

August 8, 1990

(408)559-1220

East Bay Packing Co.  
208 Jackson St.  
Oakland, CA, 94607

**PROGRESSIVE REPORT  
Groundwater Investigation  
208 Jackson Street,  
Oakland, California**

**Introduction**

Geo-Environmental Technology, (GET), has performed a groundwater investigation of the East Bay Packing property located at 208 Jackson Street in Oakland, California. This investigation has been performed in accordance with the guidelines of the Alameda County Flood and Water Conservation District, Alameda County Health Care Services, Department of Environmental Health and the Regional Water Quality Control Board. The purpose of this work was to investigate the extent of any groundwater contamination beneath the subject property. The completed work includes:

1. ~~The drilling of three monitoring wells and collection of soil samples from those borings.~~
2. The proper development and sampling of groundwater from these wells.
3. ~~Providing for the laboratory analysis of the soil and water samples from the soil borings and groundwater monitoring wells.~~
4. This report of findings.

**Location and Description of Site:**

The site is a former vehicle maintenance facility for a meat packing company located in a industrialized area in the south central portion of the City of Oakland, California. The site is located in a block bounded to the north by Jackson Street, east by Third Street, south by Madison Street, and the west by Second Street, (see Figure 1 attached). The site contains three buildings and a parking area. Four steel underground storage tanks (previously removed) were located near the central portion of the property. (see Figure 2 Attached). The property is paved (mostly with concrete) except for an unpaved section on the far eastern side of the property.

This site lies approximately 1/2 mile from the Inner Harbor area of the east central portion of San Francisco Bay. The general topography of the area is flat with a slight sloping of the land to the west.

The site is underlain by at least 10 feet of brown, light brown and yellowish-brown, fine-grained sands and clayey sands. The depth to groundwater is approximately 5.5 feet to 6.0 feet below surface grade. Water elevations indicate the direction of groundwater flow to be to the west-southwest. (See figure 2)

### Background and History

The site is where four underground fuel storage tanks were removed. The single wall steel underground tanks included: one 2,000-gallon diesel, one 10,000-gallon unleaded gasoline, one 10,000-gallon diesel, and one 8,000-gallon unleaded gasoline tank. These tanks are labeled Tank # 1, # 2, # 3, # 4 in Figure 2. The property is currently being used for vehicle storage. Adjacent properties include a parking lot, produce stores, and a packing company.

Geo-Environmental Technology removed the underground storage tanks on March 20, 1990. Two soil samples were taken from the base of each tank pit at a depth of approximately 7 feet, (Figure 2), and sent to a State-certified analytical laboratory. The results are presented in Appendix A. The results indicated elevated concentrations of TPH (as diesel) and BTEX concentrations in the tank pit # 1 area. At the request of Dennis Byrne of the Alameda County Department of Environmental Health, a grab sample of the water from tank # 2 and tank # 3 was taken and sent to a State-certified analytical laboratory. The water grab samples from tank pit # 2 were analyzed for Total Petroleum Hydrocarbons (TPH) (as gasoline) and Benzene, Toluene, Ethylbenzene and Xylenes (BTEX). The analytical results indicated that the water sampled from tank pit # 2 contained measurable concentrations of TPH (as gasoline) and BTEX. The water sample from tank pit # 3 indicated TPH (as diesel) and Benzene, Ethylbenzene and Xylenes concentrations. [Approximately 125 yards of soil (suspected to be contaminated) was excavated from below and surrounding tank #1 where actionable amounts of hydrocarbons were detected in the soil samples.] This soil was stock piled on site and spread out for aeration. The excavated area was then resampled on March 29, 1990. Lab results are presented in Appendix A.

*Looks more E-NE. where are the data that go w/gw elev.? ie T.O.C., depth to g.w.*

*over-  
ex.*

Boring and Soil Sampling

On May 5, 1990, three borings were drilled at the locations shown in Figure 2. The boring logs, which graphically depict the soils, depth to saturated zone, and well installation and design are included in Appendix B. <sup>(for mws)</sup>

Boring B-1 was drilled on the west central edge of the tank fill area of tank # 1 and was drilled to a depth of 10 feet. Soil samples were collected at 3 to 5 feet, 5 to 7 feet and 8 to 10 feet. A grayish-brown, fine-grained sand was encountered from feet 0.5 to 7.0 feet. A brown, mottled greenish-gray, fine-grained clayey sand was observed at a depth from 7.0 feet to 10.0 feet. This clayey material in the sand was considered to be the beginning of a confining layer and drilling was terminated at 10 feet in order to avoid drilling through this clay layer and into a possible aquifer. During drilling the saturated zone (groundwater) was encountered at a depth of 6.0 feet below grade. No hydrocarbon odor or staining was observed in the soils or water. Fourteen days after the drilling was completed, a water level of 4.40 feet was recorded.

Boring B-2 was located in the southeast corner of the tank fill area of tank # 3 (see figure 2 attached). Soil samples were collected at 3.0 to 5.0 feet and 6.0 to 8.0 feet. The lithology encountered in B-2 was a brown, mottled light brown, very fine-grained sand from 0.5 feet to 6.0 feet and a yellowish-brown, fine-grained, very clayey sand from 6.0 feet to 10.0 feet. This clayey material in the sand was considered to be the beginning of a confining layer and drilling was terminated at 10 feet in order to avoid drilling through this clayey layer and into a possible aquifer. During drilling the saturated zone (groundwater) was encountered at a depth of 5.5 feet below grade. Fourteen days after the drilling was completed, a water level of 5.1 feet was recorded. No hydrocarbon staining or odor was observed in the soils or water during the installation or sampling of the well.

Boring B-3 was located 160 feet east of B-1 near the eastern property boundary. A brown, mottled light brown, very fine-grained, clayey sand was encountered from 0.5 feet to 5.0 feet, followed by a yellowish-brown, fine-grained, very clayey sand from 5.0 feet to 10.0 feet. This clayey material in the sand was considered to be the beginning of a confining layer and drilling was terminated at 10 feet in order to avoid drilling through this clay layer and into a possible aquifer. The saturated zone (groundwater) was encountered at 5.5 feet a depth of 6.0 feet below grade. No hydrocarbon odors or staining were observed in the soils or water during the installation or sampling of the well.

All soil samples were collected and handled according to sampling protocol guidelines for the County of Alameda.

**Monitoring Well Installation, Development and Sampling:**

All 3 borings were completed as monitoring wells according to the drilling, sealing, and sampling protocol of the Alameda County Flood Control and Water Conservation District, Alameda County Health Care Services Agency, Department of Environmental Health, and the Regional Water Quality Control Board. The well construction is detailed on the boring logs in Appendix B.

Well development and groundwater sampling was performed by Pratt Consulting Services. Using a clean Teflon bailer or a peristaltic pump, the wells were developed by withdrawing approximately 3 well volumes of water 72 hours prior to sampling. On May 21, 1990, 3 well volumes were purged immediately prior to sampling. No phase-separated hydrocarbons (free product) were observed on the water surface prior to purging. After purging, a water sample was collected with a clean disposable bailer for each well for laboratory analysis. No odor or sheen was observed from the water sample from any of the 3 wells. Water samples were submitted to Chromalab Analytical Laboratories of San Ramon, California for analysis of TPH (as diesel) and BTEX.

**Analytical Results**

**Soil Samples:**

Boring B-1: Laboratory analytical results of sample MW 1-1, from the 3.0 feet to 3.5 feet interval, indicated a TPH (as diesel) concentration of 6.9 mg/kg (ppm). The sample MW 1-2, from the 5.0 feet to 5.5 feet interval had no concentrations of TPH (as diesel) above the test method detection limits of 5 mg/Kg (parts per million, ppm).

Boring B-2: Laboratory analytical results of sample MW 2-1, from the 3.5 feet to 4.0 feet interval had no concentrations of TPH (as diesel) above the test method detection levels of 5 mg/Kg (ppm). No sample was taken of the interval 6 to 8 feet due to the extremely poor sample recovery rate (see appendix B, boring log # 2).

Boring B-3: Laboratory analytical results of sample MW 3-1, from a depth of 3.0 to 3.5 feet indicated no TPH (as diesel) concentrations above test method detection levels of 5 mg/Kg (ppm).

Sample MW 3-2, from a depth of 7.0 feet to 7.5 feet, indicated no concentrations of TPH (as diesel) above the test method detection levels of 5 mg/Kg (ppm).

#### Water Samples:

Monitor Well MW-1: Laboratory analytical results of sample MW-B indicated a TPH (as diesel) concentration of 5.5 mg/L (ppm), TPH (as gasoline) concentration of 25 mg/L. Benzene, Toluene, Ethylbenzene and Xylenes concentrations were 400, 440, 330, 650 micrograms per Liter (ppb) respectively.

Well MW-2: Analytical results of sample MW-C indicated no concentrations of TPH (as diesel) or TPH (as gasoline) above test method detection levels of 0.5 ppm. BTEX analysis indicated no concentrations of Benzene, Toluene, Ethylbenzene, or Xylenes above test method detection levels of 1.0 ppb. *should be .05 ppm or 50 ppb*

Well MW-3: Analytical results of sample MW-A indicated no concentrations of TPH (as diesel) or TPH (as gasoline) above test method detection levels of 0.5 mg/l. BTEX analysis indicated no concentrations of Benzene, Toluene, Ethylbenzene and Xylenes above test method detection levels of 1.0 ppb. *should be 0.5 ppb*

#### Summary of Findings

1. In the west-central portion of the fill area of tank # 1 grayish-brown, fine-grained sands were encountered to a depth of 7.0 feet below grade. Below this sequence lies a brown, mottled greenish-gray, fine-grained clayey sand from 7.0 feet to 10.0 feet below grade. The clay content of the sand increased with depth. In general, the property is underlain by grayish-to yellowish-brown, fine-to very fine-grained sands to a depth of 10 feet. The clay content of the sands increases below a depth of 6 feet.
2. Groundwater was encountered at depths ranging from 5.5 feet to 6.0 feet below grade.
3. The direction of groundwater flow was determined to be toward the west southwest. *how?*
4. Laboratory analytical results indicate that only one of the five soil samples collected during boring installation, (sample MW1-1, 3.0 feet to 3.5 feet interval) indicated concentrations of TPH (as diesel) above the test method detection level of 5.0 ppm. The level of contamination found is far below actionable standards for soil.

5. Groundwater samples from monitoring wells # 2 and # 3 contain no detectable levels of hydrocarbon contamination. MW #1 was shown to contain actionable levels of both gasoline and diesel hydrocarbons.

### Conclusions

1. No phase-separated hydrocarbons (free product) was observed in the soil or water samples during or after the installation of the monitoring wells.
2. All soil samples taken from the borings are below corrective levels. No further action is required concerning soil removal.
3. From the analytical results of the soil samples it appears that the greatest amount of hydrocarbon contamination is concentrated around the area of B-1 (MW-1), which is in the tank fill area for tank # 1.
4. The analytical results of the groundwater samples indicate actionable amounts of TPH and BTEX contamination in MW-1. This well is installed near the tank fill of previously removed tank # 1.

### Observations and Recommendations

We suspect that the contamination found in the groundwater from MW #1 is the result of overspillage during the filling of tank #1. There was no observable free product in the water during excavation of the tanks nor in the monitoring well during testing. The soil samples taken from the boring during installation of the well indicated very low concentrations of product. This being the case, we would suspect that the contamination is slight and limited only to the immediate area surrounding the well. The groundwater water is at a depth of approximately 6 ft.. Considering this data, we feel there is a good chance that a 'pump and treat' type of approach would be best suited.

### Limitations

The conclusions and professional guidelines presented herein were developed in accordance with generally accepted practice for addressing fuel leaks from underground tanks as outlined in the guidelines of the California Regional Water Quality Control Board.

Because the analytical results are based on data collected at the sampling locations only, G.E.T. cannot have complete knowledge of the underlying conditions. Conditions at the project site may change with time due to the works of man and or natural processes. Accordingly, the findings of this report apply to present conditions only. Opinions expressed herein are subject to revisions in light of new information, and no warranties are expressed or implied.

To comply with the regulatory requirements of both the Regional Water Quality Control Board and the Alameda County Department of Environmental Health, G.E.T. recommends that a copy of this report be sent to these agencies as soon as possible.

G.E.T. is pleased to have been of service to you on this project. If you have any questions, please feel free to call us at (408) 559-1220. Thank you.

Respectfully Submitted,

Thomas A. Smith  
Hydrogeologist



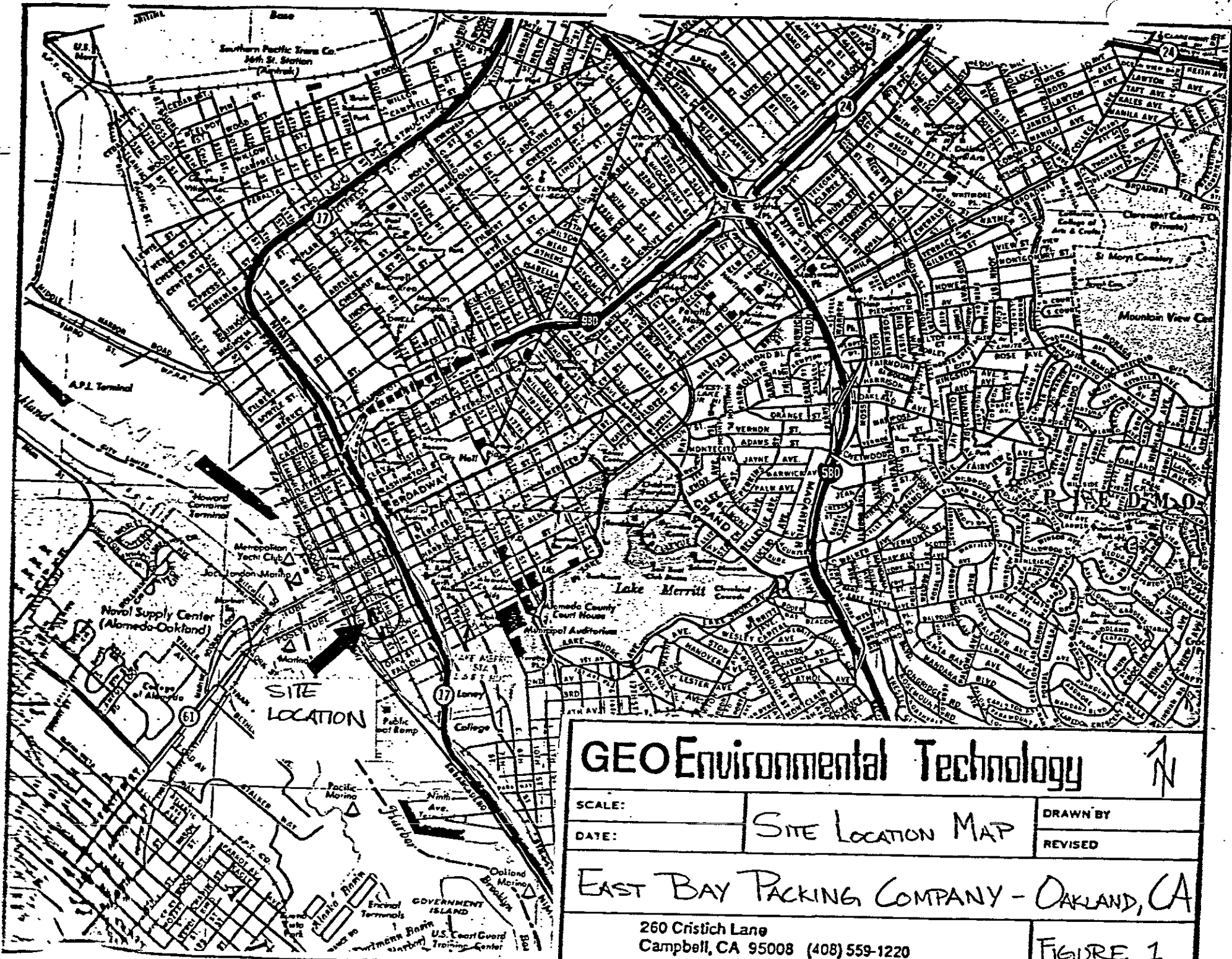
Stuart G. Solomon  
Principal

Attachments: Figure 1: Regional Site Map

Figure 2: Site Map

Appendix A: Laboratory Analytical Results and Chain  
of Custody

Appendix B: Boring Logs and Drilling Permits





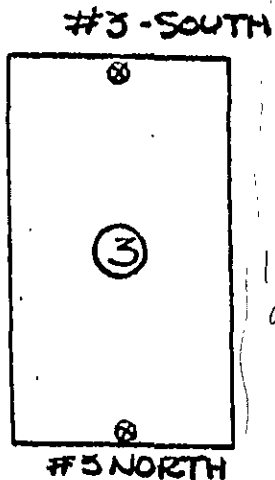
EAST BAY PACKING  
208 JACKSON ST.  
OAKLAND, CA.

W. 3rd St  
↑

MW-2  
(6.02')

BUILDING

EXPOSED  
PUC



10K  
diesel

big hole  
w/water.

#1 - SOUTH



MW-1  
(8.07')

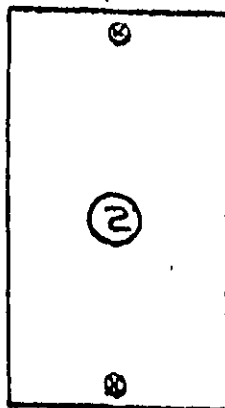
2K diesel

BUILDING

MW-3  
(5.10')

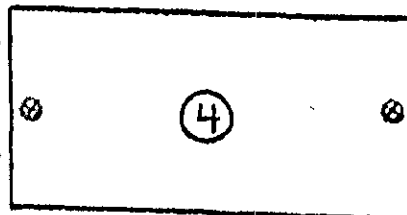
- ① 2,000 GAL. DIESEL Steel
- ② 10,000 GAL. GAS Steel
- ③ 10,000 GAL. DIESEL Steel
- ④ 8,000 GAL. GAS Steel

#2 - SOUTH



10K  
gas

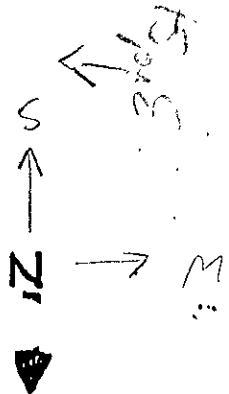
#4 - EAST



8K  
gas

#4 - WEST

5  
2nd St  
↓



.....SOIL SAMPLE LOCATIONS.....

Jackson  
↓

- NOTES:
- ① WATER SAMPLES TAKEN FROM TANKS #. 2 & 3.
  - ② ALL SAMPLES TAKEN @ 7 FT.
  - ③ X = SAMPLE LOCATIONS
  - ④ U. T. S.
  - ⑤ MW-1 : GROUND WATER MONITORING W LOCATION AND DESIGNATION
  - ⑥ (6.02') GROUNDWATER ELEVATION IN FEET

FIG. 2

**APPENDIX A**

**Laboratory Analytical Results**

# CHROMALAB, INC.

Analytical Laboratory  
Specializing in GC-GC/MS

- Environmental Analysis
- Hazardous Waste (#238)
- Drinking Water (#955)
- Waste Water
- Consultation

March 23, 1990

ChromaLab File No.: 0390105

GEO-ENVIRONMENTAL TECHNOLOGY, INC.

Attn: John Schuetze

RE: Eight rush soil samples for Gasoline/BTEX, Diesel and Lead analyses

Project Name: EAST BAY PACKING  
Project Location: Jackson Street, Oakland  
Project Number: 9012  
Duration of Analysis: March 21-23, 1990

*task pull*

## RESULTS:

Sample No.	Gasoline (mg/Kg)	Diesel (mg/Kg)	Benzene (µg/Kg)	Toluene (µg/Kg)	Ethyl Benzene (µg/Kg)	Total Xylenes (µg/Kg)	Lead (mg/Kg)
1-NORTH	----	2500	4500	3800	25000	42000	----
1-SOUTH	----	82	61000	195000	130000	240000	----
2-NORTH	N.D.	----	N.D.	N.D.	N.D.	N.D.	4.7
2-SOUTH	N.D.	----	15	N.D.	67	18	7.2
3-NORTH	----	140	N.D.	N.D.	N.D.	N.D.	----
3-SOUTH	----	5.0	N.D.	N.D.	N.D.	N.D.	----
4-EAST	N.D.	----	N.D.	N.D.	N.D.	N.D.	30
4-WEST	11	----	17	N.D.	12	5.6	10
BLANK SPIKE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
RECOVERY	102.5%	100.7%	92.8%	98.3%	99.6%	95.2%	101.4%
DETECTION LIMIT	2.5	5	5	5	5	5	0.1
METHOD OF ANALYSIS	MOD. 8015	3550/ 8015	8020	8020	8020	8020	3050/ 7420

CHROMALAB, INC.

  
David Duong  
Senior Chemist

  
Eric Tam  
Laboratory Director

# CHROMALAB, INC.

Analytical Laboratory  
Specializing in GC-GC/MS

- Environmental Analysis
- Hazardous Waste (#238)
- Drinking Water (#955)
- Waste Water
- Consultation

March 23, 1990

ChromaLab File No.: 0390105

GEO-ENVIRONMENTAL TECHNOLOGY, INC.

Attn: John Schuetze

RE: Two rush water samples for Gasoline/BTEX and Diesel analyses


Project Name: EAST BAY PACKING  
Project Location: Jackson Street, Oakland  
Project Number: 9012  
Duration of Analysis: March 21-23, 1990

*tank pull*

## RESULTS:

Sample No.	Gasoline (mg/L)	Diesel (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Total Xylenes (µg/L)
2W	0.9	----	82	6.3	3.8	15
3W	----	8.2	18	N.D.	1.4	4.3
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
SPIKE						
RECOVERY	102.5%	100.7%	92.8%	98.3%	99.6%	95.2%
DETECTION LIMIT	50	50	1.0	1.0	1.0	1.0
METHOD OF ANALYSIS	MOD. 8015	3510/ 8015	602	602	602	602

Chromalab, Inc.

  
David Duong  
Senior Chemist

  
Eric Tam  
Laboratory Director

# CHROMALAB, INC.

Analytical Laboratory  
Specializing in GC-GC/MS

- Environmental Analysis
- Hazardous Waste (#238)
- Drinking Water (#955)
- Waste Water
- Consultation

May 15, 1990

ChromaLab File No.: 0590047

GEOENVIRONMENTAL TECHNOLOGY, INC.

Attn: Thomas Smith

*borings for MWS.*

RE: Five soil samples for Diesel analysis

Project Name: EAST BAY PACKING

Project Location: ~~208~~ Jackson Street, Oakland

Date Sampled: May 7, 1990

Date Submitted: May 7, 1990

Date Extracted: May 12-14, 1990

Date Analyzed: May 14, 1990

**RESULTS:**

Sample No.	Diesel (mg/Kg)	
MW 1-1	6.9	= <del>6900</del> ppb <i>soil</i>
MW 1-2	N.D.	
MW 2-1	N.D.	
MW 3-1	N.D.	
MW 3-2	N.D.	
BLANK	N.D.	
SPIKE RECOVERY	84.2%	
DUPLICATED SPIKE RECOVERY	84.9%	
DETECTION LIMIT	5.0	
METHOD OF ANALYSIS	3550/8015	

ChromaLab, Inc.

*David Duong*  
 David Duong  
 Senior Chemist

*Eric Tam*  
 Eric Tam  
 Laboratory Director

**CHROMALAB, INC.**

Analytical Laboratory  
Specializing in GC-GC/MS

- Environmental Analysis
- Hazardous Waste (#238)
- Drinking Water (#955)
- Waste Water
- Consultation

May 24, 1990

ChromaLab File No.: 0590145

SAMPLING SPECIALISTS, INC.

Attn: John Pratt

RE: Three water samples for Gasoline/BTEX and Diesel analyses

Project Name: EAST BAY MEAT PACKING - GEO

Project Number: 1034-004-009

Date Sampled: May 21, 1990

Date Submitted: May 21, 1990

Date Extracted: May 22-23, 1990

Date Analyzed: May 22-23, 1990

RESULTS:

Sample No.	Gasoline (mg/L) <sup>ppb</sup>	Diesel (mg/L) <sup>ppb</sup>	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
MW-A mw-3	N.D. <del>25,000</del>	N.D. <del>5,500</del>	N.D.	N.D.	N.D.	N.D.
MW-B MW-1	25	5.5	400	440	330	650
MW-C mw-2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
BLANK SPIKE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
RECOVERY	90.4%	93.5%	91.4%	88.2%	98.5%	98.7%
DUP SPIKE						
RECOVERY	95.2%	86.4%	96.7%	90.1%	99.6%	109.5%
DETECTION LIMIT	0.5	0.5	1.0	1.0	1.0	1.0
METHOD OF ANALYSIS	5030/ 8015	3510/ 8015	602	602	602	602

ChromaLab, Inc.

*David Duong*  
David Duong  
Senior Chemist

*Eric Tam*  
Eric Tam  
Laboratory Director

# CHROMALAB, INC.

Analytical Laboratory  
Specializing in GC-GC/MS

- Environmental Analysis
- Hazardous Waste (#238)
- Drinking Water (#955)
- Waste Water
- Consultation

*overexcavated  
pit from  
tank #1*

March 30, 1990

ChromaLab File No.: 0390157

GEO-ENVIRONMENTAL TECHNOLOGY, INC.

Attn: John Schuetze

RE: One rush soil sample for BTEX and Diesel analyses

Project Name: EAST BAY PACKING

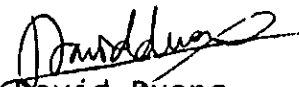
Project Number: 9012

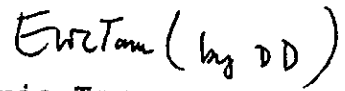
Duration of Analysis: March 29-30, 1990

RESULTS:

Sample No.	Diesel (mg/Kg)	Benzene (ug/Kg)	Toluene (ug/Kg)	Ethyl Benzene (ug/Kg)	Total Xylenes (ug/Kg)
1-1 NORTH	N.D.	13	N.D.	N.D.	6.3
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.
SPIKE RECOVERY	100.7%	92.8%	98.3%	99.6%	95.2%
DETECTION LIMIT	5.0	5.0	5.0	5.0	5.0
METHOD OF ANALYSIS	MOD.8015	8020	8020	8020	8020

CHROMALAB, INC.

  
David Duong  
Senior Chemist

  
Eric Tam  
Laboratory Director

# CHROMALAB, INC.

Analytical Laboratory  
Specializing in GC-GC/MS

- Environmental Analysis
- Hazardous Waste (#238)
- Drinking Water (#955)
- Waste Water
- Consultation

April 9, 1990

ChromaLab File No.: 0490030

GEO-ENVIRONMENTAL TECHNOLOGY, INC.

Attn: Cameron Toyne


RE: One rush composited soil sample for Gasoline and Diesel analyses

Project Name: EAST BAY PACKING  
Duration of Analysis: April 6-9, 1990

## RESULTS:

<u>Sample No.</u>	<u>Gasoline (mg/Kg)</u>	<u>Diesel (mg/Kg)</u>
SOIL 1,2,3,4,5,6 A	5.4	33
BLANK	N.D.	N.D.
SPIKE RECOVERY	102.5%	99.2%
DETECTION LIMIT	2.5	5
METHOD OF ANALYSIS	MOD. 8015	3550/8015

CHROMALAB, INC.

  
David Duong  
Senior Chemist

  
Eric Tam  
Laboratory Director



## CHAIN OF CUSTODY RECORD

PROJECT NO.		SITE NAME & ADDRESS				ANALYSES REQUESTED							REMARKS
9012		EAST BAY Packing Jackson St, oak 208				TPH (Gasoline) & B, T, X, & E	TPH (Diesel) & B, T, X, & E	Total Oil & Grease	Halogenated HC's	B, T, X & E	Heavy Metals	LEAD <i>TPH</i>	
WITNESSING AGENCY / INSPECTOR NAME / DATE													
GCT John Schuetz / EBEN CRIDER													
IDNO.	DATE	TIME	SOIL	WATER	SAMPLING LOCATION								
1-North	3/20	2:30 <sup>PM</sup>	X		See map (ATTACHED)			X					48 HR TAT
1-South	3/20	2:00 <sup>PM</sup>	X		" at 7'			X					
2-North	3/20	2:30 <sup>PM</sup>	X		" at 7'		X				X		
2-South	3/20	2:00 <sup>PM</sup>	X		" at 7'		X				X		
3-NORTH	3/20	2:30 <sup>PM</sup>	X		" at 7'			X					
3-SOUTH	3/20	2:30 <sup>PM</sup>	X		" at 7'			X					
4-EAST	3/20	2:30 <sup>PM</sup>	X		" at 7'		X				X		
4-WEST	3/20	2:30 <sup>PM</sup>	X		" at 7'		X				X		
2W ORIG	3/20	2:PM		X	(DUPLICATE SAMPLES INCLUDED)		X						
3W ORIG	3/20	2:30P		X	" " at "			X					
3WD ORIG	3/21			X	" " "			X					
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		The following MUST BE completed by the laboratory accepting samples for analysis: 1. Have all samples received for analysis been stored in ice? <u>Yes</u> 2. Will samples remain refrigerated until analyzed? <u>Yes</u> 3. Did any samples received for analysis have head space? <u>No</u> 4. Were samples in appropriate containers and properly packaged? <u>Yes</u>							
<i>[Signature]</i>		3-20-90 2:00 PM		<i>[Signature]</i>									
Relinquished by: (Signature)		Date/Time		Received by: (Signature)									
<i>[Signature]</i>		3-21-90 11:45		<i>[Signature]</i>									
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Signature: <i>[Signature]</i> Title: <u>V.P.</u> Date: <u>3-21-90</u>							
Relinquished by: (Signature)		Date/Time		Recd for Laboratory by: (Signature)									
<i>[Signature]</i>		3-21-90 11:45		<i>[Signature]</i>									

*Phase 1*

## CHAIN OF CUSTODY RECORD

PROJECT NO. <b>9012</b>		SITE NAME & ADDRESS <b>208 Jackson St. East Bay Paving Oakland, CA.</b>				ANALYSES REQUESTED						REMARKS
WITNESSING AGENCY / INSPECTOR NAME / DATE <b>GET John Schuetz</b>		TPH (Gasoline) & B, T, X, & E	TPH (Diesel) & B, T, X, & E	Total Oil & Grease	Halogenated HC's	B, T, X & E	Heavy Metals					
ID NO.	DATE	TIME	SOIL	WATER	SAMPLING LOCATION							
<b>1-1</b>	<b>NORTH</b>	<b>3-28</b>	<b>AM</b>	<b>X</b>	<b>NORTH END OF TANK NO. 1 6' Deep. 6' past end of previous excavation.</b>		<b>X</b>					<b>48-hour</b>
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		The following MUST BE completed by the laboratory accepting samples for analysis: 1. Have all samples received for analysis been stored in ice? <b>Yes</b> 2. Will samples remain refrigerated until analyzed? <b>Yes</b> 3. Did any samples received for analysis have head space? <b>N/A</b> 4. Were samples in appropriate containers and properly packaged? <b>Yes</b>						
<i>[Signature]</i>		<b>3-29 10:35 AM</b>		<i>[Signature]</i>								
Relinquished by: (Signature)		Date/Time		Received by: (Signature)								
<i>[Signature]</i>		<b>3-29 11:30 AM</b>										
Relinquished by: (Signature)		Date/Time		Received by: (Signature)								
<i>[Signature]</i>												
Relinquished by: (Signature)		Date/Time		Rec'd for Laboratory by: (Signature)								
<i>[Signature]</i>		<b>3/29/90 11:30</b>		<i>[Signature]</i>								
						Signature		Title		Date		
						<i>[Signature]</i>		V.P.		<b>3-29-90</b>		

# CHROMALAB, INC.

2239 Om 41 CHROMALAB FILE # 490030

34583

## Chain of Custody

DATE April 5 1990 PAGE 1 OF 1

PROJ. MGR. Cameron Toyne  
 COMPANY Geo-Environmental Technology  
 ADDRESS Camden Avenue  
San Jose, CA

SAMPLERS (SIGNATURE) \_\_\_\_\_ (PHONE NO.) \_\_\_\_\_

### ANALYSIS REQUEST

SAMPLE ID.	DATE	TIME	MATRIX	LAB ID.	TPH - Gasoline (EPA 5030)	TPH - Gasoline (5030) w/BTEX (EPA 602, 8020)	TPH - Diesel (EPA 3510, 3550)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240)	BASE/NEUTRAL, ACIDS (EPA 624/827, 8270)	TOTAL OIL & GREASE (EPA 5030E)	PESTICIDES/PCB (EPA 606, 8000)	PHENOLS (EPA 604, 8040)	METALS: Cd, Cr, Pb, Zn	GM METALS (18) w/CP VI	PRIORITY POLLUTANT METALS (13)	NUMBER OF CONTAINERS
Soil 1A	4-5-90	10:55	Soil		X		X											1
Soil 2A	4-5-90	10:58	Soil															1
Soil 3A	4-5-90	10:59	Soil															1
Soil 4A	4-5-90	11:03	Soil															1
Soil 5A	4-5-90	11:07	Soil															1
Soil 6A	4-5-90	11:10	Soil															1

PROJECT INFORMATION	SAMPLE RECEIPT
PROJECT: <u>Fast-Bay Packing</u>	TOTAL NO. OF CONTAINERS
PO NO.	CHAIN OF CUSTODY SEALS
SHIPPING ID. NO.	REC'D GOOD CONDITION/COLD
VIA:	CONFORMS TO RECORD
	LAB NO.

RELINQUISHED BY	1.	RELINQUISHED BY	2.	RELINQUISHED BY	3.
<u>Cameron Toyne</u>	11:20	(Signature)	(Time)	(Signature)	(Time)
<u>Cameron Toyne</u>	<u>April 5 1990</u>	(Printed Name)	(Date)	(Printed Name)	(Date)
<u>Geo-Environmental Technology</u>		(Company)		(Company)	
RECEIVED BY	1.	RECEIVED BY	2.	RECEIVED BY LABORATORY	3.
		(Signature)	(Time)	<u>[Signature]</u>	11:30
		(Printed Name)	(Date)		<u>4-5-90</u>
		(Company)			(LAB)

SPECIAL INSTRUCTIONS/COMMENTS:  
COMPOSITE 6 INTO 1  
48-hour T-A-T

PROJECT NO.		SITE NAME & ADDRESS <i>East Bay Packing 208 Jackson St. Oakland CA</i>					ANALYSES REQUESTED					REMARKS	
WITNESSING AGENCY / INSPECTOR NAME / DATE							TPH (Gasoline)	TPH (Diesel)	Total Oil & Grease	Halogenated HC's	B, T, X & E		Heavy Metals
DNO.	DATE	TIME	SOIL	WATER	SAMPLING LOCATION								
MW1-1	5/5/90	900	X		See MAP Below		X						<del>3.0-3.5</del>
MW1-2		930	X				X						5.0'-5.5'
MW2-1		1030	X				X						3.5'-4.0'
MW3-1		1130	X				X						3.0-3.5
MW3-2		1135	X				X						<del>6.5-7.0</del> 7.0'-7.5'
Relinquished by: (Signature) <i>Thomas G. Smith</i>		Date/Time 5/7/90 1250		Received by: (Signature) <i>Madeline M...</i>		The following MUST BE completed by the laboratory accepting samples for analysis: 1. Have all samples received for analysis been stored in ice? <i>yes</i> 2. Will samples remain refrigerated until analyzed? <i>yes</i> 3. Did any samples received for analysis have head space? <i>yes</i> 4. Were samples in appropriate containers and properly packaged? <i>yes</i> _____ Signature: <i>Madeline M...</i> Title: _____ Date: <i>5-7-90</i>							
Relinquished by: (Signature)		Date/Time		Rec'd for Laboratory by: (Signature)									



# SAMPLING SPECIALISTS

CHROMALAB FILE # 590145

A DIVISION OF PRATT CONSULTING COMPANY  
 COMPLETE WELL DEVELOPMENT SERVICES

COMPLETE BAILING, PURGING AND SAMPLING SERVICE FOR  
 MONITORING, RECOVERY AND VADOSE WELLS IN THE FOLLOWING STATES:  
 CALIFORNIA, NEVADA, OREGON, WASHINGTON, ARIZONA, IDAHO AND UTAH

Office Locations  
 3146 Manor Avenue  
 Walnut Creek, California 94596

12003 49th Street North  
 Building 307  
 Clearwater, Florida 34622

1-(415)-932-4356 Office  
 1-(415)-932-4256 Fax

## CHAIN OF CUSTODY DOCUMENT

PROJECT NUMBER: 1034-004-009								
PROJECT NAME: EAST BAY MEAT PACKING - GEO								
SAMPLERS SIGNATURE: JP BK								
CHECK FOR FIVE (5) DAY VERBAL/FAX SERVICE:							*	100%
CHECK FOR EMERGENCY 24 HOUR VERBAL/FAX SERVICE:								200%
DATES	TIME	SAMPLE ID	NUMBER OF SAMPLE	TPH GAS BTEX	TPH DIESEL	TOTAL OIL GREASE		
5-19-90		MW-A	3	*	*			
↓		MW-B	3	↓	↓			
↓		MW-C	3	↓	↓			
↓								
↓								
↓								
↓								
↓								

RELINQUISHED BY: <i>Mike Spence</i>	DATE 05/21/90	TIME 9:00 AM	RECEIVED BY: <i>Paul Adams</i>
RELINQUISHED BY:	DATE	TIME	RECEIVED BY:

FAX RESULTS ASAP TO JOHN PRATT AT 1-415-932-4256

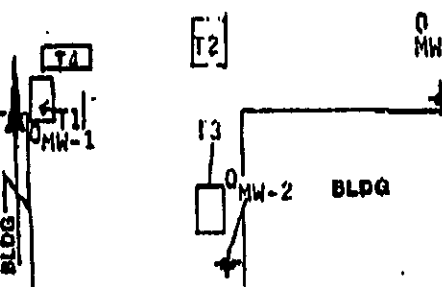
BILL Sampling Specialists FOR ANALYSIS

or I to have results by Thursday noon faxed to me if possible.

**APPENDIX B**

**Boring Logs and Drilling Permits**

LOCATION MAP



*Environmental Technology* BORING LOG PAGE 1 OF 1

WELL NUMBER	B-1 (MW-1)	LOCATION	208 JACKSON STREET OAKLAND, CALIF.
DATE	5/5/90	WEATHER	SUNNY 60's
LOGGED BY	TOM SMITH	DRILLED BY	AQUA-SCIENCE
DRILLING METHOD	8 5/8-inch HOLLOW-STEM AUGER	SAMPLING METHOD	10-INCH CALIF. SPLIT SPOON
GRAVEL PACK	SAND 10 FEET TO 4 FEET	SEAL	BENTONITE 4 FT TO 3 FT GROUT 3 FT TO 0 FT.

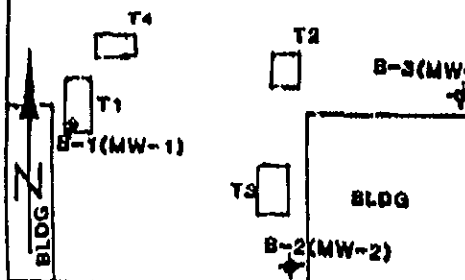
CASING TYPE	SCHEDULE 40 PVC	DIAMETER	TWO-INCH	LENGTH	5 FT.	HOLE TEN DIA. INCH	
SCREEN TYPE	PVC	SLOT	0.01 INCH	DIAMETER	TWO-INCH	LENGTH 5' FT	TOTAL TEN DEPTH FT

MOISTURE CONTENT	SORTING	DENSITY	PLASTICITY	SAMPLE NUMBER	TOP READING (FT)	DEPTH	SAMPLE RECOVERY	CONCENTRATION	RESISTANCE	USCS	LITHOLOGY/REMARKS	WELL COMPLETION
						0						
						1						
						2						
MST FR	LSE			1	NA	3		2			0.00'-1.50' SAND, grayish-brown, fine-grained, sub-rounded.	
						4	1.6'	2		SM		
SAT WELL	LSE			2	NA	5		2				
						6	0.45'	4		SC	0.00'-0.45' SAND, grayish-brown, fine-grained, sub-rounded. Water at 6.0 FT.	
						7						
SAT FR	MDNS			3	NA	8	1.5'	6		SC	0.00'-1.50' SAND, brown, mottled, greenish-gray, slightly clayey.	
						9		11				
						10		21				
						11						
						12						
						13						
						14						
						15						
						16						
						17						
						18						
						19						
						20						



PERMIT # 90266

EXPLANATION	GROUT	SAND	SCREEN	WATER LEVEL	AGENCY: Alameda Co. Flood Contr & Wtr. Conserv. District
	BENTONITE	CASING			



WELL NUMBER	B-2(MW-2)	LOCATION	208 JACKSON ST., OAKLAND, CA
DATE	5/5/90	WEATHER	SUNNY, 60's
LOGGED BY	TOM SMITH	DRILLED BY	AQUA SCIENCE
DRILLING METHOD	8 5/8-INCH HOLLOW STEM AUGER	SAMPLING METHOD	18-INCH CALIF. SPLIT-SPOON
GRAVEL PACK	SAND 10 FEET TO 4 FEET	SEAL	BENTONITE 4 FT TO 3 FT GROUT 3 FT TO 0 FT

CASING TYPE SCHEDULE 40 DIAMETER TWO-INCH LENGTH 5 FT HOLE DIA. 1.915 INCH

SCREEN TYPE PVC SLOT 0.01 INCH DIAMETER TWO-INCH LENGTH 5 FT TOTAL DEPTH 20 FT

MOISTURE CONTENT	SORTING	DENSITY	PLASTICITY	SAMPLE NUMBER	TYP. READING (PPH)	DEPTH	SAMPLE RECOVERY	PENETRATION RESISTANCE	USCS	LITHOLOGY/REMARKS	WELL COMPLETION
						0					
damp poor mst	fair			1	NA	1			ML SC	0.00'-0.50' SILT, brown, clayey.	
mst	fair					2				0.50'-1.30' SAND, brown, mottled, light brown, very fine-grained, clayey.	
						3					
						4					
						5					
sat	fair	lsc		2	NA	6			SC	Water at 5.5 feet.	
						7				0.00'-0.10' SAND, yellowish-brown, fine-grained, very clayey. Very little sample recovery.	
						8					
						9					
						10					
						11					
						12					
						13					
						14					
						15					
						16					
						17					
						18					
						19					
						20					



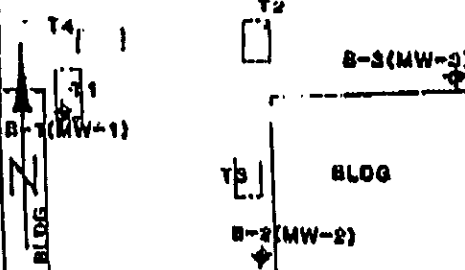
EXPLANATION

	GROUT		SAND		SCREEN
	BENTONITE		CASING		WATER LEVEL AGENCY

PERMIT # 90266

Alameda Co. Flood Cntrl. & Wtr Conserv. District





WELL NUMBER	B-3 (MW-3)	LOCATION	208 JACKSON ST. OAKLAND, CA
DATE	5/5/90	WEATHER	SUNNY, 60's
LOGGED BY	TOM SMITH	DRILLED BY	AQUA SCIENCE
DRILLING METHOD	8 5/8-INCH HOLLOW STEM AUGER	SAMPLING METHOD	18-INCH CALIF. SPLIT-SPOON
GRAVEL PACK	SAND 10 FEET TO 4 FEET	SEAL	BENTONITE 4 FT TO 3 FT GROUT 3 FT TO 0 FT

CASING TYPE SCHEDULE 40 DIAMETER TWO-INCH LENGTH 5 FT HOLE DIA. TWO-INCH

SCREEN TYPE PVC SLOT 0.01 INCH DIAMETER TWO-INCH LENGTH 5 FT TOTAL DEPTH 10 FT

MOISTURE CONTENT	SORTING	DENSITY	PLASTICITY	SAMPLE NUMBER	TIP READING (PPM)	DEPTH	SAMPLE RECOVERY	PENETRATION RESISTANCE	BSCS	LITHOLOGY/REMARKS	WELL COMPLETION
						0					
						1					
						2					
damp	poor	mst				3	1.3	3	ML	0.00'-0.50' SILT, brown, clayey.	
mst	fair	stl		1	NA	4		4	SC	0.50'-1.30' SAND, brown, mottled, light brown, very fine-grained, clayey.	
						5		5			
						6				Water at 5.5 feet.	
sat	fair	lse		2	NA	7	1.5'	2	SC	0.00'-1.50' SAND, yellowish-brown, fine-grained, very clayey.	
						8		3			
						9		4			
						10		5			
						11		6			
						12		7			
						13		8			
						14		9			
						15		10			
						16		11			
						17		12			
						18		13			
						19		14			
						20		15			



PERMIT # 90266

EXPLANATION	GROUT	SAND	SCREEN
	BENTONITE	CASING	WATER LEVEL

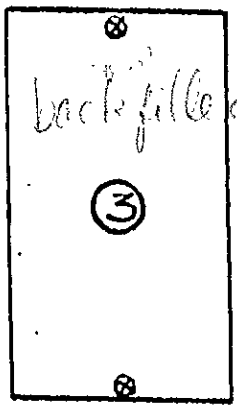
AGENCY: Alameda Co. Flood Contrl. & Wtr Conserv. District

208 JACKSON ST.  
OAKLAND, CA.

Madison St.

MW-2  
(6.02')

#3-SOUTH



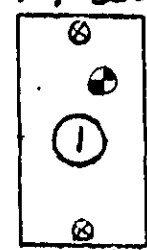
#3-NORTH

10K  
diesel

North ←

open pit

#1-SOUTH



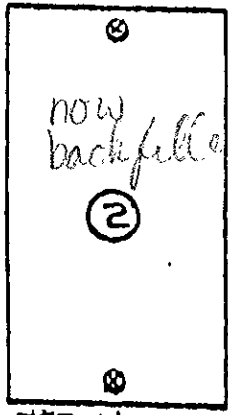
MW-1  
(8.07')

2K diesel

#1-NORTH

big hole  
w/water.

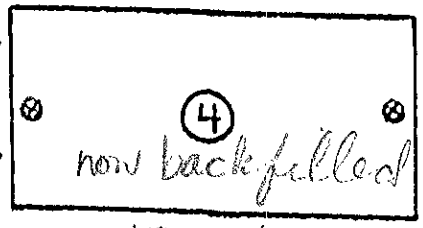
#2-SOUTH



#2-NORTH

10K  
gas

#4-EAST



8K  
gas

#4-WEST

MW-3  
(5.10')

- 2,000 GAL. DIESEL Steel
- 10,000 GAL. GAS Steel
- 10,000 GAL. DIESEL Steel
- 8,000 GAL. GAS Steel

- NOTES:
- ① WATER SAMPLES TAKEN FROM TANKS #. 2 & 3.
  - ② ALL SAMPLES TAKEN @ 7 FT.
  - ③ ⊗ = SAMPLE LOCATIONS
  - ④ U.T.S.
  - ⑤ ⊕ MW-1 : GROUND WATER MONITORING W LOCATION AND DESIGNATION
  - ⑥ (6.02') GROUNDWATER ELEVATION IN FEET

SOIL SAMPLE LOCATIONS

S ↑  
M →

FIG. 2

Jackson ↓

BUILDING

~~208 JACKSON ST.~~

Boring and Soil Sampling

On May 5, 1990, three borings were drilled at the locations shown in Figure 2. The boring logs, which graphically depict the soils, depth to saturated zone, and well installation and design are included in Appendix B. (for mws)

Boring B-1 was drilled on the west central edge of the tank fill area of tank # 1 and was drilled to a depth of 10 feet. Soil samples were collected at 3 to 5 feet, 5 to 7 feet and 8 to 10 feet. A grayish-brown, fine-grained sand was encountered from feet 0.5 to 7.0 feet. A brown, mottled greenish-gray, fine-grained clayey sand was observed at a depth from 7.0 feet to 10.0 feet. This clayey material in the sand was considered to be the beginning of a confining layer and drilling was terminated at 10 feet in order to avoid drilling through this clay layer and into a possible aquifer. During drilling the saturated zone (groundwater) was encountered at a depth of 6.0 feet below grade. No hydrocarbon odor or staining was observed in the soils or water. Fourteen days after the drilling was completed, a water level of 4.40 feet was recorded.

Boring B-2 was located in the southeast corner of the tank fill area of tank # 3 (see figure 2 attached). Soil samples were collected at 3.0 to 5.0 feet and 6.0 to 8.0 feet. The lithology encountered in B-2 was a brown, mottled light brown, very fine-grained sand from 0.5 feet to 6.0 feet and a yellowish-brown, fine-grained, very clayey sand from 6.0 feet to 10.0 feet. This clayey material in the sand was considered to be the beginning of a confining layer and drilling was terminated at 10 feet in order to avoid drilling through this clayey layer and into a possible aquifer. During drilling the saturated zone (groundwater) was encountered at a depth of 5.5 feet below grade. Fourteen days after the drilling was completed, a water level of 5.1 feet was recorded. No hydrocarbon staining or odor was observed in the soils or water during the installation or sampling of the well.

Boring B-3 was located 160 feet east of B-1 near the eastern property boundary. A brown, mottled light brown, very fine-grained, clayey sand was encountered from 0.5 feet to 5.0 feet, followed by a yellowish-brown, fine-grained, very clayey sand from 5.0 feet to 10.0 feet. This clayey material in the sand was considered to be the beginning of a confining layer and drilling was terminated at 10 feet in order to avoid drilling through this clay layer and into a possible aquifer. The saturated zone (groundwater) was encountered at 5.5 feet a depth of 6.0 feet below grade. No hydrocarbon odors or staining were observed in the soils or water during the installation or sampling of the well.



ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94566 (415) 484-2600

GROUNDWATER PROTECTION ORDINANCE PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 208 Jackson St Oakland CA 94607

PERMIT NUMBER 90266 LOCATION NUMBER

CLIENT Name East Bay Packing Address 208 Jackson St Phone (415) 465-9700 City Oakland Zip 94607

PERMIT CONDITIONS

Circled Permit Requirements Apply

APPLICANT Name Geo-Environmental Technology Address 1936 Camden Ave. #4 San Jose Phone 408-539-1220 City San Jose Zip 95124

TYPE OF PROJECT Wall Construction Geotechnical Investigation Cathodic Protection General Water Supply Contamination Monitoring Wall Destruction

PROPOSED WATER SUPPLY WELL USE Domestic Industrial Other Municipal Irrigation

DRILLING METHOD: Mud Rotary Air Rotary Auger Cable Other

DRILLER'S LICENSE NO. 48 7000-C57-HAZ

WELL PROJECTS Drill Hole Diameter 8 in. Casing Diameter 2 in. Surface Seal Depth \* ft. Maximum Depth 12 ft. Number 3

GEOTECHNICAL PROJECTS Number of Borings 1 (possibly) Hole Diameter 6 in. Maximum Depth 12 ft.

ESTIMATED STARTING DATE 5/5 1990 ESTIMATED COMPLETION DATE 5/5/1990

I hereby agree to comply with all requirements of this Ordinance and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Thomas G. Smith Date 4/27/90

- A. GENERAL 1. A permit application should be submitted so arrive at the Zone 7 office five days pri proposed starting date. 2. Submit to Zone 7 within 60 days after compl of permitted work the original Departmen Water Resources Water Well Drillers Repor equivalent for well projects, or drilling and location sketch for geotechnical projects. 3. Permit is void if project not begun with days of approval date. B. WATER WELLS, INCLUDING PIEZOMETERS 1. Minimum surface seal thickness is two inch cement grout placed by tremie. 2. Minimum seal depth is 50 feet for municipa Industrial wells or 20 feet for domestic Irrigation wells unless a lesser dept specially approved. Minimum seal depth monitoring wells is the maximum depth pract or 20 feet. C. GEOTECHNICAL. Backfill bore hole with compacted tings or heavy buntanite and upper two feet with packed material. In areas of known or sus contamination, tremied cement grout shall be us place of compacted cuttings. D. CATHODIC. Fill hole above anode zone with col placed by tremie. E. WELL DESTRUCTION. See attached. \* 5 feet surface seal as discussed with Thomas Smith of Geo-Environmental Techno.

Approved Wyman Hong Date 27 APR Wyman Hong