James P. Bowers, PE
R. William Rudolph, Jr., PE

ALCO
HAZMAT

94 JAN 18 PM 2:48

RO709
CL

3803

January 14, 1994
SCI 828.001

Melfort Properties
c/o Mr. Dennis Welch
Ranch Hand Foods-Cal
30593 Union City Boulevard
Union City, California 94587

Quarterly Groundwater Monitoring
Sampling Event #4 - January 1994
Chip Steak Facility
958 77th Avenue
Oakland, California

Dear Mr. Welch:

This letter presents quarterly groundwater monitoring results for the referenced site. Monitoring services were provided by Subsurface Consultants, Inc. (SCI) on behalf of the owner, Melfort Properties. Groundwater monitoring has been performed at the request of the Alameda County Health Care Services Agency (ACHCSA), due to an underground gasoline tank release. The location of the site is presented on the Site Plan, Plate 1.

Groundwater Sampling

On January 3, 1994, Wells MW-1, MW-2 and MW-3 were purged and sampled. In general, the groundwater monitoring event consisted of (1) measuring groundwater levels using an electric well sounder, (2) measuring free product thicknesses, (3) purging water from each well until pH, conductivity and temperature have stabilized (approximately 3 well volumes), and (4) after the wells have recovered to at least 80 percent of their initial level, sampling the wells with new disposable samplers. The samples were retained in containers pre-cleaned by the supplier in accordance with EPA protocol. The containers were placed in an ice filled cooler and remained iced until delivery to the analytical laboratory. Chain-of-custody documents accompanied the samples to the laboratory.

Analytical Testing

Analytical testing was performed by Curtis and Tompkins, Ltd., a laboratory certified by the State of California Department of Health Services for hazardous waste and water testing. A sample from each well was analyzed for the following:

1. Total volatile hydrocarbons (TVH), sample preparation and analysis using EPA Methods 5030 (purge and trap) and 8015 modified (gas chromatograph coupled to a flame ionization detector), and

2. Aromatic volatile organics, sample preparation and analysis using EPA Methods 5030 and 8020 (gas chromatograph coupled to a photoionization detector).

A summary of the current and previous analytical test results are presented in Table 1. The groundwater level data generated by SCI are presented in Table 2. Well sampling forms, analytical test reports, and chain-of-custody documents are attached. All sampling events prior to March 16, 1993 were conducted by Clayton Environmental Consultants, Inc.

Conclusions

The groundwater level data indicate that the regional groundwater flow direction is toward the northwest at a gradient of approximately 1.3 percent. This groundwater flow direction and gradient generally remain consistent with previous measurements.

In general, the analytical results indicate that gasoline, benzene, and chlorobenzene are present at low concentrations in MW-3, the downgradient well. Neither gasoline nor BTXE, were detected at concentrations in excess of laboratory reporting limits in MW-1 or MW-2 during this event. Chlorobenzene was detected just above analytical detection limits in MW-2.

In accordance with our monitoring plan, the next monitoring event will occur during March 1994. If you have any questions, please call.

Yours very truly,

Subsurface Consultants, Inc.

James P. Bowers
Geotechnical Engineer 157 (expires 3/31/95)

MFW:JPB:sld

Attachments: Table 1. - Contaminant Concentrations in Groundwater
Table 2. - Groundwater Elevation Data
Plate 1. - Site Plan
Well Sampling Forms
Analytical Test Reports
Chain-of-Custody Record

4 copies submitted

cc: Mr. Rich Hiett
Regional Water Quality Board
2101 Webster Street, Suite 500
Oakland, California 94612

Mr. Barney Chan
Alameda County Health Care Services Agency
80 Swan Way, Room 200
Oakland, California 94621

Table 1. CONTAMINANT CONCENTRATIONS IN GROUNDWATER

Well	Sample Date	TVH[1] (ug/L)[3]	B[2] (ug/L)	T[2] (ug/L)	X[2] (ug/L)	E[2] (ug/L)	Chloro-benzene (ug/L)
MW-1	9/89	560	5.4	<0.3	15	1.2	<0.3
	10/90	350	0.8	<0.3	0.5	4.1	<0.3
	1/91	80	0.6	<0.3	<0.4	0.3	<0.3
	4/91	170	17	7.3	<0.4	<0.3	<0.3
	3/16/93	90	<0.5	<0.5	<0.5	<0.5	--[4]
	6/16/93	60	<1	<1	<1	<1	<1
	10/14/93	63	<1	<1	<1	<1	<1
	01/03/94	<50	<1	<1	<1	<1	<1
MW-2	9/89	<50	<0.4	<0.3	<0.5	<0.3	16
	10/90	<50	<0.4	<0.3	<0.4	<0.3	11
	1/91	<50	<0.4	<0.3	<0.4	<0.3	3.9
	4/91	<50	<0.4	<0.3	<0.4	<0.3	10
	3/16/93	<50	<0.5	<0.5	<0.5	2.3	--
	6/16/93	<50	<1	<1	<1	<1	3
	10/14/93	<50	<1	<1	<1	<1	<1
	01/03/94	<50	<1	<1	<1	<1	2
MW-3	9/89	120	16	<0.3	9	<0.3	<0.3
	10/90	230	13	1.5	19	8.5	95
	1/91	220	5	3	18	5	75
	4/91	300	16	5.5	41	14	79
	3/16/93	170	28	<0.5	<0.5	1.6	--
	6/16/93	180	24	<1	<1	<1	62
	10/14/93	140	3	<1	1	<1	90
	01/03/94	130	4	<1	<1	<1	42

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1 TVH = Total Volatile Hydrocarbons, as gasoline
2 BTXE= Benzene, Toluene, Xylenes, and Ethylbenzene
3 ug/L= micrograms per liter
4 -- = Test not requested

Table 2. GROUNDWATER ELEVATION DATA

Well	TOC Elev[1] (feet)	Date	Groundwater Depth (feet)	Groundwater Elevation (feet)
MW-1	99.66	3/16/93	5.77	93.89
		6/16/93	6.06	93.60
		10/14/93	6.55	93.11
		01/03/94	6.02	93.64
MW-2	99.67	3/16/93	5.90	93.77
		6/16/93	6.25	93.42
		10/14/93	6.85	92.82
		01/03/94	6.26	93.41
MW-3	99.35	3/16/93	5.90	93.45
		6/16/93	6.30	93.05
		10/14/93	6.73	92.62
		01/03/94	5.99	93.36

[1] Elevation reference: Water utility manhole approximately 20 feet east of MW-1 assumed to be 100.00 feet
TOC = Top of casing

93.25'

93.5'

93.75'

77TH AVENUE

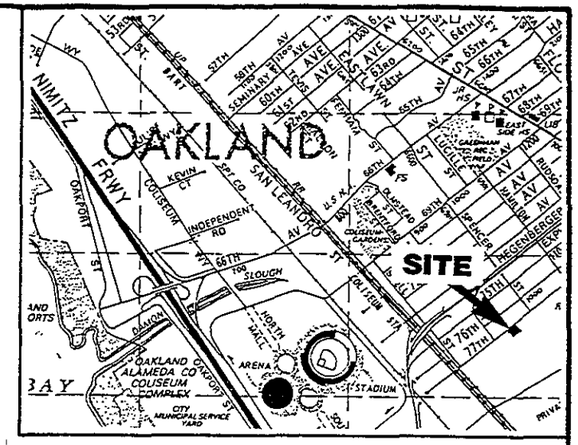
MW-3
93.36

MW-2
93.41

MW-1
93.64

DIRECTION OF GROUNDWATER FLOW

958 77TH AVENUE



VICINITY MAP

- MONITORING WELL
- EXISTING BUILDING
- AREA OF FORMER TANK EXCAVATION
- BRICK PLANTER
- EXISTING FENCE
- 93.0 GROUNDWATER SURFACE CONTOUR (feet) 1/3/94

REFERENCE NORTH

TRUE NORTH

APPROXIMATE SCALE (feet)

0 10 20

SITE PLAN

Subsurface Consultants

958 77TH AVENUE – OAKLAND, CA

JOB NUMBER	DATE	APPROVED
828.001	1/10/94	MW

PLATE 1

WELL SAMPLING FORM

Project Name: Chip Steak Well Number: MW-1

Job No.: 828.001 Well Casing Diameter: 2 inch

Sampled By: Charles Pearson Date: 1-3-94

TOC Elevation: _____ Weather: Broken Clouds / cool

Depth to Casing Bottom (below TOC) 17.55 feet

Depth to Groundwater (below TOC) 6.02 feet

Feet of Water in Well 11.53 feet

Depth to Groundwater When 80% Recovered 8.33 feet

Casing Volume (feet of water x Casing DIA ^{2} x 0.0408) 1.88 gallons

Depth Measurement Method (Tape & Paste) / Electronic Sounder / Other

Free Product None

Purge Method Bailer

FIELD MEASUREMENTS

Gallons Removed	pH	Temp (°F)	Conductivity (micromhos/cm)	Salinity S%	Comments
0	6.65	64.5	10.04 x100		H.C odor
5	6.69	62.4	7.99		
8	6.60	62.1	7.84		
9	6.56	62.1	7.81		
10	6.56	62.1	7.85		

Total Gallons Purged 10 gallons

Depth to Groundwater Before Sampling (below TOC) 6.7 feet

Sampling Method Bailer

Containers Used 3 (40 ml) _____ (liter) _____ (pint)

Subsurface Consultants

JOB NUMBER DATE APPROVED PLATE

WELL SAMPLING FORM

Project Name: Chip Steak
Well Number: MW-2
Job No.: 828.001
Well Casing Diameter: 2 inch
Sampled By: Charles Pearson
Date: 1-3-94
TOC Elevation:
Weather: Broken Clouds / cool

Depth to Casing Bottom (below TOC) 22.68 feet
Depth to Groundwater (below TOC) 6.26 feet
Feet of Water in Well 16.42 feet
Depth to Groundwater When 80% Recovered 9.54 feet
Casing Volume (feet of water x Casing DIA ^{2} x 0.0408) 2.68 gallons
Depth Measurement Method (Tape & Paste) / Electronic Sounder / Other
Free Product None
Purge Method Bailer

FIELD MEASUREMENTS

Gallons Removed	pH	Temp (°F)	Conductivity (micromhos/cm)	Salinity S%	Comments
0	7.13	59.3	2.64 x1000		Sulfer odor
5	7.29	57.4	2.71		
8	12.11	57.4	2.66		pH meter unreliable
9	—	57.4	2.64		
10	—	57.4	2.64		

Total Gallons Purged 10 gallons
Depth to Groundwater Before Sampling (below TOC) 7 feet
Sampling Method Bailer
Containers Used 3 (40 ml) ____ (liter) ____ (pint)

Subsurface Consultants

JOB NUMBER DATE APPROVED

PLATE

WELL SAMPLING FORM

Project Name: Chip Steak
Well Number: MW-3
Job No.: 828.001
Well Casing Diameter: 2 inch
Sampled By: Charles Pearson
Date: 1-3-94
TOC Elevation:
Weather: Broken Clouds / Cool

Depth to Casing Bottom (below TOC) 22.03 feet
Depth to Groundwater (below TOC) 5.99 feet
Feet of Water in Well 16.04 feet
Depth to Groundwater When 80% Recovered 9.20 feet
Casing Volume (feet of water x Casing DIA ^{2} x 0.0408) 2.62 gallons
Depth Measurement Method (Tape & Paste) / Electronic Sounder / Other
Free Product None
Purge Method Bailer

FIELD MEASUREMENTS

Gallons Removed	pH	Temp (°F)	Conductivity (micromhos/cm)	Salinity S%	Comments
0	—	59.7	9.87 x 100		
5	—	60.2	9.59		
7	—	60.5	9.46		
8	—	60.5	9.50		
9	—	60.5	9.54		

Total Gallons Purged 9 gallons
Depth to Groundwater Before Sampling (below TOC) 7 feet
Sampling Method Bailer
Containers Used 3 (40 ml) ____ (liter) ____ (pint)

Subsurface Consultants

JOB NUMBER DATE APPROVED

PLATE

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

A N A L Y T I C A L R E P O R T

Prepared for:

Subsurface Consultants
171 12th Street
Suite 201
Oakland, CA 94608

Date: 11-JAN-94
Lab Job Number: 113806
Project ID: 828.001
Location: Chip Steak Facility

Reviewed by: _____

Reviewed by: _____

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 113806
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 828.001
LOCATION: CHIP STEAK FACILITY

DATE SAMPLED: 01/03/94
DATE RECEIVED: 01/03/94
DATE ANALYZED: 01/07/94
DATE REPORTED: 01/11/94

Total Volatile Hydrocarbons as Gasoline in Aqueous Solutions
California DOHS Method
LUFT Manual October 1989

LAB ID	CLIENT ID	TVH AS GASOLINE (ug/L)	REPORTING LIMIT (ug/L)
113806-001	MW-1	ND	50
113806-002	MW-2	ND	50
113806-003	MW-3	130	50
METHOD BLANK		ND	50

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	4
RECOVERY, %	112

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 113806-001
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 828.001
LOCATION: CHIP STEAK FACILITY
SAMPLE ID: MW-1

DATE SAMPLED: 01/03/94
DATE RECEIVED: 01/03/94
DATE ANALYZED: 01/04/94
DATE REPORTED: 01/11/94

EPA 8020: Volatile Aromatic Hydrocarbons in Water

COMPOUND	RESULT ug/L	REPORTING LIMIT ug/L
Benzene	ND	1
Toluene	ND	1
Ethyl Benzene	ND	1
Total Xylenes	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	99

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 113806-002
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 828.001
LOCATION: CHIP STEAK FACILITY
SAMPLE ID: MW-2

DATE SAMPLED: 01/03/94
DATE RECEIVED: 01/03/94
DATE ANALYZED: 01/04/94
DATE REPORTED: 01/11/94

EPA 8020: Volatile Aromatic Hydrocarbons in Water

COMPOUND	RESULT ug/L	REPORTING LIMIT ug/L
Benzene	ND	1
Toluene	ND	1
Ethyl Benzene	ND	1
Total Xylenes	ND	1
Chlorobenzene	2	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	99

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 113806-003
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 828.001
LOCATION: CHIP STEAK FACILITY
SAMPLE ID: MW-3

DATE SAMPLED: 01/03/94
DATE RECEIVED: 01/03/94
DATE ANALYZED: 01/04/94
DATE REPORTED: 01/11/94

EPA 8020: Volatile Aromatic Hydrocarbons in Water

COMPOUND	RESULT ug/L	REPORTING LIMIT ug/L
Benzene	4	1
Toluene	ND	1
Ethyl Benzene	ND	1
Total Xylenes	ND	1
Chlorobenzene	42	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	99

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 113806 METHOD BLANK
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 828.001
LOCATION: CHIP STEAK FACILITY

DATE SAMPLED: N/A
DATE RECEIVED: N/A
DATE ANALYZED: 01/04/94
DATE REPORTED: 01/11/94

EPA 8020: Volatile Aromatic Hydrocarbons in Water

COMPOUND	RESULT ug/L	REPORTING LIMIT ug/L
Benzene	ND	1
Toluene	ND	1
Ethyl Benzene	ND	1
Total Xylenes	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	100

Curtis & Tompkins, Ltd

Curtis & Tompkins, Ltd.

8020 MS/MSD Report

Matrix Sample Number: 113723-001
Matrix Sample File: 003E005.raw
Matrix: WATER
Batch No: 3 937885 937886 937884

Date Analyzed: 03-JAN-94
Spike File: 003E006.raw
Spike Dup File: 003E007.raw
Analyst: JM

	Instrdg	SpikeAmt	% Rec	Limits
MS RESULTS				
Benzene	19.13	20	96 %	76-127%
Toluene	20.34	20	102 %	76-125%
Chlorobenzene	20.66	20	103 %	75-130%
Surrogate Recovery				
Bromobenzene	99.58	100	100 %	75-125%
MSD RESULTS				
Benzene	19.15	20	96 %	76-127%
Toluene	20.02	20	100 %	76-125%
Chlorobenzene	21.3	20	107 %	75-130%
Surrogate Recovery				
Bromobenzene	99.14	100	99 %	75-125%
MATRIX RESULTS				
Benzene	0			
Toluene	0			
Chlorobenzene	0			
RPD DATA				
Benzene	0 %			< 11%
Toluene	2 %			< 13%
Chlorobenzene	3 %			< 13%

Column: Rtx 502.2
Limits based on 3/90 SOW CLP

Results within Specifications - PASS

CHAIN OF CUSTODY FORM

PAGE 1 OF 1

PROJECT NAME: Chip Steak Facility
JOB NUMBER: 828.001 LAB: Curtis & Tompkins
PROJECT CONTACT: Marianne Watada TURNAROUND: normal
SAMPLED BY: Charles Pearsons REQUESTED BY: M. Watada.

LABORATORY I.D. NUMBER	SCI SAMPLE NUMBER	MATRIX: WATER	SOIL	WASTE	AIR			CONTAINERS: VOA	LITER	PINT	TUBE			METHOD PRESERVED: HCL	H_2SO_4	HNO_3	ICE	NONE	SAMPLING DATE: MONTH	DAY	YEAR	TIME				NOTES	ANALYSIS REQUESTED: TVH	EPA 8020
	MW-1	X						3						X			ice		01	03	94						X	X
	MW-2	X						3						X			ice			↓							X	X
	MW-5	X						3						X			ice			↓							X	X

CHAIN OF CUSTODY RECORD

RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
Marianne Watada	1-3-94 11:20	Mary Pearsons	1/3/94 2:20 pm
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME

COMMENTS & NOTES:

Subsurface Consultants, Inc.
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