美國和利食品公司屋
Wo Lee Food Co.
208 JACKSON ST., OAKLAND, CA 94607
TEL: (510) 444-7083 • (510) 834-5868 • FAX: (510) 444-4657

4-10-1997

ALAMEDA COUNTY ENIRONMENTAL HEALTH DIV
1311 HARBOR BAY PARKWAY, ROOM 250
ALAMEDA, CA 94502-6577

RE: BIANNUAL GROUNDWATER MONITORING REPORT
208 JACKSON STREE, OAKLAND, CA
ACC PROJECT NO. 96-6238-1.2

Dear Sirs/Madam;
Enclosed please find one copy of the Biannual groundwater monitoring report prepared by ACC Environmental Consultants, Inc. (ACC).

This report was requested by you.

Sincerely,

Janice Chow

(JANICE CHOW)(MRS.)
SECRETARY

A·C·C
ENVIRONMENTAL
CONSULTANTS

BIANNUAL GROUNDWATER MONITORING REPORT

Wo Lee Food Company
208 Jackson Street
Oakland, California

ACC Project No. 95-6238-1.2

Prepared for:

Wo Lee Food Company
208 Jackson Street
Oakland, California

April 7, 1997

Prepared by: _____
Misty C. Kaltreider
Senior Project Geologist

Reviewed by: _____
David R. DeMent, RG
Senior Geologist

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

7977 Capwell Drive, Suite 100 • Oakland, CA 94621 • (510) 638-8400 • FAX (510) 638-8404
OAKLAND • LOS ANGELES • SACRAMENTO • SEATTLE

ENVIRONMENTAL CONSULTANTS

TABLE OF CONTENTS

BIANNUAL GROUNDWATER MONITORING REPORT
Wo Lee Food Company
208 Jackson Street
Oakland, California

1.0 INTRODUCTION

On behalf of Wo Lee Food, ACC Environmental Consultants, Inc., (ACC) has prepared this report of quarterly groundwater monitoring performed at 208 Jackson Street, Oakland, California (Figure 1). The purpose of the work was to evaluate groundwater in the vicinity of the former gasoline underground storage tanks (USTs). The project objectives were to: 1) measure the groundwater levels in each well and calculate groundwater elevation, gradient, and flow direction; 2) obtain groundwater samples from the four existing monitoring wells and analyze the water samples for petroleum hydrocarbon constituents; and 3) report the findings.

2.0 BACKGROUND

Four USTs were removed from the site in March 1990 (Figure 2). Tanks #1 and #3 are reported to have contained diesel fuel and tanks #2 and #4 contained gasoline fuel. Analytical results indicated that concentrations of total petroleum hydrocarbons as diesel (TPHd) and benzene, toluene, ethylbenzene, and total xylenes (BTEX) were reported in the soil from the excavation of tank #1. Soils left in place in the other tank excavations contained relatively low concentrations of total petroleum hydrocarbons as gasoline (TPHg), TPHd, and BTEX. Approximately 125 cubic years of overburden soils from the tank locations were reportedly excavated and stockpiled on site.

Three exploratory soil borings were drilled at the site by Subsurface Consultants, Inc., (SCI) in May 1990 and converted into groundwater monitoring wells (Figure 2). SCI collected water samples from monitoring wells MW-2 and MW-3 and the tank #2 excavation in January 1994 and submitted the samples for analyses. Analytical results of groundwater samples from wells MW-2 and MW-3 did not indicate concentrations of TPHg, TPHd, or BTEX, but a sample of water collected from the tank #2 excavation indicated 3,700 μg/L, equivalent to parts per billion (ppb) TPHd and 1.1 ppb xylenes.

SCI conducted further subsurface assessment in May 1994. Two additional groundwater monitoring wells (MW-4 and MW-5) were installed downgradient of the former USTs, adjacent to Second Street in the southern corner of the property. SCI sampled the onsite monitoring wells but was unable to locate well MW-1. Well MW-1 is believed to have been destroyed during previous excavation of tanks #1 and #3. Analytical results of groundwater samples collected from wells MW-2, MW-4, and MW-5 indicated that groundwater had been impacted by petroleum hydrocarbons from the former underground storage of gasoline and diesel fuels. Off site migration of petroleum hydrocarbons is considered minimal due to no detectable concentrations of constituents in offsite borings.

Due to the constituents in the groundwater detected on site, Alameda County Health Care Services Agency (ACHCSA) requested additional offsite and onsite subsurface investigation.

Previous groundwater monitoring included measuring depth to water, subjectively evaluating groundwater, and purging and sampling the wells for laboratory analysis. Groundwater beneath the site was encountered between an average depth of 4.2 to 5.4 feet below ground surface (bgs).

In March 1995, ACC performed an additional subsurface investigation, which included drilling five exploratory soil borings (B-1 through B-5) off site along Second and Madison Streets and 11 onsite borings (B-6 through B-16). Boring results indicated that impacts were predominantly located in the immediate vicinity of the open excavation and wells MW-4 and MW-5, with little or no offsite migration. In September through November 1995, ACC measured water levels in four groundwater monitoring wells and calculated groundwater flow direction and gradient. This work was performed in order to properly place any proposed downgradient monitoring wells. ACC prepared a Corrective Action Plan dated July 10, 1996. Based on investigation work performed to date, ACC recommended selective excavation and impacted groundwater removal as a means of source removal.

In its letter dated August 12, 1996, ACHCSA requested that biannual groundwater monitoring and sampling be reinstated to evaluate groundwater conditions at the site. The letter requested that samples be analyzed for TPHg, TPHd, BTEX, and methyl tertiary butyl ether (MTBE). Initial biannual monitoring was conducted on September 4, 1996.

3.0 GROUNDWATER MONITORING AND SAMPLING

ACC conducted biannual groundwater monitoring and sampling on March 21, 1997. Work at the site included measuring depth to water, subjectively evaluating groundwater in the wells, and purging and sampling the wells for laboratory analysis.

3.1 Groundwater Monitoring

Before groundwater sampling, the depth to the surface of the water table was measured from the top of the polyvinyl chloride well casing using a Solinst water level meter. The water level measurements were recorded to the nearest 0.01 foot with respect to mean sea level (MSL). Groundwater monitoring data recorded on the well monitoring worksheet is included as Appendix 1. Information regarding well elevations and groundwater levels are summarized in Table 1.

TABLE 1 - GROUNDWATER DEPTH INFORMATION

Well Number	Date Measured	Casing Elevation (MSL)	Groundwater Depth (feet)	Groundwater Elevation (MSL)
MW-2	09/26/95	6.64	5.20	1.44
	10/27/95		5.11	1.53
	11/30/95		5.19	1.45
	09/04/96		5.05	1.59
	03/21/97		4.31	2.33
MW-3	09/26/95	7.71	5.71	2.00
	10/27/95		5.81	1.90
	11/30/95		5.90	1.81
	09/04/96		5.64	2.07
	03/21/97		5.03	2.68
MW-4	09/26/95	6.74	5.39	1.35
	10/27/95		5.43	1.31
	11/30/95		5.51	1.23
	09/04/96		5.28	1.46
	03/27/97		4.67	2.07 ↑
MW-5	09/26/95	6.73	5.14	1.59
	10/27/95		5.17	1.56
	11/30/95		5.26	1.47
	09/04/96		5.11	1.62
	03/21/97		4.32	2.41

Notes: All measurements in feet relative to MSL

3.2 Groundwater Gradient

The groundwater flow direction as determined from monitoring well data obtained on March 21, 1997, is illustrated on Figure 3. Based on groundwater elevation measurements, groundwater flow in the vicinity of wells MW-2, MW-4, and MW-5 (southern corner of the site) is toward the south at a gradient of 0.007 foot/foot. The groundwater flow direction is consistent with previous sampling events but the gradient increased to 0.007 or twice the gradient observed during previous sampling events. The flow direction and gradient in the northern corner of the site were approximately south-southeast at 0.003 foot/foot, respectively. These values are consistent with previous sampling events. Table 2 summarizes previous gradients and approximate flow directions determined from water elevations.

ACC believes that the gradient in the southern corner of the property is being influenced by standing water in the open excavation located upgradient of well MW-4. Since the majority of impacted groundwater is in the southern corner of the site, ACC evaluated flow direction and gradient from this area of the site.

TABLE 2 - GROUNDWATER GRADIENT AND FLOW DIRECTION

Date Monitored	Average Gradient (foot/foot)	Direction
September 9, 1995	0.004	south-southeast
October 27, 1995	0.003	south
November 30, 1995	0.003	south
September 4, 1996	0.003	south
March 21, 1997	0.007	south

3.3 Groundwater Sampling

Before groundwater sampling, each well was purged using a disposable polyethylene bailer. Groundwater samples were collected when temperature, pH, and conductivity of the water stabilized and a minimum of four well casing volumes of water had been removed. Following purging, each well was allowed to recharge before sampling. When recovery to 80 percent of the static water level was observed, a sample was collected for analysis. Groundwater conditions were monitored during purging and sampling. A copy of the well monitoring worksheet is presented as Appendix 1.

Wells were sampled using disposable polyethylene bailers attached to new string. From each monitoring well, approved, laboratory-supplied sample vials were filled to overflowing and sealed so that no air was trapped in the vial. Once filled, sample vials were inverted and tapped to test for air bubbles. Sample containers were labeled with self-adhesive, preprinted tags. The samples were stored in a pre-chilled, insulated container pending delivery to a state-certified laboratory for analysis.

Water purged during the development and sampling of the monitoring wells was temporarily stored on site in Department of Transportation approved 55-gallon drums pending laboratory analysis and proper disposal.

4.0 RESULTS OF GROUNDWATER SAMPLING

Groundwater samples collected from wells MW-2 through MW-5 were submitted to Chromalab, Inc., following chain of custody protocol. The samples were analyzed for TPHg, BTEX, and MTBE by EPA Methods SW846 8020A Nov 1990/8015M and TPHd by EPA Methods 8015M. Table 3 summarizes groundwater sample analytical results. A copy of the analytical results and chain of custody record is included in Appendix 2.

TABLE 3 - GROUNDWATER SAMPLE ANALYTICAL RESULTS

Well No.	Date Sampled	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	TPHd (µg/L)	MTBE (µg/L)
MW-1 (destroyed)	05/21/90	25,000	400	440	330	650	5,500	---
MW-2	05/21/90	<50	<1.0	<1.0	<1.0	<1.0	<50	---
	01/06/94	<50	<0.5	<0.5	<0.5	<0.5	<50	---
	09/04/96	<50	<0.5	<0.5	<0.5	<0.5	<50	<5.0
	03/21/97	<50	<0.5	<0.5	<0.5	<0.5	<50	<5.0
MW-3	05/21/90	<50	<1.0	<1.0	<1.0	<1.0	<50	---
	01/06/94	<50	<0.5	<0.5	<0.5	<0.5	<50	---
	06/03/94	<50	<0.5	<0.5	<0.5	<0.5	230*	---
	09/04/96	<50	<0.5	<0.5	<0.5	<0.5	<50	<50
	03/21/97	<50	<0.5	<0.5	<0.5	<0.5	<50	<5.0
MW-4	06/03/94	210,000	7,600	28,000	3,700	24,000	9,800	---
GWE ↑	09/04/96	45,000	5,100	4,600	4,100	14,000	<50	<500
	03/21/97	58,000↑	5,000 ↓	6,300 ↑	4,600 ↑	14,000 –	<50 –	<250↓ ?
MW-5	06/03/94	7,800	3.8	6.2	10	16	4,600	---
	09/04/96	1,600	14	3.6	9.7	13	<50	<5.0
↑	03/21/97	430 ↓	4.2 ↓	<0.5 ↓	1.4 ↓	0.62 ↓	690**↑	<5.0 –

Notes: * Reported to be an anomalous result from one chromatogram peak*
*** Hydrocarbon reported is in the early diesel range, and does not match laboratory diesel standard*

5.0 DISCUSSION

For the second consecutive sampling event, no gasoline or diesel fuel constituents were detected in wells MW-2 and MW-3. Concentrations of TPHg and BTEX have decreased approximately four-fold in well MW-5. For the second consecutive sampling event, TPHd was not detected in wells MW-2 through MW-4. A minor concentration of TPHd was detected in well MW-5 at 690 ppb. Concentrations of TPHg and BTEX in well MW-4 increased slightly. No MTBE was detected in any of the groundwater samples and does not appear to have been added to the gasoline used at the site.

Flow direction and gradient varied slightly across the site. In the northern portion of the site, upgradient of the open excavation, flow direction and gradient were south-southeast at 0.003 foot/foot, respectively. These values are identical with previous sampling events and indicate groundwater in the northern portion of the site moves in response to regional influences. In the southern portion of the site, downgradient of the open excavation, flow direction and gradient were south at 0.007 foot/foot, respectively. Downgradient of the open excavation, gradient is steeper, approximately twice the historical value of 0.003 foot/foot.

Artificial recharge from standing water in the open excavation appears to be influencing gradient and may be responsible for facilitating bioremediation by introducing oxygenated water in the vicinity of impacted groundwater.

5.1 Natural Attenuation

Remediation by natural attenuation is the reduction in concentration, mass, or mobility of constituents of concern with distance and time due to naturally occurring processes in the environment. These processes can be classified as physical (dispersion, diffusion, dilution, and volatilization), chemical (sorption and chemical reaction), and biological (aerobic and anaerobic biodegradation). The chemical and biological reactions result in the reduction of the total mass of chemical in the system, and are referred to as destructive mechanisms. For petroleum hydrocarbons in the subsurface, biological degradation is the most important process in the reduction of mass.

Direct evidence of natural attenuation is a documented decrease in the concentration of constituents of concern. Based on the decrease of gasoline and diesel fuel constituents alone, natural attenuation by biodegradation processes is clearly evident at this site. Sandy soils typically allow petroleum hydrocarbons to migrate further and faster than fine-grained soils. However, sandy soils also allow increased groundwater recharge, which introduces oxygenated water facilitating natural biodegradation. Previous boring investigation indicated little or no offsite migration. Site conditions must support natural biodegradation before the petroleum hydrocarbons can migrate any appreciable distance. ?

6.0 CONCLUSIONS

Based on information collected during two consecutive sampling events, ACC concludes that:

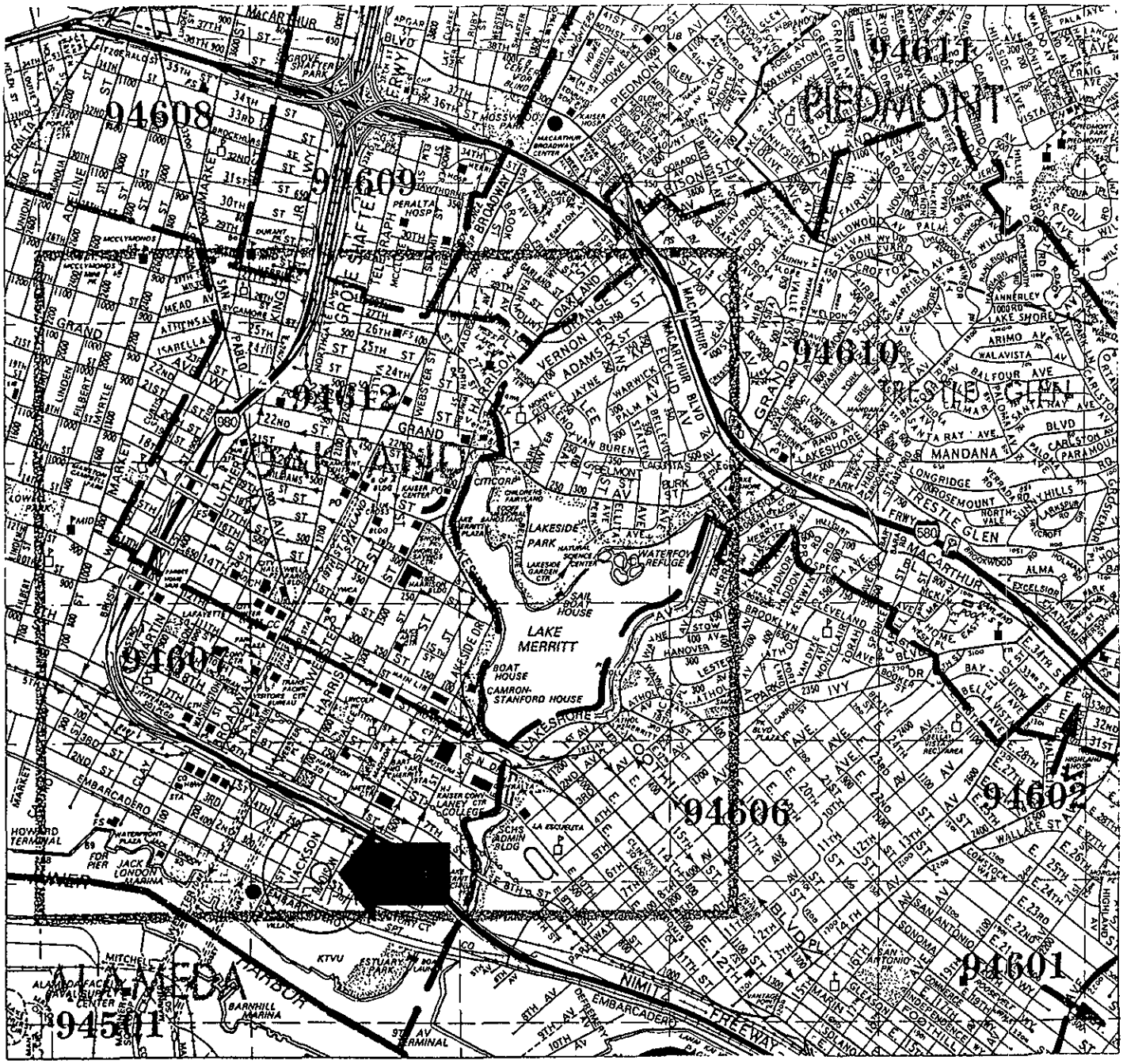
- Calculated groundwater flow direction and gradient are fairly consistent with previous sampling events;
- MTBE was not detected in any of the sampled wells, and TPHg and TPHd were not detected in wells MW-2 and MW-3;
- Concentrations of gasoline constituents increased slightly in well MW-4;
- Concentrations of TPHg and TPHd were detected in well MW-5 at concentrations of 430 and 690 ppb, respectively, and TPHg in well MW-5 has decreased 95 percent since June 1994; and
- Natural attenuation processes, principally biodegradation, are reducing the mass and concentration of dissolved-phase petroleum hydrocarbons, and ACC believes these processes are being aided by artificial groundwater recharge from the open excavation.

7.0 RECOMENDATIONS

Based on conclusions from consecutive sampling events, ACC recommends that:

- MTBE analysis be removed from any subsequent sampling events;
- Oxygen releasing compond be evaluated for use at the site;
- The excavation be left open pending implementation of any remedial activity; and
- Groundwater sampling and monitoring of the onsite wells should continue on a biannual basis to verify the trend of decreasing petroleum hydrocarbon concentrations.

The next biannual groundwater sampling will be conducted in September 1997.



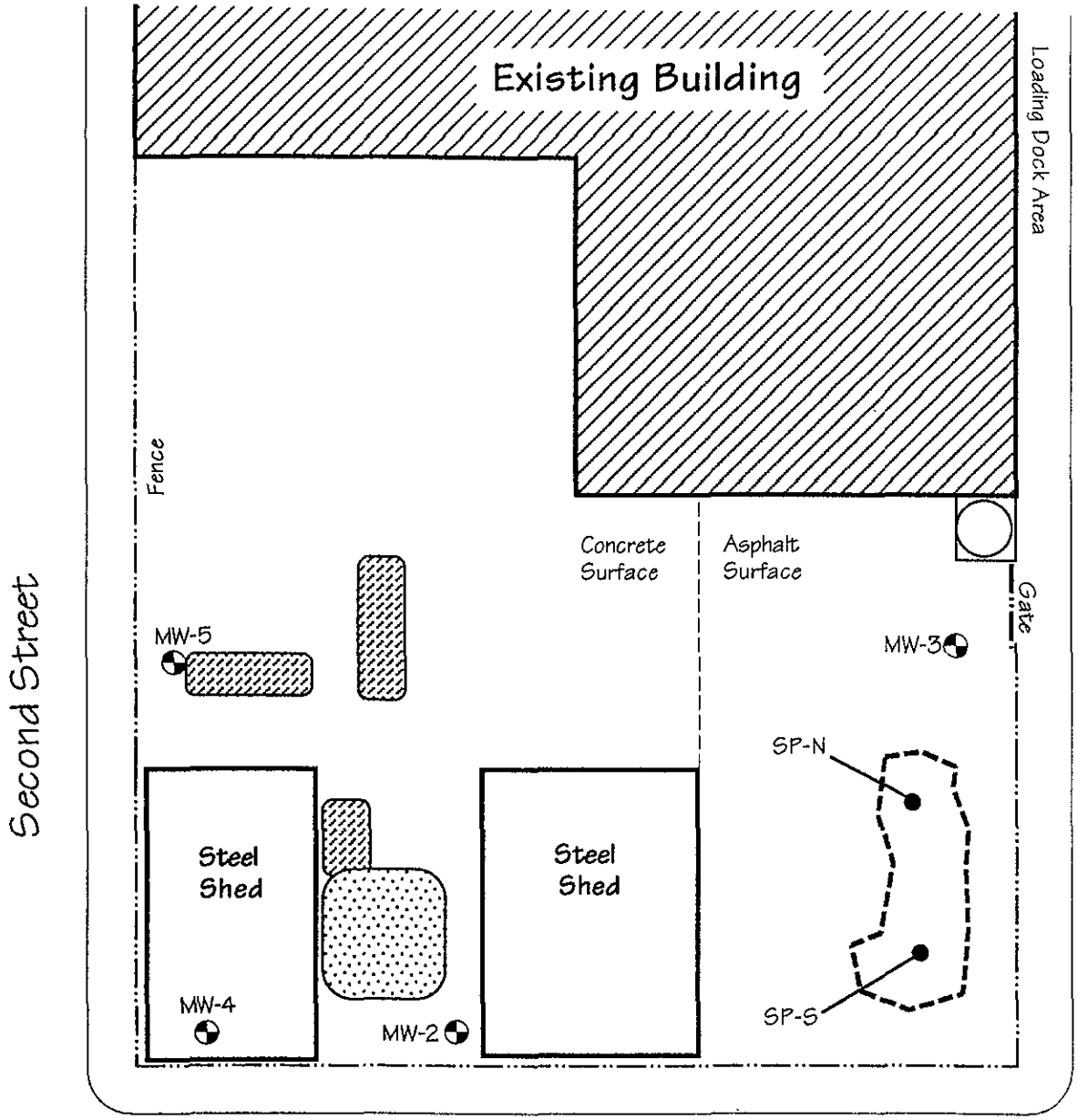
N

Source: Thomas Brothers Guide

FIGURE 1: LOCATION MAP
208 Jackson Street
Oakland, California

Project No. 6249-1.0	Scale: 1" = 40'
Drawn By: JVC	Date: 10/30/95

ACC Environmental Consultants
7977 Capwell Drive, Suite 100
Oakland, CA 94621
(510)638-8400 Fax (510)638-8404



Legend

- Open Excavation
- Former UST Location
- MW-2 - Existing Groundwater Monitoring Well
- Soil Stockpile
- SP-S - Soil Sample

Title: **SITE Plan**
208 Jackson Street
Oakland, California

Figure No: 2	Scale: 1" = 40'
Drawn By: JVC/DRD	Date: 3/30/97
Project No: 6249-1.0	

ACC Environmental Consultants, Inc.
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Oakland, CA 94621
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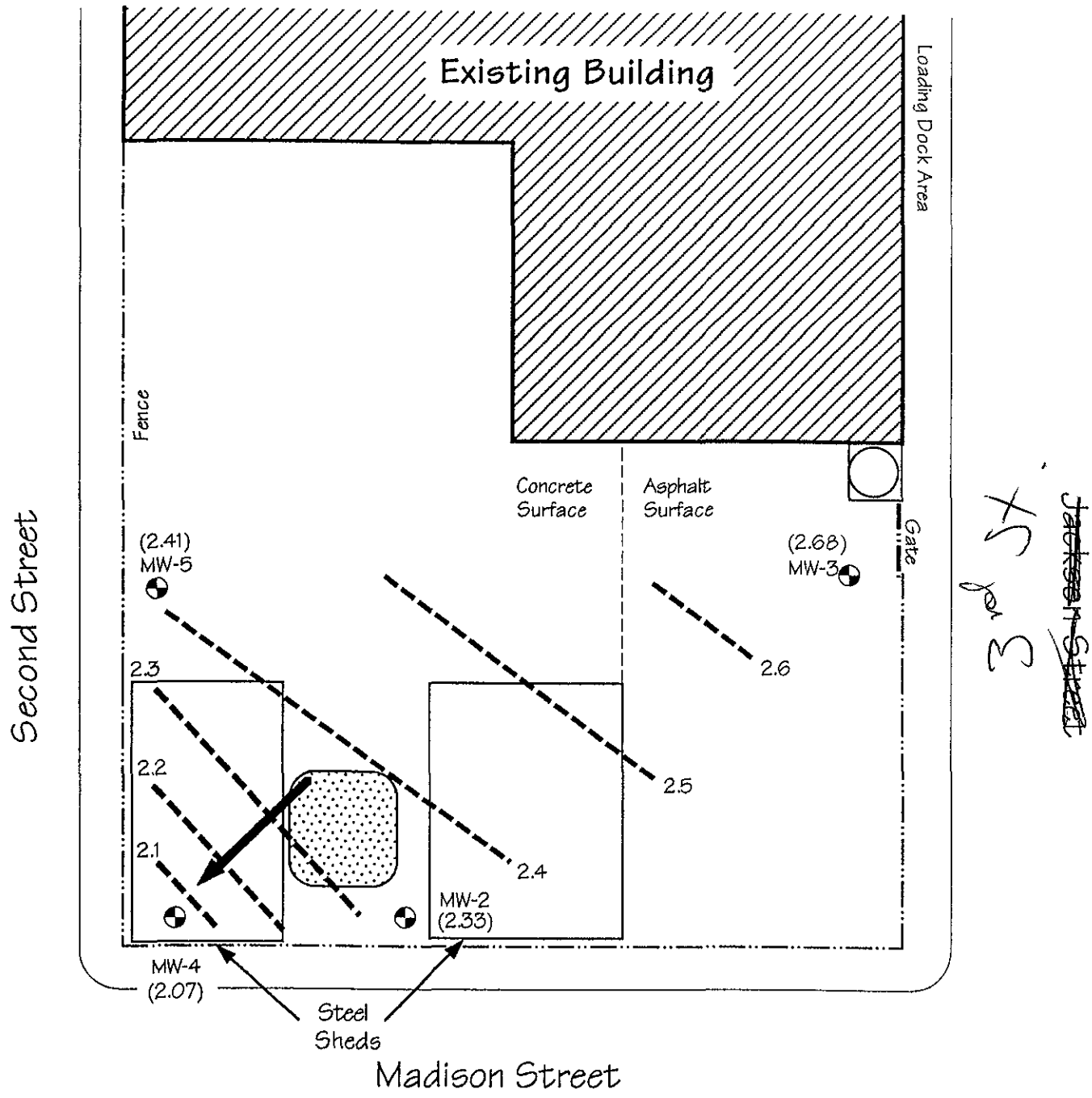
N W E S



Legend

MW-2 - Existing Groundwater Monitoring Well

- Groundwater Elevation Contour

- Approximate Groundwater Flow Direction

- Open Excavation

Groundwater levels measured on March 21, 1997

Title: **Gradient Map** Wo Lee Food 208 Jackson Street Oakland, California	
Figure No: 3	Scale: 1" = 40'
Drawn By: JVC/DRD	Date: 3/25/97
Project No: 6238-1.2	

ACC Environmental Consultants, Inc.
7977 Capwell Drive, Suite 100
Oakland, CA 94621
(510)638-8400 Fax (510)638-8404

WELL MONITORING WORKSHEET

A·C·C ENVIRONMENTAL CONSULTANTS

ACC MONITORING WELL WORKSHEET

JOB NAME: Wo Lee Food Company	PURGE METHOD: Manual Bailing
SITE ADDRESS: 208 Jackson	SAMPLED BY: Eloy Cisneros
JOB #: 6249-1.0	LABORATORY: Chromalab
DATE: 3/21/97	ANALYSIS: TPHg/BTEX/MTBE/TPHd
Onsite Drum Inventory SOIL:	MONITORING ☒ DEVELOPING ☐
EMPTY: WATER:	SAMPLING ☒

WELL: MW-2

DEPTH OF BORING: 9.20'
DEPTH TO WATER: 4.31'
WATER COLUMN: 4.89'
WELL DIAMETER: 2"
WELL VOLUME: 0.8 gal
COMMENTS:
DTW 11:55

PURGE VOL (Gal)	pH	Temp.(C)	Cond.	Sal.	Turb.	D.O.
0.8	–	21.0	0.711	—	—	—
1.6	–	21.2	0.654	—	—	—
2.4	–	21.8	0.613	—	—	—
3.2	–	22.1	0.610	—	—	—

OBSERVATIONS: ☐ Froth ☐ Sheen ☐ Odor Type_____ ☐ Free Product Amount_____ Type_____ ☐ Other

WELL: MW-3

DEPTH OF BORING: 9.22'
DEPTH TO WATER: 5.03'
WATER COLUMN: 4.19'
WELL DIAMETER: 2"
WELL VOLUME: 0.7 gal
COMMENTS:
DTW 11:50

PURGE VOL (Gal)	pH	Temp.(C)	Cond.	Sal.	Turb.	D.O.
0.7	–	21.8	0.683	—	—	—
1.4	–	22.0	0.616	—	—	—
2.1	–	21.9	0.598	—	—	—
2.8	–	22.2	0.595	—	—	—

OBSERVATIONS: ☐ Froth ☐ Sheen ☐ Odor Type_____ ☐ Free Product Amount_____ Type_____ ☐ Other

WELL: MW-4

DEPTH OF BORING: 9.38'
DEPTH TO WATER: 4.67'
WATER COLUMN: 4.71'
WELL DIAMETER: 2"
WELL VOLUME: 0.8 gal
COMMENTS:
DTW 12:05

PURGE VOL (Gal)	pH	Temp.(C)	Cond.	Sal.	Turb.	D.O.
0.8	–	21.1	0.981	—	—	—
1.6	–	21.5	0.990	—	—	—
2.4	–	21.4	0.973	—	—	—
3.2	–	21.7	0.971	—	—	—

OBSERVATIONS: ☐ Froth ☐ Sheen ☒ Odor Type Gasoline ☐ Free Product Amount_____ Type_____ ☐ Other

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A·C·C ENVIRONMENTAL CONSULTANTS

ACC MONITORING WELL WORKSHEET

JOB NAME: Wo Lee Food Company	PURGE METHOD: Manual Bailing
SITE ADDRESS: 208 Jackson	SAMPLED BY: Eloy Cisneros
JOB #: 6249-1.0	LABORATORY: Chromalab
DATE: 3/21/97	ANALYSIS: TPHg / BTEX / MTBE / TPHd
Onsite Drum Inventory SOIL:	MONITORING ☒ DEVELOPING ☐
EMPTY: WATER:	SAMPLING ☒

WELL: MW-5

DEPTH OF BORING: 9.00'

DEPTH TO WATER: 4.32'

WATER COLUMN: 4.68'

WELL DIAMETER: 2"

WELL VOLUME: 0.8 gal

COMMENTS:
DTW 12:00

PURGE VOL.	PURGE WATER READINGS						
(Gal)	pH	Temp.(C)	Cond.	Sal.	Turb.	D.O.	OBSERVATIONS
0.8	—	22.0	0.892	—			☐ Froth
1.6	—	21.8	0.793	—			☐ Sheen
2.4	—	22.1	0.772	—			☒ Odor Type Unknown
3.2	—	22.1	0.769	—			☐ Free Product
							Amount_____Type_____
							☐ Other
							Unknown odor noted, appears sewer-like.

WELL:

DEPTH OF BORING:

DEPTH TO WATER:

WATER COLUMN:

WELL DIAMETER:

WELL VOLUME:

COMMENTS:

(Gal)	pH	Temp.(C)	Cond.	Sal.	Turb.	D.O.	
							☐ Froth
							☐ Sheen
							☐ Odor Type_____
							☐ Free Product
							Amount_____Type_____
							☐ Other

WELL:

DEPTH OF BORING:

DEPTH TO WATER:

WATER COLUMN:

WELL DIAMETER:

WELL VOLUME:

COMMENTS:

(Gal)	pH	Temp.(C)	Cond.	Sal.	Turb.	D.O.	
							☐ Froth
							☐ Sheen
							☐ Odor Type_____
							☐ Free Product
							Amount_____Type_____
							☐ Other

ANALYTICAL RESULTS AND CHAIN OF CUSTODY RECORD

CHROMALAB, INC.

Environmental Services (SDB)

March 31, 1997 *Submission #:* 9703332

ACC ENVIRONMENTAL CONSULTANTS

Atten: David DeMent

Project: 208 JACKSON ST. *Project#:* 6249-1.0
Received: March 24, 1997

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

Client Sample ID: **MW-2**
Spl#: 122580 *Matrix:* WATER
Sampled: March 21, 1997 *Run#:* 6002 *Analyzed:* March 28, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	50	N.D.	87	1
MTBE	N.D.	5.0	N.D.	97	1
BENZENE	N.D.	0.50	N.D.	94	1
TOLUENE	N.D.	0.50	N.D.	96	1
ETHYL BENZENE	N.D.	0.50	N.D.	97	1
XYLENES	N.D.	0.50	N.D.	101	1

Marianne Alexander
Gas/BTEX Supervisor

Chip Poalinelli
Operations Manager

510-638-8404

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

CHROMALAB, INC.

Environmental Services (SDB)

March 31, 1997 *Submission #:* 9703332

ACC ENVIRONMENTAL CONSULTANTS

Atten: David DeMent

Project: 208 JACKSON ST. *Project#:* 6249-1.0
Received: March 24, 1997

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

Client Sample ID: **MW-3**
Spl#: 122581 *Matrix:* WATER
Sampled: March 21, 1997 *Run#:* 6002 *Analyzed:* March 28, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	50	N.D.	87	1
MTBE	N.D.	5.0	N.D.	97	1
BENZENE	N.D.	0.50	N.D.	94	1
TOLUENE	N.D.	0.50	N.D.	96	1
ETHYL BENZENE	N.D.	0.50	N.D.	97	1
XYLENES	N.D.	0.50	N.D.	101	1

Marianne Alexander
Gas/BTEX Supervisor

Chip Poalinelli
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

March 31, 1997 *Submission #:* 9703332

ACC ENVIRONMENTAL CONSULTANTS

Atten: David DeMent

Project: 208 JACKSON ST. *Project#:* 6249-1.0
Received: March 24, 1997

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

Client Sample ID: **MW-4**
Spl#: 122582 *Matrix:* WATER
Sampled: March 21, 1997 *Run#:* 6002 *Analyzed:* March 29, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	58000	2500	N.D.	87	50
MTBE	N.D.	250	N.D.	97	50
BENZENE	5000	25	N.D.	94	50
TOLUENE	6300	25	N.D.	96	50
ETHYL BENZENE	4600	25	N.D.	97	50
XYLENES	14000	50	N.D.	101	100

Note: *Reporting Limits Increased Due To Matrix Interference.*

Marianne Alexander
Gas/BTEX Supervisor

Chip Poalinelli
Operations Manager

510-638-8404

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

GM/432 B:BTEXQC0220

ALEXANDM 17:47

CHROMALAB, INC.

Environmental Services (SDB)

March 31, 1997 *Submission #:* 9703332

ACC ENVIRONMENTAL CONSULTANTS

Atten: David DeMent

Project: 208 JACKSON ST. *Project#:* 6249-1.0
Received: March 24, 1997

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

Client Sample ID: **MW-5**
Spl#: 122583 *Matrix:* WATER
Sampled: March 21, 1997 *Run#:* 6002 *Analyzed:* March 28, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	430	50	N.D.	87	1
MTBE	N.D.	5.0	N.D.	97	1
BENZENE	4.2	0.50	N.D.	94	1
TOLUENE	N.D.	0.50	N.D.	96	1
ETHYL BENZENE	1.4	0.50	N.D.	97	1
XYLENES	0.62	0.50	N.D.	101	1

Marianne Alexander
Gas/BTEX Supervisor

Chip Poalinelli
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

March 31, 1997 *Submission #:* 9703332

ACC ENVIRONMENTAL CONSULTANTS

Atten: David DeMent

Project: 208 JACKSON ST. *Project#:* 6249-1.0
Received: March 24, 1997

re: 4 samples for TPH - Diesel analysis.
Method: *EPA 8015M*

Matrix: WATER *Extracted:* March 27, 1997
Sampled: March 21, 1997 *Run#:* 5976 *Analyzed:* March 28, 1997

Spl#	CLIENT SPL ID	DIESEL (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
122580	MW-2	N.D.	50	N.D.	90.0	1
122581	MW-3	N.D.	50	N.D.	90.0	1
122582	MW-4	N.D.	50	N.D.	90.0	1

Matrix: WATER *Extracted:* March 27, 1997
Sampled: March 21, 1997 *Run#:* 5976 *Analyzed:* March 29, 1997

Spl#	CLIENT SPL ID	DIESEL (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
122583	MW-5	690	50	N.D.	90.0	1

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

Bruce Havlik
Chemist

Alex Tam
Semivolatiles Supervisor

510-638-8404 PM 03/31

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

03332/122580-122583 32694

CHROMALAB, INC.

Environmental Services (SDB) (DOHS 1094)

1220 Quarry Lane • Pleasanton, California 94566-4756
510/484-1919 • Facsimile 510/484-1096

Chain of Custody

DATE 3/21/97 PAGE 1 OF 1

PROJ MGR Dave DeMent
COMPANY ACC Environmental
ADDRESS 7977 Capwell Dr., Suite 100
Oakland, Ca. 94621

SAMPLERS (SIGNATURE)

(PHONE NO.) (510)638-8400
(FAX NO.) (510)638-8404

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 HALOCARBONS (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)	MTBE	LUFT METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (TCLP, STLC)				NUMBER OF CONTAINERS
MW-2	3/21/97	14:30	H2O			X	X									X									4
MW-3	3/21/97	15:00	H2O			X	X									X									4
MW-4	3/21/97	15:30	H2O			X	X									X									4
MW-5	3/21/97	15:15	H2O			X	X									X									4

SUBM #: 9703332 REP: PM
CLIENT: ACC
DUE: 03/31/97
REF #: 32694

PROJECT INFORMATION

PROJECT NAME: 208 Jackson St.
PROJECT NUMBER: 6249-1.0
P.O. #: 6249-1.0

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

SPECIAL INSTRUCTIONS/COMMENTS:

SAMPLE RECEIPT

TOTAL NO. OF CONTAINERS	16
HEAD SPACE	
REC'D GOOD CONDITION/COLD	
CONFORMS TO RECORD	

	1.	2.	3.
RELINQUISHED BY	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)
	Eloy Cisneros 3/21/97 (PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
	ACC Environmental (COMPANY)	(COMPANY)	Chromalab (COMPANY)
RECEIVED BY	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)	RECEIVED BY (LABORATORY) (SIGNATURE) (TIME)
	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
	(COMPANY)	(COMPANY)	(LAB)

CHROMALAB, INC.
Environmental Service (SDB)

Sample Receipt Checklist

Client Name: ACC Date/Time Received: 3/24/97 (Date) / 1004 (Time)

Reference/Subm #: 32694/9703332 Received by: BM

Checklist completed by: Chris Rowley (Signature) / 3/25/97 (Date) Reviewed By: BA 3/25/97 (Initial/Date)

Matrix: H2O Carrier name: Client - C/L -

Shipping container/cooler in good condition?	Yes ✓	No	Not Present
Custody seals intact on shipping container/cooler?	Yes	No	Not Present ✓
Custody seals intact on sample bottles?	Yes	No	Not Present ✓
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	
Sample containers intact?	Yes ✓	No	
Sufficient sample volume for indicated test?	Yes ✓	No	
All samples received within holding time?	Yes ✓	No	
Container/Temp Blank temperature in compliance?	Temp: 4.3 °C Yes ✓	No	
Water - VOA vials have zero headspace?	No VOA vials submitted ✓	Yes ✓	No
Water - pH acceptable upon receipt? N/A	adjusted?	Checked by CR	chemist for VOAs

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted: _____ Date contacted: _____ Person contacted: _____

Contacted by: _____ Regarding: _____

Comments: _____

_____

_____

Corrective Action: _____

_____

_____