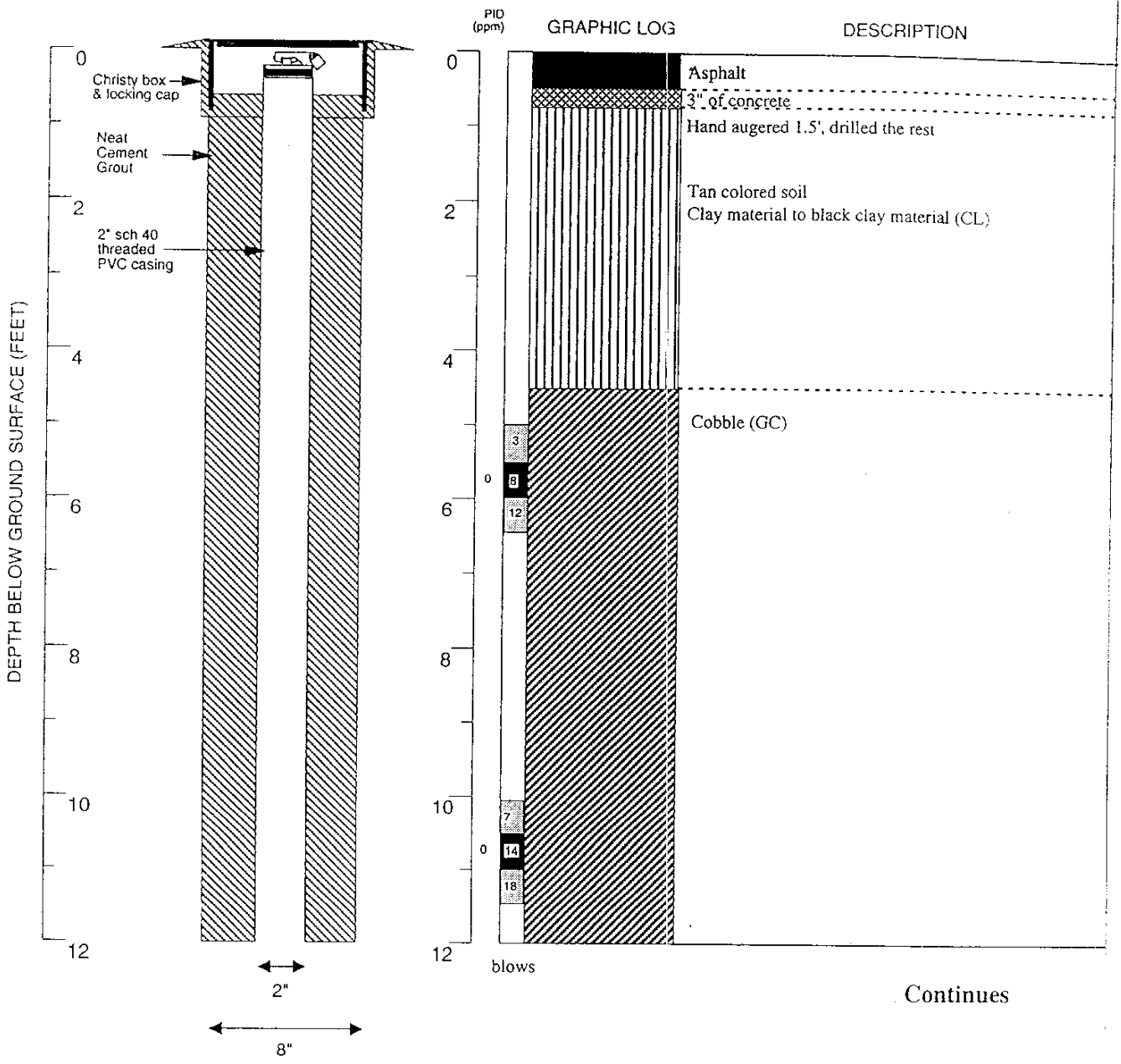
Boring Log and Well Completion Details
MW-6

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Logged by:	Benjamin I. Mira	Drilling Company:	West HazMat	Well Head Completion:	Christy box & locking cap
Inspector:		Drilling Method:	Hollow Stem Auger	Type of Sampler:	California Split Spoon
Dates Drilled:	9/14/93	Driller:	Bill Smith.	TD (Total Depth):	50.0 ft.

EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample

Contacts:
- Solid where certain
- Dotted where approximate
- Dashed where uncertain
- Hachured where gradational
- est K — Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR — No recovery

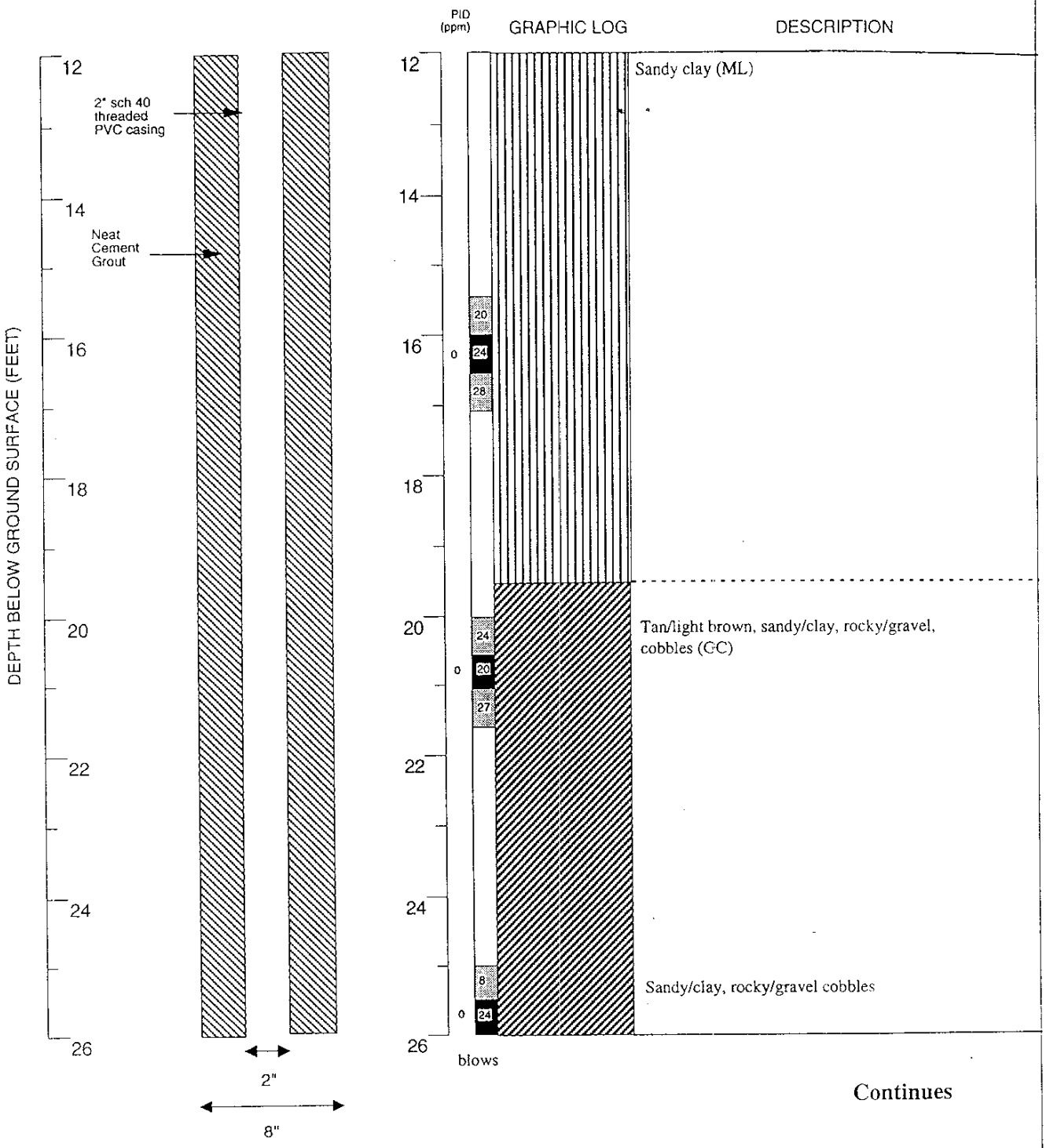
Boring Log and Well Completion Details
MW-9

One Eastmont Mall
Oakland, California

MONITOR WELL
9

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EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample

Contacts:
- Solid where certain
- Dotted where approximate
- Dashed where uncertain
- Hachured where gradational

- est K — Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR — No recovery

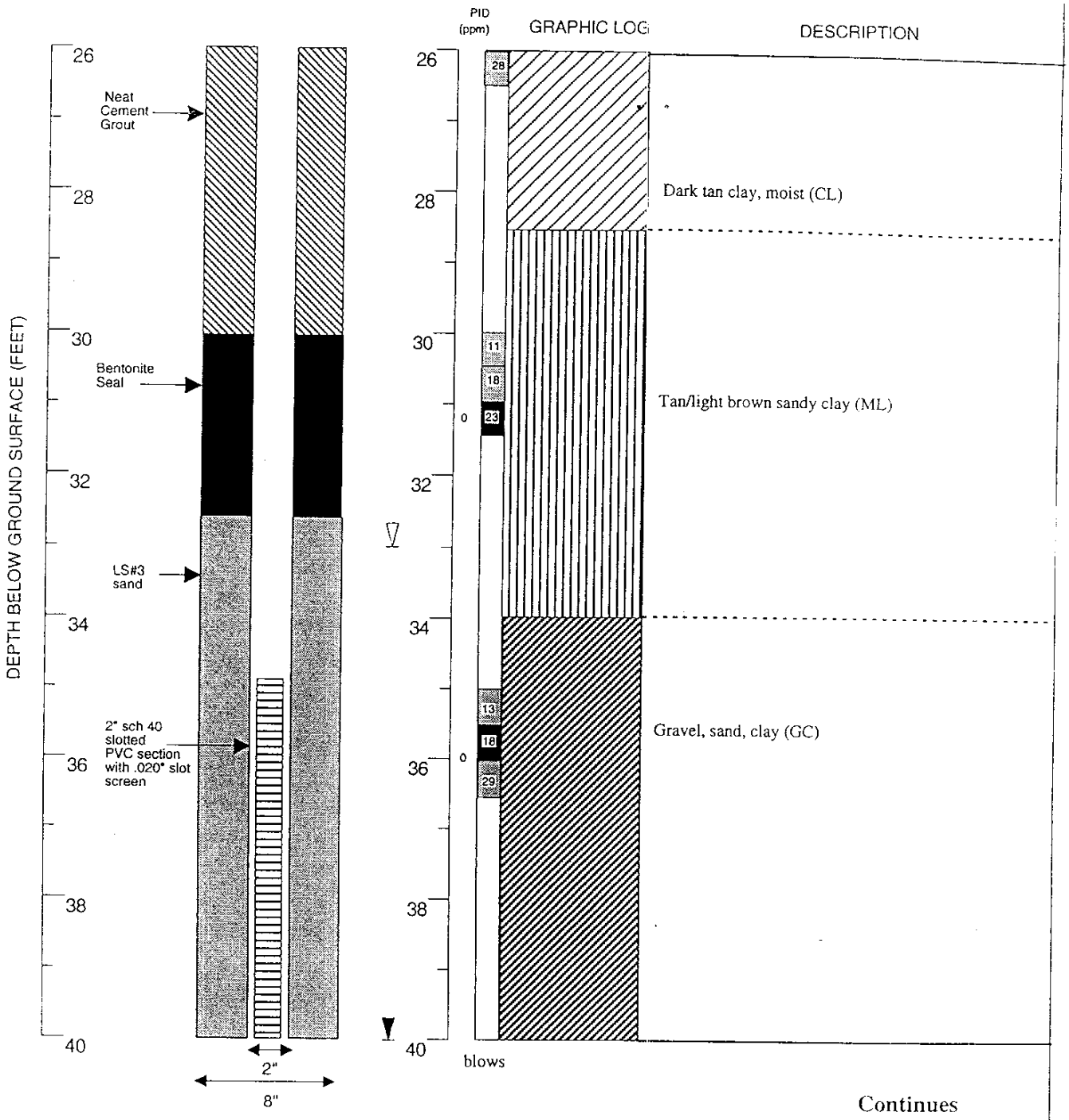
Boring Log and Well Completion Details
MW-9

One Eastmont Mall
Oakland, California

MONITOR WELL
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110-01-01



EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of recovered drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample

Contacts:
- Solid where certain
- Dotted where approximate
- Dashed where uncertain
- Hachured where gradational

est K — Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary

NR — No recovery

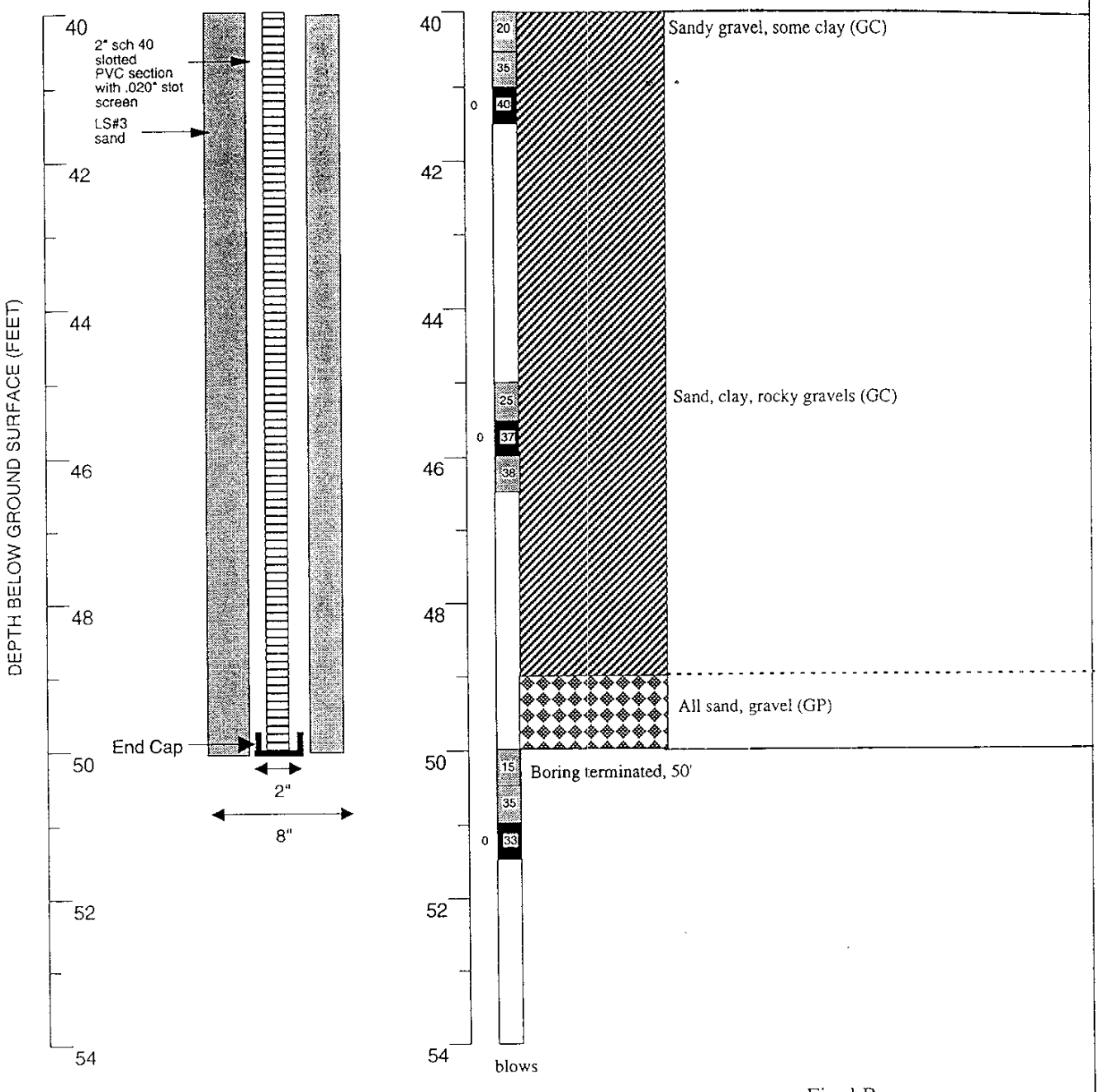
Boring Log and Well Completion Details
MW-9

One Eastmont Mall
Oakland, California

MONITOR WELL
9

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110-01-01



Final Page

EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of recovered drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample

Contacts:
- Solid where certain
- Dotted where approximate
- Dashed where uncertain
- Hachured where gradational

- est K — Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR — No recovery

Boring Log and Well Completion Details
MW-9

One Eastmont Mall
Oakland, California

MONITOR WELL
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110-01-01

TABLE 7

CUMULATIVE GROUNDWATER ELEVATION MEASUREMENTS

Eastmont Mall
Oakland, California

October 1996

Well Number	Well Casing Elevation	Date of Measurement	Depth to Groundwater	Groundwater Elevation	Average Gradient and Direction
MW-5	+ 42.07'	9-28-93	35.25'	6.82'	West
		12-29-93	36.10'	5.97'	0.007 ft/ft West
		10-19-95	30.10'	11.97'	0.005 ft/ft West
		3-6-96	29.40'	12.67'	0.004 ft/ft Northwest
		6-4-96	26.55'	15.52'	0.004 ft/ft Northwest
		9-30-96	30.10'	11.97'	0.002 ft/ft South
MW-6	+ 43.35'	9-28-93	36.85'	6.50'	West
		12-29-93	37.15'	6.20'	0.007 ft/ft West
		10-19-95	31.26'	12.09'	0.005 ft/ft West
		3-6-96	30.17'	13.18'	0.004 ft/ft Northwest
		6-4-96	28.00'	15.38'	0.004 ft/ft Northwest
		9-30-96	27.12'	16.23'	0.002 ft/ft South
MW-7	+ 44.37'	9-28-93	33.42'	10.95'	West
		12-29-93	34.25'	10.12'	0.007 ft/ft West
		10-19-95	28.78'	15.59'	0.005 ft/ft West
		3-6-96	28.97'	15.40'	0.004 ft/ft Northwest
		6-4-96	26.84'	17.53'	0.004 ft/ft Northwest
		9-30-96	27.96'	16.41'	0.002 ft/ft South
MW-8	+ 44.90'	9-28-93	32.10'	12.80'	West
		12-29-93	32.75'	12.15'	0.007 ft/ft West
		10-19-95	28.95'	15.95'	0.005 ft/ft West
		3-6-96	28.80'	16.10'	0.004 ft/ft Northwest
		6-4-96	26.92'	17.98'	0.004 ft/ft Northwest
		9-30-96	28.95'	15.95'	0.002 ft/ft South
MW-9	+ 44.18'	9-28-93	33.00'	11.18'	West
		12-29-93	33.97'	10.21'	0.007 ft/ft West
		10-19-95	29.18'	15.00'	0.005 ft/ft West
		3-6-96	28.09'	16.09'	0.004 ft/ft Northwest
		6-4-96	26.01'	18.17'	0.004 ft/ft Northwest
		9-30-96	29.02'	15.16'	0.002 ft/ft South

Note:

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TABLE 2B

CUMULATIVE GROUNDWATER ANALYTICAL RESULTS

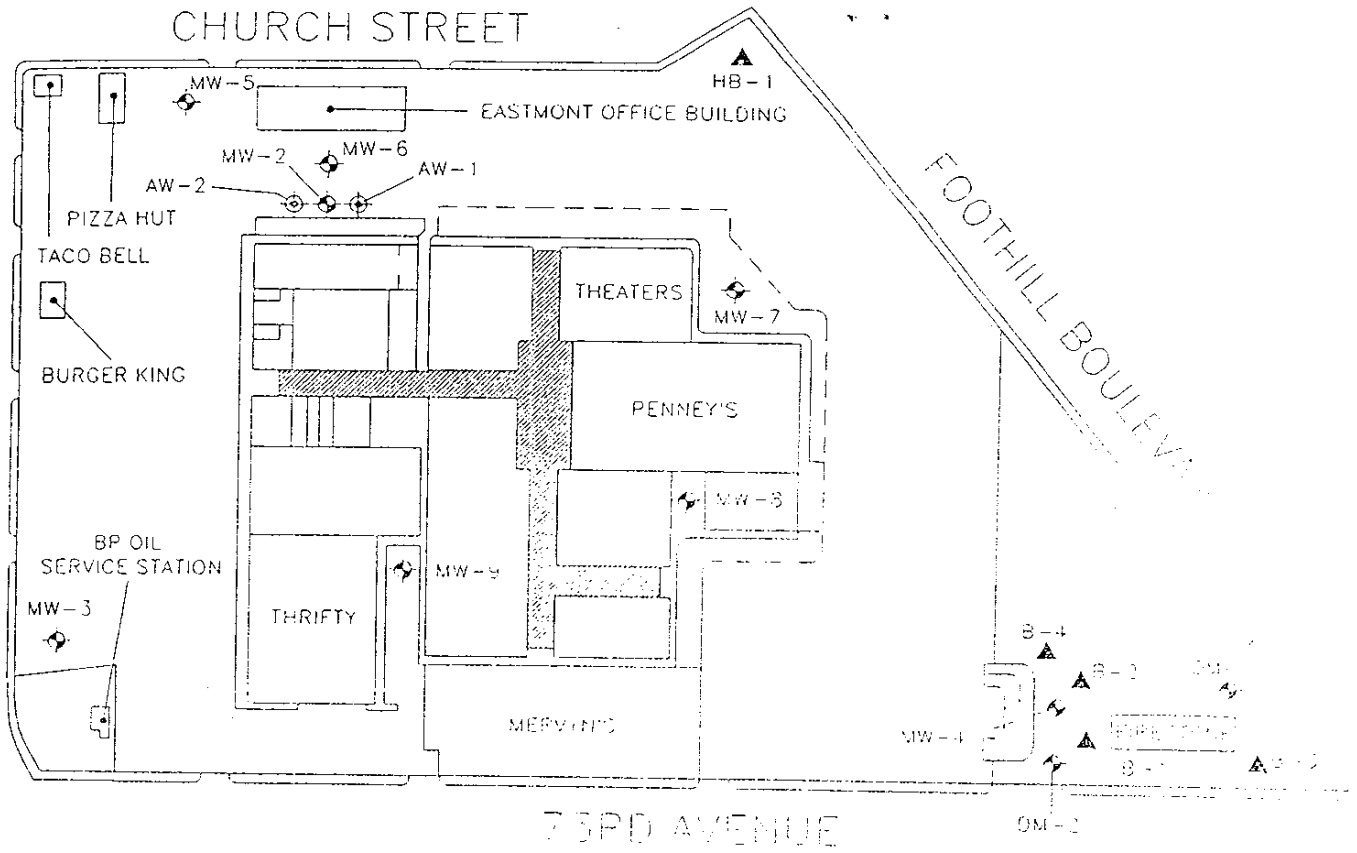
Eastmont Mall
Oakland, California

October 1996

Well Number	Sampling Date	[1]TPH-g	[2]Benzene	[2]Toluene	[2]Ethyl-Benzene	[2]Xylene	[3]Naphthalene Benzo(a)Pyrene	[4]Volatile Organic Compounds
MW-5	12-29-93	ND	ND	ND	ND	ND	ns	ND
	10-19-95	ND	ND	ND	ND	ND	ND	ND
	3-6-96	ND	ND	ND	ND	ND	ns	ns
	6-4-96	ND	ND	ND	ND	ND	ns	ns
	9-30-96	ND	ND	ND	ND	ND	ns	ns
MW-6	12-29-93	73	13	ND	1.5	ND	ns	ND
	10-19-95	ND	ND	ND	ND	ND	ND	TCE - 1.4
	3-6-96	ND	ND	ND	ND	ND	ns	ND
	6-4-96	ND	ND	ND	ND	ND	ns	ND
	9-30-96	ND	ND	ND	ND	ND	ns	ND
MW-7	12-29-93	78	15	ND	1.7	ND	ns	ND
	10-19-95	ND	ND	ND	ND	ND	ND	ND
	3-6-96	ND	ND	ND	ND	ND	ns	ns
	6-4-96	ND	ND	ND	ND	ND	ns	ns
	9-30-96	ND	ND	ND	ND	ND	ns	ns
MW-8	12-29-93	ND	ND	ND	ND	ND	ns	ND
	10-19-95	ND	ND	ND	ND	ND	ND	ND
	3-6-96	ND	ND	ND	ND	ND	ns	ns
	6-4-96	ND	ND	ND	ND	ND	ns	ns
	9-30-96	ND	ND	ND	ND	ND	ns	ns
MW-9	12-29-93	ND	ND	ND	ND	ND	ns	ND
	10-19-95	ND	ND	ND	ND	ND	ND	ND
	3-6-96	ND	ND	ND	ND	ND	ns	ns
	6-4-96	ND	ND	ND	ND	ND	ns	ns
	9-30-96	ND	ND	ND	ND	ND	ns	ns

Notes: All concentration values were reported in µg/kg equivalent to parts per billion (ppb).
ND is equivalent to "None Detected" at or above the laboratory limit of detection.
ns is equivalent to Not Sampled or the sample was not analyzed.
The Laboratory Limit of Detection for TPH-g is 50 ppb, for BTEX is 0.5 ppb.
[1]TPH-g, TPH-d, TPH-mo are equivalent to Total Petroleum Hydrocarbons as gasoline, diesel and motor oil, respectively and analyzed by EPA method 8015(m).
[2]Benzene, toluene, ethylbenzene, and xylene (BTEX) are volatile organic compounds found in fuels and analyzed by EPA method 8020.
[3]Benzo(a)pyrene and Naphalene compounds are analyzed by EPA method 8010.
[4]Volatile organic compounds are analyzed by EPA method 8010.

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AllWest Environmental, Inc.	November 1995	Generalized Site Map & Boring Locations	Project 95278.23	Figure 04
		One Eastmont Mall, Oakland, California		Source *AllWest*

Table 9

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 8010
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project: Eastmont Sub

Date Sampled: 10/30/95
Date Received: 10/31/95
Date Extracted: 11/01/95
Date Analyzed: 11/01/95
Date Reported: 11/02/95
Client ID No.: B-1-6.0'

Project No.: 95278.23
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800651
COC Log No.: 13269
Lab ID No.: N0651-1A
Batch No.: 17016
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	97

Sample: B-1-6.0'

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)	Dilution (factor)
Bromodichloromethane	75-27-4	ND	5.0	1.0
Bromoform	75-25-2	ND	5.0	1.0
Bromomethane	74-83-9	ND	5.0	1.0
Carbon tetrachloride	56-23-5	ND	5.0	1.0
Chlorobenzene	108-90-7	ND	5.0	1.0
Chloroethane	75-00-3	ND	5.0	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	5.0	1.0
Chloroform	67-66-3	ND	5.0	1.0
Chloromethane	74-87-3	ND	5.0	1.0
Dibromochloromethane	124-48-1	ND	5.0	1.0
1,2-Dichlorobenzene	95-50-1	ND	5.0	1.0
1,3-Dichlorobenzene	541-73-1	ND	5.0	1.0
1,4-Dichlorobenzene	106-46-7	ND	5.0	1.0
Dichlorodifluoromethane	75-71-8	ND	5.0	1.0
1,1-Dichloroethane	75-34-3	ND	5.0	1.0
1,2-Dichloroethane	107-06-2	ND	5.0	1.0
1,1-Dichloroethene	75-35-4	ND	5.0	1.0
1,2-Dichloroethene, total	540-59-0	ND	5.0	1.0
1,2-Dichloropropane	78-87-5	ND	5.0	1.0
cis-1,3-Dichloropropene	10061-01-5	ND	5.0	1.0
trans-1,3-Dichloropropene	10061-02-6	ND	5.0	1.0
Methylene chloride	75-09-2	ND	5.0	1.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	5.0	1.0
Tetrachloroethene	127-18-4	ND	5.0	1.0
1,1,1-Trichloroethane	71-55-6	ND	5.0	1.0
1,1,2-Trichloroethane	79-00-5	ND	5.0	1.0
Trichloroethene	79-01-6	ND	5.0	1.0
Trichlorofluoromethane	75-69-4	ND	5.0	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	5.0	1.0
Vinyl chloride	75-01-4	ND	5.0	1.0

ND = Not detected at or above indicated Reporting Limit

cont. Table 9

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 8010
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project: Eastmont Sub

Date Sampled: 10/30/95
Date Received: 10/31/95
Date Extracted: 11/01/95
Date Analyzed: 11/01/95
Date Reported: 11/02/95
Client ID No.: B-1-10.5

Project No.: 95278.23
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800651
COC Log No.: 13269
Lab ID No.: N0651-2A
Batch No.: 17016
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	97

Sample: B-1-10.5

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)	Dilution (factor)
Bromodichloromethane	75-27-4	ND	5.0	1.0
Bromoform	75-25-2	ND	5.0	1.0
Bromomethane	74-83-9	ND	5.0	1.0
Carbon tetrachloride	56-23-5	ND	5.0	1.0
Chlorobenzene	108-90-7	ND	5.0	1.0
Chloroethane	75-00-3	ND	5.0	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	5.0	1.0
Chloroform	67-66-3	ND	5.0	1.0
Chloromethane	74-87-3	ND	5.0	1.0
Dibromochloromethane	124-48-1	ND	5.0	1.0
1,2-Dichlorobenzene	95-50-1	ND	5.0	1.0
1,3-Dichlorobenzene	541-73-1	ND	5.0	1.0
1,4-Dichlorobenzene	106-46-7	ND	5.0	1.0
Dichlorodifluoromethane	75-71-8	ND	5.0	1.0
1,1-Dichloroethane	75-34-3	ND	5.0	1.0
1,2-Dichloroethane	107-06-2	ND	5.0	1.0
1,1-Dichloroethene	75-35-4	ND	5.0	1.0
1,2-Dichloroethene, total	540-59-0	ND	5.0	1.0
1,2-Dichloropropane	78-87-5	ND	5.0	1.0
cis-1,3-Dichloropropene	10061-01-5	ND	5.0	1.0
trans-1,3-Dichloropropene	10061-02-6	ND	5.0	1.0
Methylene chloride	75-09-2	ND	5.0	1.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	5.0	1.0
Tetrachloroethene	127-18-4	ND	5.0	1.0
1,1,1-Trichloroethane	71-55-6	ND	5.0	1.0
1,1,2-Trichloroethane	79-00-5	ND	5.0	1.0
Trichloroethene	79-01-6	ND	5.0	1.0
Trichlorofluoromethane	75-69-4	ND	5.0	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	5.0	1.0
Vinyl chloride	75-01-4	ND	5.0	1.0

ND = Not detected at or above indicated Reporting Limit

Cont. Table 9

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 8010
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project: Eastmont Sub

Date Sampled: 10/30/95
Date Received: 10/31/95
Date Extracted: 11/01/95
Date Analyzed: 11/01/95
Date Reported: 11/02/95
Client ID No.: B-1-46.0

Project No.: 95278.23
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800651
COC Log No.: 13269
Lab ID No.: N0651-8A
Batch No.: 17016
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	101

Sample: B-1-46.0

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)	Dilution (factor)
Bromodichloromethane	75-27-4	ND	5.0	1.0
Bromoform	75-25-2	ND	5.0	1.0
Bromomethane	74-83-9	ND	5.0	1.0
Carbon tetrachloride	56-23-5	ND	5.0	1.0
Chlorobenzene	108-90-7	ND	5.0	1.0
Chloroethane	75-00-3	ND	5.0	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	5.0	1.0
Chloroform	67-66-3	ND	5.0	1.0
Chloromethane	74-87-3	ND	5.0	1.0
Dibromochloromethane	124-48-1	ND	5.0	1.0
1,2-Dichlorobenzene	95-50-1	ND	5.0	1.0
1,3-Dichlorobenzene	541-73-1	ND	5.0	1.0
1,4-Dichlorobenzene	106-46-7	ND	5.0	1.0
Dichlorodifluoromethane	75-71-8	ND	5.0	1.0
1,1-Dichloroethane	75-34-3	ND	5.0	1.0
1,2-Dichloroethane	107-06-2	ND	5.0	1.0
1,1-Dichloroethene	75-35-4	ND	5.0	1.0
1,2-Dichloroethene, total	540-59-0	ND	5.0	1.0
1,2-Dichloropropane	78-87-5	ND	5.0	1.0
cis-1,3-Dichloropropene	10061-01-5	ND	5.0	1.0
trans-1,3-Dichloropropene	10061-02-6	ND	5.0	1.0
Methylene chloride	75-09-2	ND	5.0	1.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	5.0	1.0
Tetrachloroethene	127-18-4	ND	5.0	1.0
1,1,1-Trichloroethane	71-55-6	ND	5.0	1.0
1,1,2-Trichloroethane	79-00-5	ND	5.0	1.0
Trichloroethene	79-01-6	ND	5.0	1.0
Trichlorofluoromethane	75-69-4	ND	5.0	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	5.0	1.0
Vinyl chloride	75-01-4	ND	5.0	1.0

ND = Not detected at or above indicated Reporting Limit

CA DOHS ELAP Accreditation/Registration Number 1233

3249 Fitzgerald Road Rancho Cordova, CA 95742 (916) 638-[illegible] Fax (916) 638-4510

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 8010
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project: Eastmont Sub

Date Sampled: 10/30/95
Date Received: 10/31/95
Date Extracted: 11/01/95
Date Analyzed: 11/01/95
Date Reported: 11/02/95
Client ID No.: B-2-6.0'

Project No.: 95278.23
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800651
COC Log No.: 13269
Lab ID No.: N0651-9A
Batch No.: 17016
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	104

Sample: B-2-6.0'

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)	Dilution (factor)
Bromodichloromethane	75-27-4	ND	5.0	1.0
Bromoform	75-25-2	ND	5.0	1.0
Bromomethane	74-83-9	ND	5.0	1.0
Carbon tetrachloride	56-23-5	ND	5.0	1.0
Chlorobenzene	108-90-7	ND	5.0	1.0
Chloroethane	75-00-3	ND	5.0	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	5.0	1.0
Chloroform	67-66-3	ND	5.0	1.0
Chloromethane	74-87-3	ND	5.0	1.0
Dibromochloromethane	124-48-1	ND	5.0	1.0
1,2-Dichlorobenzene	95-50-1	ND	5.0	1.0
1,3-Dichlorobenzene	541-73-1	ND	5.0	1.0
1,4-Dichlorobenzene	106-46-7	ND	5.0	1.0
Dichlorodifluoromethane	75-71-8	ND	5.0	1.0
1,1-Dichloroethane	75-34-3	ND	5.0	1.0
1,2-Dichloroethane	107-06-2	ND	5.0	1.0
1,1-Dichloroethene	75-35-4	ND	5.0	1.0
1,2-Dichloroethene, total	540-59-0	ND	5.0	1.0
1,2-Dichloropropane	78-87-5	ND	5.0	1.0
cis-1,3-Dichloropropene	10061-01-5	ND	5.0	1.0
trans-1,3-Dichloropropene	10061-02-6	ND	5.0	1.0
Methylene chloride	75-09-2	ND	5.0	1.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	5.0	1.0
Tetrachloroethene	127-18-4	ND	5.0	1.0
1,1,1-Trichloroethane	71-55-6	ND	5.0	1.0
1,1,2-Trichloroethane	79-00-5	ND	5.0	1.0
Trichloroethene	79-01-6	ND	5.0	1.0
Trichlorofluoromethane	75-69-4	ND	5.0	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	5.0	1.0
Vinyl chloride	75-01-4	ND	5.0	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 8010
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project: Eastmont Sub

Date Sampled: 10/30/95
Date Received: 10/31/95
Date Extracted: 11/01/95
Date Analyzed: 11/01/95
Date Reported: 11/02/95
Client ID No.: B-2-10.5

Project No.: 95278.23
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800651
COC Log No.: 13269
Lab ID No.: N0651-10A
Batch No.: 17016
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	102

Sample: B-2-10.5

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)	Dilution (factor)
Bromodichloromethane	75-27-4	ND	5.0	1.0
Bromoform	75-25-2	ND	5.0	1.0
Bromomethane	74-83-9	ND	5.0	1.0
Carbon tetrachloride	56-23-5	ND	5.0	1.0
Chlorobenzene	108-90-7	ND	5.0	1.0
Chloroethane	75-00-3	ND	5.0	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	5.0	1.0
Chloroform	67-66-3	ND	5.0	1.0
Chloromethane	74-87-3	ND	5.0	1.0
Dibromochloromethane	124-48-1	ND	5.0	1.0
1,2-Dichlorobenzene	95-50-1	ND	5.0	1.0
1,3-Dichlorobenzene	541-73-1	ND	5.0	1.0
1,4-Dichlorobenzene	106-46-7	ND	5.0	1.0
Dichlorodifluoromethane	75-71-8	ND	5.0	1.0
1,1-Dichloroethane	75-34-3	ND	5.0	1.0
1,2-Dichloroethane	107-06-2	ND	5.0	1.0
1,1-Dichloroethene	75-35-4	ND	5.0	1.0
1,2-Dichloroethene, total	540-59-0	ND	5.0	1.0
1,2-Dichloropropane	78-87-5	ND	5.0	1.0
cis-1,3-Dichloropropene	10061-01-5	ND	5.0	1.0
trans-1,3-Dichloropropene	10061-02-6	ND	5.0	1.0
Methylene chloride	75-09-2	ND	5.0	1.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	5.0	1.0
Tetrachloroethene	127-18-4	ND	5.0	1.0
1,1,1-Trichloroethane	71-55-6	ND	5.0	1.0
1,1,2-Trichloroethane	79-00-5	ND	5.0	1.0
Trichloroethene	79-01-6	ND	5.0	1.0
Trichlorofluoromethane	75-69-4	ND	5.0	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	5.0	1.0
Vinyl chloride	75-01-4	ND	5.0	1.0

ND = Not detected at or above indicated Reporting Limit

Cont. Table 9

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 8010
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project: Eastmont Sub

Date Sampled: 10/30/95
Date Received: 10/31/95
Date Extracted: 11/01/95
Date Analyzed: 11/01/95
Date Reported: 11/02/95
Client ID No.: B-2-31.0

Project No.: 95278.23
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800651
COC Log No.: 13269
Lab ID No.: N0651-14A
Batch No.: 17016
Matrix: SOIL

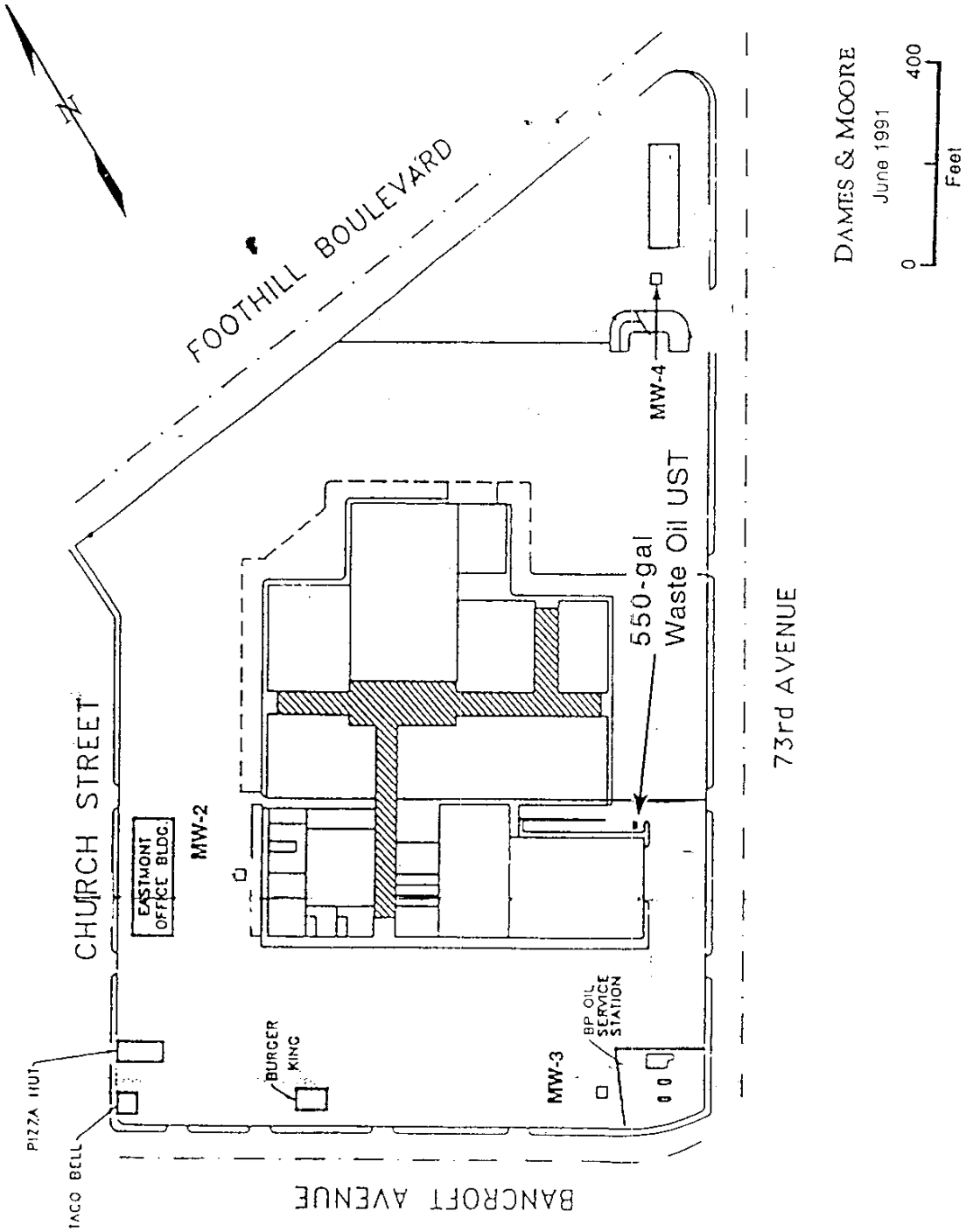
SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	101

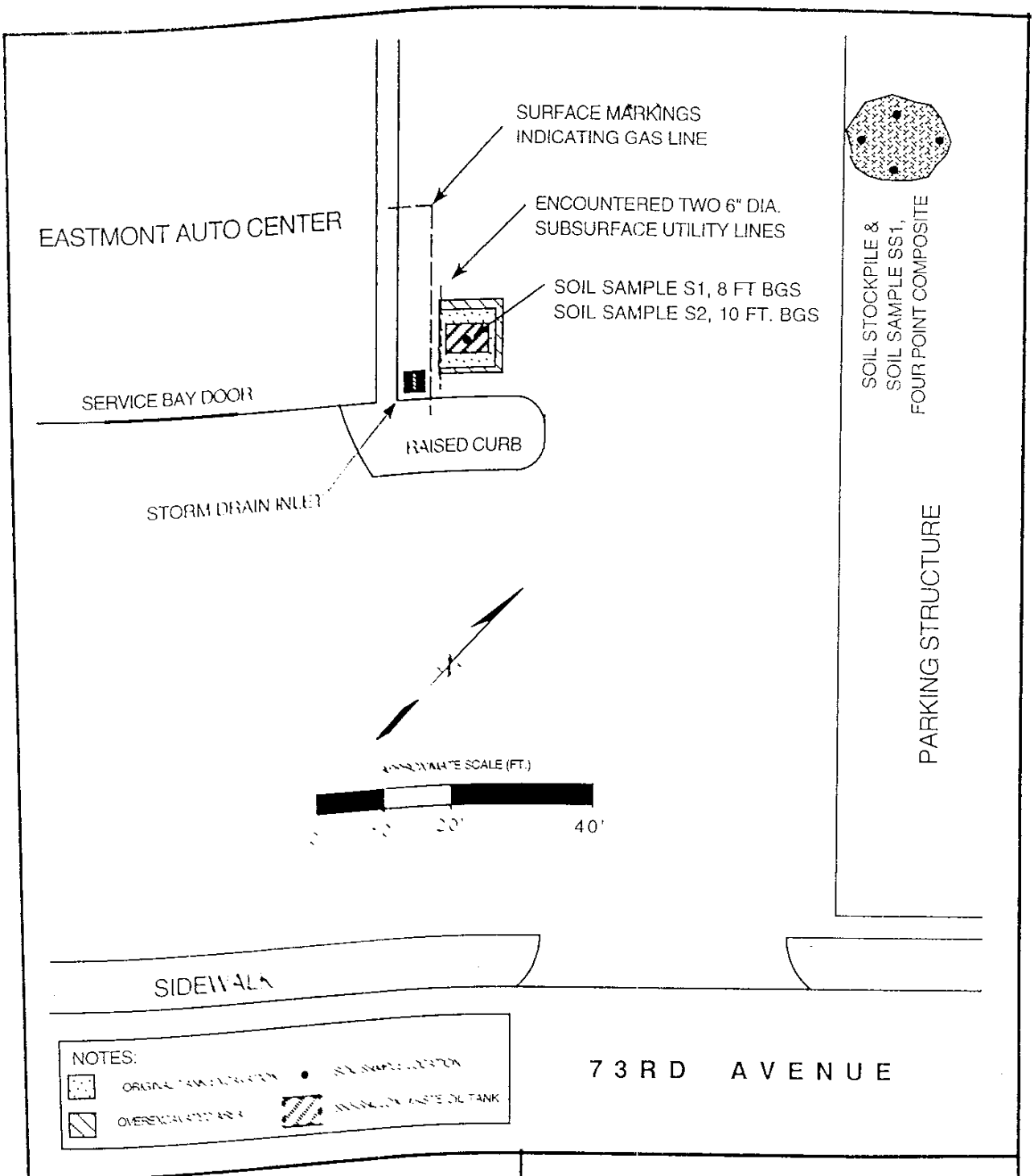
Sample: B-2-31.0

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)	Dilution (factor)
Bromodichloromethane	75-27-4	ND	5.0	1.0
Bromoform	75-25-2	ND	5.0	1.0
Bromomethane	74-83-9	ND	5.0	1.0
Carbon tetrachloride	56-23-5	ND	5.0	1.0
Chlorobenzene	108-90-7	ND	5.0	1.0
Chloroethane	75-00-3	ND	5.0	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	5.0	1.0
Chloroform	67-66-3	ND	5.0	1.0
Chloromethane	74-87-3	ND	5.0	1.0
Dibromochloromethane	124-48-1	ND	5.0	1.0
1,2-Dichlorobenzene	95-50-1	ND	5.0	1.0
1,3-Dichlorobenzene	541-73-1	ND	5.0	1.0
1,4-Dichlorobenzene	106-46-7	ND	5.0	1.0
Dichlorodifluoromethane	75-71-8	ND	5.0	1.0
1,1-Dichloroethane	75-34-3	ND	5.0	1.0
1,2-Dichloroethane	107-06-2	ND	5.0	1.0
1,1-Dichloroethene	75-35-4	ND	5.0	1.0
1,2-Dichloroethene, total	540-59-0	ND	5.0	1.0
1,2-Dichloropropane	78-87-5	ND	5.0	1.0
cis-1,3-Dichloropropene	10061-01-5	ND	5.0	1.0
trans-1,3-Dichloropropene	10061-02-6	ND	5.0	1.0
Methylene chloride	75-09-2	ND	5.0	1.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	5.0	1.0
Tetrachloroethene	127-18-4	ND	5.0	1.0
1,1,1-Trichloroethane	71-55-6	ND	5.0	1.0
1,1,2-Trichloroethane	79-00-5	ND	5.0	1.0
Trichloroethene	79-01-6	ND	5.0	1.0
Trichlorofluoromethane	75-69-4	ND	5.0	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	5.0	1.0
Vinyl chloride	75-01-4	ND	5.0	1.0

ND = Not detected at or above indicated Reporting Limit



Artesian Environmental Consultants 3100 Kerner Blvd., Ste. C San Rafael, CA 94901 (415) 257-4801 fax (415) 257-4805		**SITE MAP** The Eastmont Mall One Eastmont Mall Oakland, CA 94605	
Project No.: 1695	Date: 9/27/95	Prepared by: J. French	Figure 5



Artesian Environmental Consultants 3100 Kerner Blvd., Suite C San Rafael, CA 94901 (415) 257-3800	**SAMPLE LOCATION MAP** The Eastmont Mall One Eastmont Mall Oakland, CA 94605
Project No. 1695 · Date: 2/2/95	Prepared by: JF · Figure # 6

Table 10. Summary of Soil Analytical Results

Project Site:
Waste Oil UST Removal and Soil Remediation
One Eastmont Mall
Oakland, California

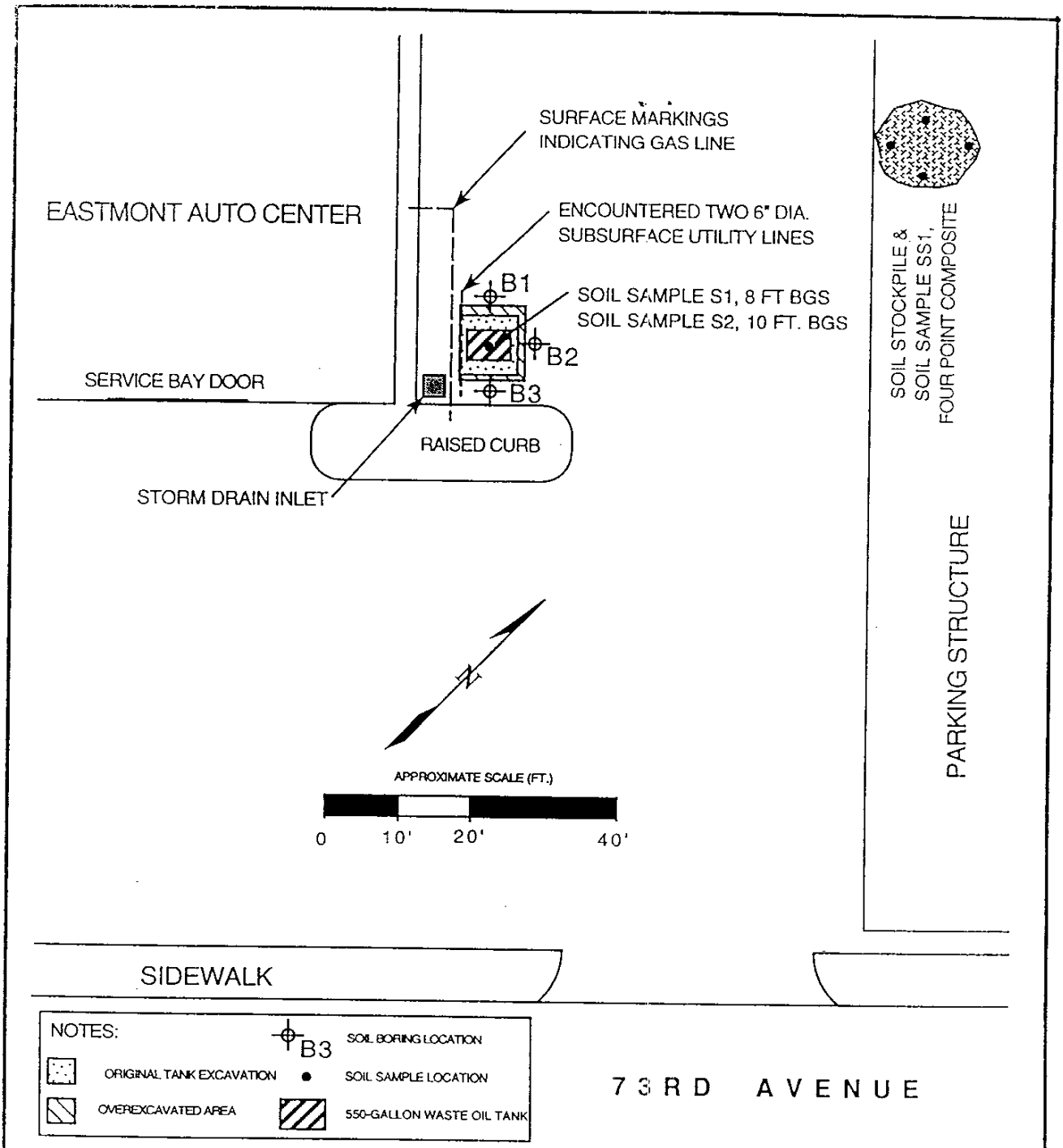
Artesian Environmental Job # 1695
3100 Kerner Blvd., Suite C
San Rafael, CA 94901
(415) 257-4801

Sample Number		Date Sampled	O&G T ppm	O&G N-P ppm	TPH-d ppm	TPH-g ppm	Benzene ppb	Toluene ppb	Ethyl Benzene ppb	Xylenes ppb
S-1	Tank pit sample	10/23/95	410	330	160	ND	ND	ND	ND	ND
SS-1	Soil stockpile	10/23/95	11,110	8500	23,000	220	ND	360	1,700	9,500
S-2	Tank pit/overex. sample	12/19/95	1,500	1,300	ND*4	NA	NA	NA	NA	NA

Compound Name			Cd ppm	Cr ppm	Pb ppm	Ni ppm	Zn ppm	Creosote ppm	8010/8270 ppb	Other
S-1	Tank pit sample	10/23/95	ND	48	2.7	71	32	N.D.	N.D.	*2
SS-1	Soil stockpile	10/23/95	ND	38	12	39	30	N.D.	*1	*3
S-2	Tank pit/overex. sample	12/19/95	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:
*1= 2.2 ppb cis-1,2-Dichloroethene, 2.3 ppb tetrachloroethene
*2= pH= 8.5, Sulfide= 55, Cyanide= ND
*3=pH=7.9, Sulfide= 62 ppm, Cyanide= ND; Flashpoint/ignitability=>140 degrees F
ND*$= ND for diesel, 610 ppm for TPH-motor oil by Method M8015
ppb= parts per billion
ppm= parts per million
NA= not analyzed; ND= below reporting level (non-detect)
O&G= oil and grease; T= total, N-T= non-polar
TPH-d= total petroleum hydrocarbons as diesel
TPH-g= total petroleum hydrocarbons as gasoline
B-T-E-X= benzene, toluene, ethyl benzene, and total xylenes

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Artesian Environmental Consultants 3100 Kerner Blvd., Suite C San Rafael, CA 94901 (415)-257-4801		**SAMPLE LOCATION MAP** The Eastmont Mall One Eastmont Mall Oakland, CA 94605	
Project No. 110-001-02	Date: 5/14/96	Prepared by: JF	Figure 7a

TABLE 11. ANALYTICAL LABORATORY RESULTS
THE EASTMONT MALL
7100 BANCROFT AVENUE
OAKLAND, CALIFORNIA

SOIL			
Sample Number	Sample Date	TPH-MO mg/Kg	Oil & Grease mg/Kg
B1 15'	4/10/96	<50	<50
B1 25'	4/10/96	<50	<50
B2 15'	4/10/96	<50	<50
B2 30'	4/10/96	<50	<50
B3 15'	4/10/96	<50	<50
B3 35'	4/10/96	<50	<50
GROUNDWATER			
Sample Number	Sample Date	TPH-MO ug/L	Oil & Grease mg/L
B1 AQ	4/10/96	**4300**	<1
B2 AQ	4/10/96	<500	<1
B3 AQ	4/10/96	<500	<1

Notes:

<50 = Analyte concentration below indicated laboratory reporting limit
TPH-MO = Total Petroleum Hydrocarbons as Motor Oil
mg/Kg = Milligrams per Kilogram, equivalent to parts per million
ug/L = Milligrams per Liter, equivalent to parts per billion
mg/L = Milligrams per Liter, equivalent to parts per million
See laboratory report for analytical methods

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AllWest
West Environmental, Inc.

Log of Boring: B-1
Project Name: Eastmont Sub
Project Number: 95278.23
Drilling Date: 10/30/95

Drilling Contractor: Soils Exploration Services
Drill Rig: CME - 55
Auger: 6" Auger
Sampler: 2" Modified California
Hammer: 140 lb. slide hammer
Logged By: Keith Craig

Blow Count	OVM Reading	Sample Interval	Depth in Feet	Well Profile	USCS Code	Soil Description
						2" asphalt with 4" of baserock
			1		CL	dark brown sandy clay (cl); soft to firm, moist;
			2			
			3			changes to moderate brown clay at 3.5';
			4			
5			5			
6	ND					
12			6			
			7			increase in sand content at 7.5';
			8			
			9			
6			10		SC	moderate brown clayey gravelly sand (sc) with sandy gravelly clay interbed; moist to wet, loose, fine to coarse grained;
10	ND					
12			11			
			12			
			13			
			14			
5			15			
11	ND					
15			16			
			17		CL	moderate brown silty clay (cl); stiff, wet, mottled orange;
			18			
			19			
10			20			
8	ND					
9			21			

Notes:

Drawn By: MJ Cunninghar
Reviewed By: L Ching

AllWest
AllWest Environmental, Inc.

Log of Boring: B-1
Project Name: Eastmont Sub
Project Number: 95278.23
Drilling Date: 10/30/95

Drilling Contractor: Soils Exploration Services
Drill Rig: CME - 55
Auger: 6" Auger

Sampler: 2" Modified California
Hammer: 140 lb. slide hammer
Logged By: Keith Craig

Blow Count	OVM Reading	Sample Interval	Depth in Feet	Well Profile	USCS Code	Soil Description
10 8 9	ND		21		CL	moderate brown silty clay (cl); stiff, wet, mottled orange;
			22			
			23			
			24			
			25			
0 12 12	ND		26			
			27			
			28		CL	clay becomes firm from 28.0' to 45.0';
			29			
			30			
8 9 9	ND		31			
			32			
			33			
			34			
			35			
5 8 8	ND		36		CL	no changes;
			37			
			38			
			39			
			40			
			41			

Notes:

Drawn By: MJ Cunningha
Reviewed By: L Ching

AllWest
AllWest Environmental, Inc.

Log of Boring: B-1
Project Name: Eastmont Sub
Project Number: 95278.23
Drilling Date: 10/30/95

Drilling Contractor: Soils Exploration Services
Drill Rig: CME - 55
Auger: 6" Auger
Sampler: 2" Modified California
Hammer: 140 lb. slide hammer
Logged By: Keith Craig

Blow Count	OVM Reading	Sample Interval	Depth in Feet	Well Profile	USCS Code	Soil Description
			41		CL	moderate brown silty clay (cl); stiff, wet;
			42			
			43			
			44			
			45			
0 9 12	ND		46		SW	moderate brown gravelly sand (sw); saturated, loose, well graded, fine to coarse grained;
			47			borehole terminated at 46.5'; groundwater first encountered at 45.3';
			48			
			49			
			50			
			51			
			52			
			53			
			54			
			55			
			56			
			57			
			58			
			59			
			60			
			61			

Notes:

Drawn By: MJ Cunningh
Reviewed By: L Ching

AllWest Environmental, Inc.

Log of Boring: B-2
Project Name: Eastmont Sub
Project Number: 95278.23
Drilling Date: 10/30/95

Drilling Contractor: Soils Exploration Services
Drill Rig: CME - 55
Auger: 6" Auger

Sampler: 2" Modified California
Hammer: 140 lb. slide hammer
Logged By: Keith Craig

Blow Count	OVM Reading	Sample Interval	Depth in Feet	Well Profile	USCS Code	Soil Description
						2" asphalt with 4" of baserock
7 8 8	ND		1 2 3 4 5 6 7 8 9		CL	dark brown sandy clay (cl); wet, firm; changes to moderate brown clay at 3.5';
6 7 6	ND		10 11 12 13 14		SW	moderate brown gravelly sand (sw); moist, loose, poorly sorted, fine to coarse grained;
8 9 8	ND		15 16 17 18 19		CL	moderate brown silty clay (cl); moist to wet, stiff, mottled orange;
6 7 10	ND		20 21			

Notes:

Drawn By: MJ Cunningha
Reviewed By: L Ching

AllWest
AllWest Environmental, Inc.

Log of Boring: B-2

Project Name: Eastmont Sub

Project Number: 95278.23

Drilling Date: 10/30/95

Drilling Contractor: Soils Exploration Services
Drill Rig: CME - 55
Auger: 6" Auger

Sampler: 2" Modified California
Hammer: 140 lb. slide hammer
Logged By: Keith Craig

Blow Count	OVM Reading	Sample Interval	Depth in Feet	Well Profile	USCS Code	Soil Description
5 7 10	ND		21 22 23 24		CL	moderate brown silty clay (cl); stiff, wet, mottled orange;
6 8 12	ND		25 26 27 28 29			
11 10 10	ND		30 31 32 33 34 35 36 37 38 39 40 41		SW	moderate brown si ty sand (sw); saturated, loose, fine grained;
						borehole terminated at 31.5'; groundwater first encountered at 30.0';

Notes:

Drawn By: MJ Cunninghar
Reviewed By: L Ching

MicroSearch Environmental Corporation

318 Harrison Street, Suite 1A Oakland, CA 94607 (510) 452-5500 Fax: (510) 452-5510

March 27, 1998

Eva Chu
Alameda County Health Care Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Drilling Permit 98WR068
Groundwater Monitoring Well Decommissioning
1 Eastmont Mall,
Oakland, California

Dear Eva:

This report describes groundwater monitoring well destruction operations at the above referenced site, herein defined as the Site. The Site Location Map and Site Plan are shown in Figures 1 and 2. Well destruction operations were conducted by Spectrum Exploration and Exploration Geoservices at the direction of MicroSearch Environmental herein called MicroSearch. The project was performed on behalf of Eastmont Mall to fulfill corrective action closure requirements for the Site, as specified in the letters from Alameda County Health Care Services Agency (ACHCSA), dated September 10, 1997, and March 3, 1998 (Appendix A).

BACKGROUND

Hunter Environmental Services, Inc. (Hunter) of Martinez, California performed a Phase II environmental audit of the Eastmont Mall property on December 20, 1989. Four soil borings were drilled by Hunter on the mall property. Three of these borings were completed as monitoring wells MW-2 through MW-4. Analytical results showed that several soil samples contained hydrocarbon contamination, and several water samples contained 1-2 dichloroethene, tricholoroethene, and tetrachloroethene. In 1991, Dames & Moore of San Francisco, California installed six additional soil borings, converting two of them into monitoring wells DM-1 and DM-2. On September 13, 1993, Artesian Environmental Consultants installed five soil borings, converting all of them into monitoring wells MW-5 through MW-9. One soil sample from the vadose zone and one groundwater sample from each boring were submitted to a laboratory and analyzed for total petroleum hydrocarbons for diesel, total petroleum hydrocarbons for gasoline, benzene, toluene, ethyl benzene, total xylenes, and purgeable halocarbons. Laboratory

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results indicated that concentration levels for all soil and groundwater samples were below the detection levels.

WELL CLOSURE ACTIVITIES

On February 15, 1998, MicroSearch obtained a drilling permit (98WR068) from the Alameda County Public Works Agency-Water Resources Section (ACPWA-WRS) for the destruction of nine monitoring wells DM-1, DM-2, MW-2, MW-4 through MW-9 at Eastmont Mall. The drilling permit is included in Appendix B. Groundwater monitoring well closure was conducted to conform with conditional corrective action closure terms as stipulated by ACHCSA.

On March 2, 1998 and March 24, 1998, groundwater monitoring wells DM-1, DM-2, MW-2, MW-4, MW-5, MW-7 through MW-9 were decommissioned in accordance with California well standards and well destruction requirements established by ACPWA-WRS. Each wells was pressure grouted by securing a coupling to the well casing top. A volume of neat cement equivalent to the filter packed portion of the boring annulus was pumped at roughly 40 pounds per square inch for approximately five minutes. The remainder of the well casing was filled with cement.

MicroSearch made a diligent effort to locate well MW-6, but it was not found. MicroSearch concludes that the cover of well MW-6 was taken from the well and the well was buried by asphalt pavement during pavement maintenance. Based on the foregoing, MicroSearch recommends that ACHCSA and ACPWA-WRS accept closure of the wells.

Should you have any questions or require additional information, please do not hesitate to contact me at (510)452-5500.

Sincerely,
MicroSearch Environmental

Truman Kwok
Project Engineer

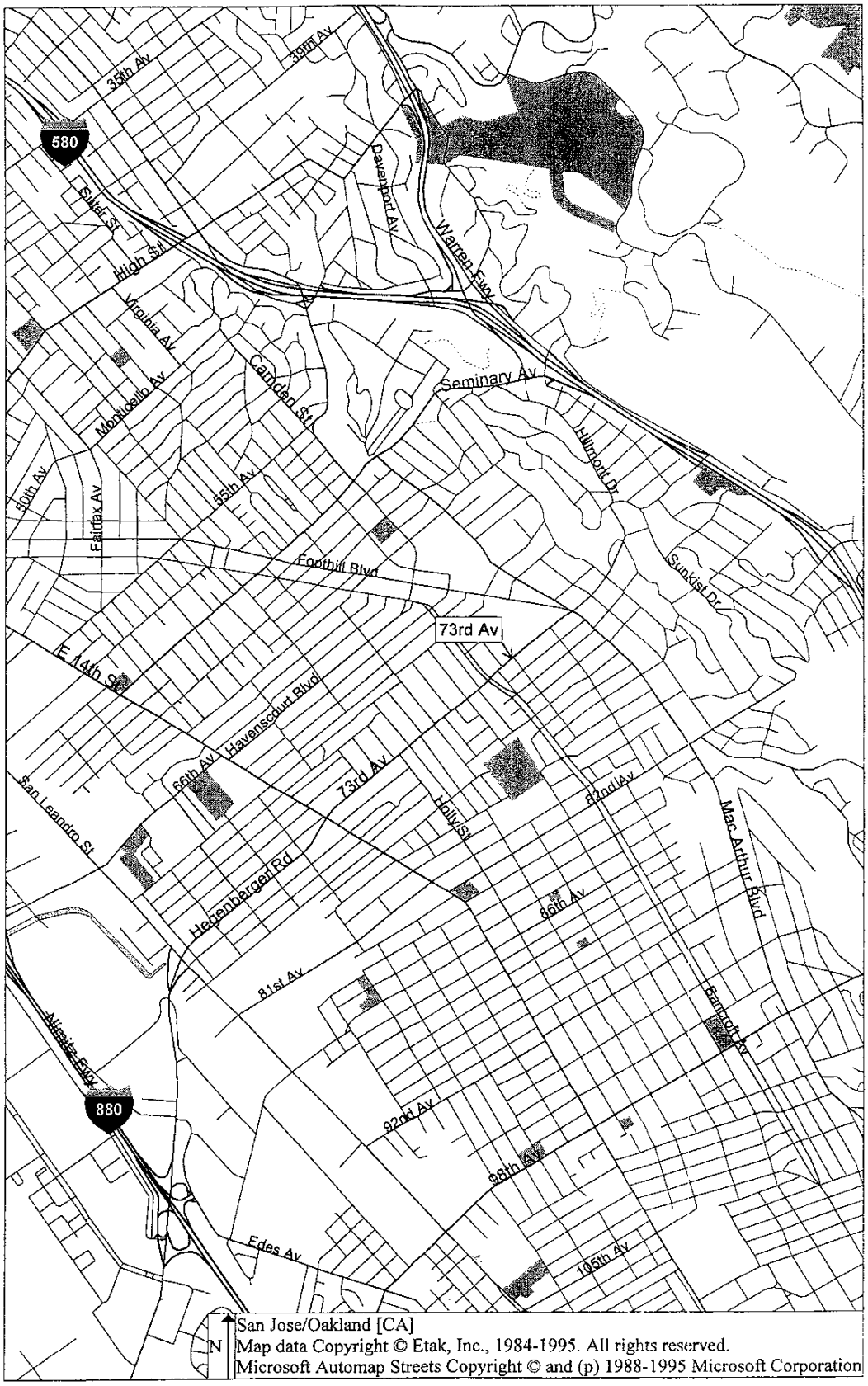


Figure 1 Site Location Map

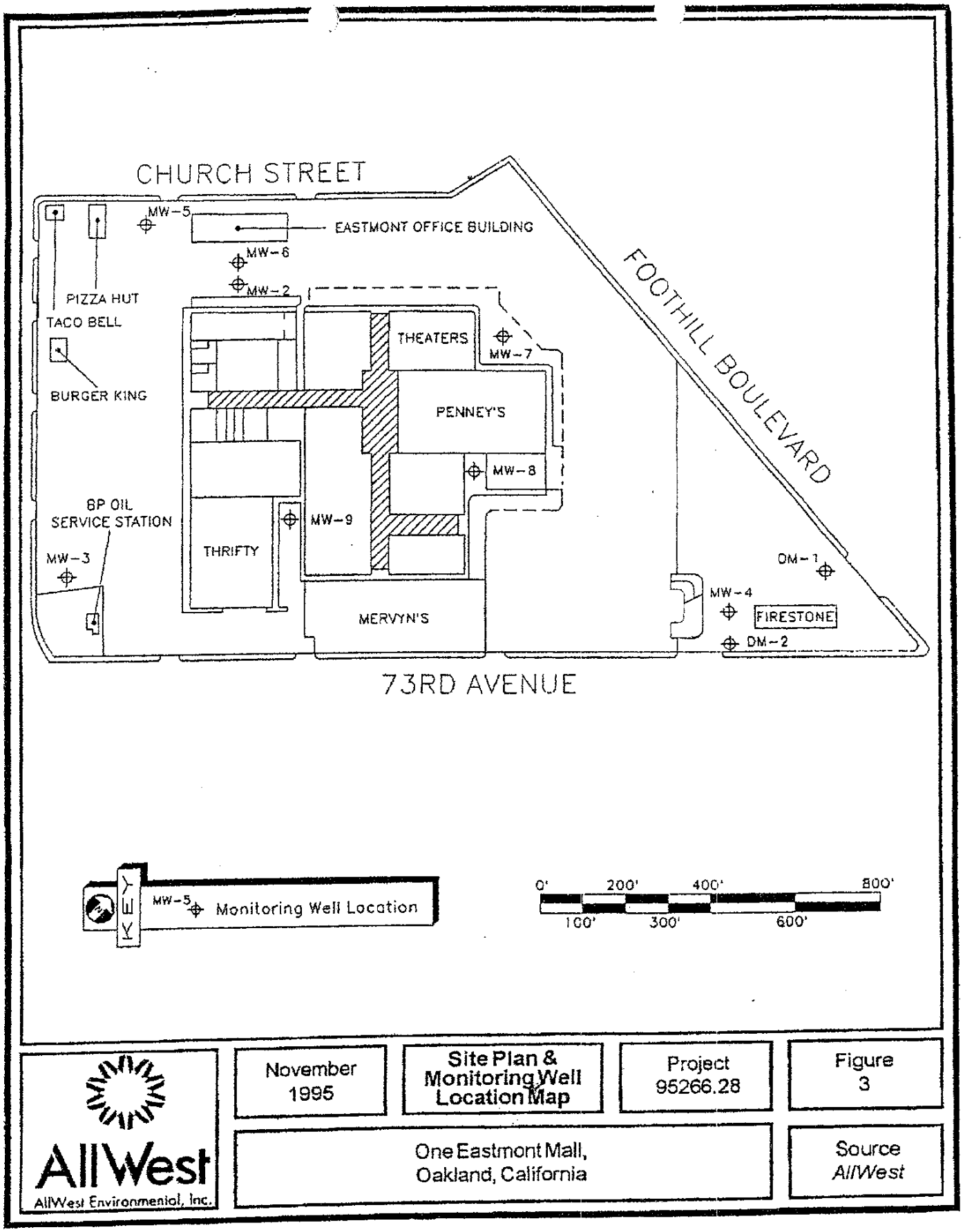


Figure 2 Site Plan

Appendix A

Letter of the Alameda County Department of Environmental Health

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
(510) 337-9335 (FAX)

StID 114

March 3, 1998

Mr. Jack Sumski
1 Eastmont Town Center
Oakland, CA 94605

RE: Well Decommission at 1 Eastmont Mall, Oakland, CA

Dear Mr. Sumski:

On September 10, 1997 I sent you a letter requesting that groundwater monitoring wells MW-5 through MW-9 be decommissioned, if they are no longer monitored. In response, Mr. Juan Mendosa of your office contacted me to inquire if wells MW-2, MW-3 and MW-4 should also be decommissioned at this time. Wells MW-2 through MW-4 were installed in December 1989 by Hunter Environmental Services, Inc.

Upon further review of the case it appears that wells MW-2 and MW-4 are no longer monitored. If this is the case, these wells should also be decommissioned. However, well MW-3, which is located adjacent to the BP Service Station, may be the same well that BP is currently monitoring. Enclosed are two site plans, one depicting the well MW-3 which was installed by Hunter Environmental, and another depicting the well which BP is sampling. If these wells are one and the same, then well MW-3 should not be decommissioned at this time. If there are indeed two wells identified as MW-3, then the one not being monitored may be decommissioned.

If you need further clarification of this letter, I may be reached at (510) 567-6762.

eva chu
Hazardous Materials Specialist

enclosures

c: Juan Mendosa, 1 Eastmont Town Center

eastmont.3

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

StID 114

September 10, 1997

Mr. Jack Sumski
1 Eastmont Town Center
Oakland, CA 94605

RE: Well Decommission at 1 Eastmont Mall, Oakland, CA

Dear Mr. Sumski:

This office and the San Francisco RWQCB have reviewed the case closure summary for the above referenced site and concur that no further action related to the underground tank release is required at this time. Before a remedial action completion letter is sent, the onsite monitoring wells (MW-5 through MW-9) should be decommissioned, if they will no longer be monitored. Please notify this office upon completion of well destruction so a closure letter can be issued.

Well destruction permits may be obtained from Alameda County Public Works. They can be reached at (510) 670-5575.

If you have any questions, I can be reached at (510) 567-6762.

Sincerely,

eva chu
Hazardous Materials Specialist

c: Gale Connor, 4 Embarcadero Center, Suite 1400, San Francisco, CA 94111

eastmont.2

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
951 TURNER COURT, SUITE 300, HAYWARD, CA 94545-2651
PHONE (510) 670-5575 ANDREAS GODFREY FAX (510) 670-5262
(510) 670-5248 ALVIN KAN

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 1 Eastmont Mall, Oakland, CA

California Coordinates Source _____ ft. Accuracy ± ____ ft.
CCN _____ ft. CCE _____ ft.
APN _____

CLIENT
Name Eastmont Town Center
Address 1 Eastmont Mall Suite 700 Phone (510) 632-1331
City Oakland, CA Zip 94605

APPLICANT
Name MicroSearch Environmental Fax (510) 482-5510
Address 3 Harrison St. Ste 101A Phone (510) 482-4660
City Carlsbad Zip 94607

TYPE OF PROJECT

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

PROPOSED WATER SUPPLY WELL USE

New Domestic	☐	Replacement Domestic	☐
Municipal	☐	Irrigation	☐
Industrial	☐	Other Monitoring	☒

DRILLING METHOD:

Mud Rotary	☐	Air Rotary	☐	Auger	☐
Cable	☐	Other	☒ Pressure Grouting		

DRILLER'S LICENSE NO. 484288

WELL PROJECTS
Drill Hole Diameter ____ in. Maximum
Casing Diameter 2 in. Depth ____ ft. unknown
Surface Seal Depth ____ ft. Number 5

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

ESTIMATED STARTING DATE 2/20/98
ESTIMATED COMPLETION DATE 3/10/98

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

APPLICANT'S SIGNATURE [signature] DATE 2/13/98

FOR OFFICE USE

PERMIT NUMBER 98WR068
WELL NUMBER _____
APN _____

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
(2.) Submit to ACPWA 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 SUPPLY WELLS
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.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

D. 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.

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

(F.) WELL DESTRUCTION
See attached.

G. SPECIAL CONDITIONS

APPROVED [signature] DATE 2/15/98

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
951 TURNER COURT, SUITE 300, HAYWARD, CA 94545-2651
PHONE (510) 670-5575 ANDREAS GODFREY FAX (510) 670-5262
(510) 670-5248 ALVIN KAN

WATER RESOURCES SECTION
GROUNDWATER PROTECTION ORDINANCE
For Pressure Grouting of Monitoring Well

ONE EASTMONT MALL
OAKLAND
PERMIT NO. 98WR068

Destruction Requirements:

1. Clean out all bridged or poorly compacted materials to the bottom of the well.
2. Pressure grout the casing to 2 feet below finished grade or original ground, whichever is the lower elevation.
3. Remove casing, seal and gravel pack to 2 feet below finished grade or original ground, whichever is the lower elevation.
4. After the seal has set, backfill the remaining hole with compacted material.

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
(510) 337-9335 (FAX)

StID 114

March 3, 1998

Mr. Jack Sumski
1 Eastmont Town Center
Oakland, CA 94605

RE: Well Decommission at 1 Eastmont Mall, Oakland, CA

Dear Mr. Sumski:

On September 10, 1997 I sent you a letter requesting that groundwater monitoring wells MW-5 through MW-9 be decommissioned, if they are no longer monitored. In response, Mr. Juan Mendosa of your office contacted me to inquire if wells MW-2, MW-3 and MW-4 should also be decommissioned at this time. Wells MW-2 through MW-4 were installed in December 1989 by Hunter Environmental Services, Inc.

Upon further review of the case it appears that wells MW-2 and MW-4 are no longer monitored. If this is the case, these wells should also be decommissioned. However, well MW-3, which is located adjacent to the BP Service Station, may be the same well that BP is currently monitoring. Enclosed are two site plans, one depicting the well MW-3 which was installed by Hunter Environmental, and another depicting the well which BP is sampling. If these wells are one and the same, then well MW-3 should not be decommissioned at this time. If there are indeed two wells identified as MW-3, then the one not being monitored may be decommissioned.

If you need further clarification of this letter, I may be reached at (510) 567-6762.

eva chu
Hazardous Materials Specialist

enclosures

c: Juan Mendosa, 1 Eastmont Town Center

eastmont.3

ARTESIAN ENVIRONMENTAL

3100 Kerner Boulevard, Suite C • San Rafael, CA 94901
Telephone 415 / 257-4801 • Fax Line 415 / 257-4805



FACSIMILE TRANSMISSION

TO: MADHULLA LOGAN

FAX #: 510/337-9335

NUMBER OF SHEETS (INCLUDING THIS ONE): 6

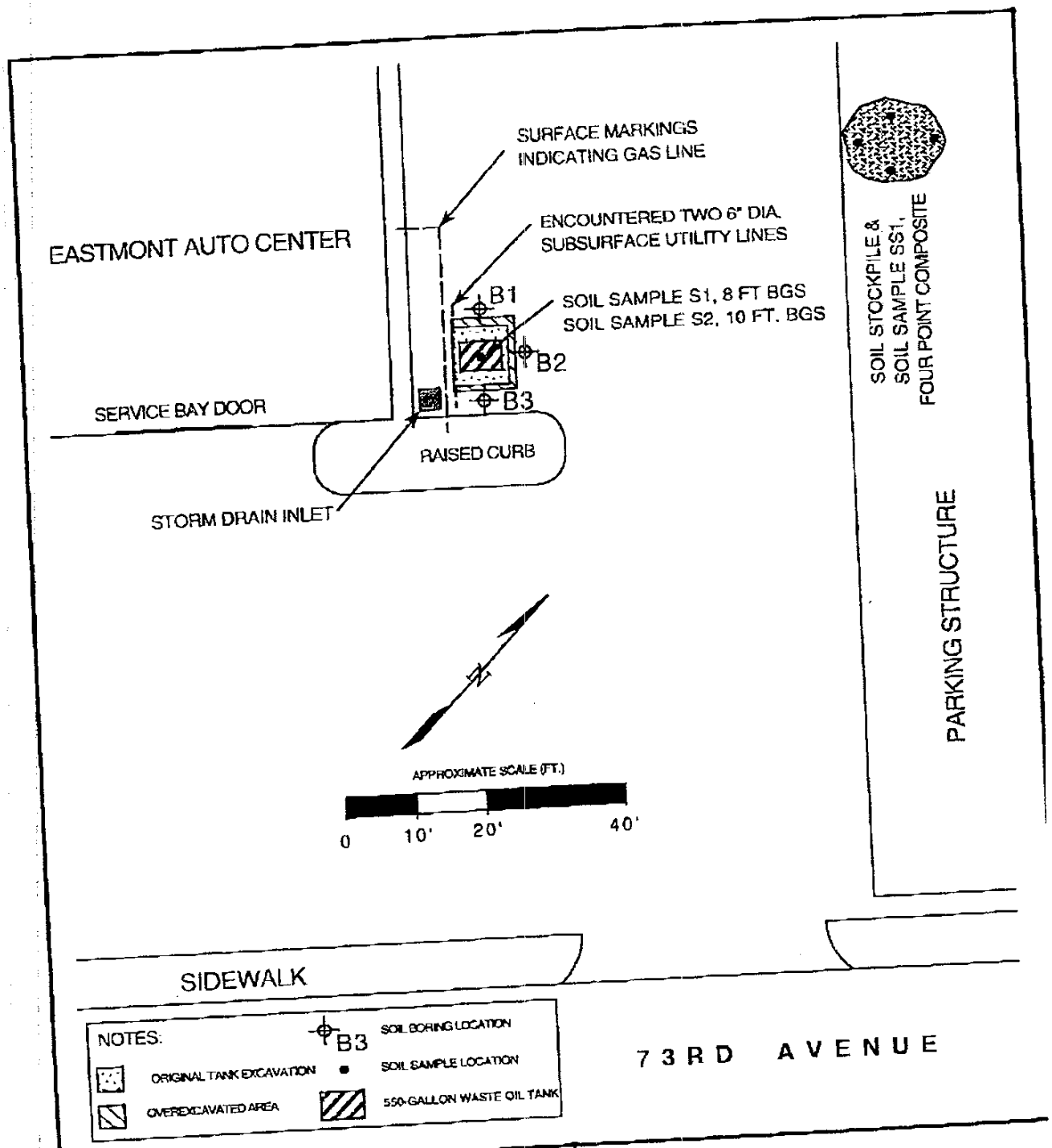
DATE: 5/30/96 **JOB NUMBER:** 110-001-62

MESSAGE: Sample locations & ANALYTICAL Report for EASTMONT MALL. Please call to discuss

FROM: JASON

IF YOU DID NOT RECEIVE THE COMPLETE TRANSMISSION, PLEASE CALL (415) 257-4801.

THIS FAX MAY CONTAIN PRIVILEGED AND CONFIDENTIAL INFORMATION INTENDED ONLY FOR THE USE OF PERSON(S) NAMED ABOVE WHO HAVE A RIGHT OF PRIVACY. IF YOU ARE NOT AN INTENDED RECIPIENT, YOU ARE NOTIFIED THAT ANY DISCLOSURE, DISSEMINATION OR DUPLICATION OF THIS FAX IS NOT AUTHORIZED, AND NO WAIVER OF ANY PRIVILEGE OR CONFIDENTIALITY IS INTENDED BY YOUR RECEIPT OF THIS TRANSMISSION. IF YOU HAVE RECEIVED THIS FAX IN ERROR, PLEASE NOTIFY US BY COLLECT TELEPHONE CALL AND RETURN IT SO WE MAY REDIRECT IT. THANK YOU.



Artesian Environmental Consultants 3100 Kerner Blvd., Suite C San Rafael, CA 94901 (415)-257-4801		**SAMPLE LOCATION MAP** The Eastmont Mall One Eastmont Mall Oakland, CA 94605	
Project No. 110-001-02	Date: 5/14/96	Prepared by: JF	Figure 3

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 9604511

April 18, 1996

ARTESIAN ENV. CONSULTANTS

Atten: Jason French

Project: EASTMONT
Project#: 110-001-02
Received: April 11, 1996

re: 3 samples for Oil and Grease analysis.
Method: 5520 B&F

Matrix: WATER
Run#: 1097

Extracted: April 17, 1996
Analyzed:

Sampled: April 10, 1996

Spl#	CLIENT SPL ID	OIL & GREASE (mg/L)	REPORTING LIMIT (mg/L)	BLANK RESULT (mg/L)	BLANK SPIKE (%)	DILUTION FACTOR
82442	B1 AQ	N.D.	1.0	N.D.	95.0	1.0
82443	B2 AQ	N.D.	1.0	N.D.	95.0	1.0
82444	B3 AQ	N.D.	1.0	N.D.	95.0	1.0

Carolyn House
Extractions Supervisor

Chip Poalinelli
Operations Manager

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

April 18, 1996 *Submission #:* 9604611

ARTESIAN ENVIRONMENTAL CONSULTANTS

Atten: Jason French

Project: EASTMONT *Project#:* 110-001-02
Received: April 11, 1996

re: Three samples for Motor Oil analysis

Matrix: WATER *Extracted:* April 15, 1996
Sampled: April 10, 1996 *Analyzed:* April 16, 1996
Method: EPA 3510/8015

Sample #	Client Sample ID	Motor Oil (µg/L)
82442	B1 AQ	4300
Note: Hydrocarbon reported is in the early Motor Oil range, and does not match Chromalab's Motor Oil standard.		
82443	B2 AQ	N.D.
82444	B3 AQ	N.D.
Blank		N.D.
Blank Spike Recovery		82%
Reporting Limit		500

Dennis Mayugba
Chemist

Alex Tam
Semivolatiles Supervisor

Note: Diesel was used as the spiking compound.

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

April 18, 1996 Submission #: 9604611

ARTESIAN ENVIRONMENTAL CONSULTANTS

Attn: Jason French

Project: EASTMONT Project#: 110-001-02
Received: April 11, 1996

re: Six samples for Motor Oil analysis

Matrix: SOIL Extracted: April 12, 1996
Sampled: April 10, 1996 Analyzed: SEE BELOW
Method: EPA 3550/8015

Sample #	Client Sample ID	Motor Oil (mg/Kg)	Date Analyzed
82446	B1 25'	N.D.	04/13/96
82447	B2 15'	N.D.	04/15/96
82448	B2 30'	N.D.	04/13/96
82449	B3 15'	N.D.	04/13/96
82450	B3 35'	N.D.	04/13/96
Blank		N.D.	
Blank Spike Recovery		89%	
Reporting Limit		50	

Matrix: SOIL Extracted: April 16, 1996
Sampled: April 10, 1996 Analyzed: April 16, 1996
Method: EPA 3550/8015

Sample #	Client Sample ID	Motor Oil (mg/Kg)
82445	B1 15'	N.D.
Blank		N.D.
Blank Spike Recovery		106%
Reporting Limit		50

Dennis Mayugba
Chemist

Alex Tam
Semivolatiles Supervisor

Note: Diesel was used as the spiking compound.

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(510) 484-1919 • Facsimile (510) 484-1096
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

April 16, 1996

Submission #: 9604611

ARTESIAN ENV. CONSULTANTS

Attn: Jason French

Project: EASTMONT
Received: April 11, 1996

Project#: 110-001-02

re: 6 samples for Oil and Grease analysis.
Method: 5520 E&F

Matrix: SOIL
Run#: 1061

Extracted: April 15, 1996
Analyzed:

Sampled: April 10, 1996

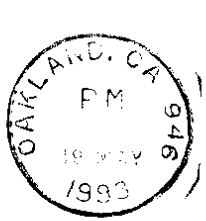
Spl#	CLIENT SPL ID	OIL & GREASE (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
82445	B1 15'	N.D.	50	N.D.	87.5	1.0
82446	B1 25'	N.D.	50	N.D.	87.5	1.0
82447	B2 15'	N.D.	50	N.D.	87.5	1.0
82448	B2 30'	N.D.	50	N.D.	87.5	1.0
82449	B3 15'	N.D.	50	N.D.	87.5	1.0
82450	B3 35'	N.D.	50	N.D.	87.5	1.0

Carolyn House
Extractions Supervisor

Chip Poalinelli
Operations Manager

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096
Federal ID #68-0140157

Box 17196
Oakland 94601





Ron Owens
Alameda Cty Environmental Health
80 Swan Way #200
Oakland CA 94621

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ARGONAUT FINANCIAL SERVICES, INC.
Realty & Investments

May 19, 1993

Mr. Ron Owcarz
Alameda County Environmental Health
80 Swan Way #200
Oakland, CA 94621

Re: Eastmont environmental matters

Dear Ron:

I hope you received my earlier letter. I also want to make sure that you personally receive this important legal notice, which prevents the assertion of legal claims in the future. Please call if you have any questions.

Sincerely,

Jim Given

Post Office Box 17196 • Oakland, California 94601 • (510) 533-7078

MERRIDITH A. SCHNEIDER, ESQ. (Bar No. 092313)
KORNFIELD, PAUL & BUPP, P.C.
1999 Harrison Street, Suite 800
Oakland, California 94612
(510) 763-1000

Attorneys for Trustee
David Summers

UNITED STATES BANKRUPTCY COURT

FOR THE NORTHERN DISTRICT OF CALIFORNIA

In re

ARGONAUT FINANCIAL SERVICES, INC.,

Debtor.
_____/

Case No. 92-42551-J
Chapter 11

NOTICE OF ENTRY OF ORDER SETTING FINAL DATE FOR FILING PROOFS OF CLAIM (Bankruptcy Rule 3003(c)(3))

PLEASE TAKE NOTICE that on April 9, 1993, an Order in the above proceeding, a copy of which is attached hereto as Exhibit "A" and incorporated herein, was entered on the bankruptcy docket of the United States Bankruptcy Court for the Northern District of California on April 13, 1993.

Dated: April 14, 1993

KORNFIELD, PAUL & BUPP

By: _____
MERRIDITH A. SCHNEIDER
Attorneys for Trustee
David A. Summers

Kornfield, Paul & Bupp
Suite 800 Lake Merritt Plaza
1999 Harrison Street
Oakland, California 94612
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MERRIDITH A. SCHNEIDER, ESQ. (Bar No. 092313)
KORNFIELD, PAUL & BUPP
1999 Harrison Street, Suite 800
Oakland, California 94612
(510) 763-1000

FILED
APR 13 1993
BANKRUPTCY COURT
OAKLAND, CALIFORNIA

Attorneys for Chapter 11 Trustee

UNITED STATES BANKRUPTCY COURT

FOR THE NORTHERN DISTRICT OF CALIFORNIA

In re

ARGONAUT FINANCIAL SERVICES, INC.
A California Corporation,

Debtor.
_____/

Case No. 92-42551 J
Chapter 11

ORDER SETTING FINAL DATE FOR FILING PROOFS OF CLAIM (Bankruptcy Rule 3003(c)(3))

Upon the application of the David A. Summers, Trustee in the above captioned Chapter 11 case, and good cause having been shown,

IT IS HEREBY ORDERED that all creditors required to file claims pursuant to 11 U.S.C. §1111(a), and Bankruptcy Rule 3003, shall file such proof of claim by or before May 28, 1993. Further, any creditor who believes they are entitled to be paid as an expense of administration pursuant to 11 U.S.C. §503(b) shall file a Request for Payment of Administrative Expense pursuant to Bankruptcy Code §503(a), by or before May 28, 1993.

Dated: 4/9/93, 1993

U. S. Bankruptcy Court Judge

* Please make sure this is properly served.

EXHIBIT A

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BERG, ZIEGLER, ANDERSON & PARKER, LLP
ATTORNEYS AT LAW
FOUR EMBARCADERO CENTER, SUITE 1400
SAN FRANCISCO, CALIFORNIA 94111
TELEPHONE (415) 397-6000
TELECOPIER (415) 397-9449

F. GALE CONNOR
EXT. 221

June 25, 1997

Madhulla Logan
Hazardous Materials Specialist
Alameda County Environmental
Health Service
1131 Harbor Bay Parkway, No. 250
Alameda, CA 94502

Re: **Eastmont Mall/Oakland, California 94605**

Dear Ms. Logan:

As you know, the owners of the Eastmont Mall are in the process of obtaining a construction loan. For a variety of reasons, it is vitally important that this loan close within the next two weeks.

The lender has virtually completed its due diligence work. One of the very few remaining issues involves a site closure letter from you. Consequently, if there is anything that we can do to assist you in expediting this process, please let me know immediately. Otherwise, at your earliest possible convenience, please provide us with a site closure or no further action letter. Thank you.

Very truly yours,

F. Gale Connor

MR. F. Gale Connor

FGC:F
cc: Robert Bridwell
706F099

6/27/97 - msg to Gale that I will start this summer next week & am working to speak w/ lenders.

500-GALLON WASTE OIL UNDERGROUND STORAGE TANK REMOVAL AND SOIL REMEDIATION REPORT

PROJECT SITE:
THE EASTMONT MALL
7100 BANCROFT AVENUE
OAKLAND, CALIFORNIA

AE Project No. 1695

Prepared For:

Mr. Bob Bridwell
The Eastmont Mall
One Eastmont Mall
Oakland, CA 94605

January 19, 1996

CERTIFIED HYDROGEOLOGIST
JAMES A. JACOBS
NO. 83
STATE OF CALIFORNIA

James A. Jacobs, C.H.G. #83
Certified Hydrogeologist

Jason French
Project Manager

3100 Kerner Blvd., Suite C • San Rafael, CA 94901 • (415) 257-4801 • FAX (415) 257-4805

ARTESIAN ENVIRONMENTAL CONSULTANTS

Transmittal Letter

From: JASON FRENCH **Date:** 1-22-96

To: JULIET SHIN **Via:** X First Class
__ UPS
__ Fed - Ex
__ Courier

Subject: TANK REMOVAL RPT. **Job:** EASTMONT MALL

As:
__ We discussed on the telephone on _____
__ You requested _____
__ We believe you may be interested
X Is required

We Are Sending:
X Enclosed
__ Under Separate Cover Via _____

For:
X Your information
__ Your use
__ Your review & comments
__ Return to you

Please:
X Keep this material
__ Return within 2 weeks
__ Acknowledge Receipt

Message:

Should you have any questions please contact Olivia Jacobs

3100 Kerner Blvd., Suite C • San Rafael, CA • 94901 • 415 257-4801 • Fax 415 257-4805

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TABLES: Table 1 Laboratory Analytical Results for Soil Samples

FIGURES: Figure 1 Regional Map
Figure 2 Site Map with Monitoring Wells
Figure 3 Site Map with Tank Location
Figure 4 Sample Location Map

APPENDIX A: Tank Closure Plan, Site Safety Plan

APPENDIX B: Permits

APPENDIX C: Laboratory Analytical Reports and Chain of Custody Records

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1.0 INTRODUCTION

Artesian Environmental (Artesian) was contracted to remove a 500-gallon waste oil tank from the Eastmont Mall. The Eastmont Mall is located at 7100 Bancroft Avenue, in the City of Oakland, California. (See Figures 1 and 2). The removal was authorized by Mr. Bridwell in an effort to comply with Alameda County and California Water Quality Control Board requirements regarding the removal of inactive underground storage tanks (USTs). After the tank was removed, Artesian was contracted to remove additional soils as part of soil remediation by overexcavation. The impacted soils were removed from the site.

2.0 SITE DESCRIPTION

The project site is bounded by Foothill Boulevard to the north, Bancroft Avenue to the south, 73rd Avenue to the east, and Church Street to the west. The site is located at the base of the Berkeley hills which rise up to 1,175 feet above sea level to the north east. Two thousand feet south of the site lies the Arroyo Viejo stream channel (Figure 1)

The project site consists of a mall with several commercial retailers including clothing stores, an auto repair shop, and a supermarket. The entire building is surrounded by large parking lot areas, along with an office building and a gasoline station (Figure 2 and 3)

The 500-gallon waste oil tank was located behind the Eastmont Auto Center, approximately 85 feet northwest of 73rd Avenue (Figures 3 and 4).

3.0 SITE BACKGROUND

The Eastmont Mall site was primarily residential prior to 1916. In 1916, the site was excavated and leveled for the construction of an automobile assembly facility; the Chevrolet Fisher Body Plant. The plant closed some time in the early 1960s. The site remained vacant from 1965 to 1969. Construction of the mall began in 1969.

Several environmental assessments unrelated to the 500-gallon waste oil tank have been performed at the site. Hunter Environmental Services, Inc. (Hunter) of Martinez, California performed a Phase II environmental audit of the Eastmont Mall property on December 20, 1989. Four soil borings were drilled by Hunter on the mall property. Three of these borings were completed as monitoring wells MW-2 through MW-4. Analytical results showed that several soil samples contained hydrocarbon contamination, and several water samples contained 1-2 dichloroethene (1-2 DCE), trichloroethene (TCE), and tetrachloroethene (PCE). In 1991, Dames & Moore of San Francisco, California installed an additional six soil borings, converting two of them into monitoring wells DM-1 and DM-2. In 1993, Artesian Environmental drilled five soil borings which were converted to groundwater monitoring wells MW-5 to MW-9. The soil and water samples were below reporting levels for TPH-g, TPH-d, BTEX compounds and the purgeable halocarbons.

The closest well to the tank is MW-9, 200 feet northwest from the tank. The groundwater flow direction is to the northwest-west, according to the Dames and Moore, 1991 Quarterly Monitoring Report. Water is estimated to be found at 35 to 40 feet below ground surface. Although oil and grease was not specifically analyzed in the past at MW-9, all analytes (TPH-g, TPH-d, BTEX compounds adn the purgeable halocarbons) were not detected.

Artesian is aware of no previous environmental studies relating to the tank.

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4.0 PREPARATION ACTIVITIES

Prior to UST removal, Artesian prepared an Underground Tank Closure Plan and Site Specific Health and Safety Plan as required by the Alameda County Environmental Protection Division. In addition, Artesian obtained a permit to remove USTs from the Oakland Fire Prevention Bureau. Plans and permits are included in Appendix A. Underground Services Alert (USA) was notified that an excavation was planned and the utilities entering the site were marked. Artesian holds a State of California General Engineering Contractor 'A' license including Hazardous Material Removal Certificate #624461. A temporary Environmental Protection Agency site identification number (EPA ID) was secured by Artesian on behalf of the Eastmont Mall as required for hazardous waste material tracking. The EPA ID number is CAC 001106136.

5.0 TANK REMOVAL

On October 23, 1995, Artesian removed a single waste oil tank from the subject site. The tank had a capacity of 500-gallons and was constructed of a single steel wall. No corrosion holes were observed on the tank. Removal of the concrete and asphalt covering the tank yielded piping with no obvious holes or loose joints. No significant corrosion was noted on tank piping. Strong hydrocarbon odors were noted during the tank removal process. Removal of the tank was witnessed by Ms. Sylvia Chaney-Williamson of the Oakland Fire Prevention Bureau and Mr. Dale Klettke of the Alameda County Environmental Protection Division. Fire and Hazardous Materials Inspection forms are attached in Appendix B.

Prior to removal, the tank was inerted with 15 pounds of dry ice and the lower explosive limit (LEL) and oxygen concentration (O_2) recorded utilizing a Gastech Tanktechtor. The oxygen concentration (O_2) was 10%. The LEL concentration was 1%.

Dexanna Ltd., of Concord, CA, transported the tank as a Non-RCRA hazardous waste solid. The tank was taken to H&H Environmental of San Francisco for disposal. Dexanna Ltd's waste hauler license number and EPA I.D. numbers are 2883 and CAD982438566, respectively. The tank was transported under uniform hazardous waste manifest number 00839. (See Appendix C). H&H Environmental's CAD number is 004771168.

A small quantity (1-5 gallons) of perched groundwater entered the pit during excavation. The flow of perched water ceased after a few minutes and the pit remained dry after further excavation. The excavation was left open pending laboratory analytical results. Steel trench plate was placed over the excavation as a safety precaution and to prevent the entrance of rainwater. No groundwater, other than the 1-5 gallons noted above, entered the pit during the period it stood open.

6.0 SOIL SAMPLING & OVEREXCAVATION

Sample collection was performed by Mr. Jason French and Mr. Fred Smith of Artesian Environmental and witnessed by Mr. Dale Klettke of the Alameda County Environmental Protection Division. Following removal of the tank, a single soil sample (soil sample S1) was collected from approximately 18 inches into native soils beneath the center of the former UST. The sample was collected from the backhoe bucket. A four point composite sample (Soil Sample SS1) was collected from the excavated soil stockpile. The composite sample was collected from points at least 12 inches beneath the stockpile surface.

Due to the impacted soils that were found during the tank removal, soil remediation by over-excavation of impacted soils was contracted. On December 19, 1995, the former tank pit was over-excavated. Approximately one to two feet of soil was removed from three of the excavation sidewalls. Subsurface utility lines prevented overexcavation on the third sidewall, closes to the Eastmont Auto Center. Two feet of soil was removed from the floor of the excavation, increasing the total excavation depth from eight to ten feet bgs. Visual staining was not observed in the bottom of the former tank pit, nor was there any obvious odor, discoloration or other notable physical property indicating exisiting contamination. The overexcavated soil and the existing stockpile were loaded and transported by Caballero Trucking, Inc. of San Jose, California. Caballero Trucking, Inc. transported the soils (31.75 cu. yds.) to REMCO, Inc. of Richmond, California, where the soils were incinerated in REMCO's rotary kiln. A confirmatory soil sample (soil sample S2) was collected from beneath the former tank location at a depth of 10 feet bgs.

NO sidewall samples collected

The excavation was backfilled to within two feet of ground surface with clean pea gravel fill. Crushed rock, placed and compacted in eight inch lifts, was placed on top of the pea gravel fill to within approximately four inches of the ground surface. Cold patch asphalt was utilized to bring the excavation to grade.

All soil samples were collected in 2 inch by 6 inch stainless steel tubes. Soil samples taken from the excavation were collected from the backhoe bucket. After being driven into the soil by hand or by using a wooden mallet, the tubes were capped on both ends with teflon tape and plastic end caps. The sample tubes were then labeled, sealed in individual zip-lock bags, and stored in an ice chest on crushed ice. The samples were then delivered under chain-of-custody control to NET, Inc. of Santa Rosa, California, for laboratory analysis. NET is a state certified hazardous materials testing laboratory. NET's state certification number is 1386.

7.0 LABORATORY ANALYTICAL RESULTS

The samples were delivered under chain-of-custody control to NET, Inc. of Santa Rosa, California, for laboratory analysis. NET is a state certified hazardous materials testing laboratory. NET's state certification number is 1386.

Soil samples S1 and SS1 were analyzed for the following constituents:

- Total Petroleum Hydrocarbons as gasoline (TPH-g) by EPA Method 8015M
- Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX) by EPA Method 8020
- Total Petroleum Hydrocarbons as diesel (TPH-d) by EPA Method 8015M
- Chlorinated Halocarbons (CL HC) by EPA Method 8010
- PCB, PCP, PNA and Creosote by EPA Method 8270.
- Total Oil and Grease (TOG) by EPA Methods 5520 E and 5520 E/F

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• Cadmium, Chromium, Lead, Zinc and Nickel by EPA Methods 6010 ICAP and 7421

Soil sample S2 was analyzed for the following constituents:

• Total Petroleum Hydrocarbons as diesel and motor oil (TPH-d & TPH-mo) by EPA Method 8015M
• Total Oil and Grease (TOG) by EPA Methods 5520 E and 5520 E/F

Laboratory analysis of composite soil sample SS1 revealed that tank backfill soils contained notable concentrations of Oil and Grease (11,100 ppm), TPH-g (220 ppm), Toluene (360 ppm), Ethylbenzene (1,700 ppm), total Xylenes (9,500 ppm), and an unidentified hydrocarbon, heavier than diesel, that was believed to be motor oil (23,000 ppm).

Soil sample S1, collected from native soils beneath the center of the former tank, contained Oil and Grease (410 ppm) and an unidentified hydrocarbon believed to be motor oil (160 ppm).

Soil sample S2, collected from two feet beneath soil sample S1, contained Oil and Grease (1,500 ppm) and TPH-mo (610 ppm).

8.0 DISCUSSION

Based upon the analytical laboratory report, it is evident that heavy petroleum hydrocarbons remain in native soils beneath the former tank. True groundwater did not enter the excavation. Oil and grease is relatively in-soluble.

The closest well to the waste oil tank is MW-9, 200 feet to the northwest. The groundwater flow direction is to the northwest-west, according to the Dames and Moore, 1991 Quarterly Monitoring Report. Water is estimated to be found at 35 to 40 feet below ground surface. Although oil and grease was not specifically analyzed in the past at MW-9, all analytes (TPH-g, TPH-d, BTEX compounds and the purgeable halocarbons) were not detected during the September, 1993 sampling event.

Petroleum hydrocarbon contamination in the soils may be small and therefore could be left in place for the following reasons 1) there is no indication that groundwater has been impacted, 2) the identified contaminants present a limited threat to public health, and 3) because natural processes will provide passive bioremediation.

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9.0 RECOMMENDATIONS

In an effort to obtain a site-closure status regarding the underground waste oil tank leak at the Eastmont Mall, Artesian recommends that three activities be performed to verify that the groundwater has not been impacted and that the soil contamination detected at the base of the former tank excavation in sample SS-2 is limited and localized.

1) Using a direct push technology (Geoprobe), it is recommended that one boring be placed over the former tank area to define the maximum depth of the soil contamination and evaluate whether the groundwater beneath the tank is impacted. Two to three soil samples and one "hydropunch" type grab groundwater sample would be collected and selecte samples would be analyzed for Total Oil and Grease and TPH-motor oil.

2) It is recommended that several monitoring wells, including MW-9 be measured for depth to water. A potentiometric map showing the direction of groundwater flow will then be constructed.

3) It is recommended to sampling the groundwater from the monitoring well MW-9, the well closest to the former underground storage tank. If MW-9 is in the downgradient direction from the former tank, the well sample would help to show the groundwater condition downgradient from the former tank. After the field activities are performed, a report of the investigation will be prepared.

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10.0 LIMITATIONS FOR SUBSURFACE SAMPLING AND ASSESSMENTS

The authors and firm offer no assurance and assume no responsibility for site conditions or activities which were beyond the scope of work requested by the client and referenced in the introduction of this report. The compensation agreed to by the client and the firm corresponds to the scope of work defined, with the associated limitations which are an integral and important part of this report. This report was prepared with generally accepted standards of environmental geological practice in California at the time this investigation was performed. This investigation was conducted solely as a tool in assessing environmental conditions of the soil and/or groundwater. No soil engineering or geotechnical recommendations are implied or should be inferred. Evaluation of the geologic conditions at the site for the purpose of this investigation is made from a limited number of observation points. There may be variations in subsurface conditions away from the sample points available. There are no representations, warranties, or guarantees that the points selected for sampling are in anyway representative of the entire site. Data from this report reflects the sample conditions at specific locations at a specific point in time. No other interpretations, representations, warranties, guarantees, express or implied, are included or intended by this report. Additional work, including further subsurface investigation, can reduce the inherent uncertainties associated with this type of investigation. There are no guarantees or warranties, express or implied, that undocumented, nonpermitted, illegally or improperly abandoned subsurface containers (such as underground storage tanks or drums) or other sources of contamination or contaminated soil or groundwater itself, or covered, encapsulated, inaccessible or nonobservable hazardous materials either do or do not exist on the property.

This project involved hazardous or toxic compounds and there are certain inherent risk factors involved (such as limitations on laboratory or analytical methods or equipment, variations in subsurface conditions, and risks associated with specific analysis not requested by the client), which may adversely affect the results of the project, even though the services were performed with such skill and care as are generally accepted professional standards for the environmental geology profession.

This report and all matters contained herein were prepared for the sole and exclusive benefit of the client specified herein, and is intended only for the use of the client. Neither all, nor any part of the contents of this report, or copy thereof, shall be used for any purpose by anyone but the client specified herein nor shall it be conveyed or disseminated by anyone without the express written consent of the authors. No one, except for the client specified herein, may rely on this report for any purpose. Any person or entity who obtains or reads this report, or a copy thereof, other than the client specified herein, expressly assumes all risk of damages to himself or third persons arising out of reliance thereon or use thereof and waives the right to bring any action based on this report, directly or indirectly, and the authors shall have no liability to any such person or entity.

11.0 DISTRIBUTION

Artesian will submit copies of this report to the following individuals following client approval:

Client:
Mr. Bob S. Bridwell
The Eastmont Mall
One Eastmont Mall
Oakland, CA 94605

Ms. Juliet Shin
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Rm. 250
Alameda, CA 94502

Mr. Kevin Graves
Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster St., Suite 500
Oakland, CA 94612

Table 1. Summary of Soil Analytical Results

Project Site:
Waste Oil UST Removal and Soil Remediation
One Eastmont Mall
Oakland, California

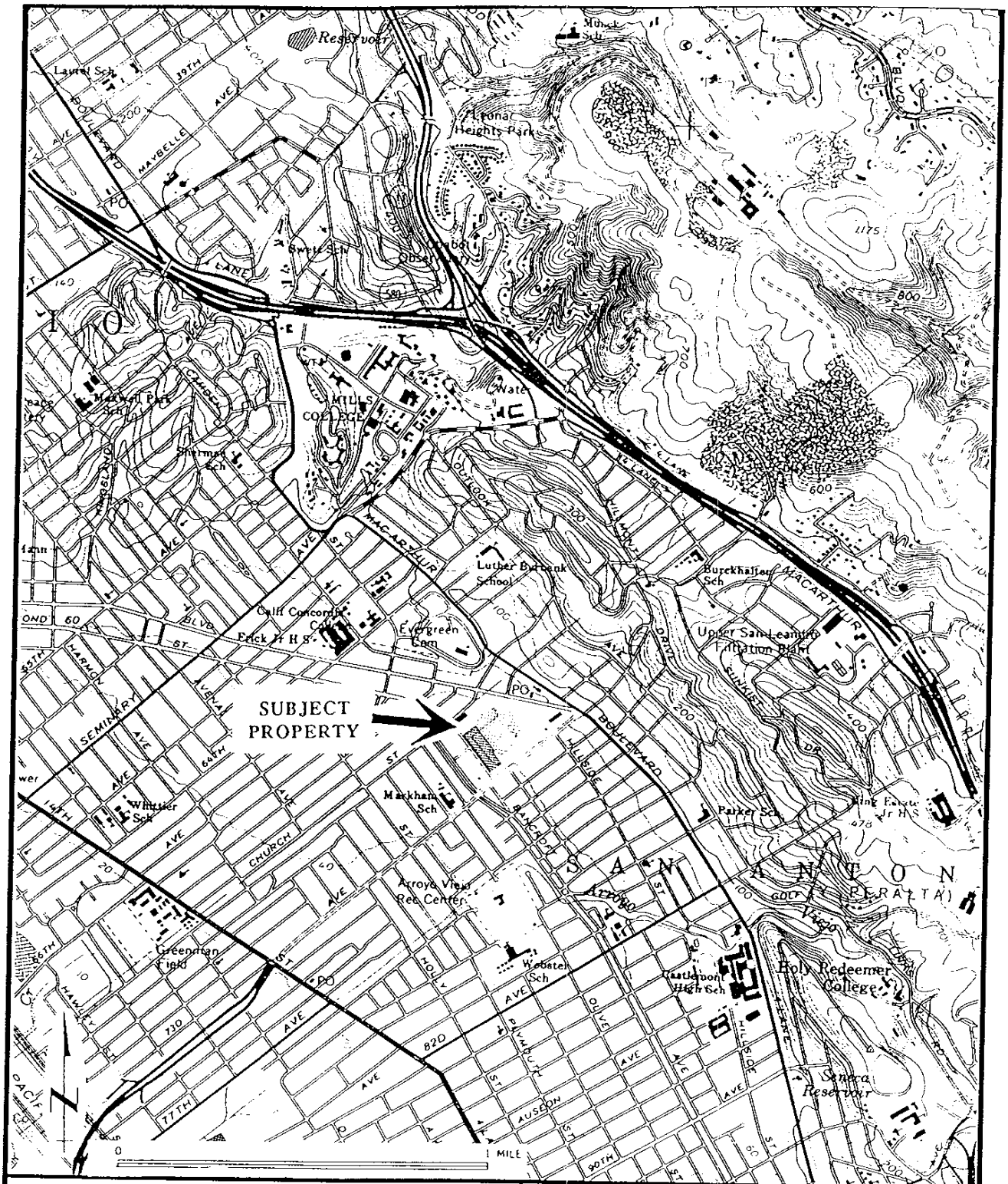
Artesian Environmental Job # 1695
3100 Kerner Blvd., Suite C
San Rafael, CA 94901
(415) 257-4801

Sample Number		Date Sampled	O&G T ppm	O&G N-P ppm	TPH-d ppm	TPH-g ppm	Benzene ppb	Toluene ppb	Ethyl Benzene ppb	Xylenes ppb
S-1	Tank pit sample	10/23/95	410	330	160	ND	ND	ND	ND	ND
SS-1	Soil stockpile	10/23/95	11,110	8500	23,000	220	ND	360	1,700	9,500
S-2	Tank pit/overex. sample	12/19/95	1,500	1,300	ND*4	NA	NA	NA	NA	NA

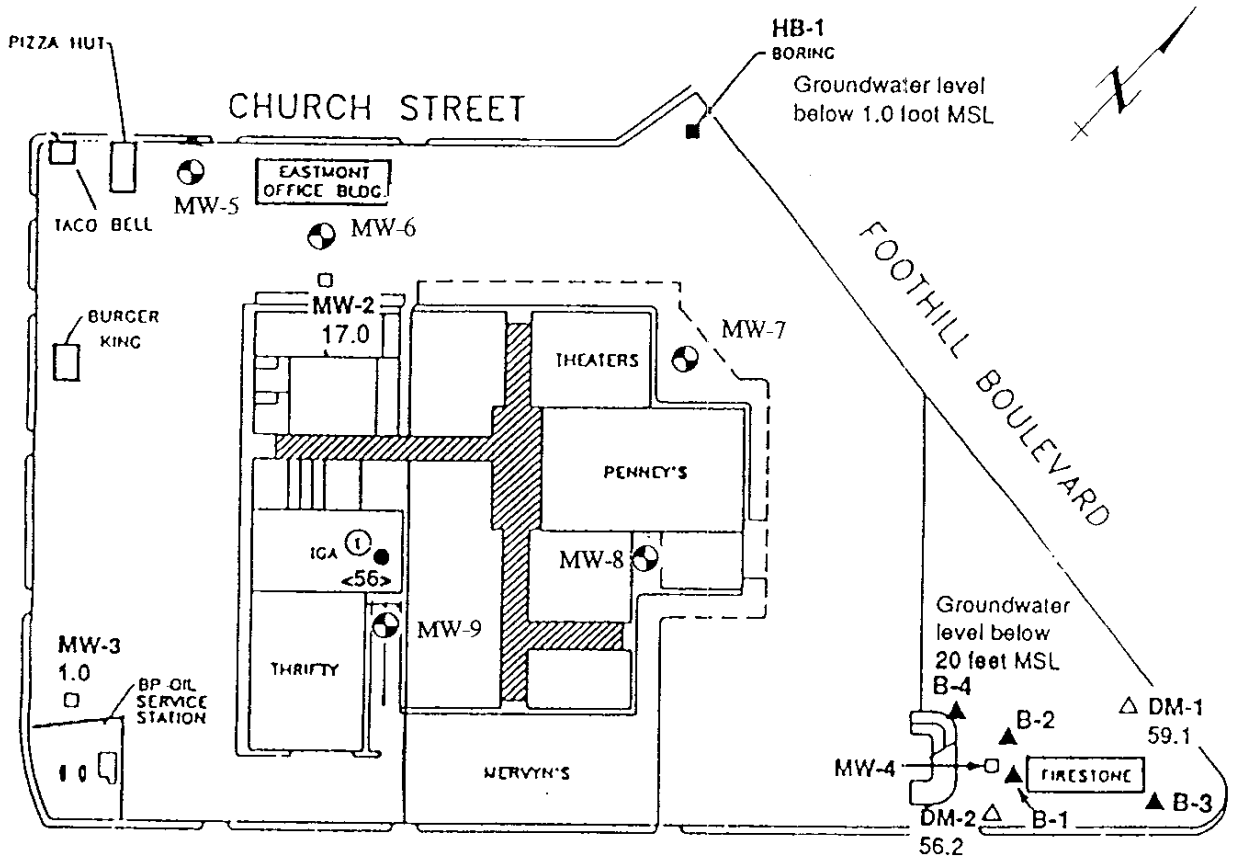
Compound Name			Cd ppm	Cr ppm	Pb ppm	Ni ppm	Zn ppm	Creosote ppm	8010/8270 ppb	Other
S-1	Tank pit sample	10/23/95	ND	48	2.7	71	32	N.D.	N.D.	*2
SS-1	Soil stockpile	10/23/95	ND	38	12	39	30	N.D.	*1	*3
S-2	Tank pit/overex. sample	12/19/95	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:
*1= 2.2 ppb cis-1,2-Dichloroethene, 2.3 ppb tetrachloroethene
*2= pH= 8.5, Sulfide= 55, Cyanide= ND
*3=pH=7.9, Sulfide= 62 ppm, Cyanide= ND; Flashpoint/ignitability=>140 degrees F
ND*$= ND for diesel, 610 ppm for TPH-motor oil by Method M8015
ppb= parts per billion
ppm= parts per million
NA= not analyzed; ND= below reporting level (non-detect)
O&G= oil and grease; T= total, N-T= non-polar
TPH-d= total petroleum hydrocarbons as diesel
TPH-g= total petroleum hydrocarbons as gasoline
B-T-E-X= benzene, toluene, ethyl benzene, and total xylenes

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Artesian Environmental Consultants 3100 Kerner Blvd., Suite C San Rafael, California 94901 415-257-4801 Fax 257-4805		REGIONAL MAP One Eastmont Mall Oakland, California 94605	
Project No: 93-001-01	Date: 8/27/93	Drawn by: BIM	Figure 1



NOTE:

① Groundwater measured in industrial well at 96 feet below ground surface (bgs) or 56 feet below mean sea level. Perforated in lower aquifer from 90 to 393 feet bgs.

Installed Monitor Wells
Artesian Environmental

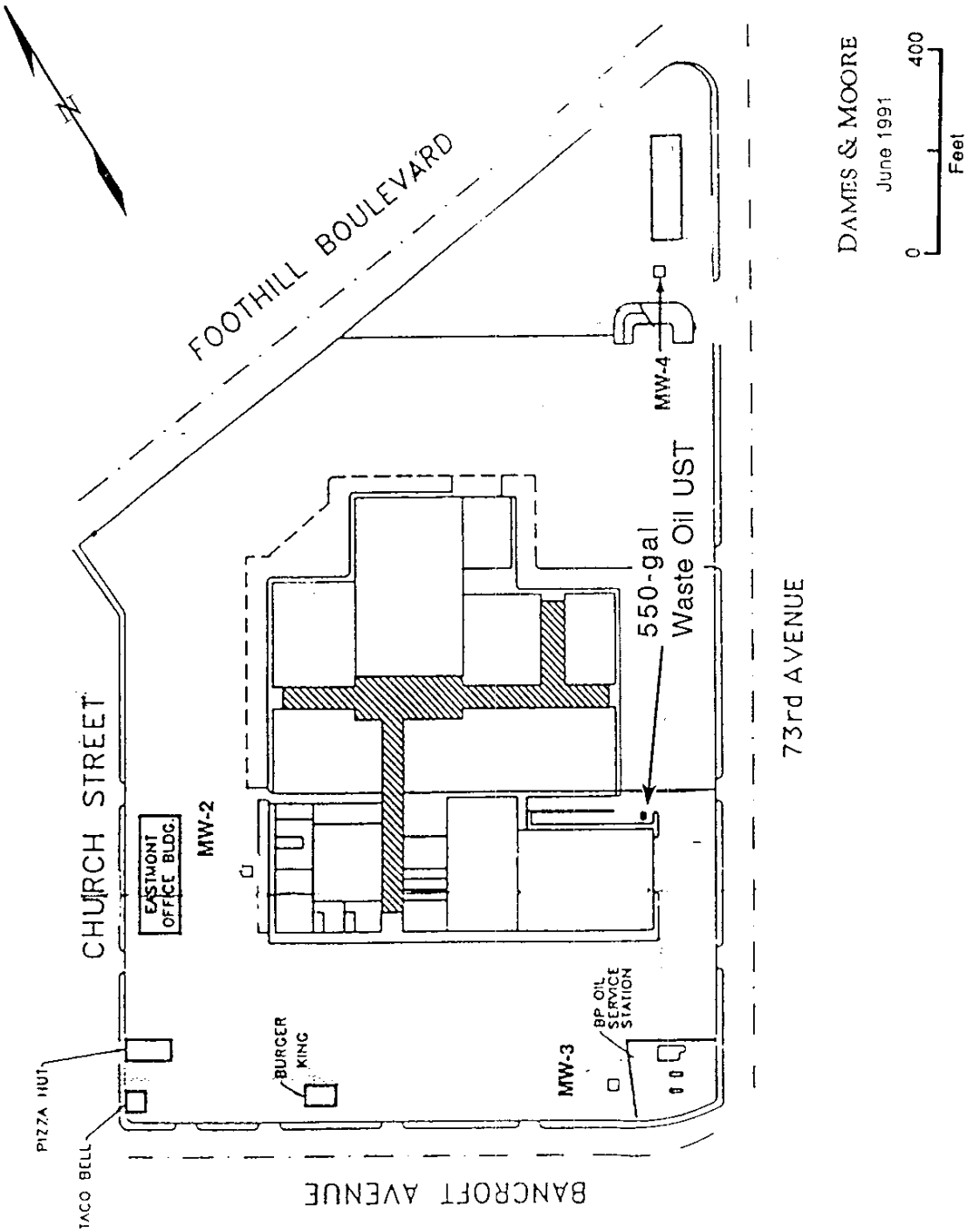
0 400
Feet

KEY

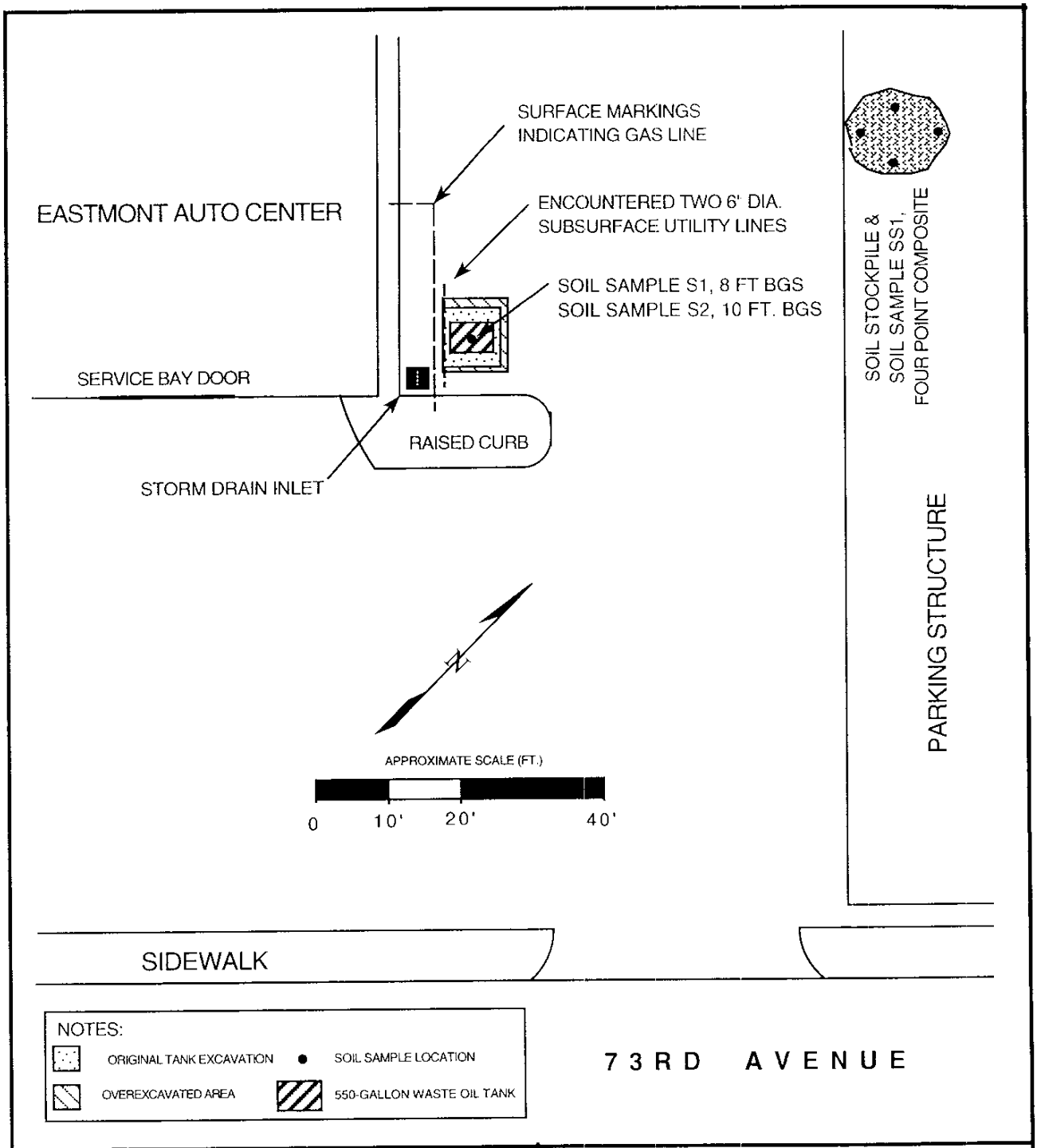
- ● Abandoned Industrial Well (1951)
- △ Dames & Moore Monitoring Well (4/91)
- ▲ Dames & Moore Soil Boring (4/91)
- □ Hunter Environ. Monitoring Well (12/89)
- ■ Hunter Environ. Soil Boring (12/89)
- 17.0 Groundwater elevation in feet above mean sea level (MSL)

After Dames & Moore, 1991

Artesian Environmental Consultants 3100 Kerner Blvd., Suite C San Rafael, California 94901 415-257-4801 Fax 257-4805		**SITE MAP** One Eastmont Mall Oakland, California 94605	
Project No: 93-001-01	Date: 8/27/93	Drawn by: BIM	Figure 2



Artesian Environmental Consultants 3100 Kerner Blvd., Ste. C San Rafael, CA 94901 (415) 257-4801 fax (415) 257-4805		**SITE MAP** The Eastmont Mall One Eastmont Mall Oakland, CA 94605	
Project No.: 1695	Date: 9/27/95	Prepared by: J. French	Figure 3



Artesian Environmental Consultants 3100 Kerner Blvd., Suite C San Rafael, CA 94901 (415)-257-4801		**SAMPLE LOCATION MAP** The Eastmont Mall One Eastmont Mall Oakland, CA 94605	
Project No. 1695	Date: 12/20/95	Prepared by: JF	Figure 4

Project Specialist 9/19/95

Please comply with additional comments in red ink. Please notify this office at least 48 hours in advance of closure. Thank you.

ACCEPTED

Aboveground Storage Tank Closure Permit Application
Alameda County Division of Hazardous Materials
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

These closure/removal plans have been received and found to be acceptable and generally meet the requirements of Title 23 and Local Health Laws. Changes to your closure plans required by the Department are to assure compliance with State and local laws. The project proposed herein is now authorized for implementation.

Submittal of the accepted plans must be on the job and available to all contractors and craftsmen involved with the removal.

Any changes or alterations of these plans and specifications from the one submitted to this Department to determine if such changes meet the requirements of State and local laws. Changes must be approved by this Department prior to implementation.

Notify this Department at least 72 hours prior to the following required inspections:

- ____ Removal of Tank(s) and Piping
- ____ Sampling
- ____ Final Inspection

Issuance of a) permit to operate, b) permanent site closure is dependent on compliance with accepted plans and all applicable laws and regulations.

*THERE IS A FINANCIAL PENALTY FOR NOT OBTAINING THESE INSPECTIONS.

Contact Specialist:

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
ENVIRONMENTAL PROTECTION DIVISION
1131 HARBOR BAY PARKWAY, RM 250
ALAMEDA, CA 94502-6577
PHONE # 510/567-6700
FAX # 510/337-9335

USA# 230 597

97 APR 02 AM 08:55

ALAMEDA COUNTY
ENVIRONMENTAL HEALTH

UNDERGROUND TANK CLOSURE PLAN

*** * * Complete according to attached instructions * * ***

1. Name of Business THE EASTMONT MALL

   Business Owner or Contact Person **(PRINT)** Bob S. Bridwell

2. Site Address ONE EASTMONT MALL

   City OAKLAND, CA Zip 94605 Phone (510) 632-1131

3. Mailing Address SAME AS ABOVE

   City _____ Zip _____ Phone _____

4. Property Owner BAYSIDE MORTGAGE & LOAN

   Business Name (if applicable) _____

   Address ONE EASTMONT MALL

   City, State OAKLAND, CA Zip 94605

5. Generator name under which tank will be manifested

   THE EASTMONT MALL

   EPA ID# under which tank will be manifested C A C O O 1 1 0 6 1 3 6

6. Contractor ARTESIAN ENVIRONMENTAL CONSULTANTS

Address 3100 KERNER BLVD, STE. C

City SAN RAFAEL, CA 94901 Phone (415)257-4801

License Type* Gen. Engineering w HAZ WASTE ID# 622461

***Effective January 1, 1992, Business and Professional Code Section 7058.7 requires prime contractors to also hold Hazardous Waste Certification issued by the State Contractors License Board.**

7. Consultant (if applicable) SAME AS Above

Address —

City, State — Phone —

8. Main Contact Person for Investigation (if applicable)

Name JASON FRENCH Title PROJECT MANAGER

Company ARTESIAN ENVIRONMENTAL

Phone (415) 257-4801

9. Number of underground tanks being closed with this plan 1

Length of piping being removed under this plan 20' VENTING

Total number of underground tanks at this facility (**confirmed with owner or operator) 1

10. State Registered Hazardous Waste Transporters/Facilities (see instructions).

**** Underground storage tanks must be handled as hazardous waste ****

a) Product/Residual Sludge/Rinsate Transporter

Name DEXANNA LTD. EPA I.D. No. CAD982438566

Hauler License No. 2883 License Exp. Date 4/30/96

Address 3104 ATHENE CT.

City CONCORD State CA Zip 94519

b) Product/Residual Sludge/Rinsate Disposal Site

Name H&H ENVIRONMENTAL EPA ID# CAD 004771168

Address 220 CHINA BASIN

City SAN FRANCISCO State CA Zip 94107

c) Tank and Piping Transporter

Name DEXANNA LTD. EPA I.D. No. CAD982438566

Hauler License No. 2883 License Exp. Date 4/30/96

Address 3104 ATHENE CT.

City CONCORD State CA Zip 94519

d) Tank and Piping Disposal Site

Name H & H ENVIRONMENTAL EPA I.D. No. CAD 004771168

Address 220 CHINA BASIN

City SAN FRANCISCO State CA Zip 94107

11. Sample Collector

Name JASON FRENCH

Company ARTESIAN ENVIRONMENTAL

Address 3100 KERNER BLVD., STE C

City SAN RAFAEL, State CA Zip 94901 Phone (415)257-4801

12. Laboratory

Name NET, INC.

Address 3636 N. LAUGHLIN RD., STE. 110

City SANTA ROSA State CA Zip 95403

State Certification No. (DOHS) 1386

13. Have tanks or pipes leaked in the past? Yes[ ] No[ ] Unknown [X]

If yes, describe. —

14. Describe methods to be used for rendering tank(s) inert:

TANK WILL BE INERTED USING NO LESS THAN 3 lbs. OF DRY ICE FOR EVERY 100-gallons OF TANK CAPACITY.

Before tanks are pumped out and inerted, all associated piping must be flushed out into the tanks. All accessible associated piping must then be removed. Inaccessible piping must be permanently plugged.

The Bay Area Air Quality Management District, 415/771-6000, along with local Fire and Building Departments, must also be contacted for tank removal permits. Fire departments typically require the use of a combustible gas indicator to verify tank inertness. **It is the contractor's responsibility to bring a working combustible gas indicator on-site to verify that the tank is inert.**

15. Tank History and Sampling Information *** (see instructions) ***

Tank		Material to be sampled (tank contents, soil, groundwater)	Location and Depth of Samples
Capacity	Use History include date last used (estimated)		
500-gal.	UNKOWN	SOIL If groundwater is identified in p.t, then one "grab" groundwater sample and 2 soil samples, one from each end of the tank at the soil/water interface, will be required.	@ 18" INTO NATIVE SOILS BENEATH TANK

One soil sample must be collected for every 20 linear feet of piping that is removed. A ground water sample must be collected if any ground water is present in the excavation.

Excavated/Stockpiled Soil	
Stockpiled Soil Volume (estimated)	**Sampling Plan**
5-10 YD^3 1 composite sample per 50 yd^3 is required for off-site disposal. One discreet sample per 20 yd^3 if planning to reuse on site.	1 SAMPLE TO BE COLLECTED FROM AT LEAST 1' BELOW SURFACE -

Stockpiled soil must be placed on bermed plastic and must be completely covered by plastic sheeting.

Will the excavated soil be returned to the excavation immediately after tank removal? [ ] yes [X] no [ ] unknown

If yes, explain reasoning _____

If unknown at this point in time, please be aware that excavated soil may not be returned to the excavation without prior approval from Alameda County. This means that the contractor, consultant, or responsible party must communicate with the Specialist IN ADVANCE of backfilling operations.

16. Chemical methods and associated detection limits to be used for analyzing samples:
The Tri-Regional Board recommended minimum verification analyses and practical quantitation reporting limits should be followed.
See attached Table 2.

17. Submit Site Health and Safety Plan (See Instructions)

Contaminant Sought	EPA or Other Sample Preparation Method Number	EPA or Other Analysis Method Number	Method Detection Limit
TPH-g/BTEX	M5030/8020	50ppb/0.5ppb } H_2O	1/0.005 ppm
TPH-d	M3510	50ppb } H_2O	1 ppm
Oil & Grease	5520 D & F	5000ppb	50 ppm
CL HC	8010		0.5 ppb
METALS Cd Cr Pb Zn Ni	ICAP 6010	Soil	0.005 ppm 0.01 ppm 0.01 ppm 0.01 ppm 0.01 ppm
PCP PCB PNA, CREOSOTE	8270		

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18. Submit Worker's Compensation Certificate copy

Name of Insurer FINNEY & BROWN, INC.

19. Submit Plot Plan ***(See Instructions)***

20. Enclose Deposit (See Instructions)

21. **Report any leaks or contamination to this office within 5 days of discovery.**
The written report shall be made on an Underground Storage Tank Unauthorized Leak/Contamination Site Report (ULR) form.

22. **Submit a closure report to this office within 60 days of the tank removal. The report must contain all information listed in item 22 of the instructions.**

23. Submit State (Underground Storage Tank Permit Application) Forms A and B (one B form for each UST to be removed) (mark box 8 for "tank removed" in the upper right hand corner)

I declare that to the best of my knowledge and belief that the statements and information provided above are correct and true.

I understand that information, in addition to that provided above, may be needed in order to obtain approval from the Environmental Protection Division and that no work is to begin on this project until this plan is approved.

I understand that any changes in design, materials or equipment will void this plan if prior approval is not obtained.

I understand that all work performed during this project will be done in compliance with all applicable OSHA (Occupational Safety and Health Administration) requirements concerning personnel health and safety. I understand that site and worker safety are solely the responsibility of the property owner or his agent and that this responsibility is not shared nor assumed by the County of Alameda.

Once I have received my stamped, accepted closure plan, I will contact the project Hazardous Materials Specialist at least three working days in advance of site work to schedule the required inspections.

CONTRACTOR INFORMATION

Name of Business ARTESIAN ENVIRONMENTAL

Name of Individual JASON FRENCH

Signature Jason French Date 9/27/95

PROPERTY OWNER OR MOST RECENT TANK OPERATOR (Circle one)

Name of Business THE EASTMONT MALL

Name of Individual Bob S Bridwell

Signature Jason French (for) Date 9/27/95

General Instructions

* Three (3) copies of this plan plus attachments and a deposit must be submitted to this Department.
* Any cutting into tanks requires local fire department approval.
* One complete copy of your approved plan must be at the construction site at all times; a copy of your approved plan must also be sent to the landowner.
* State of California Permit Application Forms A and B are to be submitted to this office. One Form A per site, one Form B for each removed tank.

Line Item Specific Instructions

2. SITE ADDRESS
   Address at which closure is taking place.

5. EPA I.D. NO. under which the tanks will be manifested
   EPA I.D. numbers may be obtained from the State Department of Toxic Substances Control, 916/324-1781.

6. CONTRACTOR
   Prime contractor for the project.

10. STATE REGISTERED HAZARDOUS WASTE TRANSPORTERS/FACILITIES

    a) All residual liquids and sludges are to be removed from tanks before tanks are inerted.

    c) Tanks must be hauled as hazardous waste.

    d) This is the place where tanks will be taken for cleaning.

15. TANK HISTORY AND SAMPLING INFORMATION
    Use History - This information is essential and must be accurate. Include tank installation date, products stored in the tank, **and the date when the tank was last used.**

    Material to be sampled - e.g. water, oil, sludge, soil, etc.

    Location and depth of samples - e.g. beneath the tank a maximum of two feet below the native soil/backfill interface, side wall at the high water mark, etc.

NOTE: These requirements are excerpts from 29 CFR Part 1910.120(b)(4), Hazardous Waste Operations and Emergency Response; Final Rule, March 6, 1989. Safety plans of certain underground tank sites may need to meet the complete requirements of this Rule.

19. PLOT PLAN
The plan should consist of a scaled view of the facility at which the tank(s) are located and should include the following information:

a) Scale;

b) North Arrow;

c) Property Lines;

d) Location of all Structures;

e) Location of all relevant existing equipment including tanks and piping to be removed and dispensers;

f) Streets;

g) Underground conduits, sewers, water lines, utilities;

h) Existing wells (drinking, monitoring, etc.);

i) Depth to ground water; and

j) All existing tank(s) and piping in addition to the tank(s) being removed.

20. DEPOSIT
A deposit, payable to "County of Alameda" for the amount indicated on the Alameda County Underground Storage Tank Fee Schedule, must accompany the plans.

21. Blank Unauthorized Leak/Contamination Site Report forms may be obtained in limited quantities from this office or from the San Francisco Bay Regional Water Quality Control Board (510/286-1255). Larger quantities may be obtained directly from the State Water Resources Control Board at (916) 739-2421.

22. TANK CLOSURE REPORT
The tank closure report should contain the following information:

a) General description of the closure activities;

b) Description of tank, fittings and piping conditions. Indicate tank size and former contents; note any corrosion, pitting, holes, etc.;

EXPLANATION FOR TABLE #2: MINIMUM VERIFICATION ANALYSIS

1. OTHER METHODOLOGIES are continually being developed and as methods are accepted by EPA or DHS, they also can be used.

2. For DRINKING WATER SOURCES, EPA recommends that the 500 series for volatile organics be used in preference to the 600 series because the detection limits are lower and the QA/QC is better.

3. APPROPRIATE STANDARDS for the materials stored in the tank are to be used for all analyses on Table #2. For instance, seasonally, there may be five different jet fuel mixtures to be considered.

4. To AVOID FALSE POSITIVE detection of benzene, benzene-free solvents are to be used.

5. TOTAL PETROLEUM HYDROCARBONS (TPH) as gasoline (G) and diesel (D) ranges (volatile and extractible, respectively) are to be analyzed and characterized by GCFID with a fused capillary column and prepared by EPA method 5030 (purge and trap) for volatile hydro- carbons, or extracted by sonication using 3550 methodology for extractable hydrocarbons. Fused capillary columns are preferred to packed columns; a packed column may be used as a "first cut" with "dirty" samples or once the hydrocarbons have been characterized and proper QA/QC is followed.

6. TETRAETHYL LEAD (TEL) analysis may be required if total lead is detected unless the determination is made that the total lead concentration is geogenic (naturally occurring).

7. CHLORINATED HYDROCARBONS (CL HC) AND BENZENE, TOLUENE, XYLENE AND ETHYLBENZENE (BTX&E) are analyzed in soil by EPA methods 8010 and 8020 respectively, (or 8240) and in water, 601 and 602, respectively (or 624).

8. OIL AND GREASE (O & G) may be used when heavy, straight chain hydrocarbons may be present. Infrared analysis by method 418.1 may also be acceptable for O & G if proper standards are used. **Standard Methods" 17th Edition, 1989, has changed the 503 series to 5520.**

9. **PRACTICAL QUANTITATION REPORTING LIMITS are influenced by matrix problems and laboratory QA/QC procedures. Following are the Practical Quantitation Reporting Limits:**

	SOIL PPM	WATER PPB
TPH G	1.0	50.0
TPH D	1.0	50.0
BTX&E	0.005	0.5
O & G	50.0	5,000.0

One Eastmont Mall
Oakland, California 94605
510 632-1131

Eastmont

January 17, 1996

Ms. Juliet Shin
Alameda County Environmental Health Dept.
1131 Harbor Bay Parkway, Rm. 250
Alameda, CA 94502-6577

Re: Report of 550 gallon Waste Oil Tank Removal
Eastmont Mall
Oakland, CA 94605

Dear Ms. Shin:

I am pleased to present this report regarding the Eastmont Mall. As principal, I retained Artesian Environmental Consultants (Artesian) to perform the above mentioned work. Artesian is a state licensed general engineering contractor (CA: A, Haz Waste, C-57; 624461).

I declare under penalty of perjury that the information and recommendations contained in the attached report are, to the best of my knowledge, true and correct.

Please call Artesian at (415) 257-4801 if you have any questions or comments.

Eastmont Town Center Company, LLC

Bob S. Bridwell
Principal

Enclosure

Based upon a Regional Board survey of Department of Health Services Certified Laboratories, the Practical Quantitation Reporting Limits are attainable by a majority of laboratories with the exception of diesel fuel in soils. The Diesel Practical Quantitation Reporting Limits, shown by the survey, are:

ROUTINE	MODIFIED PROTOCOL
≤ 10 ppm (42%)	≤ 10 ppm (10%)
≤ 5 ppm (19%)	≤ 5 ppm (21%)
≤ 1 ppm (35%)	≤ 1 ppm (60%)

When the Practical Quantitation Reporting Limits are not achievable, an explanation of the problem is to be submitted on the laboratory data sheets.

10. LABORATORY DATA SHEETS are to be signed and submitted and include the laboratory's assessment of the condition of the samples on receipt including temperature, suitable container type, air bubbles present/absent in VOA bottles, proper preservation, etc. The sheets are to include the dates sampled, submitted, prepared for analysis, and analyzed.

11. IF PEAKS ARE FOUND, when running samples, that do not conform to the standard, laboratories are to report the peaks, including any unknown complex mixtures that elute at times varying from the standards. Recognizing that these mixtures may be contrary to the standard, they may not be readily identified; however, they are to be reported. At the discretion of the LIA or Regional Board the following information is to be contained in the laboratory report:

    The relative retention time for the unknown peak(s) relative to the reference peak in the standard, copies of the chroma- togram(s), the type of column used, initial temperature, temperature program is C/minute, and the final temperature.

12. REPORTING LIMITS FOR TPH are: gasoline standard ≤ 20 carbon atoms, diesel and jet fuel (kerosene) standard ≤ 50 carbon atoms. It is not necessary to continue the chromatography beyond the limit, standard, or EPA/DHS method protocol (whichever time is greater).

EPILOGUE

ADDITIVES: Major oil companies are being encouraged or required by the federal government to reformulate gasoline as cleaner burning fuels to reduce air emissions. MTBE (Methyl-tertiary butyl ether), ETHANOL (ethyl alcohol), and other chemicals may be added to reformulate gasolines to increase the oxygen content in the fuel and thereby decrease undesirable emissions (about four percent with MTBE). MTBE and ethanol are, for practical purposes, soluble in water. The removal from the water column will be difficult. Other compounds are being added by the oil companies for various purposes. The refinements for detection and analysis for all of these additives are still being worked out. If you have any questions about the methodology, please call your Regional Board representative.

ARTESIAN ENVIRONMENTAL CONSULTANTS.
JOB SAFETY PLAN

Project location: The Eastmont Mall, One Eastmont Mall, Oakland, CA
Artesian Job #1695

Possible hazards on this job are expected to be: physical hazards associated with the operation of heavy equipment and, possibly, chemical hazards from soil, water, and/or vapor contaminated with volatile organic compounds, petroleum hydrocarbons, or any pure product of the aforementioned substance.

Required personal protective equipment for this project: Level D protection (steel toe boots, work gloves, hard hat, safety glasses), level C protection on standby (OV cartridges).

ARTESIAN ENVIRONMENTAL CONSULTANTS
JOB SAFETY PLAN

1. Site: The Eastmont Mall

2. Location: One Eastmont Mall, Oakland, California

3. Plan Prepared: Artesian Environmental Consultants Date: 9-27-95

4. Plan Approved: Project Manager
Jason French _____

Health & Safety Officer
Jim Jacobs, RG _____

5. Facility Description: Shopping Mall

6. Status (active, inactive, unknown): Active, UST unused.

7. Surroundings: Mixed commercial and residential surroundings.

8. Site map: Attached

9. Climate: Moderate dry summers, cool wet winters.

10. Site History (origin of contamination and history of injuries exposure, chemical spills, complaints, etc.): Waste oil tank to be removed. Condition of tank and surrounding soils unknown.

11. Description of work: Excavation and removal of a single 550-gallon waste oil tank. Collection of soil samples from beneath former tank location.

12. Chemical contaminants:

Chemical	Media	Minimum	Maximum
Petroleum hydrocarbons/ Volatile organic compounds	Soil, vapor, water	0	Unknown
Metals	Soil, water	0	Unknown

13. Procedures to mitigate hazards:

A) Mechanical Hazards
- verify that all equipment is in good condition
- barricade area or otherwise restrict access
- exercise caution when working in close proximity to heavy equipment

B) Electrical Hazards

- locate and mark buried utilities before excavating
- maintain at least 10 feet of clearance from overhead power lines
- properly ground all electrical equipment
- avoid standing in water when operating electrical equipment
- be familiar with specific operating instructions for each piece of equipment
- barricade area or otherwise restrict access
- deactivate any source of ignition within 25 feet of work area

C) Chemical Hazards

- use personal protective equipment listed above
- conduct direct reading air monitoring to evaluate respiratory and explosion hazards
- wash hands before eating or drinking
- avoid hand to mouth contact before washing hands
- keep dust to a minimum, avoid breathing dust

D) Temperature Hazards

- Heat: when temperature exceeds 70 F, take frequent breaks in shaded area. Unzip or remove coveralls during breaks. Have cool water or electrolyte replenishment solution available. Drink small amounts frequently to avoid dehydration. Count the pulse rate for 30 seconds, as early as possible in the rest period. If the pulse rate exceeds 110 beats per minute at the beginning of the rest period, shorten the work cycle by one-third.

- Cold: wear multi layer cold weather outfits- the outer layer should be of wind-resistant fabric

- Wet: wear proper rain gear and shoes with slip resistant tread

E) Acoustical Hazards

- use earplugs when noise level prevents conversation in normal voice at a distance of three feet

F) Organic Vapors

- monitor organic vapors. If total hydrocarbons exceed 5 ppm above background for more than 5 minutes, don Level C personal protective equipment

- if total hydrocarbons exceed 500 ppm, supply mechanical ventilation

- monitor lower explosive limit. If LEL exceeds 20%, leave area and call the fire department

- no smoking within 25 feet of working area

- post no smoking signs

14. Decontamination procedures: Steam clean equipment before leaving work area. Wash boots and gloves. Launder coveralls. Wash hands and face as soon as possible after stopping work.

15. Materials generated on-site: Drum drill cuttings and decon water in DOT approved drums with proper labels and markings. Place soil stockpiles on visqueen and cover with weighted visqueen.

16. Site resources: water, restrooms, electricity available from onsite manager.

17. Emergency equipment: Fire extinguisher, cellular phone, and first aid kit to be on-site at all times

18. Emergency telephone numbers:

Ambulance	911
Police	911
Fire Department	911
Highland Hospital	(510) 534-8055 1411 E. 31st. Street, Oakland, CA
Poison Control:	(800) 523-2222
Project Manager:	(415) 257-4801
Safety Officer:	(415) 257-4801

19. **Emergency Route to Hospital:**
•Go North along MacArthur Blvd. for 1.25 miles,
•Turn left onto Hwy. 580 going north for 3 miles,
•Exit at Beaumont Ave., turn left onto Beaumont Ave.,
•Go along Beaumont Ave. for 3 blocks, Highland Hospital is on the right.

20. Project personnel list and safety plan distribution record: All project staff must sign, indicating they have read and understand the safety plan.

Employee Name	Date/Time 11/3/95	Signature
Jason French	10/23/95 5:35 pm	
Fred Smith	10/23/95 5:25 pm	
Anthony Calloway	10/23/95 8:25 AM	
	11/3/95 8:20 am	Anthony Calloway

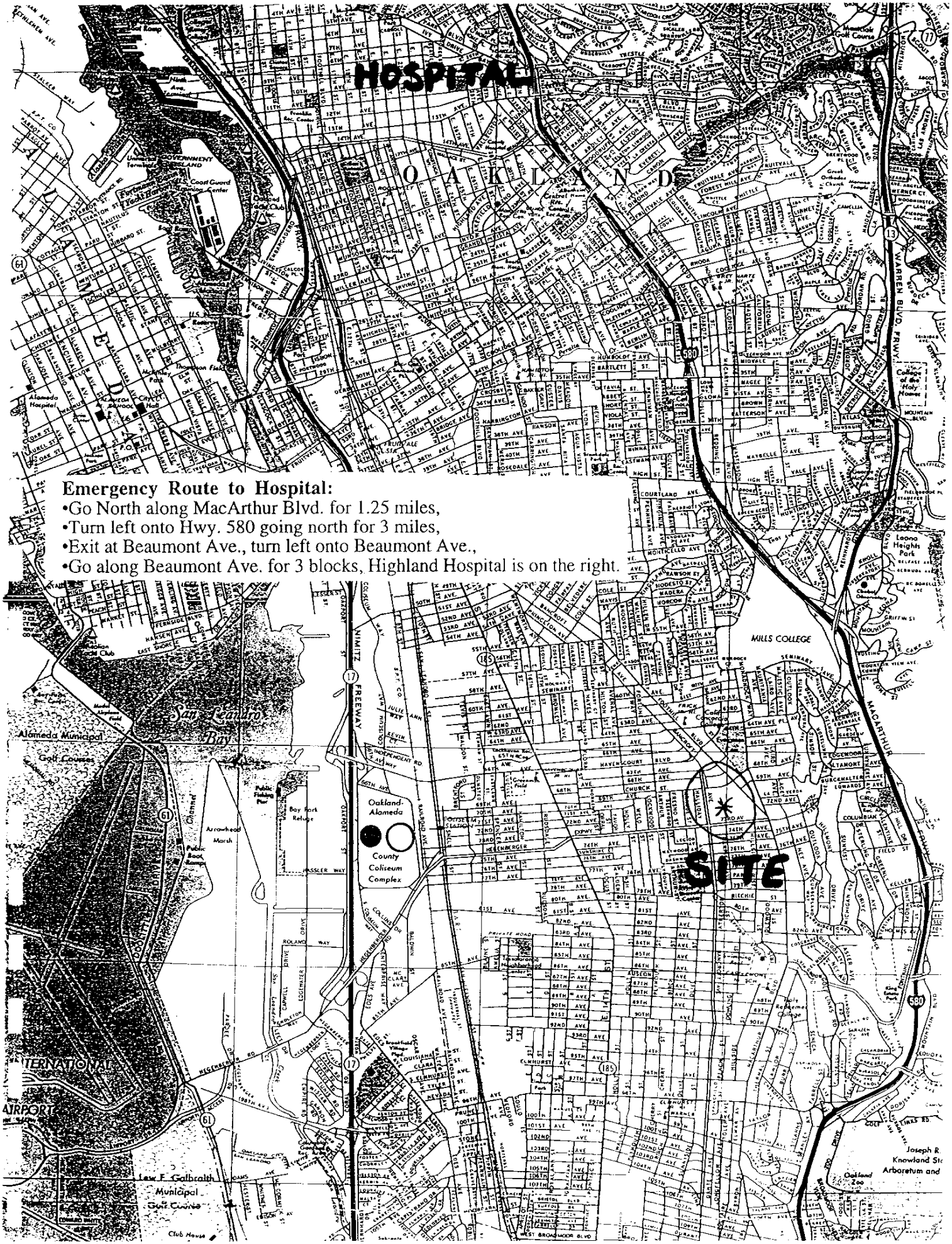
21. Health and safety meeting: All personnel participating in the project must receive initial health and safety orientation. Thereafter, a brief "tailgate" safety meeting is required as deemed necessary by the Health and Safety Officer.

Name	Topics	Date	Employee Initial

22. Visitors: It is Artesian's policy that visitors must furnish his/her own personal protective

equipment. All visitors are required to sign the visitor log and comply with the safety plan requirements.

Name of Visitor	Firm Name	Date/Time	Signature



Emergency Route to Hospital:

- Go North along MacArthur Blvd. for 1.25 miles,
- Turn left onto Hwy. 580 going north for 3 miles,
- Exit at Beaumont Ave., turn left onto Beaumont Ave.,
- Go along Beaumont Ave. for 3 blocks, Highland Hospital is on the right.

Excavation Permit Granted _____ No. _____

CITY OF OAKLAND

Permit to Excavate and Install, Repair, or Remove Inflammable Liquid Tanks.

Tank Permit No. 9964

Oakland, California, October 17 19 95

PERMISSION IS HEREBY GRANTED TO ~~XXXX~~ install ~~XXXX~~ remove ~~XXXX~~ repair ~~XXXX~~ Gasoline tank and excavate commencing _____ feet inside property line

on the North side of 73rd Ave. Street Avenue 600 feet East of Bancroft AVe. Street Avenue

House No. One Eastmont Mall Street Avenue Present Storage Tank is inactive/empty

Owner The Eastmont Mall Address One Eastmont Mall Phone 632-1131

Applicant Artesian Environmental Address 3100 Kerner Blvd., Ste., C San Rafael, 94901 Phone (415)257-4801

Dimensions of street (sidewalk) surface to be disturbed _____ X _____ Number of Tanks 1 Capacity 550 Gallons, each.

Remarks: _____

This Permit is granted in accordance with existing City Ordinances.
Owner hereby agrees to remove tanks on discontinuance of use or when notified by the City Authorities.
When installing, removing or repairing tanks, no open flame to be on or near premises.

Approved _____ Fire Marshal

Approved _____ Drainage Division Engineering Dept.

EXCAVATING PERMIT

~~Issued in accordance with Ord. No. 278 CMS, Sec. 6-2.04~~

_____ square feet of digging or removal granted.

The receipt of $ _____ special deposit is hereby acknowledged.

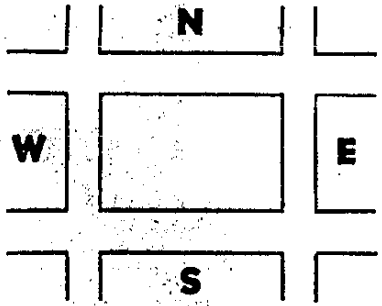
GENERAL DEPOSIT.

BUREAU OF PERMITS AND LICENSES.

Inspection Fee Paid . . . . . $ 150.00

Received by S. Smith ck#237 rec#729935

FIRE PREVENTION BUREAU



CERTIFICATE OF TANK AND EQUIPMENT INSPECTION

Inspected and passed on _____ 19 ____

By _____ Fire Marshal

NOTICE

Before Covering Tanks, Above Certificate Must Be Signed.

When ready for Inspection notify Fire Prevention Bureau, 273-3851

THIS PERMIT MUST BE LEFT ON THE WORK AS AUTHORITY THEREFOR.

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white - env. health
yellow - facility
pink - files

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

Hazardous Materials Inspection Form

1131 Harbor Bay Pkwy
Alameda, CA 94502
(510) 567-6700

II, III

Site ID # _____ Site Name _____ Today's Date _____

Site Address _____

City _____ Zip 94 Phone _____

MAX AMT stored ≥ 500 lbs, 55 gal, 200 cu.f

Inspection Categories:

_____ I. Haz. Mat./Waste GENERATOR/TRANSPORTER

_____ II. Hazardous Materials Business Plan, Acutely Hazardous Materials

__X__ III. Underground Storage Tanks

Calif. Administration Code (CAC) or the Health & Safety Code (H&SC)

Comments:

II, III

Contact _____

Title _____

Signature _____

Inspector _____

Signature _____

White = env. health
yellow = facility
pink = files

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

Hazardous Materials Inspection Form

1131 Harbor Bay Pkwy
Alameda, CA 94502
510.567-6700

II, III

Site ID # _____ Site Name _____ Today's Date ___/___/___

Site Address _____

City _____ Zip _____ Phone _____

_____ MAX AMT stored >= 500 lbs, 55 gal., 200 cft ?

Inspection Categories:

_____ I. Haz. Mat./Waste GENERATOR/TRANSPORTER

_____ II. Hazardous Materials Business Plan, Acutely Hazardous Materials

_____ III. Underground Storage Tanks

Calif. Administration Code (CAC) or the Health & Safety Code (H&SC)

Comments:

Contact _____

Title _____

Signature _____

Inspector _____

Signature _____

II, III

REMEDIAL ENVIRONMENTAL MARKETING, INC.
PH. (510) 237-5866
2717 GOODRICK AVENUE
RICHMOND, CA 94801

REMCO

Invoice

DATE	INVOICE #
12/27/95	2229

BILL TO:	SHIP TO:
Artesian Environmental Servic 3100 Kerner BLvd.,STE.C San Rafeal,Ca.94901	F-181

P.O. NUMBER	TERMS	REP	SHIP	VIA	F.O.B.	PROJECT
	Net 15	FP	12/27/95	Truck		Eastmont Mall

QUANTITY	ITEM CODE	DESCRIPTION	PRICE EACH	AMOUNT
31.35	4001	Soil Treatment	25.00	783.75

Sema4 Control#: 56676
Post Date: 1-5-96

TOTAL 783.75

CITY OF OAKLAND
REPORT OF FIRE INSPECTION

ENGINE CO. FPB

ADDRESS 7100 Bancroft

NAME Eastmont Mall / Bob Bridwell

GENERAL INSPECTION ☐ PERMIT ☐ OTHER ☐ HAZARD NOTED ☐ HAZARD ABATED ☐

NOTICE LEFT ☐ LETTER ☐ | 1st NOTICE | 2nd NOTICE | FINAL

DATE	VIOLATION	O.F.C.	CONTACTED
10-23-95	10/02 LEL - 1		Jason French
	500 Gal. waste oil		
	Tank - Dry Ice 15 lbs.		
	per 1000.		

A REINSPECTION WILL BE MADE WITHIN 0 DAYS.

FIRE PREVENTION BUREAU — PHONE 273-3851

INSPECTOR Sylvia Chaney-Williamson

338-5 (Rev. 5-77)

State of California—Environmental Protection Agency
Form Approved OMB No. 2050-0039 (Expires 9-30-96)
Please print or type. *Form designed for use on elite (12-pitch) typewriter.*

See Instructions on back of page 6.

Department of Toxic Substances Control
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAC001106360 Manifest Document No. 00839
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address Eastmont Mall
#1 Eastmont Mall - Oakland, Calif. 94605
4. Generator's Phone 510 632-1131

A. State Manifest Document Number 95269861
B. State Generator's ID

5. Transporter 1 Company Name: Dexanna, Ltd.
6. US EPA ID Number: CAD982438566
C. State Transporter's ID 602255
D. Transporter's Phone (510) 687-1292

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
H & H Ship Service, Co. - 220 China Basin St.
San Francisci, Calif. 94107 CAD004771168
10. US EPA ID Number
G. State Facility's ID 1168
H. Facility's Phone (415) 543-4835

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. Residue Used Oil/Tank NON-RCRA Hazardous Waste Solid.	001	T	P 00500	P	State 512 EPA/Other NONE
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
Tank has been inerted with 15 lbs. DRY ICE per 1000 gallons capacity.

K. Handling Codes for Wastes Listed Above
a. b. c. d.

15. Special Handling Instructions and Additional Information
Tob # 16261 4501f
Keep away from sources of ignition.
Site Location: 7100 Bancroft - Oakland, California
24 Hr. Contact Name: Bob Bridwell Phone # (510) 632-1131

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR — Printed/Typed Name: DIANE M CLARK — Signature: Diane M Clark — Month 10 Day 23 Year 95

TRANSPORTER
17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: James P. Cox — Signature: James P. Cox — Month 10 Day 23 Year 95
18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

FACILITY
19. Discrepancy Indication Space
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name — Signature — Month Day Year

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

DO NOT WRITE BELOW THIS LINE.

DTSC 8022A (9/94)

Rule: GENERATOR SENDS THIS COPY TO DTSC WITHIN 30 DAYS

NON-HAZARDOUS

LA D-95

MATERIALS MANIFEST

GENERATOR [illegible]

Site Address

Mailing

Phone ( ) Contact

TRANSPORTER T.L. SHELTON

Address 2020 TOOLE ST SAN JOSE, CA

Phone ( ) Contact ENVIRONMENTAL CONSULT.

hereby certify that the above named material was picked up at the generator site listed above.

Driver Name

Signature

Truck No. 1855

Strip Date

Time of Pick-up Time of Delivery

Consultant/Owner [illegible]

Address [illegible]

Phone ( ) [illegible] Contact [illegible]

I hereby certify that the above named material is consistent with the information presented in the Waste Characterization Form and Contaminated Soil Description Form, and has been properly described, classified and packaged, and is in proper condition for transport according to applicable regulation.

Name Date 12/19/95

Recycling Facilities REMEDIATION ENVIRONMENTAL MARKETING CO. INC. • 2717 Goodrick Avenue, Richmond, CA 94801

REMCO/CABZAON FACILITY • 62-150 Gene Welmas Drive, Mecca, CA 92254

RECEIVED BY:

DATE: 12-19-95

Control No.: F-181

COPY OF THIS SHEET MUST ACCOMPANY EVERY LOAD, AND MUST BE SUBMITTED AT THE GATE FOR ENTRY. ALL LOADS MUST BE SCHEDULED AT LEAST 24 HOURS IN ADVANCE. DELIVERIES MUST BE SCHEDULED ON A DAILY BASIS. ANY UNSCHEDULED LOADS MAY BE REFUSED AT THE GATE.

NON-HAZARDOUS

LA 0494

MATERIALS MANIFEST

GENERATOR Eastmont Mall

Site Address

Mailing

Phone ( ) Contact

TRANSPORTER

Address

Phone ( ) Contact

I hereby certify that the above named material was picked up at the generator site listed above.

Driver Name Signature

Truck No Ship Date

Time of Pick-Up Time of Delivery

Consultant/Owner Advanced Environmental Consultants

Address 2101 Larkin Blvd Suite C San Ramon

Phone (415) 837-4801 Contact: Susan Estrada

I hereby certify that the above named material is consistent with the information presented in the Waste Characterization Form and Contaminated Soil Description Form, and has been properly described, classified and packaged, and is in proper condition for transport according to applicable regulation.

Name Date: 10/19/95

193.75

Recycling Facilities REMEDIAL ENVIRONMENTAL MARKETING CO. INC. • 2717 Goodrick Avenue, Richmond, CA 94801
REMCO/CABZAON FACILITY • 62-150 Gene Welmas Drive, Mecca, CA 92254

RECEIVED BY:
DATE: F-181 10-19-95
Control No:

A COPY OF THIS SHEET MUST ACCOMPANY EVERY LOAD, AND MUST BE SUBMITTED AT THE GATE FOR ENTRY.

NATIONAL ENVIRONMENTAL TESTING, INC.

Santa Rosa Division
3636 North Laughlin Road
Suite 110
Santa Rosa, CA 95403-8226
Tel: (707) 526-7200
Fax: (707) 541-2333

Jason French
Artesian Environmental
3100 Kerner Blvd., Ste. C
San Rafael, CA 94901

Date: 11/13/1995
NET Client Acct. No: 10920
NET Job No: 95.04161
Received: 10/24/1995

Client Reference Information

Eastmont Mall/Proj. No. 1695

Sample analysis in support of the project referenced above has been completed and results are presented on the following pages. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel free to call me at (707) 541-2307.

Submitted by:

Judy Ridley
Project Coordinator

Enclosure(s)

Ref: Eastmont Mall/Proj. No. 1695

SAMPLE DESCRIPTION: S1
Date Taken: 10/23/1995
Time Taken: 15:36
NET Sample No: 254274

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
Oil & Grease (Total)	410		50	mg/kg	5520E		11/04/1995	342
Oil & Grease (Non-Polar)	330		50	mg/kg	5520E/F		11/04/1995	341
ICP METALS SOLID	--							717
Cadmium (ICP)	ND		2.0	mg/kg	EPA 6010	10/30/1995	10/30/1995	640
Chromium (ICP)	48		2.0	mg/kg	EPA 6010	10/30/1995	10/30/1995	651
Lead (GFAA)	2.7		0.2	mg/kg	EPA 7421	10/30/1995	10/30/1995	717
Nickel (ICP)	71		5.0	mg/kg	EPA 6010	10/30/1995	10/30/1995	544
Zinc (ICP)	32		5.0	mg/kg	EPA 6010	10/30/1995	10/30/1995	589
TPH (Gas/BTXE,Solid)								
METHOD 5030/M8015	--						10/31/1995	1874
DILUTION FACTOR*	1						10/31/1995	1874
as Gasoline	ND		1	mg/kg	5030		10/31/1995	1874
METHOD 8020 (GC,Solid)	--						10/31/1995	1874
Benzene	ND		2.5	ug/kg	8020		10/31/1995	1874
Toluene	ND		2.5	ug/kg	8020		10/31/1995	1874
Ethylbenzene	ND		2.5	ug/kg	8020		10/31/1995	1874
Xylenes (Total)	ND		2.5	ug/kg	8020		10/31/1995	1874
SURROGATE RESULTS	--						10/31/1995	1874
Bromofluorobenzene (SURR)	96			% Rec.	5030		10/31/1995	1874
METHOD M8015 (EXT., Solid)						10/31/1995		
DILUTION FACTOR*	10						11/07/1995	1104
as Creosote	ND		100	mg/kg	3550		11/07/1995	1104
as Diesel	160	DH	10	mg/kg	3550		11/07/1995	1104

DH : The positive result appears to be a heavier hydrocarbon than Diesel.

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

Ref: Eastmont Mall/Proj. No. 1695

SAMPLE DESCRIPTION: S1
Date Taken: 10/23/1995
Time Taken: 15:36
NET Sample No: 254274

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 8010 (GC,Solid)								
DILUTION FACTOR*	1						10/30/1995	660
Bromodichloromethane	ND		2.0	ug/kg	8010		10/30/1995	660
Bromoform	ND		2.0	ug/kg	8010		10/30/1995	660
Bromomethane	ND		2.0	ug/kg	8010		10/30/1995	660
Carbon tetrachloride	ND		2.0	ug/kg	8010		10/30/1995	660
Chlorobenzene	ND		2.0	ug/kg	8010		10/30/1995	660
Chloroethane	ND		2.0	ug/kg	8010		10/30/1995	660
2-Chloroethylvinyl ether	ND		5.0	ug/kg	8010		10/30/1995	660
Chloroform	ND		2.0	ug/kg	8010		10/30/1995	660
Chloromethane	ND		2.0	ug/kg	8010		10/30/1995	660
Dibromochloromethane	ND		2.0	ug/kg	8010		10/30/1995	660
1,2-Dichlorobenzene	ND		2.0	ug/kg	8010		10/30/1995	660
1,3-Dichlorobenzene	ND		2.0	ug/kg	8010		10/30/1995	660
1,4-Dichlorobenzene	ND		2.0	ug/kg	8010		10/30/1995	660
Dichlorodifluoromethane	ND		2.0	ug/kg	8010		10/30/1995	660
1,1-Dichloroethane	ND		2.0	ug/kg	8010		10/30/1995	660
1,2-Dichloroethane	ND		2.0	ug/kg	8010		10/30/1995	660
1,1-Dichloroethene	ND		2.0	ug/kg	8010		10/30/1995	660
cis-1,2-Dichloroethene	ND		2.0	ug/kg	8010		10/30/1995	660
trans-1,2-Dichloroethene	ND		2.0	ug/kg	8010		10/30/1995	660
1,2-Dichloropropane	ND		2.0	ug/kg	8010		10/30/1995	660
cis-1,3-Dichloropropene	ND		2.0	ug/kg	8010		10/30/1995	660
trans-1,3-Dichloropropene	ND		2.0	ug/kg	8010		10/30/1995	660
Methylene chloride	ND		50	ug/kg	8010		10/30/1995	660
1,1,2,2-Tetrachloroethane	ND		2.0	ug/kg	8010		10/30/1995	660
Tetrachloroethene	ND		2.0	ug/kg	8010		10/30/1995	660
1,1,1-Trichloroethane	ND		2.0	ug/kg	8010		10/30/1995	660
1,1,2-Trichloroethane	ND		2.0	ug/kg	8010		10/30/1995	660
Trichloroethene	ND		2.0	ug/kg	8010		10/30/1995	660
Trichlorofluoromethane	ND		2.0	ug/kg	8010		10/30/1995	660
Vinyl chloride	ND		2.0	ug/kg	8010		10/30/1995	660
SURROGATE RESULTS	--						10/30/1995	660
1,4-Difluorobenzene (SURR)	87			% Rec.			10/30/1995	660
1,4-Dichlorobutane (SURR)	N/A			% Rec.			10/30/1995	660
Bromochloromethane (SURR)	81			% Rec.			10/30/1995	660

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

Ref: Eastmont Mall/Proj. No. 1695

SAMPLE DESCRIPTION: S1
Date Taken: 10/23/1995
Time Taken: 15:36
NET Sample No: 254274

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 8270(GCMS,Solid)						10/31/1995		
DILUTION FACTOR*	1						11/09/1995	706
Acenaphthene	ND		330	ug/kg	8270		11/09/1995	706
Acenaphthylene	ND		330	ug/kg	8270		11/09/1995	706
Aldrin	ND		1600	ug/kg	8270		11/09/1995	706
Anthracene	ND		330	ug/kg	8270		11/09/1995	706
Benzidine	ND		1600	ug/kg	8270		11/09/1995	706
Benzo(a)anthracene	ND		330	ug/kg	8270		11/09/1995	706
Benzo(b)fluoranthene	ND		330	ug/kg	8270		11/09/1995	706
Benzo(k)fluoranthene	ND		330	ug/kg	8270		11/09/1995	706
Benzo(a)pyrene	ND		330	ug/kg	8270		11/09/1995	706
Benzo(g,h,i)perylene	ND		330	ug/kg	8270		11/09/1995	706
Benzoic acid	ND		1600	ug/kg	8270		11/09/1995	706
Benyzl alcohol	ND		330	ug/kg	8270		11/09/1995	706
Butyl benzyl phthalate	ND		330	ug/kg	8270		11/09/1995	706
delta-BHC	ND		1600	ug/kg	8270		11/09/1995	706
gamma-BHC	ND		1600	ug/kg	8270		11/09/1995	706
bis(2-Chloroethyl)ether	ND		330	ug/kg	8270		11/09/1995	706
bis(2-Chloroethoxy)methane	ND		330	ug/kg	8270		11/09/1995	706
bis(2-Chloroisopropyl)ether	ND		330	ug/kg	8270		11/09/1995	706
bis(2-Ethylhexyl)phthalate	ND		330	ug/kg	8270		11/09/1995	706
4-Bromophenyl phenyl ether	ND		330	ug/kg	8270		11/09/1995	706
4-Chloroanaline	ND		330	ug/kg	8270		11/09/1995	706
2-Chloronaphthalene	ND		330	ug/kg	8270		11/09/1995	706
4-Chlorophenyl phenyl ether	ND		330	ug/kg	8270		11/09/1995	706
Chrysene	ND		330	ug/kg	8270		11/09/1995	706
4,4'-DDD	ND		1600	ug/kg	8270		11/09/1995	706
4,4'-DDE	ND		1600	ug/kg	8270		11/09/1995	706
4,4'-DDT	ND		1600	ug/kg	8270		11/09/1995	706
Dibenzo(a,h)anthracene	ND		330	ug/kg	8270		11/09/1995	706
Dibenzofuran	ND		330	ug/kg	8270		11/09/1995	706
Di-n-butylphthalate	ND		330	ug/kg	8270		11/09/1995	706
1,2-Dichlorobenzene	ND		330	ug/kg	8270		11/09/1995	706
1,3-Dichlorobenzene	ND		330	ug/kg	8270		11/09/1995	706
1,4-Dichlorobenzene	ND		330	ug/kg	8270		11/09/1995	706
3,3'-Dichlorobenzidine	ND		660	ug/kg	8270		11/09/1995	706
Dieldrin	ND		1600	ug/kg	8270		11/09/1995	706
Diethylphthalate	ND		330	ug/kg	8270		11/09/1995	706
Dimethyl phthalate	ND		330	ug/kg	8270		11/09/1995	706
2,4-Dinitrotoluene	ND		330	ug/kg	8270		11/09/1995	706
2,6-Dinitrotoluene	ND		330	ug/kg	8270		11/09/1995	706
Di-n-octyl phthalate	ND		330	ug/kg	8270		11/09/1995	706
Endrin aldehyde	ND		1600	ug/kg	8270		11/09/1995	706
Fluoranthene	ND		330	ug/kg	8270		11/09/1995	706

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

Ref: Eastmont Mall/Proj. No. 1695

SAMPLE DESCRIPTION: S1
Date Taken: 10/23/1995
Time Taken: 15:36
NET Sample No: 254274

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
Fluorene	ND		330	ug/kg	8270		11/09/1995	706
Heptachlor	ND		1600	ug/kg	8270		11/09/1995	706
Heptachlor epoxide	ND		1600	ug/kg	8270		11/09/1995	706
Hexachlorobenzene	ND		330	ug/kg	8270		11/09/1995	706
Hexachlorobutadiene	ND		330	ug/kg	8270		11/09/1995	706
Hexachlorocyclopentadiene	ND		330	ug/kg	8270		11/09/1995	706
Hexachloroethane	ND		330	ug/kg	8270		11/09/1995	706
Indeno(1,2,3-cd)pyrene	ND		330	ug/kg	8270		11/09/1995	706
Isophorone	ND		330	ug/kg	8270		11/09/1995	706
2-Methylnaphthalene	ND		330	ug/kg	8270		11/09/1995	706
Naphthalene	ND		330	ug/kg	8270		11/09/1995	706
2-Nitroaniline	ND		1600	ug/kg	8270		11/09/1995	706
3-Nitroaniline	ND		1600	ug/kg	8270		11/09/1995	706
4-Nitroaniline	ND		1600	ug/kg	8270		11/09/1995	706
Nitrobenzene	ND		330	ug/kg	8270		11/09/1995	706
N-Nitroso-Di-N-propylamine	ND		330	ug/kg	8270		11/09/1995	706
N-Nitrosodiphenylamine	ND		330	ug/kg	8270		11/09/1995	706
Phenanthrene	ND		330	ug/kg	8270		11/09/1995	706
Pyrene	ND		330	ug/kg	8270		11/09/1995	706
1,2,4-Trichlorobenzene	ND		330	ug/kg	8270		11/09/1995	706
ACID EXTRACTABLES	--						11/09/1995	706
4-Chloro-3-methylphenol	ND		330	ug/kg	8270		11/09/1995	706
2-Chlorophenol	ND		330	ug/kg	8270		11/09/1995	706
2,4-Dichlorophenol	ND		330	ug/kg	8270		11/09/1995	706
2,4-Dimethylphenol	ND		330	ug/kg	8270		11/09/1995	706
2,4-Dinitrophenol	ND		1600	ug/kg	8270		11/09/1995	706
4,6-Dinitro-2-methylphenol	ND		1600	ug/kg	8270		11/09/1995	706
2-Nitrophenol	ND		330	ug/kg	8270		11/09/1995	706
4-Nitrophenol	ND		1600	ug/kg	8270		11/09/1995	706
Pentachlorophenol	ND		1600	ug/kg	8270		11/09/1995	706
Phenol	ND		330	ug/kg	8270		11/09/1995	706
2,4,6-Trichlorophenol	ND		330	ug/kg	8270		11/09/1995	706
2-Methylphenol	ND		330	ug/kg	8270		11/09/1995	706
4-Methylphenol	ND		330	ug/kg	8270		11/09/1995	706
2,4,5-Trichlorophenol	ND		1600	ug/kg	8270		11/09/1995	706
SURROGATE RESULTS	--						11/09/1995	706
Nitrobenzene-d5 (SURR)	47			% Rec.	8270		11/09/1995	706
2-Fluorobiphenyl (SURR)	54			% Rec.	8270		11/09/1995	706
p-Terphenyl-d14 (SURR)	82			% Rec.	8270		11/09/1995	706
Phenol-d5 (SURR)	58			% Rec.	8270		11/09/1995	706
2-Fluorophenol (SURR)	52			% Rec.	8270		11/09/1995	706
2,4,6-Tribromophenol (SURR)	60			% Rec.	8270		11/09/1995	706

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

Ref: Eastmont Mall/Proj. No. 1695

SAMPLE DESCRIPTION: S1
Date Taken: 10/23/1995
Time Taken: 15:36
NET Sample No: 254274

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 8270(GCMS,Solid,PCB)						10/31/1995		
DILUTION FACTOR*	1						11/09/1995	294
POLYCHLORINATED BIPHENYLS	--						11/09/1995	294
Aroclor 1016	ND		660	ug/kg	8270		11/09/1995	294
Aroclor 1221	ND		660	ug/kg	8270		11/09/1995	294
Aroclor 1232	ND		660	ug/kg	8270		11/09/1995	294
Aroclor 1242	ND		660	ug/kg	8270		11/09/1995	294
Aroclor 1248	ND		660	ug/kg	8270		11/09/1995	294
Aroclor 1254	ND		660	ug/kg	8270		11/09/1995	294
Aroclor 1260	ND		660	ug/kg	8270		11/09/1995	294

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

Ref: Eastmont Mall/Proj. No. 1695

SAMPLE DESCRIPTION: SS1
Date Taken: 10/23/1995
Time Taken: 15:51
NET Sample No: 254275

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
Oil & Grease (Total)	11,100		50	mg/kg	5520E		11/04/1995	342
Oil & Grease (Non-Polar)	8,500		50	mg/kg	5520E/F		11/04/1995	341
ICP METALS SOLID							10/30/1995	717
Cadmium (ICP)	ND		2.0	mg/kg	EPA 6010	10/30/1995	10/30/1995	640
Chromium (ICP)	38		2.0	mg/kg	EPA 6010	10/30/1995	10/30/1995	651
Lead (GFAA)	12		0.2	mg/kg	EPA 7421	10/30/1995	10/30/1995	717
Nickel (ICP)	39		5.0	mg/kg	EPA 6010	10/30/1995	10/30/1995	544
Zinc (ICP)	30		5.0	mg/kg	EPA 6010	10/30/1995	10/30/1995	589
TPH (Gas/BTXE,Solid)								
METHOD 5030/M8015	--						10/31/1995	1874
DILUTION FACTOR*	100						10/31/1995	1874
as Gasoline	220	GH	100	mg/kg	5030		10/31/1995	1874
METHOD 8020 (GC,Solid)	--						10/31/1995	1874
Benzene	ND		250	ug/kg	8020		10/31/1995	1874
Toluene	360		250	ug/kg	8020		10/31/1995	1874
Ethylbenzene	1,700		250	ug/kg	8020		10/31/1995	1874
Xylenes (Total)	9,500		250	ug/kg	8020		10/31/1995	1874
SURROGATE RESULTS	--						10/31/1995	1874
Bromofluorobenzene (SURR)	108			% Rec.	5030		10/31/1995	1874
METHOD M8015 (EXT., Solid)						10/31/1995		
DILUTION FACTOR*	1,000						11/02/1995	1100
as Creosote	ND		10,000	mg/kg	3550		11/02/1995	1100
as Diesel	23,000	DH	1,000	mg/kg	3550		11/02/1995	1100

DH : The positive result appears to be a heavier hydrocarbon than Diesel.
GH : The positive result appears to be a heavier hydrocarbon than Gasoline.

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

Ref: Eastmont Mall/Proj. No. 1695

SAMPLE DESCRIPTION: SS1
Date Taken: 10/23/1995
Time Taken: 15:51
NET Sample No: 254275

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 8010 (GC,Solid)								
DILUTION FACTOR*	1						10/30/1995	660
Bromodichloromethane	ND		2.0	ug/kg	8010		10/30/1995	660
Bromoform	ND		2.0	ug/kg	8010		10/30/1995	660
Bromomethane	ND		2.0	ug/kg	8010		10/30/1995	660
Carbon tetrachloride	ND		2.0	ug/kg	8010		10/30/1995	660
Chlorobenzene	ND		2.0	ug/kg	8010		10/30/1995	660
Chloroethane	ND		2.0	ug/kg	8010		10/30/1995	660
2-Chloroethylvinyl ether	ND		5.0	ug/kg	8010		10/30/1995	660
Chloroform	ND		2.0	ug/kg	8010		10/30/1995	660
Chloromethane	ND		2.0	ug/kg	8010		10/30/1995	660
Dibromochloromethane	ND		2.0	ug/kg	8010		10/30/1995	660
1,2-Dichlorobenzene	ND		2.0	ug/kg	8010		10/30/1995	660
1,3-Dichlorobenzene	ND		2.0	ug/kg	8010		10/30/1995	660
1,4-Dichlorobenzene	ND		2.0	ug/kg	8010		10/30/1995	660
Dichlorodifluoromethane	ND		2.0	ug/kg	8010		10/30/1995	660
1,1-Dichloroethane	ND		2.0	ug/kg	8010		10/30/1995	660
1,2-Dichloroethane	ND		2.0	ug/kg	8010		10/30/1995	660
1,1-Dichloroethene	ND		2.0	ug/kg	8010		10/30/1995	660
cis-1,2-Dichloroethene	2.2		2.0	ug/kg	8010		10/30/1995	660
trans-1,2-Dichloroethene	ND		2.0	ug/kg	8010		10/30/1995	660
1,2-Dichloropropane	ND		2.0	ug/kg	8010		10/30/1995	660
cis-1,3-Dichloropropene	ND		2.0	ug/kg	8010		10/30/1995	660
trans-1,3-Dichloropropene	ND		2.0	ug/kg	8010		10/30/1995	660
Methylene chloride	ND		50	ug/kg	8010		10/30/1995	660
1,1,2,2-Tetrachloroethane	ND		2.0	ug/kg	8010		10/30/1995	660
Tetrachloroethene	2.3		2.0	ug/kg	8010		10/30/1995	660
1,1,1-Trichloroethane	ND		2.0	ug/kg	8010		10/30/1995	660
1,1,2-Trichloroethane	ND		2.0	ug/kg	8010		10/30/1995	660
Trichloroethene	ND		2.0	ug/kg	8010		10/30/1995	660
Trichlorofluoromethane	ND		2.0	ug/kg	8010		10/30/1995	660
Vinyl chloride	ND		2.0	ug/kg	8010		10/30/1995	660
SURROGATE RESULTS	--						10/30/1995	660
1,4-Difluorobenzene (SURR)	89			% Rec.			10/30/1995	660
1,4-Dichlorobutane (SURR)	N/A			% Rec.			10/30/1995	660
Bromochloromethane (SURR)	70			% Rec.			10/30/1995	660

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Ref: Eastmont Mall/Proj. No. 1695

SAMPLE DESCRIPTION: SS1
Date Taken: 10/23/1995
Time Taken: 15:51
NET Sample No: 254275

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 8270(GCMS,Solid)						10/31/1995		
DILUTION FACTOR*	20						11/10/1995	706
Acenaphthene	ND		6,600	ug/kg	8270		11/10/1995	706
Acenaphthylene	ND		6,600	ug/kg	8270		11/10/1995	706
Aldrin	ND		32,000	ug/kg	8270		11/10/1995	706
Anthracene	ND		6,600	ug/kg	8270		11/10/1995	706
Benzidine	ND		32,000	ug/kg	8270		11/10/1995	706
Benzo(a)anthracene	ND		6,600	ug/kg	8270		11/10/1995	706
Benzo(b)fluoranthene	ND		6,600	ug/kg	8270		11/10/1995	706
Benzo(k)fluoranthene	ND		6,600	ug/kg	8270		11/10/1995	706
Benzo(a)pyrene	ND		6,600	ug/kg	8270		11/10/1995	706
Benzo(g,h,i)perylene	ND		6,600	ug/kg	8270		11/10/1995	706
Benzoic acid	ND		32,000	ug/kg	8270		11/10/1995	706
Benyzl alcohol	ND		6,600	ug/kg	8270		11/10/1995	706
Butyl benzyl phthalate	ND		6,600	ug/kg	8270		11/10/1995	706
delta-BHC	ND		32,000	ug/kg	8270		11/10/1995	706
gamma-BHC	ND		32,000	ug/kg	8270		11/10/1995	706
bis(2-Chloroethyl)ether	ND		6,600	ug/kg	8270		11/10/1995	706
bis(2-Chloroethoxy)methane	ND		6,600	ug/kg	8270		11/10/1995	706
bis(2-Chloroisopropyl)ether	ND		6,600	ug/kg	8270		11/10/1995	706
bis(2-Ethylhexyl)phthalate	ND		6,600	ug/kg	8270		11/10/1995	706
4-Bromophenyl phenyl ether	ND		6,600	ug/kg	8270		11/10/1995	706
4-Chloroanaline	ND		6,600	ug/kg	8270		11/10/1995	706
2-Chloronaphthalene	ND		6,600	ug/kg	8270		11/10/1995	706
4-Chlorophenyl phenyl ether	ND		6,600	ug/kg	8270		11/10/1995	706
Chrysene	ND		6,600	ug/kg	8270		11/10/1995	706
4,4'-DDD	ND		32,000	ug/kg	8270		11/10/1995	706
4,4'-DDE	ND		32,000	ug/kg	8270		11/10/1995	706
4,4'-DDT	ND		32,000	ug/kg	8270		11/10/1995	706
Dibenzo(a,h)anthracene	ND		6,600	ug/kg	8270		11/10/1995	706
Dibenzofuran	ND		6,600	ug/kg	8270		11/10/1995	706
Di-n-butylphthalate	ND		6,600	ug/kg	8270		11/10/1995	706
1,2-Dichlorobenzene	ND		6,600	ug/kg	8270		11/10/1995	706
1,3-Dichlorobenzene	ND		6,600	ug/kg	8270		11/10/1995	706
1,4-Dichlorobenzene	ND		6,600	ug/kg	8270		11/10/1995	706
3,3'-Dichlorobenzidine	ND		13,000	ug/kg	8270		11/10/1995	706
Dieldrin	ND		32,000	ug/kg	8270		11/10/1995	706
Diethylphthalate	ND		6,600	ug/kg	8270		11/10/1995	706
Dimethyl phthalate	ND		6,600	ug/kg	8270		11/10/1995	706
2,4-Dinitrotoluene	ND		6,600	ug/kg	8270		11/10/1995	706
2,6-Dinitrotoluene	ND		6,600	ug/kg	8270		11/10/1995	706
Di-n-octyl phthalate	ND		6,600	ug/kg	8270		11/10/1995	706
Endrin aldehyde	ND		32,000	ug/kg	8270		11/10/1995	706
Fluoranthene	ND		6,600	ug/kg	8270		11/10/1995	706

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Ref: Eastmont Mall/Proj. No. 1695

SAMPLE DESCRIPTION: SS1
Date Taken: 10/23/1995
Time Taken: 15:51
NET Sample No: 254275

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
Fluorene	ND		6,600	ug/kg	8270		11/10/1995	706
Heptachlor	ND		32,000	ug/kg	8270		11/10/1995	706
Heptachlor epoxide	ND		32,000	ug/kg	8270		11/10/1995	706
Hexachlorobenzene	ND		6,600	ug/kg	8270		11/10/1995	706
Hexachlorobutadiene	ND		6,600	ug/kg	8270		11/10/1995	706
Hexachlorocyclopentadiene	ND		6,600	ug/kg	8270		11/10/1995	706
Hexachloroethane	ND		6,600	ug/kg	8270		11/10/1995	706
Indeno(1,2,3-cd)pyrene	ND		6,600	ug/kg	8270		11/10/1995	706
Isophorone	ND		6,600	ug/kg	8270		11/10/1995	706
2-Methylnaphthalene	ND		6,600	ug/kg	8270		11/10/1995	706
Naphthalene	ND		6,600	ug/kg	8270		11/10/1995	706
2-Nitroaniline	ND		32,000	ug/kg	8270		11/10/1995	706
3-Nitroaniline	ND		32,000	ug/kg	8270		11/10/1995	706
4-Nitroaniline	ND		32,000	ug/kg	8270		11/10/1995	706
Nitrobenzene	ND		6,600	ug/kg	8270		11/10/1995	706
N-Nitroso-Di-N-propylamine	ND		6,600	ug/kg	8270		11/10/1995	706
N-Nitrosodiphenylamine	ND		6,600	ug/kg	8270		11/10/1995	706
Phenanthrene	ND		6,600	ug/kg	8270		11/10/1995	706
Pyrene	ND		6,600	ug/kg	8270		11/10/1995	706
1,2,4-Trichlorobenzene	ND		6,600	ug/kg	8270		11/10/1995	706
ACID EXTRACTABLES	--						11/10/1995	706
4-Chloro-3-methylphenol	ND		6,600	ug/kg	8270		11/10/1995	706
2-Chlorophenol	ND		6,600	ug/kg	8270		11/10/1995	706
2,4-Dichlorophenol	ND		6,600	ug/kg	8270		11/10/1995	706
2,4-Dimethylphenol	ND		6,600	ug/kg	8270		11/10/1995	706
2,4-Dinitrophenol	ND		32,000	ug/kg	8270		11/10/1995	706
4,6-Dinitro-2-methylphenol	ND		32,000	ug/kg	8270		11/10/1995	706
2-Nitrophenol	ND		6,600	ug/kg	8270		11/10/1995	706
4-Nitrophenol	ND		32,000	ug/kg	8270		11/10/1995	706
Pentachlorophenol	ND		32,000	ug/kg	8270		11/10/1995	706
Phenol	ND		6,600	ug/kg	8270		11/10/1995	706
2,4,6-Trichlorophenol	ND		6,600	ug/kg	8270		11/10/1995	706
2-Methylphenol	ND		6,600	ug/kg	8270		11/10/1995	706
4-Methylphenol	ND		6,600	ug/kg	8270		11/10/1995	706
2,4,5-Trichlorophenol	ND		32,000	ug/kg	8270		11/10/1995	706
SURROGATE RESULTS	--						11/10/1995	706
Nitrobenzene-d5 (SURR)	63			% Rec.	8270		11/10/1995	706
2-Fluorobiphenyl (SURR)	68			% Rec.	8270		11/10/1995	706
p-Terphenyl-d14 (SURR)	106			% Rec.	8270		11/10/1995	706
Phenol-d5 (SURR)	63			% Rec.	8270		11/10/1995	706
2-Fluorophenol (SURR)	45			% Rec.	8270		11/10/1995	706
2,4,6-Tribromophenol (SURR)	63			% Rec.	8270		11/10/1995	706

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Ref: Eastmont Mall/Proj. No. 1695

SAMPLE DESCRIPTION: SS1
Date Taken: 10/23/1995
Time Taken: 15:51
NET Sample No: 254275

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 8270(GCMS,Solid,PCB)						10/31/1995		
DILUTION FACTOR*	20						11/10/1995	294
POLYCHLORINATED BIPHENYLS	--						11/10/1995	294
Aroclor 1016	ND		13,000	ug/kg	8270		11/10/1995	294
Aroclor 1221	ND		13,000	ug/kg	8270		11/10/1995	294
Aroclor 1232	ND		13,000	ug/kg	8270		11/10/1995	294
Aroclor 1242	ND		13,000	ug/kg	8270		11/10/1995	294
Aroclor 1248	ND		13,000	ug/kg	8270		11/10/1995	294
Aroclor 1254	ND		13,000	ug/kg	8270		11/10/1995	294
Aroclor 1260	ND		13,000	ug/kg	8270		11/10/1995	294

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Ref: Eastmont Mall/Proj. No. 1695

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch Number
Cadmium (ICP)	96.2	0.9624	1.00	mg/kg	10/30/1995	jeo	640
Chromium (ICP)	102.5	1.025	1.00	mg/kg	10/30/1995	jeo	651
Lead (GFAA)	105.2	0.02629	0.0250	mg/kg	10/30/1995	ket	717
Nickel (ICP)	99.4	0.9937	1.00	mg/kg	10/30/1995	jeo	544
Zinc (ICP)	96.1	0.9611	1.00	mg/kg	10/30/1995	jeo	589
TPH (Gas/BTXE,Solid)							
as Gasoline	88.0	2.20	2.50	mg/kg	10/30/1995	dat3	1874
Benzene	90.8	22.7	25.0	ug/kg	10/30/1995	dat3	1874
Toluene	87.2	21.8	25.0	ug/kg	10/30/1995	dat3	1874
Ethylbenzene	95.2	23.8	25.0	ug/kg	10/30/1995	dat3	1874
Xylenes (Total)	94.0	70.5	75.0	ug/kg	10/30/1995	dat3	1874
Bromofluorobenzene (SURR)	94.0	94	100	% Rec.	10/30/1995	dat3	1874
METHOD M8015 (EXT., Solid)							
as Diesel	91.9	918.8	1000	mg/kg	10/29/1995	jar	1098
METHOD M8015 (EXT., Solid)							
as Diesel	113	1126	1000	mg/kg	11/02/1995	tts	1100
METHOD M8015 (EXT., Solid)							
as Diesel	111.0	1110	1000	mg/kg	11/07/1995	tts	1104

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Client Name: Artesian Environmental
Client Acct: 10920
NET Job No: 95.04161

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ELAP Cert: 1386
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CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch Number
METHOD 8010 (GC,Solid)							
Bromodichloromethane	96.7	19.34	20.0	ug/kg	10/30/1995	tdn	660
Bromoform	84.8	16.95	20.0	ug/kg	10/30/1995	tdn	660
Bromomethane	71.1	14.21	20.0	ug/kg	10/30/1995	tdn	660
Carbon tetrachloride	86.5	17.30	20.0	ug/kg	10/30/1995	tdn	660
Chlorobenzene	85.5	17.09	20.0	ug/kg	10/30/1995	tdn	660
Chloroethane	44.7	8.95	20.0	ug/kg	10/30/1995	tdn	660
2-Chloroethylvinyl ether	81.5	16.30	20.0	ug/kg	10/30/1995	tdn	660
Chloroform	69.0	13.79	20.0	ug/kg	10/30/1995	tdn	660
Chloromethane	50.3	10.05	20.0	ug/kg	10/30/1995	tdn	660
Dibromochloromethane	87.9	17.58	20.0	ug/kg	10/30/1995	tdn	660
1,2-Dichlorobenzene	90.6	18.12	20.0	ug/kg	10/30/1995	tdn	660
1,3-Dichlorobenzene	105.8	21.16	20.0	ug/kg	10/30/1995	tdn	660
1,4-Dichlorobenzene	90.1	18.02	20.0	ug/kg	10/30/1995	tdn	660
Dichlorodifluoromethane	49.7	9.93	20.0	ug/kg	10/30/1995	tdn	660
1,1-Dichloroethane	70.8	14.17	20.0	ug/kg	10/30/1995	tdn	660
1,2-Dichloroethane	75.1	15.01	20.0	ug/kg	10/30/1995	tdn	660
1,1-Dichloroethene	71.9	14.38	20.0	ug/kg	10/30/1995	tdn	660
cis-1,2-Dichloroethene	79.9	15.98	20.0	ug/kg	10/30/1995	tdn	660
trans-1,2-Dichloroethene	77.6	15.52	20.0	ug/kg	10/30/1995	tdn	660
1,2-Dichloropropane	86.7	17.33	20.0	ug/kg	10/30/1995	tdn	660
cis-1,3-Dichloropropene	83.9	16.78	20.0	ug/kg	10/30/1995	tdn	660
trans-1,3-Dichloropropene	89.9	17.98	20.0	ug/kg	10/30/1995	tdn	660
Methylene chloride	70.1	14.01	20.0	ug/kg	10/30/1995	tdn	660
1,1,2,2-Tetrachloroethane	78.1	15.61	20.0	ug/kg	10/30/1995	tdn	660
Tetrachloroethene	85.6	17.11	20.0	ug/kg	10/30/1995	tdn	660
1,1,1-Trichloroethane	79.6	15.92	20.0	ug/kg	10/30/1995	tdn	660
1,1,2-Trichloroethane	80.6	16.11	20.0	ug/kg	10/30/1995	tdn	660
Trichloroethene	71.5	14.30	20.0	ug/kg	10/30/1995	tdn	660
Trichlorofluoromethane	74.5	14.90	20.0	ug/kg	10/30/1995	tdn	660
Vinyl chloride	65.8	13.15	20.0	ug/kg	10/30/1995	tdn	660
1,4-Difluorobenzene (SURR)	93.0	93	100	% Rec.	10/30/1995	tdn	660
1,4-Dichlorobutane (SURR)		N/A	100	% Rec.	10/30/1995	tdn	660
Bromochloromethane (SURR)	80.0	80	100	% Rec.	10/30/1995	tdn	660

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Ref: Eastmont Mall/Proj. No. 1695

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch Number
METHOD 8270(GCMS,Solid)							
Acenaphthene	96.8	48.4	50.0	ug/kg	11/09/1995	gec	706
Benzo(a)pyrene	106.4	53.2	50.0	ug/kg	11/09/1995	gec	706
1,4-Dichlorobenzene	109.4	54.7	50.0	ug/kg	11/09/1995	gec	706
Di-n-octyl phthalate	107.6	53.8	50.0	ug/kg	11/09/1995	gec	706
Fluoranthene	102.6	51.3	50.0	ug/kg	11/09/1995	gec	706
Hexachlorobutadiene	101.8	50.9	50.0	ug/kg	11/09/1995	gec	706
N-Nitrosodiphenylamine	101.6	50.8	50.0	ug/kg	11/09/1995	gec	706
4-Chloro-3-methylphenol	109.8	54.9	50.0	ug/kg	11/09/1995	gec	706
2,4-Dichlorophenol	98.4	49.2	50.0	ug/kg	11/09/1995	gec	706
2-Nitrophenol	98.6	49.3	50.0	ug/kg	11/09/1995	gec	706
Pentachlorophenol	106.8	53.4	50.0	ug/kg	11/09/1995	gec	706
Phenol	125.4	62.7	50.0	ug/kg	11/09/1995	gec	706
2,4,6-Trichlorophenol	99.4	49.7	50.0	ug/kg	11/09/1995	gec	706
Nitrobenzene-d5 (SURR)	96.0	96	100	% Rec.	11/09/1995	gec	706
2-Fluorobiphenyl (SURR)	103.0	103	100	% Rec.	11/09/1995	gec	706
p-Terphenyl-d14 (SURR)	81.0	81	100	% Rec.	11/09/1995	gec	706
Phenol-d5 (SURR)	102.0	102	100	% Rec.	11/09/1995	gec	706
2-Fluorophenol (SURR)	106.0	106	100	% Rec.	11/09/1995	gec	706
2,4,6-Tribromophenol (SURR)	102.0	102	100	% Rec.	11/09/1995	gec	706

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Ref: Eastmont Mall/Proj. No. 1695

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch Number
METHOD 8270(GCMS,Solid)							
Acenaphthene	94.0	47.0	50.0	ug/kg	11/10/1995	gec	706
Benzo(a)pyrene	96.2	48.1	50.0	ug/kg	11/10/1995	gec	706
1,4-Dichlorobenzene	103.4	51.7	50.0	ug/kg	11/10/1995	gec	706
Di-n-octyl phthalate	91.4	45.7	50.0	ug/kg	11/10/1995	gec	706
Fluoranthene	108.2	54.1	50.0	ug/kg	11/10/1995	gec	706
Hexachlorobutadiene	98.4	49.2	50.0	ug/kg	11/10/1995	gec	706
N-Nitrosodiphenylamine	97.0	48.5	50.0	ug/kg	11/10/1995	gec	706
4-Chloro-3-methylphenol	102.0	51.0	50.0	ug/kg	11/10/1995	gec	706
2,4-Dichlorophenol	101.0	50.5	50.0	ug/kg	11/10/1995	gec	706
2-Nitrophenol	98.4	49.2	50.0	ug/kg	11/10/1995	gec	706
Pentachlorophenol	100.0	50.0	50.0	ug/kg	11/10/1995	gec	706
Phenol	108.0	54.0	50.0	ug/kg	11/10/1995	gec	706
2,4,6-Trichlorophenol	100.4	50.2	50.0	ug/kg	11/10/1995	gec	706
Nitrobenzene-d5 (SURR)	95.0	95	100	% Rec.	11/10/1995	gec	706
2-Fluorobiphenyl (SURR)	100.0	100	100	% Rec.	11/10/1995	gec	706
p-Terphenyl-d14 (SURR)	79.0	79	100	% Rec.	11/10/1995	gec	706
Phenol-d5 (SURR)	116.0	116	100	% Rec.	11/10/1995	gec	706
2-Fluorophenol (SURR)	116.0	116	100	% Rec.	11/10/1995	gec	706
2,4,6-Tribromophenol (SURR)	104.0	104	100	% Rec.	11/10/1995	gec	706

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

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METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials	Run Batch Number
Oil & Grease (Total)	ND	50	mg/kg	11/04/1995	shr	342
Oil & Grease (Non-Polar)	ND	50	mg/kg	11/04/1995	shr	341
Cadmium (ICP)	ND	2.0	mg/kg	10/30/1995	jeo	640
Chromium (ICP)	ND	2.0	mg/kg	10/30/1995	jeo	651
Lead (GFAA)	ND	0.2	mg/kg	10/30/1995	ket	717
Nickel (ICP)	ND	5.0	mg/kg	10/30/1995	jeo	544
Zinc (ICP)	ND	5.0	mg/kg	10/30/1995	jeo	589
TPH (Gas/BTXE,Solid)						
as Gasoline	ND	1	mg/kg	10/30/1995	dat3	1874
Benzene	ND	2.5	ug/kg	10/30/1995	dat3	1874
Toluene	ND	2.5	ug/kg	10/30/1995	dat3	1874
Ethylbenzene	ND	2.5	ug/kg	10/30/1995	dat3	1874
Xylenes (Total)	ND	2.5	ug/kg	10/30/1995	dat3	1874
Bromofluorobenzene (SURR)	90		% Rec.	10/30/1995	dat3	1874

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

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METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials	Run Batch Number
METHOD 8010 (GC,Solid)						
Bromodichloromethane	ND	2.0	ug/kg	10/30/1995	tdn	660
Bromoform	ND	2.0	ug/kg	10/30/1995	tdn	660
Bromomethane	ND	2.0	ug/kg	10/30/1995	tdn	660
Carbon tetrachloride	ND	2.0	ug/kg	10/30/1995	tdn	660
Chlorobenzene	ND	2.0	ug/kg	10/30/1995	tdn	660
Chloroethane	ND	2.0	ug/kg	10/30/1995	tdn	660
2-Chloroethylvinyl ether	ND	5.0	ug/kg	10/30/1995	tdn	660
Chloroform	ND	2.0	ug/kg	10/30/1995	tdn	660
Chloromethane	ND	2.0	ug/kg	10/30/1995	tdn	660
Dibromochloromethane	ND	2.0	ug/kg	10/30/1995	tdn	660
1,2-Dichlorobenzene	ND	2.0	ug/kg	10/30/1995	tdn	660
1,3-Dichlorobenzene	ND	2.0	ug/kg	10/30/1995	tdn	660
1,4-Dichlorobenzene	ND	2.0	ug/kg	10/30/1995	tdn	660
Dichlorodifluoromethane	ND	2.0	ug/kg	10/30/1995	tdn	660
1,1-Dichloroethane	ND	2.0	ug/kg	10/30/1995	tdn	660
1,2-Dichloroethane	ND	2.0	ug/kg	10/30/1995	tdn	660
1,1-Dichloroethene	ND	2.0	ug/kg	10/30/1995	tdn	660
cis-1,2-Dichloroethene	ND	2.0	ug/kg	10/30/1995	tdn	660
trans-1,2-Dichloroethene	ND	2.0	ug/kg	10/30/1995	tdn	660
1,2-Dichloropropane	ND	2.0	ug/kg	10/30/1995	tdn	660
cis-1,3-Dichloropropene	ND	2.0	ug/kg	10/30/1995	tdn	660
trans-1,3-Dichloropropene	ND	2.0	ug/kg	10/30/1995	tdn	660
Methylene chloride	ND	50	ug/kg	10/30/1995	tdn	660
1,1,2,2-Tetrachloroethane	ND	2.0	ug/kg	10/30/1995	tdn	660
Tetrachloroethene	ND	2.0	ug/kg	10/30/1995	tdn	660
1,1,1-Trichloroethane	ND	2.0	ug/kg	10/30/1995	tdn	660
1,1,2-Trichloroethane	ND	2.0	ug/kg	10/30/1995	tdn	660
Trichloroethene	ND	2.0	ug/kg	10/30/1995	tdn	660
Trichlorofluoromethane	ND	2.0	ug/kg	10/30/1995	tdn	660
Vinyl chloride	ND	2.0	ug/kg	10/30/1995	tdn	660
1,4-Difluorobenzene (SURR)	87		% Rec.	10/30/1995	tdn	660
1,4-Dichlorobutane (SURR)	N/A		% Rec.	10/30/1995	tdn	660
Bromochloromethane (SURR)	66		% Rec.	10/30/1995	tdn	660

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

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METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials	Run Batch Number
METHOD 8270(GCMS,Solid)						
Acenaphthene	ND	330	ug/kg	11/09/1995	gec	706
Acenaphthylene	ND	330	ug/kg	11/09/1995	gec	706
Aldrin	ND	1600	ug/kg	11/09/1995	gec	706
Anthracene	ND	330	ug/kg	11/09/1995	gec	706
Benzidine	ND	1600	ug/kg	11/09/1995	gec	706
Benzo(a)anthracene	ND	330	ug/kg	11/09/1995	gec	706
Benzo(b)fluoranthene	ND	330	ug/kg	11/09/1995	gec	706
Benzo(k)fluoranthene	ND	330	ug/kg	11/09/1995	gec	706
Benzo(a)pyrene	ND	330	ug/kg	11/09/1995	gec	706
Benzo(g,h,i)perylene	ND	330	ug/kg	11/09/1995	gec	706
Benzoic acid	ND	1600	ug/kg	11/09/1995	gec	706
Benyzl alcohol	ND	330	ug/kg	11/09/1995	gec	706
Butyl benzyl phthalate	ND	330	ug/kg	11/09/1995	gec	706
delta-BHC	ND	1600	ug/kg	11/09/1995	gec	706
gamma-BHC	ND	1600	ug/kg	11/09/1995	gec	706
bis(2-Chloroethyl)ether	ND	330	ug/kg	11/09/1995	gec	706
bis(2-Chloroethoxy)methane	ND	330	ug/kg	11/09/1995	gec	706
bis(2-Chloroisopropyl)ether	ND	330	ug/kg	11/09/1995	gec	706
bis(2-Ethylhexyl)phthalate	ND	330	ug/kg	11/09/1995	gec	706
4-Bromophenyl phenyl ether	ND	330	ug/kg	11/09/1995	gec	706
4-Chloroanaline	ND	330	ug/kg	11/09/1995	gec	706
2-Chloronaphthalene	ND	330	ug/kg	11/09/1995	gec	706
4-Chlorophenyl phenyl ether	ND	330	ug/kg	11/09/1995	gec	706
Chrysene	ND	330	ug/kg	11/09/1995	gec	706
4,4'-DDD	ND	1600	ug/kg	11/09/1995	gec	706
4,4'-DDE	ND	1600	ug/kg	11/09/1995	gec	706
4,4'-DDT	ND	1600	ug/kg	11/09/1995	gec	706
Dibenzo(a,h)anthracene	ND	330	ug/kg	11/09/1995	gec	706
Dibenzofuran	ND	330	ug/kg	11/09/1995	gec	706
Di-n-butylphthalate	ND	330	ug/kg	11/09/1995	gec	706
1,2-Dichlorobenzene	ND	330	ug/kg	11/09/1995	gec	706
1,3-Dichlorobenzene	ND	330	ug/kg	11/09/1995	gec	706
1,4-Dichlorobenzene	ND	330	ug/kg	11/09/1995	gec	706
3,3'-Dichlorobenzidine	ND	660	ug/kg	11/09/1995	gec	706
Dieldrin	ND	1600	ug/kg	11/09/1995	gec	706
Diethylphthalate	ND	330	ug/kg	11/09/1995	gec	706
Dimethyl phthalate	ND	330	ug/kg	11/09/1995	gec	706
2,4-Dinitrotoluene	ND	330	ug/kg	11/09/1995	gec	706
2,6-Dinitrotoluene	ND	330	ug/kg	11/09/1995	gec	706
Di-n-octyl phthalate	ND	330	ug/kg	11/09/1995	gec	706
Endrin aldehyde	ND	1600	ug/kg	11/09/1995	gec	706
Fluoranthene	ND	330	ug/kg	11/09/1995	gec	706

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METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials	Run Batch Number
Fluorene	ND	330	ug/kg	11/09/1995	gec	706
Heptachlor	ND	1600	ug/kg	11/09/1995	gec	706
Heptachlor epoxide	ND	1600	ug/kg	11/09/1995	gec	706
Hexachlorobenzene	ND	330	ug/kg	11/09/1995	gec	706
Hexachlorobutadiene	ND	330	ug/kg	11/09/1995	gec	706
Hexachlorocyclopentadiene	ND	330	ug/kg	11/09/1995	gec	706
Hexachloroethane	ND	330	ug/kg	11/09/1995	gec	706
Indeno(1,2,3-cd)pyrene	ND	330	ug/kg	11/09/1995	gec	706
Isophorone	ND	330	ug/kg	11/09/1995	gec	706
2-Methylnaphthalene	ND	330	ug/kg	11/09/1995	gec	706
Naphthalene	ND	330	ug/kg	11/09/1995	gec	706
2-Nitroaniline	ND	1600	ug/kg	11/09/1995	gec	706
3-Nitroaniline	ND	1600	ug/kg	11/09/1995	gec	706
4-Nitroaniline	ND	1600	ug/kg	11/09/1995	gec	706
Nitrobenzene	ND	330	ug/kg	11/09/1995	gec	706
N-Nitroso-Di-N-propylamine	ND	330	ug/kg	11/09/1995	gec	706
N-Nitrosodiphenylamine	ND	330	ug/kg	11/09/1995	gec	706
Phenanthrene	ND	330	ug/kg	11/09/1995	gec	706
Pyrene	ND	330	ug/kg	11/09/1995	gec	706
1,2,4-Trichlorobenzene	ND	330	ug/kg	11/09/1995	gec	706
4-Chloro-3-methylphenol	ND	330	ug/kg	11/09/1995	gec	706
2-Chlorophenol	ND	330	ug/kg	11/09/1995	gec	706
2,4-Dichlorophenol	ND	330	ug/kg	11/09/1995	gec	706
2,4-Dimethylphenol	ND	330	ug/kg	11/09/1995	gec	706
2,4-Dinitrophenol	ND	1600	ug/kg	11/09/1995	gec	706
4,6-Dinitro-2-methylphenol	ND	1600	ug/kg	11/09/1995	gec	706
2-Nitrophenol	ND	330	ug/kg	11/09/1995	gec	706
4-Nitrophenol	ND	1600	ug/kg	11/09/1995	gec	706
Pentachlorophenol	ND	1600	ug/kg	11/09/1995	gec	706
Phenol	ND	330	ug/kg	11/09/1995	gec	706
2,4,6-Trichlorophenol	ND	330	ug/kg	11/09/1995	gec	706
2-Methylphenol	ND	330	ug/kg	11/09/1995	gec	706
4-Methylphenol	ND	330	ug/kg	11/09/1995	gec	706
2,4,5-Trichlorophenol	ND	1600	ug/kg	11/09/1995	gec	706
Nitrobenzene-d5 (SURR)	40		% Rec.	11/09/1995	gec	706
2-Fluorobiphenyl (SURR)	48		% Rec.	11/09/1995	gec	706
p-Terphenyl-d14 (SURR)	79		% Rec.	11/09/1995	gec	706
Phenol-d5 (SURR)	55		% Rec.	11/09/1995	gec	706
2-Fluorophenol (SURR)	46		% Rec.	11/09/1995	gec	706
2,4,6-Tribromophenol (SURR)	51		% Rec.	11/09/1995	gec	706

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

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METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials	Run Batch Number
METHOD 8270(GCMS,Solid,PCB)						
Aroclor 1016	ND	660	ug/kg	11/09/1995	gec	294
Aroclor 1221	ND	660	ug/kg	11/09/1995	gec	294
Aroclor 1232	ND	660	ug/kg	11/09/1995	gec	294
Aroclor 1242	ND	660	ug/kg	11/09/1995	gec	294
Aroclor 1248	ND	660	ug/kg	11/09/1995	gec	294
Aroclor 1254	ND	660	ug/kg	11/09/1995	gec	294
Aroclor 1260	ND	660	ug/kg	11/09/1995	gec	294

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'ATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike % Rec.	Matrix Spike Dup % Rec.	RPD	Spike Amount	Sample Conc.	Matrix Spike Conc.	Matrix Spike Dup. Conc.	Units	Date Analyzed	Run Batch	Sample Spiked
Oil & Grease (Total)	101.1	92.5	8.8	2,708.6	ND	2,738.8	2,515.	mg/kg	11/04/1995	342	254666
Oil & Grease (Non-Polar)	96.0	87.7	9.0	2708.6	ND	2600.8	2383.8	mg/kg	11/04/1995	341	254666
ICP METALS SOLID									10/30/1995	717	253192
Cadmium (ICP)	93.4	92.7	0.8	103	ND	96.3	91.0	mg/kg	10/30/1995	640	253192
Cadmium (ICP)	91.1	91.8	0.8	127	ND	116	125	mg/kg	10/30/1995	640	253361
Chromium (ICP)	98.6	97.8	0.8	103	8.1	110	104	mg/kg	10/30/1995	651	253192
Chromium (ICP)	99.6	99.2	0.4	127	19	146	154	mg/kg	10/30/1995	651	253361
Lead (GFAA)	-41.3	27.8	1023.	2.20	6.2	5.28	6.88	mg/kg	10/30/1995	717	253192
Lead (GFAA)	95.5	109.3	13.4	3.01	5.1	7.95	8.05	mg/kg	10/30/1995	717	253361
Nickel (ICP)	95.9	93.6	2.4	103	10	109	102	mg/kg	10/30/1995	544	253192
Nickel (ICP)	94.5	94.7	0.2	127	20	141	149	mg/kg	10/30/1995	544	253361
Zinc (ICP)	91.6	87.8	4.2	103	18	112	104	mg/kg	10/30/1995	589	253192
Zinc (ICP)	91.6	86.8	5.4	127	64	181	182	mg/kg	10/30/1995	589	253361
TPH (Gas/BTXE,Solid)											254199
as Gasoline	80.0	81.2	1.5	2.50	ND	2.0	2.03	mg/kg	10/30/1995	1874	254199
Benzene	89.2	91.3	2.3	39	ND	34.8	35.6	ug/kg	10/30/1995	1874	254199
Toluene	94.1	97.0	3.0	135	ND	127	131	ug/kg	10/30/1995	1874	254199
METHOD M8015 (EXT., Solid)											254274
as Diesel				16.7	160			mg/kg	11/07/1995	1104	254274

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike % Rec.	Matrix Spike Dup % Rec.	RPD	Spike Amount	Sample Conc.	Matrix Spike Conc.	Matrix Spike Dup. Conc.	Units	Date Analyzed	Run Batch	Sample Spiked
METHOD 8010 (GC,Solid)											254274
Chlorobenzene	85.0	86.0	1.2	100	ND	85	86	ug/kg	10/30/1995	660	254274
1,1-Dichloroethene	71.0	75.0	5.5	100	ND	71	75	ug/kg	10/30/1995	660	254274
Trichloroethene	81.0	86.0	6.0	100	ND	81	86	ug/kg	10/30/1995	660	254274

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike % Rec.	Matrix Spike Dup % Rec.	RPD	Spike Amount	Sample Conc.	Matrix Spike Conc.	Matrix Spike Dup. Conc.	Units	Date Analyzed	Run Batch	Sample Spiked
METHOD 8270(GCMS,Solid)											254274
Acenaphthene	55.6	73.0	27.1	3,330	ND	1,850	2,430	ug/kg	11/09/1995	706	254274
1,4-Dichlorobenzene	60.7	64.6	6.2	3,330	ND	2,020	2,150	ug/kg	11/09/1995	706	254274
2,4-Dinitrotoluene	66.7	71.8	7.4	3,330	ND	2,220	2,390	ug/kg	11/09/1995	706	254274
N-Nitroso-Di-N-propylamine	45.3	63.7	33.8	3,330	ND	1,510	2,120	ug/kg	11/09/1995	706	254274
Pyrene	61.0	68.2	11.1	3,330	ND	2,030	2,270	ug/kg	11/09/1995	706	254274
1,2,4-Trichlorobenzene	61.0	73.9	19.1	3,330	ND	2,030	2,460	ug/kg	11/09/1995	706	254274
4-Chloro-3-methylphenol	54.3	72.6	28.8	6,670	ND	3,620	4,840	ug/kg	11/09/1995	706	254274
2-Chlorophenol	57.7	66.0	13.4	6,670	ND	3,850	4,400	ug/kg	11/09/1995	706	254274
4-Nitrophenol	63.6	71.7	12.0	6,670	ND	4,240	4,780	ug/kg	11/09/1995	706	254274
Pentachlorophenol	64.3	78.1	19.4	6,670	ND	4,290	5,210	ug/kg	11/09/1995	706	254274
Phenol	46.8	65.5	33.3	6,670	ND	3,120	4,370	ug/kg	11/09/1995	706	254274

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LABORATORY CONTROL SAMPLE REPORT

Parameter	LCS % Recovery	Duplicate LCS % Recovery	RPD	LCS Amount Found	Duplicate LCS Amount Found	LCS Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch
Oil & Grease (Total)	97.0			2,364		2,436	mg/kg	11/04/1995	shr	342
Oil & Grease (Non-Polar)	91.1			2,220		2,436	mg/kg	11/04/1995	shr	341
Cadmium (ICP)	94.3			94.3		100	mg/kg	10/30/1995	jeo	640
Chromium (ICP)	99.0			99.0		100	mg/kg	10/30/1995	jeo	651
Lead (GFAA)	94.6			2.365		2.50	mg/kg	10/30/1995	ket	717
Nickel (ICP)	96.0			96.0		100	mg/kg	10/30/1995	jeo	544
Zinc (ICP)	92.2			92.2		100	mg/kg	10/30/1995	jeo	589
METHOD M8015 (EXT., Solid) as Diesel	74.3			12.4		16.7	mg/kg	11/02/1995	tts	1100

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

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LABORATORY CONTROL SAMPLE REPORT

Parameter	LCS % Recovery	Duplicate LCS % Recovery	RPD	LCS Amount Found	Duplicate LCS Amount Found	LCS Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch
METHOD 8270(GCMS,Solid)										
Acenaphthene	49.0			49		100	ug/kg	11/09/1995	gec	706
1,4-Dichlorobenzene	51.0			51		100	ug/kg	11/09/1995	gec	706
2,4-Dinitrotoluene	58.0			58		100	ug/kg	11/09/1995	gec	706
N-Nitroso-Di-N-propylamine	42.0			42		100	ug/kg	11/09/1995	gec	706
Pyrene	51.0			51		100	ug/kg	11/09/1995	gec	706
1,2,4-Trichlorobenzene	50.0			50		100	ug/kg	11/09/1995	gec	706
4-Chloro-3-methylphenol	49.0			98		200	ug/kg	11/09/1995	gec	706
2-Chlorophenol	50.0			100		200	ug/kg	11/09/1995	gec	706
4-Nitrophenol	53.5			107		200	ug/kg	11/09/1995	gec	706
Pentachlorophenol	56.0			112		200	ug/kg	11/09/1995	gec	706
Phenol	42.5			85		200	ug/kg	11/09/1995	gec	706
Nitrobenzene-d5 (SURR)	44.0			44		100	% Rec.	11/09/1995	gec	706
2-Fluorobiphenyl (SURR)	48.0			48		100	% Rec.	11/09/1995	gec	706
p-Terphenyl-d14 (SURR)	75.0			75		100	% Rec.	11/09/1995	gec	706
Phenol-d5 (SURR)	48.0			48		100	% Rec.	11/09/1995	gec	706
2-Fluorophenol (SURR)	46.0			46		100	% Rec.	11/09/1995	gec	706
2,4,6-Tribromophenol (SURR)	54.0			54		100	% Rec.	11/09/1995	gec	706

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KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
ICVS	:	Initial Calibration Verification Standard (External Standard).
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

NATIONAL ENVIRONMENTAL TESTING, INC.

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Suite 110
Santa Rosa, CA 95403-8226
Tel: (707) 526-7200
Fax: (707) 541-2333

Jason French
Artesian Environmental
3100 Kerner Blvd., Ste. C
San Rafael, CA 94901

Date: 12/08/1995
NET Client Acct. No: 10920
NET Job No: 95.04463
Received: 11/16/1995

Client Reference Information

Eastmont Mall/Proj. No. 1695

Sample analysis in support of the project referenced above has been completed and results are presented on the following pages. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel free to call me at (707) 541-2307.

Submitted by:

Judy Ridley
Project Coordinator

Enclosure(s)

Ref: Eastmont Mall/Proj. No. 1695

SAMPLE DESCRIPTION: S1
Date Taken: 10/23/1995
Time Taken: 15:36
NET Sample No: 255833

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
pH - Corrosivity	8.5		N/A	pH units	9040		12/01/1995	240
Sulfide	55		10	mg/kg	376.1		12/06/1995	152
Cyanide (Total)	ND		0.2	mg/kg	335.2		12/06/1995	282

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

Ref: Eastmont Mall/Proj. No. 1695

SAMPLE DESCRIPTION: SS1
Date Taken: 10/23/1995
Time Taken: 15:51
NET Sample No: 255834

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
pH - Corrosivity	7.9		N/A	pH units	9040		12/01/1995	240
Flashpoint/Ignitability	>140		N/A	Degree F	1010		12/07/1995	261
Sulfide	62		10	mg/kg	376.1		12/06/1995	152
Cyanide (Total)	ND		0.2	mg/kg	335.2		12/06/1995	282

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

Ref: Eastmont Mall/Proj. No. 1695

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch Number
pH - Corrosivity	99.1	6.94	7.00	pH unit	12/01/1995	shr	240
Sulfide	101.2	54.12	53.49	mg/kg	12/06/1995	pbg	152
Cyanide (Total)	98.6	0.3825	0.3880	mg/L	12/06/1995	vah	282

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

Ref: Eastmont Mall/Proj. No. 1695

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials	Run Batch Number
Sulfide	ND	10	mg/kg	12/06/1995	pbg	152
Cyanide (Total)	ND	0.2	mg/kg	12/06/1995	vah	282

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

Ref: Eastmont Mall/Proj. No. 1695

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike % Rec.	Matrix Spike Dup % Rec.	RPD	Spike Amount	Sample Conc.	Matrix Spike Conc.	Matrix Spike Dup. Conc.	Units	Date Analyzed	Run Batch	Sample Spiked
Sulfide	123.3	107.1	14.1	54.11	62	128.74	119.23	mg/kg	12/06/1995	152	255834
Cyanide (Total)	94.7	82.3	14.0	2.095	ND	1.9836	1.7060	mg/kg	12/06/1995	282	255834

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

Ref: Eastmont Mall/Proj. No. 1695

LABORATORY CONTROL SAMPLE REPORT

Parameter	LCS % Recovery	Duplicate LCS % Recovery	RPD	LCS Amount Found	Duplicate LCS Amount Found	LCS Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch
Flashpoint/Ignitability	101.2			82		81	Degree	12/07/1995	pbg	261
Sulfide	99.2			53.07		53.49	mg/kg	12/06/1995	pbg	152

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

NET®

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
ICVS	:	Initial Calibration Verification Standard (External Standard).
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

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SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

NATIONAL ENVIRONMENTAL TESTING, INC.

Santa Rosa Division
3636 North Laughlin Road
Suite 110
Santa Rosa, CA 95403-8226
Tel: (707) 526-7200
Fax: (707) 541-2333

Jason French
Artesian Environmental
3100 Kerner Blvd., Ste. C
San Rafael, CA 94901

Date: 01/03/1996
NET Client Acct. No: 10920
NET Job No: 95.04809
Received: 12/20/1995

Client Reference Information

Sample analysis in support of the project referenced above has been completed and results are presented on the following pages. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel free to call me at (707) 541-2305.

Submitted by:

Ginger Brinlee
Project Coordinator

Enclosure(s)

Ref:

SAMPLE DESCRIPTION: S2
Date Taken: 12/19/1995
Time Taken: 10:00
NET Sample No: 257560

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
Oil & Grease (Total)	1,500		50	mg/kg	5520E		12/29/1995	345
Oil & Grease (Non-Polar)	1,300		50	mg/kg	5520E/F		12/29/1995	344
METHOD M8015 (EXT., Solid)						12/27/1995		
DILUTION FACTOR*	10						01/02/1996	1136
as Diesel	ND		10	mg/kg	3550		01/02/1996	1136
as Motor Oil	610		100	mg/kg	3550		01/02/1996	1136

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

Client Name: Artesian Environmental
Client Acct: 10920
NET Job No: 95.04809

Date: 01/03/1996
ELAP Cert: 1386
Page: 3

Ref:

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch Number
METHOD M8015 (EXT., Solid)							
as Diesel	93.8	938	1000	mg/kg	01/02/1996	tts	1136
as Motor Oil	114.0	1140	1000	mg/kg	01/02/1996	tts	1136

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

Ref:

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials	Run Batch Number
Oil & Grease (Total)	ND	50	mg/kg	12/29/1995	pbg	345
Oil & Grease (Non-Polar)	ND	50	mg/kg	12/29/1995	pbg	344
METHOD M8015 (EXT., Solid)						
as Diesel	ND	1	mg/kg	01/02/1996	tts	1136
as Motor Oil	ND	10	mg/kg	01/02/1996	tts	1136

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

Client Name: Artesian Environmental Date: 01/03/1996
Client Acct: 10920 ELAP Cert: 1386
NET Job No: 95.04809 Page: 5

Ref:

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike % Rec.	Matrix Spike Dup % Rec.	RPD	Spike Amount	Sample Conc.	Matrix Spike Conc.	Matrix Spike Dup. Conc.	Units	Date Analyzed	Run Batch	Sample Spiked
Oil & Grease (Total)	94.4	87.0	8.2	2,215	1,500	3,591	3,538	mg/kg	12/29/1995	345	257560
Oil & Grease (Non-Polar)	84.3	79.8	5.5	2,215	1,300	3,167	3,169	mg/kg	12/29/1995	344	257560
METHOD M8015 (EXT., Solid)											257560
as Diesel			7.5	16.7	ND			mg/kg	01/02/1996	1136	257560

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

Client Name: Artesian Environmental
Client Acct: 10920
NET Job No: 95.04809

Date: 01/03/1996
ELAP Cert: 1386
Page: 6

Ref:

LABORATORY CONTROL SAMPLE REPORT

Parameter	LCS % Recovery	Duplicate LCS % Recovery	RPD	LCS Amount Found	Duplicate LCS Amount Found	LCS Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch
Oil & Grease (Total)	100.2			2,396		2,392	mg/kg	12/29/1995	pbg	345
Oil & Grease (Non-Polar)	92.2			2,206		2,392	mg/kg	12/29/1995	pbg	344
METHOD M8015 (EXT., Solid) as Diesel	85.0			14.2		16.7	mg/kg	01/02/1996	tts	1136

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
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ICVS	:	Initial Calibration Verification Standard (External Standard).
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
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ARTESIAN ENVIRONMENTAL
5100 Kerner Blvd. Suite C
San Rafael Ca. 94901
Fax 415/257-4805
Tel 415/257-4801

Chain of Custody Request for Analysis

Laboratory: NET, INC Date: 12/19/95
Contact: Judy Ridley Page: 1
Phone: (707) 526-7200 Of: 1

PROJECT INFORMATION

Project Manager: JASON FRENCH
Project Name:
Fax Results to: JASON At: 415 257-4805
Also to: — At: —
Project #
Send Report to: JASON FRENCH
P.O.#
Sample Team (print): JASON FRENCH
(signatures):
Turn Around Time: (10 Day) 5 Day 48 Hr. 24 Hr. Other

Sample ID	Lab ID	Date	Time	Matrix	Preserv.	TPH – Gasoline (EPA 5030, 8015)	TPH – Diesel (EPA 3510/3550, 8015)	IEPH – Kerosene (Diesel) Motor Oil (EPA 3510/3550, 8015)	Purgeable Aromatics BTEX (EPA 602, 8020)	Purgeable Halocarbons (EPA 601, 8010)	Volatile Organics (EPA 624, 8240, 524.2)	SemiVolatile Organics (EPA 625/627, 8270, 525)	Total Oil & Grease TOTAL & (EPA 5520, B+F, E+F) NON-POLAR	Total Recoverable Petroleum Hydrocarbons (EPA 418.1)		Metals: Cd, Cr, Pb, Zn, Ni Total or Soluble	CAM Metals (17) Total or Soluble	Lead (Pb) Total, Soluble, or Organic	Extraction TCLP or STLC (Wet)			Number of Containers
S2		12/19/95	10:00 AM	Soil	—			X					X									1

CONTAINERS

SPECIAL INSTRUCTIONS:

SAMPLE RECEIPT
Total No. Containers
Head Space Y N
Rec'd Good Cond/Cold Y N
Conforms to Record Y N

COMMENTS:
- METHOD 8015M AS DIESEL & MOTOR OIL
- METHOD 5520 E & EF (TOTAL & NONPOLAR)

RELINQUISHED BY (Sampler):
(Signature) 2:53 PM (Time)
JASON FRENCH 12/20/95 (Date)
(Printed Name)
ARTESIAN ENVIRONMENTAL (Company)

RECEIVED BY:
(Signature) 14:53 (Time)
PAM GREENE 12/20/95 (Date)
(Printed Name)
NET (Company)

RELINQUISHED BY:
(Signature) 16:30 (Time)
PAM GREENE 12-20-95 (Date)
(Printed Name)
NET (Company)

RECEIVED BY:
(Signature) (Time)
(Printed Name) (Date)
(Company)

RELINQUISHED BY:
(Signature) (Time)
(Printed Name) (Date)
(Company)

RECEIVED BY (Laboratory):
(Signature) 12/20/95 (Time)
PHIL TROSSER PASS (Printed Name) 1630 (Date)
NET (Company)

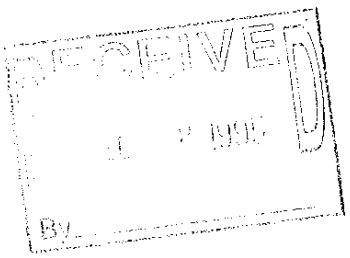
TAT: 10 Da

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AllWest

AllWest Environmental, Inc.

Specialists in Environmental Due
Diligence and Remedial Services



AllWest Environmental, Inc.
Specialists in Environmental Due Diligence and Remedial Services
One Sutter Street, Suite 600
San Francisco, Ca 94104
Tel 415.391.2510
Fax 415.391.2008

SUBSURFACE INVESTIGATION REPORT

Eastmont Mall
One Eastmont Mall
Oakland, California
NOV 1995

PREPARED FOR:

Mr. Bob Bridwell
Principal
Eastmont Mall
One Eastmont Mall
Oakland, California 94605

AllWest Project No. 95278.23
November 9, 1995

PREPARED BY:

12/31/17

Long Ching, PE
Senior Project Manager

REVIEWED BY:

Marc D. Cunningham, REA
President

AllWest Environmental, Inc.

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One Sutter Street, Suite 600
San Francisco, Ca 94104
Tel 415.391.2510
Fax 415.391.2008

November 9, 1995

Mr. Bob Bridwell
Principal
Eastmont Mall
One Eastmont Mall
Oakland, CA 94605

Subject: **Subsurface Investigation Report**
Eastmont Mall, Oakland, California
AllWest Project 95278.23

Deac Mr. Bridwell:

AllWest is pleased to present the attached report which describes the soil sampling and testing performed at Eastmont Mall in the city of Oakland, California. This report presents the results of the subsurface investigation and provides a discussion of the results, conclusions and recommendations. A copy of this report shoulc be provided to the Alameda County Environmental Health Department to fulfill regulatory reporting requirements.

We appreciate the opportunity of providing this service to you. If you have any questions regarding the attached report, please call us at (415) 391-2510.

Sincerely,

AllWest Environmental, Inc.

Long Ching, PE
Senior Project Manager

L.C\am

enclosures

AllWest

TABLE OF CONTENTS

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III. PROJECT INITIATION — Page 3
- A. Work Plan Preparation — Page 3
- B. Underground Utility Clearing — Page 3

IV. FIELD INVESTIGATION AND SAMPLING METHODOLOGY — Page 3
- A. Soil Borehole Advancement — Page 3
- B. Soil Sampling — Page 4
- C. Waste Containment — Page 5

V. SUBSURFACE CONDITIONS — Page 5

VI. LABORATORY ANALYSES — Page 5

VII. CONCLUSIONS AND RECOMMENDATIONS — Page 5

VIII. REPORT LIMITATIONS — Page 6

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Figure 2 - Site Vicinity Map
Figure 3 - Generalized Site Map (showing boring locations)

APPENDICES

Appendix A - Boring Logs and Log Legends
Appendix B - Laboratory Reports and Chain-of-Custody

AllWest

SUBSURFACE INVESTIGATION

Eastmont Mall
One Eastmont Mall
Oakland, California

I. EXECUTIVE SUMMARY

AllWest conducted a subsurface investigation program at the *Eastmont Mall* in the city of Oakland, California on October 30, 1995. The purpose of the investigation was to evaluate potential soil contamination in the vicinity of the *Sparkle Cleaners'* unit.

The investigation program included the drilling and sampling of two soil boreholes and analyzing selected soil samples for halogenated volatile organic compounds (HVOCs). The soil boreholes were advanced by hollow-stem augers to a maximum depth of 45 feet below the ground surface. A total of 14 soil samples from various depths were collected and forwarded to a state certified laboratory for chemical analyses or archiving.

Six selected soil samples were analyzed for HVOCs that include dry cleaning solvents. According to analytical results, no HVOCs were detected in any of the samples tested. Furthermore, field screening of collected soil samples did not detect any organic vapors.

Based on the investigation findings, AllWest concludes that site soils in the vicinity of former monitoring well MW-2, in front of the *Sparkle Cleaners'* unit, have not been impacted by HVOCs.

II. INTRODUCTION

This report presents the results of a subsurface testing program conducted at *Eastmont Mall*, in Oakland, California. The purpose of the investigation was to evaluate the potential of soil contamination by HVOCs in response to the request of Alameda County Environmental Health Department. The investigation program included the drilling and sampling of two soil boreholes, and the chemical analyses of selected soil samples collected from the boreholes. Field sampling activities occurred on October 30, 1995.

A. Site Background

The *Eastmont Mall* is a large regional shopping center located at the intersection of Foothill Boulevard and 73rd Street in Oakland, Alameda County, California. The multi-level mall

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houses many commercial businesses including clothing stores, general retail stores, dry cleaners, an automotive repair shop, and a supermarket. The mall building is surrounded by parking lots, a parking structure, fast food restaurants, and a service station.

Previous Phase I and Phase II environmental site assessments performed by various consultants identified several areas at the *Eastmont Mall* with confirmed or suspect soil and/or groundwater contamination. The areas included the *BP* service station at the south corner, the former *Firestone* shop at the east corner, the *Sparkle Cleaners* at the northwest side of the mall, and the *Eastmont Auto* at the southeast side of the mall.

In 1989, *Hunter Environmental* installed a groundwater monitoring well MW-2 in the parking lot in front of *Sparkle Cleaners* as part of the site assessment for *Eastmont Mall*. Trace amounts of tetrachloroethene (PCE) and trichloroethene (TCE), two halogenated volatile organic compounds (HVOCs), were detected in the groundwater sampling from MW-2. However, during a subsequent site assessment by *Artesian Environmental*, well MW-2 could not be located and a replacement well MW-6 was installed in the general area of MW-2. No detectable concentrations of PCE or TCE were found in groundwater samples from MW-6. Since no soil samples from MW-2 were analyzed during the initial assessment, the Alameda County Environmental Health Department directed the mall management to investigate potential soil contamination by HVOCs in the vicinity of the *Sparkle Cleaners*.

B. Purpose and Scope of Work

The purpose of this subsurface investigation was to evaluate the potential of soil contamination by HVOCs in the vicinity of the former well MW-2. The scope of work, as outlined in *AllWest's* work plan of October 1995, consisted of the following tasks:

1) Develop a Work Plan and a Site Specific Health and Safety Plan for the planned subsurface investigation. Submit the plans to Alameda County Environmental Health Department for agency review and approval;

2) Engage a qualified drilling contractor to perform borehole advancement;

3) Arrange underground utility clearing through Underground Service Alert (USA) and a private utility locator.

4) Advance two soil boreholes via hollow-stem augers at selected areas of the site. Collect representative soil samples from the boreholes at intervals of 5 feet or less to the saturation zone;

5) Submit collected soil samples to a California Department of Health Service certified laboratory for chemical analyses or archive;

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6) Analyze selected soil samples for halogenated volatile organic compounds (HVOCs); and

7) Interpret the data and present findings in a written report describing the field activities, summarizing the analytical results, and providing conclusions and recommendations.

III. PROJECT INITIATION

A. Workplan Preparation

A written workplan that outlines the sampling strategy, locations, and procedures, and describes the analytical methods, the quality control protocols, and the project schedules was prepared by *AllWest* in October 1995. The workplan was submitted to Alameda County Environmental Health Department (ACEHD) for agency review on October 9,1995. A verbal approval to proceed with the workplan by Ms. Madhulla Logan of *ACEHD* was received on October 26, 1995. The workplan also included a site specific health and safety plan.

B. Underground Utility Clearing

To avoid damage to underground utility installations during the course of the subsurface investigation, *AllWest* contacted *Underground Service Alert* (USA), an organization for public utility information, on the pending subsurface investigation. USA then notified each of the public and private entities that maintained underground utilities within the vicinity of the site to locate and mark their installations for field identification.

A private underground utility locator, *California Utility Survey* of San Leandro, California, was also employed by *AllWest* to conduct a magnetometer sweep of the investigation area to locate the marked and unmarked underground utilities, if any. All final sampling locations were cleared of known underground utilities.

IV. FIELD INVESTIGATION AND SAMPLING METHODOLOGY

A. Soil Borehole Advancement

A total of two boreholes were advanced at the subject site during this subsurface investigation. The borehole locations were selected to be within 15 feet of the former monitoring well MW-2 to maximize the detection of impacted soils, if any. The final borehole locations are graphically presented in Figure 3.

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The borehole advancement was performed by *Soils Exploration Services*, a licensed drilling contractor and a certified women business enterprise (WBE) of Benicia, California. The soil boreholes are drilled with 8-inch outside diameter (OD) hollow-stem continuous flight augers advanced by a truck-mounted drilling rig. During the borehole advancement operation, a field geologist from *AllWest* was present to collect representative soil samples, to conduct field screening, and to maintain a continuous log of the drilling activities.

The boring logs contain all pertinent information on borehole advancement and soil conditions, in particular the lithology of site soils and physical characteristics that suggest potential contamination. Copies of the boring logs, log legends, and a copy of the Unified Soil Classification System (USCS) are included in this report as Appendix A.

The two soil boreholes were drilled to the saturation zone to assess site soils within the entire vadose zone. The saturation zone was encountered at depths between 30 and 45 feet below ground surface. Borehole advancement was terminated immediately after free groundwater was encountered within the boring. All borings were properly abandoned by backfilling the borehole with neat cement grout.

B. Soil Sampling

Discrete soil samples were collected from each borehole at regular intervals of 5 feet or less and at where changes to lithology occurred. A total of 14 soil samples were collected during this subsurface investigation.

Soil samples were collected by driving a 2-inch inside diameter (ID) modified California sampler into the subsurface with a 140-pound hammer falling 30 inches. The sampler was lined with three 6-inch long decontaminated brass tubes that function as sample containers. After the sampler was driven to the designated depth, it was retrieved and brought to the surface. The sampler was then opened and the individual tubes were removed and examined.

Soils contained in the sample tubes were classified according to the Uniform Soil Classification System and recorded on the soil boring logs. Each soil sample was then field screened for vapors of HVOCs by an organic vapor meter (OVM) equipped with a 10.2 eV photo-ionization detector (PID). The readings of the OVM were also recorded on the boring logs.

The tubes containing the soil samples selected for preservation were capped at both ends with Teflon sheets and plastic end caps, sealed with inert silicon tapes, labeled, and field stored in an ice chest chilled to 4°C with crushed ice. At the conclusion of the soil sampling program, all preserved soil samples were transported to a state certified analytical laboratory for chemical analyses. The standard chain-of-custody protocols were followed from sample collection to delivery to the laboratory.

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C. Waste Containment

Drilling wastes, such as soil cutting and decontamination rinsate, generated during this investigation were contained in Department of Transportation (DOT) approved 55-gallon steel drums. A total of 4 drums of waste soil cuttings were generated. The drums were labeled and temporarily stored on-site await disposal.

V. SUBSURFACE CONDITIONS

Drilling data indicated that site soils are predominately clay. The near surface soil is a dark brown sandy clay that grades soft to firm, moist, low plasticity, and extends to depths between 7 and 8 feet below ground surface (BGS). A brown, medium dense, gravelly sand layer generally underlies the surficial clay and extends to 13 feet BGS. Underlying the gravelly sand layer is a brown silty clay soil stratum that grades stiff, moist, low plasticity and extends to depths between 30 and 45 feet BGS. A water bearing sand layer underlies the second clay stratum and extends to at least the maximum boring depth of 46 feet BGS.

Free groundwater was encountered in both boreholes. Groundwater depth was first encountered at depths between 30 and 45 feet BGS. The subsurface conditions encountered at the site during this investigation agree with the general soil stratigraphy reported in previous site assessments.

VI. LABORATORY ANALYSES

A total of 14 soil samples were submitted to *California Laboratory Services* in Rancho Cordova, California, a California Department of Health Services (DHS) certified analytical laboratory and a certified women business enterprise (WBE). Among the submitted samples, six were selected for chemical analyses to detect halogenated volatile organic compounds (HVOCs) by EPA method 8010. The selected soil samples were from depths of 6 and 10.5 feet of both borings and from the termination depth of each boring, at 31 and 46 feet, respectively.

The analytical results indicate no detectable concentrations of HVOCs in any of the six soil samples tested. A copy of the laboratory analytical reports and chain-of-custody records are presented in Appendix B.

VII. CONCLUSIONS AND RECOMMENDATIONS

Analytical results indicate no detectable concentrations of HVOCs in soil samples from near the ground surface (6 feet and 10.5 feet BGS) and from the saturation zone (31 feet and 46 feet BGS). This finding suggests that site soils in the vicinity of former well MW-2 were not

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impacted by HVOCs. Even though PCE and TCE were initially detected in the groundwater from MW-2, no HVOCs were ever detected in subsequent groundwater sampling in the replacement well, including the most recent sampling event conducted in October 1995. Based on the results of this and previous subsurface investigations at the site, *AllWest* concludes that no HVOC soil contamination exists in the area of former well MW-2.

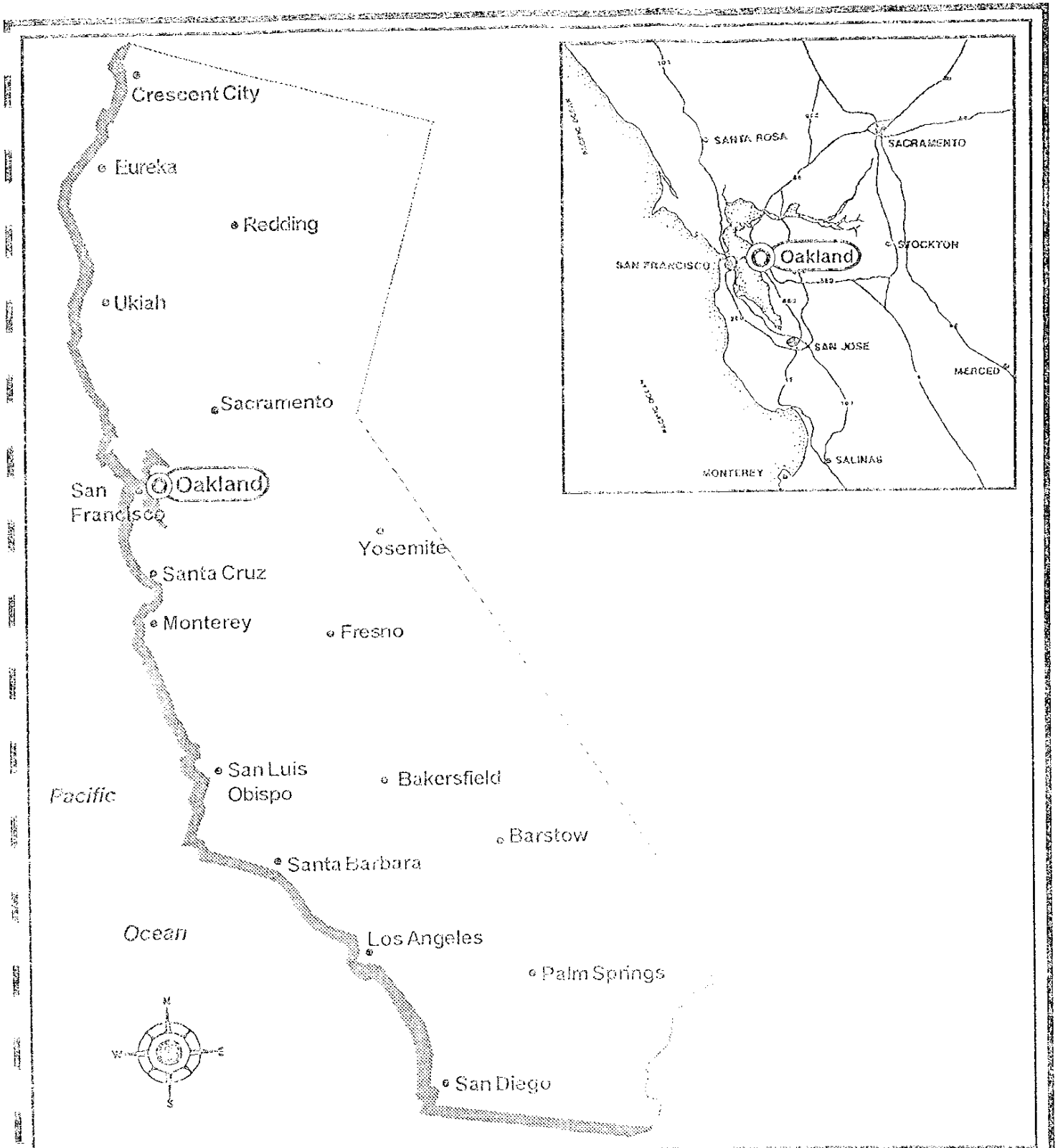
AllWest recommends that a copy of this report be forwarded to Alameda County Environmental Health Department to inform the regulator of the findings.

VIII. REPORT LIMITATIONS

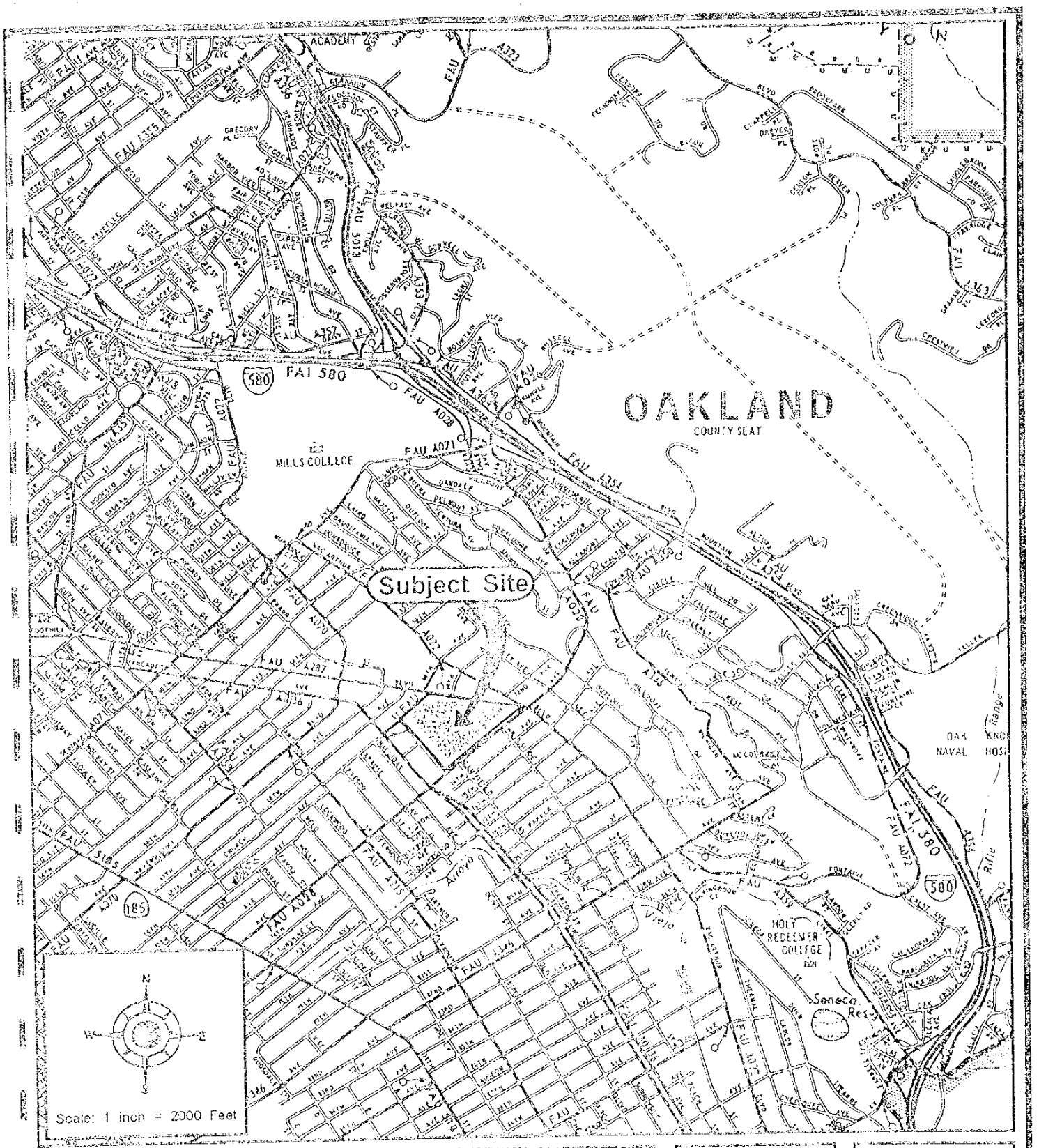
The work described in this report is performed in accordance with generally accepted engineering principles and practices. The conclusions and recommendations contained in this report are made based on observed conditions existing at the site and on laboratory test results of the submitted samples. It must be recognized that changes can occur in subsurface conditions due to site use or other reasons. Furthermore, the distribution of chemical concentrations in the subsurface can vary spatially and over time. The results of chemical analysis are valid as of the date and at the sampling location only. *AllWest* cannot be held accountable for the accuracy of the test data from an independent laboratory nor for any analyte quantities falling below the recognized standard detection limits for the method utilized by the independent laboratory.

R95278.23

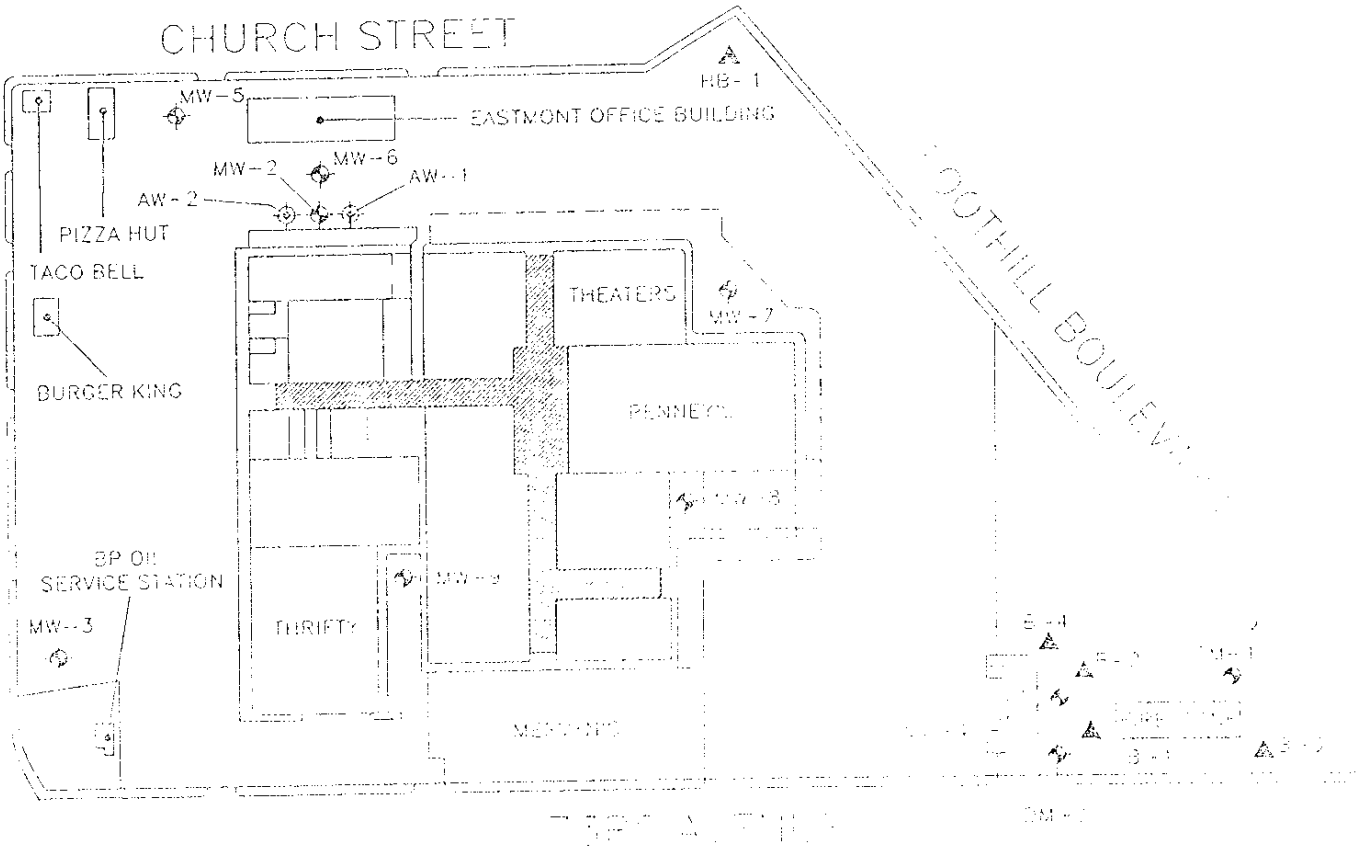
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AllWest Environmental, Inc.	November 1995	Site Regional Map	Project 95278.23	Figure 1
	One Eastmont Mall, Oakland, California			Source *AllWest*



AllWest Environmental, Inc.	November 1995	Site Vicinity Map	Project 95278.23	Figure 2
	One Eastmont Mall, Oakland, California			Source CA DOT



November 1995	Generalized Site Map & Boring Locations	Project 95278.23	Figure 3
AllWest Environmental, Inc.	One Eastmont Mall, Oakland, California		Source *AllWest*

UNIFIED SOIL CLASSIFICATION SYSTEM

PRIMARY DIVISIONS			GROUP SYMBOL	SECONDARY DIVISIONS
COARSE GRAINED SOIL	GRAVELS More than half of course fraction is larger than No. 4 sieve.	Clean gravels (less than 5% of fines)	GW	Well graded gravel-sand mixtures, little or no fines.
			GP	Poorly graded gravels or gravel-sand mixtures, little or no fines.
		Gravel with fines	GM	Silty gravels or gravel-sand-silt mixtures, with non-plastic fines.
			GC	Clayey gravels or gravel-sand-clay mixtures, with plastic fines.
	SANDS More than half of course fraction is smaller than No. 4 sieve.	Clean sands (less than 5% of fines)	SW	Well graded sands or gravelly sands, little or no fines.
			SP	Poorly graded sands or gravelly sands, little or no fines.
		Sands with fines	SM	Silty sands or sand-silt mixtures, with non-plastic fines.
			SC	Clayey sands or sand-clay mixtures, with plastic fines.
FINE GRDINED SOIL	SILTS AND CLAYS Liquid Limit less than 50%		ML	Inorganic silts and very fine sands, rock flour, or clayey silts, with slight plasticity.
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
			OL	Organic silts and organic silty clays of low plasticity.
	SILTS AND CLAYS Liquid Limit greater than 50%		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
			CH	Inorganic clays of high plasticity, fat clays.
			OH	Organic clays of medium to high plasticity, organic silts.
HIGHLY ORGANIC SOILS			PT	Peat and other highly organic soils.

BORING LOG LEGEND

- Sampler Drive Interval
- Relatively Undisturbed Sample Recovered and Preserved
- Sampler Driven, No Sample Recovery
- Disturbed Sample Recovered and Preserved

AllWest
West Environmental, Inc.

Log of Boring: B-1
Project Name: Eastmont Sub
Project Number: 95278.23
Drilling Date: 10/30/95

Drilling Contractor: Soils Exploration Services
Drill Rig: CME - 55
Auger: 6" Auger
Sampler: 2" Modified California
Hammer: 140 lb. slide hammer
Logged By: Keith Craig

Blow Count	OVM Reading	Sample Interval	Depth in Feet	Well Profile	USCS Code	Soil Description
						2" asphalt with 4" of baserock
			1		CL	dark brown sandy clay (cl); soft to firm, moist;
			2			
			3			changes to moderate brown clay at 3.5';
			4			
3 6 12	ND		5 6			
			7			increase in sand content at 7.5';
			8			
			9			
6 10 12	ND		10 11		SC	moderate brown clayey gravelly sand (sc) with sandy gravelly clay interbed; moist to wet, loose, fine to coarse grained;
			12			
			13			
			14			
5 11 15	ND		15 16		CL	moderate brown silty clay (cl); stiff, wet, mottled orange;
			17			
			18			
			19			
10 8 9	ND		20 21			

Notes:

Drawn By: MJ Cunningham
Reviewed By: [illegible]

AllWest
West Environmental, Inc.

Log of Boring: B-1
Project Name: Eastmont Sub
Project Number: 95278.23
Drilling Date: 10/30/95

Drilling Contractor: Soils Exploration Services
Drill Rig: CME - 55
Auger: 6" Auger
Sampler: 2" Modified California
Hammer: 140 lb. slide hammer
Logged By: Keith Craig

Blow Count	OVM Reading	Sample Interval	Depth in Feet	Well Profile	USCS Code	Soil Description
10 8 9	ND		21 22 23 24 25		CL	moderate brown silty clay (cl); stiff, wet, mottled orange;
0 12 12	ND		26 27 28 29 30		CL	clay becomes firm from 28.0' to 45.0';
8 9 9	ND		31 32 33 34 35			
5 8 8	ND		36 37 38 39 40 41		CL	no changes;

Notes:

Drawn By: MJ Cunningham
Reviewed By: L Ching

AllWest
AllWest Environmental, Inc.

Log of Boring: B-1
Project Name: Eastmont Sub
Project Number: 95278.23
Drilling Date: 10/30/95

Drilling Contractor: Soils Exploration Services
Drill Rig: CME - 55
Auger: 6" Auger

Sampler: 2" Mocified California
Hammer: 140 lb. slide hammer
Logged By: Keith Craig

Blow Count	OVM Reading	Sample Interval	Depth in Feet	Well Profile	USCS Code	Soil Description
			41		CL	moderate brown silty clay (cl); stiff, wet;
			42			
			43			
			44			
			45			
0					SW	moderate brown gravelly sand (sw);
9	ND		46			saturated, loose, well graded, fine to coarse grained;
12						
			47			borehole terminated at 46.5';
			48			groundwater first encountered at 45.3';
			49			
			50			
			51			
			52			
			53			
			54			
			55			
			56			
			57			
			58			
			59			
			60			
			61			

Notes:

Drawn By: MJ Cunningham
Reviewed By: L Craig

AllWest
West Environmental, Inc.

Log of Boring: B-2
Project Name: Eastmont Sub
Project Number: 95278.23
Drilling Date: 10/30/95

Drilling Contractor: Soils Exploration Services
Drill Rig: CME - 55
Auger: 6" Auger
Sampler: 2" Modified California
Hammer: 140 lb. slide hammer
Logged By: Keith Craig

Blow Count	OVM Reading	Sample Interval	Depth in Feet	Well Profile	USCS Code	Soil Description
						2" asphalt with 4" of baserock
7 8 8	ND		1 2 3 4 5 6 7 8 9		CL	dark brown sandy clay (cl); wet, firm; changes to moderate brown clay at 3.5';
6 7 6	ND		10 11 12 13 14		SW	moderate brown gravelly sand (sw); moist, loose, poorly sorted, fine to coarse grained;
8 9 8	ND		15 16 17 18 19		CL	moderate brown silty clay (cl); moist to wet, stiff, mottled orange;
6 7 10	ND		20 21			

Notes:

Drawn By: MJ Cunningham
Reviewed By: L Ching

AllWest
AllWest Environmental, Inc.

Log of Boring: B-2
Project Name: Eastmont Sub
Project Number: 95278.23
Drilling Date: 10/30/95

Drilling Contractor: Soils Exploration Services
Drill Rig: CME - 55
Auger: 6" Auger
Sampler: 2" Modified California
Hammer: 140 lb. slide hammer
Logged By: Keith Craig

Blow Count	OVM Reading	Sample Interval	Depth in Feet	Well Profile	USCS Code	Soil Description
6 7 10	ND		21 22 23 24		CL	moderate brown silty clay (cl); stiff, wet, mottled orange;
6 6 12	ND		25 26 27 28 29			
11 10 10	ND		30 31		SW	moderate brown silty sand (sw); saturated, loose, fine grained;
			32 33 34 35 36 37 38 39 40 41			borehole terminated at 31.5'; groundwater first encountered at 30.0';

Notes:

Drawn By: MJ Cunningham
Reviewed By: L Ching

California Laboratory Services

11/02/95

AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Attention: Keith Craig

Reference: Analytical Results

Project Name: Eastmont Sub
Project No.: 95278.23
Date Received: 10/31/95
Chain Of Custody: 13269

CLS ID No.: N0651
CLS Job No.: 800651

The following analyses were performed on the above referenced project:

No. of Samples	*Turnaround Time*	*Analysis Description*
6	10 Days	Halogenated Volatiles by EPA Method 8010

These samples were received by California Laboratory Services in a chilled, intact state and accompanied by a valid chain of custody document.

Calibrations for analytical testing have been performed in accordance to and pass the EPA's criteria for acceptability.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

George Hampton
Laboratory Director

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 8010
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project: Eastmont Sub

Date Sampled: 10/30/95
Date Received: 10/31/95
Date Extracted: 11/01/95
Date Analyzed: 11/01/95
Date Reported: 11/02/95
Client ID No.: B-1-6.0'

Project No.: 95278.23
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800651
COC Log No.: 13269
Lab ID No.: N0651-1A
Batch No.: 17016
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	97

Sample: B-1-6.0'

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)	Dilution (factor)
Bromodichloromethane	75-27-4	ND	5.0	1.0
Bromoform	75-25-2	ND	5.0	1.0
Bromomethane	74-83-9	ND	5.0	1.0
Carbon tetrachloride	56-23-5	ND	5.0	1.0
Chlorobenzene	108-90-7	ND	5.0	1.0
Chloroethane	75-00-3	ND	5.0	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	5.0	1.0
Chloroform	67-66-3	ND	5.0	1.0
Chloromethane	74-87-3	ND	5.0	1.0
Dibromochloromethane	124-48-1	ND	5.0	1.0
1,2-Dichlorobenzene	95-50-1	ND	5.0	1.0
1,3-Dichlorobenzene	541-73-1	ND	5.0	1.0
1,4-Dichlorobenzene	106-46-7	ND	5.0	1.0
Dichlorodifluoromethane	75-71-8	ND	5.0	1.0
1,1-Dichloroethane	75-34-3	ND	5.0	1.0
1,2-Dichloroethane	107-06-2	ND	5.0	1.0
1,1-Dichloroethene	75-35-4	ND	5.0	1.0
1,2-Dichloroethene, total	540-59-0	ND	5.0	1.0
1,2-Dichloropropane	78-87-5	ND	5.0	1.0
cis-1,3-Dichloropropene	10061-01-5	ND	5.0	1.0
trans-1,3-Dichloropropene	10061-02-6	ND	5.0	1.0
Methylene chloride	75-09-2	ND	5.0	1.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	5.0	1.0
Tetrachloroethene	127-18-4	ND	5.0	1.0
1,1,1-Trichloroethane	71-55-6	ND	5.0	1.0
1,1,2-Trichloroethane	79-00-5	ND	5.0	1.0
Trichloroethene	79-01-6	ND	5.0	1.0
Trichlorofluoromethane	75-69-4	ND	5.0	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	5.0	1.0
Vinyl chloride	75-01-4	ND	5.0	1.0

ND = Not detected at or above indicated Reporting Limit

CA [illegible] ELAP Accreditation/Registration No. [illegible]

3249 Fitz[illegible] Rd. [illegible] Cord[illegible], CA 95742 (91[illegible] Fax (5[illegible]

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 8010
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project: Eastmont Sub

Date Sampled: 10/30/95
Date Received: 10/31/95
Date Extracted: 11/01/95
Date Analyzed: 11/01/95
Date Reported: 11/02/95
Client ID No.: B-1-10.5

Project No.: 95278.23
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800651
COC Log No.: 13269
Lab ID No.: N0651-2A
Batch No.: 17016
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	97

Sample: B-1-10.5

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)	Dilution (factor)
Bromodichloromethane	75-27-4	ND	5.0	1.0
Bromoform	75-25-2	ND	5.0	1.0
Bromomethane	74-83-9	ND	5.0	1.0
Carbon tetrachloride	56-23-5	ND	5.0	1.0
Chlorobenzene	108-90-7	ND	5.0	1.0
Chloroethane	75-00-3	ND	5.0	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	5.0	1.0
Chloroform	67-66-3	ND	5.0	1.0
Chloromethane	74-87-3	ND	5.0	1.0
Dibromochloromethane	124-48-1	ND	5.0	1.0
1,2-Dichlorobenzene	95-50-1	ND	5.0	1.0
1,3-Dichlorobenzene	541-73-1	ND	5.0	1.0
1,4-Dichlorobenzene	106-46-7	ND	5.0	1.0
Dichlorodifluoromethane	75-71-8	ND	5.0	1.0
1,1-Dichloroethane	75-34-3	ND	5.0	1.0
1,2-Dichloroethane	107-06-2	ND	5.0	1.0
1,1-Dichloroethene	75-35-4	ND	5.0	1.0
1,2-Dichloroethene, total	540-59-0	ND	5.0	1.0
1,2-Dichloropropane	78-87-5	ND	5.0	1.0
cis-1,3-Dichloropropene	10061-01-5	ND	5.0	1.0
trans-1,3-Dichloropropene	10061-02-6	ND	5.0	1.0
Methylene chloride	75-09-2	ND	5.0	1.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	5.0	1.0
Tetrachloroethene	127-18-4	ND	5.0	1.0
1,1,1-Trichloroethane	71-55-6	ND	5.0	1.0
1,1,2-Trichloroethane	79-00-5	ND	5.0	1.0
Trichloroethene	79-01-6	ND	5.0	1.0
Trichlorofluoromethane	75-69-4	ND	5.0	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	5.0	1.0
Vinyl chloride	75-01-4	ND	5.0	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 8010
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project: Eastmont Sub

Date Sampled: 10/30/95
Date Received: 10/31/95
Date Extracted: 11/01/95
Date Analyzed: 11/01/95
Date Reported: 11/02/95
Client ID No.: B-1-46.0

Project No.: 95278.23
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800651
COC Log No.: 13269
Lab ID No.: N0651-8A
Batch No.: 17016
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	101

Sample: B-1-46.0

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)	Dilution (factor)
Bromodichloromethane	75-27-4	ND	5.0	1.0
Bromoform	75-25-2	ND	5.0	1.0
Bromomethane	74-83-9	ND	5.0	1.0
Carbon tetrachloride	56-23-5	ND	5.0	1.0
Chlorobenzene	108-90-7	ND	5.0	1.0
Chloroethane	75-00-3	ND	5.0	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	5.0	1.0
Chloroform	67-66-3	ND	5.0	1.0
Chloromethane	74-87-3	ND	5.0	1.0
Dibromochloromethane	124-48-1	ND	5.0	1.0
1,2-Dichlorobenzene	95-50-1	ND	5.0	1.0
1,3-Dichlorobenzene	541-73-1	ND	5.0	1.0
1,4-Dichlorobenzene	106-46-7	ND	5.0	1.0
Dichlorodifluoromethane	75-71-8	ND	5.0	1.0
1,1-Dichloroethane	75-34-3	ND	5.0	1.0
1,2-Dichloroethane	107-06-2	ND	5.0	1.0
1,1-Dichloroethene	75-35-4	ND	5.0	1.0
1,2-Dichloroethene, total	540-59-0	ND	5.0	1.0
1,2-Dichloropropane	78-87-5	ND	5.0	1.0
cis-1,3-Dichloropropene	10061-01-5	ND	5.0	1.0
trans-1,3-Dichloropropene	10061-02-6	ND	5.0	1.0
Methylene chloride	75-09-2	ND	5.0	1.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	5.0	1.0
Tetrachloroethene	127-18-4	ND	5.0	1.0
1,1,1-Trichloroethane	71-55-6	ND	5.0	1.0
1,1,2-Trichloroethane	79-00-5	ND	5.0	1.0
Trichloroethene	79-01-6	ND	5.0	1.0
Trichlorofluoromethane	75-69-4	ND	5.0	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	5.0	1.0
Vinyl chloride	75-01-4	ND	5.0	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 8010
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project: Eastmont Sub

Date Sampled: 10/30/95
Date Received: 10/31/95
Date Extracted: 11/01/95
Date Analyzed: 11/01/95
Date Reported: 11/02/95
Client ID No.: B-2-6.0'

Project No.: 95278.23
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800651
COC Log No.: 13269
Lab ID No.: N0651-9A
Batch No.: 17016
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	104

Sample: B-2-6.0'

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)	Dilution (factor)
Bromodichloromethane	75-27-4	ND	5.0	1.0
Bromoform	75-25-2	ND	5.0	1.0
Bromomethane	74-83-9	ND	5.0	1.0
Carbon tetrachloride	56-23-5	ND	5.0	1.0
Chlorobenzene	108-90-7	ND	5.0	1.0
Chloroethane	75-00-3	ND	5.0	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	5.0	1.0
Chloroform	67-66-3	ND	5.0	1.0
Chloromethane	74-87-3	ND	5.0	1.0
Dibromochloromethane	124-48-1	ND	5.0	1.0
1,2-Dichlorobenzene	95-50-1	ND	5.0	1.0
1,3-Dichlorobenzene	541-73-1	ND	5.0	1.0
1,4-Dichlorobenzene	106-46-7	ND	5.0	1.0
Dichlorodifluoromethane	75-71-8	ND	5.0	1.0
1,1-Dichloroethane	75-34-3	ND	5.0	1.0
1,2-Dichloroethane	107-06-2	ND	5.0	1.0
1,1-Dichloroethene	75-35-4	ND	5.0	1.0
1,2-Dichloroethene, total	540-59-0	ND	5.0	1.0
1,2-Dichloropropane	78-87-5	ND	5.0	1.0
cis-1,3-Dichloropropene	10061-01-5	ND	5.0	1.0
trans-1,3-Dichloropropene	10061-02-6	ND	5.0	1.0
Methylene chloride	75-09-2	ND	5.0	1.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	5.0	1.0
Tetrachloroethene	127-18-4	ND	5.0	1.0
1,1,1-Trichloroethane	71-55-6	ND	5.0	1.0
1,1,2-Trichloroethane	79-00-5	ND	5.0	1.0
Trichloroethene	79-01-6	ND	5.0	1.0
Trichlorofluoromethane	75-69-4	ND	5.0	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	5.0	1.0
Vinyl chloride	75-01-4	ND	5.0	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 8010
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project: Eastmont Sub

Date Sampled: 10/30/95
Date Received: 10/31/95
Date Extracted: 11/01/95
Date Analyzed: 11/01/95
Date Reported: 11/02/95
Client ID No.: B-2-10.5

Project No.: 95278.23
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800651
COC Log No.: 13269
Lab ID No.: N0651-10A
Batch No.: 17016
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	102

Sample: B-2-10.5

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)	Dilution (factor)
Bromodichloromethane	75-27-4	ND	5.0	1.0
Bromoform	75-25-2	ND	5.0	1.0
Bromomethane	74-83-9	ND	5.0	1.0
Carbon tetrachloride	56-23-5	ND	5.0	1.0
Chlorobenzene	108-90-7	ND	5.0	1.0
Chloroethane	75-00-3	ND	5.0	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	5.0	1.0
Chloroform	67-66-3	ND	5.0	1.0
Chloromethane	74-87-3	ND	5.0	1.0
Dibromochloromethane	124-48-1	ND	5.0	1.0
1,2-Dichlorobenzene	95-50-1	ND	5.0	1.0
1,3-Dichlorobenzene	541-73-1	ND	5.0	1.0
1,4-Dichlorobenzene	106-46-7	ND	5.0	1.0
Dichlorodifluoromethane	75-71-8	ND	5.0	1.0
1,1-Dichloroethane	75-34-3	ND	5.0	1.0
1,2-Dichloroethane	107-06-2	ND	5.0	1.0
1,1-Dichloroethene	75-35-4	ND	5.0	1.0
1,2-Dichloroethene, total	540-59-0	ND	5.0	1.0
1,2-Dichloropropane	78-87-5	ND	5.0	1.0
cis-1,3-Dichloropropene	10061-01-5	ND	5.0	1.0
trans-1,3-Dichloropropene	10061-02-6	ND	5.0	1.0
Methylene chloride	75-09-2	ND	5.0	1.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	5.0	1.0
Tetrachloroethene	127-18-4	ND	5.0	1.0
1,1,1-Trichloroethane	71-55-6	ND	5.0	1.0
1,1,2-Trichloroethane	79-00-5	ND	5.0	1.0
Trichloroethene	79-01-6	ND	5.0	1.0
Trichlorofluoromethane	75-69-4	ND	5.0	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	5.0	1.0
Vinyl chloride	75-01-4	ND	5.0	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 8010
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project: Eastmont Sub

Date Sampled: 10/30/95
Date Received: 10/31/95
Date Extracted: 11/01/95
Date Analyzed: 11/01/95
Date Reported: 11/02/95
Client ID No.: B-2-31.0

Project No.: 95278.23
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800651
COC Log No.: 13269
Lab ID No.: N0651-14A
Batch No.: 17016
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	101

Sample: B-2-31.0

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)	Dilution (factor)
Bromodichloromethane	75-27-4	ND	5.0	1.0
Bromoform	75-25-2	ND	5.0	1.0
Bromomethane	74-83-9	ND	5.0	1.0
Carbon tetrachloride	56-23-5	ND	5.0	1.0
Chlorobenzene	108-90-7	ND	5.0	1.0
Chloroethane	75-00-3	ND	5.0	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	5.0	1.0
Chloroform	67-66-3	ND	5.0	1.0
Chloromethane	74-87-3	ND	5.0	1.0
Dibromochloromethane	124-48-1	ND	5.0	1.0
1,2-Dichlorobenzene	95-50-1	ND	5.0	1.0
1,3-Dichlorobenzene	541-73-1	ND	5.0	1.0
1,4-Dichlorobenzene	106-46-7	ND	5.0	1.0
Dichlorodifluoromethane	75-71-8	ND	5.0	1.0
1,1-Dichloroethane	75-34-3	ND	5.0	1.0
1,2-Dichloroethane	107-06-2	ND	5.0	1.0
1,1-Dichloroethene	75-35-4	ND	5.0	1.0
1,2-Dichloroethene, total	540-59-0	ND	5.0	1.0
1,2-Dichloropropane	78-87-5	ND	5.0	1.0
cis-1,3-Dichloropropene	10061-01-5	ND	5.0	1.0
trans-1,3-Dichloropropene	10061-02-6	ND	5.0	1.0
Methylene chloride	75-09-2	ND	5.0	1.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	5.0	1.0
Tetrachloroethene	127-18-4	ND	5.0	1.0
1,1,1-Trichloroethane	71-55-6	ND	5.0	1.0
1,1,2-Trichloroethane	79-00-5	ND	5.0	1.0
Trichloroethene	79-01-6	ND	5.0	1.0
Trichlorofluoromethane	75-69-4	ND	5.0	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	5.0	1.0
Vinyl chloride	75-01-4	ND	5.0	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 8010
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project: Eastmont Sub

Date Extracted: 11/01/95
Date Analyzed: 11/01/95
Date Reported: 11/02/95

Project No.: 95278.23
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800651
COC Log No.: 13269
Lab ID No.: N0651
Batch No.: 17016
Matrix: SOIL

MB SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	MB Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	98

METHOD BLANK

Analyte	CAS No.	Results (ug/kg)	Reporting Limit (ug/kg)
Bromodichloromethane	75-27-4	ND	5.0
Bromoform	75-25-2	ND	5.0
Bromomethane	74-83-9	ND	5.0
Carbon tetrachloride	56-23-5	ND	5.0
Chlorobenzene	108-90-7	ND	5.0
Chloroethane	75-00-3	ND	5.0
2-Chloroethyl vinyl ether	110-75-8	ND	5.0
Chloroform	67-66-3	ND	5.0
Chloromethane	74-87-3	ND	5.0
Dibromochloromethane	124-48-1	ND	5.0
1,2-Dichlorobenzene	95-50-1	ND	5.0
1,3-Dichlorobenzene	541-73-1	ND	5.0
1,4-Dichlorobenzene	106-46-7	ND	5.0
Dichlorodifluoromethane	75-71-8	ND	5.0
1,1-Dichloroethane	75-34-3	ND	5.0
1,2-Dichloroethane	107-06-2	ND	5.0
1,1-Dichloroethene	75-35-4	ND	5.0
1,2-Dichloroethene, total	540-59-0	ND	5.0
1,2-Dichloropropane	78-87-5	ND	5.0
cis-1,3-Dichloropropene	10061-01-5	ND	5.0
trans-1,3-Dichloropropene	10061-02-6	ND	5.0
Methylene chloride	75-09-2	ND	5.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	5.0
Tetrachloroethene	127-18-4	ND	5.0
1,1,1-Trichloroethane	71-55-6	ND	5.0
1,1,2-Trichloroethane	79-00-5	ND	5.0
Trichloroethene	79-01-6	ND	5.0
Trichlorofluoromethane	75-69-4	ND	5.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	5.0
Vinyl chloride	75-01-4	ND	5.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 8010
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project: Eastmont Sub

Date Extracted: 11/01/95
Date Analyzed: 11/01/95
Date Reported: 11/02/95

Project No.: 95278.23
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800651
COC Log No.: 13269
Lab ID No.: N0651
Batch No.: 17016
Matrix: SOIL

MS SURROGATE

Analyte	CAS No.	MS Surr. Conc. (ug/kg)	MS Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	98

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (ug/kg)	MS Recovery (percent)
Chlorobenzene	108-90-7	100	97
1,1-Dichloroethene	75-35-4	100	101
Trichloroethene	79-01-6	100	103

MSD SURROGATE

Analyte	CAS No.	Surr. Conc. (ug/kg)	MSD Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	101

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (ug/kg)	MSD Recovery (percent)
Chlorobenzene	108-90-7	100	102
1,1-Dichloroethene	75-35-4	100	99
Trichloroethene	79-01-6	100	109

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Chlorobenzene	108-90-7	5
1,1-Dichloroethene	75-35-4	2
Trichloroethene	79-01-6	6

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 8010
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project: Eastmont Sub

Date Extracted: 11/01/95
Date Analyzed: 11/01/95
Date Reported: 11/02/95

Project No.: 95278.23
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800651
COC Log No.: 13269
Lab ID No.: N0651
Batch No.: 17016
Matrix: SOIL

LCS SURROGATE

Analyte	CAS No.	LCS Conc. (ug/kg)	LCS Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	100

LAB CONTROL SAMPLE

Analyte	CAS No.	LCS Conc. (ug/kg)	LCS Recovery (percent)
Chlorobenzene	108-90-7	100	98
1,1-Dichloroethene	75-35-4	100	104
Trichloroethene	79-01-6	100	99

California Laboratory Services

N0651

CHAIN OF CUSTODY

LOG NO. 13269

COMPANY NAME	AllWest Environmental
ADDRESS	1 Sutter St #600
	San Francisco CA 94104
PROJECT NAME	Eastwood Sub
PROJECT MANAGER / PHONE #	Keith Craig
SAMPLED BY	Keith Craig
P.O. DESCRIPTION	Soil Sampling
SITE LOCATION	Eastwood Mall

LAB WORK ORDER # 95279.23

LAB CLS
3249 FITZGERALD RD.
RANCHO CORDOVA, CA
95742

OTHER

FIELD CONDITIONS: overcast cool 50s

COMPOSITE: None

SPECIAL INSTRUCTIONS: Normal TAT

TURN AROUND TIME / NOTE FIELD READINGS: 24 HOURS | 48 HOURS | 1 WEEK | (2 WEEKS)

DATE	TIME	SAMPLE I.D.	METHOD	MATRIX	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	ANALYSIS REQUESTED 8010	
10/25	1015	B-1-6.0'		Soil	1	Brass Liner	No	X	
	1020	B-1-10.5			1			X	
	1030	B-1-16.0			1				Hold
	1035	B-1-21.0			1				Hold
	1045	B-1-26.0			1				Hold
	1050	B-1-31.0			1				Hold
	1105	B-1-36.0			1				Hold
	1145	B-1-46.0			1			X	
	1330	B-2-6.0'			1			X	
	1340	B-2-10.5			1			X	
	1350	B-2-16.0			1				Hold
	1352	B-2-21.0			1				Hold
	1450	B-2-26.0			1				Hold
SUSPECTED CONSTITUENTS	1455	B-2-31.0	TCE	W	1	V		X	

SAMPLE RETENTION TIME

PRESERVATIVES: (1) HCL (2) HNO_3 (3) = COLD (4)

RELINQUISHED BY	COMPANY	DATE / TIME	RECEIVED BY	COMPANY
Keith Craig	Keith Craig AllWest	10/31/95 1150	Scott Furnas	Scott Furnas / CCL
Scott Furnas	Scott Furnas / CCL	10/31/95 1400		

RECD AT LAB BY: Susan Bern

DATE / TIME: 10/31/95 1400

CONDITIONS / COMMENTS:

SHIPPED VIA: ☐ FED X ☐ UPS ☒ OTHER CCL COURIER

AIR BILL #

LAB

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California Laboratory Services

NJ0651

CHAIN OF CUSTODY

LOG NO. 13269

CLIENT NAME: Hilgart Environmental
ADDRESS: Sunrise Dr #100
PROJECT NAME: Eastwood Sub
PROJECT MANAGER: Keith Craig PHONE #
SAMPLED BY: Keith Craig
MATRIX DESCRIPTION: Soil Sampling
SITE LOCATION: Eastwood Mall

LAB USE ONLY: 95-052-2

LABORATORY: ☑ CLS 3249 FITZGERALD RD. RANCHO CORDOVA, CA 95742 ☐ OTHER

PRESERVATIVES

ANALYSIS REQUESTED: TCE

FIELD CONDITIONS: Overcast cool 50's

COMPOSITE: 2 DAY

SPECIAL INSTRUCTIONS: Normal TAT

TURN AROUND TIME (CHECK FIELD BELOW): 24 HOURS | 48 HOURS | 1 WEEK | 2 WEEKS

DATE	TIME	FIELD POINT DESIGNATION	METHOD	MATRIX	CONTAINER NO.		PRESERVATIVES	TCE									
10-28-95	1015	B-1-6.0'		Soil	1	Brass		X									
	1020	B-1-10.5			1			X									
	1030	B-1-16.0			1												Hold
	1035	B-1-21.0			1												Hold
	1045	B-1-26.0			1												Hold
	1150	B-1-31.0			1												Hold
	1105	B-1-36.0			1												Hold
	1145	B-1-46.0			1			X									
	1320	B-2-6.0'			1			X									
	1340	B-2-10.5			1			X									
	1350	B-2-16.0			1												Hold
	1402	B-2-21.0			1												Hold
	1420	B-2-26.0			1												Hold
SUSPECTED CONSTITUENTS	1455	B-2-31.0	TCE		1			X									

SAMPLE RETENTION TIME

PRESERVATIVES: (1) HCL (2) HNO_3 (3) = COLD (4)

RELINQUISHED BY	RECEIVED BY	DATE / TIME	COMMENTS
Keith Craig	Keith Craig/Hilgart	10-31-95 1150	Lab Fed Ex 8/1
Lab Person	Scott Furnas/CCL	10/31/95 1400	

RECEIVED AT LAB BY: [illegible] DATE / TIME: 10/31/95 1400

CONDITIONS / COMMENTS:

☐ FED X ☐ UPS ☒ OTHER CCL COURIER AIR BILL #

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AllWest

AllWest Environmental, Inc.

Specialists in Environmental Due Diligence and Remedial Services

AllWest

AllWest Environmental, Inc.

Specialists in Environmental Due Diligence and Remedial Services

One Sutter Street, Suite 600
San Francisco, CA 94104
Tel 415 391 2510
Fax 415 391 2008

QUARTERLY GROUNDWATER MONITORING REPORT

Third Quarter
July - September 1996

Eastmont Mall
Oakland, California

ALLWEST PROJECT 95266.28A
October 25, 1996

PREPARED BY:

Keith B. Craig
Project Manager

REVIEWED BY:

12/21/97

Long Ching, PE
Senior Engineer

AllWest

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III. GROUNDWATER SAMPLING ACTIVITIES Page 2

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REPORT QA/QC REVIEW FORM

TABLES

Table 1 - Cumulative Groundwater Elevation Measurements
Table 2 - Cumulative Groundwater Analytical Results

FIGURES

Figure 1 - Subject Site Regional Map
Figure 2 - Subject Site Vicinity Map
Figure 3 - Site Plan and Monitoring Well Location Map
Figure 4 - Groundwater Surface Contour Map

APPENDICES

Appendix A - Groundwater Sampling Proceedures
Appendix B - Groundwater Sampling Field Logs
Appendix C - Laboratory Test Results and Chain-of-Custody Records

AllWest

QUARTERLY GROUNDWATER MONITORING REPORT

Third Quarter 1996

Eastmont Mall
Oakland, California

I. INTRODUCTION

This report presents the results of the quarterly groundwater monitoring event performed by *AllWest Environmental* at the *Eastmont Mall* located in Oakland, California. The groundwater sampling event occurred on September 30, 1996. The groundwater monitoring was conducted in accordance with the *Alameda County* approved workplan.

The scope of *AllWest's* services include sampling of five groundwater monitoring wells (MW-5 through MW-9), measuring groundwater levels in all of the monitoring wells (MW-5 through MW-9), forwarding the collected groundwater samples to a state certified laboratory for chemical analyses, and preparing a written report presenting the results of the groundwater sampling. This round of sampling was for the third quarter of 1996.

II. PROJECT BACKGROUND

A. Site Location and Description

The subject property lies in the east Oakland area of Alameda County, California, in a mixed commercial and residential district (See Figures 1 and 2). The subject property is bounded by Foothill Boulevard, 73rd Avenue, and Bancroft Avenue in the Eastmont District of Oakland.

The subject property consists of a large two-story shopping mall with several smaller buildings at the site (See Figure 3), including an office complex, a police station, three fast-food restaurants, and a gasoline service station.

B. Site Background

According to available documents of previous site assessments by others, subsurface impact by petroleum hydrocarbons has been detected at the *BP Service Station* and the police station (formerly *Firestone Tire Shop*). A "site closure" has been granted to the police station site by the *San Francisco Bay Regional Water Quality Control Board* (*SFBRWQCB*) in 1994. The service station site is currently being remediated by *BP* and are under the oversight of the *Alameda County Environmental Health Department* (*ACEHD*).

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Between 1989 and 1993, up to nine groundwater monitoring wells were installed by various environmental consultants around the mall building as part of the on-going site assessment. A well installed by *Hunter Environmental* in 1989 was located west of a dry cleaning facility (*Sparkle Cleaners*) and numbered MW-2. Low levels of PCE and TCE were detected in the groundwater sample from MW-2 during the initial sampling event.

However, MW-2 could not be located during a subsequent site assessment by *Artesian Environmental* in 1993. Consequently, *Artesian* installed a replacement well (MW-6) in the general area of MW-2. The 1993 groundwater sampling did not detect PCE or TCE in MW-6 or any of the other on-site wells. The only contaminants detected in site groundwater wells were low concentrations of gasoline, benzene, and ethylbenzene in well MW-7. The wells around the mall building had not been sampled since 1993.

In September 1995, the *ACEHD* directed the mall management to initiate a quarterly groundwater monitoring program for wells MW-5 through MW-9. The purpose was to gather sufficient groundwater quality data so that a determination for site closure can be made by the County. *AllWest* was retained in October 1995 to perform the quarterly monitoring. There were three previous quarterly sampling events conducted by *AllWest* in October 1995, March 1996, and June 1996.

III. GROUNDWATER SAMPLING ACTIVITIES

Sampling of the groundwater monitoring wells was conducted by *AllWest* on September 30, 1996. Field activities included the measurement of groundwater elevations and sampling of all five monitoring wells (MW-5 through MW-9). *AllWest's* groundwater sampling protocols were followed and are presented in Appendix A. Copies of the groundwater sampling field logs are presented in Appendix B.

The groundwater levels in wells MW-5 through MW-9 measured during this and previous monitoring events are presented in Table 1, Cumulative Groundwater Level Measurements. Groundwater flow direction during this monitoring event was calculated to be towards the south with an average gradient of 0.002 ft/ft.

At least three well casing volumes were purged prior to sampling each well. After purging, four 40-milliliter samples were collected from each of the five monitoring wells. No product sheen was noted in any of the wells during purging.

A Quality Assurance/Quality Control (QA/QC) sample, in the form of a duplicate sample of sample MW-5, labeled MW-10, was collected. Additionally, a trip blank provided by the laboratory was included with the sample shipment to the laboratory.

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IV. LABORATORY TEST RESULTS

The collected groundwater samples were forwarded to a State of California certified analytical laboratory, *Global Environmental Lab, Inc.* (*Global Lab*), of Fremont, California. All of the samples were analyzed for the presence of total petroleum hydrocarbons as gasoline (TPH-g) and the volatile constituents of gasoline including benzene, toluene, ethylbenzene, and xylene (BTEX). Sample MW-6 was also analyzed for Halogenated Volatile Organic Compounds (HVOCs) by EPA method 601.

No detectable concentrations of TPH-g, BTEX, or HVOCs were found in any of the samples.

A cumulative summary of analytical results for wells MW-5 through MW-9 to date are presented on Table 2. A copy of the laboratory test reports and Chain-of-Custody documents are included as Appendix C.

V. CONCLUSIONS AND RECOMMENDATIONS

As indicated by the laboratory test results, TPH-g, BTEX, and the HVOCs were not detected in the groundwater samples from monitoring wells MW-5 through MW-9. No other contaminants previously identified in the wells were present during this sampling event. For the past three sampling rounds, no contaminant previously identified on-site has been detected.

In accordance with the workplan, the next quarterly groundwater monitoring event should be scheduled for December 1996.

VI. REPORT LIMITATIONS

The work described in this report has been performed accordance with generally accepted engineering principles an practices. The conclusions contained herein are presented based on environmental conditions of the site and laboratory test results of the groundwater samples. It must be recognized that changes can occur in groundwater conditions due to seasonal variations, or other reasons. Furthermore, the distribution of chemical concentrations in the groundwater can vary both temporally and spatially. The chemical analyses results are valid as of the date and at the sampling location only. *AllWest* cannot be held accountable for the accuracy of the test data from an independent laboratory, nor for any analyte quantities falling below the recognized standard detection limits for the method utilized by the independent laboratory.

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VII. REFERENCES

- Subsurface Investigation Report for J.C. Penney Store No. 836, Eastmont Mall, Oakland, California. Prepared by Dames & Moore and dated July 10, 1991.

- Level One Environmental Site Assessment Report for Eastmont Mall, Oakland, California. Prepared by Certified Engineering & Testing Company and dated October 27, 1992.

- Boring and Monitoring Well Installation Report for Eastmont Mall, Oakland, California. Prepared by Artesian Environmental and dated October 20, 1993.

- Quarterly Groundwater Monitoring Report for Eastmont Mall, Oakland, California. Prepared by Artesian Environmental and dated January 20, 1994.

- Work Plan for Quarterly Groundwater Monitoring and Subsurface Investigation at Eastmont Mall, Oakland, California, AllWest Environmental, October 6, 1995.

- Summary of Maximum Contaminant Levels and Action Levels, State of California, Department of Health Services, Office of Drinking Water, October 1990.

KBC115: 9526628A.Q03

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AllWest

ALLWEST
QUARTERLY MONITORING REPORT REVIEW QA/QC

Project #: 75266.284 Prepared by: Kirk Craig

Project Address: Eastwood Mall Date: 10-25-96

A. To be completed by report writer and submitted with report to reviewer.
B. To be independently verified by reviewer and filed in contract file.

			Reviewer
1.	Has the scope of work as outlined in the project contract been met?	yes X no ___	
	If no, explain why:		
2.	Is the report properly formatted?	yes X no ___	
	2A. Are page numbers on TOC correct?	yes X no ___	
	2B. Do headings in TOC correspond to report?	yes X no ___	
	2C. Are all appendices included?	yes X no ___	
3.	Is the data presentation consistent and correct?		
	3A. Do sampling results stated in text correspond exactly with laboratory results?		
	(quantity)	yes X no ___	
	(units)	yes X no ___	
	3B. Does Sampling data presented in figures correspond exactly with those cited in text and in laboratory report?		
	(quantity)	yes X no ___	
	(units)	yes X no ___	
	Approved for client receipt?	yes ✓ no ___	

Reviewer Signature: [signature] Date: 10-25-96

QMR.rvw 9/05/96

TABLE 1

CUMULATIVE GROUNDWATER ELEVATION MEASUREMENTS

Eastmont Mall
Oakland, California

October 1996

Well Number	Well Casing Elevation	Date of Measurement	Depth to Groundwater	Groundwater Elevation	Average Gradient and Direction
MW-5	+ 42.07'	9-28-93	35.25'	6.82'	West
		12-29-93	36.10'	5.97'	0.007 ft/ft West
		10-19-95	30.10'	11.97'	0.005 ft/ft West
		3-6-96	29.40'	12.67'	0.004 ft/ft Northwest
		6-4-96	26.55'	15.52'	0.004 ft/ft Northwest
		9-30-96	30.10'	11.97'	0.002 ft/ft South
MW-6	+ 43.35'	9-28-93	36.85'	6.50'	West
		12-29-93	37.15'	6.20'	0.007 ft/ft West
		10-19-95	31.26'	12.09'	0.005 ft/ft West
		3-6-96	30.17'	13.18'	0.004 ft/ft Northwest
		6-4-96	28.00'	15.38'	0.004 ft/ft Northwest
		9-30-96	27.12'	16.23'	0.002 ft/ft South
MW-7	+ 44.37'	9-28-93	33.42'	10.95'	West
		12-29-93	34.25'	10.12'	0.007 ft/ft West
		10-19-95	28.78'	15.59'	0.005 ft/ft West
		3-6-96	28.97'	15.40'	0.004 ft/ft Northwest
		6-4-96	26.84'	17.53'	0.004 ft/ft Northwest
		9-30-96	27.96'	16.41'	0.002 ft/ft South
MW-8	+ 44.90'	9-28-93	32.10'	12.80'	West
		12-29-93	32.75'	12.15'	0.007 ft/ft West
		10-19-95	28.95'	15.95'	0.005 ft/ft West
		3-6-96	28.80'	16.10'	0.004 ft/ft Northwest
		6-4-96	26.92'	17.98'	0.004 ft/ft Northwest
		9-30-96	28.95'	15.95'	0.002 ft/ft South
MW-9	+ 44.18'	9-28-93	33.00'	11.18'	West
		12-29-93	33.97'	10.21'	0.007 ft/ft West
		10-19-95	29.18'	15.00'	0.005 ft/ft West
		3-6-96	28.09'	16.09'	0.004 ft/ft Northwest
		6-4-96	26.01'	18.17'	0.004 ft/ft Northwest
		9-30-96	29.02'	15.16'	0.002 ft/ft South

Note:

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TABLE 2

CUMULATIVE GROUNDWATER ANALYTICAL RESULTS

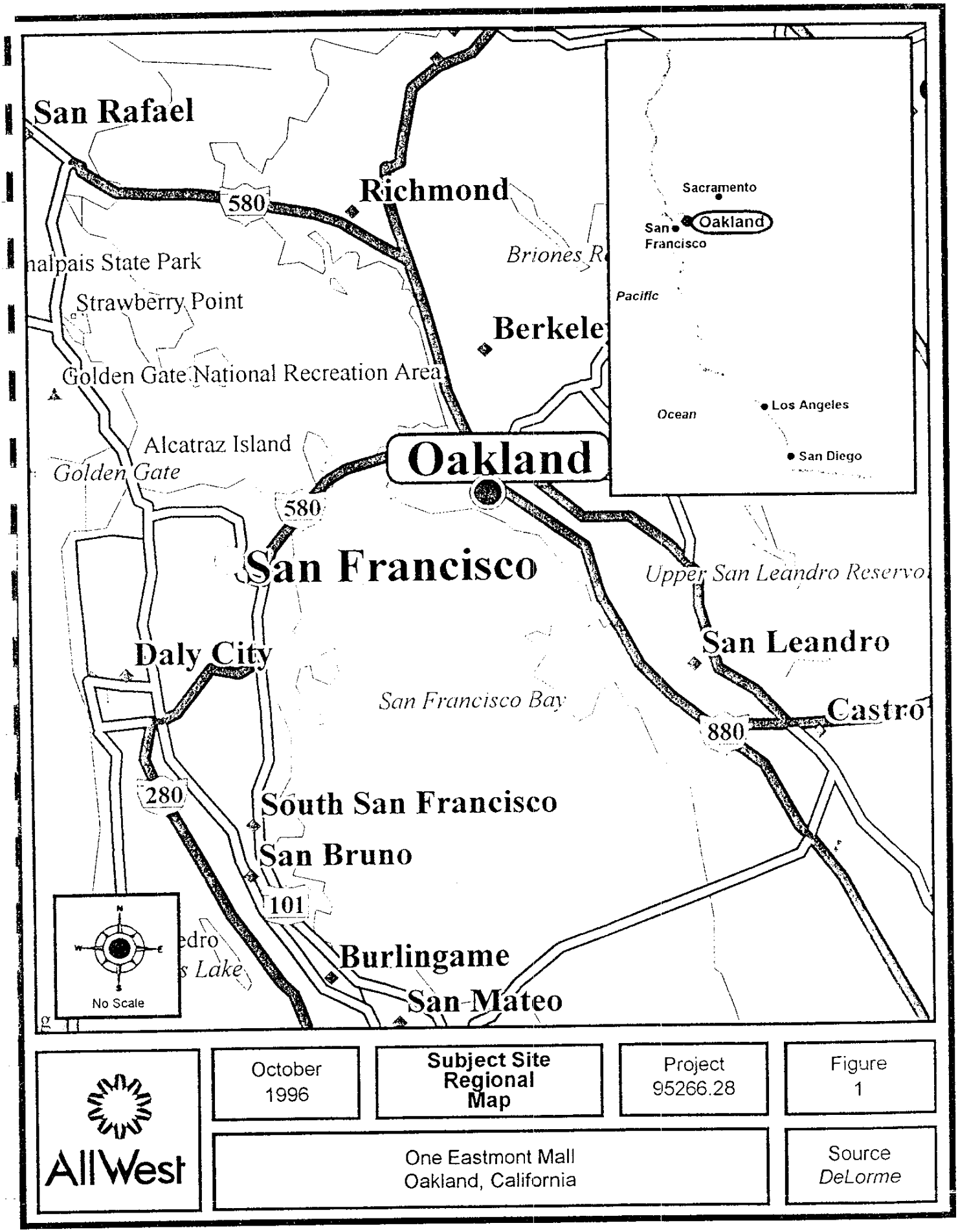
Eastmont Mall
Oakland, California

October 1996

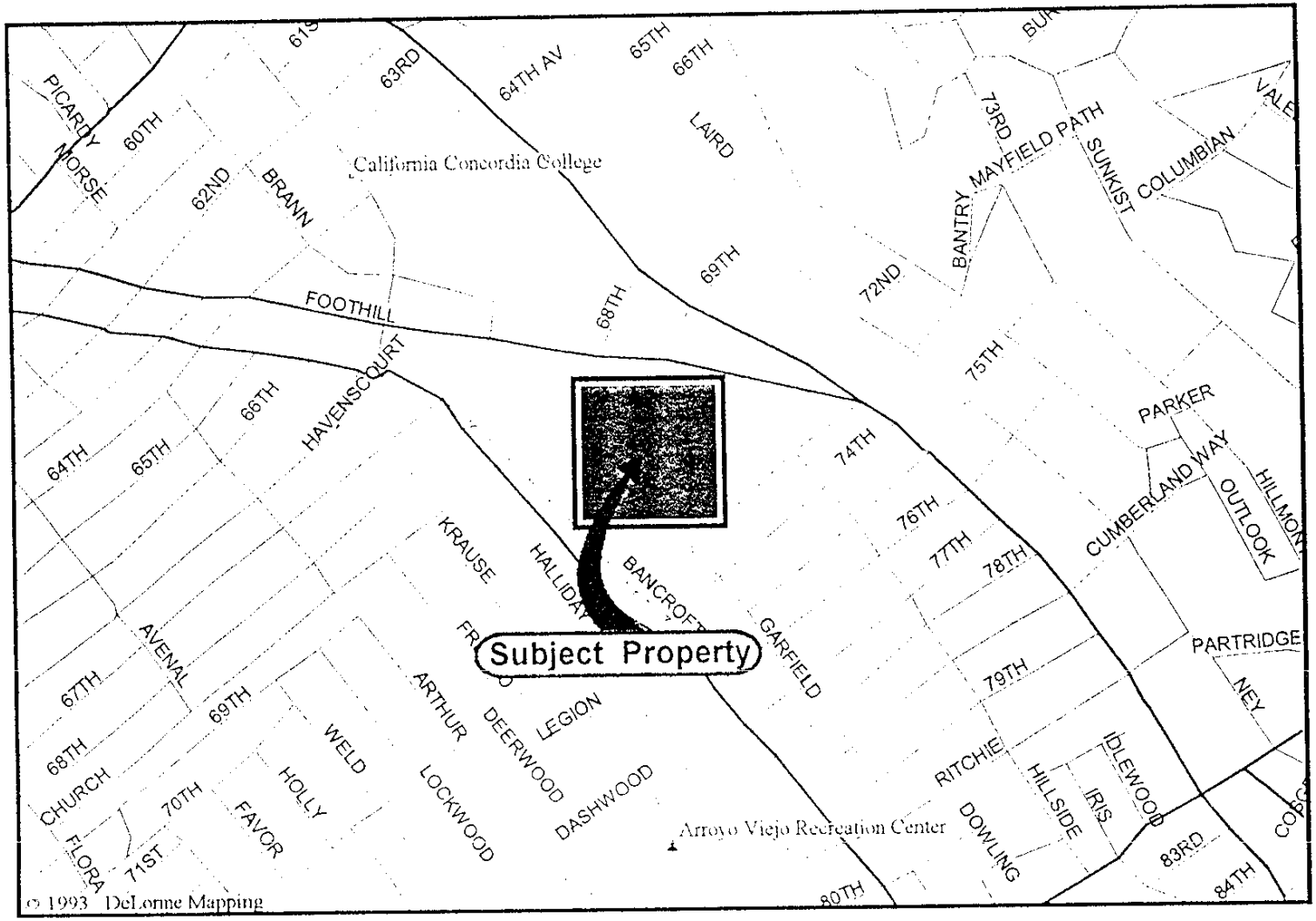
Well Number	Sampling Date	[1]TPH-g	[2]Benzene	[2]Toluene	[2]Ethyl-Benzene	[2]Xylene	[3]Naphthalene Benzo(a)Pyrene	[4]Volatile Organic Compounds
MW-5	12-29-93	ND	ND	ND	ND	ND	ns	ND
	10-19-95	ND	ND	ND	ND	ND	ND	ND
	3-6-96	ND	ND	ND	ND	ND	ns	ns
	6-4-96	ND	ND	ND	ND	ND	ns	ns
	9-30-96	ND	ND	ND	ND	ND	ns	ns
MW-6	12-29-93	73	13	ND	1.5	ND	ns	ND
	10-19-95	ND	ND	ND	ND	ND	ND	TCE - 1.4
	3-6-96	ND	ND	ND	ND	ND	ns	ND
	6-4-96	ND	ND	ND	ND	ND	ns	ND
	9-30-96	ND	ND	ND	ND	ND	ns	ND
MW-7	12-29-93	78	15	ND	1.7	ND	ns	ND
	10-19-95	ND	ND	ND	ND	ND	ND	ND
	3-6-96	ND	ND	ND	ND	ND	ns	ns
	6-4-96	ND	ND	ND	ND	ND	ns	ns
	9-30-96	ND	ND	ND	ND	ND	ns	ns
MW-8	12-29-93	ND	ND	ND	ND	ND	ns	ND
	10-19-95	ND	ND	ND	ND	ND	ND	ND
	3-6-96	ND	ND	ND	ND	ND	ns	ns
	6-4-96	ND	ND	ND	ND	ND	ns	ns
	9-30-96	ND	ND	ND	ND	ND	ns	ns
MW-9	12-29-93	ND	ND	ND	ND	ND	ns	ND
	10-19-95	ND	ND	ND	ND	ND	ND	ND
	3-6-96	ND	ND	ND	ND	ND	ns	ns
	6-4-96	ND	ND	ND	ND	ND	ns	ns
	9-30-96	ND	ND	ND	ND	ND	ns	ns

Notes: All concentration values were reported in µg/kg equivalent to parts per billion (ppb).
ND is equivalent to "None Detected" at or above the laboratory limit of detection.
ns is equivalent to Not Sampled or the sample was not analyzed.
The Laboratory Limit of Detection for TPH-g is 50 ppb, for BTEX is 0.5 ppb.
[1]TPH-g, TPH-d, TPH-mo are equivalent to Total Petroleum Hydrocarbons as gasoline, diesel and motor oil, respectively and analyzed by EPA method 8015(m).
[2]Benzene, toluene, ethylbenzene, and xylene (BTEX) are volatile organic compounds found in fuels and analyzed by EPA method 8020.
[3]Benzo(a)pyrene and Naphalene compounds are analyzed by EPA method 8010.
[4]Volatile organic compounds are analyzed by EPA method 8010.

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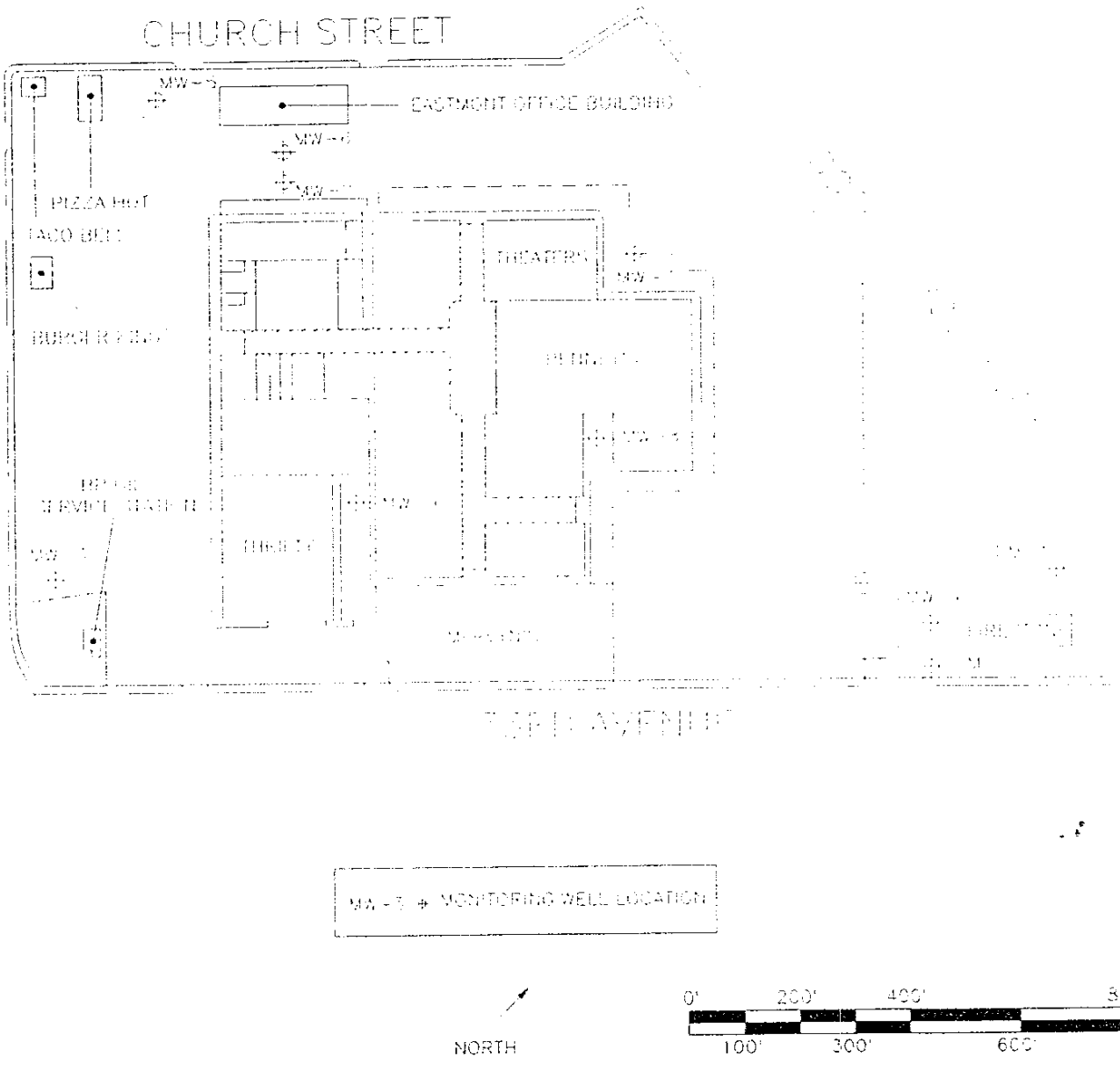


AllWest	October 1996	**Subject Site Regional Map**	Project 95266.28	Figure 1
	One Eastmont Mall Oakland, California			Source *DeLorme*

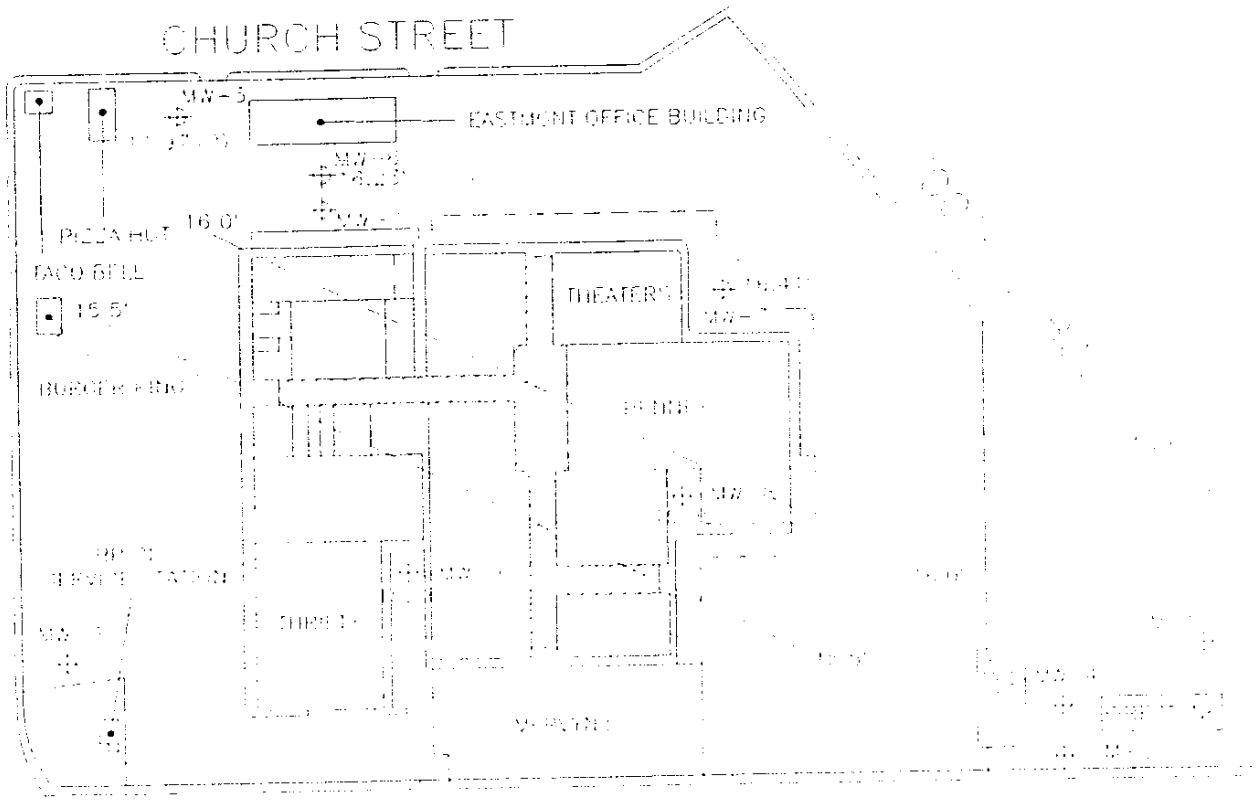


AllWest	October 1996	Subject Site Vicinity Map	Project No. 95266.28	Figure 2
	One Eastmont Mall Oakland, California			Scale *1" = 1300'*

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AllWest	October 1996	**Site Plan & Monitoring Well Location Map**	Project 95266.28	Figure 3
	One Eastmont Mall Oakland, California			Source *AllWest*


CHURCH STREET
EASTMONT OFFICE BUILDING
PIZZA HUT
TACO BELL
THEATER
MW-5
MW-6
MW-7
MW-8
MW-9
MW-10
MW-11
MW-12
MW-13
MW-14
MW-15
MW-16
MW-17
MW-18
MW-19
MW-20
MW-21
MW-22
MW-23
MW-24
MW-25
MW-26
MW-27
MW-28
MW-29
MW-30
MW-31
MW-32
MW-33
MW-34
MW-35
MW-36
MW-37
MW-38
MW-39
MW-40
MW-41
MW-42
MW-43
MW-44

Appendix A

GROUNDWATER SAMPLING PROCEDURES

Upon arriving at the groundwater monitoring well site, each monitoring well vault and well casing are first examined for damage which could render the well inoperable. Any water collected during the recent rains were purged from the well vault to avoid contamination from rain water. The upper end-cap was then removed and an organic vapor meter (OVM) was used to detect hydrocarbon vapor that might exist inside the well casing. The reading of the OVM was then recorded onto the groundwater sampling field log. After an appreciable time for groundwater levels to equilibrate, electric water level sounder was lowered into the well casing to measure the depth to water to the nearest 0.01 feet. A clear polyethylene bailer was then lowered into the well casing and partially submerged. Upon retrieval of the clear bailer, the surface of the water column retained in the bailer was carefully examined for floating product or product sheen.

After initial measurements were completed and recorded, each monitoring well was purged by an electrical submersible pump or decontaminated teflon bailer. A minimum of 3 well volumes of groundwater was purged. Groundwater quality parameters (temperature, pH, and conductivity) were monitored with a combination meter after each well volume was removed. Purging was considered complete when purging indicators were stabilized (consecutive readings within 10% of each other) or the purged water was relatively free of sediments. All purged water was temporarily stored on-site in labeled 55-gallon drums pending test results to determine the proper disposal method. If no contamination was found then the purge water was disposed of as nonhazardous.

Groundwater sampling was conducted after the water level in the well recovered to at least 80% of the initial level that was recorded before purging. The groundwater sample was collected using a disposable bailer, which was discarded after the sampling event. Upon retrieval of the disposable bailer, the retained water was carefully transferred to appropriate glass container(s) (three 40-ml VOAs) furnished by the analytical laboratory. A bottom emptying device was placed on the bailer to minimize the loss of volatile organics during transfer. All sample containers were fitted with teflon lined septum/cap and filled such that no headspace was present. After the water sample was properly transferred to the appropriate containers, the containers were labeled and immediately placed on ice in an insulated cooler to preserve the chemical characteristics of the sample.

To prevent cross contamination, all groundwater sampling equipment that came into contact with the groundwater was thoroughly cleaned by washing in Alconox (a non-phosphate detergent) solution and double rinsed with distilled water prior to each well sampling event. Groundwater samples were stored and transported in an insulated cooler filled with crushed ice. The analytical laboratory collected the samples from the site or from the *AllWest* office. The samples were delivered to the analytical laboratory by a special courier of the laboratory. All samples were transported under strict Chain-of-Custody document protocol from the time of sample collection to the time of arrival at the laboratory.

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AllWest

Groundwater Monitoring Well Sampling Field Log

Project No.: 95266.28 Project Name: Eastmont Monitoring

Well No.: MW - 5 Well Location: MW - 5

Well Depth: 48.25 (ft.) Casing Diameter: 2 (in.)

Depth to Water: 30.10 (ft.) Date: 09/30/96 Time: 900

Water Column in Well: 17.95 (ft.) Well Volume: 2.87 (gal.)

Odor? No Free Product? No Thickness: N/A

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ____

Time	pH	Conduc. (μS)	Temp. (°F)	Water Level	Volume Removed	Remark
1145	7.11	885	80.8		0.3	Moderate Turbidity
1147	7.00	894	77.8		2.5	Moderate Turbidity
1148	6.97	804	76.5		5.0	Slight Turbidity
1150	6.95	767	75.8		7.5	Clear
1152	6.90	802	75.3		10.5	Clear

Purging Start Time: 1143 Purging Stop Time: 1155

Total Volume Purged: 10.5 (gal.) Well Dewater? No

Water Level Prior to Sampling: 30.20 (ft.) Time: 1210

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 4 - 40 ml VOAs Sample No.: MW - 5

Remarks: _____

Sampler: Keith Craig Date/Time: 09/30/96 1220

KC\96266-28mw5

AllWest

Groundwater Monitoring Well Sampling Field Log

Project No.: 95266.28 Project Name: Eastmont Monitoring

Well No.: MW - 6 Well Location: _____

Well Depth: 49.30 (ft.) Casing Diameter: 2 (in.)

Depth to Water: 27.12 (ft.) Date: 09/30/96 Time: 945

Water Column in Well: 22.18 (ft.) Well Volume: 3.55 (gal.)

Odor? No Free Product? No Thickness: N/A

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ___

Time	pH	Conduc. (μS)	Temp. (°F)	Water Level	Volume Removed	Remark
1450	8.30	1078	69.8		1.0	High turbidity
1452	8.03	1184	70.2		3.5	Moderate turbidity
1454	7.84	1168	70.1		6.5	Moderately turbidity
1457	7.72	1162	68.8		10.0	Brown color
1500	7.57	1248	68.8		14.0	Dewatered

Purging Start Time: 1448 Purging Stop Time: 1500

Total Volume Purged: 14.0 (gal.) Well Dewater? Yes

Water Level Prior to Sampling: 28.80 (ft.) Time: 1520

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 4 - 40 ml VOAs Sample No.: MW - 6

Remarks: _____

Sampler: Keith Craig Date/Time: 09/30/96 1525

KC\95266-28.mw6

Groundwater Monitoring Well Sampling Field Log

AllWest

Project No.: 95266.28 Project Name: Eastmont Monitoring

Well No.: MW - 7 Well Location: _____

Well Depth: 49.20 (ft.) Casing Diameter: 2 (in.)

Depth to Water: 27.96 (ft.) Date: 09/30/96 Time: 935

Water Column in Well: 21.84 (ft.) Well Volume: 3.49 (gal.)

Odor? No Free Product? No Thickness: N/A

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ____

Time	pH	Conduc. (μS)	Temp. (°F)	Water Level	Volume Removed	Remarks
1540	8.14	979	68.5		0.5	High turbidity
1543	8.04	999	68.5		3.5	Moderate turbidity
1546	7.84	988	68.4		8.0	
1549	7.75	1045	68.8		12.0	
1553	7.70	1054	69.0		16.5	

Purging Start Time: 1539 Purging Stop Time: 1553

Total Volume Purged: 16.5 (gal.) Well Dewater? No

Water Level Prior to Sampling: 28.45 (ft.) Time: 1605

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 4 - 40 ml VOAs Sample No.: MW - 7

Remarks: _____

Sampler: Keith Craig Date/Time: 09/30/96 1615

KC\95266-28.mw7

AllWest

Groundwater Monitoring Well Sampling Field Log

Project No.: 95266.28 Project Name: Eastmont Monitoring

Well No.: MW - 8 Well Location: MW - 8

Well Depth: 48.68 (ft.) Casing Diameter: 2 (in.)

Depth to Water: 28.95 (ft.) Date: 10/19/95 Time: 915

Water Column in Well: 19.73 (ft.) Well Volume: 3.15 (gal.)

Odor? No Free Product? No Thickness: N/A

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ____

Time	pH	Conduc. (μS)	Temp. (°F)	Water Level	Volume Removed	Remark
1025	6.99	1161	76.4		0.2	Moderate Turbidity
1026	7.01	1112	73.4		2.5	Moderate Turbidity
1028	6.99	1090	72.7		5.0	Moderate Turbidity
1029	6.95	1053	71.8		7.5	Slight Turbidity
1032	6.95	1079	71.1		11.0	Slight Turbidity

Purging Start Time: 1025 Purging Stop Time: 10:33

Total Volume Purged: 11.0 (gal.) Well Dewater? No

Water Level Prior to Sampling: 29.32 (ft.) Time: 1045

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 4 - 40 ml VOAs Sample No.: MW - 8

Remark: ____

Sampler: Keith Craig Date/Time: 09/30/96 1100

KC\95266-28.mw8

AllWest

Groundwater Monitoring Well Sampling Field Log

Project No.: 95266.28 Project Name: Eastmont Monitoring

Well No.: MW - 9 Well Location: _____

Well Depth: 49.60 (ft.) Casing Diameter: 2 (in.)

Depth to Water: 29.02 (ft.) Date: 09/30/96 Time: 925

Water Column in Well: 20.58 (ft.) Well Volume: 3.29 (gal.)

Odor? No Free Product? No Thickness: N/A

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ___

Time	pH	Conduc. (μS)	Temp. (°F)	Water Level	Volume Removed	Remark
1355	8.15	912	70.0		0.5	High turbidity
1357	7.81	960	70.6		3.5	Moderate turbidity
1359	7.61	940	70.1		6.0	Moderately turbidity
1401	7.47	945	70.1		9.0	
1404	7.46	996	70.0		12.5	

Purging Start Time: 1354 Purging Stop Time: 1404

Total Volume Purged: 12.5 (gal.) Well Dewater? No

Water Level Prior to Sampling: 29.62 (ft.) Time: 1420

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 4 - 40 ml VOAs Sample No.: MW - 9

Remarks: _____

_____

Sampler: Keith Craig Date/Time: 09/30/96 1430

KC\95266-28.mw9

Global Enviromental Laboratory, Inc.
4118 CLIPPER COURT, FREMONT, CA 94538 PHONE (510) 498-1991 FAX (510) 498-1994

October 16, 1996

All West Environmental
One Sutter Street, Suite 600
San Francisco, CA 94104

Regarding: **Analytical Results**
Client Project: Eastmont
Global Lab Project: 961001B

Dear Mr. Keith Craig:

Enclosed are the lab results for the samples submitted to Global Lab for the project above. The samples will be disposed of by the laboratory after 30 days from the time they were received.

We appreciate the opportunity to be of assistance to you. If you have any questions or comments, please feel free to contact me at (510) 498-1991.

Sincerely,

Lisheng Wu
Laboratory Manager

Global Enviromental Laboratory, Inc.
4118 CLIPPER COURT, FREMONT, CA 94538 PHONE (510) 498-1991 FAX (510) 498-1994

DHS (LUFT) TPH-GASOLINE REPORT

(ug/L)

Client:	Keith Craig All West Environmental, Inc. One Sutter Street, Suite 600 San Francisco, CA 94104	Date Sampled: Date Received: Date Analyzed: Date Reported:	09-30-96 10-01-96 10-02-96 10-07-96
Project:	Eastmont	Lab Job #:	961001B
Matrix:	Water		

Client I.D.	Lab. I.D.			8015M Gasoline			Dilution Factor
MW-8	961001B01			ND			1
MW-5	961001B02			ND			1
MW-7	961001B03			ND			1
MW-6	961001B04			ND			1
MW-9	961001B05			ND			1
Reporting Limit				50 ug/L			

ND Not Detected. All analytes recorded as ND were found to be at or below the Reporting Limit.

Reviewed By:

Lisheng Wu, Laboratory Manager

ELAP#: 2132

OUTSTANDING QUALITY AND SERVICE

Global Enviromental Laboratory, Inc.
4118 CLIPPER COURT, FREMONT, CA 94538 PHONE (510) 498-1991 FAX (510) 498-1994

EPA 8010 REPORT
(ug/L)

Attn.: Keith Craig
All West Environmental, Inc.
One Sutter Street, Suite 600
San Francisco, CA 94104
Project: Eastmont
Matrix: Water
Client I.D.: MW-6

Date Sampled: 09-30-96
Date Received: 10-01-96
Date Analyzed: 10-03-96
Date Reported: 10-04-96
Lab. Project #: 961001B
Lab ID #: 961001B04

Analyte		Result		Reporting Limit
Dichlorodifluoromethane		ND		1.0
Chloromethane		ND		1.0
Bromomethane		ND		1.0
Vinyl chloride		ND		1.0
Chloroethane		ND		1.0
Trichlorofluoromethane		ND		1.0
1,1-Dichloroethene		ND		1.0
Methylene Chloride		ND		1.0
Trans-1,2-Dichloroethene		ND		1.0
1,1-Dichloroethane		ND		1.0
Cis-1,2-Dichloroethene		ND		1.0
1,1,1-Trichloroethane		ND		1.0
Carbon Tetrachloride		ND		1.0
1,2-Dichloroethane		ND		1.0
Trichloroethene		ND		1.0
1,2-Dichloropropane		ND		1.0
Bromodichloromethane		ND		1.0
Trans-1,3-Dichloropropene		ND		1.0
Cis-1,3-Dichloropropene		ND		1.0
1,1,2-Trichloroethane		ND		1.0
Tetrachloroethene		ND		1.0
Dibromochloromethane		ND		1.0
Chlorobenzene		ND		1.0
Bromoform		ND		1.0
1,1,2,2-Tetrachloroethane		ND		1.0
1,3-Dichlorobenzene		ND		1.0
1,4-Dichlorobenzene		ND		1.0
1,2-Dichlorobenzene		ND		1.0

SURROGATE RECOVERY	% Recovery	% Control Limits
4-bromofluorobenzene	80	86-116

ND = Not Detected at Reporting Limit

Reviewed By:

ELAP#: 2132

Lisheng Wu, Laboratory Manager

OUTSTANDING QUALITY AND SERVICE

Global Environmental Laboratory, Inc.
4118 CLIPPER COURT, FREMONT, CA 94538 PHONE (510) 498-1991 FAX (510) 498-1994

DHS (LUFT) TPH-BTEX REPORT
(ug/L)

Client:	Keith Craig All West Environmental, Inc. One Sutter Street, Suite 600 San Francisco, CA 94104	Date Sampled:	09-30-96
		Date Received:	10-01-96
		Date Analyzed:	10-02-96
		Date Reported:	10-04-96
Project:	Eastmont	Lab Job #:	961001B
Matrix:	Water		

Client I.D.	Lab. I.D.		Benzene	Toluene	Ethyl Benzene	Total Xylenes	Dilution Factor
MW-8	961001B01		ND	ND	ND	ND	1
MW-5	961001B02		ND	1.0	ND	ND	1
MW-7	961001B03		ND	ND	ND	ND	1
MW-6	961001B04		ND	ND	ND	ND	1
MW-9	961001B05		ND	ND	ND	ND	1
Reporting Limit			0.5 ug/L	0.5 ug/L	0.5 ug/L	0.5 ug/L	

ND Not Detected. All analytes recorded as ND were found to be at or below the Reporting Limit.

Reviewed By:

Lisheng Wu, Laboratory Manager

ELAP#: 2132

OUTSTANDING QUALITY AND SERVICE

EPA METHOD TEST QA/QC TABLE

GLOBAL PROJECT #: 961001B

Lab I.D. Number:	961001B-MSP	Analytical Method:	EPA 8010
Client Project:	Eastmont	Analysis date:	10-03-96
Ext/Prep. Method:	EPA 5030	Matrix:	Water
Date:	10-03-96	Unit:	ug/L

Analyte	Sample Result	Spike Level	MSP Result	MSP %R	MSPD Result	MSPD %R	AVE. %R	LCL %R	UCL %R	RPD %	UCL %RPD
1,1-dichloroethene	0.00	50.00	50.96	101.92	57.29	114.58	108.25	61	145	11.70	14
Trichloroethene	0.00	50.00	52.70	105.40	49.78	99.56	102.48	71	120	5.70	14
Chlorobenzene	0.00	50.00	47.91	95.82	51.61	103.22	99.52	75	130	7.44	13

Notes:
Sample Result-Concentration of Sample which is to used for Sample Spike & Sample Spike Duplicate
Spike Level- Level of Concentration Added to the Sample
MSP Result- Matrix Spike Result
MSP %R- Matrix Spike Percent Recovery
MSPD Result- Matrix Spike Duplicate Result
MSPD %R- Matrix Spike Dublicate Percent Recovery
AVG. %R - Average Recovery for MSP & MSPD % Recovery
LCL- Lower Criteria Level
UCL- Upper Criteria Level
RPD- Relative Percent Difference

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EPA METHOD TEST QA/QC TABLE

GLOBAL PROJECT #: 961001B

Lab I.D.:	961001B-MSP	Analytical Method:	EPA M8015
Project:	Eastmont	Analysis date:	10-02-96
Ext/Prep. Method:	EPA 5030	Matrix:	Water
Date:	10-02-96	Unit:	ug/L

Analyte	Sample Result	Spike Level	Matrix Spike Result	MS Recovery %	Matrix Spike Dul. Result	MSD Recovery %	Average Recovery %R	LCL %R	UCL %R	RPD %	UCL %RPD
Benzene	0.0	20.0	19.0	94.8	19.0	95.0	94.9	76.0	127.0	0.2	11.0
Toluene	0.0	20.0	18.7	93.3	19.9	99.6	96.4	76.0	125.0	6.5	13.0
Chlorobenzene	0.0	20.0	16.8	83.9	17.2	86.2	85.0	75.0	130.0	2.8	13.0
Gasoline	0.0	1000.0	990.0	99.0	1017.8	101.8	100.4	70.0	130.0	2.8	30.0

Notes:
Sample Result-Concentration of Sample which is to used for Sample Spike & Sample Spike Duplicate
Spike Level- Level of Concentration Added to the Sample
MSP Result- Matrix Spike Result
MSP %R- Matrix Spike Percent Recovery
MSPD Result- Matrix Spike Duplicate Result
MSPD %R- Matrix Spike Dublicate Percent Recovery
AVG. %R - Average Recovery for MSP & MSPD % Recovery
LCL- Lower Criteria Level
UCL- Upper Criteria Level
RPD- Relative Percent Difference

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GE Global Environmental Laboratory, Inc.
Tel: (510) 498-1991 Fax: (510) 498-1994

CHAIN OF CUSTODY

LOG NO. 1050

CLIENT NAME: AllWest Environmental
ADDRESS: 1 Sutter St #600
San Francisco ca 94104
PROJECT NAME: ~~Cypress Lo~~ Eastmont
PROJECT MANAGER: Keith Craig PHONE # (415)397-2510
SAMPLED BY:
JOB DESCRIPTION: GW Sampling
SITE LOCATION: Oakland Eastmont Mall

CLIENT JOB NUMBER:

DESTINATION LABORATORY
☒ GE
4118 Clipper Court
Fremont, CA 94538
☐ Other

PRESERVATIVES

ANALYSIS REQUESTED: 8015 w/TPH-Gas/BTEX; 8020 BTEX; 8010

FIELD CONDITIONS:
COMPOSITE:
SPECIAL INSTRUCTIONS:

TURN AROUND TIME: 24 HOURS | 48 HOURS | 1 WEEK | OTHERS

NOTE / FIELD READINGS

DATE	TIME	SAMPLE IDENTIFICATION	METHOD	MATRIX	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	8015 w/TPH-Gas/BTEX	8020 BTEX	8010	24 HOURS	48 HOURS	1 WEEK	OTHERS	NOTE / FIELD READINGS
9-30-96	1140	MW-8		water	4	40ml VOA's	HCl	X	X				X		
	1300	MW-5		"	3			X	X				X		
	1615	MW-7			4			X	X				X		
	1415	MW-6			4			X	X	X			X		
	1520	MW-9			4			X	X				X		
	1300	MW-5D			4										Hold 1 VOA missing

SUSPECTED CONSTITUENTS
SAMPLE RETENTION TIME
PRESERVATIVES: (1) HCL (2) HNO_3 (3) = COLD (4)

RELINQUISHED BY (SIGN)	PRINT NAME / COMPANY	DATE / TIME	RECEIVED BY (SIGN)	PRINT NAME / COMPANY
Keith B Craig	Keith Craig AllWest	10-1-96 1520	LEI Chen	LEI CHEN / Global

REC'D AT LAB BY: | DATE / TIME | CONDITIONS / COMMENTS:

SHIPPED VIA ☐ FED X ☐ UPS ☐ OTHER _____ AIR BILL #

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AllWest

AllWest Environmental, Inc.

Specialists in Environmental Due Diligence and Remedial Services

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AllWest Environmental, Inc.

Specialists in Environmental Due Diligence and Remedial Services

One Sutter Street, Suite 600
San Francisco, Ca 94104
Tel 415.391.2510
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QUARTERLY GROUNDWATER MONITORING REPORT

Second Quarter
April - June 1996

Eastmont Mall
Oakland, California

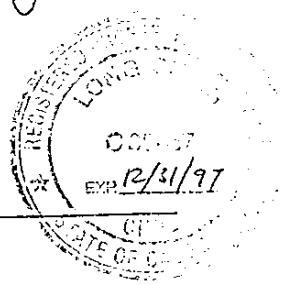
ALLWEST PROJECT 95266.28A
June 28, 1996

PREPARED BY:

Keith B. Craig
Project Manager

REVIEWED BY:

Long Ching, PE
Senior Engineer



AllWest

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QUARTERLY GROUNDWATER MONITORING REPORT

Second Quarter 1996

Eastmont Mall
Oakland, California

I. INTRODUCTION

This report presents the results of the quarterly groundwater monitoring event performed by *AllWest Environmental* at the *Eastmont Mall* located in Oakland, California. The groundwater sampling event occurred on June 4, 1996. The groundwater monitoring was conducted in accordance with the *Alameda County* approved workplan.

The scope of *AllWest's* services include sampling of five groundwater monitoring wells (MW-5 through MW-9), measuring groundwater levels in all of the monitoring wells (MW-5 through MW-9), forwarding the collected groundwater samples to a state certified laboratory for chemical analyses, and preparing a written report presenting the results of the groundwater sampling. This round of sampling was for the second quarter of 1996.

II. PROJECT BACKGROUND

Site Location and Description

The subject property lies in the east Oakland area of Alameda County, California, in a mixed commercial and residential district (See Figures 1 and 2). The subject property is bounded by Foothill Boulevard, 73rd Avenue, and Bancroft Avenue in the Eastmont District of Oakland.

The subject property consists of a large two-story shopping mall with several smaller buildings at the site (See Figure 3), including an office complex, a police station, three fast-food restaurants, and a gasoline service station.

Site Background

According to available documents of previous site assessments by others, subsurface impact by petroleum hydrocarbons has been detected at the *BP Service Station* and the police station (formerly *Firestone Tire Shop*). A "site closure" has been granted to the police station site by the *San Francisco Bay Regional Water Quality Control Board* (*SFBRWQCB*) in 1994.

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The service station site is currently being remediated by *BP* and are under the oversight of the *Alameda County Environmental Health Department (ACEHD)*.

Between 1989 and 1993, up to nine groundwater monitoring wells were installed by various environmental consultants around the mall building as part of the on-going site assessment. A well installed by *Hunter Environmental* in 1989 was located west of a dry cleaning facility (*Sparkle Cleaners*) and numbered MW-2. Low levels of PCE and TCE were detected in the groundwater sample from MW-2 during the initial sampling event.

However, MW-2 could not be located during a subsequent site assessment by *Artesian Environmental* in 1993. Consequently, *Artesian* installed a replacement well (MW-6) in the general area of MW-2. The 1993 groundwater sampling did not detect PCE or TCE in MW-6 or any of the other on-site wells. The only contaminants detected in site groundwater wells were low concentrations of gasoline, benzene, and ethylbenzene in well MW-7. The wells around the mall building had not been sampled since 1993.

In September 1995, the *ACEHD* directed the mall management to initiate a quarterly groundwater monitoring program for wells MW-5 through MW-9. The purpose was to gather sufficient groundwater quality data so that a determination for site closure can be made by the County. *AllWest* was retained in October 1995 to perform the quarterly monitoring and conducted the last quarterly sampling event in March 1996.

III. GROUNDWATER SAMPLING ACTIVITIES

Sampling of the groundwater monitoring wells was conducted by *AllWest* on June 4, 1996. Field activities included the measurement of groundwater elevations and sampling of all five monitoring wells (MW-5 through MW-9). *AllWest's* groundwater sampling protocols were followed and are presented in Appendix A. Copies of the groundwater sampling field logs are presented in Appendix B.

The groundwater levels in wells MW-5 through MW-9 measured during this and previous monitoring events are presented in Table 1, Cumulative Groundwater Level Measurements. Groundwater flow direction during this monitoring event was calculated to be towards the northwest with an average gradient of 0.004 ft/ft.

At least three well casing volumes were purged prior to sampling each well. After purging, three 40-milliliter samples were collected from each of the five monitoring wells. No product sheen was noted in any of the wells during purging.

A Quality Assurance/Quality Control (QA/QC) sample, in the form of a duplicate sample of sample MW-5, labeled MW-10, was collected. Additionally, a trip blank provided by the laboratory was included with the sample shipment to the laboratory.

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IV. LABORATORY TEST RESULTS

The collected groundwater samples were forwarded to a State of California certified analytical laboratory, *Global Environmental Lab, Inc.* (*Global Lab*), of Fremont, California. All of the samples were analyzed for the presence of total petroleum hydrocarbons as gasoline (TPH-g) and the volatile constituents of gasoline including benzene, toluene, ethylbenzene, and xylene (BTEX). Sample MW-6 was also analyzed for Halogenated Volatile Organic Compounds (HVOCs) by EPA method 601.

No detectable concentrations of TPH-g, BTEX, or HVOCs were found in any of the samples.

A cumulative summary of analytical results for wells MW-5 through MW-9 to date are presented on Table 2. A copy of the laboratory test reports and Chain-of-Custody documents are included as Appendix C.

V. CONCLUSIONS AND RECOMMENDATIONS

As indicated by the laboratory test results, TPH-g, BTEX, and the HVOCs were not detected in the groundwater samples from monitoring wells MW-5 through MW-9. No other contaminants previously identified in the wells were present during this sampling event. For the past three sampling rounds, no contaminant previously identified on-site has been detected.

In accordance with the workplan, the next quarterly groundwater monitoring event should be scheduled for September 1996.

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VI. REPORT LIMITATIONS

The work described in this report has been performed accordance with generally accepted engineering principles an practices. The conclusions contained herein are presented based on environmental conditions of the site and laboratory test results of the groundwater samples. It must be recognized that changes can occur in groundwater conditions due to seasonal variations, or other reasons. Furthermore, the distribution of chemical concentrations in the groundwater can vary both temporally and spatially. The chemical analyses results are valid as of the date and at the sampling location only. *AllWest* cannot be held accountable for the accuracy of the test data from an independent laboratory, nor for any analyte quantities falling below the recognized standard detection limits for the method utilized by the independent laboratory.

VII. REFERENCES

- Subsurface Investigation Report for J.C. Penney Store No. 836, Eastmont Mall, Oakland, California. Prepared by Dames & Moore and dated July 10, 1991.
- Level One Environmental Site Assessment Report for Eastmont Mall, Oakland, California. Prepared by Certified Engineering & Testing Company and dated October 27, 1992.
- Boring and Monitoring Well Installation Report for Eastmont Mall, Oakland, California. Prepared by Artesian Environmental and dated October 20, 1993.
- Quarterly Groundwater Monitoring Report for Eastmont Mall, Oakland, California. Prepared by Artesian Environmental and dated January 20, 1994.
- Work Plan for Quarterly Groundwater Monitoring and Subsurface Investigation at Eastmont Mall, Oakland, California, AllWest Environmental, October 6, 1995.
- Summary of Maximum Contaminant Levels and Action Levels, State of California, Department of Health Services, Office of Drinking Water, October 1990.

TABLE 1

CUMULATIVE GROUNDWATER ELEVATION MEASUREMENTS

Eastmont Mall
Oakland, California

June 1996

Well Number	Well Casing Elevation	Date of Measurement	Depth to Groundwater	Groundwater Elevation	Average Gradient and Direction
MW-5	+ 42.07'	09-28-93	35.25'	6.82'	West
		12-29-93	36.10'	5.97'	0.007 ft/ft West
		10-19-95	30.10'	11.97'	0.005 ft/ft West
		3-6-96	29.40'	12.67'	0.004 ft/ft Northwest
		6-4-96	26.55'	15.52'	0.004 ft/ft Northwest
MW-6	+ 43.35'	09-28-93	36.85'	6.50'	West
		12-29-93	37.15'	6.20'	0.007 ft/ft West
		10-19-95	31.26'	12.09'	0.005 ft/ft West
		3-6-96	30.17'	13.18'	0.004 ft/ft Northwest
		6-4-96	28.00'	15.38'	0.004 ft/ft Northwest
MW-7	+ 44.37'	09-28-93	33.42'	10.95'	West
		12-29-93	34.25'	10.12'	0.007 ft/ft West
		10-19-95	28.78'	15.59'	0.005 ft/ft West
		3-6-96	28.97'	15.40'	0.004 ft/ft Northwest
		6-4-96	26.84'	17.53'	0.004 Northwest
MW-8	+ 44.90'	09-28-93	32.10'	12.80'	West
		12-29-93	32.75'	12.15'	0.007 ft/ft West
		10-19-95	28.95'	15.95'	0.005 ft/ft West
		3-6-96	28.80'	16.10'	0.004 ft/ft Northwest
		6-4-96	26.92'	17.98'	0.004 ft/ft Northwest
MW-9	+ 44.18'	09-28-93	33.00'	11.18'	West
		12-29-93	33.97'	10.21'	0.007 ft/ft West
		10-19-95	29.18'	15.00'	0.005 ft/ft West
		3-6-96	28.09'	16.09'	0.004 ft/ft Northwest
		6-4-96	26.01'	18.17'	0.004 ft/ft Northwest

Note:

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TABLE 2

CUMULATIVE GROUNDWATER ANALYTICAL RESULTS

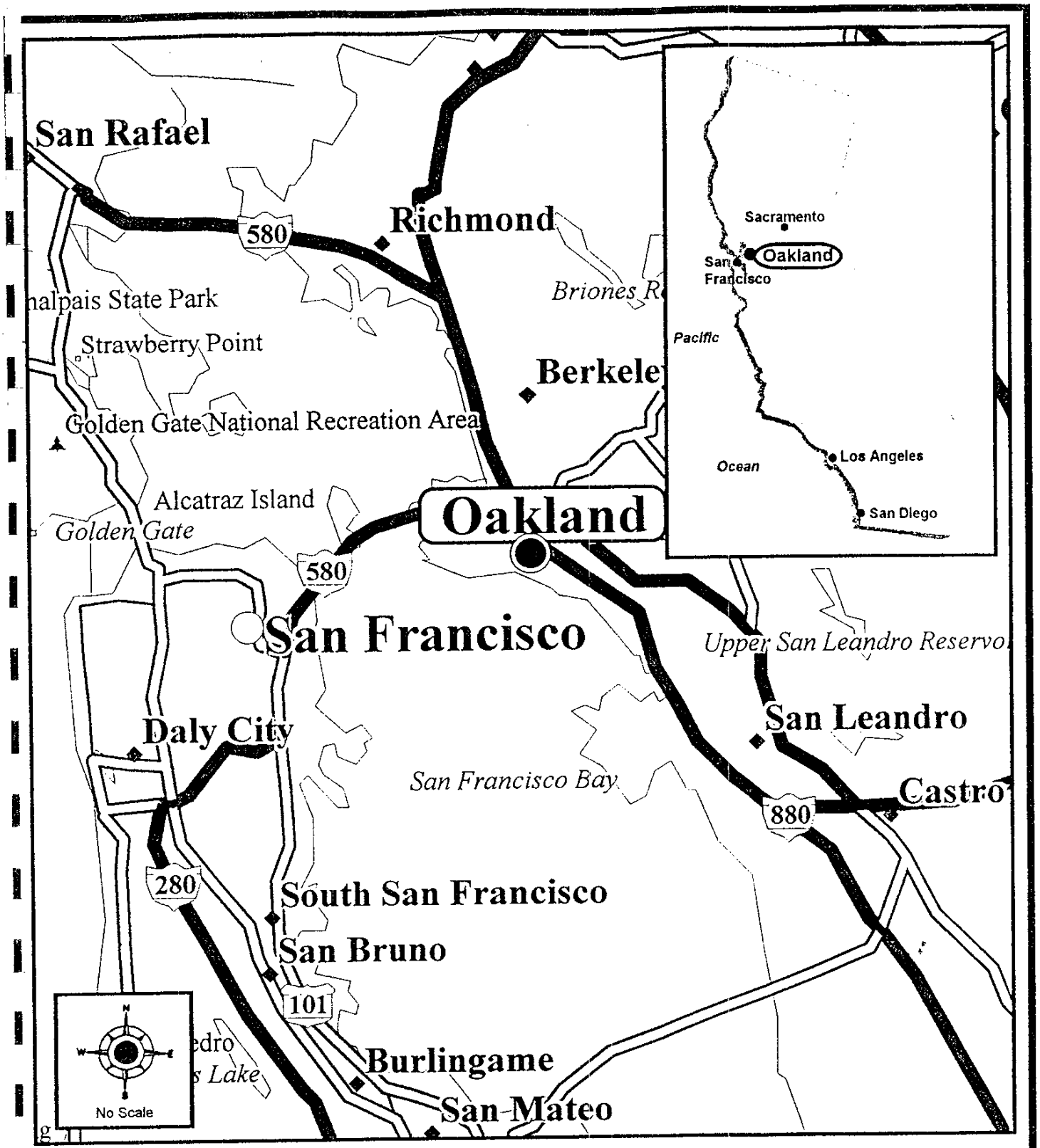
Eastmont Mall
Oakland, California

June 1996

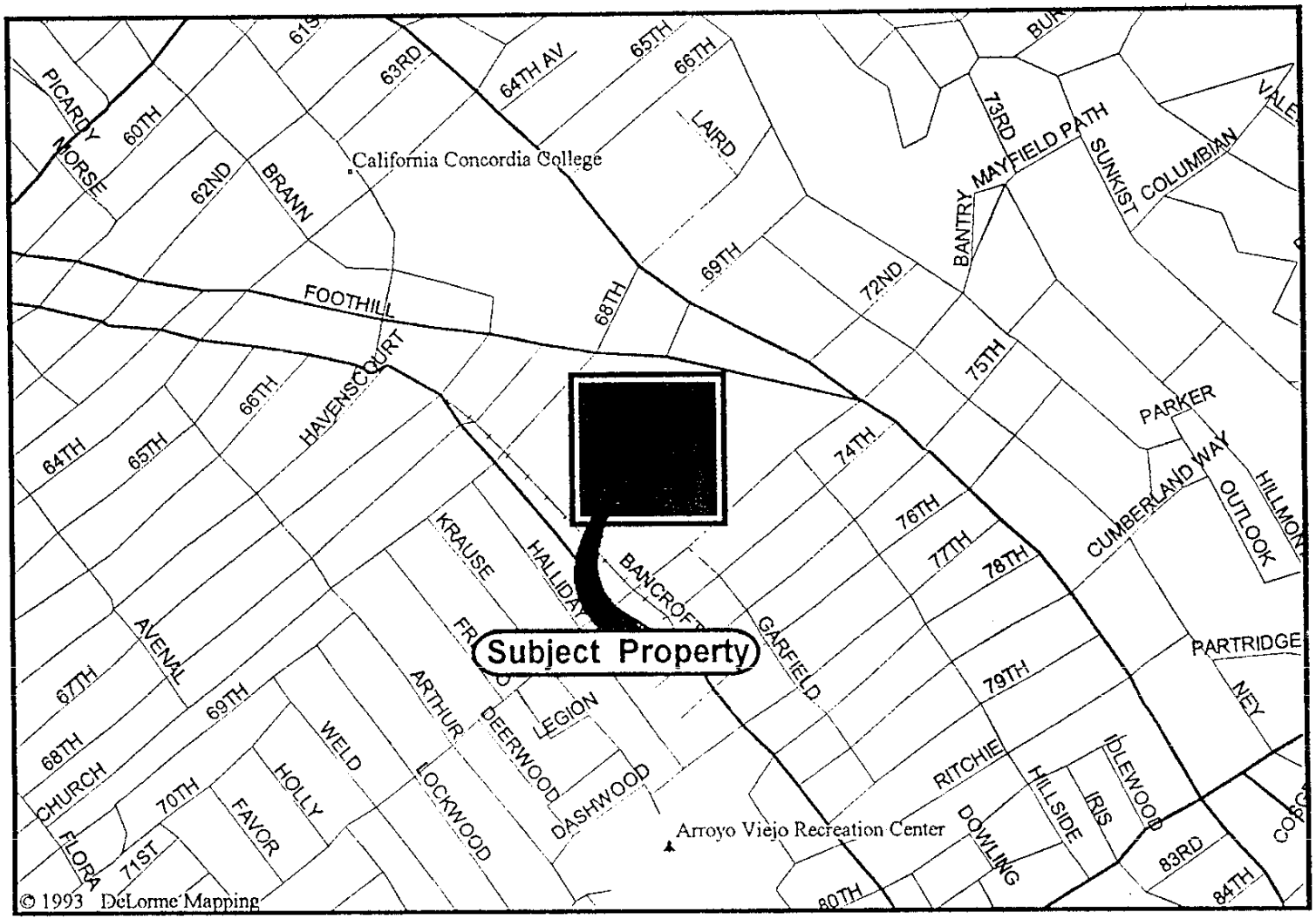
Well Number	Sampling Date	TPH-g	Benzene	Toluene	Ethyl-Benzene	Xylene	Naphthalene Benzo(a)Pyrene	Volatile Organic Compounds
MW-5	12-29-93	ND	ND	ND	ND	ND	NS	ND
	10-19-95	ND	ND	ND	ND	ND	ND	ND
	3-6-96	ND	ND	ND	ND	ND	NS	NS
	6-4-96	ND	ND	ND	ND	ND	NS	NS
MW-6	12-29-93	73	13	ND	1.5	ND	NS	ND
	10-19-95	ND	ND	ND	ND	ND	ND	TCE - 1.4
	3-6-96	ND	ND	ND	ND	ND	NS	ND
	6-4-96	ND	ND	ND	ND	ND	NS	ND
MW-7	12-29-93	78	15	ND	1.7	ND	NS	ND
	10-19-95	ND	ND	ND	ND	ND	ND	ND
	3-6-96	ND	ND	ND	ND	ND	NS	NS
	6-4-96	ND	ND	ND	ND	ND	NS	NS
MW-8	12-29-93	ND	ND	ND	ND	ND	NS	ND
	10-19-95	ND	ND	ND	ND	ND	ND	ND
	3-6-96	ND	ND	ND	ND	ND	NS	NS
	6-4-96	ND	ND	ND	ND	ND	NS	NS
MW-9	12-29-93	ND	ND	ND	ND	ND	NS	ND
	10-19-95	ND	ND	ND	ND	ND	ND	ND
	3-6-96	ND	ND	ND	ND	ND	NS	NS
	6-4-96	ND	ND	ND	ND	ND	NS	NS

Notes: All concentration values were reported in µg/kg equivalent to parts per billion (ppb).
ND is equivalent to "None Detected" at or above the laboratory limit of detection.
NS is equivalent to Not Sampled or the sample was not analyzed.
The Laboratory Limit of Detection for TPH-g is 50 ppb, for BTEX is 0.5 ppb.

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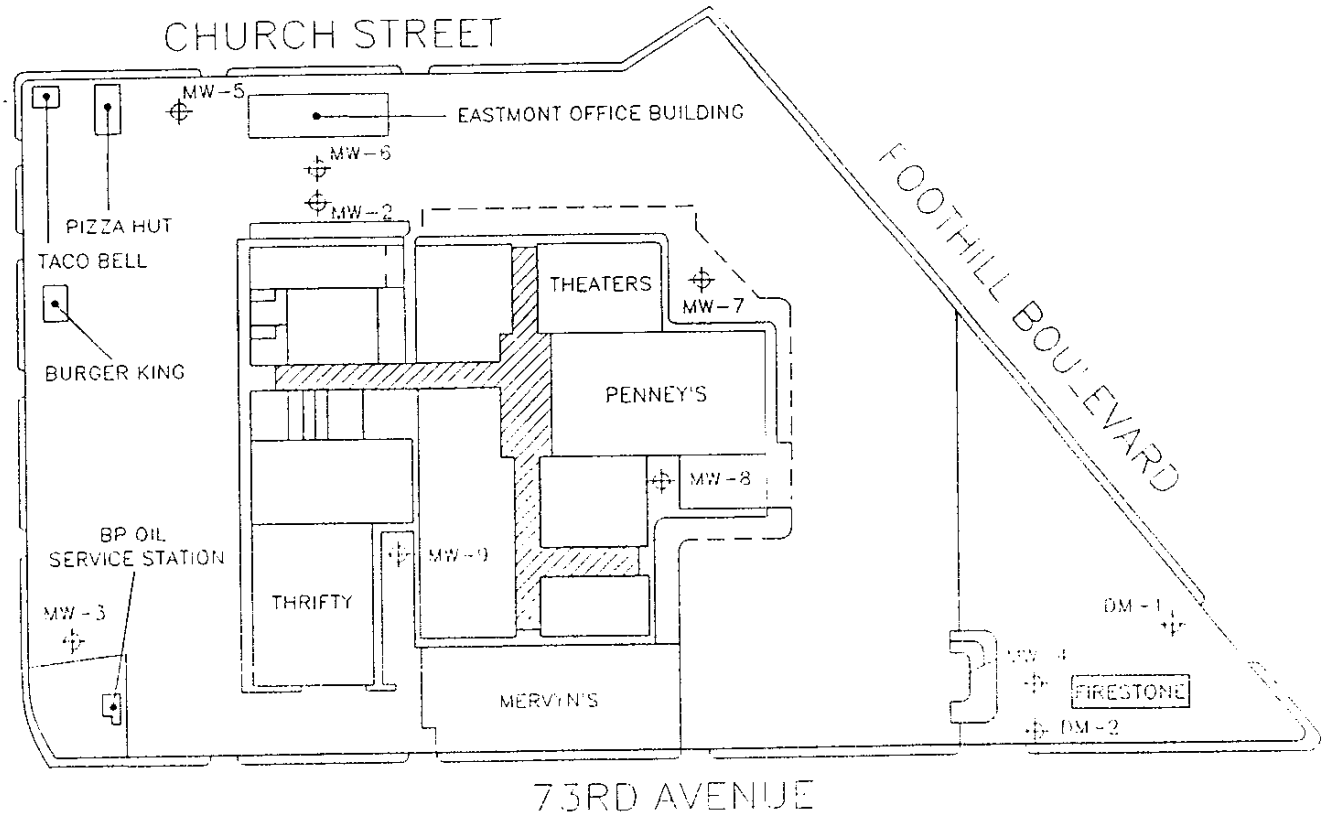


AllWest	June 1996	**Subject Site Regional Map**	Project 95266.28A	Figure 1
	One Eastmont Mall Oakland, California			Source *DeLorme*



AllWest	June 1996	**Subject Site Vicinity Map**	Project No. 95266.28A	Figure 2
	One Eastmont Mall Oakland, California			Scale *1" = 1300'*

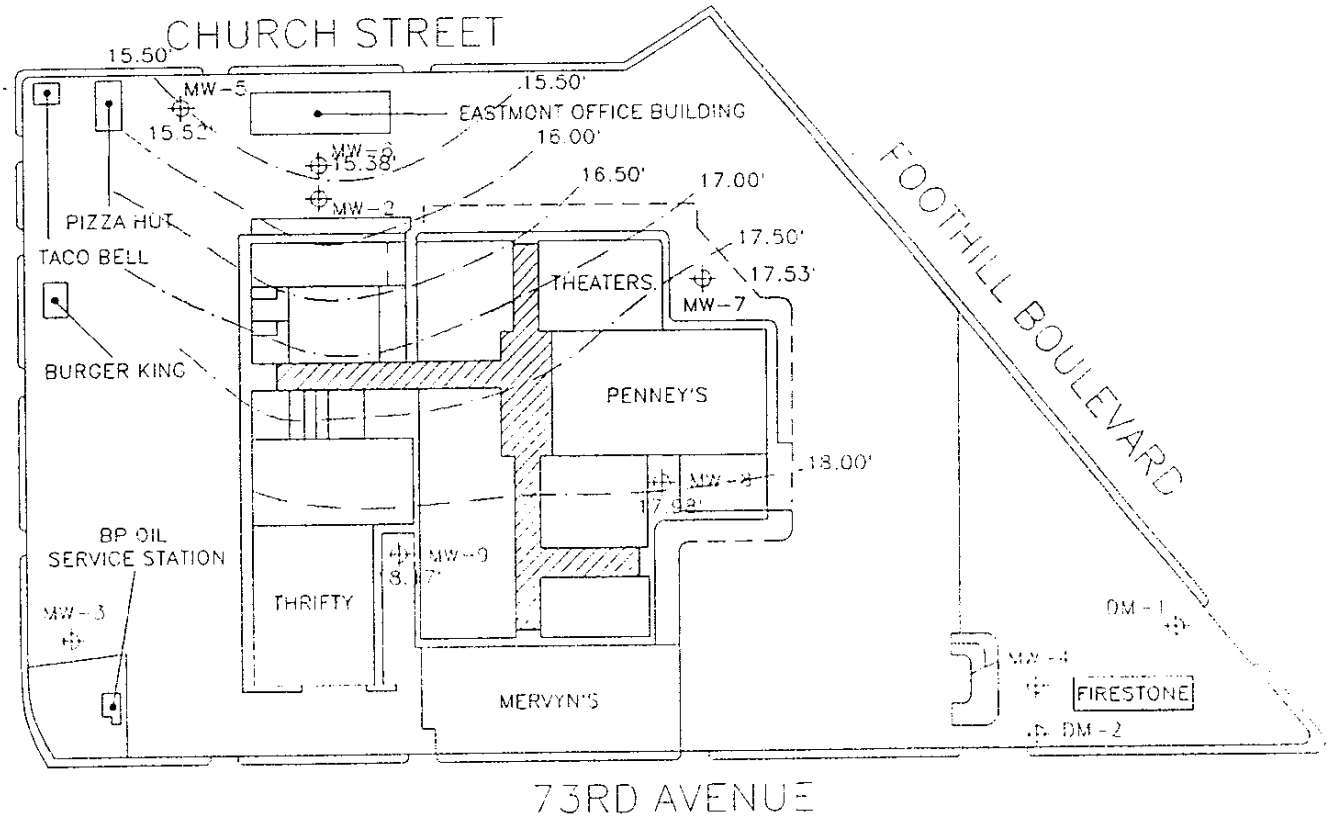
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MW-5 Monitoring Well Location

0' 100' 200' 300' 400' 600' 800'

AllWest	June 1996	**Site Plan & Monitoring Well Location Map**	Project 95266.28A	Figure 3
	One Eastmont Mall Oakland, California			Source *AllWest*



GROUNDWATER FLOW DIRECTION NORTHWEST AT 0.004 FT/FT

MW-5 ⊕ MONITORING WELL LOCATION

NORTH

0' 200' 400' 800'

100' 300' 600'

AllWest	June 1996	**Site Plan & Monitoring Well Location Map**	Project 95266.28A	Figure 4
	One Eastmont Mall Oakland, California			Source *AllWest*

Appendix A

GROUNDWATER SAMPLING PROCEDURES

Upon arriving at the groundwater monitoring well site, each monitoring well vault and well casing are first examined for damage which could render the well inoperable. Any water collected during the recent rains were purged from the well vault to avoid contamination from rain water. The upper end-cap was then removed and an organic vapor meter (OVM) was used to detect hydrocarbon vapor that might exist inside the well casing. The reading of the OVM was then recorded onto the groundwater sampling field log. After an appreciable time for groundwater levels to equilibrate, electric water level sounder was lowered into the well casing to measure the depth to water to the nearest 0.01 feet. A clear polyethylene bailer was then lowered into the well casing and partially submerged. Upon retrieval of the clear bailer, the surface of the water column retained in the bailer was carefully examined for floating product or product sheen.

After initial measurements were completed and recorded, each monitoring well was purged by an electrical submersible pump or decontaminated teflon bailer. A minimum of 3 well volumes of groundwater was purged. Groundwater quality parameters (temperature, pH, and conductivity) were monitored with a combination meter after each well volume was removed. Purging was considered complete when purging indicators were stabilized (consecutive readings within 10% of each other) or the purged water was relatively free of sediments. All purged water was temporarily stored on-site in labeled 55-gallon drums pending test results to determine the proper disposal method. If no contamination was found then the purge water was disposed of as nonhazardous.

Groundwater sampling was conducted after the water level in the well recovered to at least 80% of the initial level that was recorded before purging. The groundwater sample was collected using a disposable bailer, which was discarded after the sampling event. Upon retrieval of the disposable bailer, the retained water was carefully transferred to appropriate glass container(s) (three 40-ml VOAs) furnished by the analytical laboratory. A bottom emptying device was placed on the bailer to minimize the loss of volatile organics during transfer. All sample containers were fitted with teflon lined septum/cap and filled such that no headspace was present. After the water sample was properly transferred to the appropriate containers, the containers were labeled and immediately placed on ice in an insulated cooler to preserve the chemical characteristics of the sample.

To prevent cross contamination, all groundwater sampling equipment that came into contact with the groundwater was thoroughly cleaned by washing in Alconox (a non-phosphate detergent) solution and double rinsed with distilled water prior to each well sampling event. Groundwater samples were stored and transported in an insulated cooler filled with crushed ice. The analytical laboratory collected the samples from the site or from the *AllWest* office. The samples were delivered to the analytical laboratory by a special courier of the laboratory. All samples were transported under strict Chain-of-Custody document protocol from the time of sample collection to the time of arrival at the laboratory.

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Groundwater Monitoring Well Sampling Field Log

Project No.: 95266.28A Project Name: Eastmont Monitor

Well No.: MW-5 Well Location: MW-5

Well Depth: 29.45 (ft.) Casing Diameter: 2" (in.)

Depth to Water: 26.55 (ft.) Date: 6-4-96 Time: 930

Water Column in Well: 22.90 (ft.) Well Volume: 3.66 (gal.)

Odor? No Free Product? No Thickness: No

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ____

Time	pH	Conduc. (μS)	Temp. (°F)	Water Level	Volume Removed	Remark
1215	8.05	1042	79.2		1.5	
1218	7.65	967	76.6		3.0	
1221	7.42	900	74.5		6.0	
1224	7.16	910	73.4		8.5	
1226	7.14	890	72.7		11.0	
1229	6.98	900	72.7		13.5	

Purging Start Time: 1210 Purging Stop Time: 1230

Total Volume Purged: 13.5 (gal.) Well Dewater? No

Water Level Prior to Sampling: 27.20 (ft.) Time: 1300

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 3 - 40 ml VOAs Sample No.: MW-5

Remarks: Duplicate sample MW-10 collected, 3 40-ml VOAs

Sampler: Keith B. Craig Date/Time: 6-4-96 1320

Groundwater Monitoring Well Sampling Field Log

Project No.: 95266.28A Project Name: Eastmont Monitor

Well No.: MW-6 Well Location: MW-6

Well Depth: 49.50 (ft.) Casing Diameter: 2" (in.)

Depth to Water: 28.00 (ft.) Date: 6-4-96 Time: 1010

Water Column in Well: 20.00 (ft.) Well Volume: 3.28 (gal.)

Odor? No Free Product? No Thickness: No

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ____

Time	pH	Conduc. (μS)	Temp. (°F)	Water Level	Volume Removed	Remark
1430	7.25	1450	77.1		1.0	
1432	7.20	1130	74.8		3.0	
1435	7.10	1110	73.6		6.0	
1437	7.01	1110	72.5		8.5	
1441	6.94	1130	72.1		12.0	

Purging Start Time: 1428 Purging Stop Time: 1442

Total Volume Purged: 12.0 (gal.) Well Dewater? No

Water Level Prior to Sampling: 28.65 (ft.) Time: 1500

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 3 - 40 ml VOAs Sample No.: MW-6

Remarks: _____

_____

_____

Sampler: Keith B. Craig Date/Time: 6-4-96 1530

Groundwater Monitoring Well Sampling Field Log

Project No.: 95266.28A Project Name: Eastmont Monitor

Well No.: MW-7 Well Location: MW-7

Well Depth: 49.32 (ft.) Casing Diameter: 2" (in.)

Depth to Water: 26.84 (ft.) Date: 6-4-96 Time: 950

Water Column in Well: 22.48 (ft.) Well Volume: 3.70 (gal.)

Odor? No Free Product? No Thickness: No

Purging Method: Hand Pump ____ Submersible Pump ____ Bailer X Other ____

Time	pH	Conduc. (μS)	Temp. (°F)	Water Level	Volume Removed	Remark
1550	8.13	1390	72.0		1.0	
1553	7.85	1350	70.7		5.0	
1556	7.34	1280	68.7		7.5	
1600	7.35	1320	68.0		10.5	
1603	7.30	1300	68.1		12.5	

Purging Start Time: 1548 Purging Stop Time: 1605

Total Volume Purged: 12.5 (gal.) Well Dewater? No

Water Level Prior to Sampling: 27.36 (ft.) Time: 1630

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 3 - 40 ml VOAs Sample No.: MW-7

Remarks: _____

_____

_____

Sampler: Keith B. Craig Date/Time: 6-4-96 1700

Groundwater Monitoring Well Sampling Field Log

Project No.: 95266.28A Project Name: Eastmont Monitor

Well No.: MW-8 Well Location: MW-8

Well Depth: 48.65 (ft.) Casing Diameter: 2" (in.)

Depth to Water: 26.92 (ft.) Date: 6-4-96 Time: 1030

Water Column in Well: 21.73 (ft.) Well Volume: 3.48 (gal.)

Odor? Strong H.S. Free Product? Yes Thickness: Oily Sheen

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ____

Time	pH	Conduc. (μS)	Temp. (°F)	Water Level	Volume Removed	Remark
1030	7.54	1100	71.9		2.0	
1033	6.95	1060	70.6		5.0	
1036	6.72	1040	69.5		8.0	
1039	6.44	1010	68.6		11.0	
1042	6.40	980	68.3		14.0	

Purging Start Time: 1028 Purging Stop Time: 1043

Total Volume Purged: 14.0 (gal.) Well Dewater? No

Water Level Prior to Sampling: 27.18 (ft.) Time: ____

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 3 - 40 ml VOAs Sample No.: MW-8

Remarks: 3 40-ml VOAs

Sampler: Keith B. Craig Date/Time: 6-4-96 1100

Groundwater Monitoring Well Sampling Field Log

Project No.: 95266.28A Project Name: Eastmont Monitor

Well No.: MW-9 Well Location: MW-9

Well Depth: 49.30 (ft.) Casing Diameter: 2" (in.)

Depth to Water: 26.01 (ft.) Date: 6-4-96 Time: 1000

Water Column in Well: 32.29 (ft.) Well Volume: 3.73 (gal.)

Odor? No Free Product? No Thickness: No

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ____

Time	pH	Conduc. (μS)	Temp. (°F)	Water Level	Volume Removed	Remark
1120	7.64	1420	80.7		1.5	
1123	7.45	1350	76.5		4.0	
1126	7.36	1320	74.8		6.0	
1129	7.20	1630	74.3		9.0	
1132	7.09	1610	73.3		12.0	
1136	7.01	1600	73.0		15.0	

Purging Start Time: 1118 Purging Stop Time: 1137

Total Volume Purged: 15.0 (gal.) Well Dewater? No

Water Level Prior to Sampling: 26.75 (ft.) Time: 1200

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 3 - 40 ml VOAs Sample No.: MW-9

Remarks: _____

_____

_____

Sampler: Keith B. Craig Date/Time: 6-4-96 1200

Global Environmental Laboratory, Inc.
4118 CLIPPER COURT, FREMONT, CA 94538 PHONE (510) 498-1991 FAX (510) 498-1994

June 14, 1996

All West Environmental
One Sutter St., Suite 600
San Francisco, CA 94104

Regarding: **Analytical Results**
Client Project: 95266.28A
Global Lab Project: 960605A

Dear Mr. Keith Craig :

Enclosed are the lab results for the samples submitted to Global Lab for the project above. The samples will be disposed of by the laboratory after 30 days from the time they were received.

We appreciate the opportunity to be of assistance to you. If you have any questions or comments, please feel free to contact me at (510) 498-1991.

Sincerely,

Lei Chen
Laboratory Director

OUTSTANDING QUALITY AND SERVICE

Global Environmental Laboratory, Inc.
4118 CLIPPER COURT, FREMONT, CA 94538 PHONE (510) 498-1991 FAX (510) 498-1994

DHS (LUFT) TPH-BTEX REPORT
(ug/L)

Attn.: Keith Craig
All West Environmental
One Sutter St., Suite 600
San Francisco, CA 94104
Project: 95266.28A
Matrix: Water

Date Sampled: 6-4-96
Date Received: 6-5-96
Date Analyzed: 6-9-96
Date Reported: 6-14-96
Lab. Project #: 960605A

Client I.D.	Lab. I.D.	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Dilution Factor
MW-5	960605A01	ND	ND	ND	ND	1
MW-6	960605A02	ND	ND	ND	ND	1
MW-7	960605A03	ND	ND	ND	ND	1
MW-8	960605A04	ND	ND	ND	ND	1
MW-9	960605A05	ND	ND	ND	ND	1
Units		ug/L	ug/L	ug/L	ug/L	
Reporting Limits		0.5ug/L	0.5ug/L	0.5ug/L	0.5ug/L	

ND Not Detected. All analytes recorded as ND were found to be at or below the Reporting Limit.

Reviewed By:

Lei Chen, Laboratory Director

OUTSTANDING QUALITY AND SERVICE

GE Global Environmental Laboratory, Inc.
4118 CLIPPER COURT, FREMONT, CA 94538 PHONE (510) 498-1991 FAX (510) 498-1994

DHS (LUFT) TPH-GASOLINE REPORT
(ug/L)

Attn.: Keith Craig
All West Environmental
One Sutter St., Suite 600
San Francisco, CA 94104
Project: 95266.28A
Matrix: Water

Date Sampled: 6-4-96
Date Received: 6-5-96
Date Analyzed: 6-9-96
Date Reported: 6-14-96
Lab. Project #: 960605A

Client I.D.	Lab. I.D.	8015M GASOLINE	Dilution Factor
MW-5	960605A01	ND	1
MW-6	960605A02	ND	1
MW-7	960605A03	ND	1
MW-8	960605A04	ND	1
MW-9	960605A05	ND	1
Units		ug/L	
Reporting Limit		50ug/L	

ND Not Detected. All analytes recorded as ND were found to be at or below the Reporting Limit.

Reviewed By:

Lei Chen, Laboratory Director

OUTSTANDING QUALITY AND SERVICE

EPA METHOD TEST QA/QC TABLE

GLOBAL PROJECT #: 960605A

Lab I.D.:	960605A-MSP	Analytical Method:	EPA M8015
Project:	95266.28A	Analysis date:	06-09-96
Ext/Prep. Method:	EPA 5030	Matrix:	Water
Date:	06-09-96	Unit:	ug/L

Analyte	Sample Result	Spike Level	Matrix Spike Result	MS Recovery %	Matrix Spike Dul. Result	MSD Recovery %	Average Recovery %R	LCL %R	UCL %R	RPD %	UCL %RPD
Benzene	0.00	20.00	18.67	93	18.74	94	94	76	127	0	11
Toluene	0.00	20.00	18.87	94	19.62	98	96	76	125	4	13
Chlorobenzene	0.00	20.00	18.95	95	19.33	97	96	75	130	2	13
Gasoline	0.00	1000.00	1214.17	121	1165.75	117	119	70	130	4	30

Notes:
Sample Result-Concentration of Sample which is to used for Sample Spike & Sample Spike Duplicate
Spike Level- Level of Concentration Added to the Sample
MSP Result- Matrix Spike Result
MSP %R- Matrix Spike Percent Recovery
MSPD Result- Matrix Spike Duplicate Result
MSPD %R- Matrix Spike Dublicate Percent Recovery
AVG. %R - Average Recovery for MSP & MSPD % Recovery
LCL- Lower Criteria Level
UCL- Upper Criteria Level
RPD- Relative Percent Difference

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Global Environmental Laboratory, Inc.
4118 CLIPPER COURT, FREMONT, CA 94538 PHONE (510) 498-1991 FAX (510) 498-1994

EPA 8010 REPORT
(ug/L)

Attn.: Keith Craig
All West Environmental
One Sutter St., Suite 600
San Francisco, CA 94104
Project: 95266.28A
Matrix: Water
Client I.D.: MW-6

Date Sampled: 6-4-96
Date Received: 6-5-96
Date Analyzed: 6-12-96
Date Reported: 6-14-96
Lab. Project #: 960605A
Lab ID #: 960605A02

Analyte		Result		Reporting Limit
Dichlorofluoromethane		ND		1.0
Chloromethane		ND		1.0
Bromomethane		ND		1.0
Vinyl chloride		ND		1.0
Chloroethane		ND		1.0
Trichlorofluoroethane		ND		1.0
1,1-Dichloroethene		ND		1.0
Methylene Chloride		ND		2.0
Trans-1,2-Dichloroethene		ND		1.0
1,1-Dichloroethane		ND		1.0
Cis-1,2-Dichloroethene		ND		1.0
Chloroform		ND		1.0
1,1,1-Trichloroethane		ND		1.0
Carbon Tetrachloride		ND		1.0
1,2-Dichloroethane		ND		1.0
Trichloroethene		ND		1.0
1,2-Dichloropropene		ND		1.0
Bromodichloromethane		ND		1.0
Trans-1,3-Dichloropropene		ND		1.0
Cis-1,3-Dichloropropene		ND		1.0
1,1,2-Trichloroethane		ND		1.0
Tetrachloroethene		ND		1.0
Dibromochloromethane		ND		1.0
Chlorobenzene		ND		1.0
Bromoform		ND		1.0
1,1,2,2-Tetrachloroethane		ND		1.0
1,3-Dichlorobenzene		ND		1.0
1,4-Dichlorobenzene		ND		1.0
1,2-Dichlorobenzene		ND		1.0

SURROGATE RECOVERY	% Recovery	% Control Limits
4-bromofluorobenzene	102	84-122

ND = Not Detected at Reporting Limit
Reviewed By: ELAP#: I-1080

Lei Chen, Laboratory Director

OUTSTANDING QUALITY AND SERVICE

EPA METHOD TEST QA/QC TABLE

GLOBAL PROJECT #: 960605A

Lab I.D. Number:	960605A-MSP	Analytical Method:	EPA 8010
Client Project:	95266.28A	Analysis date:	06-12-96
Ext/Prep. Method:	EPA 5030	Matrix:	Water
Date:	06-12-96	Unit:	ug/L

Analyte	Sample Result	Spike Level	MSP Result	MSP %R	MSPD Result	MSPD %R	AVE. %R	LCL %R	UCL %R	RPD %	UCL %RPD
1,1-dichloroethene	0.00	25.00	23.94	96	23.73	95	95	61	145	1	14
Trichloroethene	0.00	25.00	23.60	94	22.86	91	93	71	120	3	14
Chlorobenzene	0.00	25.00	23.83	95	23.42	94	95	75	130	2	13

Notes:
Sample Result-Concentration of Sample which is to used for Sample Spike & Sample Spike Duplicate
Spike Level- Level of Concentration Added to the Sample
MSP Result- Matrix Spike Result
MSP %R- Matrix Spike Percent Recovery
MSPD Result- Matrix Spike Duplicate Result
MSPD %R- Matrix Spike Dublicate Percent Recovery
AVG. %R - Average Recovery for MSP & MSPD % Recovery
LCL- Lower Criteria Level
UCL- Upper Criteria Level
RPD- Relative Percent Difference

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Global Environmental Laboratory, Inc.
Tel: (510) 498-1991 Fax: (510) 498-1994

CHAIN OF CUSTODY

LOG NO. 1006

CLIENT NAME: AllWest Environmental
ADDRESS: 1 Sutter ST #600
San Francisco CA 94104
PROJECT NAME: Eastmont monitor
PROJECT MANAGER: Keith Craig PHONE #: (415) 391-2370
SAMPLED BY: Keith Craig
JOB DESCRIPTION: GW Sampling
SITE LOCATION: Eastmont Mall
Oakland Ca

CLIENT JOB NUMBER: 95266.28A

DESTINATION LABORATORY:
☒ GE
4118 Clipper Court
Fremont, CA 94538
☐ Other

FIELD CONDITIONS: Hot Sunny
COMPOSITE: No
SPECIAL INSTRUCTIONS:

DATE	TIME	SAMPLE IDENTIFICATION	METHOD	MATRIX	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	ANALYSIS REQUESTED: 8010	8015 Carb TPH-gas soil	8020 BTEX	TURN AROUND TIME: 24 HOURS	48 HOURS	1 WEEK	OTHERS	NOTE / FIELD READINGS
6-4-96		MW-5		water	4	40ml VOAs	HCl		X	X			X		
		MW-6			4			X	X	X			X		
		MW-7			4				X	X			X		
		MW-8			4				X	X			X		
		MW-9			3				X	X			X		
		MW-10			4										Hold

SUSPECTED CONSTITUENTS

SAMPLE RETENTION TIME

PRESERVATIVES: (1) HCL (2) HNO_3 (3) COLD (4)

RELINQUISHED BY (SIGN)	PRINT NAME / COMPANY	DATE / TIME	RECEIVED BY (SIGN)	PRINT NAME / COMPANY
Keith B Craig	Keith Craig AllWest	6-5-96 1450		John Dodge Imperial
John Dodge	John Dodge Imperial	6-5-96 4:04		

REC'D AT LAB BY: | DATE / TIME: | CONDITIONS / COMMENTS:

SHIPPED VIA ☐ FED X ☐ UPS ☐ OTHER _____ AIR BILL #

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AllWest Environmental, Inc.

Specialists in Environmental Due Diligence and Remedial Services

AllWest

AllWest Environmental, Inc.

Specialists in Environmental Due Diligence and Remedial Services

One Sutter Street, Suite 600
San Francisco, Ca 94104
Tel 415.391.2510
Fax 415.391.2008

QUARTERLY GROUNDWATER MONITORING REPORT

First Quarter
January - March 1996

Eastmont Mall
Oakland, California

ALLWEST PROJECT 95266.28A
March 22, 1996

PREPARED BY:

Keith B. Craig
Project Manager

REVIEWED BY:

Long Ching, PE
Senior Engineer

C 33487
EXP. 12/31/97
CIVIL
STATE OF CALIFORNIA

AllWest

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Appendix A - Groundwater Sampling Protocol
Appendix B - Groundwater Sampling Field Logs
Appendix C - Laboratory Test Results and Chain-of-Custody Records

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QUARTERLY GROUNDWATER MONITORING REPORT

First Quarter 1996

Eastmont Mall
Oakland, California

I. INTRODUCTION

This report presents the results of the quarterly groundwater monitoring event performed by *AllWest Environmental* at the *Eastmont Mall* located in Oakland, California. The groundwater sampling event occurred on March 6, 1996. The groundwater monitoring was conducted in accordance with the *Alameda County* approved workplan.

The scope of *AllWest's* services include sampling of five groundwater monitoring wells (MW-5 through MW-9), measuring groundwater levels in all of the monitoring wells, forwarding the collected groundwater samples to a state certified laboratory for chemical analyses, and preparing a written report presenting the results of the groundwater sampling. This round of sampling was for the first quarter of 1996.

II. PROJECT BACKGROUND

Site Location and Description

The subject property lies in the east Oakland area of Alameda County, California, in a mixed commercial and residential district (See Figures 1 and 2). The subject property is bounded by Foothill Boulevard, 73rd Avenue, and Bancroft Avenue in the Eastmont District of Oakland.

The subject property consists of a large two-story shopping mall with several smaller buildings at the site (See Figure 3), including an office complex, a police station, three fast-food restaurants, and a gasoline service station.

Site Background

According to available documents of previous site assessments by others, subsurface impact by petroleum hydrocarbons has been detected at the *BP Service Station* and the police station (formerly *Firestone Tire Shop*). A "site closure" has been granted to the police station site by the *San Francisco Bay Regional Water Quality Control Board* (*SFBRWQCB*) in 1994.

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The service station site is currently being remediated by *BP* and are under the oversight of the *Alameda County Environmental Health Department (ACEHD)*.

Between 1989 and 1993, up to nine groundwater monitoring wells were installed by various environmental consultants around the mall building as part of the on-going site assessment. A well installed by *Hunter Environmental* in 1989 was located west of a dry cleaning facility (*Sparkle Cleaners*) and numbered MW-2. Low levels of PCE and TCE were detected in the groundwater sample from MW-2 during the initial sampling event.

However, MW-2 could not be located during a subsequent site assessment by *Artesian Environmental* in 1993. Consequently, *Artesian* installed a replacement well (MW-6) in the general area of MW-2. The 1993 groundwater sampling did not detect PCE or TCE in MW-6 or any of the other on-site wells. The only contaminants detected in site groundwater wells were low concentrations of gasoline, benzene, and ethylbenzene in well MW-7. The wells around the mall building had not been sampled since 1993.

In September 1995, the *ACEHD* directed the mall management to initiate a quarterly groundwater monitoring program for wells MW-5 through MW-9. The purpose was to gather sufficient groundwater quality data so that a determination for site closure can be made by the County. AllWest was retained in October 1995 to perform the quarterly monitoring and conducted the last quarterly sampling event in October 1995.

III. GROUNDWATER SAMPLING ACTIVITIES

Sampling of the groundwater monitoring wells was conducted by *AllWest* on March 6, 1996. Field activities included the measurement of groundwater elevations and sampling of all five monitoring wells (MW-5 through MW-9). AllWest's groundwater sampling protocols were followed and are presented in Appendix A. Copies of the groundwater sampling field logs are presented in Appendix B.

The groundwater levels in wells MW-5 through MW-9 measured during this and previous monitoring events are presented in Table 1, Cumulative Groundwater Level Measurements. Groundwater flow direction during this monitoring event was calculated to be towards the northwest with an average gradient of 0.004 ft/ft.

At least three well casing volumes were purged prior to sampling each well. After purging, three 40-milliliter samples were collected from each of the five monitoring wells. No product sheen was noted in any of the wells during purging.

A Quality Assurance/Quality Control (QA/QC) sample, in the form of a duplicate sample of sample MW-8, labeled MW-10, was collected. Additionally, a trip blank provided by the laboratory was included with the sample shipment to the laboratory.

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IV. LABORATORY TEST RESULTS

The collected groundwater samples were forwarded to a State of California certified analytical laboratory, *Global Environmental Lab, Inc.* (*Global Lab*), of Fremont, California. All of the samples were analyzed for the presence of total petroleum hydrocarbons as gasoline (TPH-g) and the volatile constituents of gasoline including benzene, toluene, ethylbenzene, and xylene (BTEX). Sample MW-6 was also analyzed for Halogenated Volatile Organic Compounds (HVOCs) by EPA method 601.

No detectable concentrations of TPH-g, BTEX, or HVOCs were found in any of the samples.

A cumulative summary of analytical results for wells MW-5 through MW-9 to date are presented on Table 2. A copy of the laboratory test reports and Chain-of-Custody documents are included as Appendix C.

V. CONCLUSIONS AND RECOMMENDATIONS

As indicated by the laboratory test results, TPH-g, BTEX, and the HVOCs were not detected in the groundwater samples from monitoring wells MW-5 through MW-9. No other contaminants previously identified in the wells were present during this sampling event. For the past two sampling rounds, no contaminant previously identified on-site has been detected.

In accordance with the workplan, the next quarterly groundwater monitoring event should be scheduled for June 1996.

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VI. REPORT LIMITATIONS

The work described in this report has been performed accordance with generally accepted engineering principles an practices. The conclusions contained herein are presented based on environmental conditions of the site and laboratory test results of the groundwater samples. It must be recognized that changes can occur in groundwater conditions due to seasonal variations, or other reasons. Furthermore, the distribution of chemical concentrations in the groundwater can vary both temporally and spatially. The chemical analyses results are valid as of the date and at the sampling location only. *AllWest* cannot be held accountable for the accuracy of the test data from an independent laboratory, nor for any analyte quantities falling below the recognized standard detection limits for the method utilized by the independent laboratory.

VII. REFERENCES

- Subsurface Investigation Report for J.C. Penney Store No. 836, Eastmont Mall, Oakland, California. Prepared by Dames & Moore and dated July 10, 1991.
- Level One Environmental Site Assessment Report for Eastmont Mall, Oakland, California. Prepared by Certified Engineering & Testing Company and dated October 27, 1992.
- Boring and Monitoring Well Installation Report for Eastmont Mall, Oakland, California. Prepared by Artesian Environmental and dated October 20, 1993.
- Quarterly Groundwater Monitoring Report for Eastmont Mall, Oakland, California. Prepared by Artesian Environmental and dated January 20, 1994.
- Work Plan for Quarterly Groundwater Monitoring and Subsurface Investigation at Eastmont Mall, Oakland, California, AllWest Environmental, October 6, 1995.
- Summary of Maximum Contaminant Levels and Action Levels, State of California, Department of Health Services, Office of Drinking Water, October 1990.

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TABLE 1

CUMULATIVE GROUNDWATER ELEVATION MEASUREMENTS

Eastmont Mall
March 1996

Well Number	Well Casing Elevation	Date of Measurement	Depth to Groundwater	Groundwater Elevation	Average Gradient and Direction
MW-5	+ 42.07'	09-28-93 12-29-93 10-19-95 3-6-96	35.25' 36.10' 30.10' 29.40'	6.82' 5.97' 11.97' 12.67'	West 0.007 ft/ft West 0.005 ft/ft West 0.004 ft/ft Northwest
MW-6	+ 43.35'	09-28-93 12-29-93 10-19-95 3-6-96	36.85' 37.15' 31.26' 30.17'	6.50' 6.20' 12.09' 13.18'	West 0.007 ft/ft West 0.005 ft/ft West 0.004 ft/ft Northwest
MW-7	+ 44.37'	09-28-93 12-29-93 10-19-95 3-6-96	33.42' 34.25' 28.78' 28.97'	10.95' 10.12' 15.59' 15.40'	West 0.007 ft/ft West 0.005 ft/ft West 0.004 ft/ft Northwest
MW-8	+ 44.90'	09-28-93 12-29-93 10-19-95 3-6-96	32.10' 32.75' 28.95' 28.80'	12.80' 12.15' 15.95' 16.10'	West 0.007 ft/ft West 0.005 ft/ft West 0.004 ft/ft Northwest
MW-9	+ 44.18'	09-28-93 12-29-93 10-19-95 3-6-96	33.00' 33.97' 29.18' 28.09'	11.18' 10.21' 15.00' 16.09'	West 0.007 ft/ft West 0.005 ft/ft West 0.004 ft/ft Northwest

Note:

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AllWest

TABLE 2

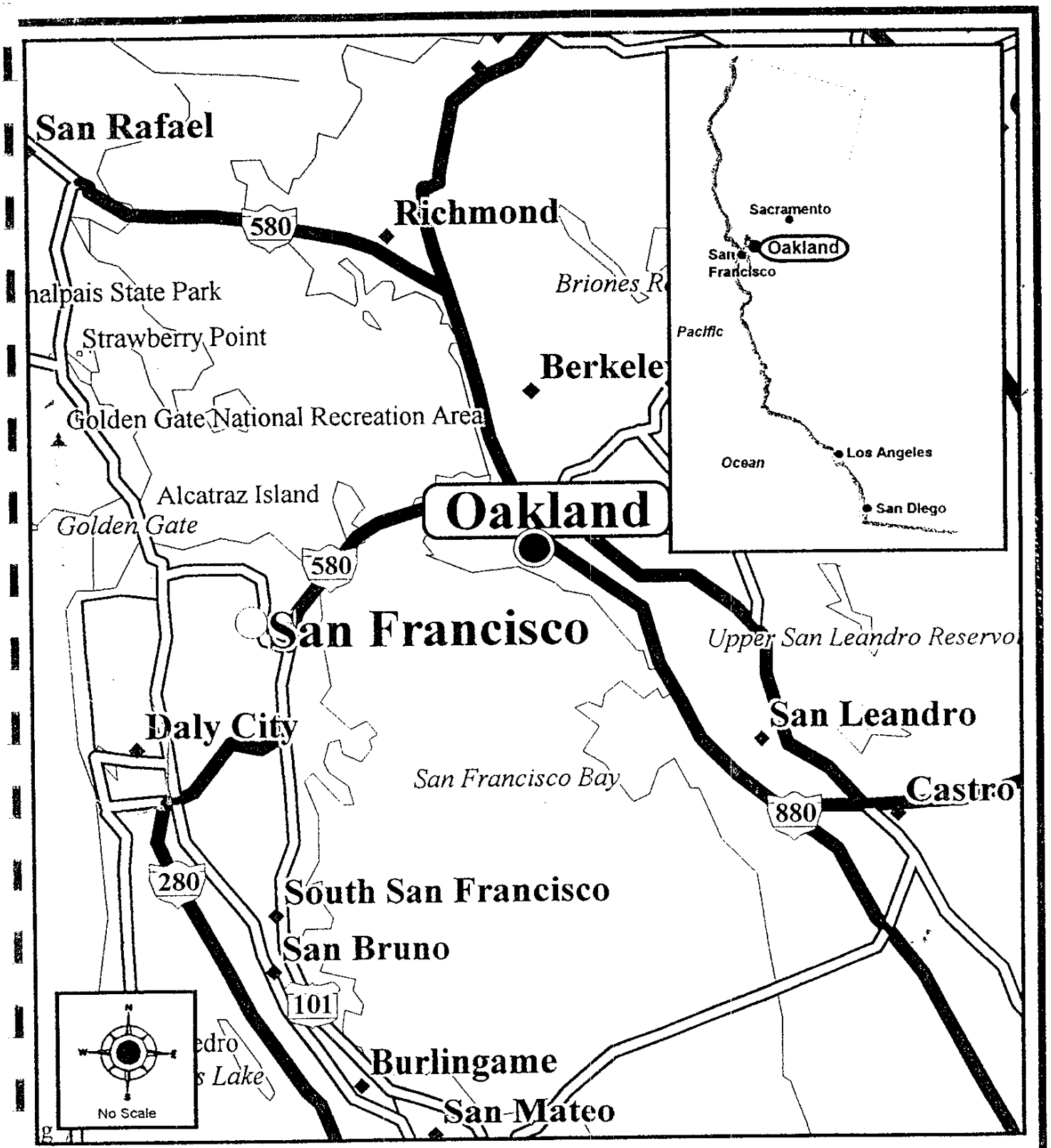
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS

Eastmont Mall
March 1996

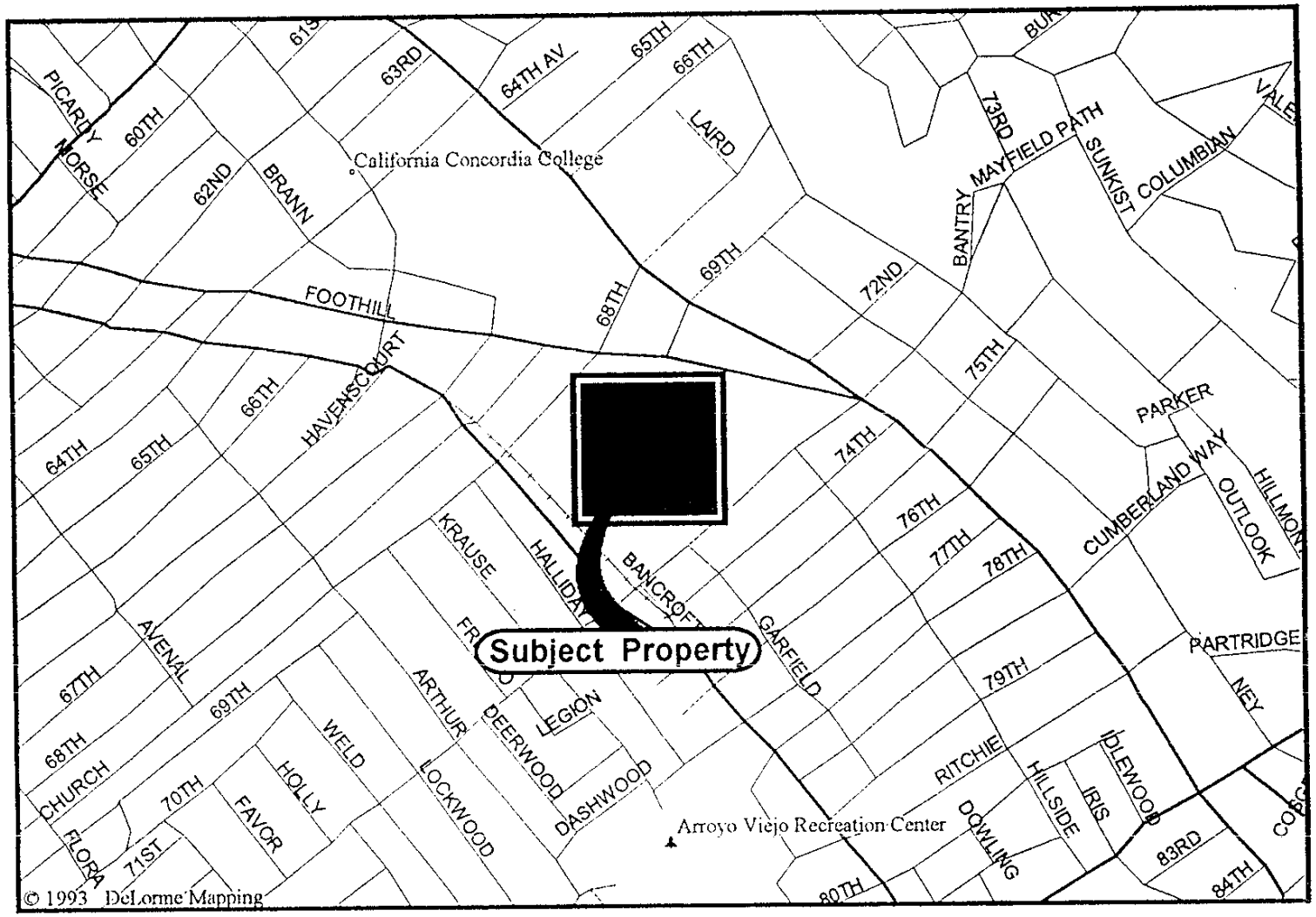
Well Number	Sampling Date	TPH-g	Benzene	Toluene	Ethyl-Benzene	Xylene	Naphthalene Benzo(a)Pyrene	Volatile Organic Compounds
MW-5	12-29-93	ND	ND	ND	ND	ND	NS	ND
	10-19-95	ND	ND	ND	ND	ND	ND	ND
	3-6-96	ND	ND	ND	ND	ND	NS	NS
MW-6	12-29-93	73	13	ND	1.5	ND	NS	ND
	10-19-95	ND	ND	ND	ND	ND	ND	TCE - 1.4
	3-6-96	ND	ND	ND	ND	ND	NS	ND
MW-7	12-29-93	78	15	ND	1.7	ND	NS	ND
	10-19-95	ND	ND	ND	ND	ND	ND	ND
	3-6-96	ND	ND	ND	ND	ND	NS	NS
MW-8	12-29-93	ND	ND	ND	ND	ND	NS	ND
	10-19-95	ND	ND	ND	ND	ND	ND	ND
	3-6-96	ND	ND	ND	ND	ND	NS	NS
MW-9	12-29-93	ND	ND	ND	ND	ND	NS	ND
	10-19-95	ND	ND	ND	ND	ND	ND	ND
	3-6-96	ND	ND	ND	ND	ND	NS	NS

Notes: All concentration values were reported in µg/kg equivalent to parts per billion (ppb).
ND is equivalent to "None Detected" at or above the laboratory limit of detection.
NS is equivalent to Not Sampled or the sample was not analyzed.
The Laboratory Limit of Detection for TPH-g is 50 ppb, for BTEX is 0.5 ppb.

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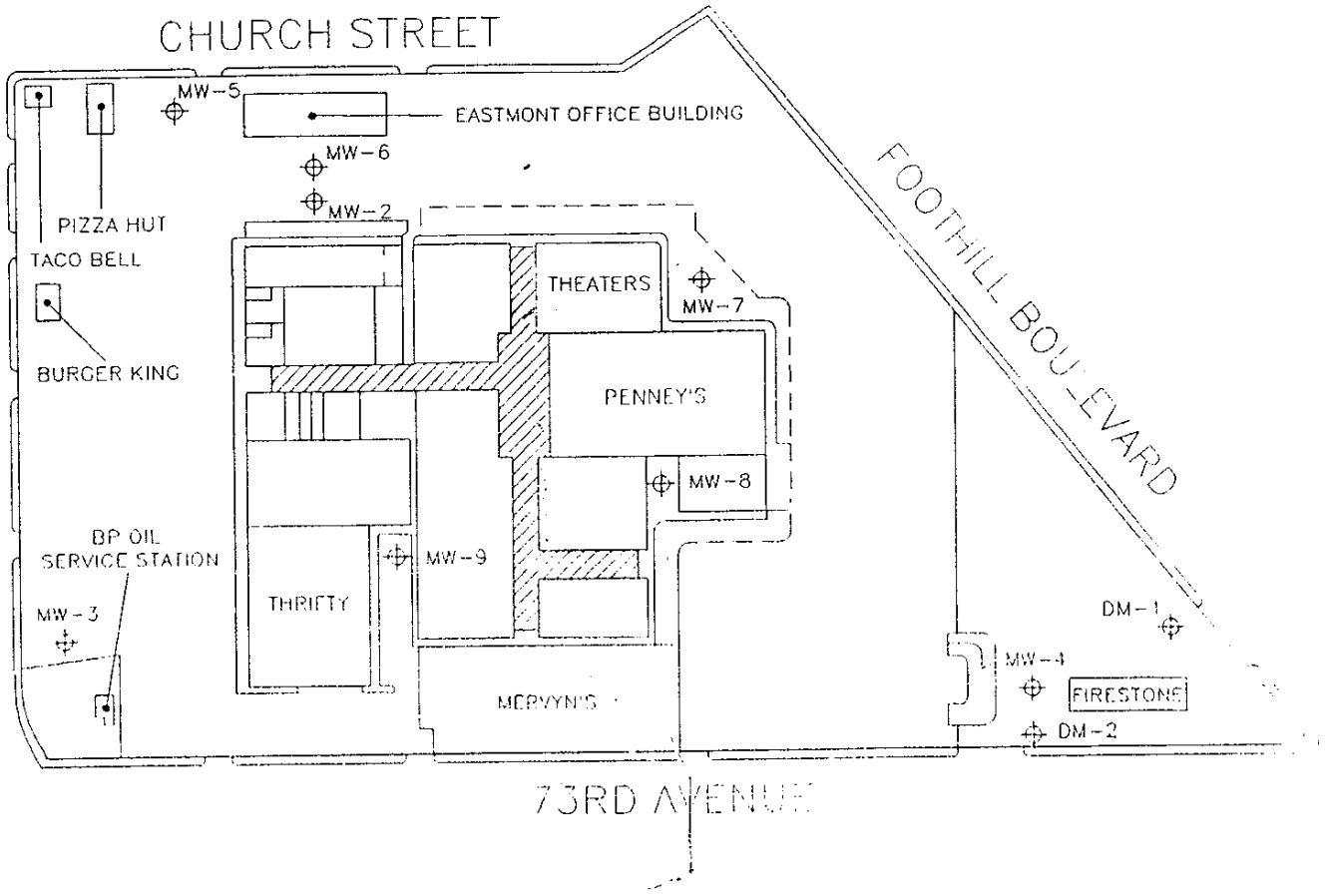


AllWest	March 1996	**Subject Site Regional Map**	Project 95266.28A	Figure 1
	One Eastmont Mall Oakland, California			Source *DeLorme*

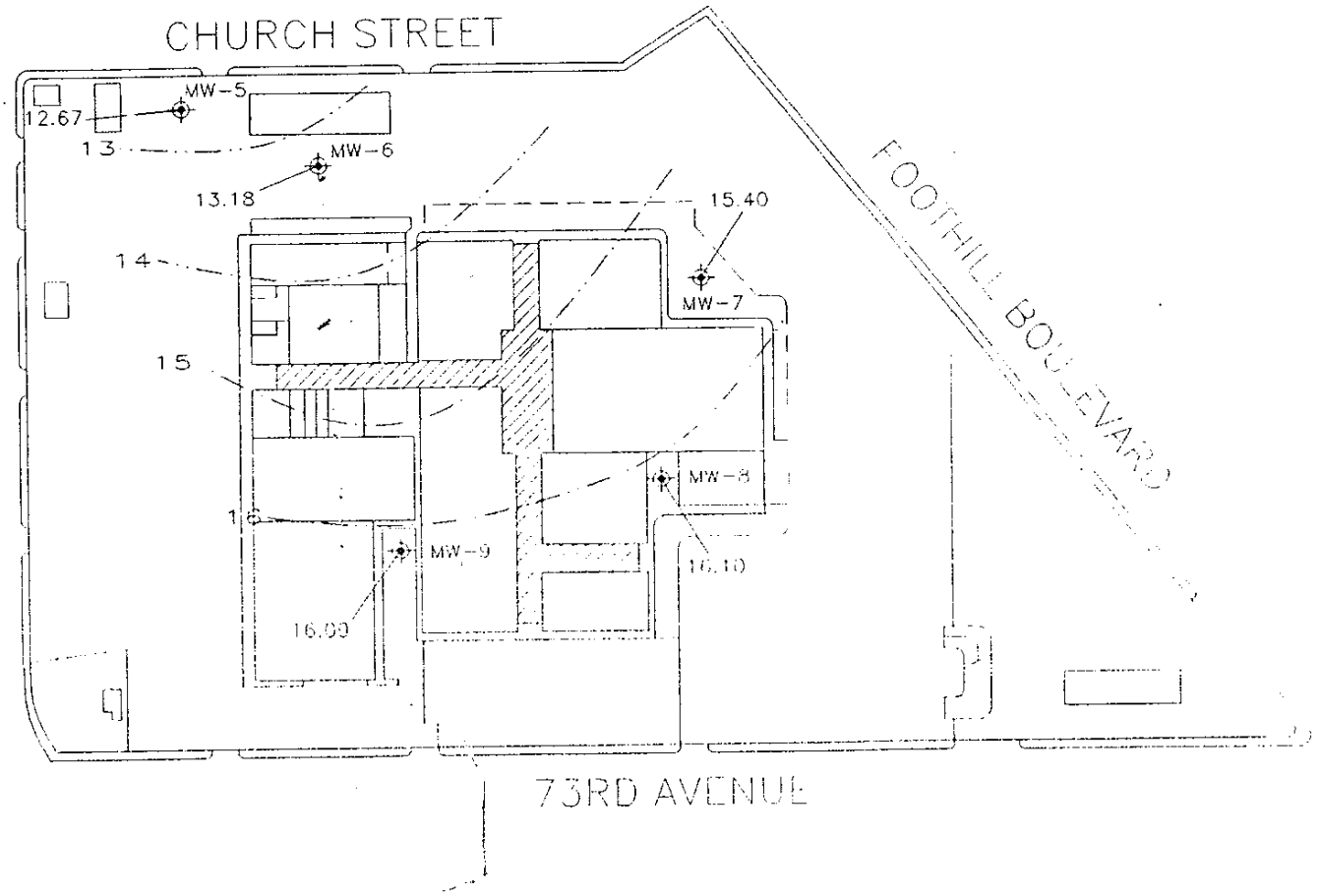


AllWest	March 1996	**Subject Site Vicinity Map**	Project No. 95266.28A	Figure 2
	One Eastmont Mall Oakland, California			Scale *1" = 1300'*

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AllWest	March 1996	**Site Plan & Monitoring Well Location Map**	Project 95266.28A	Figure 3
	One Eastmont Mall Oakland, California			Source *AllWest*



AllWest	March 1996	**Groundwater Contour Map**	Project 95266.28A	Figure 4
	One Eastmont Mall Oakland, California			Source *AllWest*

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Appendix A

GROUNDWATER SAMPLING PROCEDURES

Upon arriving at the groundwater monitoring well site, each monitoring well vault and well casing are first examined for damage which could render the well inoperable. Any water collected during the recent rains were purged from the well vault to avoid contamination from rain water. The upper end-cap was then removed and an organic vapor meter (OVM) was used to detect hydrocarbon vapor that might exist inside the well casing. The reading of the OVM was then recorded onto the groundwater sampling field log. After an appreciable time for groundwater levels to equilibrate, electric water level sounder was lowered into the well casing to measure the depth to water to the nearest 0.01 feet. A clear polyethylene bailer was then lowered into the well casing and partially submerged. Upon retrieval of the clear bailer, the surface of the water column retained in the bailer was carefully examined for floating product or product sheen.

After initial measurements were completed and recorded, each monitoring well was purged by an electrical submersible pump or decontaminated teflon bailer. A minimum of 3 well volumes of groundwater was purged. Groundwater quality parameters (temperature, pH, and conductivity) were monitored with a combination meter after each well volume was removed. Purging was considered complete when purging indicators were stabilized (consecutive readings within 10% of each other) or the purged water was relatively free of sediments. All purged water was temporarily stored on-site in labeled 55-gallon drums pending test results to determine the proper disposal method. If no contamination was found then the purge water was disposed of as nonhazardous.

Groundwater sampling was conducted after the water level in the well recovered to at least 80% of the initial level that was recorded before purging. The groundwater sample was collected using a disposable bailer, which was discarded after the sampling event. Upon retrieval of the disposable bailer, the retained water was carefully transferred to appropriate glass container(s) (three 40-ml VOAs) furnished by the analytical laboratory. A bottom emptying device was placed on the bailer to minimize the loss of volatile organics during transfer. All sample containers were fitted with teflon lined septum/cap and filled such that no headspace was present. After the water sample was properly transferred to the appropriate containers, the containers were labeled and immediately placed on ice in an insulated cooler to preserve the chemical characteristics of the sample.

To prevent cross contamination, all groundwater sampling equipment that came into contact with the groundwater was thoroughly cleaned by washing in Alconox (a non-phosphate detergent) solution and double rinsed with distilled water prior to each well sampling event. Groundwater samples were stored and transported in an insulated cooler filled with crushed ice. The analytical laboratory collected the samples from the site or from the *AllWest* office. The samples were delivered to the analytical laboratory by a special courier of the laboratory. All samples were transported under strict Chain-of-Custody document protocol from the time of sample collection to the time of arrival at the laboratory.

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Groundwater Monitoring Well Sampling Field Log

Project No.: 95266.28A Project Name: Eastmont

Well No.: MW-5 Well Location: Northwest corner

Well Depth: 49.25 (ft.) Casing Diameter: 2" (in.)

Depth to Water: 29.40 (ft.) Date: 3-6-96 Time: 930

Water Column in Well: 19.85 (ft.) Well Volume: 3.17 (gal.)

Odor? No Free Product? No Thickness: -

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ____

Time	pH	Conduc. (μS)	Temp. (°F)	Water Level	Volume Removed	Remark
1250	7.80	916	72.1		2.0	
1252	7.47	885	71.8		4.5	
1253	7.17	895	71.3		7.0	
1255	7.02	861	70.2		10.0	
1257	6.92	875	70.7		13.5	

Purging Start Time: 1250 Purging Stop Time: 1259

Total Volume Purged: 13.5 (gal.) Well Dewater? No

Water Level Prior to Sampling: 29.55 (ft.) Time: 1300

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 3 - 40 ml VOAs Sample No.: MW-5

Remarks: _____

_____

_____

Sampler: Keith B. Craig Date/Time: 3-6-96 1300

Groundwater Monitoring Well Sampling Field Log

Project No.: 95266.28A Project Name: Eastmont

Well No.: MW-6 Well Location: MW-6

Well Depth: 49.50 (ft.) Casing Diameter: 2" (in.)

Depth to Water: 30.17 (ft.) Date: 3-6-96 Time: 930

Water Column in Well: 19.33 (ft.) Well Volume: 3.19 (gal.)

Odor? No Free Product? No Thickness: -

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ____

Time	pH	Conduc. (µS)	Temp. (°F)	Water Level	Volume Removed	Remark
1510	7.53	1086	68.8		0.3	Moderately Turbid
1511	7.13	1052	69.4		3.0	
1513	6.86	1088	69.5		5.5	Clear
1515	6.81	1081	69.4		8.5	Clear
1517	6.83	1067	68.3		12.5	Clear
1518	6.82	1074	69.1		15.0	Clear

Purging Start Time: 1509 Purging Stop Time: 1520

Total Volume Purged: 15.0 (gal.) Well Dewater? No

Water Level Prior to Sampling: 31.10 (ft.) Time: 1540

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 4 - 40 ml VOAs Sample No.: MW-6

Remarks: Collected extra VOA for 8010 analysis

Sampler: Keith B. Craig Date/Time: 3-6-96 1540

Groundwater Monitoring Well Sampling Field Log

Project No.: 95266.28A Project Name: Eastmont

Well No.: MW-7 Well Location: MW-7

Well Depth: 49.32 (ft.) Casing Diameter: _____ (in.)

Depth to Water: 28.97 (ft.) Date: 3-6-96 Time: 950

Water Column in Well: 20.35 (ft.) Well Volume: 3.26 (gal.)

Odor? No Free Product? No Thickness: -

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ___

Time	pH	Conduc. (µS)	Temp. (°F)	Water Level	Volume Removed	Remark
1400	8.00	1290	68.7		0.2	Slight Turbidity
1401	7.43	1224	67.4		2.5	
1402	7.28	1165	66.4		5.5	Clear
1410	7.07	1239	64.4		8.0	Dewatered at 6.0'
1413	7.11	1195	65.0		13.0	Clear

Purging Start Time: 1358 Purging Stop Time: 1415

Total Volume Purged: 13.0 (gal.) Well Dewater? Yes

Water Level Prior to Sampling: 29.95 (ft.) Time: 1430

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 3 - 40 ml VOAs Sample No.: MW-7

Remarks: MW-10 - duplicate sample of MW-8

Sampler: Keith B. Craig Date/Time: 3-6-96 1430

Groundwater Monitoring Well Sampling Field Log

Project No.: 95266.28A Project Name: Eastmont

Well No.: MW-8 Well Location: MW-8

Well Depth: 48.65 (ft.) Casing Diameter: 2" (in.)

Depth to Water: 28.80 (ft.) Date: 3-6-96 Time: 940

Water Column in Well: 19.85 (ft.) Well Volume: 2.17 (gal.)

Odor? No Free Product? No Thickness: -

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ____

Time	pH	Conduc. (μS)	Temp. (°F)	Water Level	Volume Removed	Remark
1015	6.85	1250	69.3		0.2	Moderately Turbid
1016	6.85	447	69.2		2.5	Clear
1018	6.75	439	67.9		5.0	Clear
1019	6.71	423	67.6		7.5	Clear
1021	6.78	430	67.6		9.0	Clear
	7.25	1545	70.1		13.5	

Purging Start Time: 1015 Purging Stop Time: 1022

Total Volume Purged: 9.0 (gal.) Well Dewater? No

Water Level Prior to Sampling: 29.1 (ft.) Time: 1045

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 3 - 40 ml VOAs Sample No.: MW-8

Remarks: MW-10 - duplicate sample of MW-8

Sampler: Keith B. Craig Date/Time: 3-6-96 1100

Groundwater Monitoring Well Sampling Field Log

Project No.: 95266.28A Project Name: Eastmont

Well No.: MW-9 Well Location: MW-9

Well Depth: 49.30 (ft.) Casing Diameter: 2" (in.)

Depth to Water: 28.09 (ft.) Date: 3-6-96 Time: 940

Water Column in Well: 13.95 (ft.) Well Volume: 3.23 (gal.)

Odor? No Free Product? No Thickness: -

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ____

Time	pH	Conduc. (μS)	Temp. (°F)	Water Level	Volume Removed	Remark
1130	9.6	1670	69.7		0.3	Highly Turbid
1131	8.90	804	69.6		2.5	
1133	8.10	1086	68.9		6.0	
1134	7.76	1226	69.4		8.5	
1136	7.43	1564	70.1		11.0	
	7.25	1545	70.1		13.5	

Purging Start Time: 1129 Purging Stop Time: 1138

Total Volume Purged: 13.5 (gal.) Well Dewater? No

Water Level Prior to Sampling: 28.75 (ft.) Time: _____

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 3 - 40 ml VOAs Sample No.: MW-9

Remarks: _____

_____

_____

Sampler: Keith B. Craig Date/Time: 3-6-96 1155

Global Enviromental Laboratory, Inc.

4118 CLIPPER COURT, FREMONT, CA 94538 PHONE (510) 498-1991 FAX (510) 498-1994

EPA 8010 REPORT
(ug/L)

Client:	All West Environmental, Inc	Date Sampled:	3-06-96
	One Sutter Street, #600	Date Recieved:	3-07-96
	San Francisco, CA94104	Date Analyzed:	3-09-96
		Date Reported:	3-13-96
Project:	Eastmont Monitor	Lab Job #:	960307A
Matrix:	Water	Lab ID #:	960307A03
Client I.D.:	MW-6		

Analyte	Result	MDL	Matrix Spike % Recovery	Matrix Spike Duplicate % Recovery
Dichlorofluoromethane	ND	0.5		
Chloromethane	ND	0.3		
Bromomethane	ND	1.3		
Vinyl chloride	ND	0.5		
Chloroethane	ND	0.5		
Trichlorofluoroethane	ND	0.3		
1,1-Dichloroethene	ND	0.5		
Methylene Chloride	ND	2.0		
Trans-1,2-Dichloroethene	ND	0.2		
1,1-Dichloroethane	ND	0.4		
Cis-1,2-Dichloroethene	ND	0.2		
Chloroform	ND	0.2		
1,1,1-Trichloroethane	ND	0.3		
Carbon Tetrachloride	ND	0.8		
1,2-Dichloroethane	ND	0.3		
Trichloroethene	ND	0.4		
1,2-Dichloropropene	ND	0.6		
2-Chloro-vinyl ether	ND	1.5		
Bromodichloromethane	ND	0.5		
Trans-1,3-Dichloropropene	ND	0.4		
Cis-1,3-Dichloropropene	ND	0.5		
1,1,2-Trichloroethane	ND	1.0		
Tetrachloroethene	ND	0.5		
Dibromochloromethane	ND	0.8		
Chlorobenzene	ND	0.1		
Bromoform	ND	0.4		
1,1,2,2-Tetrachloroethane	ND	0.4		
1,3-Dichlorobenzene	ND	0.1		
1,4-Dichlorobenzene	ND	0.2		
1,2-Dichlorobenzene	ND	0.2		

ND = Not Detected at Methold Detection Limit
Reviewed By:

Lei Chen, Laboratory Director

OUTSTANDING QUALITY AND SERVICE

Global Enviromental Laboratory, Inc.
4118 CLIPPER COURT, FREMONT, CA 94538 PHONE (510) 498-1991 FAX (510) 498-1

DHS (LUFT) TPH-BTEX REPORT

(ug/L)

Attn.:	All West Environmental, Inc	Date Sampled:	3-06-96
	One Sutter Street, #600	Date Received:	3-07-96
	San Francisco, CA94104	Date Analyzed:	3-09-96
		Date Reported:	3-13-96
Project:	Eastmont Monitor, #95266.28A	Lab. Project #:	960307A
Matrix:	Water		

Client I.D.	Lab. I.D.	Benzene	Toluene	Ethyl Benzene	Total Xylenes	DF
MW-5	960307A02	ND	ND	ND	ND	1
MW-6	960307A03	ND	ND	ND	ND	1
MW-7	960307A04	ND	ND	ND	ND	1
MW-8	960307A05	ND	ND	ND	ND	1
MW-9	960307A06	ND	ND	ND	ND	1
Units		ug/L	ug/L	ug/L	ug/L	
Reporting Limits		0.5ug/L	0.5ug/L	0.5ug/L	0.5ug/L	

ND Not Detected. All analytes recorded as ND were found to be at or below the Reporting Limit.

Reviewed By:

Lei Chen, Laboratory Director

Global Enviromental Laboratory, Inc.
4118 CLIPPER COURT, FREMONT, CA 94538 PHONE (510) 498-1991 FAX (510) 498-199

DHS (LUFT) TPH-GASOLINE REPORT
(ug/L)

Attn.:	All West Environmental, Inc	Date Sampled:	3-06-96
	One Sutter Street, #600	Date Received:	3-07-96
	San Francisco, CA94104	Date Analyzed:	3-09-96
		Date Reported:	3-13-96
Project:	Eastmont Monitor, #95266.28A	Lab. Project #:	960307A
Matrix:	Water		

Client I.D.	Lab. I.D.	8015M GASOLINE	DF
MW-5	960307A02	ND	1
MW-6	960307A03	ND	1
MW-7	960307A04	ND	1
MW-8	960307A05	ND	1
MW-9	960307A06	ND	1
Units		ug/L	
Reporting Limit		50ug/L	

ND Not Detected. All analytes recorded as ND were found to be at or below the Reporting Limit.

Reviewed By:

Lei Chen, Laboratory Director

OUTSTANDING QUALITY AND SERVICE

EPA METHOD TEST QA/QC TABLE

GLOBAL PROJECT #: 960307A

Lab I.D. Number:	960307A-MSP	Analytical Method:	EPA 8010
Client Project:	95266-28A	Analysis date:	03-09-96
Ext/Prep. Method:	EPA 5030	Matrix:	Water
Date:	03-09-96	Unit:	ug/l

Analyte	Sample Result	Spike Level	MSP Result	MSP %R	MSPD Result	MSPD %R	AVE. %R	LCL %R	UCL %R	RPD %	UCL %RPD
1,1-dichloroethene	0.00	50.00	54.80	110	57.00	114	112	61	145	4	14
Trichloroethene	0.00	50.00	52.50	105	53.30	107	106	71	120	2	14
Chlorobenzene	0.00	50.00	53.25	107	53.80	108	107	75	130	1	13

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EPA METHOD TEST QA/QC TABLE

GLOBAL PROJECT #: 960307A

Lab I.D.:	960307A03-SP	Analytical Method:	EPA 8015M
Project:	95266-28A	Analysis date:	03-09-96
Ext/Prep. Method:	EPA 5030	Matrix:	Water
Date:	03-09-96	Unit:	ug/L

Analyte	Sample Result	Spike Level	Matrix Spike Result	MS Recovery %	Matrix Spike Dul. Result	MSD Recovery %	Average Recovery %R	LCL %R	UCL %R	RPD %	UCL %RPD
Benzene	0.00	20.00	17.90	90	18.14	91	90	76	127	1	11
Toluene	0.00	20.00	18.06	90	18.25	91	91	76	125	1	13
Chlorobenzene	0.00	20.00	17.99	90	18.04	90	90	75	130	0	13
Gasoline	0.00	1000.00	1236.27	124	1225.84	123	123	70	130	1	13

Notes:
Sample Result-Concentration of Sample which is to used for Sample Spike & Sample Spike Duplicate
Spike Level- Level of Concentration Added to the Sample
MSP Result- Matrix Spike Result
MSP %R- Matrix Spike Percent Recovery
MSPD Result- Matrix Spike Duplicate Result
MSPD %R- Matrix Spike Dublicate Percent Recovery
AVG. %R - Average Recovery for MSP & MSPD % Recovery
LCL- Lower Criteria Level
UCL- Upper Criteria Level
RPD- Relative Percent Difference

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California Laboratory Services

CHAIN OF CUSTODY

LOG NO. 10297

CLIENT NAME: All West Environmental
ADDRESS: 1 Sutter St #600, San Francisco CA 94104
PROJECT NAME: Eastmont Monitor
PROJECT MANAGER: Keith Craig PHONE #: 391-2510
SAMPLED BY: Keith Craig
JOB DESCRIPTION: Water Sampling
SITE LOCATION: Eastmont Mall, Oakland

CLIENT JOB NUMBER: 5266.28A

DESTINATION LABORATORY:
☐ CLS 3249 FITZGERALD RD. RANCHO CORDOVA, CA 95742
☒ OTHER: Global LABS

FIELD CONDITIONS: Sunny Breezy
COMPOSITE: N/A
SPECIAL INSTRUCTIONS: Normal TAT

DATE	TIME	SAMPLE IDENTIFICATION	METHOD	MATRIX	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	8010	8015(m) TPH-gas/diesel	8020 BTEX only	TURN AROUND TIME: 24 HOURS	48 HOURS	1 WEEK	2 WEEKS	NOTE / FIELD READINGS
~~3-6-96~~		MW-5		water	3	40ml VOA			X	X			X		
3-7-96	1520	MW-6		"	4	"		X	X	X			X		
"	1420	MW-7		"	3	"			X	X			X		
"	1045	MW-8		"	3	"			X	X			X		
"	1200	MW-9		"	3	"			X	X			X		
"	1100	MW-10		"	3	"									Hold

SUSPECTED CONSTITUENTS

SAMPLE RETENTION TIME

PRESERVATIVES: (1) HCL (2) HNO_3 (3) = COLD (4)

RELINQUISHED BY (SIGN)	PRINT NAME / COMPANY	DATE / TIME	REC'D BY (SIGN)	PRINT NAME / COMPANY
Keith Craig	Keith Craig All West	3-7-96		11:52am 3-7-96

REC'D AT LAB BY: | DATE / TIME: | CONDITIONS / COMMENTS:

SHIPPED VIA ☐ FED X ☐ UPS ☐ OTHER _____ AIR BILL #

LAB

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ALLWEST ENVIRONMENTAL
1 Sutter Street, Suite 600
San Francisco, CA 94104
415-391-2510
415-391-2008 (FAX)

TRANSMITTAL

TO: Ms. Madullah Logan
Alameda County Dept. of Environmental Health
1131 Harbor Bay Parkway, #250
Alameda, CA 94502-6577

DATE: 12-7-95

WE ARE TRANSMITTING:

PROJECT #: 95278.23
95266.28

__ Per Your Request
X Herewith
__ Under Separate Cover
__ Federal Express

THE FOLLOWING:_____

REMARKS:_____

TRANSMITTED AS CHECKED BELOW:

__ For Approval
X For Your Use
__ As Requested
__ For Review & Comment

SIGNED: Marc Cunningham

ARGONAUT FINANCIAL SERVICES, INC.

Realty & Investments

May 14, 1993

Mr. Ron Owcarz
Alameda County Environmental Health
80 Swan Way #200
Oakland, CA 94621

Re: Eastmont plan of investigation

Dear Ron:

In January of 1993, we submitted a plan of investigation for the Eastmont property. I believe we last chatted about the status of this property in February or March, when you advised me that your office could not proceed without a deposit. (We also chatted about an underground storage tank near the Eastmont Auto store.) I do not know if the deposit was ever forwarded.

Not long after our last discussion, our bankruptcy trustee agreed to let the secured lenders at Eastmont have the property. In late March, the transaction was approved by the court. As of the first of April, the secured lenders took control over Eastmont.

In other words, we will not be further prosecuting the plan of investigation or the tank removal. We were prepared to let both jobs to Artesian Environmental but now have no authority to do so. Therefore, please do not look to us for further action or financial responsibility on this matter. We have turned over our records to the secured lenders, however, and they are aware of the now pressing nature of this work. They appeared to be prepared to proceed as we would have, but it is incumbent on them to formally apprise your office of their intentions.

The secured lenders are the Pacific Bank of San Francisco and Bayside Mortgage of San Rafael. Bayside's principal's, David Norwitt and Jack Sumski, have day to day control over the property and can be reached at my old number (632-1131). Note my new number below, if you have any questions.

We appreciate the cooperativeness of your office in the past and regret the inconvenience of this change.

Best regards,

Jim Given

Post Office Box 17196 • Oakland, California 94601 • (510) 533-7078

Box 17196
Oakland Ca 94601
Attn: Carey

OAKLAND CA 945
PM
14 MAY
1993

OAKLAND
CALIF

Alameda Cty. Environmental Health
80 Swan Way #200
Oakland, CA 94621

Attn
Ron Owens

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AllWest

AllWest Environmental, Inc.

RECEIVED
By

Specialists in Environmental Due
Diligence and Remedial Services

AllWest Environmental, Inc.

Specialists in Environmental Due Diligence and Remedial Services

One Sutter Street, Suite 600
San Francisco, Ca 94104
Tel 415.391.2510
Fax 415.391.2008

QUARTERLY GROUNDWATER MONITORING REPORT

Third Quarter
August - October 1995
Eastmont Mall
Oakland, California

ALLWEST PROJECT 95266.28
November 17, 1995

PREPARED BY:

Keith B. Craig
Project Manager

REVIEWED BY:

12/21/97

Long Ching, PE
Senior Engineer

AllWest

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II.	PROJECT BACKGROUND	Page 1
III.	GROUNDWATER SAMPLING ACTIVITIES	Page 2
IV.	LABORATORY TEST RESULTS	Page 3
V.	CONCLUSIONS AND RECOMMENDATIONS	Page 3
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TABLES

Table 1 - Accumulative Groundwater Level Measurements
Table 2 - Accumulative Groundwater Analytical Results

FIGURES

Figure 1 - Site Regional Map
Figure 2 - Site Vicinity Map
Figure 3 - Well Location Map
Figure 4 - Groundwater Surface Contour Map

APPENDICES

Appendix A - Groundwater Sampling Protocol
Appendix B - Groundwater Sampling Field Logs
Appendix C - Laboratory Test Results and Chain-of-Custody Records

AllWest

QUARTERLY GROUNDWATER MONITORING REPORT

Third Quarter 1995
Eastmont Mall
Oakland, California

I. INTRODUCTION

This report presents the results of the quarterly groundwater monitoring event performed by *AllWest Environmental* at the *Eastmont Mall* located in Oakland, California. The groundwater sampling event occurred on October 19, 1995. The groundwater monitoring was conducted in accordance with the *Alameda County* approved workplan for the third quarter (August through October) of 1995.

The scope of *AllWest's* services include sampling of five groundwater monitoring wells (MW-5 through MW-9), measuring groundwater levels in the monitoring wells, forwarding the collected groundwater samples to a state certified laboratory for chemical analyses, and preparing a written report presenting the results of the groundwater sampling.

II. PROJECT BACKGROUND

The subject property lies in the east Oakland area of Alameda County, California, in a mixed commercial and residential district (See Figures 1 and 2). The subject property is bounded by Foothill Boulevard, 73rd Avenue, and Bancroft Avenue in the Eastmont District of Oakland.

The subject property consists of a large two-story shopping mall with several smaller buildings at the site (See Figure 3), including an office complex, a police station, three fast-food restaurants, and a gasoline service station.

According to available documents of previous site assessments by others, subsurface impact by petroleum hydrocarbons has been detected at the BP Service Station and the police station (formerly Firestone Tire Shop). A "site closure" has been granted to the police station site by Regional Water Quality Control Board in 1994. The service station site is currently being remediated by BP and under the oversight of Alameda County Environmental Health Department.

Between 1989 and 1993, up to nine groundwater monitoring wells were installed by various environmental consultants around the mall building as part of the on-going site assessment. A well installed by Hunter Environmental in 1989 was located west of a dry cleaning facility

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(Sparkle Cleaners) and numbered MW-2. Low levels of PCE and TCE were detected in the groundwater sample from MW-2 during the initial sampling event.

However, MW-2 could not be located during a subsequent site assessment by Artesian Environmental in 1993. Consequently, Artesian installed a replacement well (MW-6) in the general area of MW-2. The 1993 groundwater sampling did not detect PCE or TCE in MW-6 or any of the other on-site wells. The only contaminants detected in site groundwater wells were low concentrations of gasoline, benzene, and ethylbenzene in well MW-7. The wells around the mall building have not been sampled since 1993.

In September 1995, Alameda County Environmental Health Department directed the mall management to initiate a quarterly groundwater monitoring program for wells MW-5 through MW-9. The purpose was to gather sufficient groundwater quality data so that a determination on site closure can be made by the County. AllWest was retained in October 1995 to perform the quarterly monitoring.

III. GROUNDWATER SAMPLING ACTIVITIES

Field activities for this third quarter 1995 groundwater monitoring event included the measurement of groundwater elevations and sampling of all five monitoring wells (MW-5 through MW-9). Sampling of the groundwater monitoring wells was conducted by *AllWest* personnel on October 19, 1995.

The groundwater levels in wells MW-5 through MW-9 measured during this and previous monitoring events are presented in Table 1, Accumulative Groundwater Level Measurements, in the TABLES section of this report. Groundwater flow direction during this monitoring event was calculated to be towards the west with an average gradient of 0.005 ft/ft.

AllWest's groundwater sampling protocols, presented in Appendix A of this report, were followed. At least three well casing volumes were purged prior to sampling. After purging, six 40-milliliter and two 1-liter samples were collected from each of the five monitoring wells. No product sheen was noted in any of the wells prior to purging.

A Quality Assurance/Quality Control (QA/QC) sample, in the form of a duplicate sample of sample MW-9, labeled MW-10, was collected. Additionally, a trip blank provided by the laboratory followed all of the sample bottles originating from the laboratory. Copies of the groundwater sampling field logs are presented in Appendix B.

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IV. LABORATORY TEST RESULTS

The collected groundwater samples were forwarded to a State of California certified analytical laboratory, *California Laboratory Services* (*Cal Labs*), of Rancho Cordova, California and analyzed for the presence of total petroleum hydrocarbons as gasoline (TPH-g), the volatile constituents of gasoline benzene, toluene, ethylbenzene, and xylene (BTEX), the Halogenated Volatile Organic Compounds (HVOCs) by EPA method 601, and the two Polynuclear Aromatics Hydrocarbons (PNAs), Benzo(a)pyrene and Naphthalene, by EPA 610.

No detectable concentrations of TPH-g, BTEX, or the two PNAs were found in samples from all of the monitoring wells, MW-5 through MW-9.

No detectable concentrations of HVOCs were detected in any of the five wells except for Trichloroethene (TCE) in monitoring well MW-6. The TCE concentration from the MW-6 sample was reported as 1.4 parts per billion (ppb).

An accumulative summary of analytical results for wells MW-5 through MW-9 to date are presented on Table 2 in the TABLES section of this report. A copy of the laboratory test reports and Chain-of-Custody documents are included as Appendix C.

V. CONCLUSIONS AND RECOMMENDATIONS

As indicated by the laboratory test results, TPH-g, BTEX, and the two PNAs were not detected in the groundwater samples from monitoring wells MW-5 through MW-9.

Laboratory results indicated that only TCE was detected in MW-6 at a concentration of 1.4-ppb. The Maximum Contaminant Level (MCL) for TCE in drinking water, established by the State of California, is reported as 5-ppb. The TCE concentration level from well MW-6 does not exceed the MCL. No other contaminants previously identified in the wells were present during this sampling event.

Since no HVOC has ever been detected in wells MW-5, MW-7, MW-8, and MW-9, AllWest recommends that HVOC analyses be eliminated from the quarterly monitoring requirements for these four wells. In accordance with the workplan, the next quarterly groundwater monitoring event should be scheduled for January 1996.

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VI. REPORT LIMITATIONS

The work described in this report has been performed accordance with generally accepted engineering principles an practices. The conclusions contained herein are presented based on environmental conditions of the site and laboratory test results of the groundwater samples. It must be recognized that changes can occur in groundwater conditions due to seasonal variations, or other reasons. Furthermore, the distribution of chemical concentrations in the groundwater can vary both temporally and spatially. The chemical analyses results are valid as of the date and at the sampling location only. *AllWest* cannot be held accountable for the accuracy of the test data from an independent laboratory, nor for any analyte quantities falling below the recognized standard detection limits for the method utilized by the independent laboratory.

VII. REFERENCES

- Subsurface Investigation Report for J.C. Penney Store No. 836, Eastmont Mall, Oakland, California. Prepared by Dames & Moore and dated July 10, 1991.
- Level One Environmental Site Assessment Report for Eastmont Mall, Oakland, California. Prepared by Certified Engineering & Testing Company and dated October 27, 1992.
- Boring and Monitoring Well Installation Report for Eastmont Mall, Oakland, California. Prepared by Artesian Environmental and dated October 20, 1993.
- Quarterly Groundwater Monitoring Report for Eastmont Mall, Oakland, California. Prepared by Artesian Environmental and dated January 20, 1994.
- Work Plan for Quarterly Groundwater Monitoring and Subsurface Investigation at Eastmont Mall, Oakland, California, AllWest Environmental, October 6, 1995.
- Summary of Maximum Contaminant Levels and Action Levels, State of California, Department of Health Services, Office of Drinking Water, October 1990.

AllWest

TABLE 1

ACCUMULATIVE GROUNDWATER ELEVATION MEASUREMENTS

Eastmont Mall
October 1995

Well Number	Well Casing Elevation	Date of Measurement	Depth to Groundwater	Groundwater Elevation	Average Gradient and Direction
MW-5	+ 42.07'	09-28-93 12-29-93 10-19-95	35.25' 36.10' 30.10'	+ 6.82' + 5.97' + 11.97'	West 0.007 West 0.005 West
MW-6	+ 43.35'	09-28-93 12-29-93 10-19-95	36.85' 37.15' 31.26'	+ 6.50' + 6.20' + 12.09'	West 0.007 West 0.005 West
MW-7	+ 44.37'	09-28-93 12-29-93 10-19-95	33.42' 34.25' 28.78'	+ 10.95' + 10.12' + 15.59'	West 0.007 West 0.005 West
MW-8	+ 44.90'	09-28-93 12-29-93 10-19-95	32.10' 32.75' 28.95'	+ 12.80' + 12.15' + 15.95'	West 0.007 West 0.005 West
MW-9	+ 44.18'	09-28-93 12-29-93 10-19-95	33.00' 33.97' 29.18'	+ 11.18' + 10.21' + 15.00'	West 0.007 West 0.005 West

Note:

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AllWest

TABLE 2

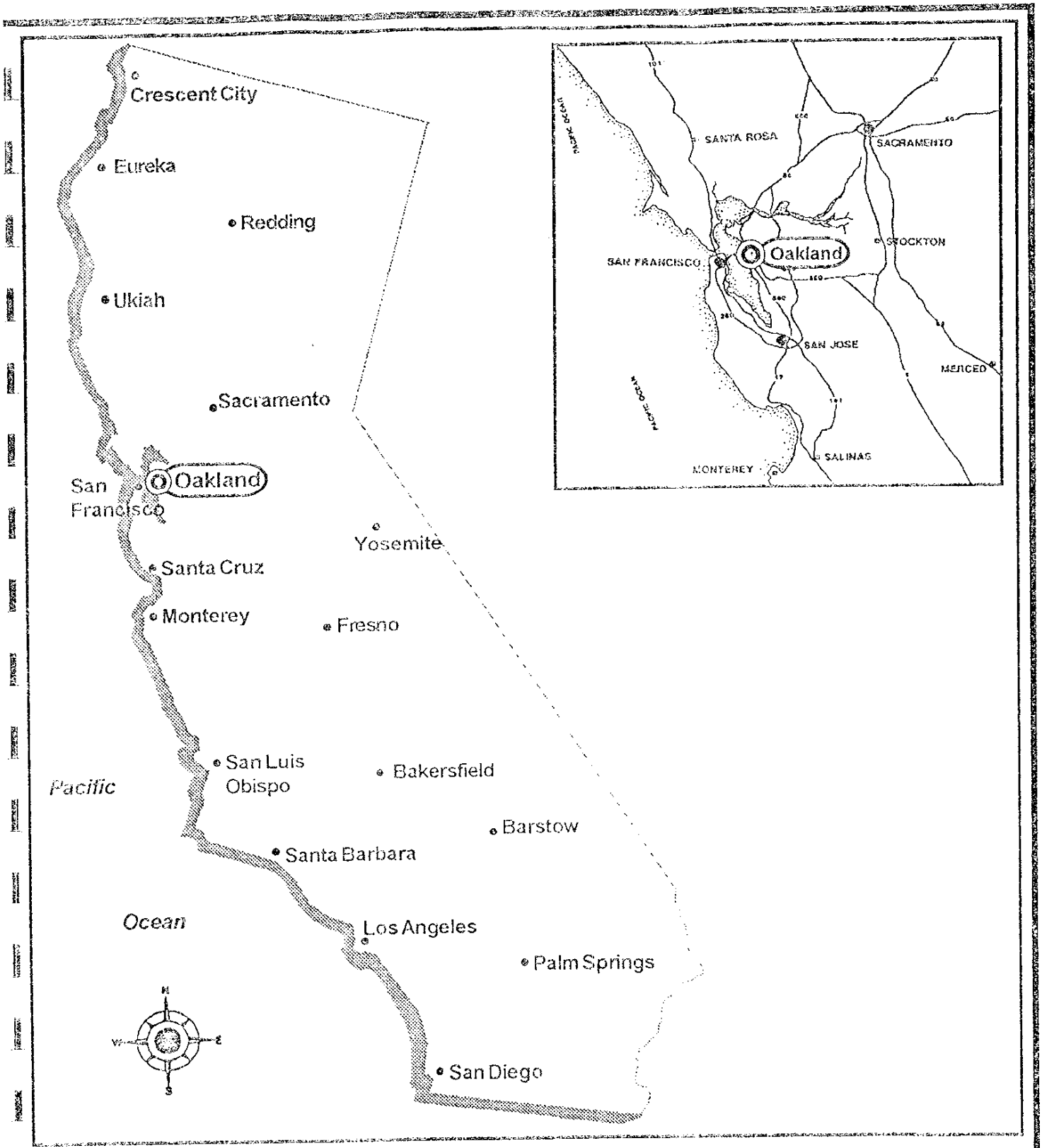
ACCUMULATIVE GROUNDWATER ANALYTICAL RESULTS

Eastmont Mall
October 1995

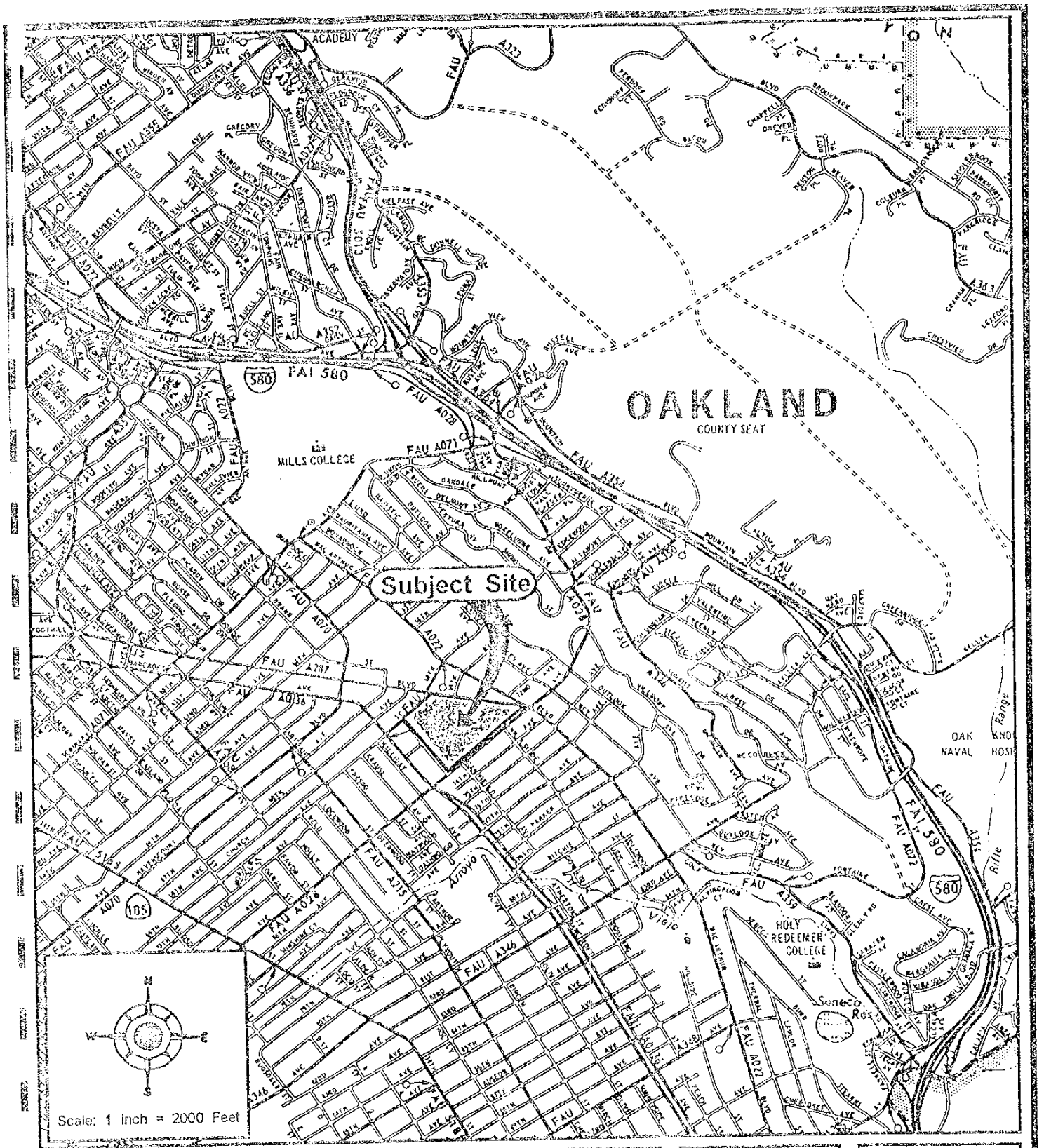
Well Number	Sampling Date	TPH-g	Benzene	Toluene	Ethyl-Benzene	Xylene	Naphthalene Benzo(a)Pyrene	Volatile Organic Compounds
MW-5	12-29-93 10-19-95	ND ND	ND ND	ND ND	ND ND	ND ND	NA ND	ND ND
MW-6	12-29-93 10-19-95	73 ND	13 ND	ND ND	1.5 ND	ND ND	NA ND	ND TCE - 1.4
MW-7	12-29-93 10-19-95	78 ND	15 ND	ND ND	1.7 ND	ND ND	NA ND	ND ND
MW-8	12-29-93 10-19-95	ND ND	ND ND	ND ND	ND ND	ND ND	NA ND	ND ND
MW-9	12-29-93 10-19-95	ND ND	ND ND	ND ND	ND ND	ND ND	NA ND	ND ND

Notes: All concentration values were reported in µg/kg equivalent to parts per billion (ppb).
ND is equivalent to "None Detected" at or above the laboratory limit of detection.
NA is equivalent to Not Analyzed.
The Laboratory Limit of Detection for TPH-g is 50 ppb, for BTEX is 0.5 ppb.

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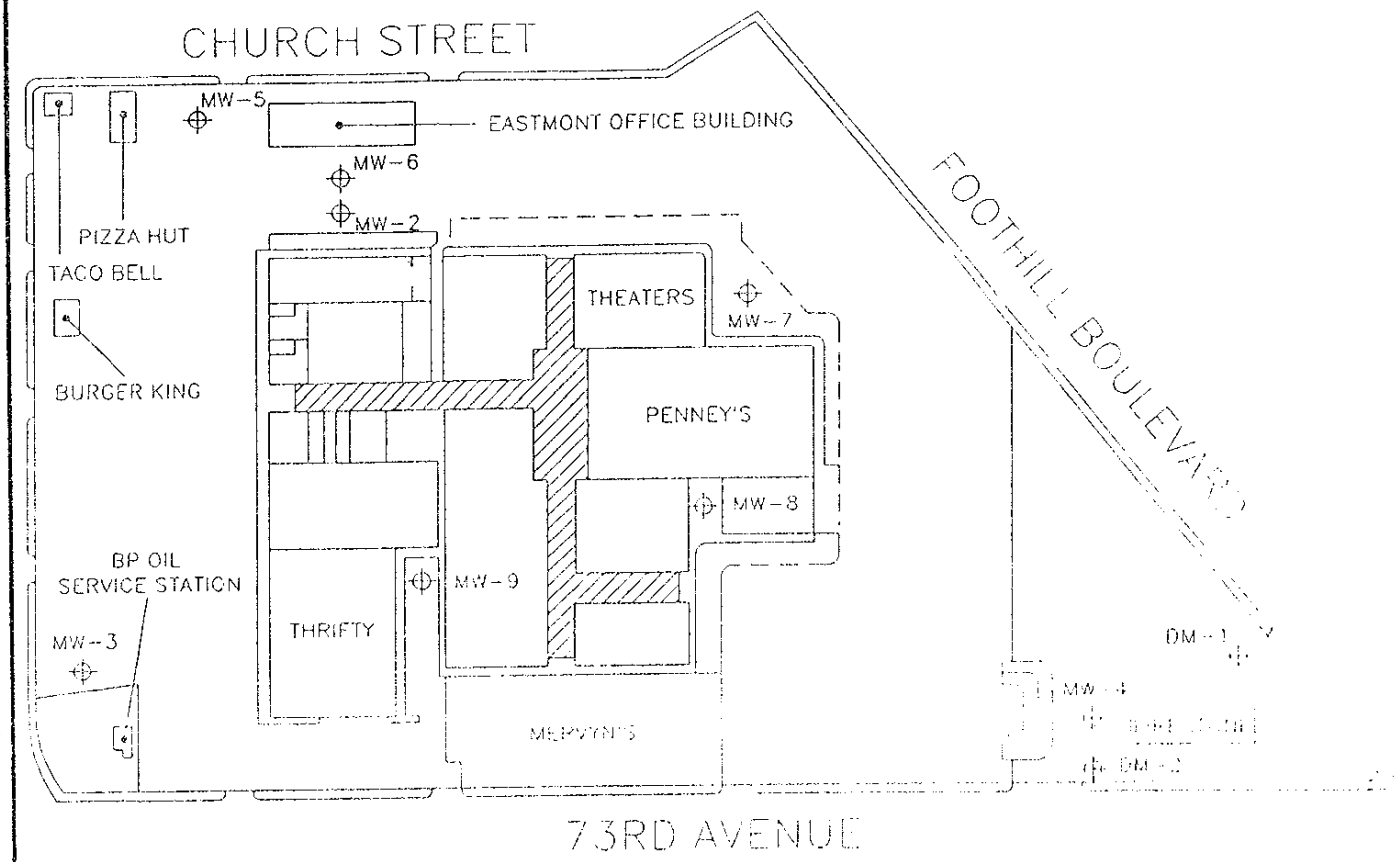
AllWest Environmental, Inc.	November 1995	Site Regional Map	Project 95266.28	Figure 1
	One Eastmont Mall, Oakland, California			Source *AllWest*



AllWest

AllWest Environmental, Inc.

November 1995	Site Vicinity Map	Project 95266.28	Figure 2
One Eastmont Mall, Oakland, California			Source CA DOT

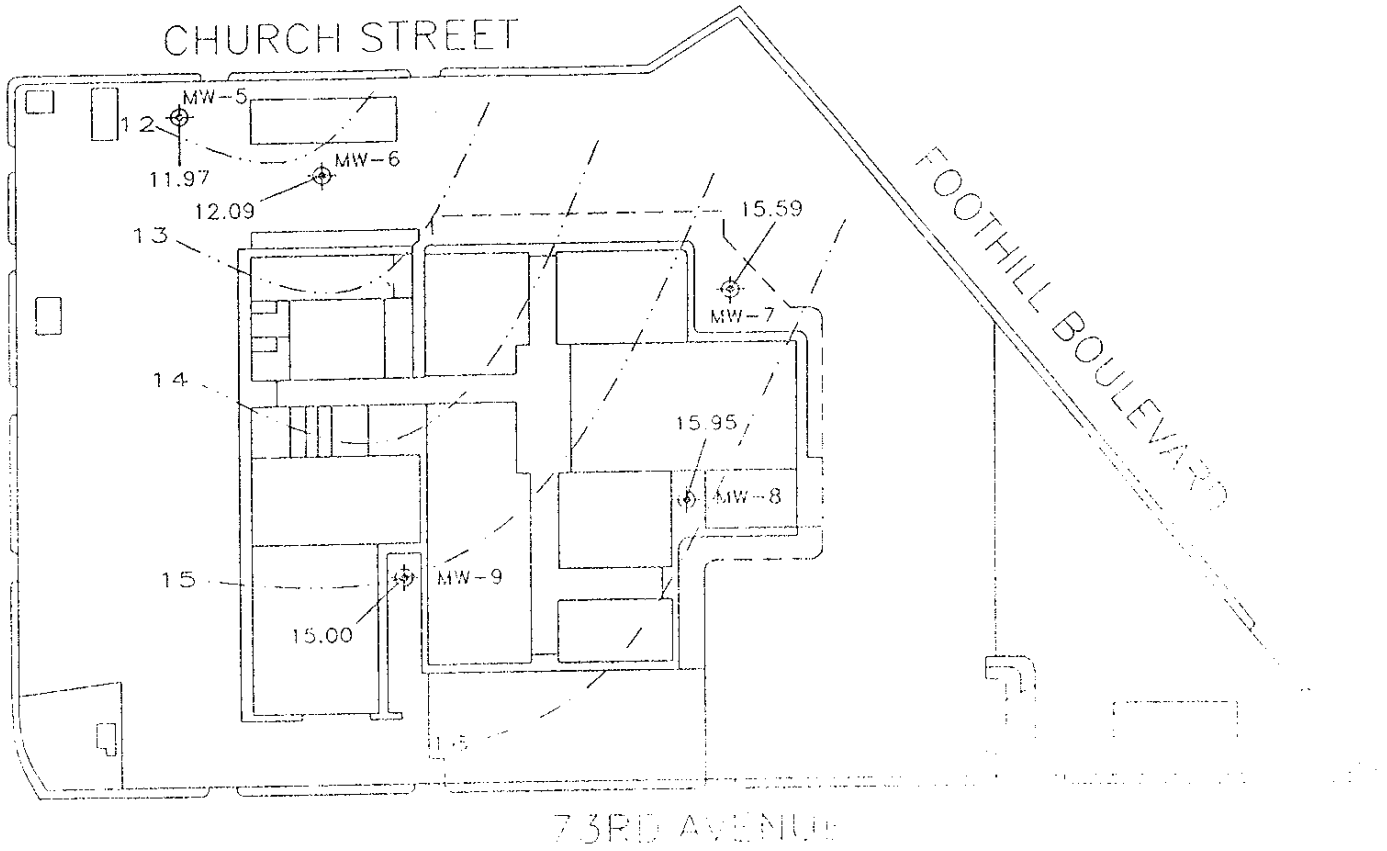


MW-5 Monitoring Well Location

0' 200' 400' 800'
100' 300' 600'

AllWest Environmental, Inc.

November 1995	Site Plan & Monitoring Well Location Map	Project 95266.28	Figure 3
	One Eastmont Mall, Oakland, California		Source *AllWest*



MW-5 Monitoring Well Location

11.97 Well Groundwater Elevation (in feet)

Groundwater Contour Line

General Flow Direction is to the west

0' 200' 400'

100' 300' 600'

AllWest Environmental, Inc.

November 1995	Grounwater Contour Map	Project 95266.28	Figure 4
One Eastmont Mall, Oakland, California			Source *AllWest*

AllWest

Appendix A

GROUNDWATER SAMPLING PROCEDURES

Upon arriving at the groundwater monitoring well site, each monitoring well vault and well casing are first examined for damage which could render the well inoperable. Any water collected during the recent rains were purged from the well vault to avoid contamination from rain water. The upper end-cap was then removed and an organic vapor meter (OVM) was used to detect hydrocarbon vapor that might exist inside the well casing. The reading of the OVM was then recorded onto the groundwater sampling field log. After an appreciable time for groundwater levels to equilibrate, electric water level sounder was lowered into the well casing to measure the depth to water to the nearest 0.01 feet. A clear polyethylene bailer was then lowered into the well casing and partially submerged. Upon retrieval of the clear bailer, the surface of the water column retained in the bailer was carefully examined for floating product or product sheen.

After initial measurements were completed and recorded, each monitoring well was purged by an electrical submersible pump or decontaminated teflon bailer. A minimum of 3 well volumes of groundwater was purged. Groundwater quality parameters (temperature, pH, and conductivity) were monitored with a combination meter after each well volume was removed. Purging was considered complete when purging indicators were stabilized (consecutive readings within 10% of each other) or the purged water was relatively free of sediments. All purged water was temporarily stored on-site in labeled 55-gallon drums pending test results to determine the proper disposal method. If no contamination was found then the purge water was disposed of as nonhazardous.

Groundwater sampling was conducted after the water level in the well recovered to at least 80% of the initial level that was recorded before purging. The groundwater sample was collected using a disposable bailer, which was discarded after the sampling event. Upon retrieval of the disposable bailer, the retained water was carefully transferred to appropriate glass container(s) (three 40-ml VOAs) furnished by the analytical laboratory. A bottom emptying device was placed on the bailer to minimize the loss of volatile organics during transfer. All sample containers were fitted with teflon lined septum/cap and filled such that no headspace was present. After the water sample was properly transferred to the appropriate containers, the containers were labeled and immediately placed on ice in an insulated cooler to preserve the chemical characteristics of the sample.

To prevent cross contamination, all groundwater sampling equipment that came into contact with the groundwater was thoroughly cleaned by washing in Alconox (a non-phosphate detergent) solution and double rinsed with distilled water prior to each well sampling event. Groundwater samples were stored and transported in an insulated cooler filled with crushed ice. The analytical laboratory collected the samples from the site or from the *AllWest* office. The samples were delivered to the analytical laboratory by a special courier of the laboratory. All samples were transported under strict Chain-of-Custody document protocol from the time of sample collection to the time of arrival at the laboratory.

Groundwater Monitoring Well Sampling Field Log

Project No.: 95266.28 Project Name: Eastmont Monitoring

Well No.: MW - 5 Well Location: MW - 5

Well Depth: 48.25 (ft.) Casing Diameter: 2 (in.)

Depth to Water: 30.10 (ft.) Date: 10/19/95 Time: 900

Water Column in Well: 17.95 (ft.) Well Volume: 2.87 (gal.)

Odor? No Free Product? No Thickness: N/A

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ____

Time	pH	Conduc. (μS)	Temp. (°F)	Water Level	Volume Removed	Remark
1145	7.11	885	80.8		0.3	Moderate Turbidity
1147	7.00	894	77.8		2.5	Moderate Turbidity
1148	6.97	804	76.5		5.0	Slight Turbidity
1150	6.95	767	75.8		7.5	Clear
1152	6.90	802	75.3		10.5	Clear

Purging Start Time: 1143 Purging Stop Time: 1155

Total Volume Purged: 10.5 (gal.) Well Dewater? No

Water Level Prior to Sampling: 30.20 (ft.) Time: 1210

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 6 VOAs w/HCL 2 Amber Liters Sample No.: MW - 5

Remark: _____

Sampler: Keith Craig Date/Time: 10/19/95 1220

Groundwater Monitoring Well Sampling Field Log

Project No.: 95266.28 Project Name: Eastmont Monitoring

Well No.: MW - 6 Well Location: MW - 6

Well Depth: 49.50 (ft.) Casing Diameter: 2 (in.)

Depth to Water: 31.26 (ft.) Date: 10/19/95 Time: 945

Water Column in Well: 17.24 (ft.) Well Volume: 2.76 (gal.)

Odor? No Free Product? No Thickness: N/A

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ____

Time	pH	Conduc. (µS)	Temp. (°F)	Water Level	Volume Removed	Remark
1515	7.70	1098	78.3		0.3	Highly Turbid
1517	7.20	971	75.6		3.0	Highly Turbid
1519	7.10	940	73.7		6.0	Moderately Turbid
1521	7.06	930	72.9		8.5	Moderately Turbid
1523	6.98	939	72.5		11.0	Slightly Turbid

Purging Start Time: 1512 Purging Stop Time: 1525

Total Volume Purged: 11.0 (gal.) Well Dewater? No

Water Level Prior to Sampling: 31.50 (ft.) Time: 1530

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 6 VOAs w/HCL 2 Amber Liters Sample No.: MW - 6

Remark: Surface well seal broken and caved in due to traffic. Needs to be fixed - excavated soil around casing

Sampler: Keith Craig Date/Time: 10/19/95 1550

Groundwater Monitoring Well Sampling Field Log

Project No.: 95266.28 Project Name: Eastmont Monitoring

Well No.: MW - 7 Well Location: MW - 7

Well Depth: 48.80 (ft.) Casing Diameter: 2 (in.)

Depth to Water: 28.78 (ft.) Date: 10/19/95 Time: 950

Water Column in Well: 20.02 (ft.) Well Volume: 3.20 (gal.)

Odor? No Free Product? No Thickness: N/A

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ____

Time	pH	Conduc. (μS)	Temp. (°F)	Water Level	Volume Removed	Remark
1634	7.90	939	67.3		0.2	Moderately Turbid
1636	7.56	957	66.8		3.0	Moderately Turbid
1638	7.38	1017	66.6		6.0	Slightly Turbid
1640	7.48	1022	66.4		9.5	Slightly Turbid
1643	7.51	1010	66.6		11.0	Slightly Turbid

Purging Start Time: 1633 Purging Stop Time: 1645

Total Volume Purged: 11.0 (gal.) Well Dewater? No

Water Level Prior to Sampling: 29.13 (ft.) Time: 1650

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 6 VOAs w/HCL 2 Amber Liters Sample No.: MW - 7

Remark: _____

_____

_____

Sampler: Keith Craig Date/Time: 10/19/95 1700

Groundwater Monitoring Well Sampling Field Log

Project No.: 95266.28 Project Name: Eastmont Monitoring

Well No.: MW - 8 Well Location: MW - 8

Well Depth: 48.68 (ft.) Casing Diameter: 2 (in.)

Depth to Water: 28.95 (ft.) Date: 10/19/95 Time: 915

Water Column in Well: 19.73 (ft.) Well Volume: 3.15 (gal.)

Odor? No Free Product? No Thickness: N/A

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ___

Time	pH	Conduc. (μS)	Temp. (°F)	Water Level	Volume Removed	Remark
1025	6.99	1161	76.4		0.2	Moderate Turbidity
1026	7.01	1112	73.4		2.5	Moderate Turbidity
1028	6.99	1090	72.7		5.0	Moderate Turbidity
1029	6.95	1053	71.8		7.5	Slight Turbidity
1032	6.95	1079	71.1		11.0	Slight Turbidity

Purging Start Time: 1024 Purging Stop Time: 1033

Total Volume Purged: 11.0 (gal.) Well Dewater? No

Water Level Prior to Sampling: 29.32 (ft.) Time: 1045

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 6 VOAs w/HCL 2 Amber Liters Sample No.: MW - 8

Remark: ____

Sampler: Keith Craig Date/Time: 10/19/95 1100

Groundwater Monitoring Well Sampling Field Log

Project No.: 95266.28 Project Name: Eastmont Monitoring

Well No.: MW - 9 Well Location: MW - 9

Well Depth: 49.60 (ft.) Casing Diameter: 2 (in.)

Depth to Water: 29.18 (ft.) Date: 10/19/95 Time: 930

Water Column in Well: 20.42 (ft.) Well Volume: 3.22 (gal.)

Odor? No Free Product? No Thickness: N/A

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ____

Time	pH	Conduc. (μS)	Temp. (°F)	Water Level	Volume Removed	Remark
1300	7.47	1504	80.2		1.0	Highly Turbid
1302	7.25	1327	77.8		2.5	Highly Turbid
1304	7.17	1282	75.4		6.0	Moderately Turbid
1306	7.05	1286	75.3		8.0	Moderately Turbid
1309	6.98	1320	74.4		11.0	Moderately Turbid

Purging Start Time: 1258 Purging Stop Time: 1310

Total Volume Purged: 11.0 (gal.) Well Dewater? No

Water Level Prior to Sampling: 29.22 (ft.) Time: 1330/1400

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 6 VOAs w/HCL 2 Amber Liters Sample No.: MW - 9

Remark: Duplicate sample collect - MW-10 1400

6 VOAs w/HCL / 2 Amber liters

Sampler: Keith Craig Date/Time: 10/19/95 1330

California Laboratory Services

11/16/95

AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Attention: Keith Craig

Reference: Analytical Results

Project Name:
Project No.: 95266.28
Date Received: 10/20/95
Chain Of Custody: 0403

CLS ID No.: N0526
CLS Job No.: 800526

The following analyses were performed on the above referenced project:

No. of Samples	*Turnaround Time*	*Analysis Description*
5	10 Days	Halogenated Volatiles by EPA Method 601
5	10 Days	TPH Gasoline and BTXE (water)
5	10 Days	EPA Method 610

These samples were received by California Laboratory Services in a chilled, intact state and accompanied by a valid chain of custody document.

Calibrations for analytical testing have been performed in accordance to and pass the EPA's criteria for acceptability.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

George Hampton
Laboratory Director

3249 Fitzgerald Road Rancho Cordova, CA 95742 (916) 638-7301 Fax (916) 638-4510

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95
Client ID No.: MW-5

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-1A
Batch No.: 16943
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	105

Sample: MW-5

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Bromodichloromethane	75-27-4	ND	0.50	1.0
Bromoform	75-25-2	ND	0.50	1.0
Bromomethane	74-83-9	ND	0.50	1.0
Carbon tetrachloride	56-23-5	ND	0.50	1.0
Chlorobenzene	108-90-7	ND	0.50	1.0
Chloroethane	75-00-3	ND	0.50	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	0.50	1.0
Chloroform	67-66-3	ND	0.50	1.0
Chloromethane	74-87-3	ND	0.50	1.0
Dibromochloromethane	124-48-1	ND	0.50	1.0
1,2-Dichlorobenzene	95-50-1	ND	0.50	1.0
1,3-Dichlorobenzene	541-73-1	ND	0.50	1.0
1,4-Dichlorobenzene	106-46-7	ND	0.50	1.0
Dichlorodifluoromethane	75-71-8	ND	0.50	1.0
1,1-Dichloroethane	75-34-3	ND	0.50	1.0
1,2-Dichloroethane	107-06-2	ND	0.50	1.0
1,1-Dichloroethene	75-35-4	ND	0.50	1.0
1,2-Dichloroethene, total	540-59-0	ND	0.50	1.0
1,2-Dichloropropane	78-87-5	ND	0.50	1.0
cis-1,3-Dichloropropene	10061-01-5	ND	0.50	1.0
trans-1,3-Dichloropropene	10061-02-6	ND	0.50	1.0
Methylene chloride	75-09-2	ND	5.0	1.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.50	1.0
Tetrachloroethene	127-18-4	ND	0.50	1.0
1,1,1-Trichloroethane	71-55-6	ND	0.50	1.0
1,1,2-Trichloroethane	79-00-5	ND	0.50	1.0
Trichloroethene	79-01-6	ND	0.50	1.0
Trichlorofluoromethane	75-69-4	ND	0.50	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	0.50	1.0
Vinyl chloride	75-01-4	ND	0.50	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95
Client ID No.: MW-6

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-2A
Batch No.: 16943
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	103

Sample: MW-6

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Bromodichloromethane	75-27-4	ND	0.50	1.0
Bromoform	75-25-2	ND	0.50	1.0
Bromomethane	74-83-9	ND	0.50	1.0
Carbon tetrachloride	56-23-5	ND	0.50	1.0
Chlorobenzene	108-90-7	ND	0.50	1.0
Chloroethane	75-00-3	ND	0.50	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	0.50	1.0
Chloroform	67-66-3	ND	0.50	1.0
Chloromethane	74-87-3	ND	0.50	1.0
Dibromochloromethane	124-48-1	ND	0.50	1.0
1,2-Dichlorobenzene	95-50-1	ND	0.50	1.0
1,3-Dichlorobenzene	541-73-1	ND	0.50	1.0
1,4-Dichlorobenzene	106-46-7	ND	0.50	1.0
Dichlorodifluoromethane	75-71-8	ND	0.50	1.0
1,1-Dichloroethane	75-34-3	ND	0.50	1.0
1,2-Dichloroethane	107-06-2	ND	0.50	1.0
1,1-Dichloroethene	75-35-4	ND	0.50	1.0
1,2-Dichloroethene, total	540-59-0	ND	0.50	1.0
1,2-Dichloropropane	78-87-5	ND	0.50	1.0
cis-1,3-Dichloropropene	10061-01-5	ND	0.50	1.0
trans-1,3-Dichloropropene	10061-02-6	ND	0.50	1.0
Methylene chloride	75-09-2	ND	5.0	1.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.50	1.0
Tetrachloroethene	127-18-4	1.4	0.50	1.0
1,1,1-Trichloroethane	71-55-6	ND	0.50	1.0
1,1,2-Trichloroethane	79-00-5	ND	0.50	1.0
Trichloroethene	79-01-6	ND	0.50	1.0
Trichlorofluoromethane	75-69-4	ND	0.50	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	0.50	1.0
Vinyl chloride	75-01-4	ND	0.50	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95
Client ID No.: MW-7

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-3A
Batch No.: 16943
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	101

Sample: MW-7

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Bromodichloromethane	75-27-4	ND	0.50	1.0
Bromoform	75-25-2	ND	0.50	1.0
Bromomethane	74-83-9	ND	0.50	1.0
Carbon tetrachloride	56-23-5	ND	0.50	1.0
Chlorobenzene	108-90-7	ND	0.50	1.0
Chloroethane	75-00-3	ND	0.50	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	0.50	1.0
Chloroform	67-66-3	ND	0.50	1.0
Chloromethane	74-87-3	ND	0.50	1.0
Dibromochloromethane	124-48-1	ND	0.50	1.0
1,2-Dichlorobenzene	95-50-1	ND	0.50	1.0
1,3-Dichlorobenzene	541-73-1	ND	0.50	1.0
1,4-Dichlorobenzene	106-46-7	ND	0.50	1.0
Dichlorodifluoromethane	75-71-8	ND	0.50	1.0
1,1-Dichloroethane	75-34-3	ND	0.50	1.0
1,2-Dichloroethane	107-06-2	ND	0.50	1.0
1,1-Dichloroethene	75-35-4	ND	0.50	1.0
1,2-Dichloroethene, total	540-59-0	ND	0.50	1.0
1,2-Dichloropropane	78-87-5	ND	0.50	1.0
cis-1,3-Dichloropropene	10061-01-5	ND	0.50	1.0
trans-1,3-Dichloropropene	10061-02-6	ND	0.50	1.0
Methylene chloride	75-09-2	ND	5.0	1.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.50	1.0
Tetrachloroethene	127-18-4	ND	0.50	1.0
1,1,1-Trichloroethane	71-55-6	ND	0.50	1.0
1,1,2-Trichloroethane	79-00-5	ND	0.50	1.0
Trichloroethene	79-01-6	ND	0.50	1.0
Trichlorofluoromethane	75-69-4	ND	0.50	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	0.50	1.0
Vinyl chloride	75-01-4	ND	0.50	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95
Client ID No.: MW-8

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-4A
Batch No.: 16943
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	103

Sample: MW-8

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Bromodichloromethane	75-27-4	ND	0.50	1.0
Bromoform	75-25-2	ND	0.50	1.0
Bromomethane	74-83-9	ND	0.50	1.0
Carbon tetrachloride	56-23-5	ND	0.50	1.0
Chlorobenzene	108-90-7	ND	0.50	1.0
Chloroethane	75-00-3	ND	0.50	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	0.50	1.0
Chloroform	67-66-3	ND	0.50	1.0
Chloromethane	74-87-3	ND	0.50	1.0
Dibromochloromethane	124-48-1	ND	0.50	1.0
1,2-Dichlorobenzene	95-50-1	ND	0.50	1.0
1,3-Dichlorobenzene	541-73-1	ND	0.50	1.0
1,4-Dichlorobenzene	106-46-7	ND	0.50	1.0
Dichlorodifluoromethane	75-71-8	ND	0.50	1.0
1,1-Dichloroethane	75-34-3	ND	0.50	1.0
1,2-Dichloroethane	107-06-2	ND	0.50	1.0
1,1-Dichloroethene	75-35-4	ND	0.50	1.0
1,2-Dichloroethene, total	540-59-0	ND	0.50	1.0
1,2-Dichloropropane	78-87-5	ND	0.50	1.0
cis-1,3-Dichloropropene	10061-01-5	ND	0.50	1.0
trans-1,3-Dichloropropene	10061-02-6	ND	0.50	1.0
Methylene chloride	75-09-2	ND	5.0	1.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.50	1.0
Tetrachloroethene	127-18-4	ND	0.50	1.0
1,1,1-Trichloroethane	71-55-6	ND	0.50	1.0
1,1,2-Trichloroethane	79-00-5	ND	0.50	1.0
Trichloroethene	79-01-6	ND	0.50	1.0
Trichlorofluoromethane	75-69-4	ND	0.50	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	0.50	1.0
Vinyl chloride	75-01-4	ND	0.50	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95
Client ID No.: MW-9

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-5A
Batch No.: 16943
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	110

Sample: MW-9

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Bromodichloromethane	75-27-4	ND	0.50	1.0
Bromoform	75-25-2	ND	0.50	1.0
Bromomethane	74-83-9	ND	0.50	1.0
Carbon tetrachloride	56-23-5	ND	0.50	1.0
Chlorobenzene	108-90-7	ND	0.50	1.0
Chloroethane	75-00-3	ND	0.50	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	0.50	1.0
Chloroform	67-66-3	ND	0.50	1.0
Chloromethane	74-87-3	ND	0.50	1.0
Dibromochloromethane	124-48-1	ND	0.50	1.0
1,2-Dichlorobenzene	95-50-1	ND	0.50	1.0
1,3-Dichlorobenzene	541-73-1	ND	0.50	1.0
1,4-Dichlorobenzene	106-46-7	ND	0.50	1.0
Dichlorodifluoromethane	75-71-8	ND	0.50	1.0
1,1-Dichlorcethane	75-34-3	ND	0.50	1.0
1,2-Dichlorcethane	107-06-2	ND	0.50	1.0
1,1-Dichloroethene	75-35-4	ND	0.50	1.0
1,2-Dichloroethene, total	540-59-0	ND	0.50	1.0
1,2-Dichloropropane	78-87-5	ND	0.50	1.0
cis-1,3-Dichloropropene	10061-01-5	ND	0.50	1.0
trans-1,3-Dichloropropene	10061-02-6	ND	0.50	1.0
Methylene chloride	75-09-2	ND	5.0	1.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.50	1.0
Tetrachloroethene	127-18-4	ND	0.50	1.0
1,1,1-Trichloroethane	71-55-6	ND	0.50	1.0
1,1,2-Trichloroethane	79-00-5	ND	0.50	1.0
Trichloroethene	79-01-6	ND	0.50	1.0
Trichlorofluoromethane	75-69-4	ND	0.50	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	0.50	1.0
Vinyl chloride	75-01-4	ND	0.50	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526
Batch No.: 16943
Matrix: WATER

MB SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	MB Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	103

METHOD BLANK

Analyte	CAS No.	Results (ug/L)	Reporting Limit (ug/L)
Bromodichloromethane	75-27-4	ND	0.50
Bromoform	75-25-2	ND	0.50
Bromomethane	74-83-9	ND	0.50
Carbon tetrachloride	56-23-5	ND	0.50
Chlorobenzene	108-90-7	ND	0.50
Chloroethane	75-00-3	ND	0.50
2-Chloroethyl vinyl ether	110-75-8	ND	0.50
Chloroform	67-66-3	ND	0.50
Chloromethane	74-87-3	ND	0.50
Dibromochloromethane	124-48-1	ND	0.50
1,2-Dichlorobenzene	95-50-1	ND	0.50
1,3-Dichlorobenzene	541-73-1	ND	0.50
1,4-Dichlorobenzene	106-46-7	ND	0.50
Dichlorodifluoromethane	75-71-8	ND	0.50
1,1-Dichloroethane	75-34-3	ND	0.50
1,2-Dichloroethane	107-06-2	ND	0.50
1,1-Dichloroethene	75-35-4	ND	0.50
1,2-Dichloroethene, total	540-59-0	ND	0.50
1,2-Dichloropropane	78-87-5	ND	0.50
cis-1,3-Dichloropropene	10061-01-5	ND	0.50
trans-1,3-Dichloropropene	10061-02-6	ND	0.50
Methylene chloride	75-09-2	ND	5.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.50
Tetrachloroethene	127-18-4	ND	0.50
1,1,1-Trichloroethane	71-55-6	ND	0.50
1,1,2-Trichloroethane	79-00-5	ND	0.50
Trichloroethene	79-01-6	ND	0.50
Trichlorofluoromethane	75-69-4	ND	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	0.50
Vinyl chloride	75-01-4	ND	0.50

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526
Batch No.: 16943
Matrix: WATER

MS SURROGATE

Analyte	CAS No.	MS Surr. Conc. (ug/L)	MS Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	103

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (ug/L)	MS Recovery (percent)
Chlorobenzene	108-90-7	10.0	106
1,1-Dichloroethene	75-35-4	10.0	94
Trichloroethene	79-01-6	10.0	105

MSD SURROGATE

Analyte	CAS No.	Surr. Conc. (ug/L)	MSD Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	102

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (ug/L)	MSD Recovery (percent)
Chlorobenzene	108-90-7	10.0	104
1,1-Dichloroethene	75-35-4	10.0	92
Trichloroethene	79-01-6	10.0	100

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Chlorobenzene	108-90-7	2
1,1-Dichloroethene	75-35-4	2
Trichloroethene	79-01-6	5

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526
Batch No.: 16943
Matrix: WATER

LCS SURROGATE

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	109

LAB CONTROL SAMPLE

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Recovery (percent)
Chlorobenzene	108-90-7	10.0	110
1,1-Dichloroethene	75-35-4	10.0	84
Trichloroethene	79-01-6	10.0	111

California Laboratory Services

Analysis Report: BTEX, EPA Method 602
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95
Client ID No.: MW-5

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-1A
Batch No.: 16930
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	105

Sample: MW-5

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Benzene	71-43-2	ND	0.30	1.0
Toluene	108-88-3	ND	0.30	1.0
Ethylbenzene	100-41-4	ND	0.30	1.0
Xylenes, total	1330-20-7	ND	0.60	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: BTEX, EPA Method 602
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95
Client ID No.: MW-6

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-2A
Batch No.: 16930
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	106

Sample: MW-6

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Benzene	71-43-2	ND	0.30	1.0
Toluene	108-88-3	ND	0.30	1.0
Ethylbenzene	100-41-4	ND	0.30	1.0
Xylenes, total	1330-20-7	ND	0.60	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: BTEX, EPA Method 602
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95
Client ID No.: MW-7

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-3A
Batch No.: 16930
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	106

Sample: **MW-7**

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Benzene	71-43-2	ND	0.30	1.0
Toluene	108-88-3	ND	0.30	1.0
Ethylbenzene	100-41-4	ND	0.30	1.0
Xylenes, total	1330-20-7	ND	0.60	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: BTEX, EPA Method 602
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95
Client ID No.: MW-8

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-4A
Batch No.: 16930
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	106

Sample: MW-8

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Benzene	71-43-2	ND	0.30	1.0
Toluene	108-88-3	ND	0.30	1.0
Ethylbenzene	100-41-4	ND	0.30	1.0
Xylenes, total	1330-20-7	ND	0.60	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: BTEX, EPA Method 602
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95
Client ID No.: MW-9

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-5A
Batch No.: 16930
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	104

Sample: MW-9

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Benzene	71-43-2	ND	0.30	1.0
Toluene	108-88-3	ND	0.30	1.0
Ethylbenzene	100-41-4	ND	0.30	1.0
Xylenes, total	1330-20-7	ND	0.60	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: BTEX, EPA Method 602
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526
Batch No.: 16930
Matrix: WATER

MB SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	MB Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	104

METHOD BLANK

Analyte	CAS No.	Results (ug/L)	Reporting Limit (ug/L)
Benzene	71-43-2	ND	0.30
Toluene	108-88-3	ND	0.30
Ethylbenzene	100-41-4	ND	0.30
Xylenes, total	1330-20-7	ND	0.60

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: BTEX, EPA Method 602
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526
Batch No.: 16930
Matrix: WATER

MS SURROGATE

Analyte	CAS No.	MS Surr. Conc. (ug/L)	MS Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	97

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (ug/L)	MS Recovery (percent)
Benzene	71-43-2	20.0	49 MI
Toluene	108-88-3	20.0	57 MI
Ethylbenzene	100-41-4	20.0	90
Xylenes, total	1330-20-7	60.0	85

MSD SURROGATE

Analyte	CAS No.	Surr. Conc. (ug/L)	MSD Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	95

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (ug/L)	MSD Recovery (percent)
Benzene	71-43-2	20.0	47 MI
Toluene	108-88-3	20.0	55 MI
Ethylbenzene	100-41-4	20.0	91
Xylenes, total	1330-20-7	60.0	84

California Laboratory Services

Analysis Report: BTEX, EPA Method 602
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526
Batch No.: 16930
Matrix: WATER

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Benzene	71-43-2	4
Toluene	108-88-3	4
Ethylbenzene	100-41-4	1
Xylenes, total	1330-20-7	1

MI = Matrix spike recovery data can not be generated due to matrix interference.

California Laboratory Services

Analysis Report: BTEX, EPA Method 602
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526
Batch No.: 16930
Matrix: WATER

LCS SURROGATE

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	95

LAB CONTROL SAMPLE

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Recovery (percent)
Benzene	71-43-2	20.0	91
Ethylbenzene	100-41-4	20.0	88
Toluene	108-88-3	20.0	92
Xylenes, total	1330-20-7	60.0	92

LCS DUPLICATE SURROGATE

Analyte	CAS No.	LCSD Conc. (ug/L)	LCSD Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	98

LAB CONTROL SAMPLE DUPLICATE

Analyte	CAS No.	LCS Conc. (ug/L)	LCSD Recovery (percent)
Benzene	71-43-2	20.0	96
Ethylbenzene	100-41-4	20.0	91
Toluene	108-88-3	20.0	94
Xylenes, total	1330-20-7	60.0	94

California Laboratory Services

Analysis Report: BTEX, EPA Method 602
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526
Batch No.: 16930
Matrix: WATER

LCS RPD

Analyte	CAS No.	LCS Relative Percent Difference (percent)
Benzene	71-43-2	5
Ethylbenzene	100-41-4	3
Toluene	108-88-3	2
Xylenes, total	1330-20-7	2

California Laboratory Services

Analysis Report: Total Petroleum Hydrocarbons, EPA Method 8015
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526
Batch No.: 16930
Matrix: WATER

ANALYTE

Sample I.D. Client	Lab	TPH as Gasoline [Rep. Limit] (Dilution)
MW-5	1A	ND [0.050] (1.0)
MW-6	2A	ND [0.050] (1.0)
MW-7	3A	ND [0.050] (1.0)
MW-8	4A	ND [0.050] (1.0)
MW-9	5A	ND [0.050] (1.0)
Units		mg/L

ND = Not detected at or above indicated Reporting Limit

CA DOHS ELAP Accreditation/Registration Number 1763
3249 Fitzgerald Road Rancho Cordova, CA 95742 (916) 638-7301 Fax (916) 638-4510

California Laboratory Services

Analysis Report: Total Petroleum Hydrocarbons, EPA Method 8015
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526
Batch No.: 16930
Matrix: WATER

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Reporting Limit (mg/L)
TPH as Gasoline	N/A	ND	0.050

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Polynuclear Aromatic Hydrocarbons by EPA Method 610 (HPLC)
Separatory Funnel, EPA Method 3510

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/26/95
Date Analyzed: 11/13/95
Date Reported: 11/14/95
Client ID No.: MW-5

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-1B
Batch No.: 16981
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
Terphenyl	92-06-8	1.00	66

Sample: **MW-5**

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Benzo(a)pyrene	50-32-8	ND	0.20	1.0
Naphthalene	91-20-3	ND	2.0	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Polynuclear Aromatic Hydrocarbons by EPA Method 610(HPLC)
Separatory Funnel, EPA Method 3510

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/26/95
Date Analyzed: 11/13/95
Date Reported: 11/14/95
Client ID No.: MW-6

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-2B
Batch No.: 16981
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
Terphenyl	92-06-8	1.00	56

Sample: MW-6

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Benzo(a)pyrene	50-32-8	ND	0.20	1.0
Naphthalene	91-20-3	ND	2.0	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Polynuclear Aromatic Hydrocarbons by EPA Method 610 (HPLC)
Separatory Funnel, EPA Method 3510

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/26/95
Date Analyzed: 11/13/95
Date Reported: 11/14/95
Client ID No.: MW-7

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-3B
Batch No.: 16981
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
Terphenyl	92-06-8	1.00	68

Sample: MW-7

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Benzo(a)pyrene	50-32-8	ND	0.20	1.0
Naphthalene	91-20-3	ND	2.0	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Polynuclear Aromatic Hydrocarbons by EPA Method 610(HPLC)
Separatory Funnel, EPA Method 3510

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/26/95
Date Analyzed: 11/13/95
Date Reported: 11/14/95
Client ID No.: MW-8

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-4B
Batch No.: 16981
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
Terphenyl	92-06-8	1.00	73

Sample: MW-8

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Benzo(a)pyrene	50-32-8	ND	0.20	1.0
Naphthalene	91-20-3	ND	2.0	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Polynuclear Aromatic Hydrocarbons by EPA Method 610 (HPLC)
Separatory Funnel, EPA Method 3510

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/26/95
Date Analyzed: 11/13/95
Date Reported: 11/14/95
Client ID No.: MW-9

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-5B
Batch No.: 16981
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
Terphenyl	92-06-8	1.00	73

Sample: **MW-9**

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Benzo(a)pyrene	50-32-8	ND	0.20	1.0
Naphthalene	91-20-3	ND	2.0	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Polynuclear Aromatic Hydrocarbons by EPA Method 610(HPLC)
Separatory Funnel, EPA Method 3510

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Extracted: 10/26/95
Date Analyzed: 11/13/95
Date Reported: 11/14/95

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526
Batch No.: 16981
Matrix: WATER

MB SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	MB Surrogate Recovery (percent)
Terphenyl	92-06-8	1.00	81

METHOD BLANK

Analyte	CAS No.	Results (ug/L)	Reporting Limit (ug/L)
Benzo(a)pyrene	50-32-8	ND	0.20
Naphthalene	91-20-3	ND	2.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Polynuclear Aromatic Hydrocarbons by EPA Method 610(HPLC)
Separatory Funnel, EPA Method 3510

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Extracted: 10/26/95
Date Analyzed: 11/13/95
Date Reported: 11/14/95

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526
Batch No.: 16981
Matrix: WATER

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (ug/L)	MS Recovery (percent)
Benzo(a)pyrene	50-32-8	IS	IS

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (ug/L)	MSD Recovery (percent)
Benzo(a)pyrene	50-32-8	IS	IS

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Benzo(a)pyrene	50-32-8	IS

IS = Recovery data could not be generated due to insufficient sample.
LCS recovery data validates methodology.

California Laboratory Services

Analysis Report: Polynuclear Aromatic Hydrocarbons by EPA Method 610(HPLC)
Separatory Funnel, EPA Method 3510

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Extracted: 10/26/95
Date Analyzed: 11/13/95
Date Reported: 11/14/95

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526
Batch No.: 16981
Matrix: WATER

LCS SURROGATE

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Surrogate Recovery (percent)
Terphenyl	92-06-8	1.00	81

LAB CONTROL SAMPLE

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Recovery (percent)
Benzo(a)pyrene	50-32-8	1.00	53

LCS DUPLICATE SURROGATE

Analyte	CAS No.	LCSD Conc. (ug/L)	LCSD Surrogate Recovery (percent)
Terphenyl	92-06-8	1.00	80

LAB CONTROL SAMPLE DUPLICATE

Analyte	CAS No.	LCS Conc. (ug/L)	LCSD Recovery (percent)
Benzo(a)pyrene	50-32-8	1.00	64

LCS RPD

Analyte	CAS No.	LCS Relative Percent Difference (percent)
Benzo(a)pyrene	50-32-8	19

Reporting Information:

1. Client: AllWest Environmental
Address: 1 Sutter ST #600
San Francisco CA 94104
Contact: Keith Coady
Alt. Contact:

~~American Environmental Network~~
~~3440 Vincent Road, Pleasant Hill, CA 94523~~
~~Phone (510) 930-0300~~
~~FAX (510) 930-0256~~

~~ABN~~ UL LABS

Page 1 of 1

REQUEST FOR ANALYSIS / CHAIN OF CUSTODY

Lab Job Number:
Lab Destination:
Date Samples Shipped:
Lab Contact:
Date Results Required:
Date Report Required:
Client Phone No.:
Client FAX No.:

Address Report To:

2. Same

Send Invoice To:

3. Same

Send Report To: 1 or 2 (Circle one)

Client P.O. No.: 95266.28 Client Project I.D. No.:

Sample Team Member (s) Keith Coady

Lab Number	Client Sample Identification	Air Volume	Date/ Time Collected	Sample Type*	Pres.	No. of Cont.	Type of Cont.	8010 610 Pkg	5030/8015 TPH-gas Line	8020 BTEX	8260	601 Purgeable Halocarbons	ANALYSIS	Comments / Hazards
	MW-5		10-19-95	water	HCL	6	VOAs	X	X	X	X			Naphalene Benzopyrene only for 8011 610
	MW-5				NO	2	Ambers	X						
	MW-6				HCL	6	VOAs		X	X	X			
	MW-6				NO	1	Amber	X						
	MW-7				HCL	6	VOAs		X	X	X			
	MW-7				NO	1	Amber	X						
	MW-8				HCL	6	VOAs		X	X	X			
	MW-8				NO	2	Ambers	X						
	MW-9				HCL	6	VOAs		X	X	X			
	MW-9				NO	1	Amber	X						
	MW-10				HCL	5	VOAs							Hold
	MW-10				NO	1	Amber							Hold
	Trip Blank				HCL	6	VOAs							Hold

Please confirm w/ low gor Keith suite of tests prior to analyses.

		DATE	TIME			DATE	TIME
Relinquished by: (Signature)	Keith Coady	10-20-95	~~1700~~ 1345	Received by: (Signature)	Scott Fuma	10/20/95	1443
Relinquished by: (Signature)	Scott Fuma	10/20/95	1630	Received by: (Signature)		10/20/95	~~1700~~ 1632
Relinquished by: (Signature)		DATE	TIME	Received by: (Signature)		DATE	TIME
Method of Shipment				Lab Comments			

*Sample type (Specify): 1) 37mm 0.8 µm MCEF 2) 25mm 0.8 µm MCEF 3) 25mm 0.4 µm polycarb. filter
4) PVC filter, diam. ____ pore size ____ 5) Charcoal tube 6) Silica gel tube 7) Water 8) Soil 9) Bulk Sample
10) Other ____ 11) Other ____

COPIES: WHITE - JOB FILE YELLOW - PROJECT FILE PINK - CLIENT

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ENVIRONMENTAL PROTECTION
95 OCT 16 PM 1:19

AllWest

AllWest Environmental, Inc.

Specialists in Environmental Due Diligence and Remedial Services

AllWest Environmental, Inc.

Specialists in Environmental Due Diligence and Remedial Services

One Sutter Street, Suite 600
San Francisco, Ca 94104
Tel 415.391.2510
Fax 415.391.2008

WORK PLAN
FOR
QUARTERLY GROUNDWATER MONITORING
AND
SUBSURFACE INVESTIGATION
AT
EASTMONT MALL
OAKLAND, CALIFORNIA

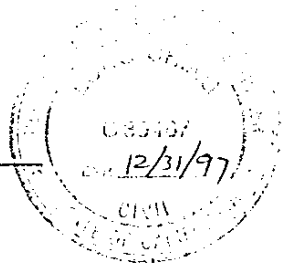
OCT 1995

Prepared for:

Mr. Bob Bridwell
Eastmont Mall
One Eastmont Mall
Oakland, CA 94605

AllWest Project No.: 95278.23
October 6, 1995

Prepared by:



Long Ching, P.E.
Senior Project Manager

Reviewed by:

Marc D. Cunningham, REA
President

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AllWest

WORK PLAN
FOR
QUARTERLY GROUNDWATER MONITORING
AND
SUBSURFACE INVESTIGATION
AT
EASTMONT MALL
OAKLAND, CALIFORNIA

I. INTRODUCTION

This work plan describes a quarterly groundwater monitoring and a subsurface soil sampling program to be implemented at the *Eastmont Mall* in Oakland, California. The groundwater monitoring program is to collect sufficient site specific groundwater information to facilitate the "site closure" process. The soil sampling program is formulated to investigate potential soil contamination in the vicinity of the *Sparkle Cleaners* facility. This investigation and monitoring program will be performed according to the requirements of Alameda County Environmental Health Department.

Included with this work plan is 1) background information, 2) scope of proposed work, 3) descriptions of field procedures, sampling protocols, and analytical methods, and 4) project staff and schedule. Maps showing the site's regional and vicinity locations, and proposed area of subsurface investigation are presented in Figures 1 through 3. Also included are example soil boring log, well sampling log, log legends (Appendix A) and a site specific health and safety plan (Appendix B).

A. Background Information

The *Eastmont Mall* is a large regional shopping center located at the intersection of Foothill Boulevard and 73rd Street in Oakland, Alameda County, California. The multi-level mall houses many commercial businesses including clothing stores, general retail stores, dry cleaners, an automotive repair shop, and a supermarket. The mall building is surrounded by parking lots, a parking structure, fast food restaurants, and a service station.

Previous Phase I and Phase II environmental site assessments performed by various consultants identified five areas at the *Eastmont Mall* with confirmed or suspect soil and/or groundwater contamination. The five areas are: the *BP* service station at the south corner, the *Firestone* shop at the east corner, the *Sparkle Cleaners* at the northwest side, the *Eastmont Auto* at the southeast side, and the "Non-Point Source Area" at the northwest area.

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The Alameda County Environmental Health Department (ACEHD) provides oversight of the investigation, remediation, and site closure activities of *Eastmont Mall*. In February 1995, ACEHD granted closure to the UST site of the former *Firestone* shop. In September 1995, ACEHD directed the mall management to conduct quarterly groundwater monitoring for the mall area and to investigate potential soil contamination in the vicinity of the *Sparkle Cleaners*.

II. PURPOSE AND SCOPE OF WORK

The purpose of the work is to supplement and enhance the groundwater information database by implementing a quarterly groundwater monitoring program and to investigate potential soil contamination in the vicinity of *Sparkle Cleaners* facility by conducting a soil sampling program. The scope of work, as proposed by AllWest in this work plan, consists of the following tasks:

1) Prepare a written work plan and a site specific health & safety plan for conducting a subsurface investigation. Submit the plans to the lead regulatory agency, Alameda County Environmental Health Department (ACEHD), for agency review and concurrence.

2) Engage the service of Underground Service Alert (USA) and a private underground utility locator to locate and clear underground utilities within the proposed soil investigation area so that the potential of accidental damage to underground utility will be reduced.

3) Advance three soil borings to the maximum depth of 30 feet around the monitoring well MW-2 in the vicinity of the *Sparkle Cleaners* facility. Collect soil samples in interval of five feet or less.

4) Maintain soil samples under chain-of-custody and transport the samples to a California Department of Health Services (DHS) certified analytical laboratory for chemical analyses. Selected soil samples will be analyzed for halogenated volatile organic compounds (HVOCs).

5) Prepare a written report describing the field activities, summarizing the laboratory data, presenting soil investigation findings, and providing conclusions and recommendations.

6) Monitor and sample five existing groundwater monitoring wells, MW-5 through MW-9, quarterly for four consecutive quarters. Collect a representative groundwater sample from each of the wells for chemical testing and measure the groundwater level in each well to determine groundwater flow direction and gradient.

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7) Maintain groundwater samples under chain-of-custody and transport the samples to a Department of Health Services (DHS) certified analytical laboratory for chemical analyses. The samples will be analyzed for total petroleum as gasoline (TPH-g), the volatile constituents: benzene, toluene, ethylbenzene, and xylene (BTEX), and polynuclear aromatic hydrocarbons (PNAs). Additionally, halogenated volatile organic compounds (HVOCs) will be analyzed during the first quarterly sampling event.

8) Prepare written quarterly groundwater monitoring reports describing the field activities, summarizing the laboratory data, and presenting groundwater monitoring results.

IV. FIELD ACTIVITIES

A. Underground Utility Clearing

To avoid damage to underground utility installations during the course of subsurface investigation, AllWest will contact *Underground Service Alert (USA)*, an organization for public utility information, on the pending subsurface investigation. *USA* then will notify each of the public and private entities that maintained underground utilities at the site to locate and mark their installations for field identification. To detect unmarked utilities and to verify *USA* markings, a private underground utility locator will be retained to survey the proposed sampling area. Proposed sampling points will be relocated if in conflict with the underground utilities. All final sampling locations will be cleared of known underground utilities.

B. Borehole Drilling and Soil Sampling

Up to three soil borings are planned for investigating the extent of soil contamination in the vicinity of the Sparkle Cleaners facility, around monitoring well MW-2. The proposed boring locations are presented on Figure 3. Prior to the commencement of drilling, the Alameda County Environmental Health Division will be notified to allow for agency inspection as necessary. The borehole drilling will be performed by a licensed drilling contractor. The boring will be drilled with 8-inch outside diameter (OD) hollow-stem continuous flight augers advanced by a truck-mounted drilling rig. During the drilling operation, a field geologist from AllWest will be present to maintain a boring log. The boring log will contain all pertinent information on drilling and soil conditions. The boring log will be included in the final written report. A copy of the field boring log to be used, the boring log legend, and the Unified Soil Classification System (USCS) is included in Appendix A.

Soil samples will be collected at intervals of five feet or where lithology change occurs by driving a 2-inch inside diameter (ID) modified California sampler into the subsurface with a 140-pound hammer falling 30 inches. The sampler will be lined with three 6-inch long decontaminated brass tubes that function as sample containers. After the sampler is driven to the designated depth, it will be retrieved and brought to the surface. The sampler will then

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be opened and the individual tubes removed and examined. Soils contained in the sample tubes will be classified according to the Uniform Soil Classification System and recorded on the soil boring logs. Each soil sample will be field screened by an organic vapor meter (OVM) equipped with a photo-ionization detector (PID). The readings of the OVM will also be recorded on the boring logs.

The tubes containing the soil samples selected for preservation will be capped at both ends with Teflon sheets and plastic end caps, sealed with inert silicon tapes, labeled, and field stored in an ice chest chilled to 4°C with crushed ice. At the conclusion of the soil sampling program, all preserved soil samples will be transported to a state certified analytical laboratory for chemical analyses. The standard chain-of-custody protocols will be followed from sample collection to delivery to the laboratory.

C. Groundwater Sampling Procedures

Groundwater will be sampled from monitoring wells MW-5 through MW-9 after a proper purging process. The purpose of well purging is to remove stymied water from the well casing and to allow fresh and more representative water to recharge the well. Prior to well purging, an electric water level sounder will be lowered into the well casing to measure the depth to the water to the nearest 0.01 feet. A clear teflon bailer will then be lowered into the well casing and partially submerged. Upon retrieval of the clear bailer, the surface of the water column retained in the bailer will be carefully examined for any floating product or product sheen.

After all initial measurements are completed and recorded, the well will be purged by an electrical submersible pump. A minimum of 3 well volumes of groundwater will be purged and groundwater characteristics (temperature, pH, and conductivity) monitored at each well volume interval. Purging is considered complete when indicators are stabilized (consecutive readings within 10% of each other) and the purged water is relatively free of sediments. All purged water will be temporarily stored on-site in 55-gallon drums awaiting test results to determine the proper disposal method.

Groundwater sampling will be conducted after the water level has recovered to at least 80% of the initial level, recorded prior to purging. The groundwater sample will be collected by a disposable bailer. Upon retrieval of the bailer, the retained water will be carefully transferred to appropriate containers furnished by the analytical laboratory. All sample containers will have a teflon lined septum/cap and be filled such that no headspace was present. Then the container will be labeled and immediately placed on ice to preserve the chemical characteristics of its content.

To prevent cross contamination, all groundwater sampling equipment that comes in contact with the groundwater will be thoroughly decontaminated prior to sampling. A disposable bailer will be used to collect the groundwater sample. Sample handling, storage, and transport procedures described in the following sections will be employed.

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IV. QUALITY ASSURANCE / QUALITY CONTROL PROGRAM

A. Sample Preservation, Storage and Handling

To prevent the loss of constituents of interest, all samples will be preserved by storing them in an ice chest cooled to 4°C with crushed ice immediately after their collection and during transportation to the laboratory. The standard chain-of-custody protocols will be followed through all stages of sample handling.

B. Field Quality Control Samples

To detect the occurrence of cross-contamination during sampling events and to reduce the probability of false-positive results, the following procedures will be observed during sampling of this project: 1) A duplicate sample will be obtained once a day or once every twenty samples obtained, whichever is more frequent. The duplicate samples will be obtained from sampling points which are known or suspected to be contaminated. 2) A field equipment blank will be collected once a day or once every twenty sampling events, whichever is more frequent. The equipment blank will be collected through a randomly selected sampling equipment prior to it use. 3) A travel blank will be included with each shipment of samples to the laboratory.

C. Chain-Of-Custody Program

All samples collected for this project will be transported under chain-of-custody protocol. The chain-of-custody program allows for the tracing of possession and handling of individual samples from the time of field collection through laboratory analysis. The document includes the signature of the collector, date and time of collection, sample number, number and type of sample containers including preservatives, parameters requested for analysis, signatures of persons and inclusive dates involved in the chain of possession. Upon delivery to the laboratory the document will also include the name of person receiving the samples, and date and time samples were received. A sample copy of the chain-of-custody form is included in Appendix A.

D. Decontamination Procedures and Waste Disposal

During field sampling all down-hole tools will be thoroughly steam cleaned prior to drilling each borehole. All soil sampling equipment will be thoroughly cleaned in an Alconox (or other phosphate-free detergent) solution and rinsed with potable water prior to each use. The rinsate will be contained along with the steam cleaning rinsate from the auger decontamination described above. Disposable sampling devices will be employed where applicable to reduce the frequency of re-using the same equipment. Soil cuttings from drilling operations and rinsate water from decontamination will be contained in 55-gallon drums and

stored temporarily on-site. Only those drums that meet Department of Transportation (DOT) specifications will be used. Proper disposal methods for these drummed materials will be determined based on analytical findings.

V. ANALYTICAL METHODS

All samples collected during this investigation will be chemically analyzed by a California Department of Health Services (DHS) certified independent analytical laboratory. Analytical methods proposed for selected soil and/or groundwater samples include: total petroleum hydrocarbons as gasoline (TPH-g) by modified EPA method 8015, the volatile organic compounds benzene, toluene, ethyl-benzene, and xylenes (BTEX) by EPA method 8020/602, the halogenated volatile organic compounds (HVOCs) by EPA method 8010/601, and the polynuclear aromatic hydrocarbons (PNAs) by EPA method 610. All samples will be analyzed under the standard turn-around-time schedule.

VI. REPORT PREPARATION

A written report summarizing the results of the subsurface soil investigation will be prepared at the completion of all task elements. The report will contain descriptions of field activities, subsurface profiles, laboratory results, and conclusions and recommendations. Also included in the reports will be boring location maps, logs of soil boring and sampling, chain-of-custody documents, and copies of the analytical laboratory reports. The report will be prepared/reviewed by a California registered civil engineer or geologist.

A written report summarizing the results of the quarterly groundwater monitoring program will be prepared at the completion of each monitoring event. The report will contain descriptions of field activities, laboratory results, and conclusions. Also included in the reports will be well location map, groundwater contour map, well sampling logs, chain-of-custody documents, and copies of the analytical laboratory reports. The report will be prepared/reviewed by a California registered civil engineer or geologist.

VII. PROJECT STAFF AND SCHEDULE

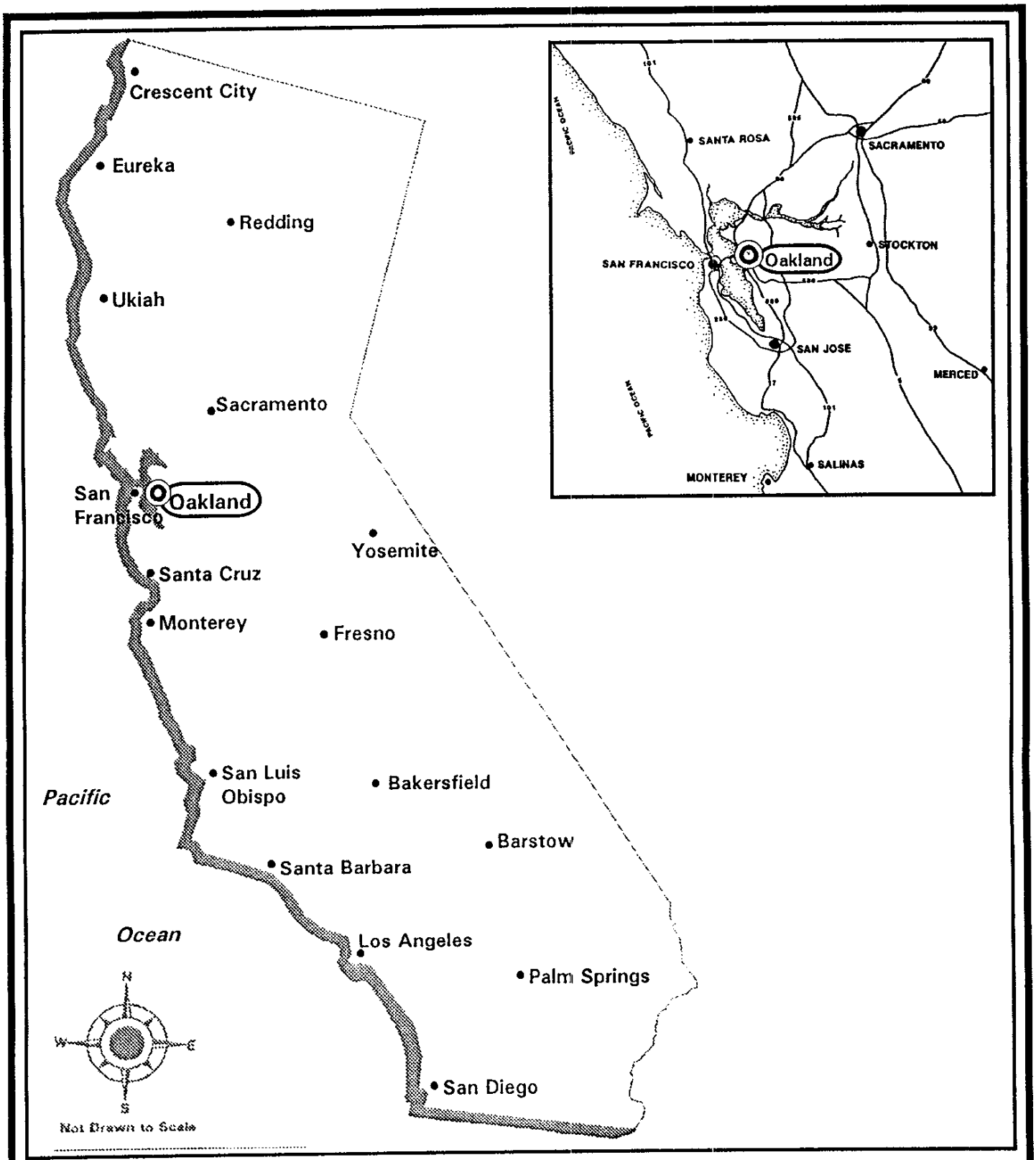
Mr. Long Ching, a California registered civil engineer, will provide technical oversight for this project and act as the project manager and regulatory liaison. Additionally, AllWest's staff of engineers, geologists, and technicians will be employed to perform the various tasks of the project.

The field work of soil sampling is planned for one day. The chemical analyses of the samples is anticipated to complete in less than two weeks. The final report will be completed within four weeks after the field sampling.

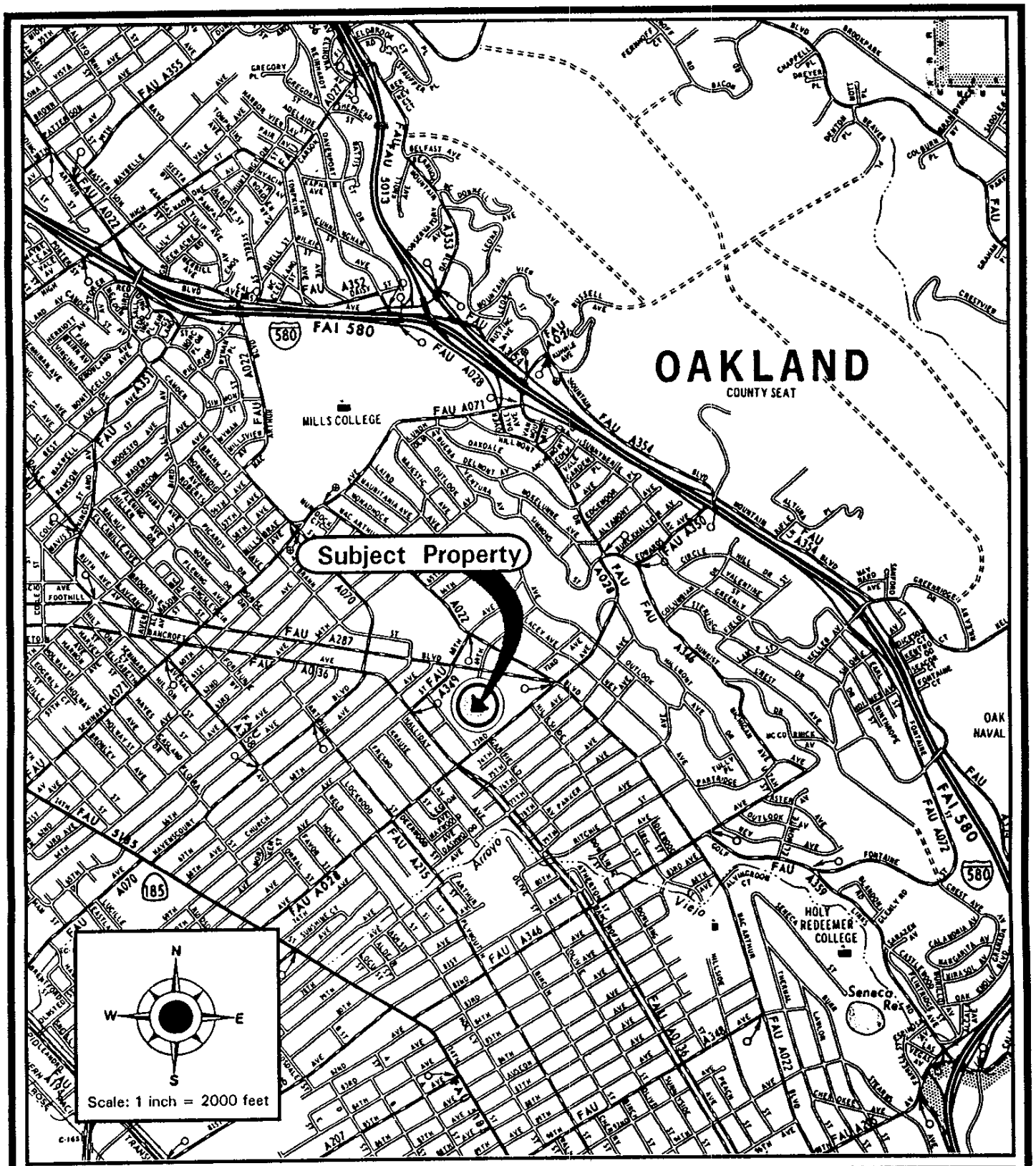
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The field work of each quarterly groundwater sampling event is planned for one day. The chemical analyses of the samples is anticipated to complete in less than two weeks. The quarterly report will be completed within four weeks after each sampling event.

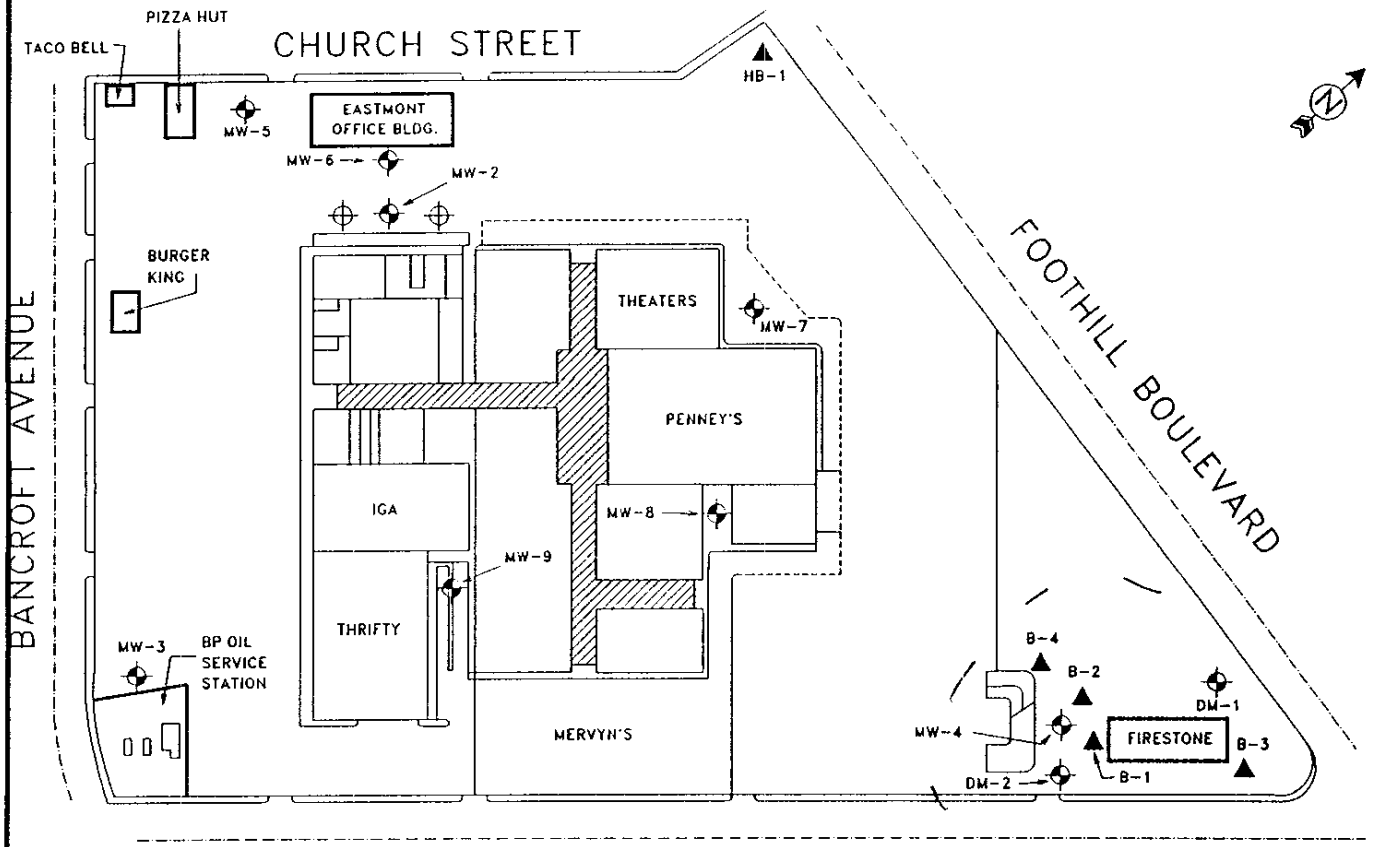
WP95278.23



AllWest Environmental, Inc.	October 1995	Site Regional Map	Project 95278.23	Figure 1
	One Eastmont Mall, Oakland, California			Source *AllWest*



AllWest Environmental, Inc.	October 1995	Site Vicinity Map	Project 95278.23	Figure 2
	One Eastmont Mall, Oakland, California			Source *CA DOT*



KEY

- soil borings (previously collected by others)
- soil borings (proposed by AllWest)
- monitoring wells (previously installed by others)

100'

0' 200'

AllWest

AllWest Environmental, Inc.

October 1995	Generalized Site Map	Project 95278.23	Figure 3
One Eastmont Mall, Oakland, California			Source *AllWest*

AllWest
AllWest Environmental, Inc.

Log of Boring:

Project Name:

Project Number:

Drilling Date:

Sheet of

Drilling Contractor:
Drill Rig:
Auger:

Sampler:
Hammer:
Logged By:

Blow Count	OVM Reading	Sample Interval	Depth in Feet	Well Profile	USCS Code	Soil Description
			1			
			2			
			3			
			4			
			5			
			6			
			7			
			8			
			9			
			10			
			11			
			12			
			13			
			14			
			15			
			16			
			17			
			18			
			19			
			20			
			21			

Groundwater Monitoring Well Sampling Field Log

Project No.: _____ Project Name: _____

Well No.: _____ Well Location: _____

Well Depth: _____ (ft.) Casing Diameter: _____ (in.)

Depth to Water: _____ (ft.) Date: _____ Time: _____

Water Column in Well: _____ (ft.) Well Volume: _____ (gal.)

Odor? _____ Free Product? _____ Thickness: _____

Purging Method: Hand Pump ___ Submersible Pump ___ Bailer ___ Other ___

Time	pH	Conduc. (μS)	Temp. (°C)	Water Level	Volume Removed	Remark

Purging Start Time: _____ Purging Stop Time: _____

Total Volume Purged: _____ (gal.) Well Dewater? _____

Water Level Prior to Sampling: _____ (ft.) Time: _____

Sampling Method: Teflon Bailer ___ Disposable Bailer ___ Sampling Pump ___

Sample Collected: _____ Sample No.: _____

Remark: _____

_____

_____

Sampler: _____ Date/Time: _____

AllWest

Site Specific Health and Safety Plan

Quarterly Groundwater Monitoring
and
Subsurface Investigation
at
Eastmont Mall
Oakland, California

ALLWEST PROJECT NO. 95134.23

October 5, 1995

Prepared by:

Long Ching
Senior Project Manager

Approved by:

Marvin Snapp
Health & Safety Manager

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TABLES, FIGURES AND ATTACHMENTS

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Figure 1A - Medical Emergency Facility Route Map

Attachment A - Agreement and Acknowledgement Statement Form
Attachment B - Site Health & Safety Plan Amendment Sheet

SITE SPECIFIC HEALTH & SAFETY PLAN

Quarterly Groundwater Monitoring
and
Subsurface Investigation
at
Eastmont Mall, Oakland, California

I. ENTRY OBJECTIVES

AllWest Environmental, Inc. (AllWest) and Bay Area Exploration (CONTRACTOR) plan to advance soil borings to collect soil samples and to conduct quarterly groundwater monitoring at the subject site. AllWest will be on site to direct the overall project, record field information, and to perform groundwater sampling. CONTRACTOR will be on site to perform borehole drilling and soil sampling. The subsurface investigation is planned for October of 1995. The quarterly groundwater monitoring is planned for four consecutive quarters commencing in October 1995.

II. ON-SITE ORGANIZATION AND COORDINATION

The following personnel are designated to carry out the job function(s):

Project Manager	Long Ching, AllWest Environmental
Project Geologist	Keith Craig, AllWest Environmental
Health & Safety Manager	Marvin Snapp, AllWest Environmental
Site Safety Officer	Keith Craig, AllWest Environmental
Contractor	Bay Area Exploration

Other personnel scheduled to be on site:

California Utility Survey

All personnel arriving/departing the site must notify the Project Manager and the CONTRACTOR's Site Superintendent or Foreman.

III. SITE BACKGROUND

Site Status: _X_ Active __ Inactive __ Unknown

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Site Description:

The site, Eastmont Mall, is a large regional shopping center located at the intersection of Foothill Boulevard and 73rd Street in Oakland, Alameda County, California. The multi-level mall houses many commercial businesses including clothing stores, general retail stores, dry cleaners, an automotive repair shop, and a supermarket. The mall building is surrounded by parking lots, a parking structure, fast food restaurants, and a service station.

Previous Phase I and Phase II environmental site assessments performed by various consultants identified several areas at the *Eastmont Mall* with confirmed or suspect soil and/or groundwater contamination. The areas included the *BP* service station at the south corner, the former *Firestone* shop at the east corner, the *Sparkle Cleaners* at the northwest side of the mall, and the *Eastmont Auto* at the southeast side of the mall.

The Alameda County Environmental Health Department (ACEHD) provides oversight of the investigation, remediation, and site closure activities of *Eastmont Mall.* Subsurface contamination from leaking underground storage tanks (USTs) at the BP station is being investigated and remediated by responsible parties. The former UST site of the former *Firestone* shop had received site closure from ACEHD in February 1995. In September 1995, ACEHD directed the mall management to conduct quarterly groundwater monitoring for the mall area and to investigate potential soil contamination in the vicinity of the *Sparkle Cleaners.*

Waste Types: _X_ Liquid _X_ Solid __ Sludge __ Gas __ None

Waste Characteristics:	__ Corrosive	__ Flammable	__ Inert
	__ Volatile	__ Reactive	__ Toxic
	__ Radioactive	_X_ Irritant	__ Other

Waste Categories: Wastes that may be encountered during the proposed work are soil cuttings, purge groundwater, and decontamination rinsate (rinse water from drilling tool decontamination) containing petroleum hydrocarbons.

IV. HAZARDS

Hazards Rating: __ High __ Moderate _X_ Low __ Unknown

Hazards/Toxic Substances Likely To Be Encountered: Hazards likely to be encountered on site are limited to soil and/or groundwater contaminated with petroleum hydrocarbons. Observe the necessary precautions while handling this material.

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Reactivity, Stability, Flammability Of Substance(s) Exist On Site: Information indicate that soils at the site may contain petroleum hydrocarbons from surface spills. The most likely type of petroleum hydrocarbons is petroleum oil and grease (machine oil). Soil and water contaminated with this type of material has a low potential to be flammable and irritable. Refer to Table 1, Definition of Hazard Evaluation Guidelines and MSDS sheets for additional information.

Area Affected: All of the work areas included in this subsurface investigation program are likely to be impacted by petroleum hydrocarbons.

Weather Conditions Anticipated: Possible adverse weather conditions to be anticipated on site are low to high temperatures, moderate winds, and some possibility of rain. The work areas are exposed and may be affected by adverse weather conditions.

V. PERSONAL PROTECTION

The level of personal protection designated here should be considered the minimal acceptable level. Project personnel may elect to upgrade the level of protection at their discretion.

Level of Protection Required: __A __B __C _X_D (Minimum)

Level D protection includes hard hats, safety glasses, and steel toed boots.

Personal Protective Equipment: A minimum of Level D protection will be required on site for all personnel. Safety glasses, hearing protection, and neoprene gloves will be worn if conditions warrant them. The presence of volatile organic compounds will be monitored with an Organic Vapor Meter (OVM). Should the level of volatiles present in the breathing zone increase to 100 ppm, Level C protection will be required. Level C protection includes PVC boots, a tyvek suit, an air purifying respirator with combination cartridges (volatiles and particulates), and protective gloves in addition to the Level D protection.

Equipment: Health and Safety related equipment to be used on site includes: two 20 BC type Fire Extinguishers, one Organic Vapor Meter (OVM), and one First Aid Kit. The equipment will be provided by the CONTRACTOR.

VI. DECONTAMINATION PROCEDURES

All operations conducted at this site have the potential to contaminate monitoring equipment and personal protective equipment (PPE). To prevent the transfer of contamination to vehicles, administrative areas and personnel, the following procedures must be followed:

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- Equipment Decontamination

  Whenever possible, equipment should be decontaminated with a solution of Alconox or soap and thoroughly rinsed with water prior to leaving the site. This must be done outside a 10-foot radius of any work area.

- Personal Decontamination

  Level D
  Segregated equipment drop
  Wash/rinse outer boot (as appropriate)
  Wash/rinse chemical resistant outer glove, then remove (as appropriate)
  Remove hard hat, goggles/safety glasses/face shield
  Remove and throw out inner disposable gloves in designated lined receptacles (as appropriate)

  Level C
  Segregated equipment drop
  Wash/rinse outer boots
  Wash/rinse chemical resistant outer gloves, then remove
  Remove outer boots and place to dry (if reusable)
  Remove chemical resistant suit (remove by rolling down the suit)
  Remove first pair(s) of disposable gloves
  Remove respirator/hard hat/face shield dispose of cartridges and wash respirator
  Remove last pair of disposable gloves

VII. CHEMICAL OF CONCERN

Potential health effects from a chemical exposure are dependant on several exposure factors such as: toxicity of substances, duration of exposure, concentration during exposure and the overall health of the person exposed.

The hazardous chemicals encountered during this investigation are anticipated to be: petroleum hydrocarbons. The following is a health analysis of the chemical.

- Petroleum Hydrocarbons

  Exposure to petroleum hydrocarbons is usually via skin contact or by ingestion. This material is not readily absorbed into the body through skin contact but is readily absorbed by ingestion. Exposure to petroleum hydrocarbons may result in skin rash, dizziness, flushing of the face, drowsiness, incoordination, abnormal gait, tremor, confusion, respiratory depression, and cardiac arrhythmias. Long-term high level exposure to petroleum hydrocarbons may lead to liver and kidney damage.

VIII. MSDS INFORMATION

Material Safety Data Sheets (MSDS) on chemical substances encountered at the site shall be made available to all persons (including subcontractors) working at the site. For emergency situation not specifically addressed by this site safety plan refer to MSDS recommendations for action information.

IX. GENERAL PROJECT SAFETY REQUIREMENTS

Project activities will be conducted in accordance with the following minimum safety requirements:

Eating, drinking, and smoking will be restricted to designated areas.

Gross decontamination and removal of all personal protective equipment will be performed prior to leaving the site. Contaminated clothing will be removed and collected in a drum for disposal.

Shaking or blowing of potentially contaminated clothing or equipment to remove dust or other materials is not permitted.

The Site Safety Officer will be responsible for taking necessary steps to protect employees from physical hazards, including

Falling objects, such as tools or equipment.
Falls from elevations.
Tripping over hoses, pipes, tools, or equipment.
Slipping on wet or oily surfaces.
Insufficient or faulty protective equipment.
Insufficient or faulty equipment or tools.

All personnel will be required to wash their hands and faces before eating, drinking or smoking.

Field operations personnel will be cautioned to inform each other of the non-visual effects of the presence of toxics, such as,

Headaches
Dizziness
Nausea
Blurred vision
Cramps
Irritation of eyes, skin, or respiratory tract
Changes in complexion or skin discoloration
Changes in apparent motor coordination

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Changes in personality or demeanor
Excessive salivation or changes in pupillary response
Changes in speech ability or pattern

Exposure To Cold Stress: Work schedules will be adjusted to provide sufficient rest periods in a heated area for warming up during operations conducted in cold weather. Also thermal protective clothing such as wind and/or moisture resistant outer wear is recommended to be worn. Dehydration, or the loss of body fluids, occurs in a cold environment and may increase the susceptibility of the worker to cold injury due to a significant change in blood flow to the extremities. Warm sweet drinks and soups should be provided at the work site to provide caloric intake and fluid volume. The intake of coffee should be limited (Adopted from TLV's and Biological Exposures Indices 1988-1989; ACGIH)

Exposure to Hot Temperature: Heatstroke and heat exhaustion can occur when a person is working in a hot environment, sitting in a hot automobile, or over-exerting while performing field duties such as monitoring or surveying. Work schedules will be adjusted to provide sufficient rest periods in a shaded area for cooling purposes. Avoiding direct sunlight will not necessarily protect a person from the ill effects of heat. It is possible to suffer heatstroke even when the temperature is fairly low. Excessive humidity can induce over-heating by interfering with the perspiration evaporation-cooling process of the body, causing excessive sweating and the loss of salt and water.

Heat Exhaustion

The signs and symptoms of heat stroke or heat exhaustion are variable with the developing condition. Headache, a light to severe dizziness, some mental confusion or loss of physical coordination; and pale, sweaty skin are all symptoms of heat exhaustion. To care for a person who has suffered heat exhaustion, move them to a cool place and keep them at rest. Fan the patient's body to expedite the cooling process, and watch for the signs of shock. If the patient becomes unconscious, or fails to recover rapidly, alert the local emergency medical service (EMS).

Heat Stroke (a.k.a. "Sunstroke")

Heat stroke is a much more serious condition than heat exhaustion. The temperature of the body can rise to such a point that the victim's brain cells will start to die. The EMS system must be notified immediately upon determination that heat stroke has or is occurring. Symptoms of heatstroke are dry, hot skin, deep breaths followed by shallow breathing, dilated (large) pupils, loss of consciousness, and convulsions or twitching of the muscles. Care for the patient includes cooling the body as quickly as possible, in any manner possible. Removing the clothing and placing wetted towels or sheets over the patient will help cool the body down. If available, ice packs can be

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placed in strategic locations on the body, such as under the armpits, on the ankles, or resting on the neck, in order to speed the cooling. Remember that the EMS system must be alerted immediately upon the determination that heat stroke is occurring or has occurred.

Replacement of the electrolytes lost during sweating is very important. Copious amounts of liquids must be consumed to replace these and balance out the blood. Quickick, Squincher, or Gatoraide are three examples of beverages that will allow the electrolyte balance to be restored. Many contractors will have drinks of this type available for their personnel, and the employees performing the work should be encouraged to drink as often as possible, even when they are not thirsty. Make sure that the proper drinks are specified. The choice of on-the-job clothing is very important. Cotton is a very good choice for hot summer weather. When working in Personal Protective Equipment such as Tyvek suits, it is essential to strip down as far as possible.

Careful monitoring of the employees engaged in demanding work during hot, humid days is a must to guard against the dangers of heat exhaustion and heat stroke, but as an employee of AllWest, you need to *protect yourself first* from the dangers of overheating in the field. Know the warning signs and first aid necessary to prevent heat stroke and heat exhaustion.

X. MEDICAL SURVEILLANCE

CONTRACTOR and subcontractors engaged in project activities must be participants in a medical surveillance program and must be cleared by the examining physician(s) to wear respiratory protection devices and protective clothing for working with hazardous materials. The applicable requirements under 29 CFR 1910.120 of the Federal Administrative Code will also be observed.

XI. SAFETY AND ORIENTATION MEETING

Field personnel from the CONTRACTOR and its subcontractors will attend a project-specific orientation meeting for safety issues and review the project tasks before beginning work. The meeting will be led by the site safety officer. In addition, fit-testing of respiratory protective devices will be conducted as part of the safety orientation meeting when the use of a respirator may be required.

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XII. WORK ZONES AND SECURITY MEASURES

The area where active excavation work is being performed will be designated as an Exclusion Zone. Only essential personnel will be allowed into an Exclusion Zone. When it is practical and local topography allows, approximately 20 to 75 feet of space surrounding the Exclusion Zone will be designated as a Contamination Reduction Zone.

XIII. TRAFFIC CONTROL

The CONTRACTOR is responsible for providing necessary traffic controls if required. Cones, wooden barricades, or a suitable alternative will be used to deny the public access to the Contamination Reduction Zone. If for any reason the safety of a member of the public (e.g., motorist or pedestrian) may be endangered, work will cease until the situation is remedied. Cones and warning signs will be used when necessary to redirect motorists or pedestrians.

XIV. PROJECT PERSONNEL

AllWest Environmental, Inc. will oversee and act accordingly during all phases of the project. The following management structure will be instituted for the purpose of successfully and safely completing this project.

Project Manager

The Project Manager will be responsible for implementing the project and obtaining any necessary personnel or resources for the completion of the project. Specific duties will include:

Coordinating the activities of CONTRACTOR and all subcontractors, to include informing them of the required personal protective equipment and insuring their signature acknowledging this Site Health and Safety Plan (Attachment A);

Selecting a Site Safety Officer and field personnel for the work to be undertaken on site;

Ensuring that the tasks assigned are being completed as planned and on schedule;

Providing authority and resources to ensure that the Site Safety Officer is able to implement and manage safety procedures;

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Preparing reports and recommendations about the project to clients and affected AllWest Environmental, Inc. personnel;

Ensuring that persons allowed to enter the site (i.e., EPA, contractors, state officials, visitors) are made aware of the potential hazards associated with the substances known or suspected to be on site, and are knowledgeable as to the on-site copy of the specific site health & safety plan;

Ensuring that the Site Safety Officer is aware of all of the provisions of this site safety plan and is instructing all personnel on site about the safety practices and emergency procedures defined in the plan; and

Ensuring that the Site Safety Officer is making an effort to monitor site safety, and has designated a Field Team Leader to assist with the responsibility when necessary.

Health & Safety Manager

The Health & Safety Manager shall be responsible for the overall coordination and oversight of the site health and safety plan. Specific duties will include:

Approving the selection of the types of personal protective equipment (PPE) to be used on site of specific tasks;

Monitoring the compliance activities and the documentation processes undertaken by the Site Safety Officer;

Evaluating weather and chemical hazard information and making recommendations to the Project Manager about any modifications to work plans or personal protection levels in order to maintain safety;

Coordinate upgrading or downgrading PPE with Site Safety Officer, as necessary, due to changes in exposure levels, monitoring results, weather, other site conditions;

Approving all field personnel working on site, taking into consideration their level of safety training, their physical capacity, and their eligibility to wear the protective equipment necessary for their assigned tasks (i.e., Respirator Fit Testing Results); and

Overseeing the air monitoring procedures as they are carried out by site personnel for compliance with all company health and safety policies.

Site Safety Officer

The Site safety Officer shall be responsible for the implementation of the site safety plan on site. Specific duties will include:

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Monitoring the compliance of field personnel for the routine and proper use of the PPE that has been designated for each task;

Routinely inspecting PPE and clothing to ensure that it is in good condition and is being stored and maintained properly;

Stopping work on the site or changing work assignments or procedures if any operation threatens the health and safety of workers or public;

Monitoring personnel who enter and exit the site and all controlled access points;

Reporting any signs of fatigue, work-related stress, or chemical exposures to the Project Manager and/or Health & Safety Manager;

Dismissing field personnel from the site if their actions or negligence endangers themselves, co-workers, or the public, and reporting the same to the Project Manager and/or Health & Safety Manager;

Reporting any accidents or violations of the site safety plan to the Project Manager and/or Health & Safety Manager, and documenting the same for the project in the project records;

Knowing emergency procedures, evacuation routes and the telephone numbers of the ambulance, local hospital, poison control center, fire and police departments;

Ensuring that all project-related personnel have signed the personnel agreement and acknowledgment form contained in this Site Health & Safety Plan;

Coordinate upgrading and downgrading PPE with the Health & Safety Manager, as necessary, due to changes in exposure levels, monitoring results, weather, and other site conditions; and

Perform air monitoring with approved instruments in accordance with requirements stated in this Site Health & Safety Plan.

XV. AMENDMENTS

Any changes in the scope of work of this project and/or site conditions must be amended in writing on the Site Health and Safety Plan Amendment Sheet (Attachment B) and approved by the Health and Safety Manager.

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XVI. EMERGENCY RESPONSE PROCEDURES

In the event of an accident resulting in physical injury, first aid will be administered and the injured worker will be transported to the nearest hospital or emergency medical clinic for emergency treatment. A physician's attention is required regardless of the severity of the injury. Figure 1A contains the map showing the nearest medical emergency facility and the most direct route to the facility.

In the event of a fire explosion, or property damage, AllWest will be immediately notified. If necessary, local fire or response agencies will be called.

The CONTRACTOR shall develop a contingency plan which address procedures to be followed in the event of fire, personal accidents and explosions which may result in environmental contamination. The plan shall be reviewed and approved by AllWest before work commences.

EMERGENCY TELEPHONE NUMBERS

Fire and Police:	911
Ambulance:	911
AllWest:	415-391-2510
Contractor	707-864-2131
Underground Service Alert (USA):	800-422-4133
CHEMTREC:	800-424-9300

Note: Only call CHEMTREC in an emergency. CHEMTREC is an Acronym for Chemical Transportation Emergency Center, a public service of the Chemical Manufacture's Association. CHEMTREC can usually provide hazard information warnings and guidance when given the identification number of the name of the product and the nature of the problem. CHEMTREC can also contact the appropriate experts.

MEDICAL:

Highland General Hospital
1411 East 31st Street
Oakland, California
(510) 534-8055

XVII. LIMITATIONS AND AUTHORITY STATEMENT

AllWest Environmental does not guarantee the health or safety of any persons entering this site. Due to the potential hazards of this site and the activity occurring thereon, it is not possible to discover, evaluate, and provide protection for all possible hazards which may be encountered. Strict adherence to the HEALTH & SAFETY

guidelines set forth herein will reduce, but not eliminate, the potential for injury at this site. The HEALTH & SAFETY guidelines in this plan were prepared specifically for this site and should not be used on any other site without prior research and evaluation by personnel trained in HEALTH & SAFETY practices. The Allwest Project manager will be responsible for implementing this plan. Both the AllWest Project Manager and the Health & Safety manager have the authority to audit site activities for compliance with this plan and may suspend, modify or halt contractors' work practices should they not meet the requirements specific to this plan.

TABLE 1
DEFINITION OF HAZARD EVALUATION GUIDELINES

HAZARD: Airborne Contaminants

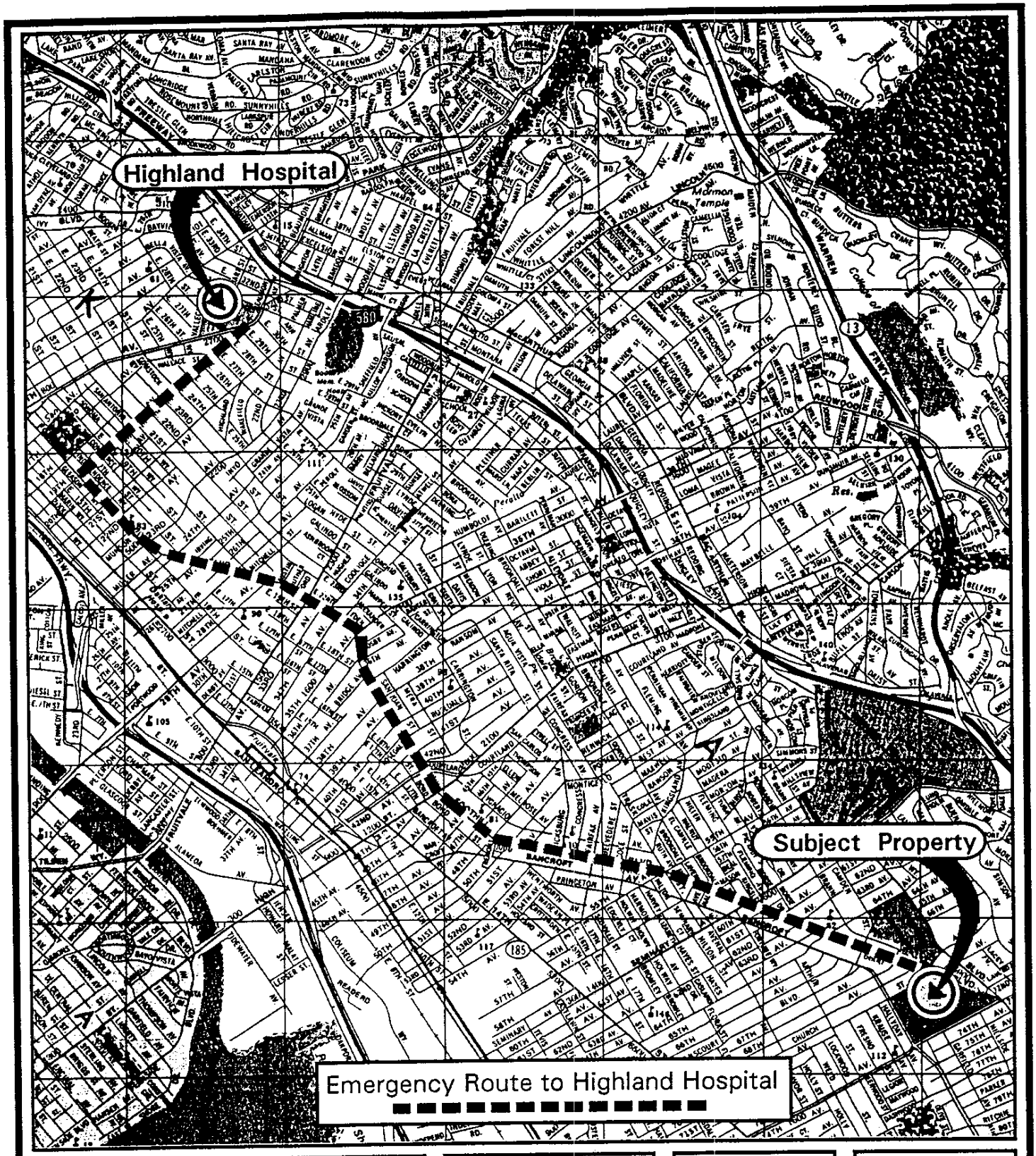
Guideline	Explanation
Threshold Limit Value Time-Weighted Average (TLV-TWA)	The time-weighted average concentration for a normal 8-hour work day and a 40-hour work week, to which nearly all workers may be repeatedly exposed without adverse effect.
Permissible Exposure Limit (PEL)	Time-weighted average concentrations similar to (and in many cases derived from) the Threshold Limit Values >
Immediately Dangerous to Life and Health (IDLH)	"IDLH" or "immediately dangerous to life or health" means any atmospheric condition that poses an immediate threat to life, or which is likely to result in acute or immediate severe health effects. This includes oxygen deficiency conditions.

HAZARD: Explosion

Guideline	Explanation
Lower Explosive Limit (LEL)	The minimum concentration of vapor in air below which propagation of a flame will not occur in the presence of an ignition source.
Upper Explosive Limit (UEL)	The maximum concentration of vapor in air above which propagation of a flame will not occur in the presence of an ignition source.

HAZARD: Fire

Guideline	Explanation
Flash Point (flash p)	The lowest temperature at which the vapor of a combustible liquid can be made to ignite momentarily in air.



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AllWest Environmental, Inc.

October 1995	Emergency Hospital Route	Project 95278.23	Figure 1A
One Eastmont Mall, Oakland, California			Source *Rand McNally*

ATTACHMENT A

AGREEMENT AND ACKNOWLEDGEMENT STATEMENT

Site Health and Safety Plan Agreement

AllWest personnel have the authority to stop work performed by the Contractor and his subcontractors at this site if any work is not performed in accordance with the requirements of this Site Health and Safety Plan.

AllWest Environmental, Inc., project personnel contractor and subcontractor personnel are required to sign the following agreement prior to conducting work at the site.

1. I have read and fully understand the Site Health and Safety Plan and my individual responsibilities.

2. I agree to abide by the provisions of the Site Safety Plan.

Name	Signature
Company	Date
Name	Signature
Company	Date
Name	Signature
Company	Date
Name	Signature
Company	Date

ATTACHMENT B

SITE SAFETY PLAN AMENDMENT SHEET

Project Name: _____

Project Number: _____

Location: _____

Changes in field activities or hazards:

Proposed Amendment:

Proposed by: _____ Date: _____

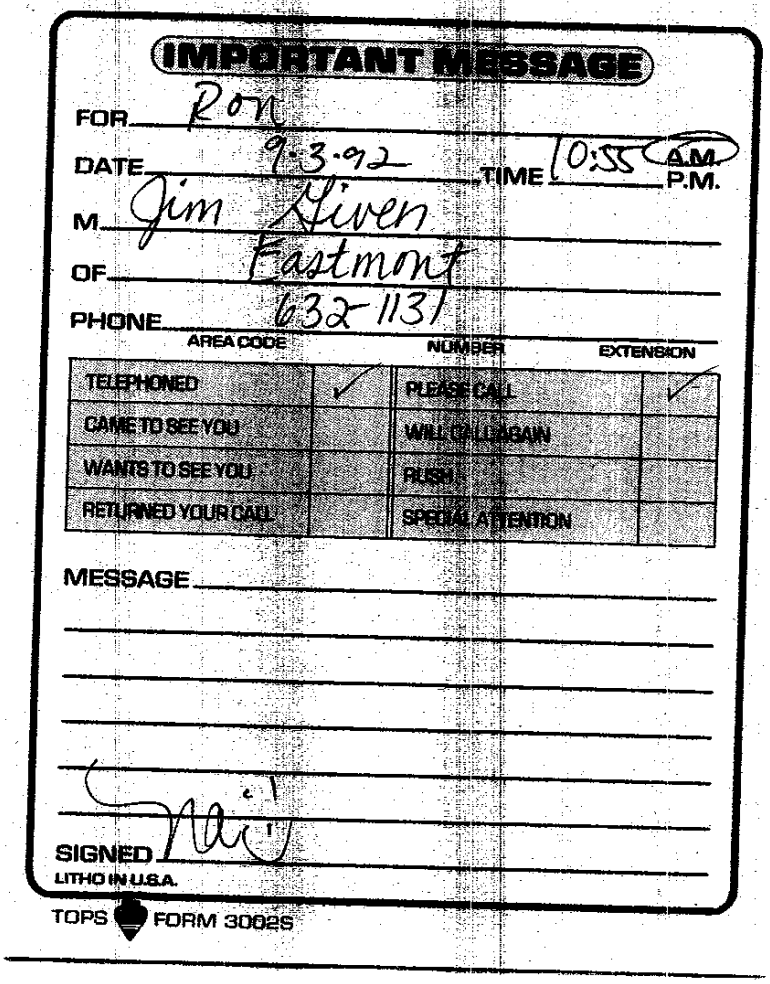
Approved by: _____ Date: _____
Project Manager

_____ Date: _____
Health & Safety Manager

Declined by: _____ Date: _____

Amendment Number: _____

Amendment Effective Date: _____



IMPORTANT MESSAGE

FOR Ron

DATE 9-3-92 TIME 10:55 A.M. P.M.

M Jim Given

OF Eastmont

PHONE 632 1131
AREA CODE NUMBER EXTENSION

TELEPHONED	✓	PLEASE CALL	✓
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL		SPECIAL ATTENTION	

MESSAGE

SIGNED

LITHO IN U.S.A.

TOPS FORM 3002S

AllWest

AllWest Environmental, Inc.

Specialists in Environmental Due Diligence and Remedial Services

AllWest

AllWest Environmental, Inc.

Specialists in Environmental Due Diligence and Remedial Services

One Sutter Street, Suite 600
San Francisco, Ca 94104
Tel 415.391.2510
Fax 415.391.2008

QUARTERLY GROUNDWATER MONITORING REPORT

Third Quarter
August - October 1995
Eastmont Mall
Oakland, California

ALLWEST PROJECT 95266.28
November 17, 1995

PREPARED BY:

Keith B. Craig
Project Manager

REVIEWED BY:

Long Ching, PE
Senior Engineer

12/21/97

AllWest

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Appendix B - Groundwater Sampling Field Logs
Appendix C - Laboratory Test Results and Chain-of-Custody Records

AllWest

QUARTERLY GROUNDWATER MONITORING REPORT

Third Quarter 1995
Eastmont Mall
Oakland, California

I. INTRODUCTION

This report presents the results of the quarterly groundwater monitoring event performed by *AllWest Environmental* at the *Eastmont Mall* located in Oakland, California. The groundwater sampling event occurred on October 19, 1995. The groundwater monitoring was conducted in accordance with the *Alameda County* approved workplan for the third quarter (August through October) of 1995.

The scope of *AllWest's* services include sampling of five groundwater monitoring wells (MW-5 through MW-9), measuring groundwater levels in the monitoring wells, forwarding the collected groundwater samples to a state certified laboratory for chemical analyses, and preparing a written report presenting the results of the groundwater sampling.

II. PROJECT BACKGROUND

The subject property lies in the east Oakland area of Alameda County, California, in a mixed commercial and residential district (See Figures 1 and 2). The subject property is bounded by Foothill Boulevard, 73rd Avenue, and Bancroft Avenue in the Eastmont District of Oakland.

The subject property consists of a large two-story shopping mall with several smaller buildings at the site (See Figure 3), including an office complex, a police station, three fast-food restaurants, and a gasoline service station.

According to available documents of previous site assessments by others, subsurface impact by petroleum hydrocarbons has been detected at the BP Service Station and the police station (formerly Firestone Tire Shop). A "site closure" has been granted to the police station site by Regional Water Quality Control Board in 1994. The service station site is currently being remediated by BP and under the oversight of Alameda County Environmental Health Department.

Between 1989 and 1993, up to nine groundwater monitoring wells were installed by various environmental consultants around the mall building as part of the on-going site assessment. A well installed by Hunter Environmental in 1989 was located west of a dry cleaning facility

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(Sparkle Cleaners) and numbered MW-2. Low levels of PCE and TCE were detected in the groundwater sample from MW-2 during the initial sampling event.

However, MW-2 could not be located during a subsequent site assessment by Artesian Environmental in 1993. Consequently, Artesian installed a replacement well (MW-6) in the general area of MW-2. The 1993 groundwater sampling did not detect PCE or TCE in MW-6 or any of the other on-site wells. The only contaminants detected in site groundwater wells were low concentrations of gasoline, benzene, and ethylbenzene in well MW-7. The wells around the mall building have not been sampled since 1993.

In September 1995, Alameda County Environmental Health Department directed the mall management to initiate a quarterly groundwater monitoring program for wells MW-5 through MW-9. The purpose was to gather sufficient groundwater quality data so that a determination on site closure can be made by the County. AllWest was retained in October 1995 to perform the quarterly monitoring.

III. GROUNDWATER SAMPLING ACTIVITIES

Field activities for this third quarter 1995 groundwater monitoring event included the measurement of groundwater elevations and sampling of all five monitoring wells (MW-5 through MW-9). Sampling of the groundwater monitoring wells was conducted by *AllWest* personnel on October 19, 1995.

The groundwater levels in wells MW-5 through MW-9 measured during this and previous monitoring events are presented in Table 1, Accumulative Groundwater Level Measurements, in the TABLES section of this report. Groundwater flow direction during this monitoring event was calculated to be towards the west with an average gradient of 0.005 ft/ft.

AllWest's groundwater sampling protocols, presented in Appendix A of this report, were followed. At least three well casing volumes were purged prior to sampling. After purging, six 40-milliliter and two 1-liter samples were collected from each of the five monitoring wells. No product sheen was noted in any of the wells prior to purging.

A Quality Assurance/Quality Control (QA/QC) sample, in the form of a duplicate sample of sample MW-9, labeled MW-10, was collected. Additionally, a trip blank provided by the laboratory followed all of the sample bottles originating from the laboratory. Copies of the groundwater sampling field logs are presented in Appendix B.

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IV. LABORATORY TEST RESULTS

The collected groundwater samples were forwarded to a State of California certified analytical laboratory, *California Laboratory Services* (*Cal Labs*), of Rancho Cordova, California and analyzed for the presence of total petroleum hydrocarbons as gasoline (TPH-g), the volatile constituents of gasoline benzene, toluene, ethylbenzene, and xylene (BTEX), the Halogenated Volatile Organic Compounds (HVOCs) by EPA method 601, and the two Polynuclear Aromatics Hydrocarbons (PNAs), Benzo(a)pyrene and Naphthalene, by EPA 610.

No detectable concentrations of TPH-g, BTEX, or the two PNAs were found in samples from all of the monitoring wells, MW-5 through MW-9.

No detectable concentrations of HVOCs were detected in any of the five wells except for Trichloroethene (TCE) in monitoring well MW-6. The TCE concentration from the MW-6 sample was reported as 1.4 parts per billion (ppb).

An accumulative summary of analytical results for wells MW-5 through MW-9 to date are presented on Table 2 in the TABLES section of this report. A copy of the laboratory test reports and Chain-of-Custody documents are included as Appendix C.

V. CONCLUSIONS AND RECOMMENDATIONS

As indicated by the laboratory test results, TPH-g, BTEX, and the two PNAs were not detected in the groundwater samples from monitoring wells MW-5 through MW-9.

Laboratory results indicated that only TCE was detected in MW-6 at a concentration of 1.4-ppb. The Maximum Contaminant Level (MCL) for TCE in drinking water, established by the State of California, is reported as 5-ppb. The TCE concentration level from well MW-6 does not exceed the MCL. No other contaminants previously identified in the wells were present during this sampling event.

Since no HVOC has ever been detected in wells MW-5, MW-7, MW-8, and MW-9, AllWest recommends that HVOC analyses be eliminated from the quarterly monitoring requirements for these four wells. In accordance with the workplan, the next quarterly groundwater monitoring event should be scheduled for January 1996.

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VI. REPORT LIMITATIONS

The work described in this report has been performed accordance with generally accepted engineering principles an practices. The conclusions contained herein are presented based on environmental conditions of the site and laboratory test results of the groundwater samples. It must be recognized that changes can occur in groundwater conditions due to seasonal variations, or other reasons. Furthermore, the distribution of chemical concentrations in the groundwater can vary both temporally and spatially. The chemical analyses results are valid as of the date and at the sampling location only. *AllWest* cannot be held accountable for the accuracy of the test data from an independent laboratory, nor for any analyte quantities falling below the recognized standard detection limits for the method utilized by the independent laboratory.

VII. REFERENCES

- Subsurface Investigation Report for J.C. Penney Store No. 836, Eastmont Mall, Oakland, California. Prepared by Dames & Moore and dated July 10, 1991.
- Level One Environmental Site Assessment Report for Eastmont Mall, Oakland, California. Prepared by Certified Engineering & Testing Company and dated October 27, 1992.
- Boring and Monitoring Well Installation Report for Eastmont Mall, Oakland, California. Prepared by Artesian Environmental and dated October 20, 1993.
- Quarterly Groundwater Monitoring Report for Eastmont Mall, Oakland, California. Prepared by Artesian Environmental and dated January 20, 1994.
- Work Plan for Quarterly Groundwater Monitoring and Subsurface Investigation at Eastmont Mall, Oakland, California, AllWest Environmental, October 6, 1995.
- Summary of Maximum Contaminant Levels and Action Levels, State of California, Department of Health Services, Office of Drinking Water, October 1990.

AllWest

TABLE 1

ACCUMULATIVE GROUNDWATER ELEVATION MEASUREMENTS

Eastmont Mall
October 1995

Well Number	Well Casing Elevation	Date of Measurement	Depth to Groundwater	Groundwater Elevation	Average Gradient and Direction
MW-5	+ 42.07'	09-28-93 12-29-93 10-19-95	35.25' 36.10' 30.10'	+ 6.82' + 5.97' + 11.97'	West 0.007 West 0.005 West
MW-6	+ 43.35'	09-28-93 12-29-93 10-19-95	36.85' 37.15' 31.26'	+ 6.50' + 6.20' + 12.09'	West 0.007 West 0.005 West
MW-7	+ 44.37'	09-28-93 12-29-93 10-19-95	33.42' 34.25' 28.78'	+ 10.95' + 10.12' + 15.59'	West 0.007 West 0.005 West
MW-8	+ 44.90'	09-28-93 12-29-93 10-19-95	32.10' 32.75' 28.95'	+ 12.80' + 12.15' + 15.95'	West 0.007 West 0.005 West
MW-9	+ 44.18'	09-28-93 12-29-93 10-19-95	33.00' 33.97' 29.18'	+ 11.18' + 10.21' + 15.00'	West 0.007 West 0.005 West

Note:

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AllWest

TABLE 2

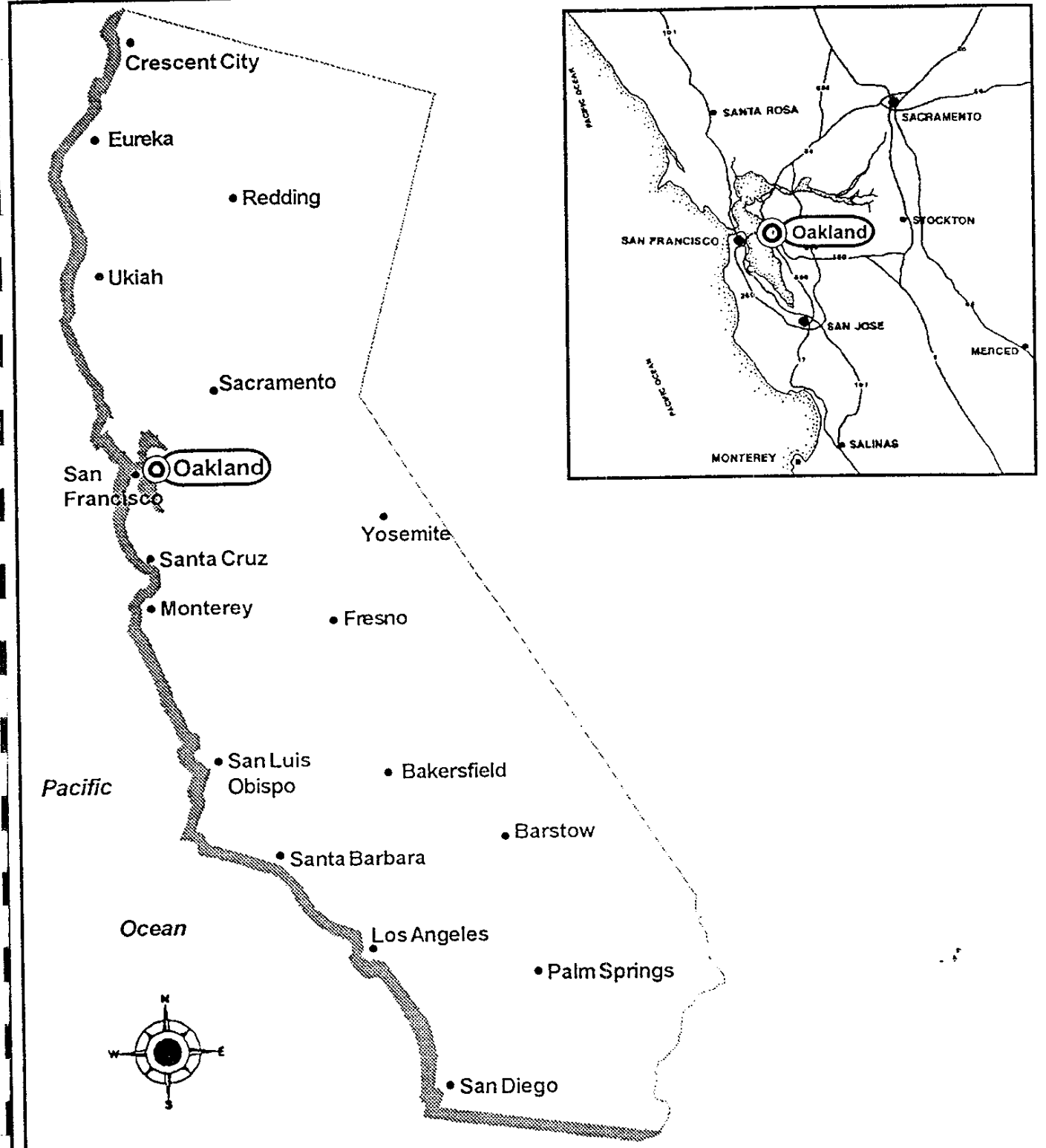
ACCUMULATIVE GROUNDWATER ANALYTICAL RESULTS

Eastmont Mall
October 1995

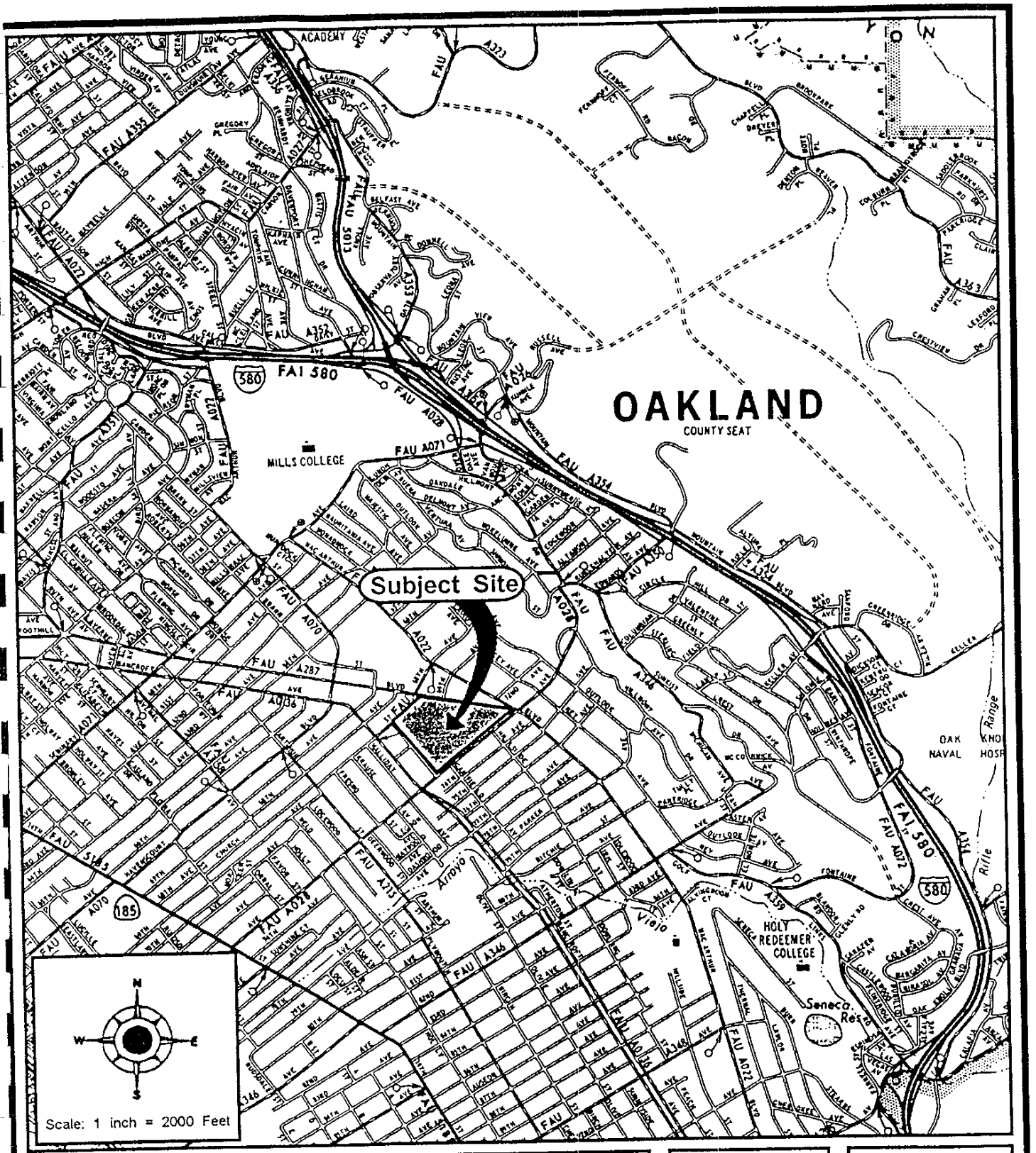
Well Number	Sampling Date	TPH-g	Benzene	Toluene	Ethyl-Benzene	Xylene	Naphthalene Benzo(a)Pyrene	Volatile Organic Compounds
MW-5	12-29-93 10-19-95	ND ND	ND ND	ND ND	ND ND	ND ND	NA ND	ND ND
MW-6	12-29-93 10-19-95	73 ND	13 ND	ND ND	1.5 ND	ND ND	NA ND	ND TCE - 1.4
MW-7	12-29-93 10-19-95	78 ND	15 ND	ND ND	1.7 ND	ND ND	NA ND	ND ND
MW-8	12-29-93 10-19-95	ND ND	ND ND	ND ND	ND ND	ND ND	NA ND	ND ND
MW-9	12-29-93 10-19-95	ND ND	ND ND	ND ND	ND ND	ND ND	NA ND	ND ND

Notes: All concentration values were reported in µg/kg equivalent to parts per billion (ppb).
ND is equivalent to "None Detected" at or above the laboratory limit of detection.
NA is equivalent to Not Analyzed.
The Laboratory Limit of Detection for TPH-g is 50 ppb, for BTEX is 0.5 ppb.

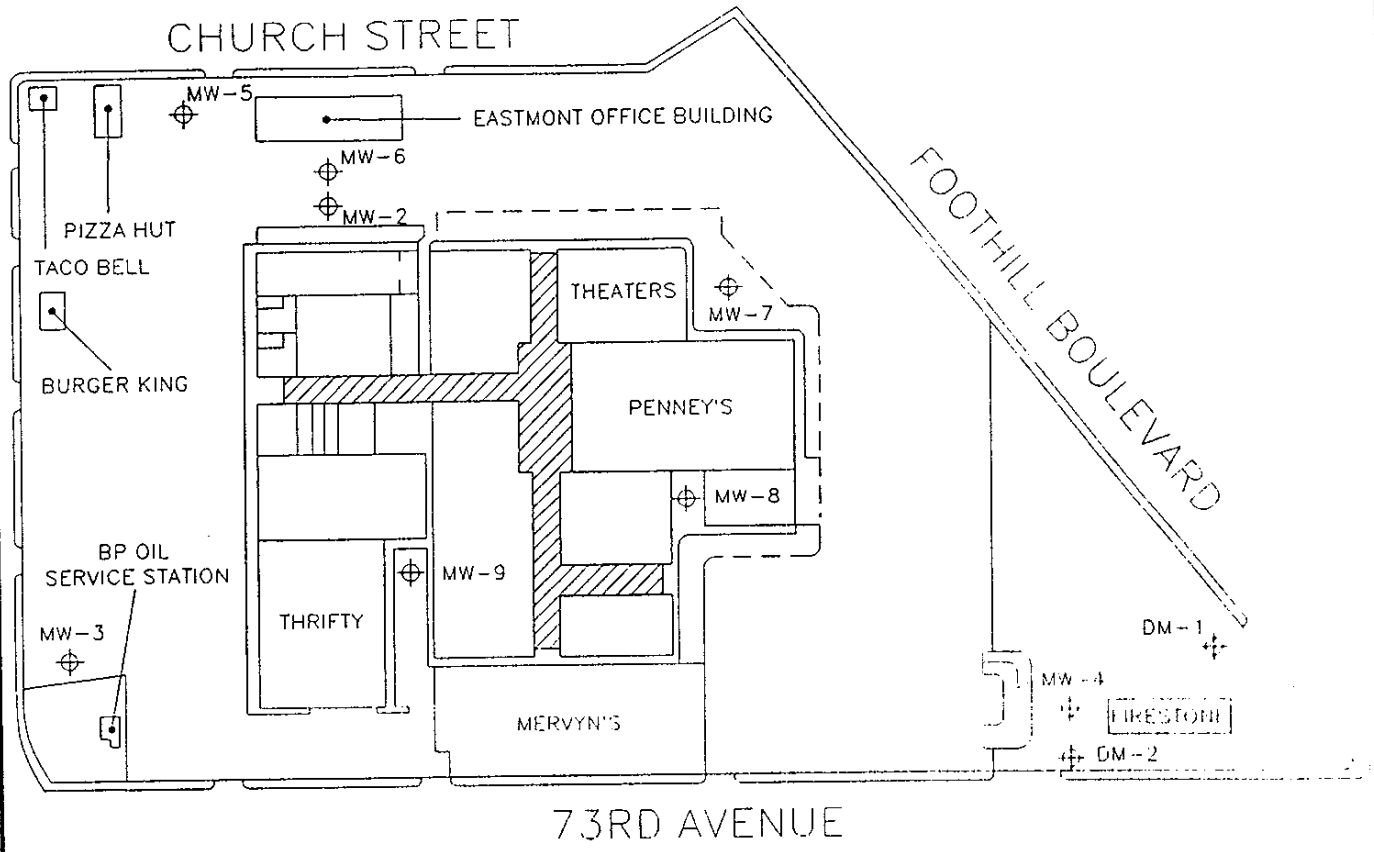
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AllWest Environmental, Inc.	November 1995	**Site Regional Map**	Project 95266.28	Figure 1
	One Eastmont Mall, Oakland, California			Source *AllWest*



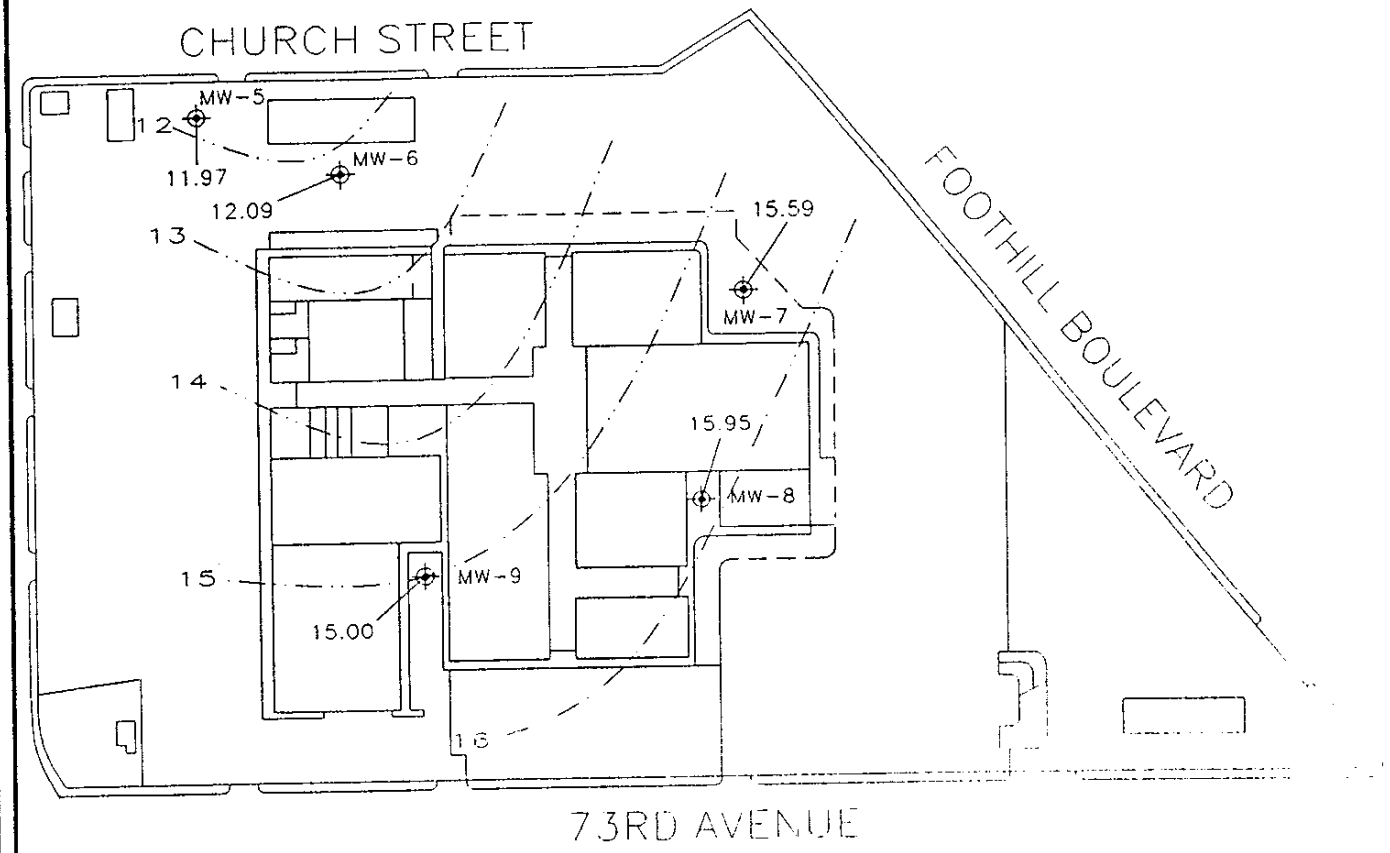
AllWest Environmental, Inc.	November 1995	**Site Vicinity Map**	Project 95266.28	Figure 2
	One Eastmont Mall, Oakland, California			Source *CA DOT*



MW-5 Monitoring Well Location

0' 200' 400' 800'
100' 300' 600'

AllWest Environmental, Inc.	November 1995	**Site Plan & Monitoring Well Location Map**	Project 95266.28	Figure 3
	One Eastmont Mall, Oakland, California			Source *AllWest*



KEY

MW-5 — Monitoring Well Location

11.97 — Well Groundwater Elevation (in feet)

Groundwater Contour Line

General Flow Direction is to the west

0' 200' 400' 800'

100' 300' 600'

AllWest

AllWest Environmental, Inc.

November 1995	**Grounwater Contour Map**	Project 95266.28	Figure 4
One Eastmont Mall, Oakland, California			Source *AllWest*

AllWest

Appendix A

GROUNDWATER SAMPLING PROCEDURES

Upon arriving at the groundwater monitoring well site, each monitoring well vault and well casing are first examined for damage which could render the well inoperable. Any water collected during the recent rains were purged from the well vault to avoid contamination from rain water. The upper end-cap was then removed and an organic vapor meter (OVM) was used to detect hydrocarbon vapor that might exist inside the well casing. The reading of the OVM was then recorded onto the groundwater sampling field log. After an appreciable time for groundwater levels to equilibrate, electric water level sounder was lowered into the well casing to measure the depth to water to the nearest 0.01 feet. A clear polyethylene bailer was then lowered into the well casing and partially submerged. Upon retrieval of the clear bailer, the surface of the water column retained in the bailer was carefully examined for floating product or product sheen.

After initial measurements were completed and recorded, each monitoring well was purged by an electrical submersible pump or decontaminated teflon bailer. A minimum of 3 well volumes of groundwater was purged. Groundwater quality parameters (temperature, pH, and conductivity) were monitored with a combination meter after each well volume was removed. Purging was considered complete when purging indicators were stabilized (consecutive readings within 10% of each other) or the purged water was relatively free of sediments. All purged water was temporarily stored on-site in labeled 55-gallon drums pending test results to determine the proper disposal method. If no contamination was found then the purge water was disposed of as nonhazardous.

Groundwater sampling was conducted after the water level in the well recovered to at least 80% of the initial level that was recorded before purging. The groundwater sample was collected using a disposable bailer, which was discarded after the sampling event. Upon retrieval of the disposable bailer, the retained water was carefully transferred to appropriate glass container(s) (three 40-ml VOAs) furnished by the analytical laboratory. A bottom emptying device was placed on the bailer to minimize the loss of volatile organics during transfer. All sample containers were fitted with teflon lined septum/cap and filled such that no headspace was present. After the water sample was properly transferred to the appropriate containers, the containers were labeled and immediately placed on ice in an insulated cooler to preserve the chemical characteristics of the sample.

To prevent cross contamination, all groundwater sampling equipment that came into contact with the groundwater was thoroughly cleaned by washing in Alconox (a non-phosphate detergent) solution and double rinsed with distilled water prior to each well sampling event. Groundwater samples were stored and transported in an insulated cooler filled with crushed ice. The analytical laboratory collected the samples from the site or from the *AllWest* office. The samples were delivered to the analytical laboratory by a special courier of the laboratory. All samples were transported under strict Chain-of-Custody document protocol from the time of sample collection to the time of arrival at the laboratory.

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Groundwater Monitoring Well Sampling Field Log

Project No.: 95266.28 Project Name: Eastmont Monitoring

Well No.: MW - 5 Well Location: MW - 5

Well Depth: 48.25 (ft.) Casing Diameter: 2 (in.)

Depth to Water: 30.10 (ft.) Date: 10/19/95 Time: 900

Water Column in Well: 17.95 (ft.) Well Volume: 2.87 (gal.)

Odor? No Free Product? No Thickness: N/A

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ____

Time	pH	Conduc. (μS)	Temp. (°F)	Water Level	Volume Removed	Remark
1145	7.11	885	80.8		0.3	Moderate Turbidity
1147	7.00	894	77.8		2.5	Moderate Turbidity
1148	6.97	804	76.5		5.0	Slight Turbidity
1150	6.95	767	75.8		7.5	Clear
1152	6.90	802	75.3		10.5	Clear

Purging Start Time: 1143 Purging Stop Time: 1155

Total Volume Purged: 10.5 (gal.) Well Dewater? No

Water Level Prior to Sampling: 30.20 (ft.) Time: 1210

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 6 VOAs w/HCL 2 Amber Liters Sample No.: MW - 5

Remark: _____

_____

Sampler: Keith Craig Date/Time: 10/19/95 1220

Groundwater Monitoring Well Sampling Field Log

Project No.: 95266.28 Project Name: Eastmont Monitoring

Well No.: MW - 6 Well Location: MW - 6

Well Depth: 49.50 (ft.) Casing Diameter: 2 (in.)

Depth to Water: 31.26 (ft.) Date: 10/19/95 Time: 945

Water Column in Well: 17.24 (ft.) Well Volume: 2.76 (gal.)

Odor? No Free Product? No Thickness: N/A

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ____

Time	pH	Conduc. (µS)	Temp. (°F)	Water Level	Volume Removed	Remark
1515	7.70	1098	78.3		0.3	Highly Turbid
1517	7.20	971	75.6		3.0	Highly Turbid
1519	7.10	940	73.7		6.0	Moderately Turbid
1521	7.06	930	72.9		8.5	Moderately Turbid
1523	6.98	939	72.5		11.0	Slightly Turbid

Purging Start Time: 1512 Purging Stop Time: 1525

Total Volume Purged: 11.0 (gal.) Well Dewater? No

Water Level Prior to Sampling: 31.50 (ft.) Time: 1530

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 6 VOAs w/HCL 2 Amber Liters Sample No.: MW - 6

Remark: Surface well seal broken and caved in due to traffic. Needs to be fixed - excavated soil around casing

Sampler: Keith Craig Date/Time: 10/19/95 1550

Groundwater Monitoring Well Sampling Field Log

Project No.: 95266.28 Project Name: Eastmont Monitoring

Well No.: MW - 7 Well Location: MW - 7

Well Depth: 48.80 (ft.) Casing Diameter: 2 (in.)

Depth to Water: 28.78 (ft.) Date: 10/19/95 Time: 950

Water Column in Well: 20.02 (ft.) Well Volume: 3.20 (gal.)

Odor? No Free Product? No Thickness: N/A

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ____

Time	pH	Conduc. (μS)	Temp. (°F)	Water Level	Volume Removed	Remark
1634	7.90	939	67.3		0.2	Moderately Turbid
1636	7.56	957	66.8		3.0	Moderately Turbid
1638	7.38	1017	66.6		6.0	Slightly Turbid
1640	7.48	1022	66.4		9.5	Slightly Turbid
1643	7.51	1010	66.6		11.0	Slightly Turbid

Purging Start Time: 1633 Purging Stop Time: 1645

Total Volume Purged: 11.0 (gal.) Well Dewater? No

Water Level Prior to Sampling: 29.13 (ft.) Time: 1650

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 6 VOAs w/HCL 2 Amber Liters Sample No.: MW - 7

Remark: _____

_____

_____

Sampler: Keith Craig Date/Time: 10/19/95 1700

Groundwater Monitoring Well Sampling Field Log

Project No.: 95266.28 Project Name: Eastmont Monitoring

Well No.: MW - 8 Well Location: MW - 8

Well Depth: 48.68 (ft.) Casing Diameter: 2 (in.)

Depth to Water: 28.95 (ft.) Date: 10/19/95 Time: 915

Water Column in Well: 19.73 (ft.) Well Volume: 3.15 (gal.)

Odor? No Free Product? No Thickness: N/A

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ____

Time	pH	Conduc. (μS)	Temp. (°F)	Water Level	Volume Removed	Remark
1025	6.99	1161	76.4		0.2	Moderate Turbidity
1026	7.01	1112	73.4		2.5	Moderate Turbidity
1028	6.99	1090	72.7		5.0	Moderate Turbidity
1029	6.95	1053	71.8		7.5	Slight Turbidity
1032	6.95	1079	71.1		11.0	Slight Turbidity

Purging Start Time: 1024 Purging Stop Time: 1033

Total Volume Purged: 11.0 (gal.) Well Dewater? No

Water Level Prior to Sampling: 29.32 (ft.) Time: 1045

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 6 VOAs w/HCL 2 Amber Liters Sample No.: MW - 8

Remark: _____

_____

Sampler: Keith Craig Date/Time: 10/19/95 1100

Groundwater Monitoring Well Sampling Field Log

Project No.: 95266.28 Project Name: Eastmont Monitoring

Well No.: MW - 9 Well Location: MW - 9

Well Depth: 49.60 (ft.) Casing Diameter: 2 (in.)

Depth to Water: 29.18 (ft.) Date: 10/19/95 Time: 930

Water Column in Well: 20.42 (ft.) Well Volume: 3.22 (gal.)

Odor? No Free Product? No Thickness: N/A

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ____

Time	pH	Conduc. (μS)	Temp. (°F)	Water Level	Volume Removed	Remark
1300	7.47	1504	80.2		1.0	Highly Turbid
1302	7.25	1327	77.8		2.5	Highly Turbid
1304	7.17	1282	75.4		6.0	Moderately Turbid
1306	7.05	1286	75.3		8.0	Moderately Turbid
1309	6.98	1320	74.4		11.0	Moderately Turbid

Purging Start Time: 1258 Purging Stop Time: 1310

Total Volume Purged: 11.0 (gal.) Well Dewater? No

Water Level Prior to Sampling: 29.22 (ft.) Time: 1330/1400

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 6 VOAs w/HCL 2 Amber Liters Sample No.: MW - 9

Remark: Duplicate sample collect - MW-10 1400

6 VOAs w/HCL / 2 Amber liters

Sampler: Keith Craig Date/Time: 10/19/95 1330

California Laboratory Services

11/16/95

AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Attention: Keith Craig

Reference: Analytical Results

Project Name:
Project No.: 95266.28
Date Received: 10/20/95
Chain Of Custody: 0403

CLS ID No.: N0526
CLS Job No.: 800526

The following analyses were performed on the above referenced project:

No. of Samples	*Turnaround Time*	*Analysis Description*
5	10 Days	Halogenated Volatiles by EPA Method 601
5	10 Days	TPH Gasoline and BTXE (water)
5	10 Days	EPA Method 610

These samples were received by California Laboratory Services in a chilled, intact state and accompanied by a valid chain of custody document.

Calibrations for analytical testing have been performed in accordance to and pass the EPA's criteria for acceptability.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

George Hampton
Laboratory Director

3249 Fitzgerald Road Rancho Cordova, CA 95742 (916) 638-7301 Fax (916) 638-4510

California Laboratory Services

Analysis Report: **Halogenated Volatile Organics, EPA Method 601**
Purge and Trap, EPA Method 5030

Client: **AllWest Environmental**
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: **10/19/95**
Date Received: **10/20/95**
Date Extracted: **10/23/95**
Date Analyzed: **10/23/95**
Date Reported: **10/25/95**
Client ID No.: **MW-5**

Project No.: **95266.28**
Contact: **Keith Craig**
Phone: **(415)391-2510**

Lab Contact: **John Arndt**
Job No.: **800526**
COC Log No.: **0403**
Lab ID No.: **N0526-1A**
Batch No.: **16943**
Matrix: **WATER**

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	105

***Sample:* MW-5**

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Bromodichloromethane	75-27-4	ND	0.50	1.0
Bromoform	75-25-2	ND	0.50	1.0
Bromomethane	74-83-9	ND	0.50	1.0
Carbon tetrachloride	56-23-5	ND	0.50	1.0
Chlorobenzene	108-90-7	ND	0.50	1.0
Chloroethane	75-00-3	ND	0.50	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	0.50	1.0
Chloroform	67-66-3	ND	0.50	1.0
Chloromethane	74-87-3	ND	0.50	1.0
Dibromochloromethane	124-48-1	ND	0.50	1.0
1,2-Dichlorobenzene	95-50-1	ND	0.50	1.0
1,3-Dichlorobenzene	541-73-1	ND	0.50	1.0
1,4-Dichlorobenzene	106-46-7	ND	0.50	1.0
Dichlorodifluoromethane	75-71-8	ND	0.50	1.0
1,1-Dichloroethane	75-34-3	ND	0.50	1.0
1,2-Dichloroethane	107-06-2	ND	0.50	1.0
1,1-Dichloroethene	75-35-4	ND	0.50	1.0
1,2-Dichloroethene, total	540-59-0	ND	0.50	1.0
1,2-Dichloropropane	78-87-5	ND	0.50	1.0
cis-1,3-Dichloropropene	10061-01-5	ND	0.50	1.0
trans-1,3-Dichloropropene	10061-02-6	ND	0.50	1.0
Methylene chloride	75-09-2	ND	5.0	1.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.50	1.0
Tetrachloroethene	127-18-4	ND	0.50	1.0
1,1,1-Trichloroethane	71-55-6	ND	0.50	1.0
1,1,2-Trichloroethane	79-00-5	ND	0.50	1.0
Trichloroethene	79-01-6	ND	0.50	1.0
Trichlorofluoromethane	75-69-4	ND	0.50	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	0.50	1.0
Vinyl chloride	75-01-4	ND	0.50	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95
Client ID No.: MW-6

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-2A
Batch No.: 16943
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	103

***Sample:* MW-6**

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Bromodichloromethane	75-27-4	ND	0.50	1.0
Bromoform	75-25-2	ND	0.50	1.0
Bromomethane	74-83-9	ND	0.50	1.0
Carbon tetrachloride	56-23-5	ND	0.50	1.0
Chlorobenzene	108-90-7	ND	0.50	1.0
Chloroethane	75-00-3	ND	0.50	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	0.50	1.0
Chloroform	67-66-3	ND	0.50	1.0
Chloromethane	74-87-3	ND	0.50	1.0
Dibromochloromethane	124-48-1	ND	0.50	1.0
1,2-Dichlorobenzene	95-50-1	ND	0.50	1.0
1,3-Dichlorobenzene	541-73-1	ND	0.50	1.0
1,4-Dichlorobenzene	106-46-7	ND	0.50	1.0
Dichlorodifluoromethane	75-71-8	ND	0.50	1.0
1,1-Dichloroethane	75-34-3	ND	0.50	1.0
1,2-Dichloroethane	107-06-2	ND	0.50	1.0
1,1-Dichloroethene	75-35-4	ND	0.50	1.0
1,2-Dichloroethene, total	540-59-0	ND	0.50	1.0
1,2-Dichloropropane	78-87-5	ND	0.50	1.0
cis-1,3-Dichloropropene	10061-01-5	ND	0.50	1.0
trans-1,3-Dichloropropene	10061-02-6	ND	0.50	1.0
Methylene chloride	75-09-2	ND	5.0	1.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.50	1.0
Tetrachloroethene	127-18-4	1.4	0.50	1.0
1,1,1-Trichloroethane	71-55-6	ND	0.50	1.0
1,1,2-Trichloroethane	79-00-5	ND	0.50	1.0
Trichloroethene	79-01-6	ND	0.50	1.0
Trichlorofluoromethane	75-69-4	ND	0.50	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	0.50	1.0
Vinyl chloride	75-01-4	ND	0.50	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95
Client ID No.: MW-7

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-3A
Batch No.: 16943
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	101

***Sample:* MW-7**

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Bromodichloromethane	75-27-4	ND	0.50	1.0
Bromoform	75-25-2	ND	0.50	1.0
Bromomethane	74-83-9	ND	0.50	1.0
Carbon tetrachloride	56-23-5	ND	0.50	1.0
Chlorobenzene	108-90-7	ND	0.50	1.0
Chloroethane	75-00-3	ND	0.50	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	0.50	1.0
Chloroform	67-66-3	ND	0.50	1.0
Chloromethane	74-87-3	ND	0.50	1.0
Dibromochloromethane	124-48-1	ND	0.50	1.0
1,2-Dichlorobenzene	95-50-1	ND	0.50	1.0
1,3-Dichlorobenzene	541-73-1	ND	0.50	1.0
1,4-Dichlorobenzene	106-46-7	ND	0.50	1.0
Dichlorodifluoromethane	75-71-8	ND	0.50	1.0
1,1-Dichloroethane	75-34-3	ND	0.50	1.0
1,2-Dichloroethane	107-06-2	ND	0.50	1.0
1,1-Dichloroethene	75-35-4	ND	0.50	1.0
1,2-Dichloroethene, total	540-59-0	ND	0.50	1.0
1,2-Dichloropropane	78-87-5	ND	0.50	1.0
cis-1,3-Dichloropropene	10061-01-5	ND	0.50	1.0
trans-1,3-Dichloropropene	10061-02-6	ND	0.50	1.0
Methylene chloride	75-09-2	ND	5.0	1.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.50	1.0
Tetrachloroethene	127-18-4	ND	0.50	1.0
1,1,1-Trichloroethane	71-55-6	ND	0.50	1.0
1,1,2-Trichloroethane	79-00-5	ND	0.50	1.0
Trichloroethene	79-01-6	ND	0.50	1.0
Trichlorofluoromethane	75-69-4	ND	0.50	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	0.50	1.0
Vinyl chloride	75-01-4	ND	0.50	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: **Halogenated Volatile Organics, EPA Method 601**
Purge and Trap, EPA Method 5030

Client: **AllWest Environmental**
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95
Client ID No.: MW-8

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-4A
Batch No.: 16943
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	103

***Sample:* MW-8**

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Bromodichloromethane	75-27-4	ND	0.50	1.0
Bromoform	75-25-2	ND	0.50	1.0
Bromomethane	74-83-9	ND	0.50	1.0
Carbon tetrachloride	56-23-5	ND	0.50	1.0
Chlorobenzene	108-90-7	ND	0.50	1.0
Chloroethane	75-00-3	ND	0.50	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	0.50	1.0
Chloroform	67-66-3	ND	0.50	1.0
Chloromethane	74-87-3	ND	0.50	1.0
Dibromochloromethane	124-48-1	ND	0.50	1.0
1,2-Dichlorobenzene	95-50-1	ND	0.50	1.0
1,3-Dichlorobenzene	541-73-1	ND	0.50	1.0
1,4-Dichlorobenzene	106-46-7	ND	0.50	1.0
Dichlorodifluoromethane	75-71-8	ND	0.50	1.0
1,1-Dichloroethane	75-34-3	ND	0.50	1.0
1,2-Dichloroethane	107-06-2	ND	0.50	1.0
1,1-Dichloroethene	75-35-4	ND	0.50	1.0
1,2-Dichloroethene, total	540-59-0	ND	0.50	1.0
1,2-Dichloropropane	78-87-5	ND	0.50	1.0
cis-1,3-Dichloropropene	10061-01-5	ND	0.50	1.0
trans-1,3-Dichloropropene	10061-02-6	ND	0.50	1.0
Methylene chloride	75-09-2	ND	5.0	1.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.50	1.0
Tetrachloroethene	127-18-4	ND	0.50	1.0
1,1,1-Trichloroethane	71-55-6	ND	0.50	1.0
1,1,2-Trichloroethane	79-00-5	ND	0.50	1.0
Trichloroethene	79-01-6	ND	0.50	1.0
Trichlorofluoromethane	75-69-4	ND	0.50	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	0.50	1.0
Vinyl chloride	75-01-4	ND	0.50	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95
Client ID No.: MW-9

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-5A
Batch No.: 16943
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	110

Sample: **MW-9**

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Bromodichloromethane	75-27-4	ND	0.50	1.0
Bromoform	75-25-2	ND	0.50	1.0
Bromomethane	74-83-9	ND	0.50	1.0
Carbon tetrachloride	56-23-5	ND	0.50	1.0
Chlorobenzene	108-90-7	ND	0.50	1.0
Chloroethane	75-00-3	ND	0.50	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	0.50	1.0
Chloroform	67-66-3	ND	0.50	1.0
Chloromethane	74-87-3	ND	0.50	1.0
Dibromochloromethane	124-48-1	ND	0.50	1.0
1,2-Dichlorobenzene	95-50-1	ND	0.50	1.0
1,3-Dichlorobenzene	541-73-1	ND	0.50	1.0
1,4-Dichlorobenzene	106-46-7	ND	0.50	1.0
Dichlorodifluoromethane	75-71-8	ND	0.50	1.0
1,1-Dichloroethane	75-34-3	ND	0.50	1.0
1,2-Dichloroethane	107-06-2	ND	0.50	1.0
1,1-Dichloroethene	75-35-4	ND	0.50	1.0
1,2-Dichloroethene, total	540-59-0	ND	0.50	1.0
1,2-Dichloropropane	78-87-5	ND	0.50	1.0
cis-1,3-Dichloropropene	10061-01-5	ND	0.50	1.0
trans-1,3-Dichloropropene	10061-02-6	ND	0.50	1.0
Methylene chloride	75-09-2	ND	5.0	1.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.50	1.0
Tetrachloroethene	127-18-4	ND	0.50	1.0
1,1,1-Trichloroethane	71-55-6	ND	0.50	1.0
1,1,2-Trichloroethane	79-00-5	ND	0.50	1.0
Trichloroethene	79-01-6	ND	0.50	1.0
Trichlorofluoromethane	75-69-4	ND	0.50	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	0.50	1.0
Vinyl chloride	75-01-4	ND	0.50	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: **Halogenated Volatile Organics, EPA Method 601**
Purge and Trap, EPA Method 5030

Client: **AllWest Environmental**
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526
Batch No.: 16943
Matrix: WATER

MB SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	MB Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	103

METHOD BLANK

Analyte	CAS No.	Results (ug/L)	Reporting Limit (ug/L)
Bromodichloromethane	75-27-4	ND	0.50
Bromoform	75-25-2	ND	0.50
Bromomethane	74-83-9	ND	0.50
Carbon tetrachloride	56-23-5	ND	0.50
Chlorobenzene	108-90-7	ND	0.50
Chloroethane	75-00-3	ND	0.50
2-Chloroethyl vinyl ether	110-75-8	ND	0.50
Chloroform	67-66-3	ND	0.50
Chloromethane	74-87-3	ND	0.50
Dibromochloromethane	124-48-1	ND	0.50
1,2-Dichlorobenzene	95-50-1	ND	0.50
1,3-Dichlorobenzene	541-73-1	ND	0.50
1,4-Dichlorobenzene	106-46-7	ND	0.50
Dichlorodifluoromethane	75-71-8	ND	0.50
1,1-Dichloroethane	75-34-3	ND	0.50
1,2-Dichloroethane	107-06-2	ND	0.50
1,1-Dichloroethene	75-35-4	ND	0.50
1,2-Dichloroethene, total	540-59-0	ND	0.50
1,2-Dichloropropane	78-87-5	ND	0.50
cis-1,3-Dichloropropene	10061-01-5	ND	0.50
trans-1,3-Dichloropropene	10061-02-6	ND	0.50
Methylene chloride	75-09-2	ND	5.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.50
Tetrachloroethene	127-18-4	ND	0.50
1,1,1-Trichloroethane	71-55-6	ND	0.50
1,1,2-Trichloroethane	79-00-5	ND	0.50
Trichloroethene	79-01-6	ND	0.50
Trichlorofluoromethane	75-69-4	ND	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ND	0.50
Vinyl chloride	75-01-4	ND	0.50

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526
Batch No.: 16943
Matrix: WATER

MS SURROGATE

Analyte	CAS No.	MS Surr. Conc. (ug/L)	MS Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	103

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (ug/L)	MS Recovery (percent)
Chlorobenzene	108-90-7	10.0	106
1,1-Dichloroethene	75-35-4	10.0	94
Trichloroethene	79-01-6	10.0	105

MSD SURROGATE

Analyte	CAS No.	Surr. Conc. (ug/L)	MSD Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	102

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (ug/L)	MSD Recovery (percent)
Chlorobenzene	108-90-7	10.0	104
1,1-Dichloroethene	75-35-4	10.0	92
Trichloroethene	79-01-6	10.0	100

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Chlorobenzene	108-90-7	2
1,1-Dichloroethene	75-35-4	2
Trichloroethene	79-01-6	5

California Laboratory Services

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526
Batch No.: 16943
Matrix: WATER

LCS SURROGATE

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	109

LAB CONTROL SAMPLE

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Recovery (percent)
Chlorobenzene	108-90-7	10.0	110
1,1-Dichloroethene	75-35-4	10.0	84
Trichloroethene	79-01-6	10.0	111

California Laboratory Services

Analysis Report: **BTEX, EPA Method 602**
Purge and Trap, EPA Method 5030

Client: **AllWest Environmental**
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95
Client ID No.: MW-5

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-1A
Batch No.: 16930
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	105

***Sample:* MW-5**

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Benzene	71-43-2	ND	0.30	1.0
Toluene	108-88-3	ND	0.30	1.0
Ethylbenzene	100-41-4	ND	0.30	1.0
Xylenes, total	1330-20-7	ND	0.60	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: **BTEX, EPA Method 602**
Purge and Trap, EPA Method 5030

Client: **AllWest Environmental**
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95
Client ID No.: MW-6

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-2A
Batch No.: 16930
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	106

Sample: **MW-6**

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Benzene	71-43-2	ND	0.30	1.0
Toluene	108-88-3	ND	0.30	1.0
Ethylbenzene	100-41-4	ND	0.30	1.0
Xylenes, total	1330-20-7	ND	0.60	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: **BTEX, EPA Method 602**
Purge and Trap, EPA Method 5030

Client: **AllWest Environmental**
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: **10/19/95**
Date Received: **10/20/95**
Date Extracted: **10/23/95**
Date Analyzed: **10/23/95**
Date Reported: **10/25/95**
Client ID No.: **MW-7**

Project No.: **95266.28**
Contact: **Keith Craig**
Phone: **(415)391-2510**

Lab Contact: **John Arndt**
Job No.: **800526**
COC Log No.: **0403**
Lab ID No.: **N0526-3A**
Batch No.: **16930**
Matrix: **WATER**

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	106

***Sample:* MW-7**

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Benzene	71-43-2	ND	0.30	1.0
Toluene	108-88-3	ND	0.30	1.0
Ethylbenzene	100-41-4	ND	0.30	1.0
Xylenes, total	1330-20-7	ND	0.60	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: BTEX, EPA Method 602
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95
Client ID No.: MW-8

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-4A
Batch No.: 16930
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	106

***Sample:* MW-8**

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Benzene	71-43-2	ND	0.30	1.0
Toluene	108-88-3	ND	0.30	1.0
Ethylbenzene	100-41-4	ND	0.30	1.0
Xylenes, total	1330-20-7	ND	0.60	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: BTEX, EPA Method 602
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95
Client ID No.: MW-9

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-5A
Batch No.: 16930
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	104

Sample: MW-9

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Benzene	71-43-2	ND	0.30	1.0
Toluene	108-88-3	ND	0.30	1.0
Ethylbenzene	100-41-4	ND	0.30	1.0
Xylenes, total	1330-20-7	ND	0.60	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: **BTEX, EPA Method 602**
Purge and Trap, EPA Method 5030

Client: **AllWest Environmental**
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526
Batch No.: 16930
Matrix: WATER

MB SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	MB Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	104

METHOD BLANK

Analyte	CAS No.	Results (ug/L)	Reporting Limit (ug/L)
Benzene	71-43-2	ND	0.30
Toluene	108-88-3	ND	0.30
Ethylbenzene	100-41-4	ND	0.30
Xylenes, total	1330-20-7	ND	0.60

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: **BTEX, EPA Method 602**
Purge and Trap, EPA Method 5030

Client: **AllWest Environmental**
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Extracted: **10/23/95**
Date Analyzed: **10/23/95**
Date Reported: **10/25/95**

Project No.: **95266.28**
Contact: **Keith Craig**
Phone: **(415)391-2510**

Lab Contact: **John Arndt**
Job No.: **800526**
COC Log No.: **0403**
Lab ID No.: **N0526**
Batch No.: **16930**
Matrix: **WATER**

MS SURROGATE

Analyte	CAS No.	MS Surr. Conc. (ug/L)	MS Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	97

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (ug/L)	MS Recovery (percent)
Benzene	71-43-2	20.0	49 MI
Toluene	108-88-3	20.0	57 MI
Ethylbenzene	100-41-4	20.0	90
Xylenes, total	1330-20-7	60.0	85

MSD SURROGATE

Analyte	CAS No.	Surr. Conc. (ug/L)	MSD Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	95

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (ug/L)	MSD Recovery (percent)
Benzene	71-43-2	20.0	47 MI
Toluene	108-88-3	20.0	55 MI
Ethylbenzene	100-41-4	20.0	91
Xylenes, total	1330-20-7	60.0	84

California Laboratory Services

Analysis Report: **BTEX, EPA Method 602**
Purge and Trap, EPA Method 5030

Client: **AllWest Environmental**
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Extracted: **10/23/95**
Date Analyzed: **10/23/95**
Date Reported: **10/25/95**

Project No.: **95266.28**
Contact: **Keith Craig**
Phone: **(415)391-2510**

Lab Contact: **John Arndt**
Job No.: **800526**
COC Log No.: **0403**
Lab ID No.: **N0526**
Batch No.: **16930**
Matrix: **WATER**

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Benzene	71-43-2	4
Toluene	108-88-3	4
Ethylbenzene	100-41-4	1
Xylenes, total	1330-20-7	1

MI = Matrix spike recovery data can not be generated due to matrix interference.

California Laboratory Services

Analysis Report: BTEX, EPA Method 602
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526
Batch No.: 16930
Matrix: WATER

LCS SURROGATE

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	95

LAB CONTROL SAMPLE

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Recovery (percent)
Benzene	71-43-2	20.0	91
Ethylbenzene	100-41-4	20.0	88
Toluene	108-88-3	20.0	92
Xylenes, total	1330-20-7	60.0	92

LCS DUPLICATE SURROGATE

Analyte	CAS No.	LCSD Conc. (ug/L)	LCSD Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20.0	98

LAB CONTROL SAMPLE DUPLICATE

Analyte	CAS No.	LCS Conc. (ug/L)	LCSD Recovery (percent)
Benzene	71-43-2	20.0	96
Ethylbenzene	100-41-4	20.0	91
Toluene	108-88-3	20.0	94
Xylenes, total	1330-20-7	60.0	94

California Laboratory Services

Analysis Report: BTEX, EPA Method 602
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526
Batch No.: 16930
Matrix: WATER

LCS RPD

Analyte	CAS No.	LCS Relative Percent Difference (percent)
Benzene	71-43-2	5
Ethylbenzene	100-41-4	3
Toluene	108-88-3	2
Xylenes, total	1330-20-7	2

California Laboratory Services

Analysis Report: Total Petroleum Hydrocarbons, EPA Method 8015
Purge and Trap, EPA Method 5030

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526
Batch No.: 16930
Matrix: WATER

		ANALYTE
Sample I.D. Client	Lab	TPH as Gasoline [Rep. Limit] (Dilution)
MW-5	1A	ND [0.050] (1.0)
MW-6	2A	ND [0.050] (1.0)
MW-7	3A	ND [0.050] (1.0)
MW-8	4A	ND [0.050] (1.0)
MW-9	5A	ND [0.050] (1.0)
Units		mg/L

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: **Total Petroleum Hydrocarbons, EPA Method 8015**
Purge and Trap, EPA Method 5030

Client: **AllWest Environmental**
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Extracted: 10/23/95
Date Analyzed: 10/23/95
Date Reported: 10/25/95

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526
Batch No.: 16930
Matrix: WATER

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Reporting Limit (mg/L)
TPH as Gasoline	N/A	ND	0.050

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Polynuclear Aromatic Hydrocarbons by EPA Method 610 (HPLC)
Separatory Funnel, EPA Method 3510

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/26/95
Date Analyzed: 11/13/95
Date Reported: 11/14/95
Client ID No.: MW-5

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-1B
Batch No.: 16981
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
Terphenyl	92-06-8	1.00	66

***Sample:* MW-5**

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Benzo(a)pyrene	50-32-8	ND	0.20	1.0
Naphthalene	91-20-3	ND	2.0	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Polynuclear Aromatic Hydrocarbons by EPA Method 610 (HPLC)
Separatory Funnel, EPA Method 3510

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/26/95
Date Analyzed: 11/13/95
Date Reported: 11/14/95
Client ID No.: MW-6

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-2B
Batch No.: 16981
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
Terphenyl	92-06-8	1.00	56

***Sample:* MW-6**

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Benzo(a)pyrene	50-32-8	ND	0.20	1.0
Naphthalene	91-20-3	ND	2.0	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Polynuclear Aromatic Hydrocarbons by EPA Method 610(HPLC)
Separatory Funnel, EPA Method 3510

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/26/95
Date Analyzed: 11/13/95
Date Reported: 11/14/95
Client ID No.: MW-7

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-3B
Batch No.: 16981
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
Terphenyl	92-06-8	1.00	68

Sample: **MW-7**

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Benzo(a)pyrene	50-32-8	ND	0.20	1.0
Naphthalene	91-20-3	ND	2.0	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: **Polynuclear Aromatic Hydrocarbons by EPA Method 610(HPLC) Separatory Funnel, EPA Method 3510**

Client: **AllWest Environmental**
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: **10/19/95**
Date Received: **10/20/95**
Date Extracted: **10/26/95**
Date Analyzed: **11/13/95**
Date Reported: **11/14/95**
Client ID No.: **MW-8**

Project No.: **95266.28**
Contact: **Keith Craig**
Phone: **(415)391-2510**

Lab Contact: **John Arndt**
Job No.: **800526**
COC Log No.: **0403**
Lab ID No.: **N0526-4B**
Batch No.: **16981**
Matrix: **WATER**

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
Terphenyl	92-06-8	1.00	73

***Sample:* MW-8**

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Benzo(a)pyrene	50-32-8	ND	0.20	1.0
Naphthalene	91-20-3	ND	2.0	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Polynuclear Aromatic Hydrocarbons by EPA Method 610(HPLC)
Separatory Funnel, EPA Method 3510

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Sampled: 10/19/95
Date Received: 10/20/95
Date Extracted: 10/26/95
Date Analyzed: 11/13/95
Date Reported: 11/14/95
Client ID No.: MW-9

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526-5B
Batch No.: 16981
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
Terphenyl	92-06-8	1.00	73

***Sample:* MW-9**

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Benzo(a)pyrene	50-32-8	ND	0.20	1.0
Naphthalene	91-20-3	ND	2.0	1.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Polynuclear Aromatic Hydrocarbons by EPA Method 610(HPLC)
Separatory Funnel, EPA Method 3510

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Extracted: 10/26/95
Date Analyzed: 11/13/95
Date Reported: 11/14/95

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526
Batch No.: 16981
Matrix: WATER

MB SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	MB Surrogate Recovery (percent)
Terphenyl	92-06-8	1.00	81

METHOD BLANK

Analyte	CAS No.	Results (ug/L)	Reporting Limit (ug/L)
Benzo(a)pyrene	50-32-8	ND	0.20
Naphthalene	91-20-3	ND	2.0

ND = Not detected at or above indicated Reporting Limit

California Laboratory Services

Analysis Report: Polynuclear Aromatic Hydrocarbons by EPA Method 610(HPLC)
Separatory Funnel, EPA Method 3510

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Extracted: 10/26/95
Date Analyzed: 11/13/95
Date Reported: 11/14/95

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526
Batch No.: 16981
Matrix: WATER

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (ug/L)	MS Recovery (percent)
Benzo(a)pyrene	50-32-8	IS	IS

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (ug/L)	MSD Recovery (percent)
Benzo(a)pyrene	50-32-8	IS	IS

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Benzo(a)pyrene	50-32-8	IS

IS = Recovery data could not be generated due to insufficient sample.
LCS recovery data validates methodology.

California Laboratory Services

Analysis Report: Polynuclear Aromatic Hydrocarbons by EPA Method 610(HPLC)
Separatory Funnel, EPA Method 3510

Client: AllWest Environmental
One Sutter Street Ste 600
San Francisco, CA 94104

Project:

Date Extracted: 10/26/95
Date Analyzed: 11/13/95
Date Reported: 11/14/95

Project No.: 95266.28
Contact: Keith Craig
Phone: (415)391-2510

Lab Contact: John Arndt
Job No.: 800526
COC Log No.: 0403
Lab ID No.: N0526
Batch No.: 16981
Matrix: WATER

LCS SURROGATE

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Surrogate Recovery (percent)
Terphenyl	92-06-8	1.00	81

LAB CONTROL SAMPLE

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Recovery (percent)
Benzo(a)pyrene	50-32-8	1.00	53

LCS DUPLICATE SURROGATE

Analyte	CAS No.	LCSD Conc. (ug/L)	LCSD Surrogate Recovery (percent)
Terphenyl	92-06-8	1.00	80

LAB CONTROL SAMPLE DUPLICATE

Analyte	CAS No.	LCS Conc. (ug/L)	LCSD Recovery (percent)
Benzo(a)pyrene	50-32-8	1.00	64

LCS RPD

Analyte	CAS No.	LCS Relative Percent Difference (percent)
Benzo(a)pyrene	50-32-8	19

Page 1 of 1

REQUEST FOR ANALYSIS / CHAIN OF CUSTODY

Reporting Information:

1. Client: All West Environmental
Address: 1 Sutter ST #600
San Francisco CA 94104
Contact: Keith Craig
Alt. Contact:

~~Acme Analytical Laboratories~~
~~3440 Vincent Road, Pleasant Hill, CA 94523~~
~~Phone (510) 930-9090~~
~~FAX (510) 930-0256~~

ATTN: Stacey Pike

Lab Job Number:
Lab Destination:
Date Samples Shipped:
Lab Contact:
Date Results Required:
Date Report Required:
Client Phone No.:
Client FAX No.:

Address Report To:

2. Same

Send Invoice To:

3. Same

Send Report To: 1 or 2 (Circle one)

Client P.O. No.: 952662.28 Client Project I.D. No.:

Sample Team Member (s) Keith Craig

ANALYSIS

Please confirm w/ Lab or Keith suite of tests prior to analyses.

Lab Number	Client Sample Identification	Air Volume	Date/ Time Collected	Sample Type*	Pres.	No. of Cont.	Type of Cont.	VOA	610 PNA's	8015(5Lm) TPH-gasoline	8020 BTEX	601 Purgeable Halocarbons	Comments / Hazards
	MW-5		10-19-95	water	HCL	6	VOAs	X	X	X	X		Naphalene Benzopyrene only for all 610
	MW-5				no	2	Ambers	X					
	MW-6				HCL	6	VOAs		X	X	X		
	MW-6				no	1	Amber	X					
	MW-7				HCL	6	VOAs		X	X	X		
	MW-7				no	1	Amber	X					
	MW-8				HCL	6	VOAs		X	X	X		
	MW-8				no	2	Ambers	X					
	MW-9				HCL	6	VOAs		X	X	X		
	MW-9				no	1	Amber	X					Hold
	MW-10				HCL	5	VOAs						Hold
	MW-10				no	1	Amber						Hold
	Trip Blank				HCL	6	VOAs						

		DATE	TIME			DATE	TIME
Relinquished by: (Signature)	Keith Craig	10-20-95	~~0900~~ 1345	Received by: (Signature)	Scott Fuma	10/20/95	1443
Relinquished by: (Signature)	Scott Fuma	10/20/95	1630	Received by: (Signature)		10/20/95	~~1700~~ 1631 MT
Relinquished by: (Signature)		DATE	TIME	Received by: (Signature)		DATE	TIME
Method of Shipment				Lab Comments			

*Sample type (Specify): 1) 37mm 0.8 µm MCEF 2) 25mm 0.8 µm MCEF 3) 25mm 0.4 µm polycarb. filter
4) PVC filter, diam. ____ pore size ____ 5) Charcoal tube 6) Silica gel tube 7) Water 8) Soil 9) Bulk Sample
10) Other ____ 11) Other ____

COPIES: WHITE - JOB FILE YELLOW - PROJECT FILE PINK - CLIENT

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ARTESIAN ENVIRONMENTAL CONSULTANTS

ALCO
HAZMAT
94 JAN 27 PM 2:19

Date: January 20, 1994

Mr. David A. Norwitt
One Eastmont Mall
Oakland, CA 94605-1970

Re: Quarterly Ground Water Monitoring
Sampling Event: December 29, 1993
For Eastmont Mall (Subject Site)
Oakland, CA 94605-1970
Project No. 110-001-03

Dear Mr. Norwitt:

Artesian Environmental Consultants (Artesian) is pleased to present the results of the quarterly ground water monitoring well sampling, performed on December 29, 1993 by Artesian at the subject site.

SITE DESCRIPTION

The site is located at One Eastmont Mall, in Oakland, California. A regional location map of the site is presented as Figure 1, and a local map showing the site area and monitor well locations is presented as Figure 2.

The project site is irregular in shape. It is bounded on the north by Foothill Boulevard, to the southeast by 73rd Avenue, to the northwest by Church Street, and to the southwest by Bancroft Avenue. A retaining wall supports an elevated parking structure to the northeast. The site is located at the base of the Berkeley hills which rise up to 1,175 feet above sea level to the northeast. Two thousand feet south of the site lies the Arroyo Viejo stream channel.

The subject site consists of a mall with several commercial retailers, including clothing stores, car repair shops, a dry cleaners, fast-food restaurants, and a supermarket. The entire building is surrounded by large parking lot areas, along with an office building, gasoline station, and fast food restaurants. A police station is located on the northeast corner of the site.

SITE HISTORY

Prior to 1916, the site was primarily residential neighborhoods. In 1916, the site was excavated and leveled for construction of the Chevrolet Fisher Body Plant, an automobile assembly plant. The plant closed some time in the early 1960s. The site remained vacant from 1965 to 1969. Construction of the mall began in 1969.

Hunter Environmental Services, Inc. (Hunter) of Martinez, California performed a Phase II environmental audit of the Eastmont Mall property on December 20, 1989. Four soil borings were drilled by Hunter on the mall property. Three of these borings

3175 Kerner Blvd., Suite E • San Rafael, CA 94901 • (415) 257-4801 • FAX (415) 257-4805

were converted to monitoring wells MW-2 through MW-4. Analytical results showed that several soil samples contained hydrocarbon contamination, and several water samples contained 1-2 dichloroethene (1-2 DCE), trichloroethene (TCE), and tetrachloroethene (PCE). In 1991, Dames & Moore of San Francisco, California installed an additional six soil borings, converting two of them into monitoring wells DM-1 and DM-2. Laboratory analytical results from both Hunter and Dames & Moore are included in Appendix A.

GROUND WATER SAMPLING

On August 11, 1993, Artesian staff measured depth to water, purged, and sampled seven ground water monitoring wells designated MW-3 through MW-9. Monitoring well MW-2 could not be located. It appears that the parking lot has been repaved in that area. The Artesian standard operating procedure (SOP) for ground water sampling is included in Appendix B.

All purged water was temporarily stored in DOT 17-H, 55-gallon containers pending analytical results. Ground water samples from monitoring wells MW-3 through MW-9 were on ice and shipped under chain-of-custody to Chromalab, Inc. of San Ramon, California. Chromalab is certified by the state of California to perform the analysis requested.

GROUND WATER FLOW

Figure 3 shows the potentiometric surface of shallow ground water based on depth-to-water measurements taken from monitor wells MW-5 through MW-9, on December 29, 1993. Depth to water measurements are related to the surveyed well casing elevations to derive mean sea level elevations for ground water. The estimated ground water gradient and flow direction for the December 29, 1993 sampling event was .007 to the west. This figure is based on the distance between monitoring well MW-6 and MW-8. Ground water elevation data are presented in Table 1.

ANALYTIC RESULTS

Ground water samples for the December 29, 1993 event were analyzed for total petroleum hydrocarbons as diesel (TPH-d) by EPA Method 8015; total petroleum hydrocarbons as gasoline (TPH-g) by EPA Method 8015; benzene, toluene, ethyl benzene and total xylenes (BTEX) by EPA Method 8020; and purgeable halocarbons by EPA Method 8010. The analytical results for all sampling events including this round of sampling are summarized in Table 2. Laboratory reports with quality assurance/quality control documents, and the chain-of-custody form are included in Appendix C.

Monitoring well MW-3 showed a TPH-gas level of 13000 parts per billion (ppb). BTEX for MW-3 ranged from 28 ppb to 990 ppb. Purgeable halocarbon results for MW-3 showed levels of 3.4 ppb for vinyl chloride and 24 ppb for 1,2-dichloroethane. Monitoring well MW-6 showed levels of 73 ppb, 13 ppb, and 1.5 ppb for TPH-gas, benzene, and ethyl benzene respectively. Monitoring well MW-7

showed levels of 78 ppb, 15 ppb, and 1.7 ppb for TPH-gas, benzene, and ethyl benzene respectively. Monitor wells MW-4, MW-5, MW-8 and MW-9 revealed no detectable levels for any of the contaminants tested.

COMMENTS

Artesian will continue to monitor the wells on a quarterly basis.

LIMITATIONS

The authors and firm offer no assurance and assume no responsibility for site conditions or activities which were beyond the scope of work requested by the client and referenced in the introduction of this report. This report was prepared with generally accepted standards of environmental geological practice in California at the time this investigation was performed. This investigation was conducted solely as a tool in assessing environmental conditions of the ground water with respect to relative hydrocarbon product and halocarbon contamination in the immediate vicinity of the subject site. Evaluation of the geologic conditions at the site for the purpose of this investigation is made from a limited number of observation points. There may be variations in subsurface conditions away from the sample points available. This report and all matters contained herein were prepared for the sole and exclusive benefit of the client specified herein, and is intended only for the use of the client.

DISTRIBUTION:

Artesian will submit copies of this report to the appropriate regulatory agencies after client approval:

Mr. Ronald Owcarz, Hazardous Materials Specialist
Alameda County Environmental Health Services Agency
Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621

Mr. Richard Hiett
San Francisco Bay Region
Regional Water Quality Control Board
2101 Webster St., Suite 500
Oakland, Ca 94612

Artesian is pleased to provide environmental consulting services to you. Please call us at (415) 257- 4801 if you have any questions.

Sincerely,
Artesian Environmental Consultants

Benjamin I. Mira
Project Geologist

James A. Jacobs, R.G. #4815
Principal Geologist



FIGURES

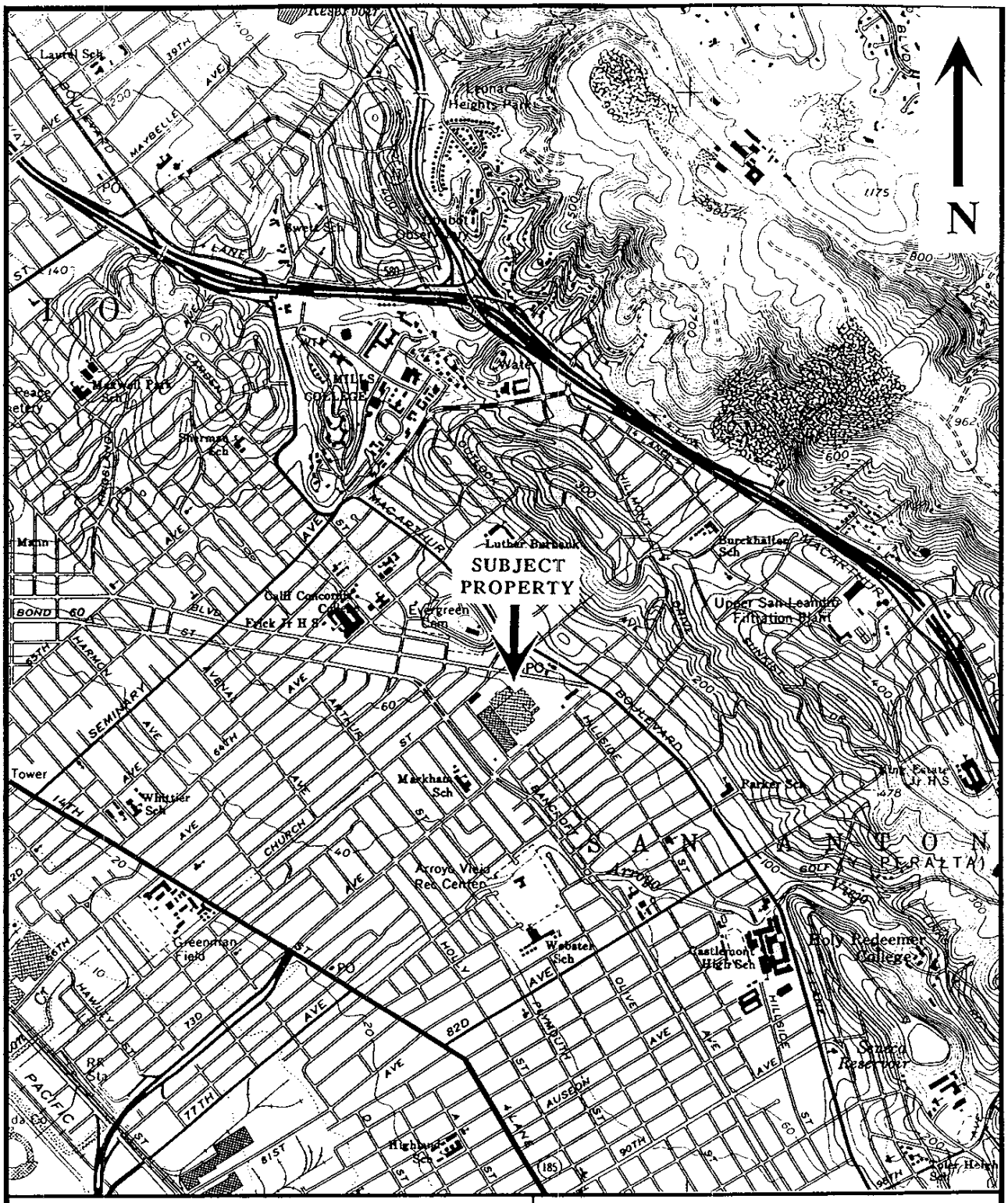
1. REGIONAL MAP
2. SITE MAP
3. GROUND WATER GRADIENT MAP

TABLES AND CHARTS

1. GROUND WATER ELEVATION DATA
2. SUMMARY OF GROUND WATER LABORATORY DATA
3. LABORATORY DATA CHARTS

APPENDICES

A: LABORATORY REPORTS - HUNTER ENVIRONMENTAL, DAMES & MOORE
B: STANDARD OPERATING PROCEDURES
C: LABORATORY REPORTS, CHAIN OF CUSTODY FORM



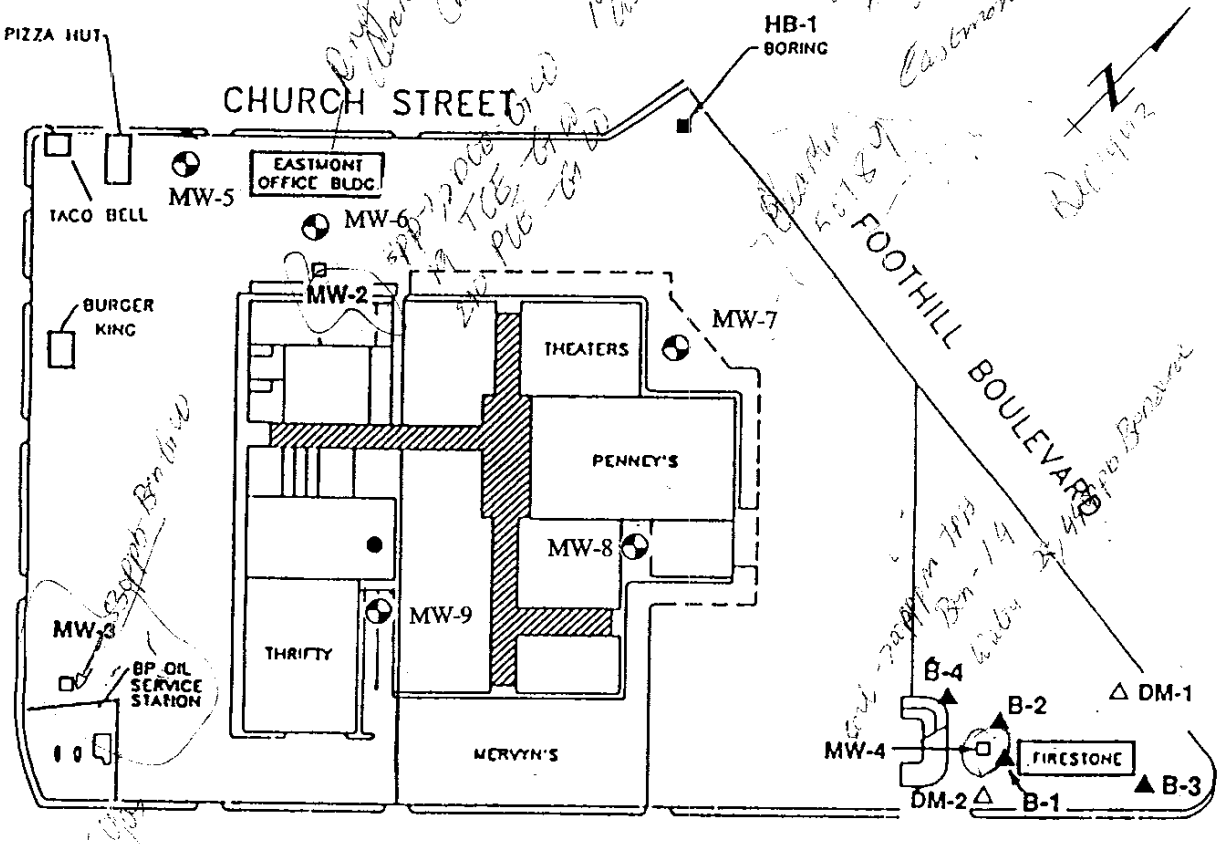
USGS Topographic Map
1959 Photorevised 1980
Oakland East Quadrangle

REGIONAL MAP

One Eastmont Mall
Oakland, CA 94605-1970

Project No. 110-001-03	Date: 12/30/93	Drawn by: BIM	Figure 1

Artesian Environmental Consultants, 3715 Kerner Blvd., Unit E, San Rafael, CA 94901



KEY

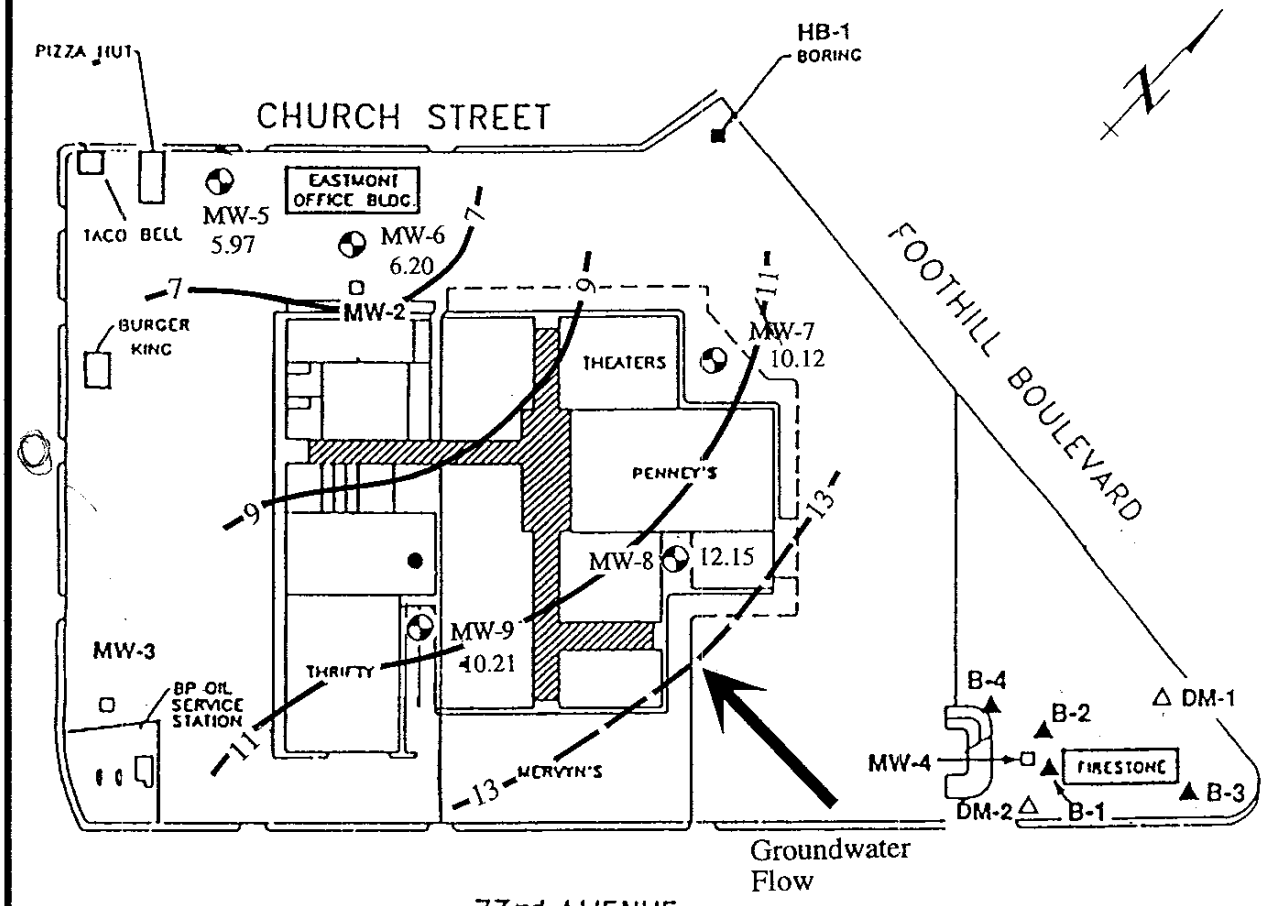
- ● Abandoned Industrial Well (1951)
- △ Dames & Moore Monitoring Well (4/91)
- ▲ Dames & Moore Soil Boring (4/91)
- □ Hunter Environ. Monitoring Well (12/89)
- ■ Hunter Environ. Soil Boring (12/89)

⊕ Installed Monitor Wells
Artesian Environmental

0 400
Feet

After Dames & Moore, 1991

Artesian Environmental Consultants 3175 Kerner Blvd., Suite E San Rafael, California 94901 415-257-4801 Fax 257-4805		**SITE MAP** One Eastmont Mall Oakland, California 94605	
Project No: 93-001-01	Date: 8/27/93	Drawn by: BIM	Figure 2



KEY

- ● Abandoned Industrial Well (1951)
- △ Dames & Moore Monitoring Well (4/91)
- ▲ Dames & Moore Soil Boring (4/91)
- □ Hunter Environ. Monitoring Well (12/89)
- ■ Hunter Environ. Soil Boring (12/89)

MW-6
6.20

Installed Monitoring Wells
Artesian Enviromental
and
Groundwater Elevation
Above Mean Sea Level

9

Groundwater Contour Elevation
(Ft. Above Mean Sea Level)

After Dames & Moore, 1991

Artesian Environmental Consultants 3175 Kerner Blvd., Suite E San Rafael, California 94901 415-257-4801 Fax 257-4805		**GROUNDWATER GRADIENT MAP** One Eastmont Mall Oakland, California 94605	
Project No: 93-001-01	Date: 01/05/94	Drawn by: JF	Figure 3

Table 1 - Groundwater Elevations

Monitoring Well Number	Date	Top of Casing Elevation (MSL)	Depth to Ground Water (ft)	Ground Water Elevation (MSL)	Total Depth of Well (ft)
MW-2	n/a	n/a	n/a	n/a	n/a
MW-3	12/29/93	n/a	29.02	n/a	42.65
MW-4	12/29/93	n/a	14.20	n/a	26.30
MW-5	9/28/93	42.07	35.25	6.82	49.30
	12/29/93	42.07	36.10	5.97	49.40
MW-6	9/28/93	43.35	36.85	6.50	49.70
	12/29/93	43.35	37.15	6.20	49.70
MW-7	9/28/93	44.37	33.42	10.95	48.90
	12/29/93	44.37	34.25	10.12	48.35
MW-8	9/28/93	44.90	32.10	12.80	48.70
	12/29/93	44.90	32.75	12.15	48.87
MW-9	9/28/93	44.18	33.00	11.18	49.30
	12/29/93	44.18	33.97	10.21	49.35

MSL= Feet Above Mean Sea Level
n/a = not available

Table 2. Summary of Water Analytical Results

Monitor Well	TPH-d ppb	TPH-g ppb	Benzene ppb	Toluene ppb	Ethyl Benzene ppb	Xylenes ppb
MW-2	n/a	n/a	n/a	n/a	n/a	n/a
MW-3	N.D.	13000	990	28	330	110
MW-4	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
MW-5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
MW-6	N.D.	73	13	N.D.	1.5	N.D.
MW-7	N.D.	78	15	N.D.	1.7	N.D.
MW-8	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
MW-9	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Compound Name	MW-2 ppb	MW-3 ppb	MW-4 ppb	MW-5 ppb	MW-6 ppb	MW-7 ppb	MW-8 ppb	MW-9 ppb
Chloromethane	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Vinyl Chloride	n/a	3.4	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Bromochloromethane	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chloroethane	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Trichlorofluoromethane	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1, 1-Dichloroethene	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Methylene Chloride	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1, 2-Dichloroethene (Trans)	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1, 2-Dichloroethene (Cis)	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1, 1-Dichloroethane	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chloroform	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1,1,1- Trichloroethane	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Carbon Tetrachloride	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1, 2-Dichloroethane	n/a	24	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Trichloroethene	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1, 2-Dichloropropane	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Bromodichloromethane	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
2-chloroethylvinylether	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Trans-1, 3-Dichloropropene	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Cis-1, 3-Dichloropropene	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1,1,2-Trichloroethane	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tetrachloroethene	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Dibromochloromethane	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chlorobenzene	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Bromoform	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1,1,2,2-tetrachloroethane	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1,3-Dichlorobenzene	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1,4-Dichlorobenzene	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
1,2-Dichlorobenzene	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Freon 113	n/a	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

n/a = not available

TPH-d= total petroleum hydrocarbons as diesel

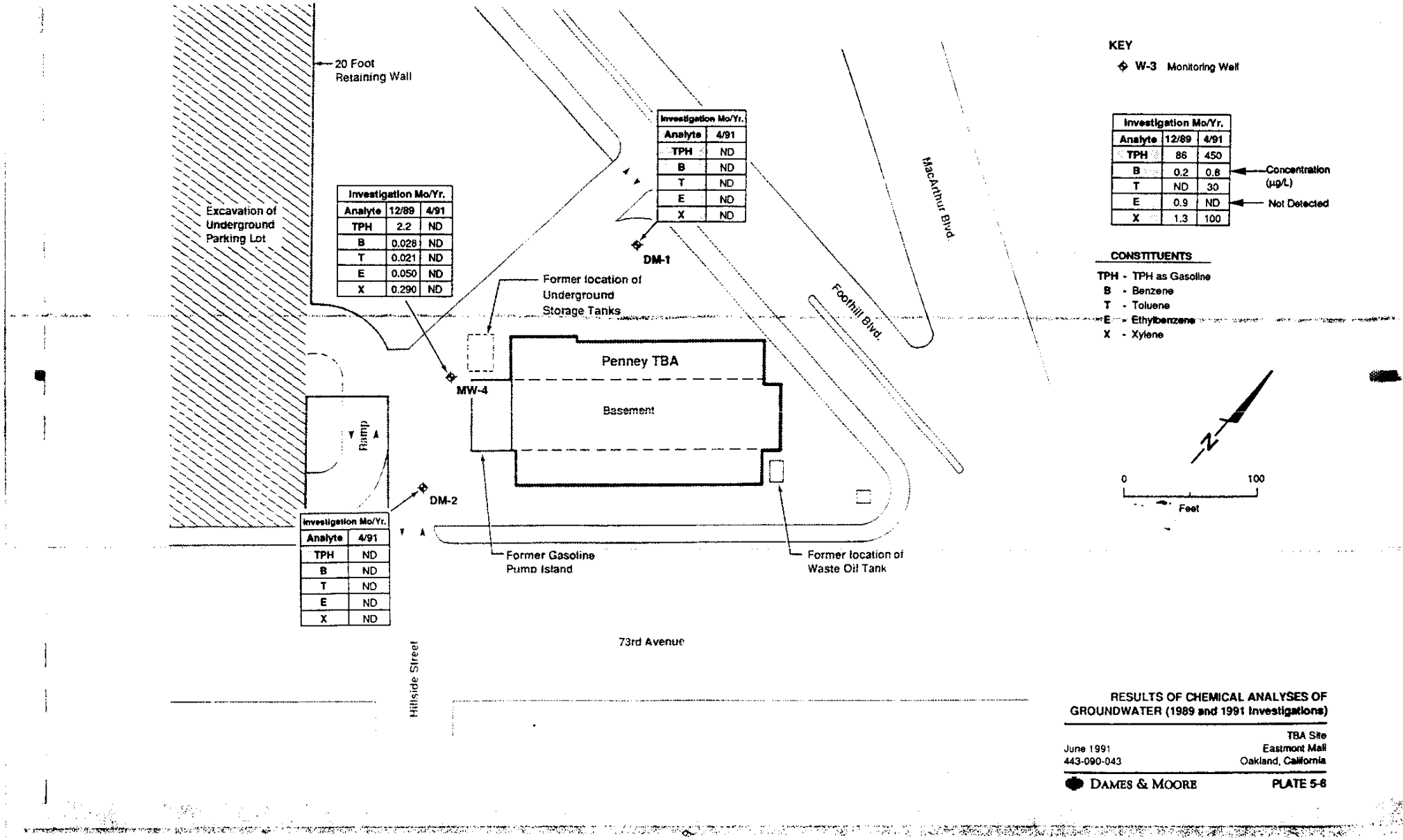
TPH-g= total petroleum hydrocarbons as gasoline

B-T-E-X= benzene, toluene, ethyl benzene, and total xylenes

ppb= parts per billion

ppm= parts per million

Sampling done on 12/29/93



RESULTS OF CHEMICAL ANALYSES OF GROUNDWATER (1989 and 1991 Investigations)

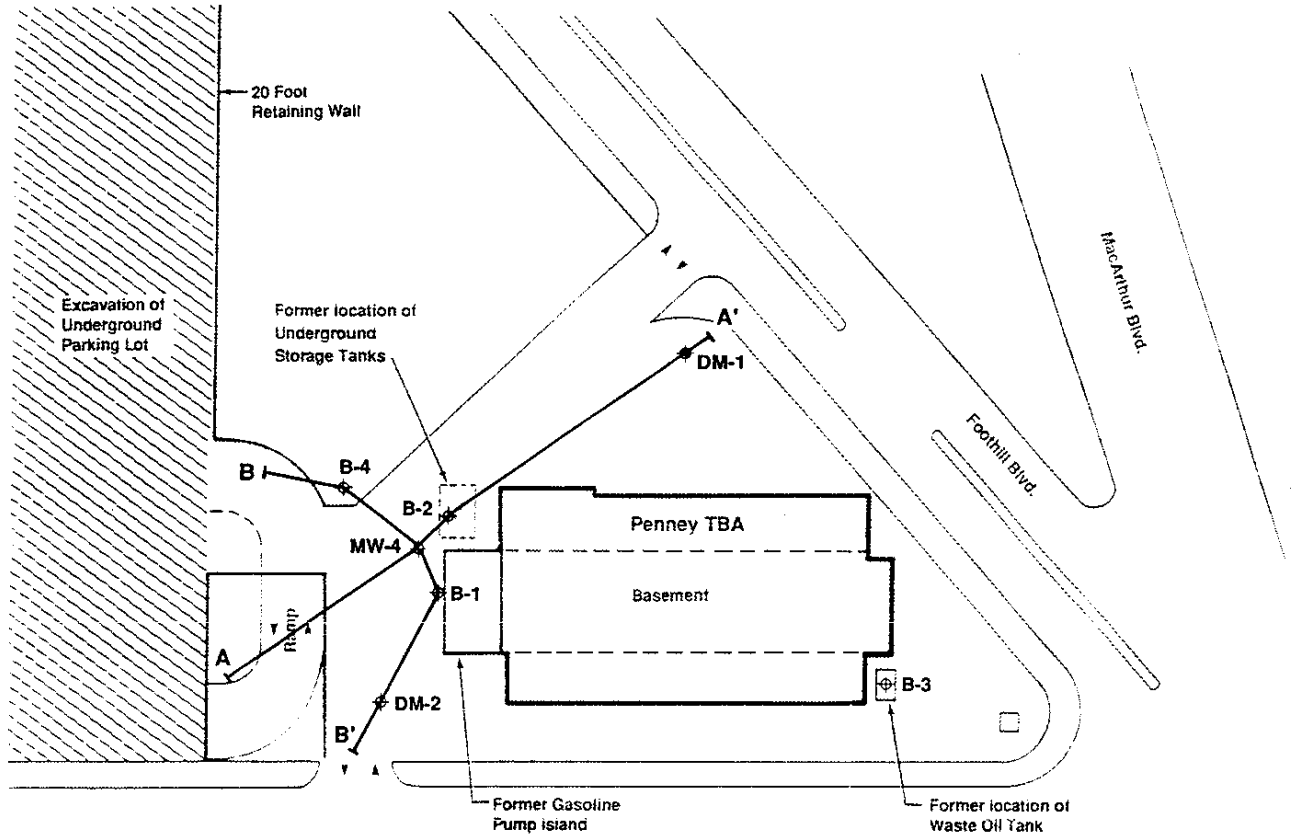
June 1991
443-090-043

TBA Site
Eastmont Mall
Oakland, California

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PLATE 5-8

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KEY

- Monitoring Well
- Boring

N

0 100

Feet

SITE MAP SHOWING LOCATION OF CROSS SECTIONS

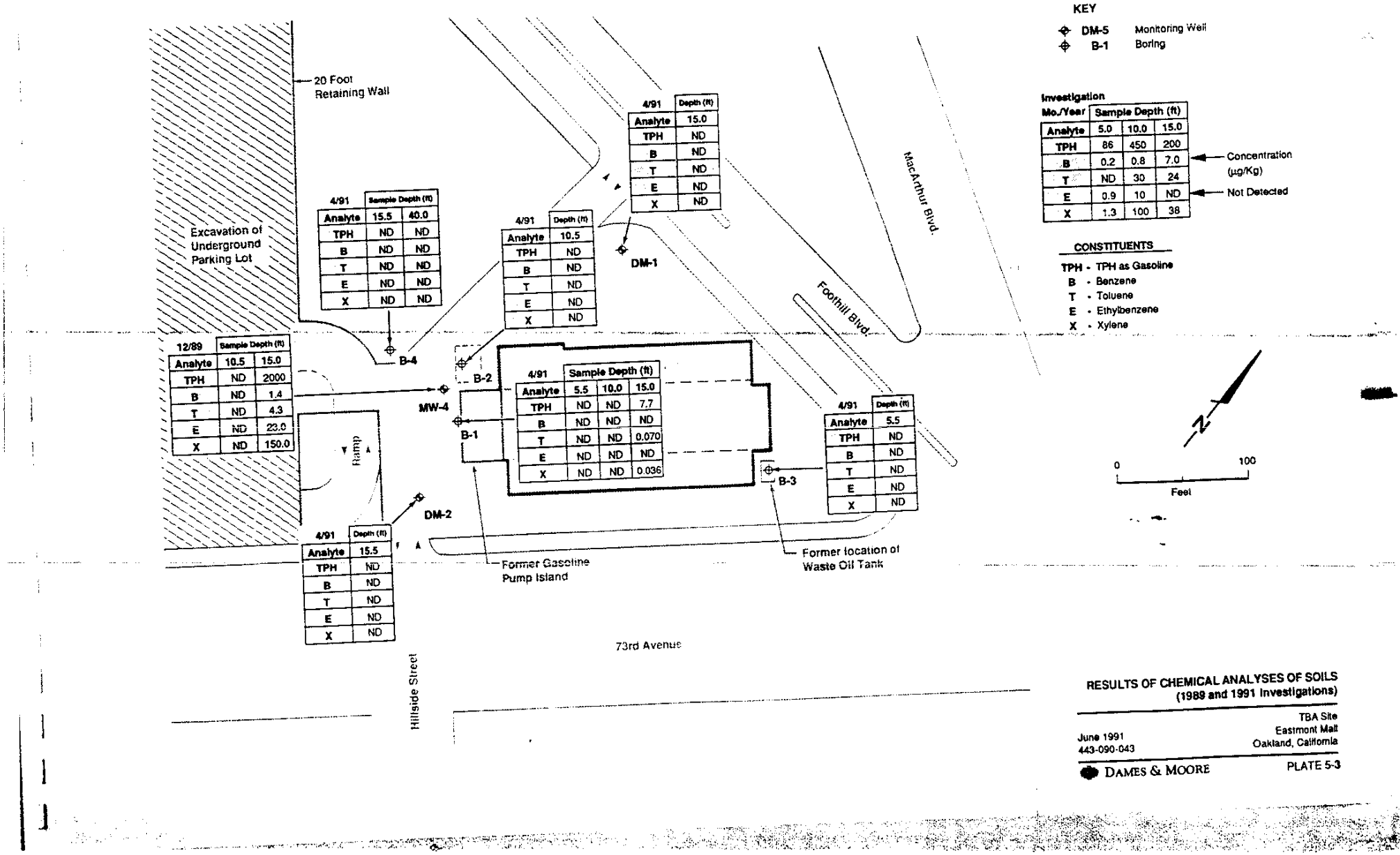
TBA Site
Eastmont Mall
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June 1991
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PLATE 4-1

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RESULTS OF CHEMICAL ANALYSES OF SOILS
(1989 and 1991 Investigations)

TBA Site
Eastmont Mall
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June 1991
443-090-043

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PLATE 5-3

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TABLE 1. RESULTS OF TPH, BTEX, AND STODDARD ANALYSES
ON SOIL SAMPLES TAKEN DECEMBER 5 AND 6, 1989
AT EASTMONT MALL, OAKLAND, CALIFORNIA

SAMPLE ID	DATE SAMPLED	TPH (ppm)	B T E X (ppb)				STODDARD (ppm)
			BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	
MW-1@10'	12/5/89	ND<1	ND<3	ND<3	ND<3	ND<3	-
MW-1@30'		ND<1	ND<3	ND<3	ND<3	ND<3	-
MW-2@10'		ND<1	ND<3	ND<3	ND<3	ND<3	ND<10
MW-2@20'		ND<1	ND<3	ND<3	ND<3	ND<3	ND<10
MW-3@10'	12/6/89	ND<1	ND<3	ND<3	ND<3	ND<3	-
MW-3@20'		ND<1	ND<3	ND<3	ND<3	ND<3	-
MW-4@10'		ND<1	ND<3	ND<3	ND<3	ND<3	-
MW-4@15'		2000	1400	4300	23,000	150,000	-

NOTES: ppm - Parts per million or milligrams per kilogram
ppb - Parts per billion or micrograms per kilogram
ND<1 - Not detected at indicated detection limit

Hunter Environmental Services, Inc.
597 Center Avenue, Suite 350
Martinez, CA 94553

TABLE 2. RESULTS OF OIL AND GREASE (O&G) ANALYSES
ON SOIL SAMPLES TAKEN DECEMBER 6, 1989
AT EASTMONT MALL, OAKLAND, CALIFORNIA

SAMPLE ID	DATE SAMPLED	OIL & GREASE (ppm)
MW-3@10'	12/6/89	ND<20
MW-3@20'		ND<20
MW-4@10'		ND<20
MW-4@15'		ND<20

Notes: ppm - Parts per million or milligrams per kilogram (mg/kg)
ND<20 - Not detected at indicated detection limit

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TABLE 3. RESULTS OF TPH, BTEX, AND STODDARD ANALYSES ON WATER SAMPLES TAKEN DECEMBER 11, 1989 AT EASTMONT MALL, OAKLAND, CALIFORNIA

SAMPLE ID	DATE SAMPLED	TPH (ppm)	B T E X (ppb)				STODDARD (ppm)
			BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	
MW-2	12/11/89	0.2	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<1
MW-3		2.7	530	16	150	59	-
MW-4		2.2	28	21	50	290	-

Notes: ND<0.3 - Not detected at indicated detection limit
ppm - Parts per million or milligrams per kilogram
ppb - Parts per billion or micrograms per kilogram

Hunter Environmental Services, Inc.
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TABLE 4. RESULTS OF TOTAL VOLATILE ORGANIC ANALYSES FOR WATER SAMPLE FROM MW-2 COLLECTED DECEMBER 11, 1989

SAMPLE: MW-2

Compound	ug/l	Compound	ug/l
Chloromethane	ND<10	Cis-1,3-Dichloropropene	ND<3
Bromoethane	ND<10	Trichloroethene	19
Vinyl Chloride	ND<10	Dibromochloromethane	ND<3
Chloroethane	ND<10	1,1,2-Trichloroethane	ND<3
Methylene Chloride	ND<10	Benzene	ND<2
Acetone	ND<10	Trans-1,3-Dichloropropene	ND<3
Carbon disulfide	ND<3	2-Chloroethyl vinyl ether	ND<3
Trichlorofluoromethane	ND<3	Bromoform	ND<3
1,1-Dichloroethene	ND<3	4-Methyl-2-Pentanone	ND<10
1,1-Dichloroethane	ND<3	2-Hexanone	ND<10
1,2-Dichloroethene (total)	8	Tetrachloroethene	210
Chloroform	ND<3	1,1,2,2-Tetrachloroethane	ND<3
1,2-Dichloroethane	ND<3	Toluene	ND<3
2-Butanone	ND<20	Chlorobenzene	ND<3
1,1,1-Trichloroethane	ND<3	Ethylbenzene	ND<3
Carbon Tetrachloride	ND<3	Styrene	ND<3
Vinyl Acetate	ND<10	Total Xylenes	ND<3
Bromodichloromethane	ND<3	1,3-Dichlorobenzene	ND<3
1,2-Dichloropropane	ND<3	1,2&1,4-Dichlorobenzenes	ND<3

Notes: ug/l - Micrograms per liter or parts per billion (ppb)
ND<10 - Non-detectable at indicated detection limit

Hunter Environmental Services, Inc.
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TABLE 5. RESULTS OF TOTAL VOLATILE ORGANIC ANALYSES FOR WATER SAMPLE FROM MW-3 COLLECTED DECEMBER 11, 1989

SAMPLE: MW-3

Compound	ug/l	Compound	ug/l
Chloromethane	ND<10	Cis-1,3-Dichloropropene	ND<3
Bromoethane	ND<10	Trichloroethene	ND<3
Vinyl Chloride	ND<10	Dibromochloromethane	ND<3
Chloroethane	ND<10	1,1,2-Trichloroethane	ND<3
Methylene Chloride	ND<10	Benzene	ND<2
Acetone	ND<10	Trans-1,3-Dichloropropene	ND<3
Carbon disulfide	ND<3	2-Chloroethyl vinyl ether	ND<3
Trichlorofluoromethane	ND<3	Bromoform	ND<3
1,1-Dichloroethene	ND<3	4-Methyl-2-Pentanone	ND<10
1,1-Dichloroethane	ND<3	2-Hexanone	ND<10
1,2-Dichloroethene (total)	ND<3	Tetrachloroethene	ND<3
Chloroform	ND<3	1,1,2,2-Tetrachloroethane	ND<3
1,2-Dichloroethane	ND<3	Toluene	ND<3
2-Butanone	ND<20	Chlorobenzene	ND<3
1,1,1-Trichloroethane	ND<3	Ethylbenzene	ND<3
Carbon Tetrachloride	ND<3	Styrene	ND<3
Vinyl Acetate	ND<10	Total Xylenes	ND<3
Bromodichloromethane	ND<3	1,3-Dichlorobenzene	ND<3
1,2-Dichloropropane	ND<3	1,2&1,4-Dichlorobenzenes	ND<3

Notes: ug/l - Micrograms per liter or parts per billion (ppb)
ND<10 - Non-detectable at indicated detection limit

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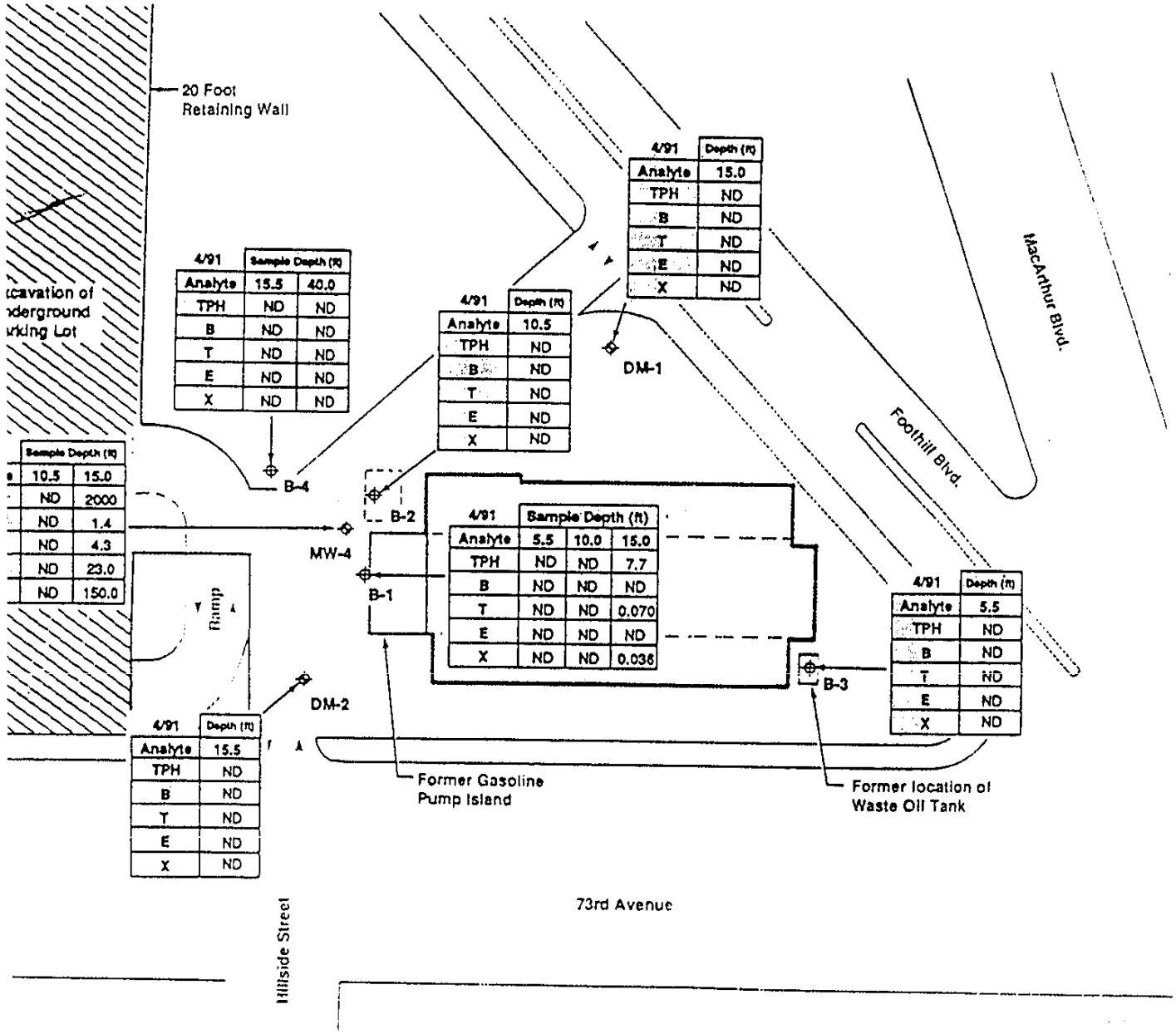
TABLE 6. RESULTS OF TOTAL VOLATILE ORGANIC ANALYSES FOR WATER SAMPLE FROM MW-4 COLLECTED DECEMBER 11, 1989

SAMPLE: MW-4

Compound	ug/l	Compound	ug/l
Chloromethane	ND<10	Cis-1,3-Dichloropropene	ND<3
Bromoethane	ND<10	Trichloroethene	ND<3
Vinyl Chloride	ND<10	Dibromochloromethane	ND<3
Chloroethane	ND<10	1,1,2-Trichloroethane	ND<3
Methylene Chloride	ND<10	Benzene	440
Acetone	ND<10	Trans-1,3-Dichloropropene	ND<3
Carbon disulfide	ND<3	2-Chloroethyl vinyl ether	ND<3
Trichlorofluoromethane	ND<3	Bromoform	ND<3
1,1-Dichloroethene	ND<3	4-Methyl-2-Pentanone	ND<10
1,1-Dichloroethane	ND<3	2-Hexanone	ND<10
1,2-Dichloroethene (total)	4	Tetrachloroethene	ND<3
Chloroform	ND<3	1,1,2,2-Tetrachloroethane	ND<3
1,2-Dichloroethane	ND<3	Toluene	19
2-Butanone	ND<20	Chlorobenzene	ND<3
1,1,1-Trichloroethane	ND<3	Ethylbenzene	130
Carbon Tetrachloride	ND<3	Styrene	ND<3
Vinyl Acetate	ND<10	Total Xylenes	54
Bromodichloromethane	ND<3	1,3-Dichlorobenzene	ND<3
1,2-Dichloropropane	ND<3	1,2&1,4-Dichlorobenzenes	ND<3

Notes: ug/l - Micrograms per liter or parts per billion (ppb)
ND<10 - Non-detectable at indicated detection limit

Hunter Environmental Services, Inc.
597 Center Avenue, Suite 350
Martinez, CA 94553



KEY

DM-5 Monitoring Well
B-1 Boring

Investigation Mo./Year	Sample Depth (ft)		
Analyte	5.0	10.0	15.0
TPH	86	450	200
B	0.2	0.8	7.0
T	ND	30	24
E	0.9	10	ND
X	1.3	100	38

Concentration (µg/Kg)

ND Not Detected

CONSTITUENTS

TPH - TPH as Gasoline
B - Benzene
T - Toluene
E - Ethylbenzene
X - Xylene

N

0 100
Feet

RESULTS OF CHEMICAL ANALYSES OF SO
(1989 and 1991 Investigatio

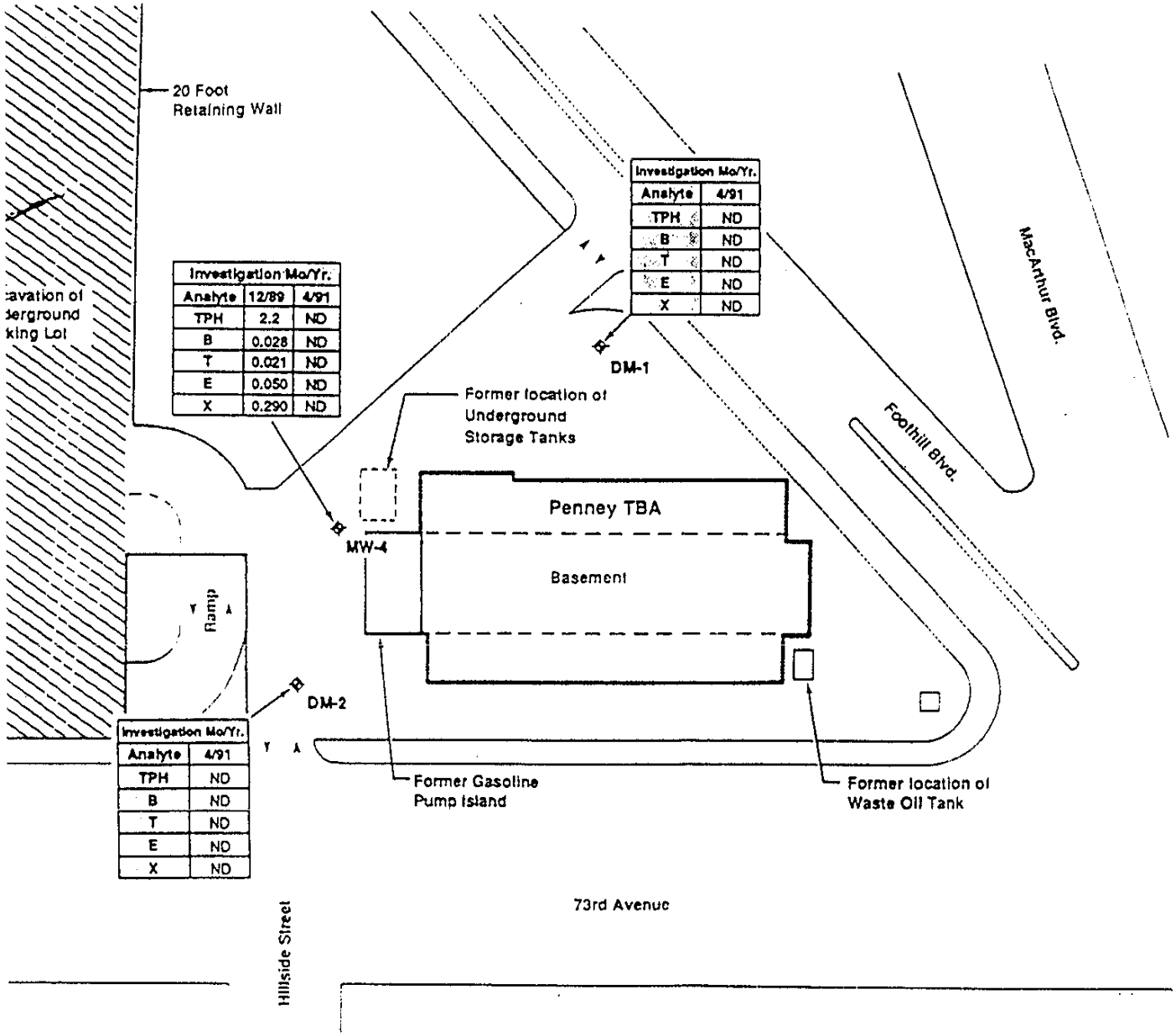
June 1991
443-090-043

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KEY

◆ W-3 Monitoring Well

Investigation Mo/Yr.		
Analyte	12/89	4/91
TPH	86	450
B	0.2	0.6
T	ND	30
E	0.9	ND
X	1.3	100

Concentratio (µg/L)

Not Detecte

CONSTITUENTS

TPH - TPH as Gasoline
B - Benzene
T - Toluene
E - Ethylbenzene
X - Xylene

N

0 100

Feet

RESULTS OF CHEMICAL ANALYSES O
GROUNDWATER (1989 and 1991 Investigations

June 1991
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Artesian Environmental Consultants

Standard Operating Procedures

MONITORING WELL SAMPLING

Prior to groundwater sampling, initial water level and floating liquid hydrocarbon measurements are recorded for each well. Each well is sounded for depth to ascertain if silting has occurred and to verify the actual depth below ground surface. These measurements are used to calculate the volume for each well. At this time, all non-dedicated pumping and sampling supplies are washed with an Alconox solution, rinsed with clean water, and final rinsed with either distilled or deionized water to prevent any cross contamination from other sampling events.

Each well is purged by evacuating a minimum of three well-casing volumes of groundwater from the well. The well water may be evacuated either by bailing, or pumping. Any of the following may be used for bailing: a dedicated pvc bailer, sterile disposable polyethylene bailer, or a stainless steel bailer. For pumping the groundwater out of the well, a downhole impeller type pump (dedicated or removable with PVC tubing), a downhole dedicated bladder pump, or a surface peristaltic pump is used.

After three to four well volumes are pumped, each well is permitted to recharge to at least 80% of original capacity or for two hours; whichever occurs first. The water is then measured to verify whether the well has stabilized. Stabilization is determined by measuring the parameters of pH; temperature; and electrical conductivity. Stabilized measurements indicate that formation water has entered the well. When two subsequent measurements of these three parameters are within 10% of each other, the well is considered stabilized and is ready to be sampled.

The samples are collected using a new polyethylene bailer with a bottom siphon and nylon cord. The bailers are disposable, and therefore, never reused. The groundwater sample is visually inspected for the presence of free product in the sampling bailer. Agitation is minimized during sample retrieval to prevent aeration during the transfer from the well to the laboratory prepared sample containers. Duplicate water samples are collected from the well and siphoned into three, 40 ml, VOA, septum top vials, with additional 950 ml samples collected in an amber glass bottles or polyethylene bottles depending on the analyses to be performed. The VOA vials are filled completely, leaving no headspace, and are sealed with Teflon-lined lids. All samples are labeled, chilled to 4° C in an ice chest, and sent to a California State Certified hazardous materials testing laboratory under chain-of-custody documentation .

All groundwater samples are collected in accordance with California Regional Water Quality Control Board (RWQCB) procedures described in the *Leaking Underground Fuel Tank (LUFT) Field Manual*, the *Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites*, and local regulatory guidelines.

Standard Environmental Protection Agency (EPA), San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), and Department of Health Services (DHS) methodologies for sampling and analyses are routinely utilized.

Chain of Custody documentation accompanies all samples to the laboratory. A copy of the Chain of Custody documentation is attached to the Certificate of Analysis.

Monitor well purge water is properly stored and labeled on site in DOT 17-H containers pending off site disposal.

CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

January 6, 1994 ChromaLab File No.: 9312348

ARTESIAN ENV. CONSULTANTS

Attn: Benjamin Mira

RE: Seven water samples for Diesel analysis

Project Name: EASTMONT MALL
Project Number: 110-001-03
Date Sampled: December 29, 1993 Date Submitted: December 30, 1993
Date Extracted: January 5, 1994 Date Analyzed: January 5, 1994

RESULTS:

Sample I.D.	Diesel (µg/L)
MW-3	N.D.
MW-4	N.D.
MW-5	N.D.
MW-6	N.D.
MW-7	N.D.
MW-8	N.D.
MW-9	N.D.
BLANK	N.D.
SPIKE RECOVERY	99%
DUP SPIKE RECOVERY	105%
DETECTION LIMIT	50
METHOD OF ANALYSIS	3510/8015

ChromaLab, Inc.

Alex Tam
Analytical Chemist

Eric Tam
Laboratory Director

2239 Omega Road,#1 • San Ramon, California 94583
(510) 831-1788 • Facsimile (510) 831-8798

CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

January 7, 1994 ChromaLab File#: 9312348

ARTESIAN ENV. CONSULTANTS

Atten: Benjamin Mira

Project: EASTMONT MALL **Project#:** 110-001-03
Submitted: December 30, 1993

re: 7 samples for Gasoline and BTEX analysis.

Matrix: LIQUID
Sampled on: December 29, 1993 *Analyzed on:* January 5, 1994
Method: EPA 5030/8015/602 *Run#:* 1969

Lab #	SAMPLE ID	Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
40496	MW-3	13000	990	28	330	110
40497	MW-4	N.D.	N.D.	N.D.	N.D.	N.D.
40498	MW-5	N.D.	N.D.	N.D.	N.D.	N.D.
40499	MW-6	73	13	N.D.	1.5	N.D.
40500	MW-7	78	15	N.D.	1.7	N.D.
40501	MW-8	N.D.	N.D.	N.D.	N.D.	N.D.
40502	MW-9	N.D.	N.D.	N.D.	N.D.	N.D.
DETECTION LIMITS		50	0.5	0.5	0.5	0.5
BLANK		N.D.	N.D.	N.D.	N.D.	N.D.
BLANK SPIKE RECOVERY(%)		97	106	94	91	87

ChromaLab, Inc.

Billy Thach
Chemist

Eric Tam
Laboratory Director

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CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

January 7, 1994 ChromaLab File#: 9312348

ARTESIAN ENV. CONSULTANTS

Atten: Benjamin Mira

Project: EASTMONT MALL **Project#:** 110-001-03
Submitted: December 30, 1993

re: One sample for Volatile Halogenated Compounds analysis.

Sample: **MW-3** *Matrix:* LIQUID
Lab #: 40496-1995 *Sampled:* December 29, 1993 *Analyzed:* January 6, 1994
Method: EPA 601

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE RESULT (%)
CHLOROMETHANE	N.D.	0.5	N.D.	--
VINYL CHLORIDE	3.4	0.5	N.D.	--
BROMOCHLOROMETHANE	N.D.	0.5	N.D.	--
CHLOROETHANE	N.D.	0.5	N.D.	--
TRICHLOROFLUOROMETHANE	N.D.	0.5	N.D.	--
1,1-DICHLOROETHENE	N.D.	0.5	N.D.	97
METHYLENE CHLORIDE	N.D.	5	N.D.	--
TRANS-1,2-DICHLOROETHENE	N.D.	0.5	N.D.	--
CIS-1,2-DICHLOROETHENE	N.D.	0.5	N.D.	--
1,1-DICHLOROETHANE	N.D.	0.5	N.D.	--
CHLOROFORM	N.D.	0.5	N.D.	--
1,1,1-TRICHLOROETHANE	N.D.	0.5	N.D.	--
CARBON TETRACHLORIDE	N.D.	0.5	N.D.	--
1,2-DICHLOROETHANE	24	0.5	N.D.	--
TRICHLOROETHENE	N.D.	0.5	N.D.	94
1,2-DICHLOROPROPANE	N.D.	0.5	N.D.	--
BROMODICHLOROMETHANE	N.D.	0.5	N.D.	--
2-CHLOROETHYLVINYL ETHER	N.D.	0.5	N.D.	--
TRANS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	--
CIS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	0.5	N.D.	--
TETRACHLOROETHENE	N.D.	0.5	N.D.	90
DIBROMOCHLOROMETHANE	N.D.	0.5	N.D.	--
CHLOROBENZENE	N.D.	0.5	N.D.	--
BROMOFORM	N.D.	0.5	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	0.5	N.D.	91
1,3-DICHLOROBENZENE	N.D.	0.5	N.D.	--
1,4-DICHLOROBENZENE	N.D.	0.5	N.D.	--
1,2-DICHLOROBENZENE	N.D.	0.5	N.D.	--
FREON 113	N.D.	0.5	N.D.	--

ChromaLab, Inc.

David Wintergrass
Chemist

Eric Tam
Laboratory Director

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(510) 831-1788 • Facsimile (510) 831-8798

CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

January 7, 1994 ChromaLab File#: 9312348

ARTESIAN ENV. CONSULTANTS

Atten: Benjamin Mira

Project: EASTMONT MALL **Project#:** 110-001-03
Submitted: December 30, 1993

re: One sample for Volatile Halogenated Compounds analysis.

Sample: **MW-4** *Matrix:* LIQUID
Lab #: 40497-1995 *Sampled:* December 29, 1993 *Analyzed:* January 6, 1994
Method: EPA 601

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE RESULT (%)
CHLOROMETHANE	N.D.	0.5	N.D.	--
VINYL CHLORIDE	N.D.	0.5	N.D.	--
BROMOCHLOROMETHANE	N.D.	0.5	N.D.	--
CHLOROETHANE	N.D.	0.5	N.D.	--
TRICHLOROFLUOROMETHANE	N.D.	0.5	N.D.	--
1,1-DICHLOROETHENE	N.D.	0.5	N.D.	97
METHYLENE CHLORIDE	N.D.	5	N.D.	--
TRANS-1,2-DICHLOROETHENE	N.D.	0.5	N.D.	--
CIS-1,2-DICHLOROETHENE	N.D.	0.5	N.D.	--
1,1-DICHLOROETHANE	N.D.	0.5	N.D.	--
CHLOROFORM	N.D.	0.5	N.D.	--
1,1,1-TRICHLOROETHANE	N.D.	0.5	N.D.	--
CARBON TETRACHLORIDE	N.D.	0.5	N.D.	--
1,2-DICHLOROETHANE	N.D.	0.5	N.D.	--
TRICHLOROETHENE	N.D.	0.5	N.D.	94
1,2-DICHLOROPROPANE	N.D.	0.5	N.D.	--
BROMODICHLOROMETHANE	N.D.	0.5	N.D.	--
2-CHLOROETHYLVINYL ETHER	N.D.	0.5	N.D.	--
TRANS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	--
CIS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	0.5	N.D.	--
TETRACHLOROETHENE	N.D.	0.5	N.D.	90
DIBROMOCHLOROMETHANE	N.D.	0.5	N.D.	--
CHLOROBENZENE	N.D.	0.5	N.D.	--
BROMOFORM	N.D.	0.5	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	0.5	N.D.	91
1,3-DICHLOROBENZENE	N.D.	0.5	N.D.	--
1,4-DICHLOROBENZENE	N.D.	0.5	N.D.	--
1,2-DICHLOROBENZENE	N.D.	0.5	N.D.	--
FREON 113	N.D.	0.5	N.D.	--

ChromaLab, Inc.

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CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

January 7, 1994 ChromaLab File#: 9312348

ARTESIAN ENV. CONSULTANTS

Atten: Benjamin Mira

Project: EASTMONT MALL **Project#:** 110-001-03
Submitted: December 30, 1993

re: One sample for Volatile Halogenated Compounds analysis.

Sample: **MW-5** *Matrix:* LIQUID
Lab #: 40498-1995 *Sampled:* December 29, 1993 *Analyzed:* January 6, 1994
Method: EPA 601

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE RESULT (%)
CHLOROMETHANE	N.D.	0.5	N.D.	--
VINYL CHLORIDE	N.D.	0.5	N.D.	--
BROMOCHLOROMETHANE	N.D.	0.5	N.D.	--
CHLOROETHANE	N.D.	0.5	N.D.	--
TRICHLOROFLUOROMETHANE	N.D.	0.5	N.D.	--
1,1-DICHLOROETHENE	N.D.	0.5	N.D.	97
METHYLENE CHLORIDE	N.D.	5	N.D.	--
TRANS-1,2-DICHLOROETHENE	N.D.	0.5	N.D.	--
CIS-1,2-DICHLOROETHENE	N.D.	0.5	N.D.	--
1,1-DICHLOROETHANE	N.D.	0.5	N.D.	--
CHLOROFORM	N.D.	0.5	N.D.	--
1,1,1-TRICHLOROETHANE	N.D.	0.5	N.D.	--
CARBON TETRACHLORIDE	N.D.	0.5	N.D.	--
1,2-DICHLOROETHANE	N.D.	0.5	N.D.	--
TRICHLOROETHENE	N.D.	0.5	N.D.	94
1,2-DICHLOROPROPANE	N.D.	0.5	N.D.	--
BROMODICHLOROMETHANE	N.D.	0.5	N.D.	--
2-CHLOROETHYLVINYL ETHER	N.D.	0.5	N.D.	--
TRANS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	--
CIS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	0.5	N.D.	--
TETRACHLOROETHENE	N.D.	0.5	N.D.	90
DIBROMOCHLOROMETHANE	N.D.	0.5	N.D.	--
CHLOROBENZENE	N.D.	0.5	N.D.	--
BROMOFORM	N.D.	0.5	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	0.5	N.D.	91
1,3-DICHLOROBENZENE	N.D.	0.5	N.D.	--
1,4-DICHLOROBENZENE	N.D.	0.5	N.D.	--
1,2-DICHLOROBENZENE	N.D.	0.5	N.D.	--
FREON 113	N.D.	0.5	N.D.	--

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CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

January 7, 1994 ChromaLab File#: 9312348

ARTESIAN ENV. CONSULTANTS

Atten: Benjamin Mira

Project: EASTMONT MALL **Project#:** 110-001-03
Submitted: December 30, 1993

re: One sample for Volatile Halogenated Compounds analysis.

Sample: **MW-6** *Matrix:* LIQUID
Lab #: 40499-1995 *Sampled:* December 29, 1993 *Analyzed:* January 6, 1994
Method: EPA 601

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE RESULT (%)
CHLOROMETHANE	N.D.	0.5	N.D.	--
VINYL CHLORIDE	N.D.	0.5	N.D.	--
BROMOCHLOROMETHANE	N.D.	0.5	N.D.	--
CHLOROETHANE	N.D.	0.5	N.D.	--
TRICHLOROFLUOROMETHANE	N.D.	0.5	N.D.	--
1,1-DICHLOROETHENE	N.D.	0.5	N.D.	97
METHYLENE CHLORIDE	N.D.	5	N.D.	--
TRANS-1,2-DICHLOROETHENE	N.D.	0.5	N.D.	--
CIS-1,2-DICHLOROETHENE	N.D.	0.5	N.D.	--
1,1-DICHLOROETHANE	N.D.	0.5	N.D.	--
CHLOROFORM	N.D.	0.5	N.D.	--
1,1,1-TRICHLOROETHANE	N.D.	0.5	N.D.	--
CARBON TETRACHLORIDE	N.D.	0.5	N.D.	--
1,2-DICHLOROETHANE	N.D.	0.5	N.D.	--
TRICHLOROETHENE	N.D.	0.5	N.D.	94
1,2-DICHLOROPROPANE	N.D.	0.5	N.D.	--
BROMODICHLOROMETHANE	N.D.	0.5	N.D.	--
2-CHLOROETHYLVINYL ETHER	N.D.	0.5	N.D.	--
TRANS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	--
CIS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	0.5	N.D.	--
TETRACHLOROETHENE	N.D.	0.5	N.D.	90
DIBROMOCHLOROMETHANE	N.D.	0.5	N.D.	--
CHLOROBENZENE	N.D.	0.5	N.D.	--
BROMOFORM	N.D.	0.5	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	0.5	N.D.	91
1,3-DICHLOROBENZENE	N.D.	0.5	N.D.	--
1,4-DICHLOROBENZENE	N.D.	0.5	N.D.	--
1,2-DICHLOROBENZENE	N.D.	0.5	N.D.	--
FREON 113	N.D.	0.5	N.D.	--

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CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

January 7, 1994 ChromaLab File#: 9312348

ARTESIAN ENV. CONSULTANTS

Atten: Benjamin Mira

Project: EASTMONT MALL **Project#:** 110-001-03
Submitted: December 30, 1993

re: One sample for Volatile Halogenated Compounds analysis.

Sample: **MW-7** *Matrix:* LIQUID
Lab #: 40500-1995 *Sampled:* December 29, 1993 *Analyzed:* January 6, 1994
Method: EPA 601

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE RESULT (%)
CHLOROMETHANE	N.D.	0.5	N.D.	--
VINYL CHLORIDE	N.D.	0.5	N.D.	--
BROMOCHLOROMETHANE	N.D.	0.5	N.D.	--
CHLOROETHANE	N.D.	0.5	N.D.	--
TRICHLOROFLUOROMETHANE	N.D.	0.5	N.D.	--
1,1-DICHLOROETHENE	N.D.	0.5	N.D.	97
METHYLENE CHLORIDE	N.D.	5	N.D.	--
TRANS-1,2-DICHLOROETHENE	N.D.	0.5	N.D.	--
CIS-1,2-DICHLOROETHENE	N.D.	0.5	N.D.	--
1,1-DICHLOROETHANE	N.D.	0.5	N.D.	--
CHLOROFORM	N.D.	0.5	N.D.	--
1,1,1-TRICHLOROETHANE	N.D.	0.5	N.D.	--
CARBON TETRACHLORIDE	N.D.	0.5	N.D.	--
1,2-DICHLOROETHANE	N.D.	0.5	N.D.	--
TRICHLOROETHENE	N.D.	0.5	N.D.	94
1,2-DICHLOROPROPANE	N.D.	0.5	N.D.	--
BROMODICHLOROMETHANE	N.D.	0.5	N.D.	--
2-CHLOROETHYLVINYL ETHER	N.D.	0.5	N.D.	--
TRANS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	--
CIS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	0.5	N.D.	--
TETRACHLOROETHENE	N.D.	0.5	N.D.	90
DIBROMOCHLOROMETHANE	N.D.	0.5	N.D.	--
CHLOROBENZENE	N.D.	0.5	N.D.	--
BROMOFORM	N.D.	0.5	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	0.5	N.D.	91
1,3-DICHLOROBENZENE	N.D.	0.5	N.D.	--
1,4-DICHLOROBENZENE	N.D.	0.5	N.D.	--
1,2-DICHLOROBENZENE	N.D.	0.5	N.D.	--
FREON 113	N.D.	0.5	N.D.	--

ChromaLab, Inc.

David Wintergrass
Chemist

Eric Tam
Laboratory Director

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CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

January 7, 1994 ChromaLab File#: 9312348

ARTESIAN ENV. CONSULTANTS

Atten: Benjamin Mira

Project: EASTMONT MALL **Project#:** 110-001-03
Submitted: December 30, 1993

re: One sample for Volatile Halogenated Compounds analysis.

Sample: **MW-8** *Matrix:* LIQUID
Lab #: 40501-1995 *Sampled:* December 29, 1993 *Analyzed:* January 6, 1994
Method: EPA 601

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE RESULT (%)
CHLOROMETHANE	N.D.	0.5	N.D.	--
VINYL CHLORIDE	N.D.	0.5	N.D.	--
BROMOCHLOROMETHANE	N.D.	0.5	N.D.	--
CHLOROETHANE	N.D.	0.5	N.D.	--
TRICHLOROFLUOROMETHANE	N.D.	0.5	N.D.	--
1,1-DICHLOROETHENE	N.D.	0.5	N.D.	97
METHYLENE CHLORIDE	N.D.	5	N.D.	--
TRANS-1,2-DICHLOROETHENE	N.D.	0.5	N.D.	--
CIS-1,2-DICHLOROETHENE	N.D.	0.5	N.D.	--
1,1-DICHLOROETHANE	N.D.	0.5	N.D.	--
CHLOROFORM	N.D.	0.5	N.D.	--
1,1,1-TRICHLOROETHANE	N.D.	0.5	N.D.	--
CARBON TETRACHLORIDE	N.D.	0.5	N.D.	--
1,2-DICHLOROETHANE	N.D.	0.5	N.D.	--
TRICHLOROETHENE	N.D.	0.5	N.D.	94
1,2-DICHLOROPROPANE	N.D.	0.5	N.D.	--
BROMODICHLOROMETHANE	N.D.	0.5	N.D.	--
2-CHLOROETHYLVINYL ETHER	N.D.	0.5	N.D.	--
TRANS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	--
CIS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	0.5	N.D.	--
TETRACHLOROETHENE	N.D.	0.5	N.D.	90
DIBROMOCHLOROMETHANE	N.D.	0.5	N.D.	--
CHLOROBENZENE	N.D.	0.5	N.D.	--
BROMOFORM	N.D.	0.5	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	0.5	N.D.	91
1,3-DICHLOROBENZENE	N.D.	0.5	N.D.	--
1,4-DICHLOROBENZENE	N.D.	0.5	N.D.	--
1,2-DICHLOROBENZENE	N.D.	0.5	N.D.	--
FREON 113	N.D.	0.5	N.D.	--

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CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

January 7, 1994 ChromaLab File#: 9312348

ARTESIAN ENV. CONSULTANTS

Atten: Benjamin Mira

Project: EASTMONT MALL **Project#:** 110-001-03
Submitted: December 30, 1993

re: One sample for Volatile Halogenated Compounds analysis.

Sample: **MW-9** *Matrix:* LIQUID
Lab #: 40502-1995 *Sampled:* December 29, 1993 *Analyzed:* January 6, 1994
Method: EPA 601

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE RESULT (%)
CHLOROMETHANE	N.D.	0.5	N.D.	--
VINYL CHLORIDE	N.D.	0.5	N.D.	--
BROMOCHLOROMETHANE	N.D.	0.5	N.D.	--
CHLOROETHANE	N.D.	0.5	N.D.	--
TRICHLOROFLUOROMETHANE	N.D.	0.5	N.D.	--
1,1-DICHLOROETHENE	N.D.	0.5	N.D.	97
METHYLENE CHLORIDE	N.D.	5	N.D.	--
TRANS-1,2-DICHLOROETHENE	N.D.	0.5	N.D.	--
CIS-1,2-DICHLOROETHENE	N.D.	0.5	N.D.	--
1,1-DICHLOROETHANE	N.D.	0.5	N.D.	--
CHLOROFORM	N.D.	0.5	N.D.	--
1,1,1-TRICHLOROETHANE	N.D.	0.5	N.D.	--
CARBON TETRACHLORIDE	N.D.	0.5	N.D.	--
1,2-DICHLOROETHANE	N.D.	0.5	N.D.	--
TRICHLOROETHENE	N.D.	0.5	N.D.	94
1,2-DICHLOROPROPANE	N.D.	0.5	N.D.	--
BROMODICHLOROMETHANE	N.D.	0.5	N.D.	--
2-CHLOROETHYLVINYL ETHER	N.D.	0.5	N.D.	--
TRANS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	--
CIS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	0.5	N.D.	--
TETRACHLOROETHENE	N.D.	0.5	N.D.	90
DIBROMOCHLOROMETHANE	N.D.	0.5	N.D.	--
CHLOROBENZENE	N.D.	0.5	N.D.	--
BROMOFORM	N.D.	0.5	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	0.5	N.D.	91
1,3-DICHLOROBENZENE	N.D.	0.5	N.D.	--
1,4-DICHLOROBENZENE	N.D.	0.5	N.D.	--
1,2-DICHLOROBENZENE	N.D.	0.5	N.D.	--
FREON 113	N.D.	0.5	N.D.	--

ChromaLab, Inc.

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SUBM #: 9312348
CLIENT: ARTESIAN
DUE: 01/07/94
REF: 14642

CHROMALAB, INC.

223

DOHS 1094

Chain of Custody

DATE 12-29-93 PAGE 1 OF 1

PROJ. MGR. BENJAMIN MIRA
COMPANY ARTESIAN ENVIRONMENTAL
ADDRESS 3175 KERNER BLVD, SUITE E.
SAN RAFAEL, CA 94901
SAMPLERS (SIGNATURE) (PHONE NO.)

ANALYSIS REPORT

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	TPH - Gasoline (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020)	TPH - Diesel (EPA 3510/3550, 8015)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240, 524.2)	BASE/NEUTRALS, ACIDS (EPA 625/627, 8270, 525)	TOTAL OIL & GREASE (EPA 5520, B+F, E+F)	PCB (EPA 608, 8080)	PESTICIDES (EPA 608, 8080)	TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1)		METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (TCLP, STLC)				NUMBER OF CONTAINERS
MW-3	12-29-93	12:30	AQ.			X	X		X																5
MW-4	12-29-93	3:30	AQ.			X	X		X																5
MW-5	12-29-93	1:15	AQ.			X	X		X																5
MW-6	12-29-93	2:05	AQ.			X	X		X																5
MW-7	12-29-93	2:45	AQ.			X	X		X																5
MW-8	12-29-93	11:00	AQ.			X	X		X																5
MW-9	12-29-93	11:50	AQ.			X	X		X																5

PROJECT INFORMATION

PROJECT NAME: EASTMONT MALL
PROJECT NUMBER: 110-001-03
P.O. #

SAMPLE RECEIPT

TOTAL NO. OF CONTAINERS	35
HEAD SPACE	
REC'D GOOD CONDITION/COLD	
CONFORMS TO RECORD	

TAT: STANDARD 5-DAY | | | 24 | 48 | 72 | OTHER

SPECIAL INSTRUCTIONS/COMMENTS:

RELINQUISHED BY 1.	RELINQUISHED BY 2.	RELINQUISHED BY 3.
(SIGNATURE) (TIME) 11:40AM	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)
BENJAMIN MIRA 12:30 93	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
(PRINTED NAME) (DATE)	(COMPANY)	(COMPANY)
ARTESIAN ENVIRONMENTAL		
(COMPANY)		
RECEIVED BY 1.	**RECEIVED BY 2.**	**RECEIVED BY (LABORATORY) 3.**
(SIGNATURE) (TIME)	(SIGNATURE) (TIME)	(SIGNATURE) 11:44 (TIME)
(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)	R. Morrow 12-30-93 (PRINTED NAME) (DATE)
(COMPANY)	(COMPANY)	Chromalab (LAB)

00000282.tif 429 / 639

ARTESIAN ENVIRONMENTAL CONSULTANTS

93 NOV -2 AM 10:49

INSTALLATION OF FIVE BORINGS AND MONITOR WELLS

Performed at
One Eastmont Mall
Oakland, California 94605

Performed for
Mr. David Norwitt
One Eastmont Mall
Oakland, California 94605

October 20, 1993

Benjamin I. Mira
Project Manager

James A. Jacobs, REG. #4815
Principal Geologist

REGISTERED GEOLOGIST
JAMES A. JACOBS
No. 4815
STATE OF CALIFORNIA

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FIGURES

1. Regional Map

2. Site Map

3. Groundwater Gradient Map

TABLES

1. Analytical Results - Soil
2. Analytical Results - Water

APPENDICES

A. Laboratory Analytical Reports - Hunter Environmental, Dames & Moore

B. Drilling Permit

C. Standard Operating Procedures

Soil Sampling
Well Installation
Well Development

D. Boring Logs, Unified Soil classification System Chart

E. Laboratory Analytical Reports

F. Chain of Custody Forms

1.0 INTRODUCTION

Artesian Environmental Consultants (Artesian) has been retained by Mr. David Norwitt of Eastmont Mall to conduct a soil boring and groundwater investigation at the Eastmont Mall in Oakland, California. The purpose of this work was to obtain additional subsurface information in order to better evaluate the vertical and lateral extent of possible soil and/or groundwater contamination on the subject property. Off site contamination was not evaluated during this investigation.

2.0 SCOPE OF WORK

The scope of work included the following:

1) Drill five soil borings, sampled at five feet intervals. Converted soil borings to groundwater monitoring wells MW-5 to MW-9. Groundwater samples were taken following well development.

2) Submit one soil sample per boring from the vadose zone, and one groundwater sample for the following analysis:

   -Total Petroleum Hydrocarbons for diesel (TPH-d, EPA Method 8015).
   -Total Petroleum Hydrocarbons for gasoline (TPH-g, EPA Method 8015).
   -Benzene, Toluene, Ethyl Benzene, and Total Xylenes (BTEX, EPA Method 8020).
   -Purgeable halocarbons (EPA Method 8010), for solvents commonly found in dry cleaners

3) Review all field and laboratory data pertaining to the subject site.

4) Prepare a report of fieldwork and analytical results.

3.0 SITE DESCRIPTION

The project site is triangular in shape. It is bounded on the north by Foothill Boulevard, the southeastern boundary is 73rd Avenue, and a retaining wall which supports a parking structure. The western boundaries are Church Street and Bancroft Avenue. The site is located at the base of the Berkeley hills which rise up to 1,175 feet above sea level to the north east. Two thousand feet south of the site lies the Arroyo Viejo stream channel.(Figure 1).

The subject site consists of a mall with several commercial retailers including clothing stores, car repair shops, a dry cleaners, fast-food restaurants, and a supermarket. The entire building is surrounded by large parking lot areas, along with an office building, gasoline station, and fast food restaurants (Figure 2). A police station is located on the northeast corner of the site.

Previous use of the Eastmont Mall site was as a residential neighborhood prior to 1916. In 1916, the site was excavated and leveled for the construction of the automobile assembly plant, Chevrolet Fisher Body Plant. The plant closed some time in the early 1960s. The site remained vacant from 1965 to 1969. Construction of the mall began in 1969.

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4.0 BACKGROUND

Hunter Environmental Services, Inc. (Hunter) of Martinez, California performed a Phase II environmental audit of the Eastmont Mall property on December 20, 1989. Four soil borings were drilled by Hunter on the mall property. Three of these borings were completed as monitoring wells MW-2 through MW-4. Analytical results showed that several soil samples contained hydrocarbon contamination, and several water samples contained 1-2 dichloroethene (1-2 DCE), trichloroethene (TCE), and tetrachloroethene (PCE). In 1991, Dames & Moore of San Francisco, California installed an additional six soil borings, converting two of them into monitoring wells DM-1 and DM-2. Laboratory analytical results from both Hunter and Dames & Moore are included in Appendix A.

5.0 SOIL BORINGS

5.1 Boring Locations

Five soil boring locations (Figure 2) were selected in order to surround the building structure, as well as the dry cleaners. All five borings were placed in the parking lot area of the site. A magnetic utility locating survey was performed by Artesian Environmental Consultants prior to any drilling activities to identify underground utilities or other subsurface obstacles. Underground Service Alert was contacted to notify utility and communication companies of drilling activities prior to any on site activities.

5.2 Drilling

Drilling permit (#93490, Appendix B) was issued on August 31, 1993 by Mr. Wyman Hong, Water Resources Technician for the Alameda County Flood Control And Water Conservation District, Zone 7. Drilling was done by West Hazmat Drilling of Newark, California, a licensed C-57 driller (# 554979) using a CME 75 GMC truck mounted drill rig with a 2.5" inner diameter hollow stem auger. All drilling and soil sampling equipment was decontaminated by steam cleaning prior to use in each borehole to minimize the potential for cross contamination. Soil cuttings generated during drilling were placed in 55 gallon (DOT 17H) drums, labeled and placed on the northeast side of the subject site, away from car and pedestrian traffic.

Mr. Benjamin I. Mira, Project Geologist with Artesian was present to log and document on-site drilling activities as well collect soil samples. Well development took place on September 28, 1993, prior to groundwater sampling.

5.3 Soil and Groundwater Samples

On September 13-14, 1993, soil samples were collected during drilling at five feet intervals. Each sample was examined for lithologic and hydrologic characteristics, and screened for possible chemical analysis for borings B-5 through B-9. On September 28, 1993, groundwater samples were collected and submitted for analysis. Only one soil sample from the vadose zone of each well was submitted for analysis. All soil and water samples were labeled and transported under chain-of-custody procedures in a refrigerated environment to Chromalab, Inc. of San Ramon, California. Chromalab is certified by the state of California for the analysis performed. Standard operating procedures for collection of soil and groundwater samples are described in Appendix C.

5.4 On-Site Hydrogeology

The subject site is paved with asphalt and underlain by Recent alluvial deposits consisting mostly of sand and clay. Lithologic descriptions are noted for each of the borings in Appendix D. Subsurface geology consists mostly of a sand and clay mixture, with small gravel and cobble-like rocks intermittently placed within the sandy clay mixture. All soil samples retrieved during drilling were screened on-site using a Thermo Environmental Instruments Model 580 B organic vapor meter (OVM). Organic vapors were not encountered using the OVM instrument. The top of the well casings were surveyed by a licensed land surveyors, Buscher & Associates of Hayward, California. The groundwater flow is to the west with a gradient of approximately 0.007 between wells MW-8 and MW-6 (Figure 3).

6.0 LABORATORY ANALYTICAL RESULTS

Laboratory analytical results are summarized in Tables 1 and 2. The laboratory reports along with quality control documents, and the chain-of-custody forms, are included in Appendices E and F, respectively. A concentration level of non-detect (ND) on the laboratory reports indicates that the compounds analyzed may be present, but at concentrations below the detection limit.

Laboratory results (Table 1) indicate that concentration levels were below reporting limits for all soil samples. Laboratory results (Table 2) indicate that concentration levels were below reporting limits for all groundwater samples.

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7.0 DISCUSSION

The subsurface information presented in this report is based on one sample location analysis of selected soil for each boring, and groundwater samples. All soil samples were field screened and organic vapors were not encountered using the OVM instrument. Laboratory analysis indicate concentration levels below reporting limits for all soil and groundwater samples collected from the site. Groundwater flow direction is to the west.

The reported contamination in the soil and groundwater samples from MW-2 from the Hunter report was not detected in the soils and groundwater at the locations sampled during this investigation. Based of this investigation, the contaminants discovered in MW-2 may be localized.

8.0 RECOMMENDATIONS

Artesian recommends monitoring the subject site on a quarterly basis for a minimum of one year. Site closure may be recommended after review of data from one full hydrologic cycle (4 Quarters).

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9.0 LIMITATIONS FOR SUBSURFACE SAMPLING AND INVESTIGATIONS

The authors and firm offer no assurance and assume no responsibility for site conditions or activities which were beyond the scope of work requested by the client and referenced in the introduction of this report. The compensation agreed to by the client and the firm corresponds to the scope of work defined, with the associated limitations which are an integral and important part of this report. This report was prepared with generally accepted standards of environmental geological practice in California at the time this investigation was performed. This investigation was conducted solely as a tool in assessing environmental conditions of the soil and/or groundwater with respect to relative hydrocarbon product contamination in the immediate vicinity of the former underground storage tank. No soil engineering or geotechnical recommendations are implied or should be inferred. Evaluation of the geologic conditions at the site for the purpose of this investigation is made from a limited number of observation points. There may be variations in subsurface conditions away from the sample points available. There are no representations, warranties, or guarantees that the points selected for sampling are in anyway representative of the entire site. Data from this report reflects the sample conditions at specific locations at a specific point in time. No other interpretations, representations, warranties, guarantees, express or implied, are included or intended by this report. Additional work, including further subsurface investigation, can reduce the inherent uncertainties associated with this type of investigation. There are no guarantees or warranties, express or implied, that undocumented, nonpermitted, illegally or improperly abandoned subsurface containers (such as underground storage tanks or drums) or other sources of contamination or contaminated soil or groundwater itself, or covered, encapsulated, inaccessible or nonobservable hazardous materials either do or do not exist on the property.

This project involved hazardous or toxic compounds and there are certain inherent risk factors involved (such as limitations on laboratory or analytical methods or equipment, variations in subsurface conditions, and risks associated with specific analysis not requested by the client), which may adversely affect the results of the project, even though the services were performed with such skill and care as are generally accepted professional standards for the environmental geology profession.

This report and all matters contained herein were prepared for the sole and exclusive benefit of the client specified herein, and is intended only for the use of the client. Neither all, nor any part of the contents of this report, or copy thereof, shall be used for any purpose by anyone but the client specified herein nor shall it be conveyed or disseminated by anyone without the express written consent of the authors. No one, except for the client specified herein, may rely on this report for any purpose. Any person or entity who obtains or reads this report, or a copy thereof, other than the client specified herein, expressly assumes all risk of damages to himself or third persons arising out of reliance thereon or use thereof and waives the right to bring any action based on this report, directly or indirectly, and the authors shall have no liability to any such person or entity.

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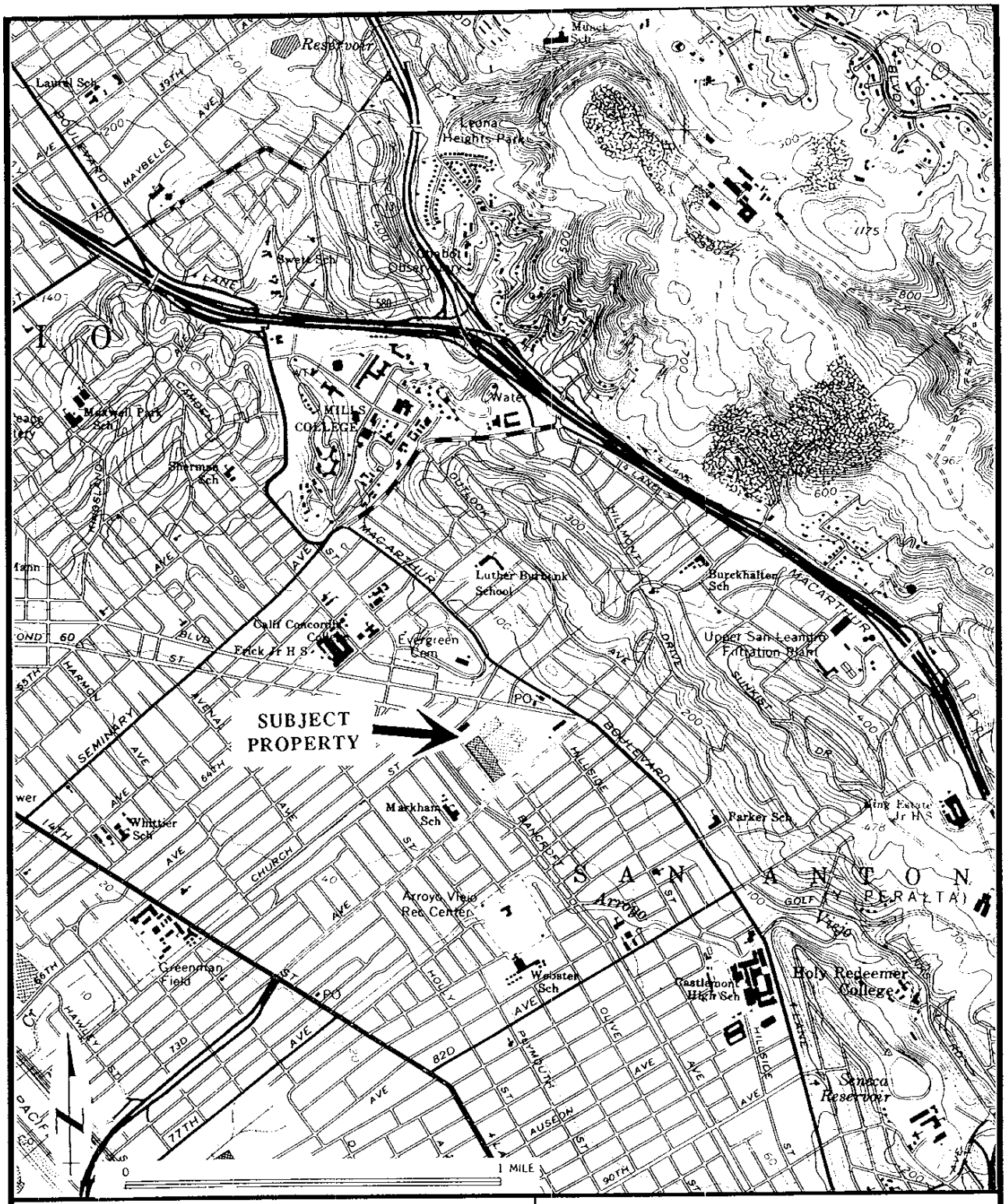
10.0 DISTRIBUTION

Artesian has submitted additional copies of this report to the client to submit to the following agencies:

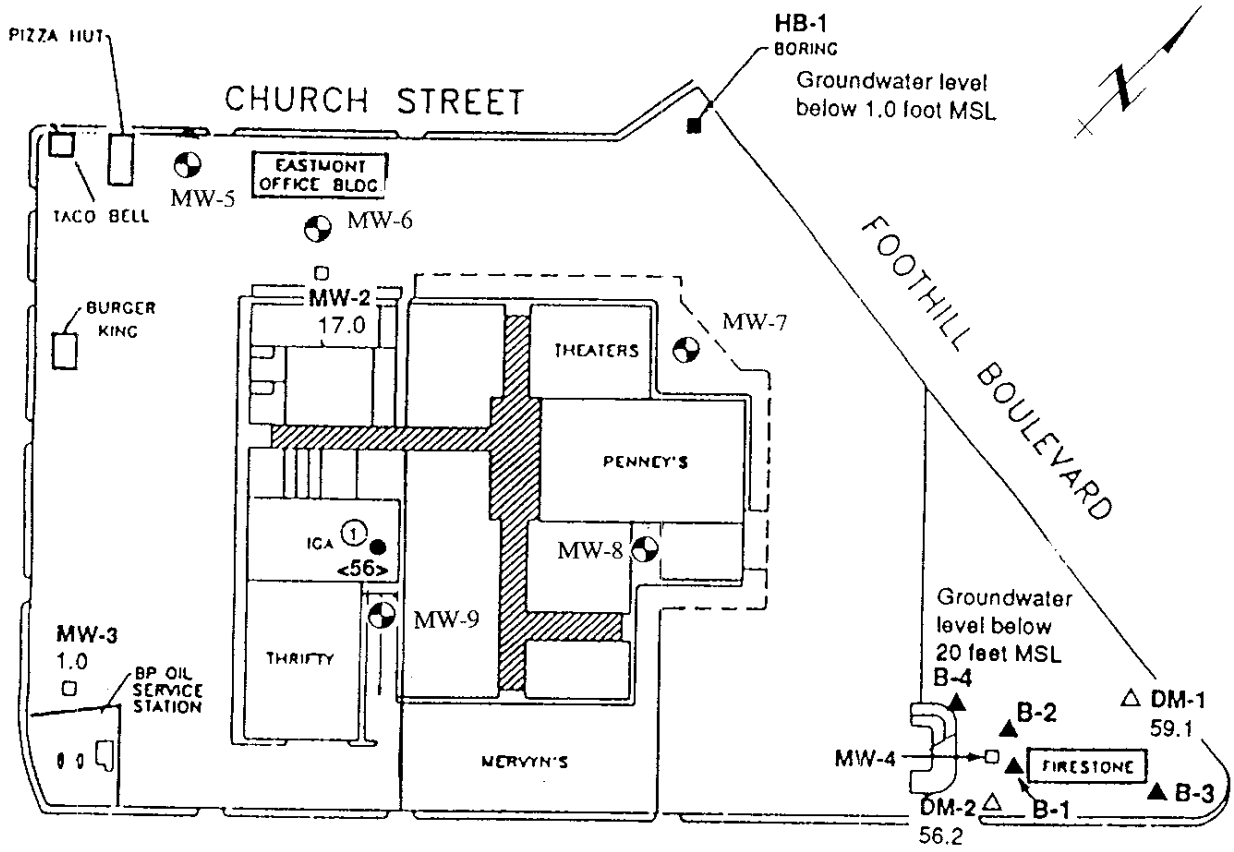
Mr. Ronald Owcarz, Hazardous Materials Specialist
Alameda County Environmental Health Services Agency
Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621

Mr. Richard Hiett
Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster St., 5th Floor
Oakland, CA 94612

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Artesian Environmental Consultants 3175 Kerner Blvd., Suite E San Rafael, California 94901 415-257-4801 Fax 257-4805		**REGIONAL MAP** One Eastmont Mall Oakland, California 94605	
Project No: 93-001-01	Date: 8/27/93	Drawn by: BIM	Figure 1



NOTE:

① Groundwater measured in industrial well at 96 feet below ground surface (bgs) or 56 feet below mean sea level. Perforated in lower aquifer from 90 to 393 feet bgs.

Installed Monitor Wells
Artesian Environmental

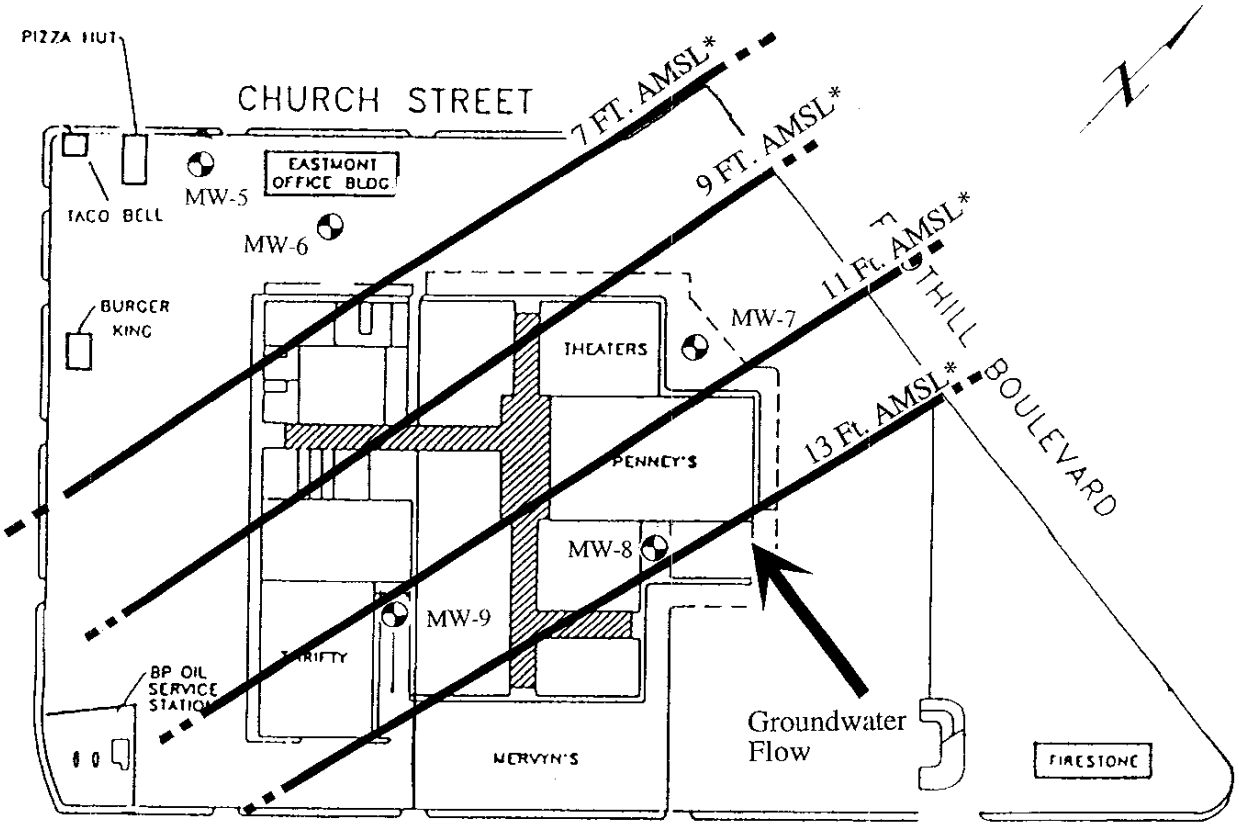
0 400
Feet

KEY

- ● Abandoned Industrial Well (1951)
- △ Dames & Moore Monitoring Well (4/91)
- ▲ Dames & Moore Soil Boring (4/91)
- □ Hunter Environ. Monitoring Well (12/89)
- ■ Hunter Environ. Soil Boring (12/89)
- 17.0 Groundwater elevation in feet above mean sea level (MSL)

After Dames & Moore, 1991

Artesian Environmental Consultants 3175 Kerner Blvd., Suite E San Rafael, California 94901 415-257-4801 Fax 257-4805		**SITE MAP** One Eastmont Mall Oakland, California 94605	
Project No: 93-001-01	Date: 8/27/93	Drawn by: BIM	Figure 2



*Above Mean Sea Level

Installed Monitor Wells
Artesian Environmental

0 400
Feet

Groundwater Elevation
Above Mean Sea Level

MW-5	6.82 Feet
MW-6	6.50 Feet
MW-7	10.95 Feet
MW-8	12.80 Feet
MW-9	11.18 Feet

After Dames & Moore, 1991

Artesian Environmental Consultants 3175 Kerner Blvd., Suite E San Rafael, California 94901 415-257-4801 Fax 257-4805	**GROUNDWATER GRADIENT MAP** One Eastmont Mall Oakland, California 94605
Project No: 93-001-01 / Date: 8/27/93	Drawn by: BIM / Figure 3

Table 1. Summary of Soil Analytical Results

Boring Number	Sample Depth	TPH-d ppb	TPH-g ppm	Benzene ppb	Toluene ppb	Ethel Benzene ppb	Total Xylenes ppb
B-5-35'	35'	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
B-6-35'	35'	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
B-7-30'	30'	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
B-8-30'	30'	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
B-9-40'	40'	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Compound Name	B-5-35' ppb	B-6-35' ppb	B-7-30' ppb	B-8-30' ppb	B-9-40' ppb
Chloromethane	N.D.	N.D.	N.D.	N.D.	N.D.
Vinyl Chloride	N.D.	N.D.	N.D.	N.D.	N.D.
Bromochloromethane	N.D.	N.D.	N.D.	N.D.	N.D.
Chloroethane	N.D.	N.D.	N.D.	N.D.	N.D.
Trichlorofluoromethane	N.D.	N.D.	N.D.	N.D.	N.D.
1, 1-Dichloroethene	N.D.	N.D.	N.D.	N.D.	N.D.
Methylene Chloride	N.D.	N.D.	N.D.	N.D.	N.D.
1, 2-Dichloroethene (Trans)	N.D.	N.D.	N.D.	N.D.	N.D.
1, 2-Dichloroethene (Cis)	N.D.	N.D.	N.D.	N.D.	N.D.
1, 1-Dichloroethane	N.D.	N.D.	N.D.	N.D.	N.D.
Chloroform	N.D.	N.D.	N.D.	N.D.	N.D.
1,1,1- Trichloroethane	N.D.	N.D.	N.D.	N.D.	N.D.
Carbon Tetrachloride	N.D.	N.D.	N.D.	N.D.	N.D.
1, 2-Dichloroethane	N.D.	N.D.	N.D.	N.D.	N.D.
Trichloroethene	N.D.	N.D.	N.D.	N.D.	N.D.
1, 2-Dichloropropane	N.D.	N.D.	N.D.	N.D.	N.D.
Bromodichloromethane	N.D.	N.D.	N.D.	N.D.	N.D.
2-chloroethylvinylether	N.D.	N.D.	N.D.	N.D.	N.D.
Trans-1, 3-Dichloropropene	N.D.	N.D.	N.D.	N.D.	N.D.
Cis-1, 3-Dichloropropene	N.D.	N.D.	N.D.	N.D.	N.D.
1,1,2-Trichloroethane	N.D.	N.D.	N.D.	N.D.	N.D.
Tetrachloroethene	N.D.	N.D.	N.D.	N.D.	N.D.
Dibromochloromethane	N.D.	N.D.	N.D.	N.D.	N.D.
Chlorobenzene	N.D.	N.D.	N.D.	N.D.	N.D.
Bromoform	N.D.	N.D.	N.D.	N.D.	N.D.
1,1,2,2-tetrachloroethane	N.D.	N.D.	N.D.	N.D.	N.D.
1,3-Dichlorobenzene	N.D.	N.D.	N.D.	N.D.	N.D.
1,4-Dichlorobenzene	N.D.	N.D.	N.D.	N.D.	N.D.
1,2-Dichlorobenzene	N.D.	N.D.	N.D.	N.D.	N.D.
Freon 113	N.D.	N.D.	N.D.	N.D.	N.D.

N.D.= non-detect
TPH-d= total petroleum hydrocarbons as diesel
ppb= parts per billion
TPH-g= total petroleum hydrocarbons as gasoline
ppm=parts per million
B-T-E-X= benzene, toluene, ethyl benzene, and total xylenes
All soil sampling done on 9/13-14/93.

Table 2. Summary of Water Analytical Results

Monitor Well	TPH-d ppm	TPH-g ppm	Benzene ppb	Toluene ppb	Ethel Benzene ppb	Total Xylenes ppb
MW-5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
MW-6	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
MW-7	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
MW-8	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
MW-9	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Compound Name	MW-5 ppb	MW-6 ppb	MW-7 ppb	MW-8 ppb	MW-9 ppb
Chloromethane	N.D.	N.D.	N.D.	N.D.	N.D.
Vinyl Chloride	N.D.	N.D.	N.D.	N.D.	N.D.
Bromochloromethane	N.D.	N.D.	N.D.	N.D.	N.D.
Chloroethane	N.D.	N.D.	N.D.	N.D.	N.D.
Trichlorofluoromethane	N.D.	N.D.	N.D.	N.D.	N.D.
1, 1-Dichloroethene	N.D.	N.D.	N.D.	N.D.	N.D.
Methylene Chloride	N.D.	N.D.	N.D.	N.D.	N.D.
1, 2-Dichloroethene (Trans)	N.D.	N.D.	N.D.	N.D.	N.D.
1, 2-Dichloroethene (Cis)	N.D.	N.D.	N.D.	N.D.	N.D.
1, 1-Dichloroethane	N.D.	N.D.	N.D.	N.D.	N.D.
Chloroform	N.D.	N.D.	N.D.	N.D.	N.D.
1,1,1- Trichloroethane	N.D.	N.D.	N.D.	N.D.	N.D.
Carbon Tetrachloride	N.D.	N.D.	N.D.	N.D.	N.D.
1, 2-Dichloroethane	N.D.	N.D.	N.D.	N.D.	N.D.
Trichloroethene	N.D.	N.D.	N.D.	N.D.	N.D.
1, 2-Dichloropropane	N.D.	N.D.	N.D.	N.D.	N.D.
Bromodichloromethane	N.D.	N.D.	N.D.	N.D.	N.D.
2-chloroethylvinylether	N.D.	N.D.	N.D.	N.D.	N.D.
Trans-1, 3-Dichloropropene	N.D.	N.D.	N.D.	N.D.	N.D.
Cis-1, 3-Dichloropropene	N.D.	N.D.	N.D.	N.D.	N.D.
1,1,2-Trichloroethane	N.D.	N.D.	N.D.	N.D.	N.D.
Tetrachloroethene	N.D.	N.D.	N.D.	N.D.	N.D.
Dibromochloromethane	N.D.	N.D.	N.D.	N.D.	N.D.
Chlorobenzene	N.D.	N.D.	N.D.	N.D.	N.D.
Bromoform	N.D.	N.D.	N.D.	N.D.	N.D.
1,1,2,2-tetrachloroethane	N.D.	N.D.	N.D.	N.D.	N.D.
1,3-Dichlorobenzene	N.D.	N.D.	N.D.	N.D.	N.D.
1,4-Dichlorobenzene	N.D.	N.D.	N.D.	N.D.	N.D.
1,2-Dichlorobenzene	N.D.	N.D.	N.D.	N.D.	N.D.
Freon 113	N.D.	N.D.	N.D.	N.D.	N.D.

N.D.= non-detect

TPH-d= total petroleum hydrocarbons as diesel

ppb= parts per billion

TPH-g= total petroleum hydrocarbons as gasoline

ppm=parts per million

B-T-E-X= benzene, toluene, ethyl benzene, and total xylenes

All water sampling done on 9/28/93.

TABLE 1. RESULTS OF TPH, BTEX, AND STODDARD ANALYSES
ON SOIL SAMPLES TAKEN DECEMBER 5 AND 6, 1989
AT EASTMONT MALL, OAKLAND, CALIFORNIA

SAMPLE ID	DATE SAMPLED	TPH (ppm)	B T E X (ppb)				STODDARD (ppm)
			BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	
MW-1@10'	12/5/89	ND<1	ND<3	ND<3	ND<3	ND<3	-
MW-1@30'		ND<1	ND<3	ND<3	ND<3	ND<3	-
MW-2@10'		ND<1	ND<3	ND<3	ND<3	ND<3	ND<10
MW-2@20'		ND<1	ND<3	ND<3	ND<3	ND<3	ND<10
MW-3@10'	12/6/89	ND<1	ND<3	ND<3	ND<3	ND<3	-
MW-3@20'		ND<1	ND<3	ND<3	ND<3	ND<3	-
MW-4@10'		ND<1	ND<3	ND<3	ND<3	ND<3	-
MW-4@15'		2000	1400	4300	23,000	150,000	-

NOTES: ppm - Parts per million or milligrams per kilogram
ppb - Parts per billion or micrograms per kilogram
ND<1 - Not detected at indicated detection limit

Hunter Environmental Services, Inc.
597 Center Avenue, Suite 350
Martinez, CA 94553

TABLE 2. RESULTS OF OIL AND GREASE (O&G) ANALYSES
ON SOIL SAMPLES TAKEN DECEMBER 6, 1989
AT EASTMONT MALL, OAKLAND, CALIFORNIA

SAMPLE ID	DATE SAMPLED	OIL & GREASE (ppm)
MW-3@10'	12/6/89	ND<20
MW-3@20'		ND<20
MW-4@10'		ND<20
MW-4@15'		ND<20

Notes: ppm - Parts per million or milligrams per kilogram (mg/kg)
ND<20 - Not detected at indicated detection limit

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TABLE 3. RESULTS OF TPH, BTEX, AND STODDARD ANALYSES
ON WATER SAMPLES TAKEN DECEMBER 11, 1989
AT EASTMONT MALL, OAKLAND, CALIFORNIA

SAMPLE ID	DATE SAMPLED	TPH (ppm)	B T E X (ppb)				STODDARD (ppm)
			BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	
MW-2	12/11/89	0.2	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<1
MW-3		2.7	530	16	150	59	-
MW-4		2.2	28	21	50	290	-

Notes: ND<0.3 - Not detected at indicated detection limit
ppm - Parts per million or milligrams per kilogram
ppb - Parts per billion or micrograms per kilogram

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Martinez, CA 94553

TABLE 4. RESULTS OF TOTAL VOLATILE ORGANIC ANALYSES FOR WATER SAMPLE FROM MW-2 COLLECTED DECEMBER 11, 1989

SAMPLE: MW-2

Compound	ug/l	Compound	ug/l
Chloromethane	ND<10	Cis-1,3-Dichloropropene	ND<3
Bromoethane	ND<10	Trichloroethene	19
Vinyl Chloride	ND<10	Dibromochloromethane	ND<3
Chloroethane	ND<10	1,1,2-Trichloroethane	ND<3
Methylene Chloride	ND<10	Benzene	ND<2
Acetone	ND<10	Trans-1,3-Dichloropropene	ND<3
Carbon disulfide	ND<3	2-Chloroethyl vinyl ether	ND<3
Trichlorofluoromethane	ND<3	Bromoform	ND<3
1,1-Dichloroethene	ND<3	4-Methyl-2-Pentanone	ND<10
1,1-Dichloroethane	ND<3	2-Hexanone	ND<10
1,2-Dichloroethene (total)	8	Tetrachloroethene	210
Chloroform	ND<3	1,1,2,2-Tetrachloroethane	ND<3
1,2-Dichloroethane	ND<3	Toluene	ND<3
2-Butanone	ND<20	Chlorobenzene	ND<3
1,1,1-Trichloroethane	ND<3	Ethylbenzene	ND<3
Carbon Tetrachloride	ND<3	Styrene	ND<3
Vinyl Acetate	ND<10	Total Xylenes	ND<3
Bromodichloromethane	ND<3	1,3-Dichlorobenzene	ND<3
1,2-Dichloropropane	ND<3	1,2&1,4-Dichlorobenzenes	ND<3

Notes: ug/l - Micrograms per liter or parts per billion (ppb)
ND<10 - Non-detectable at indicated detection limit

Hunter Environmental Services, Inc.
597 Center Avenue, Suite 350
Martinez, CA 94553

TABLE 5. RESULTS OF TOTAL VOLATILE ORGANIC ANALYSES FOR WATER SAMPLE FROM MW-3 COLLECTED DECEMBER 11, 1989

SAMPLE: MW-3

Compound	ug/l	Compound	ug/l
Chloromethane	ND<10	Cis-1,3-Dichloropropene	ND<3
Bromoethane	ND<10	Trichloroethene	ND<3
Vinyl Chloride	ND<10	Dibromochloromethane	ND<3
Chloroethane	ND<10	1,1,2-Trichloroethane	ND<3
Methylene Chloride	ND<10	Benzene	ND<2
Acetone	ND<10	Trans-1,3-Dichloropropene	ND<3
Carbon disulfide	ND<3	2-Chloroethyl vinyl ether	ND<3
Trichlorofluoromethane	ND<3	Bromoform	ND<3
1,1-Dichloroethene	ND<3	4-Methyl-2-Pentanone	ND<10
1,1-Dichloroethane	ND<3	2-Hexanone	ND<10
1,2-Dichloroethene (total)	ND<3	Tetrachloroethene	ND<3
Chloroform	ND<3	1,1,2,2-Tetrachloroethane	ND<3
1,2-Dichloroethane	ND<3	Toluene	ND<3
2-Butanone	ND<20	Chlorobenzene	ND<3
1,1,1-Trichloroethane	ND<3	Ethylbenzene	ND<3
Carbon Tetrachloride	ND<3	Styrene	ND<3
Vinyl Acetate	ND<10	Total Xylenes	ND<3
Bromodichloromethane	ND<3	1,3-Dichlorobenzene	ND<3
1,2-Dichloropropane	ND<3	1,2&1,4-Dichlorobenzenes	ND<3

Notes: ug/l - Micrograms per liter or parts per billion (ppb)
ND<10 - Non-detectable at indicated detection limit

Hunter Environmental Services, Inc.
597 Center Avenue, Suite 350
Martinez, CA 94553

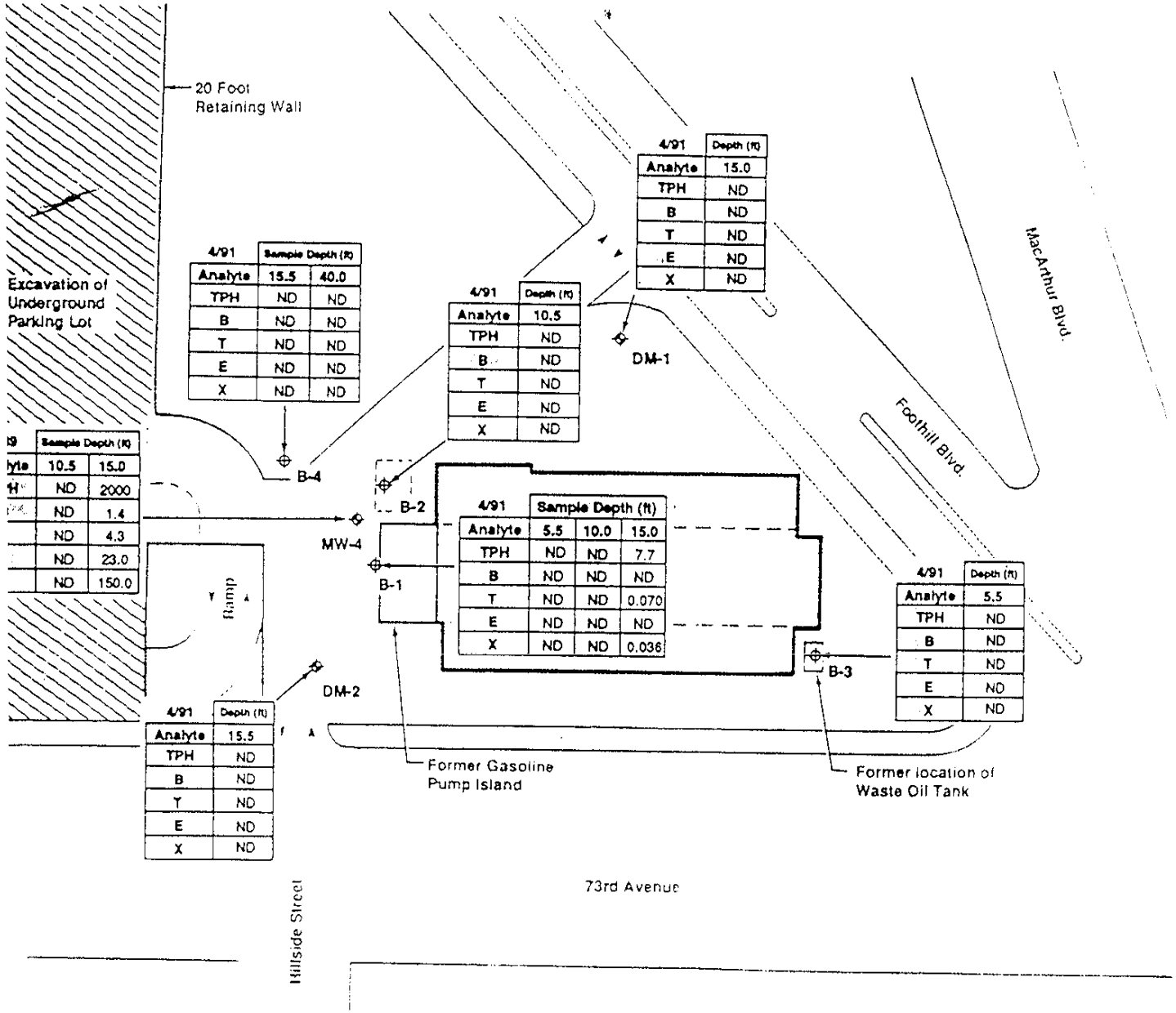
TABLE 6. RESULTS OF TOTAL VOLATILE ORGANIC ANALYSES FOR WATER SAMPLE FROM MW-4 COLLECTED DECEMBER 11, 1989

SAMPLE: MW-4

Compound	ug/l	Compound	ug/l
Chloromethane	ND<10	Cis-1,3-Dichloropropene	ND<3
Bromoethane	ND<10	Trichloroethene	ND<3
Vinyl Chloride	ND<10	Dibromochloromethane	ND<3
Chloroethane	ND<10	1,1,2-Trichloroethane	ND<3
Methylene Chloride	ND<10	Benzene	440
Acetone	ND<10	Trans-1,3-Dichloropropene	ND<3
Carbon disulfide	ND<3	2-Chloroethyl vinyl ether	ND<3
Trichlorofluoromethane	ND<3	Bromoform	ND<3
1,1-Dichloroethene	ND<3	4-Methyl-2-Pentanone	ND<10
1,1-Dichloroethane	ND<3	2-Hexanone	ND<10
1,2-Dichloroethene (total)	4	Tetrachloroethene	ND<3
Chloroform	ND<3	1,1,2,2-Tetrachloroethane	ND<3
1,2-Dichloroethane	ND<3	Toluene	19
2-Butanone	ND<20	Chlorobenzene	ND<3
1,1,1-Trichloroethane	ND<3	Ethylbenzene	130
Carbon Tetrachloride	ND<3	Styrene	ND<3
Vinyl Acetate	ND<10	Total Xylenes	54
Bromodichloromethane	ND<3	1,3-Dichlorobenzene	ND<3
1,2-Dichloropropane	ND<3	1,2&1,4-Dichlorobenzenes	ND<3

Notes: ug/l - Micrograms per liter or parts per billion (ppb)
ND<10 - Non-detectable at indicated detection limit

Hunter Environmental Services, Inc.
597 Center Avenue, Suite 350
Martinez, CA 94553



4/91	Depth (ft)
Analyte	15.0
TPH	ND
B	ND
T	ND
E	ND
X	ND

4/91	Sample Depth (ft)	
Analyte	15.5	40.0
TPH	ND	ND
B	ND	ND
T	ND	ND
E	ND	ND
X	ND	ND

4/91	Depth (ft)
Analyte	10.5
TPH	ND
B	ND
T	ND
E	ND
X	ND

4/91	Sample Depth (ft)		
Analyte	5.5	10.0	15.0
TPH	ND	ND	7.7
B	ND	ND	ND
T	ND	ND	0.070
E	ND	ND	ND
X	ND	ND	0.036

4/91	Depth (ft)
Analyte	5.5
TPH	ND
B	ND
T	ND
E	ND
X	ND

4/91	Depth (ft)
Analyte	15.5
TPH	ND
B	ND
T	ND
E	ND
X	ND

Sample Depth (ft)		
10.5	15.0	
ND	2000	
ND	1.4	
ND	4.3	
ND	23.0	
ND	150.0	

KEY

DM-5 Monitoring Well
B-1 Boring

Investigation Mo./Year	Sample Depth (ft)		
Analyte	5.0	10.0	15.0
TPH	86	450	200
B	0.2	0.8	7.0
T	ND	30	24
E	0.9	10	ND
X	1.3	100	38

Concentration (µg/Kg)

ND Not Detected

CONSTITUENTS

TPH - TPH as Gasoline
B - Benzene
T - Toluene
E - Ethylbenzene
X - Xylene

N

0 100

Feet

RESULTS OF CHEMICAL ANALYSES OF SO
(1989 and 1991 Investigatio

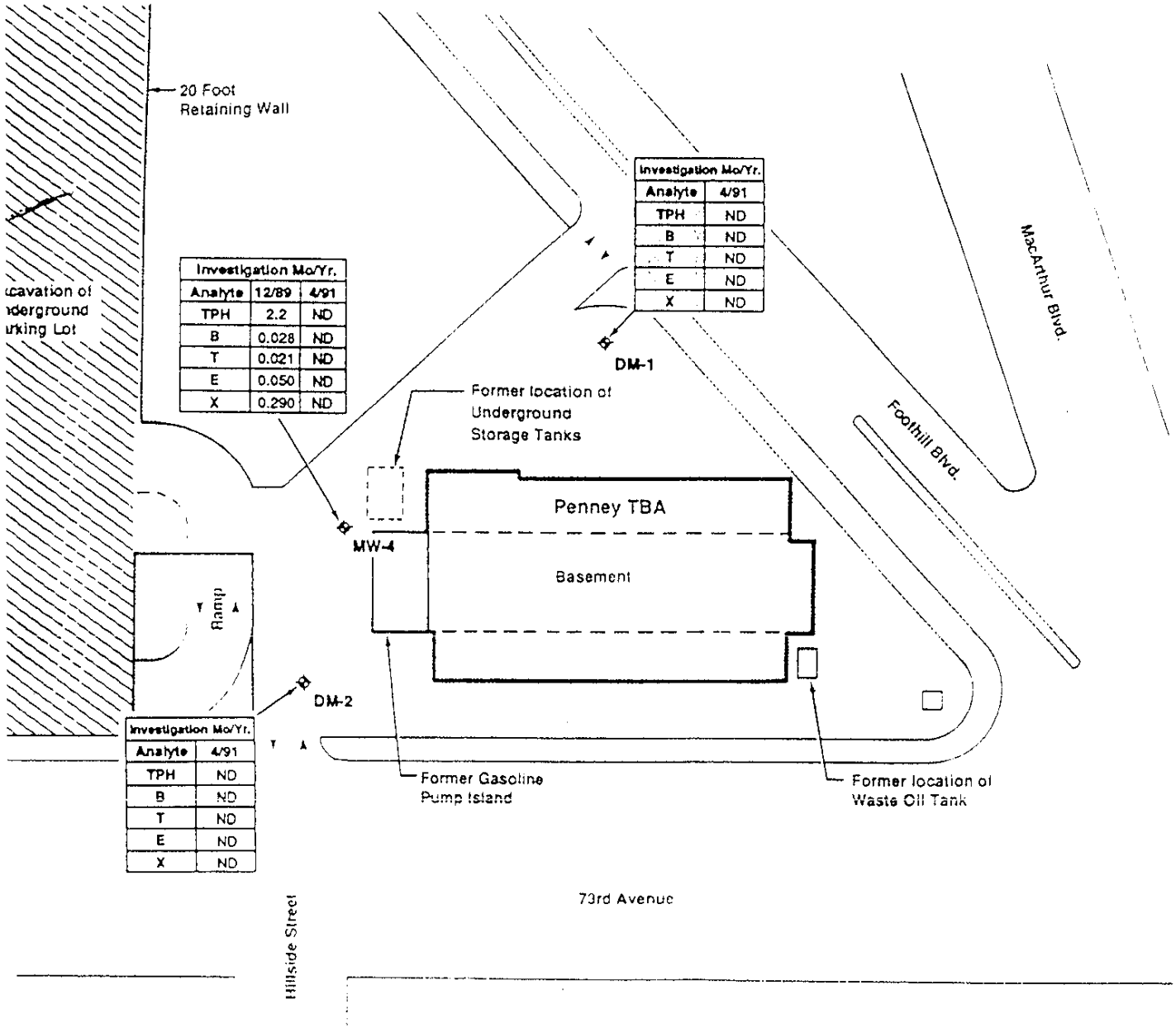
June 1991
443-090-043

TBA
Eastmont
Oakland, Califo

DAMES & MOORE

PLATE

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KEY

◈ W-3 Monitoring Well

Investigation Mo/Yr.		
Analyte	12/89	4/91
TPH	86	450
B	0.2	0.8
T	ND	30
E	0.9	ND
X	1.3	100

Concentratio (µg/L)

Not Detecte

CONSTITUENTS

TPH - TPH as Gasoline
B - Benzene
T - Toluene
E - Ethylbenzene
X - Xylene

N

0 100

Feet

RESULTS OF CHEMICAL ANALYSES O
GROUNDWATER (1989 and 1991 Investigations

June 1991
443-090-043

TBA Si
Eastmont Ma
Oakland, Californi

DAMES & MOORE

PLATE 5

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ZONE 7 WATER AGENCY

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

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT One Eastmont Mall
Oakland CA 94605

CLIENT
Name Mr David Norwitt
Address One Eastmont Mall Phone 510-632-1131
City Oakland CA Zip 94605

APPLICANT
Name James A Jacobs RG#4815
Antegrum Environmental
Address 3175 Kerner Blvd Phone Ste E, 415-257-4801
City San Rafael CA Zip 94901

TYPE OF PROJECT

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

PROPOSED WATER SUPPLY WELL USE NO

Domestic		Industrial	
Municipal		Irrigation	
Other	Monitoring		

DRILLING METHOD:

Mud Rotary		Air Rotary	
Auger	HSA		
Cable		Other	

DRILLER'S LICENSE NO. C-57- 624461

WELL PROJECTS

Drill Hole Diameter	2 in.	Maximum Depth	50 ft.
Casing Diameter	2 in.		
Surface Seal Depth	5 ft.	Number	5

GEOTECHNICAL PROJECTS

Number of Borings		Maximum Depth	ft.
Hole Diameter	in.		

ESTIMATED STARTING DATE 9/2/93
ESTIMATED COMPLETION DATE 9/15/93

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

APPLICANT'S SIGNATURE James A Jacobs RG#4815 Date 8/27/93

FOR OFFICE USE

PERMIT NUMBER 93490
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 Wyman Hong Date 31 Aug 93
Wyman Hong

31992

Artesian Environmental Consultants

Standard Operating Procedures

SOIL SAMPLING

Hand Samples: Undisturbed soil samples are obtained using a slide hammer hand sampler with a single sampling cup at the end. The sampler holds one (1), clean, six inch long by two inch diameter brass tube. The sample is obtained by hammering the cup and tube into the undisturbed soil. The sampler is removed, opened, and the brass tube containing the sample is extracted.

Electric Drive Samples: Undisturbed soil samples are obtained using a continuous coring, 0.75 inch, lined, steel sampler. The sampler is driven into the soil using an electric rotary hammer. The sampler holds one, four foot by one inch diameter, new, plastic, sampling liner. After driving the steel sampler three to four feet, the sampler is extracted and the sampling liner containing the sample is removed.

Pneumatic Drive Samples: Undisturbed soil samples are obtained using a 1.0 inch, steel, outer drive casing, fitted with a 0.5 inch, inner soil sampler, fitted with a brass liner. The casing is pneumatically driven to the desired depth, an inner plug rod is removed and the sampler is inserted into the casing. The sample is obtained by hammering the sampling cup into the undisturbed soil. After driving the sampler six inches, it is extracted and the sampling liner containing the sample is removed.

California Split-spoon Samples: Undisturbed soil samples are obtained using a California Split-spoon sampler fitted with three six inch long by two inch diameter brass tubes. The sampler is lowered down inside a hollow stem auger after the auger plug has been removed. The sampler is then driven at least eighteen inches. The sampler is usually driven using a 140 pound hammer dropping 30 inches at each blow. After driving the sampler, the sampler is extracted and the sampling liner containing the sample is removed.

Immediately after extraction the sample tube ends are sealed with Teflon tape, plastic cap plugs, and isolated in hermetically sealed locking plastic bags.

All samples are labeled and chilled to 0° C for transportation to a California State certified hazardous materials laboratory. Chain of Custody documentation accompanies all samples to the laboratory. A copy of the Chain of Custody documentation is attached to the Certificate of Analysis.

All soil samples are collected in accordance with California Regional Water Quality Control Board (RWQCB) procedures described in the *Leaking Underground Fuel Tank (LUFT) Field Manual*, the *Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites*, and local regulatory guidelines.

Standard Environmental Protection Agency (EPA), San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), and Department of Health Services (DHS) methodologies for sampling and analyses are routinely utilized.

Chain of Custody documentation accompanies all samples to the laboratory. A copy of the Chain of Custody documentation is attached to the Certificate of Analysis.

Soil cuttings and excess sampling materials are properly stored and labeled on site in DOT 17-H containers pending off site disposal.

Artesian Environmental Consultants

Standard Operating Procedures

WELL INSTALLATION

The boreholes for monitor / extraction wells are drilled using a truck-mounted, continuous flight, hollow-stem auger drill rig. The diameter of the borehole is a minimum of four inches larger than the outside diameter of the casing when installing the well screen (DWR Publication 74-81). The hollow-stem auger provides minimal interruption of drilling while permitting soil sampling at the desired intervals. All wells are installed by state-licensed drillers.

The monitor / extraction wells are cased with blank and factory-slotted, threaded, schedule 40 polyvinyl chloride (PVC). The slots are generally 0.010-inch or 0.020-inch wide by 1.5-inch long slot size, with approximately 42 slots per foot. Slot sizes are determined by previous well installations in the area or by grain size analysis. A threaded PVC cap is fastened to the bottom of the casing. Centering devices may be fastened to the casing to assure even distribution of filter material and grout within the borehole annulus. The well casing is thoroughly washed and steam-cleaned prior to installation.

After setting the casing inside the hollow stem, sand or gravel filter material is poured into the annular space to fill from the bottom of the boring to 1 foot above the slotted interval. A 1 to 2 foot thick bentonite plug is placed above the filter material to prevent the grout from infiltrating down into the filter material. Neat cement, containing about 5% bentonite, is then tremied into the annular space from the top of the bentonite plug to the surface. A lockable PVC cap is placed on each wellhead. Traffic-rated flush-mounted steel covers are installed around wellheads for wells in parking lots and driveways, while steel stove pipes are usually set over wellheads in landscaped areas.

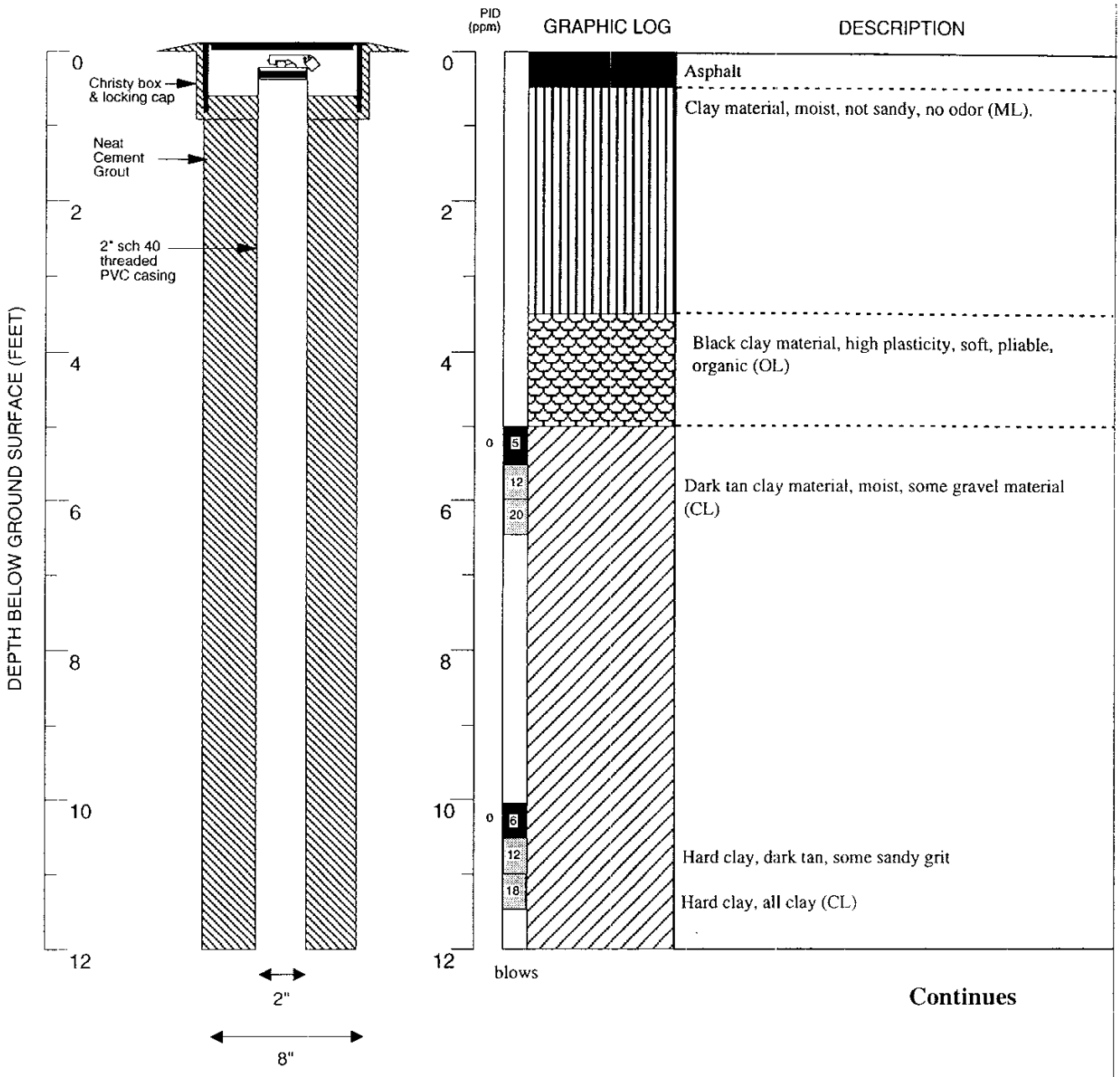
Artesian Environmental Consultants

Standard Operating Procedures

WELL DEVELOPMENT

Wells are developed to remove residual drilling materials from the wellbore, and to improve well performance by removing any fine material in the filter pack that can pass from the formation into the well. Well development is performed in accordance with California Regional Water Quality Control Board (RWQCB) procedures described in the *Leaking Underground Fuel Tank (LUFT) Field Manual*, the *Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites* , and local regulatory guidelines.

Well development techniques include pumping, bailing, surging, swabbing, jetting, flushing, and airlifting. During well development a minimum of three well volumes are evacuated from the well to permit formation water to move silts and particles into the well for removal. After allowing pH, specific conductivity, temperature and sediment content of the water to stabilize the well may be sampled. All development water and rinseate is collected for temporary storage in labeled 55 gallon, DOT 17-H containers or proper storage tanks, and is then disposed of properly depending on analytical results. To assure that cross-contamination does not occur between wells during development, all development equipment is either steam cleaned or cleaned using Alconox and rinsed twice with de-ionized water.



Logged by:	Benjamin I. Mira	Drilling Company:	West HazMat	Well Head Completion:	Christy box & locking cap
Inspector:		Drilling Method:	Hollow Stem Auger	Type of Sampler:	California Split Spoon
Dates Drilled:	9/13/93	Driller:	Bill Smith	TD (Total Depth):	50.0 ft.

EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Contacts: Solid where certain
- Dotted where approximate
- Dashed where uncertain
- est K — Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR — No recovery

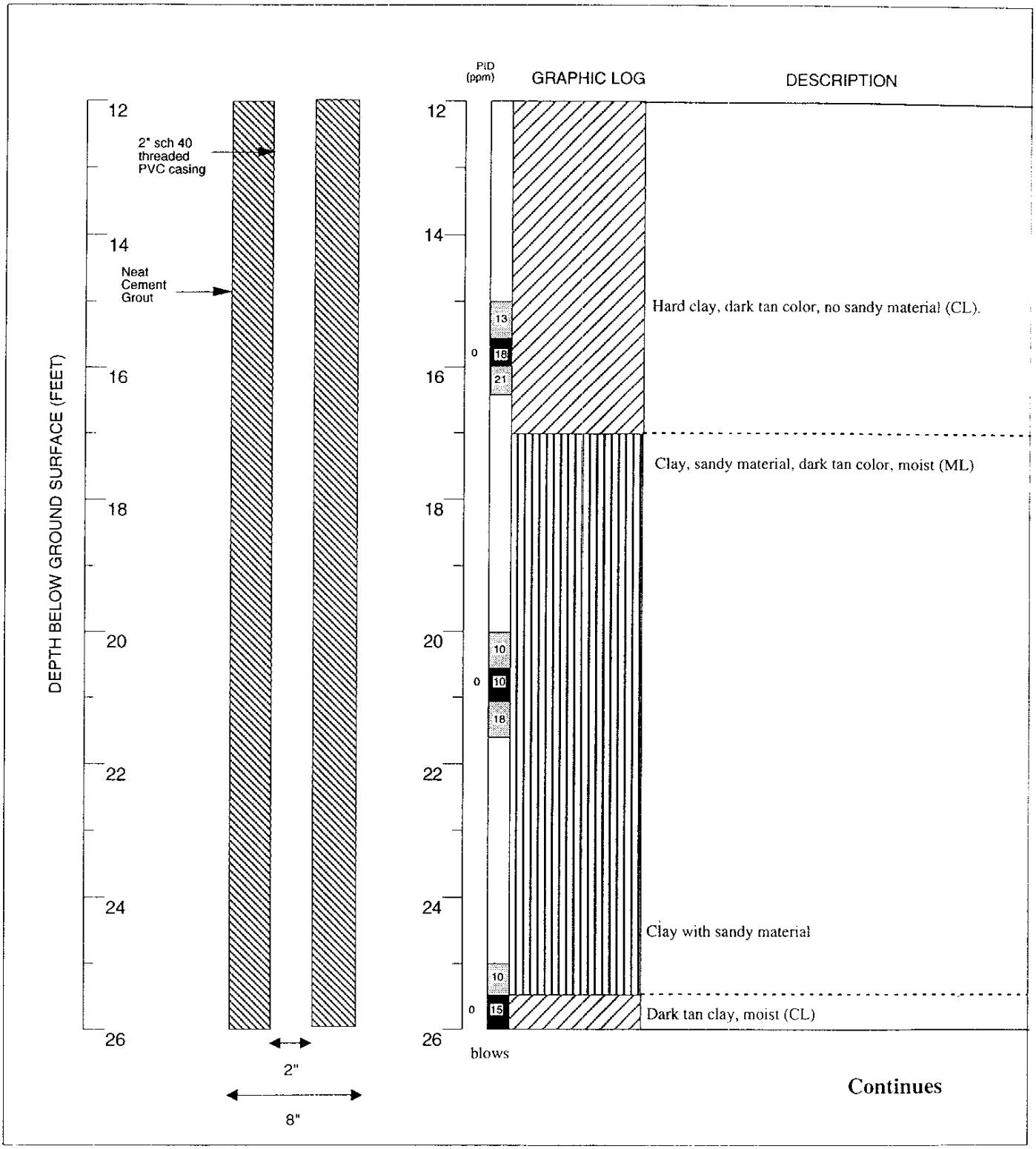
Boring Log and Well Completion Details
MW-5

One Eastmont Mall
Oakland, California

MONITOR WELL
5

ARTESIAN ENVIRONMENTAL CONSULTANTS
3175 KERNER BOULEVARD,SUITE E, SAN RAFAEL, CALIFORNIA 94901 (415) 257-4801

110-01-01



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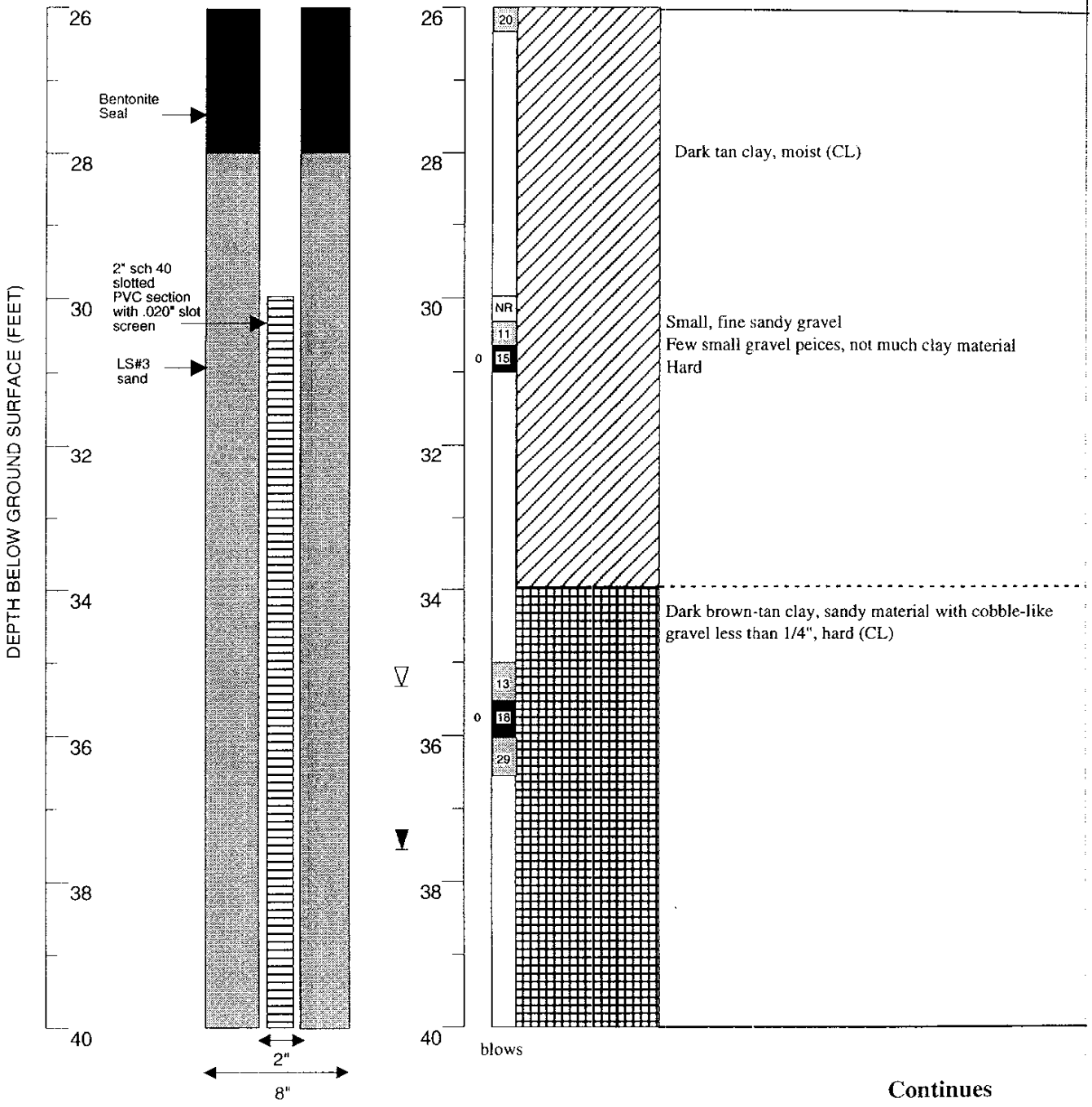
Boring Log and Well Completion Details
MW-5

One Eastmont Mall
Oakland, California

MONITOR WELL
5

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EXPLANATION

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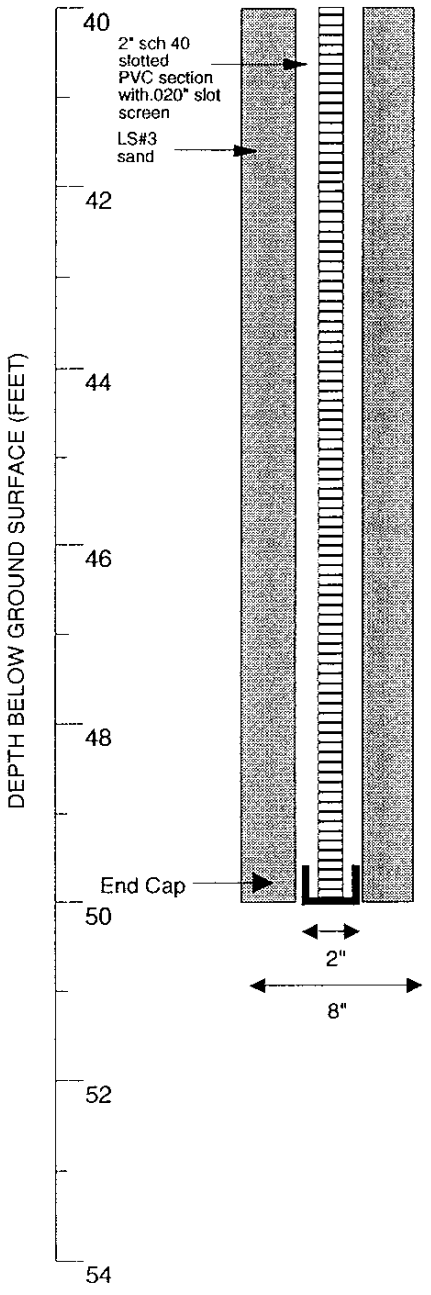
Boring Log and Well Completion Details
MW-5

One Eastmont Mall
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MONITOR WELL
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PID (ppm)	GRAPHIC LOG	DESCRIPTION
0	9	Water with small cobble gravel (GC)
	20	
	28	Sandy gravel, some clay
	14	
0	18	
	22	
		Boring terminated 50'

blows

Final Page

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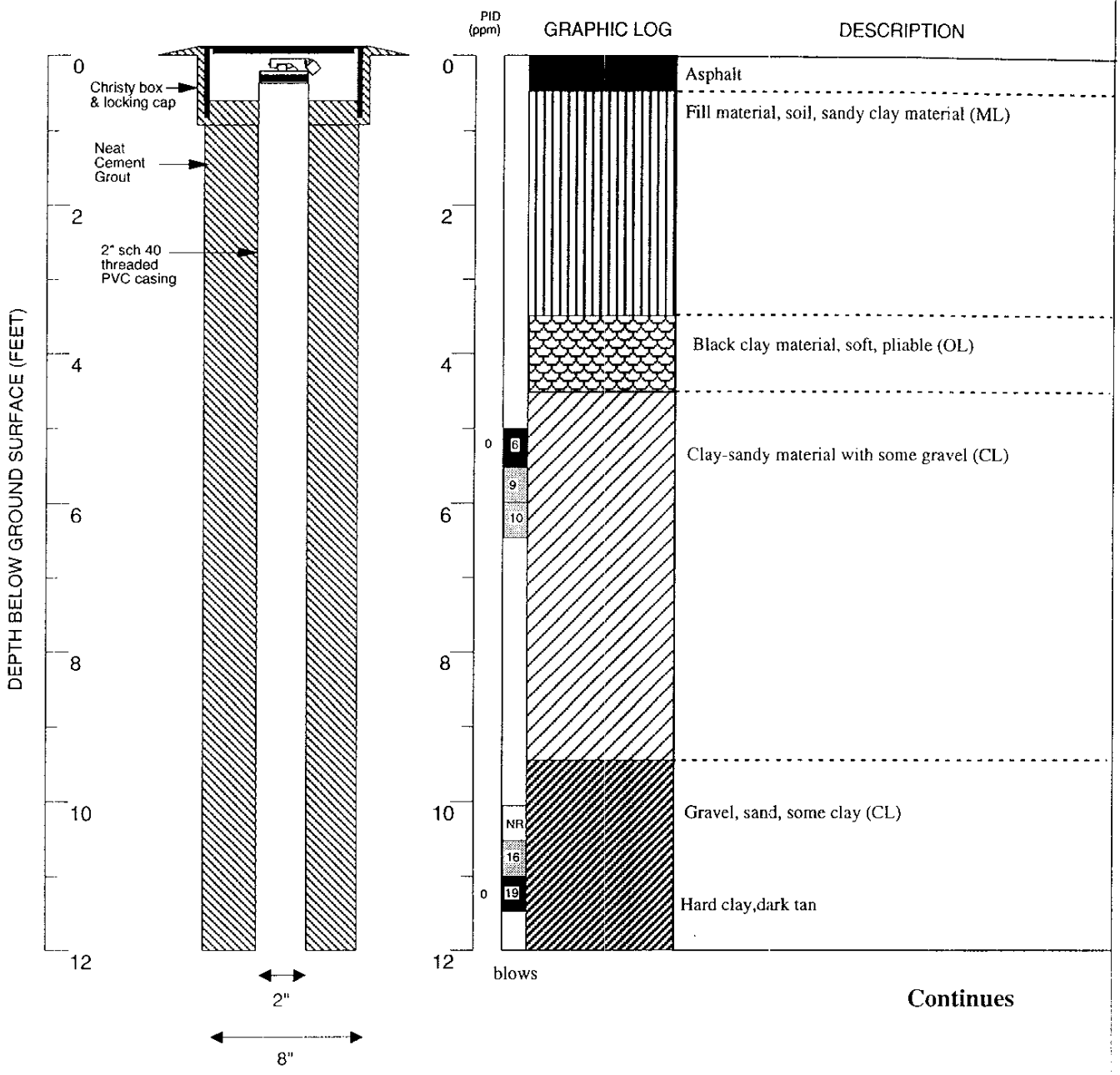
Boring Log and Well Completion Details
MW-5

One Eastmont Mall
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MONITOR WELL
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Logged by:	Benjamin I. Mira	Drilling Company:	West HazMat	Well Head Completion:	Christy box & locking cap
Inspector:		Drilling Method:	Hollow Stem Auger	Type of Sampler:	California Split Spoon
Dates Drilled:	9/13/93	Driller:	Bill Smith	TD (Total Depth):	50.0 ft.

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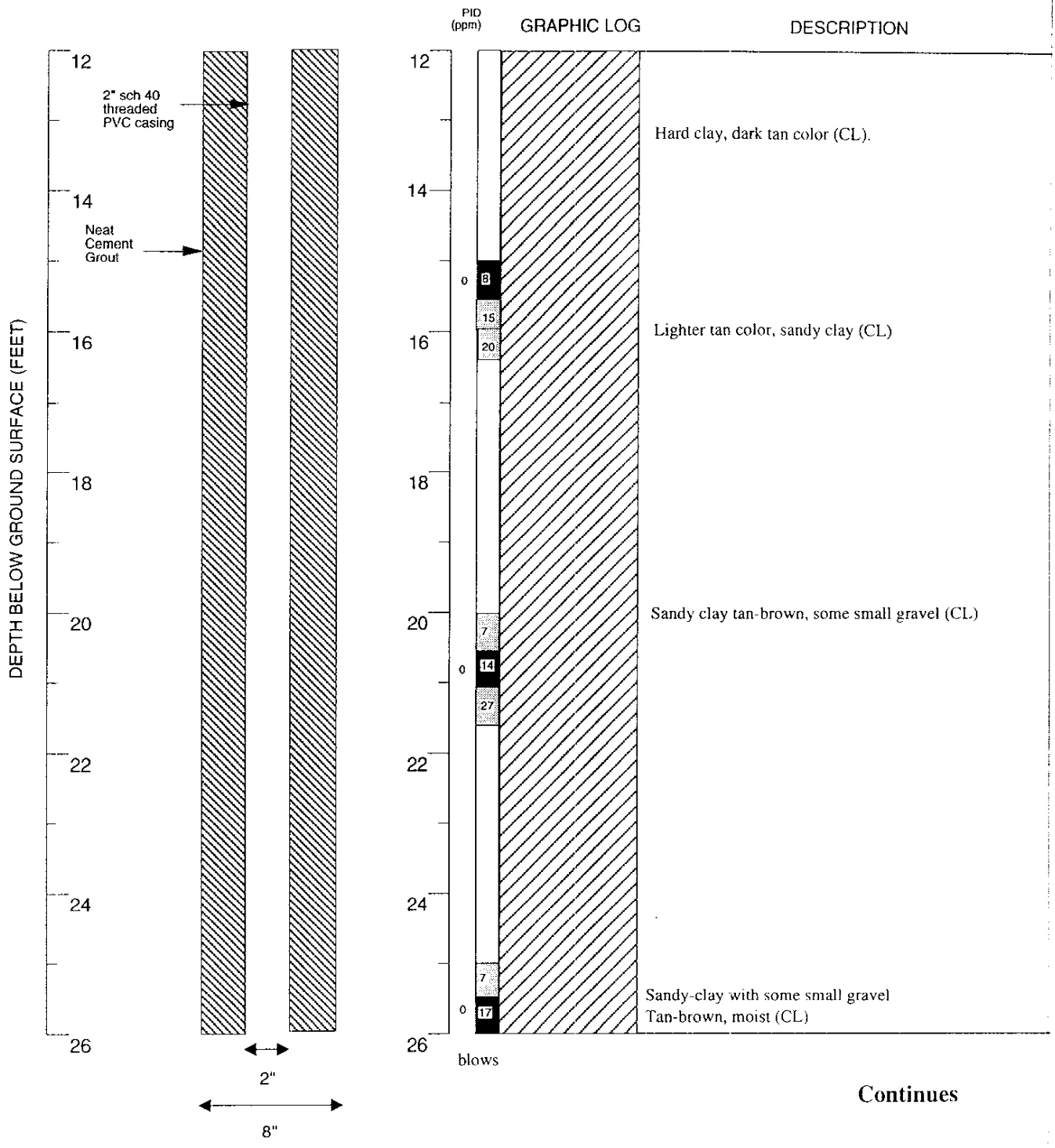
Boring Log and Well Completion Details
MW-6

One Eastmont Mall
Oakland, California

MONITOR WELL
6

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EXPLANATION

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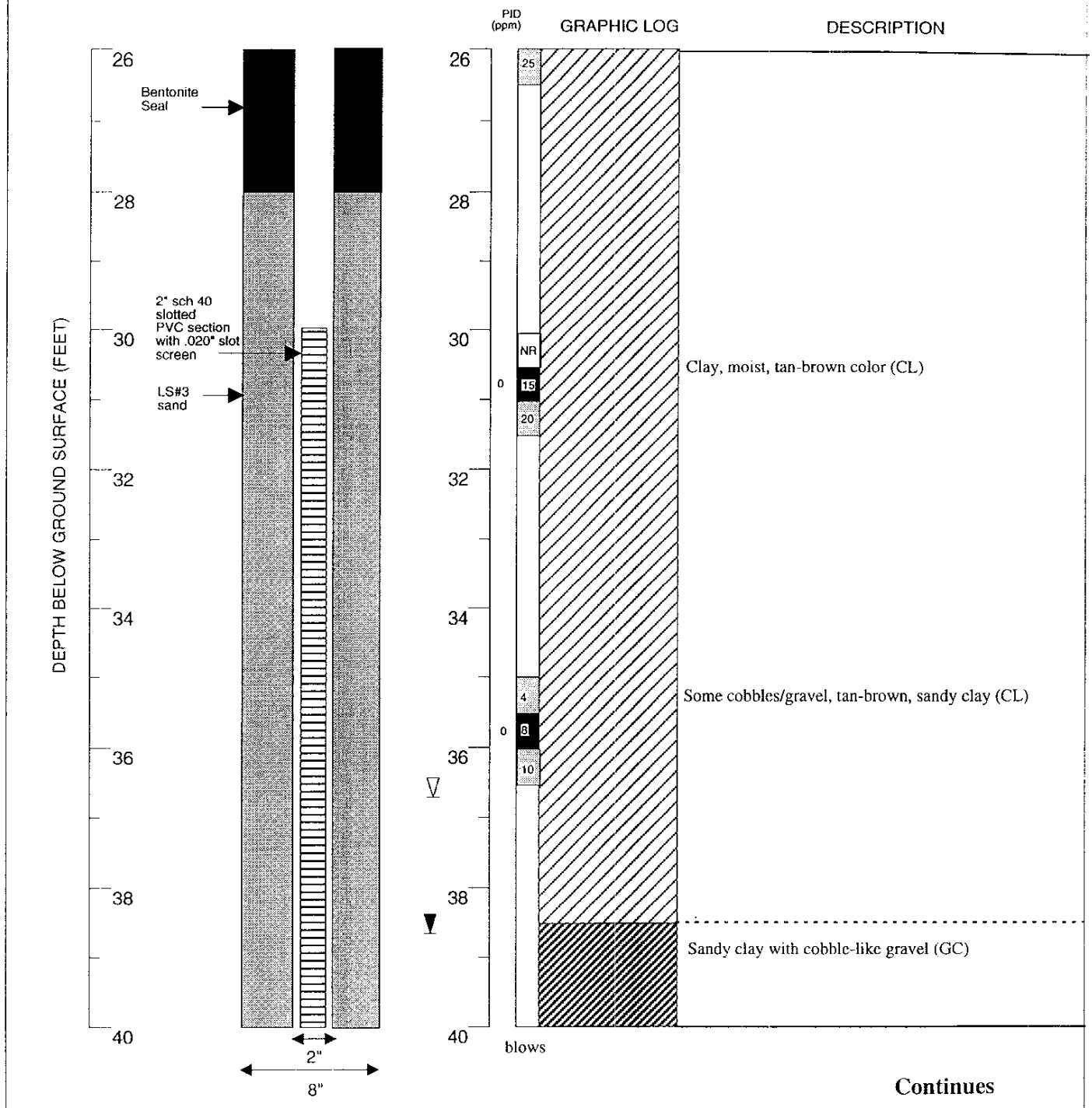
Boring Log and Well Completion Details
MW-6

One Eastmont Mall
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MONITOR WELL
6

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EXPLANATION

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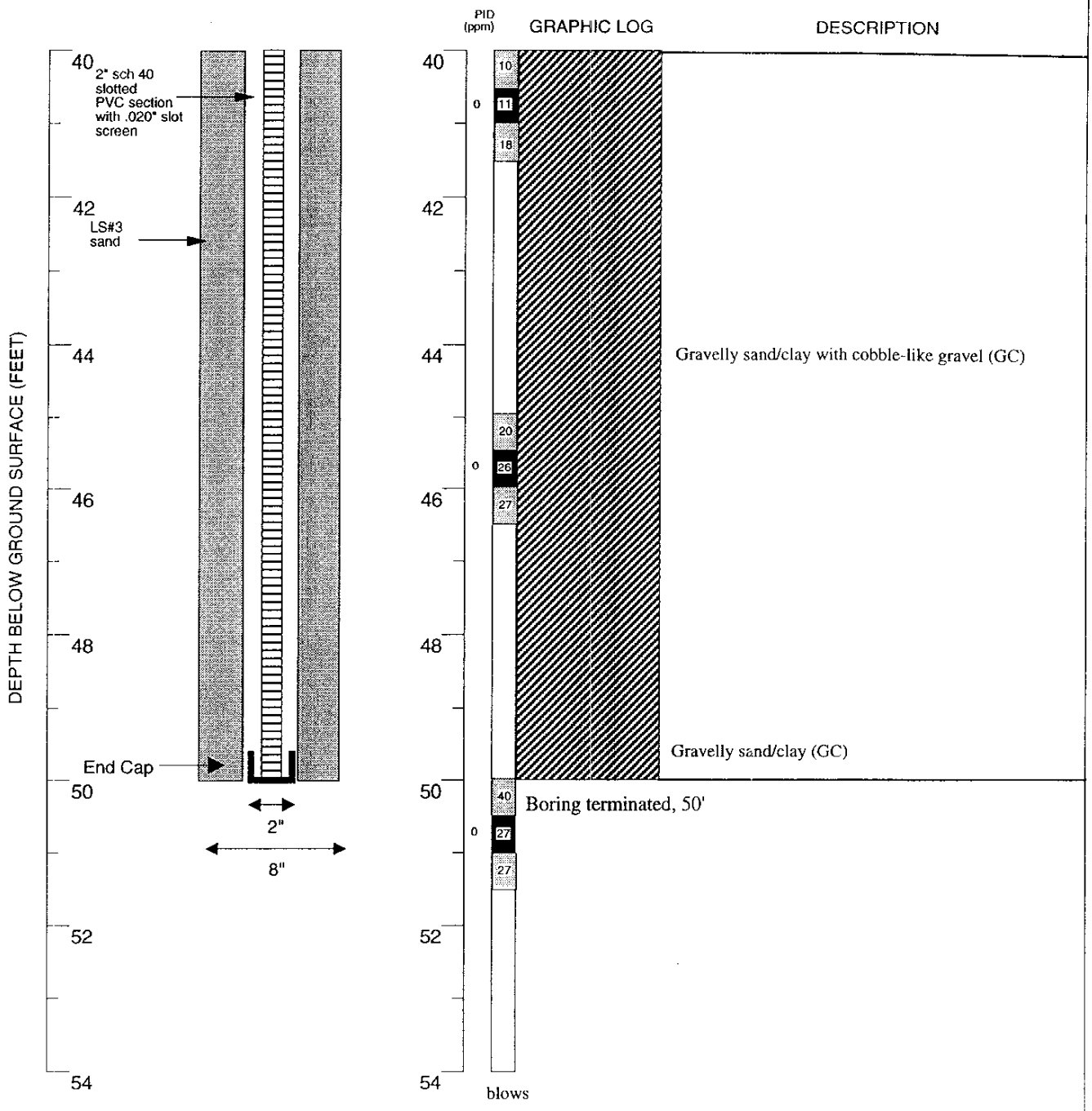
Boring Log and Well Completion Details
MW-6

One Eastmont Mall
Oakland, California

MONITOR WELL
6

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Final Page

EXPLANATION

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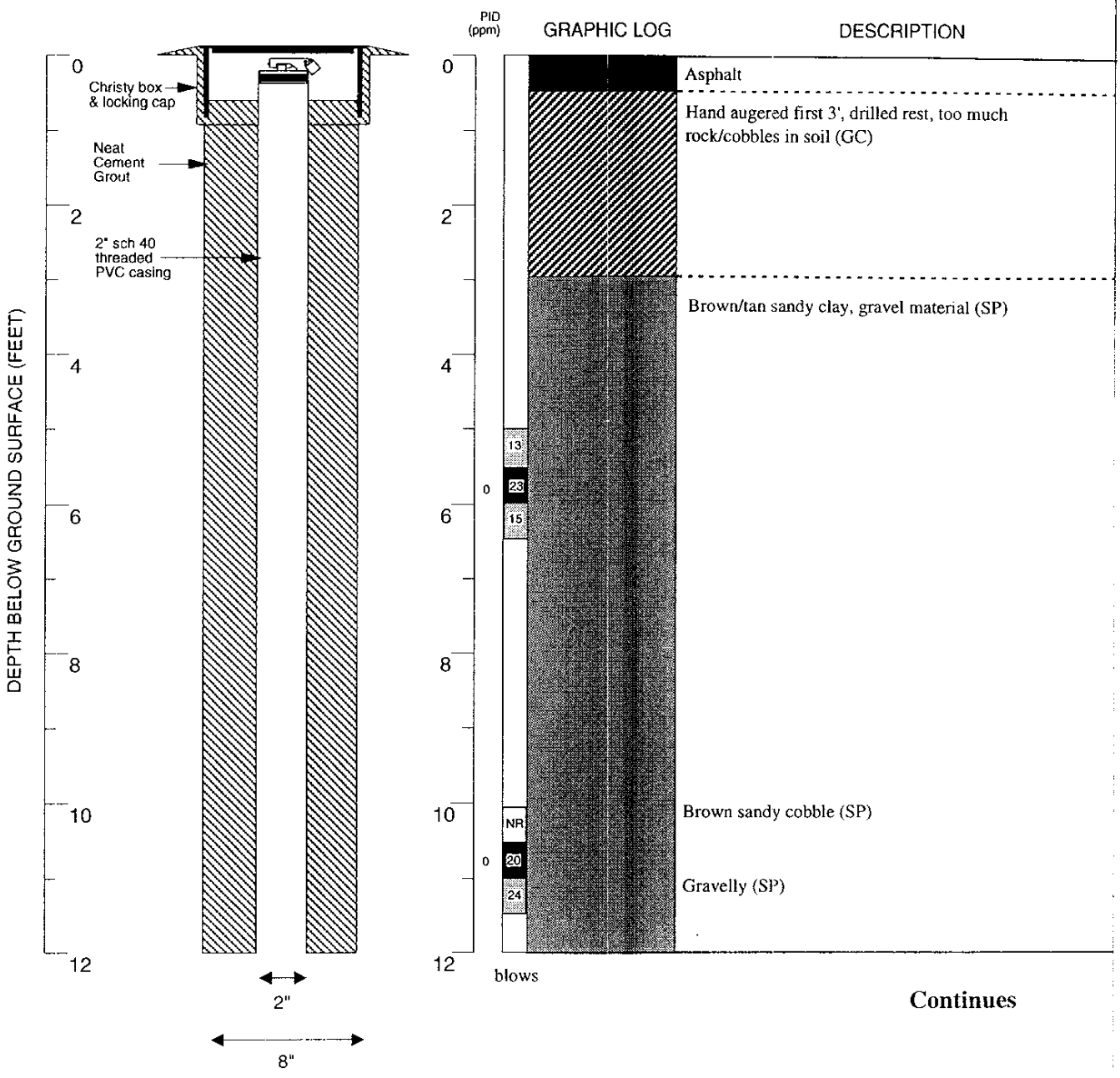
Boring Log and Well Completion Details
MW-6

One Eastmont Mall
Oakland, California

MONITOR WELL
6

ARTESIAN ENVIRONMENTAL CONSULTANTS
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110-01-01



Logged by:	Benjamin I. Mira	Drilling Company:	West HazMat	Well Head Completion:	Christy box & locking cap
Inspector:		Drilling Method:	Hollow Stem Auger	Type of Sampler:	California Split Spoon
Dates Drilled:	9/13/93	Driller:	Bill Smith	TD (Total Depth):	50.0 ft.

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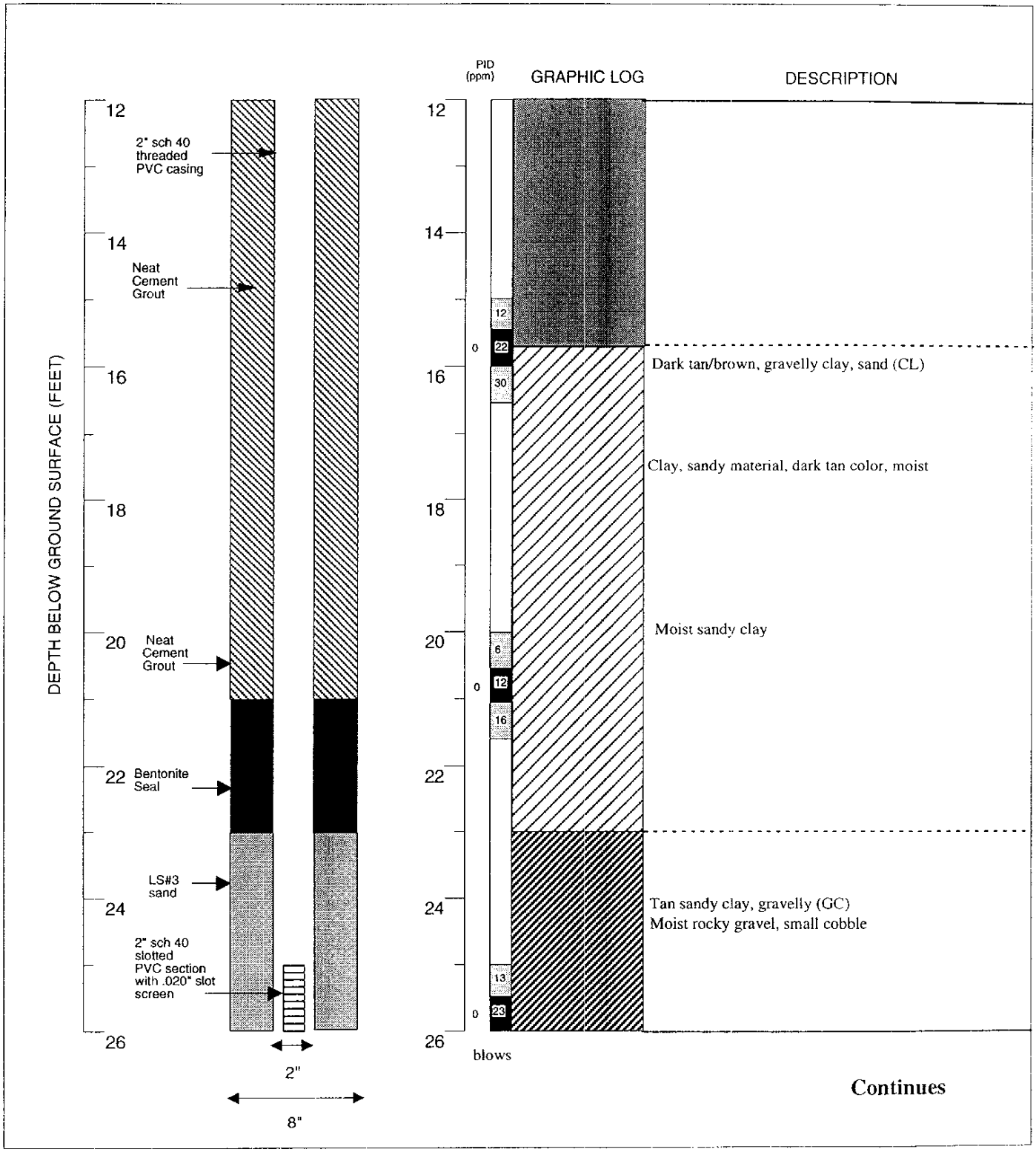
Boring Log and Well Completion Details
MW-7

One Eastmont Mall
Oakland, California

MONITOR WELL
7

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110-01-01



EXPLANATION

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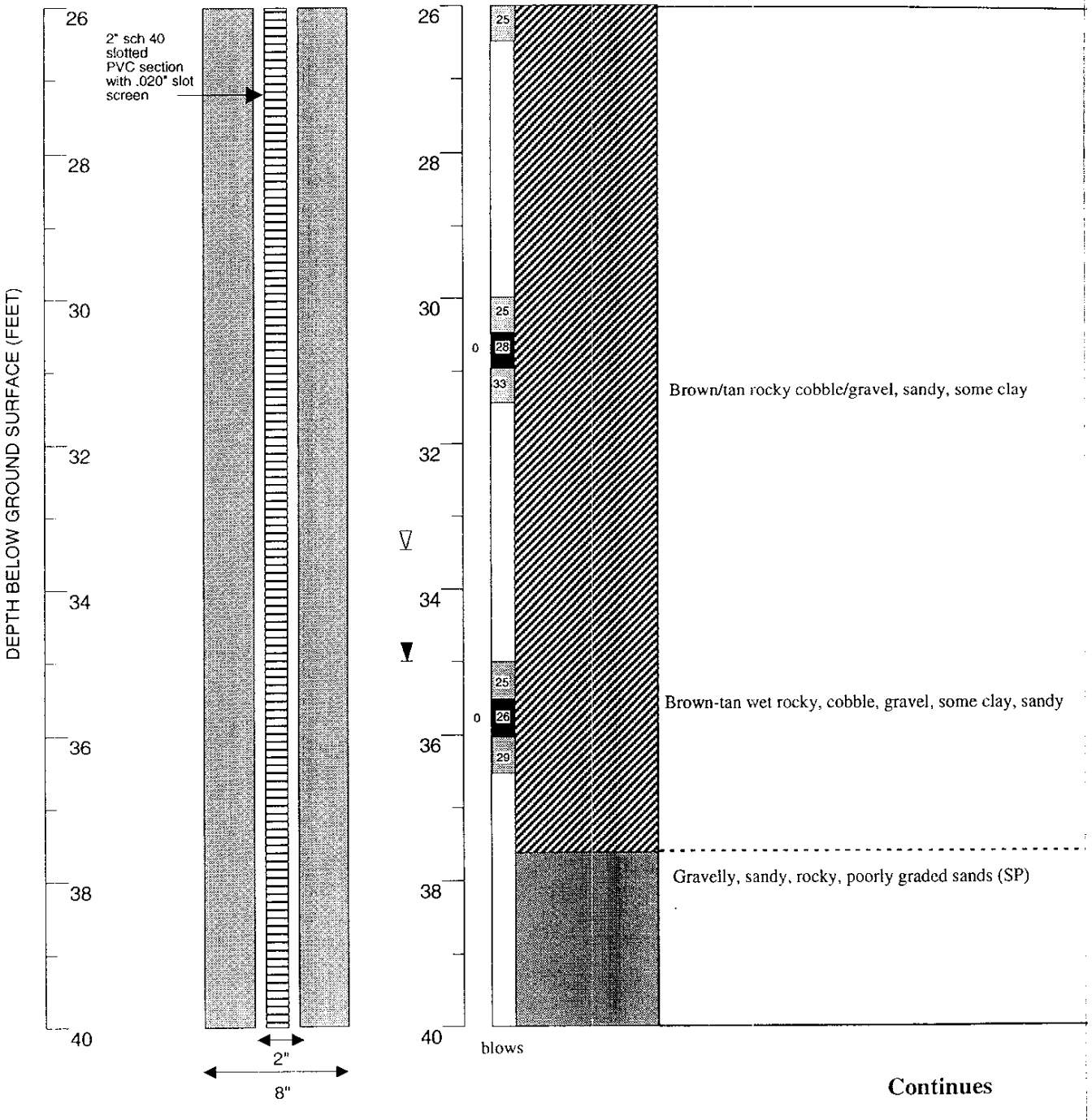
Boring Log and Well Completion Details
MW-7

One Eastmont Mall
Oakland, California

MONITOR WELL
7

ARTESIAN ENVIRONMENTAL CONSULTANTS
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110-01-01



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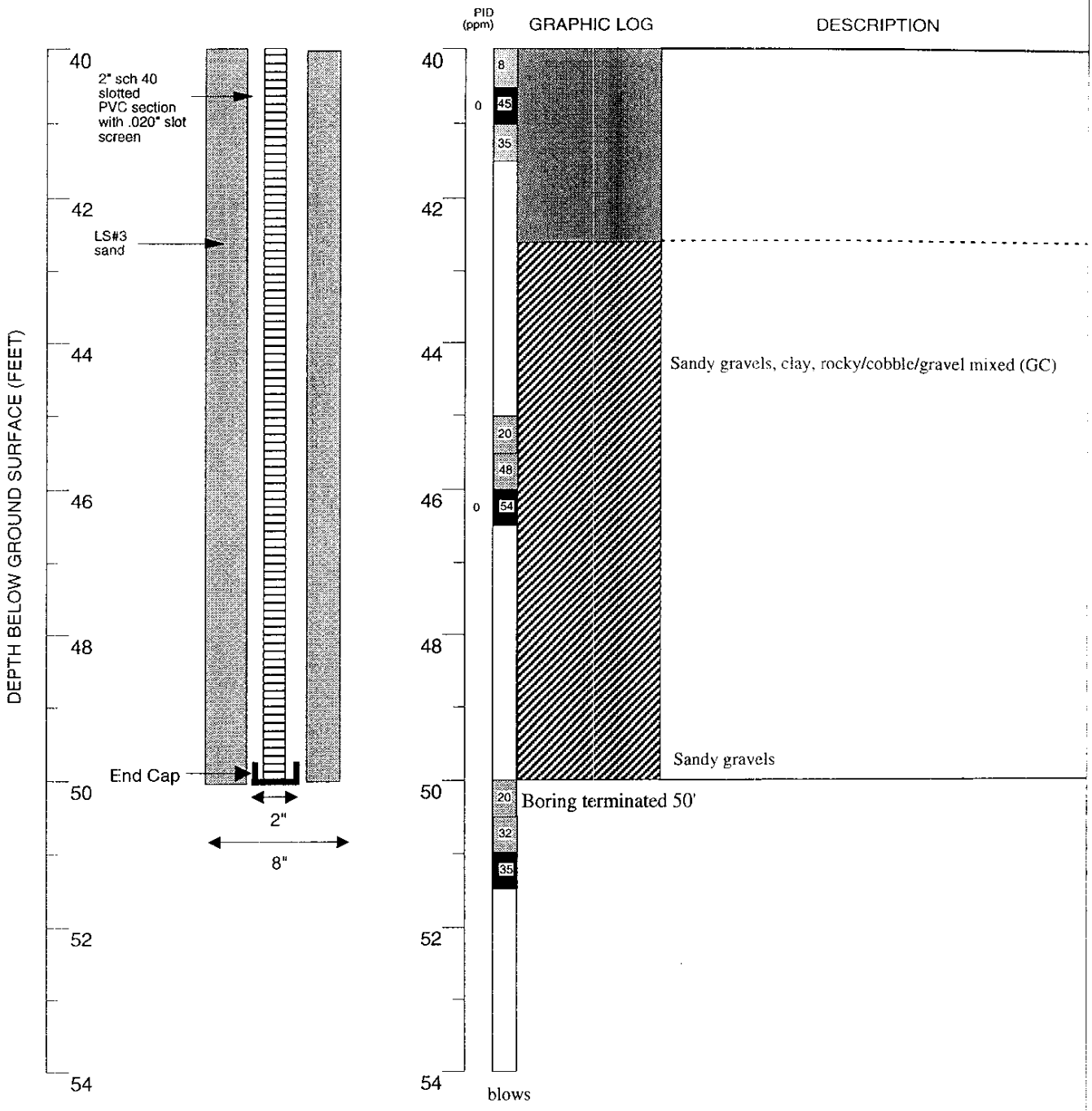
Boring Log and Well Completion Details
MW-7

One Eastmont Mall
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MONITOR WELL
7

ARTESIAN ENVIRONMENTAL CONSULTANTS
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110-01-01



Final Page

EXPLANATION

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- Sieve sample
- Grab sample

Contacts:
- Solid where certain
- Dotted where approximate
- Dashed where uncertain
- Hachured where gradational

est K — Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary

NR — No recovery

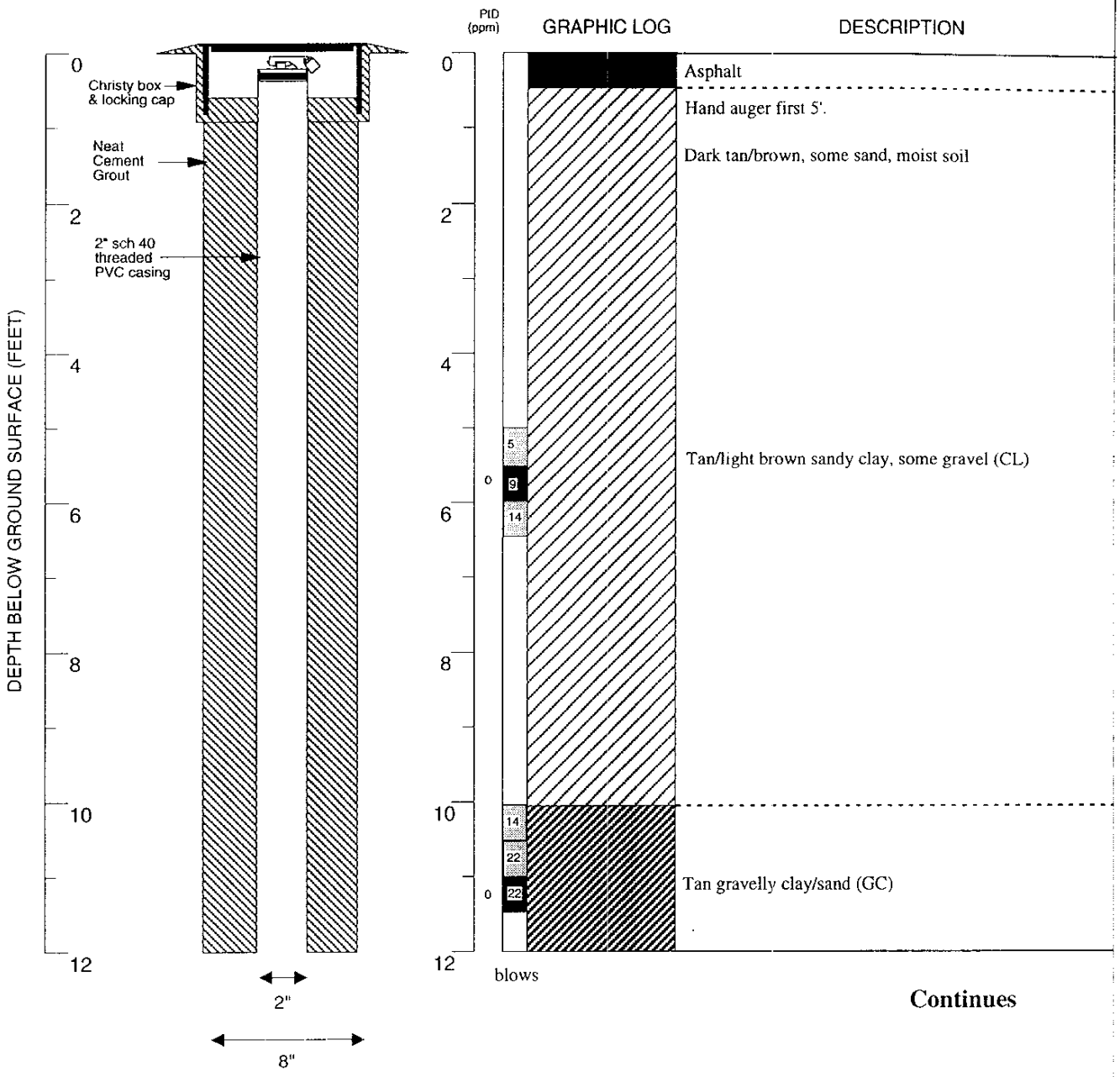
Boring Log and Well Completion Details
MW-7

One Eastmont Mall
Oakland, California

MONITOR WELL
7

ARTESIAN ENVIRONMENTAL CONSULTANTS
3175 KERNER BOULEVARD, SUITE E, SAN RAFAEL, CALIFORNIA 94901 (415) 257-4801

110-01-01



Logged by:	Benjamin I. Mira	Drilling Company:	West HazMat	Well Head Completion:	Christy box & locking cap
Inspector:		Drilling Method:	Hollow Stem Auger	Type of Sampler:	California Split Spoon
Dates Drilled:	9/14/93	Driller:	Bill Smith	TD (Total Depth):	49.0 ft.

EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Contacts: Solid where certain
- Dotted where approximate
- Dashed where uncertain
- Hachured where gradational
- est K — Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR — No recovery

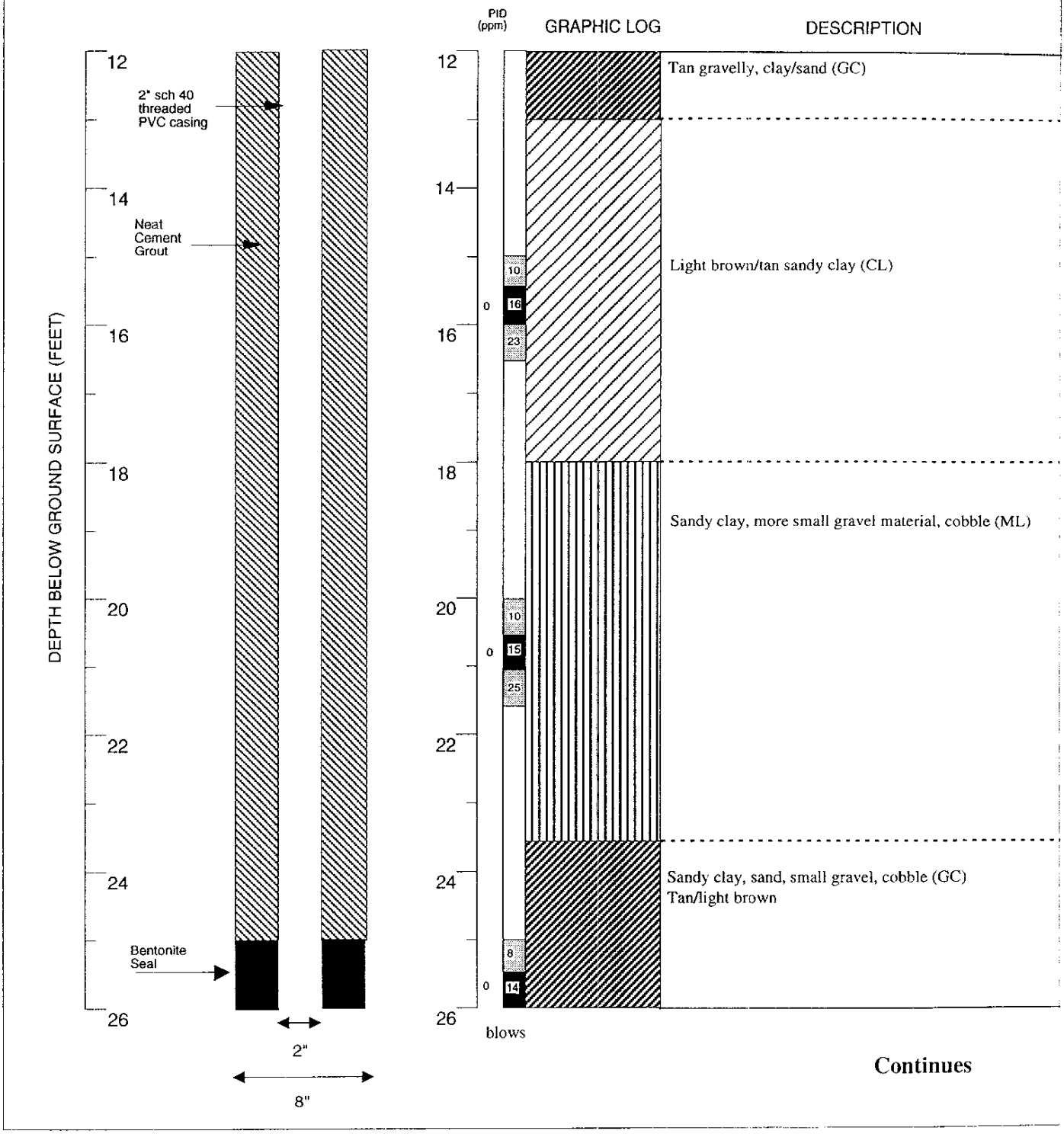
Boring Log and Well Completion Details
MW-8

One Eastmont Mall
Oakland, California

MONITOR WELL
8

ARTESIAN ENVIRONMENTAL CONSULTANTS
3175 KERNER BOULEVARD,SUITE E, SAN RAFAEL, CALIFORNIA 94901 (415) 257-4801

110-01-01



EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample

Contacts:
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- NR — No recovery

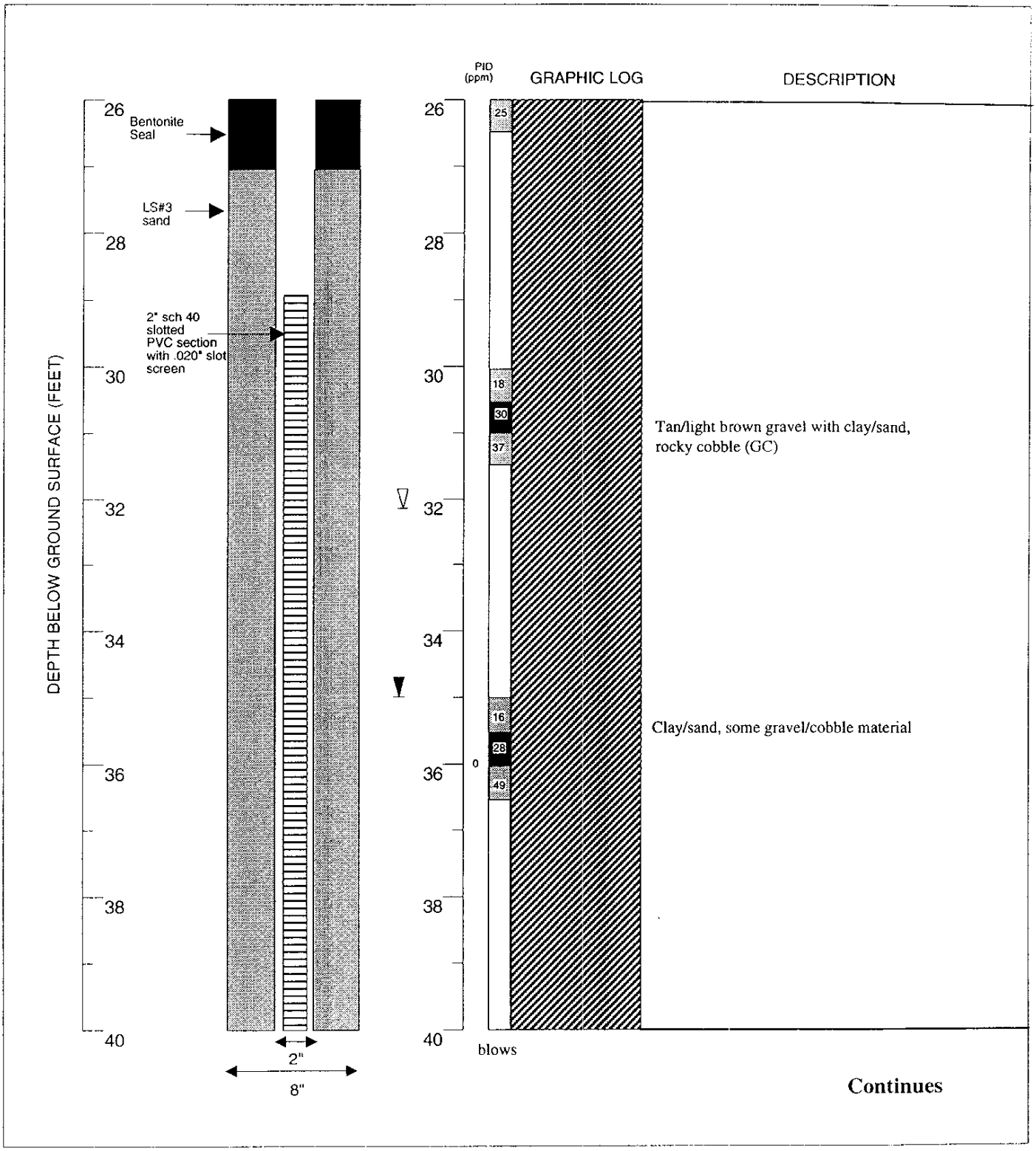
Boring Log and Well Completion Details
MW-8

One Eastmont Mall
Oakland, California

MONITOR WELL
8

ARTESIAN ENVIRONMENTAL CONSULTANTS
3175 KERNER BOULEVARD, SUITE E, SAN RAFAEL, CALIFORNIA 94901 (415) 257-4801

110-01-01



EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of recovered drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample

Contacts:
- Solid where certain
- Dotted where approximate
- Dashed where uncertain
- Hachured where gradational

est K — Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary

NR — No recovery

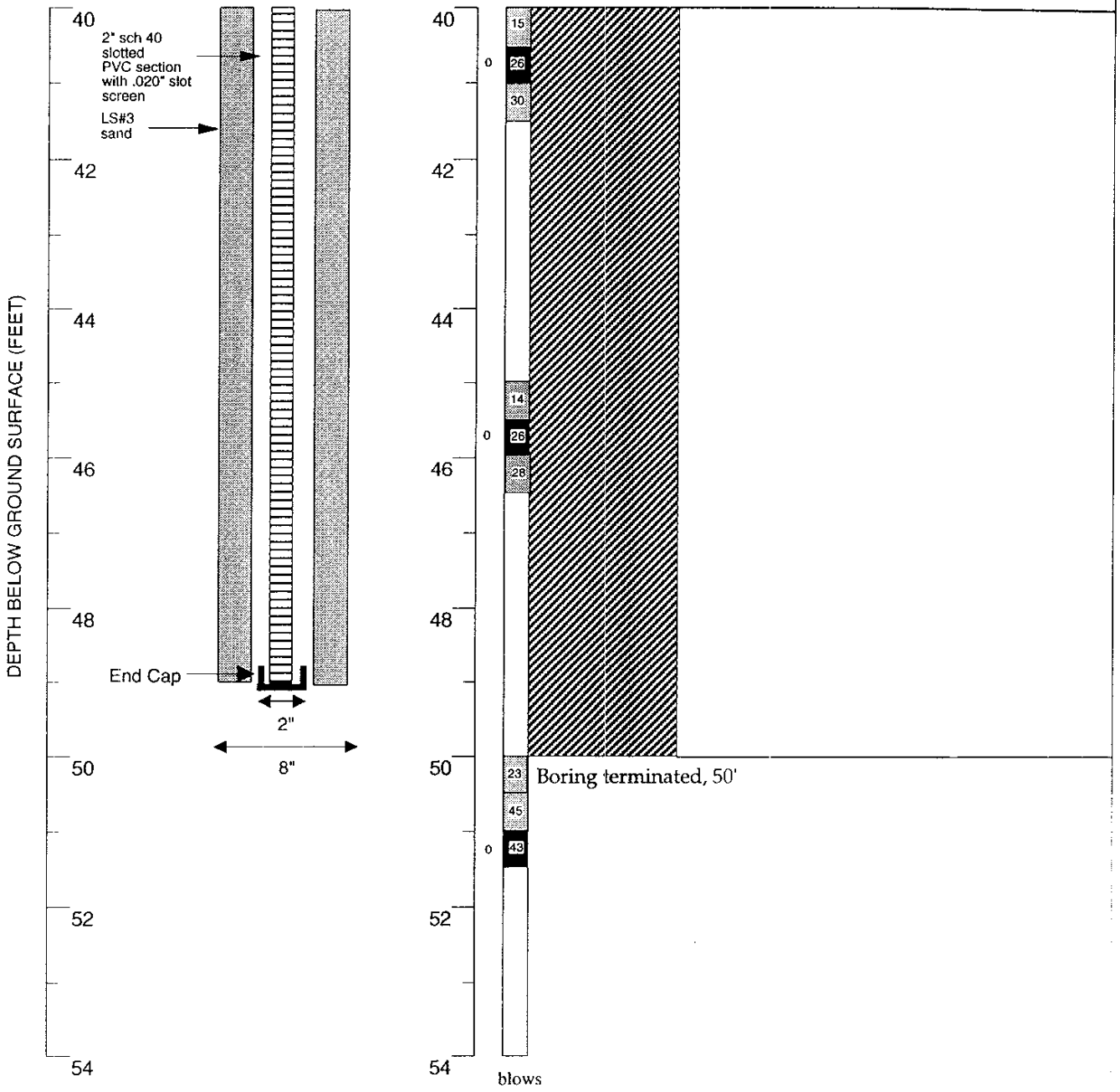
Boring Log and Well Completion Details
MW-8

One Eastmont Mall
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MONITOR WELL
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110-01-01



EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of recovered drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Contacts: Solid where certain
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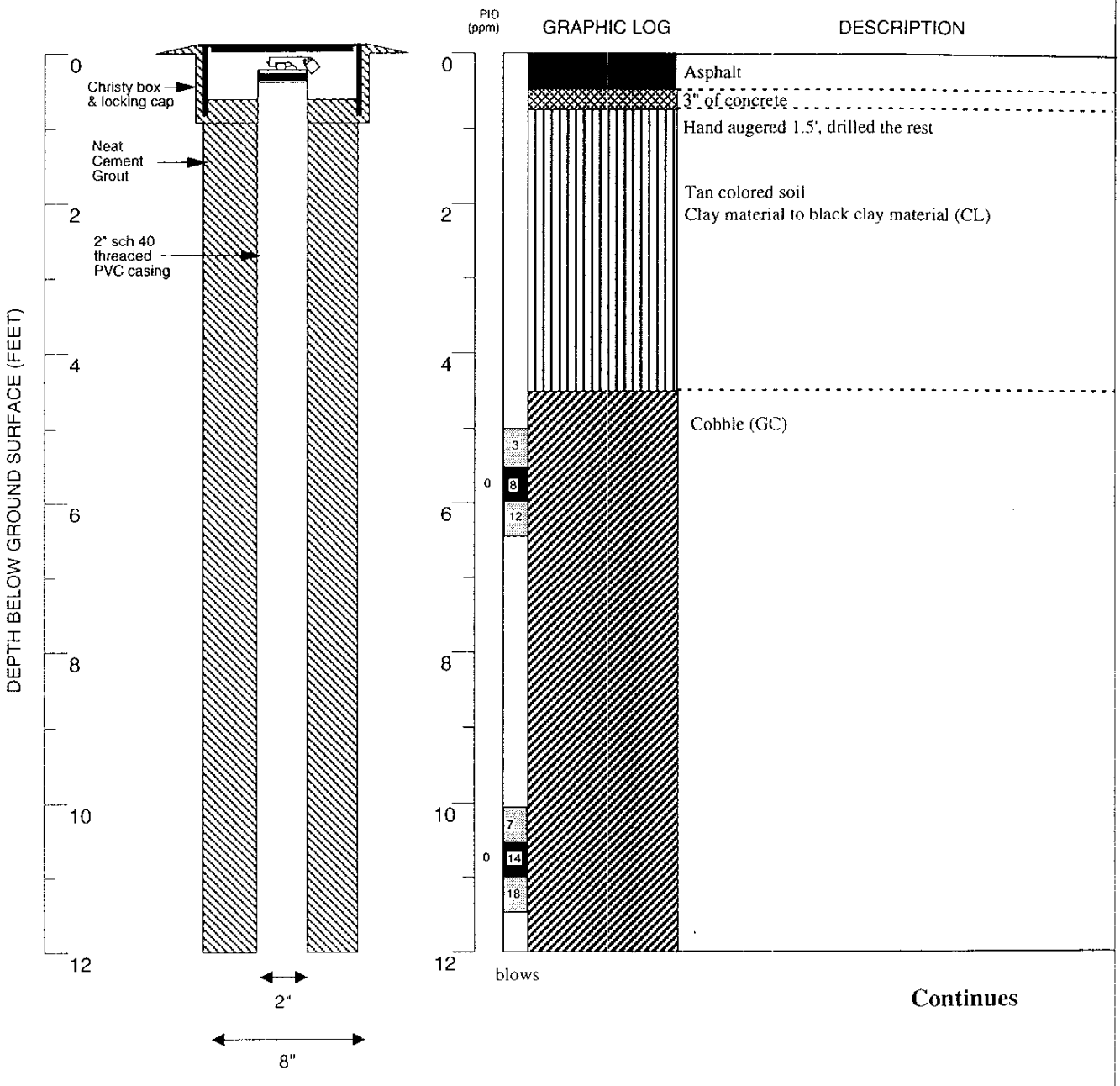
Boring Log and Well Completion Details
MW-8

One Eastmont Mall
Oakland, California

MONITOR WELL
8

ARTESIAN ENVIRONMENTAL CONSULTANTS
3175 KERNER BOULEVARD, SUITE E, SAN RAFAEL, CALIFORNIA 94901 (415) 257-4801

110-01-01



Logged by:	Benjamin I. Mira	Drilling Company:	West HazMat	Well Head Completion:	Christy box & locking cap
Inspector:		Drilling Method:	Hollow Stem Auger	Type of Sampler:	California Split Spoon
Dates Drilled:	9/14/93	Driller:	Bill Smith	TD (Total Depth):	50.0 ft.

EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Contacts: Solid where certain
- Dotted where approximate
- Dashed where uncertain
- Hachured where gradational
- est K — Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR — No recovery

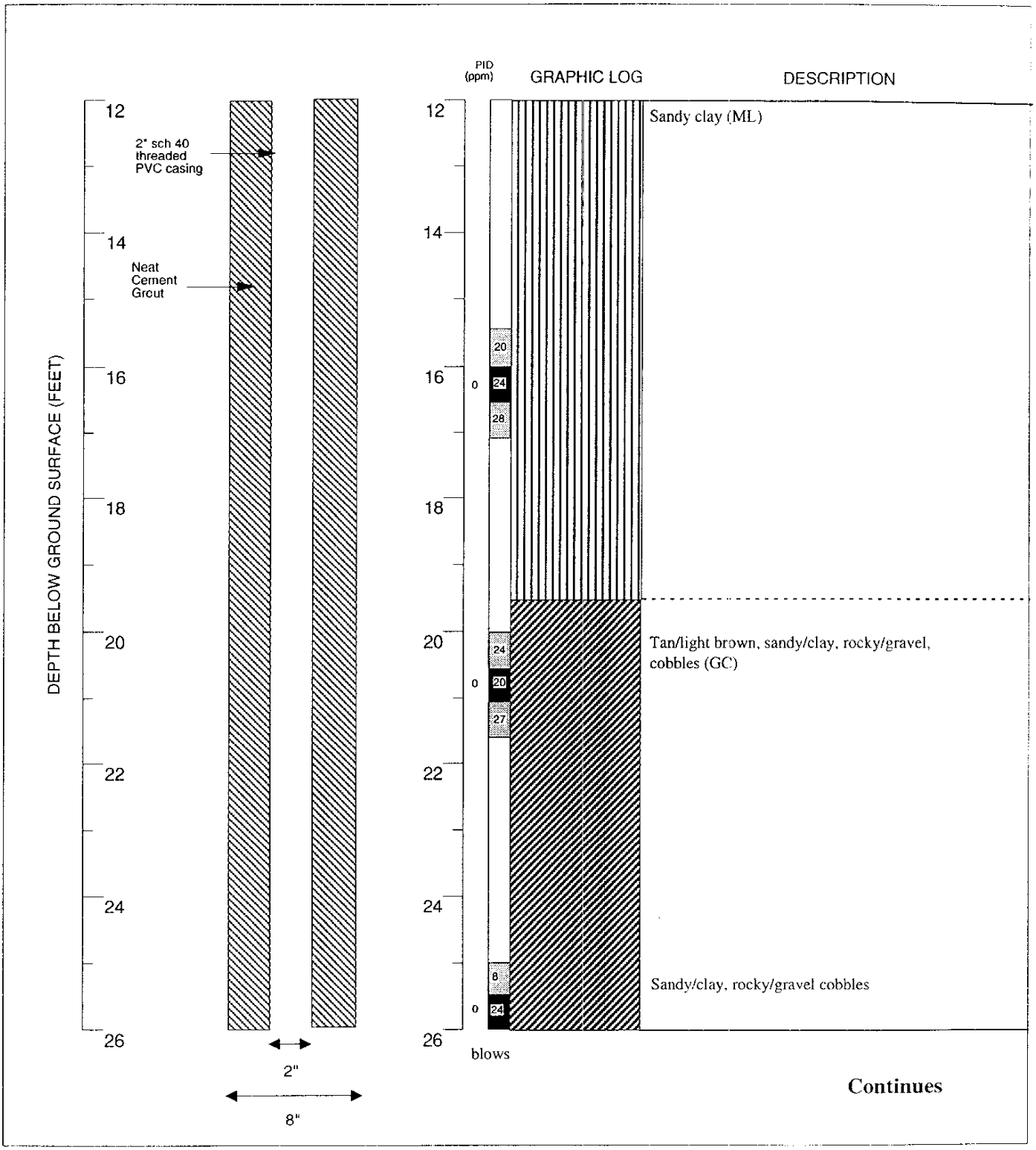
Boring Log and Well Completion Details
MW-9

One Eastmont Mall
Oakland, California

MONITOR WELL
9

ARTESIAN ENVIRONMENTAL CONSULTANTS
3175 KERNER BOULEVARD,SUITE E, SAN RAFAEL, CALIFORNIA 94901 (415) 257-4801

110-01-01



EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample

Contacts:
- Solid where certain
- Dotted where approximate
- Dashed where uncertain
- Hachured where gradational

est K — Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary

NR — No recovery

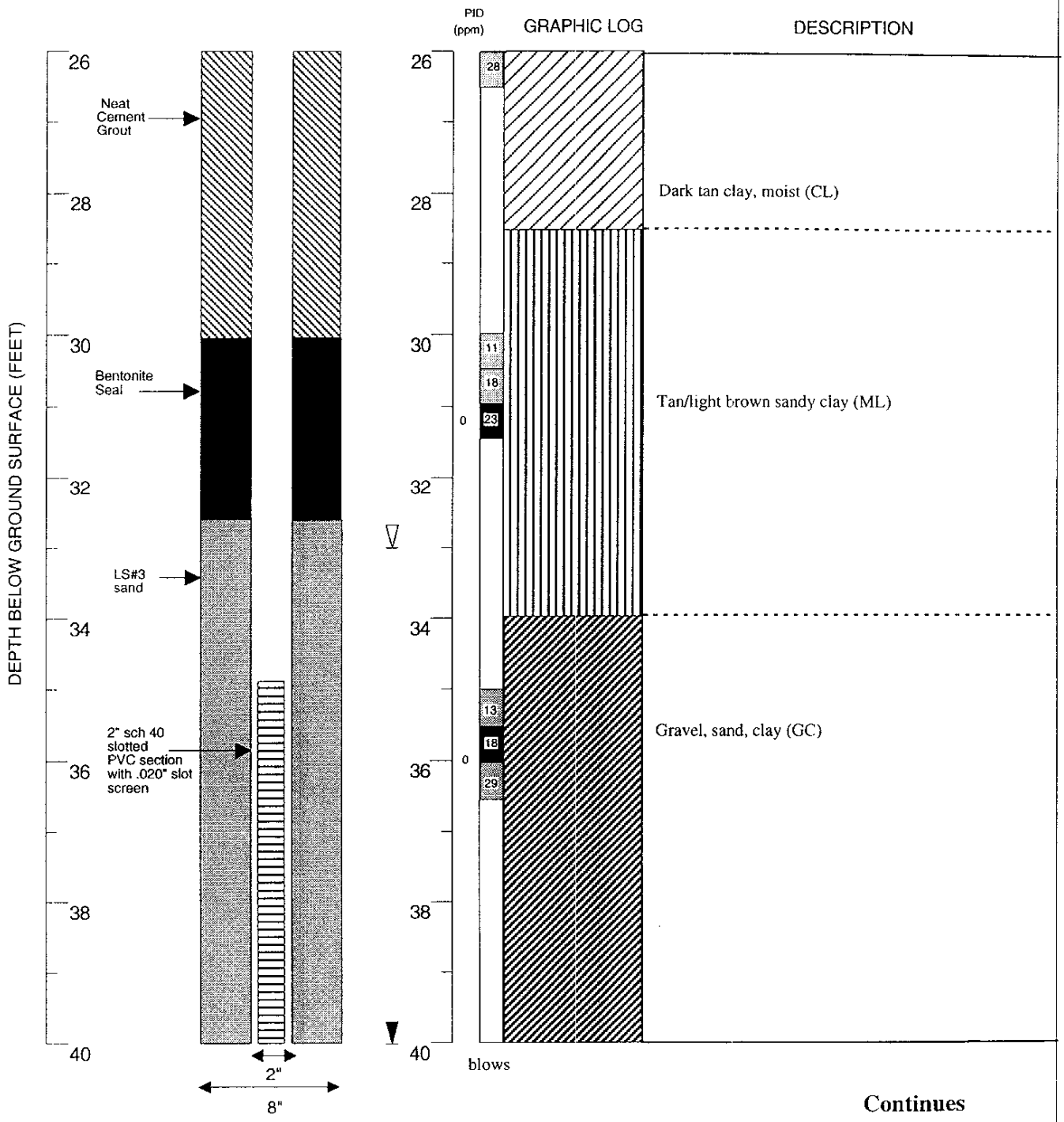
Boring Log and Well Completion Details
MW-9

One Eastmont Mall
Oakland, California

MONITOR WELL
9

ARTESIAN ENVIRONMENTAL CONSULTANTS
3175 KERNER BOULEVARD, SUITE E. SAN RAFAEL, CALIFORNIA 94901 (415) 257-4801

110-01-01



EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of recovered drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample

Contacts:
- Solid where certain
- Dotted where approximate
- Dashed where uncertain
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est K — Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary

NR — No recovery

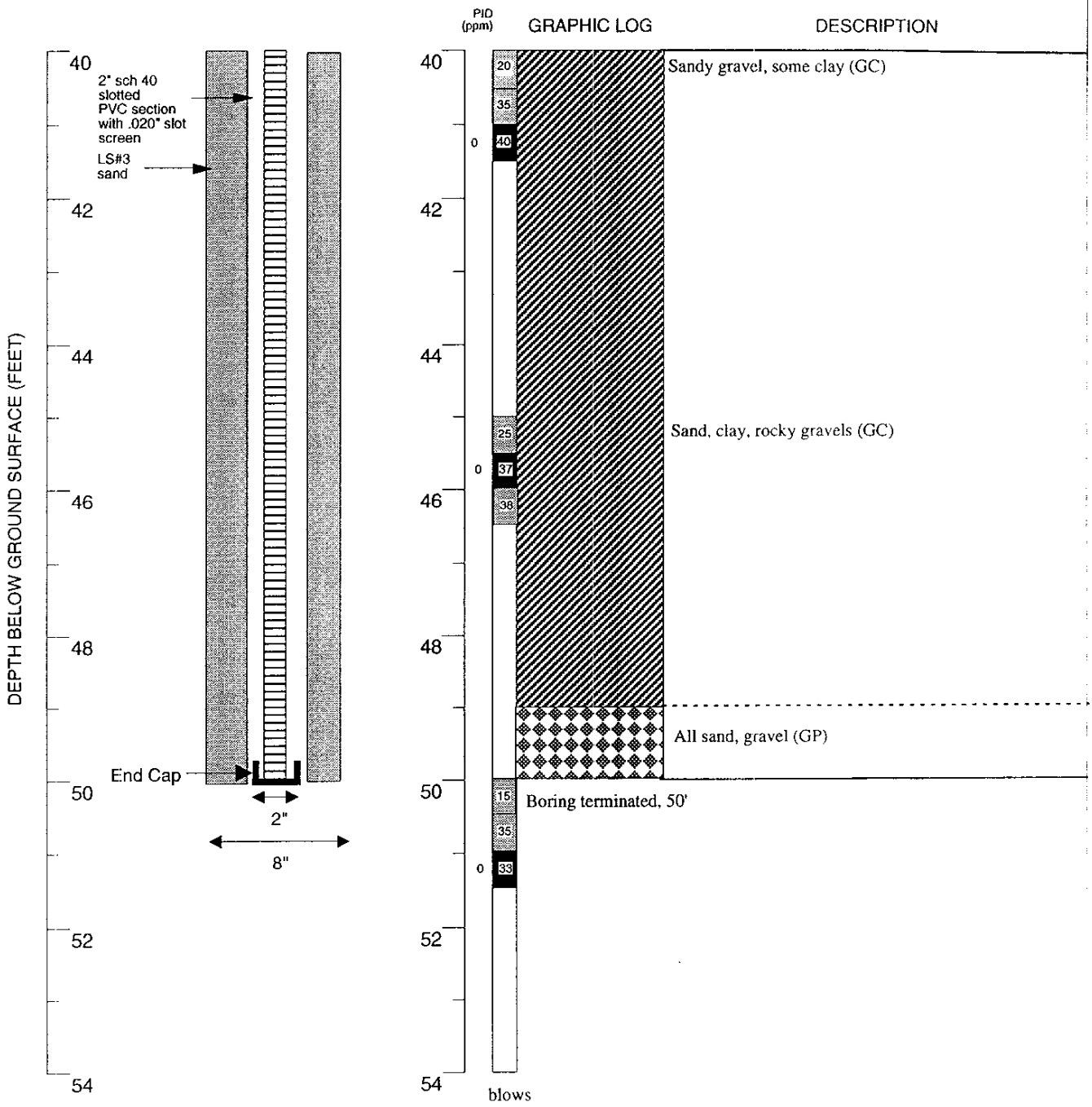
Boring Log and Well Completion Details
MW-9

One Eastmont Mall
Oakland, California

MONITOR WELL
9

ARTESIAN ENVIRONMENTAL CONSULTANTS
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110-01-01



Final Page

EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of recovered drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample

Contacts:
- Solid where certain
- Dotted where approximate
- Dashed where uncertain
- Hachured where gradational

est K — Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary

NR — No recovery

Boring Log and Well Completion Details
MW-9

One Eastmont Mall
Oakland, California

MONITOR WELL
9

ARTESIAN ENVIRONMENTAL CONSULTANTS
3175 KERNER BOULEVARD, SUITE E, SAN RAFAEL, CALIFORNIA 94901 (415) 257-4801

110-01-01

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GRAPHIC SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS — MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS — MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		G W	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
				G P	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		G M	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
				G C	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
	SAND AND SANDY SOILS — MORE THAN 50% OF COARSE FRACTION PASSING NO. 4 SIEVE	CLEAN SAND (LITTLE OR NO FINES)		S W	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				S P	POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		S M	SILTY SANDS, SAND-SILT MIXTURES
				S C	CLAYEY SANDS, SAND-CLAY MIXTURES
FINE GRAINED SOILS — MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS — LIQUID LIMIT LESS THAN 50			M L	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				C L	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				O L	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS — LIQUID LIMIT GREATER THAN 50			M H	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				C H	INORGANIC CLAYS OF HIGH PLASTICITY FAT CLAYS
				O H	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				P T	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

KEY TO LOG OF BORINGS

SAMPLES & BLOWCOUNTS

30 — HAMMER BLOWS PER FOOT OF PENETRATION

■ INDICATES UNDISTURBED SAMPLE

⊠ INDICATES DISTURBED SAMPLE

◪ STANDARD PENETRATION TEST SAMPLE

NR - INDICATES NO RECOVERY

SAMPLES DRIVEN WITH A 140-POUND HAMMER DROPPING 30 INCHES

LABORATORY TESTS

AL	ATTERBERG LIMITS TEST
DSCU	DIRECT SHEAR TEST (Consolidated, Undrained)
CBR	CALIFORNIA BEARING RATIO TEST
COMP	COMPACTION TEST
CON	CONFINED COMPRESSION (Consolidation Test)
-200	PERCENT PASSING NO. 200 SIEVE (Test Results in Parentheses)

ARTESIAN ENVIRONMENTAL CONSULTANTS

CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

September 27, 1993 ChromaLab File No.: 9309177

ARTESIAN ENV. CONSULTANTS

Attn: Jim Jacobs

RE: Five soil samples for Diesel analysis

Project Name: EASTMONT MALL
Project Number: 110-001-01
Date Sampled: Sept. 13-14, 1993 Date Submitted: Sept. 14, 1993
Date Extracted: Sept. 16, 1993 Date Analyzed: Sept. 17, 1993

RESULTS:

Sample I.D.	Diesel (mg/Kg)
B-5-35'	N.D.
B-6-35'	N.D.
B-7-30'	N.D.
B-8-30'	N.D.
B-9-40'	N.D.
BLANK	N.D.
SPIKE RECOVERY	96%
DUP SPIKE RECOVERY	99%
DETECTION LIMIT	1.0
METHOD OF ANALYSIS	3550/8015

ChromaLab, Inc.

Alex Tam
Analytical Chemist

Eric Tam
Laboratory Director

jm

2239 Omega Road,#1 • San Ramon, California 94583
(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

September 28, 1993 ChromaLab File No.: 9309177

ARTESIAN ENV. CONSULTANTS

Attn: Jim Jacobs

RE: Five soil samples for Gasoline and BTEX analysis

Project Name: EASTMONT MALL
Project Number: 110-001-01
Date Sampled: Sept. 13-14, 1993 Date Submitted: Sept.14, 1993
Date Analyzed: Sept. 21, 1993

RESULTS:

Sample I.D.	Gasoline (mg/Kg)	Benzene (µg/Kg)	Toluene (µg/Kg)	Ethyl Benzene (µg/Kg)	Total Xylenes (µg/Kg)
B-5-35	N.D.	N.D.	N.D.	N.D.	N.D.
B-6-35	N.D.	N.D.	N.D.	N.D.	N.D.
B-7-30	N.D.	N.D.	N.D.	N.D.	N.D.
B-8-30	N.D.	N.D.	N.D.	N.D.	N.D.
B-9-40	N.D.	N.D.	N.D.	N.D.	N.D.
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.
SPIKE RECOVERY	114%	106%	105%	114%	112%
DUP SPIKE RECOVERY	----	104%	103%	112%	110%
DETECTION LIMIT	1.0	5.0	5.0	5.0	5.0
METHOD OF ANALYSIS	5030/8015	8020	8020	8020	8020

ChromaLab, Inc.

Billy Thach
Analytical Chemist

Eric Tam
Laboratory Director

jm

2239 Omega Road,#1 • San Ramon, California 94583
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CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

September 28, 1993

ChromaLab File#: 9309177

ARTESIAN ENV. CONSULTANTS

Atten: Jim Jacobs

Project: EASTMONT MALL **Project#:** 110-001-01
Submitted: September 14, 1993

re: One sample for Volatile Halogenated Organics analysis.

Sample: **B-5-35'** *Matrix:* SOIL
Lab #: 15362-931 *Sampled:* September 14, 1993 *Analyzed:* September 27, 1993
Method: EPA 8010

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE RESULT (%)
CHLOROMETHANE	N.D.	5	N.D.	--
VINYL CHLORIDE	N.D.	5	N.D.	--
BROMOCHLOROMETHANE	N.D.	5	N.D.	--
CHLOROETHANE	N.D.	5	N.D.	--
TRICHLOROFLUOROMETHANE	N.D.	5	N.D.	--
1,1-DICHLOROETHENE	N.D.	5	N.D.	88
METHYLENE CHLORIDE	N.D.	100	N.D.	--
TRANS-1,2-DICHLOROETHENE	N.D.	5	N.D.	--
CIS-1,2-DICHLOROETHENE	N.D.	5	N.D.	--
1,1-DICHLOROETHANE	N.D.	5	N.D.	--
CHLOROFORM	N.D.	5	N.D.	--
1,1,1-TRICHLOROETHANE	N.D.	5	N.D.	--
CARBON TETRACHLORIDE	N.D.	5	N.D.	--
1,2-DICHLOROETHANE	N.D.	5	N.D.	--
TRICHLOROETHENE	N.D.	5	N.D.	97
1,2-DICHLOROPROPANE	N.D.	5	N.D.	--
BROMODICHLOROMETHANE	N.D.	5	N.D.	--
2-CHLOROETHYL VINYL ETHER	N.D.	5	N.D.	--
TRANS-1,3-DICHLOROPROPENE	N.D.	5	N.D.	--
CIS-1,3-DICHLOROPROPENE	N.D.	5	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	5	N.D.	--
TETRACHLOROETHENE	N.D.	5	N.D.	94
DIBROMOCHLOROMETHANE	N.D.	5	N.D.	--
CHLOROBENZENE	N.D.	5	N.D.	--
BROMOFORM	N.D.	5	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	5	N.D.	122
1,3-DICHLOROBENZENE	N.D.	5	N.D.	--
1,4-DICHLOROBENZENE	N.D.	5	N.D.	--
1,2-DICHLOROBENZENE	N.D.	5	N.D.	--
FREON 113	N.D.	5	N.D.	--

ChromaLab, Inc.

Analyst

Eric Tam
Laboratory Director

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(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

September 28, 1993

ChromaLab File#: 9309177

ARTESIAN ENV. CONSULTANTS

Atten: Jim Jacobs

Project: EASTMONT MALL **Project#:** 110-001-01
Submitted: September 14, 1993

re: One sample for Volatile Halogenated Organics analysis.

Sample: **B-6-35'** *Matrix:* SOIL
Lab #: 15363-931 *Sampled:* September 14, 1993 *Analyzed:* September 27, 1993
Method: EPA 8010

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE RESULT (%)
CHLOROMETHANE	N.D.	5	N.D.	--
VINYL CHLORIDE	N.D.	5	N.D.	--
BROMOCHLOROMETHANE	N.D.	5	N.D.	--
CHLOROETHANE	N.D.	5	N.D.	--
TRICHLOROFLUOROMETHANE	N.D.	5	N.D.	--
1,1-DICHLOROETHENE	N.D.	5	N.D.	88
METHYLENE CHLORIDE	N.D.	100	N.D.	--
TRANS-1,2-DICHLOROETHENE	N.D.	5	N.D.	--
CIS-1,2-DICHLOROETHENE	N.D.	5	N.D.	--
1,1-DICHLOROETHANE	N.D.	5	N.D.	--
CHLOROFORM	N.D.	5	N.D.	--
1,1,1-TRICHLOROETHANE	N.D.	5	N.D.	--
CARBON TETRACHLORIDE	N.D.	5	N.D.	--
1,2-DICHLOROETHANE	N.D.	5	N.D.	--
TRICHLOROETHENE	N.D.	5	N.D.	97
1,2-DICHLOROPROPANE	N.D.	5	N.D.	--
BROMODICHLOROMETHANE	N.D.	5	N.D.	--
2-CHLOROETHYL VINYL ETHER	N.D.	5	N.D.	--
TRANS-1,3-DICHLOROPROPENE	N.D.	5	N.D.	--
CIS-1,3-DICHLOROPROPENE	N.D.	5	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	5	N.D.	--
TETRACHLOROETHENE	N.D.	5	N.D.	94
DIBROMOCHLOROMETHANE	N.D.	5	N.D.	--
CHLOROBENZENE	N.D.	5	N.D.	--
BROMOFORM	N.D.	5	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	5	N.D.	122
1,3-DICHLOROBENZENE	N.D.	5	N.D.	--
1,4-DICHLOROBENZENE	N.D.	5	N.D.	--
1,2-DICHLOROBENZENE	N.D.	5	N.D.	--
FREON 113	N.D.	5	N.D.	--

ChromaLab, Inc.

Analyst

Eric Tam
Laboratory Director

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CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

September 28, 1993 ChromaLab File#: 9309177

ARTESIAN ENV. CONSULTANTS

Atten: Jim Jacobs

Project: EASTMONT MALL **Project#:** 110-001-01
Submitted: September 14, 1993

re: One sample for Volatile Halogenated Organics analysis.

Sample: **B-7-30'** *Matrix:* SOIL
Lab #: 15364-931 *Sampled:* September 14, 1993 *Analyzed:* September 27, 1993
Method: EPA 8010

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE RESULT (%)
CHLOROMETHANE	N.D.	5	N.D.	--
VINYL CHLORIDE	N.D.	5	N.D.	--
BROMOCHLOROMETHANE	N.D.	5	N.D.	--
CHLOROETHANE	N.D.	5	N.D.	--
TRICHLOROFLUOROMETHANE	N.D.	5	N.D.	--
1,1-DICHLOROETHENE	N.D.	5	N.D.	88
METHYLENE CHLORIDE	N.D.	100	N.D.	--
TRANS-1,2-DICHLOROETHENE	N.D.	5	N.D.	--
CIS-1,2-DICHLOROETHENE	N.D.	5	N.D.	--
1,1-DICHLOROETHANE	N.D.	5	N.D.	--
CHLOROFORM	N.D.	5	N.D.	--
1,1,1-TRICHLOROETHANE	N.D.	5	N.D.	--
CARBON TETRACHLORIDE	N.D.	5	N.D.	--
1,2-DICHLOROETHANE	N.D.	5	N.D.	--
TRICHLOROETHENE	N.D.	5	N.D.	97
1,2-DICHLOROPROPANE	N.D.	5	N.D.	--
BROMODICHLOROMETHANE	N.D.	5	N.D.	--
2-CHLOROETHYL VINYL ETHER	N.D.	5	N.D.	--
TRANS-1,3-DICHLOROPROPENE	N.D.	5	N.D.	--
CIS-1,3-DICHLOROPROPENE	N.D.	5	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	5	N.D.	--
TETRACHLOROETHENE	N.D.	5	N.D.	94
DIBROMOCHLOROMETHANE	N.D.	5	N.D.	--
CHLOROBENZENE	N.D.	5	N.D.	--
BROMOFORM	N.D.	5	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	5	N.D.	122
1,3-DICHLOROBENZENE	N.D.	5	N.D.	--
1,4-DICHLOROBENZENE	N.D.	5	N.D.	--
1,2-DICHLOROBENZENE	N.D.	5	N.D.	--
FREON 113	N.D.	5	N.D.	--

ChromaLab, Inc.

Analyst

Eric Tam
Laboratory Director

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CHROMALAB, INC.

Environmental Laboratory (1094)

September 28, 1993

5 DAYS TURNAROUND

ARTESIAN ENV. CONSULTANTS

ChromaLab File#: 9309177

Atten: Jim Jacobs

Project: EASTMONT MALL
Submitted: September 14, 1993 **Project#:** 110-001-01

re: One sample for Volatile Halogenated Organics analysis.

Sample: **B-8-30'**
Lab #: 15365-931 *Matrix:* SOIL
Method: EPA 8010 *Sampled:* September 14, 1993 *Analyzed:* September 27, 1993

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE RESULT (%)
CHLOROMETHANE	N.D.	5	N.D.	--
VINYL CHLORIDE	N.D.	5	N.D.	--
BROMOCHLOROMETHANE	N.D.	5	N.D.	--
CHLOROETHANE	N.D.	5	N.D.	--
TRICHLOROFLUOROMETHANE	N.D.	5	N.D.	--
1,1-DICHLOROETHENE	N.D.	5	N.D.	--
METHYLENE CHLORIDE	N.D.	5	N.D.	--
TRANS-1,2-DICHLOROETHENE	N.D.	100	N.D.	88
CIS-1,2-DICHLOROETHENE	N.D.	5	N.D.	--
1,1-DICHLOROETHANE	N.D.	5	N.D.	--
CHLOROFORM	N.D.	5	N.D.	--
1,1,1-TRICHLOROETHANE	N.D.	5	N.D.	--
CARBON TETRACHLORIDE	N.D.	5	N.D.	--
1,2-DICHLOROETHANE	N.D.	5	N.D.	--
TRICHLOROETHENE	N.D.	5	N.D.	--
1,2-DICHLOROPROPANE	N.D.	5	N.D.	--
BROMODICHLOROMETHANE	N.D.	5	N.D.	97
2-CHLOROETHYL VINYL ETHER	N.D.	5	N.D.	--
TRANS-1,3-DICHLOROPROPENE	N.D.	5	N.D.	--
CIS-1,3-DICHLOROPROPENE	N.D.	5	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	5	N.D.	--
TETRACHLOROETHENE	N.D.	5	N.D.	--
DIBROMOCHLOROMETHANE	N.D.	5	N.D.	--
CHLOROBENZENE	N.D.	5	N.D.	94
BROMOFORM	N.D.	5	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	5	N.D.	--
1,3-DICHLOROBENZENE	N.D.	5	N.D.	--
1,4-DICHLOROBENZENE	N.D.	5	N.D.	122
1,2-DICHLOROBENZENE	N.D.	5	N.D.	--
FREON 113	N.D.	5	N.D.	--

ChromaLab, Inc.

Analyst

Eric Tam
Laboratory Director

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CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

September 28, 1993

ChromaLab File#: 9309177

ARTESIAN ENV. CONSULTANTS

Atten: Jim Jacobs

Project: EASTMONT MALL **Project#:** 110-001-01
Submitted: September 14, 1993

re: One sample for Volatile Halogenated Organics analysis.

Sample: **B-9-40'** *Matrix:* SOIL
Lab #: 15366-931 *Sampled:* September 14, 1993 *Analyzed:* September 27, 1993
Method: EPA 8010

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE RESULT (%)
CHLOROMETHANE	N.D.	5	N.D.	--
VINYL CHLORIDE	N.D.	5	N.D.	--
BROMOCHLOROMETHANE	N.D.	5	N.D.	--
CHLOROETHANE	N.D.	5	N.D.	--
TRICHLOROFLUOROMETHANE	N.D.	5	N.D.	--
1,1-DICHLOROETHENE	N.D.	5	N.D.	88
METHYLENE CHLORIDE	N.D.	100	N.D.	--
TRANS-1,2-DICHLOROETHENE	N.D.	5	N.D.	--
CIS-1,2-DICHLOROETHENE	N.D.	5	N.D.	--
1,1-DICHLOROETHANE	N.D.	5	N.D.	--
CHLOROFORM	N.D.	5	N.D.	--
1,1,1-TRICHLOROETHANE	N.D.	5	N.D.	--
CARBON TETRACHLORIDE	N.D.	5	N.D.	--
1,2-DICHLOROETHANE	N.D.	5	N.D.	--
TRICHLOROETHENE	N.D.	5	N.D.	97
1,2-DICHLOROPROPANE	N.D.	5	N.D.	--
BROMODICHLOROMETHANE	N.D.	5	N.D.	--
2-CHLOROETHYL VINYL ETHER	N.D.	5	N.D.	--
TRANS-1,3-DICHLOROPROPENE	N.D.	5	N.D.	--
CIS-1,3-DICHLOROPROPENE	N.D.	5	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	5	N.D.	--
TETRACHLOROETHENE	N.D.	5	N.D.	94
DIBROMOCHLOROMETHANE	N.D.	5	N.D.	--
CHLOROBENZENE	N.D.	5	N.D.	--
BROMOFORM	N.D.	5	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	5	N.D.	122
1,3-DICHLOROBENZENE	N.D.	5	N.D.	--
1,4-DICHLOROBENZENE	N.D.	5	N.D.	--
1,2-DICHLOROBENZENE	N.D.	5	N.D.	--
FREON 113	N.D.	5	N.D.	--

ChromaLab, Inc.

Analyst

Eric Tam
Laboratory Director

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CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

October 6, 1993 ChromaLab File No.: 9309371

ARTESIAN ENV. CONSULTANTS

Attn: Ben Mira

RE: Five water samples for Diesel analysis

Project Name: EASTMONT MALL
Project Number: 110-001-01
Date Sampled: Sept. 28, 1993 Date Submitted: Sept. 29, 1993
Date Extracted: Oct. 4, 1993 Date Analyzed: Oct. 4, 1993

RESULTS:

Sample I.D.	Diesel (µg/L)
B5-AQ	N.D.
B6-AQ	N.D.
B7-AQ	N.D.
B8-AQ	N.D.
B9-AQ	N.D.
BLANK	N.D.
SPIKE RECOVERY	96%
DUP SPIKE RECOVERY	96%
DETECTION LIMIT	50
METHOD OF ANALYSIS	3510/8015

ChromaLab, Inc.

Alex Tam
Analytical Chemist

Eric Tam
Laboratory Director

cc

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CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

October 6, 1993 ChromaLab File#: 9309371

ARTESIAN ENV. CONSULTANTS

Atten: Ben Mira

Project: EASTMONT MALL **Project#:** 110-001-01
Submitted: September 29, 1993

re: 5 samples for Gasoline and BTEX analysis.

Matrix: WATER
Sampled on: September 28, 1993 *Analyzed on:* September 30, 1993
Method: EPA 5030/8015/602 *Run#:* 942

Lab # SAMPLE ID	Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
20837 B5-AQ	N.D.	N.D.	N.D.	N.D.	N.D.
20838 B6-AQ	N.D.	N.D.	N.D.	N.D.	N.D.
20839 B7-AQ	N.D.	N.D.	N.D.	N.D.	N.D.
20840 B8-AQ	N.D.	N.D.	N.D.	N.D.	N.D.
20841 B9-AQ	N.D.	N.D.	N.D.	N.D.	N.D.
DETECTION LIMITS	50	0.5	0.5	0.5	0.5
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.
BLANK SPIKE RECOVERY(%)	106	98	100	102	99

ChromaLab, Inc.

Jack Kelly
Chemist

Eric Tam
Laboratory Director

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CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

October 5, 1993 ChromaLab File#: 9309371

ARTESIAN ENV. CONSULTANTS

Atten: Ben Mira

Project: EASTMONT MALL **Project#:** 110-001-01
Submitted: September 29, 1993

re: One sample for Volatile Halogenated Compounds analysis.

Sample: **B5-AQ** *Matrix:* WATER
Lab #: 20837-985 *Sampled:* September 28, 1993 *Analyzed:* October 4, 1993
Method: EPA 601

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE RESULT (%)
CHLOROMETHANE	N.D.	0.5	N.D.	--
VINYL CHLORIDE	N.D.	0.5	N.D.	--
BROMOCHLOROMETHANE	N.D.	0.5	N.D.	--
CHLOROETHANE	N.D.	0.5	N.D.	--
TRICHLOROFLUOROMETHANE	N.D.	0.5	N.D.	--
1,1-DICHLOROETHENE	N.D.	0.5	N.D.	85
METHYLENE CHLORIDE	N.D.	20	N.D.	--
TRANS-1,2-DICHLOROETHENE	N.D.	0.5	N.D.	--
CIS-1,2-DICHLOROETHENE	N.D.	0.5	N.D.	--
1,1-DICHLOROETHANE	N.D.	0.5	N.D.	--
CHLOROFORM	N.D.	0.5	N.D.	--
1,1,1-TRICHLOROETHANE	N.D.	0.5	N.D.	--
CARBON TETRACHLORIDE	N.D.	0.5	N.D.	--
1,2-DICHLOROETHANE	N.D.	0.5	N.D.	--
TRICHLOROETHENE	N.D.	0.5	N.D.	99
1,2-DICHLOROPROPANE	N.D.	0.5	N.D.	--
BROMODICHLOROMETHANE	N.D.	0.5	N.D.	--
2-CHLOROETHYLVINYL ETHER	N.D.	0.5	N.D.	--
TRANS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	--
CIS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	0.5	N.D.	--
TETRACHLOROETHENE	N.D.	0.5	N.D.	104
DIBROMOCHLOROMETHANE	N.D.	0.5	N.D.	--
CHLOROBENZENE	N.D.	0.5	N.D.	--
BROMOFORM	N.D.	0.5	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	0.5	N.D.	112
1,3-DICHLOROBENZENE	N.D.	0.5	N.D.	--
1,4-DICHLOROBENZENE	N.D.	0.5	N.D.	--
1,2-DICHLOROBENZENE	N.D.	0.5	N.D.	--
FREON 113	N.D.	0.5	N.D.	--

ChromaLab, Inc.

David Wintergrass
Chemist

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CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

October 5, 1993 ChromaLab File#: 9309371

ARTESIAN ENV. CONSULTANTS

Atten: Ben Mira

Project: EASTMONT MALL **Project#:** 110-001-01
Submitted: September 29, 1993

re: One sample for Volatile Halogenated Compounds analysis.

Sample: **B6-AQ** *Matrix:* WATER
Lab #: 20838-985 *Sampled:* September 28, 1993 *Analyzed:* October 4, 1993
Method: EPA 601

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE RESULT (%)
CHLOROMETHANE	N.D.	0.5	N.D.	--
VINYL CHLORIDE	N.D.	0.5	N.D.	--
BROMOCHLOROMETHANE	N.D.	0.5	N.D.	--
CHLOROETHANE	N.D.	0.5	N.D.	--
TRICHLOROFLUOROMETHANE	N.D.	0.5	N.D.	--
1,1-DICHLOROETHENE	N.D.	0.5	N.D.	85
METHYLENE CHLORIDE	N.D.	20	N.D.	--
TRANS-1,2-DICHLOROETHENE	N.D.	0.5	N.D.	--
CIS-1,2-DICHLOROETHENE	N.D.	0.5	N.D.	--
1,1-DICHLOROETHANE	N.D.	0.5	N.D.	--
CHLOROFORM	N.D.	0.5	N.D.	--
1,1,1-TRICHLOROETHANE	N.D.	0.5	N.D.	--
CARBON TETRACHLORIDE	N.D.	0.5	N.D.	--
1,2-DICHLOROETHANE	N.D.	0.5	N.D.	--
TRICHLOROETHENE	N.D.	0.5	N.D.	99
1,2-DICHLOROPROPANE	N.D.	0.5	N.D.	--
BROMODICHLOROMETHANE	N.D.	0.5	N.D.	--
2-CHLOROETHYLVINYL ETHER	N.D.	0.5	N.D.	--
TRANS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	--
CIS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	0.5	N.D.	--
TETRACHLOROETHENE	N.D.	0.5	N.D.	104
DIBROMOCHLOROMETHANE	N.D.	0.5	N.D.	--
CHLOROBENZENE	N.D.	0.5	N.D.	--
BROMOFORM	N.D.	0.5	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	0.5	N.D.	112
1,3-DICHLOROBENZENE	N.D.	0.5	N.D.	--
1,4-DICHLOROBENZENE	N.D.	0.5	N.D.	--
1,2-DICHLOROBENZENE	N.D.	0.5	N.D.	--
FREON 113	N.D.	0.5	N.D.	--

ChromaLab, Inc.

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CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

October 5, 1993 ChromaLab File#: 9309371

ARTESIAN ENV. CONSULTANTS

Atten: Ben Mira

Project: EASTMONT MALL **Project#:** 110-001-01
Submitted: September 29, 1993

re: One sample for Volatile Halogenated Compounds analysis.

Sample: **B7-AQ** *Matrix:* WATER
Lab #: 20839-985 *Sampled:* September 28, 1993 *Analyzed:* October 4, 1993
Method: EPA 601

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE RESULT (%)
CHLOROMETHANE	N.D.	0.5	N.D.	--
VINYL CHLORIDE	N.D.	0.5	N.D.	--
BROMOCHLOROMETHANE	N.D.	0.5	N.D.	--
CHLOROETHANE	N.D.	0.5	N.D.	--
TRICHLOROFLUOROMETHANE	N.D.	0.5	N.D.	--
1,1-DICHLOROETHENE	N.D.	0.5	N.D.	85
METHYLENE CHLORIDE	N.D.	20	N.D.	--
TRANS-1,2-DICHLOROETHENE	N.D.	0.5	N.D.	--
CIS-1,2-DICHLOROETHENE	N.D.	0.5	N.D.	--
1,1-DICHLOROETHANE	N.D.	0.5	N.D.	--
CHLOROFORM	N.D.	0.5	N.D.	--
1,1,1-TRICHLOROETHANE	N.D.	0.5	N.D.	--
CARBON TETRACHLORIDE	N.D.	0.5	N.D.	--
1,2-DICHLOROETHANE	N.D.	0.5	N.D.	--
TRICHLOROETHENE	N.D.	0.5	N.D.	99
1,2-DICHLOROPROPANE	N.D.	0.5	N.D.	--
BROMODICHLOROMETHANE	N.D.	0.5	N.D.	--
2-CHLOROETHYLVINYL ETHER	N.D.	0.5	N.D.	--
TRANS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	--
CIS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	0.5	N.D.	--
TETRACHLOROETHENE	N.D.	0.5	N.D.	104
DIBROMOCHLOROMETHANE	N.D.	0.5	N.D.	--
CHLOROBENZENE	N.D.	0.5	N.D.	--
BROMOFORM	N.D.	0.5	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	0.5	N.D.	112
1,3-DICHLOROBENZENE	N.D.	0.5	N.D.	--
1,4-DICHLOROBENZENE	N.D.	0.5	N.D.	--
1,2-DICHLOROBENZENE	N.D.	0.5	N.D.	--
FREON 113	N.D.	0.5	N.D.	--

ChromaLab, Inc.

David Wintergrass
Chemist

Eric Tam
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CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

October 5, 1993 ChromaLab File#: 9309371

ARTESIAN ENV. CONSULTANTS

Atten: Ben Mira

Project: EASTMONT MALL **Project#:** 110-001-01
Submitted: September 29, 1993

re: One sample for Volatile Halogenated Compounds analysis.

Sample: **B8-AQ** *Matrix:* WATER
Lab #: 20840-985 *Sampled:* September 28, 1993 *Analyzed:* October 4, 1993
Method: EPA 601

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE RESULT (%)
CHLOROMETHANE	N.D.	0.5	N.D.	--
VINYL CHLORIDE	N.D.	0.5	N.D.	--
BROMOCHLOROMETHANE	N.D.	0.5	N.D.	--
CHLOROETHANE	N.D.	0.5	N.D.	--
TRICHLOROFLUOROMETHANE	N.D.	0.5	N.D.	--
1,1-DICHLOROETHENE	N.D.	0.5	N.D.	85
METHYLENE CHLORIDE	N.D.	20	N.D.	--
TRANS-1,2-DICHLOROETHENE	N.D.	0.5	N.D.	--
CIS-1,2-DICHLOROETHENE	N.D.	0.5	N.D.	--
1,1-DICHLOROETHANE	N.D.	0.5	N.D.	--
CHLOROFORM	N.D.	0.5	N.D.	--
1,1,1-TRICHLOROETHANE	N.D.	0.5	N.D.	--
CARBON TETRACHLORIDE	N.D.	0.5	N.D.	--
1,2-DICHLOROETHANE	N.D.	0.5	N.D.	--
TRICHLOROETHENE	N.D.	0.5	N.D.	99
1,2-DICHLOROPROPANE	N.D.	0.5	N.D.	--
BROMODICHLOROMETHANE	N.D.	0.5	N.D.	--
2-CHLOROETHYLVINYL ETHER	N.D.	0.5	N.D.	--
TRANS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	--
CIS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	0.5	N.D.	--
TETRACHLOROETHENE	N.D.	0.5	N.D.	104
DIBROMOCHLOROMETHANE	N.D.	0.5	N.D.	--
CHLOROBENZENE	N.D.	0.5	N.D.	--
BROMOFORM	N.D.	0.5	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	0.5	N.D.	112
1,3-DICHLOROBENZENE	N.D.	0.5	N.D.	--
1,4-DICHLOROBENZENE	N.D.	0.5	N.D.	--
1,2-DICHLOROBENZENE	N.D.	0.5	N.D.	--
FREON 113	N.D.	0.5	N.D.	--

ChromaLab, Inc.

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CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

October 5, 1993 ChromaLab File#: 9309371

ARTESIAN ENV. CONSULTANTS

Atten: Ben Mira

Project: EASTMONT MALL **Project#:** 110-001-01
Submitted: September 29, 1993

re: One sample for Volatile Halogenated Compounds analysis.

Sample: **B9-AQ** *Matrix:* WATER
Lab #: 20841-985 *Sampled:* September 28, 1993 *Analyzed:* October 4, 1993
Method: EPA 601

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE RESULT (%)
CHLOROMETHANE	N.D.	0.5	N.D.	--
VINYL CHLORIDE	N.D.	0.5	N.D.	--
BROMOCHLOROMETHANE	N.D.	0.5	N.D.	--
CHLOROETHANE	N.D.	0.5	N.D.	--
TRICHLOROFLUOROMETHANE	N.D.	0.5	N.D.	--
1,1-DICHLOROETHENE	N.D.	0.5	N.D.	85
METHYLENE CHLORIDE	N.D.	20	N.D.	--
TRANS-1,2-DICHLOROETHENE	N.D.	0.5	N.D.	--
CIS-1,2-DICHLOROETHENE	N.D.	0.5	N.D.	--
1,1-DICHLOROETHANE	N.D.	0.5	N.D.	--
CHLOROFORM	N.D.	0.5	N.D.	--
1,1,1-TRICHLOROETHANE	N.D.	0.5	N.D.	--
CARBON TETRACHLORIDE	N.D.	0.5	N.D.	--
1,2-DICHLOROETHANE	N.D.	0.5	N.D.	--
TRICHLOROETHENE	N.D.	0.5	N.D.	99
1,2-DICHLOROPROPANE	N.D.	0.5	N.D.	--
BROMODICHLOROMETHANE	N.D.	0.5	N.D.	--
2-CHLOROETHYLVINYL ETHER	N.D.	0.5	N.D.	--
TRANS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	--
CIS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	0.5	N.D.	--
TETRACHLOROETHENE	N.D.	0.5	N.D.	104
DIBROMOCHLOROMETHANE	N.D.	0.5	N.D.	--
CHLOROBENZENE	N.D.	0.5	N.D.	--
BROMOFORM	N.D.	0.5	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	0.5	N.D.	112
1,3-DICHLOROBENZENE	N.D.	0.5	N.D.	--
1,4-DICHLOROBENZENE	N.D.	0.5	N.D.	--
1,2-DICHLOROBENZENE	N.D.	0.5	N.D.	--
FREON 113	N.D.	0.5	N.D.	--

ChromaLab, Inc.

David Wintergrass
Chemist

Eric Tam
Laboratory Director

2239 Omega Road,#1 • San Ramon, California 94583
(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140157

CHROMALAB, INC.

DOHS 1094

2239

SUBM #: 9309177
CLIENT: ARTESIA
DUE: 09/28/93
REF: 13280

80

15366

Chain of Custody

DATE 9/13/93 PAGE 1 OF 7

PROJ. MGR.

COMPANY ARTESIAN ENVIRONMENTAL CONS.

ADDRESS 3175 KERNER BLVD
SAN RAFAEL CA 94901

SAMPLERS (SIGNATURE) (PHONE NO.) 257-4801

ANALYSIS REPORT

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	TPH - Gasoline (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020)	TPH - Diesel (EPA 3510/3550, 8015)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240, 524.2)	BASE/NEUTRALS, ACIDS (EPA 625/627, 8270, 525)	TOTAL OIL & GREASE (EPA 5520, B+F, E+F)	PCB (EPA 608, 8080)	PESTICIDES (EPA 608, 8080)	TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1)		METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (TCLP, STLC)				NUMBER OF CONTAINERS
B-5-5'	9/13	8:35	S																						1
B-5-10'	9/13	8:41	S																						1
B-5-15'	9/13	8:45	S																						1
B-5-20	9/13	8:54	S																						1
B-5-25'	9/13	9:05	S																						1
B-5-30'	9/13	9:12	S																						1
B-5-35'	9/13	9:20	S			X	X		X																1
B-5-40'	9/13	9:25	S																						1
B-5-45'	9/13		S																						1

PROJECT INFORMATION

PROJECT NAME: EASTMONT MALL

PROJECT NUMBER: 110-001-01

P.O. #

SAMPLE RECEIPT

TOTAL NO. OF CONTAINERS	
HEAD SPACE	
REC'D GOOD CONDITION/COLD	
CONFORMS TO RECORD	

TAT: STANDARD 5-DAY | 24 | 48 | 72 | OTHER

SPECIAL INSTRUCTIONS/COMMENTS:
10 Day TURN AROUND
RUN ONLY B-5-35'

RELINQUISHED BY 1	RELINQUISHED BY 2	RELINQUISHED BY 3
(SIGNATURE) (TIME)	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)
BEN MIRA 4:55pm	SAL NAIDU 6:00 9-14-93	
(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
9/14/93	CCX	
(COMPANY)	(COMPANY)	(COMPANY)
RECEIVED BY 1	RECEIVED BY 2	RECEIVED BY (LABORATORY) 3
4:55pm	J. Martin 10:12 9/14	
(SIGNATURE) (TIME)	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)
SAL NAIDU 9-14-93		
(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
CCX		
(COMPANY)	(COMPANY)	(LAB)

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9309177

CHROMALAB, INC.

DOHS 1094

2239 Omega Road, #1 • San Ramon, California 94583
510/831-1788 • Facsimile 510/831-8798

order 13280

Chain of Custody

~~order~~ # ~~3081~~ Page 5 of 7

DATE 9/13/93 PAGE 2 OF 7

PROJ. MGR.

COMPANY ARTESIAN ENVIRONMENTAL CONS.

ADDRESS 3175 KERNER BLVD

SAN RAFAEL CA 94901

SAMPLERS (SIGNATURE) (PHONE NO.) 257-4801

ANALYSIS REPORT

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	TPH - Gasoline (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020)	TPH - Diesel (EPA 3510/3550, 8015)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240, 524.2)	BASE/NEUTRALS, ACIDS (EPA 625/627, 8270, 525)	TOTAL OIL & GREASE (EPA 5520, B+F, E+F)	PCB (EPA 608, 8080)	PESTICIDES (EPA 608, 8080)	TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1)		METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (TCLP, STLC)				NUMBER OF CONTAINERS
B-6-5'	9/13		S																					1
B-6-10'	9/13	11:40	S																					1
B-6-15'	9/13	11:45	S																					1
B-6-20'	9/13	11:52	S																					1
B-6-25'	9/13	12:00	S																					1
B-6-30'	9/13	12:05	S																					1
B-6-35'	9/13	12:10	S			X	X		X															1

PROJECT INFORMATION

PROJECT NAME: EAST MONT MALL

PROJECT NUMBER 110-001-01

P.O. #

SAMPLE RECEIPT

TOTAL NO. OF CONTAINERS	
HEAD SPACE	
REC'D GOOD CONDITION/COLD	
CONFORMS TO RECORD	

TAT: STANDARD 5-DAY | 24 | 48 | 72 | OTHER

SPECIAL INSTRUCTIONS/COMMENTS:

RUN B-6-35'

10Δ TAT

RELINQUISHED BY 1.	RELINQUISHED BY 2.	RELINQUISHED BY 3.
(SIGNATURE) (TIME)	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)
BEN MILLER 4:55pm		
(PRINTED NAME) (DATE) 9/14/93	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
(COMPANY)	(COMPANY)	(COMPANY)
RECEIVED BY 1.	**RECEIVED BY 2.**	**RECEIVED BY (LABORATORY) 3.**
(SIGNATURE) (TIME) 4:55pm	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)
SAC NAIDU 9.14.93		
(PRINTED NAME) (DATE) CCK	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
(COMPANY)	(COMPANY)	(LAB)

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9309177

CHROMALAB, INC.

DOHS 1094

2239 Omega Road, #1 • San Ramon, California 94583
510/831-1788 • Facsimile 510/831-8798

order #13280 page 4 of 7

Chain of Custody

DATE 9/14/93 PAGE 3 OF 7

PROJ. MGR.

COMPANY ARTESIAN ENVIRONMENTAL CONS.

ADDRESS 3175 KERNER BLVD
SAN RAFAEL CA 94901

SAMPLERS (SIGNATURE) (PHONE NO.) 257-4801

ANALYSIS REPORT

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	TPH - Gasoline (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020)	TPH - Diesel (EPA 3510/3550, 8015)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240, 524.2)	BASE/NEUTRALS, ACIDS (EPA 625/627, 8270, 525)	TOTAL OIL & GREASE (EPA 5520, B+F, E+F)	PCB (EPA 608, 8080)	PESTICIDES (EPA 608, 8080)	TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1)		METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (TCLP, STLC)				NUMBER OF CONTAINERS
B-6-40'	9/13	12:15																						1
B-6-45'	9/13	2:24																						1
B-6-50'	9/13	12:30																						1
B-7-5'	9/13	2:20																						1
B-7-10'	9/13	2:24																						1
B-7-15'	9/13	2:30																						1
B-7-20'	9/13	2:34																						1
B-7-25'	9/13	2:40																						1

PROJECT INFORMATION

PROJECT NAME: EASTMONT MALL

PROJECT NUMBER: 110-001-01

P.O. #

SAMPLE RECEIPT

TOTAL NO. OF CONTAINERS	
HEAD SPACE	
REC'D GOOD CONDITION/COLD	
CONFORMS TO RECORD	

TAT	STANDARD 5-DAY			24	48	72	OTHER

SPECIAL INSTRUCTIONS/COMMENTS:

RELINQUISHED BY 1.	RELINQUISHED BY 2.	RELINQUISHED BY 3.
(SIGNATURE) (TIME)	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)
BEN MIKEL 4:55p		
(PRINTED NAME) (DATE) 9/14/93	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
(COMPANY)	(COMPANY)	(COMPANY)
RECEIVED BY 1.	**RECEIVED BY 2.**	**RECEIVED BY (LABORATORY) 3.**
(SIGNATURE) (TIME) 4:55p	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)
SAC NAIDU 9.14.93		
(PRINTED NAME) (DATE) CCX	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
(COMPANY)	(COMPANY)	(LAB)

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9309177

CHROMALAB, INC.

DOHS 1094

2239 Omega Road, #1 • San Ramon, California 94583
510/831-1788 • Facsimile 510/831-8798

Chain of Custody

under 13280 Page 3 of 7

DATE _____ PAGE 4 OF 7

PROJ. MGR. _____

COMPANY ARTESIAN ENVIRONMENTAL CONS.

ADDRESS 3175 KERNER BLVD
SAN RAFAEL CA 94901

SAMPLERS (SIGNATURE) (PHONE NO.) 257-4801

ANALYSIS REPORT

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	TPH - Gasoline (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020)	TPH - Diesel (EPA 3510/3550, 8015)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240, 524.2)	BASE/NEUTRALS, ACIDS (EPA 625/627, 8270, 525)	TOTAL OIL & GREASE (EPA 5520, B+F, E+F)	PCB (EPA 608, 8080)	PESTICIDES (EPA 608, 8080)	TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1)		METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (TCLP, STLC)				NUMBER OF CONTAINERS
B-7-30'	9/13	2:46	S			X	X		X																1
B-7-35'	9/13	2:52	S																						1
B-7-40'	9/13	3:00	S																						1
B-7-45'	9/13	3:06	S																						1
B-7-50'	9/13	3:15	S																						1
B-8-5'	9/14	7:30	S																						1
B-8-10'	9/14	7:34	S																						1
B-8-15'	9/14	7:38	S																						1

PROJECT INFORMATION

PROJECT NAME:

PROJECT NUMBER

P.O. #

SAMPLE RECEIPT

TOTAL NO. OF CONTAINERS	
HEAD SPACE	
REC'D GOOD CONDITION/COLD	
CONFORMS TO RECORD	

TAT	STANDARD 5-DAY			24	48	72	OTHER

SPECIAL INSTRUCTIONS/COMMENTS:
RUN B-7-30'
TEN DAY TAT

RELINQUISHED BY 1.	RELINQUISHED BY 2.	RELINQUISHED BY 3.
(SIGNATURE) (TIME)	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)
BEN MIRO 4:55pm		
(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
9/14/93		
(COMPANY)	(COMPANY)	(COMPANY)
RECEIVED BY 1.	**RECEIVED BY 2.**	**RECEIVED BY (LABORATORY) 3.**
(SIGNATURE) (TIME)	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)
SUE NAIDU 9.14.93		
(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
CCY		
(COMPANY)	(COMPANY)	(LAB)

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9309177

CHROMALAB, INC.

DOHS 1094

2239 Omega Road, #1 • San Ramon, California 94583
510/831-1788 • Facsimile 510/831-8798

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Chain of Custody

DATE 9/14/93 PAGE 5 OF 7

PROJ. MGR.

COMPANY ARTESIAN ENVIRONMENTAL CONS.

ADDRESS 3175 KERNER BLVD
SAN RAFAEL CA 94901

SAMPLERS (SIGNATURE) (PHONE NO.) 257-4801

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	TPH - Gasoline (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020)	TPH - Diesel (EPA 3510/3550, 8015)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240, 524.2)	BASE/NEUTRALS, ACIDS (EPA 625/627, 8270, 525)	TOTAL OIL & GREASE (EPA 5520, B+F, E+F)	PCB (EPA 608, 8080)	PESTICIDES (EPA 608, 8080)	TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1)		METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (TCLP, STLC)				NUMBER OF CONTAINERS
B-8-20'	9/14	7:44	S																					1
B-8-25'	9/14	7:49	S																					1
B-8-30'	9/14	7:56	S			X	X		X															1
B-8-35'	9/14	8:02	S																					1
B-8-40'	9/14	8:10	S																					1
B-8-45'	9/14	8:15	S																					1
B-8-50'	9/14	8:29	S																					1

ANALYSIS REPORT

PROJECT INFORMATION

PROJECT NAME:

PROJECT NUMBER

P.O. #

SAMPLE RECEIPT

TOTAL NO. OF CONTAINERS	
HEAD SPACE	
REC'D GOOD CONDITION/COLD	
CONFORMS TO RECORD	

TAT	STANDARD 5-DAY			24	48	72	OTHER

SPECIAL INSTRUCTIONS/COMMENTS:
RUN B-8-30'
10 Day TAT

RELINQUISHED BY 1.	RELINQUISHED BY 2.	RELINQUISHED BY 3.
(SIGNATURE) (TIME)	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)
BENMIRA 4:55pm		
(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
9/14/93		
(COMPANY)	(COMPANY)	(COMPANY)
RECEIVED BY 1.	**RECEIVED BY 2.**	**RECEIVED BY (LABORATORY) 3.**
(SIGNATURE) (TIME)	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)
SACNATDU 9/14/93		
(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
CCx		
(COMPANY)	(COMPANY)	(LAB)

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9309177

CHROMALAB, INC.

DOHS 1094

2239 Omega Road, #1 • San Ramon, California 94583
510/831-1788 • Facsimile 510/831-8798

Chain of Custody

under 13260 Page 1 of 7 DATE 9/14/93 PAGE 5 OF 7

PROJ. MGR.

COMPANY ARTESIAN ENVIRONMENTAL CONS.

ADDRESS 3175 KERNER BLVD
SAN RAFAEL CA 94901

SAMPLERS (SIGNATURE) (PHONE NO.) 257-4801

ANALYSIS REPORT

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	TPH - Gasoline (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020)	TPH - Diesel (EPA 3510/3550, 8015)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240, 524.2)	BASE/NEUTRALS, ACIDS (EPA 625/627, 8270, 525)	TOTAL OIL & GREASE (EPA 5520, B+F, E+F)	PCB (EPA 608, 8080)	PESTICIDES (EPA 608, 8080)	TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1)		METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (TCLP, STLC)				NUMBER OF CONTAINERS
B-9-5'	9/14	10:45	S																						1
B-9-10'	9/14	10:46	S																						1
B-9-15'	9/14	10:53	S																						1
B-9-20'	9/14	10:56	S																						1
B-9-25'	9/14	11:01	S																						1
B-9-30'	9/14	11:07	S																						1
B-9-35'	9/14	11:14	S																						1
B-9-40'	9/14	11:21	S			X	X		X																1
B-9-45'	9/14	11:26	S																						1

PROJECT INFORMATION

PROJECT NAME:

PROJECT NUMBER

P.O. #

SAMPLE RECEIPT

TOTAL NO. OF CONTAINERS	
HEAD SPACE	
REC'D GOOD CONDITION/COLD	
CONFORMS TO RECORD	

TAT	STANDARD 5-DAY			24	48	72	OTHER

SPECIAL INSTRUCTIONS/COMMENTS:
RUN B-9-40'

10 DAY TAT

RELINQUISHED BY 1	RELINQUISHED BY 2.	RELINQUISHED BY 3.
(SIGNATURE) (TIME)	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)
BEN MIRZA 4:55p		
(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
9/14/93		
(COMPANY)	(COMPANY)	(COMPANY)
RECEIVED BY 1.	**RECEIVED BY 2.**	**RECEIVED BY (LABORATORY) 3.**
(SIGNATURE) (TIME)	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)
SAC NAIDU 9-14-93		
(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
CCX		
(COMPANY)	(COMPANY)	(LAB)

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9309177

CHROMALAB, INC.

DOHS 1094

2239 Omega Road, #1 • San Ramon, California 94583
510/831-1788 • Facsimile 510/831-8798

Page 7 of 7 Order # 13250

Chain of Custody

DATE 9/14/93 PAGE 7 OF 7

PROJ. MGR

COMPANY ARTESIAN ENVIRONMENTAL CONS.

ADDRESS 3175 KERNER BLVD
SAN RAFAEL CA 94901

SAMPLERS (SIGNATURE) (PHONE NO.) 257-4801

ANALYSIS REPORT

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	TPH - Gasoline (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020)	TPH - Diesel (EPA 3510/3550, 8015)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240, 524.2)	BASE/NEUTRALS, ACIDS (EPA 625/627, 8270, 525)	TOTAL OIL & GREASE (EPA 5520, B+F, E+F)	PCB (EPA 608, 8080)	PESTICIDES (EPA 608, 8080)	TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1)		METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (TCLP, STLC)				NUMBER OF CONTAINERS
B-9-50'	9/14	11:50	S																						1

PROJECT INFORMATION

PROJECT NAME:

PROJECT NUMBER

P.O. #

SAMPLE RECEIPT

TOTAL NO. OF CONTAINERS	
HEAD SPACE	
REC'D GOOD CONDITION/COLD	
CONFORMS TO RECORD	

TAT	STANDARD 5-DAY			24	48	72	OTHER

SPECIAL INSTRUCTIONS/COMMENTS:

RELINQUISHED BY 1.	RELINQUISHED BY 2.	RELINQUISHED BY 3.
(SIGNATURE) (TIME)	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)
BEN MURRAY 4:55pm		
(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
9/14/93		
(COMPANY)	(COMPANY)	(COMPANY)
RECEIVED BY 1.	**RECEIVED BY 2.**	**RECEIVED BY (LABORATORY) 3.**
(SIGNATURE) (TIME)	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)
4:55pm		
SAC NATN 9-14-93		
(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
CCX		
(COMPANY)	(COMPANY)	(LAB)

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CHROMALAB, INC.

DOHS 1094

SUBM #: 9309371
CLIENT: ARTESIA
DUE: 10/06/93
REF: 13498

Chain of Custody

DATE 9/28/93 PAGE 1 OF 1

PROJ. MGR. BEN MIRA
COMPANY ARTESIAN ENVIRONMENTAL CONS.
ADDRESS 3175 KERNER BLVD
SAN RAFAEL CA 94901
SAMPLERS (SIGNATURE) (PHONE NO.) 257-4801

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	TPH - Gasoline (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020)	TPH - Diesel (EPA 3510/3550, 8015)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240, 524.2)	BASE/NEUTRALS, ACIDS (EPA 625/627, 8270, 525)	TOTAL OIL & GREASE (EPA 5520, B+F, E+F)	PCB (EPA 608, 8080)	PESTICIDES (EPA 608, 8080)	TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1)		METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (TCLP, STLC)				NUMBER OF CONTAINERS
B5-AQ	9/28/93	4:10	W			X	X		X																
B6-AQ	9/28/93	3:10				X	X		X																
B7-AQ	9/28/93	11:15				X	X		X																
B8-AQ	9/28/93	12:35				X	X		X																
B9-AQ	9/28/93	1:40				X	X		X																

PROJECT INFORMATION

PROJECT NAME: EASTMONT MALL
PROJECT NUMBER: 110-001-01
P.O. #

SAMPLE RECEIPT

TOTAL NO. OF CONTAINERS	25
HEAD SPACE	
REC'D GOOD CONDITION/COLD	
CONFORMS TO RECORD	

TAT: STANDARD 5-DAY | 24 | 48 | 72 | OTHER

SPECIAL INSTRUCTIONS/COMMENTS:
5 DAY TAT

	1.	2.	3.
RELINQUISHED BY	Pamela Taylor 12:35		
(SIGNATURE) (TIME)			
(PRINTED NAME) (DATE)	DARRELL TAYLOR 9-27-93		
(COMPANY)	ARTESIAN		
RECEIVED BY			
(SIGNATURE) (TIME)			
(PRINTED NAME) (DATE)			
(COMPANY)			
RECEIVED BY (LABORATORY)			B. Morrow 12:35
(SIGNATURE) (TIME)			B. Morrow 9-28-93
(PRINTED NAME) (DATE)			Chromalab
(LAB)			

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ARTESIAN ENVIRONMENTAL CONSULTANTS.
JOB SAFETY PLAN

Project location: The Eastmont Mall, One Eastmont Mall, Oakland, CA
Artesian Job #1695

Possible hazards on this job are expected to be: physical hazards associated with the operation of heavy equipment and, possibly, chemical hazards from soil, water, and/or vapor contaminated with volatile organic compounds, petroleum hydrocarbons, or any pure product of the aforementioned substance.

Required personal protective equipment for this project: Level D protection (steel toe boots, work gloves, hard hat, safety glasses), level C protection on standby (OV cartridges).

ARTESIAN ENVIRONMENTAL CONSULTANTS
JOB SAFETY PLAN

1. Site: The Eastmont Mall

2. Location: One Eastmont Mall, Oakland, California

3. Plan Prepared: Artesian Environmental Consultants Date: 9-27-95

4. Plan Approved: Project Manager
Jason French _____

Health & Safety Officer
Jim Jacobs, RG _____

5. Facility Description: Shopping Mall

6. Status (active, inactive, unknown): Active, UST unused.

7. Surroundings: Mixed commercial and residential surroundings.

8. Site map: Attached

9. Climate: Moderate dry summers, cool wet winters.

10. Site History (origin of contamination and history of injuries exposure, chemical spills, complaints, etc.): Waste oil tank to be removed. Condition of tank and surrounding soils unknown.

11. Description of work: Excavation and removal of a single 550-gallon waste oil tank. Collection of soil samples from beneath former tank location.

12. Chemical contaminants:

Chemical	Media	Minimum	Maximum
Petroleum hydrocarbons/ Volatile organic compounds	Soil, vapor, water	0	Unknown
Metals	Soil, water	0	Unknown

13. Procedures to mitigate hazards:

A) Mechanical Hazards
- verify that all equipment is in good condition
- barricade area or otherwise restrict access
- exercise caution when working in close proximity to heavy equipment

B) Electrical Hazards

- locate and mark buried utilities before excavating
- maintain at least 10 feet of clearance from overhead power lines
- properly ground all electrical equipment
- avoid standing in water when operating electrical equipment
- be familiar with specific operating instructions for each piece of equipment
- barricade area or otherwise restrict access
- deactivate any source of ignition within 25 feet of work area

C) Chemical Hazards

- use personal protective equipment listed above
- conduct direct reading air monitoring to evaluate respiratory and explosion hazards
- wash hands before eating or drinking
- avoid hand to mouth contact before washing hands
- keep dust to a minimum, avoid breathing dust

D) Temperature Hazards

- Heat: when temperature exceeds 70 F, take frequent breaks in shaded area. Unzip or remove coveralls during breaks. Have cool water or electrolyte replenishment solution available. Drink small amounts frequently to avoid dehydration. Count the pulse rate for 30 seconds, as early as possible in the rest period. If the pulse rate exceeds 110 beats per minute at the beginning of the rest period, shorten the work cycle by one-third.

- Cold: wear multi layer cold weather outfits- the outer layer should be of wind-resistant fabric

- Wet: wear proper rain gear and shoes with slip resistant tread

E) Acoustical Hazards

- use earplugs when noise level prevents conversation in normal voice at a distance of three feet

F) Organic Vapors

- monitor organic vapors. If total hydrocarbons exceed 5 ppm above background for more than 5 minutes, don Level C personal protective equipment

- if total hydrocarbons exceed 500 ppm, supply mechanical ventilation

- monitor lower explosive limit. If LEL exceeds 20%, leave area and call the fire department

- no smoking within 25 feet of working area

- post no smoking signs

14. Decontamination procedures: Steam clean equipment before leaving work area. Wash boots and gloves. Launder coveralls. Wash hands and face as soon as possible after stopping work.

15. Materials generated on-site: Drum drill cuttings and decon water in DOT approved drums with proper labels and markings. Place soil stockpiles on visqueen and cover with weighted visqueen.

16. Site resources: water, restrooms, electricity available from onsite manager.

17. Emergency equipment: Fire extinguisher, cellular phone, and first aid kit to be on-site at all times

18. Emergency telephone numbers:

Ambulance	911
Police	911
Fire Department	911
Highland Hospital	(510) 534-8055 1411 E. 31st. Street, Oakland, CA
Poison Control:	(800) 523-2222
Project Manager:	(415) 257-4801
Safety Officer:	(415) 257-4801

19. **Emergency Route to Hospital:**
•Go North along MacArthur Blvd. for 1.25 miles,
•Turn left onto Hwy. 580 going north for 3 miles,
•Exit at Beaumont Ave., turn left onto Beaumont Ave.,
•Go along Beaumont Ave. for 3 blocks, Highland Hospital is on the right.

20. Project personnel list and safety plan distribution record: All project staff must sign, indicating they have read and understand the safety plan.

Employee Name	Date/Time	Signature

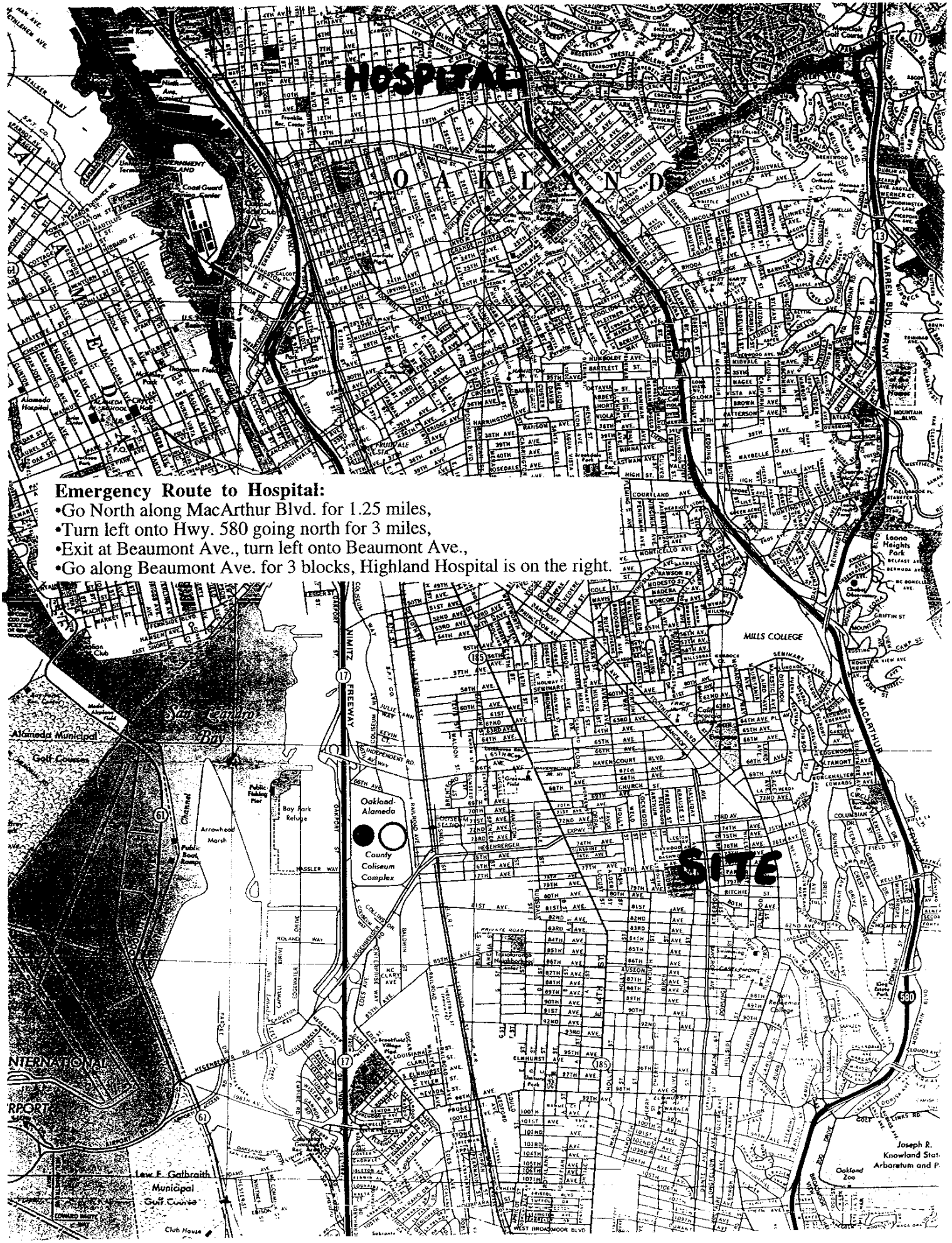
21. Health and safety meeting: All personnel participating in the project must receive initial health and safety orientation. Thereafter, a brief "tailgate" safety meeting is required as deemed necessary by the Health and Safety Officer.

Name	Topics	Date	Employee Initial

22. Visitors: It is Artesian's policy that visitors must furnish his/her own personal protective

equipment. All visitors are required to sign the visitor log and comply with the safety plan requirements.

Name of Visitor	Firm Name	Date/Time	Signature


HOSPITAL
OAKLAND
ALAMEDA
Emergency Route to Hospital:
•Go North along MacArthur Blvd. for 1.25 miles,
•Turn left onto Hwy. 580 going north for 3 miles,
•Exit at Beaumont Ave., turn left onto Beaumont Ave.,
•Go along Beaumont Ave. for 3 blocks, Highland Hospital is on the right.
SITE
MILLS COLLEGE
MACARTHUR
NIMITZ FREEWAY
San Leandro Bay
Alameda Municipal Golf Courses
Oakland-Alameda County Coliseum Complex
Arrowhead Marsh
Bay Farm Refuge
Public Fishing Pier
Public Boat Ramp
Lew F. Galbraith Municipal Golf Course
Club House
Leona Heights Park
Joseph R. Knowland State Arboretum and P.
Oakland Zoo
INTERNATIONAL
RPORT

One Eastmont Mall
Oakland, California 94605
510 632-1131

why wasn't MW-1, MW-4 at BP site (7210 Bancroft) analyzed for TPHd after 1/92?

Eastmont

January 28, 1993

Mr. Ron Owcarz
Alameda County Environmental Health
80 Swan Way #200
Oakland, CA 94621

Re: Eastmont plan of investigation

Dear Mr. Owcarz:

As you know, in late 1989 the previous owner of Eastmont discovered the presence of certain chemicals in some of the groundwater beneath the Eastmont shopping center. One site involving hydrocarbons has been recommended for closure by your office. (Tom Peacock handled this UST-Local Oversight Program file number 26 with JCPenney.) The second site, also involving hydrocarbons, is open under your supervision and that of the RWQCB. British Petroleum is handling this matter. But there was a third, troublesome location near the Bank of America (referred to in most reports as "MW-2") which turned up related solvents in quantities exceeding drinking water standards. The results of the previous owner's investigation were reported to your office by Dames and Moore, when this consultant handled the JCPenney matter. We attach a copy of this report dated July 10, 1991 for your convenience.

We now propose to better define this third site MW-2 by broadly probing relevant portions of the shopping center parcel. We seek your approval of this plan of investigation.

There will be five new borings as identified on attachment one. The borings will be drilled to a maximum depth of 50 feet if no water is encountered. If water is encountered, an attempt will be made to complete the boring as a monitoring well. All water samples will be tested for purgeable halocarbons using the 8010 method. Soil will be continuously cored to a maximum depth of 25 feet, sampling where appropriate, but not less than every five feet all the way to 50 feet. At least one soil sampling per boring will be tested for total petroleum hydrocarbons (TPH-g,-d, EPA 8015/BTEX EPA 8020) and for purgeable halocarbons (EPA 8010). If there is any positive finding, the sample will also be tested for CAM priority metals. If there is a positive finding in the water of any boring, the soil sample from the capillary fringe will be tested as described in addition to any other appropriate samples from that boring. If there is no positive finding in the water of a boring, the soil from the ten foot sample will be tested as described. Dry holes will be appropriately plugged. Additionally, the three original wells (MW-2,-3 and -4) will be resampled and

tested for purgeable halocarbons (EPA 8010). Naturally, proper EPA protocol and industry custom will be adhered to during the drilling, sampling and testing.

Based on earlier work by others at the JCPenney site and British Petroleum site, groundwater flow appears to be due west. The aquifers encountered also appear to be discontinuous or perched at levels of 20 to 40 feet below grade. Solvents were not encountered at these other locations. More substantial aquifers probably exist at depths of 100 feet or more. We expect that one or two of our borings will be dry holes as a result of this geology, which is no doubt heavily influenced by our proximity to the Hayward Fault. (Dames and Moore was 2 for 3; Hydroenvironmental is 5 for 6; and Hunter, the original consultant, was 3 for 4 in terms of completed wells to attempts.) We also believe that proposed new borings -5 and -6 are downgradient from the problematic site MW-2. Other boring locations were selected based on the old GM plant layout and current accessibility. (See attachment two.)

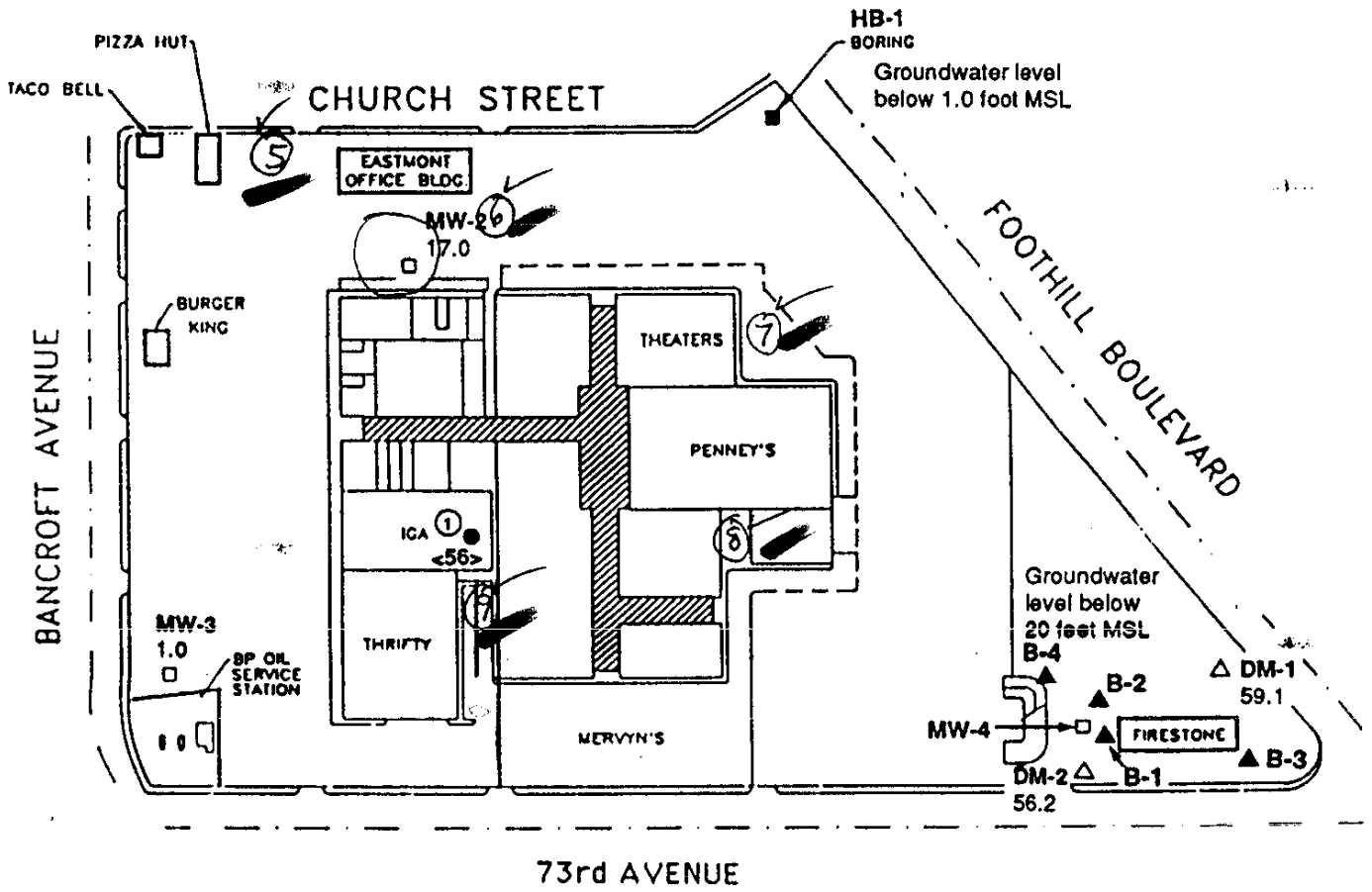
With this proposed scope of inquiry, we expect to be able to determine whether the presence of solvents is localized or generalized on the shopping center parcel. If generalized, the cause will likely be attributable to the former industrial use of the property. If not, we should be able to focus on one of two dry cleaner locations, one on and one off the property, as a potential source. Because degradation products of PCE are involved, we suspect that the problem may date back many years. If localized, likely hot spots (e.g., around the main drain lines) can be probed for a source. We doubt that a source will be derived from this set of probes. And if the problem is generalized, we should be able to define the size of the affected aquifer and any travel. If no higher levels are encountered and the aquifer is isolated, there may be nothing else to do other than periodically monitor then close the site. We know of no uses of this water in our area. At a minimum, our understanding of the shopping center parcel's geology should be greatly enhanced.

You will note that the former GM plant contained several large underground storage tanks, but we doubt that these locations are material as hydrocarbons have not been encountered at MW-2.

We look forward to your review and approval. Please call me directly if there are questions.

Sincerely,

Jim Given for Eastmont



Attachment One

NOTE:

1. ① Groundwater measured in industrial well at 96 feet below ground surface (bgs) or 56 feet below mean sea level. Perforated in lower aquifer from 90 to 393 feet bgs.
2. Plate modified from Hunter Environmental Services, December 20, 1989.

WATER LEVEL MEASUREMENTS AT THE EASTMONT MALL (1989, 1991 INVESTIGATIONS)

June 1991
443-090-043

TBA Site
Eastmont Mall
Oakland, California

DAMES & MOORE

PLATE 5-5

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3.1 REGIONAL GEOLOGY AND HYDROGEOLOGY

The Bay Plain lies west of the Hayward Fault Zone and is comprised of coalescing alluvial fans, extending from Oakland south to the Fremont area. The alluvial sediments in the Bay Plain consist of a mixture of gravels, sands and clays that are Pliocene-Pleistocene to late Pleistocene in age and were laid down on the alluvial cones west of the foothills. In general the particle size and bed thickness of the alluvium decreases westward from the apexes of the alluvial cones where the watercourses exit the foothills.

The site is located in the Coast Ranges Geologic Province of California. The region is characterized by northwest trending mountain ranges and valleys. The site is situated on the Bay Plain alluvial fan complex which is located between the San Francisco Bay and Oakland Hills.

The geology of western Alameda County is dominated by effects of the Hayward Fault Zone and associated transpressional/transtensional structural features (Maslonkowski, 1984). The active Hayward Fault trends northwest-southeast, extending along the east side of the San Francisco Bay from Richmond south to San Jose. Traces of the Hayward fault are located 2,000 to 4,000 feet north east of the TBA site as shown on Plate 1-1.

The foothills east of the Hayward Fault Zone are underlain by Jurassic and Cretaceous sedimentary and igneous rocks of the Franciscan Assemblage and Knoxville Formation with local bodies of Quaternary Leona Rhyolite. These rocks do not contain significant water-producing units (California Department of Water Resources, 1967).

Water producing zones (aquifers) are present throughout the soil Bay Plain sequence as sand and gravel layers, separated both vertically and horizontally by silt and clay of lower permeability. Aquifers in the Oakland area are generally discontinuous and interfinger with less permeable layers, as is typical of alluvial systems. These aquifers

Attachment 2; Relevant Excerpts from other Studies

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are composed of gently westward-sloping sand and gravel beds that were deposited by streams which shifted and braided on the alluvial cones over a period of hundreds of thousands of years (Maslonkowski, 1984).

Shallow aquifers within 50 feet of the ground surface are found throughout the Bay Plain Alluvial Fan. These minor aquifers are generally limited in areal extent and are usually composed of silty sand. These deposits yield small quantities of water to wells, generally less than 35 gallons per minute. Most of the shallow groundwater exists under perched conditions contained above a clay aquitard unit which separates this near surface groundwater from the saturated soils at the groundwater table and the underlying aquifers (Maslonkowski, 1984).

The J.C. Penney Oakland TBA Center is located within the proximal (upstream) reaches of the Bay Plain alluvial fan. The site is north of the Arroyo Viejo and San Leandro Creeks. Both the Arroyo Viejo and San Leandro Creek channels are entrenched below the level of the surrounding plain. This condition is believed to have existed since late Pleistocene time. The deposition of alluvial sediments on this area of the plain, therefore, has been limited to times of overbank flood flow (Maslonkowski, 1984). Alluvial overbank sediments are predominantly fine-grained sands or silts with a clay matrix. Near surface groundwater at the site and vicinity is hydraulically separated from underlying aquifers by fine grained clay rich sediments. A comparison of water levels measured in shallow and deep wells in East Oakland suggests that most near surface groundwater in the site area is perched.

Little accurate information is available to evaluate the direction and rate of flow of shallow groundwater in the Oakland Bay Plain sediments. However, the regional groundwater flow direction is likely to be toward the west, from the foothills down the Bay Plain alluvial fan toward San Francisco Bay. However, in the area of the J.C. Penney TBA site the variable stratigraphy, aquifer systems, topographic relief and the

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proximity of this site to the Hayward Fault complicate the interpretation of the localized near surface groundwater gradient and flow direction at the site.

3.2 SITE TOPOGRAPHY AND PHYSIOGRAPHY

The Oakland J. C. Penney TBA site is located in the northwest corner of the Eastmont Mall. The site is triangular in shape. It is bounded on the north by Foothill Boulevard; the south eastern boundary is 73rd Avenue and the south western boundary is a retaining wall which supports an underground and elevated parking structure just west of the site. The northern half of the site was excavated approximately five feet below grade to level the lot. A five foot retaining wall was constructed across the northern boundary of the site. The surface elevation in the eastern corner of the site is 75 feet above sea level, while the surface elevation of the western boundary is 70 feet above mean sea level. The surface elevation of the underground parking structure located just west of the site is approximately 50 feet above sea level.

The site is located at the base of the Oakland hills which rise up to 1,175 feet above sea level to the north east. Two thousand feet south of the site lies the Arroyo Viejo stream channel.

3.3 EASTMONT MALL SITE HISTORY

A review of old topographic maps of Oakland shows that the Eastmont Mall site was a residential neighborhood prior to 1916. In 1916, the site was excavated and leveled for the construction of an automobile assembly plant. According to the Sanborn Insurance Map of 1926, much of the plant was completed in 1916 and presumably began operations in that year (Plate 3-1).

The Sanborn Map shows that the plant was constructed around three separate railroad spurs which entered the factory at ground level from the southwest. In order to

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maintain a level assembly floor, the northeastern portion of the plant was excavated into the gently sloping topography to a minimum of 20 feet below ground surface (bgs). On this side of the plant, the floor of the third story was level with the ground surface along the outside of the building.

The assembly floors of the plant were divided into three separate elongate structures separated by three railroad spurs. Each of the three separate assembly areas were connected together along the back of the plant by a building which housed a fourth assembly area.

All of the structures in the main plant appear to have been three stories high. The manufacturing activity that occurred on each level was not available in the records; however, the Sanborn maps of 1925-1949 do note certain manufacturing practices that were performed in the four buildings (Plate 3-1).

The southern most assembly area housed the preliminary painting room on the first floor and the final painting and drying area on the second floor. A 50,000 gallon steel water tower sat above this section of the factory presumably storing water for use in the plant and as a precaution against fire.

The central assembly floor housed the chassis assembling area, the trim painting area, the Japanning ovens, the sanding area, the assembly conveyor, and the fender enameling area which included two large dip tanks. The factory power plant and boiler room were located in the northern corner of the central assembly floor. Beneath this section of the factory, five underground storage tanks (USTs) were buried. These tanks included a 13,000 gallon gasoline tank, a 12,000 gallon motor oil tank, a 13,000 gallon fuel tank, a 10,000 gallon kerosene tank and a 125,000 gallon reservoir for the hydrant system.

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Above this central section of the plant sat two more steel tanks. A 50,000 gallon tank was supported 105 feet above the ground and a 25,000 gallon tank was supported 69 feet above the ground. These tanks were filled with water and serviced the sprinkler system installed throughout the factory to fight fires.

The northwest assembly floor was serviced by two railroad spurs and housed the frame assembling department, the fender department, the final test department and the conditioning shed. A 13,000 gallon underground oil tank was located north of the northern spur at the center line of the building. The northwestern corner of this wing of the factory was excavated into the hillside so that the second and third floors were level with the ground surface along the outside of the building.

The building connecting the three assembly areas of the plant along the northern face of the factory housed the body assembling area. The third floor of this building was at ground level.

Based on periodic Sanborn map updates, the plant appears to have maintained the same general floor plan throughout its life. Between 1925 and 1945 a paint mixing building and a drum rack were added to the southern corner of the property. A woodworking shop was leveled on the western corner of the property. Various assembly floors were reconfigured for different manufacturing uses. All the underground storage tanks remained in place and presumably contained product throughout the life of the factory.

Aerial photos taken of the site in 1965 show the partial demolition of the Chevrolet Fisher Body Plant (Plates 3-2 and 3-3). No records were found that gave the specific factory closing date; however, this presumably occurred in the early 1960s. The aerial photos of the factory demolition show the former traces of the rail spurs, the general outlines of the northern and southern wings and the connecting structure of the factory. Still standing is the central part of the factory which housed the fender dipping racks.

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This part of the factory was built above the five underground storage tanks. The excavation along the northern side of the plant is visible. The plant site sat vacant from 1965 to 1969. Construction of the Eastmont Mall began in 1969.

The Eastmont Mall was built in two phases. Construction of Phase I began in 1969 concentrating on the southeastern half of the property. The rest of the mall was built according to the Phase II plan which began in 1970 and included the Penney's (now Firestone) TBA site and the J.C. Penney store. Detailed architectural plans for the Eastmont Mall are included as Plates 3-4 and 3-5. These plans were prepared by Burke Kober Nicolais Archuleta in 1969. Plate 3-4 is a plan of the Upper Mall level; Plate 3-5 is a plan of the Lower Mall level.

The layout of the assembly plant can be related to the present configuration of the Eastmont Mall buildings and parking lots (Plate 3-2). The J.C. Penney TBA site is located northeast of the mall and northeast of the former location of the Chevrolet plant. Prior to 1916 this site was presumably undeveloped or residential. After the car plant was built in 1916, this area was paved for parking and remained a parking lot until the construction of the Eastmont Mall began in 1969.

The J.C. Penney store is presently located just north of the former location of the Chevrolet plant central assembly area. This area housed fender dipping racks, Japanning ovens and sanding facilities. Beneath this area were five underground storage tanks containing gasoline, fuel oil, kerosene, motor oil and fire fighting solution (presumably water). The Eastmont Mall parking structure was built over much of the central assembly area.

3.4 UNDERGROUND STORAGE TANK EXCAVATION AT THE TBA SITE

Underground storage tanks (USTs) were located beneath opposite corners of the TBA building. Beneath the southwest corner of the facility gasoline was stored in buried

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fuel tanks. Beneath the northeast corner of the building waste oil was stored in an underground tank.

3.4.1 Underground Fuel Tank Removal

Three 10,000 gallon underground fuel tanks were excavated and removed from the TBA site by Firestone in 1985. These tanks were located at the southwest corner of the Firestone TBA building (Plate 4-1) and supplied gasoline to the pump island formerly located at the south end of the facility.

Dames & Moore made inquiries at the Alameda County Department of Environmental Health and the Oakland Fire Department fire prevention group about information on these tanks. Environmental health had no records on file concerning the UST removal. The Oakland City Fire Department files contained an UST permit but no information regarding the tank removal operation or the condition of the UST's at the time of removal, or whether soil and water sampling had been conducted.

J.C. Penney has no record of tank excavations at the site. According to Mr. Bob Arneson of J.C. Penney Co., Firestone disbanded the construction services group that managed UST removal and did not organize a system to recover their UST files.

Kurt Jeurgens and Kathleen Scheutzow of Firestone were contacted for information concerning the tank removal. They indicated that Dor-Am Builders, Inc. of Sacramento was contracted in 1985 to remove the tanks in accordance with federal, state and local regulations and codes. Dor-Am Builders, Inc. completed the removal operation. However, neither Mr. Jeurgens nor Ms. Scheutzow had records or field logs of the excavation and tank removal operation. Dor-Am Builders, Inc. is no longer in business and does not have a forwarding phone message.

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According to Mr. Jim Given, the Eastmont Mall manager, the underground tanks were excavated in 1985 when Firestone decided to discontinue selling gasoline after acquiring the J.C. Penney TBA. He has no records or knows of any other details concerning the tank removal.

3.4.2 Waste Oil Tank Removal

According to Ms. Kathleen Scheutzow of Firestone, the original waste oil tank formerly located at the northeast corner of the TBA building was removed by a Firestone subcontractor and replaced in 1987. Following the excavation and removal of this tank, a soil sample was taken at the bottom of the tank pit. The soil was analyzed for petroleum hydrocarbons by EPA Methods 8020, 8015, 503E and 8010. No hydrocarbon constituents were detected above the reporting limit of 0.1 mg/kg. A new waste oil tank was installed in the same location.

This waste oil tank, installed in 1987, was subsequently removed on December 12, 1991. The Alameda County Department of Environmental Health has a complete file on the excavation and removal of this second waste oil tank. Two samples of soil from the bottom of the excavation were analyzed for total petroleum hydrocarbons (TPH) as waste oil and TPH as diesel. One sample did not contain detectable hydrocarbons while the other sample contained 820 mg/kg THP as waste oil and 40 mg/kg THP as diesel. Based on these results, the excavated soils were removed and the excavation was filled with clean fill. The Alameda County Department of Health Services signed off on this tank removal on March 20, 1991 ?

3.5 PREVIOUS INVESTIGATIONS

Hunter Environmental Services, Inc. (Hunter) of Martinez, California performed a Phase II environmental audit of the Eastmont Mall property and submitted a report to Topa Savings Bank of Los Angeles, California on December 20, 1989. The Hunter

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investigation included an asbestos survey of the mall structures and a soil and groundwater investigation beneath areas of suspected hydrocarbon contamination.

Four soil borings were drilled by Hunter on the mall property (Plate 5-5). Three of these borings were completed as monitoring wells. Boring HB-1 was drilled to a depth of 54 feet near the southeast corner of Church Street and Foothill Boulevard. This boring did not encounter groundwater. Soil samples retrieved during drilling were screened on site using an organic vapor meter (OVM). None of the soil samples yielded detectible OVM readings. Samples taken from 10 and 30 feet bgs were analyzed for TPH (Method 8015) and benzene, toluene, ethylbenzene and total xylenes(BTEX) (Method 8020). No hydrocarbon was detected in the soils in boring HB-1.

MW-2 was drilled to a total depth of 35 feet immediately west of the bank as shown on Plate 5-5. Groundwater was encountered at 29 feet below ground surface (bgs). Soils were screened with an OVM during drilling and no hydrocarbon vapors were detected. Soil samples taken from 10 and 20 feet bgs were analyzed for TPH (Method 8015) and BTEX (Method 8020); none of these hydrocarbons were detected above the reporting limit (1 ppm-TPH, 3 ppb-BTEX). After completing the boring as a monitoring well, groundwater was sampled and analyzed for volatile organic compounds using EPA Method 8240. 1-2 Dichloroethene (1-2 DCE) was detected at 8 parts per billion (ppb), trichloroethene (TCE) was detected at 19 ppb, and tetrachloroethene (PCE) was detected at 210 ppb. No other volatile organic compounds were detected above the reporting limit (3-10 ppb).

MW-3 was drilled to a total depth of 45 feet to the west of the BP service station located on the corner of 73rd Avenue and Bancroft Avenue. Groundwater was encountered at 37 feet bgs. Soils were screened with an OVM during drilling and no hydrocarbon vapors were detected. Soil samples from 10 and 20 feet bgs were analyzed for TPH and BTEX; none of these hydrocarbon compounds were detected above the reporting limit (1 ppm-TPH, 3 ppb-BTEX). After completing the boring as a monitoring

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well, groundwater was sampled and analyzed for total volatile organics using EPA Method 8240. No hydrocarbon compounds were detected above the reporting limit (3-10 ppb) by this method. Although Method 8240 does analyze for benzene, toluene, ethylbenzene and total xylenes, water samples were also analyzed for TPH by Method 8015 and BTEX by Method 8020. Results from these analyses include 2.7 parts per million (ppm) TPH and 530, 16, 150, 59 ppb for BTEX, respectively.

MW-4 was drilled to a total depth of 25 feet to the south and downgradient of the former J.C. Penney TBA USTs location. Groundwater was encountered at 17 feet bgs. Soils were screened with an OVM during drilling. All soil samples registered non-detectable on the OVM except for a sample taken at 15 feet bgs which indicated a level of 230 ppm. Soil samples taken from 10 and 15 feet bgs were analyzed for TPH (Method 8015) and BTEX (Method 8020). The sample taken from 10 feet contained no detectable hydrocarbon constituents above the reporting limit; the sample taken from 15 feet contained TPH at 2000 ppm, benzene at 1.4 ppm, toluene at 4.3 ppm, ethylbenzene at 23.0 ppm and total xylenes at 150 ppm. After completing the boring as a monitoring well, groundwater was sampled and analyzed for volatile organic compounds. TPH was found at 2.2 ppm by Method 8015; BTEX was found at 28, 21, 50 and 290 ppb, respectively, by Method 8020, and at 440, 19, 130 and 54 ppb, respectively, by Method 8240. The relative ratios and absolute concentrations of these compounds analyzed by methods 8015 and 8020 do not agree.

The presence of hydrocarbon compounds in soils and groundwater from well MW-4 resulted in the Eastmont Mall management requesting further investigation of the TBA site by J.C. Penney.

3.6 AGENCY FILE SEARCH

An agency file review was performed to identify potential off-site sources of contamination that could adversely impact the site. A review of local, state and federal

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agency lists of sites with known or potential hazardous waste or underground tank problems was conducted to identify whether such sites exist with one-half mile of the Eastmont TBA location. The lists that were reviewed included: the U.S. EPA National Priority List ("Federal Superfund") and CERCLIS list; State of California Bond Expenditures Plan List ("California Superfund"), Department of Health Services, Abandoned Sites Program Information (ASPIS) List; Hazardous Waste and Substances Sites List Pursuant to AB 3750; the RWQCB's List of Leaking Underground Storage Tanks, and North Bay Counties Toxics List; and the California Waste Management Boards' Solid Waste Information System (SWIS) List.

The agency list review did not identify any sites located with one-half mile of the TBA site.

3.7 GROUNDWATER WELL INVENTORY IN THE VICINITY OF THE SITE

An inventory of groundwater wells drilled in the vicinity of the Eastmont Mall was obtained from the Alameda County Public Works Agency to assess groundwater use within one-half mile of the site. No municipal, domestic, industrial or livestock wells were identified within one-half mile of the site. An irrigation well was drilled near the corner of 64th Avenue and MacArthur Boulevard at the Evergreen Cemetery. This well is located 2,700 feet northwest cross gradient from the site. Other than this single irrigation well, groundwater is apparently not used as a resource within one-half mile of the TBA site.

Non-supply wells that are worth noting include an array of seven groundwater monitoring wells located at 6455 Foothill Boulevard on Oakland Community Housing property. These monitoring wells were drilled in 1991 and are located about 2,600 feet west, cross gradient to the TBA site. The presence of the monitoring wells at 6455 Foothill Boulevard suggests that a groundwater investigation is in progress. This location was not noted in Dames & Moore's review of agency lists of potential hazardous waste

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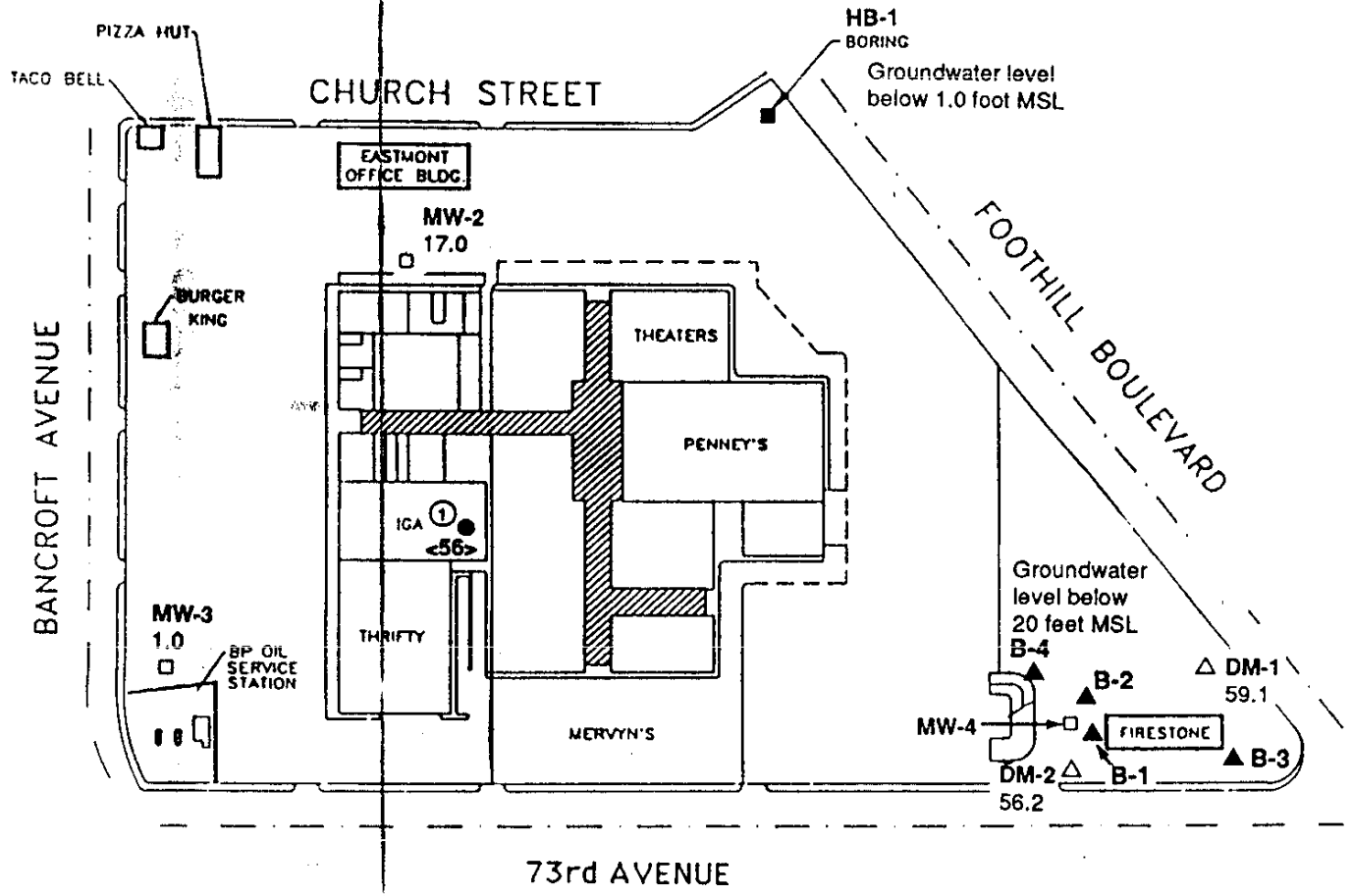
sites or leaking UST sites. The nature of the investigation at this site is not known; however, all the wells are drilled to depths of 27 to 32 feet and are screened in the uppermost saturated zone at 13 to 18 feet bgs suggesting that the investigation is concentrating on the near surface groundwater resource zone.

The groundwater well inventory also listed a 400 foot deep abandoned well (well 2S/3W 10Q1) drilled 550 feet east of Bancroft and 450 feet north of 73rd Avenue on Eastmont Mall property. This well was drilled on March 9, 1951 and was operated by the Chevrolet Oakland Division as an industrial water well. The well serviced the assembly plant until it sanded up in 1954. Depth to groundwater in the well was recorded at 96 feet bgs (56 feet below sea level). Following a 30 hour pump test, the well's yield was 170 gallons per minute out of a 12-inch diameter casing perforated from 90 feet to 393 feet bgs. The driller's log from this well is included in Appendix A.

The large disparity between water levels measured in this well and the monitoring wells drilled on the site suggests that the 1951 industrial water well tapped a separate lower aquifer not in hydraulic equilibrium with respect to the shallow groundwater zone encountered at the site.

Four other deep wells located near the site which are completed in the lower aquifer(s) also show a large disparity between the water level measurements of deep confined groundwater and near surface (0 to 50 feet bgs) unconfined water. The water level in deep wells is generally encountered tens of feet below sea level while the water level in shallow wells is almost always above sea level. In some areas, borings drilled in the shallow zone did not encounter groundwater at all.

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KEY

- ● Abandoned Industrial Well (1951)
- △ Dames & Moore Monitoring Well (4/91)
- ▲ Dames & Moore Soil Boring (4/91)
- □ Hunter Environ. Monitoring Well (12/89)
- ■ Hunter Environ. Soil Boring (12/89)
- 17.0 Groundwater elevation in feet above mean sea level (MSL)

N

0 400
Feet

NOTE:

1. ① Groundwater measured in industrial well at 96 feet below ground surface (bgs) or 56 feet below mean sea level. Perforated in lower aquifer from 90 to 393 feet bgs.
2. Plate modified from Hunter Environmental Services, December 20, 1989.

WATER LEVEL MEASUREMENTS AT THE EASTMONT MALL (1989, 1991 INVESTIGATIONS)

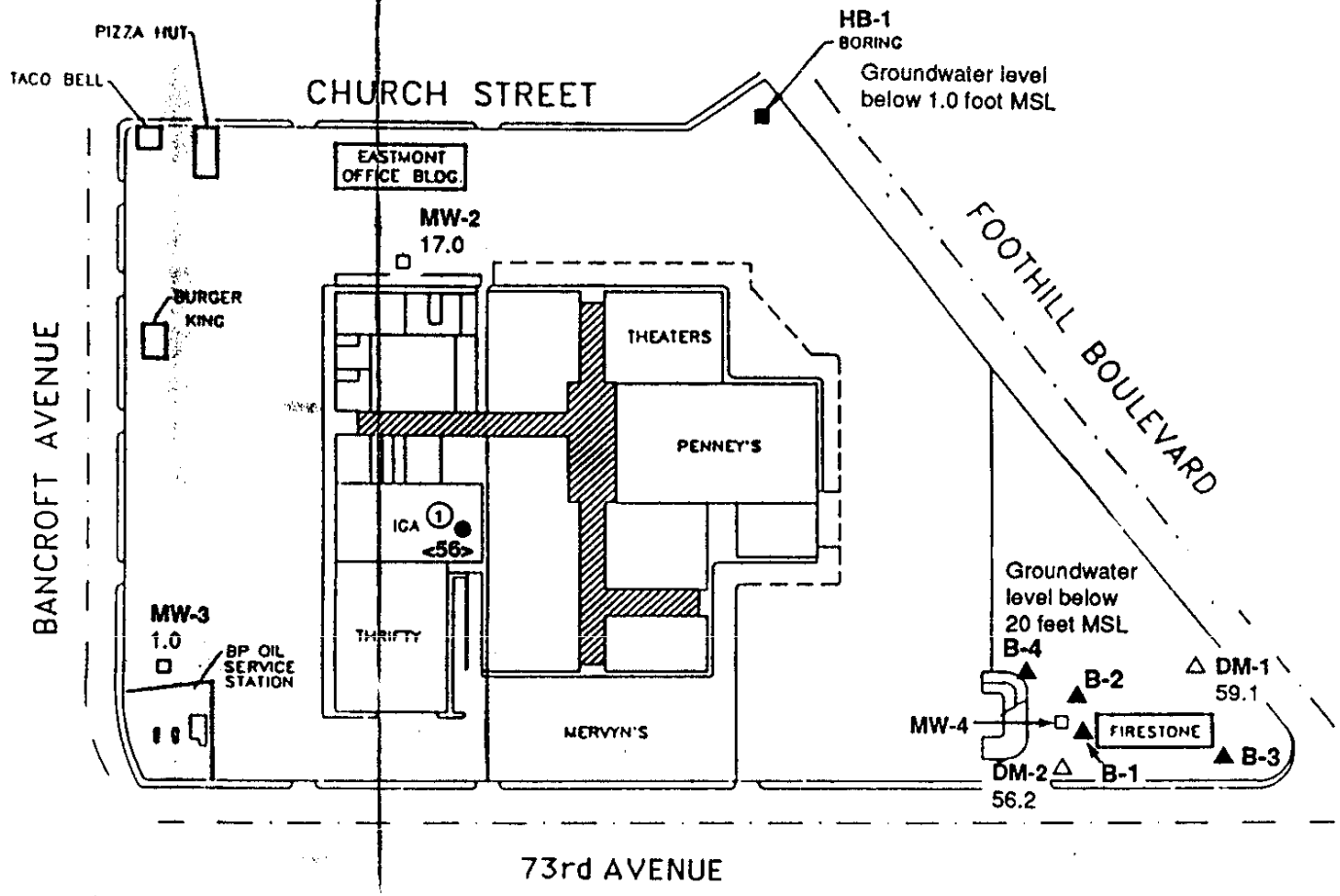
June 1991
443-090-043

TBA Site
Eastmont Mall
Oakland, California

DAMES & MOORE

PLATE 5-5

00000282.tif 520 / 639



NOTE:

1. ① Groundwater measured in industrial well at 96 feet below ground surface (bgs) or 56 feet below mean sea level. Perforated in lower aquifer from 90 to 393 feet bgs.
2. Plate modified from Hunter Environmental Services, December 20, 1989.

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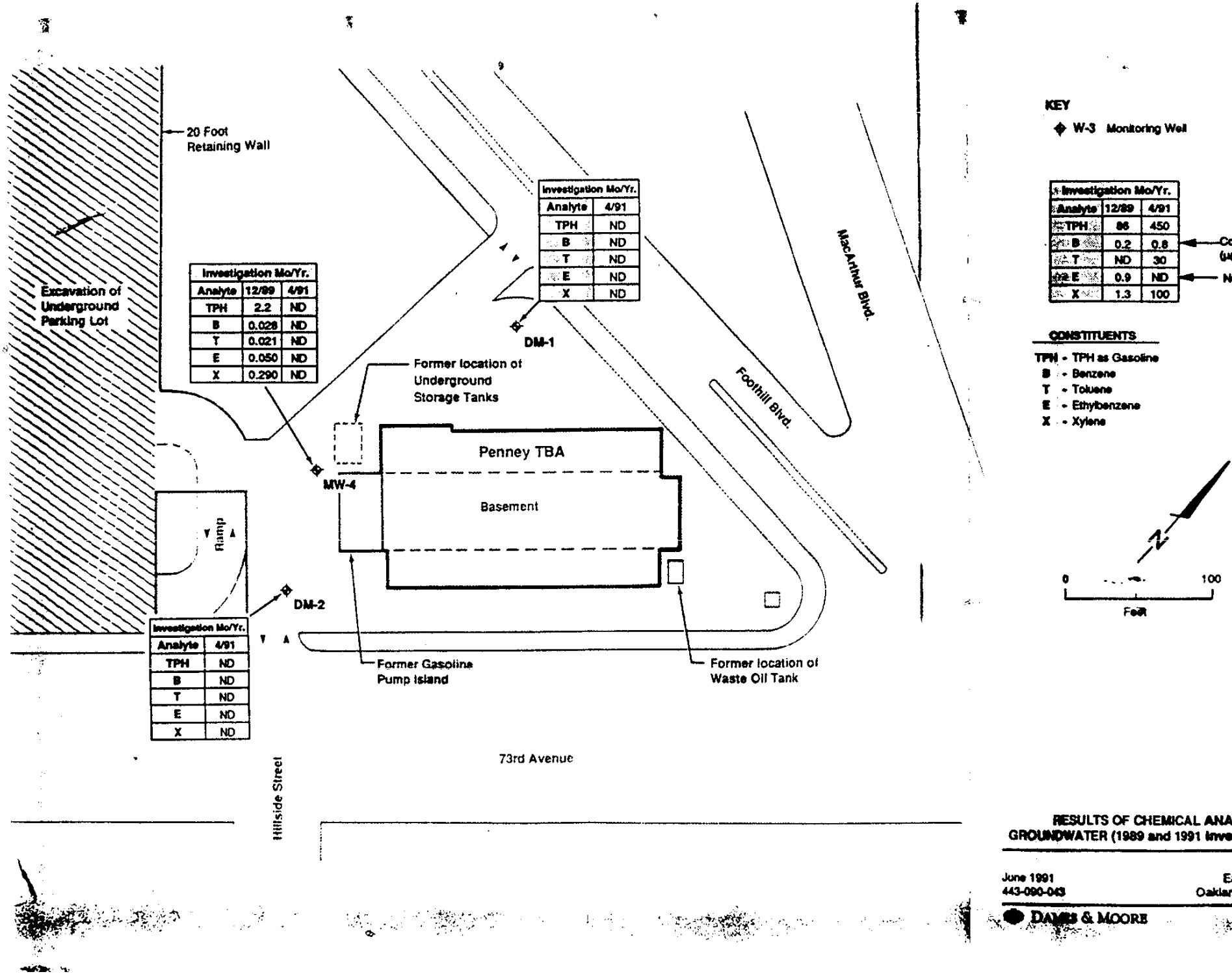
June 1991
443-090-043

TBA Site
Eastmont Mall
Oakland, California

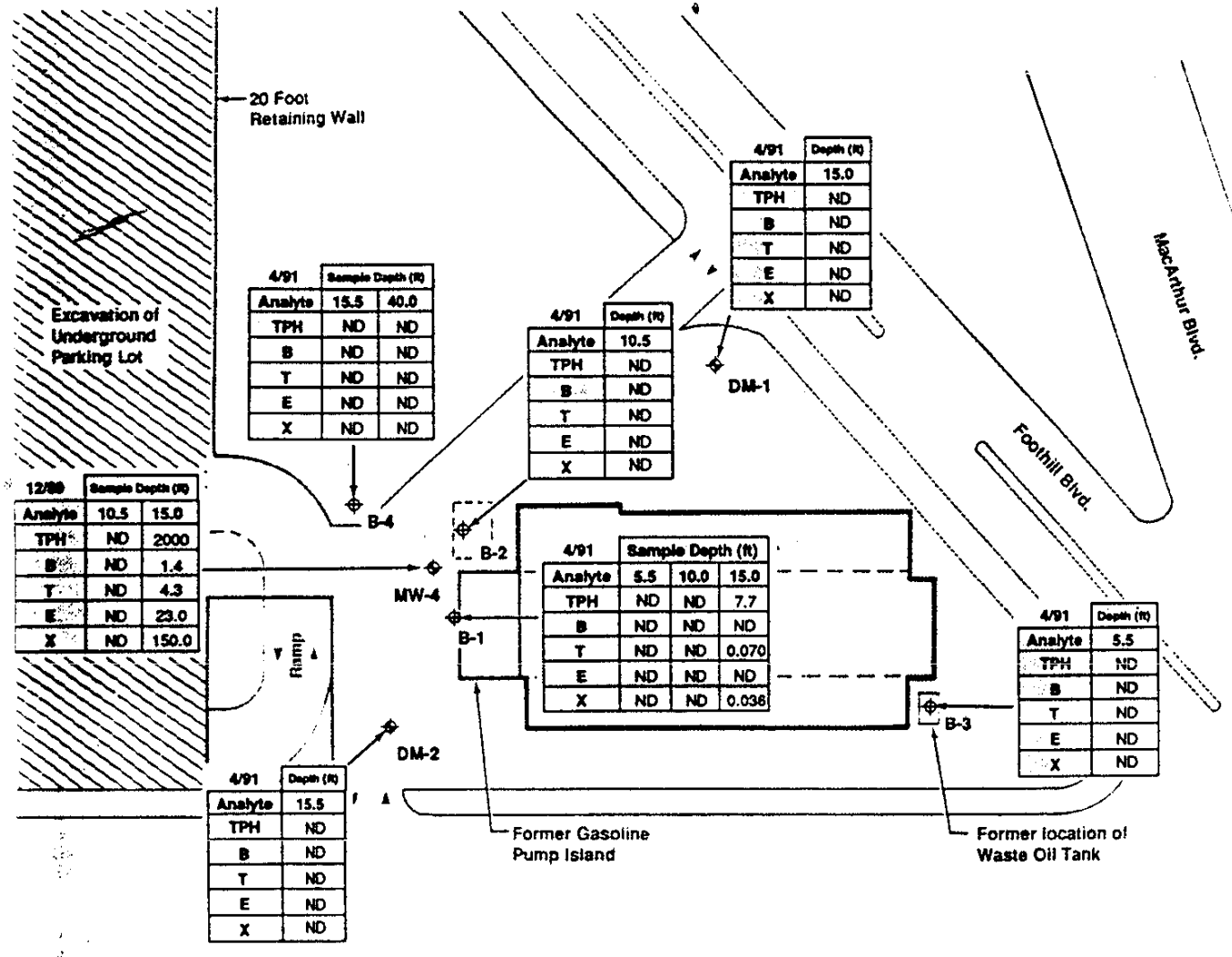
DAMES & MOORE

PLATE 5-5

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KEY

DM-5 Monitoring Well
B-1 Boring

Investigation
Mo./Year | Sample Depth (ft)

Analyte	5.0	10.0	15.0	
TPH	86	450	200	
B	0.2	0.8	7.0	← Concentrat (µg/Kg)
T	ND	30	24	
E	0.9	10	ND	← Not Detect
X	1.3	100	38	

CONSTITUENTS

TPH - TPH as Gasoline
B - Benzene
T - Toluene
E - Ethylbenzene
X - Xylene

0 100
Feet

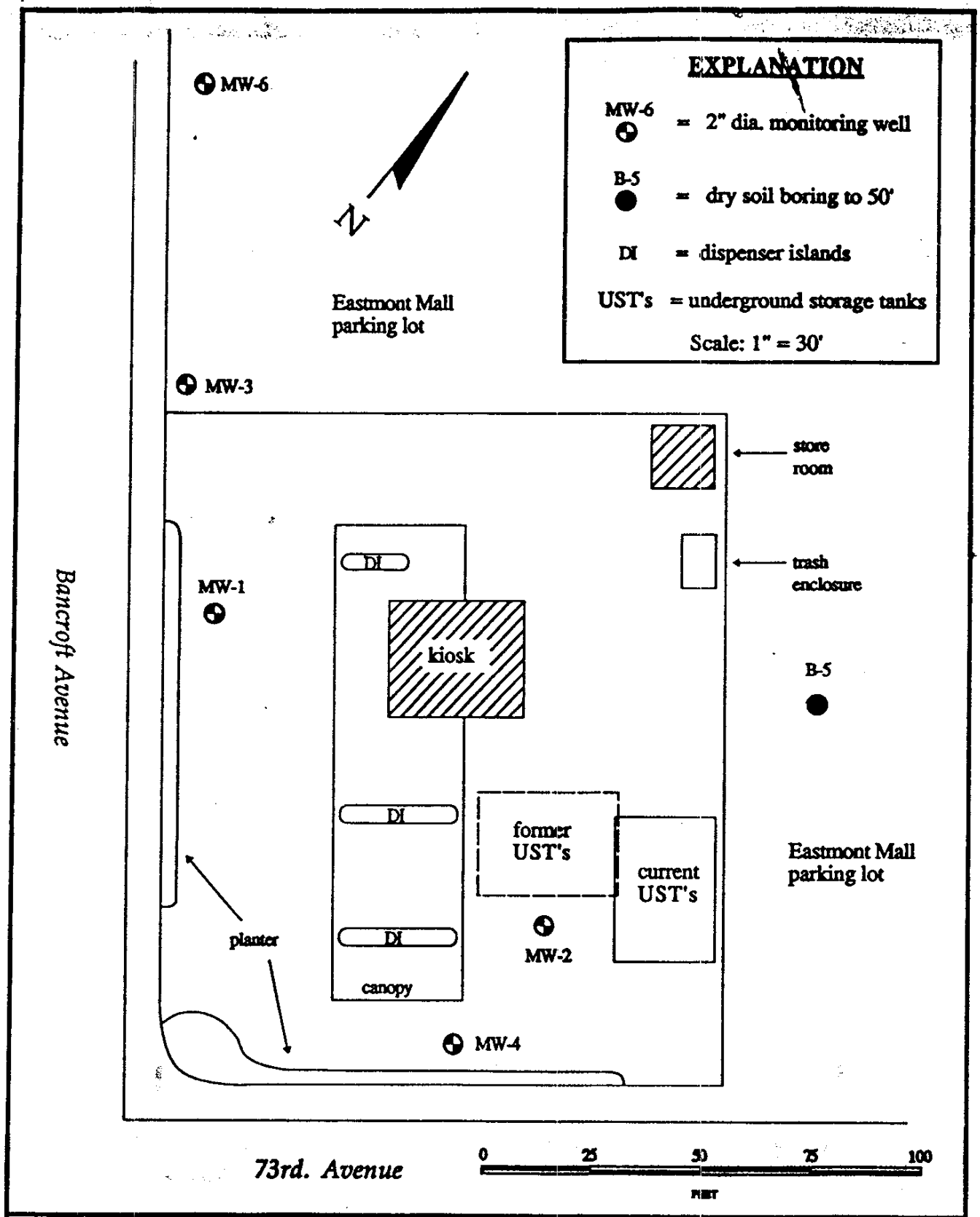
RESULTS OF CHEMICAL ANALYSES O
(1989 and 1991 Investi

June 1991
443-060-043

Eas
Oakland,

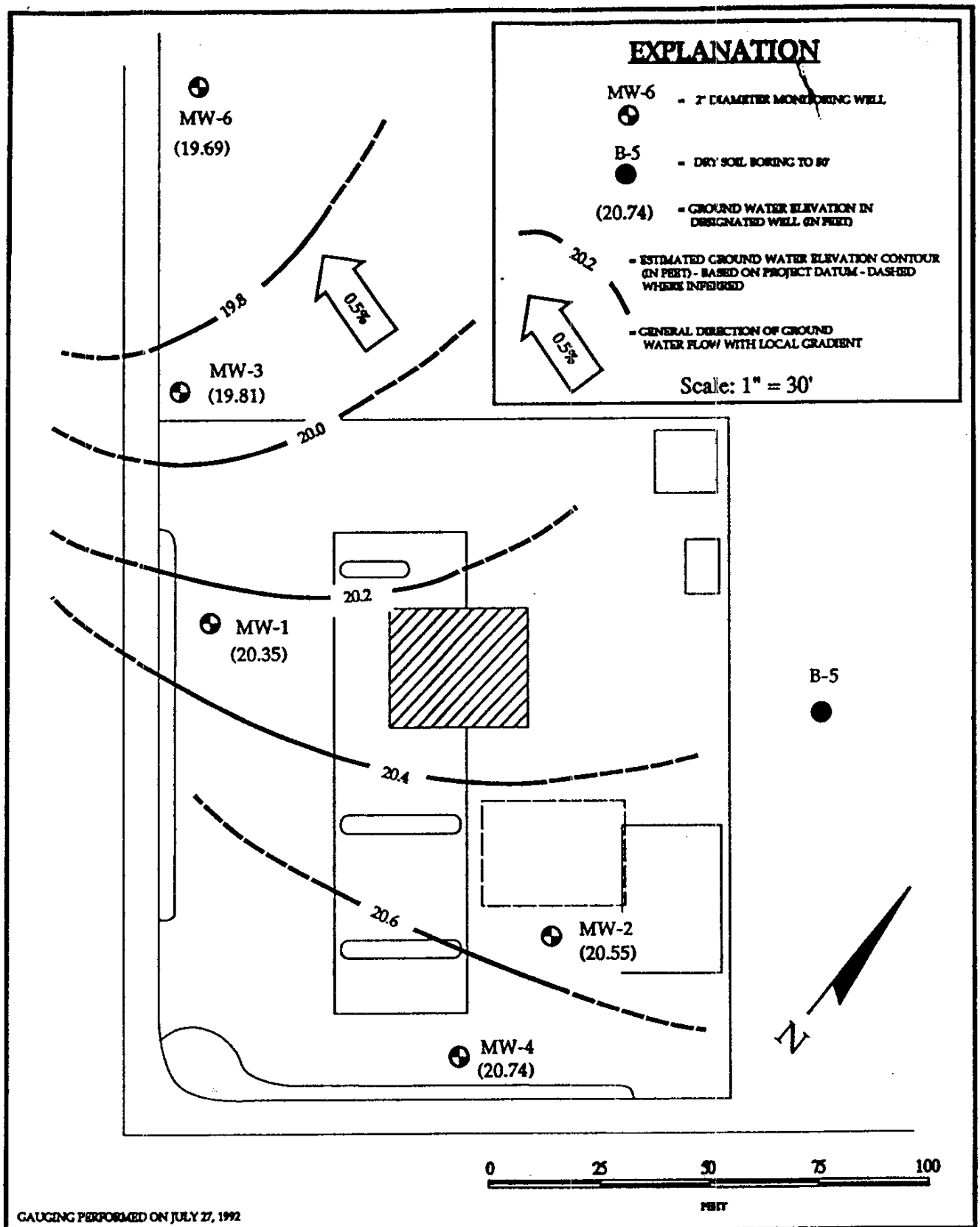
DAMES & MOORE

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HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.	**SITE PLAN** BP Service Station No. 11117 7210 Bancroft Avenue Oakland, California	Job No. 9-029 Figure 2

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GAUGING PERFORMED ON JULY 27, 1992

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.	GROUND WATER CONTOUR MAP BP Service Station No. 11117 7210 Bancroft Avenue Oakland, California	Job No. 9-029 Figure 3

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Table 3

WATER SAMPLES
CUMULATIVE ANALYTICAL RESULTS

BP Oil Facility No. 11117
7210 Bancroft Avenue
Oakland, California

MW No.		GW elev (ft)	TPHg (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	TPHd (ppb)	O-Pb (ppm)
MW-1	1/5/92	16.65	57,000	2,400	1,000	1,100	3,100	50,000	ND
	6/5/92	20.80	31,000	2,800	2,100	800	2,300	NT	NT
	7/24/92	20.35	NT	NT	NT	NT	NT	NT	NT
MW-2	1/5/92	dry	NT	NT	NT	NT	NT	NT	NT
	6/5/92	21.01	11,000	2,000	180	490	1,900	NT	NT
	7/24/92	20.55	NT	NT	NT	NT	NT	NT	NT
MW-3	1/5/92	16.26	7,400	790	23	210	40	4,000	ND
(Mall	6/5/92	20.35	2,000	130	5.3	93	20	NT	NT
Well)	7/24/92	19.81	NT	NT	NT	NT	NT	NT	NT
MW-4	7/24/92	20.74	42,000	3,200	3,600	1,400	4,100	NT	NT
MW-6	7/24/92	19.69	ND	1.6	ND	ND	ND	NT	NT

GW elev = Ground water elevation in feet

TPHg = Total petroleum hydrocarbons as gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total Xylenes

TPHd = Total petroleum hydrocarbons as diesel

O-Pb = Organic Lead

ND = Not detected above the laboratory method detection limit
NT = Not tested

Table 1

SOIL SAMPLES
SUMMARY OF ANALYTICAL RESULTS

BP Oil Facility No. 11117
7210 Bancroft Avenue
Oakland, California

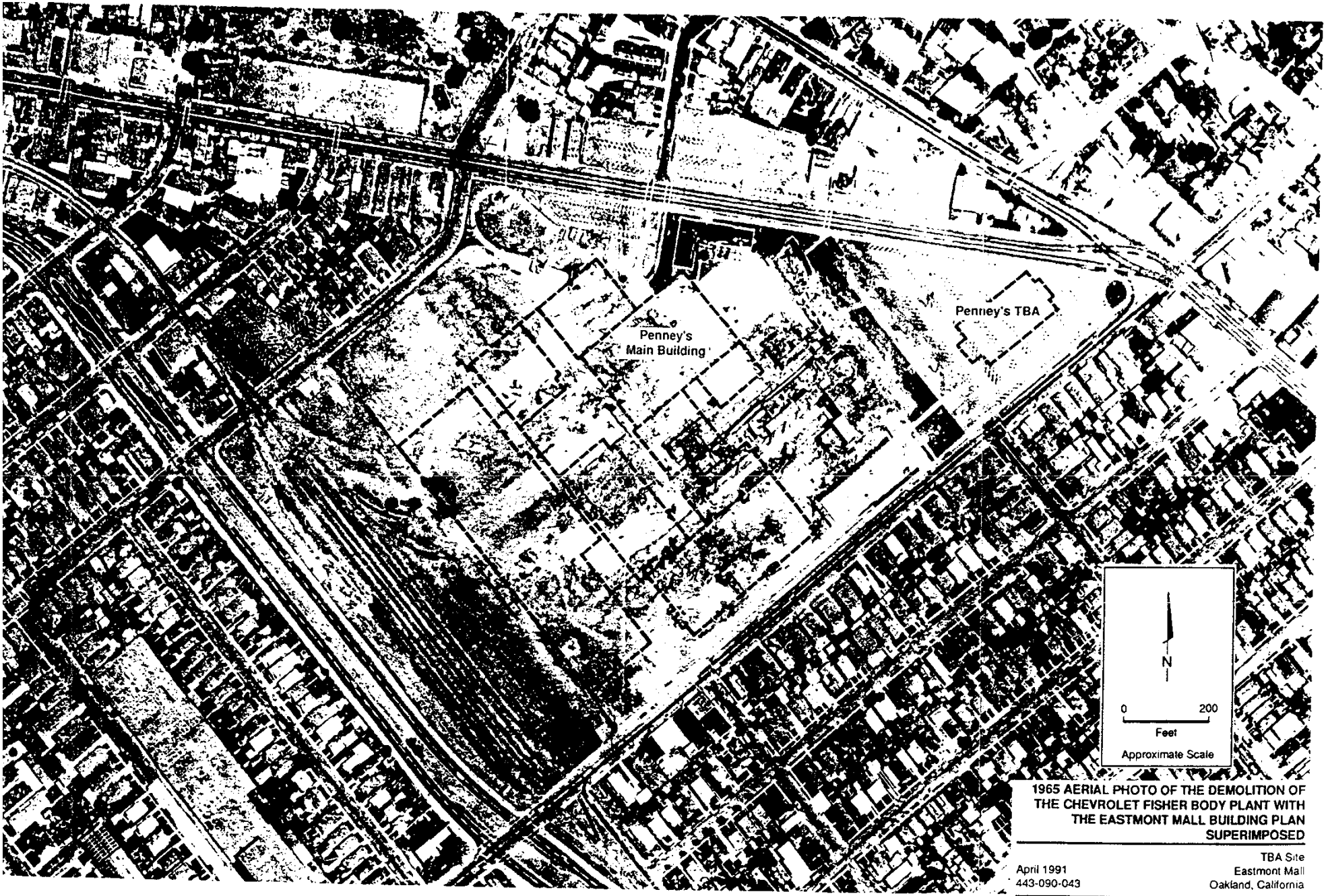
Sample Description	Date	TPHg (ppm)	B (ppm)	T (ppm)	E (ppm)	X (ppm)
MW-1 @ 5'	12/27/92	ND	ND	ND	ND	ND
MW-1 @ 15'	12/27/92	ND	ND	ND	ND	ND
MW-1 @ 25'	12/27/92	ND	ND	ND	ND	ND
MW-2 @ 5'	12/27/92	ND	ND	ND	ND	ND
MW-2 @ 15'	12/27/92	ND	ND	ND	ND	ND
MW-2 @ 25'	12/27/92	ND	ND	ND	ND	ND
MW-4 @ 15'	7/22/92	240	ND	6.6	5.7	27
MW-4 @ 20'	7/22/92	6,000	34	450	190	780
MW-4 @ 25'	7/22/92	1,100	1.6	36	27	140
B-5 @ 30'	7/22/92	ND	ND	ND	ND	ND
MW-6 @ 30'	7/23/92	ND	ND	ND	ND	ND

TPHg = Total petroleum hydrocarbons as gasoline

B = Benzene
T = Toluene
E = Ethylbenzene
X = Total Xylenes

ND = Not detected above the laboratory method detection limit

TPHg and BTEX analyses EPA 8015/8020 (DHS modified)

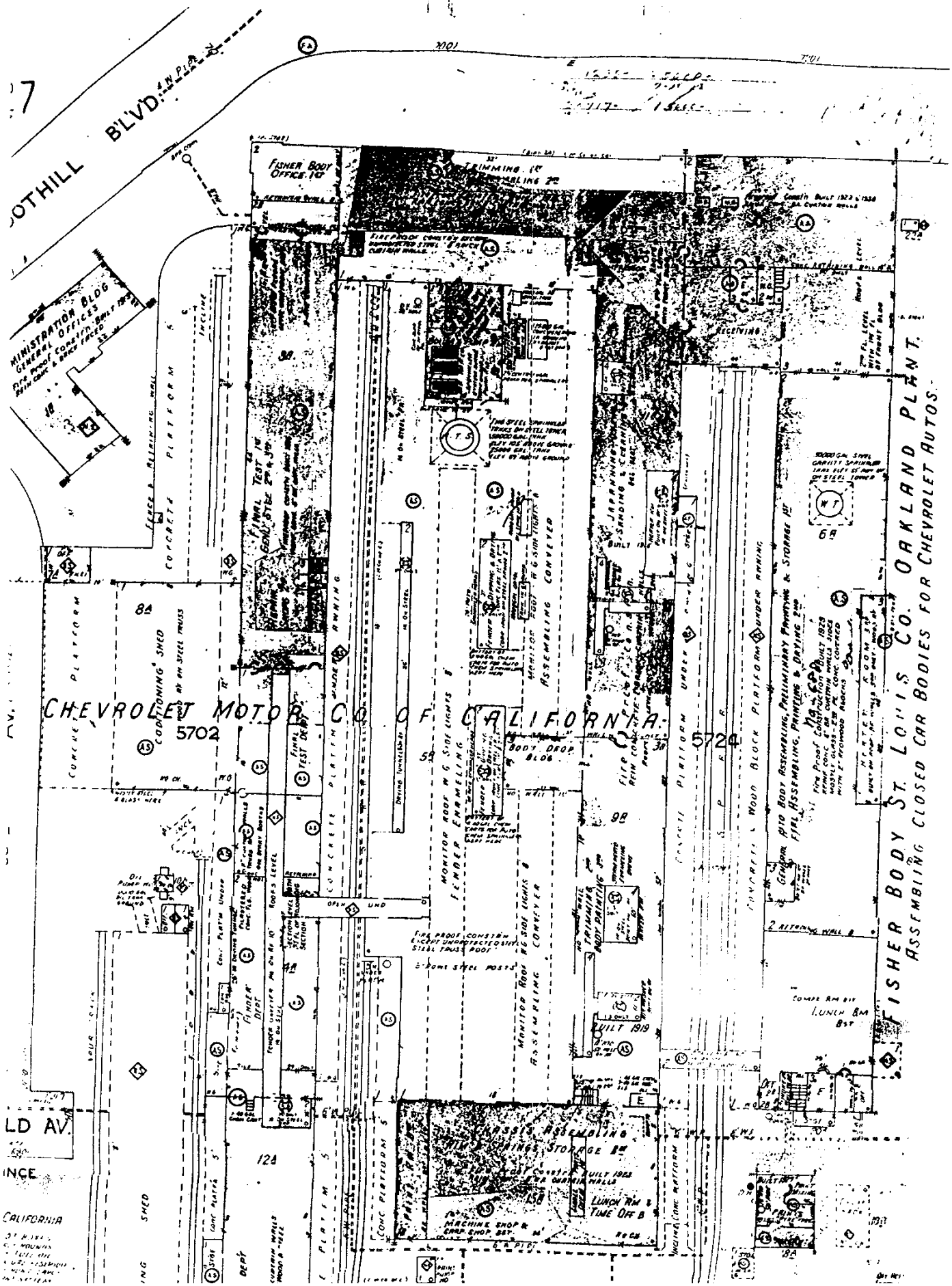


1965 AERIAL PHOTO OF THE DEMOLITION OF THE CHEVROLET FISHER BODY PLANT WITH THE EASTMONT MALL BUILDING PLAN SUPERIMPOSED

April 1991
443-090-043

TBA Site
Eastmont Mall
Oakland, California

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FISHER BODY ST. LOUIS CO. OAKLAND PLANT.
ASSEMBLING CLOSED CAR BODIES FOR CHEVROLET AUTOS.
CHEVROLET MOTOR CO OF CALIFORNIA.
5702
5724
FISHER BODY OFFICE 1-0
ADMINISTRATION BLDG GENERAL OFFICES
FIRE PROOF CONSTR'N BUILT 1928
REINF CONC & BRICK FACED
CONCRETE PLATFORM
CONDITIONING SHED
FINAL TEST
BODY STOR
MONITOR ROOF N G SIDE LIGHTS
FENDER ENAMELING
ASSEMBLING CONVEYER
BODY DROP BLDG
TRIMMING
BUILT 1919
CHASSIS ASSEMBLING
LUNCH RM & TIME OFF B
MACHINE SHOP & EMP CHOP ST.
RECEIVING
SHED
DEPT
LD AV.
CALIFORNIA

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, DIRECTOR
DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6700

Certified Mail #
09/26/95 - STID# 114

Notice of Requirement to Reimburse

David Norwitt
Not Applicable
1 Eastmont Mall
Oakland, Ca - 94605

Responsible Party
Property Owner

Eastmont Mall
1 Eastmont Mall
Oakland , CA 94605

SITE

Date First Reported
Substance: Gasoline
Petroleum: (X)Yes
Source: F

The federal Petroleum Leaking Underground Storage Tank Trust Fund (Federal Trust Fund) provides funding to pay the local and state agency administrative and oversight costs associated with the cleanup of releases from underground storage tanks. The legislature has authorized funds to pay the local and state agency administrative and oversight costs associated with the cleanup of releases from underground storage tanks. The direct and indirect costs of overseeing site investigation or remedial action at the above site are funded, in whole or in part, from the Federal Trust Fund. The above individual(s) or entity(ies) have been identified as the party or parties responsible for investigation and cleanup of the above site. **YOU ARE HEREBY NOTIFIED** that pursuant to Title 42 of the United States Code, Section 6991b(h)(6) and Section 25297.1 of the California Health and Safety Code, the above Responsible Party or Parties must reimburse the State Water Resources Control Board (SWRCB) not more than 150 percent of the total amount of site specific oversight costs actually incurred while overseeing the cleanup of the above referenced underground storage tank site, and the above Responsible Party or Parties must make full payment of such costs within 30 days of receipt of a detailed invoice from the SWRCB.

Any action or inaction by this local agency associated with corrective action, including responsible party identification, is subject to petitio to the SWRCB. Petitions must be filed within 30 days from the date of th action/inaction. To obtain petition procedures, please fax your request to Roni Riley at the SWRCB at (916) 227-4349 or telephone (916) 227-4408. Please contact Madhulla LOGAN, Hazardous Materials Specialist at this office if you have any questions concerning this matter.

George Young

George Young, Acting Chief
Contract Project Director

c: Mike Harper, SWRCB
Add: _____ Reason:_____
Delete: _____ Reason:_____
Change: _____ Reason:_____

Standard Form UST03 (6/93) ;Report: Reimb 5/95

ARTESIAN ENVIRONMENTAL CONSULTANTS

93 SEP -2 AM 11:41

August 31, 1993

Mr. Ronald Owcarz, Hazardous Materials Specialist
Alameda County Health Care Services Agency
Department of Environmental Health
UST Local Oversight Program
80 Swan Way, Rm. 200
Oakland, CA 94621

Re: Soil Boring and Monitor Well Installations Workplan
One Eastmont Mall
Oakland, California 94605

Dear Mr. Owcarz:

Artesian Environmental Consultants (Artesian) is pleased to present this workplan and site safety plan to you regarding the soil boring and monitor well installations in Oakland, California. Artesian has been retained by Mr. David Norwitt. Artesian Environmental Consultants is a state licensed general engineering contractor (CA: A, Haz Waste, C-57: 624461).

INTRODUCTION

This work plan presents the proposed activities by Artesian Environmental Consultants, (Artesian) at One Eastmont Mall, Oakland, California (Figures 1 and 2). The purpose of the project is to drill five soil borings in the vicinity of MW-2 near the Bank of America office in the Eastmont Mall in Oakland, California. The primary purpose of this scope of work is to better define the vertical and lateral extent of the following chemicals: 1-2 dichloroethene (1-2 DCE); trichloroehtene (TCE); tetrachloroehtene (PCE) detected in the soils and groundwater in MW-2; total petroleum hydrocarbons as gasoline (TPH-g); diesel (TPH-d); benzene, toluene, ethylbenzene, and xylenes (BTEX).

Scope of Work

All necessary permits will be obtained prior to performing fieldwork. All field activities will be scheduled and underground utility lines will be located by Underground Service Alert (USA) prior to drilling. Artesian will also provide underground line locating services to locate buried metal pipes and utilities prior to drilling.

Artesian will supervise the drilling of five soil borings. Drilling will be done using a hollow stem auger by a California licensed driller. The soil logging will be performed by a project geologist under the direct supervision of a California-registered geologist using the Unified Soils Classification System (USCS). The geologist will supervise the drilling activities, collect soil samples and document field activities.

3175 Kerner Blvd., Suite E • San Rafael, CA 94901 • TEL 415.257-4801 • FAX 415. 257-4805

Groundwater is estimated to occur in perched lenses at about 30 to 35 feet below ground surface and the total depth of the borings is estimated to be 50 feet below ground surface. Artesian will monitor vapors continually with a Thermo 580-B organic vapor meter (OVM), and soil samples will be collected using a stainless steel sampler every five feet for lithologic and hydrogeologic characterization, and chemical analysis.

The borings B-5 through B-9 will be drilled to the total depth before being converted into monitoring wells MW-5 through MW-9. If water is not encountered, then the borings will be properly abandoned. The well materials will be 2-inch diameter, schedule 40 pvc with a Lone Star #3 sand pack. All soil and water samples will be labeled and transported under chain-of-custody procedures in a refrigerated environment to Chromalab, Inc. of San Ramon, California, a state certified laboratory . The wells will be developed using a surge block during well construction. The wells will be sampled after 48 hours of being completed.

Selected soil samples and all groundwater samples will be analyzed by a state-certified laboratory, for the following contaminants: total petroleum hydrocarbons as gasoline (TPH-g); diesel (TPH-d) by EPA Method 8015; benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8020; and chlorinated halocarbons by EPA Method 8010.

Artesian will survey the wells relative to each other and 0.01 horizontally and vertically. These numbers will be used to determine groundwater flow direction and gradient.

A written report documenting the findings and results of the site investigation will be prepared. The report will be certified by a registered geologist and will include boring logs, laboratory reports, chain-of-custody forms and laboratory quality control documents as well as recommendations.

BACKGROUND

Site Setting

The project site is triangular in shape. It is bounded on the north by Foothill Boulevard; the south eastern boundary is 73rd Avenue and the south western boundary is a retaining wall which supports an underground and elevated parking structure just west of the site. The site is located at the base of the hills which rise up to 1,175 feet above sea level to the north east. Two thousand feet south of the site lies the Arroyo Viejo stream channel.(Figure 1).

Previous Work

Hunter Environmental Services, Inc. (Hunter) of Martinez, California performed a Phase II environmental audit of the Eastmont Mall property on December 20, 1989. Four soil borings were drilled by Hunter on the mall property, with three of these borings completed as monitoring wells. Analytical results showed that several soil samples were detected with hydrocarbon contamination,and several water samples were detected with 1-2 dichloroethene (1-2 DCE), trichloroethene (TCE), and tetrachloroehtene (PCE).

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Dames and Moore of Oakland, California has also performed work in 1991 by installing additional soil borings, monitoring wells, and conducted water level measurements.

Site Safety Plan

The site safety plan has been prepared and will be on-site during all field activities. All persons in the decontamination area will be signed in on the site safety forms and informed of the safety regulations on site. Underground Service Alert (USA) will be notified to identify underground utilities and other possible subsurface obstacles. An underground line locating survey will be performed in the vicinity of the proposed subsurface activities.

Confirmation Soil Samples

Soil samples will be sent to Chromalab, Inc. of San Ramon, California, a state-certified hazardous materials testing laboratory. Soils will be analyzed for Total Petroleum Hydrocarbons for gasoline (TPH-g) by EPA Method 8015, diesel (TPH-d) by EPA Method 8015, and benzene, toluene, ethyl benzene, and toatl xylenes (BTEX) by EPA Method 8020 and chlorinated halocarbons by EPA Method 8010.

Soil cuttings and decontamination water will be stored on site in Department of Transportation (DOT) approved containers, pending analytical results. Contaminated soils and decontaminated water will be disposed of at a proper landfill.

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DISTRIBUTION

Artesian will submit copies of this workplan to the following individuals:

Mr. David Norwitt
One Eastmont Mall
Oakland, California 94605

Mr. Richard Hiett
Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster St., 5th Floor
Oakland, CA 94612

Mr. Ronald Owcarz, Hazardous Materials Specialist
Alameda County Environmental Health Services Agency
Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621

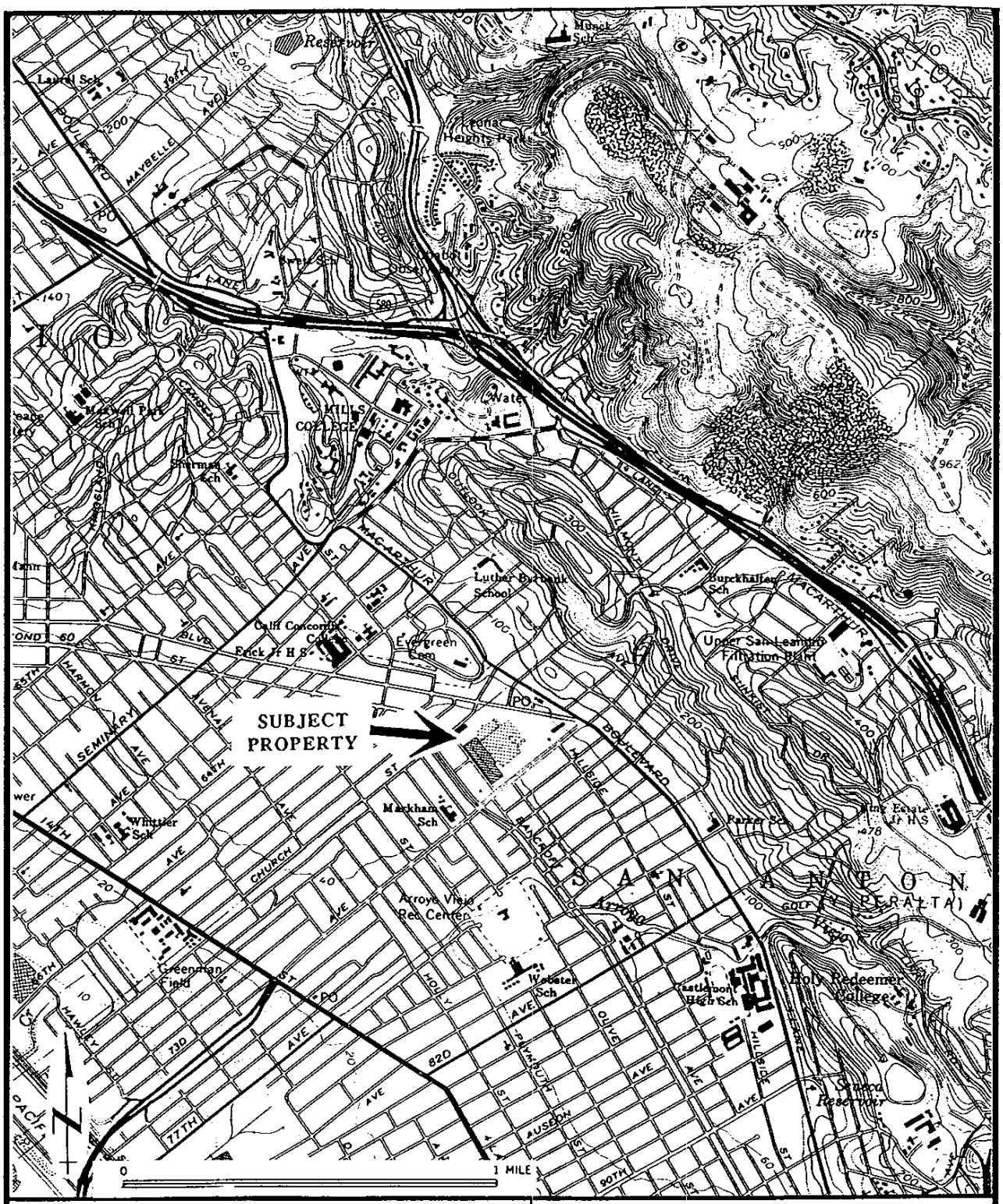
Please call me at (415) 257-4801 if there are any questions or if you have any comments.

Sincerely,

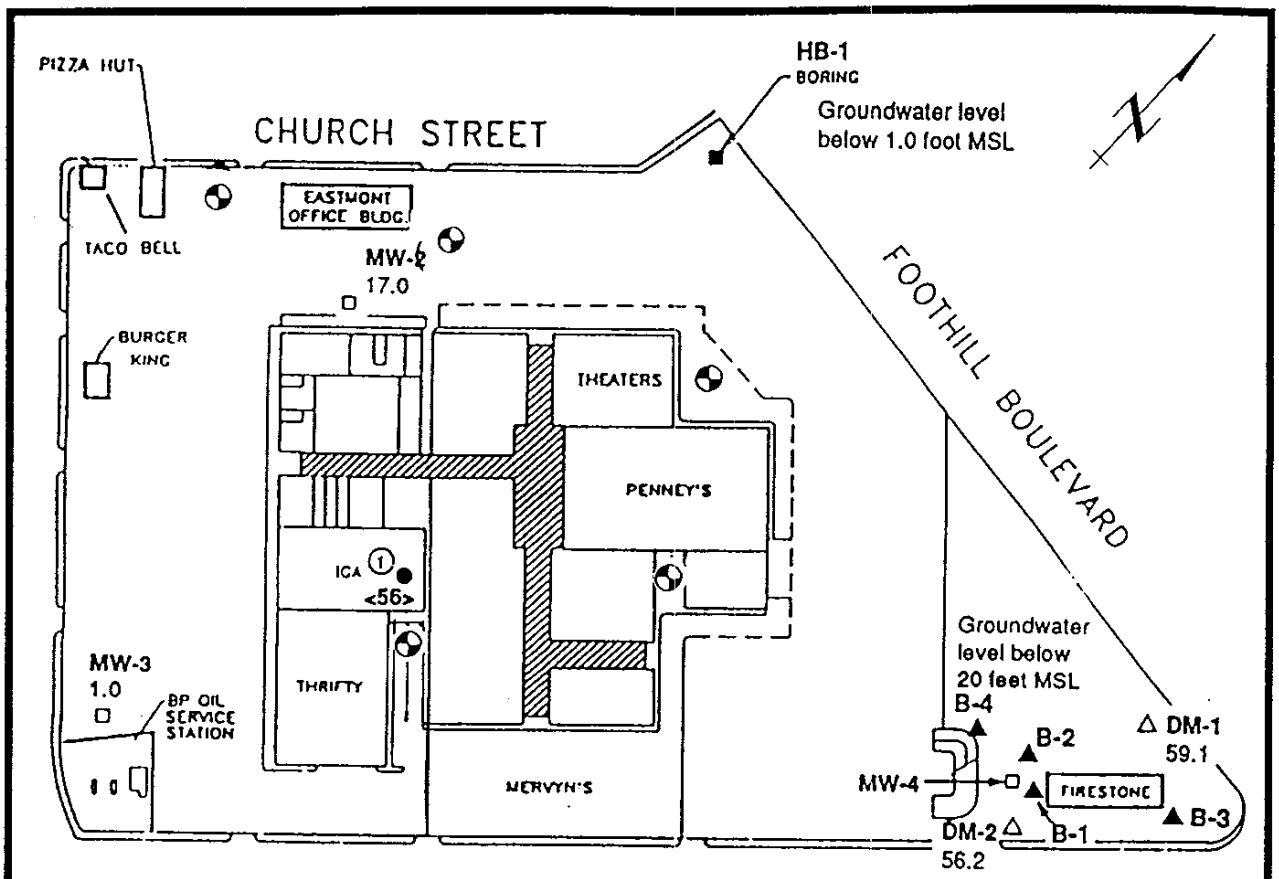
Benjamin I. Mira
Project Geologist

James A. Jacobs, R.G. #4815
Principal Geologist

REGISTERED GEOLOGIST
JAMES A. JACOBS
NO. 4815
STATE OF CALIFORNIA



Artesian Environmental Consultants 3175 Kerner Blvd., Suite E San Rafael, California 94901 415-257-4801 Fax 257-4805		**REGIONAL MAP** One Eastmont Mall Oakland, California 94605	
Project No: 93-001-01	Date: 8/27/93	Drawn by: BIM	Figure 1



NOTE:

① Groundwater measured in industrial well at 96 feet below ground surface (bgs) or 56 feet below mean sea level. Perforated in lower aquifer from 90 to 393 feet bgs.

Proposed Monitoring Wells

0 400
Feet

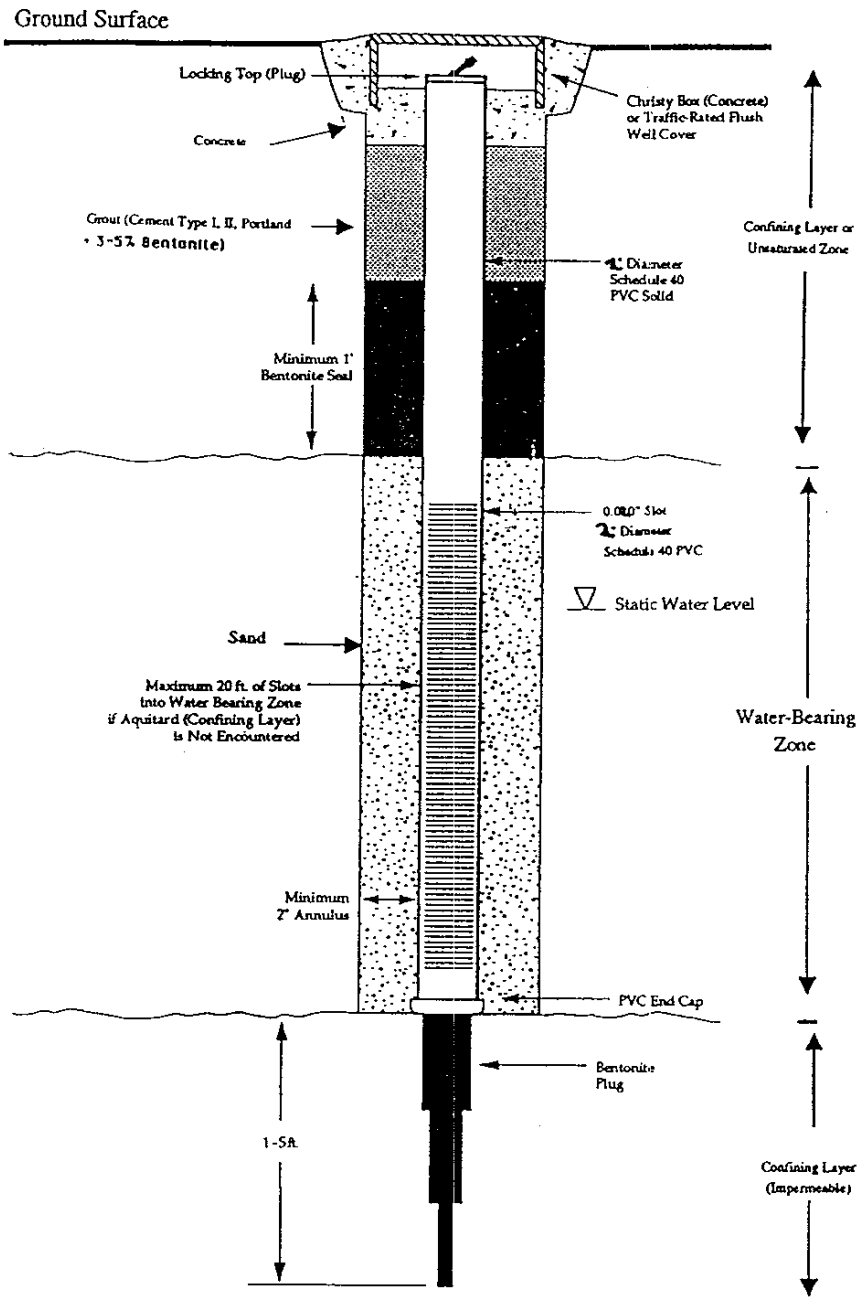
KEY

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- △ Dames & Moore Monitoring Well (4/91)
- ▲ Dames & Moore Soil Boring (4/91)
- □ Hunter Environ. Monitoring Well (12/89)
- ■ Hunter Environ. Soil Boring (12/89)
- 17.0 Groundwater elevation in feet above mean sea level (MSL)

After Dames & Moore, 1991

Artesian Environmental Consultants 3175 Kerner Blvd., Suite E San Rafael, California 94901 415-257-4801 Fax 257-4805	**SITE MAP** One Eastmont Mall Oakland, California 94605

Project No: 93-001-01	Date: 8/27/93	Drawn by: BIM	Figure 2



NOT TO SCALE

		Generalized Well Construction Details	
		Drawn by: OPJ	Figure No. 3

ZONE 7 WATER AGENCY

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

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT One Eastmont Mall
Oakland CA 94605

CLIENT
Name Mr David Norwitt
Address One Eastmont Mall Phone 510-632-1131
City Oakland CA Zip 94605

APPLICANT
Name James A Jacobs RG#4815
Artesian Environmental
Address 3175 Kerner Blvd Phone Stef 415-257-4801
City San Rafael CA Zip 94901

TYPE OF PROJECT

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

PROPOSED WATER SUPPLY WELL USE NO

Domestic		Industrial	
Municipal		Irrigation	
Other	Monitoring		

DRILLING METHOD:
Mud Rotary ____ Air Rotary ____ Auger HSA
Cable ____ Other ____

DRILLER'S LICENSE NO. C-57- 624461

WELL PROJECTS

Drill Hole Diameter	2 in.	Maximum Depth	50 ft.
Casing Diameter	2 in.		
Surface Seal Depth	5 ft.	Number	5

GEOTECHNICAL PROJECTS

Number of Borings		Maximum Depth	ft.
Hole Diameter	in.		

ESTIMATED STARTING DATE 9/2/93
ESTIMATED COMPLETION DATE 9/15/93

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

APPLICANT'S SIGNATURE James A Jacobs RG#4815 Date 8/27/93

FOR OFFICE USE

PERMIT NUMBER 93490
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 Wyman Hong Date 31 Aug 93
Wyman Hong

31992

ARTESIAN ENVIRONMENTAL CONSULTANTS.
JOB SAFETY PLAN

Project location: One Eastmont Mall, Oakland, California 94605
Artesian Job # 93-01-08

The possible hazards on this job are expected to be: physical hazards associated with working a drill rig.

Possible chemical hazards from soil contaminated with gasoline or any pure product of the aforementioned substance.

Required personal protective equipment for this project: Level D protection (steel toe neoprene boots, coveralls, work gloves, hard hat, safety glasses), level C protection on standby (OV cartridges).

ARTESIAN ENVIRONMENTAL CONSULTANTS
JOB SAFETY PLAN

1. Site: Parking lot near Bank of America, Eastmont Mall

2. Location: One Eastmont Mall, Oakland, California 94605

3. Plan Prepared: Artesian Environmental Consultants Date: 8-31-93

4. Plan Approved: Benjamin Mira, PM _____
Jim Jacobs, RG _____

5. Facility Description: Mall

6. Status (active, inactive, unknown): Active.

7. Surroundings: Business; bounded by Foothill Blvd.to the north, and 73rd Ave. to the south.

8. Site map: Attached

9. Climate: Moderate dry summers, cool wet winters.

10. Site history (origin of contamination and history of injuries exposure, chemical spills, complaints, etc.): Former Chevrolet Plant, with underground storage tanks on site.

11. Description of work: Drill 5 soil borings and install five monitor wells.

12. Chemical contaminants:

Chemical	Media	Minimum	Maximum
Gasoline	Soil/pure product	0	Unknown

13. Procedures to mitigate hazards:

A) Mechanical Hazards
- verify that all equipment is in good condition
- barricade area or otherwise restrict access
- exercise caution when working in close proximity to the 580K backhoe, bobcat, and trench shoring plates.

B) Electrical Hazards

- locate and mark buried utilities before excavating
- maintain at least 10 feet of clearance from overhead power lines
- properly ground all electrical equipment
- avoid standing in water when operating electrical equipment
- be familiar with specific operating instructions for each piece of equipment
- barricade area or otherwise restrict access
- deactivate any source of ignition within 25 feet of work area

C) Chemical Hazards

- use personal protective equipment listed above
- conduct direct reading air monitoring to evaluate respiratory and explosion hazards
- wash hands before eating or drinking
- avoid hand to mouth contact before washing hands
- keep dust to a minimum, avoid breathing dust

D) Temperature Hazards

- Heat: when temperature exceeds 70 F, take frequent breaks in shaded area. Unzip or remove coveralls during breaks. Have cool water or electrolyte replenishment solution available. Drink small amounts frequently to avoid dehydration. Count the pulse rate for 30 seconds, as early as possible in the rest period. If the pulse rate exceeds 110 beats per minute at the beginning of the rest period, shorten the work cycle by one-third.

- Cold: wear multilayer cold weather outfits- the outer layer should be of wind-resistant fabric

- Wet: wear proper raingear and shoes with slip resistant tread

E) Acoustical Hazards

- use earplugs when noise level prevents conversation in normal voice at a distance of three feet

F) Organic Vapors

- monitor organic vapors. If total hydrocarbons exceed 5 ppm above background, don Level C personal protective equipment

- if total hydrocarbons exceed 500 ppm, supply mechanical ventilation

- monitor lower explosive limit. If LEL exceeds 20%, leave area and call the fire department

- no smoking within 25 feet of working area

- post no smoking signs

14. Decontamination procedures: Steam clean equipment before leaving work area. Wash boots and gloves. Launder coveralls. Wash hands and face as soon as possible after stopping work.

15. Materials generated on-site: Drum drill cuttings and decon water in DOT approved drums with proper labels and markings. Place soil stockpiles on visqueen and cover with weighted visqueen.

16. Site resources: water, restrooms, phone, electricity

17. Emergency equipment: Fire extinguisher and first aid kit to be on-site at all times

18. Emergency telephone numbers:

Ambulance 911
Police 911
Fire Department 911
Highland Hospital (510) 534-8055
1411 E. 31st. Street, Oakland, CA
Poison Control Center: 800-523-2222
Project Manager: Office (415) 257-4801or
hm (415) 457-7367
Health & Safety Officer: Office (415) 257-4801

19. **Emergency route to Hospital:**
•Go North along MacArthur Blvd. for 1.25 miles,
•Turn left onto Hwy. 580 going north for 3 miles,
•Exit at Beaumont Ave., turn left onto Beaumont Ave.,
•Go along Beaumont Ave. for 3 blocks, Highland Hospital is on the right.

20. Project personnel list and safety plan distribution record: All project staff must sign, indicating they have read and understand the safety plan.

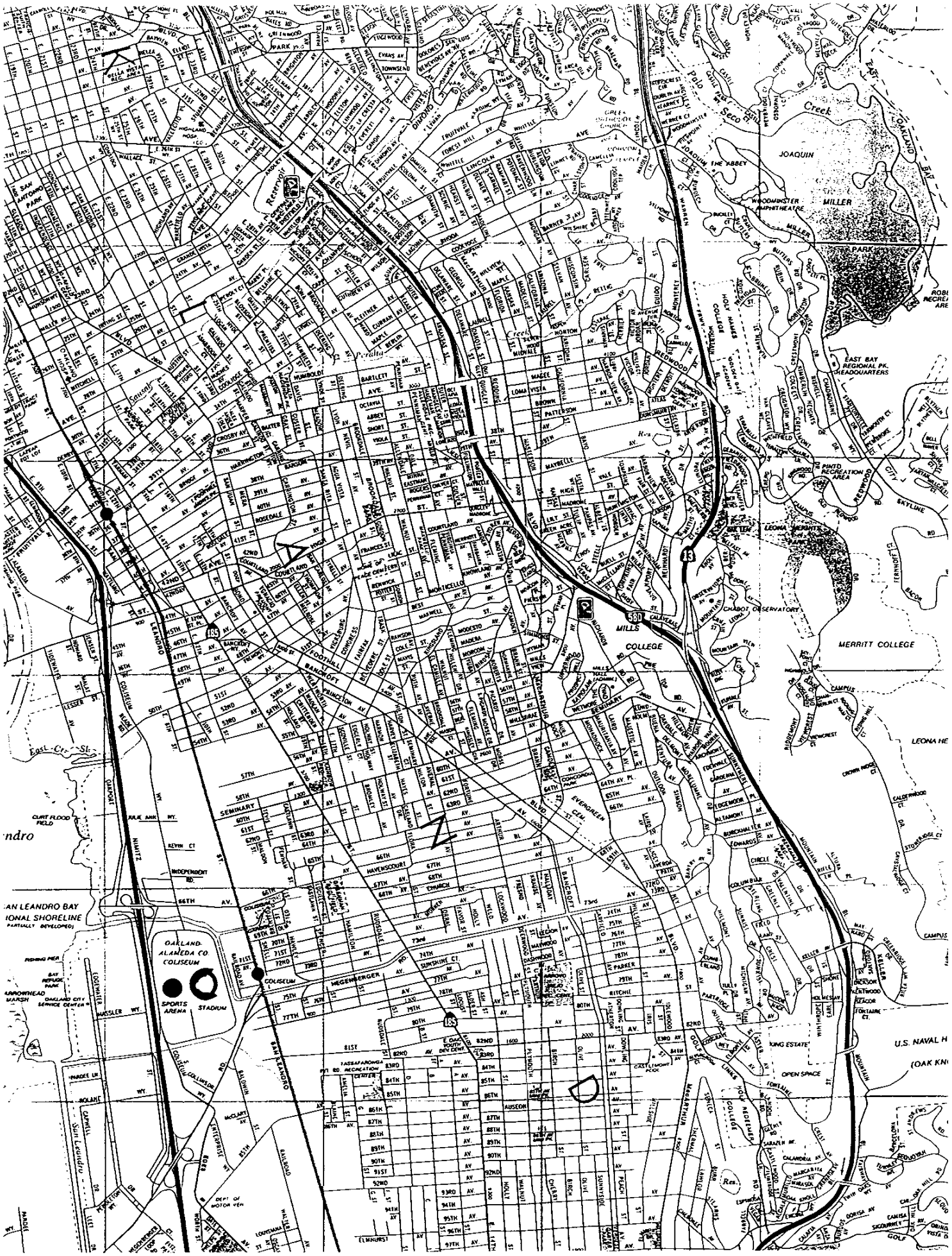
Employee Name	Date/Time	Signature

21. Health and safety meeting: All personnel participating in the project must receive initial health and safety orientation. Thereafter, a brief "tailgate" safety meeting is required as deemed necessary by the Health and Safety Officer.

Name	Topics	Date	Employee Initial

22. Visitors: It is Artesians' policy that visitors must furnish his/her own personal protective equipment. All visitors are required to sign the visitor log and comply with the safety plan requirements.

Name of Visitor	Firm Name	Date/Time	Signature


OAKLAND-ALAMEDA CO. COLISEUM
SPORTS ARENA
STADIUM
MERRITT COLLEGE
MILLS COLLEGE
SAN LEANDRO BAY
SHORELINE
EAST BAY REGIONAL PK. HEADQUARTERS
JOAQUIN MILLER PARK
SKYLINE
MACARTHUR
SEMINARY
COLISEUM
FOOTHILL
BANCROFT
FRUITVALE
MACARTHUR BLVD.
SAN LEANDRO
HEGENBERGER
HAVENSCOURT
EDES AVENUE
U.S. NAVAL H
OPEN SPACE

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6700

397 6000

September 22, 1995

Mr. Gale Connor
Berg, Ziegler, Anderson & Park
4 Embarcardero Center, 14th floor
San Francisco, CA - 94111

Subject: 1 Eastmont Mall, Oakland, Ca - 94605

Dear Mr. Connor:

In response to your request for site closure, this Department has reviewed all the pertinent documents regarding the above referenced property.

In December 1989, Hunter Environmental Services performed a phase II audit. Four soil borings were drilled on the property and 3 of them were converted into monitoring wells MW2, MW3 and MW4. The groundwater samples from monitoring well MW2 detected 1, 2 dichloroethylene (DCE) at 8 ppb, trichloroethylene (TCE) at 19 ppb and tetrachloroethylene at 210 ppb. It does not appear that the soil samples were tested for any volatile organics (VOC's) Significant concentrations of petroleum hydrocarbons as gasoline and BTEX were found in the soil and groundwater samples collected from the boring and monitoring well MW-4.

In April 1991, Dames and Moore installed 6 soil borings out of which 2 of the borings DM-1 and DM-2 were converted into monitoring wells: One sample from boring B1 collected at 15 feet indicated 7.7 ppm of gasoline, 70 ppb of toluene and 36 ppb of xylene. No other contamination was found in any other soil or groundwater samples collected during this investigation.

In September 1993, Artesian Environmental Consultants drilled 5 soil borings and completed them as monitoring wells MW-5 through MW-9. Soil and groundwater samples were analyzed for TPH gasoline, diesel, BTEX and VOC's. None of the analytes was found in concentrations above the detection limit in both the soil and groundwater samples. However, during the subsequent groundwater monitoring event that was conducted on the property in December 1993, significant concentrations of petroleum hydrocarbons as gasoline, and BTEX were found in the monitoring well MW-3 and MW-7.

Based on the information submitted to this Department, the following issues still need to be addressed before the site can be evaluated for closure:

1. After the installation of monitoring wells MW-5 through MW-9 by Artesion Environmental, only 1 groundwater monitoring event was conducted. This Department requires that groundwater monitoring be conducted for 4 consecutive quarters before any evaluation is done. So initiate groundwater monitoring at quarterly intervals for monitoring well MW-5 through MW-9 and analyze the samples for petroleum hydrocarbon as gasoline, BTEX and semi-volatile compounds (method 8270). Include the analysis for VOC's by method 8010 for the first monitoring event and inclusion of this method for future sampling events will be based on initial laboratory results for VOC's.

2. During the investigation conducted in December 1989, groundwater samples collected from monitoring well, MW-2 indicated the presence of volatile organics. Since no soil samples from this area was analyzed for VOC's, additional investigation is required to define any VOC contamination if present around monitoring well MW-2.

Please submit a workplan to this Department addressing the above mentioned issues. If you have any questions, call me at (510) 567-6764.

Sincerely,

Madhulla Logan

Madhulla Logan,
Hazardous Material Specialist

CC: Mark Cunningham, ALLWEST, 1, Sutter St, ST 600, San Francisco, CA - 94104.

Sum Arigala, San Francisco Regional Water Quality Control Board, Oakland, California.

Z 196 176 712

Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

PS Form **3800**, March 1993

Sent to: David Norwitt	
Street and No. Not Applicable	
P.O. State and ZIP Code 1 Eastmont Mall Oakland, CA 94605	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

ML

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

DAVID NORWITT

1 EASTMONT MALL

OAKLAND, CA 94605

4a. Article Number

Z 196 176 792

4b. Service Type

☐ Registered ☐ Insured

☒ Certified ☐ COD

☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery

9-28-95

5. Signature (Addressee)

Diane Clark

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

PS Form **3811**, December 1991 ☆U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6700

Certified Mail # Z 196176 792
09/26/95 - STID# 114

Notice of Requirement to Reimburse

David Norwitt
Not Applicable
1 Eastmont Mall
Oakland, Ca - 94605

Responsible Party
Property Owner

Eastmont Mall
1 Eastmont Mall
Oakland , CA 94605

SITE

Date First Reported
Substance: Gasoline
Petroleum: (X)Yes
Source: F

The federal Petroleum Leaking Underground Storage Tank Trust Fund (Federal Trust Fund) provides funding to pay the local and state agency administrative and oversight costs associated with the cleanup of releases from underground storage tanks. The legislature has authorized funds to pay the local and state agency administrative and oversight costs associated with the cleanup of releases from underground storage tanks. The direct and indirect costs of overseeing site investigation or remedial action at the above site are funded, in whole or in part, from the Federal Trust Fund. The above individual(s) or entity(ies) have been identified as the party or parties responsible for investigation and cleanup of the above site. **YOU ARE HEREBY NOTIFIED** that pursuant to Title 42 of the United States Code, Section 6991b(h)(6) and Section 25297.1 of the California Health and Safety Code, the above Responsible Party or Parties must reimburse the State Water Resources Control Board (SWRCB) not more than 150 percent of the total amount of site specific oversight costs actually incurred while overseeing the cleanup of the above referenced underground storage tank site, and the above Responsible Party or Parties must make full payment of such costs within 30 days of receipt of a detailed invoice from the SWRCB.

Any action or inaction by this local agency associated with corrective action, including responsible party identification, is subject to petitio to the SWRCB. Petitions must be filed within 30 days from the date of th action/inaction. To obtain petition procedures, please fax your request to Roni Riley at the SWRCB at (916) 227-4349 or telephone (916) 227-4408. Please contact Madhulla LOGAN, Hazardous Materials Specialist at this office if you have any questions concerning this matter.

George Young

George Young, Acting Chief
Contract Project Director

c: Mike Harper, SWRCB
Add: ✓ Reason: NEW
Delete: _____ Reason: _____
Change: _____ Reason: _____

Standard Form UST03 (6/93) ;Report: Reimb 5/95

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, Assistant Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Division
80 Swan Way, Rm. 200
Oakland, CA 94621
(510) 271-4320

February 17, 1993

Mr. Jim Given
Eastmont Mall
One Eastmont Mall
Oakland, CA 94621

Re: Eastmont Plan of Investigation

Dear Mr. Given;

I am in receipt of your letter dated January 28, 1993 and the subsurface investigative report previously submitted by Dames and Moore dated July 10, 1991 for the Eastmont Mall in Oakland. For this department to review this case, you will need to have a deposit/refund account established. The deposit/refund mechanism is authorized by the Alameda County Ordinance Code 3-141.6 which allows fees to be levied for the regulatory oversight of site mitigation projects. You are requested to submit a check for $750.00 made payable to the County of Alameda. This account will be billed at a rate of $75.00 per hour. Any unused portion of these funds will be returned to you at the completion of the project. I have enclosed a refund recipient designation form that will need to be submitted with the deposit (see both sides of form).

The review of the case will proceed as soon as funds are received. If you have any questions, please contact me at 271-4320.

Sincerely,

Ronald J. Owcarz

Ronald J. Owcarz, REHS
Hazardous Materials Specialist

Enclosure

cc: Rich Hiett, RWQCB
Ed Howell - file

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, Assistant Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Division
80 Swan Way, Rm. 200
Oakland, CA 94621
(510) 271-4320

February 17, 1993

~~A4622~~ ?
A11605

Mr. Jim Given
Eastmont Mall
One Eastmont Mall
Oakland, CA 94621

Re: Eastmont Plan of Investigation

Dear Mr. Given;

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Sincerely,

Ronald J. Owcarz

Ronald J. Owcarz, REHS
Hazardous Materials Specialist

Enclosure

cc: Rich Hiett, RWQCB
Ed Howell - file EJH

ENVIRONMENTAL
95 OCT 19 PM 1:10

ALLWEST ENVIRONMENTAL
1 Sutter Street, Suite 600
San Francisco, CA 94104
415-391-2510
415-391-2008 (FAX)

TRANSMITTAL

TO: Ms. Madhulla Logan
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

DATE: 10-17-95

PROJECT #: 95278.21

WE ARE TRANSMITTING:

__ Per Your Request
X Herewith
__ Under Separate Cover
__ Federal Express

THE FOLLOWING:_____

REMARKS:_____

TRANSMITTED AS CHECKED BELOW:

__ For Approval
X For Your Use
__ As Requested
__ For Review & Comment

SIGNED: Long CHing

REF./ A/C NO. M

COUNTY OF ALAMEDA
OFFICE OF THE AUDITOR-CONTROLLER

DATE: 9/22/93

MISCELLANEOUS RECEIPT

Nº 704512

$ 750.00
DOLLARS

RECEIVED FROM: Eastmont Mall 1 Eastmont Mall, O 94605
FOR: Eastmont Mall Property # 1 Eastmont Mall Oakland, CA 94605
RECEIVED BY: Juliette D Bfore
DEPT. NO.: 430 - 4530

☐ CASH ☒ PERSONAL/CASHIER'S CHECK/M. O. # 1265 ☐ OTHER:

110-1 (Rev 10/85) [0134E (08)] 3-Part Distribution: White - Payor Yellow & Pink - Depart.

EASTMONT MALL
1 EASTMONT MALL
OAKLAND, CA 94605
(510) 632-1131

EXPLANATION	AMOUNT
Open a deposit refund acct for regulatory oversight	

11-35
1210

1265

PAY AMOUNT OF Seven hundred fifty and no/100 DOLLARS

DATE	TO THE ORDER OF	DESCRIPTION	CHECK NUMBER	CHECK AMOUNT
9-9-93	Alameda County Health Care Service 80 Swan Way, Rm #200 Oakland, Ca. 94621	Hazardous mat. Division	1265	$ 750.00

BANK OF AMERICA Eastmont Mall Branch 0539
6900 BANCROFT AVENUE OAKLAND, CA 94605

⑈001265⑈ ⑆121000358⑆ 05391⑈07997⑈

00000282.tif 553 / 639

1 Eastmont Mall
Oakland , CA 94605

SITE

Date First Reported
Substance: Gasoline
Petroleum: (X)Yes
Source: F

The federal Petroleum Leaking Underground Storage Tank Trust Fund (Federal Trust Fund) provides funding to pay the local and state agency administrative and oversight costs associated with the cleanup of releases from underground storage tanks. The legislature has authorized funds to pay the local and state agency administrative and oversight costs associated with the cleanup of releases from underground storage tanks. The direct and indirect costs of overseeing site investigation or remedial action at the above site are funded, in whole or in part, from the Federal Trust Fund. The above individual(s) or entity(ies) have been identified as the party or parties responsible for investigation and cleanup of the above site. **YOU ARE HEREBY NOTIFIED** that pursuant to Title 42 of the United States Code, Section 6991b(h)(6) and Section 25297.1 of the California Health and Safety Code, the above Responsible Party or Parties must reimburse the State Water Resources Control Board (SWRCB) not more than 150 percent of the total amount of site specific oversight costs actually incurred while overseeing the cleanup of the above referenced underground storage tank site, and the above Responsible Party or Parties must make full payment of such costs within 30 days of receipt of a detailed invoice from the SWRCB.

Any action or inaction by this local agency associated with corrective action, including responsible party identification, is subject to petitio to the SWRCB. Petitions must be filed within 30 days from the date of th action/inaction. To obtain petition procedures, please fax your request to Roni Riley at the SWRCB at (916) 227-4349 or telephone (916) 227-4408. Please contact Madhulla LOGAN, Hazardous Materials Specialist at this office if you have any questions concerning this matter.

George Young

George Young, Acting Chief
Contract Project Director

c: Mike Harper, SWRCB
Add: _____ Reason: _____
Delete: _____ Reason: _____
Change: _____ Reason: _____

Standard Form UST03 (6/93) ;Report: Reimb 5/95

7499402046

COM No.	REMOTE STATION	START TIME	DURATION	PAGES	RESULT	USER ID	REMARKS
199	916 2274349	01-19 16:11	00'46	01/01	OK		

TRANSMIT REPORT

1998,01-19 16:12
510 337 9335
ALAMEDA CO EHS HAZ-OPS

State of California

Contractors State License Board

Pursuant to Chapter 9 of Division 3 of the Business and Professions Code
and the Rules and Regulations of the Contractors State License Board,
the Registrar of Contractors does hereby issue this license to:

ARTESIAN ENVIRONMENTAL CONSULTANTS

to engage in the business or act in the capacity of a contractor
in the following classification(s):

A - GENERAL ENGINEERING CONTRACTOR
C57 - WELL DRILLING (WATER)
HAZ - HAZARDOUS SUBSTANCES REMOVAL

State of California Department of Consumer Affairs

Witness my hand and seal this day,
September 4, 1991

Issued August 9, 1991

James Alan Jacobs
Signature of Licensee

James Alan Jacobs
Signature of License Qualifier

David R Phillips
Registrar of Contractors

624461
License Number

This license is the property of the Registrar of Contractors, is not transferrable, and shall be returned to the Registrar upon demand when suspended, revoked, or invalidated for any reason. It becomes void if not renewed.

13L-24 (REV. 4-91)

AUDIT NO. 8083

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State of California
Department of
Consumer Affairs

CONTRACTORS STATE LICENSE BOARD
9835 GOETHE ROAD, SACRAMENTO, CALIFORNIA
MAILING ADDRESS: P.O. BOX 26000
SACRAMENTO, CALIFORNIA 95826
1/916/255-3900
1/800/321-CSLB
Automated Phone System

License Number: 624461

Entity: CORP

ARTESIAN ENVIRONMENTAL
CONSULTANTS
3100 KERNER BLVD STE C
SAN RAFAEL, CA 94901

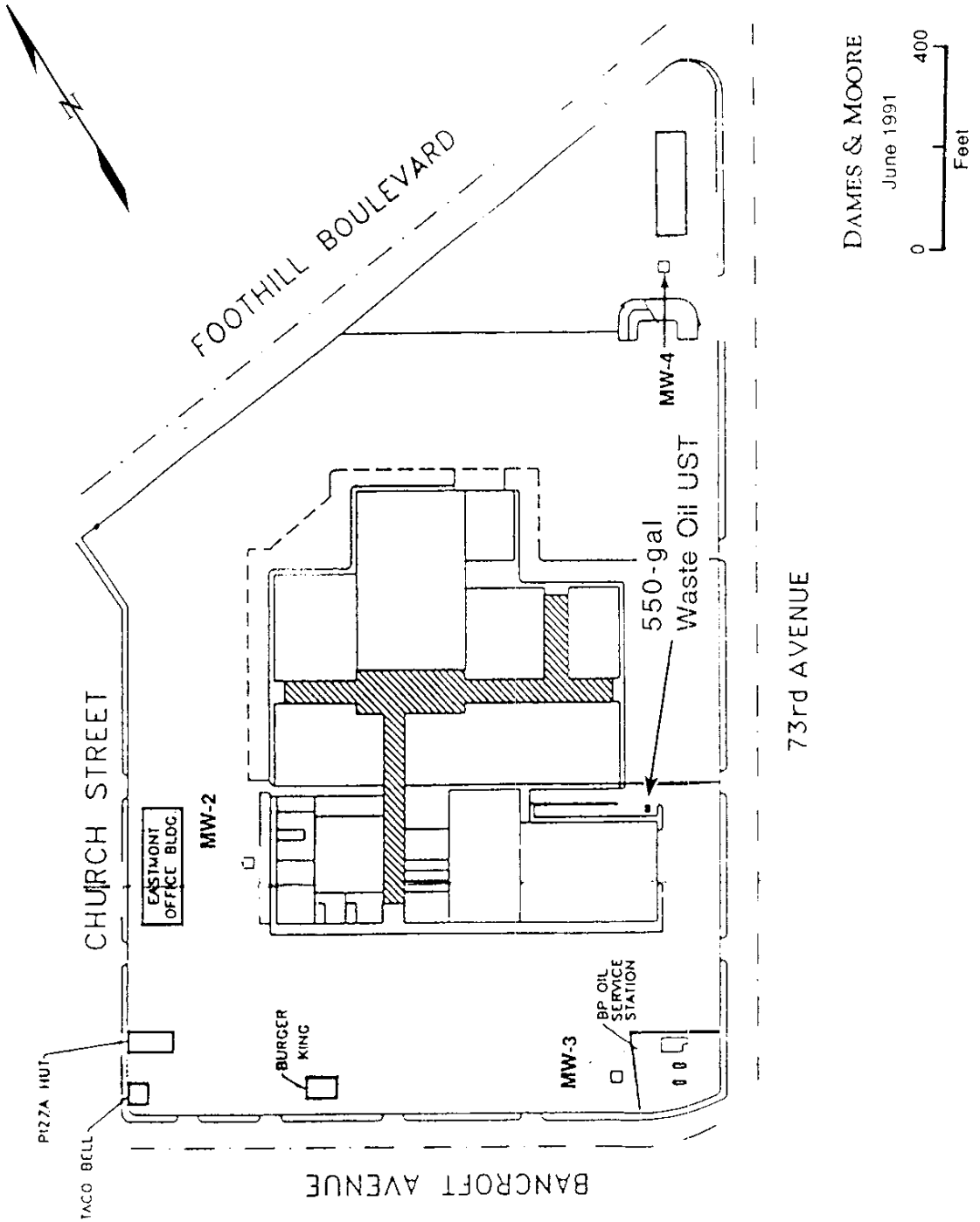
State of California
CONTRACTORS STATE LICENSE BOARD
ACTIVE LICENSE

624461 CORP

ARTESIAN ENVIRONMENTAL
CONSULTANTS

A, C57 HAZ ASB B

08/31/95



Artesian Environmental Consultants 3100 Kerner Blvd., Ste. C San Rafael, CA 94901 (415) 257-4801 fax (415) 257-4805		**SITE MAP** The Eastmont Mall One Eastmont Mall Oakland, CA 94605	
Project No.: 1695	Date: 9/27/95	Prepared by: J. French	Figure 1

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
80 Swan Way, Rm 200
Oakland, CA 94621
(510) 271-4530

December 13, 1993

Mr. David Norwitt
1 Eastmont Mall
Oakland, CA

STID 27

Re: Tank removal reminder for property located in 7250 Bancroft Avenue, Oakland, CA-94605

Dear Mr. Norwitt,

This is to remind you that no closure report has been received by our office after the $483.00 deposit was made to the deposit/ refund account for the purpose of tank removal at the above mentioned property.

As per the Alameda County Fire Code, Section 79.114 (e), you are required to remove these tanks within 90 days of not being in service. Therefore, you are required to submit a tank closure report within 30 days of the date of this letter to our office.

If you have any questions or comments, please contact me at (510) 271-4320.

Sincerely,

Madhulla Logan,
Hazardous Material Specialist

CC: Ban Mira, Artesian Environmental

Shell Spill

they pay $483 on account. Maybe Leslie can print a dep/wp sheet for you.

MZ

REF./ A/C NO. ~~MMH~~ R.

COUNTY OF ALAMEDA
OFFICE OF THE AUDITOR-CONTROLLER

DATE: 9/22/93 (RO)

MISCELLANEOUS RECEIPT

Nº 704516

$ 483.00
DOLLARS

RECEIVED FROM: Eastmont Mall # 1 Eastmont Mall, Oakland, Ca 9460[illegible]

FOR: Eastmont Auto Goodyear, 7250 Bancroft Avenue Oakland Ca. 94605

RECEIVED BY: Juliette DeFoke

DEPT. NO.: 430 - 4530

☐ CASH ☒ PERSONAL/CASHIER'S CHECK/M. O. # 1266 ☐ OTHER:

110-1 (Rev 10/85) [0134E (08)] 3-Part Distribution: White - Payor Yellow & Pink - Depart.

EASTMONT MALL
1 EASTMONT MALL
OAKLAND, CA 94605
(510) 632-1131

EXPLANATION	AMOUNT
Open deposit refund HC for costs of review.	

11-35
1210

1266

PAY AMOUNT OF Four hundred eighty three and no/100 DOLLARS

DATE	TO THE ORDER OF	DESCRIPTION	CHECK NUMBER	CHECK AMOUNT
9-9-93	Alameda County Health Care Services 80 Swan Way, Rm #200 Oakland, Ca. 94621	Hazardous Mat. Division	1266	$ 483.00

BANK OF AMERICA Eastmont Mall Branch 0539
6900 BANCROFT AVENUE OAKLAND, CA 94605

⑈001266⑈ ⑆121000358⑆ 05391⑈07997⑈

00000282.tif 559 / 639

ACORD CERTIFICATE OF INSURANCE

ISSUE DATE (MM/DD/YY) 2/13/1995

PRODUCER

Finney & Brown, Inc
PO Box 779001
Rocklin, Ca. 95677
(916) 645-5100

INSURED

ARTESIAN ENVIRONMENTAL CONSULTANTS
3100 KERNER BLVD., SUITE C
SAN RAFAEL, CA 94901

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

COMPANIES AFFORDING COVERAGE

COMPANY LETTER A ZENITH INSURANCE COMPANY
COMPANY LETTER B
COMPANY LETTER C
COMPANY LETTER D
COMPANY LETTER E

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
	GENERAL LIABILITY				GENERAL AGGREGATE	$
	COMMERCIAL GENERAL LIABILITY				PRODUCTS-COMP/OP AGG.	$
	CLAIMS MADE OCCUR.				PERSONAL & ADV. INJURY	$
	OWNER'S & CONTRACTOR'S PROT.				EACH OCCURRENCE	$
					FIRE DAMAGE (Any one fire)	$
					MED. EXPENSE (Any one person)	$
	AUTOMOBILE LIABILITY				COMBINED SINGLE LIMIT	$
	ANY AUTO					
	ALL OWNED AUTOS				BODILY INJURY (Per person)	$
	SCHEDULED AUTOS					
	HIRED AUTOS				BODILY INJURY (Per accident)	$
	NON-OWNED AUTOS					
	GARAGE LIABILITY				PROPERTY DAMAGE	$
	EXCESS LIABILITY				EACH OCCURRENCE	$
	UMBRELLA FORM				AGGREGATE	$
	OTHER THAN UMBRELLA FORM					
A	WORKER'S COMPENSATION AND EMPLOYERS' LIABILITY	N371480	02/01/95	02/01/96	X STATUTORY LIMITS	
					EACH ACCIDENT	$ 1,000,000
					DISEASE - POLICY LIMIT	$ 1,000,000
					DISEASE - EACH EMPLOYEE	$ 1,000,000
	OTHER					

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

ALL CALIFORNIA OPERATIONS

FAX (415) 257-4805

CERTIFICATE HOLDER

FOR BID/INFORMATION PURPOSES ONLY

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 10 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

ACORD 25-S (7/90) ©ACORD CORPORATION 1990

Juliet Shin 9/29/95

Project Specialist
JULIET SHIN

Please comply w/ additional comments in red ink. Please notify this office 48 hours in advance of tank removal.

ACCEPTED
Underground Storage Tank Closure Permit Application
Alameda County Division of Hazardous Materials
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

These closure/removal plans have been received and found to be acceptable and essentially meet the requirements of State and Local Health Laws. Changes to your closure plans indicated by this Department are to assure compliance with State and local laws. The project proposed herein is now released for issuance of any required building permits for construction/destruction.

One copy of the accepted plans must be on the job and available to all contractors and craftsmen involved with the removal.

Any changes or alterations of these plans and specifications must be submitted to this Department and to this Division and a hearing obtained before such changes are made. Failure to obtain approval of changes may result in penalties.

Notify this Department at least 72 hours prior to the following required inspections:

_____ Removal of Tank(s) and Piping
_____ Sampling
_____ Final Inspection

Issuance of a) permit to operate, b) permanent site closure, is dependent on compliance with accepted plans and all applicable laws and regulations.

"THERE IS A FINANCIAL PENALTY FOR NOT OBTAINING THESE INSPECTIONS"

Contact Specialist:

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
ENVIRONMENTAL PROTECTION DIVISION
1131 HARBOR BAY PARKWAY, RM 250
ALAMEDA, CA 94502-6577
PHONE # 510/567-6700
FAX # 510/337-9335

ENVIRONMENTAL PROTECTION
95 SEP 29 PM 12:42

UNDERGROUND TANK CLOSURE PLAN

*** * * Complete according to attached instructions * * ***

1. Name of Business THE EASTMONT MALL

   Business Owner or Contact Person **(PRINT)** Bob S. Bridwell

2. Site Address ONE EASTMONT MALL

   City OAKLAND, CA Zip 94605 Phone (510) 632-1131

3. Mailing Address SAME AS ABOVE

   City _____ Zip _____ Phone _____

4. Property Owner BAYSIDE MORTGAGE & LOAN

   Business Name (if applicable) _____

   Address ONE EASTMONT MALL

   City, State OAKLAND, CA Zip 94605

5. Generator name under which tank will be manifested

   THE EASTMONT MALL

   EPA ID# under which tank will be manifested C A C O O 1 1 0 6 1 3 6

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6. Contractor ARTESIAN ENVIRONMENTAL CONSULTANTS

Address 3100 KERNER BLVD, STE. C

City SAN RAFAEL, CA 94901 Phone (415)257-4801

License Type* Gen. Engineering w HAZ WASTE ID# 622461

***Effective January 1, 1992, Business and Professional Code Section 7058.7 requires prime contractors to also hold Hazardous Waste Certification issued by the State Contractors License Board.**

7. Consultant (if applicable) SAME AS Above

Address —

City, State — Phone —

8. Main Contact Person for Investigation (if applicable)

Name JASON FRENCH Title PROJECT MANAGER

Company ARTESIAN ENVIRONMENTAL

Phone (415) 257-4801

9. Number of underground tanks being closed with this plan 1

Length of piping being removed under this plan 20' VENTING

Total number of underground tanks at this facility (**confirmed with owner or operator) 1

10. State Registered Hazardous Waste Transporters/Facilities (see instructions).

**** Underground storage tanks must be handled as hazardous waste ****

a) Product/Residual Sludge/Rinsate Transporter

Name DEXANNA LTD. EPA I.D. No. CAD982438566

Hauler License No. 2883 License Exp. Date 4/30/96

Address 3104 ATHENE CT.

City CONCORD State CA Zip 94519

b) Product/Residual Sludge/Rinsate Disposal Site

Name H&H ENVIRONMENTAL EPA ID# CAD 004771168

Address 220 CHINA BASIN

City SAN FRANCISCO State CA Zip 94107

c) Tank and Piping Transporter

Name DEXANNA LTD. EPA I.D. No. CAD982438566

Hauler License No. 2883 License Exp. Date 4/30/96

Address 3104 ATHENE CT.

City CONCORD State CA Zip 94519

d) Tank and Piping Disposal Site

Name H & H ENVIRONMENTAL EPA I.D. No. CAD 004771168

Address 220 CHINA BASIN

City SAN FRANCISCO State CA Zip 94107

11. Sample Collector

Name JASON FRENCH

Company ARTESIAN ENVIRONMENTAL

Address 3100 KERNER BLVD., STE C

City SAN RAFAEL, State CA Zip 94901 Phone (415) 257-4801

12. Laboratory

Name NET, INC.

Address 3636 N. LAUGHLIN RD., STE. 110

City SANTA ROSA State CA Zip 95403

State Certification No. (DOHS) 1386

13. Have tanks or pipes leaked in the past? Yes[ ] No[ ] Unknown[X]

If yes, describe. —

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14. Describe methods to be used for rendering tank(s) inert:

TANK WILL BE INERTED USING NO LESS THAN 3 lbs. OF DRY ICE FOR EVERY 100-gallons OF TANK CAPACITY.

Before tanks are pumped out and inerted, all associated piping must be flushed out into the tanks. All accessible associated piping must then be removed. Inaccessible piping must be permanently plugged.

The Bay Area Air Quality Management District, 415/771-6000, along with local Fire and Building Departments, must also be contacted for tank removal permits. Fire departments typically require the use of a combustible gas indicator to verify tank inertness. **It is the contractor's responsibility to bring a working combustible gas indicator on-site to verify that the tank is inert.**

15. Tank History and Sampling Information *** (see instructions) ***

Tank		Material to be sampled (tank contents, soil, groundwater)	Location and Depth of Samples
Capacity	Use History include date last used (estimated)		
500-gal.	UNKOWN	SOIL If groundwater is identified in pit, then one "grab" groundwater sample and 2 soil samples, one from each end of the tank at the soil/water interface, will be required.	@ 18" INTO NATIVE SOILS BENEATH TANK

One soil sample must be collected for every 20 linear feet of piping that is removed. A ground water sample must be collected if any ground water is present in the excavation.

Excavated/Stockpiled Soil	
Stockpiled Soil Volume (estimated) 5-10 YD^3 1 composite sample per 50 yd^3 is required for off-site disposal. One discreet sample per 20 yd^3 if planning to reuse on site.	**Sampling Plan** 1 SAMPLE TO BE COLLECTED FROM AT LEAST 1' BELOW SURFACE -

Stockpiled soil must be placed on bermed plastic and must be completely covered by plastic sheeting.

Will the excavated soil be returned to the excavation immediately after tank removal? [ ] yes [X] no [ ] unknown

If yes, explain reasoning _____

If unknown at this point in time, please be aware that excavated soil may not be returned to the excavation without <u>prior</u> approval from Alameda County. This means that the contractor, consultant, or responsible party must communicate with the Specialist IN ADVANCE of backfilling operations.

16. Chemical methods and associated detection limits to be used for analyzing samples:
The Tri-Regional Board recommended minimum verification analyses and practical quantitation reporting limits should be followed.
See attached Table 2.

17. Submit Site Health and Safety Plan (See Instructions)

Contaminant Sought	EPA or Other Sample Preparation Method Number	EPA or Other Analysis Method Number	Method Detection Limit
TPH-g/BTEX	M5030/8020	50ppb/0.5ppb } H_2O	1/0.005 ppm
TPH-d	M5030	50ppb } H_2O	1 ppm
Oil & Grease	5520 D & F	5,000 ppb } H_2O	50 ppm
CL HC	8010	Soil	0.5 ppb
METALS Cd Cr Pb Zn Ni	ICAP 6010	Soil	0.005 ppm 0.01 ppm 0.01 ppm 0.01 ppm 0.01 ppm
PCP, PCB PNA, C REOSOTE	8270		

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18. Submit Worker's Compensation Certificate copy

Name of Insurer FINNEY & BROWN, INC.

19. Submit Plot Plan ***(See Instructions)***

20. Enclose Deposit (See Instructions)

21. **Report any leaks or contamination to this office within 5 days of discovery.**
The written report shall be made on an Underground Storage Tank Unauthorized Leak/Contamination Site Report (ULR) form.

22. **Submit a closure report to this office within 60 days of the tank removal. The report must contain all information listed in item 22 of the instructions.**

23. Submit State (Underground Storage Tank Permit Application) Forms A and B (one B form for each UST to be removed) (mark box 8 for "tank removed" in the upper right hand corner)

I declare that to the best of my knowledge and belief that the statements and information provided above are correct and true.

I understand that information, in addition to that provided above, may be needed in order to obtain approval from the Environmental Protection Division and that no work is to begin on this project until this plan is approved.

I understand that any changes in design, materials or equipment will void this plan if prior approval is not obtained.

I understand that all work performed during this project will be done in compliance with all applicable OSHA (Occupational Safety and Health Administration) requirements concerning personnel health and safety. I understand that site and worker safety are solely the responsibility of the property owner or his agent and that this responsibility is not shared nor assumed by the County of Alameda.

Once I have received my stamped, accepted closure plan, I will contact the project Hazardous Materials Specialist at least three working days in advance of site work to schedule the required inspections.

CONTRACTOR INFORMATION

Name of Business ARTESIAN ENVIRONMENTAL

Name of Individual JASON FRENCH

Signature Jason French Date 9/27/95

PROPERTY OWNER OR MOST RECENT TANK OPERATOR (Circle one)

Name of Business THE EASTMONT MALL

Name of Individual Bob S Bridwell

Signature Jason French (for) Date 9/27/95

General Instructions

* Three (3) copies of this plan plus attachments and a deposit must be submitted to this Department.
* Any cutting into tanks requires local fire department approval.
* One complete copy of your approved plan must be at the construction site at all times; a copy of your approved plan must also be sent to the landowner.
* State of California Permit Application Forms A and B are to be submitted to this office. One Form A per site, one Form B for each removed tank.

Line Item Specific Instructions

2. SITE ADDRESS
   Address at which closure is taking place.

5. EPA I.D. NO. under which the tanks will be manifested
   EPA I.D. numbers may be obtained from the State Department of Toxic Substances Control, 916/324-1781.

6. CONTRACTOR
   Prime contractor for the project.

10. STATE REGISTERED HAZARDOUS WASTE TRANSPORTERS/FACILITIES

    a) All residual liquids and sludges are to be removed from tanks before tanks are inerted.

    c) Tanks must be hauled as hazardous waste.

    d) This is the place where tanks will be taken for cleaning.

15. TANK HISTORY AND SAMPLING INFORMATION
    Use History - This information is essential and must be accurate. Include tank installation date, products stored in the tank, **and the date when the tank was last used.**

    Material to be sampled - e.g. water, oil, sludge, soil, etc.

    Location and depth of samples - e.g. beneath the tank a maximum of two feet below the native soil/backfill interface, side wall at the high water mark, etc.

NOTE: These requirements are excerpts from 29 CFR Part 1910.120(b)(4), Hazardous Waste Operations and Emergency Response; Final Rule, March 6, 1989. Safety plans of certain underground tank sites may need to meet the complete requirements of this Rule.

19. PLOT PLAN
The plan should consist of a scaled view of the facility at which the tank(s) are located and should include the following information:

a) Scale;

b) North Arrow;

c) Property Lines;

d) Location of all Structures;

e) Location of all relevant existing equipment including tanks and piping to be removed and dispensers;

f) Streets;

g) Underground conduits, sewers, water lines, utilities;

h) Existing wells (drinking, monitoring, etc.);

i) Depth to ground water; and

j) All existing tank(s) and piping in addition to the tank(s) being removed.

20. DEPOSIT
A deposit, payable to "County of Alameda" for the amount indicated on the Alameda County Underground Storage Tank Fee Schedule, must accompany the plans.

21. Blank Unauthorized Leak/Contamination Site Report forms may be obtained in limited quantities from this office or from the San Francisco Bay Regional Water Quality Control Board (510/286-1255). Larger quantities may be obtained directly from the State Water Resources Control Board at (916) 739-2421.

22. TANK CLOSURE REPORT
The tank closure report should contain the following information:

a) General description of the closure activities;

b) Description of tank, fittings and piping conditions. Indicate tank size and former contents; note any corrosion, pitting, holes, etc.;

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EXPLANATION FOR TABLE #2: MINIMUM VERIFICATION ANALYSIS

1. OTHER METHODOLOGIES are continually being developed and as methods are accepted by EPA or DHS, they also can be used.

2. For DRINKING WATER SOURCES, EPA recommends that the 500 series for volatile organics be used in preference to the 600 series because the detection limits are lower and the QA/QC is better.

3. APPROPRIATE STANDARDS for the materials stored in the tank are to be used for all analyses on Table #2. For instance, seasonally, there may be five different jet fuel mixtures to be considered.

4. To AVOID FALSE POSITIVE detection of benzene, benzene-free solvents are to be used.

5. TOTAL PETROLEUM HYDROCARBONS (TPH) as gasoline (G) and diesel (D) ranges (volatile and extractible, respectively) are to be analyzed and characterized by GCFID with a fused capillary column and prepared by EPA method 5030 (purge and trap) for volatile hydro- carbons, or extracted by sonication using 3550 methodology for extractable hydrocarbons. Fused capillary columns are preferred to packed columns; a packed column may be used as a "first cut" with "dirty" samples or once the hydrocarbons have been characterized and proper QA/QC is followed.

6. TETRAETHYL LEAD (TEL) analysis may be required if total lead is detected unless the determination is made that the total lead concentration is geogenic (naturally occurring).

7. CHLORINATED HYDROCARBONS (CL HC) AND BENZENE, TOLUENE, XYLENE AND ETHYLBENZENE (BTX&E) are analyzed in soil by EPA methods 8010 and 8020 respectively, (or 8240) and in water, 601 and 602, respectively (or 624).

8. OIL AND GREASE (O & G) may be used when heavy, straight chain hydrocarbons may be present. Infrared analysis by method 418.1 may also be acceptable for O & G if proper standards are used. **Standard Methods" 17th Edition, 1989, has changed the 503 series to 5520.**

9. **PRACTICAL QUANTITATION REPORTING LIMITS are influenced by matrix problems and laboratory QA/QC procedures. Following are the Practical Quantitation Reporting Limits:**

	SOIL PPM	WATER PPB
TPH G	1.0	50.0
TPH D	1.0	50.0
BTX&E	0.005	0.5
O & G	50.0	5,000.0

Based upon a Regional Board survey of Department of Health Services Certified Laboratories, the Practical Quantitation Reporting Limits are attainable by a majority of laboratories with the exception of diesel fuel in soils. The Diesel Practical Quantitation Reporting Limits, shown by the survey, are:

ROUTINE	MODIFIED PROTOCOL
≤ 10 ppm (42%)	≤ 10 ppm (10%)
≤ 5 ppm (19%)	≤ 5 ppm (21%)
≤ 1 ppm (35%)	≤ 1 ppm (60%)

When the Practical Quantitation Reporting Limits are not achievable, an explanation of the problem is to be submitted on the laboratory data sheets.

10. LABORATORY DATA SHEETS are to be signed and submitted and include the laboratory's assessment of the condition of the samples on receipt including temperature, suitable container type, air bubbles present/absent in VOA bottles, proper preservation, etc. The sheets are to include the dates sampled, submitted, prepared for analysis, and analyzed.

11. IF PEAKS ARE FOUND, when running samples, that do not conform to the standard, laboratories are to report the peaks, including any unknown complex mixtures that elute at times varying from the standards. Recognizing that these mixtures may be contrary to the standard, they may not be readily identified; however, they are to be reported. At the discretion of the LIA or Regional Board the following information is to be contained in the laboratory report:

    The relative retention time for the unknown peak(s) relative to the reference peak in the standard, copies of the chroma- togram(s), the type of column used, initial temperature, temperature program is C/minute, and the final temperature.

12. REPORTING LIMITS FOR TPH are: gasoline standard ≤ 20 carbon atoms, diesel and jet fuel (kerosene) standard ≤ 50 carbon atoms. It is not necessary to continue the chromatography beyond the limit, standard, or EPA/DHS method protocol (whichever time is greater).

EPILOGUE

ADDITIVES: Major oil companies are being encouraged or required by the federal government to reformulate gasoline as cleaner burning fuels to reduce air emissions. MTBE (Methyl-tertiary butyl ether), ETHANOL (ethyl alcohol), and other chemicals may be added to reformulate gasolines to increase the oxygen content in the fuel and thereby decrease undesirable emissions (about four percent with MTBE). MTBE and ethanol are, for practical purposes, soluble in water. The removal from the water column will be difficult. Other compounds are being added by the oil companies for various purposes. The refinements for detection and analysis for all of these additives are still being worked out. If you have any questions about the methodology, please call your Regional Board representative.

No. R1545

Environmental Health Consultants

Thomas E. Fortner

has successfully completed an 8-hour refresher course in health and safety for hazardous waste operations.

October 31, 1994 San Rafael, California

Course Date and Location

Instructor Signature

Instructor Signature



J.P. ROSS

Has Completed 40 Hrs of Hazardous Waste Operations Training

Prezant

711 6th Ave. N, Suite 200
Seattle, WA 98109 • (206) 281-8858

Cert.# 95-1400

Complies with 29 CFR 1910.120

This card certifies that

Bill Raymond

has completed 8 hours of refresher training in Hazardous Waste Operations and Emergency Response

July 10, 1995

Coordinator

You are required to have annual refresher training by: July 10, 1996

No. S1316

Environmental Health Consultants

Jason French

has successfully completed an 8-hour course for supervision of hazardous waste operations.

May 18, 1995 Burlingame, California

Course Date and Location

Instructor Signature

Instructor Signature

No. R1975

Environmental Health Consultants

Jason French

has successfully completed an 8-hour refresher course in health and safety for hazardous waste operations

May 19, 1995 Burlingame, California

Course Date and Location

Instructor Signature

Instructor Signature

No. R1071

Environmental Health Consultants

Fred Smith

has successfully completed an 8-hour refresher course in health and safety for hazardous waste operations

July 21, 1995 Burlingame, California

Course Date and Location

Instructor Signature

Instructor Signature

No. S1317

Environmental Health Consultants

Frederick A. Smith

has successfully completed an 8-hour course for supervision of hazardous waste operations

May 18, 1995 Burlingame, California

Course Date and Location

Instructor Signature

Instructor Signature

leave active as SLIC – trns to LOP
9-20-95 lop entry

trns. to LOP (na) 9/22/

DATE: September 19, (pr date, p-s)

TO : Local Oversight Program

FROM: Madhulla Logan

114

SUBJ: Transfer of Eligible Local Oversight Case

Site name: EAST MONT Mall

Address: 1 Eastmont Mall city OAKLAND Zip 94605-

TO BE ELLIGIBLE FOR LOP A CASE MUST MEET 3 QUALIFICATIONS:

1. Number of Tanks: 5 removed? Y N Date of removal Not known per/1985.

2. Samples received? (Y) N Contamination level: 2000 ppm - (ppm and type of test)

Contamination should be over 100 ppm TPH to qualify for LOP

3. Petroleum Y N Types: Avgas Jet leaded unleaded Diesel fuel oil waste oil kerosene solvents

DepRef remaining $_____ Closed with Candace/Leslie? Y N (If no explain why?)

Will be as both LOP & SLIC case.

IF YOUR SITE MEETS ALL OF THE ABOVE QUALIFICATIONS YOU SHOULD DO THE FOLLOWING TO TRANSFER THE SITE:

1. YOU MUST CLOSE THE DEPOSIT REFUND CASE AT THIS TIME. YOU MUST ACCOUNT FOR ALL TIME YOU HAVE SPENT ON THE CASE AND TURN IN THE ACCOUNT SHEET TO LESLIE. IF THERE ARE FUNDS STILL REMAINING IT IS STILL BETTER TO TRANSFER THE CASE TO LOP AS THE RATE FOR LOP ALLOWS THE ADDITION OF MANAGEMENT AND CLERICAL TIME. DO NOT ATTEMPT TO CONTINUE TO OVERSEE THE SITE SIMPLY BECAUSE THERE ARE FUNDS REMAINING!

2. COMPLETE THE A AND B PERMIT APPLICATION FORMS AND GIVE TO CONNIE/ELAINE

3. GIVE THE ENTIRE CASE TO THE PROPER LOP STAFF UPSTAIRS FOR THEM TO DO THE REST OF THE TRANSFER AND YOU ARE DONE!

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, DIRECTOR
DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6700

Certified Mail #
09/26/95 - STID# 114

Notice of Requirement to Reimburse

David Norwitt
Not Applicable
1 Eastmont Mall
Oakland, Ca - 94605

Responsible Party
Property Owner

Eastmont Mall
1 Eastmont Mall
Oakland , CA 94605

SITE

Date First Reported
Substance: Gasoline
Petroleum: (X)Yes
Source: F

The federal Petroleum Leaking Underground Storage Tank Trust Fund (Federal Trust Fund) provides funding to pay the local and state agency administrative and oversight costs associated with the cleanup of releases from underground storage tanks. The legislature has authorized funds to pay the local and state agency administrative and oversight costs associated with the cleanup of releases from underground storage tanks. The direct and indirect costs of overseeing site investigation or remedial action at the above site are funded, in whole or in part, from the Federal Trust Fund. The above individual(s) or entity(ies) have been identified as the party or parties responsible for investigation and cleanup of the above site. **YOU ARE HEREBY NOTIFIED** that pursuant to Title 42 of the United States Code, Section 6991b(h)(6) and Section 25297.1 of the California Health and Safety Code, the above Responsible Party or Parties must reimburse the State Water Resources Control Board (SWRCB) not more than 150 percent of the total amount of site specific oversight costs actually incurred while overseeing the cleanup of the above referenced underground storage tank site, and the above Responsible Party or Parties must make full payment of such costs within 30 days of receipt of a detailed invoice from the SWRCB.

Any action or inaction by this local agency associated with corrective action, including responsible party identification, is subject to petitio to the SWRCB. Petitions must be filed within 30 days from the date of th action/inaction. To obtain petition procedures, please fax your request to Roni Riley at the SWRCB at (916) 227-4349 or telephone (916) 227-4408. Please contact Madhulla LOGAN, Hazardous Materials Specialist at this office if you have any questions concerning this matter.

George Young

George Young, Acting Chief
Contract Project Director

c: Mike Harper, SWRCB
Add: _____ Reason: _____
Delete: _____ Reason: _____
Change: _____ Reason: _____

Standard Form UST03 (6/93) ;Report: Reimb 5/95

P 113 815 438

Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

UNITED STATES POSTAL SERVICE

Sent to Mr. David Norwitt	
Street and No. One Easimont Mall	
P.O., State and ZIP Code Oakland CA 94605	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date June 2, 1993	

PS Form **3800**, June 1991

Certified Mailer # P 113 815 438

Lazarus Management Company
30 Swan Way, Suite 200
Oakland, CA 94621
(510) 271-4320

June 2, 1993

Mr. David Norwitt
One Eastmont Mall
Oakland, CA 94605

Re: Eastmont Plan of Investigation

Dear Mr. Norwitt:

This letter is in response to a telephone conversation that I had with one of your associates Jack Sumski regarding your new property the Eastmont Mall in Oakland on May 26, 1993. It is also in response to two letters dated May 14 and May 19, 1993 that were received from the previous property owner Jim Givens referring me to you as the new property owner. On January 28, 1993, Jim sent this office a request to review a plan of investigation for the subsurface contamination that was previously found on the property. On February 17, 1993, a letter was sent back to him requesting that he submit a check for $750.00 to this department to open a deposit/refund account for the regulatory oversight of this site mitigation project. A copy of this letter has been enclosed for your reference. As the new property owner, you will now have to do this within 30 days of the receipt of this letter.

In addition, an inspection of the Eastmont Auto Goodyear facility on March 17, 1993, revealed that there is an abandoned 500 gallon underground waste oil tank on the mall property adjacent to their space that was never used by their business and will now have to be removed by the property owner. There was a previous Notice of Violation sent from this department on this back in August of 1990. In accordance with the California Code of Regulations, Title 23, Chapter 3, Subchapter 16, Article 7, Section 2670, you are now required to submit an underground tank closure plan to this department within 30 days of the receipt of this letter. I have enclosed a copy of this form along with a form letter that outlines the underground tank removal process in Alameda County. In addition, please submit a separate deposit/refund account check for $483.00 made payable to the County of Alameda to cover our costs of review of this project. This deposit is also authorized by Section 3-141.6 of the Ordinance Code of Alameda County. Upon completion, any remaining balance will be returned to you.

If you have any questions, please contact me at (510) 271-3420.

Sincerely,

Ronald J. Owcarz

Ronald J. Owcarz, REHS
Hazardous Materials Specialist

Enclosures

cc: Larry Blazer, Alameda County District Attorney's Office
Jack Sumski, Eastmont Mall
Rich Hiett, RWQCB
Ariu Levi - file

RO

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Mr. David Norwitt
One Eastmont Mall
Oakland Ca 94605

4a. Article Number
P113 815 438

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
6-3-93 SC

5. Signature (Addressee)
Consuela Marie Smith

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1991 ☆ U.S.G.P.O.: 1992-307-530 DOMESTIC RETURN RECEIPT

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ARNOLD PERKINS, DIRECTOR
RAFAT A. SHAHID, DEPUTY DIRECTOR

DEPARTMENT OF PUBLIC HEALTH
499 Fifth Street
Oakland, California 94607
(510)

January 23, 1996

Mr. Gale Connor
Berg, Ziegler, Anderson & Park
4 Embarcardero Center, 14th floor
San Francisco, CA - 94111

Subject: 1 Eastmont Mall, Oakland, CA - 94605

Dear Mr. Connor:

I am in receipt of the documents, Subsurface Investigation Report dated November 9, 1995 and the Third Quarterly Groundwater Monitoring Report, dated November 17, 1995 prepared by All West Environmental for the above referenced site. Based on the laboratory analysis of the groundwater samples collected for the third quarter, this Department concurs with All West Environmental Inc, that the EPA method 8010 analysis for chlorinated hydrocarbons can be excluded from the sampling protocol. However, this Department still requires that groundwater monitoring be conducted for 3 additional quarters and the groundwater samples analyzed for gasoline and BTEX.

If you have any questions, you can reach me at (510) 567-6764.

Sincerely,

Madhulla Logan

Madhulla Logan,
Hazardous Material Specialist

CC: Mark Cunningham, ALLWEST, 1, Sutter St, ST 600, San Francisco, CA - 94104.

Sum Arigala, San Francisco Regional Water Quality Control Board, Oakland, California.

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, DIRECTOR
DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6700

September 22, 1995

Mr. Gale Connor
Berg, Ziegler, Anderson & Park
4 Embarcardero Center, 14th floor
San Francisco, CA - 94111

Subject: 1 Eastmont Mall, Oakland, Ca - 94605

Dear Mr. Connor:

In response to your request for site closure, this Department has reviewed all the pertinent documents regarding the above referenced property.

In December 1989, Hunter Environmental Services performed a phase II audit. Four soil borings were drilled on the property and 3 of them were converted into monitoring wells MW2, MW3 and MW4. The groundwater samples from monitoring well MW2 detected 1, 2 dichloroethylene (DCE) at 8 ppb, trichloroethylene (TCE) at 19 ppb and tetrachloroethylene at 210 ppb. It does not appear that the soil samples were tested for any volatile organics (VOC's) Significant concentrations of petroleum hydrocarbons as gasoline and BTEX were found in the soil and groundwater samples collected from the boring and monitoring well MW-4.

In April 1991, Dames and Moore installed 6 soil borings out of which 2 of the borings DM-1 and DM-2 were converted into monitoring wells. One sample from boring B1 collected at 15 feet indicated 7.7 ppm of gasoline, 70 ppb of toluene and 36 ppb of xylene. No other contamination was found in any other soil or groundwater samples collected during this investigation.

In September 1993, Artesian Environmental Consultants drilled 5 soil borings and completed them as monitoring wells MW-5 through MW-9. Soil and groundwater samples were analyzed for TPH gasoline, diesel, BTEX and VOC's. None of the analytes was found in concentrations above the detection limit in both the soil and groundwater samples. However, during the subsequent groundwater monitoring event that was conducted on the property in December 1993, significant concentrations of petroleum hydrocarbons as gasoline, and BTEX were found in the monitoring well MW-3 and MW-7.

Based on the information submitted to this Department, the following issues still need to be addressed before the site can be evaluated for closure:

1. After the installation of monitoring wells MW-5 through MW-9 by Artesion Environmental, only 1 groundwater monitoring event was conducted. This Department requires that groundwater monitoring be conducted for 4 consecutive quarters before any evaluation is done. So initiate groundwater monitoring at quarterly intervals for monitoring well MW-5 through MW-9 and analyze the samples for petroleum hydrocarbon as gasoline, BTEX and semi-volatile compounds (method 8270). Include the analysis for VOC's by method 8010 for the first monitoring event and inclusion of this method for future sampling events will be based on initial laboratory results for VOC's.

2. During the investigation conducted in December 1989, groundwater samples collected from monitoring well, MW-2 indicated the presence of volatile organics. Since no soil samples from this area was analyzed for VOC's, additional investigation is required to define any VOC contamination if present around monitoring well MW-2.

Please submit a workplan to this Department addressing the above mentioned issues. If you have any questions, call me at (510) 567-6764.

Sincerely,

Madhulla Logan

Madhulla Logan,
Hazardous Material Specialist

CC: Mark Cunningham, ALLWEST, 1, Sutter St, ST 600, San Francisco, CA - 94104.

Sum Arigala, San Francisco Regional Water Quality Control Board, Oakland, California.

ARTESIAN ENVIRONMENTAL

3100 Kerner Boulevard, Suite C • San Rafael, CA 94901
Telephone 415 / 257-4801 • Fax Line 415 / 257-4805



FACSIMILE TRANSMISSION

TO: Juliet Shin

FAX #: 510 337-9335

NUMBER OF SHEETS (INCLUDING THIS ONE): 4

DATE: 11/9/95 **JOB NUMBER:** 1695

MESSAGE:

S1 - from beneath center of tank 8.5' below ground surface

SS1 - 4 point composite from stockpile

FROM: Jason Trant

IF YOU DID NOT RECEIVE THE COMPLETE TRANSMISSION, PLEASE CALL (415) 257-4801.

THIS FAX MAY CONTAIN PRIVILEGED AND CONFIDENTIAL INFORMATION INTENDED ONLY FOR THE USE OF PERSON(S) NAMED ABOVE WHO HAVE A RIGHT OF PRIVACY. IF YOU ARE NOT AN INTENDED RECIPIENT, YOU ARE NOTIFIED THAT ANY DISCLOSURE, DISSEMINATION OR DUPLICATION OF THIS FAX IS NOT AUTHORIZED, AND NO WAIVER OF ANY PRIVILEGE OR CONFIDENTIALITY IS INTENDED BY YOUR RECEIPT OF THIS TRANSMISSION. IF YOU HAVE RECEIVED THIS FAX IN ERROR, PLEASE NOTIFY US BY COLLECT TELEPHONE CALL AND RETURN IT SO WE MAY REDIRECT IT. THANK YOU.

Jason French
Artesian Environmental
3100 Kerner Blvd., Ste. C
San Rafael, CA 94901

Date: 11/09/1995
NET Client Acct. No: 10920
NET Pacific Job No: 95.04161
Received: 10/24/1995

Client Reference Information

Eastmont Mall/Proj. No. 1695

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Results apply only to these samples analyzed. Reproduction of this report is permitted only in its entirety. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Submitted by:

NET Santa Rosa
Preliminary Report

Enclosure(s)

PRELIMINARY REPORT

Client Name: Artesian Environmental
Client Acct: 10920
NET Job No: 95.04151

Date: 11/09/1995
NLAP Cert: 1388
Page: xxx

Ref: Basement Mall/Proj. No. 1696

SAMPLE DESCRIPTION: S1
Date Taken: 10/23/1995
Time Taken: 15:35
NET Sample No: 254274

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
Oil & Grease (Total)	410		50	mg/kg	5520E		11/04/1995	342
Oil & Grease (Non-Polar)	330		50	mg/kg	5520E/F		11/04/1995	341
ICP METALS SOLID	--							717
Cadmium (ICP)	ND		2.0	mg/kg	EPA 6010	10/30/1995	10/30/1995	640
Chromium (ICP)	48		2.0	mg/kg	EPA 6010	10/30/1995	10/30/1995	651
Lead (GFAA)	2.7		0.2	mg/kg	EPA 7421	10/30/1995	10/30/1995	717
Nickel (ICP)	71		5.0	mg/kg	EPA 6010	10/30/1995	10/30/1995	544
Zinc (ICP)	32		5.0	mg/kg	EPA 6010	10/30/1995	10/30/1995	589
TPH (Gas/BTXE,Solid)	--						10/31/1995	1874
METHOD 5030/M8015							10/31/1995	1874
DILUTION FACTOR*	1		1	mg/kg	5030		10/31/1995	1874
as Gasoline	ND						10/31/1995	1874
METHOD 8020 (GC,Solid)	--						10/31/1995	1874
Benzene	ND		2.5	ug/kg	8020		10/31/1995	1874
Toluene	ND		2.5	ug/kg	8020		10/31/1995	1874
Ethylbenzene	ND		2.5	ug/kg	8020		10/31/1995	1874
Xylenes (Total)	ND		2.5	ug/kg	8020		10/31/1995	1874
SURROGATE RESULTS	--							
Bromofluorobenzene (SURR)	96			% Rec.	5030		10/31/1995	
METHOD M8015 (EXT., Solid)								
DILUTION FACTOR*	10						11/07/1995	1104
as Creosote	ND		100	mg/kg	3550		11/07/1995	1104
as Diesel	160	DH	10	mg/kg	3550		11/07/1995	1104

DH : The positive result appears to be a heavier hydrocarbon than Diesel.

PRELIMINARY REPORT

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

Client Name: Arrcsian Environmental
Client Acct: 10920
MET Job No: 95.04161

Date: 11/05/1995
MCAP Cert: 1386
Page: xxx

Ref: Eastmont Mall/Proj. No. 1695

SAMPLE DESCRIPTION: SS1
Date Taken: 10/23/1995
Time Taken: 15:51
MET Sample No: 254275

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
Oil & Grease (Total)	11,100		50	mg/kg	SS20S		11/04/1995	342
Oil & Grease (Non-Polar)	8,500		50	mg/kg	SS20S/F		11/04/1995	341
ICP METALS SOLID	COMPLETE						10/30/1995	717
Cadmium (ICP)	ND		2.0	mg/kg	EPA 6010	10/30/1995	10/30/1995	640
Chromium (ICP)	35		2.0	mg/kg	EPA 6010	10/30/1995	10/30/1995	651
Lead (GFAA)	12		0.2	mg/kg	EPA 7421	10/30/1995	10/30/1995	717
Nickel (ICP)	39		5.0	mg/kg	EPA 6010	10/30/1995	10/30/1995	844
Zinc (ICP)	30		5.0	mg/kg	EPA 6010	10/30/1995	10/30/1995	585
TPH (Gas/BTXE,Solid)	--						10/31/1995	1874
METHOD 5030/M8015							10/31/1995	1874
DILUTION FACTOR*	100						10/31/1995	1874
as Gasoline	220	GH	100	mg/kg	5030		10/31/1995	1874
METHOD 8020 (GC,Solid)	--						10/31/1995	1874
Benzene	ND		250	ug/kg	8020		10/31/1995	1874
Toluene	360		250	ug/kg	8020		10/31/1995	1874
Ethylbenzene	1,700		250	ug/kg	8020		10/31/1995	1874
Xylenes (Total)	9,500		250	ug/kg	8020		10/31/1995	1874
SURROGATE RESULTS	--						10/31/1995	1874
Bromofluorobenzene (SURR)	108			% Rec.	5030			
METHOD M8015 (EXT., Solid)						10/31/1995	11/02/1995	1100
DILUTION FACTOR*	1,000						11/02/1995	1100
as Creosote	ND		10,000	mg/kg	3550		11/02/1995	1100
as Diesel	23,000	DF	1,000	mg/kg	3550			

DF : The positive result appears to be a heavier hydrocarbon than Diesel.
GH : The positive result appears to be a heavier hydrocarbon than Gasoline.

PRELIMINARY REPORT

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

white -env.health
yellow -facility
pink -files

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

Hazardous Materials Inspection Form

1131 Harbor Bay Pkwy
Alameda CA 94502
510/567-6700

II, III

Site ID # 27 ~~Site Name~~ EASTMONT AUTO MALL Today's Date 12/19/95

Site Address ~~7250~~ 7100 BANCROFT AVENUE

City OAKLAND Zip 94 Phone _____

_____ MAX AMT stored > 500 lbs, 55 gal., 200 cft.?

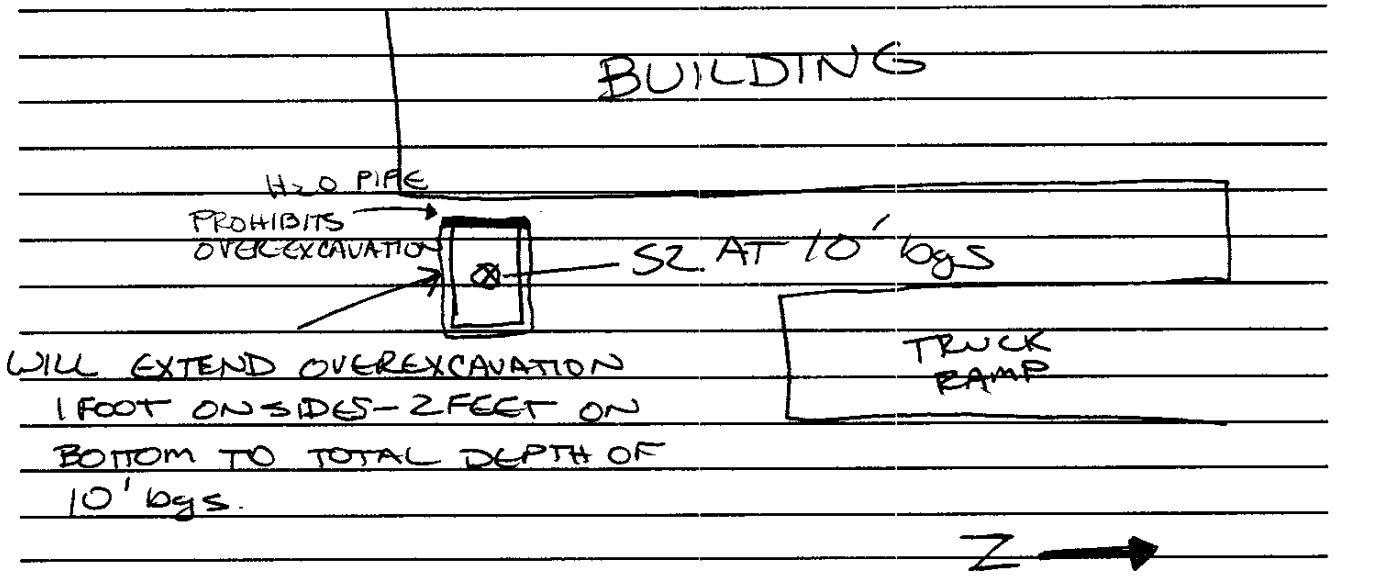
Inspection Categories:

____ I. Haz. Mat/Waste GENERATOR/TRANSPORTER
____ II. Hazardous Materials Business Plan, Acutely Hazardous Materials
__✓__ III. Underground Storage Tanks

* Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

Comments: LEFT SITE 10:AM 14 MILES
ON SITE 9:00AM TO WITNESS SOIL OVEREXCAVATION OF FORMER WASTE OIL TANK PIT.
INITIAL CONCENTRATIONS
TOG @ 410 PPM REMCO IN RICHMOND (SPOILS)
TPHd @ 180 PPM

72ND STREET



WILL EXTEND OVEREXCAVATION 1 FOOT ON SIDES - 2 FEET ON BOTTOM TO TOTAL DEPTH OF 10' bgs.

Z →

II, III

Contact JASON FRENCH
Title P.M.
Signature _____

Inspector DALE KLETTKE
Signature Dale Kletke

ALAMEDA COUNTY HAZARDOUS MATERIALS DIVISION
DEPOSIT / REFUND ACCOUNT SHEET printed09/27/95

SITE INFORMATION

Eastmont Mall Goodyear
7250 Bancroft Ave
Oakland 94605
Site Contact: Mr. Norwitt
Site Phone : 510 632-1131

StID: 27 Site#: 2316
PROJECT#: 2316A
PROJECT TYPE:*** R ***
INSP: Juliet M Shin
ACCT. SHEET PG #: ____

PROPERTY OWNER INFORMATION

Eastmont Mall Properties
1 Eastmont Mall
Oakland, Ca 94605
Owner Contact: Mr. David Norwitt
Owner Phone : 510 632-1131

PAYOR INFORMATION

Eastmont Mall
1 Eastmont Mall
Oakland CA 94605 #767
Payor Contact:
Payor Phone :

Date	Action Taken	Time In	Time Out	Hours Spent/ Depstd	Hour Balnce	Money Spent/ Depositd	Money Balance
	Balance from Prev.Page	.....	.....	.....		.....	
09/22/93	Rcpt# 704516 Deposit of $483.00 @ $90/hour			+5.36	+5.36		483.00
9/29/95	Reviewed Closure Plans			1	4.36	90.00	393.00
10/23/95	SITE VISIT - TANK PULL			2.2	2.16	198.00	195.00
1/10/96	Spoke to Jim Jacobs re results of overexcavation proposed work logged in file			0.5	1.66	45.00	150.00
12/19/95	Witnessed overexc.			1.6	.06	144	6.00
	Closed. Transferred to LOP.						

UPON COMPLETION OF PROJECT

PROJ COMPLETED BY : Juliet Shin
ATTACH: __ State Forms A,B & C __ Billing Adjustment*
DATE OF COMPLETION : 1/23/96
DATE SENT TO BILLING: 1/23/96
TOTAL COST OF PROJECT: $477.00
REFUND AMOUNT: $6.00
Rev. 5/95

* Billing adjustment forms needed when site is in our UST program.

REPORT: WrkShtD (ongoing Deposit)

ARRIVE 2:35 P.M. ARTESIAN ENVIRONMENTAL ON SITE 415 257-480
LEFT 4:10
TRAVEL 30 MINUTES TC FROM 18 MILES RT

Tyvek
white -env.health
yellow -facility
pink -files

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

Hazardous Materials Inspection Form

1131 Harbor Bay Pkwy
Alameda CA 94502
510/567-6700

II, III

Site ID # 27 Site Name EASTMOUNT AUTO Today's Date 10/23/95

Site Address 7250 BANCROFT AVE

City OAKLAND Zip 94605 Phone

_____ MAX AMT stored > 500 lbs, 55 gal., 200 cft.?

Inspection Categories:

____ I. Haz. Mat/Waste GENERATOR/TRANSPORTER
____ II. Hazardous Materials Business Plan, ~~Acutely~~ Hazardous Materials
✓ III. Underground Storage Tanks

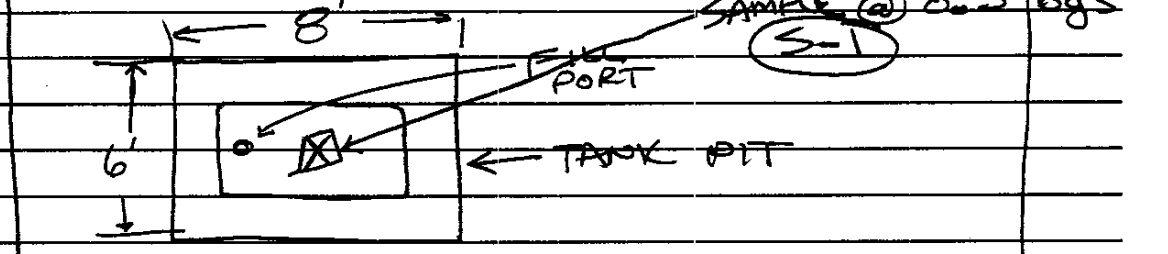
X X X

SAMPLED STOCKPILED SOIL @ 15yd3

SS-1

* Calif. Administration Code (CAC) or the Health & Safety Code (H&SC)

Comments: 500 GALLON WASTE OIL UST ENCOUNTERED PERCHED H_2O @ 6' bgs. TANK TAR WRAPPED AND IN GOOD CONDITION. @ TOP OF TANK @ 2' bgs BOTTOM @ 6' bgs



PERCHED H_2O @ 2-4' IN TANK PIT.
OILY FILM ON TOP OF H_2O IN PIT.
ANALYZE SAMPLES FOR WASTE OIL PARAMETERS
TOOK SAMPLE OF PIT H_2O.
STRONG PETROLEUM ODOR WHILE EXCAVATING
1% LEL OVERBURDEN. REMOVED OVERBURDEN.
10% O_2 TOOK SAMPLE AT 8.5' bgs
IN CENTER OF PIT.
@ 15yd³ OF STOCKPILED SOIL (ON VISQUEEN)

Contact JASON FRENCH 73RD AVENUE II, III

Title Project Manager Inspector DALE KLETTKE

Signature Signature Dale Kl

TOOK 4-POINT COMPOSITE OF STOCK PILED S

11/21/95 Spoke to Jason, Antrasian Environmental 415-257-4801, They will probably go back in and excavate a couple more feet & collect a confirmatory soil sample. If ND for contaminants of concern, the site may not be transferred to COP.

1/10/96 Jim Jacobs, 415-257-4801 - Conducted over-ex. & found higher concentrations in confirmatory samples than in initial samples (initial samples were up to 410ppm TPH & confirmatory samples were up to 6,500ppm TPH 2 feet below). Groundwater is thought to be ~30' bg. at site. Will submit report documenting work soon. I requested that if proposals are made in report that a signed cover letter from RP be attached.

ARTESIAN ENVIRONMENTAL CONSULTANTS

PHASE II SOIL & GROUNDWATER ASSESSMENT WORKPLAN

THE EASTMONT MALL
7100 BANCROFT AVENUE
OAKLAND, CALIFORNIA

AE Project No. 1743

Prepared For:

Mr. Bob Bridwell
The Eastmont Mall
One Eastmont Mall
Oakland, CA 94605

January 24, 1996

CERTIFIED HYDROGEOLOGIST
JAMES A. JACOBS
NO. 88
STATE OF CALIFORNIA

James A. Jacobs, C.H.G. #88
Certified Hydrogeologist

Jason French
Project Manager

3100 Kerner Blvd., Suite C · San Rafael, CA · 94901 · (415) 257-4801 · FAX (415) 257-4805

TABLE OF CONTENTS Page

1.0	INTRODUCTION	1
2.0	SITE SETTING	1
3.0	BACKGROUND	1
4.0	SCOPE OF WORK	2
	4.1 Soil & Groundwater Sampling	2
	4.2 Monitoring Well Sampling/Water Level Measurements	3
5.0	PERMITTING	3
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7.0	LABORATORY ANALYSIS	3
8.0	REPORT PREPARATION	4
9.0	DISTRIBUTION	4

FIGURES
Figure 1 Regional Map
Figure 2 Site Map
Figure 3 Proposed Boring Location Map

APPENDIX A: PERMIT APPLICATION

APPENDIX B: STANDARD OPERATING PROCEDURES

APPENDIX C: SITE HEALTH & SAFETY PLAN

3100 Kerner Blvd., Suite C · San Rafael, CA · 94901 · (415) 257-4801 · FAX (415) 257-4805

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1.0 INTRODUCTION

The Eastmont Mall has retained Artesian Environmental Consultants (Artesian) to perform a Phase II Assessment at the former site of a 550-gallon waste oil tank. The Eastmont Mall is located at 7100 Bancroft Avenue, in the City of Oakland, California. (See Figures 1 and 2). The work was authorized by Mr. Bridwell in an effort to comply with Alameda County and California Water Quality Control Board requirements regarding the removal, assessment, and cleanup of leaking underground storage tanks (USTs).

The intent of the proposed Phase II Assessment is to evaluate whether groundwater beneath the former UST has been impacted by petroleum hydrocarbons. A single proposed soil boring is to be advanced utilizing Geoprobe direct-push technology. Both soil and groundwater samples are to be collected from the boring.In addition, a groundwater sample will be collected from existing monitoring well MW-9. MW-9 is located approximately 200 feet downgradient of the former tank location. Depth to water measurements will be collected from other monitoring wells on the site to collected additional information on groundwater depth and gradient. A copy of Artesian's boring permit application is included in Appendix A.

2.0 SITE SETTING

The project site is bounded by Foothill Boulevard to the north, Bancroft Avenue to the south, 73rd Avenue to the east, and Church Street to the west. The site is located to the west of the Berkeley hills, which rise to 1,175 feet above sea level. Two thousand feet south of the site lies the Arroyo Viejo stream channel (Figure 1).

The project site consists of a mall with several commercial retailers including clothing stores, an auto repair shop, and a supermarket. The entire building is surrounded by large parking lot areas, along with an office building and a gasoline station (Figure 2).

3.0 BACKGROUND

The Eastmont Mall site was primarily residential prior to 1916. In 1916, the site was excavated and leveled for the construction of an automobile assembly facility; the Chevrolet Fisher Body Plant. The plant closed some time in the early 1960s. The site remained vacant from 1965 to 1969. Construction of the mall began in 1969.

Several environmental assessments unrelated to the 500-gallon waste oil tank have been performed at the site. Hunter Environmental Services, Inc. (Hunter) of Martinez, California performed a Phase II environmental audit of the Eastmont Mall property on December 20, 1989. Four soil borings were drilled by Hunter on the mall property. Three of these borings were completed as monitoring wells MW-2 through MW-4. Analytical results showed that several soil samples contained hydrocarbon contamination, and several water samples contained 1-2 dichloroethene (1-2 DCE), trichloroethene (TCE), and tetrachloroethene (PCE). In 1991, Dames & Moore of San Francisco, California installed an additional six soil borings, converting two of them into monitoring wells DM-1 and DM-2. In 1993, Artesian Environmental drilled five soil borings which were converted to

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groundwater monitoring wells MW-5 to MW-9. The soil and water samples were below reporting levels for TPH-g, TPH-d, BTEX compounds and the purgeable halocarbons.

The closest well to the tank is MW-9, approximately 200 feet to the northwest. The groundwater flow direction is to the northwest-west, according to the Dames and Moore, 1991 Quarterly Monitoring Report. Water is estimated to be found at 35 to 40 feet below ground surface. Oil and grease was not a requested analyte for groundwater samples collected from MW-9 in the past. Laboratory analysis of groundwater samples collected from MW-9 has yielded results below reporting limits for TPH-g, TPH-d, BTEX, and the purgeable halocarbons.

On October 23, 1995, Artesian removed a single waste oil tank from the subject site. The 500-gallon waste oil tank was located behind the Eastmont Auto Center, approximately 85 feet northwest of 73rd Avenue (Figure 3).

Following removal of the tank, a single soil sample (soil sample S1) was collected from approximately 18 inches into native soils beneath the center of the former UST. The sample was collected from the backhoe bucket. A four point composite sample (Soil Sample SS1) was collected from the excavated soil stockpile.

On December 19, 1995, the former tank pit was over-excavated. Approximately one to two feet of soil was removed from three of the excavation sidewalls. Subsurface utility lines prevented overexcavation on the fourth sidewall, closest to the Eastmont Auto Center. Two feet of soils were removed from the floor of the excavation, increasing the total excavation depth from eight to ten feet bgs. The over-excavated soil and the existing stockpile were loaded and transported by Caballero & Sons of San Jose, California. Caballero & Sons transported the soils (31.75 cu. yds.) to REMCO, Inc. of Richmond, California, where the soils were incinerated in REMCO's rotary kiln. A confirmatory soil sample (soil sample S2) was collected from beneath the former tank location at a depth of 10 feet bgs.

Laboratory analysis of composite soil sample SS1 revealed that tank backfill soils contained notable concentrations of Oil and Grease (11,100 ppm), TPH-g (220 ppm), Toluene (360 ppm), Ethylbenzene (1,700 ppm), total Xylenes (9,500 ppm), and an unidentified hydrocarbon, heavier than diesel, that was believed to be motor oil (23,000 ppm). Soil sample S1, collected from native soils beneath the center of the former tank, contained Oil and Grease (410 ppm) and an unidentified hydrocarbon believed to be motor oil (160 ppm). Soil sample S2, collected from two feet beneath soil sample S1, contained Oil and Grease (1,500 ppm) and TPH-mo (610 ppm).

4.0 SCOPE OF WORK

4.1 Soil & Groundwater Sampling

Soil boring B1 will be advanced to a maximum depth of 40 feet bgs through the center of the former UST location. The proposed soil boring location is shown in Figure 3. Soil samples will be collected at 5 foot intervals and field screened with a photoionization detector (PID). Three soil samples will be selected for laboratory analysis. The samples will be removed from the sampler barrel then capped on both ends with teflon tape and plastic end caps. A groundwater sample will be collected using a mini-bailer or perestaltic pump, and decanted into labeled, laboratory supplied bottles. The soil and groundwater

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samples will be labeled, placed in zip lock bags, and placed on crushed ice for transport to a California State Certified Laboratory under chain of custody control. Artesian's standard operating procedures for direct push technology soil and groundwater sampling from boreholes are attached in Appendix B.

Soil sampling equipment is decontaminated following each use. Sampler barrels and rods are decontaminated using a high pressure, hot water wash. Sampling equipment is decontaminated using a phosphate and chlorine-free detergent wash, and two distilled water rinses. Decontamination water will be stored on-site in a labeled 55 gallon DOT approved 17-H drum, pending analytical results. At the conclusion of drilling activities, the borings will be grouted to ground surface with a cement grout with (5%) bentonite.

4.2 Groundwater Monitoring Well Sampling/Water Level Measurements

Artesian will sample existing monitoring well MW-9, which is believed to be downgradient of the former waste oil UST. Prior to sampling, the well will be purged by evacuating a minimum of three to four well-casing volumes of groundwater, until the discharge water pH, temperature and conductivity stabilize. A groundwater sample will be collected using a 1.5-inch diameter disposable bailer, and decanted into labeled, laboratory supplied bottles. The samples will be stored on ice and transported under chain of custody control to a California State Certified Laboratory. Artesian's standard operating procedures for monitoring well sampling are attached in Appendix B.

Depth to water measurements will be collected from other pre-existing monitoring wells on the site using a Keck water meter. The water meter will be decontaminated between wells using a phosphate and chlorine-free detergent wash, and two distilled water rinses. The measurements will be used to determine groundwater gradient and depth across the subject site.

5.0 PERMITTING

All necessary permits will be obtained prior to performing fieldwork. All field activities will be scheduled and underground utility lines will be located by Underground Service Alert (USA) prior to drilling. Artesian will provide limited magnetic and induction line locating services to aid in locating buried pipes and utilities prior to drilling.

6.0 SITE SAFETY PLAN

The site safety plan has been prepared and will be on-site during all field activities (Appendix C). All persons in the decontamination area will be informed of the safety regulations on-site and sign the site safety forms.

7.0 LABORATORY ANALYSIS

Selected soil and/or groundwater samples from each boring will be analyzed for constituents selected from the list below. A total of three soil and two water samples will be submitted for analysis.

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-Total petroleum hydrocarbons as motor oil (TPH-mo) by EPA Method 8015
-Oil & Grease by EPA Method 5520 E & EF

8.0 REPORT PREPARATION

A written report documenting the findings and results of the site investigation will be prepared. The report will be certified by a California-State registered geologist and will include laboratory reports, chain-of-custody forms, laboratory quality control documents, and recommendations.

9.0 DISTRIBUTION

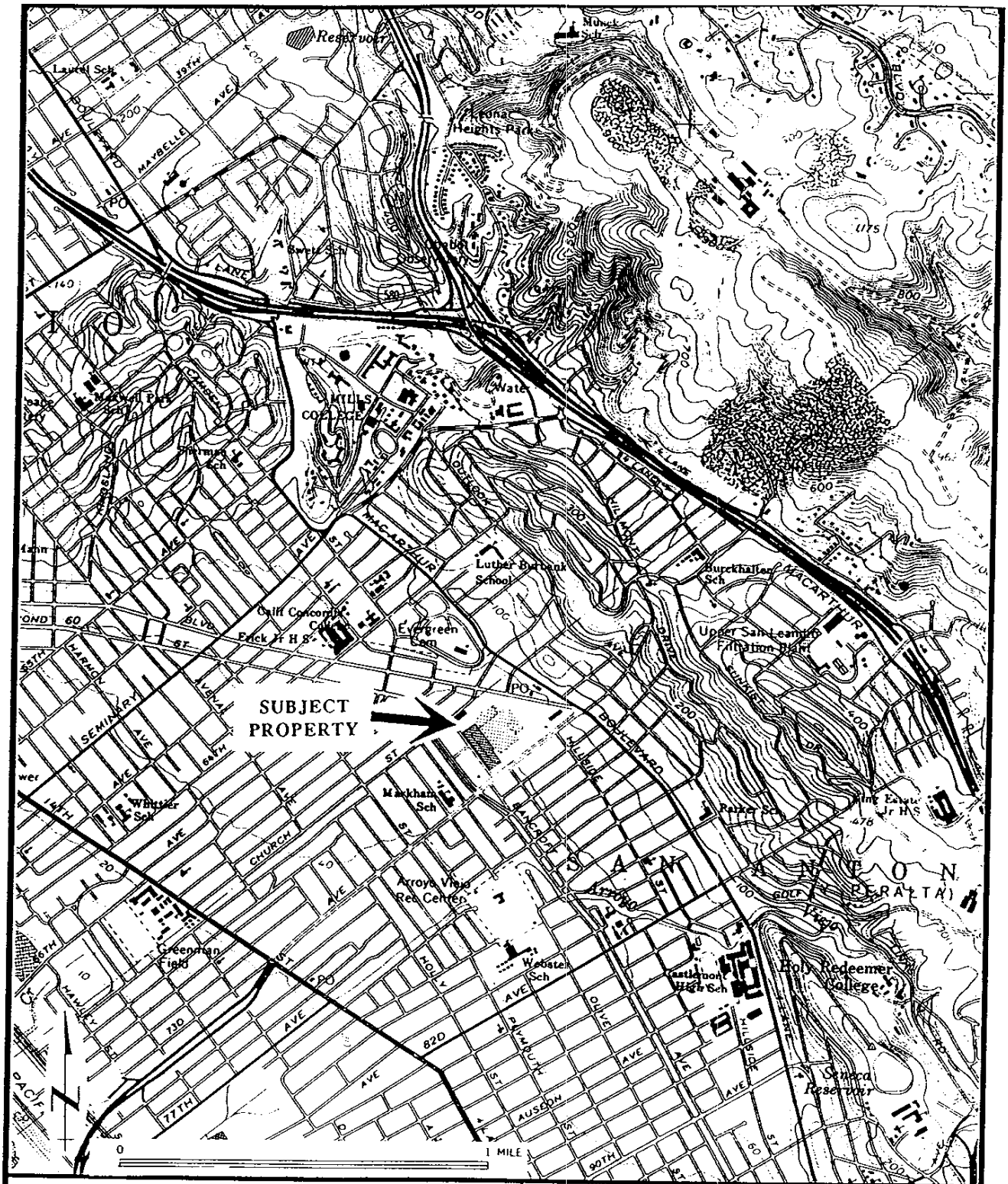
Artesian will submit copies of this workplan to the following individuals after client approval:

Mr. Bob S. Bridwell
The Eastmont Mall
One Eastmont Mall
Oakland, CA 94605

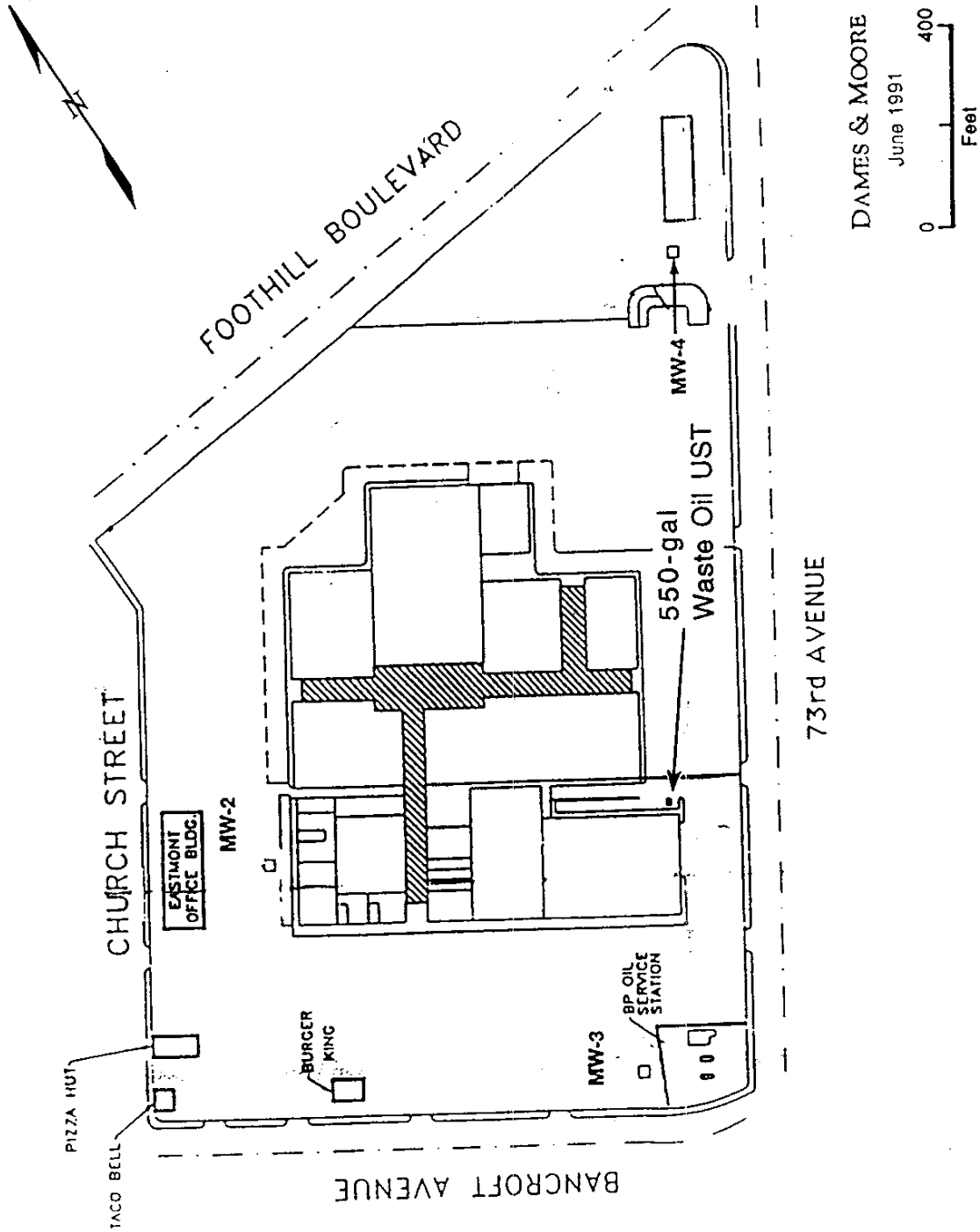
Ms. Madhulla Logan
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Rm. 250
Alameda, CA 94502

Mr. Kevin Graves
Water Quality Control Board
San Francisco Bay Region
2101 Webster St., Suite 500
Oakland, CA 94612

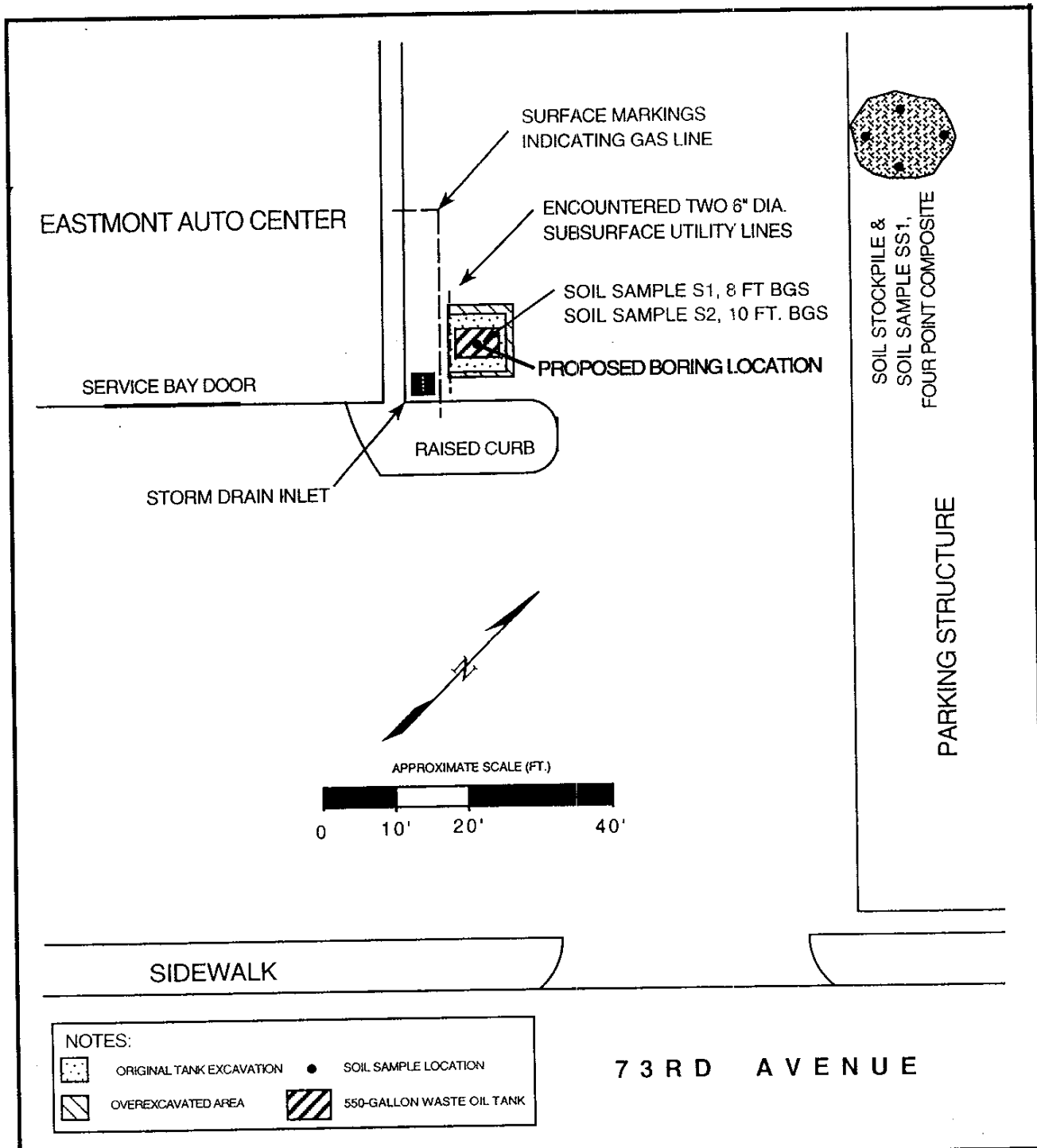
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Artesian Environmental Consultants 3100 Kerner Blvd., Suite C San Rafael, California 94901 415-257-4801 Fax 257-4805		**REGIONAL MAP** One Eastmont Mall Oakland, California 94605	
Project No: 93-001-01	Date: 8/27/93	Drawn by: BIM	Figure 1



Artesian Environmental Consultants 3100 Kerner Blvd., Ste. C San Rafael, CA 94901 (415) 257-4801 fax (415) 257-4805		**SITE MAP** The Eastmont Mall One Eastmont Mall Oakland, CA 94605	
Project No.: 1695	Date: 9/27/95	Prepared by: J. French	Figure 2



Artesian Environmental Consultants 3100 Kerner Blvd., Suite C San Rafael, CA 94901 (415)-257-4801		**PROPOSED BORING LOCATION MAP** The Eastmont Mall One Eastmont Mall Oakland, CA 94605	
Project No. 1695	Date: 12/20/95	Prepared by: JF	Figure 3

ZONE 7 WATER AGENCY

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

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

OCATION OF PROJECT THE EASTMONT MALL
7100 BANCROFT AVE.
OAKLAND, CA 94605

LIENT
Name Bob S. Bridwell, Principal
ddress ONE EASTMONT MALL Voice (510) 632-1131
ity OAKLAND, CA Zip 94605

APPLICANT
lame ARTESIAN ENVIRONMENTAL
Fax (510) 257-4801
Address 3100 KERNER BLVD. "C" Voice (510) 257-4805
ity SAN RAFAEL, CA Zip 94901

TYPE OF PROJECT

/ell Construction		Geotechnical Investigation	
Cathodic Protection	___	General	
Water Supply	___	Contamination	✓
Monitoring	___	Well Destruction	___

ROPOSED WATER SUPPLY WELL USE
Domestic ___ Industrial ___ Other N/A - NO WELL TO BE INSTALLED
lunicipal ___ Irrigation ___

DRILLING METHOD:
lud Rotary ___ Air Rotary ___ Auger ___
able ___ Other DIRECT PUSH - GEOPROBE

DRILLER'S LICENSE NO. 622461

WELL PROJECTS N/A

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

EOTECHNICAL PROJECTS

Number of Borings	1		Maximum		
Hole Diameter	1.5	in.	Depth	40	ft.

STIMATED STARTING DATE 1/31/96
STIMATED COMPLETION DATE 1/31/96

ereby agree to comply with all requirements of this permit and Alameda ounty Ordinance No. 73-68.

PPLICANT'S SIGNATURE ARTESIAN ENVIRONMENTAL Date 1/24/96

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

APPENDIX B

STANDARD OPERATING PROCEDURES

3100 Kerner Blvd., Suite C · San Rafael, CA · 94901 · (415) 257-4801 · FAX (415) 257-4805

ARTESIAN ENVIRONMENTAL

Standard Operating Procedures

Direct Push Technology - Soil Sampling
Direct push technology, also called drive point sampling and soil probing, uses portable and limited access hydraulic or pneumatic probing methods to sample soils. Artesian uses hardened stainless steel soil sampling tools. The tools are designed for discrete or continuous coring.

Piston Probe-Drive Sampler
The 2-foot to 4-foot long Probe-Drive piston sampler remains completely sealed with disposable, rubber o-rings, while it is pushed or driven to the desired sampling depth. After the sampler has been driven to the target depth, a piston stop-pin at the trailing end of the sampler is removed using steel extension rods inserted down the inside diameter of the hollow probe rods. The piston tip retracts into the sample tube as it is displaced approximately 2 feet by the soil while the sample is being collected. Soil samples are usually collected in a 2 foot long inert PETG liners (clear plastic). The liners can be cut easily with a knife. Brass, stainless steel or Teflon liners are also available to suit various sampling requirements.

Continuous Coring Tools
Artesian uses continuous coring tools ranging from 0.5 inches to 2.0 inches in diameter. The soil sampling tools range from 1.0 feet to 4.0 feet in length. The continuous coring tool contains an inner liner composed of PETG (clear plastic), brass, stainless steel or Teflon.

Drive Points
Solid, hardened steel drive points are designed to pre-probe holes or be used where difficult drilling is encountered due to hard pan soils, penetrating frost or asphalt layers. After the hard zone has been penetrated, the drive point is removed and replaced with a coring tool.

Sample Preparation
The sampler is extracted from the borehole to the surface using the Direct Push Technology (DPT) rig, a truck mounted crane, or a portable probe extractor. The sample liner containing the soil sample is removed from the sampler. The soil sample is generally logged for hydrogeologic and lithologic characteristics by a geologist or engineer under the direction and supervision of a state-registered geologist or state-registered engineer using the Unified Soil Classification System (USCS). Soil samples may be screened using an organic vapor analyzer (OVA) or a photoionization detector (PID).

After the soil samples have been logged, the portions of the soil sample selected for analysis are immediately capped on both open ends with Teflon tape, trimmed and capped with plastic caps. The samples are then labeled and placed in individual see-through zip-lock plastic bags. The samples are stored in an ice chest with crushed ice. A thermometer is kept in the ice chest to ensure that the proper temperature is maintained. The samples are then delivered under chain-of-custody to a state-certified hazardous materials testing laboratory. The above mentioned procedures minimize the potential for cross-contamination and volatilization of volatile organic compounds (VOC) prior to chemical analysis.

Decontamination
All sampling equipment is cleaned either with a hot water pressure washer or with a phosphate-free detergent wash and two de-ionized water rinses between samples and between borings to prevent cross-contamination. The sampler is then refitted with a new soil liner and re-inserted into the borehole. The sampler is driven to the next target zone. This procedure is repeated until the total depth of the borehole is reached. Since all materials generated using direct push technology are actual samples, soil disposal in not required.

ARTESIAN ENVIRONMENTAL

Standard Operating Procedures

Groundwater Sampling Tools - Bailers and Tubing & Check Valve Systems

Artesian Environmental uses a push driven sampling method to advance a water sampling device (such as Artesian, Geoprobe or other samplers) to the target depth. After the top of the water bearing zone is encountered, the water sampling device is pushed an additional 2 to 3 feet into the aquifer. The water sampling rod consists of a steel inner core well screen nested inside a steel outer sampler sheath. The sampler is kept sealed by o-ring connections while being driven to the desired sampling depth. When the desired sampling depth is reached, the sampler is pulled up approximately 2 feet which exposes the open borehole to the inner core steel well screen, creating a temporary well from which to sample. A groundwater sample can then be collected by one of the following methods:

GROUNDWATER SAMPLING - Bailers

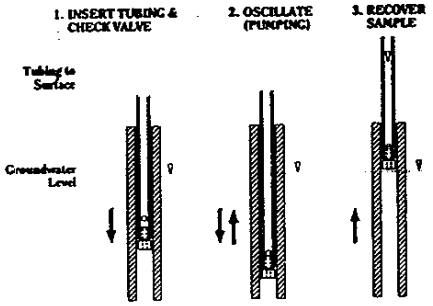
Grab groundwater samples are collected using miniature 1/2-inch diameter Teflon or stainless steel bailers. The bailers are lowered through the hollow centers of the drilling probe rods into the screened groundwater sampling device. The bailers are properly decontaminated between borings.

Groundwater Sampling with a Miniature Bailer



GROUNDWATER SAMPLING - Tubing & Check Valves

Tubing with a bottom check valve is another method of grab groundwater sampling. The 1/4-inch inner diameter polyethylene tubing with a 3/8-inch outer diameter is mounted with a stainless steel bottom check valve. The tubing, with check valve in place, is lowered down the hollow center of the drilling probe rod into the water column. An oscillating motion pumps the water column up into the tubing. The tubing recovers 9.65 ml per foot. Tests in sandy aquifers have recovered 0.5 liters of water per minute from a depth of 25 feet using the 1/4-inch inner diameter tubing and the bottom check valve.



Groundwater Sampling with a Tubing and Bottom Check Valve

Groundwater samples to be analyzed are decanted into laboratory-prepared, 40-milliliter volatile organic analysis (VOA) vials and 1 liter bottles. The VOA vials are filled completely, leaving no headspace, and are capped with septum topped Teflon-lined lids, labeled, and stored in a refrigerated environment of crushed ice and delivered under chain-of-custody to a state-certified hazardous materials testing laboratory.

Artesian Environmental Consultants

Standard Operating Procedures

MONITORING WELL SAMPLING

Prior to groundwater sampling, initial water level and floating liquid hydrocarbon measurements are recorded for each well. Each well is sounded for depth to ascertain if silting has occurred and to verify the actual depth below ground surface. These measurements are used to calculate the volume for each well. At this time, all non-dedicated pumping and sampling supplies are washed with an Alconox solution, rinsed with clean water, and final rinsed with either distilled or deionized water to prevent any cross contamination from other sampling events.

Each well is purged by evacuating a minimum of three well-casing volumes of groundwater from the well. The well water may be evacuated either by bailing, or pumping. Any of the following may be used for bailing: a dedicated pvc bailer, sterile disposable polyethylene bailer, or a stainless steel bailer. For pumping the groundwater out of the well, a downhole impeller type pump (dedicated or removable with PVC tubing), a downhole dedicated bladder pump, or a surface peristaltic pump is used.

After three to four well volumes are pumped, each well is permitted to recharge to at least 80% of original capacity or for two hours; whichever occurs first. The water is then measured to verify whether the well has stabilized. Stabilization is determined by measuring the parameters of pH; temperature; and electrical conductivity. Stabilized measurements indicate that formation water has entered the well. When two subsequent measurements of these three parameters are within 10% of each other, the well is considered stabilized and is ready to be sampled.

The samples are collected using a new polyethylene bailer with a bottom siphon and nylon cord. The bailers are disposable, and therefore, never reused. The groundwater sample is visually inspected for the presence of free product in the sampling bailer. Agitation is minimized during sample retrieval to prevent aeration during the transfer from the well to the laboratory prepared sample containers. Duplicate water samples are collected from the well and siphoned into three, 40 ml, VOA, septum top vials, with additional 950 ml samples collected in an amber glass bottles or polyethylene bottles depending on the analyses to be performed. The VOA vials are filled completely, leaving no headspace, and are sealed with Teflon-lined lids. All samples are labeled, chilled to 4° C in an ice chest, and sent to a California State Certified hazardous materials testing laboratory under chain-of-custody documentation.

All groundwater samples are collected in accordance with California Regional Water Quality Control Board (RWQCB) procedures described in the *Leaking Underground Fuel Tank (LUFT) Field Manual*, the *Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites*, and local regulatory guidelines.

Standard Environmental Protection Agency (EPA), San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), and Department of Health Services (DHS) methodologies for sampling and analyses are routinely utilized.

Chain of Custody documentation accompanies all samples to the laboratory. A copy of the Chain of Custody documentation is attached to the Certificate of Analysis.

Monitor well purge water is properly stored and labeled on site in DOT 17-H containers pending off site disposal.

ARTESIAN ENVIRONMENTAL CONSULTANTS.
JOB SAFETY PLAN

Project location: The Eastmont Mall, One Eastmont Mall, Oakland, CA
Artesian Job #1743

Possible hazards on this job are expected to be: physical hazards associated with the operation of heavy equipment and, possibly, chemical hazards from soil, water, and/or vapor contaminated with volatile organic compounds, petroleum hydrocarbons, or any pure product of the aforementioned substance.

Required personal protective equipment for this project: Level D protection (steel toe boots, work gloves, hard hat, safety glasses), level C protection on standby (OV cartridges).

ARTESIAN ENVIRONMENTAL CONSULTANTS
JOB SAFETY PLAN

1. Site: The Eastmont Mall

2. Location: One Eastmont Mall, Oakland, California

3. Plan Prepared: Artesian Environmental Consultants Date: 1-24-96

4. Plan Approved: Project Manager
Jason French _____

Health & Safety Officer
Jim Jacobs, C.H.G._____

5. Facility Description: Shopping Mall

6. Status (active, inactive, unknown): Active, UST removed.

7. Surroundings: Mixed commercial and residential surroundings.

8. Site map: Attached

9. Climate: Moderate dry summers, cool wet winters.

10. Site History (origin of contamination and history of injuries exposure, chemical spills, complaints, etc.): The Eastmont Mall site was primarily residential prior to 1916. In 1916, the site was excavated and leveled for the construction of an automobile assembly facility; the Chevrolet Fisher Body Plant. The plant closed some time in the early 1960s. The site remained vacant from 1965 to 1969. Construction of the mall began in 1969.

Several environmental assessments unrelated to the 500-gallon waste oil tank have been performed at the site. Hunter Environmental Services, Inc. (Hunter) of Martinez, California performed a Phase II environmental audit of the Eastmont Mall property on December 20, 1989. Four soil borings were drilled by Hunter on the mall property. Three of these borings were completed as monitoring wells MW-2 through MW-4. Analytical results showed that several soil samples contained hydrocarbon contamination, and several water samples contained 1-2 dichloroethene (1-2 DCE), trichloroethene (TCE), and tetrachloroethene (PCE). In 1991, Dames & Moore of San Francisco, California installed an additional six soil borings, converting two of them into monitoring wells DM-1 and DM-2. In 1993, Artesian Environmental drilled five soil borings which were converted to groundwater monitoring wells MW-5 to MW-9. The soil and water samples were below reporting levels for TPH-g, TPH-d, BTEX compounds and the purgeable halocarbons.

The closest well to the tank is MW-9, approximately 200 feet to the northwest. The groundwater flow direction is to the northwest-west, according to the Dames and Moore, 1991 Quarterly Monitoring Report. Water is estimated to be found at 35 to 40 feet below ground surface. Oil and grease was not a requested analyte for groundwater samples collected from MW-9 in the past. Laboratory analysis of groundwater samples collected from MW-9 has yielded results below reporting limits for TPH-g, TPH-d, BTEX, and the purgeable halocarbons.

On October 23, 1995, Artesian removed a single waste oil tank from the subject site. The 500-gallon waste oil tank was located behind the Eastmont Auto Center, approximately 85 feet northwest of 73rd Avenue (Figure 4).

Following removal of the tank, a single soil sample (soil sample S1) was collected from approximately 18 inches into native soils beneath the center of the former UST. The sample was collected from the backhoe bucket. A four point composite sample (Soil Sample SS1) was collected from the excavated soil stockpile.

On December 19, 1995, the former tank pit was over-excavated. Approximately one to two feet of soil was removed from three of the excavation sidewalls. Subsurface utility lines prevented overexcavation on the fourth sidewall, closest to the Eastmont Auto Center. Two feet of soils were removed from the floor of the excavation, increasing the total excavation depth from eight to ten feet bgs. The over-excavated soil and the existing stockpile were loaded and transported by Caballero & Sons of San Jose, California. Caballero & Sons transported the soils (31.75 cu. yds.) to REMCO, Inc. of Richmond, California, where the soils were incinerated in REMCO's rotary kiln. A confirmatory soil sample (soil sample S2) was collected from beneath the former tank location at a depth of 10 feet bgs.

Laboratory analysis of composite soil sample SS1 revealed that tank backfill soils contained notable concentrations of Oil and Grease (11,100 ppm), TPH-g (220 ppm), Toluene (360 ppm), Ethylbenzene (1,700 ppm), total Xylenes (9,500 ppm), and an unidentified hydrocarbon, heavier than diesel, that was believed to be motor oil (23,000 ppm). Soil sample S1, collected from native soils beneath the center of the former tank, contained Oil and Grease (410 ppm) and an unidentified hydrocarbon believed to be motor oil (160 ppm). Soil sample S2, collected from two feet beneath soil sample S1, contained Oil and Grease (1,500 ppm) and TPH-mo (610 ppm).

11. Description of work: Soil boring B1 will be advanced to a maximum depth of 40 feet bgs through the center of the former UST location. Artesian will sample existing monitoring well MW-9, which is believed to be downgradient of the former waste oil UST. Depth to water measurements will be collected from other pre-existing monitoring wells on the site using a Keck water meter.

12. Chemical contaminants:

Chemical	Media	Minimum	Maximum
Oil & Grease	Soil, water	0	1500 ppm
TPH-d	Soil, water	0	160 ppm

13. Procedures to mitigate hazards:

A) Mechanical Hazards
- verify that all equipment is in good condition
- barricade area or otherwise restrict access
- exercise caution when working in close proximity to heavy equipment

B) Electrical Hazards

- locate and mark buried utilities before excavating
- maintain at least 10 feet of clearance from overhead power lines
- properly ground all electrical equipment
- avoid standing in water when operating electrical equipment
- be familiar with specific operating instructions for each piece of equipment
- barricade area or otherwise restrict access

- deactivate any source of ignition within 25 feet of work area

C) Chemical Hazards

- use personal protective equipment listed above
- conduct direct reading air monitoring to evaluate respiratory and explosion hazards
- wash hands before eating or drinking
- avoid hand to mouth contact before washing hands
- keep dust to a minimum, avoid breathing dust

D) Temperature Hazards

- Heat: when temperature exceeds 70 F, take frequent breaks in shaded area. Unzip or remove coveralls during breaks. Have cool water or electrolyte replenishment solution available. Drink small amounts frequently to avoid dehydration. Count the pulse rate for 30 seconds, as early as possible in the rest period. If the pulse rate exceeds 110 beats per minute at the beginning of the rest period, shorten the work cycle by one-third.

- Cold: wear multi layer cold weather outfits- the outer layer should be of wind-resistant fabric

- Wet: wear proper rain gear and shoes with slip resistant tread

E) Acoustical Hazards

- use earplugs when noise level prevents conversation in normal voice at a distance of three feet

F) Organic Vapors

- monitor organic vapors. If total hydrocarbons exceed 5 ppm above background for more than 5 minutes, don Level C personal protective equipment

- if total hydrocarbons exceed 500 ppm, supply mechanical ventilation

- monitor lower explosive limit. If LEL exceeds 20%, leave area and call the fire department

- no smoking within 25 feet of working area

- post no smoking signs

14. Decontamination procedures: Steam clean equipment before leaving work area. Wash boots and gloves. Launder coveralls. Wash hands and face as soon as possible after stopping work.

15. Materials generated on-site: Drum drill cuttings and decon water in DOT approved drums with proper labels and markings. Place soil stockpiles on visqueen and cover with weighted visqueen.

16. Site resources: water, restrooms, electricity available from onsite manager.

17. Emergency equipment: Fire extinguisher, cellular phone, and first aid kit to be on-site at all times

18. Emergency telephone numbers:

Ambulance	911
Police	911
Fire Department	911

Highland Hospital	(510) 534-8055 1411 E. 31st. Street, Oakland, CA
Poison Control:	(800) 523-2222
Project Manager:	(415) 257-4801
Safety Officer:	(415) 257-4801

19. **Emergency Route to Hospital:**
- Go North along MacArthur Blvd. for 1.25 miles,
- Turn left onto Hwy. 580 going north for 3 miles,
- Exit at Beaumont Ave., turn left onto Beaumont Ave.,
- Go along Beaumont Ave. for 3 blocks, Highland Hospital is on the right.

20. Project personnel list and safety plan distribution record: All project staff must sign, indicating they have read and understand the safety plan.

Employee Name	Date/Time	Signature

21. Health and safety meeting: All personnel participating in the project must receive initial health and safety orientation. Thereafter, a brief "tailgate" safety meeting is required as deemed necessary by the Health and Safety Officer.

Name	Topics	Date	Employee Initial

22. Visitors: It is Artesian's policy that visitors must furnish his/her own personal protective equipment. All visitors are required to sign the visitor log and comply with the safety plan requirements.

Name of Visitor	Firm Name	Date/Time	Signature


HOSPITAL
OAKLAND
ALAMEDA
Emergency Route to Hospital:
•Go North along MacArthur Blvd. for 1.25 miles,
•Turn left onto Hwy. 580 going north for 3 miles,
•Exit at Beaumont Ave., turn left onto Beaumont Ave.,
•Go along Beaumont Ave. for 3 blocks, Highland Hospital is on the right.
SITE
MILLS COLLEGE
MACARTHUR
WARREN BLVD. FWY.
NIMITZ FREEWAY
Oakland-Alameda County Coliseum Complex
Alameda Municipal Golf Courses
INTERNATIONAL AIRPORT
Lew F. Galbraith Municipal Golf Course
Club House
Oakland Zoo
Joseph R. Knowland State Arboretum and

ENVIRONMENTAL PROTECTION
96 JUN 13 PM 2:27

REPORT OF PHASE II SOIL & GROUNDWATER ASSESSMENT

THE EASTMONT MALL
7100 BANCROFT AVENUE
OAKLAND, CALIFORNIA

AE Project No. 1743

Prepared For:

Mr. Bob Bridwell
The Eastmont Mall
One Eastmont Mall
Oakland, CA 94605

June 10, 1996

CERTIFIED HYDROGEOLOGIST
JAMES A. JACOBS
NO. 88
STATE OF CALIFORNIA

James A. Jacobs, C.H.G. #88
Chief Hydrogeologist/Principal

Jason French
Project Manager

3100 Kerner Blvd., Suite C • San Rafael, CA 94901 • (415) 257-4801 • FAX (415) 257-4805

ARTESIAN ENVIRONMENTAL CONSULTANTS

ENVIRONMENTAL PROTECTION
96 JUN 18 PM 2:2

Transmittal Letter

From: JASON FRENCH **Date:** 6·17·96

To: MADHULLA LOGAN **Via:** ✓ First Class
__ UPS
__ Fed - Ex
__ Courier

Subject: EASTMONT MALL: ASSESSMENT OF WASTE OIL UST SITE. **Job:** 1743

As:
__ We discussed on the telephone on _____
__ You requested _____
__ We believe you may be interested
✓ Is required

We Are Sending:
✓ Enclosed
__ Under Separate Cover Via _____

For:
__ Your information
__ Your use
✓ Your review & comments
__ Return to you

Please:
✓ Keep this material
__ Return within 2 weeks
__ Acknowledge Receipt

Message:

Should you have any questions please contact Olivia Jacobs

3100 Kerner Blvd., Suite C • San Rafael, CA • 94901 • 415 257-4801 • Fax 415 257-4805

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1.0 INTRODUCTION

Mr. Bob S. Bridwell of the Eastmont Mall retained Artesian Environmental Consultants (Artesian) to perform a Phase II Assessment at the former site of a 550-gallon waste oil tank. The Eastmont Mall is located at 7100 Bancroft Avenue, in the City of Oakland, California. (See Figures 1 and 2). The work was authorized by Mr. Bridwell in an effort to comply with Alameda County and California Water Quality Control Board requirements regarding the removal, assessment, and cleanup of leaking underground storage tanks (USTs).

The intent of the Phase II Assessment was to evaluate whether groundwater beneath the former UST has been impacted by an accidental release of petroleum hydrocarbons originating from the former waste oil UST.

2.0 SITE DESCRIPTION

The project site is bounded by Foothill Boulevard to the north, Bancroft Avenue to the south, 73rd Avenue to the east, and Church Street to the west. The site is located to the west of the Berkeley Hills, which rise to 1,175 feet above sea level. The Arroyo Viejo stream channel lies approximately two thousand feet south of the site .

The project site consists of a mall with several commercial retailers including clothing stores, an auto repair shop, and a supermarket. The entire building is surrounded by large parking lot areas, along with an office building and a gasoline station (Figure 2).

3.0 PREVIOUS WORK

The Eastmont Mall site was primarily residential prior to 1916. In 1916, the site was excavated and leveled for the construction of an automobile assembly facility; the Chevrolet Fisher Body Plant. The plant closed some time in the early 1960s. The site remained vacant from 1965 to 1969. Construction of the mall began in 1969.

Several environmental assessments unrelated to the 500-gallon waste oil tank have been performed at the site. Hunter Environmental Services, Inc. (Hunter) of Martinez, California performed a Phase II environmental audit of the Eastmont Mall property on December 20, 1989. Four soil borings were drilled by Hunter on the mall property. Three of these borings were completed as monitoring wells MW-2 through MW-4. Analytical results showed that several soil samples contained hydrocarbon contamination, and several water samples contained 1-2 dichloroethene (1-2 DCE), trichloroethene (TCE), and tetrachloroethene (PCE). In 1991, Dames & Moore of San Francisco, California installed an additional six soil borings, converting two of them into monitoring wells DM-1 and DM-2. In 1993, Artesian Environmental drilled five soil borings which were converted to groundwater monitoring wells MW-5 to MW-9. The soil and water samples were below reporting levels for TPH-g, TPH-d, BTEX compounds and the purgeable halocarbons.

On October 23, 1995, Artesian removed a single waste oil tank from the subject site. The 500-gallon waste oil tank was located behind the Eastmont Auto Center, approximately 85 feet northwest of 73rd Avenue (Figure 2).

Following removal of the tank, a single soil sample (soil sample S1) was collected from approximately 18 inches into native soils beneath the center of the former UST. The sample was collected from the backhoe bucket. A four point composite soil sample (SS1) was collected from the excavated soil stockpile.

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On December 19, 1995, the former tank pit was over-excavated. Approximately one to two feet of soil was removed from three of the excavation sidewalls. Subsurface utility lines prevented overexcavation on the fourth sidewall, closest to the Eastmont Auto Center. Two feet of soils were removed from the floor of the excavation, increasing the total excavation depth from eight to ten feet bgs. The over-excavated soil and the existing stockpile were loaded and transported by Caballero & Sons of San Jose, California. Caballero & Sons transported the soils (31.75 cu. yds.) to REMCO, Inc. of Richmond, California, where the soils were fired in REMCO's rotary kiln. A confirmatory soil sample (soil sample S2) was collected from beneath the former tank location at a depth of 10 feet bgs.

Laboratory analysis of composite soil sample SS1 revealed that tank backfill soils contained notable concentrations of Oil and Grease (11,100 ppm), TPH-g (220 ppm), Toluene (360 ppm), Ethylbenzene (1,700 ppm), total Xylenes (9,500 ppm), and an unidentified hydrocarbon, heavier than diesel, that was believed to be motor oil (23,000 ppm). Soil sample S1, collected from native soils beneath the center of the former tank, contained Oil and Grease (410 ppm) and an unidentified hydrocarbon believed to be motor oil (160 ppm). Soil sample S2, collected from two feet beneath soil sample S1, contained Oil and Grease (1,500 ppm) and TPH-mo (610 ppm).

The closest groundwater monitoring well to the former waste oil UST is MW-9, approximately 200 feet to the northwest. The groundwater flow direction is to the northwest-west, according to the Dames and Moore, 1991 Quarterly Monitoring Report. Water is estimated to be found at 35 to 40 feet below ground surface. Oil and grease was not a requested analyte for groundwater samples collected from MW-9 in the past. Laboratory analysis of groundwater samples collected from MW-9 has yielded results below reporting limits for TPH-g, TPH-d, BTEX, and the purgeable halocarbons.

4.0 SCOPE OF WORK

At the request of Ms. Madhulla Logan of the Alameda County Department of Environmental Health, the scope of work has been expanded to include three borings instead of the single boring originally proposed. The sampling of MW-9, an existing groundwater monitoring well, was removed from the scope of work. MW-9 was considered too distant to provide adequate information on groundwater conditions beneath the former waste oil UST. Depth to water measurements from existing wells on the site were not collected, as 1) groundwater gradient and direction can be determined by examining the results of past quarterly monitoring events; and 2) the increase in the number of borings, and close proximity of the borings to the former UST provide adequate assurance that groundwater sampling results are representative of subsurface conditions.

Artesian advanced three soil borings to a maximum depth of 40 feet below ground surface (bgs). A total of 20 soil samples and three groundwater sample were collected. Six of the soil samples and all three groundwater samples were submitted for laboratory analysis by the following methods:

- Total Petroleum Hydrocarbons as motor oil (TPH-d) by EPA Method 8015,
- Oil and Grease by EPA Method 5520 E & F.

The remaining fourteen soil samples were placed on hold at the laboratory pending analytical results. The scope of work also included permitting of borings, workplan preparation, and the preparation of this report discussing the field procedures and analytical results.

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5.0 FIELD ACTIVITIES

5.1 Boring Locations

The locations of the three soil borings advanced during this assessment are shown in Figure 3. A magnetic/induction utility locating survey was performed by Artesian prior to drilling activities to identify underground utilities or other subsurface obstacles. Underground Service Alert was contacted to notify utility and communication companies of drilling activities. Drilling Permit No. 96068 was approved on February 1, 1996, by Mr. Wyman Hong of Alameda County's Zone 7 Water Agency.

5.2 Drilling and Sampling

Drilling was performed by Artesian on April 10, 1996, using a Geoprobe 5400 truck mounted drill rig with 1.5" diameter direct push soil and groundwater sampling equipment. Three soil borings designated B1, B2, and B3, were advanced with the Geoprobe unit. Maximum boring depth was 40 feet bgs. A total of six soil samples and three groundwater samples were analyzed. Sampling procedures are described in Appendix A. Analytical results are summarized in Table 1.

All soil samples retrieved during drilling were screened on-site using a Rae Systems PGM-75 Photoionization detector (PID). Organic vapor concentrations above background levels were not observed using the PID instrument.

All drilling and sampling equipment was decontaminated with an Alconox solution and triple rinsed to use to minimize the potential for cross contamination. Soil cuttings were stored on site pending analytical results.

B-1 was advanced approximately two feet to the north of the former excavation. Soil samples were collected from B-1 at depths of 5, 10, 15, 20, 25, and 30 feet bgs. A groundwater sample was also collected. All soils were field screened using the PID. No PID readings above background level were detected. Groundwater sample B1 AQ and soil samples B1 15' and B1 25' were submitted for laboratory analysis. The remaining soil samples were placed on hold pending the laboratory analytical report. B1 AQ, B1 15' and B1 25' were analyzed for TPH-mo by EPA Method 8015M, and Oil and Grease by EPA Method 5520 E & F.

B-2 was advanced approximately two feet to the east of the former excavation. Soil samples were collected from B-2 at depths of 5, 10, 15, 20, 25, and 30 feet bgs. A groundwater sample was also collected. All soils were field screened using the PID. No PID readings above background level were detected. Groundwater sample B2 AQ and soil samples B2 15' and B2 30' were submitted for laboratory analysis. The remaining soil samples were placed on hold pending the laboratory analytical report. Groundwater sample B2 AQ and soil samples B2 15' and B2 30' were analyzed for TPH-mo by EPA Method 8015M, and Oil and Grease by EPA Method 5520 E & F.

B-3 was advanced approximately four feet to the south of the former excavation. Soil samples were collected from B-3 at depths of 5, 10, 15, 20, 25, 30, 35 and 40 feet bgs. A groundwater sample was also collected. All soils were field screened using the PID. No PID readings above background level were detected. Groundwater sample B3 AQ and soil samples B3 15' and B3 35' were submitted for laboratory analysis. The remaining soil samples were placed on hold pending the laboratory analytical report. Groundwater sample B3 AQ and soil samples B3 15' and B3 35' were analyzed for TPH-mo by EPA Method 8015M, and Oil and Grease by EPA Method 5520 E & F.

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6.0 SUBSURFACE CONDITIONS

The site is underlain by brown and green silts with occasional fine sands to a depth of approximately 16 feet below ground surface (bgs). Fine to medium dark brown and dark green sand with poorly sorted gravel and rock was encountered beneath the surface layer of silt, and extended to the maximum depth explored. First groundwater was encountered between 28 and 37 feet bgs. Boring logs are attached as Appendix C.

7.0 LABORATORY ANALYTICAL RESULTS

TPH-mo was reported in groundwater sample B1 AQ at a concentration of 4300 ppb. The laboratory report notes that the reported hydrocarbon is in the early motor oil range, and does not match Chromalab's motor oil standard. The reported substance appears to be a lubricating oil.

Laboratory analysis of soil and groundwater samples yielded no other results above laboratory reporting limits. Laboratory analytical results for soil and groundwater are summarized in Tables 1 and 2, respectively. Laboratory analytical reports and the chain-of-custody record are included in Appendix B.

8.0 DISCUSSION

Laboratory analysis of groundwater sample B1 AQ indicates that groundwater beneath the former waste oil UST has been impacted by an accidental release. B1 AQ was collected from B1, located downgradient of the former UST. The contaminant in question does not match the laboratory's motor oil standard, and appears to be a lighter oil such as lubricating oil. The oil was not detected in B2 or B3, located cross gradient and upgradient of the former UST, respectively. The substance was not reported in soil samples collected from the borings, and appears to have migrated almost directly downward from the tank to the water table.

9.0 RECOMMENDATIONS

Artesian recommends closure of Eastmont Mall's waste oil tank investigation for the following reasons: 1) The reported concentration of oil in the groundwater (4.3 ppm) is relatively low, 2) There are no domestic wells on the site, and 3) The area is paved, and there are no human receptors. No further work is recommended.

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10.0 LIMITATIONS FOR SUBSURFACE SAMPLING AND ASSESSMENTS

The authors and firm offer no assurance and assume no responsibility for site conditions or activities which were beyond the scope of work requested by the client and referenced in the introduction of this report. The compensation agreed to by the client and the firm corresponds to the scope of work defined, with the associated limitations which are an integral and important part of this report. This report was prepared with generally accepted standards of environmental geological practice in California at the time this assessment was performed. This assessment was conducted solely as a tool in assessing environmental conditions of the soil and/or groundwater. No soil engineering or geotechnical recommendations are implied or should be inferred. Evaluation of the geologic conditions at the site for the purpose of this assessment is made from a limited number of observation points. There may be variations in subsurface conditions away from the sample points available. There are no representations, warranties, or guarantees that the points selected for sampling are in anyway representative of the entire site. Data from this report reflects the sample conditions at specific locations at a specific point in time. No other interpretations, representations, warranties, guarantees, express or implied, are included or intended by this report. Additional work, including further subsurface evaluation, can reduce the inherent uncertainties associated with this type of assessment. There are no guarantees or warranties, express or implied, that undocumented, non permitted, illegally or improperly abandoned subsurface containers (such as underground storage tanks or drums) or other sources of contamination or contaminated soil or groundwater itself, or covered, encapsulated, inaccessible or non observable hazardous materials either do or do not exist on the property.

This project involved hazardous or toxic compounds and there are certain inherent risk factors involved (such as limitations on laboratory or analytical methods or equipment, variations in subsurface conditions, and risks associated with specific analysis not requested by the client), which may adversely affect the results of the project, even though the services were performed with such skill and care as are generally accepted professional standards for the environmental geology profession.

This report and all matters contained herein were prepared for the sole and exclusive benefit of the client specified herein, and is intended only for the use of the client. Neither all, nor any part of the contents of this report, or copy thereof, shall be used for any purpose by anyone but the client specified herein nor shall it be conveyed or disseminated by anyone without the express written consent of the authors. No one, except for the client specified herein, may rely on this report for any purpose. Any person or entity who obtains or reads this report, or a copy thereof, other than the client specified herein, expressly assumes all risk of damages to himself or third persons arising out of reliance thereon or use thereof and waives the right to bring any action based on this report, directly or indirectly, and the authors shall have no liability to any such person or entity.

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11.0 DISTRIBUTION

Artesian will submit copies of this report to the following individuals:

Mr. Bob S. Bridwell
The Eastmont Mall
One Eastmont Mall
Oakland, CA 94605

Ms. Madhulla Logan
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Rm. 250
Alameda, CA 94502

Mr. Kevin Graves
Water Quality Control Board
San Francisco Bay Region
2101 Webster St., Suite 500
Oakland, CA 94612

Mr. Wyman Hong
Zone 7 Water Agency
5997 Parkside Dr.
Pleasanton, CA 94588

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ATTN. Madhula Logan

CHROMALAB, INC.

Environmental Services (SDB)

April 18, 1996 *Submission #:* 9604611

ARTESIAN ENVIRONMENTAL CONSULTANTS

Atten: Jason French

Project: EASTMONT *Project#:* 110-001-02
Received: April 11, 1996

re: Three samples for Motor Oil analysis

Matrix: WATER *Extracted:* April 15, 1996
Sampled: April 10, 1996 *Analyzed:* April 16, 1996
Method: EPA 3510/8015

Sample #	Client Sample ID	Motor Oil (µg/L)
82442	B1 AQ	4300

Note: Hydrocarbon reported is in the early Motor Oil range, and does not match ChromaLab's Motor Oil standard.

82443	B2 AQ	N.D.
82444	B3 AQ	N.D.
Blank		N.D.
Blank Spike Recovery		82%
Reporting Limit		500

Dennis Mayugba
Chemist

Alex Tam
Semivolatiles Supervisor

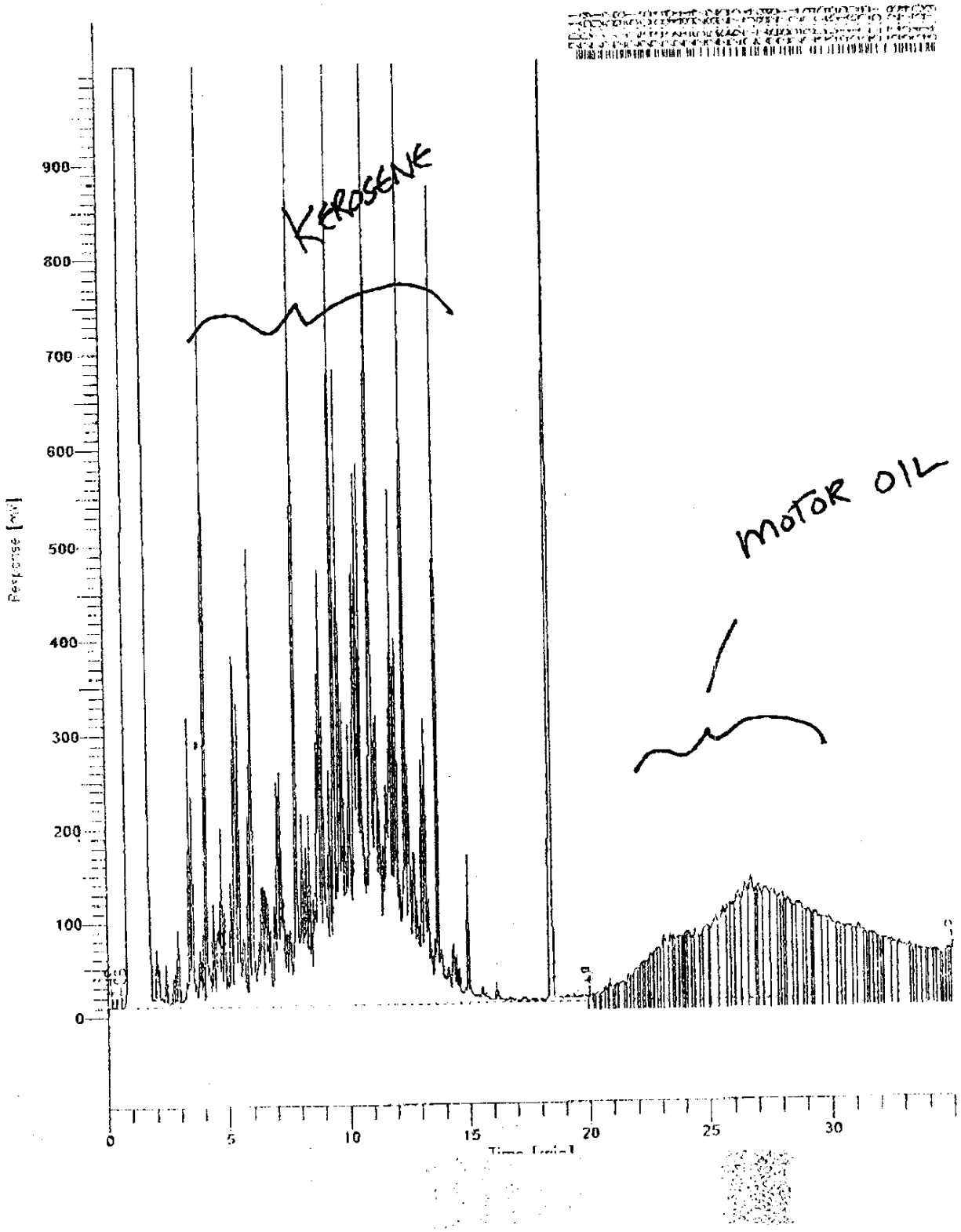
Note: Diesel was used as the spiking compound.

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(510) 484-1919 • Facsimile (510) 484-1096

MOTOR OIL ANALYSIS

Sample Name : KNPO/MOTOR OIL 500PPM
FileName : D:\GC500\DATA\Y215012A.RAW
Method : TMOTOIL.MTH
Start Time : 0.00 min End Time : 35.00 min
Scale Factor: 0.0 Plot Offset: 0 mV

Sample #: GC037 Page 1 of 1
Date : 2/21/96 10:05
Time of Injection: 2/17/96 09:11
Low Point : 0.00 mV High Point : 1000.00 mV
Plot Scale: 1000.0 mV



MOTOR OIL ANALYSIS

Sample Name : 4611/81AQ
FileName : D:\650DATA\T416010.RAW
Method : TMOTOR.MTH
Start Time : 0.00 min End Time : 35.00 min
Scale Factor: 0.0 Plot Offset: 0 mV

Sample #: 82442 Page 1 of 1
Date : 4/17/96 14:09
Time of Injection: 4/16/96 16:02
Low Point : 0.00 mV High Point : 1000.00 mV
Plot Scale: 1000.0 mV

9604611 / 82442

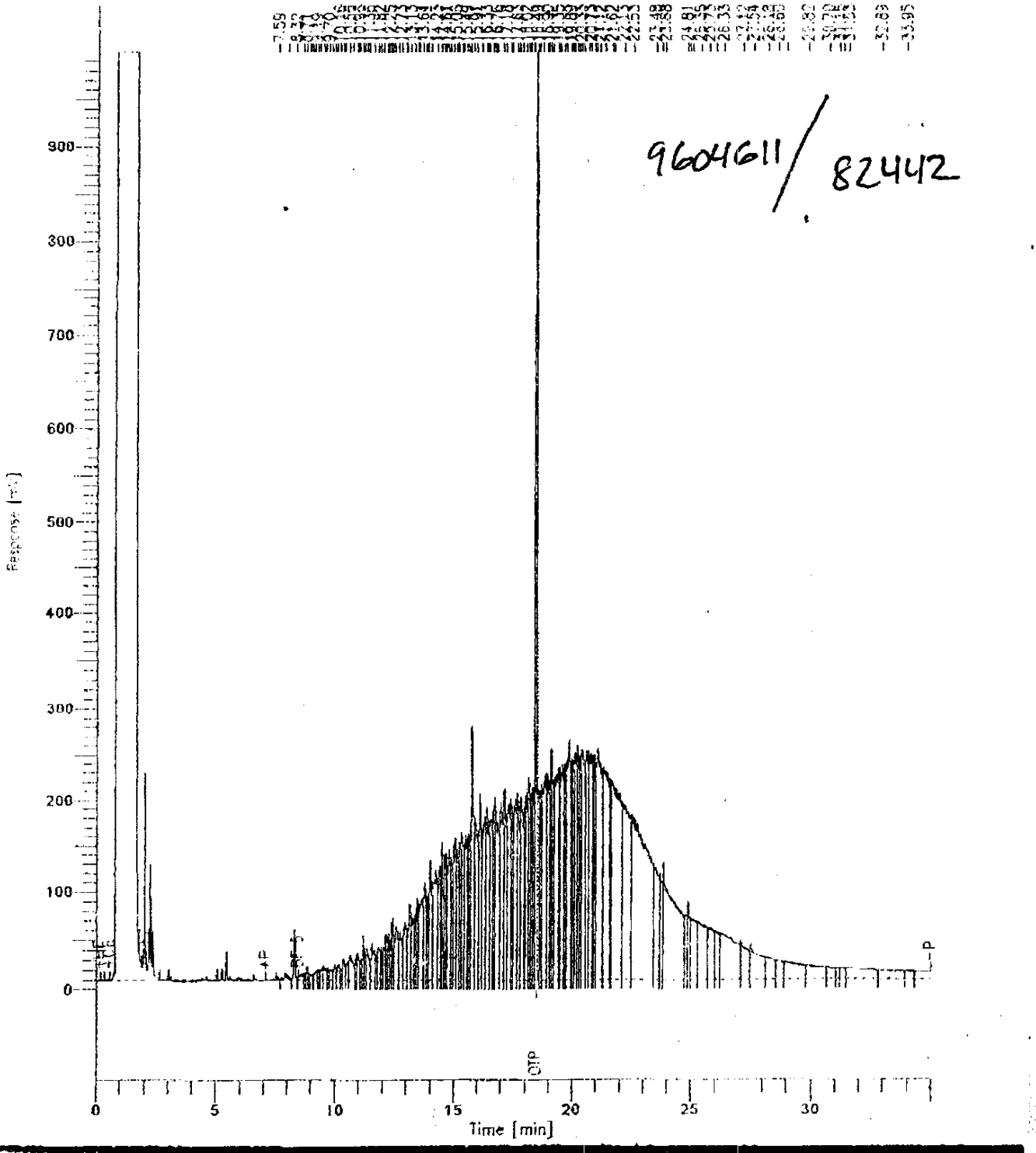


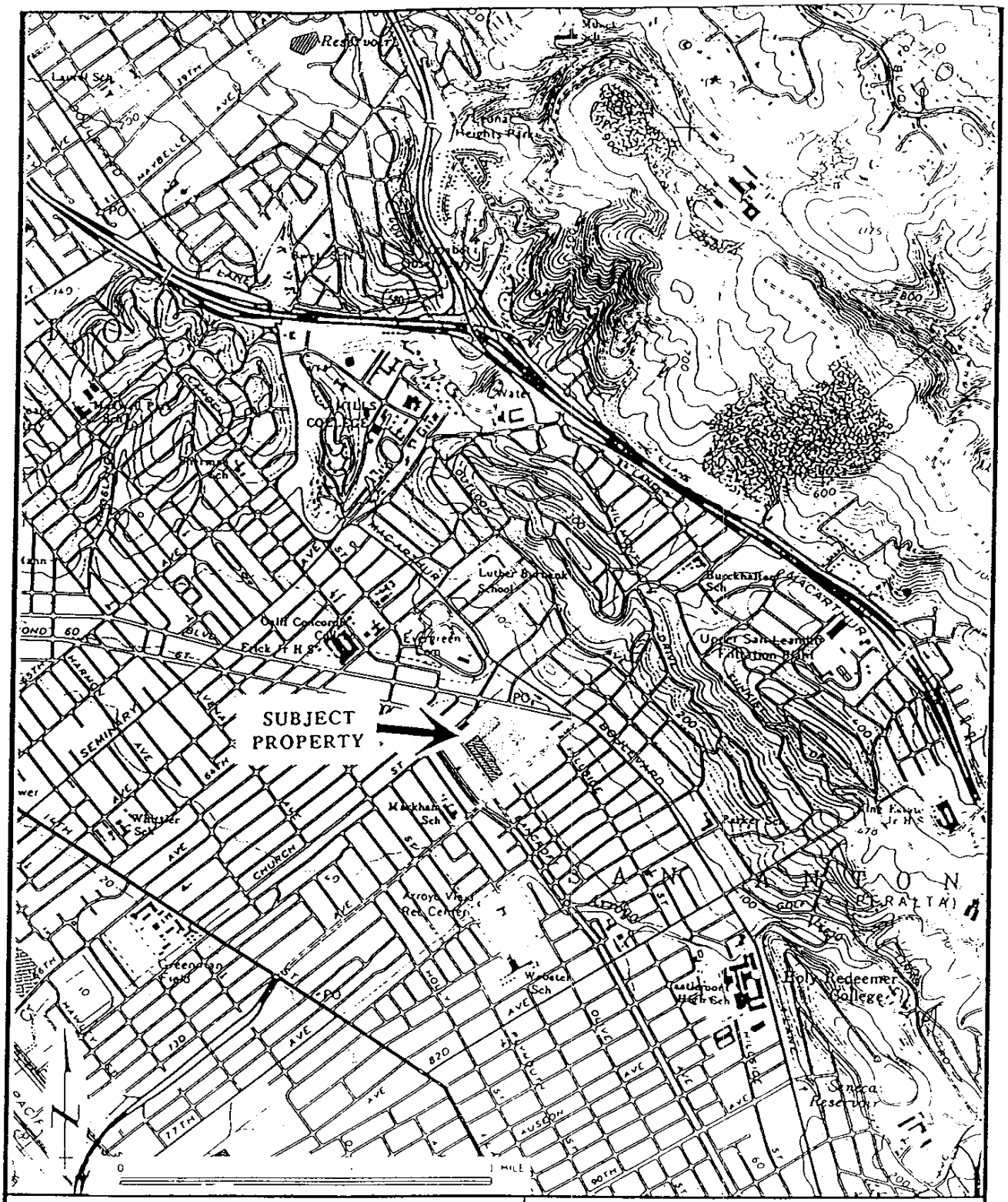
TABLE 1: ANALYTICAL LABORATORY RESULTS
THE EASTMONT MALL
7100 BANCROFT AVENUE
OAKLAND, CALIFORNIA

SOIL			
Sample Number	Sample Date	TPH-MO mg/Kg	Oil & Grease mg/Kg
B1 15'	4/10/96	<50	<50
B1 25'	4/10/96	<50	<50
B2 15'	4/10/96	<50	<50
B2 30'	4/10/96	<50	<50
B3 15'	4/10/96	<50	<50
B3 35'	4/10/96	<50	<50
GROUNDWATER			
Sample Number	Sample Date	TPH-MO ug/L	Oil & Grease mg/L
B1 AQ	4/10/96	**4300**	<1
B2 AQ	4/10/96	<500	<1
B3 AQ	4/10/96	<500	<1

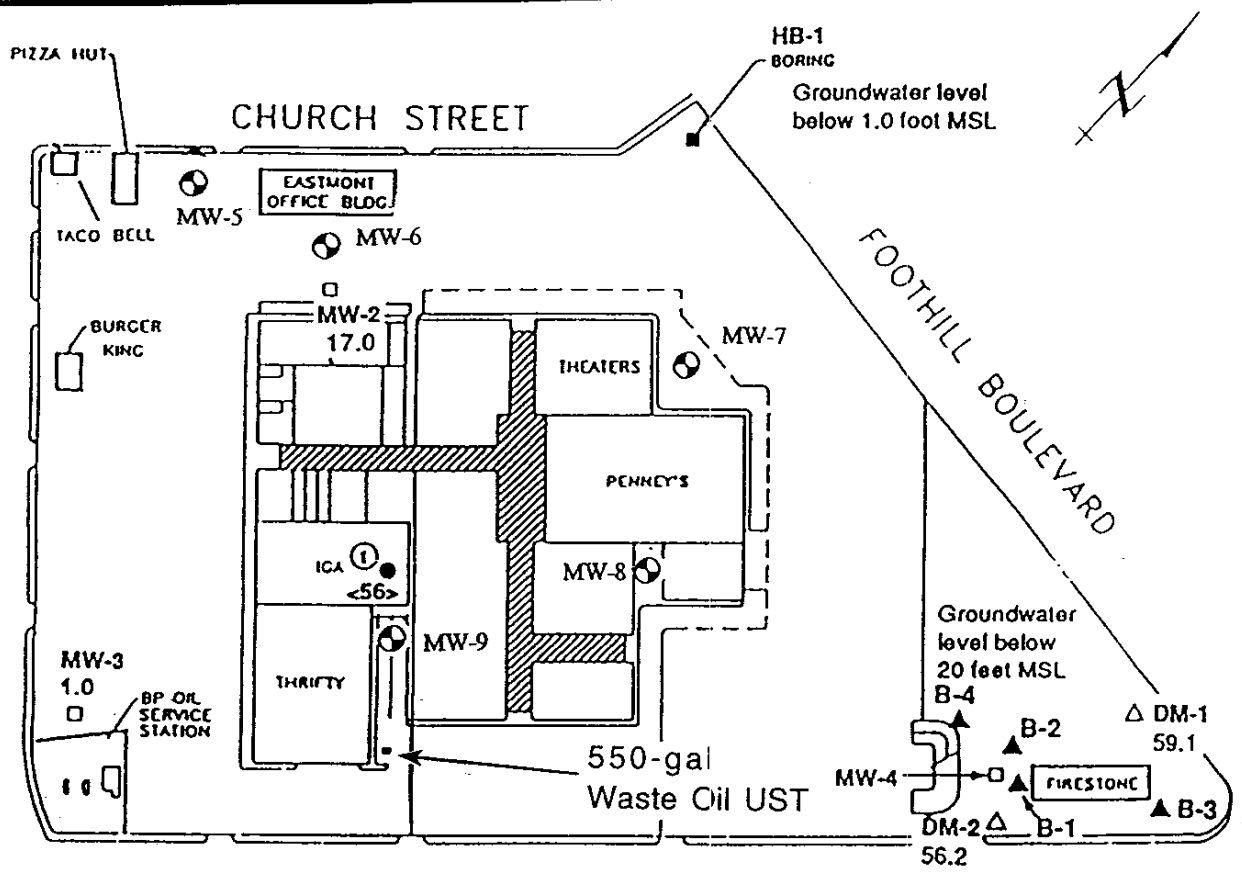
Notes:

<50 = Analyte concentration below indicated laboratory reporting limit
TPH-MO = Total Petroleum Hydrocarbons as Motor Oil
mg/Kg = Milligrams per Kilogram, equivalent to parts per million
ug/L = Milligrams per Liter, equivalent to parts per billion
mg/L = Milligrams per Liter, equivalent to parts per million
See laboratory report for analytical methods

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Artesian Environmental Consultants 3100 Kerner Blvd., Suite C San Rafael, California 94901 415-257-4801 Fax 257-4805		REGIONAL MAP One Eastmont Mall Oakland, California 94605	
Project No. 110-001-02	Date: 5/14/96	Drawn by: BIM	Figure 1



NOTE:

① Groundwater measured in industrial well at 96 feet below ground surface (bgs) or 56 feet below mean sea level. Perforated in lower aquifer from 90 to 393 feet bgs.

Installed Monitor Wells
Artesian Environmental

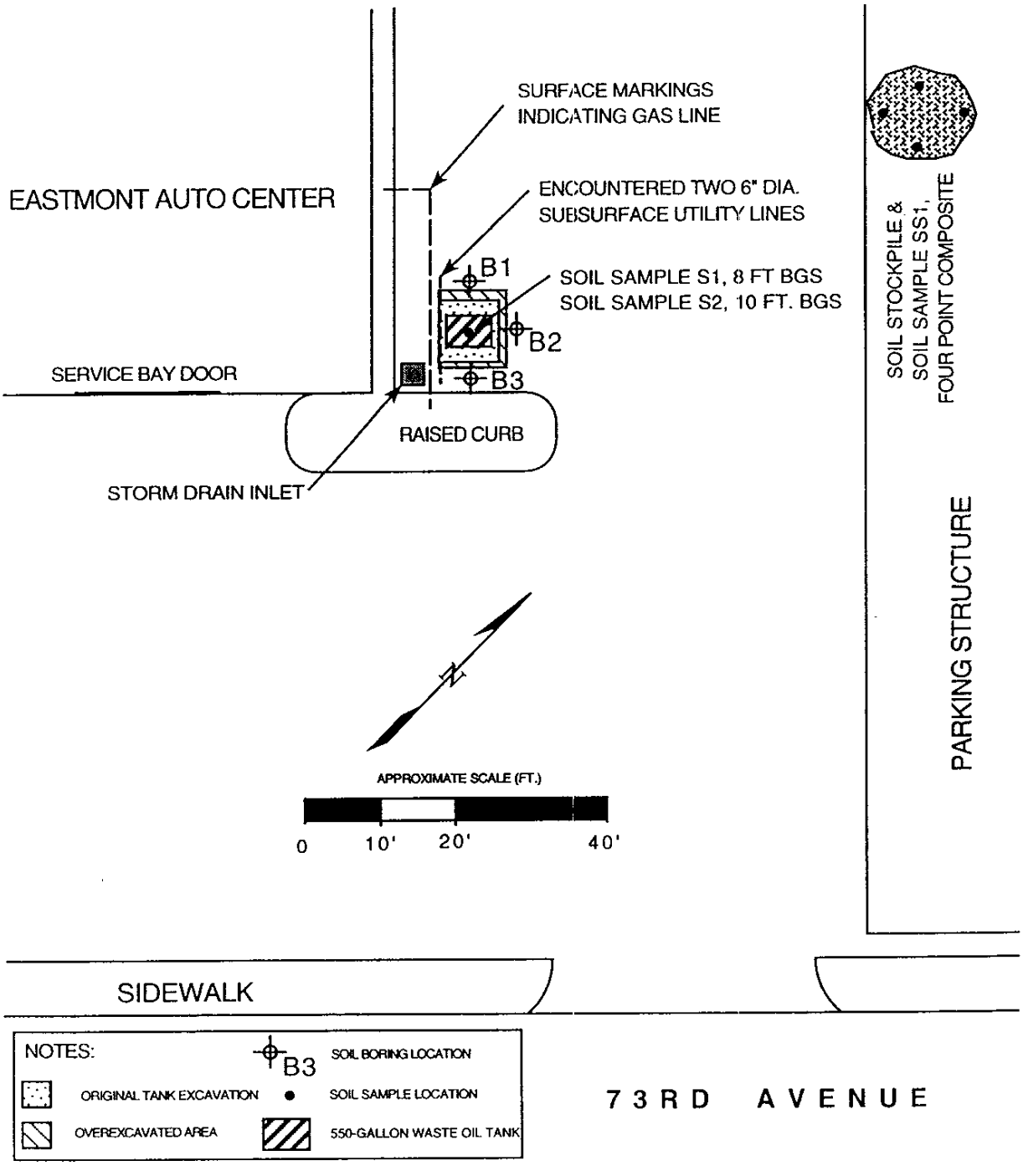
0 400
Feet

KEY

- ◐ Abandoned Industrial Well (1951)
- △ Dames & Moore Monitoring Well (4/91)
- ▲ Dames & Moore Soil Boring (4/91)
- □ Hunter Environ. Monitoring Well (12/89)
- ■ Hunter Environ. Soil Boring (12/89)
- 17.0 Groundwater elevation in feet above mean sea level (MSL)

After Dames & Moore, 1991

Artesian Environmental Consultants 3100 Kerner Blvd., Suite C San Rafael, California 94901 415-257-4801 Fax 257-4805		SITE MAP One Eastmont Mall Oakland, California 94605	
Project No. 110-001-02	Date: 5/14/96	Drawn by: BIM	Figure 2



Artesian Environmental Consultants 3100 Kerner Blvd., Suite C San Rafael, CA 94901 (415)-257-4801		**SAMPLE LOCATION MAP** The Eastmont Mall One Eastmont Mall Oakland, CA 94605	
Project No. 110-001-02	Date: 5/14/96	Prepared by: JF	Figure 3

APPENDIX A

STANDARD OPERATING PROCEDURES FOR FIELD ACTIVITIES

3100 Kerner Blvd., Suite C • San Rafael, CA 94901 • (415) 257-4801 • FAX (415) 257-4805

ARTESIAN ENVIRONMENTAL

Standard Operating Procedures

Direct Push Technology - Soil Sampling
Direct push technology, also called drive point sampling and soil probing, uses portable and limited access hydraulic or pneumatic probing methods to sample soils. Artesian uses hardened stainless steel soil sampling tools. The tools are designed for discrete or continuous coring.

Piston Probe-Drive Sampler
The 2-foot to 4-foot long Probe-Drive piston sampler remains completely sealed with disposable, rubber o-rings, while it is pushed or driven to the desired sampling depth. After the sampler has been driven to the target depth, a piston stop-pin at the trailing end of the sampler is removed using steel extension rods inserted down the inside diameter of the hollow probe rods. The piston tip retracts into the sample tube as it is displaced approximately 2 feet by the soil while the sample is being collected. Soil samples are usually collected in a 2 foot long inert PETG liners (clear plastic). The liners can be cut easily with a knife. Brass, stainless steel or Teflon liners are also available to suit various sampling requirements.

Continuous Coring Tools
Artesian uses continuous coring tools ranging from 0.5 inches to 2.0 inches in diameter. The soil sampling tools range from 1.0 feet to 4.0 feet in length. The continuous coring tool contains an inner liner composed of PETG (clear plastic), brass, stainless steel or Teflon.

Drive Points
Solid, hardened steel drive points are designed to pre-probe holes or be used where difficult drilling is encountered due to hard pan soils, penetrating frost or asphalt layers. After the hard zone has been penetrated, the drive point is removed and replaced with a coring tool.

Sample Preparation
The sampler is extracted from the borehole to the surface using the Direct Push Technology (DPT) rig, a truck mounted crane, or a portable probe extractor. The sample liner containing the soil sample is removed from the sampler. The soil sample is generally logged for hydrogeologic and lithologic characteristics by a geologist or engineer under the direction and supervision of a state-registered geologist or state-registered engineer using the Unified Soil Classification System (USCS). Soil samples may be screened using an organic vapor analyzer (OVA) or a photoionization detector (PID).

After the soil samples have been logged, the portions of the soil sample selected for analysis are immediately capped on both open ends with Teflon tape, trimmed and capped with plastic caps. The samples are then labeled and placed in individual see-through zip-lock plastic bags. The samples are stored in an ice chest with crushed ice. A thermometer is kept in the ice chest to ensure that the proper temperature is maintained. The samples are then delivered under chain-of-custody to a state-certified hazardous materials testing laboratory. The above mentioned procedures minimize the potential for cross-contamination and volatilization of volatile organic compounds (VOC) prior to chemical analysis.

Decontamination
All sampling equipment is cleaned either with a hot water pressure washer or with a phosphate-free detergent wash and two de-ionized water rinses between samples and between borings to prevent cross-contamination. The sampler is then refitted with a new soil liner and re-inserted into the borehole. The sampler is driven to the next target zone. This procedure is repeated until the total depth of the borehole is reached. Since all materials generated using direct push technology are actual samples, soil disposal in not required.

ARTESIAN ENVIRONMENTAL

Standard Operating Procedures

Groundwater Sampling Tools - Bailers and Tubing & Check Valve Systems

Artesian Environmental uses a push driven sampling method to advance a water sampling device (such as Artesian, Geoprobe or other samplers) to the target depth. After the top of the water bearing zone is encountered, the water sampling device is pushed an additional 2 to 3 feet into the aquifer. The water sampling rod consists of a steel inner core well screen nested inside a steel outer sampler sheath. The sampler is kept sealed by o-ring connections while being driven to the desired sampling depth. When the desired sampling depth is reached, the sampler is pulled up approximately 2 feet which exposes the open borehole to the inner core steel well screen, creating a temporary well from which to sample. A groundwater sample can then be collected by one of the following methods:

GROUNDWATER SAMPLING - Bailers

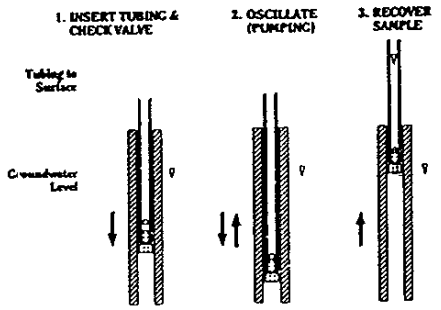
Grab groundwater samples are collected using miniature 1/2-inch diameter Teflon or stainless steel bailers. The bailers are lowered through the hollow centers of the drilling probe rods into the screened groundwater sampling device. The bailers are properly decontaminated between borings.

Groundwater Sampling with a Miniature Bailer



GROUNDWATER SAMPLING - Tubing & Check Valves

Tubing with a bottom check valve is another method of grab groundwater sampling. The 1/4-inch inner diameter polyethylene tubing with a 3/8-inch outer diameter is mounted with a stainless steel bottom check valve. The tubing, with check valve in place, is lowered down the hollow center of the drilling probe rod into the water column. An oscillating motion pumps the water column up into the tubing. The tubing recovers 9.65 ml per foot. Tests in sandy aquifers have recovered 0.5 liters of water per minute from a depth of 25 feet using the 1/4-inch inner diameter tubing and the bottom check valve.



Groundwater Sampling with a Tubing and Bottom Check Valve

Groundwater samples to be analyzed are decanted into laboratory-prepared, 40-milliliter volatile organic analysis (VOA) vials and 1 liter bottles. The VOA vials are filled completely, leaving no headspace, and are capped with septum topped Teflon-lined lids, labeled, and stored in a refrigerated environment of crushed ice and delivered under chain-of-custody to a state-certified hazardous materials testing laboratory.

APPENDIX B

LABORATORY ANALYTICAL REPORT
&
CHAIN OF CUSTODY RECORD

3100 Kerner Blvd., Suite C • San Rafael, CA 94901 • (415) 257-4801 • FAX (415) 257-4805

CHROMALAB, INC.

Environmental Services (SDB)

April 16, 1996 *Submission #:* 9604611

ARTESIAN ENV. CONSULTANTS

Atten: Jason French

Project: EASTMONT *Project#:* 110-001-02
Received: April 11, 1996

re: 6 samples for Oil and Grease analysis.
Method: *5520 E&F*

Matrix: SOIL *Extracted:* April 15, 1996
Sampled: April 10, 1996 *Run#:* 1061 *Analyzed:*

Spl#	CLIENT SPL ID	OIL & GREASE (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
82445	B1 15'	N.D.	50	N.D.	87.5	1.0
82446	B1 25'	N.D.	50	N.D.	87.5	1.0
82447	B2 15'	N.D.	50	N.D.	87.5	1.0
82448	B2 30'	N.D.	50	N.D.	87.5	1.0
82449	B3 15'	N.D.	50	N.D.	87.5	1.0
82450	B3 35'	N.D.	50	N.D.	87.5	1.0

Carolyn House
Extractions Supervisor

Chip Poalinelli
Operations Manager

415-257-4805 MV 04/18

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096

E015 0:0C0405 CMH 09:48

CHROMALAB, INC.

Environmental Services (SDB)

April 18, 1996 *Submission #:* 9604611

ARTESIAN ENVIRONMENTAL CONSULTANTS

Atten: Jason French

Project: EASTMONT *Project#:* 110-001-02
Received: April 11, 1996

re: Six samples for Motor Oil analysis

Matrix: SOIL *Extracted:* April 12, 1996
Sampled: April 10, 1996 *Analyzed:* SEE BELOW
Method: EPA 3550/8015

Sample #	Client Sample ID	Motor Oil (mg/Kg)	Date Analyzed
82446	B1 25'	N.D.	04/13/96
82447	B2 15'	N.D.	04/15/96
82448	B2 30'	N.D.	04/13/96
82449	B3 15'	N.D.	04/13/96
82450	B3 35'	N.D.	04/13/96
Blank		N.D.	
Blank Spike Recovery		89%	
Reporting Limit		50	

Matrix: SOIL *Extracted:* April 16, 1996
Sampled: April 10, 1996 *Analyzed:* April 16, 1996
Method: EPA 3550/8015

Sample #	Client Sample ID	Motor Oil (mg/Kg)
82445	B1 15'	N.D.
Blank		N.D.
Blank Spike Recovery		106%
Reporting Limit		50

Dennis Mayugba
Chemist

Alex Tam
Semivolatiles Supervisor

Note: Diesel was used as the spiking compound.

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(510) 484-1919 • Facsimile (510) 484-1096

CHROMALAB, INC.

Environmental Services (SDB)

April 18, 1996 *Submission #:* 9604611

ARTESIAN ENVIRONMENTAL CONSULTANTS

Atten: Jason French

Project: EASTMONT *Project#:* 110-001-02
Received: April 11, 1996

re: Three samples for Motor Oil analysis

Matrix: WATER *Extracted:* April 15, 1996
Sampled: April 10, 1996 *Analyzed:* April 16, 1996
Method: EPA 3510/8015

Sample #	Client Sample ID	Motor Oil (µg/L)
82442	B1 AQ	4300

Note: Hydrocarbon reported is in the early Motor Oil range, and does not match ChromaLab's Motor Oil standard.

82443	B2 AQ	N.D.
82444	B3 AQ	N.D.
Blank		N.D.
Blank Spike Recovery		82%
Reporting Limit		500

Dennis Mayugba
Chemist

Alex Tam
Semivolatiles Supervisor

Note: Diesel was used as the spiking compound.

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096

CHROMALAB, INC.

Environmental Services (SDB)

April 18, 1996 *Submission #:* 9604611

ARTESIAN ENV. CONSULTANTS

Atten: Jason French

Project: EASTMONT *Project#:* 110-001-02
Received: April 11, 1996

re: 3 samples for Oil and Grease analysis.
Method: 5520 B&F

Matrix: WATER *Extracted:* April 17, 1996
Sampled: April 10, 1996 *Run#:* 1097 *Analyzed:*

Spl#	CLIENT SPL ID	OIL & GREASE (mg/L)	REPORTING LIMIT (mg/L)	BLANK RESULT (mg/L)	BLANK SPIKE (%)	DILUTION FACTOR
82442	B1 AQ	N.D.	1.0	N.D.	95.0	1.0
82443	B2 AQ	N.D.	1.0	N.D.	95.0	1.0
82444	B3 AQ	N.D.	1.0	N.D.	95.0	1.0

Carolyn House
Extractions Supervisor

Chip Poalinelli
Operations Manager

CHROMALAB, INC.
SAMPLE RECEIPT CHECKLIST

Client Name ARTESIAN

Project EASTMONT

Reference/Subm # 27351/9604611

Checklist completed by: [signature] 4/12/96 (Signature / Date)

Date/Time Received 4/11/96 (Date / Time)

Received by B Monroe

Carrier name

Logged in by CR 4/11/96 (Initials / Date)

Matrix H2O/Soil

Shipping container in good condition?			NA____	Yes____ No____
Custody seals present on shipping container?	Intact____	Broken____	Yes____	No____
Custody seals on sample bottles?	Intact____	Broken____	Yes____	No____
Chain of custody present?			Yes✓	No____
Chain of custody signed when relinquished and received?			Yes✓	No____
Chain of custody agrees with sample labels?			Yes✓	No____
Samples in proper container/bottle?			Yes✓	No____
Samples intact?			Yes✓	No____
Sufficient sample volume for indicated test?			Yes✓	No____
VOA vials have zero headspace?			NA✓	Yes____ No____
Trip Blank received?			NA✓	Yes____ No____
All samples received within holding time?				Yes✓ No____

Container temperature? 6.1°C

pH upon receipt <2 pH adjusted_____ Check performed by: CR NA____

Any NO response must be detailed in the comments section below. If items are not applicable, they should be marked NA.

Client contacted?_____ Date contacted?_____

Person contacted?_____ Contacted by?_____

Regarding?_____

Comments:_____

Corrective Action:_____

SMPLRECD.CK

CLIENT: ARTESIAN
DUE: 04/18/96
REF #:27351

611/82442-824/64

27351

ARTESIAN ENVIRONMENTAL
5100 Kerner Blvd. Suite C
San Rafael, Ca. 94901
Fax 415-257-4805
Tel 415-257-4801

Chain of Custody Request for Analysis

Laboratory: Chromalab Date:
Contact: Page: 1
Phone: Of: 3

PROJECT INFORMATION

Project Manager: JASON FRENCH
Fax Results to: JASON At: (415) 257-4805
Also to: At:
Send Report to: ARTESIAN ENVIRONMENTAL
Sample Team (print): JASON FRENCH
(signatures):
Turn Around Time: (10 Day) 5 Day 48 Hr. 24 Hr. Other

Project Name: EASTMONT
Project # 110-001-02
P.O.#

ANALYSES

Sample ID	Lab ID	Date	Time	Matrix	Preserv.	TPH – Gasoline (EPA 5030, 8015)	TPH – ~~Diesel~~ Motor oil (EPA 3510/3550, 8015)	TEPH – Kerosene, Diesel, Motor Oil (EPA 3510/3550, 8015)	Purgeable Aromatics BTEX (EPA 602, 8020)	Purgeable Halocarbons (EPA 601, 8010)	Volatile Organics (EPA 624, 8240, 524.2)	SemiVolatile Organics (EPA 625/627, 8270, 525)	Total Oil & Grease (EPA 5520, B+F, E+F)	Total Recoverable Petroleum Hydrocarbons (EPA 418.1)		Metals: Cd, Cr, Pb, Zn, Ni Total or Soluble	CAM Metals (17) Total or Soluble	Lead (Pb) Total, Soluble, or Organic	Extraction TCLP or STLC (Wet)			CONTAINERS: HOLD SAMPLE		Number of Containers
B1 AQ		4/10/96	1100	H_2O	HCl		X						X										2
B2 AQ			1400				X						X										2
B3 AQ			1700				X						X										2
B1 5'			0900	Soil																	X		1
B1 10'			0910																		X		1
B1 15'			0920				X						X										1
B1 20'			0940																		X		1
B1 25'			1020				X						X										1
B1 30'			1050																		X		1

SPECIAL INSTRUCTIONS:

SAMPLE RECEIPT
Total No. Containers
Head Space Y N
Rec'd Good Cond/Cold Y N
Conforms to Record Y N

COMMENTS

RELINQUISHED BY (Sampler): (Signature) (Time) 7pm
(Printed Name) JASON FRENCH (Date) 4/10/96
(Company) ARTESIAN

RELINQUISHED BY: (Signature) (Time) 2:10
(Printed Name) (Date) 4/11/96
(Company)

RELINQUISHED BY: (Signature) (Time) 18H
(Printed Name) (Date) 4:10:96
(Company)

RECEIVED BY: (Signature) (Time) 7pm
(Printed Name) (Date) 4/10/96
(Company) ARTESIAN

RECEIVED BY: (Signature) (Time)
(Printed Name) (Date)
(Company) Chromalab

RECEIVED BY (Laboratory): (Signature) (Time) 1821
(Printed Name) Chris Rowley (Date) 4/4/96
(Company)

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27351

ARTESIAN ENVIRONMENTAL
5100 Kernel Blvd. Suite C
San Rafael, Ca 94901
Fax 415-257-4805
Tel 415-257-4800

Chain of Custody Request for Analysis

Laboratory: Chromalab
Contact:
Phone:
Date:
Page: 2
Of: 3

PROJECT INFORMATION

Project Manager: JASON FRENCH
Fax Results to: JASON At: (415) 257-4805
Also to: At:
Send Report to: ARTESIAN ENVIRONMENTAL
Sample Team (print): JASON FRENCH
(signatures):
Turn Around Time: (10 Day) 5 Day 48 Hr. 24 Hr. Other

Project Name: EASTMONT
Project # 110-001-02
P.O.#

Sample ID	Lab ID	Date	Time	Matrix	Preserv.
B2 5'		4/10/96	1115	SOIL	
B2 10'			1125		
B2 15'			1150		
B2 20'			1230		
B2 25'			1300		
B2 30'			1330		
B3 5'			1410		
B3 10'			1420		
B3 15'			1430		

ANALYSES

TPH – Gasoline (EPA 5030, 8015)	TPH – Diesel Motor Oil (EPA 3510/3550, 8015)	TEPH – Kerosene, Diesel, Motor Oil (EPA 3510/3550, 8015)	Purgeable Aromatics BTEX (EPA 602, 8020)	Purgeable Halocarbons (EPA 601, 8010)	Volatile Organics (EPA 624, 8240, 524.2)	SemiVolatile Organics (EPA 625/627, 8270, 525)	Total Oil & Grease (EPA 5520, B+F, E+F)	Total Recoverable Petroleum Hydrocarbons (EPA 418.1)		Metals: Cd, Cr, Pb, Zn, Ni Total or Soluble	CAM Metals (17) Total or Soluble	Lead (Pb) Total, Soluble, or Organic	Extraction TCLP or STLC (Wet)			
	X						X								
	X						X								
	X						X								

CONTAINERS

HOLD SAMPLE		Number of Containers
X		1
X		1
		1
X		1
X		1
		1
X		1
X		1
		1

SPECIAL INSTRUCTIONS:

COMMENTS:

SAMPLE RECEIPT

Total No. Containers
Head Space Y N
Rec'd Good Cond/Cold Y N
Conforms to Record Y N

RELINQUISHED BY (Sampler):
(Signature) (Time) 2:16PM
(Printed Name) JASON FRENCH (Date) 4/10/96
(Company) ARTESIAN

RELINQUISHED BY:
(Signature) (Time) 2:10PM
(Printed Name) Fred Smith (Date) 4/
(Company) Artesian Env.

RELINQUISHED BY:
(Signature) (Time) 1:04
(Printed Name) B. Marion (Date) 4-11-96
(Company) Chromalab

RECEIVED BY:
(Signature) (Time) 2:10PM
(Printed Name) Fred Smith (Date) 4/10/96
(Company) Artesian

RECEIVED BY:
(Signature) (Time) 1:40
(Printed Name) B. Marion (Date) 4-11-96
(Company) Chromalab

RECEIVED BY (Laboratory):
(Signature) (Time) 1021
(Printed Name) Chris Rowley (Date) 4/11/96
(Company) CL

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9604611 27351

ARTESIAN ENVIRONMENTAL
5100 Kernel Blvd Suite G
San Rafael Ca 94901
Fax 415-257-4805
Tel 415-257-4800

Chain of Custody Request for Analysis

Laboratory: Chromalab Date:
Contact: Page: 3
Phone: Of: 3

PROJECT INFORMATION

Project Manager: JASON FRENCH
Fax Results to: JASON At: (415) 257-4805
Also to: At:
Send Report to: ARTESIAN ENVIRONMENTAL
Sample Team (print): JASON FRENCH
(signatures)
Turn Around Time: (10 Day) 5 Day 48 Hr. 24 Hr. Other

Project Name: EASTMONT
Project # 110-001-02
P.O.#

Sample ID	Lab ID	Date	Time	Matrix	Preserv.
B3 20'		4/10/96	1450	SOIL	
B3 25'			1510		
B3 30'			1540		
B3 35'			1610		
B3 40'			1650		

ANALYSES

TPH – Gasoline (EPA 5030, 8015)	TPH – ~~Diesel~~ Motor oil (EPA 3510/3550, 8015)	TEPH – Kerosene, Diesel, Motor Oil (EPA 3510/3550, 8015)	Purgeable Aromatics BTEX (EPA 602, 8020)	Purgeable Halocarbons (EPA 601, 8010)	Volatile Organics (EPA 624, 8240, 524.2)	SemiVolatile Organics (EPA 625/627, 8270, 525)	Total Oil & Grease (EPA 5520, B+F, E+F)	Total Recoverable Petroleum Hydrocarbons (EPA 418.1)		Metals: Cd, Cr, Pb, Zn, Ni Total or Soluble	CAM Metals (17) Total or Soluble	Lead (Pb) Total, Soluble, or Organic	Extraction TCLP or STLC (Wet)		
	X						X								

CONTAINERS

HOLD SAMPLE		Number of Containers
X		1
X		1
X		1
		1
X		1

SPECIAL INSTRUCTIONS:

SAMPLE RECEIPT

Total No. Containers		
Head Space	Y	N
Rec'd Good Cond/Cold	Y	N
Conforms to Record	Y	N

COMMENTS:

RELINQUISHED BY (Sampler): (Signature) 7PM 4/10/96 (Time/Date)
(Printed Name) JASON FRENCH
(Company) ARTESIAN

RECEIVED BY: (Signature) 7PM 4/10 (Time/Date)
(Printed Name) Ted Smith
(Company) ARTESIAN

RELINQUISHED BY: (Signature) 2:10PM 4/11/96 (Time/Date)
(Printed Name) Ted Smith
(Company)

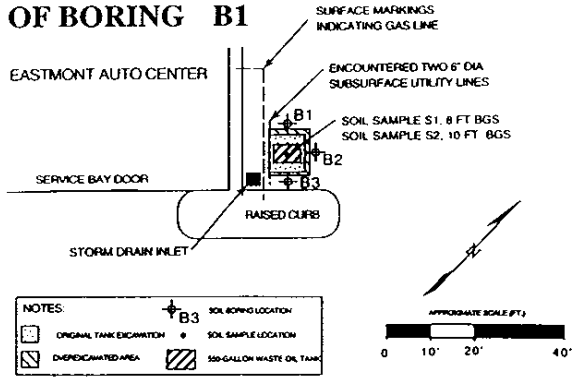
RECEIVED BY: (Signature) 4/11/96
(Printed Name)
(Company) Chromalab

RELINQUISHED BY: (Signature) 1814 (Time)
(Printed Name) B. Marcum 4/11/96 (Date)
(Company) Chromalab

RECEIVED BY (Laboratory): (Signature) 1821 (Time)
(Printed Name) Chris Rowley 4/11/96 (Date)
(Company)

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LOG OF BORING B1



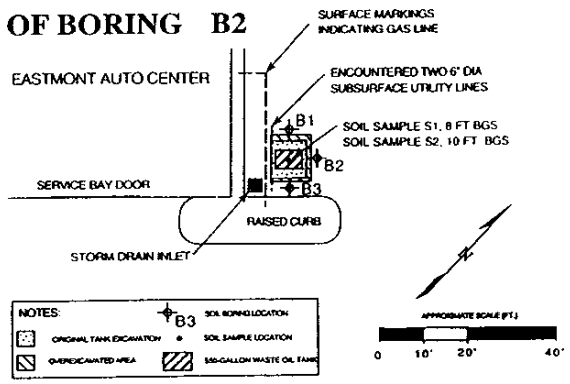
Eastmont Mall
7100 Bancroft Ave.
Oakland, California

DATES DRILLED:	4/10/96	SAMPLING METH.:	2" Continous Core
DRILLING CO.:	Artesian	TOTAL DEPTH:	30 feet bgs
DRILL TOOLS:	Geoprobe 5400	LOGGED BY:	J. French
DRILLER:	B. Raymond	DATE DEV.:	NA
PROJECT MANAGER:	J. French	DRAWN BY:	J. French
ARTESIAN JOB NO.:	110-001-02	DRAW DATE:	6/10/96

ARTESIAN ENVIRONMENTAL CONSULTANTS
3100 KERNER BLVD., SUITE C • SAN RAFAEL, CA 94901
TEL (415) 257-4801; FAX (415) 257-4805

DEPTH (feet)	SOIL SYMBOLS/ FIELD TEST DATA	SOIL DESCRIPTION	SAMPLE NO.	BLOWS /6 in.	PID ppm	COMPLETION DIAGRAM	DESCRIPTION
0		ASPHALT: 3 inches thick.					
		ML: Dark brown silt with fine sand. Dry.					
-5		ML: Brown silt with fine sand. Dry. Occasional small angular gravel. Increasingly sandy with depth.	B1 5'		0.4		
-10		SM: Brown fine sand with silt. Dry. Occasional small angular gravel.	B1 10'		0.4		
		ML: Light brown silt with fine sand. Dry.					
-15		ML: Green silt with fine sand. Slightly moist. Angular gravel and small rocks from 15.5 ft. bgs.	B1 15'		0.4		
		SP: Poorly sorted fine to medium dark brown and dark gray sand with angular gravel and rock. Moisture increasing with depth. First water encountered at 28 ft. bgs.					
-20			B1 20'		0.4		
-25			B1 25'		0.4		
-30							

LOG OF BORING B2



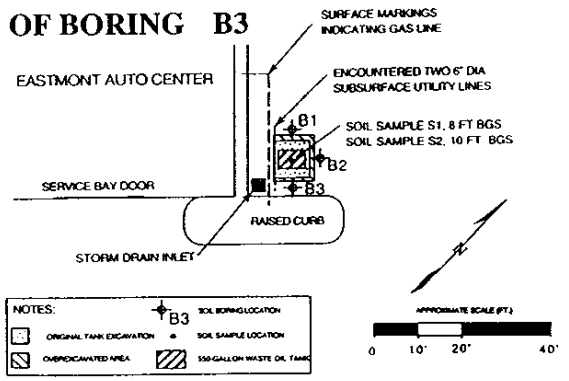
Eastmont Mall
7100 Bancroft Ave.
Oakland, California

DATES DRILLED:	4/10/96	SAMPLING METH.:	2" Continous Core
DRILLING CO.:	Artesian	TOTAL DEPTH:	38 feet bgs
DRILL TOOLS:	Geoprobe 5400	LOGGED BY:	J. French
DRILLER:	B. Raymond	DATE DEV.:	NA
PROJECT MANAGER:	J. French	DRAWN BY:	J. French
ARTESIAN JOB NO.:	110-001-02	DRAW DATE:	6/10/96

ARTESIAN ENVIRONMENTAL CONSULTANTS
3100 KERNER BLVD., SUITE C • SAN RAFAEL, CA 94901
TEL (415) 257-4801; FAX (415) 257-4805

DEPTH (feet)	SOIL SYMBOLS/ FIELD TEST DATA	SOIL DESCRIPTION	SAMPLE NO.	BLOWS /6 in.	PID ppm	COMPLETION DIAGRAM	DESCRIPTION
0		ASPHALT: 3 inches thick.					
		ML: Red/brown silt with fine sand. Dry.					
-5		ML: Brown silt with fine sand. Dry. Occasional small angular gravel.	B2 5'		0.4		
-10			B2 10'		0.4		
-15		ML: Green silt with fine sand. Slightly moist. Occasional small angular gravel.	B2 15'		0.4		
		SP: Poorly sorted fine to medium brown and red sand with angular gravel and rock. Very moist below 25.5 feet bgs. First groundwater encountered at 34 feet bgs. No sample recovery at 35 feet bgs.					
-20			B2 20'		0.4		
-25			B2 25'		0.4		
-30			B2 30'		0.4		
-35							

LOG OF BORING B3



Eastmont Mall
7100 Bancroft Ave.
Oakland, California

DATES DRILLED:	4/10/96	SAMPLING METH.:	2" Continous Core
DRILLING CO.:	Artesian	TOTAL DEPTH:	40 feet bgs
DRILL TOOLS:	Geoprobe 5400	LOGGED BY:	J. French
DRILLER:	B. Raymond	DATE DEV.:	NA
PROJECT MANAGER:	J. French	DRAWN BY:	J. French
ARTESIAN JOB NO.:	110-001-02	DRAW DATE:	6/11/96

ARTESIAN ENVIRONMENTAL CONSULTANTS
3100 KERNER BLVD., SUITE C • SAN RAFAEL, CA 94901
TEL (415) 257-4801; FAX (415) 257-4805

DEPTH (feet)	SOIL SYMBOLS/ FIELD TEST DATA	SOIL DESCRIPTION	SAMPLE NO.	BLOWS /6 in.	PID ppm	COMPLETION DIAGRAM	DESCRIPTION
0		ASPHALT: 3 inches thick.					
		ML: Brown silt with fine sand. Dry.					
-5		ML: Light Brown silt with fine sand. Dry. Occasional small angular gravel below 10 feet bgs.	B3 5'		0.4		
-10			B3 10'		0.4		
		ML: Brown silt with fine sand. Dry.					
		ML: Green silt with fine sand. Slightly moist.					
-15		SP: Poorly sorted fine to medium green and brown sand with angular and subrounded gravel and rock. First groundwater encountered at 37 feet bgs.	B3 15'		0.4		
-20			B3 20'		0.4		
-25			B3 25'		0.4		
-30			B3 30'		0.4		
-35			B3 35'		0.4		
-40		CL: Light brown silty clay. Slightly moist.					