



Regional Environmental Capacity
Underground Gasoline Storage Tank
American Brass & Iron
Oakland, California

January 31, 1992
LF 2408

Prepared for:

American Brass & Iron
7825 San Leandro Street
Oakland, California



LEVINE·FRICKE



LEVINE·FRICKE

CONSULTING ENGINEERS AND HYDROGEOLOGISTS

January 31, 1992

LF 2408

Mr. David Robinson
Environmental Manager
American Brass & Iron
7825 San Leandro Avenue
Oakland, California 94621

Subject: Report on Removal of 550-Gallon Capacity
Underground Gasoline Storage Tank,
American Brass & Iron,
Oakland, California

Dear Dave:

Enclosed are four copies of our report on the tank removal and subsequent soil excavation conducted at the subject site. We have revised this report to include your comments. Copies of this report should be submitted to the Alameda County Department of Environmental Health and the Regional Water Quality Control Board.

Please call either of the undersigned with any questions or comments.

Sincerely,

John Sturman
Senior Project
Geotechnical Engineer

Ted Splitter, P.E.
Principal Geotechnical
Engineer

Enclosures

1900 Powell Street, 12th Floor
Emeryville, California 94608
(415) 652-4500
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January 31, 1992

LF 2408

**REMOVAL OF 550-GALLON CAPACITY
UNDERGROUND GASOLINE STORAGE TANK
AMERICAN BRASS & IRON FACILITY
OAKLAND, CALIFORNIA**

1.0 INTRODUCTION

On behalf of American Brass & Iron (AB&I), Levine·Fricke has prepared this report to describe the removal of one 550-gallon capacity underground gasoline storage tank from the AB&I facility located at 7825 San Leandro Street in Oakland, California ("the Site"; Figure 1). This tank is the second tank removed as part of AB&I's current tank closure program, which when completed will include removal of four underground storage tanks from the Site.

This report describes the tank removal, disposal, soil excavation, soil aeration, and soil sampling activities, and presents laboratory analytical results and our conclusions. Levine·Fricke was retained by AB&I to provide services to assist with closure of this tank, including permitting, compliance, field observation, sampling, and preparation of this closure report.

The tank installation date is unknown, but AB&I estimates that it was installed in the early 1970s. AB&I used this tank for fueling vehicles at their facility from the time of installation until approximately August 1991. To the knowledge of AB&I, only regular (leaded) gasoline was stored in this tank.

2.0 WORK PERFORMED

The tank removal was directed and performed by AB&I, using the contracted services of Walt's Backhoe Service of Oakland, California.

2.1 Tank Contents Removal and Stabilization Procedure

Residual gasoline was reportedly pumped out of the tank on August 23, 1991, and removed from the Site by Evergreen Vacuum Services of Newark, California ("Evergreen"), to their facility for recycling. The tank and appurtenant piping were high-pressure rinsed by AB&I on the same date. We understand that the rinsate, which totalled about 40 gallons, was pumped

into a 55-gallon drum and discharged into AB&I's on-site wastewater treatment system. After removal of the rinsate, only a small amount (approximately 1 inch) of rinsate remained in the tank.

On August 26, 1991, 150 pounds of pelletized dry ice was placed in the tank through ports at each end. Combustible gases and oxygen concentrations were measured in the tank using a combustible gas meter. The air inside the tank was drawn to the meter through tubing that was lowered approximately 3 feet into the tank. Prior to tank removal, meter readings indicated that combustible gases were at 0% of the lower explosion limit (LEL). Oxygen was also measured in the tank at 0%.

2.2 Tank Excavation and Removal

The fill, product, and vent piping were removed on August 26, 1991. The product piping extended approximately 4 feet west from the tank under the adjacent wall to the dispenser. The piping was set aside for subsequent removal from the Site with the tank.

On August 26, 1991, the overburden soil was removed from the top of the tank. After gaining the approval of Mr. Dennis Byrne of the Alameda County Department of Environmental Health Hazardous Materials Division ("Alameda County"), the tank was lifted out of the ground using a backhoe. Mr. Gil Cody of the Oakland Fire Department (OFD) was unable to be present at the Site at the scheduled time of the tank removal, and directed Mr. Byrne to proceed with the tank removal in his absence. Mr. Cody arrived at the Site approximately one hour after the tank was removed, and briefly discussed the removal with Mr. John Sturman of Levine-Fricke.

The tank and appurtenant piping were loaded onto a truck operated by H&H Ship Service of San Francisco, California (H&H), using a loader and a forklift. The tank was manifested as hazardous waste, and recorded under Environmental Protection Agency (EPA) Manifest number 90546775.

2.3 Soil Sampling Under Tank

After the tank was removed from the Site, soil samples were collected by Levine-Fricke under the observation of Mr. Byrne. Two soil samples, T2-S-6 and T2-N-8.5, were collected, one from below each end of the tank.

Soil samples were collected using a backhoe. The backhoe operator was directed to remove portions of native soil (below the tank bedding material) at the desired depth and location with the backhoe. After raising the backhoe bucket to the ground surface, soil samples were collected by driving 2-inch-diameter brass tubes into the desired portion of soil in the backhoe bucket. After filling the tube completely to minimize headspace, the ends of the tube were enclosed with plastic caps over aluminum foil and sealed with cloth tape. Samples were labelled and placed in a chilled ice chest for immediate transport to the analytical laboratory under chain-of-custody protocol. Figure 2 presents soil sampling locations.

2.4 Excavation and Sampling of Excavation Soils

Levine·Fricke used a photoionization detector (PID) to screen soils encountered in the excavation for volatile organic chemicals (VOCs) associated with gasoline. The PID measurements indicated that the soils around the tank were affected by VOCs, and that the depths of affected soils extended from about 5 to 10 feet below ground surface, except immediately below the tank where affected soils extended to a depth of at least 13 feet below the ground surface.

On September 4, 1991, two test pits, one located north and the other east of the previous tank, were dug with the backhoe to assess the lateral and vertical extent of gasoline-affected soils in the vicinity of the former tank. A Levine·Fricke engineer was on site to monitor the soils using a PID, to make visual observations, and to collect soil samples.

When PID measurements and visual observations indicated a significant reduction in gasoline concentrations, samples of native soils were collected to assess soil quality. Four soil samples were collected; T2-NT1-6.5 and T2-NT1-9.5 from the north test pit, and T2-ET-6.5 and T2-ET-9.5 from the east test pit. Figure 2 presents soil sampling locations.

On September 12, 1991, approximately 120 cubic yards of soils were excavated in the area shown on Figure 2. We understand from AB&I that the Bay Area Air Quality Management District (BAAQMD) was notified of the soil excavation. Soils excavated from depths greater than 5 feet in this area were affected by gasoline. Excavated gasoline-affected soils (approximately 50 cubic yards) were segregated from unaffected soils (approximately 70 cubic yards). PID measurements and visual observations were used to assess whether soils were affected by gasoline. The excavation was terminated along the ~~east~~ west side of the former tank area when it appeared that the

adjacent concrete wall and building could be threatened due to removal of supporting soil. The excavation was terminated on the southern end so that vehicular access to the facility would not be impeded. After completing the soil excavation on September 12, 1991, four additional soil samples, T2-SE-8.5, T2-NE-9, T2-BASE-13, and T2-NW-9, were collected for subsequent laboratory analysis from the excavation sidewalls and bottom. The samples were collected using the same methods as described above.

2.5 Aeration of Gasoline-Affected Soils and Aerated Soil Sampling

The gasoline-affected soils removed from the excavation were transported with a loader to the northwest portion of the Site, and spread on a concrete pad into an approximately 1.5-foot thick lift for aeration. The soils were turned and mixed by AB&I personnel to facilitate aeration. We understand from AB&I that AB&I notified the BAAQMD of soil aeration activities.

When visual observations and PID measurements indicated that gasoline concentrations in soils were significantly reduced, soil samples were collected and sent to the laboratory for analysis. On September 27, 1991, Levine•Fricke collected one composite sample from each of two stockpiles (approximate volume of each stockpile was 25 cubic yards). Samples were collected at an approximate 1-foot depth below the stockpile surface in several locations by driving a brass tube into the soil until the tube was filled.

2.6 Excavation Backfilling

On October 1 and 2, 1991, AB&I reportedly backfilled the excavation. On October 4, 1991, Levine•Fricke observed that the excavation had been backfilled. Levine•Fricke did not observe backfilling activities.

2.7 Laboratory Analyses

Soil samples collected during the course of tank removal activities were submitted to BC Analytical Laboratories of Emeryville, California (BCA). BCA analyzed the samples for total petroleum hydrocarbons (TPH) as gasoline using EPA Method 8015 and for the gasoline constituents benzene, toluene, ethylbenzene, and xylenes (BTEX) using EPA Method 8020. Additionally, the two soil samples that were collected immediately after tank removal were analyzed for organic lead

using the California Department of Health Services (DHS) method. The samples were handled using strict chain-of-custody procedures.

3.0 FIELD OBSERVATIONS

3.1 Tank Conditions

Mr. John Sturman of Levine-Fricke and Mr. Dennis Byrne of Alameda County inspected the tank upon removal. No holes or cracks were observed. The asphalt tar and wire wrapping around the tank were generally intact.

3.2 Soil Conditions

An approximately 10-inch thick layer of concrete paving covered the ground surface over the tank. Below the concrete, an approximately 6-inch thick layer of aggregate base gravel, consisting of gravel and sand, was observed. Below the aggregate base, a layer of fill material consisting of concrete rubble, gravel and sand, extended to a depth of about 5 feet. A unit of dark gray-colored silty clay was encountered below the fill. The clay was soft to medium stiff. Portions of the clay sediments affected by gasoline (according to PID measurements) had a blue-gray discoloration.

Based on PID measurements and visual observations, soils situated below the former tank at depths of approximately 13 feet and slightly deeper, and soils located beneath the concrete wall and further west toward the former dispenser, appeared to be affected by gasoline.

3.3 Ground-Water Conditions

Although some seepage into the excavation was noted at a depth of about 12 feet, no standing water was observed in the excavation. Based upon field observations from a previous tank removal at the Site, it is expected that static ground water is at a depth of about 12 to 15 feet below ground surface at this location.

4.0 SOIL QUALITY RESULTS

Analytical results from soil samples collected from the excavation indicate that soil below and around the former tank was affected by TPH as gasoline at concentrations up to 2,000

milligrams per kilogram (mg/kg), as well as lesser concentrations of toluene, ethylbenzene, and xylenes. Accessible soils immediately below the former tank were excavated to a depth of approximately 13 feet, although some gasoline-affected soils beneath this depth remain (sample T2-BASE-13 contained 78 mg/kg TPH). Gasoline-affected soils north and east of the former tank were removed, resulting in gasoline concentrations in these remaining soils of less than or equal to 0.52 mg/kg (soil samples T2-NT1-6.5, T2-NT-9.5, T2-NE-9, T2-ET-6.5, T2-ET-9.5, and T2-SE-8.5). Results from soil samples T2-NW-9 and T2-S-6 (re-excavated) indicate that these remaining soils on the west and south walls of the excavation contain 100 mg/kg and 410 mg/kg gasoline, respectively.

Analytical results are summarized in Table 1, and laboratory certificates are attached in Appendix A.

5.0 CONCLUSIONS

A 550-gallon underground gasoline tank was removed from the Site, and approximately 120 cubic yards of gasoline-affected soil encountered beneath, north, and east of the former tank were excavated and aerated. Because the tank and its appurtenant piping appeared intact and the gasoline-affected soils were situated below about a 5-foot depth with higher PID measurements in soils located under the concrete wall, it appears that leakage occurred from the dispenser and/or from piping connected to the dispenser.

Based upon the soil-quality data obtained, additional gasoline-affected soils are present below the former tank and west (below the building) and south (below the driveway) of the former tank location. The excavation of gasoline-affected soils was terminated prior to complete removal of affected soils because of concerns about the stability of the adjacent building and impacts to AB&I operations.

Based upon our review of the work performed, sampling and analysis procedures, and analytical results obtained, it is our opinion that the work was performed in compliance with applicable tank closure requirements.

6.0 RECOMMENDATIONS

We recommend that the extent of gasoline-affected soils and the potential impact of gasoline to shallow ground water be further assessed in the area of the former tank. The extent of affected soils should be assessed by conducting a soil boring program or a soil-gas survey. The potential impact to ground water should be assessed by installing at least one shallow monitoring well in the downgradient (presumably west) direction from the tank and monitoring the ground water for petroleum hydrocarbons.

TABLE 1

SOIL QUALITY RESULTS
 550-GALLON UNDERGROUND GASOLINE TANK REMOVAL
 AMERICAN BRASS AND IRON FOUNDRY
 7825 SAN LEANDRO STREET
 OAKLAND, CALIFORNIA
 (all results in milligrams per kilogram [mg/kg])

Sample Number	Date Collected	Depth (feet)	TPH as* Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes	Organic Lead
T2-N-8.5**	26-Aug-91	8.5	2000	<2	8	15	81	<1
T2-S-6**	26-Aug-91	6	410	<2	3	14	15	<1
T2-NT1-6.5	04-Sep-91	6.5	<0.1	<0.005	<0.005	0.010	0.006	----
T2-NT1-9.5	04-Sep-91	9.5	0.52	<0.005	0.011	0.029	0.060	----
T2-ET-6.5	04-Sep-91	6.5	<0.1	<0.005	<0.005	<0.005	<0.005	----
T2-ET-9.5	04-Sep-91	9.5	<0.1	<0.005	<0.005	0.009	0.014	----
T2-SE-8.5	12-Sep-91	8.5	0.1	<0.005	<0.005	0.027	0.019	----
T2-NE-9	12-Sep-91	9	<0.1	<0.005	<0.005	0.013	0.012	----
T2-BASE-13	12-Sep-91	13	78	<0.05	0.21	0.2	3.3	----
T2-NW-9	12-Sep-91	9	100	<0.05	0.52	3.1	3.1	----
SP2-N	27-Sep-91	1	0.3	<0.005	<0.005	0.010	0.012	----
SP2-S	27-Sep-91	1	<0.1	<0.005	<0.005	<0.005	<0.005	----

NOTES:

All samples were analyzed by BC Analytical Laboratory, Emeryville, California.

Samples SP2-N and SP2-S were post-aeration stockpile samples from soil excavated around the tank. The depth refers to the depth from the top of the stockpile.

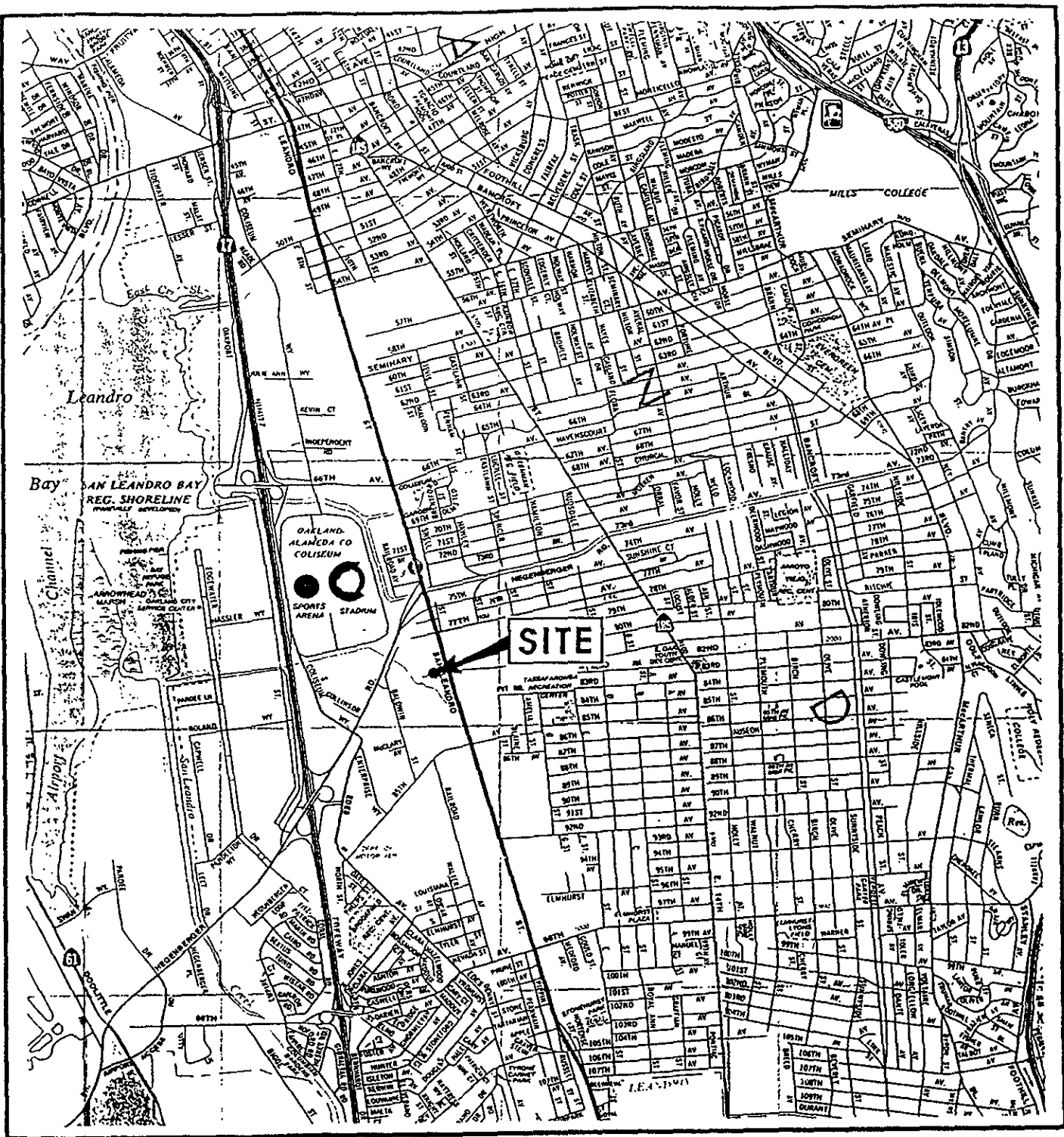
Static ground water was not encountered.

TPH - Total Petroleum Hydrocarbons

* - TPH as gasoline is reported by BC Analytical Laboratory as C6 to C12 hydrocarbons.

** - These samples do not represent existing native soils due to re-excavation

---- - Not analyzed



MAP SOURCE:
 Oakland, Berkeley, Alameda
 California State Automobile Association
 7-86

Figure 1 : SITE VICINITY

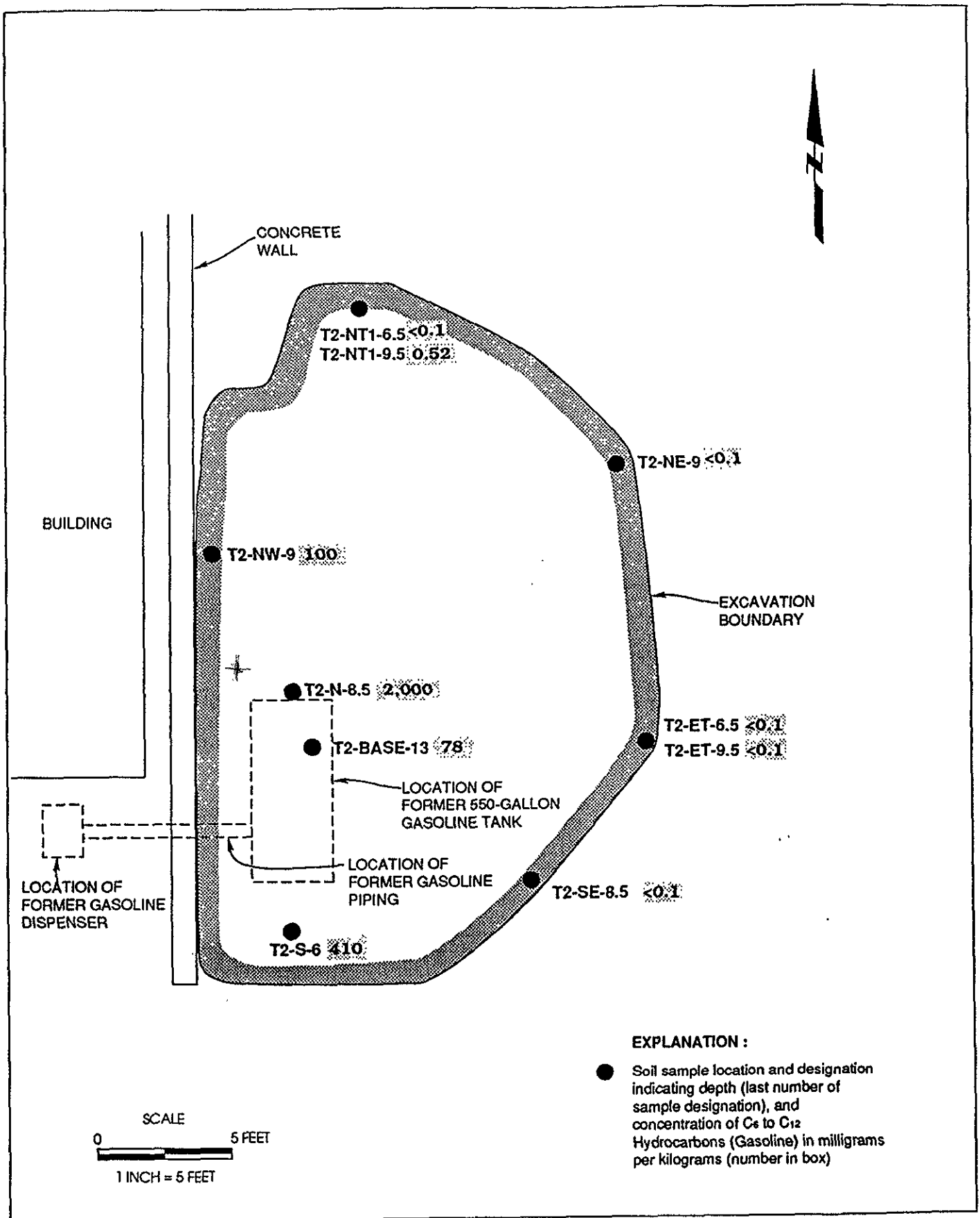


Figure 2 : SITE PLAN SHOWING FORMER TANK LOCATION, EXCAVATION AND SOIL SAMPLE LOCATIONS

APPENDIX A
LABORATORY DATA SHEETS

Analytical Report

LOG NO: E91-08-613

Received: 26 AUG 91

Mailed: SEP 04 1991

Mr. John Fehringer
American Brass and Iron
7825 San Leandro Street
Oakland, California 94621


CC: Don Wixson/John Sturman

Project: 2408

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED	
08-613-1	T2-N-8.5	26 AUG 91	
08-613-2	T2-S-6	26 AUG 91	
PARAMETER		08-613-1	08-613-2
Organic Lead, mg/kg		<1	<1
TPH-Volatile/BTEX			
Date Analyzed		08.27.91	08.27.91
Dilution Factor, Times		5000	5000
Benzene, mg/kg		<2	<2
Ethylbenzene, mg/kg		15	14
Toluene, mg/kg		8	3
Total Xylene Isomers, mg/kg		81	15
C6 to C12 Hydrocarbons, mg/kg		2000	410


Sim D. Lessley, Ph.D., Laboratory Director



CHAIN OF CUSTODY RECORD

BC Log Number **1703614**

Client name Ameria Environmental				Project or PO#		Analyses required Hazardous sample Special handling required HOLD											
Address 7851 ...				Phone # 522-2407													
City, State, Zip Merced			Report attention John Sturman														
Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by	Sample description	Number of containers											Remarks
	8/26/11	11:50	SO	John Sturman	Soil from Under the (Stump) Tree	1									X		
	"	11:25	SO			1									X		
																	LF #2408

Signature	Print Name	Company	Date	Time
John Sturman	John Sturman	Lavine-Tribe	8/26/11	10:30
Kelly Brown	Kelly Brown	PCA	8/26/11	11:25

BROWN AND CALDWELL LABORATORIES

- 1255 Powell Street, Emeryville, CA 94608 (415) 428-2300
- 373 South Fair Oaks Avenue, Pasadena, CA 91105 (818) 795-7553
- 1200 Pacific Avenue, Anaheim, CA 92805

Note:
 Samples are discarded 30 days after results are reported unless other arrangements are made.
 Hazardous samples will be returned to client or disposed of at client expense.

*KEY: AQ—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil OT—Other PE—Petroleum

CHAIN OF CUSTODY RECORD

BCA Log Number 91090102

Client name <u>American Brass & Iron</u>			Project or PO#		Analyses required TPH-Gasoline DTEX Lead (Pb) hold RUSH Hazardous sample Special handling required						
Address <u>7825 San Leandro St.</u>			Phone # <u>632-3467</u>								
City, State, Zip <u>Oakland</u>		Report attention <u>John Fehringer</u>									
Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by <u>Julie Sharp</u>	Number of containers					Remarks	
				Sample description							
T2-NT-6.5	9/4/91		SO	Soil from UST Removal	1						CC results to
T2-NT-6.5	↓		↓	↓	↓	✓	✓				Julie Sharp,
T2-NT-9.5	↓		↓	↓	↓	✓	✓				Levine, Fricke
T2-ET-6.5	↓		↓	↓	↓	✓	✓				
T2-ET-9.5	↓		↓	↓	↓	✓	✓				Levine, Fricke #2408
T2-W-11	↓		↓	↓	↓				✓		Rush 24-hr TAT

Signature	Print Name	Company	Date	Time
Relinquished by <u>Julie Sharp</u>	<u>Julie Sharp</u>	<u>Levine, Fricke</u>	<u>9/4/91</u>	<u>15:05</u>
Received by <u>J. Anderson</u>	<u>J. ANDERSON</u>	<u>BCA</u>	<u>9/4/91</u>	<u>15:15</u>
Relinquished by				
Received by				
Relinquished by				
Received by Laboratory				

B C ANALYTICAL
 1255 Powell Street, Emeryville, CA 94608 (415) 428-2300
 801 Western Avenue, Glendale, CA 91201 (818) 247-5737
 1200 Pacific Avenue, Anaheim, CA 92805 (714) 978-0113

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.
 Disposal arrangements: _____

*KEY: AQ—Aqueous NA—Nonaqueous SL—Sludge
 GW—Groundwater SO—Soil OT—Other PE—Petroleum

CHAIN OF CUSTODY RECORD

BC Log Number 9104613

Client name <u>American Brass + Iron</u>		Project or PO#	
Address <u>7825 San Leandro</u>		Phone # <u>532-3467</u>	
City, State, Zip <u>Oakland</u>		Report attention <u>John Febringer</u>	

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by	Number of containers	Analyses required										Remarks							
						IPH qualitative	BTEX	Digene Level (D15)										Hazardous sample Special handling required					
T2-N 85	2/26/91	11:55	SO	Soil from UST removal	1	X	X	X															cc results to
T2-5-6	"	11:05		"	1	X	X	X															John Sturman Levine Fricke
																							LF #2408

Signature	Print Name	Company	Date	Time
<u>John Sturman</u>	<u>John Sturman</u>	<u>Levine Fricke</u>	<u>2/26/91</u>	<u>16:20</u>
<u>Kathy [unclear]</u>	<u>[unclear]</u>	<u>BCS</u>	<u>2/26/91</u>	<u>16:20</u>

BROWN AND CALDWELL LABORATORIES
 1255 Powell Street, Emeryville, CA 94608 (415) 428-2300
 373 South Fair Oaks Avenue, Pasadena, CA 91105 (818) 795-7553
 1200 Pacific Avenue, Anaheim, CA 92605

Note:
 Samples are discarded 30 days after results are reported unless other arrangements are made.
 Hazardous samples will be returned to client or disposed of at client expense.
 *KEY: AQ—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil OT—Other PE—Petroleum

CHAIN OF CUSTODY RECORD

BCA Log Number 9109263

Client name American Brass + Iron		Project or PO#	
Address 7825 San Leandro		Phone # 632-3407	
City, State, Zip Oakland CA		Report attention John Fehring	

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by	Number of containers	Analyses required										Remarks		
						TPH	gms/lt	BIEX										
2-SE-85	9/12/91		SO		1	X	X											
T2-SW-10	"														X			
T2-FASE-13	"					X	X											
T2-NW9	"					X	X											
T2-DBRED.5	"														X			
T2-VE 9	"					X	X											
T2-SP-W	"					X	X											
T2-SPE	"					X	X											

cc: results to
John Sturman
Levine-Fricke

Signature	Print Name	Company	Date	Time
<i>John Sturman</i>	John Sturman	Levine-Fricke	9/12/91	15:00
<i>Karin Flores</i>	Karin Flores	BCA	9/12/91	15:00

BC ANALYTICAL
 1255 Powell Street, Emeryville, CA 94608 (415) 428-2300
 801 Western Avenue, Glendale, CA 91201 (818) 247-5737
 1200 Pacific Avenue, Anaheim, CA 92805 (714) 978-0113

Note. Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

*KEY. AQ—Aqueous NA—Nonaqueous SL—Sludge
 GW—Groundwater SO—Soil OT—Other PE—Petroleum

Disposal arrangements: _____

Analytical Report

LOG NO: E91-09-263

Received: 12 SEP 91

Mailed: OCT 14 1991

Mr. John Fehringer
American Brass and Iron
7825 San Leandro Street
Oakland, California 94621

Purchase Order: 1268

CC: John Sturman, Levine Fricke

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED				
09-263-1	T2-SE-8.5	12 SEP 91				
09-263-2	T2-BASE-13	12 SEP 91				
09-263-3	T2-NW9	12 SEP 91				
09-263-4	T2-NE9	12 SEP 91				
09-263-5	T2-SP-W	12 SEP 91				
PARAMETER	09-263-1	09-263-2	09-263-3	09-263-4	09-263-5	
TPH-Volatile/BTEX						
Date Analyzed	09.16.91	09.30.91	09.30.91	09.16.91	09.16.91	
Dilution Factor, Times	1	100	100	1	1	
Benzene, mg/kg	<0.005	<0.05	<0.05	<0.005	<0.005	
Ethylbenzene, mg/kg	0.027	2.0	3.1	0.013	<0.005	
Toluene, mg/kg	<0.005	0.21	0.52	<0.005	<0.005	
Total Xylene Isomers, mg/kg	0.019	3.3	3.1	0.012	<0.005	
C6 to C12 Hydrocarbons, mg/kg	0.1	78	100	<0.1	<0.1	



Analytical Report

LOG NO: E91-09-263

Received: 12 SEP 91

Mr. John Fehringer
American Brass and Iron
7825 San Leandro Street
Oakland, California 94621

Purchase Order: 1268

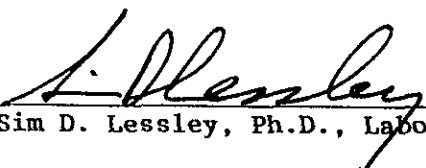
CC: John Sturman, Levine Fricke

REPORT OF ANALYTICAL RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED		
09-263-6	TS-SP-E	12 SEP 91		
09-263-7	T2-SW-10	12 SEP 91		
09-263-8	T2-N BASE-12.5	12 SEP 91		
PARAMETER		09-263-6	09-263-7	09-263-8
Sample Held, Not Analyzed		---	HELD	HELD
TPH-Volatile/BTEX				
Date Analyzed		09.16.91	---	---
Dilution Factor, Times		5	---	---
Benzene, mg/kg		<0.02	---	---
Ethylbenzene, mg/kg		<0.02	---	---
Toluene, mg/kg		<0.02	---	---
Total Xylene Isomers, mg/kg		<0.02	---	---
C6 to C12 Hydrocarbons, mg/kg		0.70	---	---

Note: 9109263*2,3 were extracted into methanol on 9/21/91. T.Chiang 10/11/91


Sim D. Lessley, Ph.D., Laboratory Director



Analytical Report

LOG NO: E91-09-626

Received: 27 SEP 91

Mailed: OCT 16 1991

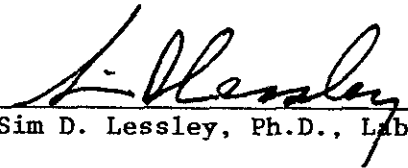
Mr. John Fehringer
American Brass and Iron
7825 San Leandro Street
Oakland, California 94621

Requisition: 1268
CC: Mr. John Sturman

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED	
09-626-1	SP2-S	27 SEP 91	
09-626-2	SP2-N	27 SEP 91	
		SP2-S	SP2-N
PARAMETER		09-626-1	09-626-2
TPH-Volatile/BTEX			
Date Analyzed		10.03.91	10.03.91
Dilution Factor, Times		1	1
Benzene, mg/kg		<0.005	<0.005 β
Ethylbenzene, mg/kg		<0.005	0.010 β
Toluene, mg/kg		<0.005	<0.005 γ
Total Xylene Isomers, mg/kg		<0.005	0.012 χ
C6 to C12 Hydrocarbons, mg/kg		<0.1	0.3


Sim D. Lessley, Ph.D., Laboratory Director

CHAIN OF CUSTODY RECORD

BCA Log Number

1109624

Client name <i>American Brass + Iron</i>				Project or PO#		Analyses required TPH, Volatiles, BTEX, Hazardous sample Special handling required					
Address <i>7625 San Leandro Ave</i>				Phone # <i>(415) 247-2467</i>							
City, State, Zip <i>Oakland CA 94621</i>			Report attention <i>Mr. John Sturman</i>								
Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by <i>[Signature]</i>	Number of containers	Remarks					
<i>102-V</i>	<i>9/27/91</i>	<i>11:40</i>	<i>SO</i>			<i>RUSH results</i>					
						<i>cc results to John Sturman Levine Fricke LF 2408</i>					

Signature	Print Name	Company	Date	Time
<i>[Signature]</i>	<i>John Sturman</i>	<i>Levine Fricke</i>	<i>9/27/91</i>	<i>12:40</i>
Relinquished by				
Received by				
Relinquished by				
Received by				
Relinquished by				
Received by Laboratory <i>[Signature]</i>	<i>Kentley O'Brien</i>	<i>BCA</i>	<i>9/27/91</i>	<i>12:40</i>

BC ANALYTICAL

- 1255 Powell Street, Emeryville, CA 94608 (415) 428-2300
- 801 Western Avenue, Glendale, CA 91201 (818) 247-5737
- 1200 Pacific Avenue, Anaheim, CA 92805 (714) 978-0113

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

Disposal arrangements: _____

*KEY: AQ—Aqueous NA—Nonaqueous SL—Sludge
GW—Groundwater SO—Soil OT—Other PE—Petroleum

Excavation Permit Granted _____ No. _____

CITY OF OAKLAND

Tank Permit

Permit to Excavate and Install, Repair, or Remove Inflammable Liquid Tanks, No. 9478

Oakland, California, August 20, 19 91

PERMISSION IS HEREBY GRANTED TO ~~install~~ remove ~~repair~~ Gasoline tank and excavate commencing _____ feet inside property line

on the _____ side of _____ Street Avenue _____ feet _____ of _____ Street Avenue

House No. 7825 San Leandro Street Avenue Present Storage _____

Owner American Brass & Iron Address same Phone 632-3467

Applicant same Address same Phone same

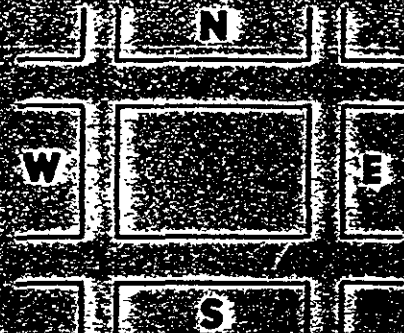
Dimensions of street (sidewalk) surface to be disturbed _____ X _____ Number of Tanks 1 Capacity 8,000 Gallons, each. 550

Remarks: _____

This Permit is granted in accordance with existing City Ordinances.
Owner hereby agrees to remove tanks on discontinuance of use or when notified by the City Authorities.
When installing, removing or repairing tanks, no open flame to be on or near premises.

Approved _____ Fire Marshal

Approved _____ Drainage Division Engineering Dept.



EXCAVATING PERMIT

Issued in accordance with Ord. No. 278 CMS, Sec. 6-2.04

_____ square feet of digging or removal granted.

The receipt of \$ _____ special deposit is hereby acknowledged.

GENERAL DEPOSIT.

BUREAU OF PERMITS AND LICENSES.

CERTIFICATE OF TANK AND EQUIPMENT INSPECTION

Inspected and passed on _____ 19 _____

By _____ Fire Marshal

Inspection Fee Paid \$ 80.00 ck#156686 rec#655734

Received by D. Clemons

FIRE PREVENTION BUREAU

NOTICE

Before Covering Tanks, Above Certificate Must Be Signed.

When ready for inspection notify Fire Prevention Bureau (273-3851)

THIS PERMIT MUST BE LEFT ON THE WORK AS AUTHORITY THEREFOR.