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95 JUL -5 PM 2:01

June 30, 1995

Mr. Robert Mibach
Peralta Community College District
333 East 8th Street
Oakland, CA 94606

RE: Quarterly Groundwater Sampling
Peralta Maintenance Yard, 501 5th Avenue, Oakland, California

Dear Mr. Mibach:

The enclosed report describes the procedures used during quarterly groundwater sampling at the Peralta Maintenance Yard, Oakland, California. This work was performed to evaluate the extent of groundwater impact from previous underground storage of petroleum hydrocarbons.

Groundwater samples were collected from the four onsite monitoring wells and submitted to Chromalab, Inc. for petroleum hydrocarbon analyses, in accordance with the "Tri-Regional Guidelines for Underground Storage Tank Sites".

Analysis of the groundwater samples collected from monitoring well MW-1 and MW-4 indicated below detectable levels of petroleum hydrocarbons. Analysis of groundwater samples collected from monitoring wells MW-2, and MW-3 indicated detectable concentrations of hydrocarbons.

If you have any comments regarding this report, please call me at (510) 522-8188.

Sincerely,

Misty C. Kaltreider
Project Geologist

cc: Mr. Thomas Peacock - Alameda County Health Care Services
Division of Hazardous Materials

1000 Atlantic Avenue, Suite 110 •Alameda, CA 94501 •(510) 522-8188 •FAX: (510) 865-5731

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# QUARTERLY GROUNDWATER INVESTIGATION WITH DISCUSSION OF SELECTED REMEDIAL OPTIONS

## PERALTA COMMUNITY COLLEGE - MAINTENANCE YARD
## 501 5TH AVENUE
## OAKLAND, CALIFORNIA, 94606

Prepared for:

Mr. Thomas Peacock
Hazardous Materials Specialist
Alameda County Health Care Services Agency
Division of Hazardous Materials

June 1995

*Job Number 6045-11*

Prepared by: _____
Misty Kaltreider
Project Geologist

Reviewed by: _____
David R. DeMent, RG #5874
Registered Geologist

REGISTERED GEOLOGIST
DAVID R. DEMENT
NO. 5874
STATE OF CALIFORNIA

1000 Atlantic Avenue, Suite 110 •Alameda, CA 94501 •(510) 522-8188 •FAX: (510) 865-5731

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## TABLES



## ATTACHMENTS

## 1.0 INTRODUCTION

This report presents the procedures and findings of quarterly groundwater investigation conducted by ACC Environmental Consultants, Inc., (ACC) on behalf of the Peralta Community College District, site owner at 501 5th Avenue, Oakland, California. The project objective was to monitor existing groundwater wells to evaluate the groundwater following remedial actions completed at the site.

## 2.0 BACKGROUND

Five underground storage tanks were installed prior to the 1960's. The tanks were used for storage of fuel and waste oil for the City of Oakland Corporation Yard. The tanks consisted of two 6,000-gallon gasoline tanks, one 2,000-gallon diesel tank, one 2,000-gallon ethyl (premium) gasoline tank, and one 550-gallon waste oil tank. In 1980 Peralta Community College District acquired the property. The District abandoned the existing five underground tanks by filling them with water and installed three fiberglass underground storage tanks. The new tanks consisted of two 6,000-gallon and one 4,000-gallon fiberglass tanks to store gasoline fuel. The new tanks were installed approximately 150 feet from the original tanks.

In 1992, the five original underground storage tanks were removed. During removal, a total of eight soil samples and one grab groundwater sample were collected from the excavation. Laboratory analysis of the soil samples indicated up to 228 parts per million (ppm) of Total Petroleum Hydrocarbons as diesel (TPHd), 134 ppm of Total Petroleum Hydrocarbons as gasoline (TPHg), 2.4 ppm benzene, 4.6 ppm toluene, 7.17 ppm ethylbenzene, 6.15 ppm total xylenes and 5,477 ppm oil and grease. Laboratory analysis of the water samples collected from the excavation indicated 170,000 parts per billion (ppb) TPHd, 15,000 ppb TPHg, 286 ppb benzene, 698 ppb toluene, 300 ppb ethylbenzene, 808 ppb total xylenes and 284,000 ppb oil and grease.

In September 1992, a preliminary study was performed by Environ of Emeryville to evaluate the soil and groundwater conditions on this site and neighboring sites. This study indicated that hydrocarbons constituents reported in the soil and grab groundwater samples were possibly a result of regional impact.

In November 1992, ACC performed a subsurface environmental site assessment of the soil around the former tank excavation. Petroleum hydrocarbons as gasoline and motor oil were detected in the soil and groundwater samples collected from the borings. Laboratory analysis of the soil indicated up to 370 ppm of TPHg, 12 ppm TPHd, 5,342 ppm motor oil, 77 ppm benzene, 74 ppm toluene, 30 ppm ethylbenzene, and 95 ppm xylenes.

In November 1993, three underground gasoline tanks were removed from the property. Soil samples collected from the excavation indicated up to 1.3 ppm TPHg, 0.2 ppm benzene, and 0.02 ppm toluene. Initial groundwater samples collected from the excavation indicated 27,000 ppb TPHg, 1,200 ppb benzene, 5,100 ppb toluene, 690 ppb ethylbenzene and 5,700 ppb xylenes.

Approximately 3,500 gallons of water were removed from the excavation. Analysis of subsequent groundwater samples from the excavation indicated 210 ppb TPHg, and 14 ppb xylenes.

Due to the detectable levels reported in the soil and groundwater onsite, additional groundwater investigation was requested from the lead regulatory agency.

In February 1994, four additional borings (MW-1, MW-2, MW-3 and MW-4) were drilled onsite and converted into 2-inch monitoring wells. The monitoring wells were used to evaluate the extent of groundwater impact from the two former excavations (See Figure 1 - Site Plan).

Laboratory analysis of the groundwater samples collected in February 1994 from monitoring wells MW-1 and MW-4 (down gradient from the tank excavations) indicated below detectable levels of the constituents evaluated. The groundwater results from monitoring well MW-1 indicated a downgradient extent of groundwater impact. Laboratory analysis of groundwater collected from monitoring wells MW-2 and MW-3 (upgradient of the former tank excavations) indicated detectable levels of constituents. Samples collected from borings MW-2 and MW-3 indicated detectable levels of TPHd, and TPHg with BTEX. Motor oil was reported in the soil from boring MW-2. However, motor oil was not detected in the groundwater sample from monitoring well MW-2. TPHd was only detected in the soil from boring MW-2.

An additional soil and groundwater investigation was conducted on May 9, 1994, to evaluate possible upgradient sources onsite. The investigation included drilling five borings upgradient (east) of existing monitoring wells MW-2 and MW-3. Laboratory analysis of the soil samples collected during the additional investigation indicated detectable levels of TPHd up to 11 ppm and motor oil up to 100 ppm. Below detectable levels of TPHg and BTEX were reported in the soil samples analyzed. Groundwater was encountered approximately 5 to 6 feet below ground surface (bgs) during the additional investigation. Laboratory analysis of grab groundwater samples collected from the boreholes indicated below detectable levels of diesel, motor oil, and BTEX. TPHg, at 61 ppb, was reported in one grab groundwater sample collected from a boring at 61 ppb. Motor oil was not detected in the groundwater samples collected from the borings and monitoring wells, therefore motor oil does not appear to currently impact the groundwater.

Results of the analytical data from previous investigations indicate that upgradient sources of TPH and motor oil exist. Fine-grain fill material and Bay Mud appear to restrict the mobility of the petroleum hydrocarbons from impacting groundwater. However, groundwater flow direction data suggests that constituent movement is in a westward direction, away from monitoring wells MW-2 and MW-3.

## 3.0 SITE DESCRIPTION

The site consists of several warehouse/office buildings surrounded by a fenced parking lot. The former location of the older tanks was within the fenced yard adjacent to the northern entrance, the former newer tanks were situated near the southern entrance (Figure 1).

## 4.0 FIELD PROCEDURES

### 4.1 Groundwater Sampling

Groundwater samples were collected on May 18, 1995 from monitoring wells MW-1, MW-2, MW-3 and MW-4. Prior to groundwater sampling, the depth to the surface of the water table was measured from the top of the PVC casing using a Solinst Water Level Meter. Information regarding well elevations and groundwater level measurements is in feet above mean sea level (MSL) and is summarized in Table 1.

**TABLE 1 - Groundwater Depth Information**

| Well No. | Date Sampled | Casing Elevation | Depth to Groundwater (Ft) | Groundwater Elevation (Ft.) |
|---|---|---|---|---|
| MW-1 | 02/14/94 | 6.78 MSL | 3.69 | 3.09 |
| | 05/16/94 | | 6.80 | -0.02 |
| | 08/25/94 | | 7.05 | -0.27 |
| | 11/16/94 | | 3.50 | 3.28 |
| | 02/14/95 | | 3.91 | 2.87 |
| | 05/18/95 | | 6.46 | 0.32 |
| MW-2 | 02/14/94 | 8.70 MSL | 4.70 | 4.00 |
| | 05/16/94 | | 4.74 | 3.96 |
| | 08/25/94 | | 5.49 | 3.21 |
| | 11/16/94 | | 5.03 | 3.67 |
| | 02/14/95 | | 4.55 | 4.15 |
| | 05/18/95 | | 4.77 | 3.93 |
| MW-3 | 02/14/94 | 8.83 MSL | 4.57 | 4.26 |
| | 05/16/94 | | 4.78 | 4.05 |
| | 08/25/94 | | 5.93 | 2.90 |
| | 11/16/94 | | 4.04 | 4.79 |
| | 02/14/95 | | 6.11 | 2.72 |
| | 05/18/95 | | 4.49 | 4.34 |

**TABLE 1 (cont.) - Groundwater Depth Information**

| Well No. | Date Sampled | Casing Elevation | Depth to Groundwater (Ft) | Groundwater Elevation (Ft.) |
|---|---|---|---|---|
| MW-4 | 02/14/94 | 5.45 MSL | 1.69 | 3.76 |
| | 05/16/94 | | 2.36 | 3.09 |
| | 08/25/94 | | 3.25 | 2.20 |
| | 11/16/94 | | 1.01 | 4.44 |
| | 02/14/95 | | 2.16 | 3.29 |
| | 05/18/95 | | 2.32 | 3.13 |

Notes: All measurements in feet
MSL = Mean Sea Level
TOC = Top of Casing

After water-level measurements were collected, each onsite well was purged by hand using a new disposable Teflon bailer for each well. Groundwater pH, temperature and electrical conductivity were monitored during well purging. Each well was considered to be purged when these parameters stabilized and four well volumes were removed from each well. Worksheets of conditions monitored during each well purging are attached in Appendix A.

After the groundwater level had recovered to a minimum of approximately 80 percent of its static level, water samples were obtained using designated disposable Teflon bailers. Two 40 ml VOA vials, without headspace were filled from the water collected from each monitoring well. The samples were preserved on ice and submitted to Chromalab Inc. under chain of custody protocol. Laboratory results with chain of custody forms are attached in Appendix B.

## 5.0 FINDINGS

### 5.1 Analytical Results - Groundwater

One groundwater sample from each monitoring wells MW-1, MW-2, MW-3, and MW-4 was collected and submitted to Chromalab for analysis for TPHg by EPA test method 5030 and BTEX by EPA test method 602. Analysis results from the groundwater samples are summarized in Table 2. Analytical results are attached in Appendix B.

**TABLE 2 - Analytical Results - Groundwater**

| Well No. | Date Sampled | TPHg ug/L | TEPH ug/L | Benzene ug/L | Toluene ug/L | E.benzene ug/L | Xylene ug/L |
|---|---|---|---|---|---|---|---|
| **MW-1** | 02/14/94 | <50 | <50 | <0.5 | <0.5 | <0.5 | <0.5 |
| | 05/23/94 | <50 | <50 | <0.5 | <0.5 | <0.5 | <0.5 |
| | 08/25/94 | <50 | NT | <0.5 | <0.5 | <0.5 | <0.5 |
| | 11/16/94 | <50 | NT | <0.5 | <0.5 | <0.5 | <0.5 |
| | 02/14/95 | <50 | NT | <0.5 | <0.5 | <0.5 | <0.5 |
| | 05/18/95 | <50 | NT | <0.5 | <0.5 | <0.5 | <0.5 |
| **MW-2** | 02/14/94 | 200 | <50 | 1.7 | <0.5 | 1.1 | 1.1 |
| | 05/23/94 | 600 | <50 | 1.8 | 0.9 | 0.7 | 2.1 |
| | 08/25/94 | 70 | NT | <50 | <0.5 | <0.5 | 0.5 |
| | 11/16/94 | <50 | NT | <50 | <0.5 | <0.5 | 0.6 |
| | 02/14/95 | 160 | NT | 0.7 | 0.6 | <0.5 | 1.0 |
| | 05/18/95 | 50 | NT | <0.5 | <0.5 | <0.5 | 0.6 |
| **MW-3** | 02/14/94 | 780 | <50 | 0.6 | 0.6 | 1.7 | 2.7 |
| | 05/23/94 | 680 | <50 | <0.5 | <0.5 | 2.2 | 2.2 |
| | 08/25/94 | 310 | NT | 6.4 | 2.7 | 1.9 | 4.1 |
| | 11/16/94 | 650 | NT | 1.6 | 1.5 | <0.5 | 2.7 |
| | 02/14/95 | 70 | NT | <0.5 | <0.5 | <0.5 | <0.5 |
| | 05/18/95 | 470 | NT | <0.5 | 1.1 | 0.7 | 0.6 |
| **MW-4** | 02/14/94 | <50 | <50 | <0.5 | <0.5 | <0.5 | <0.5 |
| | 05/23/94 | 93 | <50 | <0.5 | <0.5 | <0.5 | <0.5 |
| | 08/29/94 | <50 | NT | <0.5 | <0.5 | <0.5 | <0.5 |
| | 11/16/94 | 100 | NT | 2.7 | <0.5 | <0.5 | 1.0 |
| | 02/14/95 | 60 | NT | <0.5 | <0.5 | <0.5 | <0.5 |
| | 05/18/95 | <50 | NT | <0.5 | <0.5 | <0.5 | 0.6 |

Notes: TPHg = Total Petroleum Hydrocarbons as gasoline
TEPH = Total Extractable Petroleum Hydrocarbons as diesel, kerosene, and motor oil
ug/L = parts per billion (ppb)
NT = Not tested

5.2 Groundwater Gradient

Prior to calculating the groundwater gradient, elevations for the onsite monitoring wells were surveyed by Ron Archer Civil Engineer, Inc. to an accuracy of one-hundredth of a foot. The well elevations were surveyed at the top of the PVC well casing. The elevations of the monitoring wells were established relative to a nearby benchmark located in the intersection of 7th Street and 5th Avenue.

The groundwater gradient was calculated using the onsite monitoring wells. The location of the wells is shown on Figure 1 - Site Plan. The gradient was evaluated by triangulation using the elevation of the potentiometric surface measured with respect to Mean Sea Level datum. Groundwater elevations were collected from the wells on May 18, 1995 and are illustrated on Figure 2, Groundwater Gradient Map. Table 2 summarizes the historic groundwater gradient and the direction of groundwater flow onsite.

**TABLE 3 - Historic Groundwater Gradient**

| Date Monitored | Gradient (foot/foot) | Direction |
|---|---|---|
| 02/14/94 | 0.01 | west |
| 05/16/94 | 0.025 | west |
| 08/25/95 | 0.031 | west |
| 11/16/94 | 0.013 | west |
| 02/14/95 | 0.014 | northwest |
| 05/18/95 | 0.033 | west |

During the initial subsurface investigation conducted onsite, varying thicknesses of fill material was encountered onsite. In some areas onsite, the groundwater was migrating through the fill material producing preferential pathways. This mode of groundwater migration may be most evident during seasons of heavy rainfall when the groundwater is elevated. This additional groundwater may cause differential (radial) gradient patterns, as observed in Figure 2.

## 6.0 REMEDIAL ACTION

In accordance with a request from the Peralta Community College District, for performing work to move toward site closure, remedial activies are currently ongoing for this site and will be documented in a separate report.

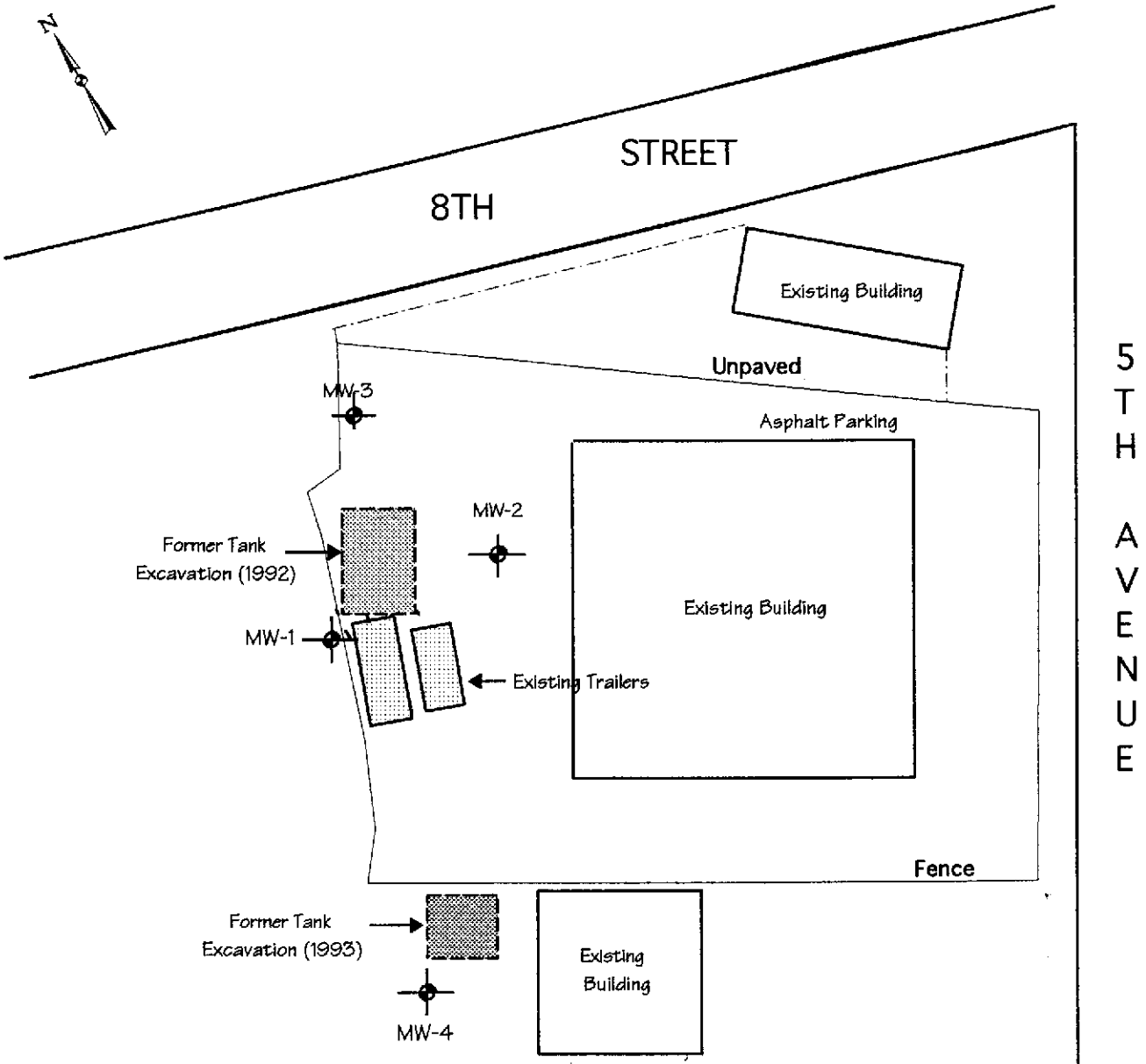
## 7.0 CONCLUSION

The analytical results and observations discussed herein indicate that groundwater has been impacted due to an unauthorized hydrocarbon release. The analytical parameters used for groundwater sampling performed were in accordance with the guidance document "Tri-Regional Water Quality Control Boards Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites", dated August 10, 1990.

During the initial groundwater investigation conducted in February 1994 and the additional subsurface investigation, laboratory analysis of the groundwater samples collected from monitoring wells and open boreholes indicated below detectable levels of TPHd, motor oil and kerosene.

Laboratory results collected from the downgradient monitoring well (MW-1) indicated below detectable levels of constituents. Laboratory analysis of groundwater collected from monitoring well, MW-2 and MW-3 (upgradient and cross gradient from the former tank excavations) indicated detectable levels of constituents indicating upgradient source(s). The groundwater results indicate that a hydrocarbon release from the former underground storage tanks onsite does not appear impact the groundwater downgradient from the tank excavation (MW-1). Historic observations indicate that the soil and groundwater impact upgradient is restricted in mobility due to the fine-grain soil. ACC anticipates a decline in concentrations of petroleum hydrocarbons over time. Groundwater levels appear to fluctuate onsite due to seasonal changes in precipitation and preferential pathways of shallow groundwater within the fill material. These seasonal changes appear to cause differential gradient patterns as evidenced by inconsistent fluctuations in water elevation levels in the four onsite groundwater monitoring wells.

Due to the ongoing remedial action, monitoring well MW-2 has been destroyed. A replacement well will be installed, and quarterly groundwater monitoring will be reinstated after completion of interim remedial actions.




LEGEND

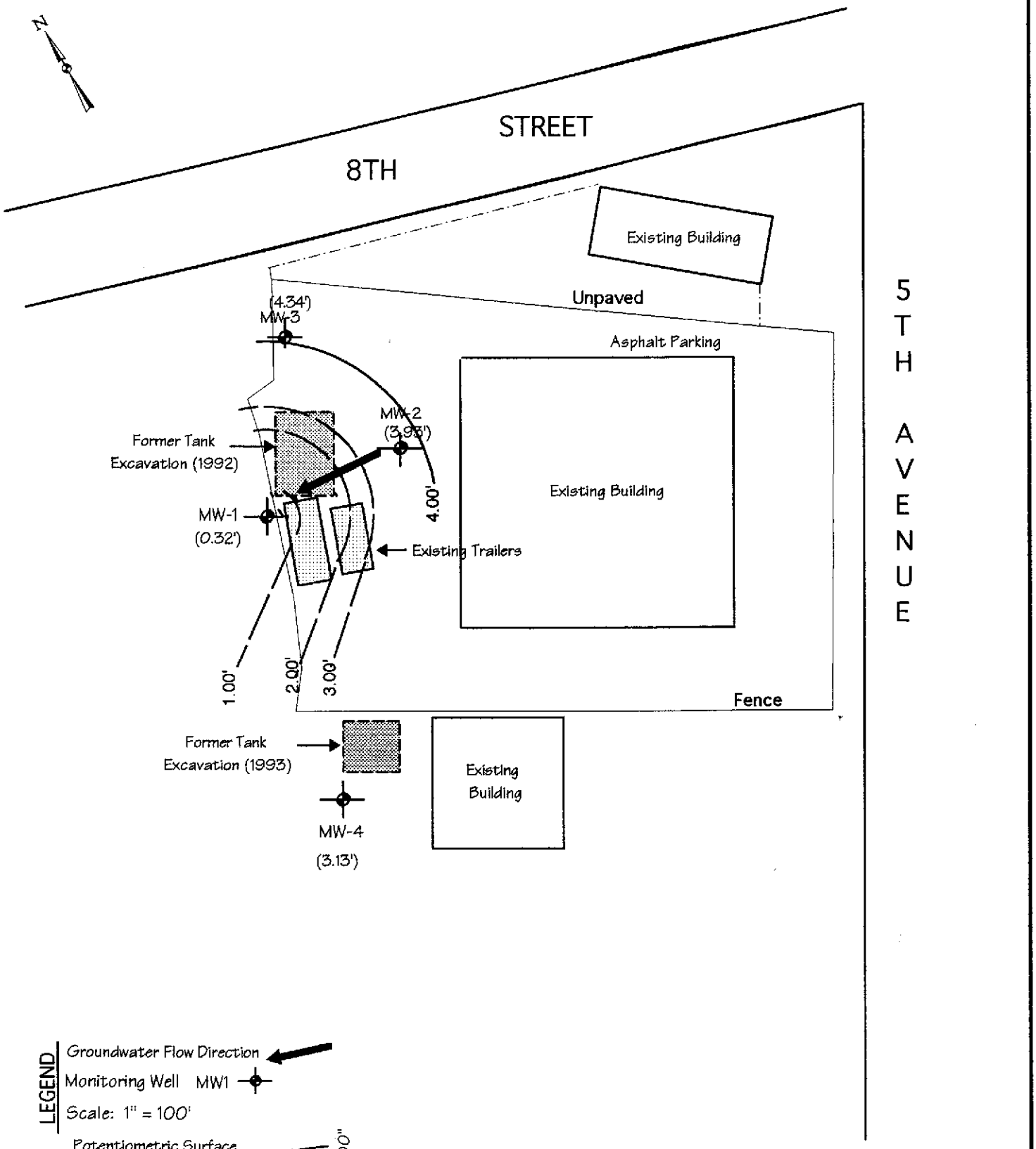
Monitoring Well MW1

Scale: 1" = 100'

Elevations measured in feet above Mean Sea Leve (MSL), measured on 5/18/95

| 05/18/95 | Drawn By: MCK | Project: 6045-11 | Figure 1: | **Site Plan** Peralta Maintainance Yard, Oakland, CA |
|---|---|---|---|---|

CC Environmental Consultants • 1000 Atlantic Avenue, Suite 110 • Alameda, CA 94501 • (510) 522-8188 Fax: (510) 865-57




Elevations measured in feet above Mean Sea Leve (MSL), measured on 5/18/95

| | | | | |
|---|---|---|---|---|
| 05/18/95 | Drawn By: MCK | Project: 6045-11 | Figure 2: | **Groundwater Gradient**<br>Peralta Maintainance Yard, Oakland, CA |

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# APPENDIX A

# NOTES OF WELL SAMPLING

Well Sampling [X] Well Development [ ] check one

Well Number: MW1

Job Number: 6045-4

Job Name: Peralta

Date: 5/18/95

Sampler: ACE/CC

Depth to Water (measured from TOC): 6.46

Inside Diameter of Casing: 2"

Depth of Boring: 14.32

Method of well development/purging: Bailing

Amount of Water Bailed/Pumped from well: 6 gallons

Depth to Water after well development:

Depth to water prior to sampling: 6.48

Bailed water stored on-site ? How ? Drums

Number of well volumes removed: 4

TSP wash, distilled rinse, new rope ? New Rope, New Bailer

Water Appearance:

| | yes | no |
|---|---|---|
| froth | X | |
| iridescence | | X |
| oil | | X |
| smell | X | |
| product | | X |
| other, describe | | X |

| Gallons Removed | pH | EC | Temp |
|---|---|---|---|
| 2 1.5 | 17.47 | 12.38 | 66.2 |
| 10 3.0 | 16.98 | 12.82 | 65.6 |
| 12 4.5 | 17.15 | 13.78 | 68.5 |
| 20 | 16.92 | 14.14 | 66.7 |
| 25 | 16.85 | 14.22 | 66.3 |
| 30 | 16.84 | 14.23 | 66.3 |
| 35 | | | |
| 40 | | | |
| 45 | | | |
| 50 | | | |

Bailed Dry by 6 gallons

Samples Obtained:

| | |
|---|---|
| TPH (gasoline) | X |
| TPH (diesel) | |
| TPH (motor oil) | |
| BTXE | X |
| EPA 624 | |
| EPA 625 | |
| EPA 608 | |
| PCEs only | |
| Metals | |
| Other, specify | |
| Field Blank | |

Well Sampling [X] Well Development [ ] check one

Well Number: MW2

Job Number: 6045-4

Job Name: Peralta

Date: 5/18/95

Sampler: ACE/CC

Depth to Water (measured from TCC): 14.77

Inside Diameter of Casing: 2"

Depth of Boring: 14.46

Method of well development/purging: Bailing

Amount of Water Bailed/Pumped from well: 6.4 gallons

Depth to Water after well development: _____

Depth to water prior to sampling: 4.79

Bailed water stored on-site ? How ? Drums

Number of well volumes removed: 4

TSP wash, distilled rinse, new rope ? New Rope, New Bail

Water Appearance:

| | yes | no |
|---|---|---|
| froth | X | |
| irridescence | | X |
| oil | | X |
| smell | X | |
| product | | X |
| other, describe | | X |

| Gallons Removed | pH | EC | Temp |
|---|---|---|---|
| 2 1.6 | 7.00 | 3.99 | 66.6 |
| 10 3.2 | 6.22 | 5.23 | 66.3 |
| 15 4.8 | 6.30 | 7.97 | 66.0 |
| 20 | 6.32 | 7.99 | 66.0 |
| 25 | 6.36 | 8.01 | 66.1 |
| 30 | 6.33 | 8.02 | 66.1 |
| 35 | | | |
| 40 | | | |
| 45 | | | |
| 50 | | | |

Samples Obtained:

| | |
|---|---|
| TPH (gasoline) | X |
| TPH (diesel) | |
| TPH (motor oil) | |
| BTXE | X |
| EPA 624 | |
| EPA 625 | |
| EPA 608 | |
| PCBs only | |
| Metals | |
| Other, specify | |
| Field Blank | |

Well Sampling [X] Well Development [ ] check one

Well Number: MW 3

Job Number: 6045-4

Job Name: Peralta

Date: 5/18/95

Sampler: ACE/CC

Depth to Water (measured from TOC): 4.49

Inside Diameter of Casing: 2"

Depth of Boring: 14.21

Method of well development/purging: Bailing

Amount of Water Bailed/Pumped from well: 6.4 gallons

Depth to Water after well development: _____

Depth to water prior to sampling: 4.50

Bailed water stored on-site ? How ? Drums

Number of well volumes removed: 4

TSP wash, distilled rinse, new rope ? New Rope, New Bailer

Water Appearance:

| | yes | no |
|---|---|---|
| froth | X | |
| irridesence | | X |
| oil | | X |
| smell | X | |
| product | | X |
| other, describe | | X |

| Gallons Removed | pH | EC | Temp |
|---|---|---|---|
| 5 | 1.6 | 5.48 | 14.26 | 65.8 |
| 10 | 3.2 | 5.62 | 8.23 | 65.2 |
| 15 | 4.8 | 6.66 | 7.95 | 65.3 |
| 20 | | 6.66 | 8.19 | 65.3 |
| 25 | | 6.69 | 8.52 | 65.2 |
| 30 | | 6.68 | 8.5 | 65.3 |
| 35 | | | | |
| 40 | | | | |
| 45 | | | | |
| 50 | | | | |

Samples Obtained:

| | |
|---|---|
| TPH (gasoline) | X |
| TPH (diesel) | |
| TPH (motor oil) | |
| BTXE | X |
| EPA 624 | |
| EPA 625 | |
| EPA 608 | |
| PCEs only | |
| Metals | |
| Other, specify | |
| Field Blank | |

Well Sampling [X] Well Development [ ] check one

Well Number: MW4

Job Number: 6045-4

Job Name: Peralta

Date: 5/18/95

Sampler: ACE / CC

Depth to Water (measured from TOC): 12.32

Inside Diameter of Casing: 2"

Depth of Boring: 14.33

Method of well development/purging: Bailing

Amount of Water Bailed/Pumped from well: 8 gallons

Depth to Water after well development: ———

Depth to water prior to sampling: 2.3

Bailed water stored on-site ? How ? Drums

Number of well volumes removed: 4

TSP wash, distilled rinse, new rope ? New Rope, New Bailer

Water Appearance:

| | yes | no |
|---|---|---|
| froth | | |
| iridescence | | |
| oil | | |
| smell | | |
| product | | |
| other, describe | | ✓ |

| Gallons Removed | | pH | EC | Temp |
|---|---|---|---|---|
| 2 | 2 | 7.62 | 1.72 | 67.1 |
| 10 | 4 | 7.68 | 2.01 | 67.4 |
| 15 | 6 | 7.65 | 2.27 | 67.8 |
| 20 | | 7.66 | 2.26 | 67.6 |
| 25 | | 7.69 | 2.28 | 67.6 |
| 30 | | 7.76 | 2.29 | 67.6 |
| 35 | | | | |
| 40 | | | | |
| 45 | | | | |
| 50 | | | | |

Samples Obtained:

| | |
|---|---|
| TPH (gasoline) | X |
| TPH (diesel) | |
| TPH (motor oil) | |
| BTXE | X |
| EPA 624 | |
| EPA 625 | |
| EPA 608 | |
| PCEs only | |
| Metals | |
| Other, specify | |
| Field Blank | |

# APPENDIX B

# ANALYTICAL RESULTS

# CHAIN OF CUSTODY

# CHROMALAB, INC.

Environmental Services (SDB)

June 1, 1995 *Submission #:* 9505244

ACC ENVIRONMENTAL CONSULTANTS

*Atten:* Misty Kaltreider

*Project:* PERALTA COLLEGE *Project#:* 6045-4
*Received:* May 18, 1995

*re:* 4 samples for Gasoline and BTEX analysis.

*Matrix:* WATER
*Sampled:* May 18, 1995 *Run#:* 6861 *Analyzed:* May 30, 1995
*Method:* EPA 5030/8015M/602/8020

| Spl # CLIENT SMPL ID | Gasoline (mg/L) | Benzene (ug/L) | Toluene (ug/L) | Ethyl Benzene (ug/L) | Total Xylenes (ug/L) |
|---|---|---|---|---|---|
| *89100* MW1 | N.D. | N.D. | N.D. | N.D. | N.D. |
| *89101* MW2 | 0.05 | N.D. | 0.5 | N.D. | 0.7 |
| *89102* MW3 | 0.47 | N.D. | 1.1 | 0.7 | 2.0 |
| *89103* MW4 | N.D. | N.D. | N.D. | N.D. | 0.6 |
| Reporting Limits | 0.05 | 0.5 | 0.5 | 0.5 | 0.5 |
| Blank Result | N.D. | N.D. | N.D. | N.D. | N.D. |
| Blank Spike Result (%) | 84 | 95 | 93 | 93 | 99 |

Jack Kelly
Chemist

Ali Kharrazi
Organic Manager

N:DC JACK 18:39:34

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

# CHROMALAB, INC.
# SAMPLE RECEIPT CHECKLIST

Client Name ACC

Project PORTOLA COLLEGE

Reference/Subm # 22028/9505244

Checklist completed by: [signature] 5/19/95 (Signature / Date)

Date/Time Received 5/18/95 1321 (Date / Time)

Received by B. Morton

Carrier name

Logged in by TA 5/18/95 (Initials / Date)

Matrix H2O

| | | | | |
|---|---|---|---|---|
| Shipping container in good condition? | | | NA____ | Yes____ No____ |
| Custody seals present on shipping container? | Intact____ | Broken____ | | Yes____ No____ |
| Custody seals on sample bottles? | Intact____ | Broken____ | | Yes____ No____ |
| Chain of custody present? | | | | Yes✓ No____ |
| Chain of custody signed when relinquished and received? | | | | Yes✓ No____ |
| Chain of custody agrees with sample labels? | | | | Yes✓ No____ |
| Samples in proper container/bottle? | | | | Yes✓ No____ |
| Samples intact? | | | | Yes✓ No____ |
| Sufficient sample volume for indicated test? | | | | Yes✓ No____ |
| VOA vials have zero headspace? | | | NA____ | Yes✓ No____ |
| Trip Blank received? | | | NA____ | Yes____ No✓ |
| All samples received within holding time? | | | | Yes✓ No____ |

Container temperature?_____

pH upon receipt _____ pH adjusted_____ Check performed by:_____ NA✓

Any NO response must be detailed in the comments section below. If items are not applicable, they should be marked NA.

---

Client contacted?_____ Date contacted?_____

Person contacted?_____ Contacted by?_____

Regarding?_____

Comments: pH checked by chemist

Corrective Action:_____

SMPLRECD.CK

244/89100-89103

22028

# CHROMALAB, INC.

2239 Ome
511

DOHS 1094

SUBM #: 9505244 REP: PM
CLIENT: ACC
DUE: 05/25/95
REF #:22028

## Chain of Custody

5/18/95 PAGE 1 OF 1

PROJ. MGR. Misty Kaltreider
COMPANY ACC Environmental
ADDRESS 1000 Atlantic Ave.
Alameda, Ca 94501

SAMPLERS (SIGNATURE) Alison Ekdale (PHONE NO.) 510-522-8198

| SAMPLE ID. | DATE | TIME | MATRIX | PRESERV. | TPH - Gasoline (EPA 5030, 8015) | TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020) | TPH - Diesel (EPA 3510/3550, 8015) | PURGEABLE AROMATICS BTEX (EPA 602, 8020) | PURGEABLE HALOCARBON (EPA 601, 8010) | VOLATILE ORGANICS (EPA 624, 8240, 524.2) | BASE/NEUTRALS, ACIDS (EPA 625/627, 8270, 525) | TOTAL OIL & GREASE (EPA 5520, B+F, E+F) | PCB (EPA 608, 8080) | PESTICIDES (EPA 608, 8080) | TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1 | | METALS: Cd, Cr, Pb, Zn, Ni | CAM METALS (17) | PRIORITY POLLUTANT METALS (13) | TOTAL LEAD | EXTRACTION (TCLP, STLC) | | | | NUMBER OF CONTAINERS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW1 | 5/18/95 | | Water | Cold | | X | | | | | | | | | | | | | | | | | | | 3 |
| MW2 | | | | | | X | | | | | | | | | | | | | | | | | | | 3 |
| MW3 | | | | | | X | | | | | | | | | | | | | | | | | | | 3 |
| MW4 | | | | | | X | | | | | | | | | | | | | | | | | | | 3 |

### PROJECT INFORMATION

PROJECT NAME: Peralta College
PROJECT NUMBER: 6045-4
P.O. # 6045-4

TAT: (STANDARD 5-DAY) | | | 24 | 48 | 72 | OTHER

SPECIAL INSTRUCTIONS/COMMENTS:
Received at 8°

### SAMPLE RECEIPT

| | |
|---|---|
| TOTAL NO. OF CONTAINERS | 12 |
| HEAD SPACE | |
| REC'D GOOD CONDITION/COLD | |
| CONFORMS TO RECORD | |

| RELINQUISHED BY 1. | RELINQUISHED BY 2. | RELINQUISHED BY 3. |
|---|---|---|
| (SIGNATURE) Alison Ekdale (TIME) | (SIGNATURE) (TIME) | (SIGNATURE) (TIME) |
| (PRINTED NAME) Alison Ekdale (DATE) 5/18/95 | (PRINTED NAME) (DATE) | (PRINTED NAME) (DATE) |
| (COMPANY) ACC Environmental | (COMPANY) | (COMPANY) |
| **RECEIVED BY 1.** | **RECEIVED BY 2.** | **RECEIVED BY (LABORATORY) 3.** |
| (SIGNATURE) (TIME) 1321 | (SIGNATURE) (TIME) | (SIGNATURE) (TIME) |
| (PRINTED NAME) B. Morrow (DATE) 5-18-95 | (PRINTED NAME) (DATE) | (PRINTED NAME) (DATE) |
| (COMPANY) Chromalab | (COMPANY) | (LAB) |