

May 6, 1993

Alameda County Health Care Services Agency

Attention: Ms. Susan L. Hugo

80 Swan Way, Room 350 Oakland CA 94621

Subject: Quarterly Groundwater Monitoring Report

Third Quarter - April 16, 1993

Oliver Rubber Company Emeryville, CA 94608

Dear Ms. Hugo:

Enclosed, please find one copy of the subject report prepared by ASE Environmental.

This report was reviewed by our Oliver staff and our Standard Products Corporate Environmental personnel. We concur with its content, and findings, and look forward to bringing this project to a successful conclusion.

Respectfully submitted,

OLIVER RUBBER COMPANY

Ronald L. Kessler

Division Manager

THE STANDARD PRODUCTS COMPANY

Tom O. Palmer

Director Environmental/Health

and Safety

c: Mr. Rich Hiett - Regional
Water Quality Control Board
David Allen - ASE







May 3, 1993

QUARTERLY GROUNDWATER MONITORING REPORT THIRD QUARTER - APRIL 16, 1993

for
The Oliver Rubber Company
1200 65th Street
Emeryville, California

Prepared for:
Mr. Ron Kessler
The Oliver Rubber Company
1200 65th Street
Emeryville, California

Prepared by:
AQUA SCIENCE ENGINEERS, INC.
2411 Old Crow Canyon Road, #4
San Ramon, CA 94583

1.0 INTRODUCTION

Site Location (Site), See Figure 1, Site Location Map 1200 65th Street Emeryville, CA

Property Owner
The Oliver Rubber Company
1200 65th Street
Emeryville, CA
Contact: Mr. Ron Kessler
(510) 654-7711

Environmental Consulting Firm Aqua Science Engineers, Inc. 2411 Old Crow Canyon Road, #4 San Ramon, CA 94583 Contact: David Allen, Project Manager (510) 820-9391

Agency Review
Alameda County Health Care Services Agency (ACHCSA)
80 Swan Way, Room 350
Oakland, CA 94621
Contact: Ms. Susan Hugo

RWQCB, San Francisco Bay Region 2101 Webster Street, Fourth Floor Oakland, CA 94612 Contact: Mr. Rich Hiett

The following is a report detailing the third quarter of a four quarter groundwater monitoring program, as required by the RWQCB and the ACHCSA. Aqua Science Engineers, Inc. (ASE) has prepared this report on behalf of the property owner, The Oliver Rubber Company. This report is intended as a supplement to the following reports: "Project Report - Phase II Soil and Groundwater Assessment", produced by ASE in October, 1992 where three monitoring wells were installed; "Tank Pull" reports by Aqua Science Engineers, Inc. (ASE) dated December 5, 1991 and July 16, 1992. The December 5, 1991 report details the removal of 2 - 8,000 gallon, underground, steel, non-halogenated organic solvent tanks; the July 16, 1992 report details the removal of 1 - 1,000 gallon, underground, steel "Bunker Oil" tank.

Quarterly Groundwater Monitoring Report - April 16, 1993

2.0 SITE BACKGROUND

2.1 Physical Location

The site is located at the corner of 65th Street at Hollis Street. The site is approximately 1/16 mile west of Interstate 80, and 1/16 mile south of Highway 13, within the City limits of Emeryville, California. The site is currently used as a manufacturing setting for rubber products. The topography of the immediate area is generally even and located at approximately 20 feet above mean sea level. (see Figure 1: Site Location Map).

2.2 Background and Site History

Between December 5, 1991 and July 16, 1992, (3) underground storage tanks were removed from the property by ASE; two of the tanks had 8,000 gallon capacities and contained non-halogenated solvents; one of the tanks had a 1,000 gallon capacity, and contained bunker oil. Underground tank removal activities were documented by ASE in a reports referenced in the previous sections. Detectable levels of Total Petroleum Hydrocarbons (TPH) as Diesel, Oil and Grease, and several constituents of Volatile Organics were found in the sidewalls of both excavations upon backfilling activities. It was determined that groundwater monitoring wells would be necessary to investigate the possibility of groundwater contamination due to leaking tanks.In October of 1992, three groundwater monitoring wells were installed, developed and sampled for chemical contamination. The results of this investigation can be found in the October 1992, ASE report.

2.3 General Geology/Hydrogeology

The site rests on unconsolidated sediments primarily composed of clay. The eastern shoreline of the San Francisco Bay is located approximately 1/16 mile west of the site. Shallow groundwater in the area is located approximately 10-12 feet below grade at the site, and flows in a westerly direction towards the San Francisco Bay.

3.0 DRILLING AND GROUNDWATER WELL CONSTRUCTION

A total of three wells were installed at the site on October 1, 1992. The locations of the ground water monitoring wells (MW-1, MW-2, and MW-3) are indicated in Figure 2, Site Plan. The soil borings for well installation were drilled to 25 feet below ground surface using a CME-75 drill rig equipped with 8 inch O.D. continuous flight, hollow stem augers. All drilling equipment was steam cleaned before use and between borings. Water saturated soil was first encountered at approximately 15-17 feet in each of the monitoring well borings.

Two-inch diameter schedule-40 PVC well casing with 0.020-inch slots was installed from 25 feet to 5 feet below the surface in each boring. Two-inch diameter schedule-40 PVC blank casing was installed above the slotted casing, to the surface. The well casings were capped, on the bottom with a two-inch threaded female plug and on top with a two inch locking security plug. The annular space of the wells was packed with No. 3 Monterey sand from the bottom of the borings to 4.5 feet below the surface. 2.0 feet of bentonite clay was placed above the sand packs. Class "H" Portland Cement was placed above the bentonite seals, to the surface. The well heads were secured with concrete vaulted, water-tight, locking, steel, street boxes.

What follows is the results of groundwater sampling and analysis during the third quarter period. Included in this section are the results of the previous quarter's results.

4.0 GROUND WATER SAMPLE COLLECTION AND CHEMICAL ANALYSIS

On April 16, 1993, ASE personnel arrived on site. Groundwater measurements and identification of any "free-product" were collected before any water was purged from the wells. No free product was identified and no odor could be recognized from any of the wells. One ground water sample was collected from each of the three groundwater monitoring wells after removal of approximately five well volumes of water and 90% well recharge. The well was purged using a 2-inch PVC bailer. The well purge water was placed in 55-gallon steel 17H drums and stored on site pending analytical results. The samples were collected using disposable, sterile, polyethylene, single check valve bailers. The samples were placed in pre-cleaned, sterile, 40 ml. glass VOA vials, then immediately placed in an ice chest for cold storage. They were later transported to Priority Environmental Laboratory in Quarterly Groundwater Monitoring Report - April 16, 1993

Milpitas, California using proper Chain-of-Custody procedures, for chemical analysis. The Groundwater analytical results and chain-of-custody records are included in Appendix A. Well Sampling Field Logs are attached in Appendix B.

The groundwater samples collected for this quarter were analyzed for all or a combination of the following: TPH as Gasoline, TPH as Diesel, BTEX, Oil & Grease, Volatile Organics, pH, and Conductivity. The results are tabulated below in Tables One, Two and Three. These tables also contain results from the previous quarter.

TABLE ONE
Summary of Chemical Analysis of WATER Samples
TPH as Gas, Diesel, BTEX, and Oil & Grease
EPA Methods 5030/8015, 3510/8015, 602, and 5520 C&F

Campla	TPH Gas	TPH Diesel	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Oil & Grease
Sample				(ppb)	(ppb)	(ppb)	(ppm)
I.D.	(ppb)	(ppb)	(ppb)	(ppo)	(PPU)	(\$P0)	(ррш)
10/5/00							
10/5/92		37.5	NI PO	N. D.	ND	MD	AT TS
MW-1		N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
MW-2					*		
MW-3							
1/18/93							
MW-1		N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
MW-2	N.D.		N.D.	N.D.	N.D.	N.D.	
MW-3	N.D.	* * *	N.D.	N.D.	N.D.	N.D.	
141 (1 5			11.21	- · · · ·			
4116193							
MW-1		N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
	ND	и.р.	и	14.15.	,,,,,,		
MW-2	N.D.						
MW-3	N.D.						
	50001	05101	(00	602	603	600	5530
EPA	5030/	3510/	602	602	602	602	5520
METHOD	8015	8015					C&F

N.D. Non Detectable at analytical method limits ppm parts per million

ppb parts per billion not analyzed

-4-

TABLE TWO

Summary of Chemical Analysis of Water Samples Volatile Organics EPA Method 624

Sample I.D.	All Volatile Organics
10/5/92	
MW-1	
MW-2	N.D.
MW-3	N.D.
1/18/93	
MW-1	
MW-2	N.D.
MW-3	N.D.
4/16/93	
MW-1	
MW-2	N.D.
MW-3	N.D.
EPA	624
METHOD	
N.D.	Non Detectable at analytical method limits not analyzed

Summary of Chemical Analysis of Water Samples pH and Conductivity EPA Methods 9045 and 120.1

TABLE THREE

Sample I.D.	pН	Conductivity
4/16/93		
MW-1	6.8	810
MW-2	7.2	720
MW-3	6.9	970
EPA METHOD	9045	120.1

5.0 GROUNDWATER GRADIENT AND DIRECTION

The elevations of the tops of the well casings were surveyed relative to mean sea level (MSL) several days after their installation. The depths to groundwater were measured in each well on April 16,1993 using a water level sounder (Solinst). Two measurements were taken in each well to confirm groundwater depth. The depth to water and the top of casing survey data were used to calculate a groundwater flow direction and gradient. A summary of the elevation data is provided below for the April 16, 1993 sampling date.

TABLE FOUR
Summary of Groundwater Well Survey Data

Well Number	Depth to Water	Top of Casing Elevation	Groundwater Elevation
MW-1	5.1 ft.	20.0 ft. AMSL	16.00 ft. AMSL
MW-2	4.62 ft.	19.21 ft. AMSL	15.41 ft. AMSL
MW-3	4.6 ft.	19.80 ft. AMSL	16.34 ft. AMSL

A three-point problem was solved for well combinations MW-1, MW-2 and MW-3. A graphic representation of the three-point problem indicating groundwater flow direction and gradient is presented in the Groundwater Gradient Map, Figure 3. The current direction of groundwater flow is west across the site at a gradient of 0.009 ft/ft. Previously, the groundwater gradient was calculated as flowing west at 0.013 ft/ft.

6.0 CONCLUSIONS

Based on the results of the chemical analyses, groundwater sampling and analysis has resulted in Non-Detectable (N.D.) levels of the constituents of which were tested.

7.0 RECOMMENDATIONS

Aqua Science Engineers recommends continuing with the groundwater monitoring program. The next sampling period will occur in the month of July, 1993. Should groundwater sampling and analysis result in N.D. levels of the constituents of which are being tested for four (4) subsequent quarters, ASE will recommend applying for site closure.

8.0 REPORT LIMITATIONS

The results of this investigation represent conditions at the time at which groundwater samples were collected, and for the specific parameters analyzed for by the laboratory. It does not fully characterize the site for contamination resulting from sources other than the underground storage tanks at the site, or for parameters not analyzed for by the laboratory. All of the laboratory work cited in this report was prepared under the direction of independent CSDHS certified laboratory. The independent laboratory is solely responsible for the contents and conclusions of the chemical analysis data.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.

David Allen

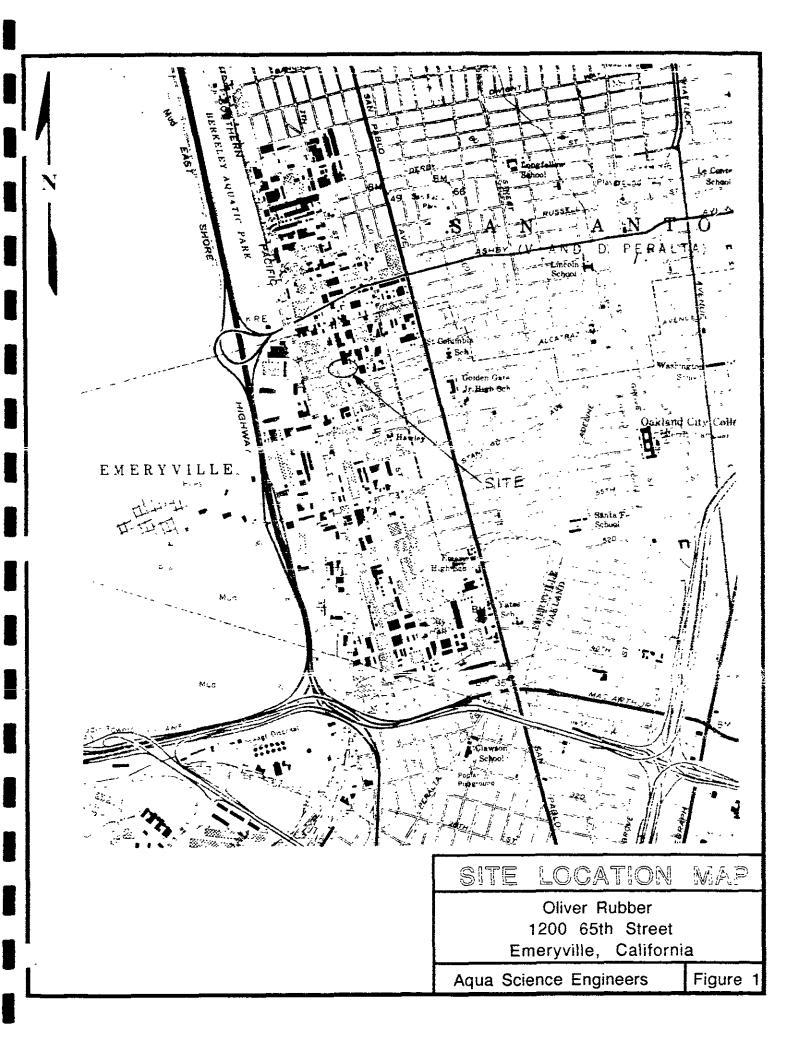
Project Manager

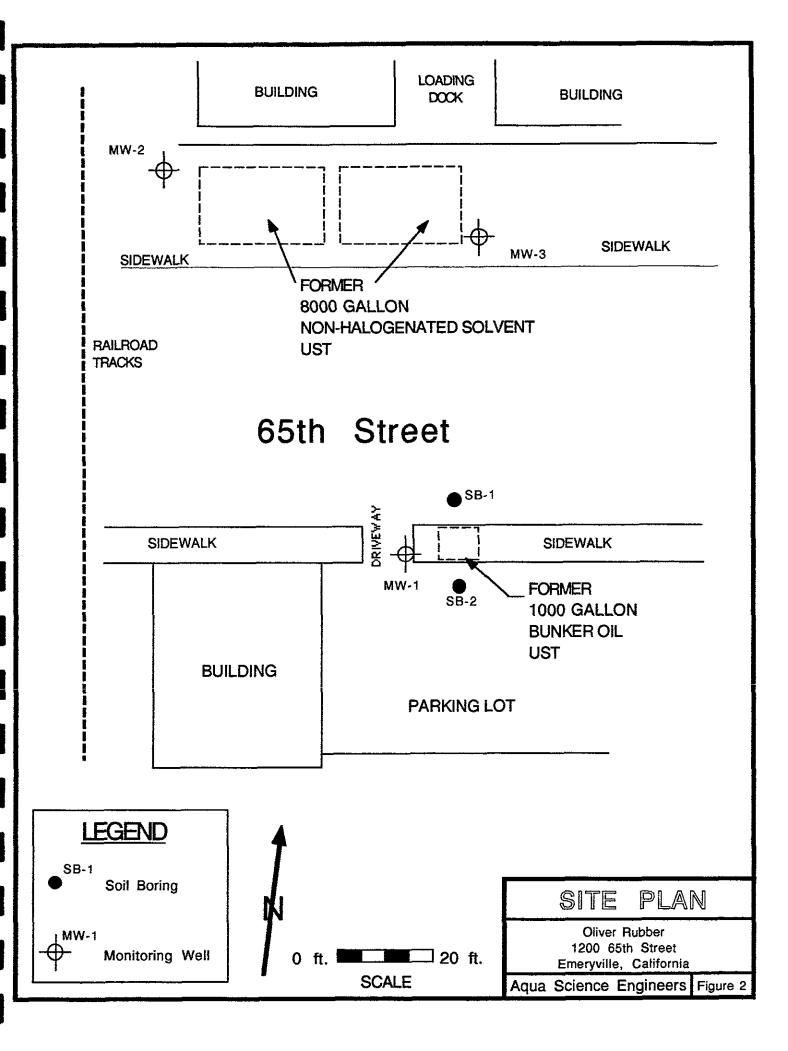
cc: Mr. Ron Kessler, The Oliver Rubber Company

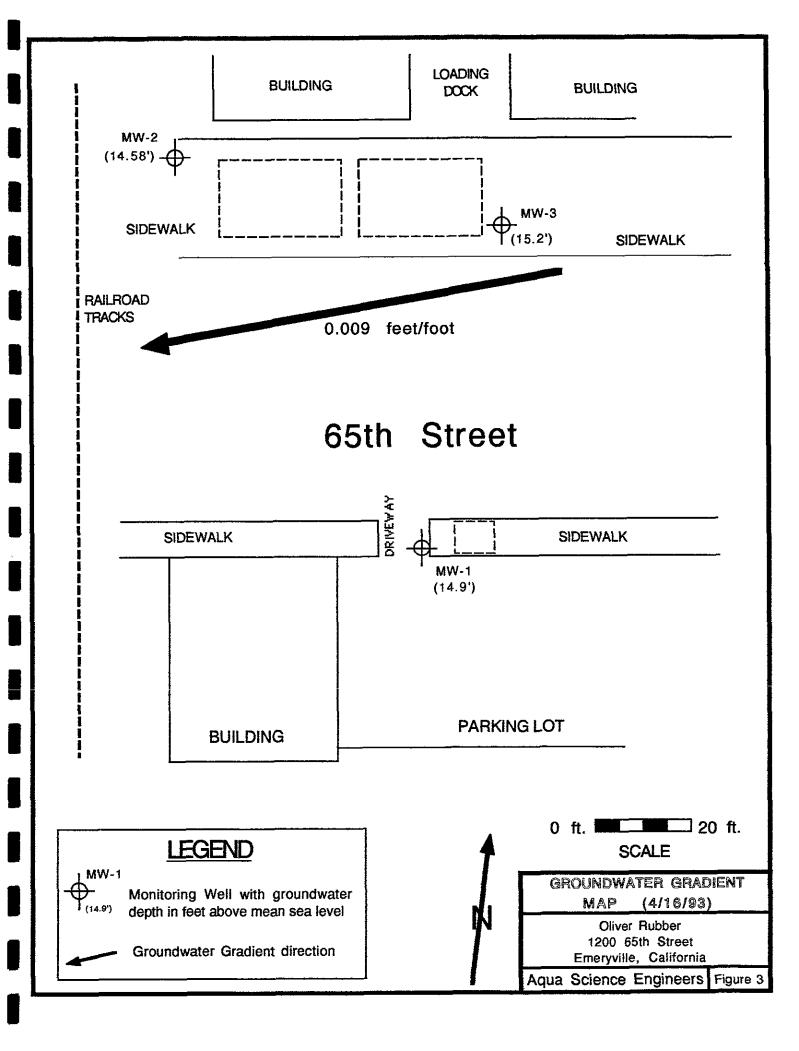
Ms. Susan Hugo, ACHCSA

Mr. Rich Hiett, RWQCB, San Francisco Bay Region

-7-







APPENDIX A

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



Prenulin Felicination Analytical Caparatory

April 19, 1993

PEL # 9304041

AQUA SCIENCE ENGINEERS, INC.

Attn: Steve DeHope

Re: Three water samples for pH, Gasoline/BTEX, Diesel, Oil &

Grease, and Conductivity analyses.

Project name: Oliver Rubber Co.

Project location: 1200 65th St., - Emeryville

Project number: 2516

Date sampled: Apr 16, 1993

Date extracted: Apr 16-17, 1993

Date submitted: Apr 16, 1993
Date analyzed: Apr 16-17, 1993

RESULTS:

SAMPLE pH Gasoline Diesel Benzene Toluene Ethyl Total Oil & Conductivity

I.D. Benzene Xylenes Grease

(ug/L) (ug/L) (ug/L) (ug/L) (ug/L) (mg/L) (uS)

N.D. N.D. 810 MW-16.8 N.D. N.D. N.D. N.D. MW-2___ N.D. ___ 970 MW-3 6.9 N.D.

Blank 7.0 N.D. N.D. N.D. N.D. N.D. N.D. 0

Spiked Recovery --- 80.4% 93.1% 90.2% 94.3% 91.6% 104.2% --- ---

Detection limit 0.05 50 50 0.5 0.5 0.5 0.5 10

Method of 9045 5030/ 3510/ 5520

Analysis 8015 8015 602 602 602 602 C & F 120.1

David Duong Laboratory Director

1764 Houret Court Milpitas, CA. 95035

Tel: 408-946-9636

Fax: 408-946-9663



Precision Environmental Analytical Laboratory

May 03, 1993

PEL # 9304041

AQUA SCIENCE ENGINEERS, INC.

Attn: Steve DeHope

Re: One water sample for pH and Conductivity analysis.

Project name: Oliver Rubber Co.

Project location: 1200 65th St., - Emeryville

Project number: 2516

Date sampled: Apr 16, 1993

Date submitted: Apr 16, 1993 Date extracted: May 03, 1993

Date analyzed: May 03, 1993

RESULTS:

SAMPLE I.D.	pH Conductivit (uS)	
MM-5	7,2	720
Blank	7.0	0
Detection limit	0.05	10
Method of Analysis	9045	120.1

-David Duong Laboratory Director



April 19, 1993

Predicion Environmenta Analytica: Labora # 9304041

AQUA SCIENCE ENGINEERS, INC.

Attn: Steve DeHope

Project name:Oliver Rubber Co.

Project number: 2516

Project location: 1200 65th St., - Emeryville

Sample I.D.: MW-2

Date Sampled: Apr 16, 1993

Date Analyzed: Apr 16-19, 1993

Date Submitted: Apr 16, 1993

Method of Analysis: EPA 624

Detection limit: 0.5 ug/L

COMPOUND NAME	CONCENTRATION (ug/L)	SPIKE RECOVERY (%)
Chloromethane	N.D.	
Vinyl Chloride	N.D.	83.1
Bromomethane	N.D.	
Chloroethane	N.D.	
Trichlorofluoromethane	N.D.	
1,1-Dichloroethene	N.D.	87.6
Methylene Chloride	N.D.	
Trans-1,2-Dichloroethene	N.D.	
1,1-Dichloroethane	N.D.	90.2
Chloroform	N.D.	
1,1,1-Trichloroethane	N.D.	88.1
Carbon Tetrachloride	N.D.	
1,2-Dichloroethane	N.D.	
Trichloroethene	N.D.	82.0
1,2-Dichloropropane	N.D.	
Bromodichloromethane	N.D.	
2-Chloroethylvinylether	N.D.	سد خته نوع چه چه
Trans-1,3-Dichloropropene	N.D.	
Cis-1,3-Dichloropropene	N.D.	
1,1,2-Trichloroethane	N.D.	
Tetrachloroethene	N.D.	94.4
Benzene	N.D.	
Dibromochloromethane	N.D.	
Toluene	N.D.	
Chlorobenzene	N.D.	
Ethylbenzene	N.D.	
Bromoform	N.D.	
1,1,2,2-Tetrachloroethane	N.D.	
Dichlorodifluoromethane	N.D.	100.9
Freon 113	N.D.	
M & P-Xylenes	N.D.	
0-Xylene	N.D.	
1,3-Dichlorobenzene	N.D.	
1,4-Dichlorobenzene	N.D.	
1,2-Dichlorobenzene	N.D.	

David Duong
Laboratory Director

1764 Houret Court Milpitas, CA. 95035

Tel: 408-946-9636

Fax: 408-946-9663

April 19, 1993

Pretuen Environmenta Analytical Laborapez # 9304041

AQUA SCIENCE ENGINEERS, INC.

Attn: Steve DeHope

Project number: 2516

Project name:Oliver Rubber Co. Project location: 1200 65th St., - Emeryville

Sample I.D.: MW-3

Date Sampled: Apr 16, 1993

Date Analyzed: Apr 16-19, 1993

Date Submitted: Apr 16, 1993

Detection limit: 0.5 ug/L Method of Analysis: EPA 624

COMPOUND NAME	CONCENTRATION (ug/L)	SPIKE RECOVERY (%)
Chloromethane	N.D.	
Vinyl Chloride	N.D.	83.1
Bromomethane	N.D.	
Chloroethane	N.D.	+-
Trichlorofluoromethane	N.D.	
1,1-Dichloroethene	N.D.	87.6
Methylene Chloride	N.D.	
Trans-1,2-Dichloroethene	N.D.	
1,1-Dichloroethane	N.D.	90.2
Chloroform	N.D.	This state was said "The
1,1,1-Trichloroethane	N.D.	88.1
Carbon Tetrachloride	N.D.	
1,2-Dichloroethane	N.D.	
Trichloroethene	N.D.	82.0
1,2-Dichloropropane	N.D.	444 444 445 446 476
Bromodichloromethane	N.D.	
2-Chloroethylvinylether	N.D.	~ ~ ~ ~
Trans-1,3-Dichloropropene	N.D.	
Cis-1,3-Dichloropropene	N.D.	
1,1,2-Trichloroethane	N.D.	
Tetrachloroethene	N.D.	94.4
Benzene	N.D.	
Dibromochloromethane	N.D.	
Toluene	N.D.	
Chlorobenzene	N.D.	
Ethylbenzene	N.D.	
Bromoform	N.D.	
1,1,2,2-Tetrachloroethane	N.D.	
Dichlorodifluoromethane	N.D.	100.9
Freon 113	N.D.	
M & P-Xylenes	N.D.	
0-Xylene	N.D.	
1,3-Dichlorobenzene	N.D.	
1,4-Dichlorobenzene	N.D.	
1,2-Dichlorobenzene	N.D.	

David Duong Laboratory Director

1764 Houret Court Milpitas, CA. 95035 Tel: 408-946-9636

Fax: 408-946-9663

Aqua Science Engineers, Inc. 2411 Old Crow Canyon Road, #4, San Ramon, CA 94583

Chain of Custo INV # 23534

(510) 820-9391 - FAX (510) 837-4853 DATE 4-16-93 PAGE 1 OF 1 PROJECT NAME Oliver Rubber Co. NO. 2516 SAMPLERS (SIGNATURE) (PHONE NO.) ADDRESS 1200 65th of Emergylle - (510) 820-9391 PURGABLE HALOCARBONS (EPA 601/8010) PURGABLE ARCMATICS (EPA 602/8020) SPECIAL INSTRUCTIONS: VOLATILE ORGANICS (EPA 624/8240) LUFT METALS (5) (EPA 6010+7000) STIC. CAM WET TPH-GASOLINE (EPA 5030/8015) BASE/NUETRALS, (EFA 625/8270) (EPA 1311/1310) REACTI VI TY NO. OF SAMPLE ID. DATE TIME MATRIX SAMPLES MW-4-16 3:00 mw-2 4-16 3.15 MW-3 4-16 2:30 RELINQUISHED BY: RECEIVED BY: **RELINOUISHED BY:** RECEIVED BY LABORATORY: COMMENTS: (signature) (time) (signature) (signature) (time) (signature) (time) (time) 2:00/14 DAVID DUONG (printed name) (printed name) (date) (printed name) (printed name) (date) (date) Company-EL 4/16/93 Company-Company-

APPENDIX B

Well Sampling Field Logs



WELL SAMPLING FIELD LOG

Aqua Science Engineers, Inc. San Ramon, CA 94583

Project Name: Oliver Rubber Co.
Project Address: 1200 65th St., Emeryville, CA
Job # Date of sampling: 4/16/93
Completed by: Steve DeHope
Well Number / Designation: MW-1
Top of casing elevation: 20.0'
Total depth of well casing: 25' Well diameter: 2"
Depth to water (before sampling): 5.1'
Thickness of floating product if any: None
Depth of well casing in water: 19.9'
Req'd volume of groundwater to be purged before sampling: 16 Gallons
Approximate volume of groundwater purged: 16 Gallons
Type of seal at grade: Portland
Type of cap on the casing: Expanding locking cap
Is the seal water tight? Yes Is the cap water tight? Yes
Number of samples (containers) collected
Did 40 ml VOA vials have headspace: No
Were sample containers chilled after sampling & for delivery? Yes
Are Chain of Custody documents accompanying the samples: Yes
Sample temperature: 19° C
Sample pH: 6.8 Test method: 9040 Conductivity: 810 Test Method: 120.1
Physical description of water during initial bailing period: Slightly cloudy & clearing
Physical description of water sample: Clear
Type of analysis requested: TPH Diesel
BTEX
Oil & Grease
ż.
Conductivity
Type of bailer/sampling equipment used: PVC and disposable
Equipment decontamination procedures: TSP Wash, tap water rinse
Disposition of bailed water volume:
Drummed on site.



WELL SAMPLING FIELD LOG

Aqua Science Engineers, Inc. San Ramon, CA 94583

Project Name:Oliver Rubber Co.
Project Address: 1200 65th St., Emeryville, CA
Job # 2571 Date of sampling: 4/16/93
Completed by: Steve DeHope
Well Number / Designation: MW-2
Top of casing elevation: 19.2'
Total depth of well casing: 24.6' Well diameter: 2"
Depth to water (before sampling): 4.62'
Thickness of floating product if any: N/A
Depth of well casing in water: 19.98'
Req'd volume of groundwater to be purged before sampling: 16 Gallons
Approximate volume of groundwater purged: 16 Gallons
Type of seal at grade: Portland
Type of cap on the casing: Expanding locking cap
Is the seal water tight? Yes Is the cap water tight? Yes
Number of samples (containers) collected
Did 40 ml VOA vials have headspace: No.
Were sample containers chilled after sampling & for delivery? Yes
Are Chain of Custody documents accompanying the samples: Yes
Sample temperature: 19° C
Sample pH: 7.2 Test method: 9040 Conductivity: 720 Test Method: 120.1
Conductivity: 720 Test Method: 120.1
Physical description of water during initial bailing period: Slightly cloudy & silty
Physical description of water sample: Almost clear
• • • • • • • • • • • • • • • • • • • •
Type of analysis requested: TPH Gas
Volatile Organics
ÞН
<u>COnductivity</u>
Type of bailer/sampling equipment used: PVC and disposable
Equipment decontamination procedures: TSP wash, tap water rinse
Disposition of bailed water volume:
Drummed on site.



WELL SAMPLING FIELD LOG

Aqua Science Engineers, Inc. San Ramon, CA 94583

Project Name: Oliver Rubber Co.
Project Address: 1200 65th St., Emeryville, CA
Job # Date of sampling:
Completed by: Steve DeHope
Well Number / Designation:
Top of casing elevation: 19.80'
Total depth of well casing: 24.66' Well diameter: 2" Depth to water (before sampling): 4.6'
Depth to water (before sampling):4.6'
Thickness of floating product if any: N/A
Depth of well casing in water: 20.66'
Req'd volume of groundwater to be purged before sampling: 16 Gallons
Approximate volume of groundwater purged: 16 Gallons
Type of seal at grade: Portland
Type of cap on the casing: Expanding locking cap
Is the seal water tight? Yes Is the cap water tight? Yes
Number of samples (containers) collected
Did 40 ml VOA vials have headspace: No
Were sample containers chilled after sampling & for delivery?yes
Are Chain of Custody documents accompanying the samples: Yes
Sample temperature: 19° C
Sample pH: 6.9 Test method: 9040
Conductivity: 970 Test Method" 120.1
Physical description of water during initial bailing period:
Cloudy & clearing
Physical description of water sample: Almost clear
TPH Gas
lype or analysis requested:
Volatile Organics
pH
Conductivity
Type of bailer/sampling equipment used: PVC and disposable
England Januarianian Bon 1
Equipment decontamination procedures: TSP wash, tap water rinse
Disposition of bailed water volume:
Drummed on site.