BSK & ASSOCIATES

GEOTECHNICAL CONSULTANTS, INC.

BSK JOB NO. P92270.3

TENTH QUARTERLY GROUNDWATER MONITORING REPORT - JANUARY 1996 AMERICAN BRASS & IRON FOUNDRY 7825 SAN LEANDRO STREET OAKLAND, CALIFORNIA

February 12, 1996

BSK

Engineers, Geologists,
Environmental Scientists

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February 12, 1996

BSK JOB NO. P92270.3

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

Attention: Mr. David Robinson
Environmental Engineering Manager

Subject: Tenth Quarterly Groundwater
Monitoring Report - January 1996
American Brass and Iron Foundry
7825 San Leandro Street
Oakland, California

As requested and authorized, BSK & Associates (BSK) has performed the tenth 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, R.G.
Geologist

Alex Y. Eskandari, P.E.
Project Manager
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(ENV\A\B&I\P92270-3 Q10)

Distribution:
American Brass & Iron Foundry (3 copies)

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TENTH QUARTERLY GROUNDWATER MONITORING REPORT - JANUARY 1996 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.

TENTH QUARTERLY MONITORING ACTIVITIES - JANUARY 1996

General

Tenth quarterly monitoring of groundwater Monitoring Wells MW-2, MW-3 and MW-4 was performed by BSK personnel on January 18 and 19, 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 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

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 $(1)_1$	Toluene $(100)_2$	Ethylbenzene $(680)_1$	Xylenes $(1750)_1$
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
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

TABLE 1 (CONTINUED)

Sample Location (Action Level)	CONSTITUENTS Benzene $(1)_1$	Toluene $(100)_2$	Ethylbenzene $(680)_1$	Xylenes $(1750)_1$
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)

Sample Location (Action Level)	CONSTITUENTS 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: 1/18/96 and 1/19/96 (Tenth Quarter)						
MW-1	--	--	--	--	--	--
MW-2	**$120_{(4)}$**	--	**1**	**ND**	--	**ND**
MW-3	**ND**	--	--	--	--	--
MW-4	**$90_{(4)}$**	--	--	--	--	--

TABLE 2 (CONTINUED)

Sample Location (Action Level)	CONSTITUENTS					
	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: 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	--
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)

TABLE 2 (CONTINUED)

Sample Location (Action Level)	CONSTITUENTS					
	TPH Gasoline (NA)	TPH Diesel (100)$_1$	Total Oil & Grease (NA)	Hydrocarbon Oil & Grease (NA)	Total Lead (50)	Volatile Halocarbons (Determined by Compound)
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 - JANUARY 1996

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

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 0.012 ft/ft. The groundwater elevation in each of the three measured on-site wells have increased by 0.61 to 0.77 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 **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)
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)

TABLE 3 (CONTINUED)

Well Number	Date Measured	Groundwater Elevation (Feet)	Hydraulic Gradient (ft/ft)	Direction of Groundwater Flow
MW-1	9/9/94	2.14	0.008 (1)	Northeast (1)
MW-2		2.38	0.003 (2)	North-Northwest (2)
MW-3		1.74		
MW-4		1.43		
MW-1	6/10/94	2.55	0.008 (1)	Northeast (1)
MW-2		2.73	0.002 (2)	North-Northwest (2)
MW-3		2.12		
MW-4		1.78		
MW-1	3/4/94	1.29	0.007 (1)	Northeast (1)
MW-2		3.14	0.005 (2)	West (2)
MW-3		2.54		
MW-4		2.25		
MW-1	12/3/93	2.04	0.008 (1)	Northeast (1)
MW-2		2.39	0.003 (2)	Northwest-West (2)
MW-3		1.72		
MW-4		1.47		
MW-1	8/20/93	2.05	0.008 (1)	Northeast (1)
MW-2		2.30	0.003 (2)	Northwest (2)
MW-3		1.55		
MW-4		1.29		
MW-1	3/10/93	2.29	0.004 (1)	North-Northwest (1)
MW-2		3.41	0.003 (2)	West (2)
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 120 ug/l and 90 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, ethylbenzene, and total xylenes were detected at 0.8, 1.2, and 0.9 ug/l, respectively, in the groundwater sample collected from MW-4. Toluene and volatile halocarbons were reported as none detected in the groundwater samples collected from MW-2. Total oil and grease was detected at 1 mg/l in the groundwater sample collected from MW-2, however, hydrocarbon oil and grease was not detected in the same sample.

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 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.

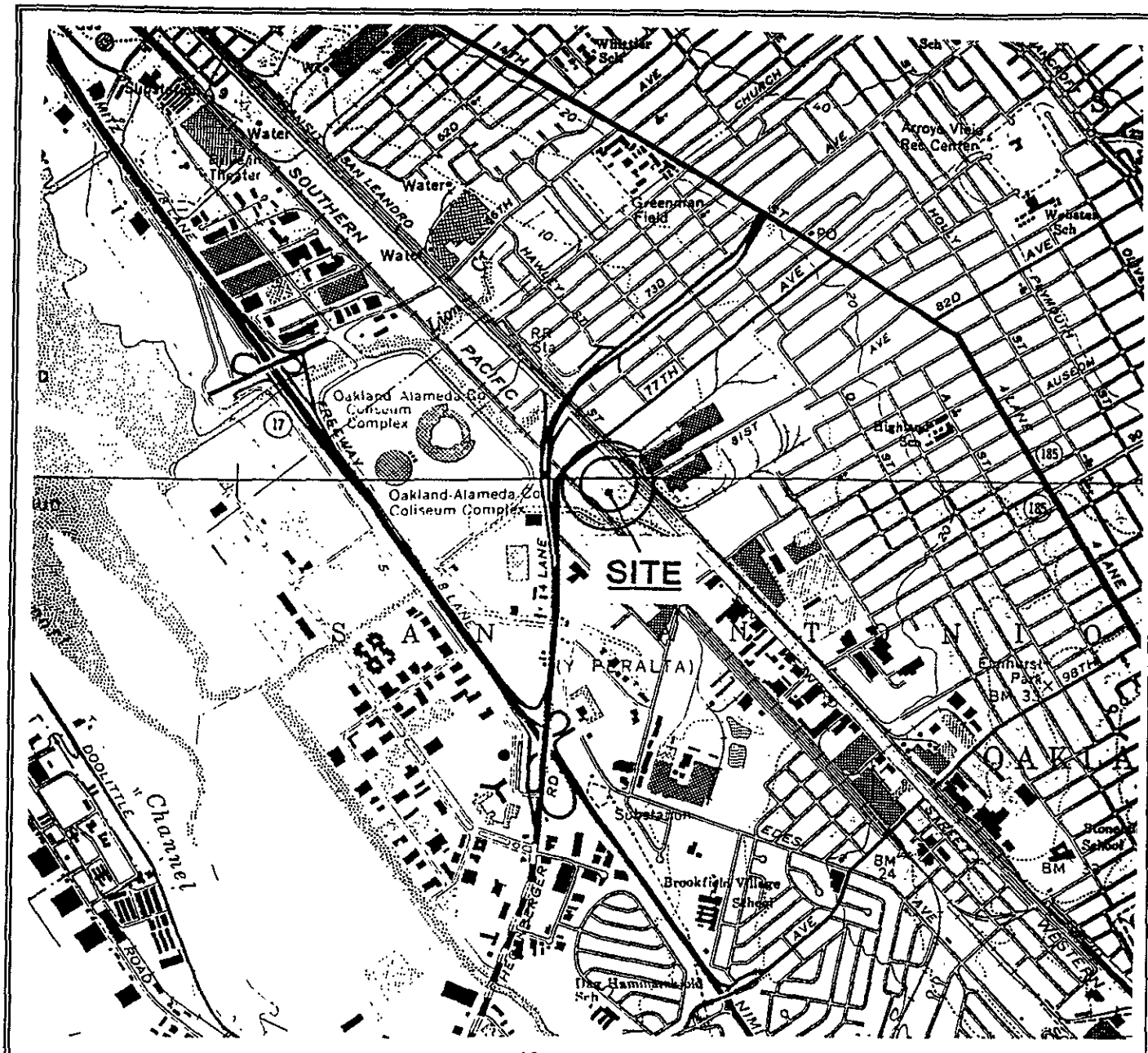
The findings of this report are valid as of the present. The passage of time, natural processes or human intervention on the property or adjacent properties, and changes in the regulations can cause changed conditions which can invalidate the findings and conclusions in this report.

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

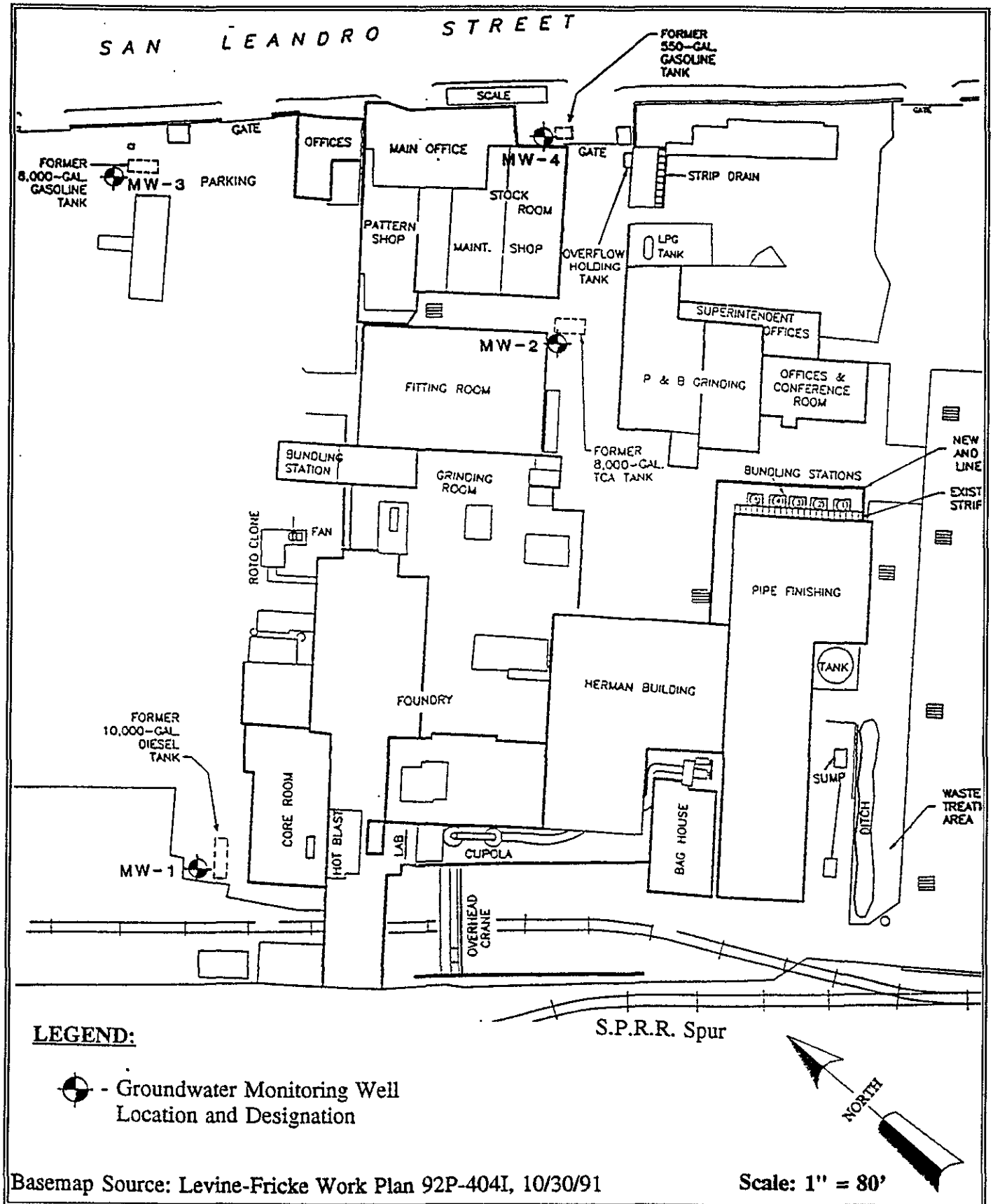
A copy of this report should be forwarded by the client to the Alameda County Department of Environmental Health for their review. An extra copy of this report has been forwarded to American Brass and Iron Foundry for this purpose.

Respectfully Submitted,
BSK & Associates



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

TENTH QUARTERLY GROUNDWATER MONITORING AMERICAN BRASS & IRON 7825 SAN LEANDRO STREET OAKLAND, CALIFORNIA	**VICINITY MAP** BSK Job No.P92270.3 JANUARY 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'

TENTH QUARTERLY GROUNDWATER MONITORING AMERICAN BRASS & IRON 7825 SAN LEANDRO STREET OAKLAND, CALIFORNIA	**SITE PLAN** BSK Job No.P92270.3 JANUARY 1996 FIGURE: 2	**BSK** & ASSOCIATES

WELL FIELD LOG

Well Observation: x **Date:** 1/19/96
Sample Collection: x **Date:** 1/19/96

Project Name: American Brass & Iron
Location: Oakland, CA
Personnel: RS/BS
Weather: Clear

WELL INFORMATION:

Well Number	MW-2	**Date Purged**	1/19/96
Depth to Water - feet(TOC)	4.24	**Purge Method**	Submersible Pump
Well Depth (feet)	17.0		
Water Volume (gallons)	8.3	**Purge Begin**	9:50
Reference Elevation - feet(TOC)	+7.80	**Purge End**	9:58
Groundwater Elevation (feet)	+3.56	**Purge Rate**	2.5 GPM
Measurement Technique	Solinst Electric Water Sounder		

IMMISCIBLE LAYERS:

Top: None Observed, No Odor
Bottom: Grey, Cloudy with fines, 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
9:53	5.0	1134	7.80	64.0	Cloudy
9:55	10.0	1255	7.23	67.1	Cloudy
9:56	15.0	1272	7.06	67.9	Cloudy
9:58	20.0	1271	7.03	68.0	Clearing

SAMPLE COLLECTION DATA:

Sampling Equipment: Teflon Point-Source Bailer

TIME	ANALYSIS	AMOUNT/CONTAINER USED	SAMPLE INTERVAL
10:08	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_2SO_4	"

Field Observations: None

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BSK Job No. P92270.3
January 1996
Figure: 4

WELL FIELD LOG

Well Observation: x **Date:** 1/18/96
Sample Collection: x **Date:** 1/18/96

Project Name: American Brass & Iron
Location: Oakland, CA
Personnel: RS/BS
Weather: Cloudy, Windy

WELL INFORMATION:

Well Number	MW-3	**Date Purged**	1/18/96
Depth to Water - feet(TOC)	7.37	**Purge Method**	Submersible Pump
Well Depth (feet)	19.0		
Water Volume (gallons)	2.0	**Purge Begin**	10:20
Reference Elevation - feet(TOC)	+9.83	**Purge End**	10:28
Groundwater Elevation (feet)	+2.46	**Purge Rate**	1.0 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
10:23	2.0	1780	6.80	60.9	Clear
10:24	4.0	1980	7.00	64.6	Clear
10:26	6.0	2170	7.07	66.3	Clear
10:28	8.0	2220	7.14	67.7	Clear

SAMPLE COLLECTION DATA:

Sampling Equipment: Teflon Point-Source Bailer

TIME	ANALYSIS	AMOUNT/CONTAINER USED	SAMPLE INTERVAL
10:35	TPHg, BTEX	2-40 ml glass vials with Hcl	10'

Field Observations: None

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BSK Job No. P92270.3
January 1996
FIGURE: 5

WELL FIELD LOG

Well Observation: x **Date:** 1/18/96
Sample Collection: x **Date:** 1/18/96

Project Name: American Brass & Iron
Location: Oakland, CA.
Personnel: RS/BS
Weather: Cloudy, Windy

WELL INFORMATION:

Well Number	MW-4	**Date Purged**	1/18/96
Depth to Water - feet(TOC)	7.15	**Purge Method**	Clear Point-Source Bailer
Well Depth (feet)	24.5		
Water Volume (gallons)	3.0	**Purge Begin**	10:55
Reference Elevation - feet(TOC)	+9.52	**Purge End**	11:03
Groundwater Elevation (feet)	+2.37	**Purge Rate**	1.5 GPM
Measurement Technique	Solinst Electric Water Sounder		

IMMISCIBLE LAYERS:

Top: None Observed, Faint Hydrocarbon Odor
Bottom: Floating 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
10:58	3.0	760	9.23	59.4	Grayish with Hydrocarbon Odor
11:00	6.0	530	8.30	63.9	Clearing with Hydrocarbon Odor
11:01	9.0	514	7.92	64.5	Clear with Hydrocarbon Odor
11:03	12.0	513	7.67	64.9	Clear with slight Odor

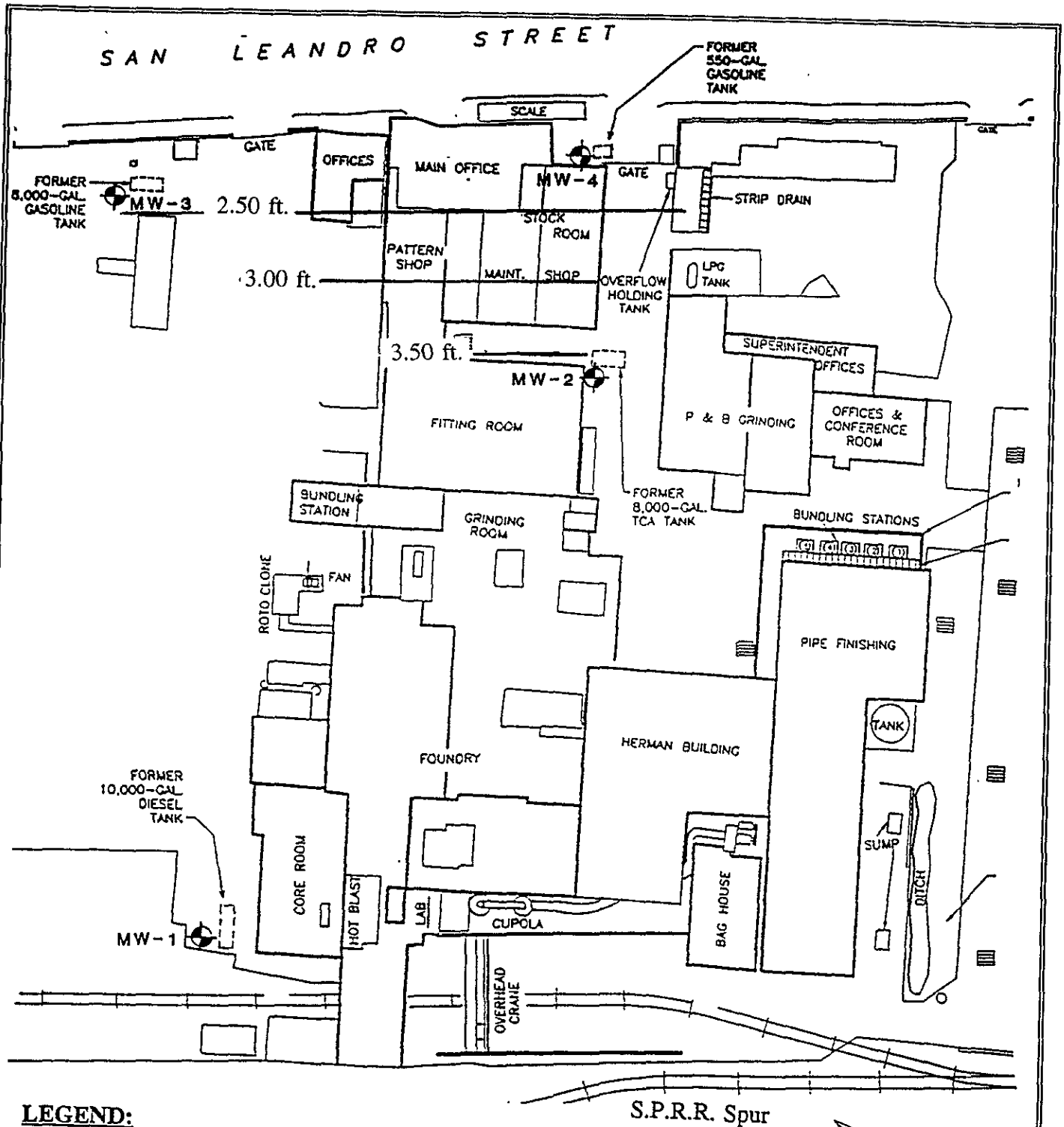
SAMPLE COLLECTION DATA:

Sampling Equipment: Teflon Point-Source Bailer

TIME	ANALYSIS	AMOUNT/CONTAINER USED	SAMPLE INTERVAL
11:05	TPH-G & BTEX	2-40 ml glass vials with HCl	± 10'

Field Observations: None

BSK



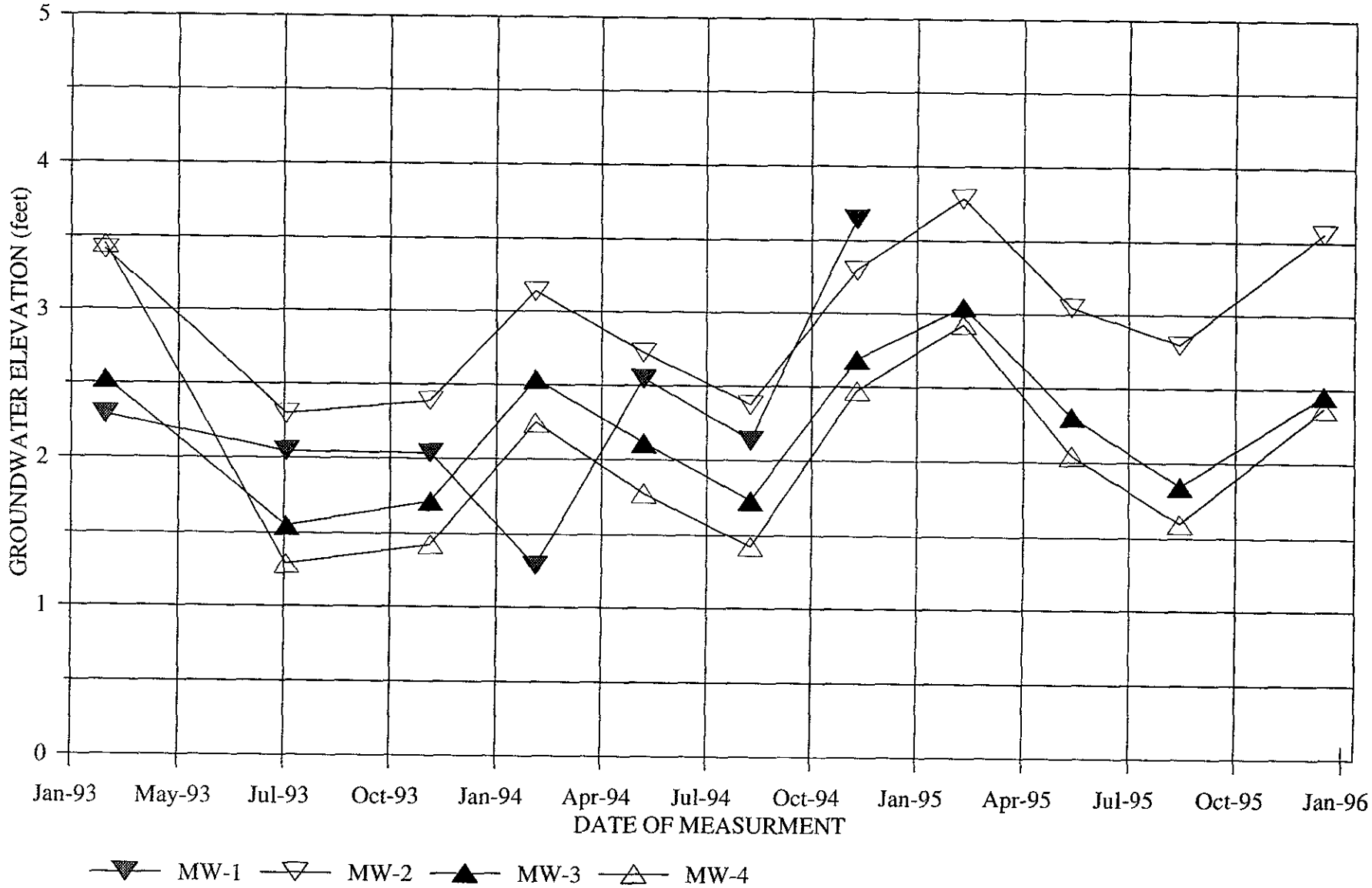
LEGEND:

- Groundwater Monitoring Well Location and Groundwater Elevation on 1/18/96 and 1/19/1996
- Line of Equal Groundwater in feet Above Mean Sea Level

Scale: 1" = 80'

TENTH QUARTERLY GROUNDWATER MONITORING AMERICAN BRASS & IRON 7825 SAN LEANDRO STREET OAKLAND, CALIFORNIA	**GROUNDWATER ELEVATION CONTOURS BSK Job No.P92270.3 JANUARY 1996 FIGURE: 6**	**BSK & ASSOCIATES**

SUMMARY OF GROUNDWATER ELEVATIONS



BSK Job No. P92270.3 JANUARY 1996 FIGURE 7	BSK

APPENDIX "A"

BSK

BSK ANALYTICAL LABORATORIES

FIGURE: A-1

BSK-Pleasanton
AB & I (Oakland)

Date Sampled : 01/19/96
Time Sampled : 1008
Date Received : 01/22/96
Date of Analysis : 01/25/96
Report Issue Date: 02/02/96

Case Number : Ch960272
Lab ID Number : 0272
Project Number : None
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)	120	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

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BSK ANALYTICAL LABORATORIES

FIGURE: A-2

BSK-Pleasanton
AB & I (Oakland)

Date Sampled : 01/19/96
Time Sampled : 1008
Date Received : 01/22/96
Date of Analysis : 01/25/96
Report Issue Date: 02/02/96

Case Number : Ch960272
Lab ID Number : 0272
Project Number : None
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 (μg/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, QA/QC Supervisor

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BSK ANALYTICAL LABORATORIES

FIGURE: A-3

BSK-Pleasanton
AB & I (Oakland)

Date Sampled : 01/19/96
Time Sampled : 1008
Date Received : 01/22/96
Date of Analysis : 01/26/96
Report Issue Date: 02/02/96

Case Number : Ch960272
Lab ID Number : 0272
Project Number : None
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.....	1	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

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BSK ANALYTICAL LABORATORIES

FIGURE: A-4

BSK-Pleasanton
American Brass & Iron

Date Sampled : 01/18/96
Time Sampled : 1035
Date Received : 01/22/96
Date of Analysis : 01/25/96
Report Issue Date: 02/01/96

Case Number : Ch960262
Lab ID Number : 0262-1
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

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BSK ANALYTICAL LABORATORIES

FIGURE: A-5

BSK-Pleasanton
American Brass & Iron

Date Sampled : 01/18/96
Time Sampled : 1105
Date Received : 01/22/96
Date of Analysis : 01/25/96
Report Issue Date: 02/01/96

Case Number : Ch960262
Lab ID Number : 0262-2
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	0.8	0.3
Toluene	ND	0.3
Ethylbenzene	1.2	0.3
Total Xylene Isomers	0.9	0.3
Total Petroleum Hydrocarbons (G)	90	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 because late (heavy) boiling point range is missing or significantly reduced.

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

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ANALYTICAL
BSK
LABORATORIES
Environmental Services

1414 Stanislaus Street
Fresno, CA 93706
(209) 485-8310
(800) 877-8310
(209) 485-6935 FAX

Analyses Request / Chain of Custody

BSK Log Number: 0272

Analytical Due Date: 1/30/96

Shaded areas for LAB use only

Requested Analyses

Client Name	AB&I OAKLAND	Report Attention.	Rifaat Salem	Phone #	
Address	c/o BSK & Assoc.	Project, Quote or PO #	P92270.3	FAX #	
City, State, Zip	Pleasanton, Ca	Copy to.		System #	

LAB use only Sample #	Type	# Cont.	Date Sampled	Time Sampled	Sampled by: RS/BS Sample Description/Location	Comment or Station Code	TPH-g, BTEX	EPA 601	Total Hydrocarbon Oil & Grease
1	L	5	1/19/96	10:08	MW-2		X	X	X

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 _____
Reciept # _____

	Signature	Print Name	Company	Date	Time
Requested / Relinquished by:	Rifaat Salem	RIFAAT SALEM	BSK-P	1/22/96	800
Received / Relinquished by:					
Received / Relinquished by:					
Received / Relinquished by:					
Received for Laboratory by:	Gerald A. Pangilinan	Gerald A. Pangilinan	BSK-Lab	1/22/96	1550

FIGURE: A-6

ANALYTICAL
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Environmental Services

1414 Stanislaus Street
Fresno, CA 93706
(209) 485-8310
(800) 877-8310
(209) 485-6935 FAX

Analyses Request / Chain of Custody

BSK Log Number: ~~0259~~ 0607

Analytical Due Date: 1/31/95

Shaded areas for LAB use only

Client Name: AMERICAN BRASS & IRON	Report Attention: RIFAAT SALEM	Phone #
Address: c/o BSK-P	Project, Quote or PO #: P92270-3	FAX #
City, State, Zip	Copy to.	System #

LAB use only Sample #	Type	# Cont.	Date Sampled	Time Sampled	Sampled by: RS/BS — Sample Description/Location	Comment or Station Code	Requested Analyses: TPH-D & BTEX
1	L	2	1/18/96	1035	MW-3		X
2	L	2	1/18/96	1105	MW-4		X

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 _____
Reciept # _____

	Signature	Print Name	Company	Date	Time
Requested / Relinquished by:	Rifaat Salem	RIFAAT SALEM	BSK & Assoc. - PLEASANTON	1/18/96	800
Received / Relinquished by:					
Received / Relinquished by:					
Received / Relinquished by:					
Received for Laboratory by:	S Gill	SARA K. DHILLON	BSK - Lab	1/22/96	0850

FIGURE: A-7