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BSK & ASSOCIATES  
GEOTECHNICAL CONSULTANTS, INC.

BSK JOB NO. P92270.3

SEVENTH QUARTERLY GROUNDWATER  
MONITORING REPORT - MARCH 1995  
AMERICAN BRASS & IRON FOUNDRY  
7825 SAN LEANDRO STREET  
OAKLAND, CALIFORNIA

March 31, 1995

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Engineers, Geologists,  
Environmental Scientists



**BSK**  
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March 31, 1995

**BSK JOB NO. P92270.3**

American Brass and Iron Foundry  
7825 San Leandro Street  
Oakland, California 94621

Attention: Mr. David Robinson  
Environmental Engineer

Subject: Seventh Quarterly Groundwater  
Monitoring Report - March 1995  
American Brass and Iron Foundry  
7825 San Leandro Street  
Oakland, California

As requested and authorized, BSK & Associates has performed the seventh quarterly monitoring of three shallow groundwater Monitoring Wells MW-2 through MW-4 at American Brass & Iron 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 American Brass & Iron. If there are questions or comments regarding this report, please contact the undersigned.

Respectfully submitted,  
**BSK & Associates**

Martin B. Cline  
Staff Geologist

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

AYEMC  
(ENVLAB&1\QRTLY195)

Distribution:  
American Brass & Iron Foundry (3 copies)

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**SEVENTH QUARTERLY GROUNDWATER  
MONITORING REPORT - MARCH 1995  
AMERICAN BRASS & IRON 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 American Brass & Iron Foundry (AB & I).

## **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.

## **SEVENTH QUARTERLY MONITORING ACTIVITIES - MARCH 1995**

### **General**

Seventh quarterly monitoring of groundwater Monitoring Wells MW-2, MW-3 and MW-4 was performed by BSK personnel on March 17, 1995, 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<sup>R</sup> or polyethylene disposable), and transferred to the appropriate sample containers, with preservative as needed. Samples designated for the analysis of lead were field-filtered using a high-capacity in-line 0.45 micron filter prior to preservation. 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 55-gallon DOT drums 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 Methods 5520 C&F  
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  
Total Lead

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)**

Sample Location (Action Level)	CONSTITUENTS			
	Benzene (1) <sub>1</sub>	Toluene (100) <sub>2</sub>	Ethylbenzene (680) <sub>1</sub>	Xylenes (1750) <sub>1</sub>
<b>SAMPLE DATE: 12/16/94 (Seventh Quarter)</b>				
MW-1	--	--	--	--
MW-2	4.9	ND	ND	ND
MW-3	ND	ND	ND	ND
MW-4	ND	ND	ND	ND
<b>SAMPLE DATE: 12/16/94 (Sixth Quarter)</b>				
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
<b>SAMPLE DATE: 09/09/94 (Fifth Quarter)</b>				
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
<b>SAMPLE DATE: 06/10/94 (Fourth Quarter)</b>				
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
<b>SAMPLE DATE: 03/04/94 (Third Quarter)</b>				
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
<b>SAMPLE DATE: 12/03/93 (Second Quarter)</b>				
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
<b>SAMPLE DATE: 08/20/93 (First Quarter)</b>				
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
<b>SAMPLE DATE: 03/10/93 (Initial Well Installation Sampling)</b>				
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)

Sample Location (Action Level)	CONSTITUENTS					
	TPH Gasoline (NA)	TPH Diesel (100) <sub>1</sub>	Total Oil & Grease (NA)	Hydrocarbon Oil & Grease (NA)	Total Lead (50)	Volatile Halocarbons (Determined by Compound)
<b>SAMPLE DATE: 3/17/95 (Seventh Quarter)</b>						
MW-1	--	--	--	--	--	--
MW-2	320 <sub>(4)</sub>	--	--	1	--	Chloroethane - 2.4(NA)
MW-3	ND	--	--	--	--	--
MW-4	62 <sub>(4)</sub>	--	--	--	ND	--
<b>SAMPLE DATE: 12/16/94 (Sixth Quarter)</b>						
MW-1	--	180 <sub>(5)</sub>	--	--	--	--
MW-2	130 <sub>(4)</sub>	--	ND	ND	--	ND
MW-3	ND	--	--	--	--	--
MW-4	100	--	--	--	86	--
<b>SAMPLE DATE: 09/09/94 (Fifth Quarter)</b>						
MW-1	--	ND	--	--	--	--
MW-2	830 <sub>(2)</sub>	--	2	2	--	Chloroethane - 1.4(NA) 1,1-Dichloroethane - 0.8(0.5)
MW-3	ND	--	--	--	--	--
MW-4	150 <sub>(2)</sub>	--	--	--	ND	--
<b>SAMPLE DATE: 06/10/94 (Fourth Quarter)</b>						
MW-1	--	490	--	--	--	--
MW-2	920	--	2,000	2,000	--	Chloroethane - 4.2(NA) 1,1-Dichloroethane - 0.6(0.5) <sub>3</sub> 1,1,1-Trichloroethane - 0.8(200) <sub>3</sub>
MW-3	ND	--	--	--	--	--
MW-4	460	--	--	--	ND	--
<b>SAMPLE DATE: 03/04/94 (Third Quarter)</b>						
MW-1	--	710	--	--	--	--
MW-2	420	--	ND	ND	--	Chloroethane - 3.7(NA)
MW-3	ND	--	--	--	--	--
MW-4	50	--	--	--	ND	--
<b>SAMPLE DATE: 12/03/93 (Second Quarter)</b>						
MW-1	--	3200 <sub>(3)</sub>	--	--	--	--
MW-2	900	--	ND	ND	--	Chloroethane - 3.8(NA)
MW-3	80	--	--	--	--	--
MW-4	1100	--	--	--	ND	--
<b>SAMPLE DATE: 08/20/93 (First Quarter)</b>						
MW-1	--	2100 <sub>(1)</sub>	--	--	--	--
MW-2	720 <sub>(2)</sub>	--	ND	ND	--	Chloroethane - 4.7(NA)
MW-3	190	--	--	--	--	--
MW-4	350	--	--	--	ND	--
<b>SAMPLE DATE: 03/10/93 (Initial Well Installation Sampling)</b>						
MW-1	--	830	--	--	--	--
MW-2	920	--	1.0	ND	--	Bromoform - 0.6(100) <sub>2</sub> Chloroethane - 5.0(NA) 1,1-Dichloroethane - 1.7(0.5) <sub>3</sub> 1,1,1-Trichloroethane - 6.7(200) <sub>3</sub>
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

### Regional Hydrogeology

The American Brass & Iron 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

Groundwater was initially encountered in borings for well installations from 8 to 12 feet in depth at the site. Following the well installations, water levels stabilized at a depth below present grade of 5 to 7 feet.

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 approximately 0.007 ft/ft. The groundwater elevation in each of the three measured on-site wells has risen by 0.4 to 0.5 feet since last reported. A summary of the groundwater data collected to date is listed below in Table 3 and graphically presented on Figure 8.

**TABLE 3  
SUMMARY OF GROUNDWATER DATA**

Well Number (Date Measured)	Groundwater Elevation (Feet)	Hydraulic Gradient (ft/ft)	Direction of Groundwater Flow
MW-2 (3/17/95)	3.79	0.007 (1)	Northeast (1)
MW-3	3.05		
MW-4	2.93		
MW-1 (12/16/95)	3.65	0.007 (1) 0.005 (2)	Northeast (1) Northeast (2)
MW-2	3.30		
MW-3	2.69		
MW-4	2.48		
MW-1 (9/9/94)	2.14	0.008 (1) 0.003 (2)	Northeast (1) North-Northwest (2)
MW-2	2.38		
MW-3	1.74		
MW-4	1.43		
MW-1 (6/10/94)	2.55	0.008 (1) 0.002 (2)	Northeast (1) North-Northwest (2)
MW-2	2.73		
MW-3	2.12		
MW-4	1.78		
MW-1 (3/4/94)	1.29	0.007 (1) 0.005 (2)	Northeast (1) West (2)
MW-2	3.14		
MW-3	2.54		
MW-4	2.25		
MW-1 (12/3/93)	2.04	0.008 (1) 0.003 (2)	Northeast (1) Northwest-West (2)
MW-2	2.39		
MW-3	1.72		
MW-4	1.47		
MW-1 (8/20/93)	2.05	0.008 (1) 0.003 (2)	Northeast (1) Northwest (2)
MW-2	2.30		
MW-3	1.55		
MW-4	1.29		
MW-1 (3/10/93)	2.29	0.004 (1) 0.003 (2)	North-Northwest (1) West (2)
MW-2	3.41		
MW-3	2.53		
MW-4	3.45		

(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 320 ug/l and 62 ug/l in groundwater samples collected from the groundwater Monitor Wells MW-2 and MW-4, respectively. Petroleum hydrocarbons as gasoline were reported as none detected in the groundwater samples collected from MW-3. Benzene was detected at 4.9 ug/l in the groundwater sample collected from MW-2. Hydrocarbon oil and grease were detected at 1.0 ug/l and chloroethane at 2.4 ug/l in the groundwater samples collected from MW-2. Total lead was reported as none detected in the groundwater sample collected from MW-4.

## RECOMMENDATIONS

Since MW-2 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 American Brass & Iron 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.

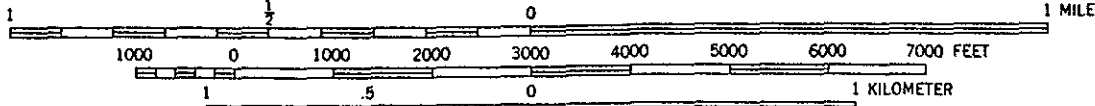
## DISTRIBUTION

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



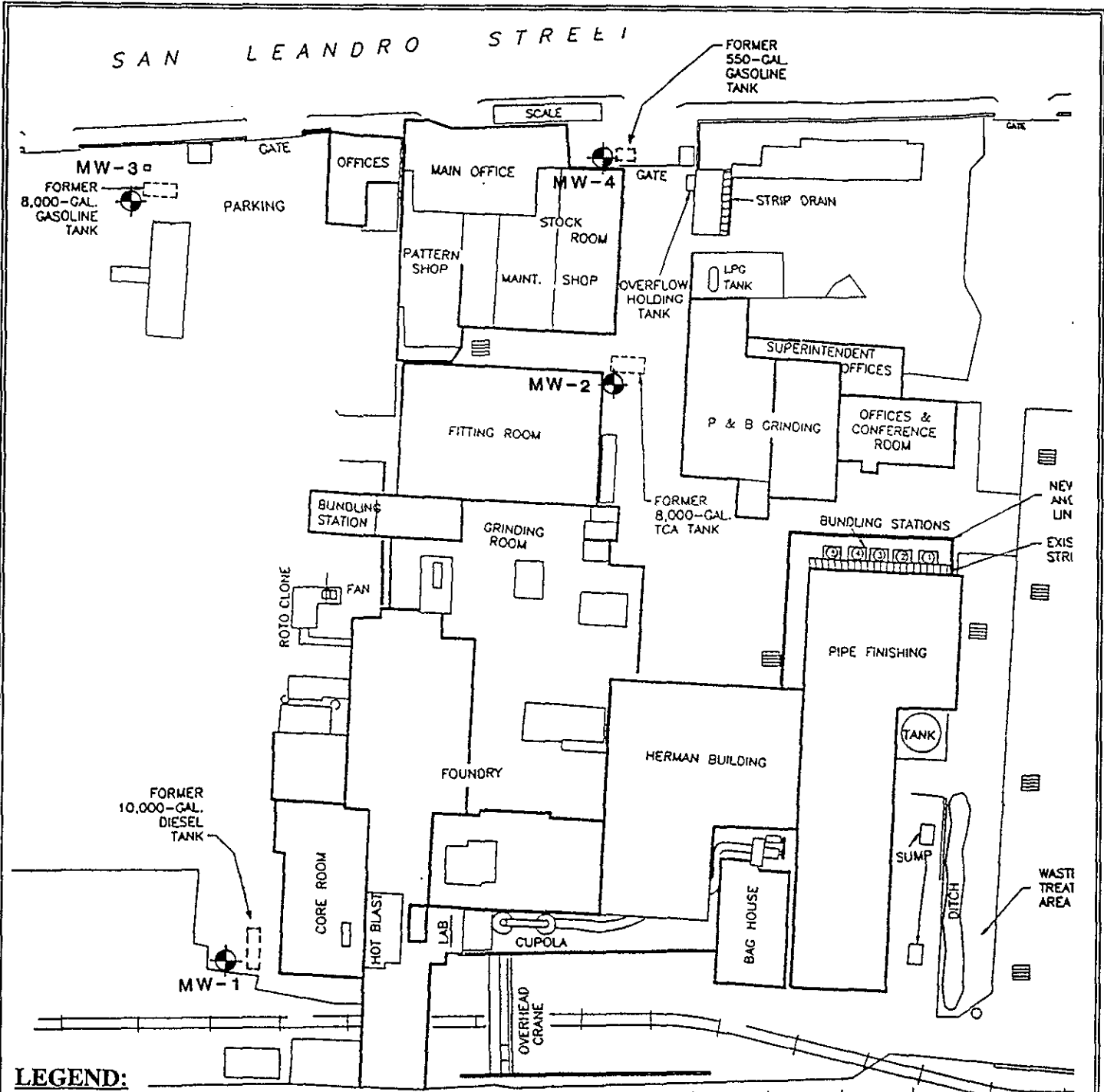
CONTOUR INTERVAL 20 FEET  
 DOTTED LINES REPRESENT 5-FOOT CONTOURS  
 NATIONAL GEODETIC VERTICAL DATUM OF 1929  
 DEPTH CURVES IN FEET—DATUM IS MEAN LOWER LOW WATER

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

**SEVENTH QUARTERLY  
 GROUNDWATER MONITORING  
 AMERICAN BRASS & IRON FOUNDRY  
 7825 SAN LEANDRO STREET  
 OAKLAND, CALIFORNIA**

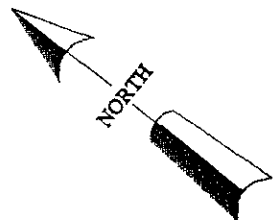
**VICINITY MAP**  
 Job No. P92270.3  
 March 1995  
 FIGURE: 1

**BSK**  
 & ASSOCIATES



**LEGEND:**

⊕ - Groundwater Monitoring Well



Scale: 1" = 80'

<p>SEVENTH QUARTERLY GROUNDWATER MONITORING AMERICAN BRASS &amp; IRON FOUNDRY 7825 SAN LEANDRO STREET OAKLAND, CALIFORNIA</p>	<p><b>SITE PLAN</b> Job No. P92270.3 March 1995 FIGURE: 2</p>	<p><b>BSK</b> &amp; ASSOCIATES</p>
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## WELL FIELD LOG

Well Observation: x      Date: 3/17/95  
 Sample Collection: x      Date: 3/17/95

Project Name:      American Brass & Iron  
 Location:          Oakland, CA  
 Personnel:        FRG  
 Weather:          Clear, Cool

### WELL INFORMATION:

Well Number	MW-2	Date Purged	3/17/95
Depth to Water - feet(TOC)	3.81	Purge Method	Submersible Pump
Well Depth (feet)	17		
Water Volume (gallons)	8.7	Purge Begin	10:53
Reference Elevation - feet(TOC)	+7.60	Purge End	11:13
Groundwater Elevation (feet)	+3.79	Purge Rate	1.8 GPM
Measurement Technique	Solinst Electric Water Sounder		

### IMMISCIBLE LAYERS:

Top:                    None Observed  
 Bottom:                Grey tint, fine sand  
 Detection Method:    Visual  
 Collection Method:   Point-Source Bailer

### WELL DEVELOPMENT/PURGE DATA:

TIME	VOLUME REMOVED (gallons)	ELECTRICAL CONDUCTIVITY (Micromhos)	pH	TEMP. (°F)	COLOR/COMMENTS
10:58	9.0	1580	7.17	68.0	
11:03	10.0	1560	7.03	68.0	
11:08	27.0	1590	7.01	68.0	
11:13	36.0	1590	7.01	68.0	
11:23	Depth to water: 3.95 feet				

### SAMPLE COLLECTION DATA:

Sampling Equipment: Teflon Point-Source Bailer

TIME	ANALYSIS	AMOUNT/CONTAINER USED	SAMPLE INTERVAL
11:25	EPA 601	2-40 ml glass vials with HCl	±10'
"	TPH-G and BTEX	2-40 ml glass vials with HCl	"
"	Total and Hydrocarbon Oil & Grease	1-liter amber glass bottle with H <sub>2</sub> SO <sub>4</sub>	"

Field Observations: None

**WELL FIELD LOG**

Well Observation: x      Date: 3/17/94  
 Sample Collection: x      Date: 3/17/94

Project Name: American Brass & Iron  
 Location: Oakland, CA.  
 Personnel: FRG  
 Weather: Clear, Cool

**WELL INFORMATION:**

Well Number	MW-3	Date Purged	3/17/94
Depth to Water - feet(TOC)	6.78	Purge Method	Clear Point-Source Bailer
Well Depth (feet)	19		
Water Volume (gallons)	2.0	Purge Begin	09:48
Reference Elevation - feet(TOC)	+9.83	Purge End	10:03
Groundwater Elevation (feet)	+3.05	Purge Rate	0.5 GPM
Measurement Technique	Solinst Electric Water Sounder		

**IMMISCIBLE LAYERS:**

Top: None  
 Bottom: None  
 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
9:51	2.0	2370	6.52	70.0	--
9:55	4.0	2420	7.11	71.0	--
9:59	6.0	2410	7.12	71.0	--
10:03	8.0	2410	7.12	71.0	--
10:06	Depth to water: 6.90 feet				

**SAMPLE COLLECTION DATA:**

Sampling Equipment: Teflon Point-Source Bailer

TIME	ANALYSIS	AMOUNT/CONTAINER USED	SAMPLE INTERVAL
10:10	TPH-G & BTEX	2-40 ml glass vials with HCl	± 17'

Field Observations: None

**WELL FIELD LOG**

Well Observation: x Date: 3/17/95  
 Sample Collection: x Date: 3/17/95

Project Name: American Brass & Iron  
 Location: Oakland, CA  
 Personnel: FRG  
 Weather: Clear, Cool

**WELL INFORMATION:**

Well Number	MW-4	Date Purged	3/17/95
Depth to Water - feet(TOC)	6.59	Purge Method	Clear Point-Source Bailer
Well Depth (feet)	26.5		
Water Volume (gallons)	3.1	Purge Begin	12:04
Reference Elevation - feet(TOC)	9.52	Purge End	12:21
Groundwater Elevation (feet)	+2.93	Purge Rate	0.8 GPM
Measurement Technique	Solinst Electric Water Sounder		

**IMMISCIBLE LAYERS:**

Top: None observed, brown organics  
 Bottom: None observed,  
 Detection Method: Visual  
 Collection Method: Clear Point-Source Bailer

**WELL DEVELOPMENT/PURGE DATA:**

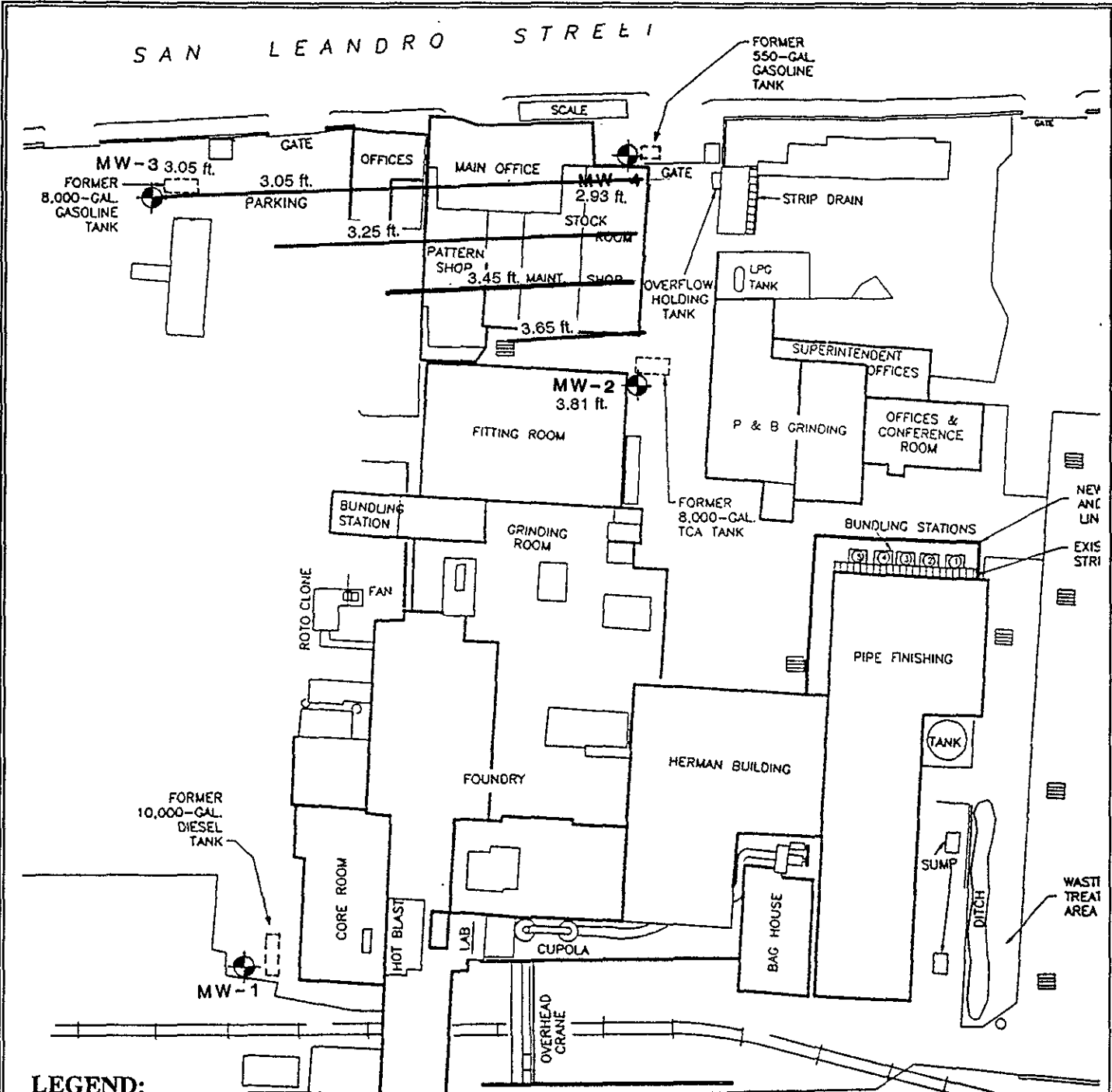
TIME	VOLUME REMOVED (gallons)	ELECTRICAL CONDUCTIVITY (Micromhos)	pH	TEMP. (°F)	COLOR/COMMENTS
12:09	3.5	528	8.10	67.0	--
12:13	7.0	483	7.68	67.0	--
12:17	10.5	490	7.53	67.0	--
12:21	14.0	490	7.52	67.0	--
12:25	Depth to Water: 6.70 feet				

**SAMPLE COLLECTION DATA:**


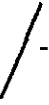
Sampling Equipment: Teflon Point-Source Bailer, sample for total lead field filtered with 0.45 micron filter

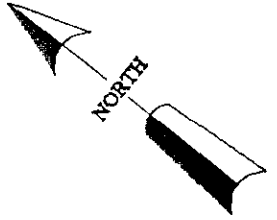
TIME	ANALYSIS	AMOUNT/CONTAINER USED	SAMPLE INTERVAL
12:30	TPH-G & BTEX	2-40 ml glass vials with HCl	±10'
"	Total Lead	1-16 oz. plastic bottle with HNO <sub>3</sub>	"

Field Observations: None




**LEGEND:**

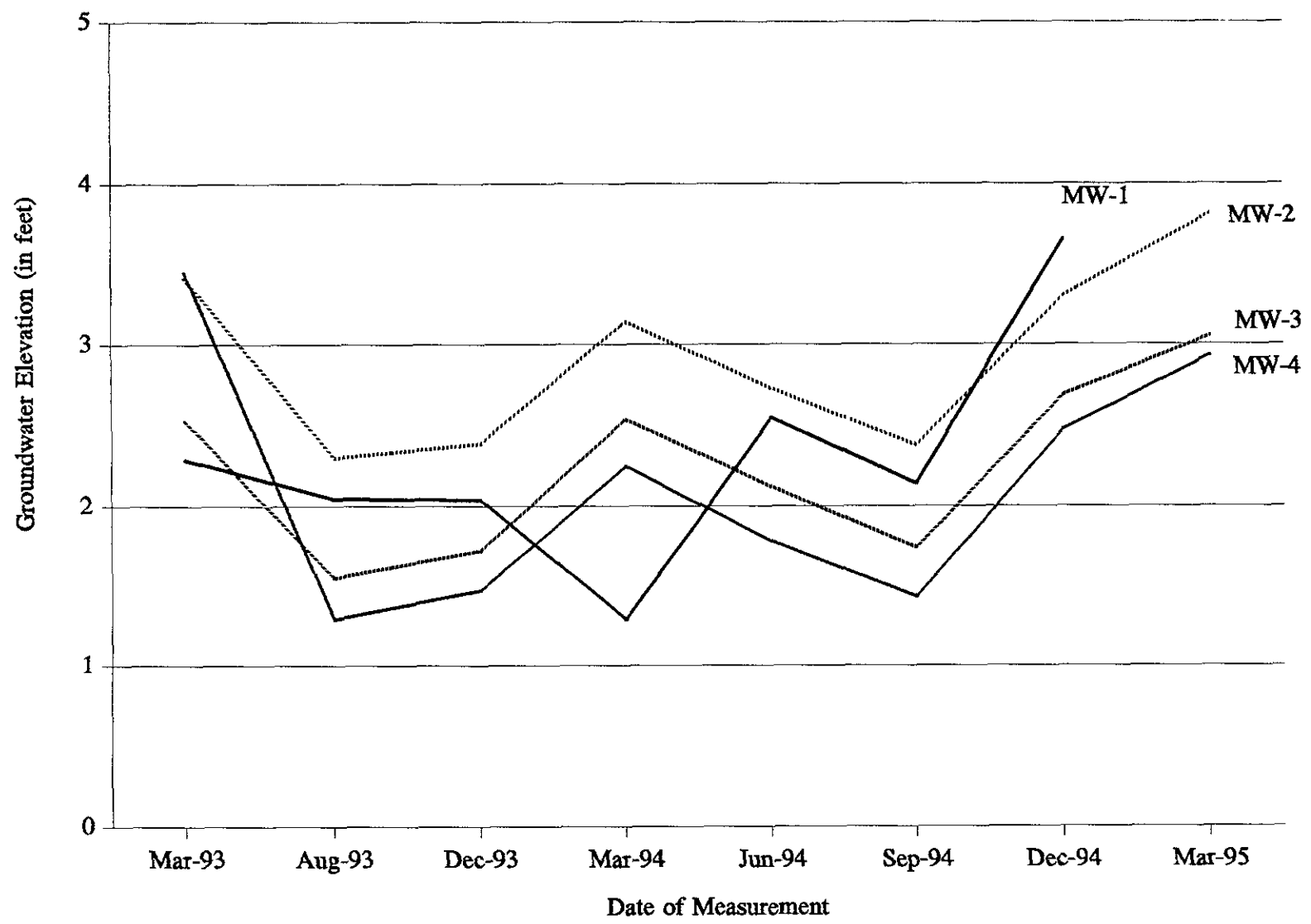
-  - Groundwater Monitoring Well Location and Groundwater Elevation on 3/17/95
-  - Line of Equal Groundwater Elevation in feet Above Mean Sea Level



Scale: 1" = 80'

<p align="center"> <b>SEVENTH QUARTERLY          GROUNDWATER MONITORING          AMERICAN BRASS &amp; IRON FOUNDRY          7825 SAN LEANDRO STREET          OAKLAND, CALIFORNIA</b> </p>	<p align="center"> <b>BSK Job No. P92270.3          GROUNDWATER          ELEVATION CONTOUR          March 1995          FIGURE: 6</b> </p>	<p align="center">  </p>
---	--	---

### SUMMARY OF GROUNDWATER ELEVATIONS



SEVENTH QUARTERLY GROUNDWATER MONITORING  
 AMERICAN BRASS & IRON FOUNDRY  
 7825 SAN LEANDRO STREET  
 OAKLAND, CALIFORNIA

Job No. P92270.3  
 March 1995  
 FIGURE: 7

**BSK**  
 & ASSOCIATES



# BSK ANALYTICAL LABORATORIES

FIGURE: A-1

BSK-Pleasanton  
AB&I

Date Sampled : 03/17/95  
Time Sampled : 1125  
Date Received : 03/20/95  
Date of Analysis : 03/21/95  
Report Issue Date: 03/31/95

Case Number : Ch950691  
Lab ID Number : 0691-1  
Project Number : P92270.3  
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 .....	2.4	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, QA/QC Supervisor

Jeffrey Creager, Organics Manager

# BSK ANALYTICAL LABORATORIES

FIGURE: A-2

BSK-Pleasanton  
AB&I

Date Sampled : 03/17/95  
Time Sampled : 1125  
Date Received : 03/20/95  
Date of Analysis : 03/27/95  
Report Issue Date: 03/31/95

Case Number : Ch950691  
Lab ID Number : 0691-1  
Project Number : P92270.3  
Sample Description: MW-2

Sample Type: LIQUID


## Analyses for Hydrocarbon Oil & Grease by EPA Method 418.1

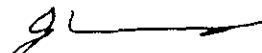
Results Reported in Milligram per Liter (mg/L)

Analyte	Results	DLR
Hydrocarbon Oil and Grease	1	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  
--: Not Analyzed

  
Cynthia Pigman, QA/QC Supervisor

  
Jeffrey Creager, Organics Manager

20302 OGH

1414 Stanislaus Street • Fresno, CA 93706 • Phone 209-497-2888, In CA 800-877-8310 • Fax 209-485-6935

# BSK ANALYTICAL LABORATORIES

FIGURE: A-3

BSK-Pleasanton  
AB&I

Date Sampled : 03/17/95  
Time Sampled : 1125  
Date Received : 03/20/95  
Date of Analysis : 03/29/95  
Report Issue Date: 03/31/95

Case Number : Ch950691  
Lab ID Number : 0691-1  
Project Number : P92270.3  
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 .....	4.9	0.3
Toluene .....	ND	0.3
Ethylbenzene .....	ND	0.3
Total Xylene Isomers .....	ND	0.3
Total Petroleum Hydrocarbons (G)	320	50

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

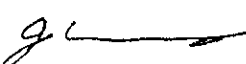
**NOTE:**

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

  
Jeffrey Creager, Organics Manager

# BSK ANALYTICAL LABORATORIES

FIGURE: A-4

BSK-Pleasanton  
AB&I

Date Sampled : 03/17/95  
Time Sampled : 1010  
Date Received : 03/20/95  
Date of Analysis : 03/29/95  
Report Issue Date: 03/31/95

Case Number : Ch950691  
Lab ID Number : 0691-2  
Project Number : P92270.3  
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

  
Jeffrey Creager, Organics Manager

R940721 BTEXPHGL.T

# BSK ANALYTICAL LABORATORIES

FIGURE: A-5

BSK-Pleasanton  
AB&I

Date Sampled : 03/17/95  
Time Sampled : 1230  
Date Received : 03/20/95  
Date of Analysis : 03/29/95  
Report Issue Date: 03/31/95

Case Number : Ch950691  
Lab ID Number : 0691-3  
Project Number : P92270.3  
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)	62	50

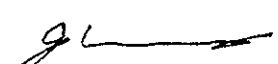
Sample DLR = DLR x DLR Multiplier, DLR Multiplier = 1

**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

  
Jeffrey Creager, Organics Manager

BSK-Pleasanton  
AB&I

Date Sampled : 03/17/95  
Time Sampled : 1230  
Date Received : 03/20/95  
Report Issue Date: 03/31/95

Case Number : Ch950691  
Lab ID Number : 0691-3  
Project Number : P92270.3  
Sample Description: MW-4

Sample Type: LIQUID

### Analyses for Selected Inorganic Constituents

Method No.	Analyte	Results	Units	DLR
EPA 7421	Lead (Pb)...	ND	mg/L	0.005

ND: None Detected

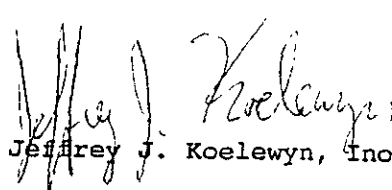
--: Not Analyzed

mg/L: Milligrams per Liter

DLR: Detection Limit for the Purposes of Reporting.

Exceptional sample conditions or matrix interferences may result in higher detection limits.

  
Cynthia Pigman, QA/QC Supervisor

  
Jeffrey J. Koelewyn, Inorganics Manager

Analyses Request / Chain of Custody

BSK Log Number: 0691

Analytical Due Date: 3-29-95

Shaded areas for LAB use only

Requested Analyses

Environmental Services

Client Name: <b>ABB I c/o BSK</b>	Report Attention: <b>Marty Cline</b>	Phone #: <b>(510) 462-4000</b>
Address: <b>1181 Quarry Ln #300</b>	Project, Quote or PO #: <b>P92270.3</b>	FAX #: <b>(510) 462-6283</b>
City, State, Zip: <b>Pleasanton CA 94566</b>	Copy to:	System #:

LAB use only			Date Sampled	Time Sampled	Sampled by: <b>FRG</b>	Sample Description/Location	Comment or Station Code	EPA 601	TPH-G, BTEX	Total Hyd Carb	Total Lead
Sample #	Type	# Cont									
1	L	5	3/17/95	11:25	MW-2			X	X	X	
2	L	2	3/17/95	10:10	MW-3			X	X		
3	L	5	3/17/95	12:30	MW-4			X		X	

ANALYSIS COPY

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: \_\_\_\_\_  
 (Signature)  
 Payment Received with Delivery  
 Date: \_\_\_\_\_ Amount: \$ \_\_\_\_\_  
 Check # \_\_\_\_\_ Initials \_\_\_\_\_  
 Receipt # \_\_\_\_\_

Signature	Print Name	Company	Date	Time
<i>F. Robert Gregueros</i>	F. Robert Gregueros	BSK - P	3/20/95	11:30
Requested / Relinquished by:				
Received / Relinquished by:				
Received / Relinquished by:				
Received / Relinquished by:				
Received for Laboratory by: <i>James Carron</i>	James Carron	BSK Labs	3/20/95	11:30