



#523

11/74

April 17, 1997

Mr. Barney Chan
Alameda County Health
Care Services Agency
1131 Harbor Bay Parkway
Room 250
Alameda, CA 94502

Subject: Groundwater Monitoring Reports/Closure Request

Dear Mr. Chan:

Please find enclosed BSK & Associates Groundwater Monitoring Reports for our site located at 7825 San Leandro Street, Oakland. The report represents the Eleventh and Twelfth quarterly monitoring results of the groundwater at this site. As indicated by the results, it appears that contamination levels of suspected compounds are below State and Local requirements or at non detection levels.

As stated in our last correspondence, we are formally requesting that our case be reviewed for site closure. It is our understanding that additional information is required in order to complete your review. If convenient, I would like to meet in the next two week to discuss any issues pertaining to the Underground Storage Tanks.

Your response would be appreciated on this matter, please feel free in contacting me at (510) 632 - 3467, extension 211.

Sincerely;

Dave Robinson
Environmental Engineering Manager

cc: Eddy So, SRWQCB

60 APR 23 1997
FOLLOW UP
TRANSPORT AND

**Eleventh Quarterly Groundwater
Monitoring Report - April 1996
AB&I Foundry
7825 San Leandro Street
Oakland, California**

**BSK & ASSOCIATES
GEOTECHNICAL CONSULTANTS, INC.**

BSK JOB NO. P92270.3

May 21, 1996



1181 Quarry Lane, Building 300
Pleasanton, CA 94566
(510) 462-4000 • FAX (510) 462-6283

May 21, 1996

BSK JOB NO. P92270.3

AB&I Foundry
7825 San Leandro Street
Oakland, California 94621

Attention: Mr. David Robinson
Environmental Engineering Manager

Subject: Eleventh Quarterly Groundwater
Monitoring Report - April 1996
AB&I Foundry
7825 San Leandro Street
Oakland, California

As requested and authorized, BSK & Associates (BSK) has performed the Eleventh quarterly monitoring of three shallow groundwater Monitoring Wells MW-2 through MW-4 at AB&I Foundry, located at 7825 San Leandro Street, Oakland, California (Site). This report presents the project background, groundwater data obtained during this sampling event as well as previous data, conclusions based on this quarter's data, and recommendations for further action, as appropriate. The Site location is shown on the Vicinity Map, Figure 1.

BSK appreciates this opportunity to continue to be of service to AB&I. If there are questions or comments regarding this report, please contact the undersigned.

Respectfully submitted,
BSK & Associates

Martin B. Cline, R.G.
Geologist

Alex Y. Eskandari, P.E.
Project Manager
C.E. #38101

AYE\MC:pc
(ENVVAB&NP92270-3.Q11)

Distribution:
AB&I Foundry (3 copies)

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**ELEVENTH QUARTERLY GROUNDWATER
MONITORING REPORT - APRIL 1996
AB&I FOUNDRY
7825 SAN LEANDRO STREET
OAKLAND, CALIFORNIA**

Introduction

This quarterly monitoring report has been prepared to meet Alameda County Department of Environmental Health (ACDEH) requirements for status updates of groundwater at the Site following the removal of four Underground Storage Tanks (USTs) during 1991 and 1992, as initially presented in their letter of October 2, 1992, to David Robinson of AB&I Foundry.

Background

AB & I has been operating at its present location for more than eighty years. AB & I's current activities include the manufacture of cast iron pipe and fittings. The facility accepts scrap iron and steel, which it stockpiles on-site, and utilizes in its processes.

AB & I maintained three USTs to store petroleum products and one UST to store solvent. AB & I removed the four USTs between August 1991 and June 1992. Removal and disposal of two of the USTs (the 8,000-gallon capacity gasoline tank and the 550-gallon capacity leaded gasoline tank) were described in two consultant's (Levine-Fricke) reports. Documentation of the removal and disposal of the two remaining USTs (the 8,000-gallon capacity 1,1,1-TCA UST and the 10,000-gallon capacity diesel UST) was reported by AB & I.

In general, analytical results for the soil and groundwater samples collected adjacent to the tanks during the tank removal projects showed detectable concentrations of Total Petroleum Hydrocarbons as gasoline (TPHg), Total Petroleum Hydrocarbons as diesel (TPHd), 1,1-DCA, Chloroethane, and 1,1,1-TCA. Affected soil at each former tank location was excavated until confirmation samples indicated the chemicals of concern were at relatively low concentrations, or to where an obstruction made further excavation impossible or hazardous.

BSK & Associates (BSK) installed four shallow groundwater monitoring wells at the Site in February 1993, one well per former tank location as shown on Figure 2, Site Plan. Soil and groundwater samples revealed soil contamination in the vicinities of the former 500-gallon gasoline tank and the TCA solvent tank, and contaminated groundwater at these two locations as well as the former diesel tank location. The well installation and sampling findings are presented in BSK Report No. P92270.3, dated April 30, 1993.

ELEVENTH QUARTERLY MONITORING ACTIVITIES - APRIL 1996

General

Eleventh quarterly monitoring of groundwater Monitoring Wells MW-2, MW-3 and MW-4 was performed by BSK personnel on April 26, 1996, in accordance with the Groundwater Well Monitoring portion of our Proposal No. PR93204.3 of July 29, 1993. As directed by Mr. David Robinson (after meeting with Barney Chan of ACEHD on March 13, 1995), sampling of the groundwater Monitoring Well MW-1, was not performed this quarter. Field procedures and observations are provided in the following text and figures.

Field Work

Water samples from site wells were obtained after purging each well of approximately four casing volumes, and allowing eighty percent recovery. Observation of water level, and for immiscible product, was performed using an electric sounder and clear point-source bailer prior to purging. The water level was recorded to the nearest 1/100th of a foot. During purging, the water parameters: pH, temperature and electrical conductivity were monitored and recorded at regular intervals on Well Field Logs. The Well Field Logs are presented in Figures 3 through 5. Water samples for analytical testing were obtained in the order of most to least volatility. Samples were obtained via point-source bailer (Teflon^R or polyethylene disposable), and transferred to the appropriate sample containers, with preservative as needed. The samples were labeled and placed into a cooler with water-ice or blue ice for delivery to our State-certified analytical laboratory.

Sampling, purging and decontamination waste water was contained on-site in a 55-gallon drum provided by AB & I. Each container was labeled according to the wastewater source, date of accumulation and owner.

Analytical Testing

Analytical testing of the water samples obtained from the site were performed by BSK State-certified Analytical Laboratories in Fresno, California.

The analyses performed for each contaminant type are those specified by the Tri-Regional Water Board Staff Recommendations of August 10, 1992 and ACDEH. The analyses are:

Well MW-2

Chlorinated Solvent by EPA Method 601

Oil and Grease by EPA Methods 413.2 and 418.1

TPHgasoline by GCFID-5030

BTEX by EPA Method 602

Well MW-3
 TPHgasoline by GCFID-5030
 BTEX by Method 602

Well MW-4
 TPHgasoline by GCFID-5030
 BTEX by Method 602

Samples were submitted to the analytical laboratory utilizing Chain-of-Custody documentation and procedure.

The results of the chemical analyses of groundwater for this quarter, and previous quarterly test results, are summarized in the following tables; water analyses results and related Action Levels are reported in Micrograms per liter (ug/l). The Chemical Test Data Sheets and project Chain-of-Custody documentation are presented in Appendix "A" of this report.

**TABLE 1 - ANALYTICAL RESULTS, GROUNDWATER SAMPLES
 BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES (BTEX)**
 Results in micrograms per liter (ug/l)

CONSTITUENTS				
Sample Location (Action Level)	Benzene (1),	Toluene (100),	Ethylbenzene (680),	Xylenes (1750),
SAMPLE DATE: 4/26/96				
MW-1	--	--	--	--
MW-2	ND	ND	ND	ND
MW-3	ND	ND	ND	ND
MW-4	ND	ND	ND	ND
SAMPLE DATE: 1/18/96 and 1/19/96 (Tenth Quarter)				
MW-1	--	--	--	--
MW-2	ND	ND	ND	ND
MW-3	ND	ND	ND	ND
MW-4	0.8	ND	1.2	0.9
SAMPLE DATE: 9/6/95 (Ninth Quarter)				
MW-1	--	--	--	--
MW-2	ND	ND	ND	ND
MW-3	ND	ND	ND	ND
MW-4	9.4	1.4	6.3	6.2
SAMPLE DATE: 6/23/95 (Eighth Quarter)				
MW-1	--	--	--	--
MW-2	ND	ND	ND	ND
MW-3	ND	ND	ND	ND
MW-4	ND	ND	0.9	1.7
SAMPLE DATE: 3/17/95 (Seventh Quarter)				
MW-1	--	--	--	--
MW-2	4.9	ND	ND	ND

CONSTITUENTS				
Sample Location (Action Level)	Benzene (1) ₁	Toluene (100) ₁	Ethylbenzene (680) ₁	Xylenes (1750) ₁
MW-3	ND	ND	ND	ND
MW-4	ND	ND	ND	ND
SAMPLE DATE: 12/16/94 (Sixth Quarter)				
MW-1	0.6	ND	ND	ND
MW-2	ND	18	ND	ND
MW-3	ND	ND	ND	ND
MW-4	0.4	0.4	ND	1.2
SAMPLE DATE: 09/09/94 (Fifth Quarter)				
MW-1	ND	ND	ND	ND
MW-2	ND	ND	ND	ND
MW-3	ND	ND	ND	ND
MW-4	0.4	ND	0.7	1.3
SAMPLE DATE: 06/10/94 (Fourth Quarter)				
MW-1	ND	ND	ND	ND
MW-2	ND	ND	ND	ND
MW-3	ND	ND	ND	ND
MW-4	4.3	ND	1.8	4.3
SAMPLE DATE: 03/04/94 (Third Quarter)				
MW-1	1.1	ND	ND	ND
MW-2	ND	ND	ND	3.6
MW-3	ND	ND	ND	ND
MW-4	ND	0.9	ND	1.1
SAMPLE DATE: 12/03/93 (Second Quarter)				
MW-1	ND	ND	ND	ND
MW-2	ND	250	19	5.1
MW-3	ND	ND	ND	ND
MW-4	ND	ND	1.4	2.8
SAMPLE DATE: 08/20/93 (First Quarter)				
MW-1	2.2	3.7	4.5	17
MW-2	2.9	4.2	6.3	25
MW-3	7.2	9.3	8.6	31
MW-4	5.6	4.9	7.5	22
SAMPLE DATE: 03/10/93 (Initial Well Installation Sampling)				
MW-1	0.6	ND	ND	ND
MW-2	ND	0.8	ND	ND
MW-3	ND	ND	ND	ND
MW-4	1.0	2.0	7.6	19

ND - None Detected

1 - California Department Of Health Services Drinking Water Standard, Revised 10/23/91

2 - California DOHS Action Level, 7/1/92

-- - Not Sampled

TABLE 2 - ANALYTICAL RESULTS, GROUNDWATER SAMPLES
TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE AND DIESEL,
TOTAL AND HYDROCARBON OIL AND GREASE
TOTAL LEAD, AND VOLATILE HALOCARBONS
 Results in micrograms per liter (ug/l)

CONSTITUENTS						
Sample Location (Action Level)	TPH Gasoline (NA)	TPH Diesel (100) ₁	Total Oil & Grease (NA)	Hydrocarbon Oil & Grease (NA)	Total Lead (50)	Volatile Halocarbons (Determined by Compound)
SAMPLE DATE: 4/26/96						
MW-1	--	--	--	--	--	--
MW-2	500 ₍₄₎	--	ND	ND	--	ND
MW-3	ND	--	--	--	--	--
MW-4	ND	--	--	--	--	--
SAMPLE DATE: 1/18/96 and 1/19/96 (Tenth Quarter)						
MW-1	--	--	--	--	--	--
MW-2	120 ₍₄₎	--	1	ND	--	ND
MW-3	ND	--	--	--	--	--
MW-4	90 ₍₄₎	--	--	--	--	--
SAMPLE DATE: 9/6/95 (Ninth Quarter)						
MW-1	--	--	--	--	--	--
MW-2	110 ₍₄₎	--	ND	ND	--	ND
MW-3	ND	--	--	--	--	--
MW-4	420	--	--	--	--	--
SAMPLE DATE: 6/23/95 (Eighth Quarter)						
MW-1	--	--	--	--	--	--
MW-2	190 ₍₄₎	--	ND	ND	--	Chloroethane - 0.9(NA)
MW-3	ND	--	--	--	--	--
MW-4	180 ₍₄₎	--	--	--	--	--
SAMPLE DATE: 3/17/95 (Seventh Quarter)						
MW-1	--	--	--	--	--	--
MW-2	320 ₍₄₎	--	--	1	--	Chloroethane - 2.4(NA)
MW-3	ND	--	--	--	--	--
MW-4	62 ₍₄₎	--	--	--	ND	--
SAMPLE DATE: 12/16/94 (Sixth Quarter)						
MW-1	--	180 ₍₅₎	--	--	--	--
MW-2	130 ₍₄₎	--	ND	ND	--	ND
MW-3	ND	--	--	--	--	--
MW-4	100	--	--	--	86	--
SAMPLE DATE: 09/09/94 (Fifth Quarter)						
MW-1	--	ND	--	--	--	--
MW-2	830 ₍₂₎	--	2	2	--	Chloroethane - 1.4(NA) 1,1-Dichloroethane - 0.8(0.5)
MW-3	ND	--	--	--	--	--
MW-4	150 ₍₂₎	--	--	--	ND	--

TABLE 2 (CONTINUED)

Sample Location (Action Level)	C O N S T I T U E N T S					Volatile Halocarbons (Determined by Compound)
	TPH Gasoline (NA)	TPH Diesel (100) ₁	Total Oil & Grease (NA)	Hydrocarbon Oil & Grease (NA)	Total Lead (50)	
SAMPLE DATE: 06/10/94 (Fourth Quarter)						
MW-1	--	490	--	--	--	--
MW-2	920	--	2,000	2,000	--	Chloroethane - 4.2(NA) 1,1-Dichloroethane - 0.6(0.5) ₃ 1,1,1-Trichloroethane - 0.8(200) ₃
MW-3	ND	--	--	--	--	--
MW-4	460	--	--	--	ND	--
SAMPLE DATE: 03/04/94 (Third Quarter)						
MW-1	--	710	--	--	--	--
MW-2	420	--	ND	ND	--	Chloroethane - 3.7(NA)
MW-3	ND	--	--	--	--	--
MW-4	50	--	--	--	ND	--
SAMPLE DATE: 12/03/93 (Second Quarter)						
MW-1	--	3200 ₍₃₎	--	--	--	--
MW-2	900	--	ND	ND	--	Chloroethane - 3.8(NA)
MW-3	80	--	--	--	--	--
MW-4	1100	--	--	--	ND	--
SAMPLE DATE: 08/20/93 (First Quarter)						
MW-1	--	2100 ₍₁₎	--	--	--	--
MW-2	720 ₍₂₎	--	ND	ND	--	Chloroethane - 4.7(NA)
MW-3	190	--	--	--	--	--
MW-4	350	--	--	--	ND	--
SAMPLE DATE: 03/10/93 (Initial Well Installation Sampling)						
MW-1	--	830	--	--	--	--
MW-2	920	--	1.0	ND	--	Bromoform - 0.6(100) ₂ Chloroethane - 5.0(NA) 1,1-Dichloroethane - 1.7(0.5) ₃ 1,1,1-Trichloroethane - 6.7(200) ₃
MW-3	ND	--	--	--	--	--
MW-4	1800	--	--	--	58.0	--

ND - None Detected, NA - Not Applicable

-- - Not Tested

1 - 1980 EPA 10-Day Suggested No Adverse Response Level (SNARL)

2 - EPA Drinking Water Standard, Revised 7/1/92

3 - California Department of Health Services Drinking Water Standards, Revised 10/23/91

(1) - "Not Diesel-Like", as reported by analytical laboratory

(2) - "Not Gasoline-Like", as reported by analytical laboratory

(3) - "Appears to be heavier than diesel," as reported by analytical laboratory

(4) - Chromatography for this sample is described as inconsistent with the gasoline standard

(5) - Chromatography for this sample is described as inconsistent with the diesel standard

GROUNDWATER DATA - APRIL 1996

Regional Hydrogeology

The AB&I Foundry facility is located on the San Leandro alluvial cone of the East Bay Plain. The upper 400 feet of the San Leandro Cone comprises discontinuous beds of sand and gravel which extend westward under San Francisco Bay, and are capped by confining clay layers. Groundwater in this area is used mainly for industrial and irrigation purposes, but is suitable in quality for most uses. Shallow aquifers of limited extent located throughout the Bay Plain, are often perched and unconfined, and typically yield less than 35 gallons per minute from silty sands. These aquifers are often tapped by wells less than 50 feet in depth and used for local irrigation. These minor aquifers are most susceptible to groundwater pollution (Maslonowski, 1984).

Site Groundwater Conditions

Based upon the groundwater elevations in the three on-site groundwater monitoring wells (MW-2, MW-3 and MW-4) the direction of groundwater flow is generally in a northeast direction. The calculated hydraulic gradient is about 0.0096 ft/ft. The groundwater elevation in each of the three measured on-site wells have decreased by 0.20 to 0.28 feet since last reported. A summary of the groundwater data collected to date is listed below in Table 3 and graphically presented on Figure 7.

TABLE 3
SUMMARY OF GROUNDWATER DATA

Well Number	Date Measured	Groundwater Elevation (Feet)	Hydraulic Gradient (ft/ft)	Direction of Groundwater Flow
MW-2 MW-3 MW-4	4/26/96	3.30 2.26 2.09	0.0096 (1)	Northeast (1)
MW-2 MW-3 MW-4	1/19/96 1/18/96 1/18/96	3.56 2.46 2.37	0.012 (1)	Northeast (1)
MW-2 MW-3 MW-4	6/9/95	2.80 1.85 1.60	0.010 (1)	Northeast (1)
MW-2 MW-3 MW-4	6/23/95	3.05 2.31 2.04	0.008 (1)	Northeast (1)
MW-2 MW-3 MW-4	3/17/95	3.79 3.05 2.93	0.007 (1)	Northeast (1)

TABLE 3 (CONTINUED)

Well Number	Date Measured	Groundwater Elevation (Feet)	Hydraulic Gradient (ft/ft)	Direction of Groundwater Flow
MW-1 MW-2 MW-3 MW-4	12/16/95	3.65 3.30 2.69 2.48	0.007 (1) 0.005 (2)	Northeast (1) Northeast (2)
MW-1 MW-2 MW-3 MW-4	9/9/94	2.14 2.38 1.74 1.43	0.008 (1) 0.003 (2)	Northeast (1) North-Northwest (2)
MW-1 MW-2 MW-3 MW-4	6/10/94	2.55 2.73 2.12 1.78	0.008 (1) 0.002 (2)	Northeast (1) North-Northwest (2)
MW-1 MW-2 MW-3 MW-4	3/4/94	1.29 3.14 2.54 2.25	0.007 (1) 0.005 (2)	Northeast (1) West (2)
MW-1 MW-2 MW-3 MW-4	12/3/93	2.04 2.39 1.72 1.47	0.008 (1) 0.003 (2)	Northeast (1) Northwest-West (2)
MW-1 MW-2 MW-3 MW-4	8/20/93	2.05 2.30 1.55 1.29	0.008 (1) 0.003 (2)	Northeast (1) Northwest (2)
MW-1 MW-2 MW-3 MW-4	3/10/93	2.29 3.41 2.53 3.45	0.004 (1) 0.003 (2)	North-Northwest (1) West (2)

(1) Based upon a three point solution using wells MW-2, MW-3 and MW-4.

(2) Based upon a three point solution using wells MW-1, MW-2 and MW-3.

FINDINGS

Petroleum hydrocarbons as gasoline (TPH-g) were detected at levels of 500 ug/l in the groundwater sample collected from the groundwater Monitor Well MW-2. Total and hydrocarbon oil and grease and volatile halocarbons were reported as none detected in the groundwater samples collected from MW-2. Petroleum hydrocarbons as gasoline and BTEX were reported as none detected in the groundwater samples collected from MW-3 and MW-4.

RECOMMENDATIONS

Since MW-1 will no longer be monitored, the well should be properly closed. Assessment of the lateral extent of shallow groundwater contamination should be considered in the vicinity of Wells MW-2 and MW-4.

Quarterly monitoring of the three wells installed should continue to be performed to assess contaminant concentration fluctuation with respect to groundwater level, gradient and flow direction. Groundwater samples collected from the quarterly monitoring of Well MW-4, should be analyzed for chlorinated hydrocarbons by EPA Method 601.

LIMITATIONS

This groundwater monitoring well report has been prepared for the exclusive use of AB&I Foundry Company. Unauthorized use of or reliance on the information contained in this report by others, unless given express written consent by BSK & Associates, is strictly prohibited.

The findings and conclusions presented in this report are based on field observations, and on data obtained from the sources listed in this report. This report has been prepared in accordance with generally accepted methodologies and standards of practice for the area. No other warranty, either expressed or implied, is made as to the findings or conclusions included in this report.

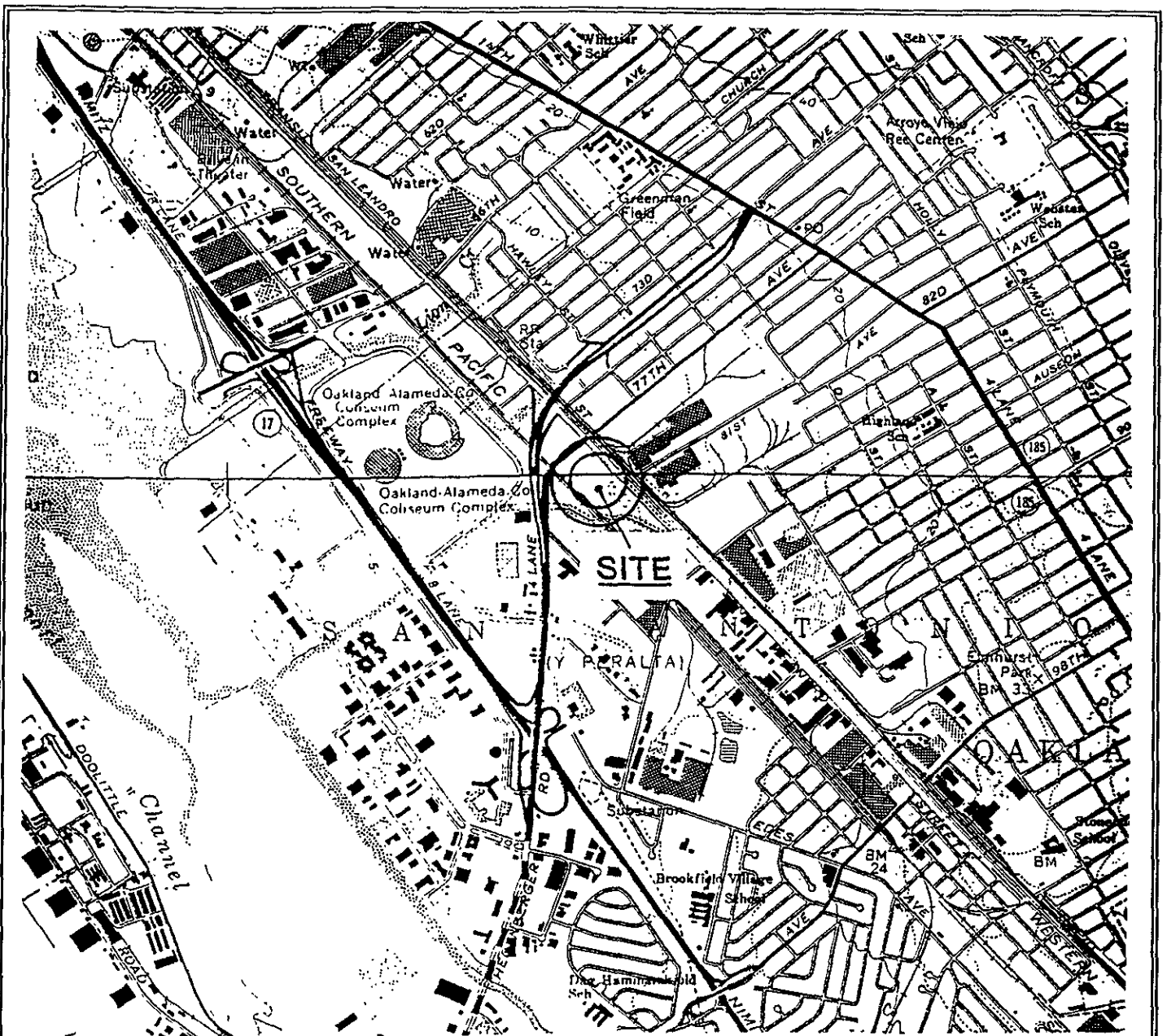
The findings of this report are valid as of the present. The passage of time, natural processes or human intervention on the property or adjacent properties, and changes in the regulations can cause changed conditions which can invalidate the findings and conclusions in this report.

This report is neither certification nor guarantee that the property is free of, or contains hazardous substance contamination, other than that mentioned in the report.

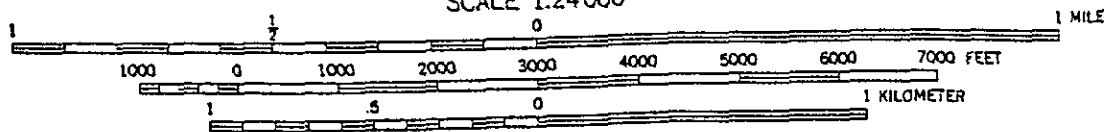
DISTRIBUTION

A copy of this report should be forwarded by the client to the Alameda County Department of Environmental Health for their review. An extra copy of this report has been forwarded to American Brass and Iron Foundry for this purpose.

Respectfully Submitted,
BSK & Associates



SCALE 1:24 000



CONTOUR INTERVAL 20 FEET
 DOTTED LINES REPRESENT 5-FOOT CONTOURS
 NATIONAL GEODETIC VERTICAL DATUM OF 1929
 DEPTH CURVES IN FEET—DATUM IS MEAN LOWER LOW WATER



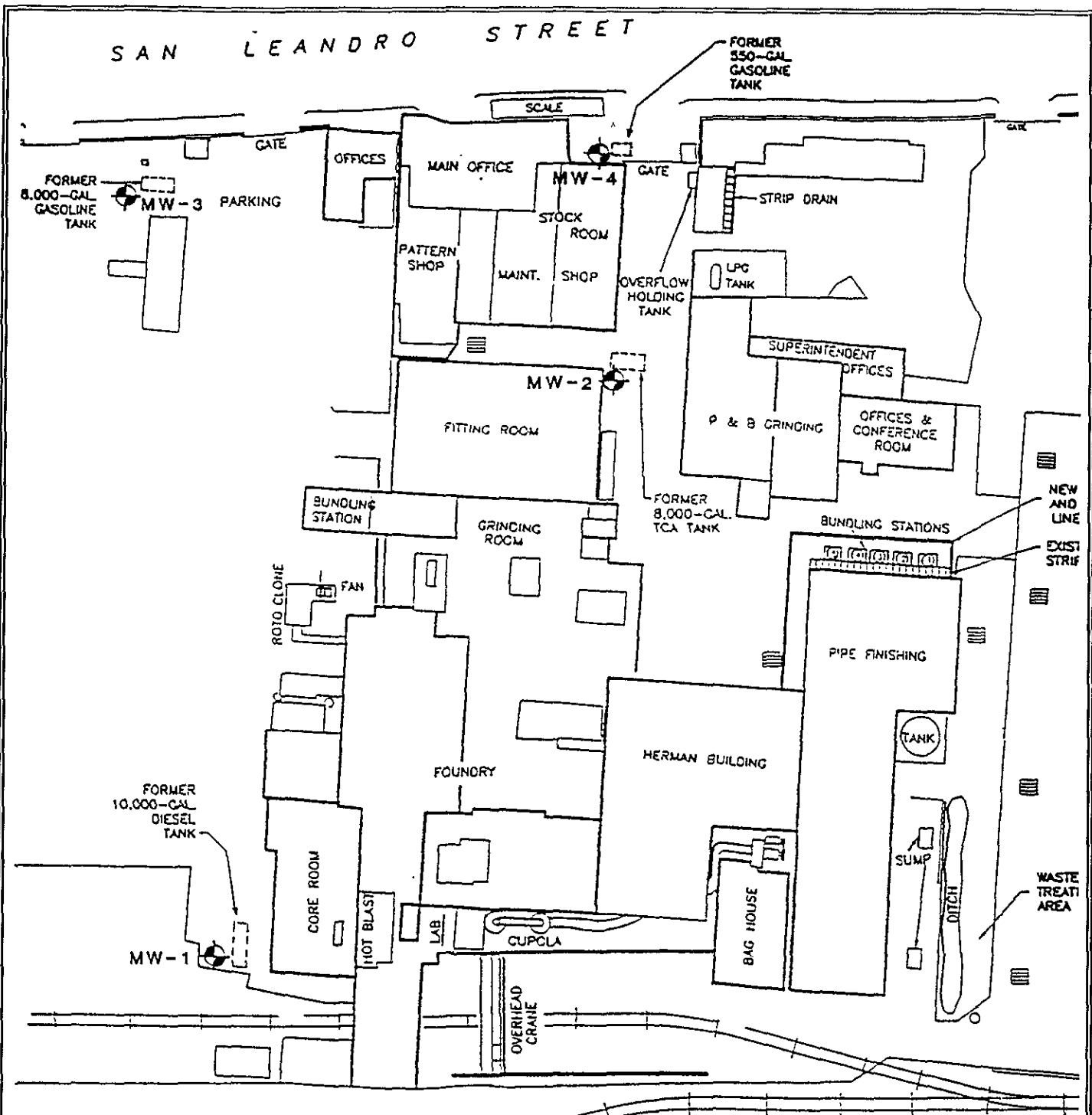
Source: USGS 7.5 Minute Topographic Maps, Oakland East and San Leandro Quadrangles

**ELEVENTH QUARTERLY
 GROUNDWATER MONITORING
 AB&I FOUNDRY
 7825 SAN LEANDRO STREET
 OAKLAND, CALIFORNIA**


VICINITY MAP

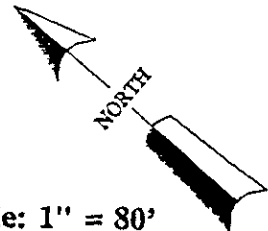
**Job No. P92270.3
 APRIL 1996
 FIGURE: 1**

**BSK
 & ASSOCIATES**



LEGEND:

 - Groundwater Monitoring Well
 Location and Designation



Basemap Source: Levine-Fricke Work Plan 92P-404I, 10/30/91

Scale: 1" = 80'

**ELEVENTH QUARTERLY
 GROUNDWATER MONITORING
 AB&I FOUNDRY
 7825 SAN LEANDRO STREET
 OAKLAND, CALIFORNIA**

SITE PLAN

Job No. P92270.3
 APRIL 1996
 FIGURE: 2

BSK
 & ASSOCIATES

WELL FIELD LOG

Well Observation: x Date: 4/26/96
 Sample Collection: x Date: 4/26/96

Project Name: American Brass & Iron
 Location: Oakland, CA
 Personnel: MC
 Weather: Clear, Warm

WELL INFORMATION:

Well Number	MW-2	Date Purged	4/26/96
Depth to Water - feet(TOC)	4.50	Purge Method	Submersible Pump
Well Depth (feet)	17.0		
Water Volume (gallons)	8.1	Purge Begin	11:55
Reference Elevation - feet(TOC)	+7.80	Purge End	12:03
Groundwater Elevation (feet)	+3.30	Purge Rate	3.0 GPM
Measurement Technique	Solinst Electric Water Sounder		

IMMISCIBLE LAYERS:

Top: None Observed, No Odor
 Bottom: Trace Olive Grey Colloids, No Odor
 Detection Method: Visual
 Collection Method: Point-Source Bailer

WELL DEVELOPMENT/PURGE DATA:

TIME	VOLUME REMOVED (gallons)	ELECTRICAL CONDUCTIVITY (Micromhos)	pH	TEMP. (°F)	COLOR/COMMENTS
11:58	8.0	901	6.51	76	
12:00	16.0	811	6.85	72	
12:03	24.0	789	6.94	71	

SAMPLE COLLECTION DATA:

Sampling Equipment: Teflon Point-Source Bailer

TIME	ANALYSIS	AMOUNT/CONTAINER USED	SAMPLE INTERVAL
12:10	EPA 601	2-40 ml glass vials with HCl	±5'
"	TPH-G and BTEX	2-40 ml glass vials with HCl	"
"	Total and Hydrocarbon Oil & Grease	1-liter amber glass bottle with H ₂ SO ₄	"

Field Observations: None

WELL FIELD LOG

Well Observation: x Date: 4/26/96
 Sample Collection: x Date: 4/26/96

Project Name: American Brass & Iron
 Location: Oakland, CA
 Personnel: MC
 Weather: Clear, Warm

WELL INFORMATION:

Well Number	MW-3	Date Purged	4/26/96
Depth to Water - feet(TOC)	7.57	Purge Method	Submersible Pump
Well Depth (feet)	19.0		
Water Volume (gallons)	2.0	Purge Begin	11:06
Reference Elevation - feet(TOC)	+9.83	Purge End	11:10
Groundwater Elevation (feet)	+2.26	Purge Rate	2.0 GPM
Measurement Technique	Solinst Electric Water Sounder		

IMMISCIBLE LAYERS:

Top: None observed, no odor
 Bottom: None observed, no odor
 Detection Method: Visual
 Collection Method: Point-Source Bailer

WELL DEVELOPMENT/PURGE DATA:

TIME	VOLUME REMOVED (gallons)	ELECTRICAL CONDUCTIVITY (Micromhos)	pH	TEMP. (°F)	COLOR/COMMENTS
11:07	2.0	1428	6.45	77	
11:08	4.0	1374	6.60	74	
11:09	6.0	1379	6.50	74	
11:10	8.0	1359	6.60	73	

SAMPLE COLLECTION DATA:

Sampling Equipment: Teflon Point-Source Bailer

TIME	ANALYSIS	AMOUNT/CONTAINER USED	SAMPLE INTERVAL
11:16	TPHg, BTEX	2-40 ml glass vials with Hcl	10'

Field Observations: None

WELL FIELD LOG

Well Observation: x Date: 4/26/96
 Sample Collection: x Date: 4/26/96

Project Name: American Brass & Iron
 Location: Oakland, CA.
 Personnel: MC
 Weather: Clear, Warm

WELL INFORMATION:

Well Number	MW-4	Date Purged	4/26/96
Depth to Water - feet(TOC)	7.43	Purge Method	Clear Point-Source Bailer
Well Depth (feet)	24.5		
Water Volume (gallons)	2.9	Purge Begin	12:41
Reference Elevation - feet(TOC)	+9.52	Purge End	12:46
Groundwater Elevation (feet)	+2.09	Purge Rate	1.8 GPM
Measurement Technique	Solinst Electric Water Sounder		

IMMISCIBLE LAYERS:

Top: None Observed, Faint Hydrocarbon Odor
 Bottom: Orange Particles Observed, Faint Hydrocarbon Odor
 Detection Method: Visual
 Collection Method: Clear Point-Source Bailer

WELL DEVELOPMENT/PURGE DATA:

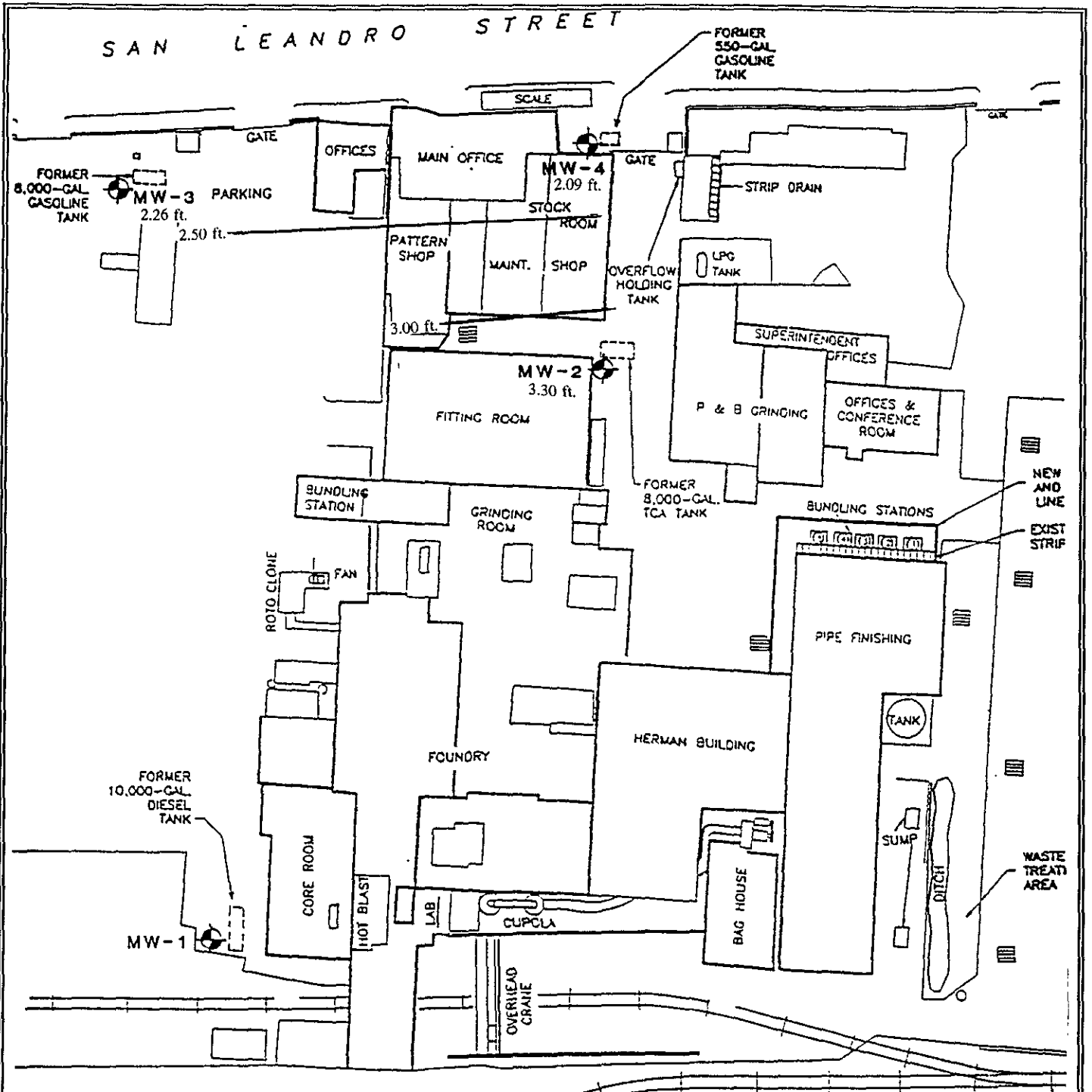
TIME	VOLUME REMOVED (gallons)	ELECTRICAL CONDUCTIVITY (Micromhos)	pH	TEMP. (°F)	COLOR/COMMENTS
12:58	3.0	3050	8.38	76	
12:00	6.0	2970	8.15	72	
12:01	9.0	2940	7.96	71	

SAMPLE COLLECTION DATA:

Sampling Equipment: Teflon Point-Source Bailer

TIME	ANALYSIS	AMOUNT/CONTAINER USED	SAMPLE INTERVAL
13:00	TPH-G & BTEX	2-40 ml glass vials with HCl	± 7.5'

Field Observations: None



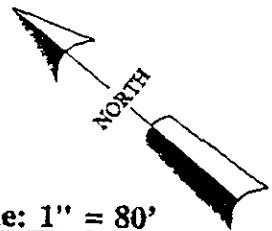
LEGEND:



Groundwater Monitoring Well
Location and Groundwater
Elevation on 4/26/96



Line of Equal Groundwater Elevation
in feet Above Mean Sea Level



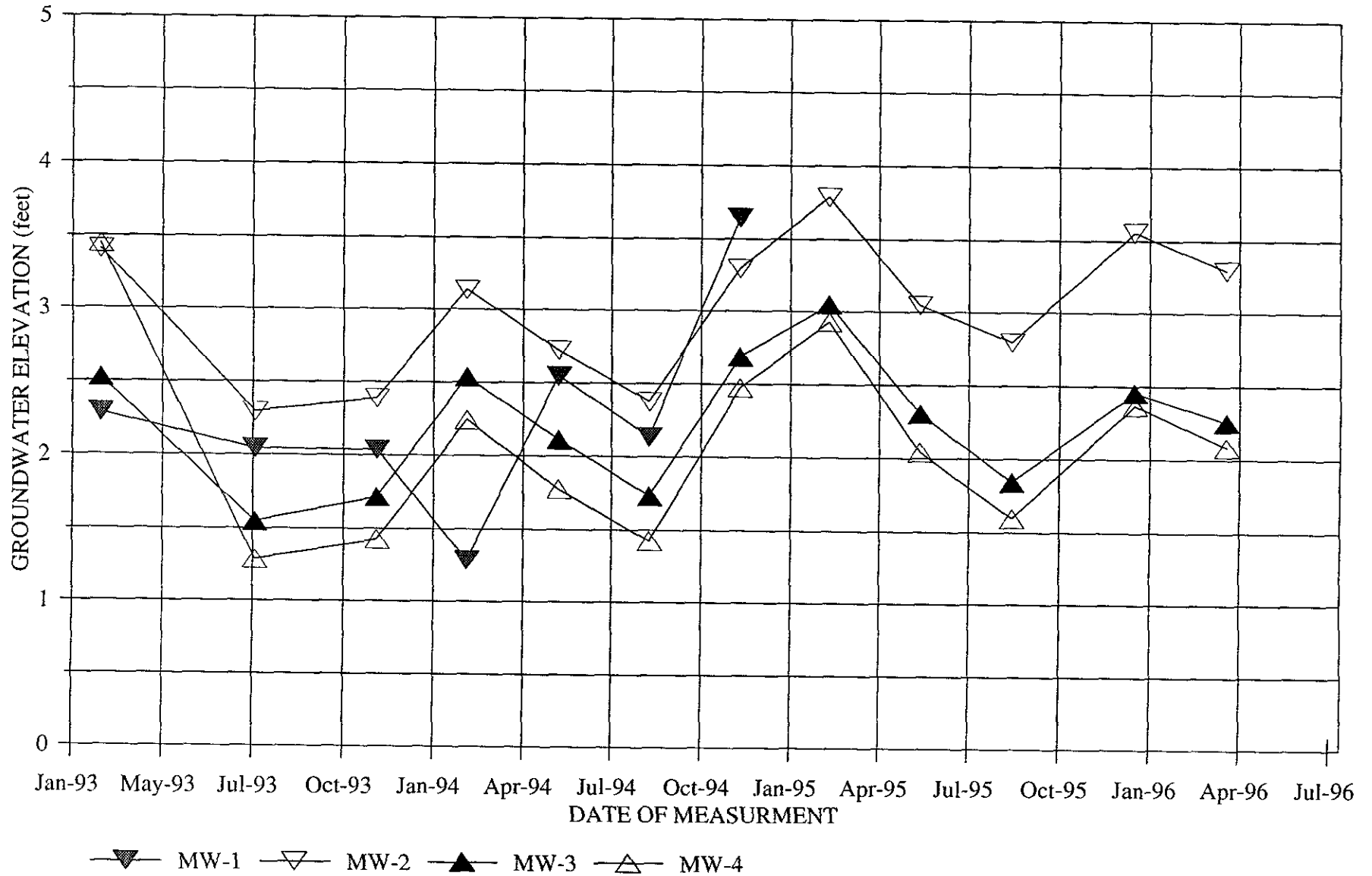
Scale: 1" = 80'

**ELEVENTH QUARTERLY
GROUNDWATER MONITORING
AB&I FOUNDRY
7825 SAN LEANDRO STREET
OAKLAND, CALIFORNIA**

**Job No. P92270.3
GROUNDWATER
ELEVATION CONTOUR
APRIL 1996
FIGURE: 6**

**BSK
& ASSOCIATES**

SUMMARY OF GROUNDWATER ELEVATIONS



BSK Job No. P92270.3
APRIL 1996
FIGURE 7

BSK

APPENDIX "A"

BSK ANALYTICAL LABORATORIES

BSK-Pleasanton
AB & I

Date Sampled : 04/26/96
Time Sampled : 1210
Date Received : 04/30/96
Date of Analysis : 05/03/96
Report Issue Date: 05/15/96

Case Number : Ch961643
Lab ID Number : 1643-2
Project Number : P92270
Sample Description: MW-2

Sample Type: LIQUID

Analyses for Volatile Halocarbons by EPA Method 601
Prepared by EPA Method 5030

Results Reported in Micrograms per Liter ($\mu\text{g/L}$)

Compounds	Results	DLR	Compound	Results	DLR
Bromodichloromethane	ND	0.5	1,2-Dichloroethane	ND	0.5
Bromoform	ND	0.5	1,1-Dichloroethene	ND	0.5
Bromomethane	ND	1.0	cis-1,2-Dichloroethene.....	ND	0.5
Carbon tetrachloride	ND	0.5	trans-1,2-Dichloroethene...	ND	0.5
Chlorobenzene	ND	0.5	1,2-Dichloropropane	ND	0.5
Chloroethane	ND	0.5	cis-1,3-Dichloropropene ...	ND	0.5
Chloroform	ND	0.5	trans-1,3-Dichloropropene..	ND	0.5
Chloromethane	ND	0.5	Methylene chloride	ND	2.0
Dibromochloromethane	ND	0.5	1,1,2,2-tetrachloroethane..	ND	0.5
1,2-Dichlorobenzene	ND	0.5	Tetrachloroethene	ND	0.5
1,3-Dichlorobenzene	ND	0.5	1,1,1-Trichloroethane	ND	0.5
1,4-Dichlorobenzene	ND	0.5	1,1,2-Trichloroethane	ND	0.5
Dichlorodifluoromethane ...	ND	2.0	Trichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5	Trichlorofluoromethane	ND	0.5
			Vinyl chloride	ND	1.0

Sample DLR = DLR x DLR Multiplier,

DLR Multiplier = 1

DLR: Detection Limit for the Purposes of Reporting.
Exceptional sample conditions or matrix interferences
may result in higher detection limits.

ND: None Detected

--: Not Analyzed

Cynthia Pigman
Cynthia Pigman, QA/QC Supervisor

BSK ANALYTICAL LABORATORIES

BSK-Pleasanton
AB & I

Date Sampled : 04/26/96
Time Sampled : 1210
Date Received : 04/30/96
Date of Analysis : 05/06/96
Report Issue Date: 05/15/96

Case Number : Ch961643
Lab ID Number : 1643-2
Project Number : P92270
Sample Description: MW-2

Sample Type: LIQUID

Analyses For Total and Hydrocarbon Oil & Grease
By EPA Methods 413.2 & 418.1

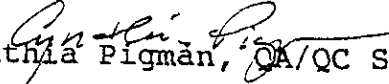
Results Reported in Milligrams Per Liter (mg/L)

Analyte	Results	DLR
Total Oil and Grease.....	ND	1
Hydrocarbon Oil and Grease	ND	1

Sample DLR = DLR x DLR Multiplier, DLR Multiplier = 1

DLR: Detection Limit for the Purposes of Reporting.
Exceptional sample conditions or matrix interferences
may result in higher detection limits.

ND: None Detected


Cynthia Pigman, QA/QC Supervisor

R941101 OGTHL41

BSK ANALYTICAL LABORATORIES

BSK-Pleasanton
AB & I

Date Sampled : 04/26/96
Time Sampled : 1210
Date Received : 04/30/96
Date of Analysis : 05/05/96
Report Issue Date: 05/15/96

Case Number : Ch961643
Lab ID Number : 1643-2
Project Number : P92270
Sample Description: MW-2

Sample Type: LIQUID

Analyses for BTEX by EPA Method 8020
and TPH(G) by EPA Method 8015
Prepared by Method 5030

Results Reported in Micrograms per Liter (ug/L)

Compound	Results	DLR
Benzene	ND	0.3
Toluene	ND	0.3
Ethylbenzene	ND	0.3
Total Xylene Isomers	ND	0.3
Total Petroleum Hydrocarbons (G)	500	50

Sample DLR = DLR x DLR Multiplier, DLR Multiplier = 1

NOTE:

Hydrocarbons in the gasoline boiling point range are reported, in accordance with the method, as gasoline.
Chromatography for this sample is described as inconsistent with the gasoline standard.

LEGEND:

DLR: Detection Limit for the Purposes of Reporting.
Exceptional sample conditions or matrix interferences
may result in higher detection limits.
ND: None Detected


Cynthia Pigman, QA/QC Supervisor

BSK ANALYTICAL LABORATORIES

BSK-Pleasanton
AB & I

Date Sampled : 04/26/96
Time Sampled : 1116
Date Received : 04/30/96
Date of Analysis : 05/05/96
Report Issue Date: 05/15/96

Case Number : Ch961643
Lab ID Number : 1643-1
Project Number : P92270
Sample Description: MW-3

Sample Type: LIQUID

Analyses for BTEX by EPA Method 8020
and TPH(G) by EPA Method 8015
Prepared by Method 5030

Results Reported in Micrograms per Liter (ug/L)

Compound	Results	DLR
Benzene	ND	0.3
Toluene	ND	0.3
Ethylbenzene	ND	0.3
Total Xylene Isomers	ND	0.3
Total Petroleum Hydrocarbons (G)	ND	50

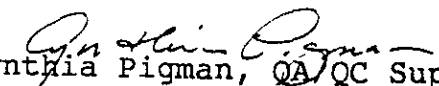
Sample DLR = DLR x DLR Multiplier, DLR Multiplier = 1

NOTE:

Hydrocarbons in the gasoline boiling point range are reported, in accordance with the method, as gasoline.

LEGEND:

DLR: Detection Limit for the Purposes of Reporting.
Exceptional sample conditions or matrix interferences
may result in higher detection limits.
ND: None Detected


Cynthia Pigman, QA/QC Supervisor

BSK ANALYTICAL LABORATORIES

BSK-Pleasanton
AB & I

Date Sampled : 04/26/96
Time Sampled : 1300
Date Received : 04/30/96
Date of Analysis : 05/05/96
Report Issue Date: 05/15/96

Case Number : Ch961643
Lab ID Number : 1643-3
Project Number : P92270
Sample Description: MW-4

Sample Type: LIQUID

Analyses for BTEX by EPA Method 8020
and TPH(G) by EPA Method 8015
Prepared by Method 5030

Results Reported in Micrograms per Liter (ug/L)

Compound	Results	DLR
Benzene	ND	0.3
Toluene	ND	0.3
Ethylbenzene	ND	0.3
Total Xylene Isomers	ND	0.3
Total Petroleum Hydrocarbons (G)	ND	50

Sample DLR = DLR x DLR Multiplier, DLR Multiplier = 1

NOTE:

Hydrocarbons in the gasoline boiling point range are reported, in accordance with the method, as gasoline.

LEGEND:

DLR: Detection Limit for the Purposes of Reporting.
Exceptional sample conditions or matrix interferences
may result in higher detection limits.
ND: None Detected


Cynthia Pigman, QA/QC Supervisor

Analyses Request / Chain of Custody

BSK Log Number: 1643

Analytical Due Date: 5/9/96

Environmental Services BSK-P

Shaded areas for LAB use only

Requested Analyses

Client Name <i>AB I - Oakland</i>	Report Attention: <i>Martin Cline</i>	Phone #
Address <i>C/O BSK-P</i>	Project, Quote or PO # <i>P92270</i>	FAX #
City, State, Zip	Copy to:	System #

LAB use only			Date Sampled	Time Sampled	Sampled by: <i>M. Cline</i>	Sample Description/Location	Comment or Station Code
Sample #	Type	# Cont.					
<i>1</i>	<i>L</i>	<i>2</i>	<i>4/26/96</i>	<i>11:16</i>	<i>MW-3</i>		
<i>2</i>	<i>L</i>	<i>S</i>	<i>↓</i>	<i>12:10</i>	<i>MW-2</i>		
<i>3</i>	<i>L</i>	<i>2</i>	<i>↓</i>	<i>13:00</i>	<i>MW-4</i>		

TPH-6/BTEX
 EPA-601
 Total and Hydro-
 Carbon Oil & Grease

Matrix Type: L - Liquid S - Solid G - Gas
 Type of Hazards Associated with Samples: _____
 Additional Services: Rush Priority: - 2 Day - 5 Day
 - Formal Chain of Custody - QC Data package
 Additional Services Authorized by: _____
 Payment Received with Delivery: Date: _____ Amount: \$ _____
 Check # _____ Initials _____
 Receipt # _____
 (Signature)

Signature	Print Name	Company	Date	Time
<i>Martin Cline</i>	<i>Martin Cline</i>	<i>BSK-P</i>	<i>4/29/96</i>	<i>08:00</i>
<i>S. Shillon</i>	<i>SARA K-DHILLON</i>	<i>BSK-P</i>	<i>4/30/96</i>	<i>1200</i>