

91 MAY 31 AM 11:22

May 29, 1991
File: 10-1682-03/38

Mr. Dennis Hunt
District Manager
Industrial Asphalt
P.O. Box 636
Pleasanton, CA 94566

SUBJECT: Quarterly Report (February 1991 - April 1991), Industrial Asphalt, Pleasanton, California

Dear Mr. Hunt:

Kleinfelder, Inc., is pleased to submit this quarterly report for the first quarter of 1991 (February 1991 through April 1991) for the Industrial Asphalt site in Pleasanton, California (Plate 1). Quarterly progress reports were requested by the Alameda County Department of Health Services (ACDHS) in their letter to you dated 13 November 1989.

INTRODUCTION

Thirteen monitoring wells and one extraction well (MW-13) are present onsite. Data collected from these wells were used to evaluate the nature and extent of the plume. The location of monitoring wells along with the extraction well are shown on Plate 2. All wells are being monitored for depth to water and product thickness on a quarterly basis in accordance with recommendations in the Remedial Investigation Report dated 28 December 1990. Collected ground water samples have been analyzed for the target compounds including total petroleum hydrocarbons (TPH) as diesel/waste oil and polychlorinated biphenyls (PCBs). Additionally, as requested by the ACDHS in their letter to your firm dated February 21, 1991, water samples were also analyzed for BTXE (benzene, toluene, xylenes and ethylbenzene) using EPA Method 8020, Oil and Grease (Standard Method 5520 C & F) and halogenated volatile organics using EPA Method 8010.

Water samples were collected from onsite wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, MW-10, MW-13, MW-14, MW-15 and MW-16 during this sampling round. Monitoring wells MW-6 and MW-9 were not accessible on the sampling days, and therefore, were not sampled. In addition to the onsite monitoring wells, an offsite water supply well located on the Jameson property was sampled. Refer to Plate 2 for the location of all wells and the offsite well.

WATER LEVEL MONITORING DATA

Ground water surface elevation data were collected in sampled wells prior to their sampling. These measurements are provided in Table 1. Generally, the ground water surface elevation has dropped since the previous sampling round which occurred in January 1991.

Based on the information collected during this round of sampling, a ground water gradient map was constructed (Plate 3). This map indicates a general flow direction to the east, which is a change from the northeasterly flow direction noted during the previous sampling round. With the exception of an apparent anomalous high water level reading at MW-2, water levels are relatively flat over much of the site (approximate elevation 306). Ground water gradient and the apparent anomalous reading, will be further evaluated after acquisition of additional water level data in July.

A measurement from staff gauge located in the adjacent settlement pond collected during this sampling round indicates that the water surface in the pond has risen in elevation approximately one half foot since the last sampling round in January 1991.

GROUND WATER CHEMISTRY MONITORING RESULTS

Sheen was observed in the following wells during this sampling round: MW-1, MW-2, MW-3, MW-8, MW-9, and MW-13. In addition, some monitoring wells exhibited hydrocarbon odors. These include: MW-1, MW-2, MW-3, MW-8, MW-10, and MW-13.

Analytical data are provided in Tables 1, 2 and 3. Complete analytical laboratory reports along with chain of custody records are included in The Appendix.

Detectable concentrations of PCBs have been found in the ground water samples collected from monitoring wells MW-2, MW-3 and MW-8. The highest concentration detected was in the sample collected from MW-2 at 5.1 micrograms per liter ($\mu\text{g/l}$). The remaining concentrations for the other two monitoring wells was 0.8 $\mu\text{g/l}$.

Analyses on the water samples collected from wells MW-1, MW-2, MW-3, MW-4 and MW-8, revealed the presence of dissolved hydrocarbons (TPH) as both diesel and waste oil in ground water at these sampling locations. TPH as "waste oil only" was detected in the samples collected from MW-16. TPH as "diesel only" was detected in wells MW-7, MW-10, MW-13 and MW-15. The concentrations range between 44 milligrams per liter (mg/l) to 0.5 mg/l , with MW-2 exhibiting the highest concentrations. Generally, analytical data indicate a drop in the concentrations of TPH as diesel and waste oil in the water samples collected as compared to the January 1991 data. This is consistent with other sampling rounds in which the ground water surface elevation increase or decrease in elevation caused increase or decrease, respectively, in detected concentrations.

Chemical analysis for oil and grease and hydrocarbons revealed the presence of these compounds in the water samples obtained from wells MW-1, MW-2, MW-3, MW-4, MW-8, MW-10, MW-15 and MW-16. Oil and grease was detected in MW-7. (Table 1).

1,1 - Dichloroethane, trichlorofluoromethane and vinyl chloride were detected in the sample from well MW-3. In addition, 1,2 Dichloroethene was detected at a concentration of 1 $\mu\text{g/l}$ in well MW-8. (Table 2).

Benzene was detected in samples from monitoring wells MW-2 and MW-3, toluene in well MW-14, ethylbenzene in well MW-3 and MW-8 and xylenes in well MW-3 only (Table 3).

An offsite water supply well located east of the site (Jameson Well) was sampled (Plate 2). The well was purged by opening a tap and running the water for about 30 minutes in order to empty the surge tank. Approximately 20 gallons of water were purged prior to collecting a sample. The ground water samples were analyzed for the same constituents as the onsite monitoring wells. None of the target compounds were detected in concentrations above their respective laboratory reporting limits.

In summary, based on the available data, the ground water surface elevation beneath the site is lower than the previous sampling round and ground water flow is generally to the east. The ground water chemistry has remained, for the most part, consistent between sampling rounds. The ground water samples collected from monitoring wells MW-1, MW-2, MW-3, and MW-8 continue to exhibit higher concentrations of the target compounds. The ground water samples collected from the offsite water production well (Jameson well) did not exhibit concentrations of the target chemical above the laboratory reporting limits for each of the compounds requested.

RECOMMENDED RI ACTIVITIES

Several volatile organic compounds, oil and grease and BTXE were found in the water samples obtained from the onsite monitoring wells. Therefore, it is recommended that during the next quarterly round (July 1991), water samples be analyzed for the same compounds. This is to confirm low concentrations of these compounds found in selected water samples.

LIMITATIONS

This report was prepared in general accordance with the accepted standard of practice which exists in Northern California at the time the investigation was performed. It should be recognized that definition and evaluation of environmental conditions is a difficult and inexact art. Judgements leading to conclusions and recommendations are generally made with an incomplete knowledge of the conditions present. More extensive studies, including additional environmental investigations, can tend to reduce the inherent uncertainties associated with such studies. If the Client wishes to reduce the uncertainty beyond the level associated with this study, Kleinfelder should be notified for additional consultation.

Our firm has prepared this report for the Client's exclusive use for this particular project and in accordance with generally accepted engineering practices within the area at the time of our investigation. No other representations, expressed or implied, and no warranty or guarantee is included or intended.


This report may be used only by the client and only for the purposes stated, within a reasonable time from its issuance. Land use, site conditions (both onsite and offsite) or other factors may change over time, and additional work may be required with the passage of time. Any party other than the client who wishes to use this report shall notify Kleinfelder of such intended use. Based on the intended use of the report, Kleinfelder may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the client or anyone else will release Kleinfelder from any liability resulting from the use of this report by any unauthorized party.

If you have any questions regarding this report or require additional information, please contact the undersigned.

Sincerely,

KLEINFELDER, INC.


Krzysztof (Krys) S. Jesionek,
Project Manager


Lloyd C. Venburg, R.G.
Senior Project Manager



KSJ:LCV:mtm

cc: Dwight Beavers - Industrial Asphalt
Gil Wistar - Alameda County Department of Environmental Services
Rico Duazo - California Regional Water Quality Control Board
Jerry Killingstad - Alameda County Flood Control and Water Conservation District

Table 1
MONITORING PARAMETERS (APRIL 1991)
INDUSTRIAL ASPHALT

Monitoring Well	Total Depth (feet)	Depth to Water ⁽¹⁾ (feet)	Ground Water Elevation ⁽²⁾ (feet)	Product Thickness (feet)	TPH as Diesel ⁽³⁾ (mg/l)	TPH as Waste Oil ⁽⁴⁾ (mg/l)	PCBs μ g/l ⁽⁵⁾	Oil & Grease (mg/l) ⁽¹⁰⁾	Total Hydrocarbons (mg/l) ⁽¹¹⁾
MW-1	88	73.69	305.72	SHEEN	40	27	ND	91	74
MW-2	90	72.00	307.80	SHEEN	44	35	5.1	150	130
MW-3	90	72.34	306.20	SHEEN	19	14	0.8	34	30
MW-4	95	70.71	305.55	NE	0.7	9.7	ND	11	6
MW-5	110	78.57	303.98	NE	ND	ND	ND	ND	ND
MW-6	109	NC	NA	NA	NT	NT	NT	NT	NT
MW-7	109	73.07	305.87	NE	0.5	ND	ND	1	ND
MW-8	109	72.82	305.74	NE	4.1	4.8	0.8	15	11
MW-9	108	NC	NA	NA	NT	NT	NT	NT	NT
MW-10	111	72.02	306.02	NE	3	ND	ND	4	1
MW-11 ⁽⁸⁾	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-13 ⁽⁹⁾	116	73.62	306.59	SHEEN	0.7	ND	ND	ND	ND
MW-14	114.5	74.27	305.82	NE	ND	ND	ND	ND	ND
MW-15	117	73.03	305.09	NE	0.5	ND	ND	2	1
MW-16	110	73.27	306.38	NE	ND	0.5	ND	0.9	ND
14A2 ⁽¹²⁾	UNK	UNK	UNK	UNK	ND	ND	ND	ND	ND
SG	NA	1.5	301.5 ⁽⁷⁾	NA	NA	NA	NA	NA	NA

- (1) Below top of casing
(2) Feet above mean sea level (USGS Datum)
(3) Laboratory detection limits - 0.05 mg/l
(4) Laboratory detection limit - 0.1 mg/l
(5) Laboratory detection limit - 0.5 μ g/l
(6) Reading on the staff gage
(7) Surface water elevation in the pit
(8) Well abandoned on August 8, 1990
(9) Extraction well
(10) Laboratory detection limit - 0.5 mg/l
(11) Laboratory detection limit - 0.5 mg/l
(12) Jamieson Well
- TPH Total Petroleum Hydrocarbons
PCBs Polychlorinated Biphenyls (Aroclor 1260)
NE Not Encountered
ND Not Detected at or above laboratory detection limits
NA Not Applicable
SG Staff Gage
NC Not Accessible
NT Not Tested
UNK Unknown



Table 2
HALOGENATED ORGANICS (EPA METHOD 8010)⁽¹⁾
INDUSTRIAL ASPHALT

Monitoring Well	1,1 - DCA	1,2 - DCE	TCFM	VC
MW-1	ND	ND	ND	ND
MW-2	ND	ND	ND	ND
MW-3	2	ND	1	8
MW-4	ND	ND	ND	ND
MW-5	ND	ND	ND	ND
MW-6	NT	NT	NT	NT
MW-7	ND	ND	ND	ND
MW-8	ND	1	ND	ND
MW-9	NT	NT	NT	NT
MW-10	ND	ND	ND	ND
MW-13	ND	ND	ND	ND
MW-14	ND	ND	ND	ND
MW-15	ND	ND	ND	ND
MW-16	ND	ND	ND	ND
14A2	ND	ND	ND	ND

Notes:

Concentrations in $\mu\text{g}/\text{l}$

(1) Laboratory detection limits - 0.5 mg/l

NT Not Tested

1,1 - DCA = 1,1 Dichloroethane

1,2 - DCE = 1,2 Dichloroethene

TCFM Trichlorochloromethane

VC Vinyl Chloride

14A2 Jamieson Well



Table 3
BTXE (EPA METHOD 8020)
INDUSTRIAL ASPHALT

Monitoring Well	Benzene ⁽¹⁾	Toluene ⁽¹⁾	Ethylbenzene ⁽¹⁾	Xylenes ⁽²⁾
MW-1	ND	ND	ND	ND
MW-2	0.7	ND	ND	ND
MW-3	0.9	ND	6	3
MW-4	ND	ND	ND	ND
MW-5	ND	ND	ND	ND
MW-6	NT	NT	NT	NT
MW-7	ND	ND	ND	ND
MW-8	ND	ND	3	ND
MW-9	NT	NT	NT	NT
MW-10	ND	ND	ND	ND
MW-13	ND	ND	ND	ND
MW-14	ND	0.7	ND	ND
MW-15	ND	ND	ND	ND
MW-16	ND	ND	ND	ND
14A2	ND	ND	ND	ND

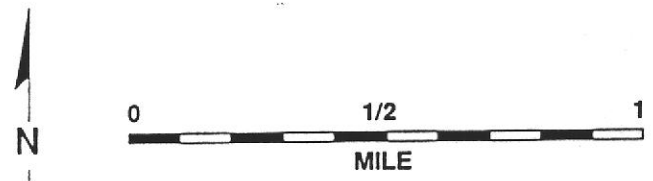
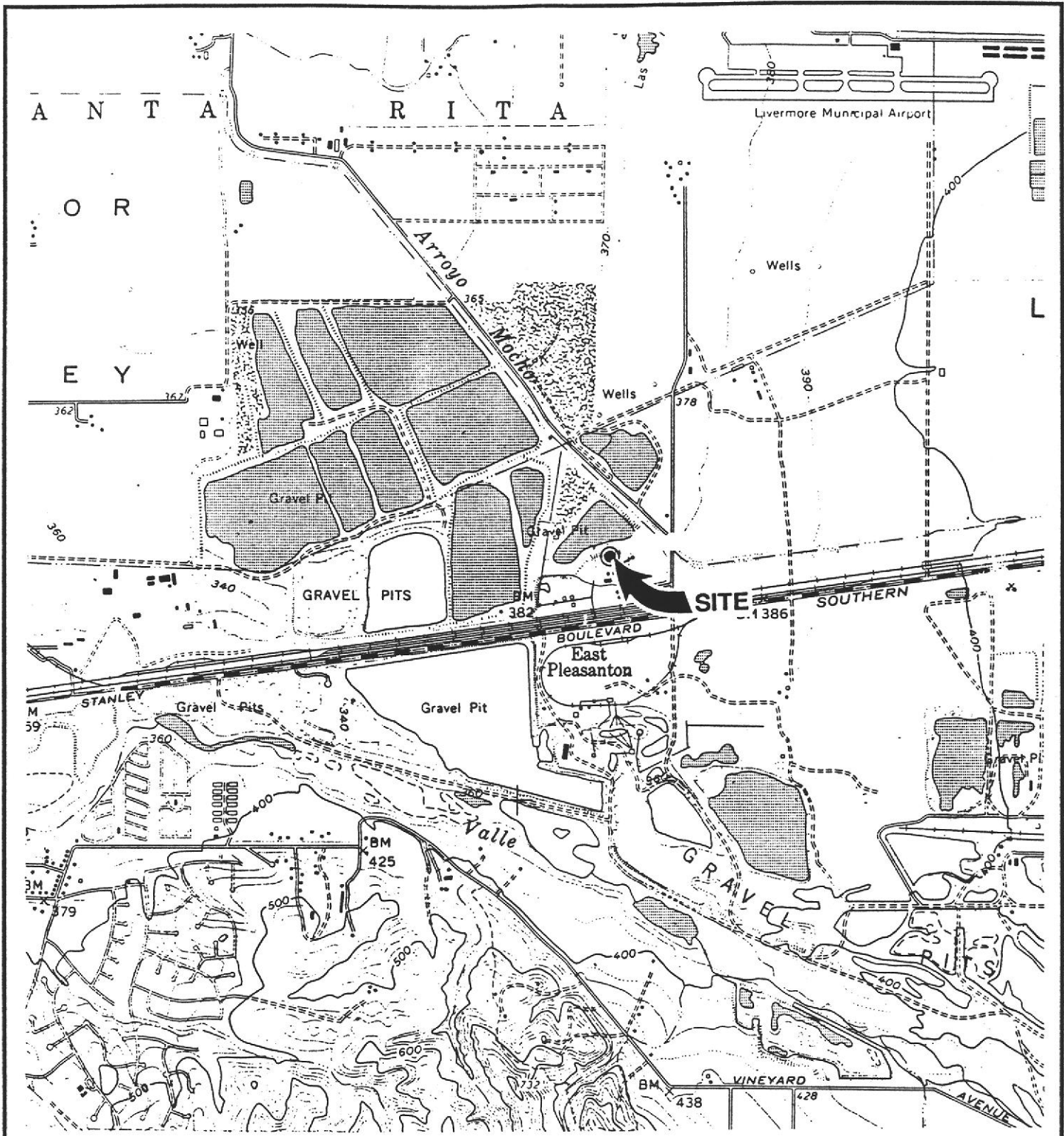
Notes:

Concentrations in $\mu\text{g}/\text{l}$

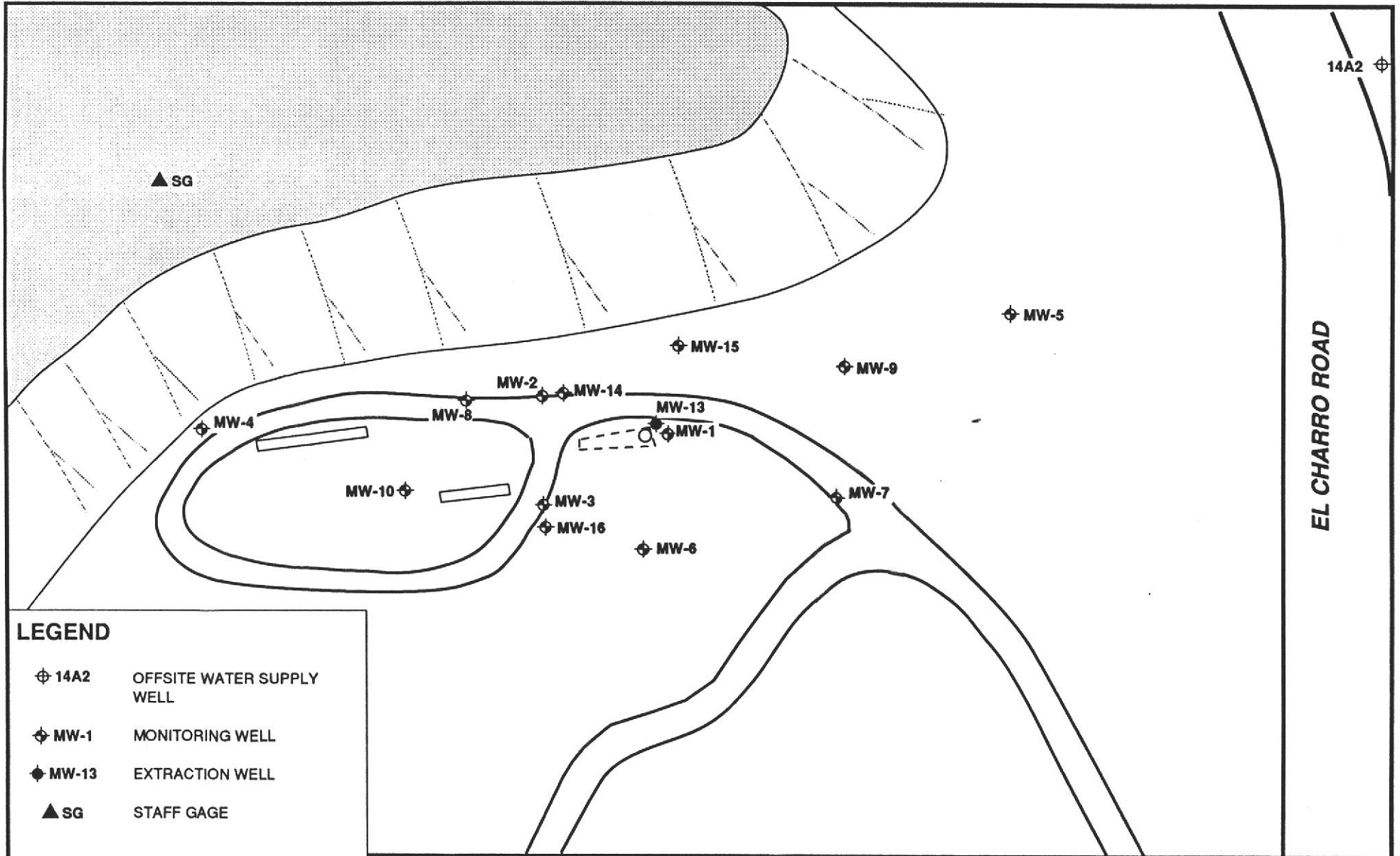
(1) Laboratory detection limit - $0.5 \mu\text{g}/\text{l}$

(2) Laboratory detection limit - $2 \mu\text{g}/\text{l}$



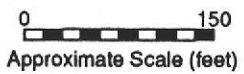


 <p>KLEINFELDER</p> <p>PROJECT NO. 10-1682-03</p>	<p>SITE LOCATION MAP</p> <p>INDUSTRIAL ASPHALT PLEASANTON, CALIFORNIA</p>	<p>PLATE</p> <p>1</p>
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LEGEND

- ⊕ 14A2 OFFSITE WATER SUPPLY WELL
- ⊕ MW-1 MONITORING WELL
- ⊕ MW-13 EXTRACTION WELL
- ▲ SG STAFF GAGE



BASE MAP SOURCE:
 Wells surveyed by Associated Professions Inc. and Kleinfelder, Inc.
 Site details from 1987 photo (No. HAP-753), Pacific Aerial Surveys.



MONITORING WELL LOCATION MAP

INDUSTRIAL ASPHALT
 PLEASANTON, CALIFORNIA

PROJECT NO. 10-1682-03

DRAFTED BY: L. Sue

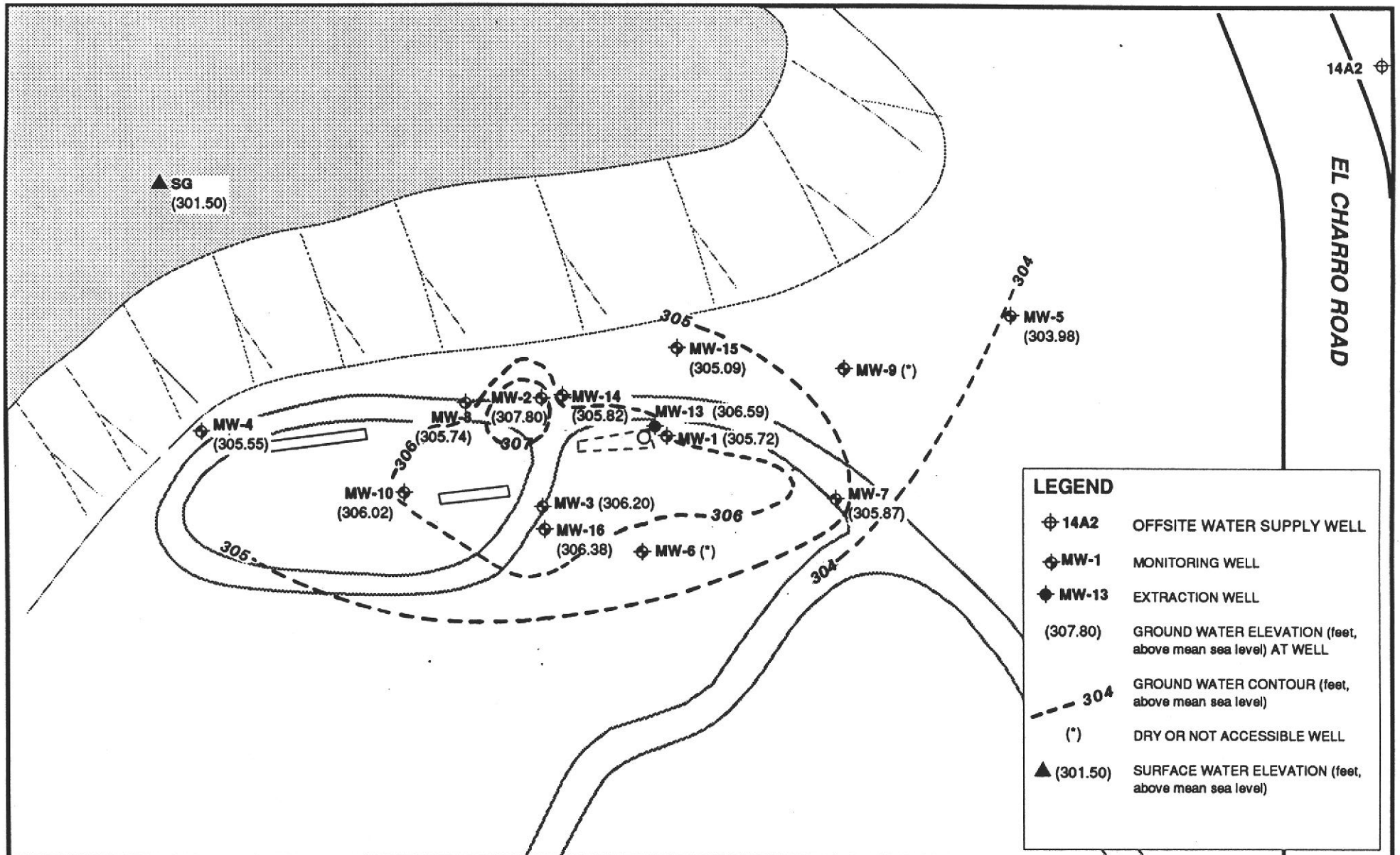
DATE: 5-20-91

CHECKED BY: L. Venburg

DATE: 5-22-91

PLATE

2



LEGEND	
⊕ 14A2	OFFSITE WATER SUPPLY WELL
⊕ MW-1	MONITORING WELL
◆ MW-13	EXTRACTION WELL
(307.80)	GROUND WATER ELEVATION (feet, above mean sea level) AT WELL
- - - 304	GROUND WATER CONTOUR (feet, above mean sea level)
(*)	DRY OR NOT ACCESSIBLE WELL
▲ (301.50)	SURFACE WATER ELEVATION (feet, above mean sea level)



**GROUND WATER SURFACE GRADIENT
MAP (APRIL 1991)**

**INDUSTRIAL ASPHALT
PLEASANTON, CALIFORNIA**

PROJECT NO. 10-1682-03

PLATE

3

BASE MAP SOURCE:
Wells surveyed by Associated Professions Inc. and Kleinfelder, Inc.
Site details from 1987 photo (No. HAP-753), Pacific Aerial Surveys.

DRAFTED BY: L. Sue

DATE: 5-20-91

CHECKED BY: L. Venburg

DATE: 5-22-91

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LABORATORY ANALYSIS REPORT

KLEINFELDER, INC.
2121 N. CALIFORNIA STREET
SUITE 570
WALNUT CREEK, CA 94596
ATTN: KRYS JESIONEK

REPORT DATE: 05/03/91

DATE SAMPLED: 04/17/91

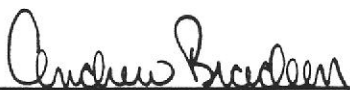
DATE RECEIVED: 04/17/91

CLIENT PROJ. NO: 10-1682-03
C.O.C. NO: 1159

MED-TOX JOB NOS: 9104142,
9104143

ANALYSIS OF: WATER SAMPLES

See attached for results



Andrew Bradeen, Manager
Organic Laboratory

Results FAXed 04/26/91

KLEINFELDER, INC.

DATE SAMPLED: 04/17/91
DATE RECEIVED: 04/17/91
CLIENT PROJ. NO: 10-1682-03

REPORT DATE: 05/03/91

MED-TOX JOB NOS: 9104142,
9104143

Sample Identification Client Id. Lab No.	Extractable Hydrocarbons as Diesel (mg/L)	Extractable Hydrocarbons as Oil (mg/L)	Oil & Grease (mg/L)	Hydrocarbons (mg/L)
9104142				
50180 MW-5 01E	ND	ND	---	---
50180 01G	---	---	ND	ND
50190 MW-4 02E	0.7 *	9.7	---	---
50190 02G	---	---	11	6
54040 MW-7 03E	0.5 *	ND	---	---
54040 03G	---	---	1	ND
54050 MW-10 04E	3.0 *	ND	---	---
54050 04G	---	---	4	1
9140143				
53882 MW-15 01E	0.5 *	ND	---	---
53882 01G	---	---	2	1
Detection Limit	0.05	0.1	0.5	0.5
Method:	3510 GCFID	3510 GCFID	5520C	5520F
Instrument:	C	C	IR	IR
Date Extracted:	04/23,05/01/91		04/24,29/91	
Date Analyzed:	04/24-05/01/91		04/26-30/91	

ND = Not Detected

* Although this sample contains what appears to be higher molecular weight hydrocabons than those typically contained in a diesel fuel, the reported concentration is based on diesel calibration.

KLEINFELDER, INC.

CLIENT ID: 50180
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 04/17/91
DATE RECEIVED: 04/17/91
REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104142-01A
MED-TOX JOB NO: 9104142
DATE ANALYZED: 04/18/91
INSTRUMENT: G

EPA METHOD 8010 (WATER MATRIX)
HALOGENATED VOLATILE ORGANICS

COMPOUND	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Bromodichloromethane	75-27-4	ND	0.5
Bromoform	75-25-2	ND	0.5
Bromomethane	74-83-9	ND	0.5
Carbon Tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	0.5
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	0.5
Dibromochloromethane	124-48-1	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	0.5
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
cis-1,2-Dichloroethene	156-69-4	ND	0.5
trans-1,2-Dichloroethene	156-60-5	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene Chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichloro- 1,2,2-trifluoroethane	76-13-1	ND	0.5
Vinyl Chloride	75-01-4	ND	0.5

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 50190
 CLIENT PROJ. ID: 10-1682-03
 DATE SAMPLED: 04/17/91
 DATE RECEIVED: 04/17/91
 REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104142-02A
 MED-TOX JOB NO: 9104142
 DATE ANALYZED: 04/18/91
 INSTRUMENT: G

EPA METHOD 8010 (WATER MATRIX)
 HALOGENATED VOLATILE ORGANICS

COMPOUND	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Bromodichloromethane	75-27-4	ND	0.5
Bromoform	75-25-2	ND	0.5
Bromomethane	74-83-9	ND	0.5
Carbon Tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	0.5
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	0.5
Dibromochloromethane	124-48-1	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	0.5
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
cis-1,2-Dichloroethene	156-69-4	ND	0.5
trans-1,2-Dichloroethene	156-60-5	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene Chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichloro-			
1,2,2-trifluoroethane	76-13-1	ND	0.5
Vinyl Chloride	75-01-4	ND	0.5

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 54040
 CLIENT PROJ. ID: 10-1682-03
 DATE SAMPLED: 04/17/91
 DATE RECEIVED: 04/17/91
 REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104142-03A
 MED-TOX JOB NO: 9104142
 DATE ANALYZED: 04/18/91
 INSTRUMENT: G

EPA METHOD 8010 (WATER MATRIX)
 HALOGENATED VOLATILE ORGANICS

COMPOUND	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Bromodichloromethane	75-27-4	ND	0.5
Bromoform	75-25-2	ND	0.5
Bromomethane	74-83-9	ND	0.5
Carbon Tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	0.5
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	0.5
Dibromochloromethane	124-48-1	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	0.5
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
cis-1,2-Dichloroethene	156-69-4	ND	0.5
trans-1,2-Dichloroethene	156-60-5	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene Chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichloro-			
1,2,2-trifluoroethane	76-13-1	ND	0.5
Vinyl Chloride	75-01-4	ND	0.5

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 54050
 CLIENT PROJ. ID: 10-1682-03
 DATE SAMPLED: 04/17/91
 DATE RECEIVED: 04/17/91
 REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104142-04A
 MED-TOX JOB NO: 9104142
 DATE ANALYZED: 04/18/91
 INSTRUMENT: G

EPA METHOD 8010 (WATER MATRIX)
 HALOGENATED VOLATILE ORGANICS

COMPOUND	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Bromodichloromethane	75-27-4	ND	0.5
Bromoform	75-25-2	ND	0.5
Bromomethane	74-83-9	ND	0.5
Carbon Tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	0.5
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	0.5
Dibromochloromethane	124-48-1	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	0.5
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
cis-1,2-Dichloroethene	156-69-4	ND	0.5
trans-1,2-Dichloroethene	156-60-5	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene Chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichloro-			
1,2,2-trifluoroethane	76-13-1	ND	0.5
Vinyl Chloride	75-01-4	ND	0.5

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 53882
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 04/17/91
DATE RECEIVED: 04/17/91
REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104143-01A
MED-TOX JOB NO: 9104143
DATE ANALYZED: 04/18/91
INSTRUMENT: G

EPA METHOD 8010 (WATER MATRIX)
HALOGENATED VOLATILE ORGANICS

COMPOUND	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Bromodichloromethane	75-27-4	ND	0.5
Bromoform	75-25-2	ND	0.5
Bromomethane	74-83-9	ND	0.5
Carbon Tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	0.5
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	0.5
Dibromochloromethane	124-48-1	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	0.5
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
cis-1,2-Dichloroethene	156-69-4	ND	0.5
trans-1,2-Dichloroethene	156-60-5	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene Chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichloro-			
1,2,2-trifluoroethane	76-13-1	ND	0.5
Vinyl Chloride	75-01-4	ND	0.5

ND = Not Detected

KLEINFELDER, INC.

CLIENT PROJ. ID: 10-1682-03
CLIENT ID: 50180
DATE SAMPLED: 04/17/91
DATE RECEIVED: 04/17/91
REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104142-01C
MED-TOX JOB NO: 9104142
DATE ANALYZED: 04/18/91
INSTRUMENT: G

BTEX (WATER MATRIX)

METHOD: EPA 8020 (5030)

	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Benzene	71-43-2	ND	0.5
Toluene	108-88-3	ND	0.5
Ethylbenzene	100-41-4	ND	0.5
Xylenes, Total	1330-20-7	ND	2

ND = Not Detected

KLEINFELDER, INC.

CLIENT PROJ. ID: 10-1682-03
CLIENT ID: 50190
DATE SAMPLED: 04/17/91
DATE RECEIVED: 04/17/91
REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104142-02C
MED-TOX JOB NO: 9104142
DATE ANALYZED: 04/18/91
INSTRUMENT: G

BTEX (WATER MATRIX)

METHOD: EPA 8020 (5030)

	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Benzene	71-43-2	ND	0.5
Toluene	108-88-3	ND	0.5
Ethylbenzene	100-41-4	ND	0.5
Xylenes, Total	1330-20-7	ND	2

ND = Not Detected

KLEINFELDER, INC.

CLIENT PROJ. ID: 10-1682-03
CLIENT ID: 54040
DATE SAMPLED: 04/17/91
DATE RECEIVED: 04/17/91
REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104142-03C
MED-TOX JOB NO: 9104142
DATE ANALYZED: 04/18/91
INSTRUMENT: G

BTEX (WATER MATRIX)

METHOD: EPA 8020 (5030)

	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Benzene	71-43-2	ND	0.5
Toluene	108-88-3	ND	0.5
Ethylbenzene	100-41-4	ND	0.5
Xylenes, Total	1330-20-7	ND	2

ND = Not Detected

KLEINFELDER, INC.

CLIENT PROJ. ID: 10-1682-03
CLIENT ID: 54050
DATE SAMPLED: 04/17/91
DATE RECEIVED: 04/17/91
REPORT DATE: 05/03/91MED-TOX LAB NO: 9104142-04C
MED-TOX JOB NO: 9104142
DATE ANALYZED: 04/18/91
INSTRUMENT: G

BTEX (WATER MATRIX)

METHOD: EPA 8020 (5030)

	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Benzene	71-43-2	ND	0.5
Toluene	108-88-3	ND	0.5
Ethylbenzene	100-41-4	ND	0.5
Xylenes, Total	1330-20-7	ND	2

ND = Not Detected

KLEINFELDER, INC.

CLIENT PROJ. ID: 10-1682-03
CLIENT ID: 53882
DATE SAMPLED: 04/17/91
DATE RECEIVED: 04/17/91
REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104143-01C
MED-TOX JOB NO: 9104143
DATE ANALYZED: 04/18/91
INSTRUMENT: G

BTEX (WATER MATRIX)

METHOD: EPA 8020 (5030)

	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Benzene	71-43-2	ND	0.5
Toluene	108-88-3	ND	0.5
Ethylbenzene	100-41-4	ND	0.5
Xylenes, Total	1330-20-7	ND	2

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 50180
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 04/17/91
DATE RECEIVED: 04/17/91
REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104142-011
MED-TOX JOB NO: 9104142
DATE EXTRACTED: 04/18/91
DATE ANALYZED: 04/25/91
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS

AROCLOR	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Aroclor 1016	12674-11-2	ND	0.5
Aroclor 1221	11104-28-2	ND	0.5
Aroclor 1232	11141-16-5	ND	0.5
Aroclor 1242	53469-21-9	ND	0.5
Aroclor 1248	12672-29-6	ND	0.5
Aroclor 1254	11097-69-1	ND	0.5
Aroclor 1260	11096-82-5	ND	0.5

ND - Not Detected

Analytical Method: EPA 8080, SW-846 3rd Edition, 1986

KLEINFELDER, INC.

CLIENT ID: 50190
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 04/17/91
DATE RECEIVED: 04/17/91
REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104142-02I
MED-TOX JOB NO: 9104142
DATE EXTRACTED: 04/18, 26/91
DATE ANALYZED: 04/25-26/91
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS

AROCLOR	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Aroclor 1016	12674-11-2	ND	0.5
Aroclor 1221	11104-28-2	ND	0.5
Aroclor 1232	11141-16-5	ND	0.5
Aroclor 1242	53469-21-9	ND	0.5
Aroclor 1248	12672-29-6	ND	0.5
Aroclor 1254	11097-69-1	ND	0.5
Aroclor 1260	11096-82-5	ND	0.5

ND = Not Detected

Analytical Method: EPA 8080, SW-846 3rd Edition, 1986

Duplicate sample extractions showed surrogate recoveries outside our Quality Control limits due to sample matrix effects; therefore, all results are 'estimated concentrations'.

KLEINFELDER, INC.

CLIENT ID: 54040
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 04/17/91
DATE RECEIVED: 04/17/91
REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104142-03I
MED-TOX JOB NO: 9104142
DATE EXTRACTED: 04/18, 26/91
DATE ANALYZED: 04/25-26/91
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS

AROCLOR	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Aroclor 1016	12674-11-2	ND	0.5
Aroclor 1221	11104-28-2	ND	0.5
Aroclor 1232	11141-16-5	ND	0.5
Aroclor 1242	53469-21-9	ND	0.5
Aroclor 1248	12672-29-6	ND	0.5
Aroclor 1254	11097-69-1	ND	0.5
Aroclor 1260	11096-82-5	ND	0.5

ND = Not Detected

Analytical Method: EPA 8080, SW-846 3rd Edition, 1986

KLEINFELDER, INC.

CLIENT ID: 54050
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 04/17/91
DATE RECEIVED: 04/17/91
REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104142-04I
MED-TOX JOB NO: 9104142
DATE EXTRACTED: 04/18, 26/91
DATE ANALYZED: 04/25-26/91
INSTRUMENT: B

EPA METHOD 8080

POLYCHLORINATED BIPHENYLS

AROCLOR	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Aroclor 1016	12674-11-2	ND	0.5
Aroclor 1221	11104-28-2	ND	0.5
Aroclor 1232	11141-16-5	ND	0.5
Aroclor 1242	53469-21-9	ND	0.5
Aroclor 1248	12672-29-6	ND	0.5
Aroclor 1254	11097-69-1	ND	0.5
Aroclor 1260	11096-82-5	ND	0.5

ND = Not Detected

Analytical Method: EPA 8080, SW-846 3rd Edition, 1986

KLEINFELDER, INC.

CLIENT ID: 53882
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 04/17/91
DATE RECEIVED: 04/17/91
REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104143-01I
MED-TOX JOB NO: 9104143
DATE EXTRACTED: 04/18, 26/91
DATE ANALYZED: 04/25-26/91
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS

AROCLOR	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Aroclor 1016	12674-11-2	ND	0.5
Aroclor 1221	11104-28-2	ND	0.5
Aroclor 1232	11141-16-5	ND	0.5
Aroclor 1242	53469-21-9	ND	0.5
Aroclor 1248	12672-29-6	ND	0.5
Aroclor 1254	11097-69-1	ND	0.5
Aroclor 1260	11096-82-5	ND	0.5

ND = Not Detected

Analytical Method: EPA 8080, SW-846 3rd Edition, 1986

QUALITY CONTROL DATA

KLEINFELDER, INC.

CLIENT PROJ. NO: 10-1682-03

MED-TOX JOB NO: 9104142 & 9104143

DATE EXTRACTED: 04/24/91
DATE ANALYZED: 04/26/91
INSTRUMENT: IR

MED-TOX JOB NOS: 9104142,
9104143
CLIENT REF: 10-1682-03

**IR DETERMINATION/OIL & GREASE/HYDROCARBONS
MATRIX SPIKE RECOVERY SUMMARY
(WATER MATRIX; EXTRACTION METHOD)**

ANALYTE	Spike Conc. (mg/L)	Sample Result (mg/L)	MS Result (mg/L)	MSD Result (mg/L)	Average Percent Recovery	RPD
oil	6.73	ND	6.73	7.06	102.5	4.8

CURRENT QC LIMITS (Revised 03/14/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
OIL	(70-121)	7.1

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
ND = Not Detected

DATE EXTRACTED: 04/23/91

MED-TOX JOB NOS: 9104142,
9104143

DATE ANALYZED: 04/24/91

INSTRUMENT: C

**MATRIX SPIKE RECOVERY SUMMARY
TPH EXTRACTABLE WATERS
METHOD 3510 GCFID
(WATER MATRIX; EXTRACTION METHOD)**

ANALYTE	Spike Conc. (mg/L)	Sample Result (mg/L)	MS Result (mg/L)	MSD Result (mg/L)	Average Percent Recovery	RPD
Diesel	0.509	ND	0.344	0.378	70.9	9.4

CURRENT QC LIMITS (Revised 02/12/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Diesel	(39.2-106.5)	33.2

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
ND = Not Detected

INSTRUMENT: G

MED-TOX JOB NOS: 9104142,
9104143

CLIENT REF: 10-1682-03

SURROGATE STANDARD RECOVERY SUMMARY

METHOD 8010/8020
(WATER MATRIX)

SAMPLE IDENTIFICATION			SURROGATE RECOVERY (PERCENT)	
Date Analyzed	Client Id.	Lab No.	Bromochloro-methane	1,4-Dichloro-butane
	9104142			
04/18/91	50180	01A	96.7	99.2
04/18/91	50190	02A	97.2	97.2
04/18/91	54040	03A	97.4	96.7
04/18/91	54050	04A	100.8	99.3
	9104143			
04/18/91	53882	01A	103.6	98.4

CURRENT QC LIMITS

<u>ANALYTE</u>	<u>PERCENT RECOVERY</u>
Bromochloromethane	(80-120)
1,4-Dichlorobutane	(80-120)

DATE ANALYZED: 04/18/91

MED-TOX JOB NOS: 9104142,

INSTRUMENT: G

CLIENT REF: 10-1682-03

METHOD SPIKE RECOVERY SUMMARY

**METHOD 8010/8020
WATER**

ANALYTE	Spike Conc. (ug/L)	Sample Result (ug/L)	MS Result (ug/L)	MSD Result (ug/L)	Average Percent Recovery	RPD
1,1-Dichloroethene	50.0	ND	43.3	44.0	87.3	1.6
Trichloroethene	50.0	ND	50.6	53.1	103.7	4.8
Benzene	50.0	ND	50.2	49.2	99.4	2.0
Toluene	50.0	ND	50.4	48.9	99.3	3.0
Chlorobenzene	50.0	ND	47.9	46.8	94.7	2.3

CURRENT QC LIMITS (Revised 02/18/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
1,1-Dichloroethene	(58.5-132.5)	17.5
Trichloroethene	(76.6-127.0)	15.2
Benzene	(85.4-125.9)	10.5
Toluene	(85.9-123.9)	11.4
Chlorobenzene	(76.6-128.9)	9.6

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
ND = Not Detected

DATE EXTRACTED: 04/18, 26/91

MED-TOX JOB NOS: 9104142,
9104143

CLIENT REF: 10-1682-03

INSTRUMENT: B

SURROGATE STANDARD RECOVERY SUMMARY**METHOD 8080
(WATER MATRIX)**

SAMPLE IDENTIFICATION			SURROGATE RECOVERY (PERCENT)
Date Analyzed	Client Id.	Lab No.	2,4,5,6-Tetrachloro-meta-xylene
	9104142		
04/25/91	50180	01I	72
04/25/91	50190	02I	14 *
04/26/91	50190	02J	45 *
04/26/91	54040	03J	67
04/26/91	54050	04J	73
	9104143		
04/26/91	53882	01J	67

CURRENT QC LIMITS

<u>ANALYTE</u>	<u>PERCENT RECOVERY</u>
2,4,5,6-Tetrachloro-meta-xylene	(46-134)

* Surrogate outside of QC limits

DATE EXTRACTED: 04/18/91

MED-TOX JOB NOS: 9104142,
9104143

DATE ANALYZED: 04/25/91

INSTRUMENT: B

MATRIX SPIKE RECOVERY SUMMARY**METHOD 8080 (PCBs)
(WATER MATRIX)**

COMPOUND	Spike Amount (ug/L)	Sample Result (ug/L)	MS Result (ug/L)	MSD Result (ug/L)	Average Percent Recovery	RPD
A1260	5.70	ND	5.29	5.30	92.9	0.2

CURRENT QC LIMITS

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
A1260	(57-127)	24

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
ND = Not Detected

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LABORATORY ANALYSIS REPORT

KLEINFELDER, INC.
2121 N. CALIFORNIA STREET
SUITE 570
WALNUT CREEK, CA 94596
ATTN: KRYS JESIONEK

REPORT DATE: 05/01/91
DATE SAMPLED: 04/18/91
DATE RECEIVED: 04/18/91
MED-TOX JOB NO: 9104157


CLIENT PROJ. NO: 10-1682-03
C.O.C. NO: 1157

ANALYSIS OF: WATER SAMPLES

Sample Identification	Client Id.	Lab No.	Extractable Hydrocarbons as Diesel (mg/L)	Extractable Hydrocarbons as Oil (mg/L)	Oil & Grease (mg/L)	Hydrocarbons (mg/L)
53888	MU-16	01E	ND	0.5	---	---
53888		01G	---	---	0.9	ND
53894	MU-13	02E	0.7 *	ND	---	---
53894		02G	---	---	ND	ND
54138	MU-8	03E	4.1	4.8	---	---
54138		03G	---	---	15	11
Detection Limit			0.05	0.1	0.5	0.5
Method:			3520 GCFID	3520 GCFID	5520C	5520F
Instrument:			C	C	IR	IR
Date Extracted:			04/24/91	04/24/91	04/24,29/91	04/24,29/91
Date Analyzed:			04/25/91	04/25/91	04/26-29/91	04/26-29/91

ND = Not Detected

* This sample contains what appears to be "weathered" diesel, which includes higher molecular weight hydrocarbons than those typically contained in a diesel


Andrew Bradeen, Manager
Organic Laboratory

Results FAXed 04/29/91

KLEINFELDER, INC.

CLIENT ID: 53888
 CLIENT PROJ. ID: 10-1682-03
 DATE SAMPLED: 04/18/91
 DATE RECEIVED: 04/18/91
 REPORT DATE: 05/01/91

MED-TOX LAB NO: 9104157-01A
 MED-TOX JOB NO: 9104157
 DATE ANALYZED: 04/22/91
 INSTRUMENT: G

EPA METHOD 8010 (WATER MATRIX)
 HALOGENATED VOLATILE ORGANICS

COMPOUND	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Bromodichloromethane	75-27-4	ND	0.5
Bromoform	75-25-2	ND	0.5
Bromomethane	74-83-9	ND	0.5
Carbon Tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	0.5
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	0.5
Dibromochloromethane	124-48-1	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	0.5
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
1,2-Dichloroethene, total	540-59-0	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene Chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichloro- 1,2,2-trifluoroethane	76-13-1	ND	0.5
Vinyl Chloride	75-01-4	ND	0.5

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 53894
 CLIENT PROJ. ID: 10-1682-03
 DATE SAMPLED: 04/18/91
 DATE RECEIVED: 04/18/91
 REPORT DATE: 05/01/91

MED-TOX LAB NO: 9104157-02A
 MED-TOX JOB NO: 9104157
 DATE ANALYZED: 04/22/91
 INSTRUMENT: G

EPA METHOD 8010 (WATER MATRIX)
 HALOGENATED VOLATILE ORGANICS

COMPOUND	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Bromodichloromethane	75-27-4	ND	0.5
Bromoform	75-25-2	ND	0.5
Bromomethane	74-83-9	ND	0.5
Carbon Tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	0.5
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	0.5
Dibromochloromethane	124-48-1	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	0.5
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
1,2-Dichloroethene, total	540-59-0	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene Chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichloro- 1,2,2-trifluoroethane	76-13-1	ND	0.5
Vinyl Chloride	75-01-4	ND	0.5

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 54138
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 04/18/91
DATE RECEIVED: 04/18/91
REPORT DATE: 05/01/91

MED-TOX LAB NO: 9104157-03A
MED-TOX JOB NO: 9104157
DATE ANALYZED: 04/22/91
INSTRUMENT: G

EPA METHOD 8010 (WATER MATRIX)
HALOGENATED VOLATILE ORGANICS

COMPOUND	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Bromodichloromethane	75-27-4	ND	0.5
Bromoform	75-25-2	ND	0.5
Bromomethane	74-83-9	ND	0.5
Carbon Tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	0.5
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	0.5
Dibromochloromethane	124-48-1	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	0.5
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
1,2-Dichloroethene, total	540-59-0	1	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene Chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichloro- 1,2,2-trifluoroethane	76-13-1	ND	0.5
Vinyl Chloride	75-01-4	ND	0.5

ND = Not Detected

KLEINFELDER, INC.

CLIENT PROJ. ID: 10-1682-03
CLIENT ID: 53888
DATE SAMPLED: 04/18/91
DATE RECEIVED: 04/18/91
REPORT DATE: 05/01/91

MED-TOX LAB NO: 9104157-01C
MED-TOX JOB NO: 9104157
DATE ANALYZED: 04/22/91
INSTRUMENT: G

BTEX (WATER MATRIX)

METHOD: EPA 8020 (5030)

	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Benzene	71-43-2	ND	0.5
Toluene	108-88-3	ND	0.5
Ethylbenzene	100-41-4	ND	0.5
Xylenes, Total	1330-20-7	ND	2

ND = Not Detected

KLEINFELDER, INC.

CLIENT PROJ. ID: 10-1682-03
CLIENT ID: 53894
DATE SAMPLED: 04/18/91
DATE RECEIVED: 04/18/91
REPORT DATE: 05/01/91

MED-TOX LAB NO: 9104157-02C
MED-TOX JOB NO: 9104157
DATE ANALYZED: 04/22/91
INSTRUMENT: G

BTEX (WATER MATRIX)

METHOD: EPA 8020 (5030)

	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Benzene	71-43-2	ND	0.5
Toluene	108-88-3	ND	0.5
Ethylbenzene	100-41-4	ND	0.5
Xylenes, Total	1330-20-7	ND	2

ND = Not Detected

KLEINFELDER, INC.

CLIENT PROJ. ID: 10-1682-03
CLIENT ID: 54138
DATE SAMPLED: 04/18/91
DATE RECEIVED: 04/18/91
REPORT DATE: 05/01/91

MED-TOX LAB NO: 9104157-03C
MED-TOX JOB NO: 9104157
DATE ANALYZED: 04/22/91
INSTRUMENT: G

BTEX (WATER MATRIX)

METHOD: EPA 8020 (5030)

	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Benzene	71-43-2	ND	0.5
Toluene	108-88-3	ND	0.5
Ethylbenzene	100-41-4	3	0.5
Xylenes, Total	1330-20-7	ND	2

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 53888
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 04/18/91
DATE RECEIVED: 04/18/91
REPORT DATE: 05/01/91

MED-TOX LAB NO: 9104157-01I
MED-TOX JOB NO: 9104157
DATE EXTRACTED: 04/19/91
DATE ANALYZED: 04/25/91
INSTRUMENT: B

EPA METHOD 8080

POLYCHLORINATED BIPHENYLS

AROCLOR	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Aroclor 1016	12674-11-2	ND	0.5
Aroclor 1221	11104-28-2	ND	0.5
Aroclor 1232	11141-16-5	ND	0.5
Aroclor 1242	53469-21-9	ND	0.5
Aroclor 1248	12672-29-6	ND	0.5
Aroclor 1254	11097-69-1	ND	0.5
Aroclor 1260	11096-82-5	ND	0.5

ND = Not Detected

Analytical Method: EPA 8080, SW-846 3rd Edition, 1986

KLEINFELDER, INC.

CLIENT ID: 53894
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 04/18/91
DATE RECEIVED: 04/18/91
REPORT DATE: 05/01/91

MED-TOX LAB NO: 9104157-02I
MED-TOX JOB NO: 9104157
DATE EXTRACTED: 04/19/91
DATE ANALYZED: 04/25/91
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS

AROCLOR	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Aroclor 1016	12674-11-2	ND	0.5
Aroclor 1221	11104-28-2	ND	0.5
Aroclor 1232	11141-16-5	ND	0.5
Aroclor 1242	53469-21-9	ND	0.5
Aroclor 1248	12672-29-6	ND	0.5
Aroclor 1254	11097-69-1	ND	0.5
Aroclor 1260	11096-82-5	ND	0.5

ND = Not Detected

Analytical Method: EPA 8080, SW-846 3rd Edition, 1986

KLEINFELDER, INC.

CLIENT ID: 54138
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 04/18/91
DATE RECEIVED: 04/18/91
REPORT DATE: 05/01/91

MED-TOX LAB NO: 9104157-03I
MED-TOX JOB NO: 9104157
DATE EXTRACTED: 04/19/91
DATE ANALYZED: 04/25/91
INSTRUMENT: B

EPA METHOD 8080

POLYCHLORINATED BIPHENYLS

AROCLOR	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Aroclor 1016	12674-11-2	ND	0.5
Aroclor 1221	11104-28-2	ND	0.5
Aroclor 1232	11141-16-5	ND	0.5
Aroclor 1242	53469-21-9	ND	0.5
Aroclor 1248	12672-29-6	ND	0.5
Aroclor 1254	11097-69-1	ND	0.5
Aroclor 1260	11096-82-5	0.8	0.5

ND = Not Detected

Analytical Method: EPA 8080, SW-846 3rd Edition, 1986

QUALITY CONTROL DATA

KLEINFELDER, INC.

CLIENT PROJ. NO: 10-1682-03

MED-TOX JOB NO: 9104157

DATE EXTRACTED: 04/24/91
DATE ANALYZED: 04/26/91
INSTRUMENT: IR

MED-TOX JOB NO: 9104157
CLIENT REF: 10-1682-03

**IR DETERMINATION/OIL & GREASE/HYDROCARBONS
MATRIX SPIKE RECOVERY SUMMARY
(WATER MATRIX; EXTRACTION METHOD)**

ANALYTE	Spike Conc. (mg/L)	Sample Result (mg/L)	MS Result (mg/L)	MSD Result (mg/L)	Average Percent Recovery	RPD
OIL	6.73	ND	6.73	7.06	102.5	4.8

CURRENT QC LIMITS (Revised 03/14/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
OIL	(70-121)	7.1

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
ND = Not Detected

DATE EXTRACTED: 04/24/91

MED-TOX JOB NO: 9104157

DATE ANALYZED: 04/25/91

INSTRUMENT: C

**MATRIX SPIKE RECOVERY SUMMARY
TPH EXTRACTABLE WATERS
METHOD 3520 GCFID
(WATER MATRIX; EXTRACTION METHOD)**

ANALYTE	Spike Conc. (mg/L)	Sample Result (mg/L)	MS Result (mg/L)	MSD Result (mg/L)	Average Percent Recovery	RPD
Diesel	0.509	ND	0.358	0.347	69.3	3.1

CURRENT QC LIMITS (Revised 02/12/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Diesel	(39.2-106.5)	33.2

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
ND = Not Detected

INSTRUMENT: G

MED-TOX JOB NO: 9104157

CLIENT REF: 10-1682-03

SURROGATE STANDARD RECOVERY SUMMARYMETHOD 8010/8020
(WATER MATRIX)

SAMPLE IDENTIFICATION			SURROGATE RECOVERY (PERCENT)	
Date Analyzed	Client Id.	Lab No.	Bromochloro- methane	1,4-Dichloro- butane
04/22/91	53888	01A	105.1	102.3
04/22/91	53894	02A	96.4	103.7
04/22/91	54138	03A	96.4	100.9

CURRENT QC LIMITS

<u>ANALYTE</u>	<u>PERCENT RECOVERY</u>
Bromochloromethane	(80-120)
1,4-Dichlorobutane	(80-120)

DATE ANALYZED: 04/22/91

MED-TOX JOB NO: 9104157

INSTRUMENT: G

CLIENT REF: 10-1682-03

METHOD SPIKE RECOVERY SUMMARY

**METHOD 8010/8020
WATER**

ANALYTE	Spike Conc. (ug/L)	Sample Result (ug/L)	MS Result (ug/L)	MSD Result (ug/L)	Average Percent Recovery	RPD
1,1-Dichloroethene	50.0	ND	45.7	42.3	88.0	7.7
Trichloroethene	50.0	ND	55.6	53.0	108.6	4.8
Benzene	50.0	ND	48.9	46.9	95.8	4.2
Toluene	50.0	ND	48.4	46.6	95.0	3.8
Chlorobenzene	50.0	ND	45.9	44.5	90.4	3.1

CURRENT QC LIMITS (Revised 02/18/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
1,1-Dichloroethene	(58.5-132.5)	17.5
Trichloroethene	(76.6-127.0)	15.2
Benzene	(85.4-125.9)	10.5
Toluene	(85.9-123.9)	11.4
Chlorobenzene	(76.6-128.9)	9.6

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
ND = Not Detected

DATE EXTRACTED: 04/19/91

MED-TOX JOB NO: 9104157

CLIENT REF: 10-1682-03

INSTRUMENT: B

SURROGATE STANDARD RECOVERY SUMMARY**METHOD 8080
(WATER MATRIX)**

SAMPLE IDENTIFICATION			SURROGATE RECOVERY (PERCENT)
Date Analyzed	Client Id.	Lab No.	2,4,5,6-Tetrachloro-meta-xylene
04/25/91	53888	01I	57
04/25/91	53894	02I	68
04/25/91	54138	03I	64

CURRENT QC LIMITS

<u>ANALYTE</u>	<u>PERCENT RECOVERY</u>
2,4,5,6-Tetrachloro-meta-xylene	(46-134)

DATE EXTRACTED: 04/19/91

MED-TOX JOB NO: 9104157

DATE ANALYZED: 04/25/91

INSTRUMENT: B

MATRIX SPIKE RECOVERY SUMMARY

**METHOD 8080 (PCBs)
(WATER MATRIX)**

COMPOUND	Spike Amount (ug/L)	Sample Result (ug/L)	MS Result (ug/L)	MSD Result (ug/L)	Average Percent Recovery	RPD
A1260	5.70	ND	4.97	4.66	84.5	6.4

CURRENT QC LIMITS

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
A1260	(57-127)	24

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
ND = Not Detected

A Division of Gillis International

LABORATORY ANALYSIS REPORT

KLEINFELDER, INC.
2121 N. CALIFORNIA STREET
SUITE 570
WALNUT CREEK, CA 94596
ATTN: KRYS JESIONEK

REPORT DATE: 05/03/91

DATE SAMPLED: 04/19/91

DATE RECEIVED: 04/19/91

CLIENT PROJ. NO: 10-1682-03
C.O.C. NO: 1156

MED-TOX JOB NOS: 9104166,
9104167

ANALYSIS OF: WATER SAMPLES

See attached for results



Andrew Bradeen, Manager
Organic Laboratory

Results FAXed 04/30/91

KLEINFELDER, INC.

DATE SAMPLED: 04/19/91
DATE RECEIVED: 04/19/91
CLIENT PROJ. NO: 10-1682-03

REPORT DATE: 05/03/91

MED-TOX JOB NOS: 9104166,
9104167

Sample Identification Client Id. Lab No.	Extractable Hydrocarbons as Diesel (mg/L)	Extractable Hydrocarbons as Oil (mg/L)	Oil & Grease (mg/L)	Hydrocarbons (mg/L)
9104166				
54140 MW-3 01E	19	14	---	---
54140 01G	---	---	34	30
54150 MW-14 02E	ND	ND	---	---
54150 02G	---	---	ND	ND
54160 MW-2 03E	44	35	---	---
54160 03G	---	---	150	130
9104167				
54330 MW-1 01E	40	27	---	---
54330 01G	---	---	91	74
54740 14A2 02E	ND	ND	---	---
54740 02G	---	---	ND	ND
Detection Limit	0.05	0.1	0.5	0.5
Method:	3520 GCFID	3520 GCFID	5520C	5520F
Instrument:	C	C	IR	IR
Date Extracted:	04/24/91	04/24/91	04/23/91	04/23/91
Date Analyzed:	04/25/91	04/25/91	04/24/91	04/24/91
ND = Not Detected				

KLEINFELDER, INC.

CLIENT ID: 54140
 CLIENT PROJ. ID: 10-1682-03
 DATE SAMPLED: 04/19/91
 DATE RECEIVED: 04/19/91
 REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104166-01A
 MED-TOX JOB NO: 9104166
 DATE ANALYZED: 04/22-24/91
 INSTRUMENT: G

EPA METHOD 8010 (WATER MATRIX)
 HALOGENATED VOLATILE ORGANICS

COMPOUND	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Bromodichloromethane	75-27-4	ND	0.5
Bromoform	75-25-2	ND	0.5
Bromomethane	74-83-9	ND	0.5
Carbon Tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	0.5
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	0.5
Dibromochloromethane	124-48-1	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	0.5
1,1-Dichloroethane	75-34-3	2	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
cis-1,2-Dichloroethene	156-69-4	ND	0.5
trans-1,2-Dichloroethene	156-60-5	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene Chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	1	0.5
1,1,2-Trichloro- 1,2,2-trifluoroethane	76-13-1	ND	0.5
Vinyl Chloride	75-01-4	8	0.5

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 54150
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 04/19/91
DATE RECEIVED: 04/19/91
REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104166-02A
MED-TOX JOB NO: 9104166
DATE ANALYZED: 04/22-24/91
INSTRUMENT: G

EPA METHOD 8010 (WATER MATRIX)
HALOGENATED VOLATILE ORGANICS

COMPOUND	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Bromodichloromethane	75-27-4	ND	0.5
Bromoform	75-25-2	ND	0.5
Bromomethane	74-83-9	ND	0.5
Carbon Tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	0.5
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	0.5
Dibromochloromethane	124-48-1	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	0.5
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
cis-1,2-Dichloroethene	156-69-4	ND	0.5
trans-1,2-Dichloroethene	156-60-5	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene Chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichloro- 1,2,2-trifluoroethane	76-13-1	ND	0.5
Vinyl Chloride	75-01-4	ND	0.5

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 54160
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 04/19/91
DATE RECEIVED: 04/19/91
REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104166-03A
MED-TOX JOB NO: 9104166
DATE ANALYZED: 04/22-24/91
INSTRUMENT: G

EPA METHOD 8010 (WATER MATRIX)
HALOGENATED VOLATILE ORGANICS

COMPOUND	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Bromodichloromethane	75-27-4	ND	0.5
Bromoform	75-25-2	ND	0.5
Bromomethane	74-83-9	ND	0.5
Carbon Tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	0.5
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	0.5
Dibromochloromethane	124-48-1	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	0.5
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
cis-1,2-Dichloroethene	156-69-4	ND	0.5
trans-1,2-Dichloroethene	156-60-5	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene Chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichloro- 1,2,2-trifluoroethane	76-13-1	ND	0.5
Vinyl Chloride	75-01-4	ND	0.5

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 54330
 CLIENT PROJ. ID: 10-1682-03
 DATE SAMPLED: 04/19/91
 DATE RECEIVED: 04/19/91
 REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104167-01A
 MED-TOX JOB NO: 9104167
 DATE ANALYZED: 04/22/91
 INSTRUMENT: G

EPA METHOD 8010 (WATER MATRIX)
 HALOGENATED VOLATILE ORGANICS

COMPOUND	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Bromodichloromethane	75-27-4	ND	0.5
Bromoform	75-25-2	ND	0.5
Bromomethane	74-83-9	ND	0.5
Carbon Tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	0.5
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	0.5
Dibromochloromethane	124-48-1	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	0.5
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
cis-1,2-Dichloroethene	156-69-4	ND	0.5
trans-1,2-Dichloroethene	156-60-5	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene Chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichloro- 1,2,2-trifluoroethane	76-13-1	ND	0.5
Vinyl Chloride	75-01-4	ND	0.5

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 54740
 CLIENT PROJ. ID: 10-1682-03
 DATE SAMPLED: 04/19/91
 DATE RECEIVED: 04/19/91
 REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104167-02A
 MED-TOX JOB NO: 9104167
 DATE ANALYZED: 04/22/91
 INSTRUMENT: G

EPA METHOD 8010 (WATER MATRIX)
 HALOGENATED VOLATILE ORGANICS

COMPOUND	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Bromodichloromethane	75-27-4	ND	0.5
Bromoform	75-25-2	ND	0.5
Bromomethane	74-83-9	ND	0.5
Carbon Tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	0.5
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	0.5
Dibromochloromethane	124-48-1	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	0.5
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
cis-1,2-Dichloroethene	156-69-4	ND	0.5
trans-1,2-Dichloroethene	156-60-5	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene Chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichloro- 1,2,2-trifluoroethane	76-13-1	ND	0.5
Vinyl Chloride	75-01-4	ND	0.5

ND = Not Detected

KLEINFELDER, INC.

CLIENT PROJ. ID: 10-1682-03
CLIENT ID: 54140
DATE SAMPLED: 04/19/91
DATE RECEIVED: 04/19/91
REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104166-01C
MED-TOX JOB NO: 9104166
DATE ANALYZED: 04/24/91
INSTRUMENT: G

BTEX (WATER MATRIX)

METHOD: EPA 8020 (5030)

	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Benzene	71-43-2	0.9	0.5
Toluene	108-88-3	ND	0.5
Ethylbenzene	100-41-4	6	0.5
Xylenes, Total	1330-20-7	3	2

ND = Not Detected

KLEINFELDER, INC.

CLIENT PROJ. ID: 10-1682-03
CLIENT ID: 54150
DATE SAMPLED: 04/19/91
DATE RECEIVED: 04/19/91
REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104166-02C
MED-TOX JOB NO: 9104166
DATE ANALYZED: 04/24/91
INSTRUMENT: G

BTEX (WATER MATRIX)

METHOD: EPA 8020 (5030)

	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Benzene	71-43-2	ND	0.5
Toluene	108-88-3	0.7	0.5
Ethylbenzene	100-41-4	ND	0.5
Xylenes, Total	1330-20-7	ND	2

ND - Not Detected

KLEINFELDER, INC.

CLIENT PROJ. ID: 10-1682-03
CLIENT ID: 54160
DATE SAMPLED: 04/19/91
DATE RECEIVED: 04/19/91
REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104166-03C
MED-TOX JOB NO: 9104166
DATE ANALYZED: 04/24/91
INSTRUMENT: G

BTEX (WATER MATRIX)

METHOD: EPA 8020 (5030)

	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Benzene	71-43-2	0.7	0.5
Toluene	108-88-3	ND	0.5
Ethylbenzene	100-41-4	ND	0.5
Xylenes, Total	1330-20-7	ND	2

ND = Not Detected

KLEINFELDER, INC.

CLIENT PROJ. ID: 10-1682-03
CLIENT ID: 54330
DATE SAMPLED: 04/19/91
DATE RECEIVED: 04/19/91
REPORT DATE: 05/03/91MED-TOX LAB NO: 9104167-01C
MED-TOX JOB NO: 9104167
DATE ANALYZED: 04/22/91
INSTRUMENT: G

BTEX (WATER MATRIX)

METHOD: EPA 8020 (5030)

	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Benzene	71-43-2	ND	0.5
Toluene	108-88-3	ND	0.5
Ethylbenzene	100-41-4	ND	0.5
Xylenes, Total	1330-20-7	ND	2

ND = Not Detected

KLEINFELDER, INC.

CLIENT PROJ. ID: 10-1682-03
CLIENT ID: 54740
DATE SAMPLED: 04/19/91
DATE RECEIVED: 04/19/91
REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104167-02C
MED-TOX JOB NO: 9104167
DATE ANALYZED: 04/22/91
INSTRUMENT: G

BTEX (WATER MATRIX)

METHOD: EPA 8020 (5030)

	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Benzene	71-43-2	ND	0.5
Toluene	108-88-3	ND	0.5
Ethylbenzene	100-41-4	ND	0.5
Xylenes, Total	1330-20-7	ND	2

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 54140
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 04/19/91
DATE RECEIVED: 04/19/91
REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104166-011
MED-TOX JOB NO: 9104166
DATE EXTRACTED: 04/26/91
DATE ANALYZED: 04/26/91
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS

AROCLOR	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Aroclor 1016	12674-11-2	ND	0.5
Aroclor 1221	11104-28-2	ND	0.5
Aroclor 1232	11141-16-5	ND	0.5
Aroclor 1242	53469-21-9	ND	0.5
Aroclor 1248	12672-29-6	ND	0.5
Aroclor 1254	11097-69-1	ND	0.5
Aroclor 1260	11096-82-5	0.8	0.5

ND - Not Detected

Analytical Method: EPA 8080, SW-846 3rd Edition, 1986

KLEINFELDER, INC.

CLIENT ID: 54150
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 04/19/91
DATE RECEIVED: 04/19/91
REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104166-02I
MED-TOX JOB NO: 9104166
DATE EXTRACTED: 04/26/91
DATE ANALYZED: 04/26/91
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS

AROCLOR	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Aroclor 1016	12674-11-2	ND	0.5
Aroclor 1221	11104-28-2	ND	0.5
Aroclor 1232	11141-16-5	ND	0.5
Aroclor 1242	53469-21-9	ND	0.5
Aroclor 1248	12672-29-6	ND	0.5
Aroclor 1254	11097-69-1	ND	0.5
Aroclor 1260	11096-82-5	ND	0.5

ND = Not Detected

Analytical Method: EPA 8080, SW-846 3rd Edition, 1986

KLEINFELDER, INC.

CLIENT ID: 54160
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 04/19/91
DATE RECEIVED: 04/19/91
REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104166-03I
MED-TOX JOB NO: 9104166
DATE EXTRACTED: 04/26/91
DATE ANALYZED: 04/26/91
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS

AROCLOR	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Aroclor 1016	12674-11-2	ND	0.5
Aroclor 1221	11104-28-2	ND	0.5
Aroclor 1232	11141-16-5	ND	0.5
Aroclor 1242	53469-21-9	ND	0.5
Aroclor 1248	12672-29-6	ND	0.5
Aroclor 1254	11097-69-1	ND	0.5
Aroclor 1260	11096-82-5	5.1	0.5

ND = Not Detected

Analytical Method: EPA 8080, SW-846 3rd Edition, 1986

KLEINFELDER, INC.

CLIENT ID: 54330
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 04/19/91
DATE RECEIVED: 04/19/91
REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104167-01I
MED-TOX JOB NO: 9104167
DATE EXTRACTED: 04/19/91
DATE ANALYZED: 04/25/91
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS

AROCLOR	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Aroclor 1016	12674-11-2	ND	0.5
Aroclor 1221	11104-28-2	ND	0.5
Aroclor 1232	11141-16-5	ND	0.5
Aroclor 1242	53469-21-9	ND	0.5
Aroclor 1248	12672-29-6	ND	0.5
Aroclor 1254	11097-69-1	ND	0.5
Aroclor 1260	11096-82-5	ND	0.5

ND = Not Detected

Analytical Method: EPA 8080, SW-846 3rd Edition, 1986

KLEINFELDER, INC.

CLIENT ID: 54740
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 04/19/91
DATE RECEIVED: 04/19/91
REPORT DATE: 05/03/91

MED-TOX LAB NO: 9104167-02I
MED-TOX JOB NO: 9104167
DATE EXTRACTED: 04/19/91
DATE ANALYZED: 04/25/91
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS

AROCLOR	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Aroclor 1016	12674-11-2	ND	0.5
Aroclor 1221	11104-28-2	ND	0.5
Aroclor 1232	11141-16-5	ND	0.5
Aroclor 1242	53469-21-9	ND	0.5
Aroclor 1248	12672-29-6	ND	0.5
Aroclor 1254	11097-69-1	ND	0.5
Aroclor 1260	11096-82-5	ND	0.5

ND = Not Detected

Analytical Method: EPA 8080, SW-846 3rd Edition, 1986

QUALITY CONTROL DATA

KLEINFELDER, INC.

CLIENT PROJ. NO: 10-1682-03

MED-TOX JOB NOS: 9104166 & 9104167

DATE EXTRACTED: 04/29/91
DATE ANALYZED: 04/30/91
INSTRUMENT: IR

MED-TOX JOB NOS: 9104166,
9104167
CLIENT REF: 10-1682-03

**IR DETERMINATION/OIL & GREASE/HYDROCARBONS
MATRIX SPIKE RECOVERY SUMMARY
(WATER MATRIX; EXTRACTION METHOD)**

ANALYTE	Spike Conc. (mg/L)	Sample Result (mg/L)	MS Result (mg/L)	MSD Result (mg/L)	Average Percent Recovery	RPD
oil	6.73	ND	7.40	7.57	111.2	2.3

CURRENT QC LIMITS (Revised 03/14/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
OIL	(70-121)	7.1

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
ND = Not Detected

DATE EXTRACTED: 04/24/91

MED-TOX JOB NO: 9104166

DATE ANALYZED: 04/25/91

INSTRUMENT: C

**MATRIX SPIKE RECOVERY SUMMARY
TPH EXTRACTABLE WATERS
METHOD 3520 GCFID
(WATER MATRIX; EXTRACTION METHOD)**

ANALYTE	Spike Conc. (mg/L)	Sample Result (mg/L)	MS Result (mg/L)	MSD Result (mg/L)	Average Percent Recovery	RPD
Diesel	0.509	ND	0.358	0.347	69.3	3.1

CURRENT QC LIMITS (Revised 02/12/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Diesel	(39.2-106.5)	33.2

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
ND = Not Detected

DATE EXTRACTED: 04/23/91

MED-TOX JOB NO: 9104167

DATE ANALYZED: 04/24/91

INSTRUMENT: C

MATRIX SPIKE RECOVERY SUMMARY
TPH EXTRACTABLE WATERS
METHOD 3520 GCFID
(WATER MATRIX; EXTRACTION METHOD)

ANALYTE	Spike Conc. (mg/L)	Sample Result (mg/L)	MS Result (mg/L)	MSD Result (mg/L)	Average Percent Recovery	RPD
Diesel	0.509	ND	0.344	0.378	70.9	9.4

CURRENT QC LIMITS (Revised 02/12/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Diesel	(39.2-106.5)	33.2

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
ND = Not Detected

INSTRUMENT: G

MED-TOX JOB NOS: 9104166,
9104167

CLIENT REF: 10-1682-03

SURROGATE STANDARD RECOVERY SUMMARY

**METHOD 8010/8020
(WATER MATRIX)**

SAMPLE IDENTIFICATION			SURROGATE RECOVERY (PERCENT)	
Date Analyzed	Client Id.	Lab No.	Bromochloro-methane	1,4-Dichloro-butane
	9104166			
04/24/91	54140	01A	94.1	104.1
04/24/91	54150	02A	94.8	96.0
04/24/91	54160	03A	95.8	100.0
	9104167			
04/22/91	54330	01A	95.6	101.2
04/22/91	54740	02A	98.0	96.3

CURRENT QC LIMITS

<u>ANALYTE</u>	<u>PERCENT RECOVERY</u>
Bromochloromethane	(80-120)
1,4-Dichlorobutane	(80-120)

DATE ANALYZED: 04/22/91

MED-TOX JOB NO: 9104167

INSTRUMENT: G

CLIENT REF: 10-1682-03

METHOD SPIKE RECOVERY SUMMARY

**METHOD 8010/8020
WATER**

ANALYTE	Spike Conc. (ug/L)	Sample Result (ug/L)	MS Result (ug/L)	MSD Result (ug/L)	Average Percent Recovery	RPD
1,1-Dichloroethene	50.0	ND	45.7	42.3	88.0	7.7
Trichloroethene	50.0	ND	55.6	53.0	108.6	4.8
Benzene	50.0	ND	48.9	46.9	95.8	4.2
Toluene	50.0	ND	48.4	46.6	95.0	3.8
Chlorobenzene	50.0	ND	45.9	44.5	90.4	3.1

CURRENT QC LIMITS (Revised 02/18/91)

Analyte	Percent Recovery	RPD
1,1-Dichloroethene	(58.5-132.5)	17.5
Trichloroethene	(76.6-127.0)	15.2
Benzene	(85.4-125.9)	10.5
Toluene	(85.9-123.9)	11.4
Chlorobenzene	(76.6-128.9)	9.6

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
ND = Not Detected

DATE ANALYZED: 04/24/91

MED-TOX JOB NO: 9104166

INSTRUMENT: G

CLIENT REF: 10-1682-03

MATRIX SPIKE RECOVERY SUMMARY

**METHOD 8010/8020
WATER**

ANALYTE	Spike Conc. (ug/L)	Sample Result (ug/L)	MS Result (ug/L)	MSD Result (ug/L)	Average Percent Recovery	RPD
1,1-Dichloroethene	50.0	ND	55.2	52.7	107.9	4.6
Trichloroethene	50.0	ND	54.0	52.2	106.2	3.4
Benzene	50.0	ND	47.8	47.6	95.4	0.4
Toluene	50.0	ND	46.5	46.2	92.7	0.6
Chlorobenzene	50.0	ND	44.2	43.9	88.1	0.7

CURRENT QC LIMITS (Revised 02/18/91)

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
1,1-Dichloroethene	(58.5-132.5)	17.5
Trichloroethene	(76.6-127.0)	15.2
Benzene	(85.4-125.9)	10.5
Toluene	(85.9-123.9)	11.4
Chlorobenzene	(76.6-128.9)	9.6

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
ND = Not Detected

DATE EXTRACTED: 04/19, 26/91

MED-TOX JOB NOS: 9104166,
9104167

CLIENT REF: 10-1682-03

INSTRUMENT: B

SURROGATE STANDARD RECOVERY SUMMARY**METHOD 8080
(WATER MATRIX)**

SAMPLE IDENTIFICATION			SURROGATE RECOVERY (PERCENT)	
Date Analyzed	Client Id.	Lab No.	2,4,5,6-Tetrachloro-meta-xylene	
	9104166			
04/26/91	54140	01I		84
04/26/91	54150	02I		58
04/26/91	54160	03I		77
	9104167			
04/25/91	54330	01I		51
04/25/91	54740	02I		51

CURRENT QC LIMITS

<u>ANALYTE</u>	<u>PERCENT RECOVERY</u>
2,4,5,6-Tetrachloro-meta-xylene	(46-134)

DATE EXTRACTED: 04/26/91

MED-TOX JOB NO: 9104166

DATE ANALYZED: 04/26/91

INSTRUMENT: B

MATRIX SPIKE RECOVERY SUMMARY**METHOD 8080 (PCBs)
(WATER MATRIX)**

COMPOUND	Spike Amount (ug/L)	Sample Result (ug/L)	MS Result (ug/L)	MSD Result (ug/L)	Average Percent Recovery	RPD
A1260	5.27	ND	4.93	5.24	96.5	6.1

CURRENT QC LIMITS

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
A1260	(57-127)	24

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
ND = Not Detected

DATE EXTRACTED: 04/19/91

MED-TOX JOB NO: 9104167

DATE ANALYZED: 04/25/91

INSTRUMENT: B

MATRIX SPIKE RECOVERY SUMMARY**METHOD 8080 (PCBs)
(WATER MATRIX)**

COMPOUND	Spike Amount (ug/L)	Sample Result (ug/L)	MS Result (ug/L)	MSD Result (ug/L)	Average Percent Recovery	RPD
A1260	5.70	ND	4.97	4.66	84.5	6.4

CURRENT QC LIMITS

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
A1260	(57-127)	24

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
ND = Not Detected

