aqua science engineers inc.

April 22, 1997

# QUARTERLY
# GROUNDWATER MONITORING REPORT
# APRIL 1, 1997 SAMPLING

for

Custom Alloy Scrap Sales
2711 Union Street
Oakland, California



REGISTERED PROFESSIONAL ENGINEER
DAVID M. SCHULTZ
No. 38738
Exp. 4-97
CIVIL
STATE OF CALIFORNIA

Prepared by:
AQUA SCIENCE ENGINEERS, INC.
2411 Old Crow Canyon Road, #4
San Ramon, CA 94583
(510) 820-9391

## 1.0 INTRODUCTION

This report details the quarterly groundwater sampling for the subject site, as required by the Alameda County Health Care Services Agency (ACHCSA) and the Regional Water Quality Control Board (RWQCB). Aqua Science Engineers, Inc. (ASE) has prepared this report on behalf of Mr. Eugene Teasley of Gardiner Manufacturing, owner of the property.

## 2.0 SITE BACKGROUND

The site was previously occupied by Gardiner Manufacturing as a machining and press operation. Beginning in 1985, Custom Alloy Scrap Sales occupied the property as a metal scrap recycling operation. Custom Alloy Scrap Sales is currently the tenant on the property.

In August 1990, MacKinnon Environmental Consulting of Walnut Creek, California conducted a limited soil assessment at the site. Up to 4,000 parts per million (ppm) oil and grease (O&G) and 2,600 ppm total petroleum hydrocarbons as diesel (TPH-D) were detected in the soil samples collected during the assessment.

In March 1996, ASE drilled ten soil borings at the site. Up to 4,300 ppm TPH-D, 4,500 ppm O&G, 0.01 ppm toluene, 0.0092 ppm ethylbenzene, 0.011 ppm total xylenes, 0.055 ppm cis-1,2-dichloroethene (cis-1,2-DCE), 0.018 ppm trans-1,2-dichloroethene (trans-1,2-DCE) and 0.052 ppm trichloroethene (TCE) were detected in the soil samples collected during this assessment. None of these volatile organic compound (VOC) concentrations, nor any of the metal concentrations detected, exceeded US EPA Region IX Preliminary Remediation Goals (PRGs) for Industrial Soil. Up to 7,100 parts per billion (ppb) O&G, 43 ppb vinyl chloride, 2.1 ppb 1,1-dichloroethene, 22 ppb 1,1-dichloroethane, 78 ppb cis-1,2-DCE, 15 ppb trans-1,2-DCE, 100 ppb TCE, 1 ppb tetrachloroethene (PCE), 21 ppb chlorobenzene, and 39 ppb 1,2-dichlorobenzene were detected in groundwater samples collected from the site. Several of these VOC concentrations exceeded California Department of Toxic Substances Control (DTSC) maximum contaminant levels (MCLs) for drinking water.

In September 1996, ASE drilled four soil borings at the site and installed groundwater monitoring wells MW-1 through MW-4 in the borings. Up to 350 ppm TPH-D were detected in the soil samples collected from borings MW-2 and MW-4, although the chromatogram pattern on these samples did not resemble the diesel standard. Motor

oil range hydrocarbons were detected in the soil samples collected from boring MW-4. 0.048 ppm flourene was detected in the soil sample collected from 6.0-feet bgs in boring MW-4. Relatively high VOC concentrations were detected in groundwater samples collected from all four site monitoring wells. Up to 2,200 ppb TCE was detected in groundwater samples collected at the site. In addition, PCE, benzene, vinyl chloride, cis-1,2-DCE, trans-1,2-DCE and chlorobenzene were detected in groundwater samples collected at the site at concentrations exceeding DTSC MCLs, especially in groundwater samples collected from monitoring well MW-2.

## 3.0 GROUNDWATER GRADIENT AND DIRECTION

ASE surveyed the top of casing elevation of each well relative to a site datum on October 3, 1996. An assumed site datum elevation of 15-feet above mean sea level (msl) was interpolated from the USGS Oakland West, California 7.5 Minute Quadrangle (1980). The top of casing elevation of monitoring well MW-1 was set at 15-feet, and the top of casing elevations of monitoring wells MW-2, MW-3 and MW-4 were surveyed relative to monitoring well MW-1. The depth to groundwater was measured in each well prior to sampling on April 1, 1997 with an electric water level sounder. Depth to groundwater measurements are presented in Table One, and groundwater elevation contours are plotted on Figure 2. Groundwater appears to flow to the west beneath the site at a gradient of 0.017-feet/foot.

## 4.0 GROUND WATER SAMPLE COLLECTION AND CHEMICAL ANALYSIS

On April 1, 1997, ASE environmental specialist Scott Ferriman arrived on-site. After measuring and recording the depths to groundwater in monitoring wells MW-1, MW-2, MW-3, and MW-4, ASE purged four well casing volumes of groundwater from each well using pre-cleaned, dedicated polyethylene bailers. No free-floating hydrocarbons or sheen was encountered in any of the wells. The pH, temperature and conductivity of the purge water were monitored during evacuation, and samples were not collected until these parameters stabilized. Groundwater samples were collected from the wells using dedicated polyethylene bailers. Groundwater samples were decanted from the bailers into 40-ml volatile organic analysis (VOA) vials and 1-liter amber glass bottles. All samples were preserved with hydrochloric acid as appropriate, labeled, placed in protective foam sleeves and placed on

ice for transport to Chromalab of Pleasanton, California (ELAP# 1094) under chain-of-custody. The analytical report and chain-of-custody are included in Appendix A. Well Sampling Field Logs are attached in Appendix B. Well purge water was placed in a 55-gallon steel DOT 17H drum and stored on-site pending analytical results.

The groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-G) by EPA Method 5030/8015M, TPH-D by EPA Method 3510/8015M, benzene, toluene, ethylbenzene and xylenes (BTEX) and MTBE by EPA Method 8020, VOCs by EPA Method 8010 and polynuclear aromatic hydrocarbons (PNAs) by EPA Method 8310. The results are tabulated below in Tables Two and Three. No PNAs were detected in any of the groundwater samples analyzed; therefore, PNAs were not included in the tables.

## 5.0 CONCLUSIONS

Relatively high VOC concentrations, above California Department of Toxic Substances Control (DTSC) maximum contaminant levels (MCLs) for drinking water, continue to be detected in groundwater samples collected from all four monitoring wells. The highest concentration of PCE at the site, 910 ppb, was detected in groundwater samples collected from upgradient monitoring well MW-3, and may indicate an off-site source. TCE concentrations ranged from 18 ppb to 1,500 ppb. Benzene, vinyl chloride, trans-1,2-DCE, cis-1,2-DCE, TCE, PCE, chlorobenzene and 1,4-DCB were detected in groundwater samples collected at the site at concentrations exceeding DTSC MCLs.

## 6.0 RECOMMENDATIONS

ASE recommends that groundwater samples continue to be collected at the site on a quarterly basis. After the next sampling period, ASE recommends that a risk assessment be performed to determine whether the site is suitable for closure.

## 7.0 REPORT LIMITATIONS

The results of this assessment represent conditions at the time of the groundwater sampling for the specific parameters analyzed by the laboratory. It does not fully characterize the site for parameters not analyzed by the laboratory. All of the laboratory work cited in this report was prepared under the direction of independent CAL-EPA

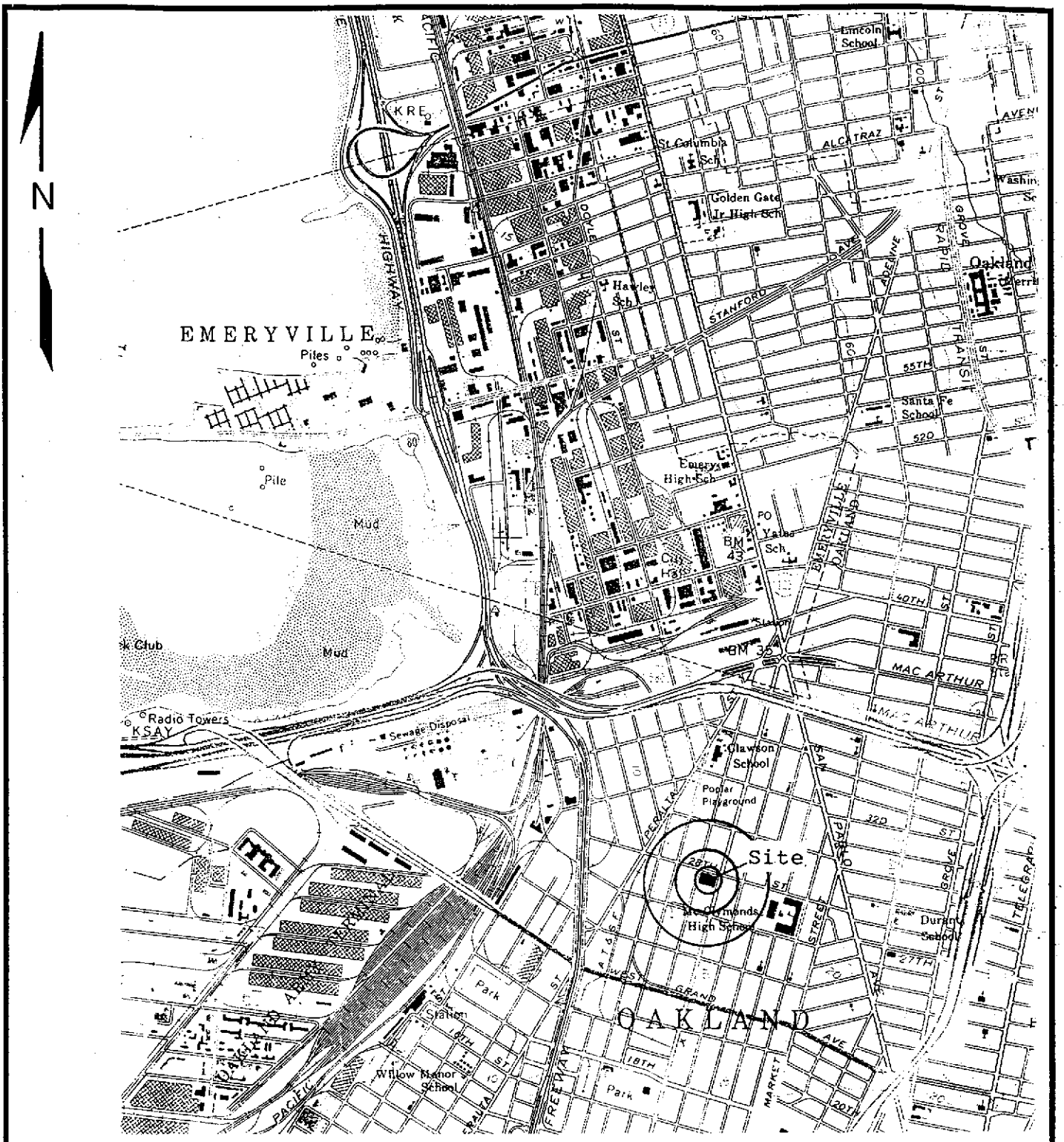
certified laboratory. The independent laboratory is solely responsible for the contents and conclusions of the chemical analysis data.

Aqua Science Engineers appreciates the opportunity to continue providing environmental services for this project. Should you have any questions or comments, please feel free to call us at (510) 820-9391.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.

Scott Ferriman
Environmental Specialist

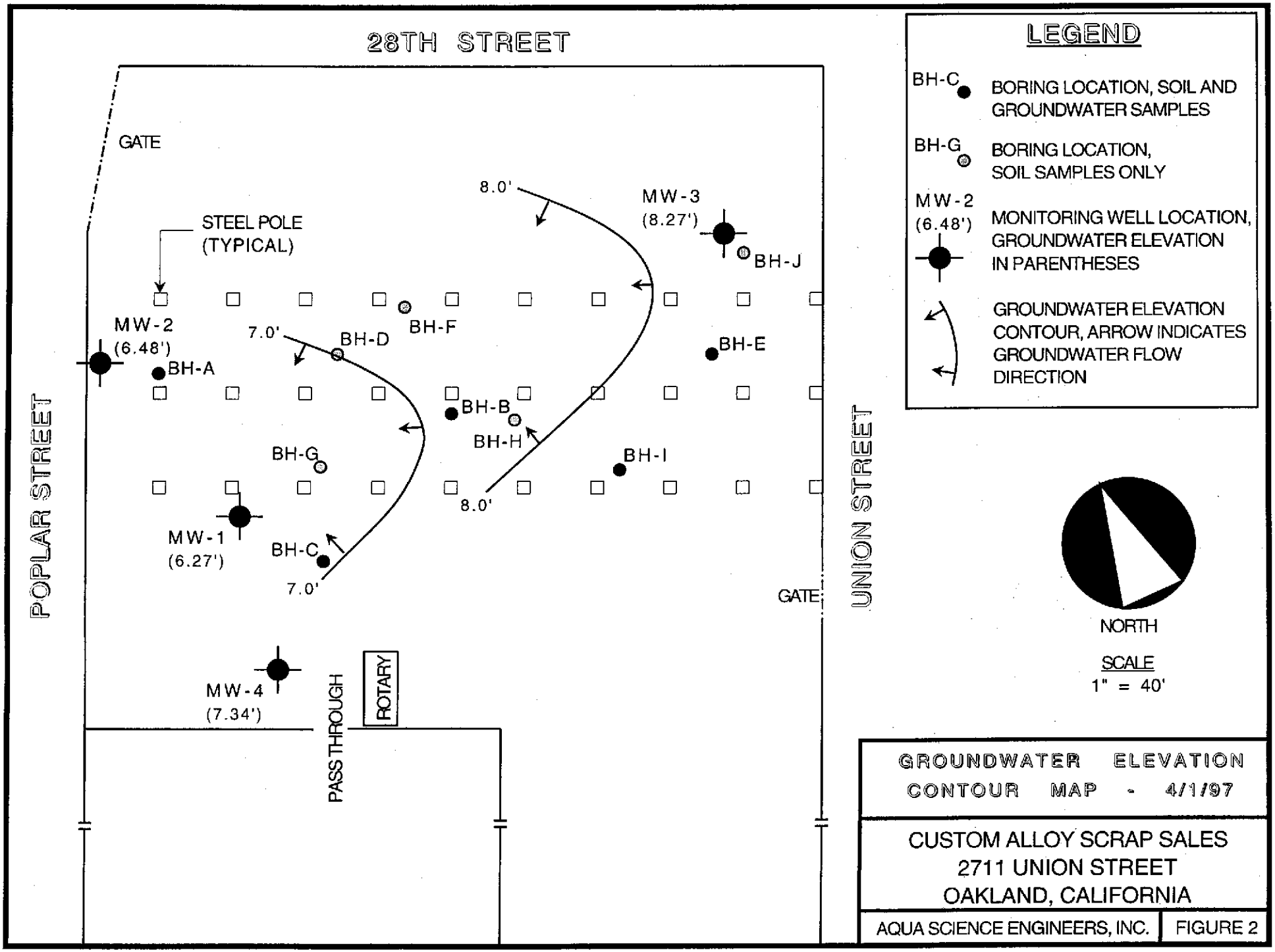



# SITE LOCATION MAP

Custom Alloy Scrap Sales
Poplar and 28th Street
Oakland, California

BASE: USGS Oakland West 7.5 minute quadrangle topographic map, dated 1980, scale 1:24,000.

Aqua Science Engineers, Inc. | Figure 1




GROUNDWATER ELEVATION CONTOUR MAP - 4/1/97

CUSTOM ALLOY SCRAP SALES
2711 UNION STREET
OAKLAND, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC. | FIGURE 2

## TABLE ONE

Summary of Groundwater Well Survey Data

| Well I.D. | Date of Measurement | Top of Casing Elevation (relative to project datum) | Depth to Water (feet) | Groundwater Elevation (project data) |
|---|---|---|---|---|
| MW-1 | 10-03-96 | 15.00 | 9.52 | 5.48 |
| | 01-07-97 | | 6.74 | 8.26 |
| | 04-01-97 | | 8.73 | 6.27 |
| MW-2 | 10-03-96 | 15.44 | 9.75 | 5.69 |
| | 01-07-97 | | 6.90 | 8.54 |
| | 04-01-97 | | 8.96 | 6.48 |
| MW-3 | 10-03-96 | 14.92 | 7.75 | 7.17 |
| | 01-07-97 | | 4.27 | 10.65 |
| | 04-01-97 | | 6.65 | 8.27 |
| MW-4 | 10-03-96 | 14.98 | 8.73 | 6.25 |
| | 01-07-97 | | 5.28 | 9.70 |
| | 04-01-97 | | 7.64 | 7.34 |

## TABLE TWO
Summary of Chemical Analysis of **WATER** Samples
TPH-G, TPH-D, BTEX and MTBE
(All Results are in **parts per billion**)

| Sample I.D. | TPH-G | TPH-D | Benzene | Toluene | Ethyl Benzene | Total Xylenes | MTBE |
|---|---|---|---|---|---|---|---|
| MW-1 | | | | | | | |
| 10/03/96 | 83 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <5 |
| 01/07/97 | <50 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <5 |
| 04/01/97 | <50 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <5 |
| MW-2 | | | | | | | |
| 10/03/96 | 210 | 2,000* | 1.1 | <0.5 | <0.5 | <0.5 | 130 |
| 01/07/97 | 320 | 3,200* | 2.0 | 0.86 | <0.5 | <0.5 | <50 |
| 04/01/97 | <50 | 850* | 1.1 | <0.5 | <0.5 | 0.52 | <5 |
| MW-3 | | | | | | | |
| 10/03/96 | 200 | 53 | <0.5 | 1.4 | <0.5 | <0.5 | <5 |
| 01/07/97 | <50 | <50 | <0.5 | 0.68 | <0.5 | <0.5 | <5 |
| 04/01/97 | <50 | <50 | <0.5 | 0.61 | <0.5 | <0.5 | <5 |
| MW-4 | | | | | | | |
| 10/03/96 | 120 | 1,400* | <0.5 | 3.8 | <0.5 | <0.5 | <5 |
| 01/07/97 | <50 | 2,100* | <0.5 | 0.91 | <0.5 | <0.5 | <5 |
| 04/01/97 | <50 | 750* | <0.5 | <0.5 | <0.5 | <0.5 | <5 |
| EPA METHOD | 5030/ 8015M | 3510/ 8015M | 8020 | 8020 | 8020 | 8020 | 8020 |
| DTSC MCLs | NE | NE | 1 | 100* | 680 | 1,750 | NE |

Notes:
DTSC MCL = California Department of Toxic Substance Control maximum contaminant level for drinking water.
NE = DTSC MCLs and RALs not established
* = Chromatogram pattern does not resemble diesel fuel; hydrocarbons in motor oil range detected.
** = DTSC recommended action level (RAL); MCL not established

# TABLE THREE

Summary of Chemical Analysis of **WATER** Samples
Volatile Organic Compounds (VOC's)
EPA Method 8240 or 8010
**(All Results are in parts per billion)**

| Sample I.D. | VC | 1,1-DCE | trans-1,2-DCE | cis-1,2-DCE | 1,1-DCA | 1,1,1-TCA | TCE | PCE | CB | 1,3-DCB | 1,4-DCB | 1,2-DCB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | | | | | | | | | | | | |
| 10/03/96 | < 20 | < 20 | < 20 | 61 | < 20 | < 20 | 2,200 | < 20 | < 20 | < 20 | < 20 | < 20 |
| 01/07/97 | 2.0 | 0.70 | 2.7 | 73 | < 0.5 | 1.8 | 1,500 | 18 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| 04/01/97 | < 10 | < 10 | < 10 | 71 | < 10 | < 10 | 1,500 | 18 | < 10 | < 10 | < 10 | < 10 |
| MW-2 | | | | | | | | | | | | |
| 10/03/96 | 160 | < 20 | 47 | 200 | < 20 | < 20 | 220 | < 20 | 32 | < 20 | < 20 | < 20 |
| 01/07/97 | 95 | 4.5 | 42 | 290 | 4.7 | < 0.5 | 270 | 18 | 74 | 0.90 | 4.8 | 35 |
| 04/01/97 | 120 | 5.3 | 53 | 240 | 4.7 | < 0.5 | 200 | 16 | 97 | 1.4 | 7.4 | 64 |
| MW-3 | | | | | | | | | | | | |
| 10/03/96 | < 20 | < 20 | < 20 | < 20 | < 20 | < 20 | 120 | 520 | < 20 | < 20 | < 20 | < 20 |
| 01/07/97 | < 20 | < 20 | < 20 | < 20 | < 20 | < 20 | 300 | 1,700 | < 20 | < 20 | < 20 | < 20 |
| 04/01/97 | < 20 | < 20 | < 20 | < 20 | < 20 | < 20 | 190 | 910 | < 20 | < 20 | < 20 | < 20 |
| MW-4 | | | | | | | | | | | | |
| 10/03/96 | < 20 | < 20 | < 20 | 28 | < 20 | < 20 | 270 | < 20 | < 20 | < 20 | < 20 | < 20 |
| 01/07/97 | 1.7 | < 0.5 | < 0.5 | 58 | < 0.5 | < 0.5 | 18 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| 04/01/97 | 25 | 1.5 | 6.2 | 100 | 1.1 | < 0.5 | 18 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| DTSC MCL | 0.5 | 6 | 10 | 6 | 5 | 200 | 5 | 5 | 30 | NE | 5 | NE |

Notes:
NE = DTSC MCL not established
VC = vinyl chloride
1,1-DCE = 1,1-dichloroethene
trans 1,2-DCE = trans-1,2-dichloroethene
cis 1,2-DCE = cis-1,2-dichloroethene
1,1-DCA = 1,1-dichloroethane
1,1,1-TCA = 1,1,1-trichlororethane
TCE = trichloroethene
PCE = tetrachloroethene
CB = chlorobenzene
1,3-DCB = 1,3-dichlorobenzene
1,4-DCB = 1,4-dichlorobenzene
1,2-DCB = 1,2-dichlorobenzene

# APPENDIX A

California EPA Certified Laboratory
Report of Groundwater Samples
and
Chain of Custody Record

# CHROMALAB, INC.

Environmental Services (SDB)

April 15, 1997 *Submission #:* 9704031

AQUA SCIENCE ENGINEERS INC

*Atten:* Scott Ferriman.

*Project:* CUSTOM ALLOY SCRAP SALES *Project#:* 2971
*Received:* April 2, 1997

*re:* 2 samples for TPH - Diesel analysis.
*Method:* *EPA 8015M*

*Matrix:* WATER *Extracted:* April 8, 1997
*Sampled:* April 1, 1997 *Run#:* 6184 *Analyzed:* April 9, 1997

| Spl# | CLIENT SPL ID | DIESEL (ug/L) | REPORTING LIMIT (ug/L) | BLANK RESULT (ug/L) | BLANK SPIKE (%) | DILUTION FACTOR |
|---|---|---|---|---|---|---|
| *124168* | MW-1 | N.D. | 50 | N.D. | 91.0 | 1 |
| *124169* | MW-2 | 850 | 50 | N.D. | 91.0 | 1 |

*Note: Hydrocarbon reported is in the late Diesel range, and does not match our Diesel standard.*

Bruce Havlik
Chemist

Alex Tam FOR
Semivolatiles Supervisor

510-837-4853 MV 04/09

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(510) 484-1919 • Facsimile (510) 484-1096
Federal ID #68-0140157

# CHROMALAB, INC.

Environmental Services (SDB)

April 15, 1997 *Submission #:* 9704031

AQUA SCIENCE ENGINEERS INC

*Atten:* Scott Ferriman.

*Project:* CUSTOM ALLOY SCRAP SALES *Project#:* 2971
*Received:* April 2, 1997

*re:* 2 samples for TPH - Diesel analysis.
*Method:* *EPA 8015M*

*Matrix:* WATER *Extracted:* April 8, 1997
*Sampled:* April 1, 1997 *Run#:* 6184 *Analyzed:* April 8, 1997

| Spl# | CLIENT SPL ID | DIESEL (ug/L) | REPORTING LIMIT (ug/L) | BLANK RESULT (ug/L) | BLANK SPIKE (%) | DILUTION FACTOR |
|---|---|---|---|---|---|---|
| *124170* | MW-3 | N.D. | 50 | N.D. | 91.0 | 1 |

*Matrix:* WATER *Extracted:* April 8, 1997
*Sampled:* April 1, 1997 *Run#:* 6184 *Analyzed:* April 9, 1997

| Spl# | CLIENT SPL ID | DIESEL (ug/L) | REPORTING LIMIT (ug/L) | BLANK RESULT (ug/L) | BLANK SPIKE (%) | DILUTION FACTOR |
|---|---|---|---|---|---|---|
| *124171* | MW-4 | 750 | 50 | N.D. | 91.0 | 1 |

*Note: Hydrocarbon reported is in the late Diesel range and does not match our Diesel standard.*

Bruce Havlik
Chemist

Alex Tam
Semivolatiles Supervisor



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(510) 484-1919 • Facsimile (510) 484-1096
Federal ID #68-0140157

# CHROMALAB, INC.

Environmental Services (SDB)

April 15, 1997 *Submission #:* 9704031

AQUA SCIENCE ENGINEERS INC

*Atten:* Scott Ferriman.

*Project:* CUSTOM ALLOY SCRAP SALES *Project#:* 2971
*Received:* April 2, 1997

*re:* One sample for Gasoline BTEX MTBE analysis.
*Method:* SW846 8020A Nov 1990 / 8015Mod

*Client Sample ID:* **MW-1**
*Spl#:* 124168 *Matrix:* WATER
*Sampled:* April 1, 1997 *Run#:* 6208 *Analyzed:* April 9, 1997

| ANALYTE | RESULT (ug/L) | REPORTING LIMIT (ug/L) | BLANK RESULT (ug/L) | BLANK SPIKE (%) | DILUTION FACTOR |
|---|---|---|---|---|---|
| GASOLINE | N.D. | 50 | N.D. | 110 | 1 |
| MTBE | N.D. | 5.0 | N.D. | 90 | 1 |
| BENZENE | N.D. | 0.50 | N.D. | 103 | 1 |
| TOLUENE | N.D. | 0.50 | N.D. | 101 | 1 |
| ETHYL BENZENE | N.D. | 0.50 | N.D. | 98 | 1 |
| XYLENES | N.D. | 0.50 | N.D. | 99 | 1 |

*Note: Hydrocarbon found in Gasoline Range is uncharacteristic of Gasoline Profile. If quantified using Gasoline's response factor, concentration would equal 600 ug/L.*

Marianne Alexander
Gas/BTEX Supervisor

Chip Poalinelli
Operations Manager

# CHROMALAB, INC.

Environmental Services (SDB)

April 15, 1997 *Submission #:* 9704031

AQUA SCIENCE ENGINEERS INC

*Atten:* Scott Ferriman.

*Project:* CUSTOM ALLOY SCRAP SALES *Project#:* 2971
*Received:* April 2, 1997

*re:* One sample for Gasoline BTEX MTBE analysis.
*Method:* SW846 8020A Nov 1990 / 8015Mod

*Client Sample ID:* **MW-2**
*Spl#:* 124169 *Matrix:* WATER
*Sampled:* April 1, 1997 *Run#:* 6208 *Analyzed:* April 9, 1997

| ANALYTE | RESULT (ug/L) | REPORTING LIMIT (ug/L) | BLANK RESULT (ug/L) | BLANK SPIKE (%) | DILUTION FACTOR |
|---|---|---|---|---|---|
| GASOLINE | N.D. | 50 | N.D. | 110 | 1 |
| MTBE | N.D. | 5.0 | N.D. | 90 | 1 |
| BENZENE | 1.1 | 0.50 | N.D. | 103 | 1 |
| TOLUENE | N.D. | 0.50 | N.D. | 101 | 1 |
| ETHYL BENZENE | N.D. | 0.50 | N.D. | 98 | 1 |
| XYLENES | 0.52 | 0.50 | N.D. | 99 | 1 |

*Note: Hydrocarbon found in Gasoline Range is uncharacteristic of Gasoline Profile. If quantified using Gasoline's response factor, concentration would equal 380 ug/L.*

Marianne Alexander
Gas/BTEX Supervisor

Chip Poalinelli
Operations Manager

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Federal ID #68-0140157

# CHROMALAB, INC.

Environmental Services (SDB)

April 15, 1997 *Submission #:* 9704031

AQUA SCIENCE ENGINEERS INC

*Atten:* Scott Ferriman.

*Project:* CUSTOM ALLOY SCRAP SALES *Project#:* 2971
*Received:* April 2, 1997

*re:* One sample for Gasoline BTEX MTBE analysis.
*Method:* SW846 8020A Nov 1990 / 8015Mod

*Client Sample ID:* **MW-3**
*Spl#:* 124170 *Matrix:* WATER
*Sampled:* April 1, 1997 *Run#:* 6208 *Analyzed:* April 9, 1997

| ANALYTE | RESULT (ug/L) | REPORTING LIMIT (ug/L) | BLANK RESULT (ug/L) | BLANK SPIKE (%) | DILUTION FACTOR |
|---|---|---|---|---|---|
| GASOLINE | N.D. | 50 | N.D. | 110 | 1 |
| MTBE | N.D. | 5.0 | N.D. | 90 | 1 |
| BENZENE | N.D. | 0.50 | N.D. | 103 | 1 |
| TOLUENE | 0.61 | 0.50 | N.D. | 101 | 1 |
| ETHYL BENZENE | N.D. | 0.50 | N.D. | 98 | 1 |
| XYLENES | N.D. | 0.50 | N.D. | 99 | 1 |

*Note: Hydrocarbon found in Gasoline Range is uncharacteristic of Gasoline Profile. If quantified using Gasoline's response factor, concentration would equal 500 ug/L.*

Marianne Alexander
Gas/BTEX Supervisor

Chip Poalinelli
Operations Manager



1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096
Federal ID #68-0140157

# CHROMALAB, INC.

Environmental Services (SDB)

April 15, 1997 *Submission #:* 9704031

AQUA SCIENCE ENGINEERS INC

*Atten:* Scott Ferriman.

*Project:* CUSTOM ALLOY SCRAP SALES *Project#:* 2971
*Received:* April 2, 1997

*re:* One sample for Gasoline BTEX MTBE analysis.
*Method:* SW846 8020A Nov 1990 / 8015Mod

*Client Sample ID:* **MW-4**
*Spl#:* 124171 *Matrix:* WATER
*Sampled:* April 1, 1997 *Run#:* 6208 *Analyzed:* April 9, 1997

| ANALYTE | RESULT (ug/L) | REPORTING LIMIT (ug/L) | BLANK RESULT (ug/L) | BLANK SPIKE (%) | DILUTION FACTOR |
|---|---|---|---|---|---|
| GASOLINE | N.D. | 50 | N.D. | 110 | 1 |
| MTBE | N.D. | 5.0 | N.D. | 90 | 1 |
| BENZENE | N.D. | 0.50 | N.D. | 103 | 1 |
| TOLUENE | N.D. | 0.50 | N.D. | 101 | 1 |
| ETHYL BENZENE | N.D. | 0.50 | N.D. | 98 | 1 |
| XYLENES | N.D. | 0.50 | N.D. | 99 | 1 |

*Note: Hydrocarbon found in Gasoline Range is uncharacteristic of Gasoline Profile. If quantified using Gasoline's response factor, concentration would equal 88 ug/L.*

Marianne Alexander
Gas/BTEX Supervisor

Chip Poalinelli
Operations Manager

# CHROMALAB, INC.

Environmental Services (SDB)

April 10, 1997 *Submission #:* 9704031

AQUA SCIENCE ENGINEERS INC

*Atten:* Scott Ferriman.

*Project:* CUSTOM ALLOY SCRAP SALES *Project#:* 2971
*Received:* April 2, 1997

*re:* One sample for Volatile Halogenated Organics analysis.
*Method:* *SW846 Method 8010A July 1992*

*Client Sample ID:* **MW-1**
*Spl#:* 124168 *Matrix:* WATER
*Sampled:* April 1, 1997 *Run#:* 6207 *Analyzed:* April 8, 1997

| ANALYTE | RESULT (ug/L) | REPORTING LIMIT (ug/L) | BLANK RESULT (ug/L) | BLANK SPIKE (%) | DILUTION FACTOR |
|---|---|---|---|---|---|
| VINYL CHLORIDE | N.D. | 10 | N.D. | -- | 20 |
| CHLOROETHANE | N.D. | 10 | N.D. | -- | 20 |
| TRICHLOROFLUOROMETHANE | N.D. | 10 | N.D. | -- | 20 |
| 1,1-DICHLOROETHENE | N.D. | 10 | N.D. | 95.0 | 20 |
| METHYLENE CHLORIDE | N.D. | 100 | N.D. | -- | 20 |
| TRANS-1,2-DICHLOROETHENE | N.D. | 10 | N.D. | -- | 20 |
| CIS-1,2-DICHLOROETHENE | 71 | 10 | N.D. | -- | 20 |
| 1,1-DICHLOROETHANE | N.D. | 10 | N.D. | -- | 20 |
| CHLOROFORM | N.D. | 60 | N.D. | -- | 20 |
| 1,1,1-TRICHLOROETHANE | N.D. | 10 | N.D. | -- | 20 |
| CARBON TETRACHLORIDE | N.D. | 10 | N.D. | -- | 20 |
| 1,2-DICHLOROETHANE | N.D. | 10 | N.D. | -- | 20 |
| TRICHLOROETHENE | 1500 | 10 | N.D. | 97.0 | 20 |
| 1,2-DICHLOROPROPANE | N.D. | 10 | N.D. | -- | 20 |
| BROMODICHLOROMETHANE | N.D. | 10 | N.D. | -- | 20 |
| 2-CHLOROETHYL VINYL ETHER | N.D. | 10 | N.D. | -- | 20 |
| TRANS-1,3-DICHLOROPROPENE | N.D. | 10 | N.D. | -- | 20 |
| CIS-1,3-DICHLOROPROPENE | N.D. | 10 | N.D. | -- | 20 |
| 1,1,2-TRICHLOROETHANE | N.D. | 10 | N.D. | -- | 20 |
| TETRACHLOROETHENE | 18 | 10 | N.D. | -- | 20 |
| DIBROMOCHLOROMETHANE | N.D. | 10 | N.D. | -- | 20 |
| CHLOROBENZENE | N.D. | 10 | N.D. | 92.0 | 20 |
| BROMOFORM | N.D. | 10 | N.D. | -- | 20 |
| 1,1,2,2-TETRACHLOROETHANE | N.D. | 10 | N.D. | -- | 20 |
| 1,3-DICHLOROBENZENE | N.D. | 10 | N.D. | -- | 20 |
| 1,4-DICHLOROBENZENE | N.D. | 10 | N.D. | -- | 20 |
| 1,2-DICHLOROBENZENE | N.D. | 10 | N.D. | -- | 20 |
| TRICHLOROTRIFLUOROETHANE | N.D. | 10 | N.D. | -- | 20 |
| CHLOROMETHANE | N.D. | 20 | N.D. | -- | 20 |
| BROMOMETHANE | N.D. | 20 | N.D. | -- | 20 |

*Note: SAMPLE WAS ANALYZED USING EPA METHOD 8240*

Oleg Nemtsov
Chemist

Chip Poalinelli
Operations Manager

510-837-4853 MV 04/09

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096
Federal ID #68-0140157

# CHROMALAB, INC.

Environmental Services (SDB)

April 10, 1997 *Submission #:* 9704031

AQUA SCIENCE ENGINEERS INC

*Atten:* Scott Ferriman.

*Project:* CUSTOM ALLOY SCRAP SALES *Project#:* 2971
*Received:* April 2, 1997

*re:* One sample for Volatile Halogenated Organics analysis.
*Method:* *SW846 Method 8010A July 1992*

*Client Sample ID:* **MW-2**
*Spl#:* 124169 *Matrix:* WATER
*Sampled:* April 1, 1997 *Run#:* 6096 *Analyzed:* April 2, 1997

| ANALYTE | RESULT (ug/L) | REPORTING LIMIT (ug/L) | BLANK RESULT (ug/L) | BLANK SPIKE (%) | DILUTION FACTOR |
|---|---|---|---|---|---|
| VINYL CHLORIDE | 120 | 0.50 | N.D. | -- | 1 |
| *Note: VALUE IS TAKEN FROM GC/MS RUN EPA METHOD 8240* | | | | | |
| CHLOROETHANE | N.D. | 0.50 | N.D. | -- | 1 |
| TRICHLOROFLUOROMETHANE | N.D. | 0.50 | N.D. | -- | 1 |
| 1,1-DICHLOROETHENE | 5.3 | 0.50 | N.D. | 72.0 | 1 |
| METHYLENE CHLORIDE | N.D. | 5.0 | N.D. | -- | 1 |
| TRANS-1,2-DICHLOROETHENE | 53 | 0.50 | N.D. | -- | 1 |
| *Note: VALUE IS TAKEN FROM GC/MS RUN EPA METHOD 8240* | | | | | |
| CIS-1,2-DICHLOROETHENE | 240 | 0.50 | N.D. | -- | 1 |
| *Note: VALUE IS TAKEN FROM GC/MS RUN EPA METHOD 8240* | | | | | |
| 1,1-DICHLOROETHANE | 4.7 | 0.50 | N.D. | -- | 1 |
| CHLOROFORM | N.D. | 3.0 | N.D. | -- | 1 |
| 1,1,1-TRICHLOROETHANE | N.D. | 0.50 | N.D. | -- | 1 |
| CARBON TETRACHLORIDE | N.D. | 0.50 | N.D. | -- | 1 |
| 1,2-DICHLOROETHANE | N.D. | 0.50 | N.D. | -- | 1 |
| TRICHLOROETHENE | 200 | 0.50 | N.D. | 103 | 1 |
| *Note: VALUE IS TAKEN FROM GC/MS RUN EPA METHOD 8240* | | | | | |
| 1,2-DICHLOROPROPANE | N.D. | 0.50 | N.D. | -- | 1 |
| BROMODICHLOROMETHANE | N.D. | 0.50 | N.D. | -- | 1 |
| 2-CHLOROETHYL VINYL ETHER | N.D. | 0.50 | N.D. | -- | 1 |
| TRANS-1,3-DICHLOROPROPENE | N.D. | 0.50 | N.D. | -- | 1 |
| CIS-1,3-DICHLOROPROPENE | N.D. | 0.50 | N.D. | -- | 1 |
| 1,1,2-TRICHLOROETHANE | N.D. | 0.50 | N.D. | -- | 1 |
| TETRACHLOROETHENE | 16 | 0.50 | N.D. | -- | 1 |
| *Note: VALUE IS TAKEN FROM GC/MS RUN EPA METHOD 8240* | | | | | |
| DIBROMOCHLOROMETHANE | N.D. | 0.50 | N.D. | -- | 1 |
| CHLOROBENZENE | 97 | 0.50 | N.D. | 97.0 | 1 |
| *Note: VALUE IS TAKEN FROM GC/MS RUN EPA METHOD 8240* | | | | | |
| BROMOFORM | N.D. | 0.50 | N.D. | -- | 1 |
| 1,1,2,2-TETRACHLOROETHANE | N.D. | 0.50 | N.D. | -- | 1 |
| 1,3-DICHLOROBENZENE | 1.4 | 0.50 | N.D. | -- | 1 |
| 1,4-DICHLOROBENZENE | 7.4 | 0.50 | N.D. | -- | 1 |
| 1,2-DICHLOROBENZENE | 64 | 0.50 | N.D. | -- | 1 |
| *Note: VALUE IS TAKEN FROM GC/MS RUN EPA METHOD 8240* | | | | | |
| TRICHLOROTRIFLUOROETHANE | N.D. | 0.50 | N.D. | -- | 1 |
| CHLOROMETHANE | N.D. | 1.0 | N.D. | -- | 1 |
| BROMOMETHANE | N.D. | 1.0 | N.D. | -- | 1 |


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Federal ID #68-0140157

# CHROMALAB, INC.

Environmental Services (SDB)


April 10, 1997



AQUA SCIENCE ENGINEERS INC

*Atten:* Scott Ferriman.

*Project:* CUSTOM ALLOY SCRAP SALES *Project#:* 2971
*Received:* April 2, 1997

*re:* One sample for Volatile Halogenated Organics analysis, continued.
*Method:* *SW846 Method 8010A July 1992*

*Client Sample ID:* **MW-2**
*Spl#:* 124169 *Matrix:* WATER
*Sampled:* April 1, 1997 *Run#:* 6096 *Analyzed:* April 2, 1997

| ANALYTE | RESULT (ug/L) | REPORTING LIMIT (ug/L) | BLANK RESULT (ug/L) | BLANK SPIKE (%) | DILUTION FACTOR |
|---|---|---|---|---|---|

Oleg Nemtsov
Chemist

Chip Poalinelli
Operations Manager

# CHROMALAB, INC.

Environmental Services (SDB)

April 10, 1997 *Submission #:* 9704031

AQUA SCIENCE ENGINEERS INC

*Atten:* Scott Ferriman.

*Project:* CUSTOM ALLOY SCRAP SALES *Project#:* 2971
*Received:* April 2, 1997

*re:* One sample for Volatile Halogenated Organics analysis.
*Method:* *SW846 Method 8010A July 1992*

*Client Sample ID:* MW-3
*Spl#:* 124170 *Matrix:* WATER
*Sampled:* April 1, 1997 *Run#:* 6207 *Analyzed:* April 8, 1997

| ANALYTE | RESULT (ug/L) | REPORTING LIMIT (ug/L) | BLANK RESULT (ug/L) | BLANK SPIKE (%) | DILUTION FACTOR |
|---|---|---|---|---|---|
| VINYL CHLORIDE | N.D. | 20 | N.D. | -- | 40 |
| CHLOROETHANE | N.D. | 20 | N.D. | -- | 40 |
| TRICHLOROFLUOROMETHANE | N.D. | 20 | N.D. | -- | 40 |
| 1,1-DICHLOROETHENE | N.D. | 20 | N.D. | 95.0 | 40 |
| METHYLENE CHLORIDE | N.D. | 200 | N.D. | -- | 40 |
| TRANS-1,2-DICHLOROETHENE | N.D. | 20 | N.D. | -- | 40 |
| CIS-1,2-DICHLOROETHENE | N.D. | 20 | N.D. | -- | 40 |
| 1,1-DICHLOROETHANE | N.D. | 20 | N.D. | -- | 40 |
| CHLOROFORM | N.D. | 120 | N.D. | -- | 40 |
| 1,1,1-TRICHLOROETHANE | N.D. | 20 | N.D. | -- | 40 |
| CARBON TETRACHLORIDE | N.D. | 20 | N.D. | -- | 40 |
| 1,2-DICHLOROETHANE | N.D. | 20 | N.D. | -- | 40 |
| TRICHLOROETHENE | 190 | 20 | N.D. | 97.0 | 40 |
| 1,2-DICHLOROPROPANE | N.D. | 20 | N.D. | -- | 40 |
| BROMODICHLOROMETHANE | N.D. | 20 | N.D. | -- | 40 |
| 2-CHLOROETHYL VINYL ETHER | N.D. | 20 | N.D. | -- | 40 |
| TRANS-1,3-DICHLOROPROPENE | N.D. | 20 | N.D. | -- | 40 |
| CIS-1,3-DICHLOROPROPENE | N.D. | 20 | N.D. | -- | 40 |
| 1,1,2-TRICHLOROETHANE | N.D. | 20 | N.D. | -- | 40 |
| TETRACHLOROETHENE | 910 | 20 | N.D. | -- | 40 |
| DIBROMOCHLOROMETHANE | N.D. | 20 | N.D. | -- | 40 |
| CHLOROBENZENE | N.D. | 20 | N.D. | 92.0 | 40 |
| BROMOFORM | N.D. | 20 | N.D. | -- | 40 |
| 1,1,2,2-TETRACHLOROETHANE | N.D. | 20 | N.D. | -- | 40 |
| 1,3-DICHLOROBENZENE | N.D. | 20 | N.D. | -- | 40 |
| 1,4-DICHLOROBENZENE | N.D. | 20 | N.D. | -- | 40 |
| 1,2-DICHLOROBENZENE | N.D. | 20 | N.D. | -- | 40 |
| TRICHLOROTRIFLUOROETHANE | N.D. | 20 | N.D. | -- | 40 |
| CHLOROMETHANE | N.D. | 40 | N.D. | -- | 40 |
| BROMOMETHANE | N.D. | 40 | N.D. | -- | 40 |

*Note: SAMPLE WAS ANALYZED USING EPA METHOD 8240*

Oleg Nemtsov
Chemist

Chip Poalinelli
Operations Manager

# CHROMALAB, INC.

Environmental Services (SDB)

April 10, 1997 *Submission #:* 9704031

AQUA SCIENCE ENGINEERS INC

*Atten:* Scott Ferriman.

*Project:* CUSTOM ALLOY SCRAP SALES *Project#:* 2971
*Received:* April 2, 1997

*re:* One sample for Volatile Halogenated Organics analysis.
*Method:* *SW846 Method 8010A July 1992*

*Client Sample ID:* **MW-4**
*Spl#:* 124171 *Matrix:* WATER
*Sampled:* April 1, 1997 *Run#:* 6096 *Analyzed:* April 2, 1997

| ANALYTE | RESULT (ug/L) | REPORTING LIMIT (ug/L) | BLANK RESULT (ug/L) | BLANK SPIKE (%) | DILUTION FACTOR |
|---|---|---|---|---|---|
| VINYL CHLORIDE | 25 | 0.50 | N.D. | -- | 1 |
| *Note: VALUE IS TAKEN FROM GC/MS RUN EPA METHOD 8240* | | | | | |
| CHLOROETHANE | N.D. | 0.50 | N.D. | -- | 1 |
| TRICHLOROFLUOROMETHANE | N.D. | 0.50 | N.D. | -- | 1 |
| 1,1-DICHLOROETHENE | 1.5 | 0.50 | N.D. | 72.0 | 1 |
| METHYLENE CHLORIDE | N.D. | 5.0 | N.D. | -- | 1 |
| TRANS-1,2-DICHLOROETHENE | 6.2 | 0.50 | N.D. | -- | 1 |
| CIS-1,2-DICHLOROETHENE | 100 | 0.50 | N.D. | -- | 1 |
| *Note: VALUE IS TAKEN FROM GC/MS RUN EPA METHOD 8240* | | | | | |
| 1,1-DICHLOROETHANE | 1.1 | 0.50 | N.D. | -- | 1 |
| CHLOROFORM | N.D. | 3.0 | N.D. | -- | 1 |
| 1,1,1-TRICHLOROETHANE | N.D. | 0.50 | N.D. | -- | 1 |
| CARBON TETRACHLORIDE | N.D. | 0.50 | N.D. | -- | 1 |
| 1,2-DICHLOROETHANE | N.D. | 0.50 | N.D. | -- | 1 |
| TRICHLOROETHENE | 18 | 0.50 | N.D. | 103 | 1 |
| 1,2-DICHLOROPROPANE | N.D. | 0.50 | N.D. | -- | 1 |
| BROMODICHLOROMETHANE | N.D. | 0.50 | N.D. | -- | 1 |
| 2-CHLOROETHYL VINYL ETHER | N.D. | 0.50 | N.D. | -- | 1 |
| TRANS-1,3-DICHLOROPROPENE | N.D. | 0.50 | N.D. | -- | 1 |
| CIS-1,3-DICHLOROPROPENE | N.D. | 0.50 | N.D. | -- | 1 |
| 1,1,2-TRICHLOROETHANE | N.D. | 0.50 | N.D. | -- | 1 |
| TETRACHLOROETHENE | N.D. | 0.50 | N.D. | -- | 1 |
| DIBROMOCHLOROMETHANE | N.D. | 0.50 | N.D. | -- | 1 |
| CHLOROBENZENE | N.D. | 0.50 | N.D. | 97.0 | 1 |
| BROMOFORM | N.D. | 0.50 | N.D. | -- | 1 |
| 1,1,2,2-TETRACHLOROETHANE | N.D. | 0.50 | N.D. | -- | 1 |
| 1,3-DICHLOROBENZENE | N.D. | 0.50 | N.D. | -- | 1 |
| 1,4-DICHLOROBENZENE | N.D. | 0.50 | N.D. | -- | 1 |
| 1,2-DICHLOROBENZENE | N.D. | 0.50 | N.D. | -- | 1 |
| TRICHLOROTRIFLUOROETHANE | N.D. | 0.50 | N.D. | -- | 1 |
| CHLOROMETHANE | N.D. | 1.0 | N.D. | -- | 1 |
| BROMOMETHANE | N.D. | 1.0 | N.D. | -- | 1 |

Oleg Nemtsov
Chemist

Chip Poalinelli
Operations Manager

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# CHROMALAB, INC.

Environmental Services (SDB)

April 8, 1997 *Submission #:* 9704031

AQUA SCIENCE ENGINEERS INC

*Atten:* Scott Ferriman.

*Project:* CUSTOM ALLOY SCRAP SALES *Project#:* 2971
*Received:* April 2, 1997

*re:* One sample for Polynuclear Aromatics (PNAs) analysis.
*Method:* *SW846 Method 8310 Sept 1986*

*Client Sample ID:* **MW-1**
*Spl#:* 124168 *Matrix:* WATER *Extracted:* April 3, 1997
*Sampled:* April 1, 1997 *Run#:* 6143 *Analyzed:* April 5, 1997

| ANALYTE | RESULT (ug/L) | REPORTING LIMIT (ug/L) | BLANK RESULT (ug/L) | BLANK SPIKE (%) | DILUTION FACTOR |
|---|---|---|---|---|---|
| NAPHTHALENE | N.D. | 2.0 | N.D. | 73.0 | 1 |
| ACENAPHTHENE | N.D. | 3.5 | N.D. | -- | 1 |
| ACENAPTHYLENE | N.D. | 1.7 | N.D. | -- | 1 |
| FLUORENE | N.D. | 0.30 | N.D. | -- | 1 |
| PHENANTHRENE | N.D. | 0.15 | N.D. | 77.6 | 1 |
| ANTHRACENE | N.D. | 0.070 | N.D. | -- | 1 |
| FLUORANTHENE | N.D. | 0.15 | N.D. | -- | 1 |
| PYRENE | N.D. | 0.32 | N.D. | 90.8 | 1 |
| BENZO(A)ANTHRACENE | N.D. | 0.15 | N.D. | -- | 1 |
| CHRYSENE | N.D. | 0.35 | N.D. | 71.2 | 1 |
| BENZO(B)FLUORANTHENE | N.D. | 0.050 | N.D. | -- | 1 |
| BENZO(K)FLUORANTHENE | N.D. | 0.050 | N.D. | -- | 1 |
| BENZO(A)PYRENE | N.D. | 0.15 | N.D. | 82.0 | 1 |
| IDENO(1,2,3-CD)PYRENE | N.D. | 0.16 | N.D. | -- | 1 |
| DIBENZO(A,H)ANTHRACENE | N.D. | 4.6 | N.D. | -- | 1 |
| BENZO(GHI)PERYLENE | N.D. | 0.67 | N.D. | -- | 1 |

Dennis Mayugba
Chemist

Alex Tam
Semivolatiles Supervisor

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# CHROMALAB, INC.

Environmental Services (SDB)

April 8, 1997 *Submission #:* 9704031

AQUA SCIENCE ENGINEERS INC

*Atten:* Scott Ferriman.

*Project:* CUSTOM ALLOY SCRAP SALES *Project#:* 2971
*Received:* April 2, 1997

*re:* One sample for Polynuclear Aromatics (PNAs) analysis.
*Method:* *SW846 Method 8310 Sept 1986*

*Client Sample ID:* **MW-2**
*Spl#:* 124169 *Matrix:* WATER *Extracted:* April 3, 1997
*Sampled:* April 1, 1997 *Run#:* 6143 *Analyzed:* April 5, 1997

| ANALYTE | RESULT (ug/L) | REPORTING LIMIT (ug/L) | BLANK RESULT (ug/L) | BLANK SPIKE (%) | DILUTION FACTOR |
|---|---|---|---|---|---|
| NAPHTHALENE | N.D. | 2.0 | N.D. | 73.0 | 1 |
| ACENAPHTHENE | N.D. | 3.5 | N.D. | -- | 1 |
| ACENAPTHYLENE | N.D. | 1.7 | N.D. | -- | 1 |
| FLUORENE | N.D. | 0.30 | N.D. | -- | 1 |
| PHENANTHRENE | N.D. | 0.15 | N.D. | 77.6 | 1 |
| ANTHRACENE | N.D. | 0.070 | N.D. | -- | 1 |
| FLUORANTHENE | N.D. | 0.15 | N.D. | -- | 1 |
| PYRENE | N.D. | 0.32 | N.D. | 90.8 | 1 |
| BENZO(A)ANTHRACENE | N.D. | 0.15 | N.D. | -- | 1 |
| CHRYSENE | N.D. | 0.35 | N.D. | 71.2 | 1 |
| BENZO(B)FLUORANTHENE | N.D. | 0.050 | N.D. | -- | 1 |
| BENZO(K)FLUORANTHENE | N.D. | 0.050 | N.D. | -- | 1 |
| BENZO(A)PYRENE | N.D. | 0.15 | N.D. | 82.0 | 1 |
| IDENO(1,2,3-CD)PYRENE | N.D. | 0.16 | N.D. | -- | 1 |
| DIBENZO(A,H)ANTHRACENE | N.D. | 4.6 | N.D. | -- | 1 |
| BENZO(GHI)PERYLENE | N.D. | 0.67 | N.D. | -- | 1 |

Dennis Mayugba
Chemist

Alex Tam
Semivolatiles Supervisor

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# CHROMALAB, INC.

Environmental Services (SDB)

April 8, 1997 *Submission #:* 9704031

AQUA SCIENCE ENGINEERS INC

*Atten:* Scott Ferriman.

*Project:* CUSTOM ALLOY SCRAP SALES *Project#:* 2971
*Received:* April 2, 1997

*re:* One sample for Polynuclear Aromatics (PNAs) analysis.
*Method:* *SW846 Method 8310 Sept 1986*

*Client Sample ID:* **MW-3**
*Spl#:* 124170 *Matrix:* WATER *Extracted:* April 3, 1997
*Sampled:* April 1, 1997 *Run#:* 6143 *Analyzed:* April 5, 1997

| ANALYTE | RESULT (ug/L) | REPORTING LIMIT (ug/L) | BLANK RESULT (ug/L) | BLANK SPIKE (%) | DILUTION FACTOR |
|---|---|---|---|---|---|
| NAPHTHALENE | N.D. | 2.0 | N.D. | 73.0 | 1 |
| ACENAPHTHENE | N.D. | 3.5 | N.D. | -- | 1 |
| ACENAPTHYLENE | N.D. | 1.7 | N.D. | -- | 1 |
| FLUORENE | N.D. | 0.30 | N.D. | -- | 1 |
| PHENANTHRENE | N.D. | 0.15 | N.D. | 77.6 | 1 |
| ANTHRACENE | N.D. | 0.071 | N.D. | -- | 1 |
| FLUORANTHENE | N.D. | 0.15 | N.D. | -- | 1 |
| PYRENE | N.D. | 0.32 | N.D. | 90.8 | 1 |
| BENZO(A)ANTHRACENE | N.D. | 0.15 | N.D. | -- | 1 |
| CHRYSENE | N.D. | 0.35 | N.D. | 71.2 | 1 |
| BENZO(B)FLUORANTHENE | N.D. | 0.050 | N.D. | -- | 1 |
| BENZO(K)FLUORANTHENE | N.D. | 0.050 | N.D. | -- | 1 |
| BENZO(A)PYRENE | N.D. | 0.15 | N.D. | 82.0 | 1 |
| IDENO(1,2,3-CD)PYRENE | N.D. | 0.16 | N.D. | -- | 1 |
| DIBENZO(A,H)ANTHRACENE | N.D. | 4.6 | N.D. | -- | 1 |
| BENZO(GHI)PERYLENE | N.D. | 0.68 | N.D. | -- | 1 |

Dennis Mayugba for
Chemist

Alex Tam
Semivolatiles Supervisor

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# CHROMALAB, INC.

Environmental Services (SDB)

April 8, 1997 *Submission #:* 9704031

AQUA SCIENCE ENGINEERS INC

*Atten:* Scott Ferriman.

*Project:* CUSTOM ALLOY SCRAP SALES *Project#:* 2971
*Received:* April 2, 1997

*re:* One sample for Polynuclear Aromatics (PNAs) analysis.
*Method:* *SW846 Method 8310 Sept 1986*

*Client Sample ID:* **MW-4**
*Spl#:* 124171 *Matrix:* WATER *Extracted:* April 3, 1997
*Sampled:* April 1, 1997 *Run#:* 6143 *Analyzed:* April 5, 1997

| ANALYTE | RESULT (ug/L) | REPORTING LIMIT (ug/L) | BLANK RESULT (ug/L) | BLANK SPIKE (%) | DILUTION FACTOR |
|---|---|---|---|---|---|
| NAPHTHALENE | N.D. | 2.0 | N.D. | 73.0 | 1 |
| ACENAPHTHENE | N.D. | 3.5 | N.D. | -- | 1 |
| ACENAPTHYLENE | N.D. | 1.7 | N.D. | -- | 1 |
| FLUORENE | N.D. | 0.30 | N.D. | -- | 1 |
| PHENANTHRENE | N.D. | 0.15 | N.D. | 77.6 | 1 |
| ANTHRACENE | N.D. | 0.070 | N.D. | -- | 1 |
| FLUORANTHENE | N.D. | 0.15 | N.D. | -- | 1 |
| PYRENE | N.D. | 0.32 | N.D. | 90.8 | 1 |
| BENZO(A)ANTHRACENE | N.D. | 0.15 | N.D. | -- | 1 |
| CHRYSENE | N.D. | 0.35 | N.D. | 71.2 | 1 |
| BENZO(B)FLUORANTHENE | N.D. | 0.050 | N.D. | -- | 1 |
| BENZO(K)FLUORANTHENE | N.D. | 0.050 | N.D. | -- | 1 |
| BENZO(A)PYRENE | N.D. | 0.15 | N.D. | 82.0 | 1 |
| IDENO(1,2,3-CD)PYRENE | N.D. | 0.16 | N.D. | -- | 1 |
| DIBENZO(A,H)ANTHRACENE | N.D. | 4.6 | N.D. | -- | 1 |
| BENZO(GHI)PERYLENE | N.D. | 0.67 | N.D. | -- | 1 |

Dennis Mayugba
Chemist

Alex Tam
Semivolatiles Supervisor



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Federal ID #68-0140157

0402/124165-124171

32875

Aqua Science Engineers, Inc.
2411 Old Crow Canyon Road, #4,
San Ramon, CA 94583
(510) 820-9391 - FAX (510) 837-4853

# Chain of Custody

DATE 4-1-97 PAGE 1 OF

SAMPLERS (SIGNATURE) (PHONE NO.)
Scott T. 510-820-9391

PROJECT NAME Custom Alloy Scrap Sales NO. 2971
ADDRESS 271 Union Street, Oakland, CA

## ANALYSIS REQUEST

*SPECIAL INSTRUCTIONS:*
5-Day

| SAMPLE ID. | DATE | TIME | MATRIX | NO. OF SAMPLES | TPH-GASOLINE (EPA 5030/8015) | TPH-GASOLINE/BTEX/MTBE (EPA 5030/8015-8020) | TPH-DIESEL (EPA 3510/8015) | PURGABLE AROMATICS (EPA 602/8020) | PURGABLE HALOCARBONS (EPA 601/8010) | VOLATILE ORGANICS (EPA 624/8240) | BASE/NUETRALS, ACIDS (EPA 625/8270) | OIL & GREASE (EPA 5520 E&F or B&F) | LUFT METALS (5) (EPA 6010+7000) | TITLE 22 (CAM 17) (EPA 6010+7000) | TCLP (EPA 1311/1310) | STLC-CAM WET (EPA 1311/1310) | REACTIVITY CORROSIVITY IGNITABILITY | EPA 8310 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 4-1-97 | 12:35 | water | 6 | | X | X | | X | | | | | | | | | X | | | | |
| MW-2 | ↓ | 11:45 | ↓ | ↓ | | X | X | | X | | | | | | | | | X | | | | |
| MW-3 | | 14:15 | | | | X | X | | X | | | | | | | | | X | | | | |
| MW-4 | | 13:30 | | | | X | X | | X | | | | | | | | | X | | | | |

SUBM #: 9704031 REP: MV
CLIENT: ASE
DUE: 04/09/97
REF #: 32895

| RELINQUISHED BY: | RECEIVED BY: | RELINQUISHED BY: | RECEIVED BY LABORATORY: | COMMENTS: |
|---|---|---|---|---|
| Scott T. 15:22 | Gary Cook 15:22 | | Chris Rowley 15:22 | |
| (signature) (time) | (signature) (time) | (signature) (time) | (signature) (time) | |
| Scott Ferriman 4-2-97 | Gary Cook 4/2/97 | | Chris Rowley 4/2/97 | |
| (printed name) (date) | (printed name) (date) | (printed name) (date) | (printed name) (date) | |
| Company- ASE, Inc. | Company- Chroma Lab | Company- | Company- Chromalab | |

# APPENDIX B

Well Sampling Field Logs

aqua science engineers inc.

# WELL SAMPLING FIELD LOG

Project Name and Address: Custom Alloy Scrap Sales, Oakland, CA
Job #: 2971 Date of sampling: 4-1-97
Well Name: MW-1 Sampled by: SK
Total depth of well (feet): 24.73 Well diameter (inches): 2"
Depth to water before sampling (feet): 8.73
Thickness of floating product if any: none
Depth of well casing in water (feet): 16.0
Number of gallons per well casing volume (gallons): 2.7
Number of well casing volumes to be removed: 4
Req'd volume of groundwater to be purged before sampling (gallons): 11
Equipment used to purge the well: Dedicated Poly Bailer
Time Evacuation Began: 11:55 Time Evacuation Finished: 12:30
Approximate volume of groundwater purged: 11
Did the well go dry?: No After how many gallons: —
Time samples were collected: 12:35
Depth to water at time of sampling: 8.96
Percent recovery at time of sampling: 98%
Samples collected with: Dedicated Poly Bailer
Sample color: Cloudy Odor: None
Description of sediment in sample: Small Amount of Brown Silt

## CHEMICAL DATA

| Volume Purged | Temp | pH | Conductivity |
|---|---|---|---|
| 1 | 61.6 | 8.32 | 834 |
| 2 | 61.5 | 8.41 | 776 |
| 3 | 61.4 | 8.39 | 771 |
| 4 | 61.4 | 8.34 | 775 |
| | | | |

## SAMPLES COLLECTED

| Sample | # of containers | Volume & type container | Pres | Iced? | Analysis |
|---|---|---|---|---|---|
| MW-1 | 2 | 40 ml VOAs | HCl | Yes | TPH-g/BTEX/MTBE |
| | 2 | 40 ml VOAs | | | ~~TPH~~ 8010 |
| | 1 | 1 L Amber | | | TPH-D |
| | 1 | 1 L Amber | | | 8310 |
| | | | | | |

aqua science engineers inc.

# WELL SAMPLING FIELD LOG

Project Name and Address: Custom Alloy Scrap Sales, Oakland, CA
Job #: 2971 Date of sampling: 4-1-97
Well Name: MW-2 Sampled by: SC
Total depth of well (feet): 19.23 Well diameter (inches): 2"
Depth to water before sampling (feet): 8.96
Thickness of floating product if any: none
Depth of well casing in water (feet): 10.27
Number of gallons per well casing volume (gallons): 1.7
Number of well casing volumes to be removed: 4
Req'd volume of groundwater to be purged before sampling (gallons): 7
Equipment used to purge the well: Dedicated Poly Bailer
Time Evacuation Began: 11:15 Time Evacuation Finished: 11:35
Approximate volume of groundwater purged: 7
Did the well go dry?: No After how many gallons: —
Time samples were collected: 11:45
Depth to water at time of sampling: 9.17
Percent recovery at time of sampling: 98%
Samples collected with: Dedicated Poly Bailer
Sample color: Cloudy Odor: None
Description of sediment in sample: Small amount of Tan Silt

## CHEMICAL DATA

| Volume Purged | Temp | pH | Conductivity |
|---|---|---|---|
| 1 | 64.3 | 8.27 | 1070 |
| 2 | 61.8 | 8.47 | 1039 |
| 3 | 61.5 | 8.21 | 1007 |
| 4 | 61.5 | 8.17 | 1012 |
| | | | |

## SAMPLES COLLECTED

| Sample | # of containers | Volume & type container | Pres | Iced? | Analysis |
|---|---|---|---|---|---|
| MW-2 | 2 | 40 ml VOAs | HCl | Yes | TPHg/BTEX/MTBE |
| | 2 | 40 ml VOAs | | | 8010 |
| | 1 | 1 L Amber | | | TPHd |
| | 1 | 1 L Amber | | | 8310 |
| | | | | | |

aqua science engineers inc.

# WELL SAMPLING FIELD LOG

Project Name and Address: Custom Alloy Scrap Sales, Oakland, CA
Job #: 2971 Date of sampling: 4-1-97
Well Name: MW-3 Sampled by: SC
Total depth of well (feet): 24.78 Well diameter (inches): 2"
Depth to water before sampling (feet): 6.65
Thickness of floating product if any: None
Depth of well casing in water (feet): 18.13
Number of gallons per well casing volume (gallons): 3
Number of well casing volumes to be removed: 4
Req'd volume of groundwater to be purged before sampling (gallons): 12
Equipment used to purge the well: Dedicated Poly Bailer
Time Evacuation Began: 13:45 Time Evacuation Finished: 14:10
Approximate volume of groundwater purged: 12
Did the well go dry?: No After how many gallons: —
Time samples were collected: 14:15
Depth to water at time of sampling: 6.87
Percent recovery at time of sampling: 99%
Samples collected with: Dedicated Poly Bailer
Sample color: Cloudy Odor: None
Description of sediment in sample: None

## CHEMICAL DATA

| Volume Purged | Temp | pH | Conductivity |
|---|---|---|---|
| 1 | 58.8 | 8.29 | 1089 |
| 2 | 58.8 | 8.19 | 1101 |
| 3 | 58.8 | 8.27 | 1107 |
| 4 | 58.8 | 8.22 | 1112 |
| | | | |

## SAMPLES COLLECTED

| Sample | # of containers | Volume & type container | Pres | Iced? | Analysis |
|---|---|---|---|---|---|
| MW-3 | 2 | 40 ml VOAs | HCl | Yes | TPHg/BTEX/MTBE |
| | 2 | 40 ml VOAs | | | 8010 |
| | 1 | 1 l Amber | | | TPHD |
| | 1 | 1 l Amber | | | 8310 |
| | | | | | |