KLEINFELDER

92 AUG -3 AM 11:23

QUARTERLY REPORT
(MAY-JULY, 1992)
INDUSTRIAL ASPHALT
PLEASANTON, CALIFORNA

July 31, 1992

KLEINFELDER

July 30, 1992
File: 10-1682-03/38

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

SUBJECT: Quarterly Report (May - July 1992) Industrial Asphalt, Pleasanton, California

Dear Mr. Hunt:

Kleinfelder, Inc., is pleased to submit this quarterly report for the second quarter of 1992 (May - July 1992) 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 and the ground water gradient beneath the site. 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 and 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 Oil and Grease (Standard Method 5520 C & F). A request for sample analysis for BTXE (benzene, toluene, xylenes and ethylbenzene) using EPA Method 8020, and halogenated volatile organics using EPA Method 8010 in that same letter was subsequently modified by ACDHS to include only wells MW-3 (8010 and 8020) and MW-2 and MW-8 (8020 only) for a limited period of time. Pursuant to that revision, monitoring well MW-8 was sampled for BTEX using EPA method 8020 for the final time during this second quarter. The other two wells were sampled for the final time during the first quarter of 1992.

Water samples were collected on May 19 through 22, 1992, from onsite wells MW-1, MW-4, MW-5, MW-7, MW-8, MW-10, MW-13, MW-14, MW-15 and MW-16. Monitoring wells MW-2, MW-3, MW-6, and MW-9 were not accessible on the sampling days, and therefore, not sampled. 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 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 7.76 feet since the last measurement on March 3, 1992.

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 northeast, with local flow directions toward the north and northwest beneath the western portion of the site (the vicinity of MW-10). This flow direction is as noted in previous sampling rounds.

Water level elevations beneath the site vary between 289 and 297 feet (MW-5 and MW-16, respectively). Water levels in the area of MW-5 are again the lowest on the site, which conforms with historical observations. The overall gradient is steeper than observed in March 1992. The gradients vary from approximately 0.21 feet per foot towards the northeastern corner of the site to 0.01 feet per foot beneath the western portion of the site.

GROUND WATER CHEMISTRY MONITORING RESULTS

The presence of a sheen in wells is noted on Table 1 along with the water level data. Analytical data are provided on Tables 2 and 3. Complete analytical laboratory reports along with chain of custody records are included in the Appendix.

Sheen was observed in monitoring wells MW-1 and MW-8 during this sampling round. In addition, these two wells also exhibited hydrocarbon-like odors. Monitoring wells MW-2 and MW-3, in which sheens and odors have previously been observed, were not accessible during this sampling round.

Detectable concentrations of PCBs were found only in the ground water samples collected from monitoring well MW-1 (2 ug/L), which is an increase from 0.7 ug/L detected during the March 1992 sampling round. PCBs had not been detected in samples collected from that well since February 1991 (9.6 ug/L).

Detectable concentrations of total petroleum hydrocarbons as diesel (TPH(d)) and total petroleum hydrocarbons as waste oil (TPH(wo)) were found in samples collected from MW-1, MW-7, AND MW-10. TPH(d) was detected in the samples collected from MW-8 and MW-13. TPH(wo) was detected in the sample collected from MW-4. Detected concentrations for TPH(d) ranged from 130 mg/L in MW-1 to 0.2 mg/L in MW-7. Detected concentrations for TPH(wo) ranged from 57 mg/L in MW-1 to 0.2 mg/L in MW-16. Generally, analytical data indicate an increase in the concentrations of TPH as diesel and waste oil in the water samples collected as compared to the November 1991 and March 1992 data. This is consistent with other sampling rounds in which an increase or decrease in ground water surface elevation caused an increase or decrease, respectively, in detected concentrations.

Detectable concentrations of oil and grease and total hydrocarbons were found in the water samples obtained from wells MW-1, MW-4, MW-7 and MW-10. Oil and grease alone were detected in MW-13, and MW-16 (Table 2). Detected concentrations of oil and grease ranged from 340 mg/L in MW-1 to 0.5 mg/L in MW-13. Detected concentrations of total hydrocarbons ranged from 310 mg/L in MW-1 to 0.5 mg/L in MW-7.

KLEINFELDER 2121 N. California Blvd., Suite 570, Walnut Creek, CA 94596 (510) 938-5610

Sample analysis for BTEX and halogenated volatile organic compounds has been discontinued for all monitoring wells at this site, except MW-8 since the March 1992 sampling round with concurrence from the ACDHS. During the May 1992 sampling round only MW-8 remained to be tested for BTEX via EPA Test Method 8020. Benzene was the only aromatic volatile organic compound detected in the sample collected from that well (Table 3). Benzene had not previously been detected during the previous four sampling rounds. Ethylbenzene, detected at a concentration of 0.8 ug/L in the sample collected from this well in March 1992 was not detected during this sampling round.

An offsite water supply well located east of the site (Jamieson Well) was sampled (Plate 2). The well was purged by opening a tap and running the water for about 5 minutes in order to empty the purge tank. Approximately 30 gallons of water were purged prior to collecting a sample. This sample was 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.

SUMMARY

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 remains generally toward the northeast. The ground water chemistry has remained, for the most part, consistent between sampling rounds although concentrations have increased since November 1991 and March 1992. The ground water samples collected from monitoring well MW-1 continues to exhibit higher concentrations of the target compounds with lower concentrations in wells MW-4, MW-7, MW-8, MW-10, MW-13, and MW-16. The ground water samples collected from the offsite water production well (Jamieson well) did not exhibit concentrations of the target chemicals at concentrations above the laboratory reporting limits for the compounds requested.

RECOMMENDED RI ACTIVITIES

Aromatic volatile organic compounds, oil and grease, TPHd and TPHwo were found in the water samples obtained from some of the onsite monitoring wells. Therefore, it is recommended that during the next quarterly round (August 1992), 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

A system of ten ground water extraction wells were installed at the site in late May and early June 1992. Plans and specifications for construction of the proposed remediation system are in preparation.

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.

FOR

Guy A. Jett
Staff Geologist

David K. Behrens

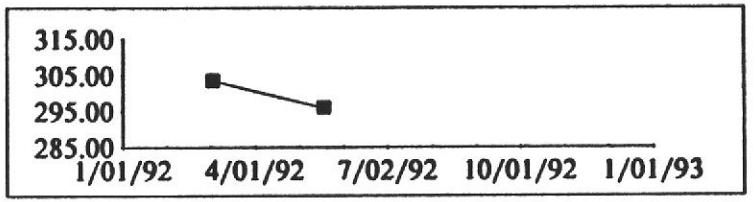
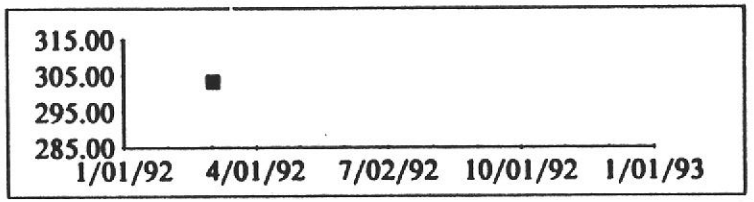
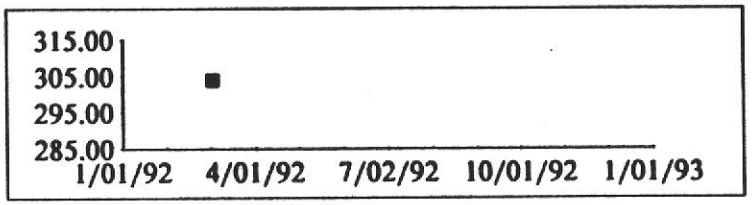
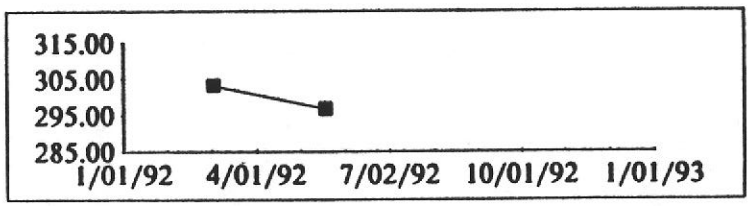
David K. Behrens, P.E.,
Senior Project Manager

GAJ/DKB:pd

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

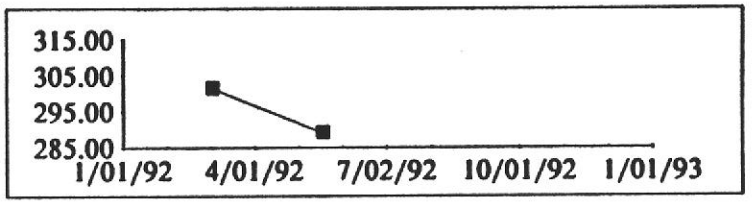
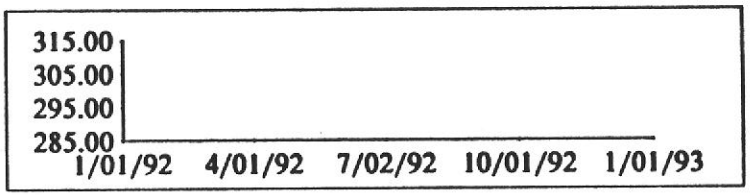
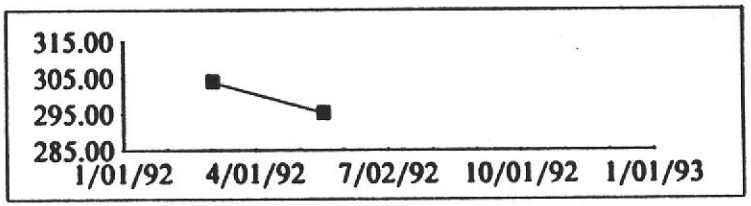
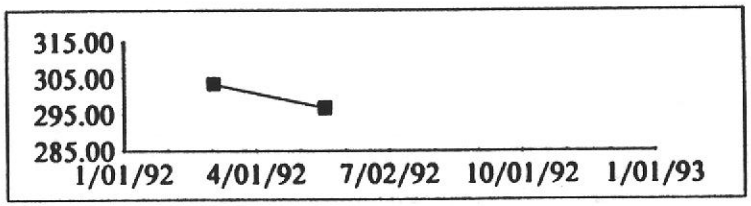
KLEINFELDER

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	3/03/92	88	379.41	SHEEN	76.01	303.40	
	5/19/92			SHEEN	83.54	295.87	
MW-2	3/03/92	90	379.80	SHEEN	76.59	303.21	
	5/19/92			NA	Not Measured		
MW-3	3/03/92	90	378.54	SHEEN	74.72	303.82	
	5/19/92			NA	DRY		
MW-4	3/03/92	95	376.26	NE	73.20	303.06	
	5/19/92			NE	79.59	296.67	

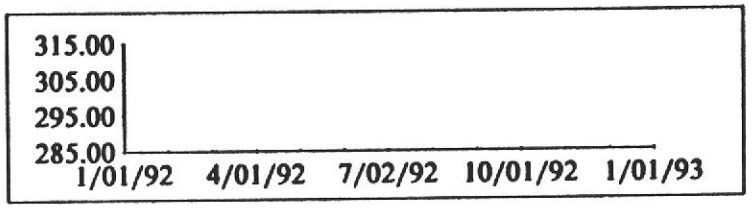
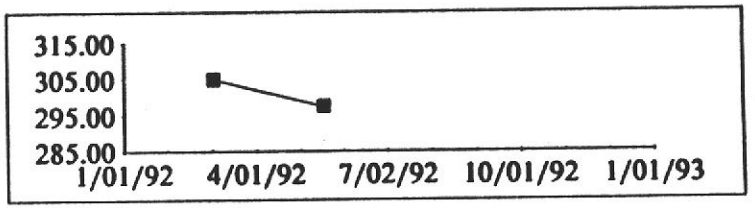
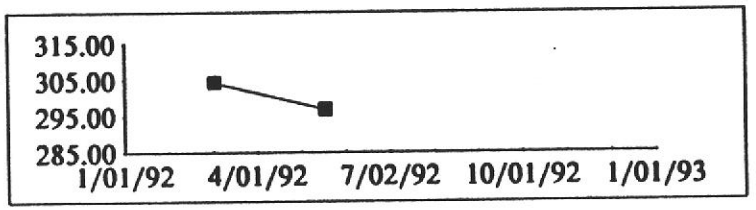
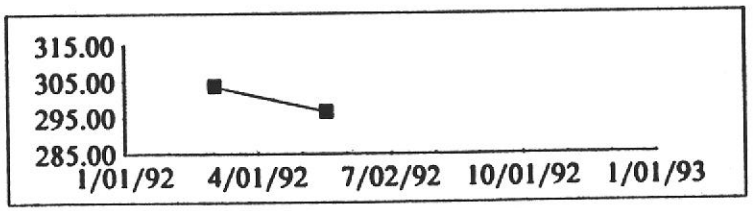
KLEINFELDER

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-5	3/03/92	110	382.55	NE	81.23	301.32	
	5/19/92			NE	93.51	289.04	
MW-6	3/03/92	109	379.15	NA	Not Measured		
	5/19/92			NA	Not Measured		
MW-7	3/03/92	109	378.94	NE	75.29	303.65	
	5/19/92			NE	83.85	295.09	
MW-8	3/03/92	109	378.56	SHEEN	75.20	303.36	
	5/19/92			SHEEN	81.76	296.80	

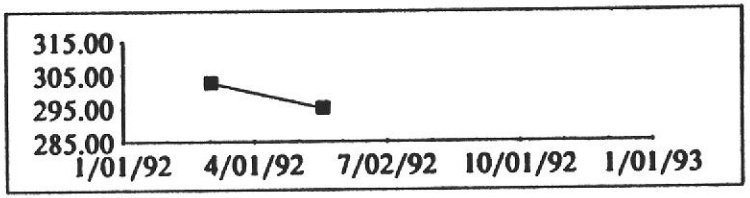
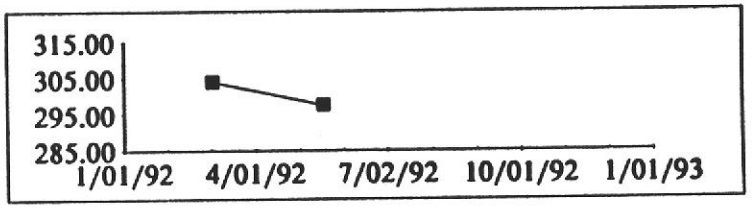
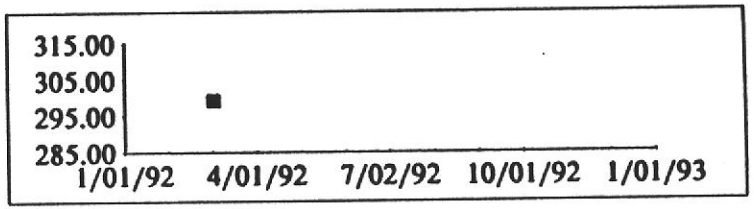
KLEINFELDER

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-9	3/03/92	108	377.40	NA	Not Measured		
	5/19/92			NA	Not Measured		
MW-10	3/03/92	111	378.04	NE	73.10	304.94	
	5/19/92			NE	80.76	297.28	
MW-13 Extraction Well	3/03/92	116	380.21	NE	76.03	304.18	
	5/19/92			NE	83.37	296.84	
MW-14	3/03/92	114.5	380.09	NE	76.63	303.46	
	5/19/92			NE	83.46	296.63	

KLEINFELDER

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	
MW-16	3/03/92	110	379.65	NE	75.61	304.04	
	5/19/92			NE	82.14	297.51	
STAFF GAGE	3/03/92	NA	300.00	NE	-1	299.00	
	5/19/92			NA	Not Measured		

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

KLEINFELDER

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 Hydrocarbons[3] (mg/L)	PCBs[4] (µg/L)
MW-1	July 1991	29	8	60	55	ND
	Nov. 1991	9.5	4.9	22	19	ND
	Mar. 1992	11	4.9	27	20	0.7
	May 1992	130	57	340	310	2
MW-2	July 1991	32	14	73	64	0.8
	Nov. 1991	110	57	110	96	1
	Mar. 1992	4.1	1.5	10	8	ND
	May 1992	NT	NT	NT	NT	NT
MW-3	July 1991	0.7	ND	ND	ND	ND
	Nov. 1991	210	120	360	330	7.4
	Mar. 1992	4.2	2.4	31	27	ND
	May 1992	NT	NT	NT	NT	NT
MW-4	July 1991	ND	ND	ND	ND	ND
	Nov. 1991	ND	ND	2	0.9	ND
	Mar. 1992	ND	ND	3	1	ND
	May 1992	ND	0.8	1	0.7	ND
MW-5	July 1991	ND	0.8	ND	ND	ND
	Nov. 1991	ND	ND	ND	ND	ND
	Mar. 1992	ND	ND	ND	ND	ND
	May 1992	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

Please see notes on last page of Table 2

KLEINFELDER

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 Hydrocarbons[3] (mg/L)	PCBs[4] (µg/L)
MW-6	July 1991	NT	NT	NT	NT	NT
	Nov. 1991	NT	NT	NT	NT	NT
	Mar. 1992	NT	NT	NT	NT	NT
	May 1992	NT	NT	NT	NT	NT
MW-7	July 1991	0.09	0.1	ND	ND	ND
	Nov. 1991	0.07	ND	ND	ND	ND
	Mar. 1992	ND	ND	ND	ND	ND
	May 1992	0.2	0.3	0.8	0.5	ND
MW-8	July 1991	0.3	ND	ND	ND	ND
	Nov. 1991	4.1	4.8	15	11	0.8
	Mar. 1992	0.5	0.1	0.6	ND	ND
	May 1992	0.3	ND	ND	ND	ND
MW-9	July 1991	0.4	ND	ND	ND	ND
	Nov. 1991	0.1	ND	ND	ND	ND
	Mar. 1992	NT	NT	NT	NT	NT
	May 1992	NT	NT	NT	NT	NT
MW-10	July 1991	ND	ND	ND	ND	ND
	Nov. 1991	ND	ND	ND	ND	ND
	Mar. 1992	ND	ND	ND	ND	ND
	May 1992	0.4	0.4	3	0.8	ND
Laboratory Detection Limit[5]		0.05	0.1	0.5	0.5	0.5
Drinking Water Standard[6]		--	--	--	--	0.5

Please see notes on last page of Table 2

KLEINFELDER

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 Hydrocarbons[3] (mg/L)	PCBs[4] (µg/L)
MW-13[7,8]	July 1991	0.8	0.3	0.9	0.6	ND
	Nov. 1991	0.6(0.6)	ND(ND)	(0.9(0.9)	0.8(0.9)	ND(ND)
	Mar. 1992	0.58(0.61)	ND(0.1)	ND(ND)	ND(ND)	ND(ND)
	May 1992	0.6	ND	0.5	ND	ND
MW-14	July 1991	ND	0.3	0.6	ND	ND
	Nov. 1991	ND	ND	ND	ND	ND
	Mar. 1992	ND	ND	ND	ND	ND
	May 1992	ND(ND)	ND(ND)	ND(ND)	ND(ND)	ND(ND)
MW-15	July 1991	1.0	1.5	0.7	ND	ND
	Nov. 1991	0.07	ND	2	ND	ND
	Mar. 1992	0.3	ND	0.5	ND	ND
	May 1992	ND(ND)	ND(ND)	ND(ND)	ND(ND)	ND(ND)
MW-16	July 1991	ND	0.5	ND	ND	ND
	Nov. 1991	0.08	ND	ND	ND	ND
	Mar. 1992	1.4(1.5)	ND(ND)	1(2)	ND(ND)	ND(ND)
	May 1992	0.4	0.2	0.9	ND	ND
14A2[9]	July 1991	ND	ND	ND	ND	ND
	Nov. 1991	ND	ND	ND	ND	ND
	Mar. 1992	ND	ND	ND	ND	ND
	May 1992	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

Please see notes on last page of Table 2

TABLE 2
(Continued)
MONITORING PARAMETERS
INDUSTRIAL ASPHALT

NOTES:

(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.

TPH Total Petroleum Hydrocarbons.
ND Not Detected at or above laboratory reporting limits
NT Not Tested

KLEINFELDER

TABLE 3
VOLATILE ORGANIC COMPOUNDS[1]
INDUSTRIAL ASPHALT

Well Number	Sample Date	Benzene (µg/L)	Ethyl-benzene (µg/L)	Toluene (µg/L)	Total Xylenes (µg/L)	1,1-DCA[2] (µg/L)	1,2-DCE[3] (µg/L)	TCFM[4] (µg/L)	Vinyl Chloride (µg/L)	Other 8010 Compounds (µg/L)
MW-1	July 1991	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Nov. 1991	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Mar. 1992	NT	NT	NT	NT	NT	NT	NT	NT	NT
	May 1992	NT	NT	NT	NT	NT	NT	NT	NT	NT
MW-2	July 1991	0.8	ND	ND	ND	ND	ND	ND	ND	ND
	Nov. 1991	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Mar. 1992	1	4	ND	2	NT	NT	NT	NT	NT
	May 1992	NT	NT	NT	NT	NT	NT	NT	NT	NT
MW-3	July 1991	ND	ND	ND	ND	2	ND	ND	8	ND
	Nov. 1991	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Mar. 1992	ND	ND	ND	ND	ND	ND	ND	ND	ND
	May 1992	NT	NT	NT	NT	NT	NT	NT	NT	NT
MW-4	July 1991	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Nov. 1991	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Mar. 1992	NT	NT	NT	NT	NT	NT	NT	NT	NT
	May 1992	NT	NT	NT	NT	NT	NT	NT	NT	NT
MW-5	July 1991	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Nov. 1991	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Mar. 1992	NT	NT	NT	NT	NT	NT	NT	NT	NT
	May 1992	NT	NT	NT	NT	NT	NT	NT	NT	NT
Laboratory Detection Limit		0.5	0.5	2	0.5	0.5	0.5	0.5	0.5	
Drinking Water Standard[6]		1	680	1,000(40)	1,750(20)	5	6	150	0.5	--

Please see notes on last page of Table

KLEINFELDER

TABLE 3
(Continued)
VOLATILE ORGANIC COMPOUNDS[1]
INDUSTRIAL ASPHALT

Well Number	Sample Date	Benzene (µg/L)	Ethyl-benzene (µg/L)	Toluene (µg/L)	Total Xylenes (µg/L)	1,1-DCA[2] (µg/L)	1,2-DCE[3] (µg/L)	TCFM[4] (µg/L)	Vinyl Chloride (µg/L)	Other 8010 Compounds (µg/L)
MW-6	July 1991	NT	NT	NT	NT	NT	NT	NT	NT	NT
	Nov. 1991	NT	NT	NT	NT	NT	NT	NT	NT	NT
	Mar. 1992	NT	NT	NT	NT	NT	NT	NT	NT	NT
	May 1992	NT	NT	NT	NT	NT	NT	NT	NT	NT
MW-7	July 1991	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Nov. 1991	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Mar. 1992	NT	NT	NT	NT	NT	NT	NT	NT	NT
	May 1992	NT	NT	NT	NT	NT	NT	NT	NT	NT
MW-8	July 1991	ND	1	ND	ND	ND	ND	ND	ND	ND
	Nov. 1991	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Mar. 1992	ND	0.8	ND	ND	NT	NT	NT	NT	NT
	May 1992	0.3	ND	ND	ND	NT	NT	NT	NT	NT
MW-9	July 1991	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Nov. 1991	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Mar. 1992	NT	NT	NT	NT	NT	NT	NT	NT	NT
	May 1992	NT	NT	NT	NT	NT	NT	NT	NT	NT
MW-10	July 1991	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Nov. 1991	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Mar. 1992	NT	NT	NT	NT	NT	NT	NT	NT	NT
	May 1992	NT	NT	NT	NT	NT	NT	NT	NT	NT
Laboratory Detection Limit		0.5	0.5	2	0.5	0.5	0.5	0.5	0.5	
Drinking Water Standard[6]		1	680	1,000(40)	1,750(20)	5	6	150	0.5	--

Please see notes on last page of Table

KLEINFELDER

TABLE 3
(Continued)
VOLATILE ORGANIC COMPOUNDS[1]
INDUSTRIAL ASPHALT

Well Number	Sample Date	Benzene (µg/L)	Ethyl-benzene (µg/L)	Toluene (µg/L)	Total Xylenes (µg/L)	1,1-DCA[2] (µg/L)	1,2-DCE[3] (µg/L)	TCFM[4] (µg/L)	Vinyl Chloride (µg/L)	Other 8010 Compounds (µg/L)
MW-13	July 1991	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Nov. 1991	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Mar. 1992	NT	NT	NT	NT	NT	NT	NT	NT	NT
	May 1992	NT	NT	NT	NT	NT	NT	NT	NT	NT
MW-14	July 1991	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Nov. 1991	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Mar. 1992	NT	NT	NT	NT	NT	NT	NT	NT	NT
	May 1992	NT	NT	NT	NT	NT	NT	NT	NT	NT
MW-15	July 1991	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Nov. 1991	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Mar. 1992	NT	NT	NT	NT	NT	NT	NT	NT	NT
	May 1992	NT	NT	NT	NT	NT	NT	NT	NT	NT
MW-16	July 1991	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Nov. 1991	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Mar. 1992	NT	NT	NT	NT	NT	NT	NT	NT	NT
	May 1992	NT	NT	NT	NT	NT	NT	NT	NT	NT
14A2[5]	July 1991	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Nov. 1991	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Mar. 1992	NT	NT	NT	NT	NT	NT	NT	NT	NT
	May 1992	NT	NT	NT	NT	NT	NT	NT	NT	NT
Laboratory Detection Limit		0.5	0.5	2	0.5	0.5	0.5	0.5	0.5	
Drinking Water Standard[6]		1	680	1,000(40)	1,750(20)	5	6	150	0.5	--

Please see notes on last page of Table

TABLE 3
NOTES
VOLATILE ORGANIC COMPOUNDS
INDUSTRIAL ASPHALT

NOTES:

(1) Sample analysis for benzene, ethylbenzene, toluene, and total xylenes via EPA Test Method 8020 (volatile aromatic compounds). Sample analysis for other compounds via EPA Test Method 8010 (halogenated volatile organic compounds). Compounds not listed were not detected at concentrations above the laboratory detection limit.

(2) 1,1-Dichloroethane

(3) 1,2-Dichloroethene, total

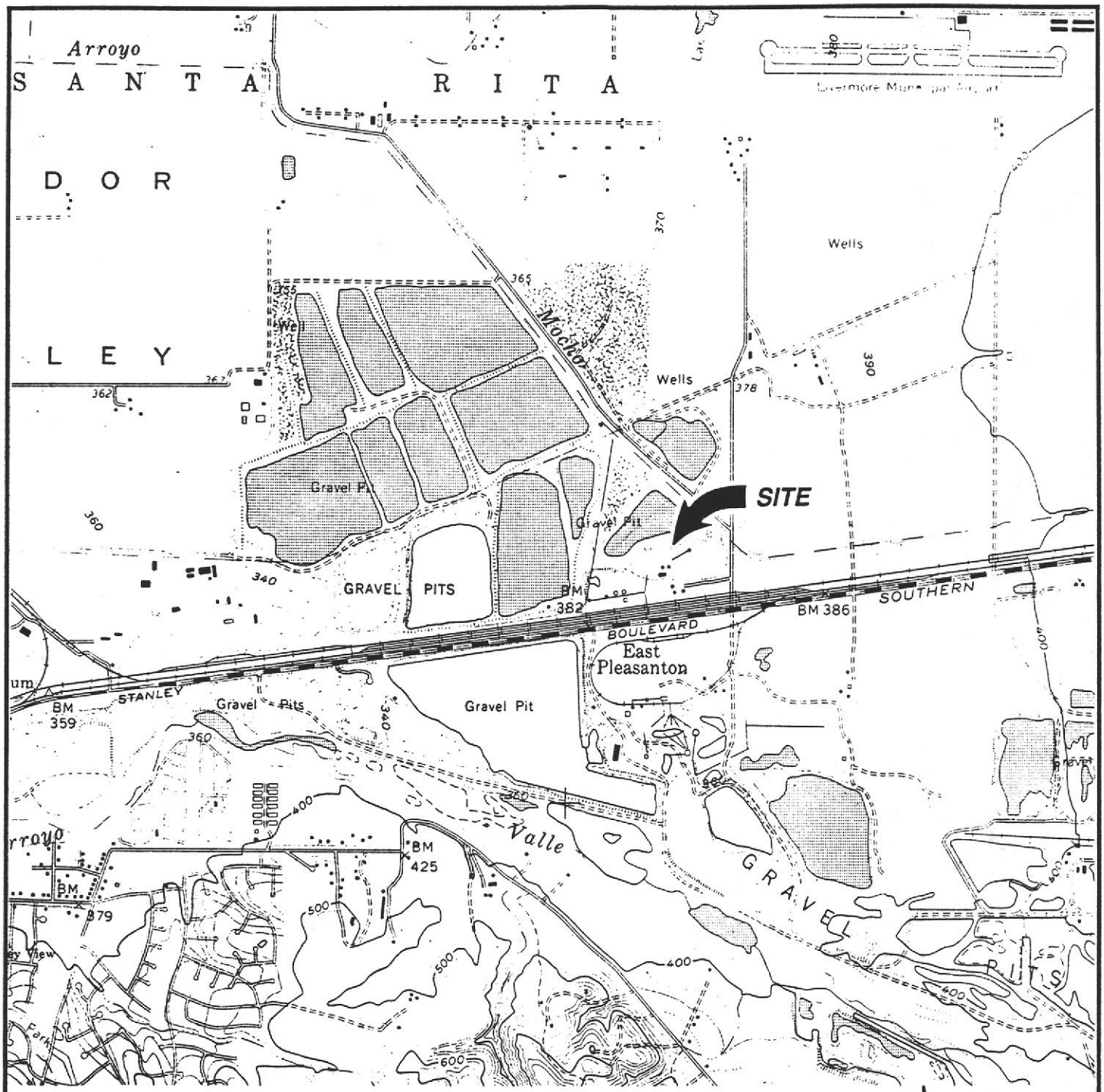
(4) Trichlorofluoromethane

(5) Jamieson water supply well sampled via a tap.

(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.

ND Not Detected at or above laboratory detection limits (Only those compounds which were detected in one or more samples are tabulated.

NT Not Tested



BASE MAP:
U.S.Geologic Survey, 7.5-Minute Topographic Series, Livermore, California, Quadrangle.

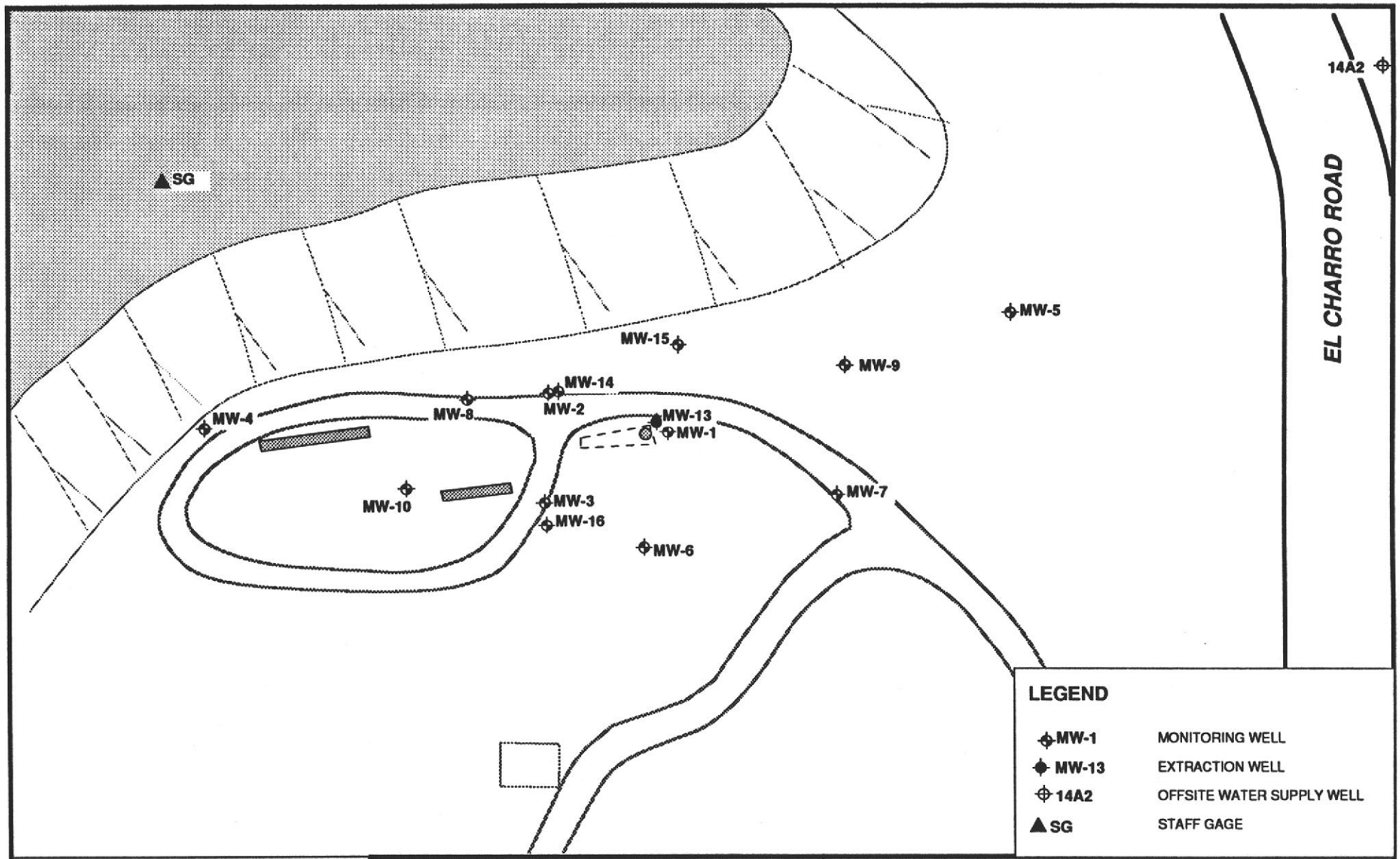
KLEINFELDER

PROJECT NUMBER 10-1682-03

SITE LOCATION MAP

INDUSTRIAL ASPHALT
PLEASANTON, CALIFORNIA

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: 6-26-92

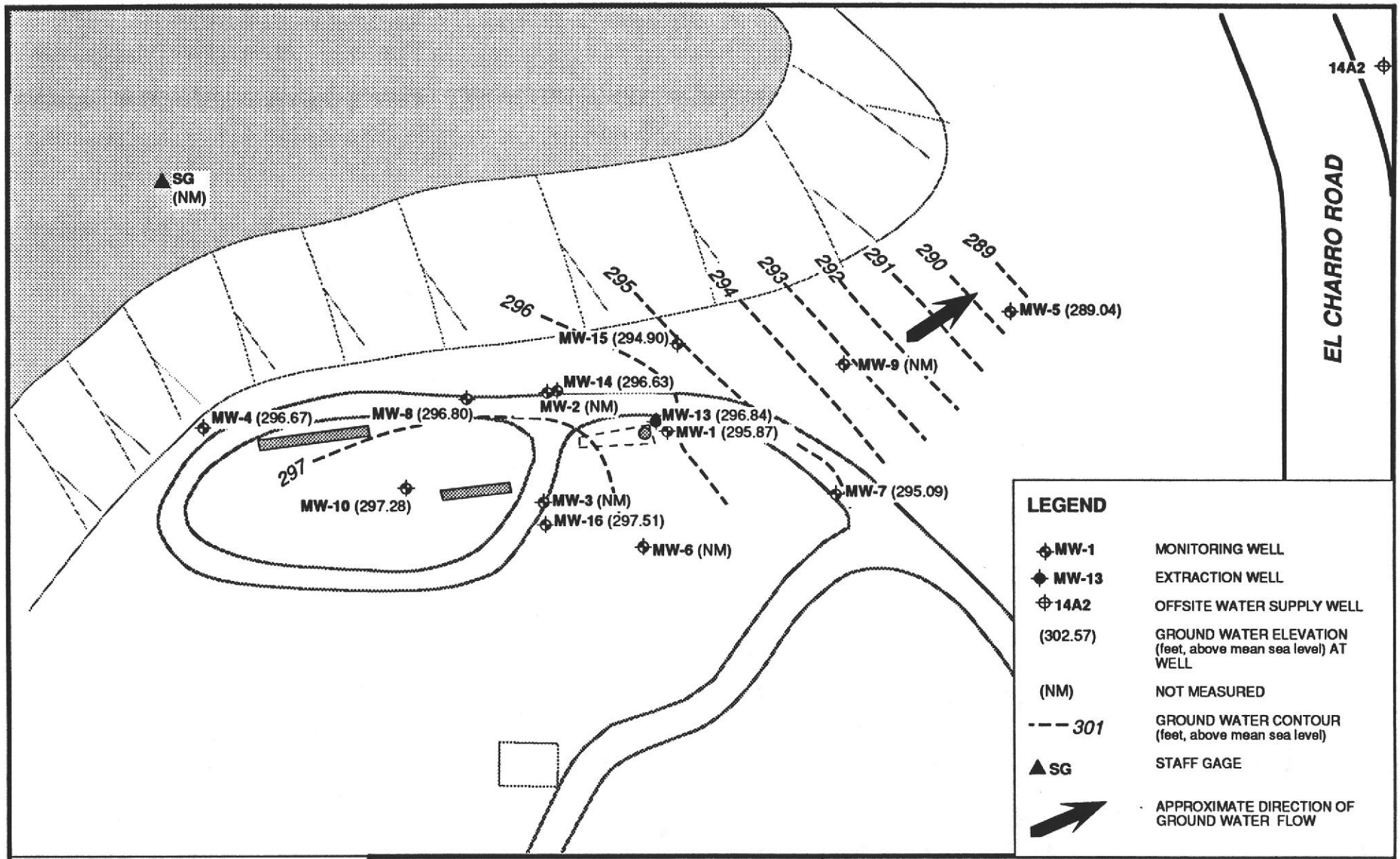
CHECKED BY: D. Behrens DATE: 6-29-92

MONITORING 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: 6-26-92

CHECKED BY: D. Behrens DATE: 6-29-92

GROUND WATER SURFACE CONTOUR MAP — MAY 1992

INDUSTRIAL ASPHALT
PLEASANTON, CALIFORNIA

PROJECT NO. 10-1682-03

PLATE 3

Quanteq Laboratories

An Ecologics Company

WORKING COPY

FORMERLY MED-TOX

Certificate of Analysis

DOHS CERTIFICATION NO. E772

AIHA ACCREDITATION NO. 332

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: 1890

REPORT DATE: 06/08/92

DATE SAMPLED: 05/19/92

DATE RECEIVED: 05/19/92

QUANTEQ JOB NO: 9205194

ANALYSIS OF: WATER SAMPLES

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)
55343	01A	130	57	---	---
55343 MW-1	01B	---	---	340	310
55355	02A	ND	0.8	---	---
55355 MW-4	02C	---	---	1	0.7
55339	03A	ND	ND	---	---
55339 Tap.	03C	---	---	ND	ND
Detection Limit		0.05	0.2	0.5	0.5
Method:		3510 GCFID	3510 GCFID	5520C	5520F
Instrument:		C	C	IR	IR
Date Extracted:		05/29/92	05/29/92	06/01/92	06/01/92
Date Analyzed:		05/29-06/01/92	05/29-06/01/92	06/02/92	06/02/92

ND = Not Detected

Andrew Bradeen

Andrew Bradeen, Manager
Organic Laboratory

Results FAXed 06/03/92

KLEINFELDER, INC.

CLIENT ID: 55343
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 05/19/92
DATE RECEIVED: 05/19/92
REPORT DATE: 06/08/92

QUANTEQ LAB NO: 9205194-01C
QUANTEQ JOB NO: 9205194
DATE EXTRACTED: 05/26/92
DATE ANALYZED: 05/28/92
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

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**	**2**	**0.5**

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 55355
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 05/19/92
DATE RECEIVED: 05/19/92
REPORT DATE: 06/08/92

QUANTEQ LAB NO: 9205194-02E
QUANTEQ JOB NO: 9205194
DATE EXTRACTED: 05/26/92
DATE ANALYZED: 05/28/92
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

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

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: 55339
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 05/19/92
DATE RECEIVED: 05/19/92
REPORT DATE: 06/08/92

QUANTEQ LAB NO: 9205194-03E
QUANTEQ JOB NO: 9205194
DATE EXTRACTED: 05/26/92
DATE ANALYZED: 05/28/92
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

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

QUALITY CONTROL DATA

DATE EXTRACTED: 06/01/92
DATE ANALYZED: 06/02/92
CLIENT PROJ. ID: 10-1682-03

QUANTEQ JOB NO: 9205194
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	7.67	ND	7.19	7.19	93.7	0.0

CURRENT QC LIMITS (Revised 01/09/92)

Analyte	Percent Recovery	RPD
Oil	(87-112)	5.4

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

QUALITY CONTROL DATA

DATE EXTRACTED: 05/29/92
DATE ANALYZED: 05/29/92
CLIENT PROJ. ID: 10-1682-03

QUANTEQ JOB NO: 9205194
SAMPLE SPIKED: D.I. WATER
INSTRUMENT: C

METHOD 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	2.51	ND	2.18	2.40	91.2	9.6

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: 05/26, 06/02/92

QUANTEQ JOB NO: 9205194

CLIENT PROJ. ID: 10-1682-03

INSTRUMENT: B

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
06/03/92	55343	01D	29
06/03/92	55355	02D	12 *
05/28/92	55355	02E	14 *
05/28/92	55339	03E	86

CURRENT QC LIMITS

ANALYTE	PERCENT RECOVERY
2,4,5,6-Tetrachloro-meta-xylene	(23-125)

* Surrogates outside Q.C. limits

QUALITY CONTROL DATA

DATE EXTRACTED: 05/26/92
DATE ANALYZED: 05/28/92
CLIENT PROJ. ID: 10-1682-03

QUANTEQ JOB NO: 9205194
SAMPLE SPIKED: D.I. WATER
INSTRUMENT: B

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	5.63	ND	4.51	4.71	81.9	4.3

CURRENT QC LIMITS

Analyte	Percent Recovery	RPD
A1260	(57-121)	20

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

R4 S2 9205194

PROJ. NO.	PROJECT NAME
10-168.03	
L.P. NO. (P.O. NO.)	SAMPLERS: (Signature/Number) Chris [illegible] Emp 1834

DATE MM/DD/YY	SAMPLE I.D. TIME HH:MM:SS	SAMPLE I.D.	NO. OF CONTAINERS	ANALYSIS: TPH diesel	Petroleum oil	Oil & grease 5520	8020	HOLD	PCBs	REMARKS
5/17/92	1610	55343 01A, B, C, D	4	X	X	X			X	Standard Turn around Time:
	1555	55355 02A, B, C, D, E, F	6	X	X	X			X	
	1645	55339 03A → F	6	X	X	X			X	
		55333 04AB	2				X	*		

Sample 55339 De-watered Did Not recover for Additional Sampling

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	5/19/92	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)
	5/19/92 1730	Denise Harrington

Remarks: Thank you

Send Results To: Guy Jett

KLEINFELDER
2121 N. CALIFORNIA BLVD.
SUITE 570
WALNUT CREEK, CA 94596
(415) 938-5610

M-60 White - Sampler Canary - Return Copy To Shipper Pink - Lab Copy No. 1800

QuanteQ Laboratories

An Ecologics Company

WORKING COPY

FORMERLY MED-TOX

Certificate of Analysis

DOHS CERTIFICATION NO. E772

AIHA ACCREDITATION NO. 332

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: 1889

REPORT DATE: 06/08/92

DATE SAMPLED: 05/21/92

DATE RECEIVED: 05/21/92

QUANTEQ JOB NO: 9205223

ANALYSIS OF: WATER SAMPLES

See attached for results

Andrew Bradeen, Manager
Organic Laboratory

Results FAXed 06/04/92

3440 Vincent Road • Pleasant Hill, CA 94523 • (510) 930-9090 • FAX (510) 930-0256

KLEINFELDER, INC.

DATE SAMPLED: 05/21/92
DATE RECEIVED: 05/21/92
CLIENT PROJ. ID: 10-1682-03

REPORT DATE: 06/08/92
QUANTEQ JOB NO: 9205223

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)
55829 MW-5	01A	ND	ND	---	---
55829	01C	---	---	ND	ND
55835 MW-7	02A	0.2	0.3	---	---
55835	02C	---	---	0.8	0.5
55357 MW-10	03A	0.4	0.4	---	---
55357	03C	---	---	3	0.8
55613 MW-15	04A	ND	ND	---	---
55613	04C	---	---	ND	ND
55621 MW-15 (dup)	05A	ND	ND	---	---
55621	05C	---	---	ND	ND
55348 MW-16	06A	0.4	0.2	---	---
55348	06C	---	---	0.9	ND
Detection Limit		0.05	0.2	0.5	0.5
Method:		3510 GCFID	3510 GCFID	5520C	5520F
Instrument:		C	C	IR	IR
Date Extracted:		06/03/92	06/03/92	06/01/92	06/01/92
Date Analyzed:		06/03/92	06/03/92	06/02/92	06/02/92

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 55829
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 05/21/92
DATE RECEIVED: 05/21/92
REPORT DATE: 06/08/92

QUANTEQ LAB NO: 9205223-01E
QUANTEQ JOB NO: 9205223
DATE EXTRACTED: 05/27/92
DATE ANALYZED: 05/29/92
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

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

KLEINFELDER, INC.

CLIENT ID: 55835
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 05/21/92
DATE RECEIVED: 05/21/92
REPORT DATE: 06/08/92

QUANTEQ LAB NO: 9205223-02E
QUANTEQ JOB NO: 9205223
DATE EXTRACTED: 05/27/92
DATE ANALYZED: 05/29/92
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

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

KLEINFELDER, INC.

CLIENT ID: 55357
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 05/21/92
DATE RECEIVED: 05/21/92
REPORT DATE: 06/08/92

QUANTEQ LAB NO: 9205223-03E
QUANTEQ JOB NO: 9205223
DATE EXTRACTED: 05/27/92
DATE ANALYZED: 05/29/92
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

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

KLEINFELDER, INC.

CLIENT ID: 55613
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 05/21/92
DATE RECEIVED: 05/21/92
REPORT DATE: 06/08/92

QUANTEQ LAB NO: 9205223-04E
QUANTEQ JOB NO: 9205223
DATE EXTRACTED: 05/27/92
DATE ANALYZED: 05/29/92
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

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

KLEINFELDER, INC.

CLIENT ID: 55621
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 05/21/92
DATE RECEIVED: 05/21/92
REPORT DATE: 06/08/92

QUANTEQ LAB NO: 9205223-05E
QUANTEQ JOB NO: 9205223
DATE EXTRACTED: 05/27/92
DATE ANALYZED: 05/29/92
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

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

KLEINFELDER, INC.

CLIENT ID: 55348
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 05/21/92
DATE RECEIVED: 05/21/92
REPORT DATE: 06/08/92

QUANTEQ LAB NO: 9205223-06E
QUANTEQ JOB NO: 9205223
DATE EXTRACTED: 05/27/92
DATE ANALYZED: 05/29/92
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

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

QUALITY CONTROL DATA

DATE EXTRACTED: 06/01/92
DATE ANALYZED: 06/02/92
CLIENT PROJ. ID: 10-1682-03

QUANTEQ JOB NO: 9205223
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	7.67	ND	7.19	7.19	93.7	0.0

CURRENT QC LIMITS (Revised 01/09/92)

Analyte	Percent Recovery	RPD
Oil	(87-112)	5.4

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

QUALITY CONTROL DATA

DATE EXTRACTED: 06/03/92
DATE ANALYZED: 06/03/92
CLIENT PROJ. ID: 10-1682-03

QUANTEQ JOB NO: 9205223
SAMPLE SPIKED: D.I. WATER
INSTRUMENT: C

METHOD 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	2.51	ND	2.40	2.23	92.2	7.3

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: 05/27/92 QUANTEQ JOB NO: 9205223

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

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
05/29/92	55829	01E	96
05/29/92	55835	02E	76
05/29/92	55357	03E	71
05/29/92	55613	04E	92
05/29/92	55621	05E	93
05/29/92	55548	06E	72

CURRENT QC LIMITS

ANALYTE	PERCENT RECOVERY
2,4,5,6-Tetrachloro-meta-xylene	(23-125)

QUALITY CONTROL DATA

DATE EXTRACTED: 05/26/92
DATE ANALYZED: 05/29/92
CLIENT PROJ. ID: 10-1682-03

QUANTEQ JOB NO: 9205223
SAMPLE SPIKED: D.I. WATER
INSTRUMENT: B

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	5.63	ND	4.51	4.71	81.9	4.3

CURRENT QC LIMITS

Analyte	Percent Recovery	RPD
A1260	(57-121)	20

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

4205223

PROJ. NO.	PROJECT NAME		NO. OF CONTAINERS	ANALYSIS: 8020	TPH Diesel	TPH Waste Oil	Oil & Grease	5520 C/F	PCBs			Hold		REMARKS
10-1682-03														
L.P. NO. (P.O. NO.)	SAMPLERS: (Signature/Number) Scott Eng 1834													
DATE MM/DD/YY	SAMPLE I.D. TIME HH:MM:SS	SAMPLE I.D.												
5/21/92	0831	55829 01A-F	6		X	X	X		X					STANDARD Turn around Time
	0930	55835 02A-F	6		X	X	X		X					
	1041	55357 03A-F	6		X	X	X		X					
	1215	55613 04A-F	6		X	X	X		X					
	1240	55621 05A-F	6		X	X	X		X					
	1315	55348 06A-F	6		X	X	X		X					
		55601 07AB T.B	2	X								X		

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	5/21/92 1420	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)
	5/21/92 1420	[signature]

Remarks

Guy Jeff

Thank You

Send Results To

KLEINFELDER
2121 N. CALIFORNIA BLVD.
SUITE 570
WALNUT CREEK, CA 94596
(415) 938-5610

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

№ 1889

CHAIN OF CUSTODY

QuanteQ Laboratories

An Ecologics Company

WORKING COPY

FORMERLY MED-TOX

Certificate of Analysis

DOHS CERTIFICATION NO. E[illegible]2

AIHA ACCREDITATION NO. 332

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: 1888

REPORT DATE: 06/08/92

DATE SAMPLED: 05/22/92

DATE RECEIVED: 05/22/92

QUANTEQ JOB NO: 9205238

ANALYSIS OF: WATER SAMPLES

See attached for results

Andrew Bradeen, Manager
Organic Laboratory

Results FAXed 06/05/92

KLEINFELDER, INC.

DATE SAMPLED: 05/22/92
DATE RECEIVED: 05/22/92
CLIENT PROJ. ID: 10-1682-03

REPORT DATE: 06/08/92
QUANTEQ JOB NO: 9205238

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)
56006 MW-14	01A	ND	ND	---	---
56006	01C	---	---	ND	ND
56012	02A	ND	ND	---	---
56012 MW-14 (dup)	02C	---	---	ND	ND
56027	03A	0.6	ND	---	---
56027 MW-13	03C	---	---	0.5	ND
56035	04A	0.3	ND	---	---
56035 MW-8	04C	---	---	ND	ND
Detection Limit		0.05	0.2	0.5	0.5
Method:		3510 GCFID	3510 GCFID	5520C	5520F
Instrument:		C	C	IR	IR
Date Extracted:		06/03/92	06/03/92	06/03/92	06/03/92
Date Analyzed:		06/03/92	06/03/92	06/04/92	06/04/92

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 56035
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 05/22/92
DATE RECEIVED: 05/22/92
REPORT DATE: 06/08/92

QUANTEQ LAB NO: 9205238-04G
QUANTEQ JOB NO: 9205238
DATE ANALYZED: 05/26/92
INSTRUMENT: F

BTEX (WATER MATRIX)
METHOD: EPA 8020 (5030)

COMPOUND	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Benzene	**71-43-2**	**0.3**	**0.3**
Toluene	108-88-3	ND	0.3
Ethylbenzene	100-41-4	ND	0.3
Xylenes, Total	1330-20-7	ND	1

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 56043TB
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 05/22/92
DATE RECEIVED: 05/22/92
REPORT DATE: 06/08/92

QUANTEQ LAB NO: 9205238-05A
QUANTEQ JOB NO: 9205238
DATE ANALYZED: 05/26/92
INSTRUMENT: F

BTEX (WATER MATRIX)
METHOD: EPA 8020 (5030)

COMPOUND	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Benzene	71-43-2	ND	0.3
Toluene	108-88-3	ND	0.3
Ethylbenzene	100-41-4	ND	0.3
Xylenes, Total	1330-20-7	ND	1

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 56006
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 05/22/92
DATE RECEIVED: 05/22/92
REPORT DATE: 06/08/92

QUANTEQ LAB NO: 9205238-01E
QUANTEQ JOB NO: 9205238
DATE EXTRACTED: 05/28/92
DATE ANALYZED: 06/03/92
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

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

KLEINFELDER, INC.

CLIENT ID: 56012
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 05/22/92
DATE RECEIVED: 05/22/92
REPORT DATE: 06/08/92

QUANTEQ LAB NO: 9205238-02E
QUANTEQ JOB NO: 9205238
DATE EXTRACTED: 05/28/92
DATE ANALYZED: 06/03/92
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

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

KLEINFELDER, INC.

CLIENT ID: 56027
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 05/22/92
DATE RECEIVED: 05/22/92
REPORT DATE: 06/08/92

QUANTEQ LAB NO: 9205238-03E
QUANTEQ JOB NO: 9205238
DATE EXTRACTED: 05/28/92
DATE ANALYZED: 06/03/92
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

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

KLEINFELDER, INC.

CLIENT ID: 56035
CLIENT PROJ. ID: 10-1682-03
DATE SAMPLED: 05/22/92
DATE RECEIVED: 05/22/92
REPORT DATE: 06/08/92

QUANTEQ LAB NO: 9205238-04E
QUANTEQ JOB NO: 9205238
DATE EXTRACTED: 05/28/92
DATE ANALYZED: 06/03/92
INSTRUMENT: B

EPA METHOD 8080
POLYCHLORINATED BIPHENYLS
(WATER MATRIX)

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

QUALITY CONTROL DATA

DATE EXTRACTED: 06/03/92
DATE ANALYZED: 06/04/92
CLIENT PROJ. ID: 10-1682-03

QUANTEQ JOB NO: 9205238
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	7.51	ND	7.35	7.35	97.9	0.0

CURRENT QC LIMITS (Revised 01/09/92)

Analyte	Percent Recovery	RPD
Oil	(87-112)	5.4

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

QUALITY CONTROL DATA

DATE EXTRACTED: 06/03/92
DATE ANALYZED: 06/03/92
CLIENT PROJ. ID: 10-1682-03

QUANTEQ JOB NO: 9205238
SAMPLE SPIKED: D.I. WATER
INSTRUMENT: C

METHOD 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	2.51	ND	2.40	2.23	92.2	7.3

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 ANALYZED: 05/26/92
SAMPLE SPIKED: 9205238-05A
CLIENT PROJ. ID: 10-1682-03

QUANTEQ JOB NO: 9205238
INSTRUMENT: F

MATRIX SPIKE RECOVERY SUMMARY
METHOD: EPA 8020, 5030 GCFID
(WATER MATRIX)

ANALYTE	Spike Conc. (ug/L)	Sample Result (ug/L)	MS Result (ug/L)	MSD Result (ug/L)	Average Percent Recovery	RPD
Benzene	50.0	ND	51.8	49.5	101.3	4.5
Toluene	50.0	ND	51.6	49.1	100.7	5.0

CURRENT QC LIMITS (Revised 05/14/92)

Analyte	Percent Recovery	RPD
Benzene	(81.4-115.3)	10.2
Toluene	(85.3-112.4)	9.4

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

QUALITY CONTROL DATA

DATE EXTRACTED: 05/28/92

QUANTEQ JOB NO: 9205238

CLIENT PROJ. ID: 10-1682-03

INSTRUMENT: B

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
06/03/92	56006	01E	93
06/03/92	56012	02E	93
06/03/92	56027	03E	82
06/03/92	56035	04E	83

CURRENT QC LIMITS

ANALYTE	PERCENT RECOVERY
2,4,5,6-Tetrachloro-meta-xylene	(23-125)

QUALITY CONTROL DATA

DATE EXTRACTED: 05/28/92
DATE ANALYZED: 06/03/92
CLIENT PROJ. ID: 10-1682-03

QUANTEQ JOB NO: 9205238
SAMPLE SPIKED: D.I. WATER
INSTRUMENT: B

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	5.63	ND	5.42	5.66	98.4	4.3

CURRENT QC LIMITS

Analyte	Percent Recovery	RPD
A1260	(57-121)	20

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

PROJ. NO.	PROJECT NAME
10482.03	
L.P. NO. (P.O. NO.)	SAMPLERS: (Signature/Number) Chris Scott

9205238

DATE MM/DD/YY	SAMPLE I.D. TIME HH:MM:SS	SAMPLE I.D.	NO. OF CONTAINERS	ANALYSIS 8020 BTEX	TPH Diesel	TPH Waste Oil	Oil & Grease SM 5520 C+F	RCRA	REMARKS
5/22/92	0958	56006 01A-01F	6		X	X	X	X	STANDARD TURN AROUND
	1030	56012 02A-02F	6		X	X	X	X	TIME!
	1155	56027 03A-03F	6		X	X	X	X	*EXCEPT: 56041 WHICH WILL
	1230	56035 04A-04H	8	X	X	X	X	X	BE A 24 Hour TAT.
	1250	56041 * SEE NOTE	2					X	9205239
		56043 05A,B		X					
									Samples Rec'd Cool

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	5/22/92 1325	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)
		Robin Rivera

Remarks: Sample 56041 will be taken to D. Behrens ASAP.

Thank You

Send Results To: Guy Jett
KLEINFELDER
2121 N. CALIFORNIA BLVD.
SUITE 570
WALNUT CREEK, CA 94596
(415) 938-5610

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

CHAIN OF CUSTODY

№ 1888