# Tollman-Hundley Hotels

Operations Services 5820 W. Irlo Bronson Highway Kissimmee, Florida 34746 Telephone: (407) 396-6605 Fax: (407) 396-8060

June 3, 1996

Ms. Susan L. Hugo Senior Hazardous Materials Specialist Alameda County Health Care Services 1131 Harbor Bay Parkway Alameda, California 94502-6577

Subject: Report of Phase III Environmental

Site Assessment
Days Inn Hotel
1603 Powell Street
Emeryville, California

Dear Ms. Hugo:

Enclosed for your information and review is the report prepared by Law/Crandall, Inc. for a Phase III Environmental Site Assessment at the Days Inn Hotel in Emeryville, California. This report documents Law/Crandall's assessment of the extent of soil and groundwater hydrocarbon impacts related to the historical presence of aboveground and underground storage tanks at the site, and possible off-site sources. Included are Law/Crandall's recommendations for additional monitoring at this site.

Please review this report and provide your comments as soon as possible. We are presently trying to refinance this property and need to move toward closure on this site as quickly as possible to prevent further delays to this process.

If you have questions or need additional information, don't hesitate to contact me at the above address or at (407) 396-6605. Also feel free to call Mark Miller or Andrew Muha of Law/Crandall directly at (415) 834-2040.

Sincerely,

Charles G. Goldman

cc: Brett Tollman Mark Miller Andrew Muha

Enclosure

ENVINORECTION 15



# REPORT OF PHASE III ENVIRONMENTAL SITE ASSESSMENT

DAYS INN HOTEL 1603 POWELL STREET EMERYVILLE, CALIFORNIA

Prepared for:

EMERYVILLE DAYS LIMITED PARTNERSHIP 5820 W. Irlo Bronson Highway Kissimmee, Florida 34746 PROTECTION 95 IIIN AND A



May 29, 1996

Mr. Charles G. Goldman, Vice President Operations Services c/o Days Suites 5820 W. Irlo Bronson Highway Kissimmee, Florida 34746

Subject: Report of Phase III Environmental Site Assessment

Days Inn Hotel 1603 Powell Street Emeryville, California

Law/Crandall Project No. 70424-6-0004

Dear Mr. Goldman:

Law/Crandall (LAW) is pleased to present to Emeryville Days Limited Partnership this report for a Phase III Environmental Site Assessment at the Days Inn Hotel in Emeryville, California. This report documents our assessment of the extent of soil and groundwater hydrocarbon impacts related to the historical presence of above-ground and underground storage tanks at the site, and possible off-site sources. The scope of services was presented in our proposal number 70424-6-5005 dated January 16, 1996, and our work authorization sheet dated April 9, 1996. Authorization was provided by your signing our proposal acceptance sheet on January 29, 1996 and work authorization sheet on April 12, 1996. This report resents our understanding of the project background and objectives, our scope of services, and our findings, conclusions and recommendations.

This report is intended for the use of Emeryville Days Limited Partnership. Our services have been performed under mutually agreed upon terms and conditions. Any third party not specifically mentioned therein shall not rely upon this report except at its sole and exclusive risk and without liability to LAW and affiliates.

We appreciate the opportunity to be of service to you. Please call if you have any questions or if we may be of further service.

Sincerely,

LAW/CRANDALL

andrew T. Muha

Andrew T. Muha Project Geologist Mark I. Miller, R.G., C.E.G. Principal Geologist

# REPORT OF PHASE III ENVIRONMENTAL SITE ASSESSMENT

DAYS INN HOTEL 1603 POWELL STREET EMERYVILLE, CALIFORNIA

## Prepared for:

EMERYVILLE DAYS LIMITED PARTNERSHIP 5820 W. Irlo Bronson Highway Kissimmee, Florida 34746

Prepared by:

Law/ Crandall San Francisco, California Law Project No. 70424-6-0004

May 29, 1996

# TABLE OF CONTENTS

· Pas	<u>ge</u>
1.0 INTRODUCTION	1
2.0 BACKGROUND INFORMATION	1
3.0 OBJECTIVE	. 2
4.0 SCOPE OF SERVICES	3
5.0 FIELD ASSESSMENT PROCEDURES  5.1 SOIL BORING ACTIVITIES  5.2 MONITORING WELL INSTALLATION	. 4
6.0 FIELD OBSERVATIONS AND RESULTS OF LABORATORY TESTING 6.1 SOIL CONDITIONS 6.2 FIELD SCREENING RESULTS 6.3 GROUNDWATER CONDITIONS 6.4 LABORATORY ANALYSES 6.5 LABORATORY ANALYTICAL RESULTS OF SOIL SAMPLES 6.6 LABORATORY ANALYTICAL RESULTS OF GROUNDWATER SAMPLES	.6 .6 .7
7.0 CONCLUSIONS	. 9
8.0 RECOMMENDATIONS	11
TABLES	
Table 1 - Groundwater Elevation Data Table 2 - Soil Sample Analytical Results for TPH/G, TPH/D, TPH/O, and BTEX Table 3 - Soil Sample Analytical Results for Selected Metals Table 4 - Groundwater Sample Analytical Results for TPH/G, TPH/D, TPH/O, and BTEX Table 5 - Groundwater Sample Analytical Results for Selected Metals	
FIGURES	
Figure 1 - Site Location Map Figure 2 - Site Plan Figure 3 - Site Plan Showing Groundwater Elevations	
APPENDICES .	

Appendix A - Boring Permits

Appendix B - Boring Logs

Appendix C - Laboratory Analytical Report

#### 1.0 INTRODUCTION

Emeryville Days Limited Partnership retained Law/Crandall (LAW) to perform a Phase III Environmental Site Assessment at the facility located at 1603 Powell Street in Emeryville, California (Figure 1). The entire facility is currently occupied by a Days Inn Hotel. This report presents the results of our soil and groundwater characterization activities at the site consisting of soil borings, groundwater monitoring well installation and initial groundwater monitoring activities. This report includes our understanding of the project background and objectives, and provides a description of our scope of services, our findings, and our conclusions and recommendations.

#### 2.0 BACKGROUND INFORMATION

The Days Inn site is located at 1603 Powell Street in Emeryville, California. According to a Phase I Environmental Site Assessment report for the site prepared by McLaren/Hart and dated January 18, 1993, the Days Inn facility and affiliated Days Cafe were constructed in 1985 and 1988, respectively, on a 1.58 acre parcel. The seven-story, 154-room hotel is located approximately 0.2 miles east of the San Francisco Bay and is surrounded by commercial and industrial facilities.

The only environmental concern associated with the current property usage related to a reported 1,000-gallon diesel generator underground storage tank (UST). The UST was described in the McLaren/Hart Phase I report as being located near the southeastern corner of the hotel building (Figure 2). However, when LAW conducted a site reconnaissance prior to commencing the current assessment, we confirmed that the emergency generator's fuel tank is attached beneath the emergency generator - no USTs are known to be currently present at the site. McLaren/Hart also identified several nearby properties with UST or other toxic problems as potential concerns to the subject property.

According to McLaren/Hart's Phase I report, the property was occupied by an auto freight depot from sometime prior to 1949 until the early 1980s. Environmental concerns associated with the auto freight depot included the presence of two large above-ground storage tanks (ASTs) located near the southeastern corner of the property (Figure 2). Soil stains were observed to be present around the ASTs and between

the ASTs and the freight depot building in historical aerial photographs. Nine ASTs were formerly present on the Union Oil of California distribution facility property located to the east of the site.

McLaren/Hart conducted soil and groundwater sampling at the site during March and April of 1993; the results of their Phase II assessment are provided in their report dated May 27, 1993. Prior to the commencement of the Phase II field sampling activities, McLaren/Hart confirmed that five USTs were removed from the site prior to the construction of the current hotel building. The UST cluster was located immediately west of the former ASTs, as shown on Figure 2.

McLaren/Hart installed a total of 21 soil borings at locations of interest at the site. Hydropunch<sup>TM</sup> groundwater samples were collected from each boring. The borings were located along the eastern and western property boundaries, in the vicinity of the historical ASTs and USTs, and in the vicinity of the current diesel UST. Fill soils and Bay Muds were identified in the soil borings. Groundwater was encountered at a depth of approximately 7 feet below ground surface (bgs). Total petroleum hydrocarbons (TPH) consisting of motor oil, oil and grease, gasoline and/or diesel fuels, were detected at varying concentrations in all of the initial seven borings, and nearly all of the subsequent 14 borings. Benzene, ethylbenzene, toluene and total xylene (BETX) constituents were detected in soil samples from four of the borings. TPH as motor oil, oil and grease, gasoline and/or diesel fuel was detected in water samples from 10 of the 21 total borings. McLaren/Hart concluded that the distribution of soil and groundwater contaminants was complex, and could have resulted from a number of activities including surface and subsurface discharge of petroleum hydrocarbons by the previous owner, on-site migration of contaminants from the former off-site Union Oil facility, or by the use of petroleum contaminated fill soils at the site. The current on-site diesel UST reported in the McLaren/Hart Phase I report is no longer considered to represent a potential source of the identified diesel contaminants in soil and groundwater, as the UST does not appear to be present at the site.

#### 3.0 OBJECTIVE

Our objective was to further evaluate subsurface soil and groundwater conditions at the site, and to establish a groundwater monitoring network, as a means of achieving site closure. A total of six

groundwater monitoring wells were installed to assess the extent of hydrocarbon impacts in soil and groundwater.

#### 4.0 SCOPE OF SERVICES

Our services for this phase of the project consisted of the following activities:

- Prepared a workplan describing our proposed field activities which was submitted to the Alameda County Health Care Services on February 22, 1996 and verbally approved on April 16, 1996.
- Obtained drilling permits from the Alameda County Zone 7 Water Agency.
- Contacted Underground Service Alert (USA) for utility clearances prior to drilling. LAW
  also subcontracted with Cruz Brothers Utility locators to clear specific boring locations.
- Prepared a Health and Safety Plan to satisfy OSHA 29 CFR 1910.120 provisions.
- On April 17 and 18, 1996 LAW observed the advancement of 6 soil borings to depths
  ranging from approximately 15 to 20 feet bgs and the installation of six 2-inch diameter
  Schedule 40 PVC groundwater monitoring wells. The wells were intended to allow for the
  collection of groundwater samples. A 10 to 15 feet well screen was installed at the bottom of
  each well. One soil sample was retained for analysis from each boring.
- Developed the monitoring wells with a surge block and a low flow pump prior to sampling.
- Following construction, the wells were surveyed for horizontal and vertical control by a licensed surveyor relative to an established benchmark.
- Collected groundwater samples from the six monitoring wells following appropriate well purging.
- The soil and groundwater samples were analyzed for TPH as gasoline (TPH/G) using EPA Method 8015 Modified, benzene, ethylbenzene, toluene, and total xylenes (BETX) and methyl t-butyl ether (MTBE) using EPA Method 8020, TPH as diesel (TPH/D) using EPA Method 8015 Modified, TPH as motor oil (TPH/O) using EPA Method 5520, polynuclear aromatic hydrocarbons (PNAs) using EPA Method 8270, chlorinated volatile organic compounds (VOCs) using EPA Method 8010, lead by the waste extraction test (WET) using EPA Method

7420, and the metals arsenic, cadmium, chromium, nickel, and zinc using EPA Method 7060/6010.

 Prepared this report describing the field work conducted at the site, soil and groundwater conditions, and analytical results.

# 5.0 FIELD ASSESSMENT PROCEDURES

#### 5.1 SOIL BORINGS ACTIVITIES

Bayland Drilling (Bayland), under subcontract to LAW, drilled six soil borings and converted them to groundwater monitoring wells on April 17 and 18, 1996. The locations of the borings are indicated on Figure 2. Copies of the well installation permits are included in Appendix A.

The borings were advanced to depths ranging from 15 to 20 feet bgs using a truck-mounted drill rig equipped with 8-inch outer diameter hollow stem augers. The materials encountered in the borings were logged in accordance with the Unified Soil Classification System by a LAW geologist. Soil samples were obtained with a California split-spoon sampler at 5-foot intervals and at significant lithologic boundaries. The soil samples were qualitatively assessed for volatile organic vapors in the field using headspace analytical techniques. We used an organic vapor analyzer (OVA) flame-ionization detector calibrated to a methane standard to conduct the headspace field analyses.

Soil samples were selected for analysis on the basis of OVA readings, visual or olfactory evidence of contamination, or the sample's location relative to the groundwater surface. Soil samples were preserved by covering the ends of the brass tubes with Teflon sheeting and plastic end caps; the samples were labeled, placed in ziplocked bags packed on ice, and transported in a thermally insulated cooler along with a Chain of Custody documentation to the California certified AEN Laboratory for analysis.

Drilling equipment were steam cleaned prior to use and between borings. Sampling equipment was thoroughly washed in a trisodium phosphate (TSP) solution or equivalent and rinsed with potable water after each use to reduce the potential for cross-contamination. Drill cuttings and water generated during

drilling, well installation, development and sampling activities has been stored on site in DOT approved 55-gallon drums, pending proper disposal.

#### 5.2 MONITORING WELL INSTALLATION

Upon completion of drilling, the borings were converted to groundwater monitoring wells. The wells were constructed with 2-inch diameter, flush threaded, Schedule 40 PVC blank casing and 0.010-inch machine-slotted screen. Monitoring wells MW-4 and MW-6 are screened from approximately 5 to 20 feet bgs, the remaining wells are screened from approximately 5 to 15 feet bgs. A #2-12 sand pack was installed around and approximately one to two feet above the slotted interval, and an approximately 0.5 foot to 1-foot bentonite seal was placed above the sand pack and hydrated. The remaining annulus was filled with a cement-bentonite mixture. A watertight locking cap was installed on each well, and the wellheads are protected by watertight, traffic-rated Christy boxes set in concrete at the ground surface. Boring logs and well construction details are included in Appendix B.

The monitoring wells were developed and purged on April 19, 1996. The wells were developed by repeatedly surging the screened interval of each well with a 2-inch diameter vented surge block for approximately 15 minutes. Approximately 20 gallons of water was subsequently purged from each well with a low-flow pump until the discharge water ran clear.

On April 23, 1996 the wells were purged of approximately 8 to 10 gallons of water with a low-flow pump prior to sampling. Field-measured parameters of pH, temperature, and electric conductivity were recorded during the pumping to ensure that the groundwater quality stabilized prior to sampling. The wells were allowed to recover to approximately 80 percent of their static water level prior to sampling

Groundwater samples were collected from each well with a separate disposable bailer. The samples were poured into laboratory-supplied containers for analysis. The samples were then placed on ice in a thermally insulated cooler, and delivered along with chain of custody documentation to AEN Laboratory in Pleasant Hill, California.

## 6.0 FIELD OBSERVATIONS AND RESULTS OF LABORATORY ANALYSIS

The following sections present our findings with respect to soil and groundwater conditions, and groundwater quality.

#### 6.1 SOIL CONDITIONS

LAW's soil boring activities indicated that soils from the ground surface to approximately 10 feet bgs consisted of fill materials such as clay, silt, sand, and gravel with pieces of brick and concrete. Bay Muds were encountered at depths greater than 10 to 12 feet bgs.

#### 6.2 FIELD SCREENING RESULTS

The field screening activities did identify elevated concentrations of organic vapors in the samples. OVA readings ranged from 1 ppm to 330 parts per million (ppm). The higher reading were generally encountered in the soil samples collected from approximately 5 to 10 feet bgs.

#### **6.3 GROUNDWATER CONDITIONS**

The wells were surveyed for horizontal and vertical control relative to an East Bay Municipal Utility District (EBMUD) benchmark (BM). The survey was accomplished by David L. Cramer and Associates, Inc. under subcontract to LAW. The elevation of the benchmark is 11.32 feet above mean sea level. Groundwater elevation data is summarized in Table 1. Based on the depth to water measurements and the monitoring well casing elevations, groundwater beneath the subject property was calculated to flow in a northerly direction, as shown on Figure 3. Tidal forces may influence the groundwater gradient at the site.

#### 6.4 LABORATORY ANALYSES

One soil and one groundwater sample from each of the borings (12 samples total) were submitted for analysis. Results of the laboratory analyses are included along with chain of custody documentation in Appendix C. Selected laboratory analytical results are presented below and in Tables 2, 3, 4, and 5.

#### 6.5 LABORATORY ANALYTICAL RESULTS OF SOIL SAMPLES

The soil sample collected from boring MW-1 at 5 feet bgs did not contain TPH/G, BTEX, MTBE, TPH/D, TPH/O, PNAs, or chlorinated solvents at concentrations in excess of laboratory detection limits. Low concentrations of arsenic, lead, chromium, nickel and zinc were detected; however, cadmium was not detected in concentrations exceeding the laboratory detection limit.

The soil sample collected from boring MW-2 at 5 feet bgs did not contain TPH/G, BTEX, MTBE, TPH/D, PNAs, or chlorinated solvents at concentrations in excess of laboratory detection limits. TPH/O was detected at a concentration of 430 milligrams per kilogram (mg/kg). Low concentrations of lead, arsenic, cadmium, chromium, nickel and zinc were also detected.

The soil sample collected from boring MW-3 at 7 feet bgs did not contain TPH/G, BTEX, MTBE, TPH/D, PNAs, or chlorinated solvents at concentrations in excess of laboratory detection limits. TPH/O was detected at a concentration of 23 mg/kg. Low concentrations of arsenic, lead, chromium, nickel and zinc were detected; cadmium was not detected.

The soil sample collected from boring MW-4 at 5 feet bgs did not contain TPH/G, BTEX, MTBE, TPH/D, PNAs, or chlorinated solvents at concentrations in excess of laboratory detection limits. TPH/O was detected at a concentration of 13 mg/kg. Low concentrations of arsenic, lead, chromium, nickel and zinc were detected; cadmium was not detected.

The soil sample collected from boring MW-5 at 5 feet bgs did not contain TPH/G, BTEX, MTBE, TPH/D, PNAs, or chlorinated solvents at concentrations in excess of laboratory detection limits. TPH/O was

detected at a concentration of 390 mg/kg. Low concentrations of arsenic, lead, chromium, nickel and zinc were detected; cadmium was not detected.

The soil sample collected from boring MW-6 at 5 feet bgs did not contain TPH/G, BTEX, MTBE, TPH/D, PNAs, or chlorinated solvents at concentrations in excess of laboratory detection limits. TPH/O was detected at a concentration of 82 mg/kg. Low concentrations of arsenic, lead, chromium, nickel and zinc were detected; cadmium was not detected.

### 6.6 LABORATORY ANALYTICAL RESULTS OF GROUNDWATER SAMPLES

The groundwater sample collected from monitoring well MW-1 did not contain TPH/G, BTEX, MTBE, TPH/O, or chlorinated solvents at concentrations in excess of laboratory detection limits. TPH/D was detected at a concentration of 0.66 milligrams per liter (mg/L). The PNAs acenaphthene, fluorene, and phenanthrene were detected at concentrations of 85 micrograms per liter (ug/L), 15 ug/L, and 34 ug/L, respectively. Arsenic and nickel were detected at concentrations of 0.004 mg/L and 0.01 mg/E, respectively. Cadmium, chromium, lead, and zinc were not detected at concentrations in excess of laboratory detection limits.

The groundwater sample collected from monitoring well MW-2 did not contain TPH/G, BTEX, MTBE, PNAs, chlorinated solvents, or the analyzed metals at concentrations in excess of laboratory detection limits. TPH/D and TPH/O were detected at concentrations of 1.6 mg/L and 0.3 mg/L, respectively.

The groundwater sample collected from monitoring well MW-3 did not contain TPH/G, BTEX, MTBE, TPH/0, PNAs, or chlorinated solvents at concentrations in excess of laboratory detection limits. TPH/D was detected at a concentration of 0.58 mg/L. Arsenic and nickel were detected at concentrations of 0.034 mg/L and 0.02 mg/L, respectively. Lead, cadmium, chromium, and zinc were not detected.

The groundwater sample collected from monitoring well MW-4 did not contain TPH/G, BTEX, MTBE, TPH/D, TPH/O, PNAs, or chlorinated solvents at concentrations in excess of laboratory detection limits. Arsenic was detected at a concentration of 0.003 mg/L. Cadmium, chromium, lead, nickel and zinc were not detected.

The groundwater sample collected from monitoring well MW-5 did not contain TPH/G, BTEX, MTBE, TPH/O, PNAs, or chlorinated solvents at concentrations in excess of laboratory detection limits. TPH/D was detected at a concentration of 0.44 mg/L. Arsenic was detected at a concentration of 0.006 mg/L. Cadmium, chromium, lead, nickel and zinc were not detected.

The groundwater sample collected from monitoring well MW-6 did not contain TPH/G, BTEX, MTBE, TPH/O, PNAs, or chlorinated solvents at concentrations in excess of laboratory detection limits. TPH/D was detected at a concentration of 0.23 mg/L. Arsenic was detected at a concentration of 0.006 mg/L. Cadmium, chromium, lead, nickel and zinc were not detected.

#### 7.0 CONCLUSIONS

LAW observed the installation of six monitoring wells at the Days Inn Hotel facility in Emeryville, California. We confirmed during a site reconnaissance that a diesel UST was not associated with the building's emergency generator, as previously reported by McLaren/Hart. Soil samples were collected during the installation of the monitoring wells. Groundwater samples were collected from the six wells following installation and development of the monitoring wells.

Soil boring activities indicated that soils from the ground surface to approximately 10 feet bgs consisted of fill materials consisting clay, silt, sand, and gravel with pieces of bricks and concrete. Bay Muds were encountered at depths greater than 10 to 12 feet bgs.

Based on the depth to water measurements and the monitoring well casing elevations, groundwater beneath the subject property was calculated to flow in a northerly direction. Tidal forces may influence the groundwater gradient at the site.

Soil samples collected from the monitoring well borings did not contain concentrations of TPH/G, BETX, MTBE, TPH/D, PNAs, or chlorinated solvents. Some of the samples contained relatively low concentrations of TPH/O. The highest concentration detected was 430 mg/kg in the soil sample collected from boring MW-2 at 5 feet bgs. Low concentrations of the metals arsenic, cadmium, chromium, lead, nickel and zinc were also detected in the soil samples. The detected metals concentrations are below their

respective Preliminary Remediation Goals (PRGs) for residential properties, as promulgated by the Region IX EPA, dated September 1, 1995. PRGs have not been developed for TPH/O.

TPH/G, BTEX, MTBE, and chlorinated solvents were not detected in any of the monitoring well groundwater samples at concentrations in excess of laboratory detection limits. Groundwater samples collected from the monitoring wells indicated the presence of low concentrations (less than 2 mg/L) of TPH/D. TPH/O was detected at a concentration of 0.3 mg/L in monitoring well MW-2. The PNAs acenaphthene, fluorene, and phenanthrene were detected at concentrations of 85 ug/L, 15 ug/L, and 34 ug/L, respectively, in monitoring well MW-1; PNAs were not detected in the other monitoring wells. The detected concentrations are below their respective PRGs for residential properties, as promulgated by the Region IX EPA, dated September 1, 1995. PRGs have not been established for TPH/D or TPH/O in groundwater.

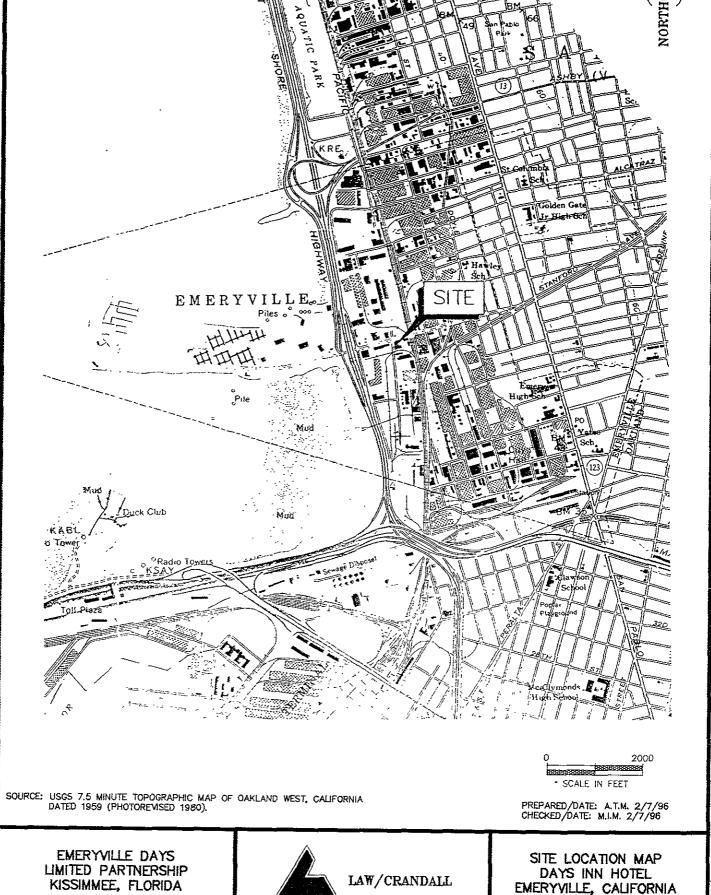
Arsenic was detected in groundwater samples collected from monitoring wells MW-1, MW-3, MW-4, MW-5, and MW-6 at concentrations up to 0.034 mg/L. The concentrations detected are above the PRGs for tap water. The detected arsenic concentrations may represent background levels; arsenic is not a constituent of concern at the site. Nickel was detected in groundwater samples collected from MW-1 and MW-3 at concentrations of 0.01 mg/L and 0.02 mg/L, respectively; the detected concentrations are below the PRGs. Cadmium, chromium, lead, and zinc were not detected in the groundwater samples at concentrations in excess of laboratory detection limits.

Based on the analytical data, it appears that relatively low levels of hydrocarbon soil and groundwater impacts from either on-site or off-site sources, including fill material, are present at the site. PNAs were also detected in groundwater collected from monitoring well MW-1 on the eastern portion of the site. Low concentrations of several metals were also detected in soil and groundwater at the site. The hydrocarbon concentrations detected during this assessment appear to be significantly lower than those detected by McLaren/Hart in their 1993 assessments.

# 8.0 RECOMMENDATIONS

LAW recommends that the existing monitoring wells be sampled one additional time to monitor constituent migration patterns and to evaluate variations in groundwater quality. The groundwater sample analyses should be limited to TPH/O and TPH/D. The report should be submitted to Alameda County Health Care Services.

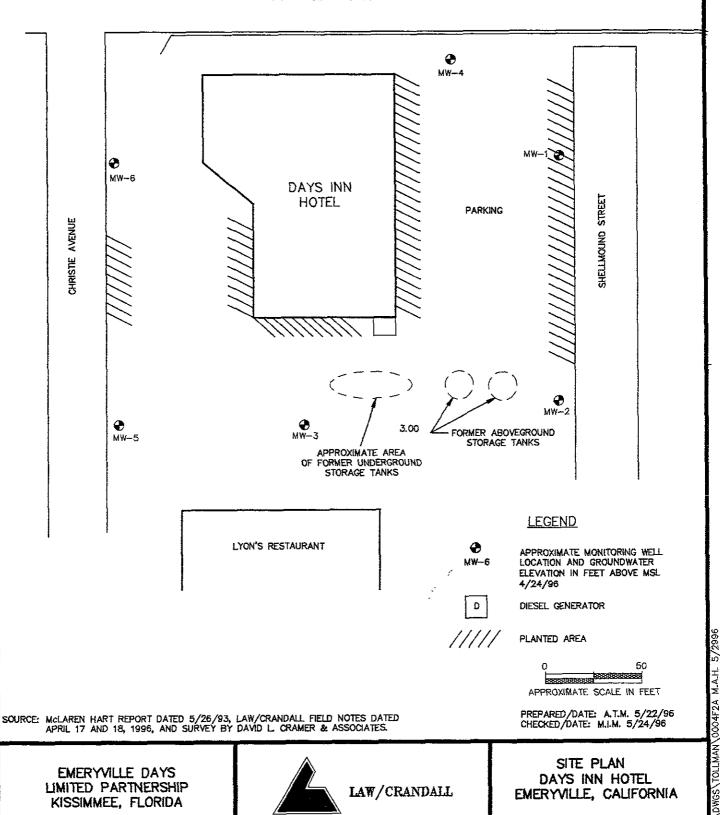
**FIGURES** 



\DWGS\TOLLMAN\0004F1 M.A.H. 2/22/96

PROJECT: 70424-6-0004

POWELL STREET BRIDGE



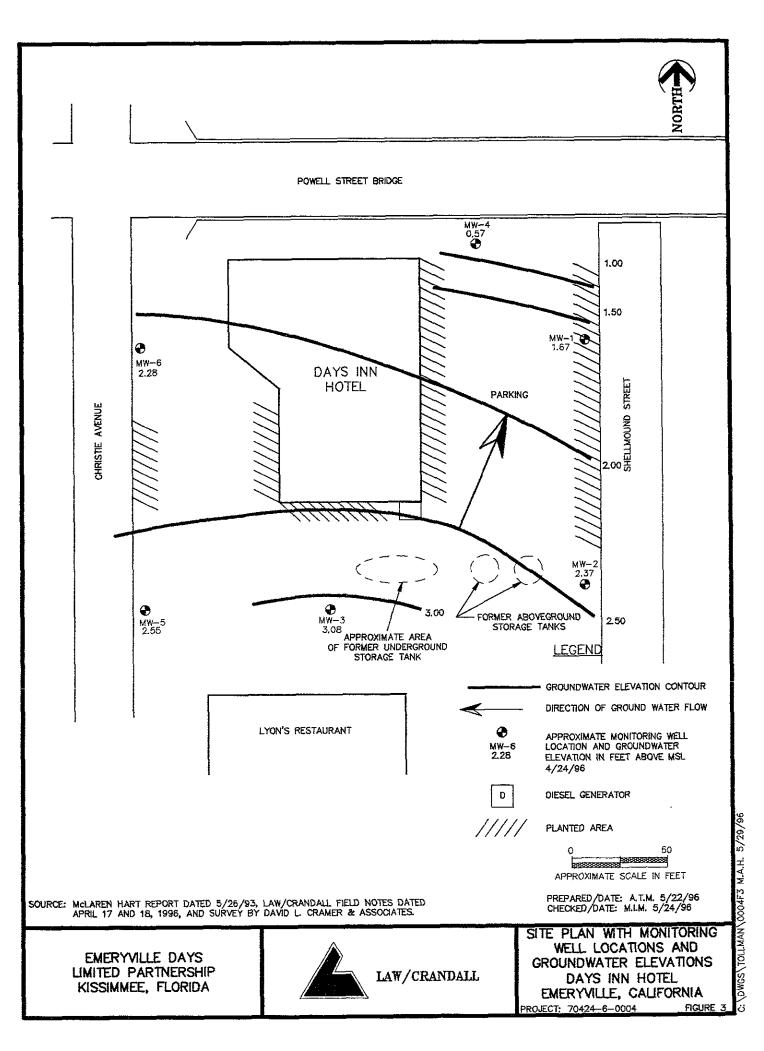
**EMERYVILLE DAYS** LIMITED PARTNERSHIP KISSIMMEE, FLORIDA



LAW/CRANDALL

SITE PLAN DAYS INN HOTEL EMERYVILLE, CALIFORNIA

PROJECT: 70424-6-0004



**TABLES** 

Table 1: Groundwater Elevation Data

Monitoring Well	Well Depth (feet)	Depth to Groundwater (1) (feet)	Well Casing Elevation (2) (feet)	Groundwater Elevation (2) (feet)
MW-1	14.9	6.72	8.39	1.67
MW-2	14.95	6.43	8.8	2.37
MW-3	14.9	6.41	9.49	3.08
MW-4	19.9	7.39	7.96	0.57
MW-5	15	7.49	10.04	2.55
MW-6	20	6.77	9.05	2.28

#### Notes:

- 1) All measured from top of PVC well casing.
- 2) Relative to feet above mean sea level (MSL) datum.

Table 2 - Summary of Soil Sample Analytical Results - TPH/G, TPH/D, TPH/O and BTEX

Sample Number	TPH/G	TPH/D	TPH/O	Benzene	Toluene	Ethylbenzene	Xylenes
Laboratory Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MW-1 @ 5'	ND	ND	ND	ND	ND	ND	ND
MW-2 @ 5'	ND	ND	430	ND	ND	ND	ND
MW-3 @ 7'	ND	ND	23	ND	ND	ND	ND
MW-4 @ 5'	ND	ND	13	ND	ND	ND	ND
MW-5 @ 5'	ND	ND	390	ND	ND	ND	ND
MW-6 @ 5'	ND	ND	82	ND	ND	ND	ND

Note MW-1 @ 5' - Indicates Monitoring Well Boring and Sample Depth

mg/kg = milligrams per kilogram

ND - Not Detected at or above laboratory detection limits

Table 3 - Summary of Soil Sample Analytical Results - Selected Metals

Sample Number	Arsenic	Cadmium	Chromium	Lead (1)	Nickel	Zinc
Laboratory Units	mg/kg	mg/kg	mg/kg	mg/l	mg/kg	mg/kg
MW-1 @ 5'	2	ND	27	0.1	32	46
MW-2 @ 5'	8.3	0.4	25	2.6	36	170
MW-3 @ 7'	1.6	ND	35	0.9	45	59
MW-4 @ 5'	4.9	ND	29	0.3	35	35
MW-5 @ 5'	1.8	ND	27	2.1	23	46
MW-6 @ 5'	1.4	ND	23	4.6	13	31

Note MW-1 @ 5- Indicates Monitoring Well Boring and Sample Depth

mg/kg = milligrams per kilogram

mg/l = milligrams per liter

(1) = Analyzed using California WET

ND - Not Detected at or above laboratory detection limits

Table 4 - Summary of Groundwater Analytical Results - TPH/G, TPH/D, TPH/O and BTEX

Monitoring Well No.	TPH/G	TPH/D	TPH/O	Benzene	Toluene	Ethylbenzene	Xylenes	M
Laboratory Units	mg/L	mg/L	mg/L	ug/l	ug/l	ug/L	ug/L	<u> </u>
MW-1	ND	0.66 -	ND	ND	ND	ND	ND	ne
MW-2	ND	1.6	0.3	ND	ND	ND	ND	JD O
MW-3	ND	0.58	ND	ИD	ND	ND	ND	D/ND
MW-4	ND	ND	ND	ND	ND	ND	ND	ND
MW-5	ND	0.44	ND	ND	ND	ND	ND	MA
MW-6	ND	0.23	ND	ND	ND	ND	ND	ND

Note MW-1 - Indicates Monitoring Well No. 1

mg/l = milligrams per liter

ug/l = micrograms per liter

ND - Not Detected at or above laboratory detection limits

Table 5 - Summary of Groundwater Analytical Results - Selected Metals

Monitoring Well No.	Arsenic	Cadmium	Chromium	Lead	Nickel	Zin
Laboratory Units	mg/l	mg/l	mg/l	mg/l	mg/l	mg
MW-1	0.004	ND	ND	ND	0.01	NI
MW-2	ND	ND	ND	ND	ND	NI
MW-3	0.034	ND	ND	ND	0.02	NI
MW-4	0.003	ND	ND	ND	ND	NI
MW-5	0.006	ND	ND	ND	ND	NI
MW-6	0.006	ND	ND	ND	ND	NI

Note MW-1 - Indicates Monitoring Well No. 1

mg/l = milligrams per liter

ND - Not Detected at or above laboratory detection limits

APPENDIX A

**PERMITS** 



mit and Alemeda County Ordinance No. 73-58.

AFPLICANT'S SRUTAN

# ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

5997 PARKSIDE DRIVE

PLEASANTON, CALIFORNIA 94588

(445) 484-2600

121969

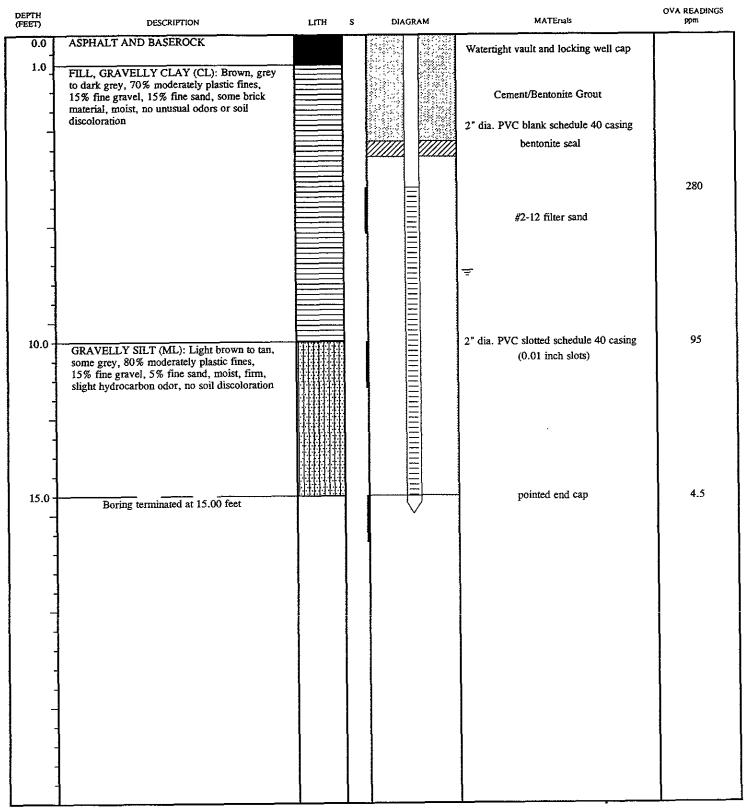
GROUNDWATER PROTECTION ORDINANCE PERMIT APPLICATION 4 50-462-89.4

FOR APPLICANT TO COMPLETE	FOR OFFICE USE
EUGATION OF PROJECT Days Two Note!	PERMIT NUMBER 96274
1603 Fowest stated	LOCATION NUMBER
Empry ville, Cacitarain	
	•
CLIENT	
TOTO FEMAL YHINE Days Lameted Portoce SHIPD	PERMIT CONDITIONS
idress 5020 pt. St. 6 Barren Ct. Phone	•
City Estimate Franks 210 34746	Circled Permit Requirements Apply
PLICANT	•
tong Law la August	A. GENERAL
	L. A permit application should be submitted so as to
dress \$75 Balleau St. Phone (415) \$74-2540	arrive at the Zone 7 office five days prior to
ty San Francisco CE 210 9414	proposed starting date.
•	2. Submit to Zone 7 mithin 60 days after completion
TIPE OF PROJECT	of permitted work the original Department of
il Construction Geotechnical Investigation	Water Resources Water Well Drillers Report or
Cathodic Protection General Nater, Supply Contemination	equivalent for well projects, or drilling logs
Monitoring X Well Destruction	and location skatch for geotechnical projects.
A MOLL DESTRUCTION	3. Permit is void it project not begun within 90
PROPOSED WATER SUPPLY WELL USE	Cays of approval date.  (8.) WATER WELLS, INCLUDING PIEZOMETERS
Demostic Industrial Other	1. Minimum surface sest thickness is two inches of
nicipal irrigation	cenent grout placed by treate.
	2. Minimum seal depth is 50 feet for municipal and
DRILLING METHOD:	industrial wells or 20 feet for demestic and
Rotary Air Rotary Auger X	irrigation wells unless a lasser depth 1s
ble <u>Other</u>	specially approved. Minimum seel depth for
	monitoring wells is the maximum depth practicable
TILLER'S LICENSE NO. # 374152	or 20 feet.
WELL PROJECTS	C. GEOTECHNICAL. Beckfill bors hole with compacted out-
Drill Hole Diemeter & in. Meximum	tings or heavy bentonite and upper two feet with com-
Costing Dismeter 2 in. Depth 76 ff.	pected meterial. In areas of known or suspected
Surface Seal Depth & ft. Number	contemination, transled coment grout shall be used in piace of compacted outlings.
	D_ CATHODIC. Fill hole above anode zone with concrete
erotechnical projects	bisced by treate.
Number of Sorings Maximum	E. WELL DESTRUCTION. See attached.
Hole Diemeter in. Depth ff	•
FIMATED STATING DATE 4/15/94	
TIMATED STARTING DATE 4/15/96 TIMATED COMPLETION DATE 5/15/96	
Lineraby eares to comply with all requirements of this	

APPENDIX B

**BORING LOGS** 

#### MW-1 TEST BORING RECORD



#### REMARKS:

- 1) Borings advanced using 8-inch diameter hollow stem augers.
- 2) = Groundwater encountered at a depth of approximately 7 feet bgs.
- 3) = Groundwater stabilized at a depth of 6.72 bgs.
- 4) Lith = Soil Lithology

5) S = Soil sample collected for analysis

DRILLED BY LOGGED BY CHECKED BY BAYLAND ATM MIM

BORING NUMBER DATE STARTED DATE COMPLETED JOB NUMBER MW-1 4/17/96 4/17/96 70424-6-0004



#### MW-2 TEST BORING RECORD

DEPTH (FEET)	DESCRIPTION	LITH	s	DIAGRAM	1	MATERIALS	OVA READINGS ppm
0.0	ASPHALT AND BASEROCK				71.24 577	Watertight vault and locking well cap	
	FILL, BASEROCK WITH SANDY SILT (ML): Dark brown, 50% moderately plastic fines, 30% angular gravel, 205 fine to medium sand, slightly moist, no unusual odors or soil discoloration.		1			Cement/bentonite grout  2* dia. PVC blank schedule 40 casing bentonite seal	
4.0	FILL, SANDY CLAY (CL): Dark brown to black, 70% moderately plastic fines, 15% fine sand, 15% gravels and concrete, brick material, moist, slight hydrocarbon odor, no soil discoloration					╤= #2/12 sand	1.0
-						2" dia. PVC slotted schedule 40 casing (0.01 inch slots)	200
12.0 ]	SANDY SILT (ML): Light brown, some grey mottling, 90% moderately plastic fines, 10% fine sand, trace gravel, moist, firm, no unusual odors or soil discoloration						
15.0	Boring terminated at 15.00 feet					pointed end cap	3.4
				<u></u>			

#### REMARKS:

1) Borings advanced using 8-inch hollow stemm augers.

2) = Groundwater encountered at a depth of approximately 6.5 feet bgs

3)= Groundwater stabilized at a depth of approximately 6.5 feet bgs

4) Lith = Soil lithology

5) S = Soil sample collected for analysis

DRILLED BY LOGGED BY CHECKED BY

ATM MIM

BAYLANDS BORING NUMBER DATE STARTED DATE COMPLETED JOB NUMBER

MW-2 4/18/96 4/18/96 70424-6-0004



#### MW-3 TEST BORING RECORD

DEPTH (FEET)	DESCRIPTION	LITH	s	DIAGR	AM	MATERIALS	OVA READINGS ppm
0.0	ASPHALT AND BASEROCK					Watertight vault and locking well cap	-
1.0	FILL, SANDY CLAY (CL): Dark brown to black, 80% moderately plastic fines, 10% fine sand, 10% coarse gravel and brick fragments, moist, no unusual odors or soil discoloration					Cement/Bentonite Grout  2" dia. PVC blank schedule 40 casing bentonite seal	
- -	NOTE: BRICK FRAGMENTS AND CONCRETE IN FILL SOIL		!			<del>=</del> ∵ #2-12 filter sand	110
- -	NOTE: COLOR CHANGE TO BLACK, SLIGHT ORGANIC ODOR IN SOIL					2"dia. PVC slotted schedule 40 casing (0.01 inch slots)	330
13.0	SANDY SILT (ML): Tan with grey mottling, 90% moderately plastic fines, 10% fine sand, moist, firm, no unusual odors or soil discoloration  Boring terminated at 15.00 feet					pointed end cap	16
-	Bornig terminated at 13.00 feet				,		
_							

#### REMARKS:

- 1) Borings advanced using 8-inch diameter hollow stem augers
- 2) = Groundwater encountered at a depth of approximately 7 feet bgs.
- 3) = = Groundwater stabilized at a depth of 6.4 feet bgs
- 4) Lith = Soil lithology
- 5) S = Soil sample collected for analysis

DRILLED BY LOGGED BY CHECKED BY

ATM MIM

BAYLANDS BORING NUMBER DATE STARTED DATE COMPLETED JOB NUMBER

MW-3 4/18/96 4/18/96 70424-6-0004



#### MW-4 TEST BORING RECORD

DEPTH (FEET)	DESCRIPTION	LITH	s	DIAG	RAM	MATERIALS	OVA READINGS ppm
0.0	ASPHALT AND BASEROCK					Watertight vault and locking well cap	
1.0	FILL, GRAVELLY SILT (ML): Grey brown to dark brown, 85% moderately plastic fines, 15% fine gravel, trace sand, moist, no unusual odors or soil discoloration.					Cement/bentonite grout	
3.5	ET I CANDY CLAY (CL) Dock groups	11111111		77777	777777	2" dia. PVC blank schedule 40 casing bentonite seal	
	FILL, SANDY CLAY (CL): Dark grey to black, 80% moderately plastic fines, 10% fine sand, 10% angular gravel, moist, firm, no unusual odors or soil discoloration					#2-12 filter sand	220 300
13.0	SANDY SILT (ML): Tan to medium brown, some rust color, 80% moderately plastic					2" dia. PVC slotted schedule 40 casing (0.01 inch slots)	
1	fines, 20% fine sand, moist, no unusual odors or soil discoloration						2
20.0	SILTY CLAY (CL): Light grey brown, some rust color, 95% moderately plastic fines, trace fine sand, moist, no unusual odors or soil discoloration  Boring terminated at 20.00 feet					pointed end cap	
		<u> </u>	_		-		<u>                                     </u>

#### REMARKS:

- 1) Borings advanced using 8-inch diameter hollow stem augers.
- 2) = Groundwater encountered at a depth of approximately 6.5 feet bgs.
- 3) = Groundwater stabilized at a depth of 7.4 feet bgs.
- 4) Lith = Soil lithology
- 5) S = Soil sample collected for analysis

DRILLED BY LOGGED BY CHECKED BY

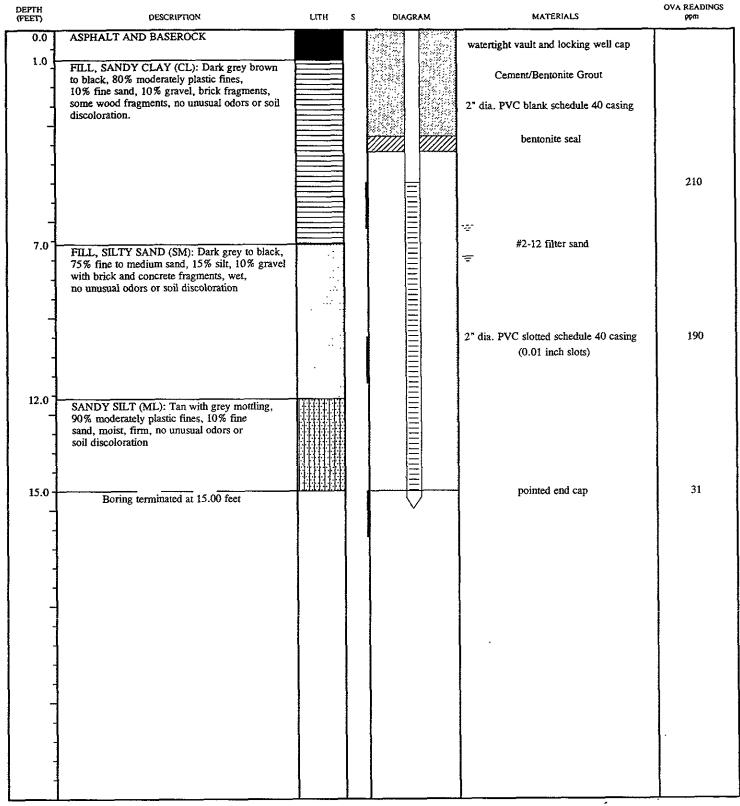
ATM MIM

BAYLANDS BORING NUMBER DATE STARTED DATE COMPLETED JOB NUMBER

MW-4 4/17/96 4/17/96 70424-6-0004



#### MW-5 TEST BORING RECORD



#### REMARKS:

1) Borings advanced using 8-inch diameter hollow stem augers.

2) = Groundwater encountered at a depth of approximately 6.5 feet bgs.

3)  $\equiv$  = Groundwater stabilized at a depth of 7.49 feet bgs.

4) Lith = Soil lithology

5) S = Soil sample collected for analysis

DRILLED BY LOGGED BY CHECKED BY

ATM MIM

BAYLANDS BORING NUMBER DATE STARTED DATE COMPLETED JOB NUMBER

MW-5 4/18/96 4/18/96 70424-6-0004



#### MW-6 TEST BORING RECORD

DEPTH (FEET)	DESCRIPTION	LITH	\$	DIAGRAM	MATERIALS	OVA READINGS
1.0	ASPHALT AND BASEROCK  FILL, GRAVELLY SANDY SILT (ML): Medium brown, 80% moderately plastic fines, 15% fine to medium angular gravel, 5% fine sand, some brick fragments, moist, no unusual				Watertight vault and locking well cap Cement/Bentonite Grout 2" dia. PVC blank schedule 40 casing	
3.0_	odors or soil discoloration.  Fill, SAND (SP) Brown to grey, fine sand, moist, no unusual odors or soil discoloration.				Bentonite Seal	
4.0	FILL, GRAVELLY SILTY SAND (SW): Medium to dark brown, some grey, some brick, 60% medium sand, 20% angular gravel to 1/2", 20% moderately plastic fines, moist, no unusual odors or soil discoloration				= #2-12 filter sand	1.0
9.0	FILL, SANDY CLAY (CL): grey to greenish grey, 80% moderately plastic fines, 15% fine sand, trace to 5% fine gravel, some brick material, wet, no unusual odors or soil discoloration					30
12.0	SANDY SILT (ML): Dark grey to black, 80% low plasticity fines, 20% fine sand, trace fine gravel, wet, slight organic odor, no soil discoloration.				2" dia. PVC slotted schedule 40 casing	
15.0	SILTY CLAY (CL): Greenish grey with light brown, 95% moderately plastic fines, trace to 5% fine sand, moist, firm, no unusual odors or soil discoloration.					20
20.0 - - - - - - -	Boring terminated at 20.00 feet				pointed end cap	4
REMARKS		<u>                                      </u>	Ц	DRILLED BY	BAYLANDS BORING NUMBER	MW-6

## REMARKS:

- 1) Borings advanced using 8-inch diamter hollow stem augers
- 2) = Groundwater encountered at a depth of approximately 6 feet bgs.
- 3)  $\equiv$  = Groundwater stabilized at a depth of 6.77 feet bgs.
- 4) Lith = Soil lithology
- 5) S = Soil sample collected for analysis

DRILLED BY LOGGED BY CHECKED BY

ATM MIM

BAYLANDS BORING NUMBER DATE STARTED DATE COMPLETED JOB NUMBER

MW-6 4/17/96 4/17/96 70424-6-0004



# APPENDIX C

LABORATORY ANALYTICAL REPORT

# American Environmental Network

ERTHINIDEDE ANDVANSES

DOHS Certification: 1172

AIHA Accieditation, 11124

PAGE 1

LAW/CRANDALL, INC. 875 BATTERY ST.

SAN FRANCISCO, CA 94111-1513

ATTN: ANDREW T. MUHA

CLIENT PROJ. ID: 70424-6-0004 CLIENT PROJ. NAME: DAYS INN REPORT DATE: 05/08/96

DATE(S) SAMPLED: 04/17/96-04/18/96

DATE RECEIVED: 04/18/96

AEN WORK ORDER: 9604258

#### PROJECT SUMMARY:

On April 18, 1996, this laboratory received 20 soil sample(s).

Client requested 6 sample(s) be analyzed for chemical parameters; fourteen samples were placed on hold. Results of analysis are summarized on the following page(s). Please see quality control report for a summary of QC data pertaining to this project.

Samples will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Samples may be archived by prior arrangement.

If you have any questions, please contact Client Services at (510) 930-9090.

Larry Klein

Laboratory Director

#### LAW/CRANDALL, INC.

SAMPLE ID: MW1 @ 5'
AEN LAB NO: 9604258-01
AEN WORK ORDER: 9604258

CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/17/96 DATE RECEIVED: 04/18/96 REPORT DATE: 05/08/96

REPORTING DATE METHOD/ UNITS **ANALYZED** LIMIT CAS# RESULT ANALYTE Extrn Date 04/23/96 CA Title 22 #CA Waste Extraction EPA 8020 BTEX & Gasoline HCs 04/26/96 5 ug/kg 71-43-2 ND Benzene 04/26/96 5 ug/kg ND 108-88-3 Toluene. 5 ug/kg 5 ug/kg 04/26/96 100-41-4 ND Ethy1benzene 04/26/96 1330-20-7 ND Xylenes, Total 0.2 mg/kg04/26/96 ND 5030/GCFID Purgeable HCs as Gasoline 04/26/96 50 ug/kg Methyl t-Butyl Ether ND EPA 8020 04/24/96 Extrn Date EPA 3550 #Extraction for TPH 04/26/96 1 mg/kgND GC-FID TPH as Diesel 04/26/96 5 mg/kg GC-FID ND TPH as Oil 0.1 mg/L04/29/96 0.1 \* Lead in WET Extract EPA 7420 04/23/96 Prep Date EPA 3050 #Digestion, Metals by GFAA 04/24/96 2.0 \* 0.5 mg/kgEPA 7060 Arsenic 04/23/96 Prep Date #Digestion, Metals AA/ICP EPA 3050 04/24/96 0.2 mg/kgFPA 6010 ND Cadmium 0.5 mg/kg04/24/96 27 \* EPA 6010 Chromium 1 mg/kg04/24/96 EPA 6010 32 \* Nickel 1 mg/kg 04/24/96 46 \* EPA 6010 Zinc 04/24/96 Extrn Date EPA 3550 #Extraction for PNAs EPA 8270 PNAs by EPA 8270 330 ug/kg 05/03/96 ND 83-32-9 Acenaphthene 05/03/96 330 ug/kg ND Acenaphthy lene 208-96-8 05/03/96 330 ug/kg Anthracene 120-12-7 ND 05/03/96 56-55-3 ND 330 ug/kg Benzo(a)anthracene 05/03/96 330 ua/ka 205-99-2 ND Benzo(b)fluoranthene 05/03/96 330 ug/kg 207-08-9 ND Benzo(k)fluoranthene

## LAW/CRANDALL, INC.

SAMPLE ID: MW1 @ 5' AEN LAB NO: 9604258-01 AEN WORK ORDER: 9604258 CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/17/96 DATE RECEIVED: 04/18/96 REPORT DATE: 05/08/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UN	DATE NITS ANALYZED
Benzo(g,h,i)perylene	191-24-2	ND	330 ug/kg	
Benzo(a)pyrene	50-32-8	ND	330 ug/kg	g 05/03/96
Chrysene	218-01-9	ND	330 ug/kg	9 05/03/96 9 05/03/96
Dibenzo(a.h)anthracene	53-70-3	DM DN	330 ug/kg 330 ug/kg	05/03/96
Fluoranthene	206-44-0 86-73-7	ND ND	330 ug/kg	05/03/96
Fluorene Indeno(1,2,3-cd)pyrene	193-39-5	ND	330 ug/kg	05/03/96
Naphthalene	91-20-3	ND	330 ug/kg	05/03/96
Phenanthrene	85-01-8	ND	330 ug/kg	05/03/96
Pyrene	129-00-0	ND	330 ug/kg	g 05/03/96
EPA 8010 - Soil matrix	EPA 8010			
Bromodichloromethane	75-27-4	ND	5 ug/kg	
Bromoform	75-25-2	ND	5 ug/kg	g 04/25/96
Bromomethane	74-83-9	ND	20 ug/k	
Carbon Tetrachloride	56-23-5	ND	5 ug/k	g 04/25/96
Chlorobenzene	108-90-7	ND	5 ug/k	
Chloroethane	75-00-3	ND	20 ug/k 5 ug/k	
2-Chloroethyl Vinyl Ether	110-75-8	ND ND	5 ug/k	
Chloroform Chloromothano	67-66-3 74-87-3	ND	20 ug/k	
Chloromethane Dibromochloromethane	124-48-1	ND	5 ug/k	
1,2-Dichlorobenzene	95-50-1	ND	5 ug/k	g 04/25/96
1.3-Dichlorobenzene	541-73-1	ND	5 ug/k	
1.4-Dichlorobenzene	106-46-7	ND	5 ug/k	g 04/25/96
Dichlorodifluoromethane	75-71-8	ND	20 ug/k	g 04/25/96
1,1-Dichloroethane	75-34-3	ND	5 ug/k	g 04/25/96
1.2-Dichloroethane	107-06-2	ND	5 ug/k	g 04/25/96
1,1-Dichloroethene	75-35-4	ND	5 ug/k	g 04/25/96
cis-1.2-Dichloroethene	156-59-2	ND	5 ug/k	g 04/25/96 a 04/25/96
trans-1.2-Dichloroethene	156-60-5	ND	5 ug/k	<i>J</i>
1.2-Dichloropropane	78-87-5	ND ND	5 ug/k 5 ug/k	
cis-1,3-Dichloropropene	10061-01-5 10061-02-6	ND ND	5 ug/k	9
trans-1,3-Dichloropropene Methylene Chloride	75-09-2	ND	20 ug/k	
1,1,2,2-Tetrachloroethane	79-34-5	ПD	5 ug/k	
Tetrachloroethene	127-18-4	ND	5 ug/k	ğ 04/25/96
1,1,1-Trichloroethane	71-55-6	ND	5 ug/k	g 04/25/96
1,1,2-Trichloroethane	79-00-5	ND	5 ug/k	g 04/25/96
Trichloroethene	79-01-6	ND	5 ug/k	
Trichlorofluoromethane	75-69-4	ND	2 <u>0</u> ug/k	
1.1.2Trichlorotrifluoroethan		ND	5 ug/k	
Vinyl Chloride	75-01-4	ND	20 ug/k	cg 04/25/96

## LAW/CRANDALL, INC.

SAMPLE ID: MW1 @ 5'
AEN LAB NO: 9604258-01
AEN WORK ORDER: 9604258
CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/17/96 DATE RECEIVED: 04/18/96 REPORT DATE: 05/08/96

METHOD/ REPORTING DATE
ANALYTE CAS# RESULT LIMIT UNITS ANALYZED

#### LAW/CRANDALL, INC.

SAMPLE ID: MW2 @ 5' AEN LAB NO: 9604258-04 AEN WORK ORDER: 9604258

CLIENT PROJ. ID: 70424-6-0004

**DATE SAMPLED: 04/18/96** DATE RECEIVED: 04/18/96 REPORT DATE: 05/08/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#CA Waste Extraction	CA Title 22	-		Extrn Date	04/23/96
BTEX & Gasoline HCs Benzene Toluene Ethylbenzene Xylenes, Total Purgeable HCs as Gasoline	FPA 8020 71-43-2 108-88-3 100-41-4 1330-20-7 5030/GCFID	ND ND ND ND	5 5 5	ug/kg ug/kg ug/kg ug/kg mg/kg	04/27/96 04/27/96 04/27/96 04/27/96 04/27/96
Methyl t-Butyl Ether	EPA 8020	ND	50	ug/kg	04/27/96
#Extraction for TPH	EPA 3550	-		Extrn Date	04/24/96
TPH as Diesel	GC-FID	ND	5	mg/kg	04/26/96
TPH as Oil	GC-FID	430	* 20	mg/kg	04/26/96
Lead in WET Extract	EPA 7420	2.6	* 0.1	mg/L	04/29/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	04/23/96
Arsenic	EPA 7060	8.3	* 0.5	mg/kg	04/24/96
#Digestion, Metals AA/ICP	EPA 3050			Prep Date	04/23/96
Cadmium	EPA 6010	0.4	* 0.2	mg/kg	04/24/96
Chromium	EPA 6010	25	* 0.5	mg/kg	04/24/96
Nickel	EPA 6010	36	* 1	mg/kg	04/24/96
Zinc	EPA 6010	170	* 1	mg/kg	04/24/96
#Extraction for PNAs	EPA 3550	-		Extrn Date	04/24/96
PNAs by EPA 8270 Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b)fluoranthene Benzo(k)fluoranthene	EPA 8270 83-32-9 208-96-8 120-12-7 56-55-3 205-99-2 207-08-9	ND ND ND ND ND ND	66000 66000 66000 66000	ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg	05/03/96 05/03/96 05/03/96 05/03/96 05/03/96

## LAW/CRANDALL, INC.

SAMPLE ID: MW2 @ 5' AEN LAB NO: 9604258-04 AEN WORK ORDER: 9604258 CLIENT PROJ. ID: 70424-6-0004

**DATE SAMPLED:** 04/18/96 DATE RECEIVED: 04/18/96 REPORT DATE: 05/08/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Benzo(g,h,i)perylene	191-24-2	ND	66000 u	g/kg	05/03/96
Benzo(a)pyrene	50-32-8	ND	66000 u		05/03/96
Chrysene	218-01-9	ND	66000 u		05/03/96
Dibenzo(a.h)anthracene	53-70-3	ND	66000 u		05/03/96
Fluoranthene	206-44-0	ND	66000 u		05/03/96
Fluorene	86-73-7	ND	66000 u		05/03/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND	66000 u		05/03/96
Naphthalene	91-20-3	ND	66000 u		05/03/96
Phenanthrene	85-01-8	ND	66000 u		05/03/96
Pyrene	129-00-0	ND	66000 u	g/kg	05/03/96
EPA 8010 - Soil matrix E	PA 8010				
Bromodichloromethane	75-27-4	ND		g/kg	04/25/96
Bromoform	75-25-2	ND	5 u	g/kg	04/25/96
Bromomethane	74-83-9	ND	20 u	g/kg	04/25/96
Carbon Tetrachloride	56-23-5	ИĎ	5 น	g/kg	04/25/96
Chlorobenzene Chlorobenzene	108-90-7	ND	.5 u	ig/kg	04/25/96
Chloroethane	75-00-3	ND	2 <u>0</u> u	ig/kg	04/25/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	5 U	ig/kg	04/25/96
Chloroform	67-66-3	ND	5 U	ig/kg	04/25/96
Chloromethane	74-87-3	ND	20 0	ig/kg	04/25/96
Dibromochloromethane	124-48-1	ND	5 0	ıg/kg	04/25/96
1.2-Dichlorobenzene	95-50-1	ND	5 U	ig/kg	04/25/96 04/25/96
1.3-Dichlorobenzene	541-73-1	ND	5 L	ığ/kğ	04/25/96
1.4-Dichlorobenzene	106-46-7	ND	20 t	ig/kg	04/25/96
Dichlorodifluoromethane	75-71-8 75-34-3	ND ND	20 U	ıg/kg ıg/kg	04/25/90
1,1-Dichloroethane	107-06-2	ND ND	5 t	ig/kg ig/kg	04/25/90
1,2-Dichloroethane 1,1-Dichloroethene	75-35-4	ND ND	5 (	ig/kg ia/ka	04/25/9
cis-1,2-Dichloroethene	156-59-2	ND	5 1	ig/kg ig/kg	04/25/9
trans-1,2-Dichloroethene	156-60-5	ND	5 1	ig/kg	04/25/9
1.2-Dichloropropane	78-87-5	ND	5 1	ig/kg	04/25/9
cis-1,3-Dichloropropene	10061-01-5	ND	5 i	ig/kg	04/25/9
trans-1,3-Dichloropropene	10061-02-6	ND	5 i	ig/kg	04/25/9
Methylene Chloride	75-09-2	ND	20 i	ıg/kg :	04/25/9
1.1,2,2-Tetrachloroethane	79-34-5	ND	์ 5 เ	ığ/kg	04/25/9
Tetrachloroethene	127-18-4	ND	5ι	ug/kg	04/25/9
1.1.1-Trichloroethane	71-55-6	ND	5 เ	ug/kg	04/25/9
1.1.2-Trichloroethane	79-00-5	ND	5ι	ug/kg	04/25/9
Trichloroethene	79-01-6	ND	5 t	ıg∕kg	04/25/9
Trichlorofluoromethane	75~69-4	ND	20 ι	ug/kg	04/25/9
1,1,2Trichlorotrifluoroethane	76-13-1	ND		ug/kg	04/25/9
Vinyl Chloride	75-01-4	ND	20 ι	ug/kg	04/25/9

#### LAW/CRANDALL. INC.

SAMPLE ID: MW2 @ 5'
AEN LAB NO: 9604258-04
AEN WORK ORDER: 9604258

CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/18/96 DATE RECEIVED: 04/18/96 REPORT DATE: 05/08/96

KEI OKT DATE. 03/00/30

	METHOD/		REPORTING		DATE
ANALYTE	CAS#	RESULT	LIMIT	UNITS	ANALYZED

RL elevated for diesel due to high levels of target compounds: RLs elevated for EPA 8270 due to high levels of non-target compounds. Sample run at dilution.

## LAW/CRANDALL, INC.

SAMPLE ID: MW3 @ 7' AEN LAB NO: 9604258-07 AEN WORK ORDER: 9604258 CLIENT PROJ. ID: 70424-6-0004

**DATE SAMPLED: 04/18/96** DATE RECEIVED: 04/18/96 REPORT DATE: 05/08/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#CA Waste Extraction	CA Title 22	-		Extrn Date	04/23/96
BTEX & Gasoline HCs Benzene Toluene Ethylbenzene Xylenes, Total Purgeable HCs as Gasoline	EPA 8020 71-43-2 108-88-3 100-41-4 1330-20-7 5030/GCFID	ND ND ND ND	5 5 5	ug/kg ug/kg ug/kg ug/kg mg/kg	04/26/96 04/26/96 04/26/96 04/26/96 04/26/96
Methyl t-Butyl Ether	EPA 8020	ND	50	ug/kg	04/26/96
#Extraction for TPH	EPA 3550	-		Extrn Date	04/24/96
TPH as Diesel	GC-FID	ND	1	mg/kg	04/26/96
TPH as Oil	GC-FID	23	* 5	mg/kg	04/26/96
Lead in WET Extract	EPA 7420	0.9	* 0.1	mg/L	04/29/96
#Digestion, Metals by GFAA	EPA 3050	gan		Prep Date	04/24/96
Arsenic	EPA 7060	1.6	* 0.5	mg/kg	04/25/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	04/23/96
Cadmium	EPA 6010	ND	0.2	mg/kg	04/24/96
Chromium	EPA 6010	35	* 0.5	mg/kg	04/24/96
Nickel	EPA 6010	. 45	* 1	mg/kg	04/24/96
Zinc	EPA 6010	59	* 1	mg/kg	04/24/96
#Extraction for PNAs	EPA 3550	_		Extrn Date	04/24/9
PNAs by EPA 8270 Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b)fluoranthene Benzo(k)fluoranthene	EPA 8270 83-32-9 208-96-8 120-12-7 56-55-3 205-99-2 207-08-9	ND ND ND ND ND ND	3300 3300 3300 3300	ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg	05/03/9 05/03/9 05/03/9 05/03/9 05/03/9 05/03/9

## LAW/CRANDALL, INC.

SAMPLE ID: MW3 @ 7' AEN LAB NO: 9604258-07 AEN WORK ORDER: 9604258 CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/18/96 DATE RECEIVED: 04/18/96 REPORT DATE: 05/08/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Benzo(g,h,i)perylene	 191-24-2	ND	3300 ug	/ka	05/03/96
	50-32-8	ND	3300 ug.		05/03/96
	218-01-9	ND	3300 ug.	/kg	05/03/96
Dibenzo(a.h)anthracene	53-70-3	ND	3300 ug.	/kg	05/03/96
Fluoranthene	206-44-0	ND	3300 ug.	/kg	05/03/96
Fluorene	86-73-7	ND	3300 ug.	/kg	05/03/96
<pre>Indeno(1,2,3-cd)pyrene</pre>	193-39-5	ND	3300 ug.	/kg	05/03/96
Naphthalene	91-20-3	ND	3300 ug		05/03/96
Phenanthrene	85-01-8	ND	3300 ug		05/03/96
Pyrene	129-00-0	ND	3300 ug	/kg	05/03/96
EPA 8010 - Soil matrix EF	A 8010		_		0.1.405.405
Bromodichloromethane	75-27-4	ND	5 ug	/kg	04/25/96
Bromoform	75-25-2	ND	5 ug	/kg	04/25/96
Bromomethane	74-83-9	ND	2 <u>0</u> ug	/kg	04/25/96
Carbon Tetrachloride	56-23-5	ND	5 ug	/Kg	04/25/96 04/25/96
Chlorobenzene	108-90-7	ND	5 ug	/kg	04/25/96
Chloroethane	75-00-3	ND ND	20 ug 5 ug	/kg /ka	04/25/96
2-Chloroethyl Vinyl Ether	110-75-8	ND ND	5 ug	/kg	04/25/96
Chloroform	67-66-3 74-87-3	ND	20 ug	i/ka	04/25/96
Chloromethane Dibromochloromethane	124-48-1	ND	ร มด	ı/ka	04/25/96
1,2-Dichlorobenzene	95-50-1	ND	5 ug	ı/ka	04/25/96
1,3-Dichlorobenzene	541-73-1	ND	5 ug 5 ug 5 ug	i/ka	04/25/96
1.4-Dichlorobenzene	106-46-7	ND	5 uc	i/kg	04/25/96
Dichlorodifluoromethane	75-71-8	ND	20 ug 5 ug 5 ug 5 ug	j/kg	04/25/96
1.1-Dichloroethane	75-34-3	ND	5 ug	ı/kg	04/25/96
1.2-Dichloroethane	107-06-2	ND	5 ug	j/kg	04/25/96
1,1-Dichloroethene	75-35-4	ND	5 ug	₃/kg	04/25/96
cis-1,2-Dichloroethene	156-59-2	ND	5 ug 5 ug	g/kg	04/25/96
trans-1,2-Dichloroethene	156-60-5	ND	5 ug	J/kg	04/25/96
1,2-Dichloropropane	78-87-5	ND	5 ug		04/25/96
cis-1.3-Dichloropropene	10061-01-5	ND	5 ug		04/25/96
trans-1,3-Dichloropropene	10061-02-6	ND	5 ug		04/25/96 04/25/96
Methylene Chloride	75-09-2	ND		g/kg :	04/25/96
1.1.2.2-Tetrachloroethane	79-34-5	ND ND		g/kg g/kg	04/25/96
Tetrachloroethene	127-18-4	ND ND		g/kg	04/25/96
1,1,1-Trichloroethane	71-55-6 79-00-5	ND		g/kg	04/25/96
1.1.2-Trichloroethane	79-00-5 79-01-6	ND		g/kg	04/25/96
Trichloroethene	75-69-4	ND	20 u		04/25/96
Trichlorofluoromethane 1.1.2Trichlorotrifluoroethane		ND ND		g/kg	04/25/96
Vinyl Chloride	75-01-4	ND	20 u		04/25/96

#### LAW/CRANDALL, INC.

SAMPLE ID: MW3 @ 7 AEN LAB NO: 9604258-07 AEN WORK ORDER: 9604258

CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/18/96 DATE RECEIVED: 04/18/96

**REPORT DATE: 05/08/96** 

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED

RLs elevated for EPA 8270 due to high levels of non-target compounds. Sample run at dilution.

### LAW/CRANDALL, INC.

SAMPLE ID: MW4 @ 5' AEN LAB NO: 9604258-10 AEN WORK ORDER: 9604258 CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/17/96 DATE RECEIVED: 04/18/96 REPORT DATE: 05/08/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#CA Waste Extraction	CA Title 22	_		Extrn Date	04/23/96
BTEX & Gasoline HCs Benzene Toluene Ethylbenzene Xylenes, Total Purgeable HCs as Gasoline	EPA 8020 71-43-2 108-88-3 100-41-4 1330-20-7 5030/GCFID	ND ND ND ND ND	5 5 5	ug/kg ug/kg ug/kg ug/kg mg/kg	04/27/96 04/27/96 04/27/96 04/27/96 04/27/96
Methyl t-Butyl Ether	EPA 8020	ND	50	ug/kg	04/27/96
#Extraction for TPH	EPA 3550	-		Extrn Date	04/24/96
TPH as Diesel	GC-FID	ND	1	mg/kg	04/26/96
TPH as Oil	GC-FID	13	* 5	mg/kg	04/26/96
Lead in WET Extract	EPA 7420	0.3	* 0.1	mg/L	04/29/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	04/24/96
Arsenic	EPA 7060	4.9	* 0.5	mg/kg	04/25/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	04/23/96
Cadmium	EPA 6010	ND	0.2	mg/kg	04/24/96
Chromium	EPA 6010	29	* 0.5	mg/kg	04/24/96
Nickel	EPA 6010	.35	* 1	mg/kg	04/24/96
Zinc	EPA 6010	35	* 1	mg/kg	04/24/96
#Extraction for PNAs	EPA 3550	-		Extrn Dațe	04/24/96
PNAs by EPA 8270 Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b)fluoranthene Benzo(k)fluoranthene	EPA 8270 83-32-9 208-96-8 120-12-7 56-55-3 205-99-2 207-08-9	ND ND ND ND ND ND	330 330 330 330	ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg	05/03/96 05/03/96 05/03/96 05/03/96 05/03/96

## LAW/CRANDALL, INC.

SAMPLE ID: MW4 @ 5' AEN LAB NO: 9604258-10 AEN WORK ORDER: 9604258 CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/17/96 DATE RECEIVED: 04/18/96 **REPORT DATE: 05/08/96** 

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Benzo(g,h,i)perylene	191-24-2	ND	330 u	g/kg	05/03/96
Benzo(a)pyrene	50-32-8	ND	330 u		05/03/96
Chrysene	218-01-9	ND	330 u		05/03/96
Dibenzo(a,h)anthracene	53-70-3	ND	330 u		05/03/96
Fluoranthene	206-44-0	ND	330 u		05/03/96
Fluorene	86-73-7	ND	330 u		05/03/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND	330 u		05/03/96
Naphthalene	91-20-3	ND	330 u		05/03/96
Phenanthrene	85-01-8	ND	330 u		05/03/96
Pyrene	129-00-0	ND	330 u	g/kg	05/03/96
EPA 8010 - Soil matrix E	PA 8010				- · · · · · ·
Bromodichloromethane	75-27-4	ND	<u>5</u> u	g/kg	04/25/90
Bromoform	75-25-2	ND	5 น	g/kg	04/25/9
Bromomethane	74-83-9	ND		ig/kg	04/25/9
Carbon Tetrachloride	56-23-5	ND	5 บ	ıg/kg	04/25/9
Chlorobenzene	108-90-7	ND	5 U	ig/kg	04/25/9
Chloroethane Chloroethane	75-00-3	ND	2 <u>0</u> t	ig/kg	04/25/9
2-Chloroethyl Vinyl Ether	110-75-8	ND	5 ប	ig/kg	04/25/9
Chloroform	67-66-3	ND	5 0	ıg/kg	04/25/9
Chloromethane	74-87-3	ND	20 L	ıg/kg	04/25/9
Dibromochloromethane	124-48-1	ND		ıg/kg	04/25/9
1,2-Dichlorobenzene	95-50-1	ND	5 [	ıg/kg	04/25/9
1,3-Dichlorobenzene	541-73-1	ND	5 L	ig/kg	04/25/9 04/25/9
1.4-Dichlorobenzene	106-46-7	ND	ວ ເ 20 ເ	ıg/kg	04/25/9
Dichlorodifluoromethane	75-71-8	ND ND	20 t	ıg/kg ıg/kg	04/25/9
1,1-Dichloroethane	75-34-3	ND	ວ ເ ຮັ <sub>່</sub>	ig/kg ig/kg	04/25/9
1.2-Dichloroethane	107-06-2	ND ND		ig/kg ig/kg	04/25/9
1,1-Dichloroethene	75-35-4 156-59-2	ND ND	5 t	ig/kg ig/kg	04/25/9
cis-1,2-Dichloroethene	156-60-5	ND ND	5 t	ig/kg	04/25/9
trans-1,2-Dichloroethene	78-87-5	ND	5 t	ig/kg	04/25/9
1.2-Dichloropropane	10061-01-5	ND		ug/kg	04/25/9
cis-1.3-Dichloropropene trans-1.3-Dichloropropene	10061-01-5	ND	5 1	ug/kg	04/25/9
Methylene Chloride	75-09-2	ND	2Ď i	ig/kg	04/25/9
1,1,2,2-Tetrachloroethane	79-34-5	ND		ug/kg	04/25/9
Tetrachloroethene	127-18-4	ND		ug/kg	04/25/9
1,1,1-Trichloroethane	71-55-6	ND	5 (	ug/kg	04/25/9
1.1.2-Trichloroethane	79-00-5	ND	5 (	ug/kg	04/25/9
Trichloroethene	79-01-6	ND	5 (	ug/kg	04/25/9
Trichlorofluoromethane	75-69-4	ND	20	ug/kg	04/25/9
1,1,2Trichlorotrifluoroethane		ND		ug/kg	04/25/9
Vinyl Chloride	75-01-4	ND		ug/kg	04/25/9

## LAW/CRANDALL, INC.

SAMPLE ID: MW4 @ 5' AEN LAB NO: 9604258-10 AEN WORK ORDER: 9604258 CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/17/96 DATE RECEIVED: 04/18/96

**REPORT DATE: 05/08/96** 

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ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED

#### LAW/CRANDALL, INC.

SAMPLE ID: MW5 @ 5' AEN LAB NO: 9604258-14 AEN WORK ORDER: 9604258 CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/18/96 DATE RECEIVED: 04/18/96 REPORT DATE: 05/08/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#CA Waste Extraction	CA Title 22	-		Extrn Date	04/23/96
BTEX & Gasoline HCs Benzene Toluene Ethylbenzene Xylenes, Total Purgeable HCs as Gasoline	EPA 8020 71-43-2 108-88-3 100-41-4 1330-20-7 5030/GCFID	ND ND ND ND ND	5 5 5	ug/kg ug/kg ug/kg ug/kg mg/kg	04/26/96 04/26/96 04/26/96 04/26/96 04/26/96
Methyl t-Butyl Ether	EPA 8020	ND	50	ug/kg	04/26/96
#Extraction for TPH	EPA 3550	-		Extrn Date	04/24/96
TPH as Diesel	GC-FID	ND	5	mg/kg	04/26/96
TPH as 0il	GC-FID	390	* 20	mg/kg	04/26/96
Lead in WET Extract	EPA 7420	2.1	* 0.1	mg/L	04/29/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	04/24/96
Arsenic	EPA 7060	1.8	* 0.5	mg/kg	04/25/96
#Digestion. Metals AA/ICP	EPA 3050	-		Prep Date	04/23/96
Cadmium	EPA 6010	ND	0.2	mg/kg	04/24/96
Chromium	EPA 6010	27	* 0.5	mg/kg	04/24/96
Nickel	EPA 6010	23	* 1	mg/kg	04/24/96
Zinc	EPA 6010	46	* 1	mg/kg	04/24/96
#Extraction for PNAs	EPA 3550	-		Extrn Date	04/24/96
PNAs by EPA 8270 Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b)fluoranthene Benzo(k)fluoranthene	EPA 8270 83-32-9 208-96-8 120-12-7 56-55-3 205-99-2 207-08-9	ND ND ND ND ND ND	33000 33000 33000 33000	ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg	05/03/96 05/03/96 05/03/96 05/03/96 05/03/96

#### LAW/CRANDALL, INC.

SAMPLE ID: MW5 @ 5' AEN LAB NO: 9604258-14 AEN WORK ORDER: 9604258

CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/18/96 DATE RECEIVED: 04/18/96 REPORT DATE: 05/08/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Benzo(g.h.i)perylene	191-24-2	ND	33000 ug		05/03/96
Benzo(a)pyrene	50-32-8	ND	33000 ug		05/03/96
Chrysene	218-01-9	ИD	33000 uç		05/03/96
Dibenzo(a,h)anthracene	53-70-3	ND	33000 ug		05/03/96
Fluoranthene	206-44-0	ND	33000 ug		05/03/96
Fluorene	86-73-7	ND	33000 ug		05/03/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND	33000 ug		05/03/96
Naphthalene	91-20-3	ND	33000 ug		05/03/96
Phenanthrene	85-01-8	ND ND	33000 ug		05/03/96 05/03/96
Pyrene	129-00-0	IND	33000 u	g/ ky	03/03/90
EPA 8010 - Soil matrix El	PA 8010				
Bromodichloromethane	75-27-4	ND		g/kg	04/25/96
Bromoform	75-25-2	ND		g/kg	04/25/96
Bromomethane	74-83-9	ND	20 u	g/kg	04/25/96
Carbon Tetrachloride	56-23-5	ND	5 u	g/kg	04/25/96
Chlorobenzene	108-90-7	ND		g/kg	04/25/96
Chloroethane	75-00-3	ND	20 u	g/kg ~/k~	04/25/96
2-Chloroethyl Vinyl Ether	110-75-8	ND		g/kg	04/25/96 04/25/96
Chloroform	67-66-3	ND		g/kg	04/25/96
Chloromethane	74-87-3 124-48-1	ND ND		g/kg g/kg	04/25/96
Dibromochloromethane 1,2-Dichlorobenzene	95-50-1	ND ND		g/kg g/kg	04/25/96
1,3-Dichlorobenzene	541-73-1	ND ND	5 u	g/kg g/kg	04/25/96
1,4-Dichlorobenzene	106-46-7	ND	5 u	g/kg g/kg	04/25/96
Dichlorodifluoromethane	75-71-8	ND	20 u		04/25/96
1.1-Dichloroethane	75-34-3	ND	5 11	a/ka	04/25/96
1.2-Dichloroethane	107-06-2	ND	5 u	g/kg	04/25/96
1.1-Dichloroethene	75-35-4	ND	5 น	g/kg	04/25/96
cis-1,2-Dichloroethene	156-59-2	ND	5 u	g/kg	04/25/96
trans-1,2-Dichloroethene	156-60-5	ND	5 น	g/kg g/kg g/kg g/kg	04/25/96
1,2-Dichloropropane	78-87-5	ND	5 น	g/kg	04/25/96
cis-1,3-Dichloropropene	10061-01-5	ND		g/kg	04/25/96
trans-1.3-Dichloropropene	10061-02-6	ND		g/kg	04/25/96
Methylene Chloride	75-09-2	ND		g/kg:	04/25/96
1,1,2,2-Tetrachloroethane	79-34-5	ND		ıg/kg	04/25/96 04/25/96
Tetrachloroethene	127-18-4	ND		ıg/kg ıg/kg	04/25/96
1,1,1-Trichloroethane 1,1,2-Trichloroethane	71-55-6 79-00-5	ND ND		ig/kg ig/kg	04/25/96
Trichloroethene	79-00-5 79-01-6	ON		ig/kg ig/kg	04/25/96
Trichlorofluoromethane	75-69-4	ND ND		ig/kg ig/kg	04/25/96
1,1,2Trichlorotrifluoroethane		ND		ig/kg ig/kg	04/25/96
Vinyl Chloride	75-01-4	ND		ig/kg	04/25/96

#### LAW/CRANDALL, INC.

SAMPLE ID: MW5 @ 5' AEN LAB NO: 9604258-14 AEN WORK ORDER: 9604258

CLIENT PROJ. ID: 70424-6-0004

**DATE SAMPLED: 04/18/96** DATE RECEIVED: 04/18/96

**REPORT DATE: 05/08/96** 

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
ANALTIE	CNOTE	KEJOET	CIIII	ONTIS	MANETALD

RL elevated for diesel due to high levels of target compounds; RLs elevated for EPA 8270 due to high levels of non-target compounds. Sample run at dilution.

#### LAW/CRANDALL, INC.

SAMPLE ID: MW6 @ 5'
AEN LAB NO: 9604258-17
AEN WORK ORDER: 9604258

CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/17/96 DATE RECEIVED: 04/18/96 REPORT DATE: 05/08/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#CA Waste Extraction	CA Title 22	-		Extrn Date	04/23/96
BTEX & Gasoline HCs Benzene Toluene Ethylbenzene Xylenes, Total Purgeable HCs as Gasoline	EPA 8020 71-43-2 108-88-3 100-41-4 1330-20-7 5030/GCFID	ND ND ND ND ND	5 5 5	ug/kg ug/kg ug/kg ug/kg mg/kg	04/26/96 04/26/96 04/26/96 04/26/96 04/26/96
Methyl t-Butyl Ether	EPA 8020	ND	50	ug/kg	04/26/96
#Extraction for TPH	EPA 3550	-		Extrn Date	04/25/96
TPH as Diesel	GC-FID	ND	1	mg/kg	04/27/96
TPH as Oil	GC-FID	82	* 5	mg/kg	04/27/96
Lead in WET Extract	EPA 7420	4.6	* 0.1	mg/L	04/29/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	04/24/96
Arsenic	EPA 7060	1.4	* 0.5	mg/kg	04/25/96
#Digestion, Metals AA/ICP	EPA 3050	<b>~</b>		Prep Date	04/23/96
Cadmium	EPA 6010	ND	0.2	mg/kg	04/24/96
Chromium	EPA 6010	23	* 0.5	mg/kg	04/24/96
Nickel	EPA 6010	13	* 1	mg/kg	04/24/96
Zinc	EPA 6010	31	* 1	mg/kg	04/24/96
#Extraction for PNAs	EPA 3550	-		Extrn Date	04/24/96
PNAs by EPA 8270 Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b)fluoranthene Benzo(k)fluoranthene	EPA 8270 83-32-9 208-96-8 120-12-7 56-55-3 205-99-2 207-08-9	ND ND ND ND ND ND	3300 3300 3300 3300	ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg	05/03/96 05/03/96 05/03/96 05/03/96 05/03/96

## LAW/CRANDALL, INC.

SAMPLE ID: MW6 @ 5' AEN LAB NO: 9604258-17 AEN WORK ORDER: 9604258 CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/17/96 DATE RECEIVED: 04/18/96 **REPORT DATE: 05/08/96** 

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZE
MVACITE		112021			
Benzo(g.h.i)perylene	191-24-2	ND	3300 ug	a/ka	05/03/9
Benzo(a)pyrene	50-32-8	ND	3300 ug		05/03/9
Chrysene	218-01-9	ND	3300 ug		05/03/9
Dibenzo(a,h)anthracene	53-70-3	ND	3300 u		05/03/9
Fluoranthene	206-44-0	ND	3300 u		05/03/9
Fluorene	86-73-7	ND	3300 u		05/03/9
Indeno(1,2,3-cd)pyrene	193-39-5	ND	3300 u	g/kg	05/03/9
Naphthalene	91-20-3	ND	3300 u		05/03/9
Phenanthrene	85-01-8	ND	3300 u		05/03/9
Pyrene	129-00-0	ND	3300 u		05/03/9
PA 8010 - Soil matrix E	PA 8010				
Bromodichloromethane	75-27-4	ND	5 u	g/kg	04/25/9
Bromoform	75-25-2	ND		g/kg	04/25/9
Bromomethane	74-83-9	ND	20 u		04/25/
Carbon Tetrachloride	56-23-5	ND		g/kg	04/25/9
Chlorobenzene	108-90-7	ND	5 u	g/kg	04/25/
Chloroethane	75-00-3	ND	20 u	g/kg	04/25/
2-Chloroethyl Vinyl Ether	110-75-8	ND	5 u	g/kg	04/25/
Chloroform Chloroform	67-66-3	ND	5 u	g/kg	04/25/
Chloromethane	74-87-3	ND	20 u	g/kg	04/25/
Dibromochloromethane	124-48-1	ND	5 u	g/kg	04/25/
1.2-Dichlorobenzene	95-50-1	ND	5 u	ıg/kg	04/25/
1.3-Dichlorobenzene	541-73-1	ND	5 u	g/kg lg/kg lg/kg lg/kg	04/25/
1.4-Dichlorobenzene	106-46-7	ND	5 U	ıg/kg	04/25/
Dichlorodifluoromethane	75-71-8	ND	20 u	ig/kg	04/25/
1.1-Dichloroethane	75-34-3	ND		ıg/kg	04/25/
1,2-Dichloroethane	107-06-2	ND	5 U	ıg/kg	04/25/
1,1-Dichloroethene	75-35-4	ND	5 L	ıg/kg	04/25/
cis-1,2-Dichloroethene	156-59-2	ND	5 ι	ıg/kg	04/25/
trans-1.2-Dichloroethene	156-60-5	ND	5 เ	ıg/kg	04/25/
1,2-Dichloropropane	78-87-5	ND	5 t	ıg/kg	04/25/
cis-1,3-Dichloropropene	10061-01-5	ND		ıg/kg	04/25/
trans-1.3-Dichloropropene	10061-02-6	ND		ıg/kg	04/25/
Methylene Chloride	75-09-2	ND		ıg/kg <u>:</u>	04/25/
1,1,2,2-Tetrachloroethane	79-34-5	ND		ıg/kg	04/25/
Tetrachloroethene	127-18-4	ND		ıg/kg	04/25/
1,1,1-Trichloroethane	71-55-6	ND		ıg/kg	04/25/
1,1,2-Trichloroethane	79-00-5	ND		ug/kg	04/25/
Trichloroethene	79-01-6	ND		ug/kg	04/25/
Trichlorofluoromethane	75-69-4	ND		ug/kg	04/25/
1.1.2Trichlorotrifluoroethane	25 01 4	ND		ug/kg	04/25/ 04/25/
Vinyl Chloride	75-01-4	ND	20 τ	ug/kg	U4/ Z3/

#### LAW/CRANDALL. INC.

SAMPLE ID: MW6 @ 5' AEN LAB NO: 9604258-17 AEN WORK ORDER: 9604258

CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/17/96 DATE RECEIVED: 04/18/96

**REPORT DATE: 05/08/96** 

	·				
ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED

RLs elevated for EPA 8270 due to high levels of non-target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit

## AEN (CALIFORNIA) OUALITY CONTROL REPORT

AEN JOB NUMBER: 9604258

CLIENT PROJECT ID: 70424-6-0004

### Quality Control and Project Summary

All laboratory quality control parameters were found to be within established limits.

#### Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

- D: Surrogates diluted out.
- #: Indicates result outside of established laboratory QC limits.

### QUALITY CONTROL DATA

METHOD: EPA 3550 GCFID

AEN JOB NO: 9604258

DATE EXTRACTED: 04/24/96; 04/25/96

INSTRUMENT: C MATRIX: SOIL

## Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery n-Pentacosane
04/26/96 04/26/96 04/26/96 04/26/96 04/26/96 04/27/96	MW1 @ 5' MW2 @ 5' MW3 @ 7' MW4 @ 5' MW5 @ 5' MW6 @ 5'	01 04 07 10 14 17	92 68 72 83 71 94
QC Limits:			45-110

DATE EXTRACTED: 04/25/95 DATE ANALYZED: 04/26/95 SAMPLE SPIKED: 9604188-16

INSTRUMENT: C

## Matrix Spike Recovery Summary

				QC Lim	its
Analyte	Spike Added (mg/kg)	Average Percent Recovery	RPD	Percent Recovery	RPD
Diesel	40.0	84	3	44-108	13

Daily method blanks for all associated analytical runs showed no contamination at or above the reporting limit.

## QUALITY CONTROL DATA

METHOD: EPA 8010

AEN JOB NO: 9604258

INSTRUMENT: G MATRIX: SOIL

## Surrogate Standard Recovery Summary

			Percent Recovery		
Date Analyzed	Client Id.	Lab Id.	Bromochloro- methane	1-Bromo-3-chloro- propane	
04/25/96 04/25/96 04/25/96 04/25/96 04/25/96 04/25/96	MW1 @ 5' MW2 @ 5' MW3 @ 7' MW4 @ 5' MW5 @ 5' MW6 @ 5'	01 04 07 10 14 17	71 76 72 75 72 76	87 93 90 86 90 87	
QC Limits:			70-130	70-130	

DATE ANALYZED: 04/23/96

9604211-19

SAMPLE SPIKED: INSTRUMENT: G

## Matrix Spike Recovery Summary

				QC Limi	ts
Analyte	Spike Added (ug/kg)	Average Percent Recovery	RPD	Percent Recovery	RPD
1.1-Dichloroethene Trichloroethene Chlorobenzene	e 50 50 50	56 87 79	10 6 8	37-156 54-122 54-141	20 20 20

Daily method blanks for all associated analytical runs showed no contamination at or above the reporting limit.

## QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9604258 INSTRUMENT: E, H MATRIX: SOIL

## Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery Fluorobenzene
04/26/96 04/27/96 04/26/96 04/27/96 04/26/96 04/27/96	MW1 @ 5' MW2 @ 5' MW3 @ 7' MW4 @ 5' MW5 @ 5' MW6 @ 5'	01 04 07 10 14 17	115 103 104 106 107 105
OC Limits:			70-130

DATE ANALYZED: 04/27/96

SAMPLE SPIKED: 9604365-02

INSTRUMENT: E

## Matrix Spike Recovery Summary

				QC Lim	iits
Analyte	Spike Added (ug/kg)	Average Percent Recovery	RPD	Percent Recovery	RPD
Benzene Toluene	34.5 105	106 110	1	79-113 84-110	26 20
Hydrocarbons as Gasoline	1000	104	1	60-126	: 20

Daily method blanks for all associated analytical runs showed no contamination at or above the reporting limit.

#### QUALITY CONTROL DATA

METHOD: EPA 8270

AEN JOB NO: 9604258

DATE EXTRACTED: 04/24/96

INSTRUMENT: 11 MATRIX: SOIL

## Surrogate Standard Recovery Summary

Date Analyzed (								
	Client Id.	Lab Id.	2-Fluoro- phenol	Phenol-d <sub>5</sub>	Nitro- benzene-d <sub>5</sub>	2-Fluoro- biphenyl	2,4,6-Tri- bromophenol	Terphenyl- d <sub>14</sub>
05/03/96	MW1 อ 5′	01	77	87	87	80	115	89
05/03/96	MW2 8 5'	04	D	D	D	D	D	Ð
05/03/96	MW3 a 7'	07	D	Đ	Ð	Ð	D	Ð
05/03/96	MW4 @ 5'	10	63	76	74	71	116	86
05/03/96	MW5 @ 5'	14	D	Đ	D	Ð	D	Đ
05/03/96	MW6 a 5'	17	Ď	Ď	D	D	Đ	D
QC Limits:			25-121	24-113	23-120	30-115	19-122	18-137

D: Surrogates diluted out.

DATE EXTRACTED: 04/24/96 DATE ANALYZED: 05/03/96

SAMPLE SPIKED: LCS INSTRUMENT: 11

## Laboratory Control Sample Recovery

Analyte	Spike Added (ug/kg)	Percent Recovery	QC Limits Percent Recovery
Phenol 2-Chlorophenol 1,4-Dichlorobenzene N-Nitrosodi-n-propylamine 1,2,4-Trichlorobenzene 4-Chloro-3-methylphenol Acenaphthene 4-Nitrophenol 2,4-Dinitrotoluene Pentachlorophenol	3660	81	4-120
	3480	73	27-130
	3460	74	13- 95
	3530	85	10-130
	3480	61	29-101
	3410	86	3-149
	3560	82	48-125
	3590	103	0-129
	3510	72	38-103
	3490	60	0-190
	3610	90	34-143

Daily method blanks for all associated analytical runs showed no contamination at or above the reporting limit.

#### QUALITY CONTROL DATA

AEN JOB NO: 9604258 SAMPLE SPIKED: SAND

DATE(S) ANALYZED: 04/23-24/96

MATRIX: SOIL

## Method Blank and Spike Recovery Summary

		D3 (.	Castra			QC Lir	mits
Analyte	Inst./ Method	Blank Result (mg/kg)	Spike Added (mg/kg)	Percent Recovery	RPD	Percent Recovery	RPD
As, Arsenic Cd. Cadmium Cr. Chromium Ni. Nickel Zn, Zinc	4000/7060 ICP/6010 ICP/6010 ICP/6010 ICP/6010	ND ND ND ND ND	10 10 50 50 50	95 96 96 98 91	5 3 4 4	67-136 83-109 85-110 83-115 81-109	15 10 10 10 10

SAMPLE SPIKED: 9604258-17 DATE EXTRACTED: 04/23/96 DATE(S) ANALYZED: 04/29/96

MATRIX: WET

## Matrix Spike Recovery Summary

Analyte	Inst./ Method	Sample Result (mg/L)	Spike Added (mg/L)	MS Result (mg/L)	Percent Recovery
Pb, Lead	V12/7420	4.55	8.0	12.7	102

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Daily method blanks for all associated analytical runs showed no contamination at or above the reporting limit.

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※ 製金 875 BAT	TERY-STREE	Company Co.	<b>使用的主张</b>										*				9			
N:FRANCISCO, 415)	FRANCISCO, CALIFORNIA 9411115132 Report to: Andrew T. Mula				×		+ 0	0	0	0	0109	ļ								
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	Dave Tu	,			Tolon	hone: <u>(</u> 4	15)	83	4 -	2040	į,	1	12	#CS	12	:\b	3	·		
Project Name:_											8778		TOH! Motor Oil	ł I	STATE OF	4	Ž			
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	mw1 @ 15'	1	17:00	1 1				┼-	×	\\Z\Z\!\\		\_\	K	×	×	×	1			+
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	MW Z D 10'		8140	<del>-  </del> -			- -	-	<u>r</u>	HOLL 05A				<del> </del>	ļ		-		_	
		4/18	8150			1			¥	Hold OGA			×	×	メ	¥	у			
	MW 3 0 7'		11:15	1 1			-	-	×	02/4	^^	K	<del> ~</del>	-		<del>  _</del>	^			
	Jew3 @ 10'	4/18	11:25			- (		-	4	HO/8 09A			-	<del> </del>	-					+
	MW3 @ 15"		11:35						× -	Hold OGA	×	×	×	×	74	<u> </u>	×			
	MW4 25'	4/17	jiris	×			-	-	<del>-  -</del>	104		-	1	-	-			-		
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	MW4@15'		(1:30	1			-  -	-	,	4018 12A		_		-	-					-
	MW4 @ 20'	4/17	11:34	1		/				4010 131						<u> </u>	<u> </u>			
NOTES:										RELINQUISHED BY:			^	$\mathbb{R}$	EC.	EI/	/ED	) BY	!	
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Page L of L CHAIN OF CUSTODY FORM Analyses 9604258 LAW/CRANDALLS INC.
8 875 BATTERY STREET.
3AN FRANCISCO, CALIFORNIA 94111-1513 Sampler: Andraw T. Muha Report to: Andrew T. Muha Company: LAW/CRANDALL Project No: 70424-6-0004 \_\_\_\_\_\_Telephone: (415) 834-2040 Project Name: Days Zww (415) 834-2051 Turnaround Time: Standard 7 day Fax: Preservative Matrix # of Field Notes Soll Waster Sampling Laboratory Con-Sample ID. Date Time Number tainers X × 141 4:50 4/18 MW505 HOW 15A-10:00 MW5@10 4/18 X 161 HOLL MWS@ 15 4/18 01:0 KXXX x X 9:45 47A 4/17 MW6 e 5 181 Holl MW6@ 10 4/17 9:50 X 19A H04 4/17 10:09 X MW6 @15 20A-Hold 10:10 X MWG @ 20 4/17 RECEIVED BY: RELINQUISHED BY: NOTES: \* CALL to CONFIRM 4-18-96 1610 Inchesy T. Mula 4/10 4:10 DATE/TIME Heal DATE/TIME 479-96 MD DATE/TIME 4-18-96 170 DATE/TIME DATE/TIME

FAX (510) 930-0256

PHONE (510) 930-9090

## CHANGE ORDER REQUEST

AMERICAN ENVIRONMENTAL NETWORK (AEN) 3440 VINCENT ROAD PLEASANT HILL, CA 94523

- ,	•			
DATE/TIME AEN REP.	04 22 No 1500 POXY SIJUL Mb 0+258	COMPANY .	Land Crain Andrea	whall Inc. W Muha 4-6-0004
N PROJ NO.	MB 07258	PROJECT .	PROJ. #	COC#
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CCEPTED - 7	The above specificat <b>ions of th</b> is C	Change Order are a	austactory and	ale lieseny accorso
ATE OF ACCEP	PTANCE 4/23/91	SIGNATURE	Indrew T.	Muha
	PLEASE AUTHORIZE BY SIGN	ING REQUEST AND	) RETURN BY	FAX
P, 02	FAX NO. 15109300258	I ENA NELMOKK	WEKICU.	71:81 NON 86-22-99

## American Environmental Network

## Centifone or violents

DOHS Certification: 1172

AIHA Accreditation: 11134

PAGE 1

LAW/CRANDALL, INC. 875 BATTERY ST. SAN FRANCISCO, CA 94111-1513

ATTN: MARK MILLER

CLIENT PROJ. ID: 70424-6-0004

REPORT DATE: 05/13/96

DATE(S) SAMPLED: 04/24/96

DATE RECEIVED: 04/25/96

AEN WORK ORDER: 9604339

#### PROJECT SUMMARY:

On April 25, 1996, this laboratory received 3 water sample(s).

Client requested sample(s) be analyzed for chemical parameters. Results of analysis are summarized on the following page(s). Please see quality control report for a summary of QC data pertaining to this project.

Samples will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Samples may be archived by prior arrangement.

If you have any questions, please contact Client Services at (510) 930-9090.

Larry Klein

Laboratory Director

#### LAW/CRANDALL. INC.

SAMPLE ID: MW-1

AEN LAB NO: 9604339-01A AEN WORK ORDER: 9604339 CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96 DATE RECEIVED: 04/25/96 REPORT DATE: 05/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs Benzene Toluene Ethylbenzene Xylenes, Total Purgeable HCs as Gasoline	EPA 8020 71-43-2 108-88-3 100-41-4 1330-20-7 5030/GCFID	ND ND ND ND ND	0.5 0.5 0.5 2 0.05	ug/L ug/L ug/L ug/L mg/L	05/01/96 05/01/96 05/01/96 05/01/96 05/01/96
Methyl t-Butyl Ether	EPA 8020	ND	50	ug/L	05/01/96

#### LAW/CRANDALL, INC.

SAMPLE ID: MW-1

AEN LAB NO: 9604339-01D AEN WORK ORDER: 9604339

CLIENT PROJ. ID: 70424-6-0004

**DATE SAMPLED: 04/24/96** 

DATE RECEIVED: 04/25/96 **REPORT DATE: 05/13/96** 

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Da	te 05/06/96
TPH as Diesel	GC-FID	0.66 *	0.05	mg/L	05/08/96
TPH as Oil	GC-FID	ND	0.2	mg/L	05/08/96

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

#### LAW/CRANDALL, INC.

SAMPLE ID: MW-1 AEN LAB NO: 9604339-01F AEN WORK ORDER: 9604339

CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96 DATE RECEIVED: 04/25/96 **REPORT DATE: 05/13/96** 

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
EPA 8010 - Water matrix El Bromodichloromethane Bromoform Bromomethane	PA 8010 75-27-4 75-25-2 74-83-9	ND ND ND	0.5 0.5 2	ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96
Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether	56-23-5 108-90-7 75-00-3 110-75-8	ND ND ND ND	0.5 0.5 2 0.5	ug/L ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96 04/27/96 04/27/96
Chloroform Chloromethane Dibromochloromethane 1.2-Dichlorobenzene 1.3-Dichlorobenzene	67-66-3 74-87-3 124-48-1 95-50-1 541-73-1	ND ND ND ND ND	0.5 2 0.5 0.5 0.5	ug/L ug/L ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96 04/27/96
1.4-Dichlorobenzene Dichlorodifluoromethane 1.1-Dichloroethane 1.2-Dichloroethane	106-46-7 75-71-8 75-34-3 107-06-2	ND ND ND ND	0.5 2 0.5 0.5 0.5	ug/L ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96 04/27/96 04/27/96
1.1-Dichloroethene cis-1.2-Dichloroethene trans-1.2-Dichloroethene 1.2-Dichloropropane cis-1.3-Dichloropropene	75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5	ND ND ND ND ND	0.5 0.5 0.5 0.5	ug/L ug/L ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96 04/27/96
trans-1,3-Dichloropropene Methylene Chloride 1,1,2,2-Tetrachloroethane Tetrachloroethene 1,1,1-Trichloroethane	10061-02-6 75-09-2 79-34-5 127-18-4 71-55-6	ND ND ND ND ND	0.5 2 0.5 0.5	ug/L ug/L ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96 04/27/96 04/27/96
1,1,1-171chToroethane 1,1,2-TrichToroethane TrichToroethane TrichToroethane TrichToroethane 1,1,2TrichToroethane VinyT Chloride	79-00-5 79-01-6 75-69-4	ND ND ND ND ND	0.5 0.5 0.5 2 0.5 2	ug/L ug/L ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96 04/27/96 04/27/96

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

#### LAW/CRANDALL, INC.

SAMPLE ID: MW-1

AEN LAB NO: 9604339-011 AEN WORK ORDER: 9604339 CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96 DATE RECEIVED: 04/25/96

**REPORT DATE: 05/13/96** 

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for PNAs	EPA 3520	-		Extrn Date	05/01/96
PNAs by EPA 8270 Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(g,h,i)perylene Benzo(a)pyrene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	EPA 8270 83-32-9 208-96-8 120-12-7 56-55-3 205-99-2 207-08-9 191-24-2 50-32-8 218-01-9 53-70-3 206-44-0 86-73-7 193-39-5 91-20-3 85-01-8 129-00-0	85 * ND	10 10 10 10 10 10 10 10 10 10 10 10 10 1	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96

## LAW/CRANDALL, INC.

SAMPLE ID: MW-1

AEN LAB NO: 9604339-01K

AEN WORK ORDER: 9604339 CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96 DATE RECEIVED: 04/25/96

**REPORT DATE: 05/13/96** 

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	04/25/96
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	04/30/96
Arsenic	EPA 7060	0.004	* 0.002	mg/L	04/30/96
#Digestion, Metals by ICP	EPA 3010	-		Prep Date	04/30/96
Cadmium	EPA 6010	ND	0.005	mg/L	05/02/96
Chromium	EPA 6010	ND	0.01	mg/L	05/02/96
Lead	EPA 6010	ND	0.04	mg/L	05/02/96
Nickel	EPA 6010	0.01	* 0.01	mg/L	05/02/96
Zinc	EPA 6010	ND	0.01	mg/L	05/02/96

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

#### LAW/CRANDALL, INC.

SAMPLE ID: MW-2

AEN LAB NO: 9604339-02A AEN WORK ORDER: 9604339

CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96 DATE RECEIVED: 04/25/96

**REPORT DATE: 05/13/96** 

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs Benzene Toluene Ethylbenzene Xylenes. Total Purgeable HCs as Gasoline	EPA 8020 71-43-2 108-88-3 100-41-4 1330-20-7 5030/GCFID	ND ND ND ND	0.5 0.5 0.5 2 0.05	ug/L ug/L ug/L ug/L mg/L	05/01/96 05/01/96 05/01/96 05/01/96 05/01/96
Methyl t-Butyl Ether	EPA 8020	ND	50	ug/L	05/01/96

#### LAW/CRANDALL, INC.

SAMPLE ID: MW-2

AEN LAB NO: 9604339-02D AEN WORK ORDER: 9604339

CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96 DATE RECEIVED: 04/25/96 REPORT DATE: 05/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	05/06/96
TPH as Diesel	GC-FID	1.6 *	0.05	mg/L	05/08/96
TPH as 0il	GC-FID	0.3 *	0.2	mg/L	05/08/96

#### LAW/CRANDALL, INC.

SAMPLE ID: MW-2

AEN LAB NO: 9604339-02F AEN WORK ORDER: 9604339

CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96

DATE RECEIVED: 04/25/96 REPORT DATE: 05/13/96

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit

#### LAW/CRANDALL, INC.

SAMPLE ID: MW-2

AEN LAB NO: 9604339-021 AEN WORK ORDER: 9604339

CLIENT PROJ. ID: 70424-6-0004

**DATE SAMPLED: 04/24/96** 

DATE RECEIVED: 04/25/96 REPORT DATE: 05/13/96

_					
ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for PNAs	EPA 3520	_		Extrn Date	05/01/96
PNAs by EPA 8270 Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(g,h,i)perylene Benzo(a)pyrene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	EPA 8270  83-32-9 208-96-8 120-12-7 56-55-3 205-99-2 207-08-9 191-24-2 50-32-8 218-01-9 53-70-3 206-44-0 86-73-7 193-39-5 91-20-3 85-01-8 129-00-0	ND ND ND ND ND ND ND ND ND ND ND ND	10 10 10 10 10 10 10 10 10 10 10 10	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96

#### LAW/CRANDALL, INC.

**SAMPLE ID:** MW-2 **AEN LAB NO:** 9604339-02K AEN WORK ORDER: 9604339

CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96 DATE RECEIVED: 04/25/96

REPORT DATE: 05/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	04/25/96
#Digestion. Metals by GFAA	EPA 3020	-		Prep Date	04/30/96
Arsenic	EPA 7060	ND	0.002	mg/L	04/30/96
#Digestion, Metals by ICP	EPA 3010	-		Prep Date	04/30/96
Cadmium	EPA 6010	ND	0.005	mg/L	05/02/96
Chromium	EPA 6010	ND	0.01	mg/L	05/02/96
Lead	EPA 6010	ND	0.04	mg/L	05/02/96
Nickel	EPA 6010	ND	0.01	mg/L	05/02/96
Zinc	EPA 6010	ND	0.01	mg/L	05/02/96

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

#### LAW/CRANDALL, INC.

SAMPLE ID: MW-3

**AEN LAB NO:** 9604339-03A **AEN WORK ORDER:** 9604339

CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96 DATE RECEIVED: 04/25/96

REPORT DATE: 05/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING RESULT LIMIT UNITS		
BTEX & Gasoline HCs Benzene Toluene Ethylbenzene Xylenes, Total Purgeable HCs as Gasoline	EPA 8020 71-43-2 108-88-3 100-41-4 1330-20-7 5030/GCFID	ND ND ND ND	0.5 0.5 0.5 2 0.05	ug/L ug/L ug/L ug/L mg/L	05/01/96 05/01/96 05/01/96 05/01/96 05/01/96
Methyl t-Butyl Ether	EPA 8020	ND	50	ug/L	05/01/96

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit

#### LAW/CRANDALL, INC.

SAMPLE ID: MW-3

AEN LAB NO: 9604339-03D AEN WORK ORDER: 9604339

CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96 DATE RECEIVED: 04/25/96

REPORT DATE: 05/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	05/06/96
TPH as Diesel	GC-FID	0.58 *	0.05	mg/L	05/08/96
TPH as Oil	GC-FID	ND	0.2	mg/L	05/08/96

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit

## LAW/CRANDALL, INC.

SAMPLE ID: MW-3

AEN LAB NO: 9604339-03F AEN WORK ORDER: 9604339 CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96 DATE RECEIVED: 04/25/96

**REPORT DATE: 05/13/96** 

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
EPA 8010 - Water matrix EF Bromodichloromethane Bromomethane	PA 8010 75-27-4 75-25-2 74-83-9	ND ND ND	0.5 0.5 2	ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96
Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform	56-23-5 108-90-7 75-00-3 110-75-8 67-66-3	ND ND ND ND ND	0.5 0.5 0.5 2 0.5 0.5	ug/L ug/L ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96 04/27/96 04/27/96
Chloromethane Dibromochloromethane 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene	74-87-3 124-48-1 95-50-1 541-73-1 106-46-7	ND ND ND ND ND	0.5 0.5 0.5 0.5	ug/L ug/L ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96 04/27/96 04/27/96
Dichlorodifluoromethane 1.1-Dichloroethane 1.2-Dichloroethane 1.1-Dichloroethene	75-71-8 75-34-3 107-06-2 75-35-4	ND ND ND ND ND	0.5 0.5 0.5 0.5 0.5	ug/L ug/L ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96 04/27/96 04/27/96
cis-1,2-Dichloroethene trans-1,2-Dichloroethene 1,2-Dichloropropane cis-1,3-Dichloropropene trans-1,3-Dichloropropene	156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6	ND ND ND ND	0.5 0.5	ug/L ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96 04/27/96
Methylene Chloride 1.1.2.2-Tetrachloroethane Tetrachloroethene 1.1.1-Trichloroethane 1.1.2-Trichloroethane	75-09-2 79-34-5 127-18-4 71-55-6 79-00-5	ND ND ND ND ND	2 0.5 0.5 0.5 0.5	ug/L ug/L ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96 04/27/96 04/27/96
Trichloroethene Trichlorofluoromethane 1,1,2Trichlorotrifluoroethane Vinyl Chloride	79-01-6 75-69-4	ND ND ND ND	0.5 2 0.5 2	ug/L ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96 04/27/96

## LAW/CRANDALL, INC.

SAMPLE ID: MW-3

AEN LAB NO: 9604339-031

AEN WORK ORDER: 9604339 CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96 DATE RECEIVED: 04/25/96

**REPORT DATE: 05/13/96** 

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for PNAs	EPA 3520	-		Extrn Date	05/01/96
PNAs by EPA 8270 Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(g,h,i)perylene Benzo(a)pyrene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	EPA 8270 83-32-9 208-96-8 120-12-7 56-55-3 205-99-2 207-08-9 191-24-2 50-32-8 218-01-9 53-70-3 206-44-0 86-73-7 193-39-5 91-20-3 85-01-8 129-00-0	ND ND ND ND ND ND ND ND ND ND ND	10 10 10 10 10 10 10 10 10 10 10 10	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96

#### LAW/CRANDALL, INC.

SAMPLE ID: MW-3

AEN LAB NO: 9604339-03K AEN WORK ORDER: 9604339

CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96 DATE RECEIVED: 04/25/96

**REPORT DATE: 05/13/96** 

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
	0.45			F:3++ D-+0	04/25/06
#Sample Filtration	0.45 um	-		Filtr Date	04/25/90
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	04/30/96
Arsenic	EPA 7060	0.034	* 0.002	mg/L	04/30/96
#Digestion, Metals by ICP	EPA 3010	-		Prep Date	04/30/96
Cadmium	EPA 6010	ND	0.005	mg/L	05/02/96
Chromium	EPA 6010	ND	0.01	mg/L	05/02/96
Lead	EPA 6010	ND	0.04	mg/L	05/02/96
Nickel	EPA 6010	0.02	* 0.01	mg/L	05/02/96
Zinc	EPA 6010	ND	0.01	mg/L	05/02/96

#### AEN (CALIFORNIA) QUALITY CONTROL REPORT

AEN JOB NUMBER: 9604339

CLIENT PROJECT ID: 70424-6-0004

#### Quality Control and Project Summary

All laboratory quality control parameters were found to be within established limits.

#### Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

## QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9604339

DATE EXTRACTED: 05/06/96

INSTRUMENT: A MATRIX: WATER

## Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery n-Pentacosane
05/08/96 05/08/96 05/08/96	MW-1 MW-2 MW-3	01 02 03	98 93 96
QC Limits:			58-118

DATE EXTRACTED: 05/06/95 DATE ANALYZED: 05/07/95 SAMPLE SPIKED: 9604270-14

INSTRUMENT: A

## Matrix Spike Recovery Summary

				QC Lim	its
Analyte	Spike Added (mg/L)	Average Percent Recovery	RPD	Percent Recovery	RPD
Diesel	4.00	93	2	58-107	15

Daily method blanks for all associated analytical runs showed no contamination at or above the reporting limit.

#### QUALITY CONTROL DATA

METHOD: EPA 8010

AEN JOB NO: 9604339

INSTRUMENT: I MATRIX: WATER

## Surrogate Standard Recovery Summary

			Percer	nt Recovery
Date Analyzed	Client Id.	Lab Id.	Bromochloro- methane	1-Bromo-3-chloro- propane
04/27/96 04/27/96 04/27/96	MW-1 MW-2 MW-3	01 02 03	99 100 100	117 119 118
QC Limits:			70-130	70-130

DATE ANALYZED: 04/26/96

SAMPLE SPIKED: 9604229-01

INSTRUMENT: I

## Matrix Spike Recovery Summary

				QC Limit	ts
Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	Percent Recovery	RPD
1.1-Dichloroethene Trichloroethene Chlorobenzene	50 50 50	101 106 96	<1 1 2	37-156 54-122 54-141	20 . 20 20

Daily method blanks for all associated analytical runs showed no contamination at or above the reporting limit.

### QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9604339

INSTRUMENT: H MATRIX: WATER

### Surrogate Standard Recovery Summary

			Percent Recovery
Date Analyzed	Client Id.	Lab Id.	Fluorobenzene
05/01/96 05/01/96 05/01/96	MW-1 MW-2 MW-3	01 02 03	101 102 102
QC Limits:			70-130

DATE ANALYZED: 05. SAMPLE SPIKED: 96

05/01/96 9604318-07

INSTRUMENT: H

### Matrix Spike Recovery Summary

				QC Limi	ts
Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	Percent Recovery	RPD
Benzene Toluene	22.2 73.9	100 96	2 8	85-109 87-111	17 16
Hydrocarbons as Gasoline	500	112	9	66-117	19

Daily method blanks for all associated analytical runs showed no contamination at or above the reporting limit.

#### QUALITY CONTROL DATA

METHOD: EPA 8270

AEN JOB NO: 9604339

DATE EXTRACTED: 05/01/96

INSTRUMENT: 11 MATRIX: WATER

## Surrogate Standard Recovery Summary

Percent Recovery								
Date Analyzed	Client Id.	Lab Id.	2-Fluoro- phenol	Phenol -d <sub>5</sub>	Nitro- benzene-d <sub>5</sub>	2-Fluoro- biphenyl	2,4,6-Tri- bromophenol	Terphenyl- d <sub>l4</sub>
05/08/96	MW-1	01	56	59	74	44	85	43
05/08/96	MM-5	02	62	65	73 81	47 44	95 97	51 44
05/08/96	MW-3	03	54	62	81	44	71	7-7
QC Limits:			21-100	10-94	35-114	43-116	10-123	33-141

DATE EXTRACTED: 05/01/96 DATE ANALYZED: 05/07/96

SAMPLE SPIKED: LCS INSTRUMENT: 11

## Laboratory Control Sample Recovery

Analyte	Spike Added (ug/L)	Percent Recovery	QC Limits Percent Recovery
Phenol 2-Chlorophenol 1,4-Dichlorobenzene N-Nitrosodi-n-propylamine 1,2,4-Trichlorobenzene 4-Chloro-3-methylphenol Acenaphthene 4-Nitrophenol 2,4-Dinitrotoluene Pentachlorophenol Pyrene	200 200 200 200 200 200 200 200 200 200	80 76 76 92 78 94 86 110 86 78	5-112 23-134 20-124 0-230 44-142 22-147 47-145 0-132 0-112- 14-176 52-115

Daily method blanks for all associated analytical runs showed no contamination at or above the reporting limit.

### QUALITY CONTROL DATA

AEN JOB NO: 9604339 SAMPLE SPIKED: DI WATER

DATE(S) ANALYZED: 04/30-05/02/96 MATRIX: WATER

## Method Blank and Spike Recovery Summary

			0. 11			QC Limits		
Analyte	Inst./ Method	Blank Result (mg/L)	Spike Added (mg/L)	Percent Recovery	RPD	Percent Recovery	RPD	
As, Arsenic	4000/7060	ND	0.04	99	3	69-136	12	
Cd, Cadmium	ICP/6010	ND	0.05	106	5	84-120	10	
Cr. Chromium	ICP/6010	ND	0.1	111	<1	85-128	10	
Ni, Nickel	ICP/6010	ND	0.01	110	1	92-121	10	
Pb. Lead	ICP/6010	ND	0.5	109	1	90-122	10	
Zn, Zinc	ICP/6010	ND	0.25	112	1	90-121	10	

Address: And Address: And Address: And Address: And Address: And Address: And Address: Addres		S/////	American Environmental Network 3440 Vincent Road, Pleasant Hill, CA 94523 Phone (510) 930-9090 FAX (510) 930-0256  Send Invoice To:					Lab Lab Date Lab Date Date Clie	Cont	Numb ination ples act: sults port F	oer: on: Ship Requi Requi No.:	iired: ired:	14,	9/	ST F	FOR (1915)	Page ANALYSIS / C	CHAIN O	OF CUSTODY	
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	41	*Sample type	(Specify): 1) 37	mm 0.8 µ	ım MCEF _ 5) Cha	2) 25mn rcoal tub	n 0.8 µm oe 6) Sil	MCEI ica ge	F 3)	25mi e 7)	m 0.4 Wate	lµm∣ er8)	polyca Soil	ırb. fil 9) Bı	iter ulk S	ampl	e			

\*Sample type (Specify): 1) 37mm 0.8 µm MCEF 2) 25mm 0.8 µm MCEF 3) 25mm 0.4 µm polycard. Intoleration of the property of the p

# American Environmental Network

DOHS Centication, 1172

AIHA Accreditation: 11134

PAGE 1

LAW/CRANDALL, INC. 875 BATTERY ST. SAN FRANCISCO, CA 94111-1513

ATTN: MARK MILLER CLIENT PROJ. ID: 70424-6-0004

REPORT DATE: 05/13/96

DATE(S) SAMPLED: 04/24/96

DATE RECEIVED: 04/25/96

AEN WORK ORDER: 9604340

#### PROJECT SUMMARY:

On April 25, 1996, this laboratory received 3 water sample(s).

Client requested sample(s) be analyzed for chemical parameters. Results of analysis are summarized on the following page(s). Please see quality control report for a summary of QC data pertaining to this project.

Samples will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Samples may be archived by prior arrangement.

If you have any questions, please contact Client Services at (510) 930-9090.

Larry Kleiń

Laboratory Director

#### LAW/CRANDALL, INC.

SAMPLE ID: MW-4

AEN LAB NO: 9604340-01A AEN WORK ORDER: 9604340

CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96

DATE RECEIVED: 04/25/96 **REPORT DATE: 05/13/96** 

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs Benzene Toluene Ethylbenzene Xylenes, Total Purgeable HCs as Gasoline	EPA 8020 71-43-2 108-88-3 100-41-4 1330-20-7 5030/GCFID	ND ND ND ND ND	0.5 0.5 0.5 2 0.05	ug/L ug/L ug/L ug/L mg/L	05/01/96 05/01/96 05/01/96 05/01/96 05/01/96
Methyl t-Butyl Ether	EPA 8020	ND	50	ug/L	05/01/96

#### LAW/CRANDALL. INC.

SAMPLE ID: MW-4

AEN LAB NO: 9604340-01D

AEN WORK ORDER: 9604340 CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96 DATE RECEIVED: 04/25/96

REPORT DATE: 05/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	05/06/96
TPH as Diesel	GC-FID	ND	0.05	mg/L	05/07/96
TPH as 0il	GC-FID	ND	0.2	mg/L	05/07/96

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit

### LAW/CRANDALL, INC.

SAMPLE ID: MW-4

AEN LAB NO: 9604340-01F AEN WORK ORDER: 9604340

CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96 DATE RECEIVED: 04/25/96 REPORT DATE: 05/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
EPA 8010 - Water matrix El Bromodichloromethane Bromoform	PA 8010 75-27-4 75-25-2	ND ND	0.5 0.5	ug/L ug/L	04/27/96 04/27/96
Bromomethane Carbon Tetrachloride Chlorobenzene Chloroethane	74-83-9 56-23-5 108-90-7 75-00-3	DN DN DN DN	2 0.5 0.5	ug/L ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96 04/27/96
2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane	110-75-8 67-66-3 74-87-3 124-48-1	ND ND ND ND	2 0.5 0.5 2 0.5	ug/L ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96 04/27/96
1.2-Dichlorobenzene 1.3-Dichlorobenzene 1.4-Dichlorobenzene	95-50-1 541-73-1 106-46-7	ND ND ND ND	0.5 0.5 0.5 2	ug/L ug/L ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96 04/27/96
Dichlorodifluoromethane 1.1-Dichloroethane 1.2-Dichloroethane 1.1-Dichloroethene	75-71-8 75-34-3 107-06-2 75-35-4	DN ND ND	0.5 0.5 0.5	ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96
cis-1.2-Dichloroethene trans-1.2-Dichloroethene 1.2-Dichloropropane cis-1.3-Dichloropropene	156-59-2 156-60-5 78-87-5 10061-01-5	ND ND ND ND	0.5 0.5 0.5 0.5	ug/L ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96 04/27/96
trans-1,3-Dichloropropene Methylene Chloride 1.1,2,2-Tetrachloroethane Tetrachloroethene	10061-02-6 75-09-2 79-34-5 127-18-4	ND ND ND ND	0.5 2 0.5 0.5	ug/L ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96 04/27/96
1,1,1-Trichloroethane 1,1,2-Trichloroethane Trichloroethene Trichlorofluoromethane	71-55-6 79-00-5 79-01-6 75-69-4	ON DN DN	0.5 0.5 0.5	ug/L ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96 04/27/96
1,1,2Trichlorotrifluoroethane Vinyl Chloride	76-13-1 75-01-4	ND ND	2 0.5 2	ug/L ug/L	04/27/96 04/27/96

## LAW/CRANDALL, INC.

SAMPLE ID: MW-4

AEN LAB NO: 9604340-011 AEN WORK ORDER: 9604340

CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96 DATE RECEIVED: 04/25/96 REPORT DATE: 05/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for PNAs	EPA 3520	•		Extrn Date	05/01/96
PNAs by EPA 8270 Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(g,h,i)perylene Benzo(a)pyrene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	EPA 8270 83-32-9 208-96-8 120-12-7 56-55-3 205-99-2 207-08-9 191-24-2 50-32-8 218-01-9 53-70-3 206-44-0 86-73-7 193-39-5 91-20-3 85-01-8 129-00-0	ND ND ND ND ND ND ND ND ND ND ND ND	10 10 10 10 10 10 10 10 10 10 10 10	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96

#### LAW/CRANDALL, INC.

SAMPLE ID: MW-4

AEN LAB NO: 9604340-01K

AEN WORK ORDER: 9604340 CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96 DATE RECEIVED: 04/25/96 REPORT DATE: 05/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#C 7 Filturtion	0.45 um			Filtr Date	04/25/96
#Sample Filtration	EPA 3020	-		Prep Date	04/30/96
#Digestion. Metals by GFAA	EPA 7060	0.003 *	0.002	mg/L	04/30/96
#Digestion, Metals by ICP	EPA 3010	-		Prep Date	04/30/96
Cadmium	EPA 6010	ND	0.005	mg/L	05/02/96
Chromium	EPA 6010	ND	0.01	mg/L	05/02/96
Lead	EPA 6010	ND	0.04	mg/L	05/02/96
Nickel	EPA 6010	ND	0.01	mg/L	05/02/96
Zinc	EPA 6010	ND	0.01	mg/L	05/02/96

ND = Not detected at or above the reporting limit  $\star$  = Value at or above reporting limit

#### LAW/CRANDALL, INC.

SAMPLE ID: MW-5

AEN LAB NO: 9604340-02A AEN WORK ORDER: 9604340

CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96 DATE RECEIVED: 04/25/96 REPORT DATE: 05/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs Benzene Toluene Ethylbenzene Xylenes, Total Purgeable HCs as Gasoline	EPA 8020 71-43-2 108-88-3 100-41-4 1330-20-7 5030/GCFID	ND ND ND NO ND	0.5 0.5 0.5 2 0.05	ug/L ug/L ug/L ug/L mg/L	05/01/96 05/01/96 05/01/96 05/01/96 05/01/96
Methyl t-Butyl Ether	EPA 8020	ND	50	ug/L	05/01/96

#### LAW/CRANDALL, INC.

SAMPLE ID: MW-5

AEN LAB NO: 9604340-02D AEN WORK ORDER: 9604340 CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96 DATE RECEIVED: 04/25/96

REPORT DATE: 05/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Da	te 05/06/96
TPH as Diesel	GC-FID	0.44 *	0.05	mg/L	05/07/96
TPH as Oil	GC-FID	ND	0.2	mg/L	05/07/96

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

## LAW/CRANDALL, INC.

SAMPLE ID: MW-5

AEN LAB NO: 9604340-02F AEN WORK ORDER: 9604340

CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96 DATE RECEIVED: 04/25/96

REPORT DATE: 05/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Bromodichloromethane Bromoform	PA 8010 75-27-4 75-25-2	ND ND	0.5 0.5 2	ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96
Bromomethane Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether	74-83-9 56-23-5 108-90-7 75-00-3 110-75-8	ND ND ND ND ND	0.5 0.5 2 0.5	ug/L ug/L ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96 04/27/96
Chloroform Chloromethane Dibromochloromethane 1,2-Dichlorobenzene	67-66-3 74-87-3 124-48-1 95-50-1	ND ND ND ND	0.5 2 0.5 0.5	ug/L ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96 04/27/96
1.3-Dichlorobenzene 1.4-Dichlorobenzene Dichlorodifluoromethane 1.1-Dichloroethane	541-73-1 106-46-7 75-71-8 75-34-3 107-06-2	ND ND ND ND ND	0.5 0.5 2 0.5 0.5	ug/L ug/L ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96 04/27/96 04/27/96
1.2-Dichloroethane 1.1-Dichloroethene cis-1.2-Dichloroethene trans-1.2-Dichloroethene 1.2-Dichloropropane	75-35-4 156-59-2 156-60-5 78-87-5	ND ND ND ND	0.5 0.5 0.5 0.5	ug/L ug/L ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96 04/27/96
cis-1,3-Dichloropropene trans-1,3-Dichloropropene Methylene Chloride 1,1,2,2-Tetrachloroethane	10061-01-5 10061-02-6 75-09-2 79-34-5	ND ND ND NO	0.5 0.5 2 0.5 0.5	ug/L ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96 04/27/96
Tetrachloroethene 1,1,1-Trichloroethane 1,1,2-Trichloroethane Trichloroethene Trichlorofluoromethane 1,1,2Trichlorotrifluoroethane	127-18-4 71-55-6 79-00-5 79-01-6 75-69-4	ND ND ND ND ND	0.5 0.5 0.5 0.5 0.5	ug/L ug/L ug/L ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96 04/27/96 04/27/96

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

#### LAW/CRANDALL, INC.

SAMPLE ID: MW-5

AEN LAB NO: 9604340-02I

AEN WORK ORDER: 9604340 CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96 DATE RECEIVED: 04/25/96 REPORT DATE: 05/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for PNAs	EPA 3520	-		Extrn Date	05/01/96
PNAs by EPA 8270 Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(g,h,i)perylene Benzo(a)pyrene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1.2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	EPA 8270 83-32-9 208-96-8 120-12-7 56-55-3 205-99-2 207-08-9 191-24-2 50-32-8 218-01-9 53-70-3 206-44-0 86-73-7 193-39-5 91-20-3 85-01-8 129-00-0	ND ND ND ND ND ND ND ND ND ND ND ND ND	10 10 10 10 10 10 10 10 10 10 10 10	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96

### LAW/CRANDALL, INC.

SAMPLE ID: MW-5

AEN LAB NO: 9604340-02K

AEN WORK ORDER: 9604340 CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96 DATE RECEIVED: 04/25/96

REPORT DATE: 05/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	04/25/96
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	04/30/96
Arsenic	EPA 7060	0.006 *	0.002	mg/L	04/30/96
#Digestion, Metals by ICP	EPA 3010	-		Prep Date	04/30/96
Cadmium	EPA 6010	ND	0.005	mg/L	05/03/96
Chromium	EPA 6010	ND	0.01	mg/L	05/03/96
Lead	EPA 6010	ND	0.04	mg/L	05/03/96
Nickel	EPA 6010	ND	0.01	mg/L	05/03/96
Zinc	EPA 6010	ND	0.01	mg/L	05/03/96

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit

#### LAW/CRANDALL, INC.

SAMPLE ID: MW-6

AEN LAB NO: 9604340-03A AEN WORK ORDER: 9604340 CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96

DATE RECEIVED: 04/25/96 REPORT DATE: 05/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs Benzene Toluene Ethylbenzene Xylenes, Total Purgeable HCs as Gasoline	EPA 8020 71-43-2 108-88-3 100-41-4 1330-20-7 5030/GCFID	ND ND ND ND ND	0.5 0.5 0.5 2 0.05	ug/L ug/L ug/L ug/L mg/L	05/01/96 05/01/96 05/01/96 05/01/96 05/01/96
Methyl t-Butyl Ether	EPA 8020	ND	50	ug/L	05/01/96

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit

### LAW/CRANDALL, INC.

SAMPLE ID: MW-6

AEN LAB NO: 9604340-030 AEN LIORK OPDER: 9604340

AEN WORK ORDER: 9604340 CLIENT PROJ. ID: 70424-6-0004 DATE SAMPLED: 04/24/96

DATE RECEIVED: 04/25/96 REPORT DATE: 05/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	_		Extrn Da	te 05/06/96
TPH as Diesel	GC-FID	0.23 *	0.05	mg/L	05/07/96
TPH as Oil	GC-FID	ND	0.2	mg/L	05/07/96

#### LAW/CRANDALL, INC.

SAMPLE ID: MW-6

AEN LAB NO: 9604340-03F AEN WORK ORDER: 9604340

CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96 DATE RECEIVED: 04/25/96

**REPORT DATE: 05/13/96** 

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Bromodichloromethane	PA 8010 75-27-4 75-25-2	ND ND	0.5 0.5	ug/L ug/L	04/27/96 04/27/96
Bromoform Bromomethane Carbon Tetrachloride	74-83-9 56-23-5	ND ND	0.5 0.5 0.5	ug/L ug/L	04/27/96 04/27/96 04/27/96
Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether	108-90-7 75-00-3 110-75-8	ND ND	2 0.5	ug/L ug/L ug/L	04/27/96 04/27/96
Chloroform Chloromethane Dibromochloromethane	67-66-3 74-87-3 124-48-1	ON DN DN	0.5 2 0.5	ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96
1.2-Dichlorobenzene 1.3-Dichlorobenzene 1.4-Dichlorobenzene	95-50-1 541-73-1 106-46-7	ND ND ND	0.5 0.5 0.5	ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96
Dichlorodifluoromethane 1.1-Dichloroethane 1.2-Dichloroethane	75-71-8 75-34-3 107-06-2	ND ND ND	2 0.5 0.5	ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96
1.1-Dichloroethene cis-1,2-Dichloroethene trans-1.2-Dichloroethene	75-35-4 156-59-2 156-60-5	ND ND ND	0.5 0.5 0.5	ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96
<pre>1.2-Dichloropropane cis-1,3-Dichloropropene</pre>	78-87-5 10061-01-5 10061-02-6	ND NO ND	0.5 0.5 0.5	ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96
trans-1,3-Dichloropropene Methylene Chloride 1,1,2,2-Tetrachloroethane	75-09-2 79-34-5	ND ND	0.5 0.5 0.5	ug/L ug/L	04/27/96 04/27/96 04/27/96
Tetrachloroethene 1.1.1-Trichloroethane 1.1.2-Trichloroethane Trichloroethene	127-18-4 71-55-6 79-00-5 79-01-6	ND ND ND ND	0.5 0.5 0.5	ug/L ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96
Trichlorofluoromethane 1,1,2Trichlorotrifluoroethane Vinyl Chloride	75-69-4	ND ND ND	0.5	ug/L ug/L ug/L	04/27/96 04/27/96 04/27/96

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

### LAW/CRANDALL, INC.

SAMPLE ID: MW-6

AEN LAB NO: 9604340-031 AEN WORK ORDER: 9604340

CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96

DATE RECEIVED: 04/25/96 REPORT DATE: 05/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for PNAs	EPA 3520	_		Extrn Date	05/01/96
PNAs by EPA 8270 Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(g,h,i)perylene Benzo(a)pyrene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	EPA 8270 83-32-9 208-96-8 120-12-7 56-55-3 205-99-2 207-08-9 191-24-2 50-32-8 218-01-9 53-70-3 206-44-0 86-73-7 193-39-5 91-20-3 85-01-8 129-00-0		10 10 10 10 10 10 10 10 10 10 10 10	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96 05/08/96

### LAW/CRANDALL, INC.

SAMPLE ID: MW-6

AEN LAB NO: 9604340-03K AEN WORK ORDER: 9604340 CLIENT PROJ. ID: 70424-6-0004

DATE SAMPLED: 04/24/96 DATE RECEIVED: 04/25/96 REPORT DATE: 05/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	_		Filtr Date	04/25/96
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	04/30/96
Arsenic	EPA 7060	0.006 *	0.002	mg/L	04/30/96
#Digestion, Metals by ICP	EPA 3010	-		Prep Date	04/30/96
Cadmium	EPA 6010	ND	0.005	mg/L	05/03/96
Chromium	EPA 6010	ND	0.01	mg/L	05/03/96
Lead	EPA 6010	ND	0.04	mg/L	05/03/96
Nickel	EPA 6010	ND	0.01	mg/L	05/03/96
Zinc	EPA 6010	ND	0.01	mg/L	05/03/96

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

## AEN (CALIFORNIA) OUALITY CONTROL REPORT

AEN JOB NUMBER: 9604340

CLIENT PROJECT ID: 70424-6-0004

### Quality Control and Project Summary

All laboratory quality control parameters were found to be within established limits.

#### <u>Definitions</u>

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

## QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9604340

DATE EXTRACTED: 05/06/96

INSTRUMENT: A MATRIX: WATER

## Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery n-Pentacosane
05/07/96 05/07/96 05/08/96	MW-4 MW-5 MW-6	01 02 03	101 94 100
QC Limits:			58-118

DATE EXTRACTED: 05/06/95 DATE ANALYZED: 05/07/95 SAMPLE SPIKED: INSTRUMENT: A 9604270-14

## Matrix Spike Recovery Summary

				QC Limi	its
Analyte	Spike Added (mg/L)	Average Percent Recovery	RPD	Percent Recovery	RPD
Diesel	4.00	93	2	58-107	15

Daily method blanks for all associated analytical runs showed no contamination at or above the reporting limit.

:

PAGE 19

### QUALITY CONTROL DATA

METHOD: EPA 8010

AEN JOB NO: 9604340

INSTRUMENT: I MATRIX: WATER

### Surrogate Standard Recovery Summary

			Percen	t Recovery
Date Analyzed	Client Id.	Lab Id.	Bromochloro- methane	1-Bromo-3-chloro- propane
04/27/96 04/27/96 04/27/96	MW-4 MW-5 MW-6	01 02 03	96 100 102	112 118 119
QC Limits:			70-130	70-130

DATE ANALYZED: 04/26/96 SAMPLE SPIKED: 9604229-01

INSTRUMENT: I

## Matrix Spike Recovery Summary

				QC Limit	.s
Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	Percent Recovery	RPD
1,1-Dichloroethene Trichloroethene Chlorobenzene	50 50 50	101 106 96	<1 1 2	37-156 54-122 54-141	20 20 20

Daily method blanks for all associated analytical runs showed no contamination at or above the reporting limit.

### QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9604340

INSTRUMENT: H MATRIX: WATER

## Surrogate Standard Recovery Summary

			Percent Recovery
Date Analyzed	Client Id.	Lab Id.	Fluorobenzene
05/01/96 05/01/96 05/01/96	MW-4 MW-5 MW-6	01 02 03	102 102 102
QC Limits:			70-130

DATE ANALYZED: 05/01/96 SAMPLE SPIKED: 9604318-07

INSTRUMENT: H

## Matrix Spike Recovery Summary

				QC Limi	ts
Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	Percent Recovery	RPD
Benzene Toluene	22.2 73.9	100 96	2 8	85-109 87-111	17 16
Hydrocarbons as Gasoline	500	112	9	66-117	19

Daily method blanks for all associated analytical runs showed no contamination at or above the reporting limit.

## QUALITY CONTROL DATA

METHOD: EPA 8270

AEN JOB NO: 9604340

DATE EXTRACTED: 05/01/96

INSTRUMENT: 11 MATRIX: WATER

## Surrogate Standard Recovery Summary

					Perc	ent Recovery	ecovery										
Date Analyzed	Client Id.	Lab Id.	2-Fluoro- phenol	Phenol -d <sub>5</sub>	Nitro- benzene-d <sub>5</sub>	2-fluoro- biphenyl	2,4,6-Tri- bromophenol	Terphenyl- d <sub>14</sub>									
05/08/96 05/08/96 05/08/96	MW-4 MW-5 MW-6	01 02 03	65 56 72	69 60 77	83 68 88	52 46 53	102 89 109	55 48 56									
QC Limits:			21-100	10-94	35-114	43-116	10-123	33-141									

DATE EXTRACTED: 05/01/96 DATE ANALYZED: 05/07/96

SAMPLE SPIKED: LCS INSTRUMENT: 11

## Laboratory Control Sample Recovery

Analyte	Spike Added (ug/L)	Percent Recovery	QC Limits Percent Recovery
Phenol 2-Chlorophenol 1,4-Dichlorobenzene N-Nitrosodi-n-propylamine 1,2,4-Trichlorobenzene 4-Chloro-3-methylphenol Acenaphthene 4-Nitrophenol 2,4-Dinitrotoluene Pentachlorophenol Pyrene	200 200 200 200 200 200 200 200 200 200	80 76 76 92 78 94 86 110 86 78	5-112 23-134 20-124 0-230 44-142 22-147 47-145 0-132 0-112 14-176 52-115

Daily method blanks for all associated analytical runs showed no contamination at or above the reporting limit.

## QUALITY CONTROL DATA

AEN JOB NO: 9604340

SAMPLE SPIKED: DI WATER

DATE(S) ANALYZED: 04/30-05/02/96

MATRIX: WATER

## Method Blank and Spike Recovery Summary

			0			QC Lir	nits
Analyte	Inst./ Method	Blank Result (mg/L)	Spike Added (mg/L)	Percent Recovery	RPD	Percent Recovery	RPD
As. Arsenic	4000/7060	ND	0.04	99	3	69-136	12
Cd. Cadmium	ICP/6010	ND	0.05	106	5	84-120	10
Cr. Chromium	ICP/6010	ND	0.1	111	<1	85-128	10
Ni. Nickel	ICP/6010	ND	0.01	110	1	92-121	10
Pb. Lead	ICP/6010	ND	0.5	109	1	90-122	10
Zn. Zinc	ICP/6010	ND	0.25	112	1	90-121	10

Reporting Information:  1. Client: LAW/CRANDaU Address: 875 Rattery St. Son Francisco, CA 94111 Contact. Mark Milter Alt. Contact: Andrew T. Muha			American Environmental Network 3440 Vincent Road, Pleasant Hill, CA 94523 Phone (510) 930-9090 FAX (510) 930-0256						Lab Lab Date		Num ination	ber:	pped		QUE	ST	SOR FOR 9	ANAL'	Page . YSIS / C	HAIN		
Address Rep		S <sub>6</sub>	end Invoice To:		1				Dat		sults							~~~~~				
2.	Sama as 2		JAME	<i>~</i> 3					Clie	e Rep Int Ph Int FA	ione	No.:		1415	15) 1) E	939	- y	2040	>			
									0,10	/1				NAL					7			
Client P.O. I	n To O or 2 (Circle one)  No.: Clie  m Member (s) ATM	nt Project I.D. N	10:: <u>70424</u>	- <u>c</u> - oc	04	·-	<b>T</b>	- /	16 teletus		Notagi	20,00	4 4 827	10 4 27 24 25 X	19/2 	/	//		7			
Lab Number	Client Sample Identification	Air Volume	Date/ Time Collected	Sample Type*	Pres.	No. of Cont.	Type of Cont.	No.				277	W/V	\$ <sup>}</sup> /	$\angle$		$\angle$		Comme	ents /	Hazar	ds
25047	MW-1		4/24 K50	7		11		У	k	γ	Y	Х	λ					* Filk	n Meta	e San	yplin o	40
1003/	MW-Z		4/24 1845	1		11		X	×	X	X <sup>1</sup>	χ	X						n Netw			
44 -	MW-3		4/24 1745	7		11		~	λ	*	X'	×	X				<u> </u>	* Filte	* Metal	Skap	LWG.	a R
DIAK	MW-4	<del> </del>	4/24 1500	<del></del>		1)		×	X	X	х	У	χ					i Filt	n Meta	1 500	pl in 1	OB
07.A-K	MW-5		4/24 1700			11		×	×	x	٨	X	х					& Filt	~ Metal	54	ple in	AB
DLA-K	MW-G		4124 1350	7		1)		-74	×	×	×	Х	λ					* Gile,	. Metal	Sing	GW L	1 B
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Relinquishe (Signature)	ad by:	D	DATE		TIME -		Receive (Signat			X	) t		K.,	P	w	i	1		<u> 25-9</u>	6	TIME //SC	>
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Method of							Lab Co	mmei	nts													
L		*Samole Ivne	(Sneci(v): 1) 37	mm 0.8 u	m MCEF 2	2) 25mm	1 0.8 um	MCE	= 3)	25mr	n 0.4	um c	olyca	rb. fil	ter							

pore size \_\_\_\_\_\_ 5) Charcoal tube 6) Silica gel tube 7) Water 8) Soil 9) Bulk Sample

4) PVC filter, diam. \_