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DAVE ALLEN
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FAX BEING SENT BY:

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2411 Old Crow Canyon Road, #4
San Ramon, CA 94583
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SEMI-VOLATILE?

DATE: 2-19-98
TO: Mr. Amir Gholami
FROM: Dave Allen
NUMBER OF PAGES TO FOLLOW: 14

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MESSAGE:

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February 19, 1998

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REPORT
of
SOIL AND WATER ASSESSMENT
ASE JOB NO. 3231
at
The Oliver Rubber Facility
1200 65th Street
Oakland, California

Waste / Live

Submitted by:

Aqua Science Engineers
2411 Old Crow Canyon Road, #4
San Ramon, California 94583
(510) 820-9391



David M. Schultz

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1.0 PURPOSE

This report, detailing the methods and findings of soil borings drilled at the Oliver Rubber Plant, was written in an effort to solicit a timely response (guidance) from the Alameda County Health Care Services Agency regarding their opinion and/or position of the analytical results of the soil and grab water samples described in further detail below.

2.0 INTRODUCTION

This report outlines the methods and findings of Aqua Science Engineers, Inc. (ASE)'s soil and grab water assessment related to an unregulated tank vault at the former Oliver Rubber Plant (Oliver), located at 1200 65th Street in Oakland, California (*Figure 1*). The site assessment activities were initiated by Oliver in an effort to confirm the soundness of the vault prior to backfilling activities. This assessment was also performed in anticipation of due diligence activities related to the future sale of the property.

3.0 SITE HISTORY

The unregulated tank vault referenced above held three (3) 5,000 gallon Raffex 120 product tanks, which is a component in the rubber tire treads Oliver manufactured at the plant. A material data safety sheet (MSDS) for Raffex 120 is attached in Appendix A.

Early in 1998, the tanks were removed from the vault, cleaned thoroughly and scrapped at a local metal recycling facility. The concrete floor of the vault was cleaned and visually inspected by Aqua Science Engineers, Inc. (ASE) on February 4, 1998 for integrity. No evident or visible integrity failures (cracks) were noted by ASE. The floor and the walls were joined at the corners by cold joints. What appeared to be groundwater was noted to enter the vault during shallow groundwater months. After consultation with Oliver, ASE was contracted to drill two soil borings in the vault to assess subsurface soil and water conditions below the vault.

4.0 DRILL SOIL BORINGS AND COLLECT SAMPLES

Prior to drilling, ASE contacted, by telephone, Mr. Amir Gholami of the Alameda County Health Care Services Agency (ACHCSA) for his guidance, as necessary. Mr. Gholami stated that his agency would like to be made

aware of the results of the borings upon completion of the assessment activities.

On February 10, 1998, Vickers Concrete Coring cored two 4-inch diameter holes in the concrete floor of the vault in locations shown on the attached Site plan. Upon breaking through the bottom of the vault floor, what appeared to be groundwater began spouting from the cored hole. ASE staff geologist Charlie Rous immediately collected samples of the water spouting from the hole, taking great care in making certain not to cross-contaminate the grab sample with the water that was puddling on the floor near the cored hole. Mr. Rous collected grab water samples GRAB-A and GRAB-B from both boreholes. The water samples were collected into pre-cleaned 1-liter amber bottles, labeled, and placed into an ice chest containing ice prior to delivery to the analytical laboratory under chain of custody. Shortly after the collection of the water sample from boring GRAB-A, Mr. Rous was able to collect a soil sample from the borehole using a hand auger. Soil sample GRAB-A @ 3.5' was collected 3.5-feet below the vault floor. The soil sample was collected directly from the auger shoe and stored in a glass sample jar, labeled, and placed into an ice chest containing ice prior to delivery to the analytical laboratory under chain of custody. A soil sample was not able to be collected from soil boring GRAB-B due to the amount of water in the boring. Due to the conditions within the vault relating to the current groundwater depths in the immediate vicinity, it would be extremely difficult to attempt to collect additional samples in this manner.

5.0 ANALYTICAL RESULTS FOR SOIL SAMPLES

The soil sample collected from borehole GRAB-A was analyzed by CAL-EPA certified laboratory Chromalab, Inc. of Pleasanton, California (ELAP #1094) for total extractable hydrocarbons as Raffex, kerosene, and motor oil by modified EPA Method 8015. A sample of Raffex 120 was also submitted to Chromalab to be analyzed first to create a standard for the subsurface samples to be measured against. The soil sample analytical results are tabulated below in Table One, and the certified analytical report and chain of custody forms are included in Appendix B.

TABLE ONE
Summary of Chemical Analysis of SOIL Samples
All results are in parts per million

Sample ID	TPH Raffex	TPH Kerosene	Motor Oil
GRAB-A @ 3.5'	380	< 1.0	< 50
EPA METHOD	8015M	8015M	8015M

Note: Detectable concentrations are in **bold**

6.0 ANALYTICAL RESULTS FOR GRAB WATER SAMPLES

The grab water samples were analyzed by Chromalab for total extractable hydrocarbons as Raffex, kerosene, and motor oil by modified EPA Method 8015. The analytical results are tabulated below in Table Two, and the certified analytical report and chain of custody forms are included in Appendix B.

TABLE TWO
Summary of Chemical Analysis of Grab Water Samples
All results are in parts per million

Sample ID	TPH Raffex	TPH Kerosene	Motor Oil
GRAB-A	8.0	< 0.05	< 0.50
GRAB-B	28.0	< 0.05	< 0.50
EPA METHOD	8015M	8015M	8015M

Note: Detectable concentrations are in **bold**

7.0 CONCLUSIONS

An elevated concentration of Raffex was identified in the soil sample collected from boring GRAB-A at 380 parts per million. Elevated concentrations of Raffex were identified in both grab water samples collected from beneath the vault. Raffex, as the MSDS in Appendix A

details, is a heavy petroleum hydrocarbon much like the consistency of tar at room temperature. Raffex is an unregulated compound that does not contain light-end petroleum hydrocarbons. Much like motor-oil, there are no regulatory cleanup goals established for this compound.

The tanks containing the Raffex have been removed from the site; thus, the source no longer exists. Being that the Oliver facility lies in a heavily industrialized area, groundwater in the vicinity of the Oliver facility has not and most likely will never be used for human consumption.

8.0 RECOMMENDATIONS

It is ASEs opinion that the 380 ppm Raffex detected in the soil sample collected from below the vault is not a significant concentration requiring further assessment or investigative activities. Further sample collection and/or excavation of soil below this vault would not be feasible due to the location of the vault in respect to the R/R spur, Oliver building, and depth of groundwater. ASE therefore recommends that the vault be backfilled immediately with import material. Backfilling is tentatively scheduled for February 24, 1998, and will be conducted unless otherwise directed by the ACHCSA.

Should any further environmental activities become necessary regarding the water beneath this vault, ASE recommends that such investigative activities be performed outside of the vault in the presumed downgradient direction, toward the west.

On behalf of the Oliver Rubber Company, ASE requests that the ACHCSA prepare a response and guidance related to the subsurface samples collected beneath the vault.

As directed by Oliver Rubber Company, ASE has supplied a copy of this report to the following regulatory agency for their review and further guidance:

Alameda County Health Care Services Agency
Attention: Mr. Amir Gholami
1131 Harbor Bay Parkway
Alameda, California 94502

9.0 REPORT LIMITATIONS

The results of this assessment represent conditions at the time of the soil and groundwater sampling, at the specific locations at which the samples were collected, and for the specific parameters analyzed by the laboratory.

This report does not fully characterize the site for contamination resulting from unknown sources or for parameters not analyzed by the laboratory. All of the laboratory work cited in this report was prepared under the direction of an independent CAL-EPA certified laboratory. The independent laboratory is solely responsible for the contents and conclusions of the chemical analysis data.

Aqua Science Engineers appreciates the opportunity provide environmental consulting services for this project. Should you have any questions or comments, please feel free to call us at (510) 820-9391.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.



David Allen, R.E.A.
Senior Project Manager



Attachments: Figure 1
Appendices A & B

cc: Mr. Tom Palmer, The Standard Products Company
Mr. David Kuhre, The Oliver Rubber Company

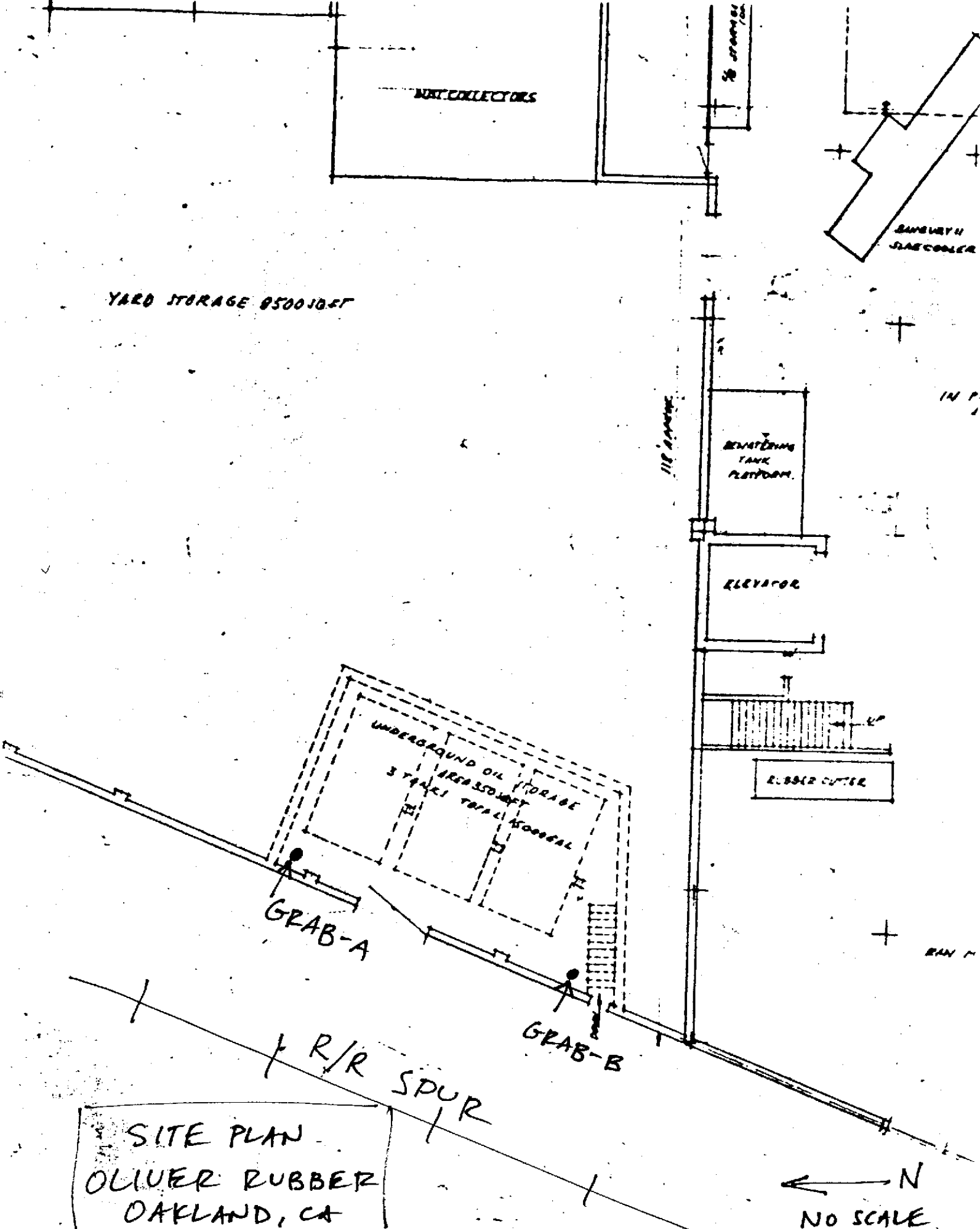


FIGURE 1

APPENDIX A

MSDS for Raffex 120

2306

SAN JOAQUIN REFINING CO., INC.
STANDARD & SHELL STREETS
P. O. BOX 5576
BAKERSFIELD CA 93388
(805) 327-4257

H HAZARD RATING
M 4 - SEVERE HEALTH
I 3 - SERIOUS FLAMMABILITY
S 2 - MODERATE REACTIVITY
1 - SLIGHT
0 - MINIMAL

PAGE 1 OF 2

HMIS

MATERIAL SAFETY DATA SHEET
("ESSENTIALLY SIMILAR" TO FORM OSHA 20
MATERIAL SAFETY DATA SHEET)



PRODUCT NAME: RAFFEX 120
CHEMICAL FAMILY: PETROLEUM, HYDROCARBON
CHEMICAL NAME:

CODE: 3130

CAS NO. 64742-11-6, HEAVY NAPHTHENIC DISTILLATE SOLVENT EXTRACT

TYPICAL COMPOSITION: HEAVY NAPHTHENIC DISTILLATE SOLVENT EXTRACT 100%

EXPOSURE STANDARD, ACGIH TWA & OSHA PEL - OBSERVE 5 MG/M3 (CUBIC METER OF AIR) FOR MINERAL OILS

PHYSICAL DATA

INITIAL BOILING POINT, 'F: 550 SPECIFIC GRAVITY (H2O=1): 1.0
VAPOR PRESSURE (MMHg): <0.1 PERCENT VOLATILE, (% BY VOL.): NA
VAPOR DENSITY (AIR=1): NA EVAPORATION RATE (ETHYL ETHER=1): <1
SOLUBILITY IN WATER: NIL
APPEARANCE AND ODOR: BLACK LIQUID WITH LITTLE OR NO ODOR

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT - COC, 'F: 410 FLAMMABLE LIMITS: LEL UEL
EXTINGUISHING MEDIA: FOAM, WATER FOG, DRY CHEMICAL, CO2 NDA NDA
SPECIAL FIRE FIGHTING PROCEDURES:
DO NO ENTER CONFINED FIRE SPACE WITHOUT PROPER PROTECTIVE EQUIPMENT
INCLUDING SELF-CONTAINED BREATHING APPARATUS. SEE HAZARDOUS DECOMPOSITION
PRODUCTS.

REACTIVITY DATA

STABILITY (THERMAL, LIGHT): STABLE
INCOMPATIBILITY (MATERIALS TO AVOID): MAY REACT WITH STRONG OXIDIZERS.
HAZARDOUS DECOMPOSITION PRODUCTS: NORMAL COMBUSTION FORMS CARBON DIOXIDE
AND WATER VAPOR, AND MAY PRODUCE OXIDES OF SULFUR AND NITROGEN.
INCOMPLETE COMBUSTION CAN PRODUCE CARBON MONOXIDE.
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

SAN JOAQUIN REFINING CO. INC.
PAGE 2 OF 2 CODE:3130

MATERIAL SAFETY DATA SHEET

SPILL OR LEAK PROCEDURES

STEPS IN CASE OF SPILL: CLEAN UP USING ABSORBENT MATERIAL, SUCH AS EARTH OR SAND.
WASTE DISPOSAL METHOD: OBSERVE FEDERAL, STATE, AND LOCAL REGULATIONS COVERING CHEMICAL WASTE SPILLS.

SPECIAL PROTECTION INFORMATION FOR POTENTIAL ROUTES OF ENTRY

EYE: AVOID EYE CONTACT. FLUSH WITH PLENTY OF WATER. IF IRRITATION PERSISTS SEEK MEDICAL ATTENTION.
SKIN: AVOID SKIN CONTACT. IF CONTACT OCCURS, WASH WITH SOAP AND WATER.
RESPIRATORY PROTECTION: IF OPERATING CONDITIONS CREATE AIRBORN CONCENTRATIONS WHICH EXCEED THE EXPOSURE STANDARD, THE USE OF AN APPROVED NIOSH/OSHA RESPIRATOR FOR ORGANIC VAPORS OR AIR-SUPPLIED BREATHING EQUIPMENT IS RECOMMENDED.
VENTILATION: USE ADEQUATE VENTILATION TO KEEP THE AIRBORN CONCENTRATIONS OF THIS MATERIAL BELOW THE ESTABLISHED EXPOSURE STANDARD.

SPECIAL PRECAUTIONS AND SAFE HANDLING

AVOID FIRE, SPARKS, OPEN FLAME. WEAR APPROPRIATE EQUIPMENT TO INSURE THAT PRODUCT DOES NOT CONTACT EYES OR SKIN.

HEALTH HAZARD DATA

EYES: THIS MATERIAL IS NOT EXPECTED TO CAUSE EYE IRRITATION.
SKIN: THIS MATERIAL IS NOT EXPECTED TO CAUSE SKIN IRRITATION.
INGESTION: NOT EXPECTED TO BE ACUTELY TOXIC BY INGESTION. IF SWALLOWED, DO NOT INDUCE VOMITING, CALL A PHYSICIAN.
INHALATION: FUMES MAY BE UNPLEASANT AND MAY PRODUCE NAUSEA. REMOVE THE PERSON TO FRESH AIR IF RESPIRATORY DISCOMFORT OCCURS.
EFFECT OF OVEREXPOSURE: INHALATION OF HIGH CONCENTRATIONS MAY CAUSE DIZZINESS, HEADACHE, OR NAUSEA.

SUSPECTED CANCER AGENT:

THIS PRODUCT CONTAINS PETROLEUM OILS SIMILAR TO ONES CATEGORIZED BY THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER AS CAUSING SKIN CANCER IN MICE WHEN REPEATEDLY APPLIED FOR MOST OF THE LIFETIME OF THE ANIMAL WITH NO EFFORT MADE TO REMOVE THE OIL BETWEEN APPLICATIONS.

DATE REVISED: 7/94

REVISED BY:

NA = NOT APPLICABLE

NDA = NO DATA AVAILABLE

APPENDIX B

Analytical Report and Chain of Custody Forms
For Soil and Grab Water Samples

CHROMALAB, INC.

Environmental Services (SDB)

February 12, 1998

Submission #: 9802149

AQUA SCIENCE ENGINEERS INC

Atten: Charlie Rous

Project: OLIVER RUBBER
 Received: February 10, 1998

Project#: 3231

re: 3 samples for TEPH analysis.
 Method: EPA 8015M

Matrix: WATER
 Sampled: February 10, 1998 Run#: 11122
 Extracted: February 11, 1998
 Analyzed: February 11, 1998

Spl#	CLIENT SPL ID	Kerosene (ug/L)	Raffex (ug/L)	Motor Oil (ug/L)
170250	GRAB-A	N.D.	8000	N.D.
Note: Quantitation based on a one point RAFFEX reference standard. The hydrocarbon pattern in this sample matched the RAFFEX reference.				
170251	GRAB-B	N.D.	28000	N.D.
Note: Quantitation base upon a one point RAFFEX reference standard. The hydrocarbon pattern in this sample matched the RAFFEX reference.				

Matrix: SOIL
 Sampled: February 10, 1998 Run#: 11126
 Extracted: February 11, 1998
 Analyzed: February 11, 1998

Spl#	CLIENT SPL ID	Kerosene (ug/L)	Raffex (mg/Kg)	Motor Oil (mg/Kg)
170252	GRAB-A@3.5'	N.D.	380	N.D.
Note: Quantitation based on a one point RAFFEX reference standard. The hydrocarbon pattern in this sample matched the RAFFEX reference.				

Reporting Limits	1.0	1.0	50
Blank Result	N.D.	N.D.	N.D.
Blank Spike Result (%)	--	99.8	--

Bruce Havlik
 Bruce Havlik
 Chemist

Carolyn House
 Carolyn House
 Chemist