SOIL AND WATER SAMPLING REPORT

LEVINE FRICKE WELLS RP1-RP5

Rifkin Property
4525-4563 Horton Street
Emeryville, California

November 16, 1994

Prepared For:

Mr. Frank Satterwhite, Receiver
3220 Monika Lane
Hayward, California 94541

Prepared By

TMC ENVIRONMENTAL, INC.
13908 San Pablo Avenue, Suite 101
San Pablo, California 94806

Mark Youngkin, Vice President
Project Number 115093

TABLE OF CONTENTS
Soil and Water Sampling Report
Levine Fricke Wells RP1-RP5

Table of Contents continued...

TABLES

ILLUSTRATIONS

Plates occur at the end of the report.

ATTACHMENTS

SOIL AND WATER SAMPLING REPORT
RIFKIN PROPERTY WELLS RP1-RP5
4525-4563 Horton Street, Emeryville California

TMC Environmental, Inc. Report Number 115093-2
November 16, 1994

INTRODUCTION

TMC Environmental, Inc. (TMC) recovered soil and water samples from five new monitoring wells installed on the Rifkin Property. Levine Fricke of Emeryville, California, installed the monitoring wells for the Sherwin Williams Company. Levine Fricke conducted the field investigation using the procedures in the work plan called "Procedures for Installation of Ground-Water Monitoring Wells on a Portion of the Rifkin Property" dated July 14, 1994. Mr. Frank Satterwhite, Receiver for the Rifkin Property, authorized the well installation in a site access agreement dated July 18, 1994. Levine Fricke personnel supervised the drilling and well installation. This report presents the results of additional soil and water sampling from the new monitoring wells. The Levine Fricke technical report contains complete field investigation documentation.

GENERAL SITE INFORMATION

SITE DESCRIPTION

The subject property, called the 'Site' or 'Rifkin Property' in this report, is at the following address:

4525-4563 Horton Street, City of Emeryville
County of Alameda, State of California
Assessor's Parcel No. 49-1041-005

The approximately one acre site is on Horton Street between 53rd and 45th Streets (see Plate 1, Site Vicinity Map). The property is in a heavy industry area of Emeryville California, on filled land along the former shoreline of San Francisco Bay. The site is developed with two-story, brick-walled, commercial buildings (see Plate 2, Site Map). The buildings occupy the majority of the one acre property. Multiple businesses and addresses occur within the building. The Site is bordered to the north by Chiron International Research Corporation, to the south by the Sherwin Williams Company, to the east by Horton Street and Chiron, and to the west by railroad tracks and the rubble of a dismantled water tank and fuel oil tank. Temescal Creek runs through a culvert beneath the building. Public utilities service the general area. Land use of the surrounding area is commercial and industrial.

LEAD IMPLEMENTING AGENCIES

The local agency with jurisdiction over this site is:

County of Alameda, Health Care Services Agency
Department of Environmental Health, UST Local Oversight Program
1130 Harbor Bay Road, Alameda, California

The officer overseeing this case is Ms. Susan Hugo.

The State agency with jurisdiction over this site is:

California Regional Water Quality Control Board (RWQCB)
San Francisco Bay Region
2101 Webster Street, Suite 500, Oakland, California 94612
Regional Water Quality Control Board Case Number 38-0252

Mr. Sum Arigala is the case officer for the RWQCB. The RWQCB has been overseeing the investigation and interim remediation of the arsenic contamination at the Sherwin Williams Company Plant. In a May 29, 1992, letter, the RWQCB requested Sherwin Williams Company install two additional monitoring wells to assess pollution northeast of the Plant. In a September 22, 1993, letter, the RWQCB requested Sherwin Williams Company conduct additional investigation of possible off-site migration from the Plant towards the Rifkin Property. In a January 11, 1994, letter approving the January 6, 1994, Levine Fricke work plan to investigate the Rifkin Property, the RWQCB required the analysis of samples for total petroleum hydrocarbons (TPH) and volatile organic compounds (VOC) in addition to arsenic.

1994 SOIL AND WATER SAMPLING OF LEVINE-FRICKE WELLS

On July 25, 1994, Levine-Fricke, on behalf of the Sherwin Williams Company, drilled five borings on the Rifkin Property to allow the installation of five new ground water monitoring wells. Mr. Robin Barber, field geologist for Levine Fricke, supervised the field work. Levine Fricke recovered soil and water samples for the analysis of arsenic only.

Mr. Tom Ghigliotto, field technician for TMC, recovered selected soil and water samples from the Levine-Fricke monitoring wells. TMC recovered soil samples only from borings RP2, RP3, and RP4. The borings RP5 and RP6 occurred very close to previous borings sampled by Levine Fricke on July 6, 1994. Sampling of borings RP1 and RP5 would have duplicated recent sampling by Levine Fricke. TMC did not recover soil samples from borings RP1 and RP5. TMC recovered water samples from all five new wells.

SOIL SAMPLING ANALYSIS RESULTS

The following table, Soil Sample Results for Total Petroleum Hydrocarbons, shows the petroleum fuel concentrations detected in soil samples recovered from borings RP2, RP3, and RP4. American Materials Engineering Research (AMER) laboratory of Sunnyvale,

California analyzed the soil samples. The analysis methods consist of the following: total petroleum hydrocarbons (TPH) as gasoline (EPA method 8015 modified), TPH as diesel (EPA method 8015 modified), selected samples for TPH as Motor Oil (EPA method 8015 modified), and organic lead (EPA method 6000/7000).

Table 1 Soil Sample Results for Total Petroleum Hydrocarbons

Boring Labels:	RP2, RP3, and RP4
Site Address:	4525-4563 Horton Street, Emeryville, California
Site Name:	Rifkin Property
Sample Collector	TMC Environmental, Inc., San Pablo, California
Sample Collection Date:	July 25, 1994

Boring-Sample I.D.	Sample Depth	8015M/TPH **Gasoline**	8015M/TPH **Diesel**	8015M/TPH **Motor Oil**	Organic **Lead**
	feet	mg/kg	mg/kg	mg/kg	mg/kg
Boring RP2					
RP2-5'	5	**1.5**	ND<1	ND<1	ND<1
RP2-10.5'	10.5	ND<1	**3.3**	ND<1	ND<1
Boring RP3					
RP3-6'	6	ND<1	**9.5**	ND<1	ND<1
RP3-11'	11	ND<1	**1.8**	ND<1	ND<1
Boring RP4					
RP4-6'	6	ND<1	ND<1	ND<1	ND<1
RP4-10.5'	10.5	ND<1	ND<1	ND<1	ND<1

ND: Non detectable above reporting limits. NA: Not analyzed.
mg/kg - milligrams per kilogram, parts per million, ppm
8015M/TPH - EPA Method 8015 Modified / Total Petroleum Hydrocarbons

The laboratory reported volatile organic compounds in soil samples from borings RP2 and RP3. The laboratory reported no detectable volatile organic compounds in soil samples RP4-6' and RP4-10.5' from boring RP4.

The following table, *Boring RP2 - Soil Sample Results for Volatile Organic Compounds*, shows the concentrations detected by the laboratory for volatile organic compounds (VOC) by EPA method 624/8240 from samples of soil recovered from boring RP2.

Table 2 Boring RP2 - Soil Sample Results for Volatile Organic Compounds

Boring Label: RP2
Site Address: 4525-4563 Horton Street, Emeryville, CA
Site Name: Rifkin Property
Sample Collector: TMC Environmental, Inc., San Pablo, California
Sample Collection Date: July 25, 1994

Compound	Detection Limit (mg/kg)	**RP2-5'** (mg/kg)	**RP2-10.5'** (mg/kg)
Depth below grade in feet		5	10½
2-butanone	0.007	**0.051**	ND
ethylbenzene	0.003	**0.029**	ND
toluene	0.003	**0.27**	ND
o-xylene	0.002	**0.024**	ND
p/m-xylene	0.003	**0.061**	ND
vinyl acetate	0.011	**0.051**	ND
Tentative Identification Compound			
cyclopentane, 1,3-dimethyl-, trans-	e	0.041	
cyclopentane, 1,1-dimethyl-	e	0.22	
heptane, 3-methyl -	e	0.021	
heptane, 2-methyl	e	0.033	
cyclohexane, methyl-	e	0.24	
cyclopentane, ethyl-	e	0.046	
cyclopentane, 1,1,2-trimethyl -,	e	0.034	
cyclopentane, 1,2,3-trimethyl -,	e	0.15	
2-methyl-2-decanol	e	0.022	
3-pentanone, 2,4-dimethyl	e	0.18	

mg/kg - milligrams per kilogram, parts per million, ppm; e - estimated

The following table, *Boring RP3 - Soil Sample Results for Volatile Organic Compounds*, shows the concentrations detected by the laboratory for volatile organic compounds (VOC) by EPA method 624/8240 from samples of soil recovered from boring RP3.

Table 3 RP3- Soil Sample Results for Volatile Organic Compounds

Boring Label: RP3
Site Address: 4525-4563 Horton Street, Emeryville, California
Site Name: Rifkin Property
Sample Collector TMC Environmental, Inc., San Pablo, California
Sample Collection Date: July 25, 1994

Compound	Detection Limit (mg/kg)	RP3-6' (mg/kg)	RP3-11' (mg/kg)
Depth below grade in feet		6	11
acetone	0.028	**0.11**	ND
benzene	0.005	**0.010**	ND
2-butanone	0.007	**0.093**	ND
ethylbenzene	0.003	**0.18**	ND
4-methyl-2-pentanone	0.009	**7.1**	**0.042**
toluene	0.003	**4.1**	ND
trichloroethylene	0.005	**3.3**	ND
o-xylene	0.002	**0.32**	ND
p/m-xylene	0.003	**0.94**	ND
Tentative Identification Compound			
pentane, 3-ethyl	e	0.027	
3-pentanone	e	0.027	
cyclopentane, 1,1,3-trimethyl-	e	0.16	
hexane, 2-methyl-	e	0.028	
cyclopentane, 1,2,4-trimethyl-	e	0.19	
2-hexanol	e	0.067	
1,3-dioxolane, 4,4,5,-tetramethyl	e	0.031	
n-butyl ether	e	0.032	
3-pentanone, 2,4-dimethyl	e	1.2	0.012

mg/kg - milligrams per kilogram, parts per million, ppm
e - estimated

WATER SAMPLING ANALYSIS RESULTS

At the conclusion of drilling, Levine Fricke installed new, two-inch ground water monitoring wells in each of the five borings. Levine Fricke sampled the wells only for arsenic. On September 8, 1994, TMC personnel recovered ground water samples for the analysis of petroleum hydrocarbons and volatile organic compounds. Levine Fricke purged the water in each well prior to the recovery of samples by TMC. Water samples were recovered from each well with new disposable bailers. Water column thickness is only 3 feet in wells RP1 and RP3. The wells only penetrate the uppermost portion of the first water bearing zone. Arsenic concentrations obtained from the wells may not be representative of the lower sands in the first water bearing zone.

American Materials Engineering Research (AMER) laboratory of Sunnyvale, California analyzed the water samples. The analyses consisted of the following: total petroleum hydrocarbons (TPH) as gasoline (EPA method 8015 modified), TPH as diesel (EPA method 8015 modified), and benzene, toluene, ethylbenzene, and total xylenes distinction (BTEX, EPA method 8020). The following table, *Water Sample Results For Total*

Petroleum Hydrocarbons, shows the petroleum hydrocarbons reported by the laboratory for water samples from wells RP1, RP2, RP3, RP4, and RP5.

Table 4 Water Sample Analysis Results for Total Petroleum Hydrocarbons

Site Address: 4525-4563 Horton Street, Emeryville, California
Site Name: Rifkin Property
Sample Collector TMC Environmental, Inc., San Pablo, California
Sample Collection Date: September 8, 1994

Boring-Sample I.D.	8015M/TPH Gasoline	8015M/TPH Diesel	8020/BTEX BTEX
Detection Limit	50 ug/l	50 ug/l	0.5 ug/l
RP1	ND	**2600**	ND
RP2	**120**	**96**	ND
RP3	**170**	**280**	ND
RP4	**65**	**110**	ND
RP5	**180**	**230**	ND

ND: Non detectable above reporting limits
BTEX - benzene, toluene, ethylbenzene, total xylenes
ug/l - micrograms per liter, equivalent to ppb, parts per billion

The following table, *Water Sample Analysis Results For Volatile Organic Compounds*, shows the concentrations reported by the laboratory for water samples from wells RP1, RP2, RP3, RP4, and RP5. The laboratory analyzed the samples for volatile organic compounds (VOC) by EPA method 601.

Table 5 Water Sample Analysis Results for Volatile Organic Compounds

Site Address: 1450 Sherwin Avenue, Emeryville, CA
Site Name: Sherwin-Williams Company Plant
Sample Collector TMC Environmental, Inc., San Pablo, California
Sample Collection Date: September 8, 1994

Compound	Detection Limit (ug/L)	RP1 (ug/l)	RP2 (ug/l)	RP3 (ug/l)	RP4 (ug/l)	RP5 (ug/l)
chlorobenzene	0.4	ND	ND	ND	ND	**1.8**
chloroform	0.4	**0.5**	**0.4**	ND	**0.7**	**0.4**
1,2-dichloroethane	0.8	**1.7**	ND	ND	**0.6**	ND
trans-1,2-dichloroethene	0.4	**1.3**	**0.4**	ND	**3.2**	ND
methylene chloride	2.0	**9.4**	**13**	**8.7**	**8.9**	**11**
vinyl chloride	0.5	ND	ND	ND	**1.6**	ND
trichloroethene	0.4	ND	**0.7**	ND	**1.6**	ND

ug/kg - micrograms per kilogram, equivalent to parts per billion, ppb
ND - not detected above laboratory reporting limit

SEPTEMBER 1994 ERLER & KALINOWSKI, INC. SOIL SAMPLING

Erler & Kalinowski, Inc. (EKI) performed soil sampling on the Rifkin Property. The purpose of the soil sampling is to provide geotechnical data for future Chiron development. On September 17, 1994, Geomatrix drilled two deep holes on the Rifkin Property. Plate 2, Site Map, shows the location of the borings, GMTX-12 and GMTX-13. The holes penetrated through the first and second aquifers. Geomatrix used a sealing technique approved by the Regional Water Quality Control Board to seal the boring when finished. Please refer to the original Erler & Kalinowski report for details of the investigation and sealing. EKI recovered two environmental samples from each boring for chemical analysis. The analyses consisted of the following: volatile organic compounds (EPA method 8240), total petroleum hydrocarbons as gasoline and diesel (EPA method 8015 modified), and benzene, toluene, ethylbenzene, and total xylenes (BTEX) analysis (EPA method 8020). The laboratory, Sequoia Analytical of Redwood City, California, combined samples from 5 and 10 feet into one sample for laboratory analyses. This method combines a vadose zone sample with a ground water interface sample. The resulting analyses results provide screening information only on the presence or absence of contamination.

EKI provided TMC with copies of the results of the environmental sampling in borings GMTX-12 and GMTX-13. The EKI transmittal is contained in attachment 3. EKI drilled hole GMTX-12 in the southwestern corner of the Rifkin Property where known soil and ground water contamination occurs. The composite sample GMTX-12A/B had concentrations of acetone at 2600 µg/kg, 1000 µg/kg 4-methyl-2-pentanone, 260 µg/kg total xylenes (EPA method 8240), 1.6 mg/kg extractable hydrocarbons that was unidentified as >C16, gasoline at 2.7 mg/kg, toluene at 0.039 mg/kg (EPA method 8020), ethylbenzene at 0.048 mg/kg (EPA method 8020), and total xylenes at 0.23 mg/kg (EPA

method 8020). The concentrations of chemicals detected in the soil is relatively low. Previous sampling in the area of GMTX-12 indicates significant ground water interface contamination.

EKI drilled hole GMTX-13 in the north central area of the Rifkin Property. The composite sample GMTX-13A/B had no reported concentrations of volatile organic compounds. Extractable hydrocarbons, identified as motor oil, occurred in the sample at 11 mg/kg. The laboratory reported no detectable gasoline, toluene, ethylbenzene, or total xylenes. The concentrations of motor oil detected in the soil is low, below local agency action levels for additional investigation.

GRADIENT DATA

On September 8, 1994, TMC recovered ground water samples for the analysis of petroleum hydrocarbons and volatile organic compounds. At the same time, Levine Fricke also collected ground water samples for the analysis of arsenic. Prior to the well purging by Levine Fricke, TMC measured the depth to ground water in each monitoring well. Depth to ground water occurs at 8-9 feet below grade on the Rifkin Property. Levine Fricke provided to TMC the elevations of the well casing in a phone conversation. The following table shows the results of preliminary ground water measurements in wells RP1, RP2, RP3, RP4, and RP5.

Table 6 Ground Water Measurements in Levine Fricke RP Wells

Wells Measured: RP1, RP2, RP3, RP4, and RP5
Site Address: 4525-4563 Horton Street, Emeryville, California
Site Name: Rifkin Property
Measurement Date: September 8, 1994

Monitoring Well I.D.	Casing Elevation *	Well Depth	Water Column	Ground Water Depth	Ground Water Elevation
	feet	feet	feet	feet below grade	feet
RP1	15.12	11.8	3.2	-8.65	6.47
RP2	15.23	14.4	5.4	-8.99	6.24
RP3	15.15	12.8	3.9	-8.80	6.35
RP4	15.10	16.2	7.1	-9.03	6.07
RP5	15.03	15.9	6.93	-8.95	6.08

* -- Preliminary survey data

Plate 3, Gradient Map, shows the preliminary estimate of the horizontal gradient and down gradient direction. Using the data from five monitoring wells, TMC estimated the horizontal gradient and direction of flow. TMC used a 'three point solution' to estimate the gradient (slope of potentiometric surface) and down gradient direction (direction of

slope) for each set of three wells. The following table shows the results of the preliminary estimates:

Table 7 Horizontal Gradient and Direction in Levine Fricke RP Wells

Wells Measured: RP1, RP2, RP3, RP4, and RP5
Site Address: 4525-4563 Horton Street, Emeryville, California
Site Name: Rifkin Property
Measurement Date: September 8, 1994

Monitoring Well Group	Ground Water Elevation	Horizontal Gradient *	Down Gradient Direction
	feet	ft/ft	degrees
RP1-RP2-RP3	6.47-6.24-6.35	0.004	North 27 West
RP2-RP3-RP4	6.4-6.35-6.07	0.003	North 2 West
RP3-RP4-RP5	6.35-6.07-6.08	0.003	North 16 West
Average Values:	6.24	0.003	North 15 West

* -- Preliminary survey data

The variation in estimates among the three groups of wells is small for measurements of this type. The preliminary estimate of horizontal gradient is 0.003 ft/ft (3 feet vertical in one thousand feet horizontal) in a direction towards north 15 degrees west. The estimated direction of ground water flow is northward generally parallel to Horton Street. The direction of ground water flow is towards the Temescal Creek Overflow Culvert.

Preliminary data from this study indicates the Temescal Creek Overflow Conduit is artificially draining the shallow ground water of the Rifkin Property. The base of Temescal Creek is 7 feet below the level of the ground water surface. The measured direction of flow is directly towards the Overflow Culvert. The directions of ground water flow likely changes as the Culvert and Creek change direction.

Erler & Kalinowski, Inc. in the 1993 Preliminary Site Characterization Report noted the following; "Evaluation of the available water level data indicates that, the Temescal Creek Culverts, which run underground, locally divert shallow groundwater flow to the southwest, north of the Rifkin Site. Drainage pipes, which permit groundwater inflow, are apparent within the Temescal Creek Overflow Culvert in the vicinity of the Rifkin Site. Although information obtained from the Alameda County Flood Control District indicates that such drainage pipes do not exist within the main Temescal Creek Culvert near the Rifkin Site, the base of this main Culvert is approximately 15 feet bgs and is underlain with gravel. Therefore, both culverts have the capacity to act as high permeability drains that can chanelize and create preferential pathways for shallow groundwater flow."

LIMITATIONS

The procedures and opinions in this work plan agree with professional practice as provided in guidelines of the California Regional Water Quality Control Board. The lab test results rely on limited data collected at the sampling location only. Budget and access constraints restrict the amount of testing allowed. The lab test results do not apply to the general site as a whole. Therefore, TMC Environmental Inc. cannot have complete knowledge of the underlying conditions at the conclusion of the work. Reports contain information provided to TMC by the client, other consultants, adjacent property owners, and government agencies. TMC does not warranty the accuracy of reported information. We provide the information in the resulting report to our client so a more informed decision about site conditions can be made. The professional opinion and judgment in the report are subject to revisions in light of new information. We do not state or imply any guarantees or warranties that the subject property is or is not free of environmental impairment.

SCALE 1:24000

1 ½ 0 1 MILE

Contour Interval 20 Feet

US Geological Survey, Oakland West Quadrangle Map

N
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S

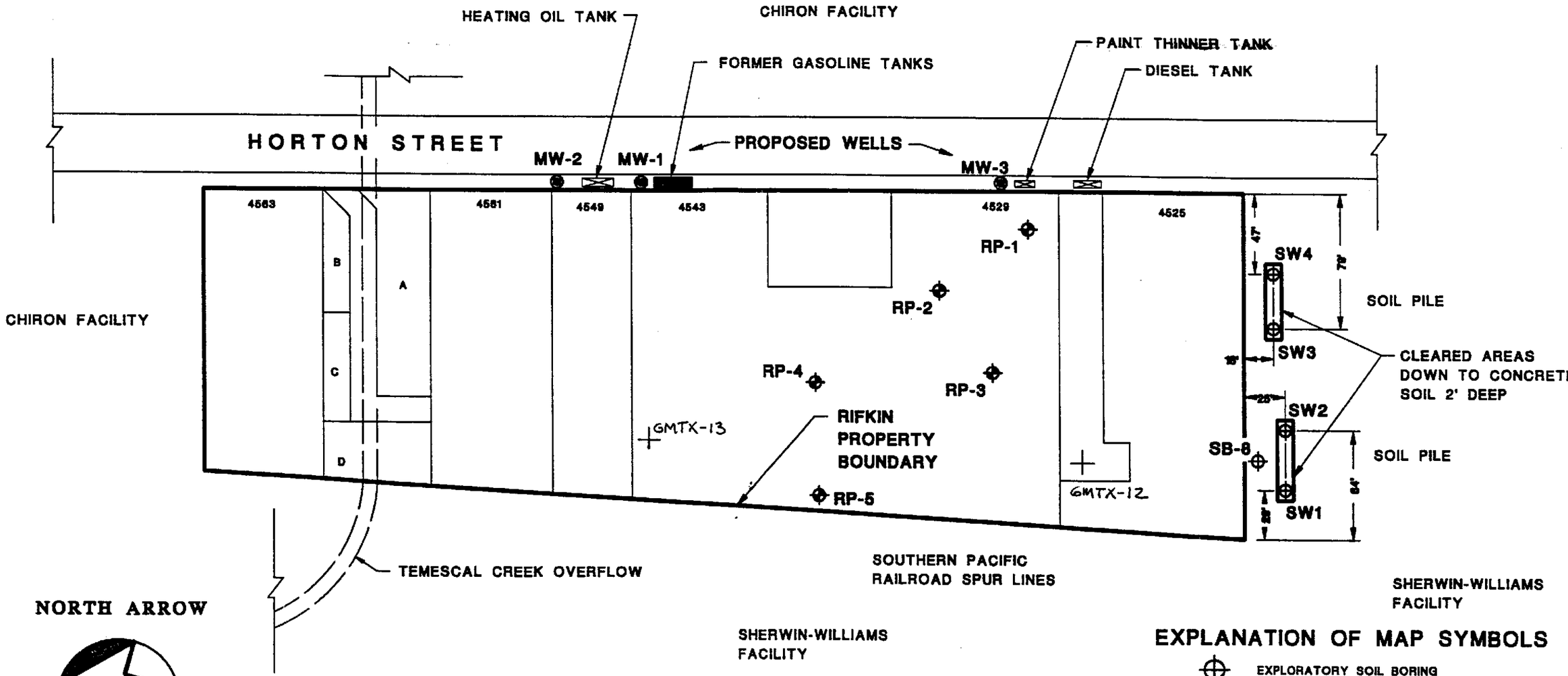
TMC
Environmental, Inc.

SITE VICINITY MAP
Rifkin Property

4525-4563 Horton Street
Emeryville, California

Project No. 1 0 November 1994

PLATE
1



NORTH ARROW

APPROXIMATE

EXPLANATION OF MAP SYMBOLS

- EXPLORATORY SOIL BORING
- MONITORING WELL 1994 LEVINE FRICKE
- PROPOSED MONITORING WELL
- UNDERGROUND TANKS REMOVED IN 1993
- FORMER GASOLINE TANKS REMOVED IN 1988

SCALE IN FEET

0 60 120

APPROXIMATE

TMC Environmental, Inc.

TMC ENVIRONMENTAL, INC.

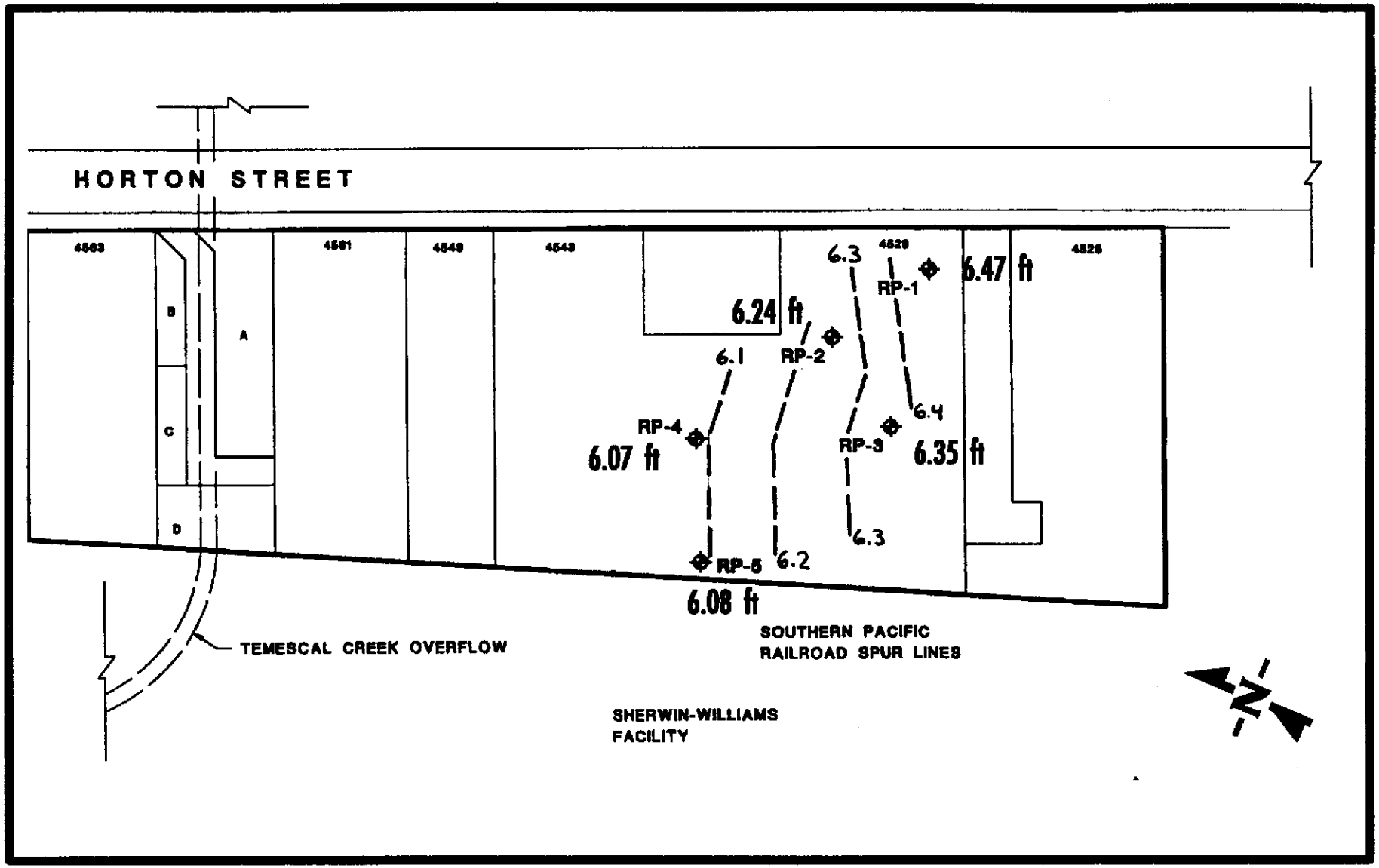
13908 SAN PABLO AVENUE, SUITE 101
SAN PABLO, CALIFORNIA 94806
510-232-8366 FAX 510-232-5133

SITE MAP

RIFKIN PROPERTY
EMERYVILLE, CALIFORNIA

DATE OF DRAWING: AUGUST, 1994 JOB NO. 11 093

PLATE 2



LEGEND

RP-0
1.00 ft
⊕ Monitoring Well with elevation of groundwater in feet

Project No. 11 094
November 1994
Scale 1 inch = 80 feet

GRADIENT MAP

Rifkin Property

4525-4563 Horton Street,
Emeryville California

TMC ENVIRONMENTAL INC. SAN PABLO, CALIFORNIA

PLATE 3

ATTACHMENT 1

ANALYTICAL LABORATORY REPORTS
CHAIN-OF-CUSTODY FORMS

AMER
Advanced Materials Engineering Research, Inc.

ANALYSIS REPORT
(ELAP Certificate No. 1909)
EPA METHOD 8020

CLIENT:
TMC Environmental, Inc.
13908 San Pablo Ave., Suite #101
San Pablo, CA 94806
MATRIX: WATER
PROJECT MANAGER: Tom Ghigliotto
PROJECT: 4525-4563 Horton St., #1-15094

DATE SAMPLED: 09-08-94
DATE RECEIVED: 09-08-94
DATE REPORTED: 09-15-94
AMER ID: E444

Client I.D.	AMER I.D.	Benzene	Toluene	Ethyl Benzene	Total Xylene	DF
EQB-5	E4090847	ND	ND	ND	ND	1
RP-5	E4090848	ND	ND	ND	ND	1
RP-4	E4090849	ND	ND	ND	ND	1
RP-2	E4090850	ND	ND	ND	ND	1
RP-1	E4090851	ND	ND	ND	ND	1
RP-3	E4090852	ND	ND	ND	ND	1
Units		ug/l	ug/l	ug/l	ug/l	
Detection Limits (DL)		0.5ug/l	0.5ug/l	0.5ug/l	0.5ug/l	

ND Not Detected. All analytes recorded as ND were found to be under the limit of detection.
Sample Detection Limit is equal to the Method Detection Limit X the Dilution Factor.

Reviewed By

Lei Chen, Laboratory Manager

AMER
Advanced Materials Engineering Research, Inc.

ANALYSIS REPORT
(ELAP Certificate No. 1909)
EPA METHOD 8015M

CLIENT:
TMC Environmental, Inc.
13908 San Pablo Ave., Suite #101
San Pablo, CA 94806
MATRIX: WATER
PROJECT MANAGER: Tom Ghigliotto
PROJECT: 4525-4563 Horton St., #1-15094

DATE SAMPLED: 09-08-94
DATE RECEIVED: 09-08-94
DATE REPORTED: 09-15-94
AMER ID: E444

Client I.D.	AMER I.D.	8015M/ TPH-GASOLINE	DF
EQB-5	E4090847	ND	1
RP-5	E4090848	**180**	1
RP-4	E4090849	**65**	1
RP-2	E4090850	**120**	1
RP-1	E4090851	ND	1
RP-3	E4090852	**170**	1
Units		ug/l	
Detection Limits (DL)		50ug/l	

ND Not Detected. All analytes recorded as ND were found to be under the limit of detection.
Sample Detection Limit is equal to the Method Detection Limit X the Dilution Factor.

Reviewed By

Lei Chen, Laboratory Manager

783 East Evelyn Ave., Sunnyvale, CA 94086 Tel. (408) 738-3033 Fax. (408) 738-3035

AMER
Advanced Materials Engineering Research, Inc.

ANALYSIS REPORT
(ELAP Certificate No. 1909)
EPA METHOD 8015M

CLIENT:
TMC Environmental, Inc.
13908 San Pablo Ave., Suite #101
San Pablo, CA 94806
MATRIX: WATER
PROJECT MANAGER: Tom Ghigliotto
PROJECT: 4525-4563 Horton St., #1-15094

DATE SAMPLED: 09-08-94
DATE RECEIVED: 09-08-94
DATE REPORTED: 09-15-94
AMER ID: E444

Client I.D.	AMER I.D.	8015M/ TPH-DIESEL	DF
EQB-5	E4090847	ND	1
RP-5	E4090848	**230**	1
RP-4	E4090849	**110**	1
RP-2	E4090850	**96**	1
RP-1	E4090851	**2600**	1
RP-3	E4090852	**280**	1
Units		ug/l	
Detection Limits (DL)		50ug/l	

ND Not Detected. All analytes recorded as ND were found to be under the limit of detection.

Reviewed By

Lei Chen, Laboratory Manager

783 East Evelyn Ave., Sunnyvale, CA 94086 Tel. (408) 738-3033 Fax. (408) 738-3035

AMER
Advanced Materials Engineering Research, Inc.

ANALYSIS REPORT
(ELAP Certificate No. 1909)
EPA METHODS 601

Client: TMC Environmental, Inc.
Proj. Manager: Tom Ghigliotto
Matrix: WATER
Sample Name: RP-1, E4090851
PROJECT: 4525-4563 Horton St., #1-15094

Date Sampled: 09-08-94
Date Received: 09-08-94
Date Reported: 09-15-94
Lab. Report #: E444

ANALYTES	RESULTS ug/l	MDL ug/l	ANALYTES	RESULTS ug/l	MDL ug/l
Bromodichloromethane	ND	0.8	trans-1,2-Dichloroethene	**1.3**	0.4
Bromoform	ND	0.8	1,2-Dichloropropane	ND	0.4
Bromomethane	ND	1.2	cis-1,3-Dichloropropene	ND	0.8
Carbon tetrachloride	ND	0.4	trans-1,3-Dichloropropene	ND	0.8
Chlorobenzene	ND	0.4	Methylene Chloride	**9.4**	2.0
Chloroethane	ND	0.5	1,1,2,2-Tetrachloroethane	ND	0.4
2-Chloroethylvinyl ether	ND	0.4	tetrachloroethene	ND	0.4
Chloroform	**0.5**	0.4	1,1,1-Trichloroethane	ND	0.4
Chloromethane	ND	1.2	1,1,2-Trichloroethane	ND	0.5
Dibromochloromethane	ND	0.8	Trichloroethene	ND	0.4
1,2-Dichlorobenzene	ND	0.8	Trichlorofluoromethane	ND	0.8
1,3-Dichlorobenzene	ND	0.4	Vinyl Chloride	ND	0.5
1,4-Dichlorobenzene	ND	0.4			
Dichlorobenzene	ND	1.2	Benzene	NR	0.5
1,1-Dichloroethane	ND	0.4	Toluene	NR	0.5
1,2-Dichloroethane	**1.7**	0.8	Ethyl benzene	NR	0.5
1,1-Dichloroethene	ND	0.4	Total Xylene	NR	0.5

NOTES
* Indicates extra compound requested by the client.
NR-Analysis not requested
COC-Chain of Custody
ND- Analytes not detected at, or above the stated detection limit.
ppb- ug/l for waters, ug/kg for soils
DL- Detection Limit Factor
SDL- Sample Detection Limit - Multiply DL by the DL Factor to obtain the detection limit for a specific analyte.
MDL- Method Detection Limit
Sample Detection Limit is equal to the Method Detection Limit X the Dilution Factor
PROCEDURES:
This analysis was performed in using EPA Method 8010, EPA Method 8020, and EPA Method 5030
CERTIFICATION:
California Department of Health Services ELAP Certificate #1909

Reported by:

Lei Chen, Laboratory Manager

783 East Evelyn Ave., Sunnyvale, CA 94086 Tel. (408) 738-3033 Fax. (408) 738-3035

AMER
Advanced Materials Engineering Research, Inc.

ANALYSIS REPORT
(ELAP Certificate No. 1909)
EPA METHODS 601

Client: TMC Environmental, Inc.
Proj. Manager: Tom Ghigliotto
Matrix: WATER
Sample Name: RP-2, E4090850
PROJECT: 4525-4563 Horton St., #1-15094

Date Sampled: 09-08-94
Date Received: 09-08-94
Date Reported: 09-15-94
Lab. Report #: E444

ANALYTES	RESULTS ug/l	MDL ug/l	ANALYTES	RESULTS ug/l	MDL ug/l
Bromodichloromethane	ND	0.8	trans-1,2-Dichloroethene	**0.4**	0.4
Bromoform	ND	0.8	1,2-Dichloropropane	ND	0.4
Bromomethane	ND	1.2	cis-1,3-Dichloropropene	ND	0.8
Carbon tetrachloride	ND	0.4	trans-1,3-Dichloropropene	ND	0.8
Chlorobenzene	ND	0.4	Methylene Chloride	**13**	2.0
Chloroethane	ND	0.5	1,1,2,2-Tetrachloroethane	ND	0.4
2-Chloroethylvinyl ether	ND	0.4	tetrachloroethene	ND	0.4
Chloroform	**0.4**	0.4	1,1,1-Trichloroethane	ND	0.4
Chloromethane	ND	1.2	1,1,2-Trichloroethane	ND	0.5
Dibromochloromethane	ND	0.8	Trichloroethene	**0.7**	0.4
1,2-Dichlorobenzene	ND	0.8	Trichlorofluoromethane	ND	0.8
1,3-Dichlorobenzene	ND	0.4	Vinyl Chloride	ND	0.5
1,4-Dichlorobenzene	ND	0.4			
Dichlorobenzene	ND	1.2	Benzene	NR	0.5
1,1-Dichloroethane	ND	0.4	Toluene	NR	0.5
1,2-Dichloroethane	ND	0.8	Ethyl benzene	NR	0.5
1,1-Dichloroethene	ND	0.4	Total Xylene	NR	0.5

NOTES
* Indicates extra compound requested by the client.
NR-Analysis not requested
COC-Chain of Custody
ND- Analytes not detected at, or above the stated detection limit.
ppb- ug/l for waters, ug/kg for soils
DL- Detection Limit Factor
SDL- Sample Detection Limit - Multiply DL by the DL Factor to obtain the detection limit for a specific analyte.
MDL- Method Detection Limit
Sample Detection Limit is equal to the Method Detection Limit X the Dilution Factor.
PROCEDURES:
This analysis was performed in using EPA Method 8010, EPA Method 8020, and EPA Method 5030
CERTIFICATION:
California Department of Health Services ELAP Certificate #1909

Reported by:

Lei Chen, Laboratory Manager

783 East Evelyn Ave., Sunnyvale, CA 94086 Tel. (408) 738-3033 Fax. (408) 738-3035

AMER
Advanced Materials Engineering Research, Inc.

ANALYSIS REPORT
(ELAP Certificate No. 1909)
EPA METHODS 601

Client: TMC Environmental, Inc.
Proj. Manager: Tom Ghigliotto
Matrix: WATER
Sample Name: RP-3, E4090852
PROJECT: 4525-4563 Horton St., #1-15094

Date Sampled: 09-08-94
Date Received: 09-08-94
Date Reported: 09-15-94
Lab. Report #: E444

ANALYTES	RESULTS ug/l	MDL ug/l	ANALYTES	RESULTS ug/l	MDL ug/l
Bromodichloromethane	ND	0.8	trans-1,2-Dichloroethene	ND	0.4
Bromoform	ND	0.8	1,2-Dichloropropane	ND	0.4
Bromomethane	ND	1.2	cis-1,3-Dichloropropene	ND	0.8
Carbon tetrachloride	ND	0.4	trans-1,3-Dichloropropene	ND	0.8
Chlorobenzene	ND	0.4	Methylene Chloride	**8.7**	2.0
Chloroethane	ND	0.5	1,1,2,2-Tetrachloroethane	ND	0.4
2-Chloroethylvinyl ether	ND	0.4	tetrachloroethene	ND	0.4
Chloroform	ND	0.4	1,1,1-Trichloroethane	ND	0.4
Chloromethane	ND	1.2	1,1,2-Trichloroethane	ND	0.5
Dibromochloromethane	ND	0.8	Trichloroethene	ND	0.4
1,2-Dichlorobenzene	ND	0.8	Trichlorofluoromethane	ND	0.8
1,3-Dichlorobenzene	ND	0.4	Vinyl Chloride	ND	0.5
1,4-Dichlorobenzene	ND	0.4			
Dichlorobenzene	ND	1.2	Benzene	NR	0.5
1,1-Dichloroethane	ND	0.4	Toluene	NR	0.5
1,2-Dichloroethane	ND	0.8	Ethyl benzene	NR	0.5
1,1-Dichloroethene	ND	0.4	Total Xylene	NR	0.5

NOTES
* Indicates extra compound requested by the client.
NR-Analysis not requested
COC-Chain of Custody
ND- Analytes not detected at, or above the stated detection limit.
ppb- ug/l for waters; ug/kg for soils
DL- Detection Limit Factor
SDL- Sample Detection Limit - Multiply DL by the DL Factor to obtain the detection limit for a specific analyte.
MDL- Method Detection Limit
Sample Detection Limit is equal to the Method Detection Limit X the Dilution Factor.
PROCEDURES:
This analysis was performed in using EPA Method 8010, EPA Method 8020, and EPA Method 5030.
CERTIFICATION:
California Department of Health Services ELAP Certificate #1909

Reported by:

Lei Chen, Laboratory Manager

783 East Evelyn Ave., Sunnyvale, CA 94086 Tel. (408) 738-3033 Fax. (408) 738-3035

AMER
Advanced Materials Engineering Research, Inc.

ANALYSIS REPORT
(ELAP Certificate No. 1909)
EPA METHODS 601

Client: TMC Environmental, Inc.
Proj. Manager: Tom Ghigliotto
Matrix: WATER
Sample Name: RP-4, E4090849
PROJECT: 4525-4563 Horton St., #1-15094

Date Sampled: 09-08-94
Date Received: 09-08-94
Date Reported: 09-15-94
Lab. Report #: E444

ANALYTES	RESULTS ug/l	MDL ug/l	ANALYTES	RESULTS ug/l	MDL ug/l
Bromodichloromethane	ND	0.8	trans-1,2-Dichloroethene	**3.2**	0.4
Bromoform	ND	0.8	1,2-Dichloropropane	ND	0.4
Bromomethane	ND	1.2	cis-1,3-Dichloropropene	ND	0.8
Carbon tetrachloride	ND	0.4	trans-1,3-Dichloropropene	ND	0.8
Chlorobenzene	ND	0.4	Methylene Chloride	**8.9**	2.0
Chloroethane	ND	0.5	1,1,2,2-Tetrachloroethane	ND	0.4
2-Chloroethylvinyl ether	ND	0.4	tetrachloroethene	ND	0.4
Chloroform	**0.7**	0.4	1,1,1-Trichloroethane	ND	0.4
Chloromethane	ND	1.2	1,1,2-Trichloroethane	ND	0.5
Dibromochloromethane	ND	0.8	Trichloroethene	**1.6**	0.4
1,2-Dichlorobenzene	ND	0.8	Trichlorofluoromethane	ND	0.8
1,3-Dichlorobenzene	ND	0.4	Vinyl Chloride	**1.6**	0.5
1,4-Dichlorobenzene	ND	0.4			
Dichlorobenzene	ND	1.2	Benzene	NR	0.5
1,1-Dichloroethane	ND	0.4	Toluene	NR	0.5
1,2-Dichloroethane	**0.6**	0.8	Ethyl benzene	NR	0.5
1,1-Dichloroethene	ND	0.4	Total Xylene	NR	0.5

NOTES
* Indicates extra compound requested by the client.
NR-Analysis not requested
COC-Chain of Custody
ND- Analytes not detected at, or above the stated detection limit
ppb- ug/l for waters; ug/kg for soils
DL- Detection Limit Factor
SDL- Sample Detection Limit - Multiply DL by the DL Factor to obtain the detection limit for a specific analyte
MDL- Method Detection Limit
Sample Detection Limit is equal to the Method Detection Limit X the Dilution Factor.
PROCEDURES:
This analysis was performed in using EPA Method 8010, EPA Method 8020, and EPA Method 5030.
CERTIFICATION:
California Department of Health Services ELAP Certificate #1909

Reported by:

Lei Chen, Laboratory Manager

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AMER
Advanced Materials Engineering Research, Inc.

ANALYSIS REPORT
(ELAP Certificate No. 1909)
EPA METHODS 601

Client: TMC Environmental, Inc.
Proj. Manager: Tom Ghigliotto
Matrix: WATER
Sample Name: RP-5, E4090848
PROJECT: 4525-4563 Horton St., #1-15094

Date Sampled: 09-08-94
Date Received: 09-08-94
Date Reported: 09-15-94
Lab. Report #: E444

ANALYTES	RESULTS ug/l	MDL ug/l	ANALYTES	RESULTS ug/l	MDL ug/l
Bromodichloromethane	ND	0.8	trans-1,2-Dichloroethene	ND	0.4
Bromoform	ND	0.8	1,2-Dichloropropane	ND	0.4
Bromomethane	ND	1.2	cis-1,3-Dichloropropene	ND	0.8
Carbon tetrachloride	ND	0.4	trans-1,3-Dichloropropene	ND	0.8
Chlorobenzene	**1.8**	0.4	Methylene Chloride	**11**	2.0
Chloroethane	ND	0.5	1,1,2,2-Tetrachloroethane	ND	0.4
2-Chloroethylvinyl ether	ND	0.4	tetrachloroethene	ND	0.4
Chloroform	**0.4**	0.4	1,1,1-Trichloroethane	ND	0.4
Chloromethane	ND	1.2	1,1,2-Trichloroethane	ND	0.5
Dibromochloromethane	ND	0.8	Trichloroethene	ND	0.4
1,2-Dichlorobenzene	ND	0.8	Trichlorofluoromethane	ND	0.8
1,3-Dichlorobenzene	ND	0.4	Vinyl Chloride	ND	0.5
1,4-Dichlorobenzene	ND	0.4			
Dichlorobenzene	ND	1.2	Benzene	NR	0.5
1,1-Dichloroethane	ND	0.4	Toluene	NR	0.5
1,2-Dichloroethane	ND	0.8	Ethyl benzene	NR	0.5
1,1-Dichloroethene	ND	0.4	Total Xylene	NR	0.5

NOTES
* Indicates extra compound requested by the client.
NR-Analysis not requested
COC-Chain of Custody
ND- Analytes not detected at, or above the stated detection limit.
ppb- ug/l for waters; ug/kg for soils
DL- Detection Limit Factor
SDL- Sample Detection Limit - Multiply DL by the DL Factor to obtain the detection limit for a specific analyte
MDL- Method Detection Limit
Sample Detection Limit is equal to the Method Detection Limit X the Dilution Factor
PROCEDURES:
This analysis was performed in using EPA Method 8010, EPA Method 8020, and EPA Method 5030.
CERTIFICATION:
California Department of Health Services ELAP Certificate #1909

Reported by:

Lei Chen, Laboratory Manager

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AMER

Advanced Materials Engineering Research, Inc.

ANALYSIS REPORT
(ELAP Certificate No. 1909)
EPA METHODS 601

Client: TMC Environmental, Inc.
Proj. Manager: Tom Ghigliotto
Matrix: WATER
Sample Name: EQB-5, E4090847
PROJECT: 4525-4563 Horton St., #1-15094

Date Sampled: 09-08-94
Date Received: 09-08-94
Date Reported: 09-15-94
Lab. Report #: E444

ANALYTES	RESULTS ug/l	MDL ug/l	ANALYTES	RESULTS ug/l	MDL ug/l
Bromodichloromethane	ND	0.8	trans-1,2-Dichloroethene	ND	0.4
Bromoform	ND	0.8	1,2-Dichloropropane	ND	0.4
Bromomethane	ND	1.2	cis-1,3-Dichloropropene	ND	0.8
Carbon tetrachloride	ND	0.4	trans-1,3-Dichloropropene	ND	0.8
Chlorobenzene	ND	0.4	Methylene Chloride	ND	2.0
Chloroethane	ND	0.5	1,1,2,2-Tetrachloroethane	ND	0.4
2-Chloroethylvinyl ether	ND	0.4	tetrachloroethene	ND	0.4
Chloroform	ND	0.4	1,1,1-Trichloroethane	ND	0.4
Chloromethane	ND	1.2	1,1,2-Trichloroethane	ND	0.5
Dibromochloromethane	ND	0.8	Trichloroethene	ND	0.4
1,2-Dichlorobenzene	ND	0.8	Trichlorofluoromethane	ND	0.8
1,3-Dichlorobenzene	ND	0.4	Vinyl Chloride	ND	0.5
1,4-Dichlorobenzene	ND	0.4			
Dichlorobenzene	ND	1.2	Benzene	NR	0.5
1,1-Dichloroethane	ND	0.4	Toluene	NR	0.5
1,2-Dichloroethane	ND	0.8	Ethyl benzene	NR	0.5
1,1-Dichloroethene	ND	0.4	Total Xylene	NR	0.5

NOTES
* Indicates extra compound requested by the client.
NR-Analysis not requested
COC-Chain of Custody
ND- Analytes not detected at, or above the stated detection limit
ppb- ug/l for waters; ug/kg for soils
DL- Detection Limit Factor
SDL- Sample Detection Limit - Multiply DL by the DL Factor to obtain the detection limit for a specific analyte.
MDL- Method Detection Limit
Sample Detection Limit is equal to the Method Detection Limit X the Dilution Factor.
PROCEDURES:
This analysis was performed in using EPA Method 8010, EPA Method 8020, and EPA Method 5030.
CERTIFICATION:
California Department of Health Services ELAP Certificate #1909

Reported by:

Lei Chen, Laboratory Manager

783 East Evelyn Ave., Sunnyvale, CA 94086 Tel. (408) 738-3033 Fax. (408) 738-3035

EPA M. 8015/8020 TEST QA/QC TABLE

AMER WORKORDER: E444

AMER I.D. Number: E4091401-SP & E4090847-MSP
TMC Environmental, Inc. Project: #1-15094
Ext/Prep. Method: EPA 5030, DHS TPH
Date: 09-12-94
Analyst: RL

Analytical Method: EPA M. 8015/8020
Analysis date: 09-12-94
Analyst: RL
Matrix: Water
Unit: ug/l

Analyte	Sample Result	Spike Level	Matrix Spike Result	Ms Recovery %	Matrix Spike Dul. Result	MSD Recovery %	Average Recovery %R	LCL %R	UCL %R	RPD %	UCL %RPD
Benzene	0.00	20.00	17.90	90	17.70	89	89	76	127	1	11
Toluene	0.00	20.00	17.40	87	16.50	83	85	76	125	5	13
Chlorobenzene	0.00	20.00	16.40	82	15.20	76	79	75	130	8	13
TPH-Gasoline	0.00	500.00	547.00	109	522.00	104	107	70	130	5	30
TPH-Diesel	0.00	1000.00	838.50	84	886.60	89	86	70	130	6	30

Notes:
Spike Level- Level of Concentration Added to the Sample
MS Result- Matrix Spike Result
MS %R- Matrix Spike Percent Recovery
MSD Result- Matrix Spike Duplicate Result
MSD %R- Matrix Spike Dublicate Percent Recovery
LCL- Lower Criteria Level
UCL- Upper Criteria Level
RPD- Relative Percent Difference

EPA 601/8010 TEST QA/QC TABLE

AMER WORKORDER: E444

AMER I.D. Number: E4090806-MSP
TMC Project: #1-15094
Ext/Prep. Method: EPA 5030, DHS TPH
Date: 09-09-94
Analyst: RL

Analytical Method: EPA M. 601/8010
Analysis date: 09-09-94
Analyst: LC
Matrix: Water
Unit: ug/l

Analyte	Sample Result	Spike Level	MS Result	MS %R	MSD Result	MSD %R	AVE. %R	LCL %R	UCL %R	RPD %	UCL %RPD
1,1-dichloroehthene	0.00	20.00	23.36	117	23.44	117	117	61	145	0	14
Trichloroethene	0.00	20.00	23.45	117	23.01	115	116	71	120	2	14
Chlorobenzene	0.00	20.00	22.75	114	22.89	114	114	75	130	1	13

Notes:
Spike Level- Level of Concentration Added to the Sample
MS Result- Matrix Spike Result
MS %R- Matrix Spike Percent Recovery
MSD Result- Matrix Spike Duplicate Result
MSD %R- Matrix Spike Dublicate Percent Recovery
LCL- Lower Criteria Level
UCL- Upper Criteria Level
RPD- Relative Percent Difference

TMC Environmental, Inc.
13908 San Pablo Ave.
Suite 101
San Pablo, California
(510) 232-8366

CHAIN OF CUSTODY RECORD
ANALYSIS REQUEST FORM
FOR
ENVIRONMENTAL SAMPLING

JOB #	JOB ADDRESS:	SAMPLER:
1-15094	4525-4563 Horton Street Emeryville, CA	Tom Ghigliotto
LABORATORY NAME:	Advanced Materials Engineering Research, Inc. Sunnyvale, CA 94086	

LAB ID NO.	SAMPLE LABEL	SOIL	WATER	DATE	TIME	TVH-GAS	TEH-DIESEL	BTEX-8020	FULL SCAN	EPA 8010	EPA 8240	EPA 8270	T.O.G.	
	EQB-5		X	9/8/94	1011	X	X	X		X				
	RP-5		X	9/8/94	1045	X	X	X		X				
	RP-4		X	9/8/94	1135	X	X	X		X				
	RP-2		X	9/8/94	1222	X	X	X		X				
	RP-1		X	9/8/94	1238	X	X	X		X				
	RP-3		X	9/8/94	1:40	X	X	X		X				

Special Instructions:

Relinquished By:		Recieved By:
(Print Name) Tom Ghigliotto	Date: 9/8/94	(Print Name) Tom Edwards
(Signature) Tom Ghigliotto	Time: 1615	(Signature)
(Print Name) Tom Edwards	Date: 9/8/94	(Print Name) Masoud mirza
(Signature)	Time: 4:39pm	(Signature)
(Print Name) Masoud mirza	Date:	(Print Name)
(Signature)	Time:	(Signature)
(Print Name)	Date:	(Print Name)
(Signature)	Time:	(Signature)

LABORATORY NOTES: 5 DAYS TURNAROUND TIME FOR ANALYSIS RESULTS
E444 PLEASE INCLUDE SAMPLE CONDITION REPORT WITH RESULTS

PLEASE FAX A COPY OF THE ANALYTICAL RESULTS TO THE FOLLOWING:
TMC ENVIRONMENTAL, INC. AT (510) 232-5133

AMER
Advanced Materials Engineering Research, Inc.

ANALYSIS REPORT
(ELAP Certificate No. 1909)
EPA METHOD 8015M

CLIENT:
TMC ENVIRONMENTAL, INC.
13908 San Pablo Avenue, Suite 101
San Pablo CA 94806
MATRIX: SOIL
PROJECT MANAGER: Tom Ghigliotto
PROJECT: Horton Street, # 115094

DATE SAMPLED: 07-25-94
DATE RECEIVED: 07-27-94
DATE REPORTED: 08-02-94
AMER ID: E339

Client I.D.	AMER I.D.	8015M/ TPH-GASOLINE	DF
RP4-6'	E4072701	ND	1
RP4-10.5'	E4072702	ND	1
RP2-5'	E4072705	**1.5**	1
RP2-10.5'	E4072706	ND	1
RP3-6'	E4072709	ND	1
RP3-11'	E4072710	ND	1
Units		mg/kg	
Detection Limits (DL)		1mg/kg	

ND Not Detected. All analytes recorded as ND were found to be under the limit of detection.

Reviewed By

Lei Chen, Laboratory Manager

783 East Evelyn Ave., Sunnyvale, CA 94086 Tel. (408) 738-3033 Fax. (408) 738-3035

AMER
Advanced Materials Engineering Research, Inc.

ANALYSIS REPORT
(ELAP Certificate No. 1909)
EPA METHOD 8015M

CLIENT:
TMC ENVIRONMENTAL, INC.
13908 San Pablo Avenue, Suite 101
San Pablo CA 94806
MATRIX: SOIL
PROJECT MANAGER: Tom Ghigliotto
PROJECT: Horton Street, # 115094

DATE SAMPLED: 07-25-94
DATE RECEIVED: 07-27-94
DATE REPORTED: 08-02-94
AMER ID: E339

Client I.D.	AMER I.D.	8015M/ TPH-DIESEL	DF
RP4-6'	E4072701	ND	1
RP4-10.5'	E4072702	ND	1
RP2-5'	E4072705	ND	1
RP2-10.5'	E4072706	**3.3**	1
RP3-6'	E4072709	**9.5**	1
RP3-11'	E4072710	**1.8**	1
Units		mg/kg	
Detection Limits (DL)		1.0mg/kg	

ND Not Detected. All analytes recorded as ND were found to be under the limit of detection.

Reviewed By

Lei Chen, Laboratory Manager

783 East Evelyn Ave., Sunnyvale, CA 94086 Tel. (408) 738-3033 Fax. (408) 738-3035

EPA M. 8015/8020 TEST QA/QC TABLE

AMER WORKORDER: E339

AMER I.D. Number: E4072512 - SP & E4072701- MSP
TMC ENVIROMENTAL, INC. Project : Horton St., # 115094
Ext/Prep. Method: EPA 5030, DHS TPH
Date: 07/29/94
Analyst: RL/KK

Analytical Method: EPA M. 8015/8020
Analysis date: 07/29/94
Analyst: RL/KK
Matrix: Soil
Unit: mg/kg

Analyte	Sample Result	Spike Level	Matrix Spike Result	Ms Recovery %	Matrix Spike Dul. Result	MSD Recovery %	Average Recovery %R	LCL %R	UCL %R	RPD %	UCL %RPD
TPH -g	0.00	1.250	1.418	113	1.495	120	117	60	130	5	30
TPH - d	0.00	100.000	93.000	93	118.800	119	106	60	130	24	30

Notes:
Spike Level- Level of Concentration Added to the Sample
MS Result- Matrix Spike Result
MS %R- Matrix Spike Percent Recovery
MSD Result- Matrix Spike Duplicate Result
MSD %R- Matrix Spike Dublicate Percent Recovery
LCL- Lower Criteria Level
UCL- Upper Criteria Level
RPD- Relative Percent Difference

AMER
Advanced Materials Engineering Research, Inc.

ANALYSIS REPORT
(ELAP Certificate No. 1909)
EPA METHOD 8015M

CLIENT:
TMC ENVIRONMENTAL, INC.
13908 San Pablo Avenue, Suite 101
San Pablo CA 94806
MATRIX: SOIL
PROJECT MANAGER: Tom Ghigliotto
PROJECT: Horton Street, # 115094

DATE SAMPLED: 07-25-94
DATE RECEIVED: 07-27-94
DATE REPORTED: 08-02-94
AMER ID: E339

Client I.D.	AMER I.D.	8015M/ TPH-MOTOR OIL	DF
RP4-6'	E4072701	ND	1
RP4-10.5'	E4072702	ND	1
RP2-5'	E4072705	ND	1
RP2-10.5'	E4072706	ND	1
RP3-6'	E4072709	ND	1
RP3-11'	E4072710	ND	1
Units		mg/kg	
Detection Limits (DL)		1.0mg/kg	

ND Not Detected. All analytes recorded as ND were found to be under the limit of detection.

Reviewed By

Lei Chen, Laboratory Manager

783 East Evelyn Ave., Sunnyvale, CA 94086 Tel. (408) 738-3033 Fax. (408) 738-3035

EPA M. 8015/8020 TEST QA/QC TABLE

AMER WORKORDER: E339

AMER I.D. Number: E4072701-MSP(mo)
TMC ENVIRONMENTAL, INC. Project: Horton St., # 115094
Ext/Prep. Method: EPA 5030, DHS TPH
Date: 07/29/94
Analyst: RL/LC

Analytical Method: EPA M. 8015 - Motor Oil
Analysis date: 07/29/94
Analyst: RL/LC
Matrix: Soil
Unit: mg/kg

Analyte	Sample Result	Spike Level	Matrix Spike Result	Ms Recovery %	Matrix Spike Dul. Result	MSD Recovery %	Average Recovery %R	LCL %R	UCL %R	RPD %	UCL %RPD
TPH - Motor Oil	0.00	500.00	603.80	121	662.00	132	127	70	130	9	30

Notes:
Spike Level- Level of Concentration Added to the Sample
MS Result- Matrix Spike Result
MS %R- Matrix Spike Percent Recovery
MSD Result- Matrix Spike Duplicate Result
MSD %R- Matrix Spike Dublicate Percent Recovery
LCL- Lower Criteria Level
UCL- Upper Criteria Level
RPD- Relative Percent Difference

AMER
Advanced Materials Engineering Research, Inc.

ANALYSIS REPORT
(ELAP Certificate No. 1909)
EPA METHOD 6000/7000

CLIENT:
TMC ENVIRONMENTAL, INC.
13908 San Pablo Avenue, Suite 101
San Pablo CA 94806
MATRIX: SOIL
PROJECT MANAGER: Tom Ghigliotto
PROJECT: Horton Street, # 115094

DATE SAMPLED: 07-25-94
DATE RECEIVED: 07-27-94
DATE REPORTED: 08-02-94
AMER ID: E339

Metal Analysis: Organic Lead
Sample Matrix: SOIL
Dilution Factor: 1

Client I.D.	AMER I.D.	Metal Concentration	Detection Limit	Units
RP4-6'	E4072701	ND	1.0	mg/kg
RP4-10.5'	E4072702	ND	1.0	mg/kg
RP2-5'	E4072705	ND	1.0	mg/kg
RP2-10.5'	E4072706	ND	1.0	mg/kg
RP3-6'	E4072709	ND	1.0	mg/kg
RP3-11'	E4072710	ND	1.0	mg/kg

ND = Not Detected. Analyte reported as ND was not present above the stated limit of detection.

Reported by:

Lei Chen, Laboratory Manager

783 East Evelyn Ave., Sunnyvale, CA 94086 Tel. (408) 738-3033 Fax. (408) 738-3035

AMER
Advanced Materials Engineering Research, Inc.

EPA METHODS 624/8240 ANALYSIS REPORT
(ELAP CERTIFICATE NO. 1909)

Client: TMC ENVIRONMENTAL, INC.
13908 San Pablo Avenue, Suite 101
San Pablo, CA 94806
Project Manager: Tom Ghigliotto
Project: Horton Street, # 115094
Sample Name: RP4-6' (E4072701)

Date Sampled: 07-25-94
Date Received: 07-27-94
Date Reported: 08-04-94
Sample Matrix: SOIL
AMER Report #: E339

COMPOUND	CAS #	CONC. (mg/kg)	DETECTION LIMIT (mg/kg)
acetone		ND	0.028
benzene		ND	0.005
bromomethane		ND	0.008
bromodichloromethane		ND	0.005
bromoform (SPCC)		ND	0.008
2-butanone		ND	0.007
carbon disulfide		ND	0.008
carbon tetrachloride		ND	0.010
chlorobenzene (SPCC)		ND	0.004
chlorodibromomethane		ND	0.010
chloroethane		ND	0.005
2-chloro-ethyl-vinyl ether		ND	0.011
chloroform (CCC)		ND	0.005
chloromethane		ND	0.008
1,2-dichlorobenzene		ND	0.004
1,3-dichlorobenzene		ND	0.003
1,4-dichlorobenzene		ND	0.003
dichlorodifluoromethane		ND	0.010
1,1 -dichloroethane (SPCC)		ND	0.008
1,2-dichloroethane		ND	0.006
1,1 -dichloroethene (CCC)		ND	0.005
1,2-dichloropropane		ND	0.014
cis-1,3-dichloropropene		ND	0.005
trans-1,3-dichlorpropene		ND	0.006
ethylbenzene		ND	0.003
2-hexanone		ND	0.011
4-methyl-2-pentanone		ND	0.009

AMER
Advanced Materials Engineering Research, Inc.

EPA METHODS 624/8240 ANALYSIS REPORT
(ELAP CERTIFICATE NO. 1909)

Client: TMC ENVIRONMENTAL, INC.
13908 San Pablo Avenue, Suite 101
San Pablo, CA 94806
Project Manager: Tom Ghigliotto
Project: Horton Street, # 115094
Sample Name: RP4-6' (E4072701)

Date Sampled: 07-25-94
Date Received: 07-27-94
Date Reported: 08-04-94
Sample Matrix: SOIL
AMER Report #: E339

COMPOUND	CAS #	CONC. (mg/kg)	DETECTION LIMIT (mg/kg)
methylene dichloride		ND	0.043
styrene		ND	0.005
1,1,2,2-tetrachloroethane		ND	0.005
tetrachloroethylene		ND	0.011
toluene		ND	0.003
trans- 1,2-dichloroethlene		ND	0.007
1,1,1-trichloroethane		ND	0.005
1,1,2-trichloroethane		ND	0.008
trichloroethylene		ND	0.005
trichlorofluoromethane		ND	0.010
o-xylene		ND	0.002
p/m-xylene		ND	0.003
vinyl acetate		ND	0.011
vinyl chloride		ND	0.009

TENTATIVE IDENTIFICATION COMPOUND	CAS #	CONC. (mg/kg)	DETECTION LIMIT (mg/kg)

Reviewed By:

Lei Chen, Laboratory Manager

AMER
Advanced Materials Engineering Research, Inc.

EPA METHODS 624/8240 ANALYSIS REPORT
(ELAP CERTIFICATE NO. 1909)

Client: TMC ENVIRONMENTAL, INC.
13908 San Pablo Avenue, Suite 101
San Pablo, CA 94806
Project Manager: Tom Ghigliotto
Project: Horton Street, # 115094
Sample Name: RP4-10.5' (E4072702)

Date Sampled: 07-25-94
Date Received: 07-27-94
Date Reported: 08-04-94
Sample Matrix: SOIL
AMER Report #: E339

COMPOUND	CAS #	CONC. (mg/kg)	DETECTION LIMIT (mg/kg)
acetone		ND	0.028
benzene		ND	0.005
bromomethane		ND	0.008
bromodichloromethane		ND	0.005
bromoform (SPCC)		ND	0.008
2-butanone		ND	0.007
carbon disulfide		ND	0.008
carbon tetrachloride		ND	0.010
chlorobenzene (SPCC)		ND	0.004
chlorodibromomethane		ND	0.010
chloroethane		ND	0.005
2-chloro-ethyl-vinyl ether		ND	0.011
chloroform (CCC)		ND	0.005
chloromethane		ND	0.008
1,2-dichlorobenzene		ND	0.004
1,3-dichlorobenzene		ND	0.003
1,4-dichlorobenzene		ND	0.003
dichlorodifluoromethane		ND	0.010
1,1 -dichloroethane (SPCC)		ND	0.008
1,2-dichloroethane		ND	0.006
1,1 -dichloroethene (CCC)		ND	0.005
1,2-dichloropropane		ND	0.014
cis-1,3-dichloropropene		ND	0.005
trans-1,3-dichlorpropene		ND	0.006
ethylbenzene		ND	0.003
2-hexanone		ND	0.011
4-methyl-2-pentanone		ND	0.009

AMER
Advanced Materials Engineering Research, Inc.

EPA METHODS 624/8240 ANALYSIS REPORT
(ELAP CERTIFICATE NO. 1909)

Client: TMC ENVIRONMENTAL, INC.
13908 San Pablo Avenue, Suite 101
San Pablo, CA 94806
Project Manager: Tom Ghigliotto
Project: Horton Street, # 115094
Sample Name: RP4-10.5' (E4072702)

Date Sampled: 07-25-94
Date Received: 07-27-94
Date Reported: 08-04-94
Sample Matrix: SOIL
AMER Report #: E339

COMPOUND	CAS #	CONC. (mg/kg)	DETECTION LIMIT (mg/kg)
methylene dichloride		ND	0.043
styrene		ND	0.005
1,1,2,2-tetrachloroethane		ND	0.005
tetrachloroethylene		ND	0.011
toluene		ND	0.003
trans- 1,2-dichloroethlene		ND	0.007
1,1,1-trichloroethane		ND	0.005
1,1,2-trichloroethane		ND	0.008
trichloroethylene		ND	0.005
trichlorofluoromethane		ND	0.010
o-xylene		ND	0.002
p/m-xylene		ND	0.003
vinyl acetate		ND	0.011
vinyl chloride		ND	0.009

TENTATIVE IDENTIFICATION COMPOUND	CAS #	CONC. (mg/kg)	DETECTION LIMIT (mg/kg)

Reviewed By:

Lei Chen, Laboratory Manager

AMER
Advanced Materials Engineering Research, Inc.

EPA METHODS 624/8240 ANALYSIS REPORT
(ELAP CERTIFICATE NO. 1909)

Client: TMC ENVIRONMENTAL, INC.
13908 San Pablo Avenue, Suite 101
San Pablo, CA 94806
Project Manager: Tom Ghigliotto
Project: Horton Street, # 115094
Sample Name: RP2-5' (E4072705)

Date Sampled: 07-25-94
Date Received: 07-27-94
Date Reported: 08-04-94
Sample Matrix: SOIL
AMER Report #: E339

COMPOUND	CAS #	CONC. (mg/kg)	DETECTION LIMIT (mg/kg)
acetone		ND	0.028
benzene		ND	0.005
bromomethane		ND	0.008
bromodichloromethane		ND	0.005
bromoform (SPCC)		ND	0.008
2-butanone		**0.051**	0.007
carbon disulfide		ND	0.008
carbon tetrachloride		ND	0.010
chlorobenzene (SPCC)		ND	0.004
chlorodibromomethane		ND	0.010
chloroethane		ND	0.005
2-chloro-ethyl-vinyl ether		ND	0.011
chloroform (CCC)		ND	0.005
chloromethane		ND	0.008
1,2-dichlorobenzene		ND	0.004
1,3-dichlorobenzene		ND	0.003
1,4-dichlorobenzene		ND	0.003
dichlorodifluoromethane		ND	0.010
1,1 -dichloroethane (SPCC)		ND	0.008
1,2-dichloroethane		ND	0.006
1,1 -dichloroethene (CCC)		ND	0.005
1,2-dichloropropane		ND	0.014
cis-1,3-dichloropropene		ND	0.005
trans-1,3-dichlorpropene		ND	0.006
ethylbenzene		**0.029**	0.003
2-hexanone		ND	0.011
4-methyl-2-pentanone		ND	0.009

AMER
Advanced Materials Engineering Research, Inc.

EPA METHODS 624/8240 ANALYSIS REPORT
(ELAP CERTIFICATE NO. 1909)

Client: TMC ENVIRONMENTAL, INC.
13908 San Pablo Avenue, Suite 101
San Pablo, CA 94806
Project Manager: Tom Ghigliotto
Project: Horton Street, # 115094
Sample Name: RP2-5' (E4072705)

Date Sampled: 07-25-94
Date Received: 07-27-94
Date Reported: 08-04-94
Sample Matrix: SOIL
AMER Report #: E339

COMPOUND	CAS #	CONC. (mg/kg)	DETECTION LIMIT (mg/kg)
methylene dichloride		ND	0.043
styrene		ND	0.005
1,1,2,2-tetrachloroethane		ND	0.005
tetrachloroethylene		ND	0.011
toluene		**0.27**	0.003
trans- 1,2-dichloroethlene		ND	0.007
1,1,1-trichloroethane		ND	0.005
1,1,2-trichloroethane		ND	0.008
trichloroethylene		ND	0.005
trichlorofluoromethane		ND	0.010
o-xylene		**0.024**	0.002
p/m-xylene		**0.061**	0.003
vinyl acetate		**0.051**	0.011
vinyl chloride		ND	0.009

TENTATIVE IDENTIFICATION COMPOUND	CAS #	CONC. (mg/kg)	DETECTION LIMIT (mg/kg)
cyclopentane, 1.3-dimethyl-, trans-		**0.041**	e
cyclohexane, methyl-		**0.24**	e
cyclopentane, 1,1-dimethyl-		**0.22**	e
cyclopentane, ethyl-		**0.046**	e
heptane, 2-methyl-		**0.033**	e
heptane, 3-methyl-		**0.021**	e
cyclopentane,1,2,3-trimethyl-		**0.15**	e
cyclopentane, 1,1,2-trimethyl-		**0.034**	e
2-methyl-2-decanol		**0.022**	e
3-pentanone, 2,4-dimethyl		**0.18**	e

Reviewed By:

Lei Chen, Laboratory Manager

AMER
Advanced Materials Engineering Research, Inc.

EPA METHODS 624/8240 ANALYSIS REPORT
(ELAP CERTIFICATE NO. 1909)

Client: TMC ENVIRONMENTAL, INC.
13908 San Pablo Avenue, Suite 101
San Pablo, CA 94806
Project Manager: Tom Ghigliotto
Project: Horton Street, # 115094
Sample Name: RP2-10.5' (E4072706)

Date Sampled: 07-25-94
Date Received: 07-27-94
Date Reported: 08-04-94
Sample Matrix: SOIL
AMER Report #: E339

COMPOUND	CAS #	CONC. (mg/kg)	DETECTION LIMIT (mg/kg)
acetone		ND	0.028
benzene		ND	0.005
bromomethane		ND	0.008
bromodichloromethane		ND	0.005
bromoform (SPCC)		ND	0.008
2-butanone		ND	0.007
carbon disulfide		ND	0.008
carbon tetrachloride		ND	0.010
chlorobenzene (SPCC)		ND	0.004
chlorodibromomethane		ND	0.010
chloroethane		ND	0.005
2-chloro-ethyl-vinyl ether		ND	0.011
chloroform (CCC)		ND	0.005
chloromethane		ND	0.008
1,2-dichlorobenzene		ND	0.004
1,3-dichlorobenzene		ND	0.003
1,4-dichlorobenzene		ND	0.003
dichlorodifluoromethane		ND	0.010
1,1 -dichloroethane (SPCC)		ND	0.008
1,2-dichloroethane		ND	0.006
1,1 -dichloroethene (CCC)		ND	0.005
1,2-dichloropropane		ND	0.014
cis-1,3-dichloropropene		ND	0.005
trans-1,3-dichlorpropene		ND	0.006
ethylbenzene		ND	0.003
2-hexanone		ND	0.011
4-methyl-2-pentanone		ND	0.009

AMER
Advanced Materials Engineering Research, Inc.

EPA METHODS 624/8240 ANALYSIS REPORT
(ELAP CERTIFICATE NO. 1909)

Client: TMC ENVIRONMENTAL, INC.
13908 San Pablo Avenue, Suite 101
San Pablo, CA 94806
Project Manager: Tom Ghigliotto
Project: Horton Street, # 115094
Sample Name: RP2-10.5' (E4072706)

Date Sampled: 07-25-94
Date Received: 07-27-94
Date Reported: 08-04-94
Sample Matrix: SOIL
AMER Report #: E339

COMPOUND	CAS #	CONC. (mg/kg)	DETECTION LIMIT (mg/kg)
methylene dichloride		ND	0.043
styrene		ND	0.005
1,1,2,2-tetrachloroethane		ND	0.005
tetrachloroethylene		ND	0.011
toluene		ND	0.003
trans- 1,2-dichloroethlene		ND	0.007
1,1,1-trichloroethane		ND	0.005
1,1,2-trichloroethane		ND	0.008
trichloroethylene		ND	0.005
trichlorofluoromethane		ND	0.010
o-xylene		ND	0.002
p/m-xylene		ND	0.003
vinyl acetate		ND	0.011
vinyl chloride		ND	0.009

TENTATIVE IDENTIFICATION COMPOUND	CAS #	CONC. (mg/kg)	DETECTION LIMIT (mg/kg)

Reviewed By:

Lei Chen, Laboratory Manager

AMER
Advanced Materials Engineering Research, Inc.

EPA METHODS 624/8240 ANALYSIS REPORT
(ELAP CERTIFICATE NO. 1909)

Client: TMC ENVIRONMENTAL, INC.
13908 San Pablo Avenue, Suite 101
San Pablo, CA 94806
Project Manager: Tom Ghigliotto
Project: Horton Street, # 115094
Sample Name: RP3-6' (E4072709)

Date Sampled: 07-25-94
Date Received: 07-27-94
Date Reported: 08-04-94
Sample Matrix: SOIL
AMER Report #: E339

COMPOUND	CAS #	CONC. (mg/kg)	DETECTION LIMIT (mg/kg)
acetone		**0.11**	0.028
benzene		**0.010**	0.005
bromomethane		ND	0.008
bromodichloromethane		ND	0.005
bromoform (SPCC)		ND	0.008
2-butanone		**0.093**	0.007
carbon disulfide		ND	0.008
carbon tetrachloride		ND	0.010
chlorobenzene (SPCC)		ND	0.004
chlorodibromomethane		ND	0.010
chloroethane		ND	0.005
2-chloro-ethyl-vinyl ether		ND	0.011
chloroform (CCC)		ND	0.005
chloromethane		ND	0.008
1,2-dichlorobenzene		ND	0.004
1,3-dichlorobenzene		ND	0.003
1,4-dichlorobenzene		ND	0.003
dichlorodifluoromethane		ND	0.010
1,1 -dichloroethane (SPCC)		ND	0.008
1,2-dichloroethane		ND	0.006
1,1 -dichloroethene (CCC)		ND	0.005
1,2-dichloropropane		ND	0.014
cis-1,3-dichloropropene		ND	0.005
trans-1,3-dichlorpropene		ND	0.006
ethylbenzene		**0.18**	0.003
2-hexanone		ND	0.011
4-methyl-2-pentanone		**7.1**	0.009

AMER
Advanced Materials Engineering Research, Inc.

EPA METHODS 624/8240 ANALYSIS REPORT
(ELAP CERTIFICATE NO. 1909)

Client: TMC ENVIRONMENTAL, INC.
13908 San Pablo Avenue, Suite 101
San Pablo, CA 94806
Project Manager: Tom Ghigliotto
Project: Horton Street, # 115094
Sample Name: RP3-6' (E4072709)

Date Sampled: 07-25-94
Date Received: 07-27-94
Date Reported: 08-04-94
Sample Matrix: SOIL
AMER Report #: E339

COMPOUND	CAS #	CONC. (mg/kg)	DETECTION LIMIT (mg/kg)
methylene dichloride		ND	0.043
styrene		ND	0.005
1,1,2,2-tetrachloroethane		ND	0.005
tetrachloroethylene		ND	0.011
toluene		**4.1**	0.003
trans- 1,2-dichloroethlene		ND	0.007
1,1,1-trichloroethane		ND	0.005
1,1,2-trichloroethane		ND	0.008
trichloroethylene		**3.3**	0.005
trichlorofluoromethane		ND	0.010
o-xylene		**0.32**	0.002
p/m-xylene		**0.94**	0.003
vinyl acetate		ND	0.011
vinyl chloride		ND	0.009

TENTATIVE IDENTIFICATION COMPOUND	CAS #	CONC. (mg/kg)	DETECTION LIMIT (mg/kg)
pentane, 3-ethyl-		**0.027**	e
3-pentanone		**0.027**	e
cyclopentane, 1,1,3-trimethyl-		**0.16**	e
hexane, 2-methhyl-		**0.028**	e
cyclopentane, 1,2,4 -trimethyl-,		**0.19**	e
2-hexanol		**0.067**	e
1,3-dioxolane, 4,4,5,5-tetramethyl		**0.031**	e
n-butyl ether		**0.032**	e
3-pentanone, 2,4-dimethyl		**1.2**	e

Reviewed By:

Lei Chen, Laboratory Manager

AMER
Advanced Materials Engineering Research, Inc.

EPA METHODS 624/8240 ANALYSIS REPORT
(ELAP CERTIFICATE NO. 1909)

Client: TMC ENVIRONMENTAL, INC.
13908 San Pablo Avenue, Suite 101
San Pablo, CA 94806
Project Manager: Tom Ghigliotto
Project: Horton Street, # 115094
Sample Name: RP3-11' (E4072710)

Date Sampled: 07-25-94
Date Received: 07-27-94
Date Reported: 08-04-94
Sample Matrix: SOIL
AMER Report #: E339

COMPOUND	CAS #	CONC. (mg/kg)	DETECTION LIMIT (mg/kg)
acetone		ND	0.028
benzene		ND	0.005
bromomethane		ND	0.008
bromodichloromethane		ND	0.005
bromoform (SPCC)		ND	0.008
2-butanone		ND	0.007
carbon disulfide		ND	0.008
carbon tetrachloride		ND	0.010
chlorobenzene (SPCC)		ND	0.004
chlorodibromomethane		ND	0.010
chloroethane		ND	0.005
2-chloro-ethyl-vinyl ether		ND	0.011
chloroform (CCC)		ND	0.005
chloromethane		ND	0.008
1,2-dichlorobenzene		ND	0.004
1,3-dichlorobenzene		ND	0.003
1,4-dichlorobenzene		ND	0.003
dichlorodifluoromethane		ND	0.010
1,1 -dichloroethane (SPCC)		ND	0.008
1,2-dichloroethane		ND	0.006
1,1 -dichloroethene (CCC)		ND	0.005
1,2-dichloropropane		ND	0.014
cis-1,3-dichloropropene		ND	0.005
trans-1,3-dichlorpropene		ND	0.006
ethylbenzene		ND	0.003
2-hexanone		ND	0.011
4-methyl-2-pentanone		**0.042**	0.009

AMER
Advanced Materials Engineering Research, Inc.

EPA METHODS 624/8240 ANALYSIS REPORT
(ELAP CERTIFICATE NO. 1909)

Client: TMC ENVIRONMENTAL, INC.
13908 San Pablo Avenue, Suite 101
San Pablo, CA 94806
Project Manager: Tom Ghigliotto
Project: Horton Street, # 115094
Sample Name: RP3-11' (E4072710)

Date Sampled: 07-25-94
Date Received: 07-27-94
Date Reported: 08-04-94
Sample Matrix: SOIL
AMER Report #: E339

COMPOUND	CAS #	CONC. (mg/kg)	DETECTION LIMIT (mg/kg)
methylene dichloride		ND	0.043
styrene		ND	0.005
1,1,2,2-tetrachloroethane		ND	0.005
tetrachloroethylene		ND	0.011
toluene		ND	0.003
trans- 1,2-dichloroethlene		ND	0.007
1,1,1-trichloroethane		ND	0.005
1,1,2-trichloroethane		ND	0.008
trichloroethylene		ND	0.005
trichlorofluoromethane		ND	0.010
o-xylene		ND	0.002
p/m-xylene		ND	0.003
vinyl acetate		ND	0.011
vinyl chloride		ND	0.009

TENTATIVE IDENTIFICATION COMPOUND	CAS #	CONC. (mg/kg)	DETECTION LIMIT (mg/kg)
3-pentanone, 2,4-dimethyl-		**0.012**	e

Reviewed By:

Lei Chen, Laboratory Manager

8240 TEST QA/QC TABLE

AMER WORKORDER: E339

AMER I.D. Number: E4072701-SP
TMC ENVIRONMENTAL, INC. Project: Horton Sreet, # 115094
Ext/Prep. Method: EPA 5030
Date: 08/02/94
Analyst: LC/KK

Analytical Method EPA 8240
Analysis date: 08/02/94
Analyst: LC
Matrix: Soil
Unit: mg/kg

Analyte	Sample Result	Spike Level	Matrix Spike Result	Ms Recovery %	Matrix Spike Dul. Result	MSD Recovery %	Average Recovery %R	LCL %R	UCL %R	RPD %	UCL %RPD
1,1-Dichloroethene	0	0.125	0.120	96	0.118	94	95	59	172	2	14
Trichloroethene	0	0.125	0.094	75	0.098	78	77	62	137	4	14
Chlorobenzene	0	0.125	0.104	83	0.107	86	84	60	133	3	13
Toluene	0	0.125	0.107	86	0.109	87	86	59	139	2	13
Benzene	0	0.125	0.125	100	0.120	96	98	66	142	4	11

Notes:
Spike Level- Level of Concentration Added to the Sample
MS Result- Matrix Spik
MS %R- Matrix Spike Percent Recovery
MSD Result- Matrix Spike Duplicate Result
MSD %R- Matrix Spike Dublicate Percent Recovery
LCL- Lower Criteria Level
UCL- Upper Criteria Level
RPD- Relative Percent Difference

E339 A

TMC Environmental, Inc.
13908 San Pablo Ave.
Suite 101
San Pablo, California
(510) 232-8366

CHAIN OF CUSTODY RECORD
ANALYSIS REQUEST FORM
FOR
ENVIRONMENTAL SAMPLING

JOB #	JOB ADDRESS:	SAMPLER: Tom Ghigliotto
115094	HORTON STREET	

LABORATORY NAME: Advanced Materials Engineering Research, Inc. 783 E. Evelyn Ave. Sunnyvale, CA

LAB ID NO.	SAMPLE LABEL	SOIL	WATER	DATE	TIME	TVH-GAS	TEH-DIESEL	BTEX-8020	EPA 8240	ORGANIC LEAD	Modified 8015	
	RP4-6'	X		7-25-94	9:35a				X	X	✓	
	RP4-10.5'	X		7-25-94	9:50a				X	X	X	
	RP5-5.5'	X		7-25-94	12:23a				X	X	X	*Hold
	RP5-10.5'	X		7-25-94	12:31a				X	X	X	*Hold
	RP2-5'	X		7-25-94	2:07pm				X	X	X	
	RP2-10.5	X		7-25-94	2:21pm				X	X	X	

Special Instructions: Modified 8015 For TPH GAS, Diesel & Motor oil.

* Hold According to Tom Ghigliotto on 7/27/94 by phone at 5:50p.m. (RP5-5.5 RP5-10.5, RP1-6, RP1-11.)

Relinquished By:

(Print Name) Tom Ghigliotto	Date: 7/27/94	(Print Name) Guoenzi	
(Signature) Tom Ghigliotto	Time: 11:55	(Signature)	
(Print Name) Guoenzi	Date: 7-27-94	(Print Name) Hanan Kingti	
(Signature)	Time: 1302	(Signature)	
(Print Name)	Date:	(Print Name)	
(Signature)	Time:	(Signature)	
(Print Name)	Date:	(Print Name)	
(Signature)	Time:	(Signature)	

Recieved By:

LABORATORY NOTES: 5 DAYS TURNAROUND TIME FOR ANALYSIS RESULTS
PLEASE INCLUDE SAMPLE CONDITION REPORT WITH RESULTS

PLEASE FAX A COPY OF THE ANALYTICAL RESULTS TO THE FOLLOWING:
TMC ENVIRONMENTAL, INC. AT (510) 232-5133

E339B

TMC Environmental, Inc.
13908 San Pablo Ave.
Suite 101
San Pablo, California
(510) 232-8366

CHAIN OF CUSTODY RECORD
ANALYSIS REQUEST FORM
FOR
ENVIRONMENTAL SAMPLING

JOB #	JOB ADDRESS:	SAMPLER: Tom Ghigliotto
1-15094	Horton Street, Emeryville	

LABORATORY NAME: Advanced Materials Engineering Research, Inc. 783 E. Evelyn Ave. Sunnyvale, CA

LAB ID NO.	SAMPLE LABEL	SOIL	WATER	DATE	TIME	TVH-GAS	TEH-DIESEL	BTEX-8020	EPA 8240 ORGANIC LEAD	Modified 8015	
	RP1-6'	X		7-26-94	8:56a				X	X	X *Hold
	RP1-11'	X		7-26-94	9:15a				X	X	X *Hold
	RP3-6'	X		7-26-94	11:13				X	X	X
	RP3-11'	X		7-26-94	11:25				X	X	X

Special Instructions: Modified 8015 for TPH Gas, Diesel & Motor Oil

Relinquished By:

(Print Name) Tom Ghigliotto (Signature) Tom Ghigliotto	Date: 7/27/94 Time: 11:55	(Print Name) GUDERZI (Signature)
(Print Name) GUDERZI (Signature)	Date: 7-27-94 Time: 1302	(Print Name) Kalyan Kolluri (Signature)
(Print Name) (Signature)	Date: Time:	(Print Name) (Signature)
(Print Name) (Signature)	Date: Time:	(Print Name) (Signature)

Recieved By:

LABORATORY NOTES: 5 DAYS TURNAROUND TIME FOR ANALYSIS RESULTS
PLEASE INCLUDE SAMPLE CONDITION REPORT WITH RESULTS

PLEASE FAX A COPY OF THE ANALYTICAL RESULTS TO THE FOLLOWING:
TMC ENVIRONMENTAL, INC. AT (510) 232-5133

ATTACHMENT 2

RECORDS OF WATER SAMPLE COLLECTION

RECORD OF WATER SAMPLE COLLECTION

WELL LABEL: RP-1	DATE COLLECTED: 9-8-94	JOB NUMBER: 115094
JOB NAME: Rifkin Property	SAMPLERS NAME: Tom Ghigliotto	
LOCATION: 4525 - 4563 Horton Street, Emeryville, California		

WELL HEAD COND.: Inside of Christy Box is fill of water.

TIME MEASURED	09:40	12:37				
DEPTH IN FEET (Measure to 0.01')	8.65	8.65				

WELL PURGING RECORD

TOTAL DEPTH OF WELL: 11.86	**DEPTH TO WATER:** 8.65	**DIAMETER:** 2"

PURGE VOLUME = TOTAL DEPTH - WATER DEPTH X VOLUME FACTOR X 3 VOLUMES = 1.5 **GALLONS**
VOLUME FACTOR = 0.17 FOR 2" CASING; 0.65 FOR 4" CASING; 1.47 FOR 6" CASING

PURGE METHOD: Bailer	**OVA-FID VAPOR READING, ppm :** 0

WELL PURGING PARAMETERS

GALLONS	TIME	TEMPERATURE degrees F	CONDUCTIVITY x 1000	VISUAL TURBIDITY	pH
0	12:50	66.2	1.18	Clear	7.93
0.5	12:52	66.1	1.33	Slightly Cloudy	7.95
1.0	12:56	65.8	1.32	Slightly Cloudy/Clear	8.41
2.0	12:57	65.8	1.29	Slightly Cloudy/Clear	8.40

SAMPLING METHOD: Disposable Bailer	**TIME COLLECTED:** 13:08
SAMPLE TURBIDITY: 75.0	

RECORD OF WATER SAMPLE COLLECTION

WELL LABEL: RP-2	DATE COLLECTED: 9-8-94	JOB NUMBER: 115094
JOB NAME: Rifkin Property	SAMPLERS NAME: Tom Ghigliotto	
LOCATION: 4525 - 4563 Horton Street, Emeryville, California		

WELL HEAD COND.: New; Slight odor on purge water.

TIME MEASURED	09:31	11:57				
DEPTH IN FEET (Measure to 0.01')	8.99	8.99				

WELL PURGING RECORD

TOTAL DEPTH OF WELL: 14.43	**DEPTH TO WATER:** 8.99	**DIAMETER:** 2"

PURGE VOLUME = TOTAL DEPTH - WATER DEPTH X VOLUME FACTOR X 3 VOLUMES = GALLONS
VOLUME FACTOR = 0.17 FOR 2" CASING; 0.65 FOR 4" CASING; 1.47 FOR 6" CASING

PURGE METHOD: Bailer	**OVA-FID VAPOR READING, ppm :** 0

WELL PURGING PARAMETERS

GALLONS	TIME	TEMPERATURE degrees F	CONDUCTIVITY x 1000	VISUAL TURBIDITY	pH
0	12:03	65.9	1.52	Slightly Cloudy	7.69
1	12:09	65.8	1.51	Very Cloudy	7.44
2	12:11	65.4	1.50	Very Cloudy/Dk Brown	7.48
3	12:13	65.5	1.49	Very Cloudy/Dk Brown	7.86

SAMPLING METHOD: Disposable Bailer	**TIME COLLECTED:** 12:22
SAMPLE TURBIDITY: >200	

RECORD OF WATER SAMPLE COLLECTION

WELL LABEL: RP-3	DATE COLLECTED: 9-8-94	JOB NUMBER: 115094
JOB NAME: Rifkin Property	SAMPLERS NAME: Tom Ghigliotto	
LOCATION: 4525 - 4563 Horton Street, Emeryville, California		

WELL HEAD COND.:

TIME MEASURED	09:42	13:15				
DEPTH IN FEET (Measure to 0.01')	8.80	8.80				

WELL PURGING RECORD

TOTAL DEPTH OF WELL: 12.78	**DEPTH TO WATER:** 8.80	**DIAMETER:** 2"

PURGE VOLUME = TOTAL DEPTH - WATER DEPTH X VOLUME FACTOR X 3 VOLUMES = 2.03 **GALLONS**
VOLUME FACTOR = 0.17 FOR 2" CASING; 0.65 FOR 4" CASING; 1.47 FOR 6" CASING

PURGE METHOD: Bailer	**OVA-FID VAPOR READING, ppm :** 0

WELL PURGING PARAMETERS

GALLONS	TIME	TEMPERATURE degrees F	CONDUCTIVITY x 1000	VISUAL TURBIDITY	pH
0	13:22	65.9	1.55	Cloudy	11.04
1	13:26	65.7	1.47	Very Cloudy/Dk Brown	12.40
1.5	13:29	65.5	1.53	Very Cloudy	10.43
2	13:30	65.4	1.57	Very Cloudy	9.86

SAMPLING METHOD: Disposable Bailer	**TIME COLLECTED:** 13:40
SAMPLE TURBIDITY: 83.2	

RECORD OF WATER SAMPLE COLLECTION

WELL LABEL: RP-4	DATE COLLECTED: 9-8-94	JOB NUMBER: 115094
JOB NAME: Rifkin Property	SAMPLERS NAME: Tom Ghigliotto	
LOCATION: 4525 - 4563 Horton Street, Emeryville, California		

WELL HEAD COND.: New

TIME MEASURED	09:28	11:07				
DEPTH IN FEET (Measure to 0.01')	9.02	9.03				

WELL PURGING RECORD

TOTAL DEPTH OF WELL: 16.15	**DEPTH TO WATER:** 9.03	**DIAMETER:** 2"

PURGE VOLUME = TOTAL DEPTH - WATER DEPTH X VOLUME FACTOR X 3 VOLUMES = 3.5292 **GALLONS**
VOLUME FACTOR = 0.17 FOR 2" CASING; 0.65 FOR 4" CASING; 1.47 FOR 6" CASING

PURGE METHOD: Disposable Bailer	**OVA-FID VAPOR READING, ppm :** 0

WELL PURGING PARAMETERS

GALLONS	TIME	TEMPERATURE degrees F	CONDUCTIVITY x 1000	VISUAL TURBIDITY	pH
0	11:14	66.1	0.98	Slightly Cloudy	6.23
1	11:17	65.6	1.03	Very Turbid	6.14
2	11:21	65.0	1.01	Very Turbid	6.16
3	11:25	64.9	1.00	Very Turbid	6.36
4	11:28	64.7	1.00	Very Turbid	6.32

SAMPLING METHOD: Disposable Bailer	**TIME COLLECTED:** 11:35
SAMPLE TURBIDITY: 0.43	

RECORD OF WATER SAMPLE COLLECTION

WELL LABEL: RP-5	DATE COLLECTED: 9-8-94	JOB NUMBER: 115094
JOB NAME: Rifkin Property	SAMPLERS NAME: Tom Ghigliotto	
LOCATION: 4525 - 4563 Horton Street, Emeryville, California		

WELL HEAD COND.: New, field cable ph meter.

TIME MEASURED	09:25	09:48				
DEPTH IN FEET (Measure to 0.01')	8.95	8.95				

WELL PURGING RECORD

TOTAL DEPTH OF WELL: 15.88	**DEPTH TO WATER:** 8.95	**DIAMETER:** 2"

PURGE VOLUME = TOTAL DEPTH - WATER DEPTH X VOLUME FACTOR X 3 VOLUMES = 3.0 **GALLONS**
VOLUME FACTOR = 0.17 FOR 2" CASING; 0.65 FOR 4" CASING; 1.47 FOR 6" CASING

PURGE METHOD: Disposable Bailer	**OVA-FID VAPOR READING, ppm :** 0

WELL PURGING PARAMETERS

GALLONS	TIME	TEMPERATURE degrees F	CONDUCTIVITY x 1000	VISUAL TURBIDITY	pH
0	10:29	66.8	1.09	Clear	5.83
1	10:32	66.1	1.09	Very Turbid	5.83
2	10:35	66.0	1.04	Very Turbid	5.88
3	10:39	66.0	1.04	Very Turbid	5.90

SAMPLING METHOD: Disposable Bailer	**TIME COLLECTED:** 10:45
SAMPLE TURBIDITY: 19.3 NTU	

ATTACHMENT 3

RESULTS OF SAMPLE COLLECTION

BORINGS GMTX-12 AND GMTX-13

Erler & Kalinowski, Inc.

September 17, 1994

Erler & Kalinowski, Inc.
Consulting Engineers and Scientists
1730 So. Amphlett Blvd., Suite 320
San Mateo, California 94402
(415) 578-1172
Fax (415) 578-9131

LETTER OF TRANSMITTAL

TO: Mark Youngkin
IMC Environmental, Inc.
13908 San Pablo Ave, Suite 101
San Pablo, CA 94806

DATE: 5 October 1994
CONTRACT NO: 930028-05
SUBJECT: Chiron/Rifkin Prop.

We are sending you:

☐ Plans	☐ Prints	☐ Specifications
☒ Reports	☐ Samples	☐ Shop Drawings
☐ Copy of Letter	☐ Other	☐ Change Order

Dated: Sequoia lab reports - 10/4/94

Description:

These are transmitted as checked below:

☒ As Requested	☐ For Review & Comments
☐ For Approval	☐ Returned After Loan to us
☐ For Information & Coordination	☐ For Action Noted

Remarks: Results from EPA 8240, TPH diesel, & TPH-gas/BTEX analyses from borings GMTX-12 and GMTX-13. In each boring, samples were collected at 2-2.5 ft(A) and 5-5.5 ft(B) bgs and were composited for laboratory analysis. Samples were collected by Geomatrix and composited in the laboratory.

Copy to: Ric Notini, Chiron Prop

ERLER & KALINOWSKI, INC.

by: Michelle K King
Michelle K. King

If enclosures are not as noted, please advise us at once.

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Erler & Kalinowski, Inc.	Client Proj. ID: 2803, Chiron	Sampled: 09/17/94
1730 South Amphlett, Ste 320	Sample Descript: GMTX-12A/B (Comp)	Received: 09/17/94
San Mateo, CA 94402	Matrix: SOLID	Extracted: 09/26/94
	Analysis Method: EPA 8240	Analyzed: 09/27/94
Attention: Michelle King	Lab Number: 9409990-01	Reported: 10/04/94

Instrument ID: F3

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	**500**	**2600**
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	**500**	**1000**
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	100	N.D.

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Erler & Kalinowski, Inc.	Client Proj. ID: 2803, Chiron	Sampled: 09/17/94
1730 South Amphlett, Ste 320	Sample Descript: GMTX-12A/B (Comp)	Received: 09/17/94
San Mateo, CA 94402	Matrix: SOLID	Extracted: 09/26/94
	Analysis Method: EPA 8240	Analyzed: 09/27/94
Attention: Michelle King	Lab Number: 9409990-01	Reported: 10/04/94

Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Vinyl chloride	100	N.D.
Total Xylenes	**100**	**260**

Surrogates	Control Limits %		% Recovery
1,2-Dichloroethane-d4	70	121	95
Toluene-d8	81	117	94
4-Bromofluorobenzene	74	121	96

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Michelle King

Client Proj. ID: 2803, Chiron
Sample Descript: GMTX-12A/B (Comp)
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9409990-01

Sampled: 09/17/94
Received: 09/17/94
Extracted: 09/27/94
Analyzed: 09/27/94
Reported: 10/04/94

Instrument ID: GCHP-4A

Fuel Fingerprint

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
Extractable Hydrocarbons	1.0	1.6
Chromatogram Pattern: **Unidentified HC**		>C16

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	95

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

ter & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402 tention: Michelle King	Client Proj. ID: 2803, Chiron Sample Descript: GMTX-12A/B (Comp) Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9409990-01	Sampled: 09/17/94 Received: 09/17/94 Extracted: 09/27/94 Analyzed: 09/27/94 Reported: 10/04/94

trument ID: GCHP-18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**1.0**	**2.7**
Benzene	0.0050	N.D.
oluene	**0.0050**	**0.039**
thyl Benzene	**0.0050**	**0.048**
Xylenes (Total)	**0.0050**	**0.23**
Chromatogram Pattern:		**Gas**

Surrogates	Control Limits %		% Recovery
rifluorotoluene	70	130	119

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Michelle King

Client Proj. ID: 2803, Chiron
Sample Descript: Method Blank A
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9409990-03

Sampled:
Received: 09/17/94
Extracted: 09/26/94
Analyzed: 09/26/94
Reported: 10/04/94

Instrument ID: F3

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	500	N.D.
2-Hexanone	250	N.D.
Methylene chloride	500	N.D.
4-Methyl-2-pentanone	100	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate		

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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Michelle King

Client Proj. ID: 2803, Chiron
Sample Descript: Method Blank A
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9409990-03

Sampled:
Received: 09/17/94
Extracted: 09/26/94
Analyzed: 09/26/94
Reported: 10/04/94

Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.

Surrogates	Control Limits %		% Recovery
1,2-Dichloroethane-d4	70	121	104
Toluene-d8	81	117	112
4-Bromofluorobenzene	74	121	113

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

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Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402 Attention: Michelle King	Client Proj. ID: 2803, Chiron Sample Descript: Method Blank A Matrix: SOLID Analysis Method: EPA 8015 Mod Lab Number: 9409990-03	Sampled: Received: 09/17/94 Extracted: 09/27/94 Analyzed: 09/27/94 Reported: 10/04/94

Instrument ID: GCHP-4A

Fuel Fingerprint

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
Extractable Hydrocarbons Chromatogram Pattern:	1.0	N.D.

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	94

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

r & Kalinowski, Inc.) South Amphlett, Ste 320 San Mateo, CA 94402 ntion: Michelle King	Client Proj. ID: 2803, Chiron Sample Descript: Method Blank A Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9409990-03	Sampled: Received: 09/17/94 Extracted: 09/27/94 Analyzed: 09/27/94 Reported: 10/04/94

strument ID: GCHP-18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	86

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

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Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Michelle King

Client Project ID: 2803, Chiron
Matrix: Solid
QC Sample Group: 9409990 01, 03

Reported: Oct 4, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Analyst:	M. Williams	M. Williams	M. Williams	M. Williams	M. Williams
MS/MSD Batch#:	9409B61-01	9409B61-01	9409B61-01	9409B61-01	9409B61-01
Date Prepared:	9/26/94	9/26/94	9/26/94	9/26/94	9/26/94
Date Analyzed:	9/27/94	9/27/94	9/27/94	9/27/94	9/27/94
Instrument I.D.#:	F3	F3	F3	F3	F3
Conc. Spiked:	2500 g/kg	2500 g/kg	2500 g/kg	2500 g/kg	2500 g/kg
Matrix Spike % Recovery:	68	88	92	160	96
Matrix Spike Duplicate % Recovery:	68	84	100	40	96
Relative % Difference:	0.0	4.7	8.3	120	0.0
LCS Batch#:	VB092694	VB092694	VB092694	VB092694	VB092694
Date Prepared:	9/26/94	9/26/94	9/26/94	9/26/94	9/26/94
Date Analyzed:	9/28/94	9/28/94	9/28/94	9/28/94	9/28/94
Instrument I.D.#:	MS-F3	MS-F3	MS-F3	MS-F3	MS-F3
LCS % Recovery:	80	96	96	92	96
% Recovery Control Limits:	DL-234	71-157	37-151	47-150	37-160

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

Sequoia Analytical

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Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Michelle King

Client Project ID: 2803, Chiron
Matrix: Solid

QC Sample Group: 9409990 01, 03

Reported: Oct 4, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Diesel
Method:	EPA 8015 Mod
Analyst:	N. Herrera
MS/MSD Batch#:	9409899-01
Date Prepared:	9/27/94
Date Analyzed:	9/27/94
Instrument I.D.#:	GCHP4
Conc. Spiked:	15 mg/kg
Matrix Spike % Recovery:	89
Matrix Spike Duplicate % Recovery:	83
Relative % Difference:	7.0
LCS Batch#:	
Date Prepared:	
Date Analyzed:	
Instrument I.D.#:	
LCS % Recovery:	
% Recovery Control Limits:	38-122

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

Please Note:
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Client Project ID: 2803, Chiron
Matrix: Solid
QC Sample Group: 9409990 01, 03

Reported: Oct 4, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	E. Cunanan	E. Cunanan	E. Cunanan	E. Cunanan
MS/MSD Batch#:	9409990-01	9409990-01	9409990-01	9409990-01
Date Prepared:	9/27/94	9/27/94	9/27/94	9/27/94
Date Analyzed:	9/27/94	9/27/94	9/27/94	9/27/94
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	0.20 mg/kg	0.20 mg/kg	0.20 mg/kg	0.60 mg/kg
Matrix Spike % Recovery:	90	90	90	93
Matrix Spike Duplicate % Recovery:	90	90	90	92
Relative % Difference:	0.0	0.0	0.0	1.1
LCS Batch#:				
Date Prepared:				
Date Analyzed:				
Instrument I.D.#:				
LCS % Recovery:				
% Recovery Control Limits:	55-145	47-149	47-155	56-140

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

Sequoia Analytical

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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Michelle King

Client Proj. ID: 2803, Chiron
Sample Descript: GMTX-13A/B Comp.
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9409899-01

Sampled: 09/16/94
Received: 09/16/94
Extracted: 09/26/94
Analyzed: 09/27/94
Reported: 10/04/94

Instrument ID: F3

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	500	N.D.
2-Hexanone	250	N.D.
Methylene chloride	500	N.D.
4-Methyl-2-pentanone	100	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate		

Sequoia Analytical

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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Michelle King

Client Proj. ID: 2803, Chiron
Sample Descript: GMTX-13A/B Comp.
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9409899-01

Sampled: 09/16/94
Received: 09/16/94
Extracted: 09/26/94
Analyzed: 09/27/94
Reported: 10/04/94

Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.

Surrogates	Control Limits %		% Recovery
1,2-Dichloroethane-d4	70	121	88
Toluene-d8	81	117	98
4-Bromofluorobenzene	74	121	96

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

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rier & Kalinowski, Inc.
730 South Amphlett, Ste 320
San Mateo, CA 94402

ttention: Michelle King

Client Proj. ID: 2803, Chiron
Sample Descript: GMTX-13A/B Comp.
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9409899-01

Sampled: 09/16/94
Received: 09/16/94
Extracted: 09/27/94
Analyzed: 09/28/94
Reported: 10/04/94

strument ID: GCHP-4B

Fuel Fingerprint

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
Extractable Hydrocarbons	1.0	11
Chromatogram Pattern: **Weathered**		**Motor Oil**

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	96

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

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Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402 Attention: Michelle King	Client Proj. ID: 2803, Chiron Sample Descript: GMTX-13A/B Comp. Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9409899-01	Sampled: 09/16/94 Received: 09/16/94 Extracted: 09/27/94 Analyzed: 09/27/94 Reported: 10/04/94

Instrument ID: GCHP-01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	87

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Michelle King

Client Proj. ID: 2803, Chiron
Sample Descript: Method Blank A
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9409899-02

Sampled:
Received: 09/16/94
Extracted: 09/26/94
Analyzed: 09/26/94
Reported: 10/04/94

Instrument ID: F3

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	500	N.D.
2-Hexanone	250	N.D.
Methylene chloride	500	N.D.
4-Methyl-2-pentanone	100	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate		

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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Michelle King

Client Proj. ID: 2803, Chiron
Sample Descript: Method Blank A
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9409899-02

Sampled:
Received: 09/16/94
Extracted: 09/26/94
Analyzed: 09/26/94
Reported: 10/04/94

Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.

Surrogates	Control Limits %		% Recovery
1,2-Dichloroethane-d4	70	121	104
Toluene-d8	81	117	112
4-Bromofluorobenzene	74	121	113

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

Sequoia Analytical

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Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402 Attention: Michelle King	Client Proj. ID: 2803, Chiron Sample Descript: Method Blank A Matrix: SOLID Analysis Method: EPA 8015 Mod Lab Number: 9409899-02	Sampled: Received: 09/16/94 Extracted: 09/27/94 Analyzed: 09/28/94 Reported: 10/04/94

Instrument ID: GCHP-4B

Fuel Fingerprint

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
Extractable Hydrocarbons Chromatogram Pattern:	1.0	N.D.

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	98

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
Project Manager

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Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402 Attention: Michelle King	Client Proj. ID: 2803, Chiron Sample Descript: Method Blank A Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9409899-02	Sampled: Received: 09/16/94 Extracted: 09/27/94 Analyzed: 09/27/94 Reported: 10/04/94

Instrument ID: GCHP-01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	80

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning
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San Mateo, CA 94402
Attention: Michelle King

Client Project ID: 2803, Chiron
Matrix: Solid

QC Sample Group: 9409899 01-02

Reported: Oct 4, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Analyst:	M. Williams	M. Williams	M. Williams	M. Williams	M. Williams
MS/MSD Batch#:	9409B61-01	9409B61-01	9409B61-01	9409B61-01	9409B61-01
Date Prepared:	9/26/94	9/26/94	9/26/94	9/26/94	9/26/94
Date Analyzed:	9/27/94	9/27/94	9/27/94	9/27/94	9/27/94
Instrument I.D.#:	MS-F3	MS-F3	MS-F3	MS-F3	MS-F3
Conc. Spiked:	2500 µg/kg	2500 µg/kg	2500 µg/kg	2500 µg/kg	2500 µg/kg
Matrix Spike % Recovery:	68	88	92	160	96
Matrix Spike Duplicate % Recovery:	68	84	100	40	96
Relative % Difference:	0.0	4.7	8.3	120	0.0
LCS Batch#:	VB092694	VB092694	VB092694	VB092694	VB092694
Date Prepared:	9/26/94	9/26/94	9/26/94	9/26/94	9/26/94
Date Analyzed:	9/28/94	9/28/94	9/28/94	9/28/94	9/28/94
Instrument I.D.#:	MS-F3	MS-F3	MS-F3	MS-F3	MS-F3
LCS % Recovery:	80	96	96	92	96
% Recovery Control Limits:	DL-234	71-157	37-151	47-150	37-160

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SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

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San Mateo, CA 94402
Attention: Michelle King

Client Project ID: 2803, Chiron
Matrix: Solid

QC Sample Group: 9409899 01-02

Reported: Oct 4, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Diesel
Method:	EPA 8015 Mod
Analyst:	N. Herrera
MS/MSD Batch#:	9409899-01
Date Prepared:	9/27/94
Date Analyzed:	9/27/94
Instrument I.D.#:	GCHP4A
Conc. Spiked:	15 µg/kg
Matrix Spike % Recovery:	89
Matrix Spike Duplicate % Recovery:	83
Relative % Difference:	7.0
LCS Batch#:	
Date Prepared:	
Date Analyzed:	
Instrument I.D.#:	
LCS % Recovery:	
% Recovery Control Limits:	38-122

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SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

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Sequoia Analytical

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Attention: Michelle King

Client Project ID: 2803, Chiron
Matrix: Solid

QC Sample Group: 9409899 01-02

Reported: Oct 4, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	R. Geckler	R. Geckler	R. Geckler	R. Geckler
MS/MSD Batch#:	9409899-01	9409899-01	9409899-01	9409899-01
Date Prepared:	9/27/94	9/27/94	9/27/94	9/27/94
Date Analyzed:	9/27/94	9/27/94	9/27/94	9/27/94
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	0.20 mg/kg	0.20 mg/kg	0.20 mg/kg	0.60 mg/kg
Matrix Spike % Recovery:	80	85	90	90
Matrix Spike Duplicate % Recovery:	80	85	90	90
Relative % Difference:	0.0	0.0	0.0	0.0
LCS Batch#:				
Date Prepared:				
Date Analyzed:				
Instrument I.D.#:				
LCS % Recovery:				
% Recovery Control Limits:	55-145	47-149	47-155	56-140

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

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