

Copper and Brass Sales

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FRESNO, CALIFORNIA 93727

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ALCO
HAZMAT

94 JUN -1 PM 2:03

May 31, 1994

Susan L. Hugo
Alameda County Health Care Services Agency
Department of Environmental Health
80 Swan Way, Rm. 200
Oakland, California 94621

Re: Submittal of Underground Storage Tank Case Closure Report
1295 67th Street, Emeryville, California

Dear Ms. Hugo:

Enclosed is the document entitled "Underground Storage Tank Case Closure Report" for the facility at 1295 67th Street in Emeryville, California. This report is submitted to you on behalf of Copper & Brass Sales, Inc., pursuant to letters sent by your agency on March 30 and June 22, 1993.

This report is submitted to complete the requirements for case closure. Based on evaluations of the data and information presented in this report, we recommend that the ACHCSA proceed with case closure.

To the best of my knowledge, the information in the attached report is accurate and I concur with the conclusions and recommendations contained in the report.

Since we currently have an agreement with a buyer to purchase the property upon completion of case closure, we would appreciate your immediate attention and reponse to this report. Please call me should you have any questions or comments regarding this document.

Sincerely,


George T. Blandino
General Manager

Enclosure

cc: Rich Hiett, RWQCB

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OVER 60 YEARS OF INSTANT INVENTORY

**UNDERGROUND STORAGE TANK
CASE CLOSURE REPORT
1295 67th Street
Emeryville, California**

May 31, 1994
AZ119-001

Prepared for:
Copper and Brass Sales, Inc.
1295 67th Street
Emeryville, CA 94608

AZURE ENVIRONMENTAL



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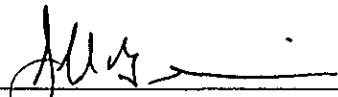
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SIGNATURE PAGE

All hydrogeologic and geologic information, conclusions, and recommendations contained in this report have been prepared by a California Registered Geologist.



Jeff Hennier
Principal Hydrogeologist
California Registered Geologist (4605)

5/31/94
Date



May 31, 1994

AZ119-001

**UNDERGROUND STORAGE TANK
CASE CLOSURE REPORT
1295 67th Street
Emeryville, California**

1.0 INTRODUCTION

This Underground Storage Tank Case Closure ("Closure") Report is submitted on behalf of Copper and Brass Sales, Inc. (C&BS), for the facility at 1295 67th Street ("the Site") in Emeryville, California (Figure 1). Remedial investigations were conducted at the Site pursuant to the Alameda County Health Care Services Agency's (ACHCSA) request for a preliminary site assessment (PSA), contained in their letter to C&BS dated March 30, 1993. The PSA was conducted and a report submitted to the ACHCSA on August 30, 1993. Subsequent ground-water monitoring was conducted and quarterly reports submitted to the ACHCSA pursuant to their request contained in a letter to C&BS dated June 22, 1993.

This report contains a comprehensive summary of the remedial investigation and quarterly ground-water monitoring data collected at the Site. This report presents our evaluation of the data collected at the Site and rationale for recommending case closure.

1.1 Site Description

The Site is located at 1295 67th Street in Emeryville, approximately 1/2 mile east of the San Francisco Bay (Figure 1). The Site is located in an industrial area and the property is entirely covered by the site building and concrete paved parking areas, with the exception of a small landscaped area along 67th Street. C&BS built the present facility in 1964 and occupied the Site during the period between 1964 and July 1993. Their operations at the facility involved the distribution of various types of non-ferrous metal rod and tubing. The building is currently occupied by Ciserve, Inc..

The ground surface in the Site vicinity is approximately 30 feet above mean sea level and slopes gently toward the Bay. Due to the Site's proximity to the Bay, shallow-depth sediments at the Site consist of fine-grained silt and clay sediments deposited in tidal marsh and estuarine environments.

One 2,000-gallon capacity underground storage tank (UST) was previously located at the western boundary of the Site (Figure 2). The UST was reportedly installed in 1973 and was used to store diesel until October 1992. The tank was removed from the Site in December 1992. No other USTs are known to be present at the Site.



1.2 Background and Summary of Previous Investigations

In December 1992, K.T.W. & Associates (KTW) conducted UST removal and soil sampling activities at the Site. These activities are described in KTW's report entitled "Tank Closure Report," prepared on December 29, 1992 (see Appendix A). Results of soil sampling conducted during tank removal activities are summarized in Table 1.

KTW reported the presence of fuel hydrocarbons in soil samples collected from below the east and west ends of the former UST at a depth of 9 feet below grade. Chemical analysis of the soil samples indicated the presence of total petroleum hydrocarbons (TPH) as diesel (up to 1,800 ppm) and as gasoline (up to 6.5 ppm), benzene (up to 0.390 ppm), toluene (up to 0.380 ppm), ethylbenzene (up to 1.20 ppm) and total xylenes (up to 2.90 ppm). KTW reported that "a small amount of water with a sheen of free product" was present in the excavation pit. After collecting the soil samples, KTW reportedly removed an additional 75 cubic yards of soil from north, south and east walls of the excavation pit.

On February 22, Riedel Environmental Services (Riedel) collected verification soil samples from the north, south, east and west excavation walls at depths of 8 feet below ground surface. Analysis of the soil samples indicated fuel hydrocarbons were not detected, with the exception of 13 ppm of diesel found in the sample collected from the east excavation wall. A water sample collected from the excavation pit detected relatively low concentrations of TPH as gasoline (0.120 ppm) and benzene (0.001 ppm). On April 27, the tank excavation was backfilled with imported fill.

Based on these results, the ACHCSA requested that a PSA be conducted at the Site in a letter to C&BS dated March 30, 1993.

2.0 SOIL AND GROUND-WATER INVESTIGATION FIELD METHODS

As required by the ACHCSA, remedial investigations at the Site were conducted in accordance with the Regional Water Quality Control Board's (RWQCB) "Tri-Regional Board Staff Recommendations For Preliminary Evaluation and Investigation of Underground Tank Sites" (August 1990) and ACHCSA guidelines. Descriptions of the investigation methods used at the Site are described below.

Borehole Drilling and Soil Sampling Methods

Soil boring B-1 and well boring MW-1 were drilled by Gregg Drilling on July 16, 1993 using truck-mounted drilling rig equipped with hollow-stem augers. Prior to conducting drilling activities, a survey of underground utilities was conducted by Underground Service Alert (USA) and by a private utility locating company (downUnder Technologies) to clear the boring and well locations for drilling access.



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All drilling activities were conducted under the supervision of a California Registered Geologist. All down hole drilling and sampling equipment was steam cleaned prior to use at each drilling location to prevent potential cross-contamination between locations. Boring B-1 was backfilled with cement-bentonite grout after completion of drilling.

Soil samples were collected at approximately 2-1/2-foot intervals for lithologic description and possible chemical analysis. The lithologic log for soil boring B-1 is included in Appendix B. Soil samples were collected from the boring by driving a clean, 2-inch diameter split spoon sampler lined with clean brass tubes, ahead of the hollow-stem auger into undisturbed soil. The samples were analyzed in the field for the presence of volatile hydrocarbons using an OVM.

Two samples per boring were submitted to an analytical laboratory for chemical analysis. The soil sample selected for chemical analysis (B-1-8) was secured by placing thin Teflon sheeting and plastic caps over the ends of each sample tube. The samples were placed in a chilled cooler for transport to the analytical laboratory under strict chain-of-custody procedures.

Monitoring Well Construction

A ground-water monitoring well was installed in well boring MW-1. The monitoring well was constructed using flush-threaded, 2-inch-diameter polyvinyl chloride (PVC) casing with factory-slotted well screens. All drilling equipment, sampling tools, and well casing were steam cleaned before use.

The well casing was placed in the completed well boring through the hollow stem auger. Fifteen feet of slotted PVC casing was placed in the borehole, extending between depths of 5 to 20 feet below the ground surface. A filter pack of appropriately graded sand was placed in the annular space between the hollow-stem auger and the slotted PVC well casing as the auger was gradually removed from the borehole. Bentonite was placed above the filter pack to isolate the perforated interval from material above and prevent the entrance of grout into the filter pack. A cement-bentonite grout was poured above the bentonite seal to prevent surface water infiltration into the well annulus. A locking cap was placed over the top of the well casing to protect the well's integrity. A watertight well enclosure was placed over the top of the well and set slightly higher than the surrounding grade for visibility and protection from truck traffic at the Site.

Monitoring Well Survey and Water-Level Measurement

Following well installation, the top-of-casing elevation of the well was established to the nearest one-hundredth of a foot by a licensed surveyor. A water-level measurement was collected from the well on July 29, 1993. Quarterly depth to water measurements were collected using an electric water-level meter. Ground-water elevation was calculated based on the measured depth to ground water.



Well Development

The newly installed well was developed within 3 days of completing well installation activities. The well was developed by bailing to remove sediment from around the screened interval and enhance hydraulic communication with the surrounding formation. Observations of the quality and clarity of water withdrawn, and measurements of water temperature, pH and specific conductivity were recorded during this process. The well was developed until the above parameters stabilized. Approximately 10 well volumes were removed during well development.

Ground-Water Sampling

The well was sampled on a quarterly basis beginning in July 1993. Prior to sampling, the well was purged by bailing to remove static water in the well. Observations of the quality and clarity of water withdrawn, and measurements of water temperature, pH and specific conductivity were recorded during this process. The well was purged until the above parameters stabilized. Approximately 3 to 5 well volumes were removed during well purging.

Ground-water samples were collected using a clean Teflon bailer and gently poured into laboratory supplied containers which were appropriate for the type of analyses performed on the sample. Samples to be analyzed for TPH as gasoline and BTEX were placed in four 40-milliliter VOA containers. Samples to be analyzed for diesel were placed in 2 one-liter amber containers. The containers were filled so as to exclude air bubbles, in order to minimize potential volatilization of chemical compounds in the samples. The water samples were placed in a chilled cooler immediately after collection for transport to the laboratory.

Drilling and Sampling Waste Storage

Waste soil generated during borehole drilling activities was temporarily stored at the Site in 55-gallon drums. The waste soil was transported and properly disposed at the B&J Landfill in Vacaville by Integrated Wastestream Management, Inc. of Milpitas. Purge water generated during well sampling activities is temporarily stored at the Site in 55-gallon drums. Appropriate options for disposal of purge water will be evaluated after completion of site closure activities.

3.0 RESULTS OF SOIL AND GROUND-WATER INVESTIGATIONS

3.1 Soil Sampling Results

3.1.1 INTRODUCTION

On July 16, 1993, *Azure* Environmental collected soil samples from a soil boring (B-1) located approximately 10 feet east of the east sidewall of the tank excavation pit (Figure 2). Descriptions of sediments encountered in the boring are included in the lithologic log presented in Appendix B.

Soil boring B-1 was drilled to a total depth of 9 feet below grade. Soil samples for chemical analysis were collected from the boring at 5 and 8 feet below grade. No petroleum hydrocarbon odor or evidence of visual staining was noted in the samples. Since previous sampling from the excavation pit indicated diesel was detected in a sample collected at a depth of 8 feet, the soil sample collected at a depth of 8 feet in boring B-1 was selected for chemical analysis.

3.1.2 RESULTS OF SOIL SAMPLE ANALYSIS

In accordance with the RWQCB's Tri-Regional Guidelines, the soil sample from boring B-1 was analyzed for TPHd (EPA Method 3550), TPHg (EPA Method 5030), and benzene, toluene, ethylbenzene and xylenes (BTEX; EPA Method 8020). Sampling analysis results are summarized in Table 1.

Sample analysis results indicate that fuel hydrocarbons were not detected in the soil sample collected from boring B-1.

3.2 Ground-Water Sampling Results

3.2.1 INTRODUCTION

On July 16, 1993, monitoring well MW-1 was installed at a location within 6 feet southwest of the former UST (Figure 2). Descriptions of sediments encountered in the well boring and details of monitoring well construction are included in the lithologic log for well MW-1 presented in Appendix B.

The objective of the ground-water investigation was to assess the extent of fuel hydrocarbons in ground water at and in the general downgradient direction from the former UST location. The well was drilled to a depth of 20 feet below grade. The screened interval in the well was placed across the ground-water surface to allow floating free product, if present, to enter the well and to accommodate seasonal water-level fluctuations.



3.2.2 RESULTS OF GROUND-WATER SAMPLE ANALYSIS

Beginning in July 1993, four successive quarters of ground-water samples were collected from monitoring well MW-1. The water samples from monitoring well MW-1 were analyzed for TPHd (EPA Method 3510), TPHg (EPA Method 5030), and BTEX (EPA Method 8020). Sampling analysis results are summarized in Table 1; laboratory analysis certificates for the most recent samples collected in March 1994 are presented in Appendix C.

Results from four quarters of ground-water sampling indicate TPHg and BTEX were not detected. Only TPHd was detected at a concentration of 0.09 ppm in the ground-water sample collected from the well in July 1993. Sampling results indicate TPHd was not detected in three subsequent quarterly sampling events. Floating free product was also not present in the well.

4.0 SHALLOW-ZONE HYDROGEOLOGY

4.1 Regional and Local Hydrogeology

The ground surface in the Site vicinity is approximately 30 feet above mean sea level and slopes gently toward the southwest. Ground water is encountered at a depth of approximately 10 feet below ground surface in the Site vicinity and generally flows in the direction of the natural surface topography (southwest) toward the Bay, located approximately 1/2-mile from the Site (Figure 1).

Due to the Site's proximity to the Bay, shallow-depth sediments consist of fine-grained silt and clay sediments deposited in tidal marsh and estuarine environments. Regionally, the upper sediment intervals (within approximately 200 feet of ground surface) reportedly consist primarily of silt and clay sediments with no major regional aquifers present. Sand and gravel water-yielding strata within the upper sediment interval are likely present as lenticular units of limited lateral and vertical extent. Typical hydraulic conductivity values for the types of silt and clay sediments found at the Site range between 10^{-3} to 10^{-5} cm/s.

4.2 Ground-Water Flow Direction and Gradients

Water-level measurements were collected during four successive quarters from monitoring well MW-1 to assess the depth to ground water and seasonal variations of the ground-water surface at the Site. A summary of water-level measurement data and calculated ground-water elevations are presented in Table 3.

The depth to ground water measured in the well during the period between July 1993 and May 1994 varied between 11.02 feet below grade (17.82 feet above mean sea level) and 9.79 feet below grade (18.73 feet above mean sea level).



The ground-water flow direction and gradient at the Site was estimated using ground-water elevation data collected at the nearby Oliver Rubber facility. The Oliver Rubber facility is located at 1200 65th Street in Emeryville, approximately 600 feet southeast of the Site (Figure 1). A potentiometric surface map of ground-water elevation data collected at Oliver Rubber on January 18 and July 14, 1993 are presented in Appendix D.

Ground-water elevation measurements at the Oliver Rubber facility indicate the general direction of ground-water flow is toward the southwest (see figure in Appendix D). The calculated horizontal gradient is 0.001 ft/ft. The ground-water flow direction at Oliver Rubber is generally consistent with the estimated ground-water flow direction (southwest) based on the proximity of the Site and slope of the land surface toward San Francisco Bay. Ground-water flow at the Oliver Rubber facility is expected to be representative of ground-water flow conditions at the Site since the two locations are relatively near each other (less than 2 blocks apart), and they are nearly the same distance and direction from the Bay.

5.0 BENEFICIAL USES OF GROUND WATER

The Site is relatively small and is located in an industrial area approximately 1/2 mile east of the San Francisco Bay (Figure 1). Water supplies for the Site and nearby facilities is provided by East Bay Municipal Utility District from municipal water sources located outside of a 1/2-mile radius from the Site. Conductivity measurements collected during ground-water sampling (up to 1,500 umhos/cm) indicate the Site ground water is brackish. The low water quality characteristics of ground water near the Bay precludes the use of shallow ground water as a potential source for drinking water. Therefore, the potential public health threat posed by fuel hydrocarbon contamination in ground water at the Site, if it were present, would be minimal.

6.0 SUMMARY AND CONCLUSIONS

Investigations at the Site were conducted as part of a PSA to assess the extent of fuel hydrocarbons in soil and ground water at the Site. The scope of investigations included drilling one soil boring adjacent to the east wall of the tank excavation and installing one monitoring well within 6 feet and downgradient of the former UST location. Ground-water monitoring data from four successive sampling events were collected from the Site monitoring well to evaluate water levels and ground-water quality adjacent to the former UST location.

Results of the soil sampling conducted from the tank excavation pit indicated fuel hydrocarbons were not detected in soil samples collected from the west, north and south excavation walls. A soil sample from the boring drilled at a location 10 feet east of the excavation did not detect fuel hydrocarbons, indicating residual TPHd in soil at the east excavation wall is limited to the area within 10 feet of the former UST location. The TPHd concentration (13 ppm) at the east wall is well below levels that would be considered a

ground-water quality at the Site. Therefore, no further actions are recommended for Site soil.

Shallow-depth sediments at the Site consist of relatively low permeability, fine-grained silt and clay sediments typical of tidal marsh and estuarine deposits. Water-level measurements collected during four successive quarters from the Site monitoring well indicate the depth to ground water is approximately 10 feet below grade (28.5 feet above mean sea level). Ground-water elevation measurements in the Site vicinity indicate the general direction of ground-water flow is toward the southwest, in the direction of the slope of the natural surface topography (southwest) toward the Bay.

Results from four successive quarters of collecting ground-water samples from the Site monitoring well indicate TPHg and BTEX were not detected. Only TPHd was detected at a concentration of 0.09 ppm in one ground-water sample collected from the well; TPHd was not detected in three subsequent quarterly sampling events. Floating free product was also not present in the well. The TPHd concentration detected in the sample is below levels that would be considered a potential threat to further degradation of ground-water quality at the Site. The TPHd concentration found in well MW-1 is expected to be at or near the highest concentration in Site ground water because of the well's proximity (within approximately 6 feet) to the former UST location. Based on these results, no additional monitoring is recommended.

The low water quality characteristics of shallow ground water and access to municipal water supplies precludes the use of shallow ground water as a potential source for drinking water in the Site vicinity. The potential public health threat posed by fuel hydrocarbon contamination in ground water at the Site, if it were present, would be minimal.

7.0 RECOMMENDATIONS

Results of investigations and monitoring at the Site indicate TPHd remaining in soil is restricted to a small area and is well below levels that would be considered a potential threat to ground-water quality at the Site. Four successive quarters of ground-water sampling data indicate fuel hydrocarbons were not detected in ground water, with the exception of one detection of trace levels of TPHd (0.09 ppm).

Based on these results, we recommend that no further work should be conducted and the Site should be approved for case closure. Upon the ACHCSA and RWQCB approval of case closure, the monitoring well will be decommissioned in accordance with Department of Water Resources and Alameda County Flood Control and Water Conservation District regulations. Waste soil from well decommission activities will be properly disposed at an approved facility.



8.0 SELECTED REFERENCES

Azure Environmental. 1993. Preliminary Site Assessment Report, August 30.

Azure Environmental. 1993. Quarterly Ground-Water Monitoring Report No. 1,
November 30.

Azure Environmental. 1994. Quarterly Ground-Water Monitoring Report No. 2, March 1.

K.T.W. & Associates. 1992. Tank closure report for Copper and Brass Sales, Inc., 1295
67th Street, Emeryville, California. December 29.



TABLE 1

SUMMARY OF FUEL HYDROCARBONS IN
SOIL SAMPLES (ppm)
1295 67th Street, Emeryville, California

Sample Location	Sample Date	TPHd	TPHg	B	T	E	X
West End	12/14/92	42	6.5	<0.005	<0.005	<0.005	<0.005
East End	12/14/92	1,800	300	0.39	0.38	1.2	2.9
West Wall	2/11/93	<10	<1	<0.003	<0.003	<0.003	<0.003
East Wall	2/11/93	13	<1	<0.003	<0.003	<0.003	<0.003
North Wall	2/11/93	<10	<1	<0.003	<0.003	<0.003	<0.003
South Wall	2/11/93	<10	<1	<0.003	<0.003	<0.003	<0.003
Boring B-1	7/16/93	<1.0	<0.2	<0.005	<0.005	<0.005	<0.005

Notes:

Excavation end samples collected by KTW and analyzed by McCampbell Analytical.

Excavation wall samples collected by Riedel Environmental Services and analyzed by Superior Precision Analytical.

Boring B-1 sample collected by Azure Environmental and analyzed by American Environmental Network (AEN)

ppm = parts per million

B - Benzene

T - Toluene

E - Ethylbenzene

X - Xylenes

TPHd - Total Petroleum Hydrocarbons as Diesel

TPHg - Total Petroleum Hydrocarbons as Gasoline

TABLE 2

**CUMULATIVE SUMMARY OF GROUND-WATER
SAMPLE ANALYSIS RESULTS (ppm)
1295 67th Street, Emeryville, California**

Well Number	Sample Date	TPHd	TPHg	B	T	E	X
MW-1	7/29/93	0.09	<0.05	<0.0005	<0.0005	<0.0005	<0.002
	10/29/93	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.002
	12/30/93	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.002
	3/29/94	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.002

Notes:

- ppm - parts per million.
- Samples analyzed by American Environmental Network, Pleasant Hill, California; Laboratory certificates are included in report Appendix B.

B - Benzene

T - Toluene

E - Ethylbenzene

X - Total Xylenes

TPHd - Total Petroleum Hydrocarbons as Diesel

TPHg - Total Petroleum Hydrocarbons as Gasoline

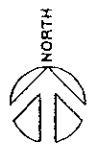
TABLE 3

**CUMULATIVE SUMMARY OF
GROUND-WATER ELEVATION DATA
1295 67th Street, Emeryville, California**

Well Number	Well Elevation	Date Measured	Depth to Ground Water	Ground-Water Elevation
MW-1	28.52	7/29/93	10.70	17.82
		10/29/93	11.02	17.50
		12/30/93	10.21	18.31
		3/29/94	9.79	18.73

Notes:

- Depth to ground water measured in feet
- Elevations measured relative to mean sea level (MSL)



0 1/2 mile
Scale

Source: U. S. G. S.
Oakland West Quadrangle

Figure 1: Site Location Map

6 7 t h S t r e e t

Sidewalk

Neighboring Building

MW-1

Excavation Area

Loading Dock

Site Building

EXPLANATION

 Monitoring Well



Scale: 1" = 30'

Base Map Source: KTW Associates

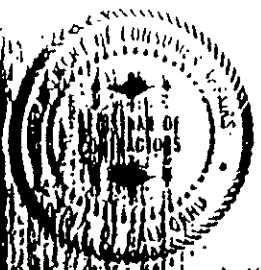
Figure 2: Site Plan



Building Quality

**HAZARDOUS SUBSTANCES REMOVAL AND REMEDIAL
ACTIONS CERTIFICATION**

Pursuant to the provisions of Section 7051 of the Business and Professions Code, the Registrar of Contractors hereby certifies that the following qualifying person has successfully completed the hazardous substances removal and remedial actions examination.



Qualifies: JOHN WALKER SUTFIN

License No: 572427

Business Name: K.T.W. & ASSOCIATES, INC.

and official seal this
day of **MARCH**, 1992
Registrar of Contractors

111.36 (12/01)

This certification is the property of the Registrar of Contractors. It is not transferable, and shall be returned to the Registrar upon demand when suspended, revoked, or invalidated for any reason.

A 4716



CONTRACTORS STATE LICENSE BOARD



License Number

572427

Entity

C O R P

Company Name

K I W 3 ASSOCIATES INC

Classification

CS1/040 A

Expiration Date

07/31/93

JUN 04 '92 10:43AM P.S. IN SCIP OFF 119 OFF 3155

**STATE
COMPENSATION
INSURANCE
FUND**

P.O. BOX 807, SAN FRANCISCO, CA 94101-0807

CERTIFICATE OF WORKERS' COMPENSATION INSURANCE

JUNE 4, 1992

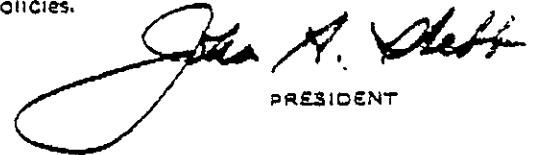
POLICY NUMBER: 1145011-92
CERTIFICATE EXPIRES: 06-01-93

This is to certify that we have issued a valid Workers' Compensation insurance policy in a form approved by the California Insurance Commissioner to the employer named below for the policy period indicated.

This policy is not subject to cancellation by the Fund except upon ten days' advance written notice to the employer.

We will also give you TEN days' advance notice should this policy be cancelled prior to its normal expiration.

This certificate of insurance is not an insurance policy and does not amend, extend or alter the coverage afforded by the policies listed herein. Notwithstanding any requirement, term, or condition of any contract or other document with respect to which this certificate of insurance may be issued or may pertain, the insurance afforded by the policies described herein is subject to all the terms, exclusions and conditions of such policies.


PRESIDENT

EMPLOYER

NEW AND ASSOCIATES
13139 OSGOOD RD.
FREMONT, CA 94539

PRODUCER

ANDREINI AND COMPANY
220 WEST 20TH AVENUE
SAN MATEO, CA 94403
(415) 573 - 1111

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

COMPANIES AFFORDING COVERAGE

- COMPANY LETTER A GOLDEN EAGLE INSURANCE CO.
- COMPANY LETTER B
- COMPANY LETTER C
- COMPANY LETTER D
- COMPANY LETTER E

INSURED

KTW & ASSOCIATES
43289 OSGOOD ROAD
FREMONT, CA. 94538

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN. THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
	GENERAL LIABILITY				GENERAL AGGREGATE \$ 2,000,000 PRODUCTS-COMP/OP AGG. \$ 1,000,000 PERSONAL & ADV. INJURY \$ 1,000,000 EACH OCCURRENCE \$ 1,000,000 FIRE DAMAGE (Any one fire) \$ 50,000 MED. EXPENSE (Any one person) \$ 5,000
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY CLAIMS MADE <input checked="" type="checkbox"/> OCCUR. OWNER'S & CONTRACTOR'S PROT.	CCP 169554	12/17/91	12/17/92	
	AUTOMOBILE LIABILITY				COMBINED SINGLE LIMIT \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE \$
A	<input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input checked="" type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS <input type="checkbox"/> GARAGE LIABILITY	CCP 169554	12/17/91	12/17/92	
	EXCESS LIABILITY				EACH OCCURRENCE \$ AGGREGATE \$
	<input type="checkbox"/> UMBRELLA FORM <input type="checkbox"/> OTHER THAN UMBRELLA FORM				
	WORKER'S COMPENSATION AND EMPLOYERS' LIABILITY				STATUTORY LIMITS EACH ACCIDENT \$ DISEASE - POLICY LIMIT \$ DISEASE - EACH EMPLOYEE \$
	OTHER				

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

*EXCEPT WITH RESPECT TO NON-PAYMENT OF PREMIUM, WHICH SHALL BE 10 DAYS NOTICE

CERTIFICATE HOLDER

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE EXPIRATION DATE THEREOF THE ISSUING COMPANY WILL ENDEAVOR TO MAIL *30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED HEREON. BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

APPENDIX A
TANK CLOSURE REPORT



43289 Osgood Road, Fremont, Calif. 94539

(510) 623-0480

Cal. State Cont. Lic. # 572427

TANK CLOSURE REPORT

for

Copper & Brass Sales
1295 67th Street
Emeryville, California

December 29, 1992

Mr. George Blandino
Copper & Brass Sales
1295 67th Street
Emeryville, California 94608

Mr. Blandino:

K.T.W. & Associates, Inc. is pleased to submit this report describing closure activities associated with the removal of one underground storage tank in Emeryville, California. This report provides a description of site activities and observations that include: the condition of the excavated tank, the condition of tank's backfill and other subsurface materials, sampling procedures and locations, laboratory analytical procedures and certified analytical results, chain of custody documentation, a hazardous waste manifest, and a certificate of disposal.

Site Description

The site is Copper & Brass Sales, located at 1295 67th Avenue, Emeryville, California. A site location map is presented in Plate 1. One (1) 2,000 gallon underground diesel fuel tank was formerly located at the subject site. A site map showing the location of the site structure and former underground tank is presented in Plate 2.

Closure Plan and Permitting

A closure plan and permit applications for removal of underground tanks were completed and submitted to the City of Emeryville, Fire Department (EFD), the Alameda County Health Care Services Agency (ACHCSA) and City of Emeryville Building Department (EBD). Closure activities proceeded under an ACHCSA permit, the EFD permit No. 1271, and the EBD permit No. B-4496-11992 which are presented in Attachment A.

Underground Tank Closure

Prior to removal, the tank was pumped of 325 gallons of diesel fuel on December 9, 1992. The fuel was transported and disposed of as hazardous under manifest by a certified disposal and recycling firm. The manifest is located in Attachment C, Section 1. Tank removal activities occurred on December 14, 1992. Inspector Brian Oliva, Alameda County Health Care Services Agency, and Fire Inspector George Warren, Emeryville Fire Department, were present to observe the tank removal and sampling activities. Construction, documentation, and sampling services associated with closure were performed by K.T.W. & Associates. Closure activities were documented in an Inspection Report prepared by Brian Oliva, Attachment B.

Upon removal, although wrapped, the structural integrity of the tank was observed to be unsound, and contained corrosion holes at least one inch (1") or more in diameter at the west end of the tank. The tank was removed and transported from the site by a permitted hazardous waste transporter under hazardous waste manifest. A copy of the hazardous waste manifest and a Certificate of Disposal are located in Attachment C, Section 2.

General Observations, Underground Tank Closure

The tank, which had been used to store diesel fuel prior to its removal, contained the following trim; a vent line, a product line, an extraction riser, and a fill riser. The vent line, product line, extraction riser and fill riser were made of steel, wrapped, and no corrosion was apparent.

The vent line on the tank was properly installed so as to vent to the atmosphere, and not into the earth, and the riser assemblies that constituted the fill pipes for the tank were correctly assembled.

Strong hydrocarbon odors were observed while removing the tank, and the overburden material contained moderate discoloration. However, the soil remaining in the excavation was highly discolored with a grayish-green tint at the fill end and the bottom. The backfill material consisted of imported sands.¹

In addition to the soil staining, there was a small amount of water with a sheen of free product floating on top that also exhibited a hydrocarbon odor in the excavation.

¹Contamination found is believed to be from appearant overfills, and the holes found in the tank.

Soil Sampling

At the request of Inspector Oliva, two (2) soil samples (W. END and E. END) were taken from the excavation at nine (9) feet in depth. ²

The soil samples from the excavation were obtained by the use of a backhoe bucket. Upon removal of the soil, samples were extracted by driving a brass tube into the soil in the bucket; then sealed with foil and plastic caps and promptly stored on blue ice in a cooler.

Both samples were submitted on blue ice to McCampbell Analytical, Pacheco, California (DOHS #1644) on December 15, 1992, under the appropriate chain of custody documentation. The sample locations are noted on Plate 2 and combined in Table I.

Certified Analytical Results

Samples collected for minimum verification analyses (MVA) were analyzed in accordance with appropriate regulatory guidelines contained within Regional Board Staff Recommendations for Initial Evaluation and Investigation of Underground Tanks (RWQCB, 1988). Copies of soil analytical results are presented in Attachment D.

MVA for Underground Fuel Tank Excavation

The soil samples (W. END and E. END) collected from the native material below the fuel tank ranged from non-detected (N.D.) to high levels of the constituents sought. Sample W. END, taken from the west end of the excavation, ranged from N.D. for Benzene, Toluene, Total Xylenes and Ethylbenzene (BTXE), to 6.5 parts per million (p.p.m.) Total Petroleum Hydrocarbons as Gasoline (TPH-G); and at it's highest level, 42 p.p.m. Total Petroleum Hydrocarbons as Diesel (TPH-D). Sample E. END, taken from the east end of the excavation, ranged from 0.38 p.p.m. to 2.9 p.p.m. BTXE combined, 300 p.p.m. TPH-G; and was 1,800 p.p.m. TPH-D at it's highest level of all constiutents sought. ³

²Inspector Oliva also requested a water sample be taken, but there was not enough water available in the excavation to do so.

³ Samples were also analyzed for Total Petroleum Hydrocarbons as Gasoline (TPH-G), although it was not requested by Alameda County Health Care Services Agency.

Overexcavation

After examination of the excavation, on December 15, 1992 overexcavation of the tank pit was done. Approximately seventy-five (75) yards of stained contaminated soil was removed, stockpiled on and covered with 10MIL polyethylene sheeting. Upon completion of these activities temporary fencing was placed around the excavation for safety, pending analytical results and further definition from regulatory agencies on this site.

Regulatory Guidelines

The Regional Water Quality Control Board - San Francisco Bay Region has established a level of 100 ppm TPH concentrations in soil as a general decision value for requiring further definition of site soil and groundwater contamination where shallow groundwater conditions are known to exist. The origin of the 100 ppm level was to "develop a method to prioritize the case load and indicate whether a significant volume of fuel had been released or discharged" (RWQCB, June, 1988).

K.T.W. & Associates suggests additional sampling be done in the excavation as well as the stockpile, clean imported fill be replaced in the excavation after all contaminated material has been removed, and the stockpiled material be remediated or disposed of at a Class III Landfill upon acceptance. All options given will be addressed as an addendum to this report under a separate letterhead upon characterization of the site from the regulatory agencies.

A copy of this report should be submitted to:

Alameda County Health Care Services Agency
80 Swan Way, Room 200
Oakland, California 94621
Attn: Mr. Brian Oliva

City of Emeryville
Emeryville Fire Department
6303 Hollis Street
Emeryville, California 94608
Attn: Mr. George Warren

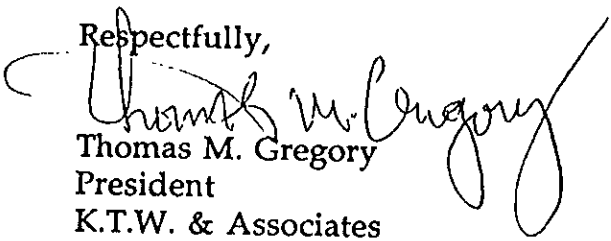
Mr. George Blandino
Copper & Brass Sales
December 29, 1992
Page 5

Regional Water Quality Control Board
1800 Harrison Street
Oakland, California 94612

Additional copies of this report have been provided for the purpose of regulatory submittal.

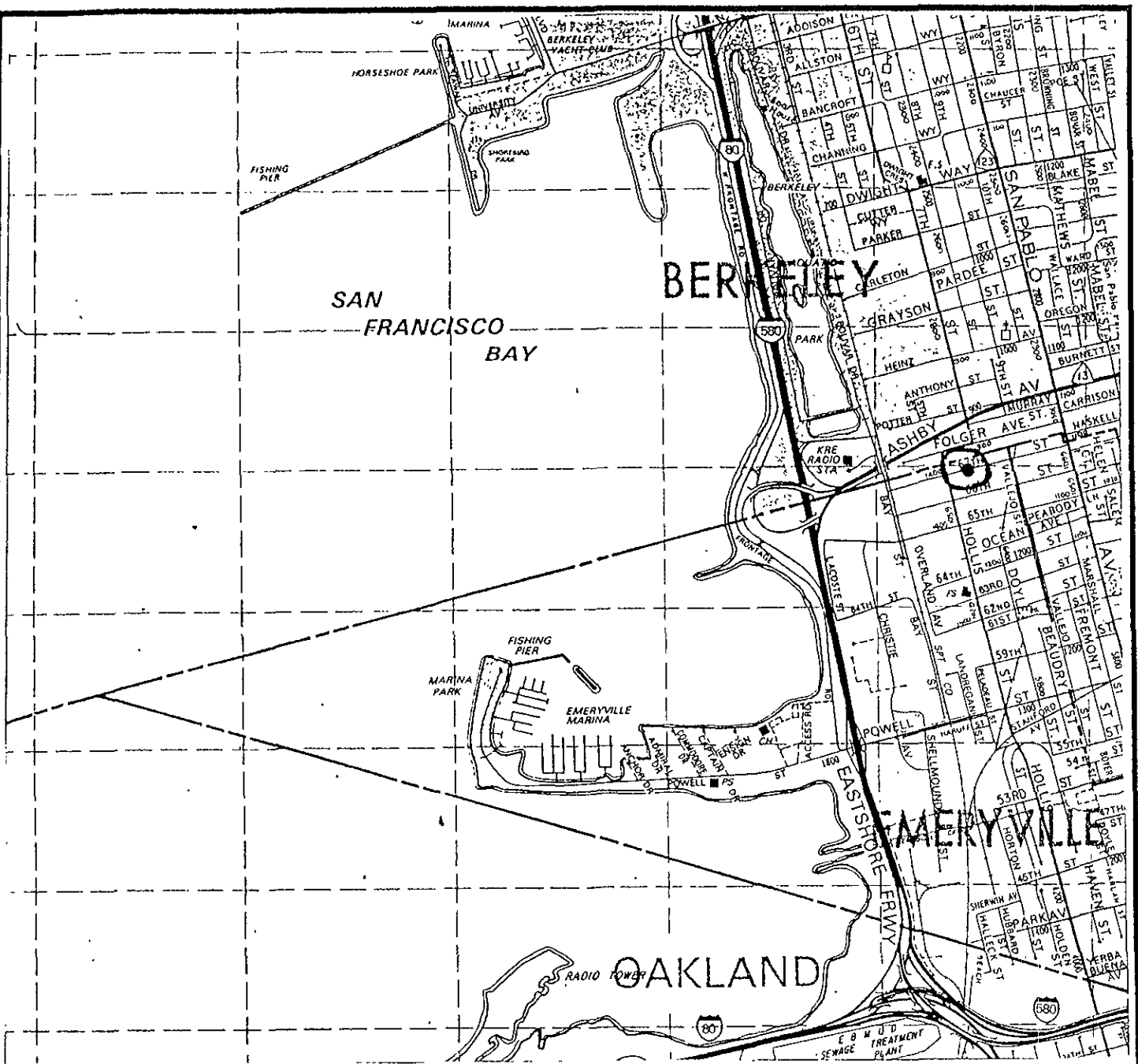
Should you have any questions or comments regarding the evaluations presented in this report, please call.

Respectfully,


Thomas M. Gregory
President
K.T.W. & Associates

TMG/emm

Attachments



SCALE NTS
DATE 12/29/92
DRWG. BY EMM



SITE LOCATION
 COPPER & BRASS SALES
 1295 67th Street
 Emeryville, California

PLATE
 1

● = Site Location

67th Street

Sidewalk

Driveways

Planters



Concrete

Former 2,000 Gallon Diesel Tank

Sample W. End

Original Excavation

Sample E. End

Overexcavation Area
2' in North, South & East Directions

Stockpile

Loading Dock

Neighboring Building

Existing Building

SCALE
NTS

DATE
12/29/92

DRWG. BY
EMM



SITE LOCATION
COPPER & BRASS SALES
1295 67th Street
Emeryville, California

PLATE

2

<u>SOIL SAMPLES</u>	<u>DATE</u>	<u>DEPTH</u>	<u>TPH-G</u>	<u>TPH-D</u>	<u>B</u>	<u>T</u>	<u>X</u>	<u>E</u>
W. END	12/14/92	9'	6.5	42	N.D.	N.D.	N.D.	N.D.
E. END	12/14/92	9'	300	1800	0.39	0.38	2.90	1.20

ABBREVIATIONS

TPH-G	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
TPH-D	TOTAL PETROLEUM HYDROCARBONS AS DIESEL
B	BENZENE
T	TOLUENE
X	TOTAL XYLENES
E	ETHYLBENZENE
N.D.	NON-DETECTED

NOTE: ALL SOIL SAMPLES ARE MEASURED IN PARTS PER MILLION (PPM)

white -env.health
 yellow -facility
 pink -files

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

80 Swan Way, #200
 Oakland, CA 94621
 (415) 271-4320

Hazardous Materials Inspection Form

II, III

IA BUSINESS PLANS (Title 19)

- ___ 1. Immediate Reporting 2703
- ___ 2. Bus. Plan Slids. 25503(b)
- ___ 3. RR Cars > 30 days 25503.7
- ___ 4. Inventory Information 25504(a)
- ___ 5. Inventory Complete 2730
- ___ 6. Emergency Response 25504(b)
- ___ 7. Training 25504(c)
- ___ 8. Deficiency 25505(a)
- ___ 9. Modification 25505(b)

IB ACUTELY HAZ. MAT'LS

- ___ 10. Registration Form Filed 25533(a)
- ___ 11. Form Complete 25533(b)
- ___ 12. RMPP Contents 25534(c)
- ___ 13. Implement Sch. Read? (Y/N)
- ___ 14. OnSite Conseq. Assess. 25524(c)
- ___ 15. Probable Risk Assessment 25534(d)
- ___ 16. Persons Responsible 25534(g)
- ___ 17. Certification 25534(f)
- ___ 18. Exemption Request? (Y/N) 25533(b)
- ___ 19. Trade Secret Requested? 25534

II. UNDERGROUND TANKS (Title 23)

- General
- ___ 1. Permit Application 25284 (H&S)
 - ___ 2. Pipeline Leak Detection 25292 (H&S)
 - ___ 3. Records Maintenance 2712
 - ___ 4. Release Report 2651
 - ___ 5. Closure Plans 2670
- Monitoring for Existing Tanks
- ___ 6. Method
 - 1) Monthly Test
 - 2) Daily Vadose
Semi-annual groundwater
One time soils
 - 3) Daily Vadose
One time soils
Annual tank test
 - 4) Monthly Groundwater
One time soils
 - 5) Daily Inventory
Annual tank testing
Cont pipe leak test
Vadose/groundwater mon.
 - 6) Daily Inventory
Annual tank testing
Cont pipe leak test
 - 7) Weekly Tank Gauge
Annual tank testing
 - 8) Annual Tank Testing
Daily inventory
 - 9) Other
- New Tanks
- ___ 7. Precip Tank Test 2643
Date: _____
 - ___ 8. Inventory Rec. 2644
 - ___ 9. Soil Testing. 2646
 - ___ 10. Ground Water. 2647
 - ___ 11. Monitor Plan 2632
 - ___ 12. Access. Secure 2634
 - ___ 13. Plans Suorvl 2711
Date: _____
 - ___ 14. As Built 2635
Date: _____

Site ID # 3937 Site Name Cropes + Beans Silo Today's Date 12/14/92

Site Address 1295 67th ST

City Emeryville Zip 94609 Phone _____

___ MAX AMT stored > 500 lbs, 55 gal., 200 cft.?

Inspection Categories:

- ___ I. Haz. Mat/Waste GENERATOR/TRANSPORTER
- ___ II. Business Plans, Acute Hazardous Materials
- III. Underground Tanks, Removal

KTW
 removed

* Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

Comments:

10 excursions in 1992
 On site for removal of 1200
 115T (diesel tank) tank in water with
 CO₂ - LEL, O₂ Tank. Tank removed
 to removal. Upon removal several holes
 in tank observed. Stained soil
 below situation also noted. Emeryville
 FD on site. Several photographs taken
 There is "ice product" on top of water
 in feet
 (1) removed samples at each end of
 2 soil, 11 July 1992
 Samples into taken included in
 RFEY, TPH-TOC II
 Sample - stockpiled soil, soil
 to ground/groundwater
 this time
 (1) to hold a well to test this
 site within 30 days.
 12/11 Make area around fuel tank
 so as to prevent in future

Contact: _____

Title: _____

Signature: _____

Inspector: Ryan J...

Signature: _____

II, III



EVERGREEN ENVIRONMENTAL SERVICES

6880 SMITH AVE., NEWARK, CA 94560
(800) 972-5284 EPA ID# CAD 980695761

A DIVISION OF CALIFORNIA OIL RECYCLERS

BILL OF LADING / INVOICE 283631

#120
CHM

DATE 12-09-92

CUSTOMER	NAME COPPER & BRASS				NAME KTW & ASSOC				CASH <input type="checkbox"/> CHECK <input type="checkbox"/>	
	ADDRESS 1295 67th St				ADDRESS 43289 OSGOOD RD.				PO # A3821-C	
	CITY STATE ZIP CO Emeryville CA 94608				CITY STATE ZIP CO EMERYVIL, CA 94539				CUSTOMER NO. KPAS01	
								PHONE NO 510 1655-72		

PLEASE PAY FROM THIS INVOICE

TERMS: NET 7 DA

PRODUCT	MANIFEST #	GALLONS	PRICE	AMOUNT
USED OIL, NON-RCRA HAZARDOUS WASTE, LUBRICATING	92090745	325		
COMBUSTIBLE LIQUID, NA1270 INDUSTRIAL				
NON-RCRA HAZARDOUS WASTE LIQUID UN1142 (AUTOMOTIVE ANTIFREEZE)				
UN9189 (OIL & WATER)				
WASTE PETROLEUM OIL NOS COMBUSTIBLE LIQUID NA1270 (GREATER THAN 1000 ppm HALOGENS)	BACK to tomorrow	12-10-92		
TEST PASS <input type="checkbox"/> FAIL <input type="checkbox"/> PPM				
OTHER: FLD - 1st test good	CLEAN DIESEL			
DRAINED USED OIL FILTERS	CRUSHED <input type="checkbox"/> UNCRUSHED <input type="checkbox"/> EMPTY <input type="checkbox"/>			

EVERGREEN OIL, INC. (510) 795-4400
6880 Smith Avenue EPA ID# CAD 980887418
Newark, California 94560

I certify that the information and amounts shown above are true and correct and that the used oil provided to Evergreen Environmental Services meets the definition of used oil pursuant to California Health & Safety Code Section 25250.1, unless otherwise noted. This further serves as notification that the waste is being disposed pursuant to Section 66268.7(10) of the California Health & Safety Code. I also acknowledge that I have read and agree to the terms and conditions set forth on the reverse side of this form.

TOTAL CHARGES

DRIVER: **James** ROUTE # _____ DRIVER SIGNATURE: *James* GENERATOR'S SIGNATURE: *Tom Nohel*

DEC 10 1992

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No. **CA 9806957619017 45** Manifest Document No. **Y 1** Page 1
 Information in the shaded areas is not required by Federal law

1. Generator's Name and Mailing Address
EVERGREEN ENVIRONMENTAL SERVICES
 6880 Smith Avenue, Newark, CA 94560

4. Generator's Phone (510): **795-4400**

3. Transporter 1 Company Name
EVERGREEN ENVIRONMENTAL SERVICES

6. US EPA ID Number
CA 09806957619017

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address
EVERGREEN OIL INC.
 6880 Smith Avenue, Newark, CA 94560

10. US EPA ID Number
CA 0980887418

A. State Manifest Document Number
92090745

B. State Generator's ID
HIAH QI 31 61 114149141

C. State Transporter's ID
310344

D. Transporter's Phone
(800) 3743224

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID
CA 0980887418

H. Facility's Phone
(510) 795-4400

11. US DOT Description (including proper shipping name, hazard class, and ID number)	12. Containers		13. Total Quantity	14. Unit Wt/Vol	1. Waste Number
	No.	Type			
a. X USED OILS—NON-RCRA HAZARDOUS WASTE, COMBUSTIBLE LIQUID, NA 1270	0101	TIT	01750 G		State 221 EPA/Other None
b. NON-RCRA HAZARDOUS WASTE LIQUID	0101	TIT	00440 G		State 134 EPA/Other None
c.					State EPA/Other
d.					State EPA/Other

J. Additional Descriptions for Materials Listed Above

11A — Waste oils with water
 11B — Ethylene glycol automotive antifreeze

K. Handling Codes for Wastes Listed Above

a. **01** b. **14**

15. Special Handling Instructions and Additional Information

WEAR RUBBER GLOVES

24 HOUR EMERGENCY RESPONSE # (510) 795-4400
EMERGENCY CONTACT — KIRK HAYWARD
GUIDE #27

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of the containers are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable federal, state and international laws.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: **Phillip JAMESON** Signature: *Phillip Jameson* Month: **12** Day: **10** Year: **1992**

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: **Phillip JAMESON** Signature: *Phillip Jameson* Month: **12** Day: **10** Year: **1992**

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: Signature: Month: Day: Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Acknowledgement of Receipt of Hazardous Materials Covered by this Manifest except as noted below

Printed/Typed Name: **M. H. Souda** Signature: *M. H. Souda* Month: **12** Day: **09** Year: **1992**

DO NOT WRITE BELOW THIS LINE.

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No

Manifest Document No

2 Page 1

Sacramento California

Information in the shaded areas is not required by Federal law

CIA1000619715104/0117319 1 of 1

3 Generator's Name and Mailing Address

COPPER & BRASS SALES
1295 67th ST
EMERYVILLE CA 94608

4 Generator's Phone (510) 658-7212

5 Transporter 1 Company Name

6 US EPA ID Number

ERICKSON INC

CIA100091416163192

7 Transporter 2 Company Name

8 US EPA ID Number

9 Designated Facility Name and Site Address

Erickson, Inc
255 Parr Blvd

10 US EPA ID Number

Richmond, CA 94801

C5D06A266502

H Facility

11 US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)

a. Waste Empty Storage Tank
NON-RCRA Hazardous Waste Solid.

12 Containers
No Type

13 Total Quantity

14 Unit Wt Vol

11 P

2000 P

15 Special Handling Instructions and Additional Information

Keep away from sources of ignition. Always wear hardhats when working around
-S.T.'s 24 Hrs Contact Name DAN FEARDOR Phone 510-623-0490

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable federal, state and international laws.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name

LANCE E. HADSTELL

Signature

Lance E. Hadstell

Month Day Year
11/21/92

17 Transporter 1 Acknowledgment or Receipt of Materials

Printed/Typed Name

DAN BAILEY

Signature

Dan Bailey

Month Day Year
11/21/92

18 Transporter 2 Acknowledgment or Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19 Discrepancy Indication Space

20 Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19

Printed/Typed Name

DAVID SATO

Signature

DAVE SATO

Month Day Year
12/11/92

DO NOT WRITE BELOW THIS LINE

KTW & Associates 43289 Osgood Road Fremont, CA 94539	Client Project ID: Copper and Brass Sales, Emeryville	Date Sampled: 12/14/92
	Client Contact: John Sutfin	Date Received: 12/15/92
	Client P.O: A3833-CBS	Date Extracted: 12/15/92
		Date Analyzed: 12/15-12/17/92

Low Boiling Point (C6-C12) TPH* as Gasoline and BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(G) ⁺	Benzene	Toluene	Ethyl Benzene	Xylenes	% Rec. Surrogate
21034	W. END	S	6.5,g	ND	ND	ND	ND	96
21035	E. END	S	300,g,e	0.39	0.38	1.2	2.9	117 [#]
Detection Limit unless otherwise stated; ND means Not Detected	W	50 ug/L	0.5	0.5	0.5	0.5	0.5	
	S	1.0 mg/kg	0.005	0.005	0.005	0.005	0.005	

*water samples are reported in ug/L and soils in mg/kg

*cluttered chromatogram; sample peak co-elutes with surrogate peak

⁺The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) predominately unmodified or weakly modified gasoline; b) heavier gasoline range compounds predominate (aged gasoline?); c) lighter gasoline range compounds predominate (the most mobile gasoline compounds); d) heavy and light gasoline range compounds predominate (aged gasoline together with introduced light compounds?); e) gasoline range compounds predominate; no recognizable pattern; f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds predominate.

14 Edward Hamilton, Lab Director

QC REPORT

Date: 12/13-12/15/92

Matrix: Soil

Analyte	Concentration (mg/kg)			Amount Spiked	% Recovery		
	Sample	MS	MSD		MS	MSD	RPD
TPH (gas)	0.000	1.664	1.774	2.03	82	87	6.4
Benzene	0.000	0.188	0.192	0.2	94	96	2.1
Toluene	0.012	0.212	0.218	0.2	100	103	2.8
Ethyl Benzene	0.000	0.206	0.216	0.2	103	108	4.7
Xylenes	0.000	0.612	0.644	0.6	102	107	5.1
TPH (diesel)	0	158	151	150	105	101	4.5
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$



Chain of Custody Record

12-14-92 21035

43289 Osgood Road, Fremont, CA 94539 (415) 623-0480

DATE 12-14-92 PAGE 1 OF 1

Client: <u>COPPER AND BRASS SALES</u>				PARAMETERS										OTHERS		NUMBER OF CONTAINERS	OBSERVATIONS/ COMMENTS														
Address: <u>1295 67TH</u> <u>EMERYVILLE</u>				CAM METALS (18)	PR. POLLUTANT METALS (13)	GENERAL MINERALS	OIL & GREASE	TOG	BASE/NEU/ACIDS (ORGANICS)	PESTICIDES	VOLATILE ORGANICS (601/602)	VOLATILE ORGANICS (624)	TPH-G	TPH-D	BTXE																
Project: _____																SAMPLERS SIGNATURE															
SAMPLE NO.	DATE	TIME	LOCATION																												
W. END	12-14	3:25P	TANK PIT											X	X																
E. END	12-14	3:35P	TANK PIT											X	X																
No. 21034																															
No. 21035																															
TOTAL # OF CONTAINERS <u>2</u>																															
METHOD OF SHIPMENT																															
SPECIAL HANDLING/ T.A.T.																															
<u>Standard</u>																															
RELINQUISHED BY <u>Tan Corcoran</u>				DATE <u>12/14/92</u>				RECEIVED BY <u>Cindy Sheerwood</u>				DATE <u>12/14/92</u>				RELINQUISHED BY <u>Cindy Sheerwood</u>				DATE <u>12/15/92</u>				RECEIVED BY <u>Mick Mirhallo</u>				DATE <u>12/15/92</u>			
TIME <u>5:50 PM</u>				TIME <u>5:50 PM</u>				TIME <u>5:50 PM</u>				TIME <u>8:55 AM</u>				TIME <u>8:55 AM</u>				TIME <u>8:55 AM</u>				TIME <u>8:55 AM</u>							
KW Associates				KW Associates				KW Associates				KW Associates				CCT Carrier #719				CCT Carrier #719				CCT Carrier #719							
RELINQUISHED BY <u>Mick Mirhallo</u>				DATE <u>12-15-92</u>				RECEIVED BY <u>Ed Hamilton</u>				DATE <u>12-15-</u>				RELINQUISHED BY <u>Mick Mirhallo</u>				DATE <u>12-15-</u>				RECEIVED BY <u>Ed Hamilton</u>				DATE <u>12-15-</u>			
TIME <u>5:45</u>				TIME <u>5:45</u>				TIME <u>5:45</u>				TIME <u>5:45</u>				TIME <u>5:45</u>				TIME <u>5:45</u>				TIME <u>5:45</u>							
CCT Carrier #719				NAZ				NAZ				ICE/TO <input checked="" type="checkbox"/>				GOOD CONDITION <input checked="" type="checkbox"/>				HEAD SPACE ABSENT <input checked="" type="checkbox"/>				PRESERVATIVE <input checked="" type="checkbox"/>				APPROPRIATE CONTAINERS <input checked="" type="checkbox"/>			








APPENDIX B

BORING LOGS AND WELL CONSTRUCTION DATA





LITHOLOGY

SAMPLE DATA

Soil Boring B-1

Depth (feet)	Borehole Grouted	Graphic Log	Sample No. and Interval	OVM (ppm)
—		 CONCRETE	—	—
—		 SANDY CLAY (CL), yellowish brown (10YR5/6), moist, fine sand, soft, low plasticity	—	—
—		 SILTY CLAY (CL), dark gray (5Y4/1), low plasticity, stiff.	—	—
5		 SANDY CLAY (CL), yellowish brown, (10YR5/6) moist fine sand, soft.	■ B-1-5	0
—		 GRAVELLY SANDY CLAY (CL), dark yellowish brown, (10YR4/4), moist, fine subangular gravel, medium and coarse sand.	—	—
—		 SILTY CLAY (CL), yellowish brown, (10YR4/4), moist, stiff, low plasticity.	■ B-1-8	0
10		TD=9'		

Explanation:

Clay	Silt	Sand	Gravel
			

Drilling Method: HSA
 Sampling Method: Split spoon
 Drilling Company: Gregg Drilling
 Driller: Mo

Permit No.: 93373
 Hydrogeologist: J. Hennler
 R.G. #4605

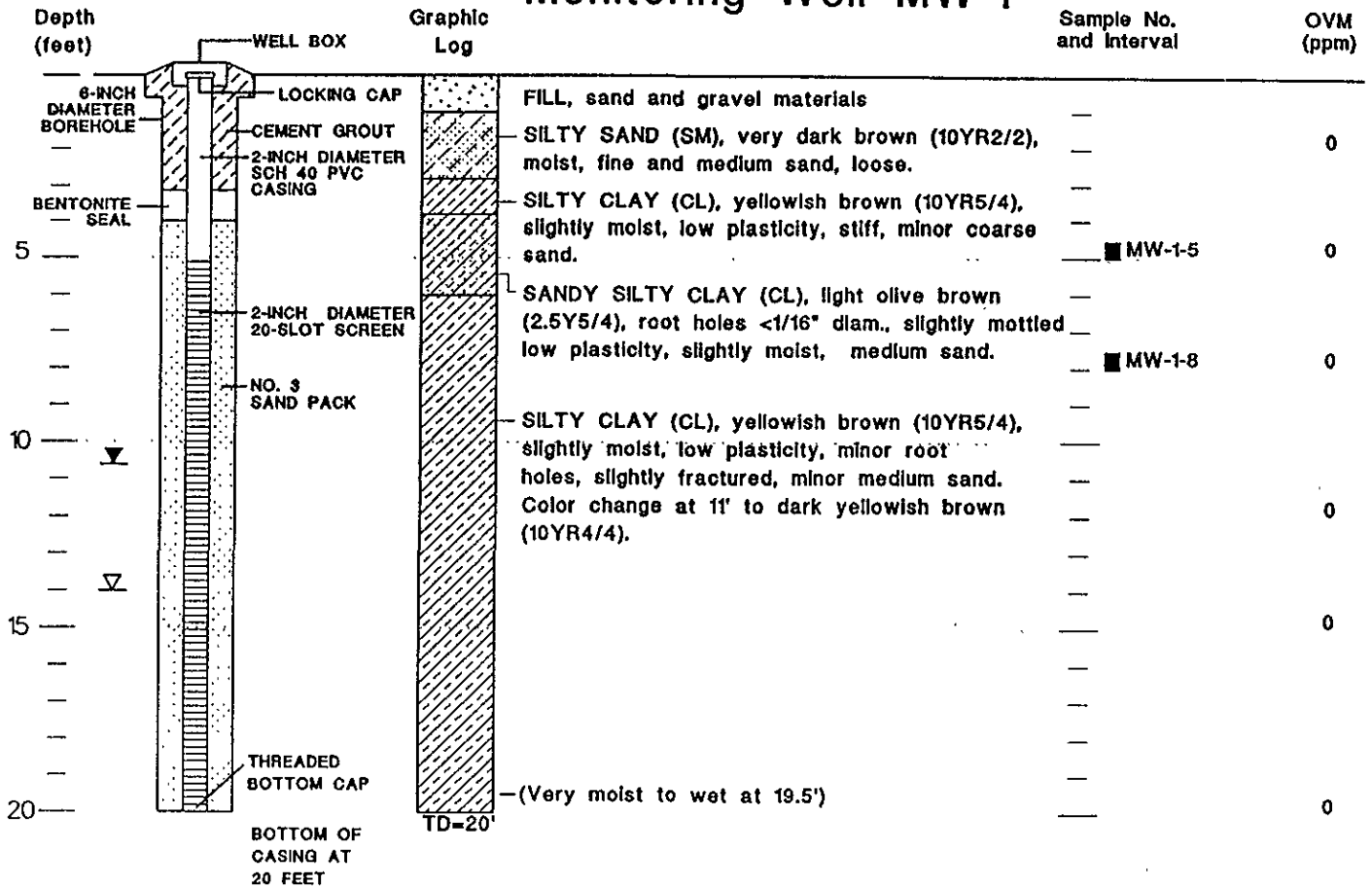
AZURE ENVIRONMENTAL		Figure B-1: Soil Boring Lithology and Sample Data
Project No. 119-001	July 16, 1993	
Copper and Brass Sales Facility * Emeryville		

WELL CONSTRUCTION

LITHOLOGY

SAMPLE DATA

Monitoring Well MW-1



Explanation:



▽ Water level measured at time of drilling
 ▼ Water level measured on July 29, 1993

Drilling Method: HSA
 Sampling Method: Split spoon
 Drilling company: Gregg Drilling
 Driller: Mo

Permit No.: 93373
 Hydrogeologist: J. Hennier
 R.G. #4605

AZURE ENVIRONMENTAL

Figure B-2: Boring Lithology and Monitoring Well Construction

Project No. 119-001

July 16, 1993

Copper and Brass Sales Facility • Emeryville

APPENDIX C
LABORATORY CERTIFICATES
MARCH 1994 GROUND-WATER SAMPLES

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172

AIHA Accreditation: 11134

PAGE 1

AZURE ENVIRONMENTAL
1001 LINCOLN AVENUE
SAN RAFAEL, CA 94901

REPORT DATE: 04/11/94

DATE(S) SAMPLED: 03/29/94

DATE RECEIVED: 03/30/94

ATTN: JEFF HENNIER
CLIENT PROJ. ID: 119.001

AEN WORK ORDER: 9403333

P.O. NUMBER: 119.001

PROJECT SUMMARY:

On March 30, 1994, this laboratory received 1 water sample(s).

Client requested the sample be analyzed for organic parameters. Sample identification, methodologies, results and dates analyzed are summarized on the following pages.

Please see quality control report for a summary of QC data pertaining to this project.

If you have any questions, please contact Client Services at (510) 930-9090.



Larry Klein
General Manager

AZURE ENVIRONMENTAL

SAMPLE ID: MW-1
AEN LAB NO: 9403333-01
AEN WORK ORDER: 9403333
CLIENT PROJ. ID: 119.001

DATE SAMPLED: 03/29/94
DATE RECEIVED: 03/30/94
REPORT DATE: 04/11/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	04/06/94
Toluene	108-88-3	ND	0.5	ug/L	04/06/94
Ethylbenzene	100-41-4	ND	0.5	ug/L	04/06/94
Xylenes, Total	1330-20-7	ND	2	ug/L	04/06/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	04/06/94
#Extraction for Diesel/Oil	EPA 3510	-		Extrn Date	03/31/94
TPH as Diesel	GC-FID	ND	0.05	mg/L	04/01/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9403333

CLIENT PROJECT ID: 119.001

Quality Control Summary

All laboratory quality control parameters were found to be within established limits.

Definitions

The following abbreviations are found throughout the QC report:

- ND = Not Detected at or above the reporting limit
- RPD = Relative Percent Difference
- < = Less Than

QUALITY CONTROL DATA

DATE EXTRACTED: 03/28/94
 DATE ANALYZED: 03/31/94
 CLIENT PROJ. ID: 119.001

AEN JOB NO: 9403333
 SAMPLE SPIKED: DI WATER
 INSTRUMENT: C

METHOD SPIKE RECOVERY SUMMARY
 TPH EXTRACTABLE WATER
 METHOD: EPA 3510 GCFID

ANALYTE	Spike Added (mg/L)	Average Percent Recovery	RPD
Diesel	2.10	80	4

CURRENT QC LIMITS

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Diesel	(63-109)	10

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

QUALITY CONTROL DATA

CLIENT PROJ. ID: 119.001

AEN JOB NO: 9403333

INSTRUMENT: F

SURROGATE STANDARD RECOVERY SUMMARY
METHOD: EPA 8020, 5030 GCFID
(WATER MATRIX)

Date Analyzed	SAMPLE IDENTIFICATION		SURROGATE RECOVERY (PERCENT)
	Client Id.	Lab Id.	Fluorobenzene
04/06/94	MW-1	01	101

CURRENT QC LIMITS

<u>ANALYTE</u>	<u>PERCENT RECOVERY</u>
Fluorobenzene	(70-115)

QUALITY CONTROL DATA

DATE ANALYZED: 04/05/94
CLIENT PROJ. ID: 119.001

AEN JOB NO: 9403333
SAMPLE SPIKED: LCS
INSTRUMENT: F

LABORATORY CONTROL SAMPLE
METHOD: EPA 8020, 5030 GCFID
(WATER MATRIX)

ANALYTE	Spike Added (ug/L)	Percent Recovery
Benzene	10.0	100
Toluene	34.7	103
Hydrocarbons as Gasoline	500	86

CURRENT QC LIMITS

<u>Analyte</u>	<u>Percent Recovery</u>
Benzene	(65-122)
Toluene	(67-124)
Gasoline	(60-125)

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

*** END OF REPORT ***

Reporting Information:

1. Client: Azure Env.
 Address: 1001 Lincoln Ave
San Rafael CA
 Contact: Jeff Harrington
 Alt. Contact: 415 471 7413

American Environmental Network

3440 Vincent Road, Pleasant Hill, CA 94523
 Phone (510) 930-9090
 FAX (510) 930-0256

AEN

R-3, S-2

REQUEST FOR ANALYSIS / CHAIN OF CUSTODY

Lab Job Number: 9403333
 Lab Destination: _____
 Date Samples Shipped: _____
 Lab Contact: Robin
 Date Results Required: usual turnaround
 Date Report Required: _____
 Client Phone No.: 415/435-9740
 Client FAX No.: 435-6062

Address Report To:

2. AS ABOVE

Send Invoice To:

3. _____

Send Report To: 1 or 2 (Circle one)

Client P.O. No.: 119-001 Client Project I.D. No.: 119-001

Sample Team Member (s) GTW

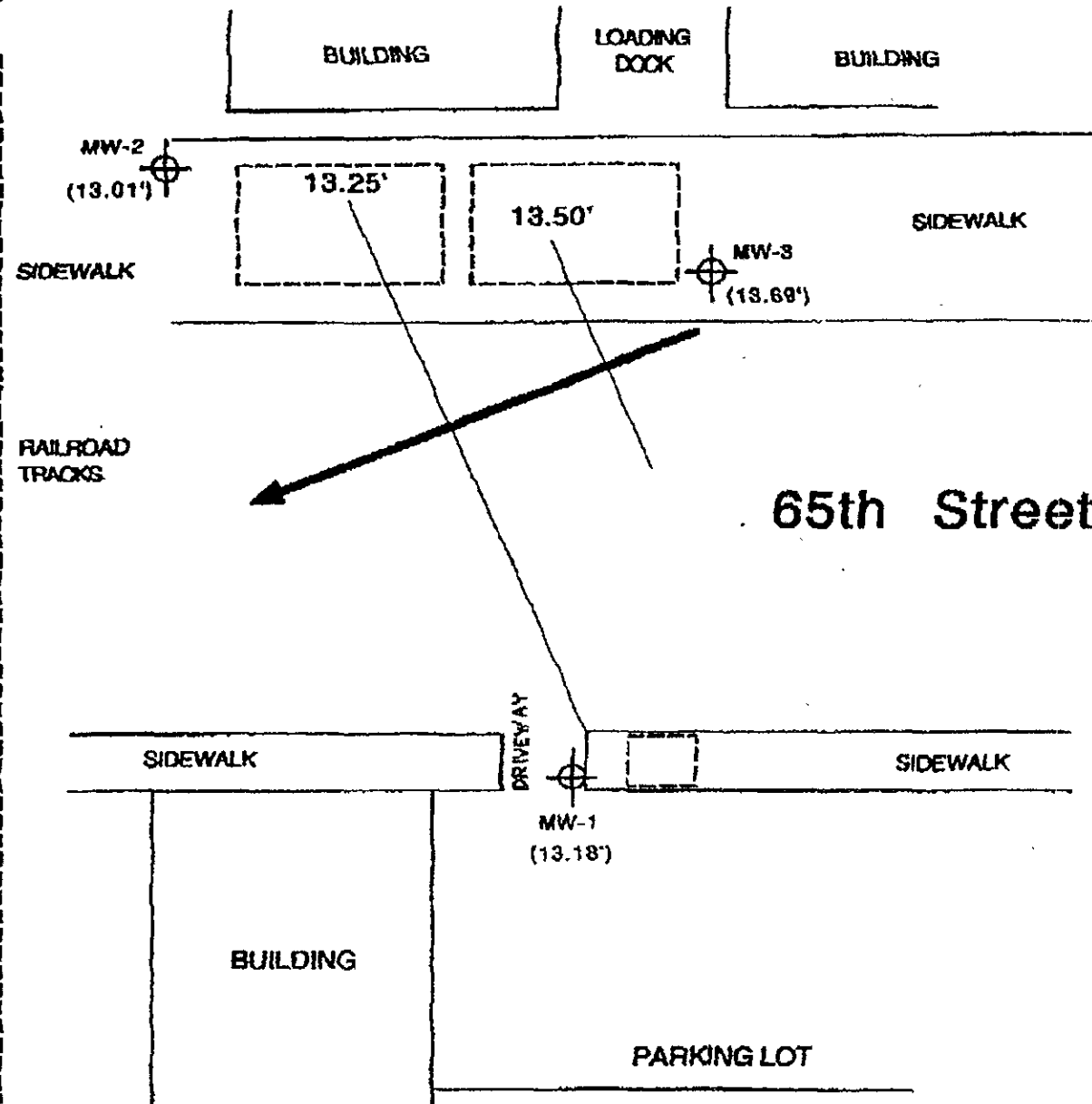
Lab Number	Client Sample Identification	Time Air Volume	Date/Time Collected	Sample Type*	Pres.	No. of Cont.	Type of Cont.	ANALYSIS	Comments / Hazards
<u>01A-D</u>	<u>MW-1</u>	<u>1:15</u>	<u>3/29/94</u>	<u>H₂O</u>	<u>4</u>	<u>5</u>	<u>3-VIALS 2-ANAL</u>	<u>TPH (D) TPH (G) BTEX</u>	<u>Timbers, 2 more rec'd</u>

Relinquished by: <u>[Signature]</u>	DATE <u>4-1-94</u> TIME _____	Received by: <u>[Signature]</u>	DATE <u>3/29/94</u> TIME <u>4:00</u>
Relinquished by: <u>[Signature]</u>	DATE <u>3/30/94</u> TIME <u>10:30</u>	Received by: <u>[Signature]</u>	DATE <u>3/30/94</u> TIME <u>10:30</u>
Relinquished by: <u>[Signature]</u>	DATE <u>3/30/94</u> TIME <u>1200</u>	Received by: <u>Denise Harrington</u>	DATE <u>3/30/94</u> TIME <u>1200</u>
Method of Shipment	Lab Comments		

*Sample type (Specify): 1) 37mm 0.8 µm MCEF 2) 25mm 0.8 µm MCEF 3) 25mm 0.4 µm polycarb. filter
 4) PVC filter, diam. _____ pore size _____ 5) Charcoal tube 6) Silica gel tube 7) Water 8) Soil 9) Bulk Sample
 10) Other _____ 11) Other _____




APPENDIX D

**POTENTIOMETRIC SURFACE MAP
FROM THE NEARBY OLIVER RUBBER FACILITY**



65th Street

LEGEND

-  MW-1
Monitoring well with groundwater elevation referenced to project datum
-  Groundwater elevation contour, approximately located
-  Groundwater flow direction

0 ft.  20 ft.
SCALE

GROUNDWATER ELEVATION CONTOUR MAP (7/14/93)	
Oliver Rubber 1200 65th Street Emeryville, California	
Aqua Science Engineers	Figure 3

BUILDING LOADING DOCK BUILDING

MW-2
(15.41')

MW-3
(16.34')

SIDEWALK

SIDEWALK

RAILROAD TRACKS

65th Street

SIDEWALK

DRIVEWAY

SIDEWALK

MW-1
(16.00')

15.50'

15.75'


16.00'

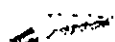
16.25'

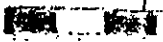
BUILDING

PARKING LOT

LEGEND

MW-1
 Monitoring Well with groundwater depth in feet above mean sea level

 Groundwater Gradient direction

0 ft.  20 ft.
SCALE



**GROUNDWATER GRADIENT
MAP (1/18/93)**

Oliver Rubber
1200 65th Street
Emeryville, California

Aqua Science Engineers | Figure 3