KLEINFELDER

QUARTERLY REPORT
(FEBRUARY - APRIL 1993)
INDUSTRIAL ASPHALT
PLEASANTON, CALIFORNIA

April 1, 1993

KLEINFELDER

April 1, 1993
File: 10-1682-03/38

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

SUBJECT: Quarterly Report (February - April 1993) Industrial Asphalt, Pleasanton, California

Dear Mr. Hunt:

Kleinfelder, Inc., is pleased to submit this quarterly report for the first quarter of 1993 (February - April 1993) 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 November 13, 1989.

INTRODUCTION

Thirteen monitoring wells and eleven extraction wells are present onsite. Data collected from the monitoring wells have been used to evaluate the nature and extent of the plume and the ground water gradient beneath the site. The locations of the monitoring and extraction wells are shown on Plate 2. All monitoring wells are monitored for depth to water and product thickness on a quarterly basis in accordance with recommendations in the Remedial Investigation Report dated December 28, 1990. Collected ground water samples have been analyzed for the target compounds including total petroleum hydrocarbons (TPH) as diesel (TPH[d]) and oil (TPH[o]) 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 Total Oil and Grease (TOG) and Total Hydrocarbons (TH).

Water samples were collected on February 11 and 12, 1993, from all but one of the thirteen onsite wells (MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-10, MW-14, MW-15, and MW-16). Duplicate samples were collected from monitoring wells MW-1 and MW-8. Monitoring well MW-9 was not accessible on the sampling days and was not sampled. As noted in previous reports monitoring well MW-13 was not sampled as this well has been converted to a ground water extraction well. In addition to the onsite monitoring wells, an offsite water supply well located on the Jamieson property was sampled via a hose tap. Refer to Plate 2 for the location of all wells and the offsite well.

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WATER LEVEL MONITORING DATA

Ground water surface elevation data were collected from sampled wells on February 10, 1993, prior to their sampling. These measurements are provided in Table 1. Generally, the ground water surface elevation at the site has risen an average of approximately 30 feet since the last measurement on November 18, 1992. The greatest recorded rise was in MW-5 which rose more than 46 feet (from below the bottom of the well).

Water level elevations beneath the site vary from a high of 318.46 feet at MW-5 to a low of 313.98 at MW-4. In November 1992 water levels in MW-5 were the lowest at the site with an elevation below the bottom of the well (less than 273 feet). This contrasts with historical observations where the water levels in the area of MW-5 were the lowest on the site.

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 towards the west-northwest. This flow direction differs from the northeast flow directions which have been noted in previous sampling rounds.

The overall gradient is steepest beneath the eastern third of the site at approximately 0.0068 feet per foot. The gradient flattens towards the west to 0.0054 feet per foot beneath the central portion of the site, then to 0.0032 feet per foot beneath the western portion of the site. Beneath the western portion, the gradient is comparable to that observed during the last sampling round in November 1992 (0.0044 feet per foot)

GROUND WATER CHEMISTRY MONITORING RESULTS

Groundwater samples collected from the site were analyzed by Quanteq Laboratories, a State-certified analytical laboratory. The samples were analyzed for TPH(d) and TPH(o) using a modified EPA Test Method 8015 (extraction), for TOG using standard method (SM) 5520C, for TH using SM-5520F, and for PCBs using EPA Test Method 8080. Sample analysis for BTEX and halogenated volatile organic compounds has been discontinued for all monitoring wells at this site with concurrence from the ACDHS. Analytical data are summarized on Table 2. Complete analytical laboratory reports along with chain of custody records are included in the Appendix.

A sheen and hydrocarbon-like odors were reported for four of the thirteen wells sampled during this round (MW-1, MW-2, MW-3, and MW-8). An interview with the sampling technician indicated that well MW-1 appeared to contain the heaviest sheen.

Detectable concentrations of PCBs were not found in any of the tested wells during this round. Detectable concentrations of PCBs were last found only in the ground water sample collected from monitoring well MW-1 during the May 1992 sampling round (2 μg/L).

Concentrations of both TPH(d) and TPH(o) were detected in the samples collected from six of the thirteen sampled wells (MW-1, MW-2, MW-3, MW-7, MW-8, and MW-15), with the highest concentrations reported from MW-1. TPH(o) only was detected in samples collected from and additional six wells (MW-4, MW-5, MW-6, MW-10, MW-14, and MW-16), all at concentrations less than 1.0 mg/L. The Jamieson production well 14A2 (sampled from a tap) was the only sampling location where the collected sample did not contain either TPH(d) or TPH(o).

TPH(d) and TPH(o) have rarely been detected in samples collected from MW-5 and MW-6 since monitoring began in June 1988. Prior to the current sampling round, TPH(d) had been detected in samples from MW-5 in September 1989 and June 1990, all at concentrations below 1.0 mg/L. Similarly TPH(o) had been detected only in May 1990 and July 1991, also at concentrations below 1 mg/L. In MW-6 TPH(d) was last detected in February 1990 while TPH(o) was last detected in September 1989, before reappearing in November 1992. In both cases, detected concentrations were either at or near the detection limit for the constituent.

Detectable concentrations of TOG and TH were also reported for samples collected from nine of the thirteen tested wells (MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, and MW-10). TOG only was reported for samples collected from two additional wells (MW-15 and MW-16). Samples collected from the two remaining locations (MW-14 and the Jamieson well) did not contain reportable concentrations for either TOG or TH.

The results for TOG and TH contrast to November 1992 sampling round when these species were reported for samples from MW-6 and MW-8 only, and the August 1992 sampling round when these constituents were not found in any of the water samples (Table 2). When compared with the May 1992 data (the last round for which results for wells MW-1, MW-2, MW-3, and MW-5 were available), the reported concentrations of all species for MW-1, MW-2, and MW-3 have decreased by about an order of magnitude while the reported concentrations in most of the remaining wells have now risen to above the detection limit. Generally, analytical data indicate the presence of hydrocarbons in all wells at the site.

Duplicate samples were collected from wells MW-1 and MW-8. Analytical results for the samples from MW-8 appeared to be in agreement with one another indicating acceptable levels of laboratory precision. The agreement between analytical results of duplicate samples from MW-1, however, was not good. A review of analytical data, and ultimate reanalysis of the sample yielded no improvement in precision. Inasmuch as Kleinfelder's technician reported a thick sheen in this well, the lack of agreement between analytical results for MW-1 is believed to be due to the variability between samples which typically results when product sheen is encountered.

SUMMARY

A summary of the data available from the February 1993 sampling round of the Industrial Asphalt site indicates the following:

- The ground water surface elevation beneath the site averages 30 feet higher than the previous sampling round while the ground water flow direction has apparently reversed and is now towards the west.
- Wells which were previously dry contained sufficient quantities of water for sampling.
- Coincident with the rise in groundwater levels, the groundwater chemistry has exhibited a general increase in the concentration of hydrocarbon compounds from below the detection limit. In the three wells with the highest historical concentrations (MW-1, MW-2, and MW-3), however, the reported concentrations have decreased by as much as an order of magnitude since the last time sampled (May 1992).
- No PCBs were detected in samples collected from any of the wells during this sampling round.

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- A ground water sample collected from the offsite water production well (Jamieson well) did not exhibit reportable concentrations of the target chemicals requested.

RECOMMENDED RI ACTIVITIES

Oil and grease, TPH(d), TPH(o), total hydrocarbons, and PCBs have occasionally been found in water samples obtained from some of the onsite monitoring wells. Continuance of monitoring for these compounds is also part of the proposed waste discharge requirements which were prepared for this site. Therefore, it is recommended that during the next quarterly round (May 1993) that water samples be analyzed for these same compounds. This is to allow an assessment of possible changes in concentrations of these compounds found in selected water samples.

OTHER ACTIVITIES

Design plans and specifications for construction of the proposed remediation system have been completed. An application for Waste Discharge Requirements/Tentative Order for discharge of treated ground water to a nearby infiltration pond has been released for comment by ACDHS and the Regional Water Quality Control Board. Bid packages for the construction of the remediation system will be released upon issuance of the Waste Discharge Requirements/Tentative Order, a contractor selected, and the system constructed.

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. Judgments 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.

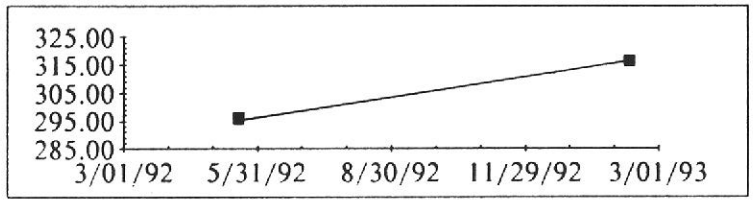
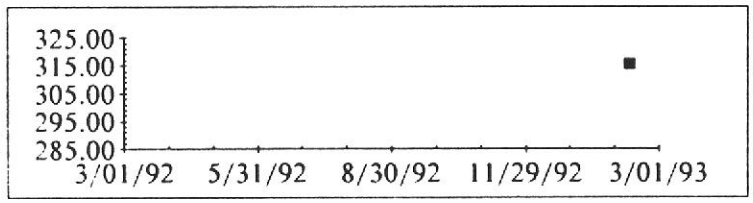
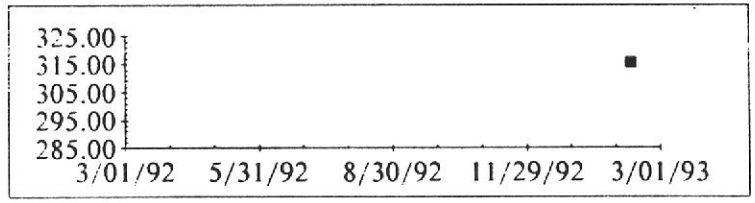
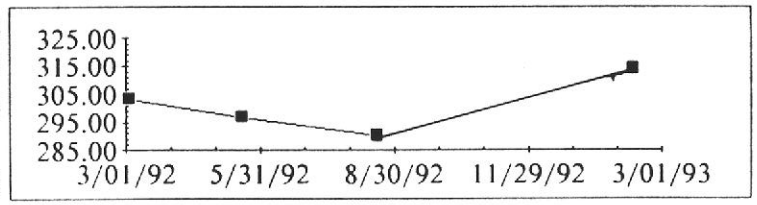
Guy A. Jett
Staff Geologist

John E. Romie, R.G.,
Manager, Remedial Investigations Group

GAJ/DKB:rgc

cc: Dwight Beavers - Industrial Asphalt
Ravi Arulanantham - Alameda County Department of Environmental Services
John Jang - California Regional Water Quality Control Board
Jerry Killingstad - Alameda County Flood Control and Water Conservation District, Zone 7

TABLE 1
SUMMARY OF 1992 GROUND WATER ELEVATIONS
INDUSTRIAL ASPHALT

Well Number	Date	Total Well Depth (ft)	Survey Elevation (ft, MSL)	Product Thickness (ft)	Depth to Water (ft)	Elevation (ft, MSL)	Trend
MW-1	5/19/92	88	379.41	SHEEN	83.54	295.87	
	8/19/92			NA	DRY		
	11/18/92			NA	DRY		
	2/10/93			SHEEN	63.23	316.18	
MW-2	5/19/92	90	379.80	SHEEN	Not Accessable		
	8/19/92			NA	DRY		
	11/18/92			NA	DRY		
	2/10/93			SHEEN	64.70	315.10	
MW-3	5/19/92	90	378.54	NA	DRY		
	8/19/92			NA	DRY		
	11/18/92			NA	DRY		
	2/10/93			SHEEN	63.28	315.26	
MW-4	3/03/92	95	376.26	NE	73.20	303.06	
	5/19/92			NE	79.59	296.67	
	8/19/92			NE	86.12	290.14	
	11/18/92			NA	Burried		
	2/10/93			NE	62.28	313.98	

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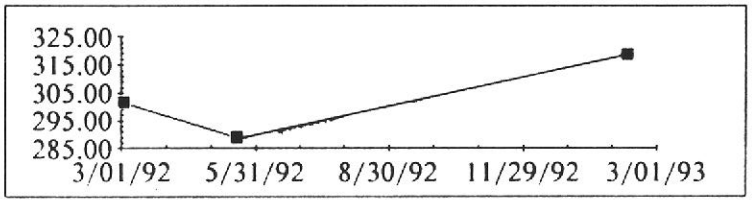
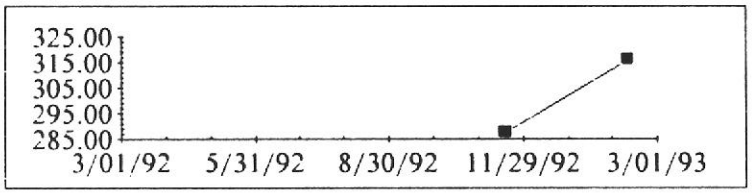
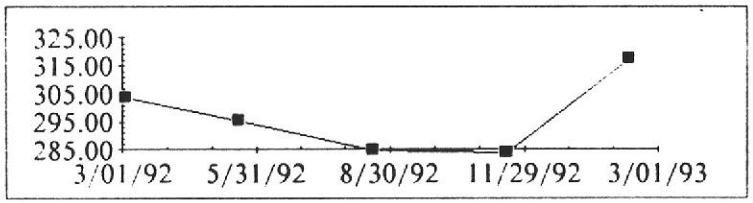
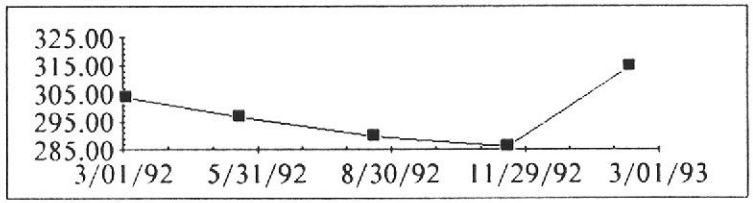
INDUSTRIAL ASPHALT

Well Number	Date	Total Well Depth (ft)	Survey Elevation (ft, MSL)	Product Thickness (ft)	Depth to Water (ft)	Elevation (ft, MSL)	Trend
MW-5	3/03/92	110	382.55	NE	81.23	301.32	
	5/19/92			NE	93.51	289.04	
	8/19/92			NA	DRY		
	11/18/92			NA	DRY		
	2/10/93			NE	64.09	318.46	
MW-6	3/03/92	109	379.15	NA	Burried		
	5/19/92			NA	Burried		
	8/19/92			NA	Burried		
	11/18/92			NE	91.40	287.75	
	2/10/93			NE	63.26	315.89	
MW-7	3/03/92	109	378.94	NE	75.29	303.65	
	5/19/92			NE	83.85	295.09	
	8/19/92			NE	94.21	284.73	
	11/18/92			NE	94.96	283.98	
	2/10/93			NE	61.72	317.22	
MW-8	3/03/92	109	378.56	SHEEN	75.20	303.36	
	5/19/92			SHEEN	81.76	296.80	
	8/19/92			NE	88.57	289.99	
	11/18/92			NE	92.56	286.00	
	2/10/93			SHEEN	63.76	314.80	

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INDUSTRIAL ASPHALT

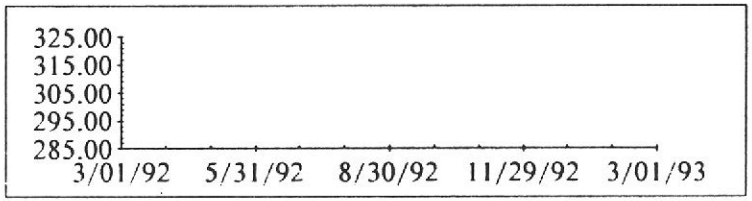
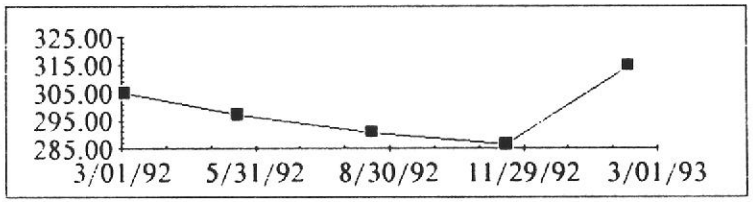
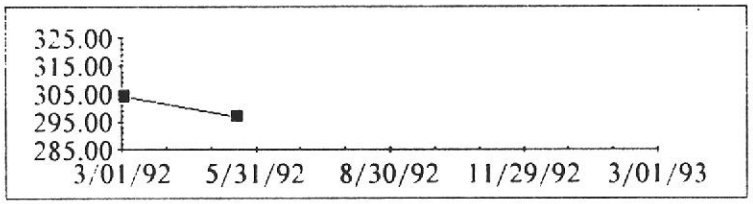
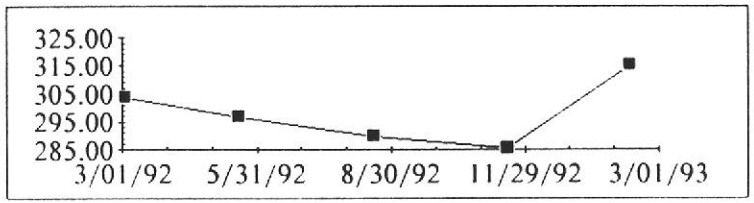
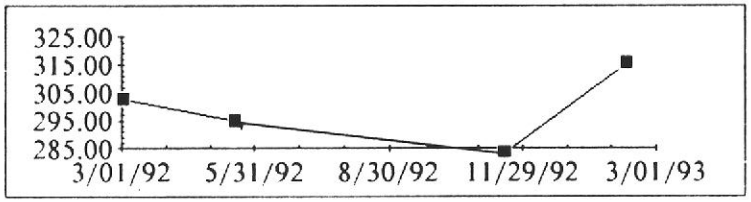
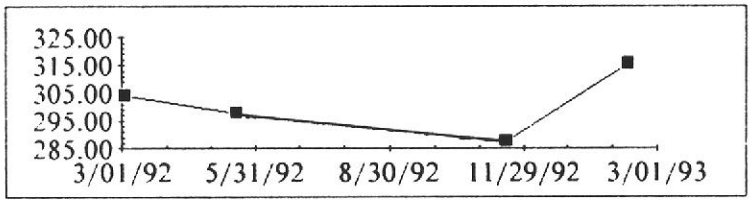
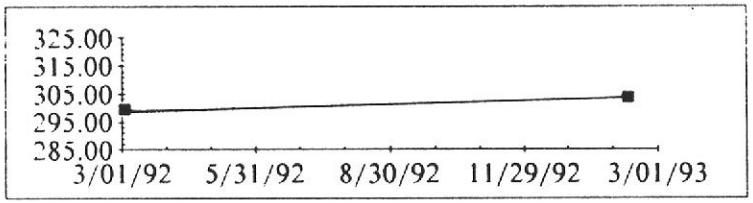
Well Number	Date	Total Well Depth (ft)	Survey Elevation (ft, MSL)	Product Thickness (ft)	Depth to Water (ft)	Elevation (ft, MSL)	Trend
MW-9	3/03/92	108	377.40	NA	Flooded		
	5/19/92			NA	Burried		
	8/19/92			NA	Burried		
	11/18/92			NA	Burried		
	2/10/93			NA	Flooded		
MW-10	3/03/92	111	378.04	NE	73.10	304.94	
	5/19/92			NE	80.76	297.28	
	8/19/92			NE	87.54	290.50	
	11/18/92			NE	91.30	286.74	
	2/10/93			NE	63.32	314.72	
MW-13	3/03/92	116	380.21	NE	76.03	304.18	
Extraction	5/19/92			NE	83.37	296.84	
Well	8/19/92	Converted to Well EX-11			Not Measured		
MW-14	3/03/92	114.5	380.09	NE	76.63	303.46	
	5/19/92			NE	83.46	296.63	
	8/19/92			NE	90.39	289.70	
	11/18/92			NE	94.36	285.73	
	2/10/93			NE	65.00	315.09	

TABLE 1
SUMMARY OF 1992 GROUND WATER ELEVATIONS
INDUSTRIAL ASPHALT

Well Number	Date	Total Well Depth (ft)	Survey Elevation (ft, MSL)	Product Thickness (ft)	Depth to Water (ft)	Elevation (ft, MSL)	Trend
MW-15	3/03/92	117	378.12	NE	75.54	302.58	
	5/19/92			NE	83.22	294.90	
	8/19/92			NA	Burried		
	11/18/92			NE	94.92	283.20	
	2/10/93			NE	62.46	315.66	
MW-16	3/03/92	110	379.65	NE	75.61	304.04	
	5/19/92			NE	82.14	297.51	
	8/19/92				Not Measured		
	11/18/92			NE	92.26	287.39	
	2/10/93			NE	64.22	315.43	
STAFF GAGE	3/03/92	NA	300.00	NE	-1	299.00	
	5/19/92			NA	Not Measured		
	8/19/92			NA	Not Measured		
	11/18/92			NA	Below Staff Gage		
	2/10/93			NE	3.1	303.10	

NOTES:

Survey elevations refer to Top of Casing, Mean Sea Level (USGS Datum)

Depth to Water in feet below Top of Casing

NA Not Applicable

NE Not Encountered

TABLE 2
MONITORING PARAMETERS
INDUSTRIAL ASPHALT

Well Number	Sample Date	TPH as Diesel[1] (mg/L)	TPH as Oil[1] (mg/L)	Oil & Grease[2] (mg/L)	Total Hydro-carbons[3] (mg/L)	PCBs[4] (µg/L)
MW-1[8]	Mar. 1992	11	4.9	27	20	0.7
	May 1992	130	57	340	310	2
	Aug. 1992	DRY	DRY	DRY	DRY	DRY
	Nov. 1992	DRY	DRY	DRY	DRY	DRY
	Feb. 1993	9.5(4.5)	6.2(4.2)	31(22)	23(17)	ND
	Feb. 1993[10]	11(18)	4.9(8.4)	19(14)	14(11)	ND
MW-2	Mar. 1992	4.1	1.5	10	8	ND
	May 1992	NT	NT	NT	NT	NT
	Aug. 1992	DRY	DRY	DRY	DRY	DRY
	Nov. 1992	DRY	DRY	DRY	DRY	DRY
	Feb. 1993	1.6	1.0	2	1	ND
MW-3	Mar. 1992	4.2	2.4	31	27	ND
	May 1992	NT	NT	NT	NT	NT
	Aug. 1992	DRY	DRY	DRY	DRY	DRY
	Nov. 1992	DRY	DRY	DRY	DRY	DRY
	Feb. 1993	0.6	0.5	3	2	ND
MW-4	Mar. 1992	ND	ND	3	1	ND
	May 1992	ND	0.8	1	0.7	ND
	Aug. 1992	ND	ND	ND	ND	ND
	Nov. 1992	NA	NA	NA	NA	NA
	Feb. 1993	ND	0.3	3	2	ND
MW-5	Mar. 1992	ND	ND	ND	ND	ND
	May 1992	ND	ND	ND	ND	ND
	Aug. 1992	DRY	DRY	DRY	DRY	DRY
	Nov. 1992	DRY	DRY	DRY	DRY	DRY
	Feb. 1993	ND	0.2	0.9	0.9	ND
MW-6	Mar. 1992	NT	NT	NT	NT	NT
	May 1992	NT	NT	NT	NT	NT
	Aug. 1992	NT	NT	NT	NT	NT
	Nov. 1992	0.1	0.3	1	0.7	ND
	Feb. 1993	ND	0.5	2	2	ND
MW-7	Mar. 1992	ND	ND	ND	ND	ND
	May 1992	0.2	0.3	0.8	0.5	ND
	Aug. 1992	ND	ND	ND	ND	ND
	Nov. 1992	ND	ND	ND	ND	ND
	Feb. 1993	0.1	0.3	1	0.8	ND
Laboratory Detection Limit[5]		0.05	0.1	0.5	0.5	0.5
Drinking Water Standard[6]		--	--	--	--	0.5

TABLE 2
(continued)
MONITORING PARAMETERS
INDUSTRIAL ASPHALT

Well Number	Sample Date	TPH as Diesel[1] (mg/L)	TPH as Oil[1] (mg/L)	Oil & Grease[2] (mg/L)	Total Hydro-carbons[3] (mg/L)	PCBs[4] (Ìg/L)
MW-8[8]	Mar. 1992	0.5	0.1	0.6	ND	ND
	May 1992	0.3	ND	ND	ND	ND
	Aug. 1992	0.1(0.1)	ND(ND)	ND(ND)	ND(ND)	ND(ND)
	Nov. 1992	0.4(0.2)	0.7(0.4)	1(0.5)	0.7(ND)	ND(ND)
	Feb. 1993	1.2(1.2)	0.9(0.7)	3(3)	2(2)	ND
MW-9	Mar. 1992	NT	NT	NT	NT	NT
	May 1992	NT	NT	NT	NT	NT
	Aug. 1992	NT	NT	NT	NT	NT
	Nov. 1992	NA	NA	NA	NA	NA
	Feb. 1993	NT	NT	NT	NT	NT
MW-10	Mar. 1992	ND	ND	ND	ND	ND
	May 1992	0.4	0.4	3	0.8	ND
	Aug. 1992	ND	ND	ND	ND	ND
	Nov. 1992	ND	ND	ND	ND	ND
	Feb. 1993	ND	0.9	3	2	ND
MW-13	Nov. 1992	Nt Converted to Extraction Well (EW-11) May 1992				
MW-14[8]	Mar. 1992	ND	ND	ND	ND	ND
	May 1992	ND(ND)	ND(ND)	ND(ND)	ND(ND)	ND(ND)
	Aug. 1992	ND	ND	ND	ND	ND
	Nov. 1992	ND(ND)	ND(ND)	ND(ND)	ND(ND)	ND(ND)
	Feb. 1993	ND	0.3	ND	ND	ND
MW-15[8]	Mar. 1992	0.3	ND	0.5	ND	ND
	May 1992	ND(ND)	ND(ND)	ND(ND)	ND(ND)	ND(ND)
	Aug. 1992	NT	NT	NT	NT	NT
	Nov. 1992	ND	ND	ND	ND	ND
	Feb. 1993	0.08	0.5	2	ND	ND
MW-16[8]	Mar. 1992	1.4(1.5)	ND(ND)	1(2)	ND(ND)	ND(ND)
	May 1992	0.4	0.2	0.9	ND	ND
	Aug. 1992	NT	NT	NT	NT	NT
	Nov. 1992	ND	ND	ND	ND	ND
	Feb. 1993	ND	0.7	1	ND	ND
14A2[9]	Mar. 1992	ND	ND	ND	ND	ND
	May 1992	ND	ND	ND	ND	ND
	Aug. 1992	ND	ND	ND	ND	ND
	Nov. 1992	ND	ND	ND	ND	ND
	Feb. 1993	ND	ND	ND	ND	ND
Laboratory Detection Limit[5]		0.05	0.1	0.5	0.5	0.5
Drinking Water Standard[6]		--	--	--	--	0.5

TABLE 2
(continued)
MONITORING PARAMETERS
INDUSTRIAL ASPHALT

NOTES FOR TABLE 2:

(1) Sample analysis via SM 3510 GCFID.

(2) Sample analysis via SM 5520C.

(3) Sample analysis via SM 5520F.

(4) Polychlorinated Biphenyl compounds. Sample analysis via EPA Test Method 8080.

(5) Routine Laboratory detection limits. Some limits may vary. Please refer to attached laboratory reports for specific detection limits.

(6) California Department of Health Services Drinking Water Standards, Primary Maximum Contaminant Levels (MCL); secondary MCLs listed in parentheses. Source: Water Quality Goals, California Regional Water Quality Control Board, February 1991.

(7) Extraction Well.

(8) Duplicate analyses in parentheses.

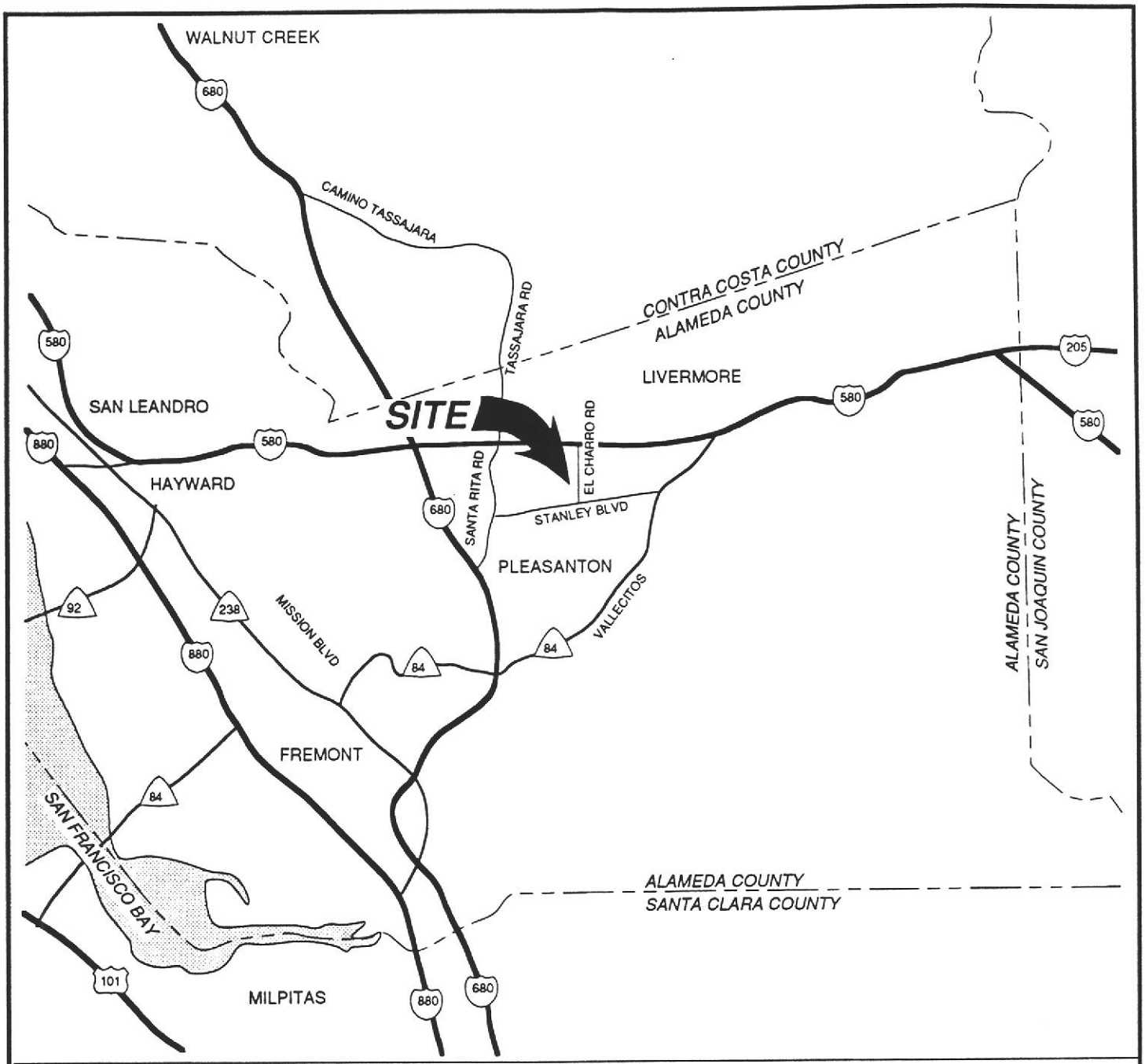
(9) Jamieson Well sampled via a tap.

(10) Reextraction and reanalysis of samples.

TPH Total Petroleum Hydrocarbons.

ND Not Detected at or above laboratory reporting limits

NT Not Tested



KLEINFELDER

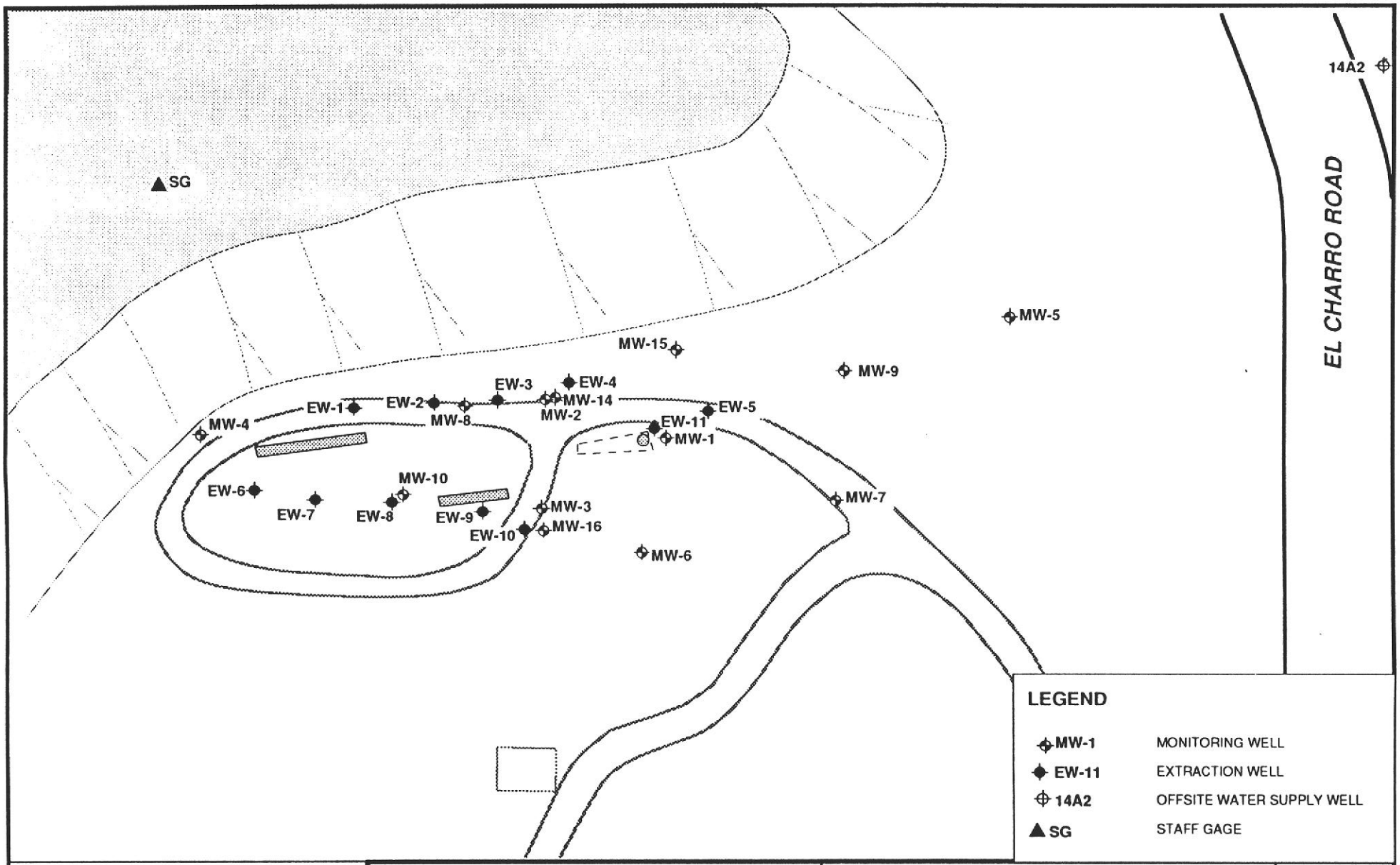
DRAFTED BY:	L. Sue	DATE:	3-1-93
CHECKED BY:	D. Behrens	DATE:	3-3-93

VICINITY MAP

INDUSTRIAL ASPHALT
52 EL CHARRO ROAD
PLEASANTON, CALIFORNIA

PROJECT NUMBER 10-1682-03

PLATE 1



0 150
Approximate Scale (feet)

N

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

KLEINFELDER

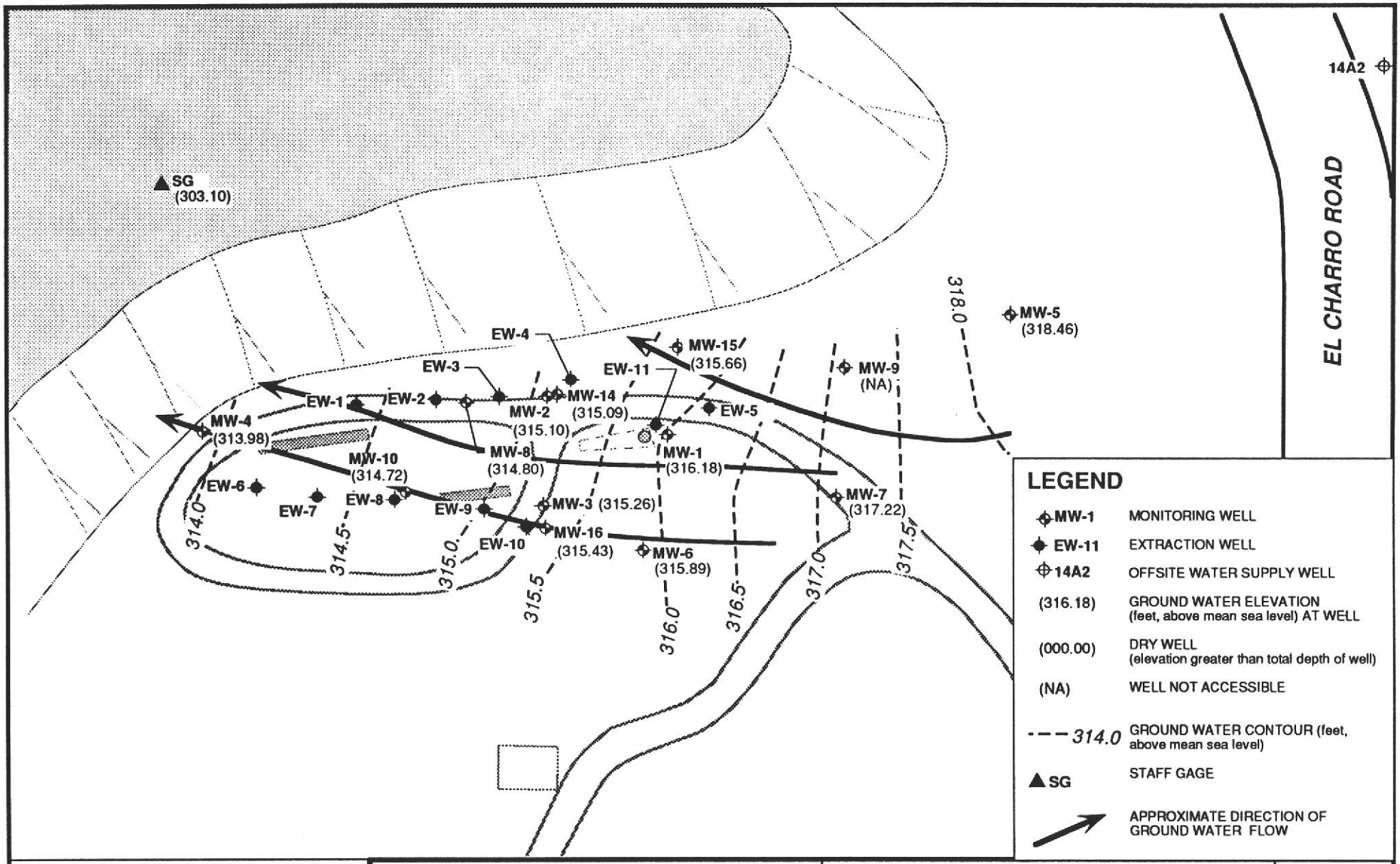
DRAFTED BY:	L. Sue	DATE:	3-1-93
CHECKED BY:	D. Behrens	DATE:	3-3-93

MONITORING AND EXTRACTION WELL LOCATION MAP

INDUSTRIAL ASPHALT
PLEASANTON, CALIFORNIA

PROJECT NO. 10-1682-03

PLATE
2



0 150
Approximate Scale (feet)

N

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

KLEINFELDER

DRAFTED BY: L. Sue DATE: 3-1-93

CHECKED BY: D. Behrens DATE: 3-3-93

GROUND WATER SURFACE CONTOUR MAP — FEBRUARY 10, 1993

INDUSTRIAL ASPHALT
PLEASANTON, CALIFORNIA

PROJECT NO. 10-1682-03

PLATE 3

QuanteQ Laboratories

FILE COPY

Certificate of Analysis

DOHS CERTIFICATION NO. 1775 ABIA ACCREDITATION NO. 152

KLEINFELDER, INC.
2121 N. CALIFORNIA BLVD.
SUITE 570
WALNUT CREEK, CA 94596
ATTN: GUY JETT

CLIENT PROJ. ID: 10-1682-03
C.O.C. NO: 2455
P.O. NO: W1305

REPORT DATE: 02/23/93

DATE SAMPLED: 02/11/93

DATE RECEIVED: 02/11/93

QUANTEQ JOB NO: 9302120

PROJECT SUMMARY:

On February 11, 1993, this laboratory received six (6) water samples.

Client requested samples be analyzed for Total Petroleum Hydrocarbons as Diesel and Oil by EPA Method 3520 GCFID, Oil & Grease by SM-5520C, Hydrocarbons by SM-5520F and Polychlorinated Biphenyls by EPA Method 8080. Sample identification, results and dates analyzed are summarized on the following pages.

All laboratory quality control parameters were found to be within established limits. Batch QC data is included at the end of this report.

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

Larry Klein
Laboratory Manager

Results FAXed 02/22/93

KLEINFELDER, INC.

DATE SAMPLED: 02/11/93
DATE RECEIVED: 02/11/93
CLIENT PROJ. ID: 10-1682-03

REPORT DATE: 02/23/93

QUANTEQ JOB NO: 9302120

Client Sample Id.	Quanteq Lab Id.	Extractable Hydrocarbons as Diesel (mg/L)	Extractable Hydrocarbons as Oil (mg/L)	Oil & Grease (mg/L)	Hydrocarbons (mg/L)
55468 MW-6	01C	ND	0.5	---	---
55468	01E	---	---	2	2
55498 MW-5	02C	ND	0.2	---	---
55498	02E	---	---	0.9	0.9
55483 MW-14	03C	ND	0.3	---	---
55483	03E	---	---	ND	ND
55458 MW-15	04C	0.08	0.5	---	---
55458	04E	---	---	2	ND
55475 MW-16	05C	ND	0.7	---	---
55475	05E	---	---	1	ND
55488 TAP	06C	ND	ND	---	---
55488	06E	---	---	ND	ND
Reporting Limit		0.05	0.2	0.5	0.5
Method:		EPA 3520 GCFID	EPA 3520 GCFID	SM-5520C	SM-5520F
Instrument:		C	C	IR	IR
Date Extracted:		02/17/93	02/17/93	02/17/93	02/17/93
Date Analyzed:		02/19/93	02/19/93	02/18-19/93	02/18-19/93

ND = Not Detected

KLEINFELDER, INC.

SAMPLE ID: 55468
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 02/11/93
DATE RECEIVED: 02/11/93
REPORT DATE: 02/23/93

QUANTEQ LAB NO: 9302120-01A
QUANTEQ JOB NO: 9302120
DATE EXTRACTED: 02/15/93
DATE ANALYZED: 02/16/93
INSTRUMENT: A

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	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

KLEINFELDER, INC.

SAMPLE ID: 55498
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 02/11/93
DATE RECEIVED: 02/11/93
REPORT DATE: 02/23/93

QUANTEQ LAB NO: 9302120-02A
QUANTEQ JOB NO: 9302120
DATE EXTRACTED: 02/15/93
DATE ANALYZED: 02/16/93
INSTRUMENT: A

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	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

KLEINFELDER, INC.

SAMPLE ID: 55483
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 02/11/93
DATE RECEIVED: 02/11/93
REPORT DATE: 02/23/93

QUANTEQ LAB NO: 9302120-03A
QUANTEQ JOB NO: 9302120
DATE EXTRACTED: 02/15/93
DATE ANALYZED: 02/16/93
INSTRUMENT: A

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	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

KLEINFELDER, INC.

SAMPLE ID: 55458
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 02/11/93
DATE RECEIVED: 02/11/93
REPORT DATE: 02/23/93

QUANTEQ LAB NO: 9302120-04A
QUANTEQ JOB NO: 9302120
DATE EXTRACTED: 02/15/93
DATE ANALYZED: 02/16/93
INSTRUMENT: A

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	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

KLEINFELDER, INC.

SAMPLE ID: 55475
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 02/11/93
DATE RECEIVED: 02/11/93
REPORT DATE: 02/23/93

QUANTEQ LAB NO: 9302120-05A
QUANTEQ JOB NO: 9302120
DATE EXTRACTED: 02/15/93
DATE ANALYZED: 02/16/93
INSTRUMENT: A

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	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

KLEINFELDER, INC.

SAMPLE ID: 55488
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 02/11/93
DATE RECEIVED: 02/11/93
REPORT DATE: 02/23/93

QUANTEQ LAB NO: 9302120-06A
QUANTEQ JOB NO: 9302120
DATE EXTRACTED: 02/15/93
DATE ANALYZED: 02/16/93
INSTRUMENT: A

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	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

QUALITY CONTROL DATA

DATE EXTRACTED: 02/17/93
DATE ANALYZED: 02/19/93
CLIENT PROJ. ID: 10-1682-03

QUANTEQ JOB NO: 9302120
SAMPLE SPIKED: D.I. WATER
INSTRUMENT: IR

IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS
METHOD SPIKE RECOVERY SUMMARY
(WATER MATRIX)

ANALYTE	MS Conc. (mg/L)	Sample Result (mg/L)	MS Result (mg/L)	MSD Result (mg/L)	Average Percent Recovery	RPD
Oil	5.90	ND	5.77	5.62	96.5	2.6

CURRENT QC LIMITS (Revised 06/22/92)

Analyte	Percent Recovery	RPD
Oil	(88-110)	5.8

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

QUALITY CONTROL DATA

DATE EXTRACTED: 02/17/93
DATE ANALYZED: 02/19/93
CLIENT PROJ. ID: 10-1682-03

QUANTEQ JOB NO: 9302120
SAMPLE SPIKED: D.I. WATER
INSTRUMENT: C

METHOD SPIKE RECOVERY SUMMARY
TPH EXTRACTABLE WATERS
METHOD 3520 GCFID

ANALYTE	Spike Conc. (mg/L)	Sample Result (mg/L)	MS Result (mg/L)	MSD Result (mg/L)	Average Percent Recovery	RPD
Diesel	2.00	ND	1.17	1.17	58.5	0.0

CURRENT QC LIMITS (Revised 08/15/91)

Analyte	Percent Recovery	RPD
Diesel	(49.3-101.4)	29.0

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

QUALITY CONTROL DATA

DATE EXTRACTED: 02/15/93

QUANTEQ JOB NO: 9302120

CLIENT PROJ. ID: 10-1682-03

INSTRUMENT: A

SURROGATE STANDARD RECOVERY SUMMARY

METHOD 8080
(WATER MATRIX)

SAMPLE IDENTIFICATION			SURROGATE RECOVERY (PERCENT)
Date Analyzed	Client Id.	Lab Id.	2,4,5,6-Tetrachloro-meta-xylene
02/16/93	55468	01A	81
02/16/93	55498	02A	92
02/16/93	55483	03A	97
02/16/93	55458	04A	90
02/16/93	55475	05A	106
02/16/93	55488	06A	103

CURRENT QC LIMITS (Revised 06/22/92)

ANALYTE	PERCENT RECOVERY
2,4,5,6-Tetrachloro-meta-xylene	(30-131)

QUALITY CONTROL DATA

DATE EXTRACTED: 02/15/93
DATE ANALYZED: 02/16/93
CLIENT PROJ. ID: 10-1682-03

QUANTEQ JOB NO: 9302120
SAMPLE SPIKED: D.I. WATER
INSTRUMENT: A

MATRIX SPIKE RECOVERY SUMMARY

METHOD 8080 (PCBs)
(WATER MATRIX)

COMPOUND	Spike Amount (mg/L)	Sample Result (mg/L)	MS Result (mg/L)	MSD Result (mg/L)	Average Percent Recovery	RPD
A1260	5.00	ND	5.95	5.37	113.2	10.2

CURRENT QC LIMITS (Revised 06/22/92)

Analyte	Percent Recovery	RPD
A1260	(53-133)	16

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

KLEINFELDER

PROJ. NO.	PROJECT NAME
10 1882 03	
L.P. NO. (P.O. NO.)	SAMPLERS (Signature/Number)
	[signature]

DATE MM/DD/YY	SAMPLE I.D. TIME HH MM SS	SAMPLE I.D.	NO. OF CONTAINERS	ANALYSIS													REMARKS
7/1/93		55462	1	X		X		X	X								
		55463	1	X		X		X	X								
		55464	1	X		X		X	X								
		55458	1	X		X		X	X								
		55471	1	X		X		X	X								
		55465	1	X		X		X	X								

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	7/1/93 1645	[signature]
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)

Remarks

ALL GO 3-DAY
[illegible] TAT

Send Results To

KLEINFELDER
2121 N. CALIFORNIA BLVD.
SUITE 570
WALNUT CREEK, CA 94596
(510) 938-5610

M-60 White - Sample Canary - Return Copy To Shipper Pink - Lab Copy

2155

CHAIN OF CUSTODY

Quanteq Laboratories

An Ecologics Company

FILE COPY
10-1682-03
Lab Data 1993

Certificate of Analysis

DOHS CERTIFICATION NO. E772

AIHA ACCREDITATION NO. 552

KLEINFELDER, INC.
2121 N. CALIFORNIA BLVD.
SUITE 570
WALNUT CREEK, CA 94596
ATTN: GUY JETT

CLIENT PROJ. ID: 10-1682-03
C.O.C. NO: 2445
P.O. NO: W1305

REPORT DATE: 03/11/93

DATE SAMPLED: 02/11-12/93

DATE RECEIVED: 02/12/93

QUANTEQ JOB NO: 9302135

PROJECT SUMMARY:

On February 12, 1993, this laboratory received nine (9) water samples.

Client requested samples be analyzed for Total Petroleum Hydrocarbons as Diesel and Oil by EPA Method 3520 GCFID, Oil & Grease by SM-5520C, Hydrocarbons by SM-5520F and Polychlorinated Biphenyls by EPA Method 8080. Sample identification, results and dates analyzed are summarized on the following pages.

Samples 55402 and 55413 were extracted in duplicate for methods 3520 GCFID, 5520C and 5520F due to apparent inconsistencies in results. Results for all fractions are included in this report. These samples did not appear homogeneous. Inconsistent results may be due to suspended or floating hydrocarbon particles in the samples.

All laboratory quality control parameters were found to be within established limits. Batch QC data is included at the end of this report.

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

Larry Klein
Laboratory Manager

Results FAXed 02/23/93

KLEINFELDER, INC.

DATE SAMPLED: 02/11-12/93
DATE RECEIVED: 02/12/93
CLIENT PROJ. ID: 10-1682-03

REPORT DATE: 03/11/93

QUANTEQ JOB NO: 9302135

Client Sample Id.	Quanteq Lab Id.	Extractable Hydrocarbons as Diesel (mg/L)	Extractable Hydrocarbons as Oil (mg/L)	Oil & Grease (mg/L)	Hydrocarbons (mg/L)
61847 MW-10	01C	ND	0.9	---	---
61847	01E	---	---	3	2
55433 MW-7	02C	0.1	0.3	---	---
55433	02E	---	---	1	0.8
55402 MW-1	03C	9.5	6.2	---	---
55402	03E	---	---	31	23
55413 MW-1 (d)	04C	4.5	4.2	---	---
55413	04E	---	---	22	17
55415 MW-3	05C	0.6	0.5	---	---
55415	05E	---	---	3	2
55427 MW-2	06C	1.6	1.0	---	---
55427	06E	---	---	2	1
55325 MW-8	07C	1.2	0.9	---	---
55325	07E	---	---	3	2
55329 MW-8 (d)	08C	1.2	0.7	---	---
55329	08E	---	---	3	2
55474 MW-4	09C	ND	0.3	---	---
55474	09E	---	---	3	2
Reporting Limit		0.05	0.2	0.5	0.5
Method:		EPA 3520 GCFID	EPA 3520 GCFID	SM-5520C	SM-5520F
Instrument:		C	C	IR	IR
Date Extracted:		02/19/93	02/19/93	02/17/93	02/17/93
Date Analyzed:		02/22/93	02/22/93	02/18-19/93	02/18-19/93

ND = Not Detected

KLEINFELDER, INC.

DATE SAMPLED: 02/11-12/93
DATE RECEIVED: 02/12/93
CLIENT PROJ. ID: 10-1682-03

REPORT DATE: 03/11/93

QUANTEQ JOB NO: 9302135

Client Sample Id.	Quanteq Lab Id.	Extractable Hydrocarbons as Diesel (mg/L)	Extractable Hydrocarbons as Oil (mg/L)	Oil & Grease (mg/L)	Hydrocarbons (mg/L)
reanalysis					
55402 MW-1	03D	11	4.9	---	---
55402	03F	---	---	19	14
55413 MW-1 (d)	04D	18	8.4	---	---
55413	04F	---	---	14	11
Reporting Limit		0.05	0.2	0.5	0.5
Method:		EPA 3520 GCFID	EPA 3520 GCFID	SM-5520C	SM-5520F
Instrument:		C	C	IR	IR
Date Extracted:		02/24/93	02/24/93	02/25/93	02/25/93
Date Analyzed:		03/03/93	03/03/93	03/03/93	03/03/93

ND = Not Detected

KLEINFELDER, INC.

SAMPLE ID: 61847
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 02/11/93
DATE RECEIVED: 02/12/93
REPORT DATE: 03/11/93

QUANTEQ LAB NO: 9302135-01A
QUANTEQ JOB NO: 9302135
DATE EXTRACTED: 02/16/93
DATE ANALYZED: 02/19/93
INSTRUMENT: A

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	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

KLEINFELDER, INC.

SAMPLE ID: 55433
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 02/12/93
DATE RECEIVED: 02/12/93
REPORT DATE: 03/11/93

QUANTEQ LAB NO: 9302135-02A
QUANTEQ JOB NO: 9302135
DATE EXTRACTED: 02/16/93
DATE ANALYZED: 02/19/93
INSTRUMENT: A

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	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

KLEINFELDER, INC.

SAMPLE ID: 55402
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 02/12/93
DATE RECEIVED: 02/12/93
REPORT DATE: 03/11/93

QUANTEQ LAB NO: 9302135-03A
QUANTEQ JOB NO: 9302135
DATE EXTRACTED: 02/16/93
DATE ANALYZED: 02/19/93
INSTRUMENT: A

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	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

KLEINFELDER, INC.

SAMPLE ID: 55413
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 02/12/93
DATE RECEIVED: 02/12/93
REPORT DATE: 03/11/93

QUANTEQ LAB NO: 9302135-04A
QUANTEQ JOB NO: 9302135
DATE EXTRACTED: 02/16/93
DATE ANALYZED: 02/19/93
INSTRUMENT: A

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	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

KLEINFELDER, INC.

SAMPLE ID: 55415
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 02/12/93
DATE RECEIVED: 02/12/93
REPORT DATE: 03/11/93

QUANTEQ LAB NO: 9302135-05A
QUANTEQ JOB NO: 9302135
DATE EXTRACTED: 02/16/93
DATE ANALYZED: 02/19/93
INSTRUMENT: A

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	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

KLEINFELDER, INC.

SAMPLE ID: 55325
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 02/12/93
DATE RECEIVED: 02/12/93
REPORT DATE: 03/11/93

QUANTEQ LAB NO: 9302135-07A
QUANTEQ JOB NO: 9302135
DATE EXTRACTED: 02/16/93
DATE ANALYZED: 02/19/93
INSTRUMENT: A

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	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

KLEINFELDER, INC.

SAMPLE ID: 55329
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 02/12/93
DATE RECEIVED: 02/12/93
REPORT DATE: 03/11/93

QUANTEQ LAB NO: 9302135-08A
QUANTEQ JOB NO: 9302135
DATE EXTRACTED: 02/16/93
DATE ANALYZED: 02/19/93
INSTRUMENT: A

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	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

KLEINFELDER, INC.

SAMPLE ID: 55474
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 02/12/93
DATE RECEIVED: 02/12/93
REPORT DATE: 03/11/93

QUANTEQ LAB NO: 9302135-09A
QUANTEQ JOB NO: 9302135
DATE EXTRACTED: 02/16/93
DATE ANALYZED: 02/19/93
INSTRUMENT: A

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	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

QUALITY CONTROL DATA

DATE EXTRACTED: 02/19/93
DATE ANALYZED: 02/22/93
CLIENT PROJ. ID: 10-1682-03

QUANTEQ JOB NO: 9302135
SAMPLE SPIKED: D.I. WATER
INSTRUMENT: C

METHOD SPIKE RECOVERY SUMMARY
TPH EXTRACTABLE WATERS
METHOD 3520 GCFID

ANALYTE	Spike Conc. (mg/L)	Sample Result (mg/L)	MS Result (mg/L)	MSD Result (mg/L)	Average Percent Recovery	RPD
Diesel	2.00	ND	1.23	1.20	60.8	2.5

CURRENT QC LIMITS (Revised 08/15/91)

Analyte	Percent Recovery	RPD
Diesel	(49.3-101.4)	29.0

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

QUALITY CONTROL DATA

DATE EXTRACTED: 02/16/93
DATE ANALYZED: 02/18/93
CLIENT PROJ. ID: 10-1682-03

QUANTEQ JOB NO: 9302135
SAMPLE SPIKED: D.I. WATER
INSTRUMENT: A

MATRIX SPIKE RECOVERY SUMMARY

METHOD 8080 (PCBs)
(WATER MATRIX)

COMPOUND	Spike Amount (mg/L)	Sample Result (mg/L)	MS Result (mg/L)	MSD Result (mg/L)	Average Percent Recovery	RPD
A1260	4.00	ND	4.33	4.14	105.9	4.5

CURRENT QC LIMITS (Revised 06/22/92)

Analyte	Percent Recovery	RPD
A1260	(53-133)	16

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

KLEINFELDER

R-1, SB/C

9302135

PROJ. NO.	PROJECT NAME
16703	
L.P. NO. (P.O NO.) W1305	SAMPLERS: (Signature/Number) Greg Hamel 1282

DATE MM/DD/YY	SAMPLE I.D. TIME HH:MM:SS	SAMPLE I.D.	NO OF CON-TAINERS	ANALYSIS VOC's only	TPH as diesel (E)	TOTAL HYDROCARBONS Oil and Grease	REMARKS
11-12		61847 01A-F	6	X	X	X X	
12-12		55433 02A-F	6	X	X	X X	
		55402 03A-F	6	X	X	X X	*
		55413 04A-F	6	X	X	X X	*
		55415 05A-F	6	X	X	X X	*
		55427 06A-F	6	X	X	X X	*
		55325 07A-F	6	X	X	X X	*
		55329 08A-F	6	X	X	X X	*
		55474 09A-F	6	X	X	X X	

* Holds which may be HOT

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Greg Hamel	12-12-93	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)
	12/14/93 1750	Gina Gillespie

Remarks

ATTN GUY JETT
Standard T.A.T.

Send Results To

KLEINFELDER
2121 N. CALIFORNIA BLVD.
SUITE 570
WALNUT CREEK, CA 94596
(510) 938-5610

M 60 White Sample Canary Return Copy To Shipper Pink Lab Copy

2445