QUARTERLY REPORT
(AUGUST - OCTOBER 1993)
INDUSTRIAL ASPHALT
PLEASANTON, CALIFORNIA

December 10, 1993

KLEINFELDER

December 10, 1993
File: 10-1682-03/38

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

SUBJECT: Quarterly Report (August - October 1993) Industrial Asphalt, Pleasanton, California

Dear Mr. Hunt:

Kleinfelder, Inc., is pleased to submit this quarterly report for the third quarter of 1993 (August - October 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 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 August 16 and 20, 1993, from all but one of the thirteen onsite ground water monitoring 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-7 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.

WATER LEVEL MONITORING DATA

Ground water surface elevation data were collected from sampled wells on August 19, 1993, prior to their sampling. These measurements are provided in Table 1. Generally, the ground water surface elevation at the site has fallen an average of approximately 9.2 feet since the last measurement on May 11, 1993.

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Water level elevations beneath the site vary from a high of 310.13 feet at MW-6 to a low of 307.66 at MW-5. Historical observations at the site indicated that water levels in the area of monitoring wells MW-5 and MW-7 were the lowest at the site. Between February and May 1993, however, water levels in MW-5 and MW-7 were the highest at the site during a winter and spring of relatively heavy rainfall. Measurements recorded during this sampling round indicated that water levels in well MW-5 were again the lowest at the site, suggesting a return towards the historical pattern.

The overall gradient is steepest beneath the eastern third of the site at approximately 0.0076 feet per foot to the northeast. The gradient flattens beneath the central third of the site to 0.0054 feet per foot to the north. This indicates both a steepening of the gradient and a shift on the flow direction towards the east since May 1993. Beneath the western third, the gradient flattens further to 0.0032 feet per foot but the flow direction has shifted northward relative to May 1993.

GROUND WATER CHEMISTRY MONITORING RESULTS

Groundwater samples collected from the site were analyzed by American Environmental Network (AEN) laboratories (formerly 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 for the August sampling event along with chain of custody records are included in the Appendix.

A sheen and/or hydrocarbon-like odors were again reported for two of the thirteen wells sampled during this round (MW-2 and MW-3). Well MW-1, which appeared to contain the heaviest sheen during the May 1993 sampling round, contained very little water and was not evaluated for odor and sheen at this time.

PCBs, at a concentration of 1 μg/L were reported for the sample collected from well MW-1 only. Detectable concentrations of PCBs were not found in any of the other twelve 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 four of the thirteen sampled wells (MW-1, MW-2, MW-7, and MW-10), with the highest concentrations reported from MW-1. TPH(d) only was detected in samples collected from four wells (MW-3, MW-5, MW-8, and MW-15), all at concentrations less than 1.0 mg/L.

TPH(o) only was not detected in samples collected from any of the wells during this round. Five wells (MW-4, MW-6, MW-14, MW-16, and the Jamieson production well 14A2 (sampled from a tap) did not contain either TPH(d) or TPH(o).

Detectable concentrations of both TOG and TH were reported for samples collected from only one of the thirteen tested wells (MW-1) during the August sampling round in contrast to five of thirteen during the May 1993 sampling round. TOG only was reported for samples collected from one additional well (MW-2). Samples collected from the eleven remaining locations (MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-10, MW-14, MW-15, MW-16, and the Jamieson well) did not contain reportable concentrations for either TOG or TH.

The results for TOG and TH contrast to preceeding sampling rounds. In August 1992 sampling round these constituents were not found in any of the water samples tested. In November 1992 these species were reported for samples from MW-6 and MW-8 only, possibly as a result of autumn rainfall. By February 1993, one or both of these species were found in nine of the thirteen sampled wells, following a ground water rise of approximately 26 feet in response to heavy winter rains. By May 1993, the number of wells containing these constituents had decreased to five, with a further decrease to two during this sampling round.

Duplicate samples were collected from wells MW-7 and MW-8. Analytical results for these samples appeared to be in agreement with one another, indicating acceptable levels of laboratory precision.

SUMMARY

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

- The ground water surface elevation beneath the site averages 9.2 feet lower than the previous sampling round while the ground water flow direction has rotated eastward from the northwest towards the north and northeast.

- Changes in the reported concentrations of target species vary across the site with four wells increasing (MW-1, MW-5, MW-7, and MW-15) and six wells decreasing (MW-2, MW-3, MW-4, MW-6, MW-8, and MW-9). In February 1993, the Jameison well was the only one not containing detectable concentrations of the target species. During the May 1993 sampling round, four of the wells (MW-7, MW-14, MW-16, and the Jamieson well) did not contain such constituents. During this sampling round five wells did not contain detectable concentrations of the target species (MW-4, MW-6, MW-14, MW-16, and the Jamieson well).

- PCBs were detected (1 μg/L) in samples collected from monitoring well MW-1 only during this sampling round. PCBs were last detected in this well, and at this site, in May 1992.

RECOMMENDED RI ACTIVITIES

Oil and grease, TPH(d), TPH(o), total hydrocarbons, and, occasionally, PCBs continue to be found in water samples obtained from some of the onsite monitoring wells. Monitoring for these compounds is part of the proposed waste discharge requirements which were prepared for this site. We therefore recommend that water samples be analyzed for these same compounds during the November 1993 sampling round. This will allow an assessment of possible changes in concentrations of these compounds found in selected water samples.

OTHER ACTIVITIES

Design plans and specifications for the proposed remediation system at the site have been completed by Kleinfelder and approved by Industrial Asphalt. A bit package for construction of the system was submitted to five contracting firms in early September. Inasmuch as only one bid was received in response to this request, Industrial Asphalt intends to solicit a new set of bids from other acceptable contractors in late October or early November.

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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.

Guy A. Jett, R.G.
Staff Geologist

John E. Romie, R.G.
Senior Project Manager

GAJ/JER:sr

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
Butch Kelly - Calmat - Jamieson

TABLE 1
SUMMARY OF GROUND WATER ELEVATIONS
INDUSTRIAL ASPHALT

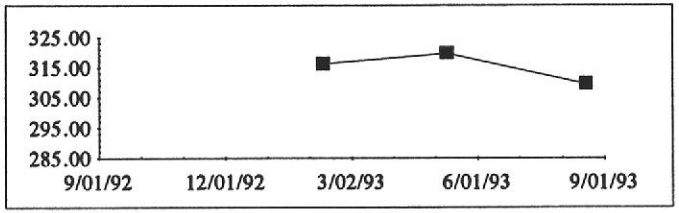
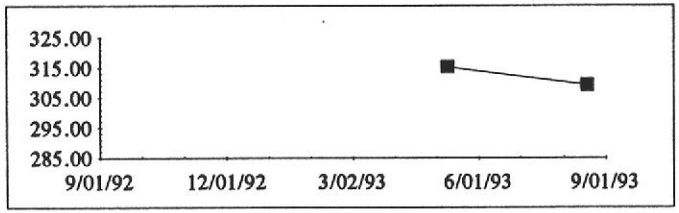
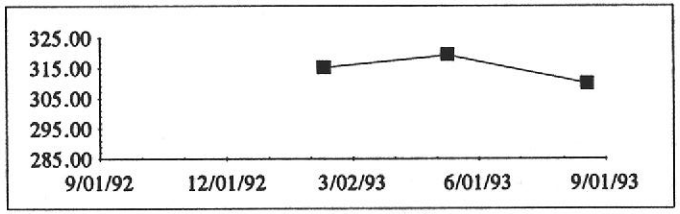
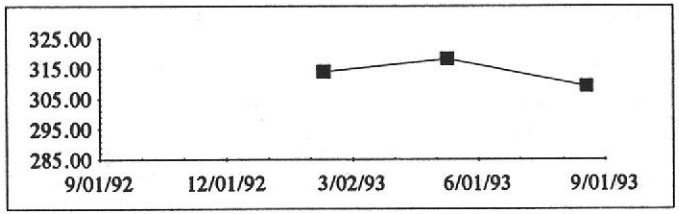
Well Number	Date	Total Well Depth (ft)	Survey Elevation (ft, MSL)	Product Thickness (ft)	Depth to Water (ft)	Elevation (ft, MSL)	Trend
MW-1	11/18/92	88	379.41	NA	DRY		
	2/10/93			SHEEN	63.23	316.18	
	5/11/93			SHEEN	59.72	319.69	
	8/19/93			SHEEN	70.05	309.36	
MW-2	11/18/92	90	379.80	NA	DRY		
	2/10/93			NA	DRY		
	5/11/93			SHEEN	64.70	315.10	
	8/19/93			SHEEN	70.63	309.17	
MW-3	11/18/92	90	378.54	NA	DRY		
	2/10/93			SHEEN	63.28	315.26	
	5/11/93			SHEEN	59.22	319.32	
	8/19/93			NE	68.69	309.85	
MW-4	11/18/92	95	376.26	NA	Burried		
	2/10/93			NE	62.28	313.98	
	5/11/93			NE	58.21	318.05	
	8/19/93			NE	67.26	309.00	

TABLE 1
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INDUSTRIAL ASPHALT

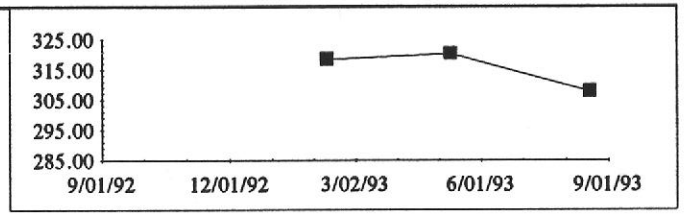
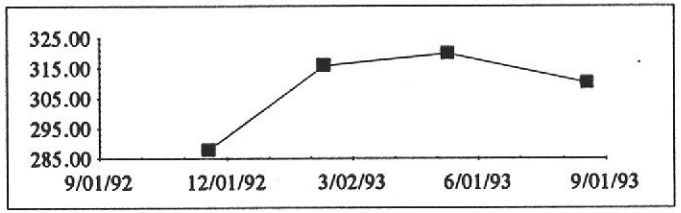
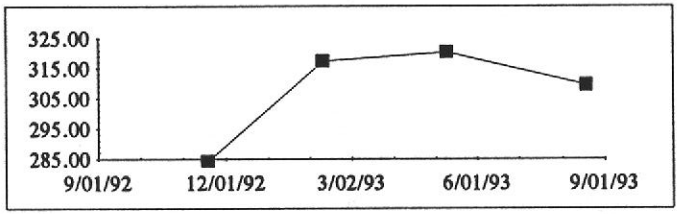
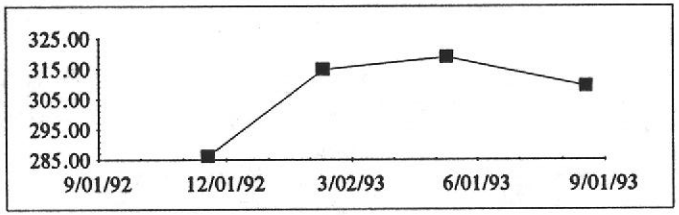
Well Number	Date	Total Well Depth (ft)	Survey Elevation (ft, MSL)	Product Thickness (ft)	Depth to Water (ft)	Elevation (ft, MSL)	Trend
MW-5	11/18/92	110	382.55	NA	DRY		
	2/10/93			NE	64.09	318.46	
	5/11/93			NE	62.37	320.18	
	8/19/93			NE	74.89	307.66	
MW-6	11/18/92	109	379.15	NE	91.40	287.75	
	2/10/93			NE	63.26	315.89	
	5/11/93			NE	59.37	319.78	
	8/19/93			NE	69.02	310.13	
MW-7	11/18/92	109	378.94	NE	94.96	283.98	
	2/10/93			NE	61.72	317.22	
	5/11/93			NE	58.58	320.36	
	8/19/93			NE	69.44	309.50	
MW-8	11/18/92	109	378.56	NE	92.56	286.00	
	2/10/93			SHEEN	63.76	314.80	
	5/11/93			SHEEN	59.77	318.79	
	8/19/93			NE	69.25	309.31	

TABLE 1
SUMMARY OF GROUND WATER ELEVATIONS
INDUSTRIAL ASPHALT

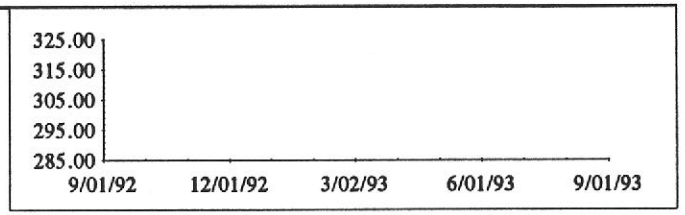
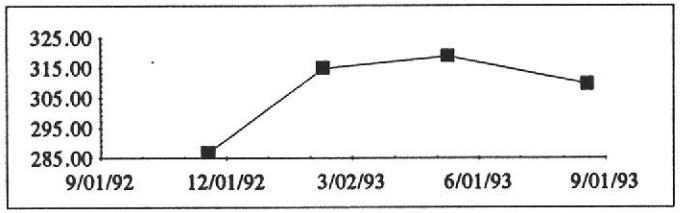
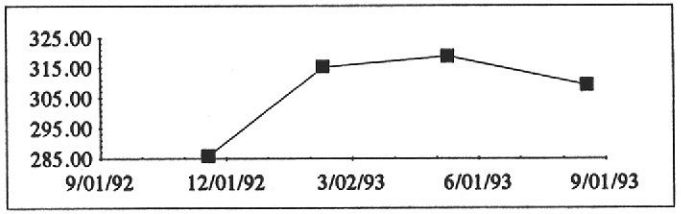
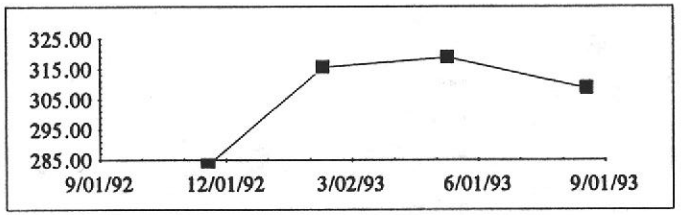
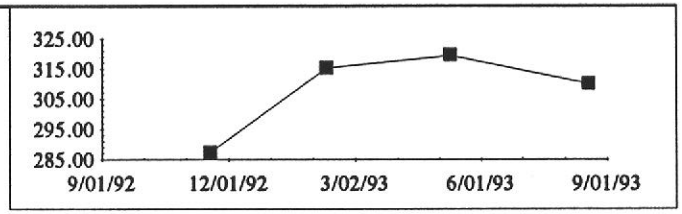
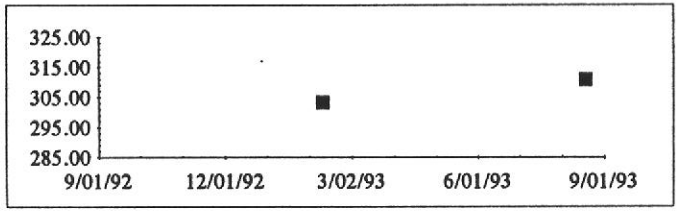
Well Number	Date	Total Well Depth (ft)	Survey Elevation (ft, MSL)	Product Thickness (ft)	Depth to Water (ft)	Elevation (ft, MSL)	Trend
MW-9	11/18/92	108	377.40	NA	Burried		
	2/10/93			NA	Flooded		
	5/11/93			NA	Burried		
	8/19/93			NA	Burried		
MW-10	11/18/92	111	378.04	NE	91.30	286.74	
	2/10/93			NE	63.32	314.72	
	5/11/93			NE	59.23	318.81	
	8/19/93			NE	68.46	309.58	
MW-14	11/18/92	114.5	380.09	NE	94.36	285.73	
	2/10/93			NE	65.00	315.09	
	5/11/93			NE	61.22	318.87	
	8/19/93			NE	70.91	309.18	
MW-15	11/18/92	117	378.12	NE	94.92	283.20	
	2/10/93			NE	62.46	315.66	
	5/11/93			NE	59.23	318.89	
	8/19/93			NE	69.53	308.59	

TABLE 1
SUMMARY OF 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-16	11/18/92	110	379.65	NE	92.26	287.39	
	2/10/93			NE	64.22	315.43	
	5/11/93			NE	60.19	319.46	
	8/19/93			NE	69.65	310.00	
STAFF GAGE	11/18/92	NA	300.00	NE	Below Staff Gage		
	2/10/93			NE	3.1	303.10	
	5/11/93			NE	Above Staff Gage		
	8/19/93			NE	10.5	310.50	

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] (ìg/L)
MW-1	Nov. 1992	DRY	DRY	DRY	DRY	DRY
[8]	Feb. 1993	9.5(4.5)	6.2(4.2)	31(22)	23(17)	ND
[8]	Feb. 1993[10]	11(18)	4.9(8.4)	19(14)	14(11)	ND
	May 1993	0.3	ND	0.6	ND	ND
	Aug. 1993	5.1	11	19	10	1
MW-2	Nov. 1992	DRY	DRY	DRY	DRY	DRY
	Feb. 1993	1.6	1.0	2	1	ND
	May 1993	1.9	0.9	3	2	ND
	Aug. 1993	0.9	0.2	0.7	ND	ND
MW-3	Nov. 1992	DRY	DRY	DRY	DRY	DRY
	Feb. 1993	0.6	0.5	3	2	ND
	May 1993	2.8	2.4	6	5	ND
	Aug. 1993	0.4	ND	ND	ND	ND
MW-4	Nov. 1992	NA	NA	NA	NA	NA
	Feb. 1993	ND	0.3	3	2	ND
	May 1993	ND	1.0	2	1	ND
	Aug. 1993	ND	ND	ND	ND	ND
MW-5	Nov. 1992	DRY	DRY	DRY	DRY	DRY
	Feb. 1993	ND	0.2	0.9	0.9	ND
[8]	May 1993	0.1(0.2)	ND(ND)	ND(ND)	ND(ND)	ND(ND)
	Aug. 1993	0.4	ND	ND	ND	ND
MW-6	Nov. 1992	0.1	0.3	1	0.7	ND
	Feb. 1993	ND	0.5	2	2	ND
	May 1993	ND	0.3	ND	ND	ND
	Aug. 1993	ND	ND	ND	ND	ND
MW-7	Nov. 1992	ND	ND	ND	ND	ND
	Feb. 1993	0.1	0.3	1	0.8	ND
	May 1993	ND	ND	ND	ND	ND
[8]	Aug. 1993	0.6(0.5)	2(2)	ND(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

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]	Nov. 1992	0.4(0.2)	0.7(0.4)	1(0.5)	0.7(ND)	ND(ND)
[8]	Feb. 1993	1.2(1.2)	0.9(0.7)	3(3)	2(2)	ND
[8]	May 1993	1.5(1.5)	0.4(0.4)	1(1)	0.8(0.6)	ND(ND)
[8]	Aug. 1993	0.2(0.2)	ND(ND)	ND(ND)	ND(ND)	ND(ND)
MW-9	Nov. 1992	NT	NT	NT	NT	NT
	Feb. 1993	NT	NT	NT	NT	NT
	May 1993	NT	NT	NT	NT	NT
	Aug. 1993	NT	NT	NT	NT	NT
MW-10	Nov. 1992	ND	ND	ND	ND	ND
	Feb. 1993	ND	0.9	3	2	ND
	May 1993	0.6	0.8	1	1	ND
	Aug. 1993	0.2	0.3	ND	ND	ND
MW-14[8]	Nov. 1992	ND(ND)	ND(ND)	ND(ND)	ND(ND)	ND(ND)
	Feb. 1993	ND	0.3	ND	ND	ND
	May 1993	ND	ND	ND	ND	ND
	Aug. 1993	ND	ND	ND	ND	ND
MW-15	Nov. 1992	ND	ND	ND	ND	ND
	Feb. 1993	0.08	0.5	2	ND	ND
	May 1993	0.1	ND	ND	ND	ND
	Aug. 1993	0.2	0.2	ND	ND	ND
MW-16	Nov. 1992	ND	ND	ND	ND	ND
	Feb. 1993	ND	0.7	1	ND	ND
	May 1993	ND	ND	ND	ND	ND
	Aug. 1993	ND	ND	ND	ND	ND
14A2[9]	Nov. 1992	ND	ND	ND	ND	ND
	Feb. 1993	ND	ND	ND	ND	ND
	May 1993	ND	ND	ND	ND	ND
	Aug. 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.

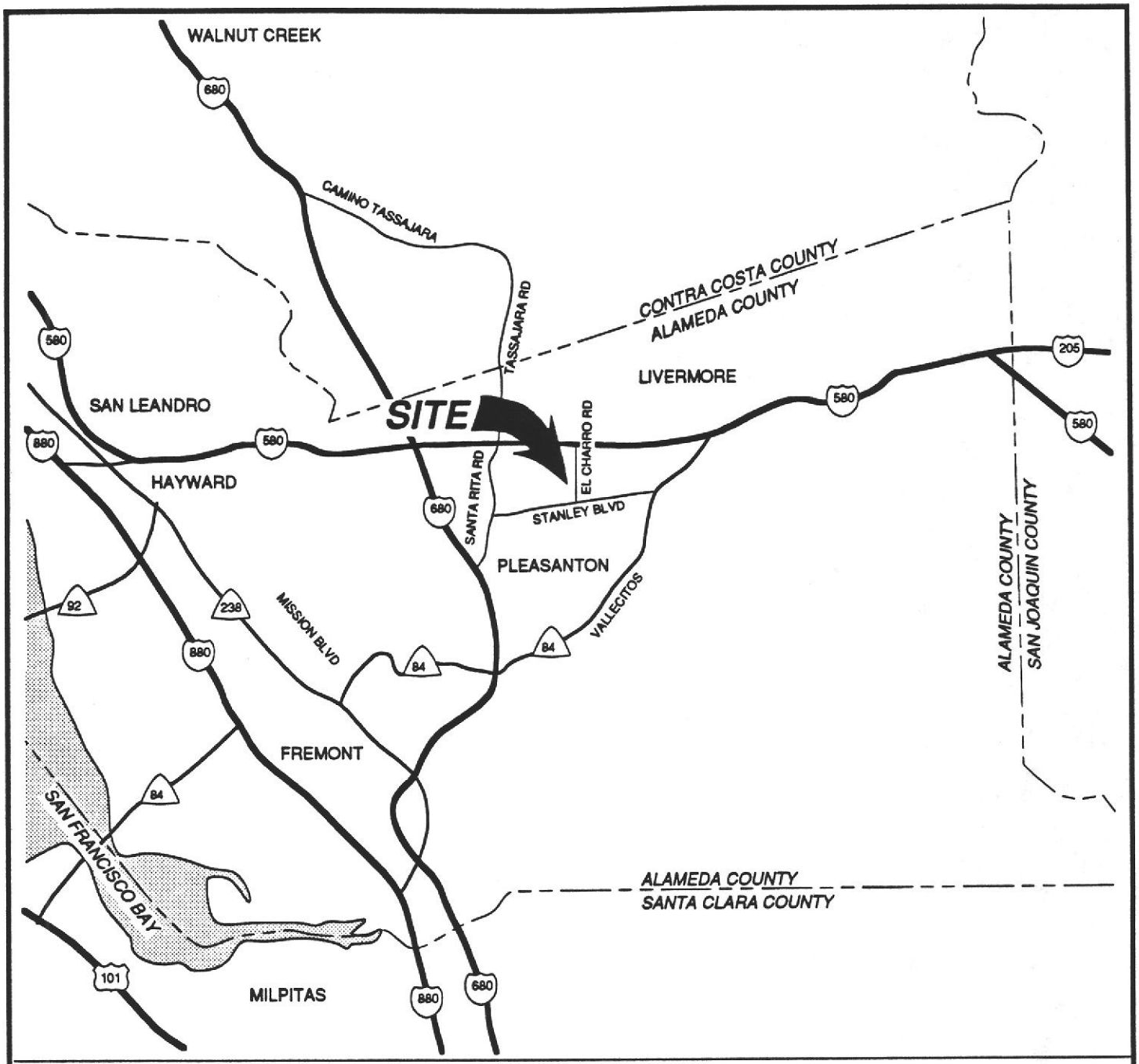
(9) Jamieson Well sampled via a tap.

(10) Reextraction and reanalysis of samples.

TPH Total Petroleum Hydrocarbons.

ND Not Detected at or above laboratory reporting limits

NT Not Tested



KLEINFELDER

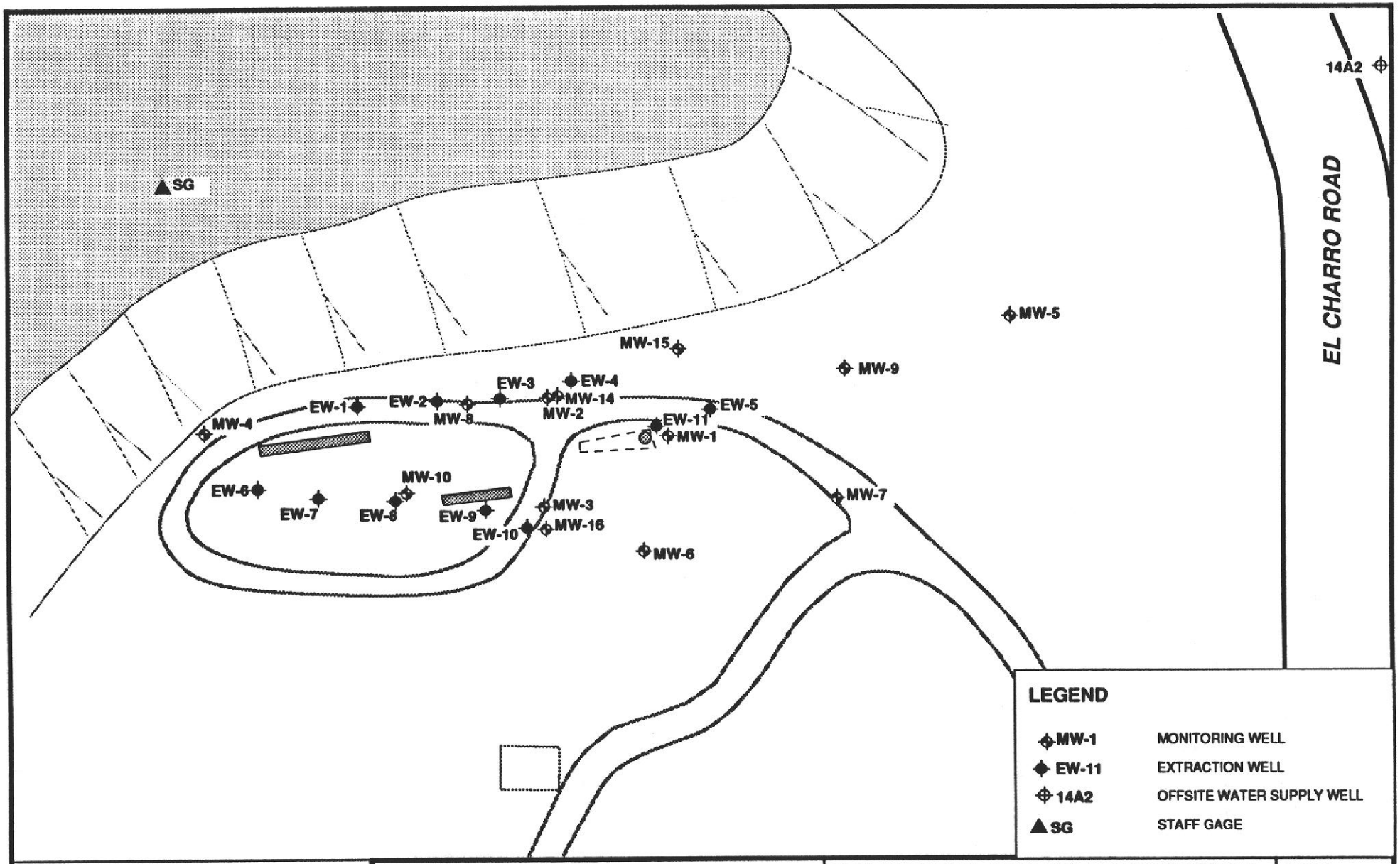
DRAFTED BY:	L. Sue	DATE: 11-1-93	
CHECKED BY:	J. Romie	DATE: 11-2-93	

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

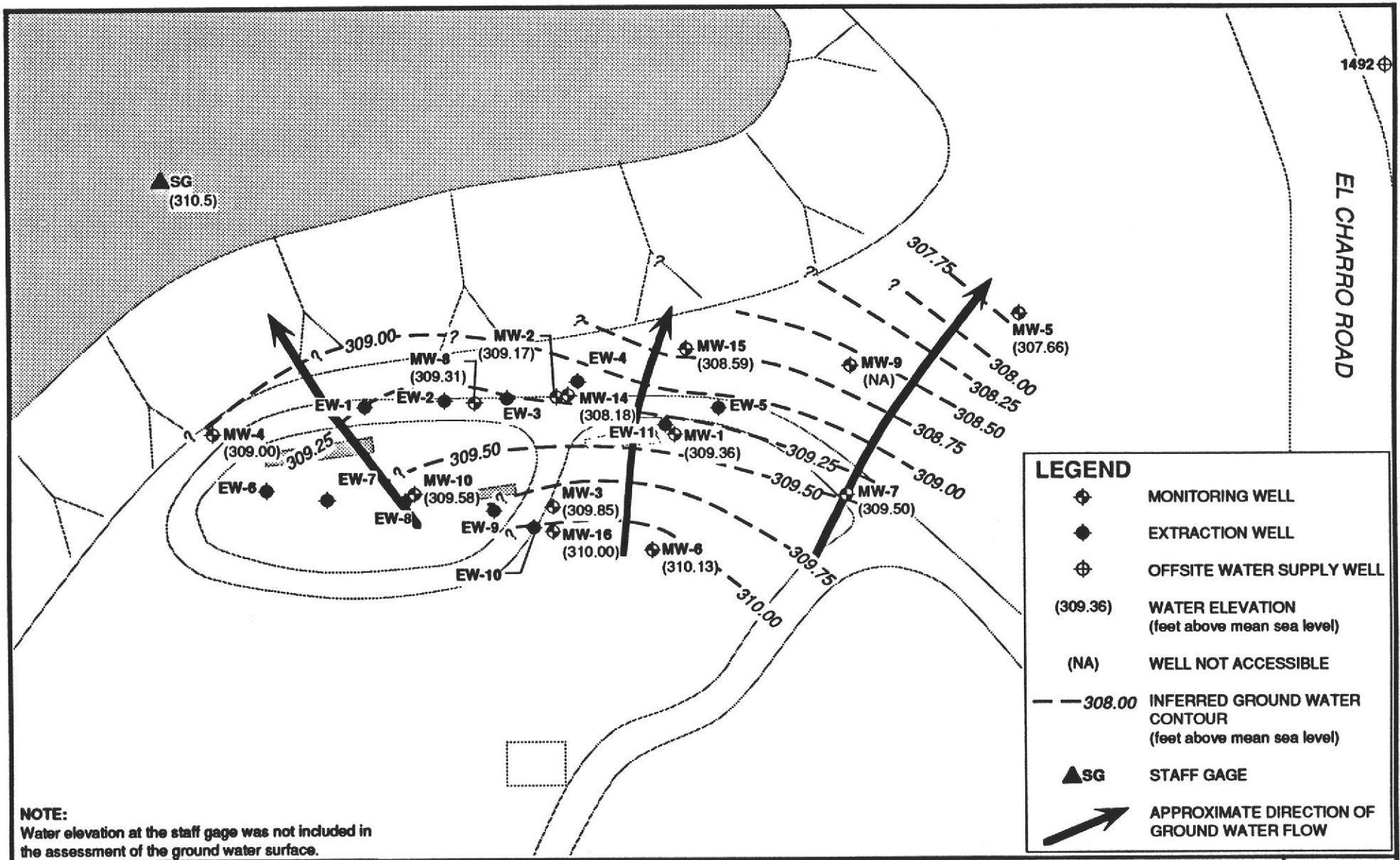
DRAFTED BY: L. Sue	DATE: 11-1-93	
CHECKED BY: J. Romie	DATE: 11-2-93	

MONITORING AND EXTRACTION WELL LOCATION MAP

INDUSTRIAL ASPHALT
PLEASANTON, CALIFORNIA

PROJECT NO. 10-1682-03

PLATE
2



NOTE:
Water elevation at the staff gage was not included in the assessment of the ground water surface.

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: 9-15-93
CHECKED BY: J. Romie	DATE: 11-2-93

GROUND WATER SURFACE CONTOUR MAP — AUGUST 19, 1993

INDUSTRIAL ASPHALT
PLEASANTON, CALIFORNIA

PROJECT NUMBER 10-1682-03

PLATE
3

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172

AIHA Accreditation: 94523-001

File Copy

KLEINFELDER, INC.
7133 KOLL CENTER PKWY.
SUITE 100
PLEASANTON, CA 94566
ATTN: GUY JETT

CLIENT PROJ. ID: 10-1682-03
C.O.C. NO: 2493

REPORT DATE: 09/07/93

DATE SAMPLED: 08/20/93

DATE RECEIVED: 08/20/93

AEN JOB NO: 9308238

PROJECT SUMMARY:

On August 20, 1993, this laboratory received seven (7) water samples.

Client requested samples be analyzed for Total Petroleum Hydrocarbons as Diesel and Oil by EPA Method 3510 GCFID, Oil & Grease by SM5520C, Hydrocarbons by SM5520F 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
General Manager

Results FAXed 08/31/93

KLEINFELDER, INC.

DATE SAMPLED: 08/20/93
DATE RECEIVED: 08/20/93
CLIENT PROJ. ID: 10-1682-03

REPORT DATE: 09/07/93
AEN JOB NO: 9308238

Client Sample Id.	AEN Lab Id.	Extractable Hydrocarbons as Diesel (mg/L)	Extractable Hydrocarbons as Oil (mg/L)	Oil & Grease (mg/L)	Hydrocarbons (mg/L)
60419	01C	ND	ND	---	---
60419 MW-6	01E	---	---	ND	ND
60422	02C	ND	ND	---	---
60422 MW-4	02E	---	---	ND	ND
60431	03C	0.2	0.3	---	---
60431 MW-10	03E	---	---	ND	ND
55437	04C	0.2	ND	---	---
55437 MW-8	04E	---	---	ND	ND
60432	05C	0.2	ND	---	---
60432 MW-8(d)	05E	---	---	ND	ND
56762	06C	0.9	0.2	---	---
56762 MW-2	06E	---	---	0.7	ND
60504	07C	0.4	ND	---	---
60504 MW-3	07E	---	---	ND	ND
Reporting Limit		0.05	0.2	0.5	0.5
Method:		EPA 3510 GCFID	EPA 3510 GCFID	SM5520C	SM5520F
Instrument:		C	C	IR	IR
Date Extracted:		08/26/93	08/26/93	08/27/93	08/27/93
Date Analyzed:		08/30/93	08/30/93	08/27/93	08/27/93

ND = Not Detected

KLEINFELDER, INC.

SAMPLE ID: 60419
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 08/20/93
DATE RECEIVED: 08/20/93
REPORT DATE: 09/07/93

AEN LAB NO: 9308238-01A
AEN JOB NO: 9308238
DATE EXTRACTED: 08/24/93
DATE ANALYZED: 08/30/93
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	CAS #	CONCENTRATION (ug/L)	REPORTING 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: 60422
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 08/20/93
DATE RECEIVED: 08/20/93
REPORT DATE: 09/07/93

AEN LAB NO: 9308238-02A
AEN JOB NO: 9308238
DATE EXTRACTED: 08/24/93
DATE ANALYZED: 08/30/93
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	CAS #	CONCENTRATION (ug/L)	REPORTING 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: 60431
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 08/20/93
DATE RECEIVED: 08/20/93
REPORT DATE: 09/07/93

AEN LAB NO: 9308238-03A
AEN JOB NO: 9308238
DATE EXTRACTED: 08/24/93
DATE ANALYZED: 08/30/93
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	CAS #	CONCENTRATION (ug/L)	REPORTING 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: 55437
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 08/20/93
DATE RECEIVED: 08/20/93
REPORT DATE: 09/07/93

AEN LAB NO: 9308238-04A
AEN JOB NO: 9308238
DATE EXTRACTED: 08/24/93
DATE ANALYZED: 08/30/93
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	CAS #	CONCENTRATION (ug/L)	REPORTING 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: 60432
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 08/20/93
DATE RECEIVED: 08/20/93
REPORT DATE: 09/07/93

AEN LAB NO: 9308238-05A
AEN JOB NO: 9308238
DATE EXTRACTED: 08/24/93
DATE ANALYZED: 08/31/93
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	CAS #	CONCENTRATION (ug/L)	REPORTING 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: 56762
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 08/20/93
DATE RECEIVED: 08/20/93
REPORT DATE: 09/07/93

AEN LAB NO: 9308238-06A
AEN JOB NO: 9308238
DATE EXTRACTED: 08/24/93
DATE ANALYZED: 08/31/93
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	CAS #	CONCENTRATION (ug/L)	REPORTING 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: 60504
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 08/20/93
DATE RECEIVED: 08/20/93
REPORT DATE: 09/07/93

AEN LAB NO: 9308238-07A
AEN JOB NO: 9308238
DATE EXTRACTED: 08/24/93
DATE ANALYZED: 08/31/93
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	CAS #	CONCENTRATION (ug/L)	REPORTING 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: 08/25/93
DATE ANALYZED: 08/31/93
CLIENT PROJ. ID: 10-1682-03

AEN JOB NO: 9308238
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	6.49	ND	6.21	6.21	95.7	0.0

CURRENT QC LIMITS (Revised 06/22/92)

Analyte	Percent Recovery	RPD
Oil	(88-110)	5.8

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

QUALITY CONTROL DATA

DATE EXTRACTED: 08/26/93
DATE ANALYZED: 08/30/93
CLIENT PROJ. ID: 10-1682-03

AEN JOB NO: 9308238
SAMPLE SPIKED: D.I. WATER
INSTRUMENT: C

METHOD SPIKE RECOVERY SUMMARY
TPH EXTRACTABLE WATERS
METHOD: EPA 3510 GCFID

ANALYTE	Spike Conc. (mg/L)	Sample Result (mg/L)	MS Result (mg/L)	MSD Result (mg/L)	Average Percent Recovery	RPD
Diesel	2.02	ND	1.85	1.87	92.1	1.1

CURRENT QC LIMITS (Revised 06/22/92)

Analyte	Percent Recovery	RPD
Diesel	(45.0-103.3)	25.0

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

QUALITY CONTROL DATA

DATE EXTRACTED: 08/24/93 AEN JOB NO: 9308238

CLIENT PROJ. ID: 10-1682-03 INSTRUMENT: B

SURROGATE STANDARD RECOVERY SUMMARY
METHOD: EPA 8080
(WATER MATRIX)

SAMPLE IDENTIFICATION			SURROGATE RECOVERY (PERCENT)
Date Analyzed	Client Id.	Lab Id.	2,4,5,6-Tetrachloro-meta-xylene
08/30/93	60419	01A	65.2
08/30/93	60422	02A	94.0
08/30/93	60431	03A	73.2
08/30/93	55437	04A	83.9
08/31/93	60432	05A	83.8
08/31/93	56762	06A	84.8
08/31/93	60504	07A	81.4

CURRENT QC LIMITS (Revised 06/22/92)

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

QUALITY CONTROL DATA

DATE EXTRACTED: 08/24/93
DATE ANALYZED: 08/30/93
CLIENT PROJ. ID: 10-1682-03

AEN JOB NO: 9308238
SAMPLE SPIKED: D.I. WATER
INSTRUMENT: B

METHOD SPIKE RECOVERY SUMMARY
METHOD: EPA 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	4.00	ND	4.75	4.86	120.1	2.3

CURRENT QC LIMITS (Revised 06/22/92)

Analyte	Percent Recovery	RPD
A1260	(53-133)	16

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

KLEINFELDER

R-1, S-A, E, D, H   9308238

PROJ. NO.: 10-168203

PROJECT NAME:

L.P. NO. (P.O. NO.):

SAMPLERS: (Signature/Number) Doug Heard 1282

DATE MM/DD/YY	SAMPLE I.D. TIME HH:MM:SS	SAMPLE I.D.		NO. OF CONTAINERS	PCB's ONLY	TPH as Diesel	Total Hydrocarbons	Oil & Grease	REMARKS
8/20/93		60419	01A-F	6	X	X	X	X	
↓		60422	02A-F	6	X	X	X	X	
↓		60431	03A-F	6	X	X	X	X	
↓		55437	04A-F	6	X	X	X	X	
↓		60432	05A-F	6	X	X	X	X	
↓		56762	06A-F	6	X	X	X	X	
↓		60504	07A-F	6	X	X	X	X	

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Doug Heard	8/20/93 1805	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature) Gina Gillespie 8-20-93 1805

Remarks: Standard T.A.T. Att'n Guy Jett

Send Results To: KLEINFELDER ~~2121 N. CALIFORNIA~~ BLVD. ~~SUITE 570~~ ~~WALNUT CREEK~~, CA 94596 ~~(510) 938-5610~~ Pleasanton Office

M-60   White · Sampler   Canary · Return Copy To Shipper   Pink · Lab Copy   No. 2493

CHAIN OF CUSTODY

FILE COPY

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172

AIHA Accreditation 94523-001

KLEINFELDER, INC.
7133 KOLL CENTER PKWY.
SUITE 100
PLEASANTON, CA 94566
ATTN: GUY JETT

CLIENT PROJ. ID: 10-1682-03
C.O.C. NO: 2322

REPORT DATE: 09/16/93

DATE SAMPLED: 08/19/93

DATE RECEIVED: 08/20/93

AEN JOB NO: 9308235

PROJECT SUMMARY:

On August 20, 1993, this laboratory received six (6) water samples.

Client requested samples be analyzed for Total Petroleum Hydrocarbons as Diesel and Oil by EPA Method 3510 GCFID, Oil & Grease by SM5520C, Hydrocarbons by SM5520F 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
General Manager

Results FAXed 08/31/93

KLEINFELDER, INC.

DATE SAMPLED: 08/19/93
DATE RECEIVED: 08/20/93
CLIENT PROJ. ID: 10-1682-03

REPORT DATE: 09/16/93
AEN JOB NO: 9308235

Client Sample Id.	AEN Lab Id.	Extractable Hydrocarbons as Diesel (mg/L)	Extractable Hydrocarbons as Oil (mg/L)	Oil & Grease (mg/L)	Hydrocarbons (mg/L)
60337 MW-7	01C	0.6	2	---	---
60337	01E	---	---	ND	ND
60338 MW-7(d)	02C	0.5	2	---	---
60338	02E	---	---	ND	ND
60339 MW-5	03C	0.4	ND	---	---
60339	03E	---	---	ND	ND
56792 MW-15	04C	0.2	0.2	---	---
56792	04E	---	---	ND	ND
60472 MW-16	05C	ND	ND	---	---
60472	05E	---	---	ND	ND
56793 MW-14	06C	ND	ND	---	---
56793	06E	---	---	ND	ND
Reporting Limit		0.05	0.2	0.5	0.5
Method:		EPA 3510 GCFID	EPA 3510 GCFID	SM5520C	SM5520F
Instrument:		C	C	IR	IR
Date Extracted:		08/24/93	08/24/93	08/25/93	08/25/93
Date Analyzed:		08/30/93	08/30/93	08/27/93	08/27/93

ND = Not Detected

KLEINFELDER, INC.

SAMPLE ID: 60337
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 08/19/93
DATE RECEIVED: 08/20/93
REPORT DATE: 09/16/93

AEN LAB NO: 9308235-01A
AEN JOB NO: 9308235
DATE EXTRACTED: 08/23/93
DATE ANALYZED: 08/25/93
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	CAS #	CONCENTRATION (ug/L)	REPORTING 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: 60338
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 08/19/93
DATE RECEIVED: 08/20/93
REPORT DATE: 09/16/93

AEN LAB NO: 9308235-02A
AEN JOB NO: 9308235
DATE EXTRACTED: 08/23/93
DATE ANALYZED: 08/25/93
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	CAS #	CONCENTRATION (ug/L)	REPORTING 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: 60339
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 08/19/93
DATE RECEIVED: 08/20/93
REPORT DATE: 09/16/93

AEN LAB NO: 9308235-03A
AEN JOB NO: 9308235
DATE EXTRACTED: 08/23/93
DATE ANALYZED: 08/25/93
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	CAS #	CONCENTRATION (ug/L)	REPORTING 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: 60472
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 08/19/93
DATE RECEIVED: 08/20/93
REPORT DATE: 09/16/93

AEN LAB NO: 9308235-05A
AEN JOB NO: 9308235
DATE EXTRACTED: 08/23/93
DATE ANALYZED: 08/25/93
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	CAS #	CONCENTRATION (ug/L)	REPORTING 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: 56793
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 08/19/93
DATE RECEIVED: 08/20/93
REPORT DATE: 09/16/93

AEN LAB NO: 9308235-06A
AEN JOB NO: 9308235
DATE EXTRACTED: 08/23/93
DATE ANALYZED: 08/25/93
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	CAS #	CONCENTRATION (ug/L)	REPORTING 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: 08/25/93
DATE ANALYZED: 08/31/93
CLIENT PROJ. ID: 10-1682-03

AEN JOB NO: 9308235
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	6.49	ND	6.21	6.21	95.7	0.0

CURRENT QC LIMITS (Revised 06/22/92)

Analyte	Percent Recovery	RPD
Oil	(88-110)	5.8

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

QUALITY CONTROL DATA

DATE EXTRACTED: 08/23/93
DATE ANALYZED: 08/24/93
CLIENT PROJ. ID: 10-1682-03

AEN JOB NO: 9308235
SAMPLE SPIKED: D.I. WATER
INSTRUMENT: C

METHOD SPIKE RECOVERY SUMMARY
TPH EXTRACTABLE WATERS
METHOD: EPA 3510 GCFID

ANALYTE	Spike Conc. (mg/L)	Sample Result (mg/L)	MS Result (mg/L)	MSD Result (mg/L)	Average Percent Recovery	RPD
Diesel	2.02	ND	1.54	1.58	77.2	2.6

CURRENT QC LIMITS (Revised 06/22/92)

Analyte	Percent Recovery	RPD
Diesel	(45.0-103.3)	25.0

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

QUALITY CONTROL DATA

DATE EXTRACTED: 08/23/93 AEN JOB NO: 9308235

CLIENT PROJ. ID: 10-1682-03 INSTRUMENT: B

SURROGATE STANDARD RECOVERY SUMMARY
METHOD: EPA 8080
(WATER MATRIX)

SAMPLE IDENTIFICATION			SURROGATE RECOVERY (PERCENT)
Date Analyzed	Client Id.	Lab Id.	2,4,5,6-Tetrachloro-meta-xylene
08/25/93	60337	01A	40
08/25/93	60338	02A	38
08/25/93	60339	03A	80
08/25/93	56792	04A	57
08/25/93	60472	05A	88
08/25/93	56793	06A	88

CURRENT QC LIMITS (Revised 06/22/92)

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

QUALITY CONTROL DATA

DATE EXTRACTED: 08/23/93
DATE ANALYZED: 08/25/93
CLIENT PROJ. ID: 10-1682-03

AEN JOB NO: 9308235
SAMPLE SPIKED: D.I. WATER
INSTRUMENT: B

METHOD SPIKE RECOVERY SUMMARY
METHOD: EPA 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	4.00	ND	4.28	4.44	109.0	3.7

CURRENT QC LIMITS (Revised 06/22/92)

Analyte	Percent Recovery	RPD
A1260	(53-133)	16

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

KLEINFELDER

R-1, S-E, F, C, D

9308235

PROJ. NO.	PROJECT NAME
10-1682-03	~~Scott~~ Industrial Asphalt
L.P. NO. (P.O. NO.)	SAMPLERS: (Signature/Number) Dave Head 1782

DATE MM/DD/YY	SAMPLE I.D. TIME HH:MM:SS	SAMPLE I.D.	NO. OF CONTAINERS	ANALYSIS: BTEX only	TPH as diesel	Total Hydrocarbons Oil & Grease 5520	REMARKS
8-19-93		60337 D1A-F	6	X	X	X X	
		60338 D2A-E	~~6~~ 5	X	X	X X	
		60339 D3A-F	6	X	X	X X	
		56792 D4A-F	6	X	X	X X	
		60472 D5A-F	6	X	X	X X	
		56793 D6A-F	6	X	X	X X	

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Dave Head	8/20/93 1245	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	8/20/93 13:45	
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)

Remarks

Standard T.A.T

Attn Guy Jett

Send Results To

KLEINFELDER
~~2121 N. CALIFORNIA BLVD.~~
~~SUITE 570~~
~~WALNUT CREEK, CA 94596~~
~~(510) 938-5610~~
PLEASANTON OFFICE
(510) 484-1700

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

CHAIN OF CUSTODY

№ 2322

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172 AIHA Accreditation: 94523-001

File Copy

KLEINFELDER, INC.
7133 KOLL CENTER PKWY.
SUITE 100
PLEASANTON, CA 94566
ATTN: GUY JETT

REPORT DATE: 09/07/93

DATE SAMPLED: 08/16/93

DATE RECEIVED: 08/16/93

CLIENT PROJ. ID: 10-1682-03
C.O.C. NO: 178

AEN JOB NO: 9308164

PROJECT SUMMARY:

On August 16, 1993, this laboratory received two (2) water samples.

Client requested samples be analyzed for Total Petroleum Hydrocarbons as Diesel and Oil by EPA Method 3510 GCFID, Oil & Grease by SM5520C, Hydrocarbons by SM5520F 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
General Manager

Results FAXed 08/25-09/03/93

KLEINFELDER, INC.

DATE SAMPLED: 08/16/93
DATE RECEIVED: 08/16/93
CLIENT PROJ. ID: 10-1682-03

REPORT DATE: 09/07/93
AEN JOB NO: 9308164

Client Sample Id.	AEN Lab Id.	Extractable Hydrocarbons as Diesel (mg/L)	Extractable Hydrocarbons as Oil (mg/L)	Oil & Grease (mg/L)	Hydrocarbons (mg/L)
64016 MW-1	01A	5.1	11	---	---
64016 MW-1	01C	---	---	19	10
64020 TAP	02A	ND	ND	---	---
64020 TAP	02C	---	---	ND	ND
Reporting Limit		0.05	0.2	0.5	0.5
Method:		EPA 3510 GCFID	EPA 3510 GCFID	SM5520C	SM5520F
Instrument:		C	C	IR	IR
Date Extracted:		08/19/93	08/19/93	08/19/93	08/19/93
Date Analyzed:		08/24/93	08/24/93	08/19/93	08/19/93

ND = Not Detected

KLEINFELDER, INC.

SAMPLE ID: 64016
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 08/16/93
DATE RECEIVED: 08/16/93
REPORT DATE: 09/07/93

AEN LAB NO: 9308164-01E
AEN JOB NO: 9308164
DATE EXTRACTED: 08/17/93
DATE ANALYZED: 08/17/93
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	CAS #	CONCENTRATION (ug/L)	REPORTING 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**	**1**	**0.5**

ND = Not Detected

KLEINFELDER, INC.

SAMPLE ID: 64020
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 08/16/93
DATE RECEIVED: 08/16/93
REPORT DATE: 09/07/93

AEN LAB NO: 9308164-02E
AEN JOB NO: 9308164
DATE EXTRACTED: 08/17/93
DATE ANALYZED: 08/17/93
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

COMPOUND	CAS #	CONCENTRATION (ug/L)	REPORTING 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: 08/12/93
DATE ANALYZED: 08/12/93
CLIENT PROJ. ID: 10-1682-03

AEN JOB NO: 9308164
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	6.93	ND	6.21	6.06	88.5	2.4

CURRENT QC LIMITS (Revised 06/22/92)

Analyte	Percent Recovery	RPD
Oil	(88-110)	5.8

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

QUALITY CONTROL DATA

DATE EXTRACTED: 08/03/93
DATE ANALYZED: 08/03/93
CLIENT PROJ. ID: 10-1682-03

AEN JOB NO: 9308164
SAMPLE SPIKED: D.I. WATER
INSTRUMENT: C

METHOD SPIKE RECOVERY SUMMARY
TPH EXTRACTABLE WATERS
METHOD: EPA 3510 GCFID

ANALYTE	Spike Conc. (mg/L)	Sample Result (mg/L)	MS Result (mg/L)	MSD Result (mg/L)	Average Percent Recovery	RPD
Diesel	2.02	ND	1.78	1.81	88.9	1.7

CURRENT QC LIMITS (Revised 06/22/92)

Analyte	Percent Recovery	RPD
Diesel	(45.0-103.3)	25.0

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

QUALITY CONTROL DATA

DATE EXTRACTED: 08/17/93 AEN JOB NO: 9308164

CLIENT PROJ. ID: 10-1682-03 INSTRUMENT: B

SURROGATE STANDARD RECOVERY SUMMARY
METHOD: EPA 8080
(WATER MATRIX)

SAMPLE IDENTIFICATION			SURROGATE RECOVERY (PERCENT)
Date Analyzed	Client Id.	Lab Id.	2,4,5,6-Tetrachloro-meta-xylene
08/17/93	64016	01E	88
08/17/93	64020	02E	98

CURRENT QC LIMITS (Revised 06/22/92)

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

QUALITY CONTROL DATA

DATE EXTRACTED: 08/06/93
DATE ANALYZED: 08/06/93
CLIENT PROJ. ID: 10-1682-03

AEN JOB NO: 9308164
SAMPLE SPIKED: D.I. WATER
INSTRUMENT: B

METHOD SPIKE RECOVERY SUMMARY
METHOD: EPA 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	4.00	ND	4.59	4.42	112.6	3.8

CURRENT QC LIMITS (Revised 06/22/92)

Analyte	Percent Recovery	RPD
A1260	(53-133)	16

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

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9308164

PROJ NO	PROJECT NAME
10-1682-03	
LP NO / P.O. NO.:	SAMPLERS: (Signature/Number) Chris Scott 1834

DATE MM DD YY	SAMPLE ID TIME HH MM SS	SAMPLE ID	NO OF CONTAINERS	ANALYSIS: TPH d / Oil & Grease 5520 C.F. / PCB's	REMARKS
8-16-93	1259	64016	4	X X X	STANDARD TURN around
	1400	64020	4	X X X	

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	8/16/93 1547	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature) 8-16-93 1547
		Gina Gillespie

Remarks: A.E.N. Thank You

Send Results To Gary Jett

KLEINFELDER
7133 KOLL CENTER PARKWAY
SUITE 100
PLEASANTON, CA 94566
(510) 484-1700

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