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ENVIRONMENTAL PROTECTION
96 AUG 12 PM 3:38

12 August 1996

Mr. William Wick, Esq.
Crosby, Heafey, Roach & May
1999 Harrision Street
Oakland, California 94612-3400

Subject: Groundwater Sampling Results for June 1996
4200 Alameda Avenue, Oakland, California
(EKI 930040.04)

Dear Mr. Wick:

Erler & Kalinowski, Inc. ("EKI") is pleased to submit this summary of analytical results of groundwater samples collected in June 1996 at the property located at 4200 Alameda Avenue in Oakland, California ("the site"). These analytical results represent the first semiannual monitoring event for 1996. Semiannual monitoring of wells at the site was in response to the request made by the Alameda County Department of Environmental Health in its letter dated 8 February 1996.

GROUNDWATER MONITORING WELL SAMPLING PROCEDURES

EKI sampled the five existing monitoring wells at the site on 24 June 1996. Prior to collecting water samples, EKI measured depths to groundwater and the total depths of wells to determine the casing volume of each well to be purged. Purging was accomplished by hand bailing each well. The bailer was cleaned in a 55-gallon drum with Alconox® soap and distilled water before use at each well. The wells were purged until three casing volumes were removed or until the well dewatered. Temperature, specific conductivity, and pH were measured during purging. Groundwater purge records are included as Attachment A.

EKI used a disposable PVC bailer to collect groundwater samples from each monitoring well. Water samples were collected in 40 mL glass vials and preserved with hydrochloric acid ("HCl") for analysis of volatile organic compounds ("VOCs"), purgeable petroleum hydrocarbons, and benzene, toluene, ethyl benzene, and total xylenes ("BTEX"). Water samples were collected in 1 liter amber glass bottles for analysis of total extractable petroleum hydrocarbons. Collected water samples were placed in a cooled container and transported to Sequoia Analytical Laboratory under chain-of-custody procedures.

SUMMARY OF GROUNDWATER SAMPLING RESULTS FOR JUNE 1996

Immiscible hydrocarbons were noted in each of the five monitoring wells constructed at the site. Immiscible hydrocarbons were observed in the form of a sheen or tiny globules of oil floating on the water surface in monitoring wells MW-1, MW-2, and MW-3. Wells MW-4 and MW-5 contained measurable amounts of floating hydrocarbons. An electronic interface probe was used to measure the thickness of floating hydrocarbons in these wells. Floating hydrocarbons measured 0.46 feet thick in well MW-4 and 2.37 feet thick in well MW-5. Groundwater elevation and hydrocarbon thickness measurements are summarized in Table 1.

Groundwater samples collected from the five monitoring wells were analyzed for the following compounds:

- Total purgeable petroleum hydrocarbons with BTEX by modified EPA Method 8015 and EPA Method 8020
- Extractable hydrocarbon fuel fingerprint by modified EPA Method 8015
- Halogenated volatile organic compounds by EPA Method 8260

Groundwater sample analytical results are summarized in Tables 2 through 4 and shown on Figures 1 and 2. Copies of laboratory analytical reports are included as Attachment B.

Total Petroleum Hydrocarbons in Groundwater

Total petroleum hydrocarbons ("TPH") in groundwater samples were quantitated against both gasoline and diesel standards. Sequoia Analytical found that the chromatogram patterns of extractable hydrocarbons did not resemble that of a diesel fuel in groundwater samples collected from most of the wells.

Reported concentrations are set forth in Table 2 and shown on Figure 1. However, these results should not be interpreted as the levels of TPH solely dissolved in groundwater. Immiscible hydrocarbons were observed in groundwater samples collected from the monitoring wells. Measured TPH concentrations likely include quantitation of TPH in both immiscible and soluble phases.

BTEX and Halogenated VOCs in Groundwater

BTEX and certain halogenated VOCs were detected in groundwater samples collected from the site. Halogenated VOCs include 1,1-dichloroethane ("1,1-DCA"), chloroethane, cis-1,2-dichloroethene ("c-1,2-DCE"), trans-1,2-dichloroethene ("t-1,2-DCE"), vinyl chloride, 1,2-dichlorobenzene ("1,2-DCB"), 1,3-dichlorobenzene (1,3-DCB"), and 1,4-dichlorobenzene ("1,4-DCB").

The detected concentrations for June 1996 are set forth in Table 4. However, it should be recognized that BTEX and halogenated VOCs can be expected to partition between groundwater and immiscible hydrocarbons. Measured concentrations of these chemicals may be largely associated with immiscible hydrocarbons in groundwater at the site. The actual dissolved concentrations of these chemicals in groundwater are unknown.

QUALITY ASSURANCE/QUALITY CONTROL PROCEDURES

To provide a check on monitoring well sampling techniques, EKI collected one equipment blank sample from a disposable bailer. No VOCs or petroleum hydrocarbons were detected in the equipment blank sample.

One trip blank was also included in the cooler containing groundwater samples transported to the laboratory. No VOCs or purgeable petroleum hydrocarbons were detected in the trip blank sample. The trip blank sample contained 92 ug/L of TPH (as diesel) indicating the possibility of sample cross-contamination. However, the relatively low extractable hydrocarbon concentration detected in the trip blank suggests that cross-contamination between samples, if any, is minor and does not affect interpretation of monitoring well sample results.

Review of matrix spike and matrix spike duplicate analytical results included with the laboratory reports (Attachment B) indicate that acceptable accuracy and precision were achieved. Matrix spike and matrix spike duplicate results were within laboratory control limits except for TPH (as diesel) results. The high concentrations of TPH (as diesel) necessitated that groundwater samples collected from the on-site wells be diluted for analyses by modified EPA Method 8015. Consequently, Sequoia was unable to obtain surrogate recovery due to dilution effects. However, as with the trip blank sample results, poor surrogate recovery does not affect interpretation of the TPH (as diesel) data. These

data show that TPH is present in on-site wells and that measured TPH likely reflects quantitation of hydrocarbons in both immiscible and soluble phases.

Please call if you have questions.

Very truly yours,

ERLER & KALINOWSKI, INC.

Andrew N. Safford, P.E.
Project Manager

Theodore G. Erler, P.E.
President

attachment

TABLE 1
SUMMARY OF WATER LEVEL MEASUREMENTS

4200 Alameda Avenue, Oakland, California
(EKI 930040.04)

Well ID	Reference Elevation (ft, msl); (a), (b)	Sample Date	Depth to Hydrocarbon (ft)	Depth to Groundwater (ft)	Thickness of Hydrocarbon (ft)	Groundwater Surface Elevation (ft, msl); (c)
MW-1	14.86	7/26/95	-	10.07	-	4.93
		8/7/96	10.41	10.42	0.01	4.45
MW-2	14.12	7/26/95	-	6.39	-	7.71
		8/7/96	8.08	8.09	0.01	6.04
MW-3	12.59	7/26/95	-	8.65	-	3.94
		8/7/96	9.28	9.29	0.01	3.31
MW-4	13.18	7/26/95	-	9.95	-	3.52
		8/7/96	9.91	10.54	0.63	3.21
MW-5	14.41	7/26/95	8.83	8.88	0.05	4.58
		8/7/96	9.9	13.1	3.20	4.19

Notes:

(a) Elevations are expressed in feet above mean sea level ("msl").

(b) Reference elevations are based are survey measurements conducted by MacLeod and Associates, Inc. on 20 June 1996 following grading of the site upon completing demolition and excavation of structures.

(c) Groundwater elevations have been adjusted for effect of floating hydrocarbons, if any, measured in wells. A specific gravity of 0.9 was assumed when compensating for the depression of the groundwater surface due to floating hydrocarbons.

TABLE 2
TOTAL PETROLEUM HYDROCARBON (TPH) ANALYTICAL RESULTS OF GROUNDWATER SAMPLES

4200 Alameda Avenue, Oakland, California
(EKI 930040.04)

Well ID	Sample Date	TPH (as gasoline) Concentration (a)		TPH (as diesel) Concentration (a)	
		(ug/L)	Description of Chromatogram Pattern	(ug/L)	Description of Chromatogram Pattern
MW-1	7/26/95	**11,000**	Pattern characteristic of gasoline	**29,000**	Unidentifiable pattern of hydrocarbons in C_9-C_{30} range
	6/24/96	**7,800**	Pattern characteristic of gasoline	**39,000**	Pattern characteristic of diesel in the C_9-C_{14} range
MW-2	7/26/95	**3,600**	Pattern characteristic of gasoline	**22,000**	Unidentifiable pattern of hydrocarbons in C_9-C_{39} range
	6/24/96	**2,700**	Pattern characteristic of gasoline	**12,000**	Unidentifiable pattern of hydrocarbons in C_9-C_{36} range
MW-3	7/25/95	**200**	Pattern characteristic of gasoline and unidentified hydrocarbons greater than C_8	**5,600**	Unidentifiable pattern of hydrocarbons in C_9-C_{38} range
	7/25/95 dup	**180**	Pattern characteristic of gasoline and unidentified hydrocarbons greater than C_{10}	**7,000**	Unidentifiable pattern of hydrocarbons in C_9-C_{38} range
	6/24/96	**57**	Pattern characteristic of gasoline	**4,900**	Unidentifiable pattern of hydrocarbons in C_9-C_{38} range
MW-4	7/25/95	**1,400**	Pattern characteristic of gasoline	**24,000**	Pattern characteristic of crude oil
	6/24/96	**5,500**	Pattern characteristic of gasoline and unidentified hydrocarbons greater than C_{11}	**850,000**	Unidentifiable pattern of hydrocarbons in C_9-C_{40} range
MW-5	7/26/95	**4,800**	Pattern characteristic of gasoline and unidentified hydrocarbons greater than C_{10}	**7,500**	Unidentifiable pattern of hydrocarbons in C_9-C_{34} range
	6/24/96	**2,000**	Pattern characteristic of gasoline	**520,000**	Unidentifiable pattern of hydrocarbons in C_9-C_{40} range
	6/24/96 dup	**2,200**	Pattern characteristic of gasoline	**360,000**	Unidentifiable pattern of hydrocarbons in C_9-C_{40} range

Notes:

(a) Immiscible hydrocarbons present in groundwater samples. Measured constituents likely include quantitation of constituents in both immiscible and soluble phases.

TABLE 3
BENZENE, TOLUENE, ETHYL BENZENE, TOTAL XYLENES (BTEX)
ANALYTICAL RESULTS OF GROUNDWATER SAMPLES

4200 Alameda Avenue, Oakland, California
(EKI 930040.04)

Well ID	Sample Date	BTEX Concentration (ug/L); (b)			
		Benzene	Toluene	Ethyl Benzene	Total Xylenes
MW-1	7/26/95	630	1,300	140	870
	6/24/96	530	1,000	130	860
MW-2	7/26/95	36	37	130	660
	6/24/96	19	<10	170	340
MW-3	7/25/95	6.2	<0.5 (a)	<0.5	<0.5
	7/25/95 dup	6.2	<0.5	<0.5	<0.5
	6/24/96	6.3	<0.5	<0.5	<0.5
MW-4	7/25/95	64	12	28	49
	6/24/96	140	13	87	150
MW-5	7/26/95	78	160	56	190
	6/24/96	97	160	48	150
	6/24/96 dup	95	150	50	160

Notes:

(a) Less than symbol ("<") denotes that compound was not present above the detection limit shown.

(b) Immiscible hydrocarbons present in groundwater samples. Measured constituents likely include quantitation of constituents in both immiscible and soluble phases.

TABLE 4
HALOGENATED VOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS OF GROUNDWATER SAMPLES

4200 Alameda Avenue, Oakland, California
(EKI 930040.04)

Well ID	Sample Date	Halogenated Volatile Organic Compound Concentration (ug/L); (b)											
		Chlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	1,1,1-trichloroethane	1,1-dichloroethane	Chloroethane	Tetrachloroethane	Trichloroethene	cis-1,2-dichloroethene	trans-1,2-dichloroethene	Vinyl Chloride
MW-1	7/26/95	<50	<50	<50	<50	<50	**130**	<100	<50	<50	**2,300**	**91**	**3,100**
	6/24/96	<50	<50	<50	<50	<50	**88**	<100	<50	<50	**2,800**	**110**	**3,100**
MW-2	7/26/95	**7.3**	**48**	**1.5**	**8**	<1.3	**4.8**	**5.8**	<1.3	<1.3	<1.3	<1.3	<2.5
	6/24/96	**7.4**	**88**	**4.0**	**18**	<2.5	**15**	**6.2**	<2.5	**3.8**	**20**	<2.5	**4.1**
MW-3	7/25/95	<0.5	**1.7**	<0.5	<0.5	<0.5	<0.5	**1.2**	<0.5	<0.5	<0.5	<0.5	<0.5
	7/25/95 dup	<0.5	**1.6**	<0.5	<0.5	<0.5	<0.5	**1.1**	<0.5	<0.5	<0.5	<0.5	<0.5
	6/24/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.0**	<0.5	<0.5	<0.5	<0.5	<0.5
MW-4	7/25/95	<50	<50	<50	<50	<50	<50	<50	<50	<50	**2,000**	**50**	**3,500**
	6/24/96	<100	<100	<100	<100	<100	<100	<100	<100	<100	**3,100**	<100	**4,200**
MW-5	7/26/95	<100	<100	<100	<100	<100	**160**	<200	<100	<100	**3,700**	**130**	**5,200**
	6/24/96	<100	<100	<100	<100	<100	**150**	<100	<100	<100	**2,800**	**160**	**4,200**
	6/24/96 dup	<100	<100	<100	<100	<100	**140**	<100	<100	<100	**2,800**	**170**	**4,100**

Notes:

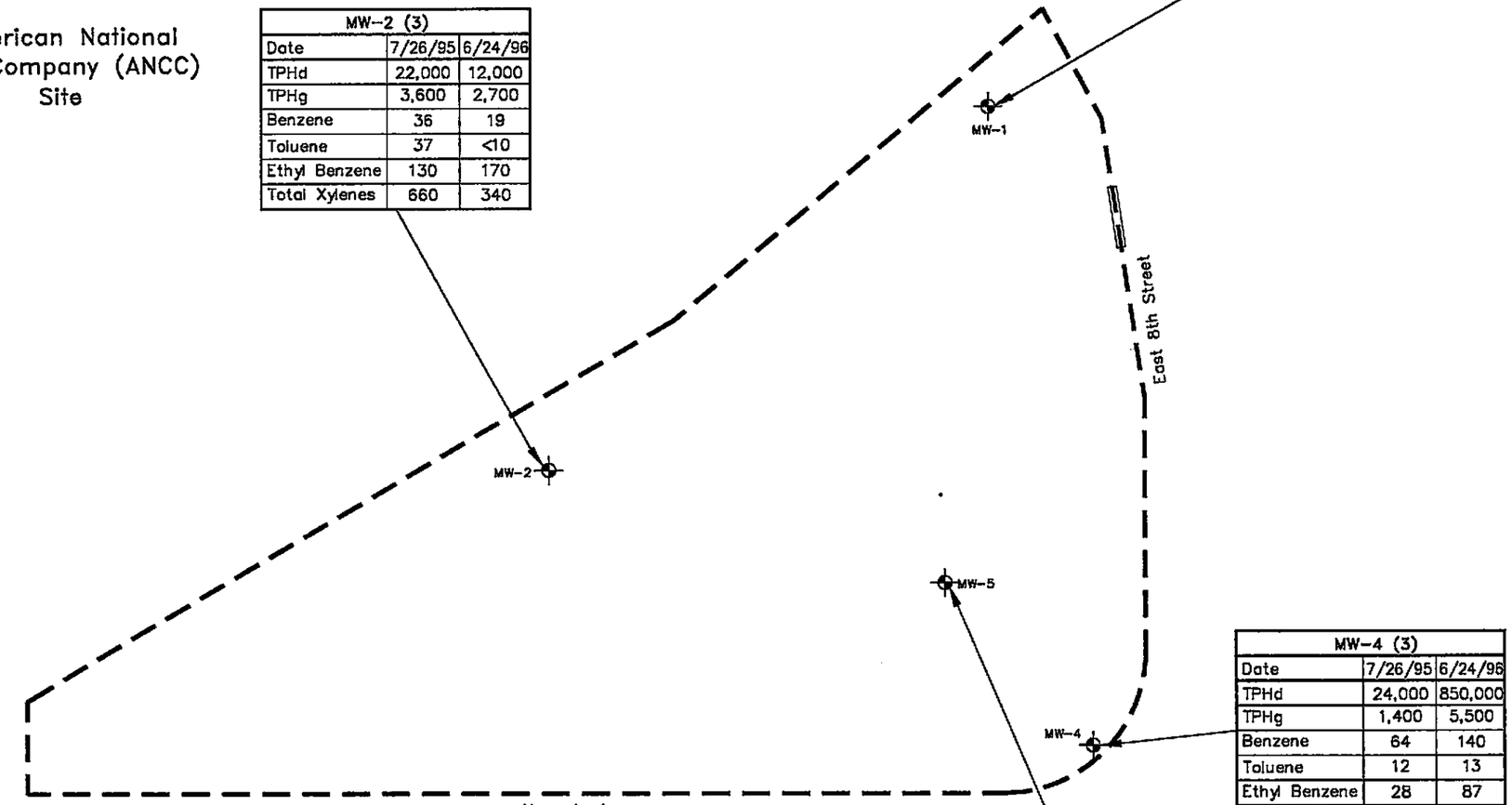
(a) Less than symbol ("<") denotes that compound was not present above the detection limit shown.

(b) Immiscible hydrocarbons present in groundwater samples. Measured constituents likely include quantitation of constituents in both immiscible and soluble phases.

American National Can Company (ANCC) Site

MW-1 (3)		
Date	7/26/95	6/24/96
TPHd	29,000	39,000
TPHg	11,000	7,800
Benzene	630	530
Toluene	1,300	1,000
Ethyl Benzene	140	130
Total Xylenes	870	860

MW-2 (3)		
Date	7/26/95	6/24/96
TPHd	22,000	12,000
TPHg	3,600	2,700
Benzene	36	19
Toluene	37	<10
Ethyl Benzene	130	170
Total Xylenes	660	340



MW-4 (3)		
Date	7/26/95	6/24/96
TPHd	24,000	850,000
TPHg	1,400	5,500
Benzene	64	140
Toluene	12	13
Ethyl Benzene	28	87
Total Xylenes	49	150

MW-3 (3)		
Date	7/26/95	6/24/96
TPHd	5,600	4,900
TPHg	200	57
Benzene	6.2	6.3
Toluene	<0.5	<0.5
Ethyl Benzene	<0.5	<0.5
Total Xylenes	<0.5	<0.5

MW-5 (3)		
Date	7/26/95	6/24/96
TPHd	7,500	520,000
TPHg	4,800	2,000
Benzene	78	97
Toluene	160	160
Ethyl Benzene	56	48
Total Xylenes	190	150

N

0 40 80

(Approximate Scale in Feet)

LEGEND

— — Site Boundary

Monitoring Well

Abbreviations

TPHd Total Petroleum Hydrocarbons as Diesel Fuel

TPHmo Total Petroleum Hydrocarbons as Motor Oil

TPHg Total Petroleum Hydrocarbons as Gasoline

Notes:

1. All locations are approximate.
2. Concentrations in ug/L (ppb).
3. Immiscible hydrocarbons present in groundwater samples. Measured concentrations likely include quantitation of constitutents in both the immiscible and soluble phases.

Erler & Kalinowski, Inc.

Petroleum Hydrocarbons and BTEX in Groundwater

4200 Alameda Avenue
Oakland, CA
August 1996
EKI 930040.04
Figure 1

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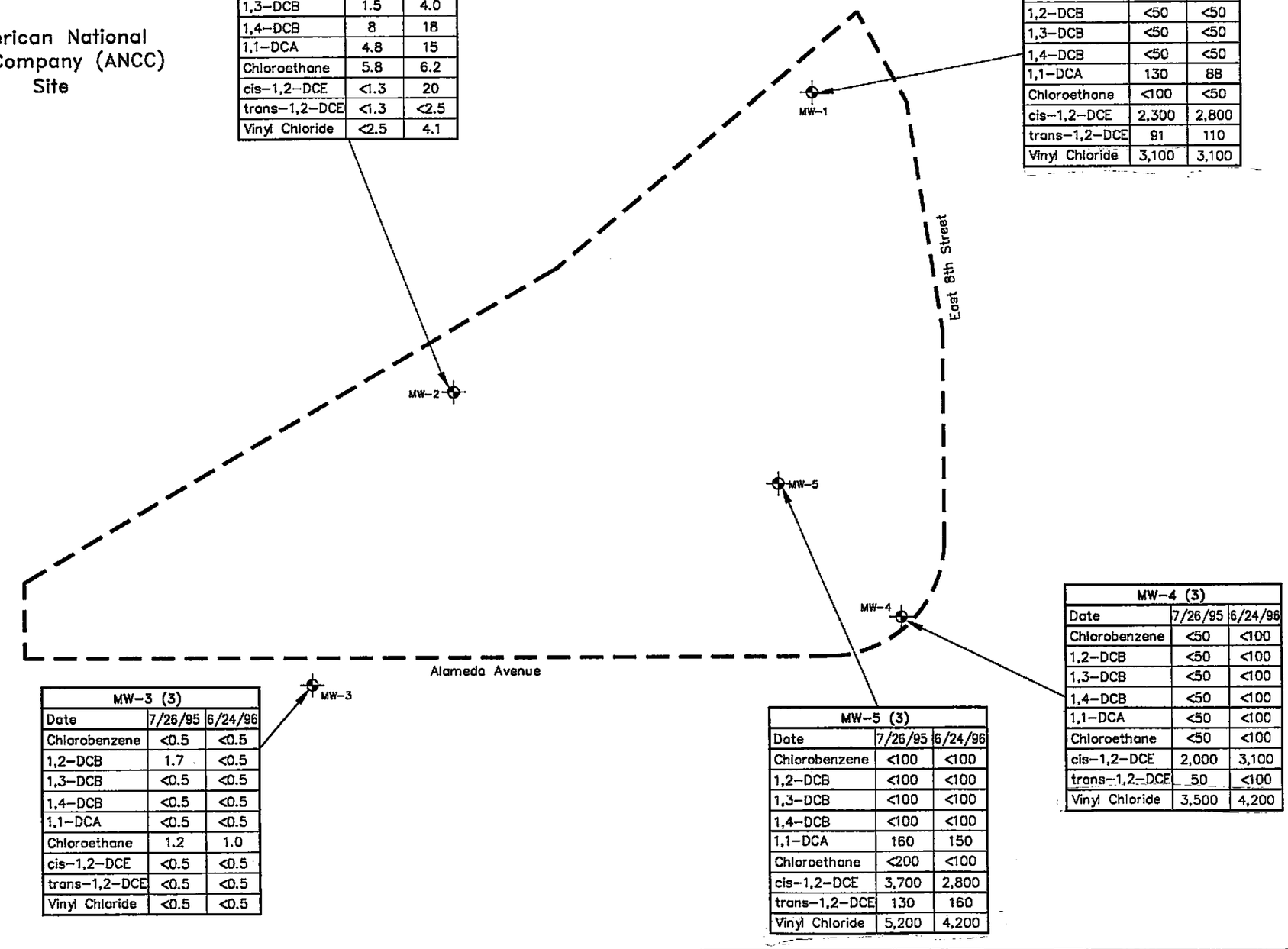
American National Can Company (ANCC) Site

MW-2 (3)		
Date	7/26/95	6/24/96
Chlorobenzene	7.3	7.4
1,2-DCB	48	88
1,3-DCB	1.5	4.0
1,4-DCB	8	18
1,1-DCA	4.8	15
Chloroethane	5.8	6.2
cis-1,2-DCE	<1.3	20
trans-1,2-DCE	<1.3	<2.5
Vinyl Chloride	<2.5	4.1

MW-1 (3)		
Date	7/26/95	6/24/96
Chlorobenzene	<50	<50
1,2-DCB	<50	<50
1,3-DCB	<50	<50
1,4-DCB	<50	<50
1,1-DCA	130	88
Chloroethane	<100	<50
cis-1,2-DCE	2,300	2,800
trans-1,2-DCE	91	110
Vinyl Chloride	3,100	3,100



MW-3 (3)		
Date	7/26/95	6/24/96
Chlorobenzene	<0.5	<0.5
1,2-DCB	1.7	<0.5
1,3-DCB	<0.5	<0.5
1,4-DCB	<0.5	<0.5
1,1-DCA	<0.5	<0.5
Chloroethane	1.2	1.0
cis-1,2-DCE	<0.5	<0.5
trans-1,2-DCE	<0.5	<0.5
Vinyl Chloride	<0.5	<0.5

MW-5 (3)		
Date	7/26/95	6/24/96
Chlorobenzene	<100	<100
1,2-DCB	<100	<100
1,3-DCB	<100	<100
1,4-DCB	<100	<100
1,1-DCA	160	150
Chloroethane	<200	<100
cis-1,2-DCE	3,700	2,800
trans-1,2-DCE	130	160
Vinyl Chloride	5,200	4,200

MW-4 (3)		
Date	7/26/95	6/24/96
Chlorobenzene	<50	<100
1,2-DCB	<50	<100
1,3-DCB	<50	<100
1,4-DCB	<50	<100
1,1-DCA	<50	<100
Chloroethane	<50	<100
cis-1,2-DCE	2,000	3,100
trans-1,2-DCE	50	<100
Vinyl Chloride	3,500	4,200

N

0 40 80

(Approximate Scale in Feet)

LEGEND

Site Boundary

Monitoring Well

Abbreviations

1,2-DCB	1,2-dichlorobenzene
1,3-DCB	1,3-dichlorobenzene
1,4-DCB	1,4-dichlorobenzene
1,1-DCA	1,1-dichloroethane
cis-1,2-DCE	cis-1,2-dichloroethene
trans-1,2-DCE	trans-1,2-dichloroethane

Notes:

1. All locations are approximate.
2. Concentrations in ug/L (ppb).
3. Immiscible hydrocarbons present in groundwater samples. Measured concentrations likely include quantitation of constitutents in both the immiscible and soluble phases.

Erler & Kalinowski, Inc.

Halogenated Volatile Organic Compounds in Groundwater

4200 Alameda Avenue
Oakland, CA
August 1996
EKI 930040.04
Figure 2

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Erler & Kalinowski, Inc.

GROUNDWATER PURGE SAMPLE FORM

PROJECT NAME: Ekotek DATE: 6-24-96

PROJECT NUMBER: 930040.01 WELL NUMBER: MW-1 PERSONNEL: BBH/CDL

WELL VOLUME CALCULATION:

Depth of Well (ft.)		Depth to Water (ft.)		Water Column (ft.)		Multiplier (below)	Casing Vol. (gallons)
16.30	-	9.36	=	6.94	*	0.64	= 4.4

Mult. for casing diam. = 2-inch=0.16; 4-inch=0.64; 6-inch=1.44 gals/ft.

No. of bailers prior to start of purge: _____

PURGE METHOD: Hand Bail

PURGE DEPTH: _____

START TIME: 15:05 END TIME: _____

TOTAL GALLONS PURGED:

INSTRUMENT CALIBRATION

Instrument	Field measure	Standard measure
Conductivity		
pH		
pH		See MW-3
Turbidity		
Temperature		
Depth Probe		

SAMPLES: Field I.D. Time Collected Containers & Preservation

COMMENTS:

Time	15:07	15:19	15:22	15:29	15:38		
Volume Purged (gallons)	2	4	6	8	9		
Temperature (degrees F or C)	23.2	21.5	22.1	23.4	21.6		
pH	6.66	6.70	6.51	6.42	6.55		
Specific Conductivity (millimhos)	1.607	1.604	1.630	1.675	1.74		
Turbidity/Color (NTU)	180	>200	>200	>200	>200		
Odor							
Depth to Water during purge (feet)		13.58	14.72	14.90	15.80	bailed dry	
Number of Casing Volumes removed							
Purge Rate (gallons/minute)							

Erler & Kalinowski, Inc.

GROUNDWATER PURGE SAMPLE FORM

PROJECT NAME: Ekotek DATE: 6/24/96

PROJECT NUMBER: 930040.01 WELL NUMBER: MW-2 PERSONNEL: BBH/CDY

WELL VOLUME CALCULATION:

Depth of Well (ft.)		Depth to Water (ft.)		Water Column (ft.)		Multiplier (below)		Casing Vol. (gallons)
16.36	-	7.78	=	8.58	*	0.64	=	5.5

Mult. for casing diam. = 2-inch=0.16; 4-inch=0.64; 6-inch=1.44 gals/ft.

No. of bailers prior to start of purge: _____

PURGE METHOD: Hand Bail

PURGE DEPTH: _____

START TIME: 14:20 END TIME: _____

TOTAL GALLONS PURGED:

INSTRUMENT CALIBRATION

Instrument	Field measure	Standard measure
Conductivity		
pH		
pH		
Turbidity		
Temperature		
Depth Probe		

see MW-3 form

SAMPLES: Field I.D. Time Collected Containers & Preservation

COMMENTS:

Time	14:24	14:29	14:32	14:41	14:53		
Volume Purged (gallons)	2	4	6	8	10		
Temperature (degrees F or C)	22.0	21.2	20.5	22.5			
pH	6.37	6.66	6.42	6.73			
Specific Conductivity (millimhos)	1.197	1.161	1.142	1.183			
Turbidity/Color (NTU)	61.0	44.1	116.0	Opaque >200			
Odor							
Depth to Water during purge (feet)	9.31		12.20	13.63	15.20 ←	bailed dry	
Number of Casing Volumes removed							
Purge Rate (gallons/minute)							

Erler & Kalinowski, Inc.

GROUNDWATER PURGE SAMPLE FORM

PROJECT NAME: Ekotek DATE: 6/24/96

PROJECT NUMBER: 930040.01 WELL NUMBER: MW-3 PERSONNEL: BBH/CDA

WELL VOLUME CALCULATION:

Depth of Well (ft.)		Depth to Water (ft.)		Water Column (ft.)		Multiplier (below)		Casing Vol. (gallons)
12.70	-	8.62	=	4.08	*	0.64	=	2.6

Mult. for casing diam. = 2-inch=0.16; 4-inch=0.64; 6-inch=1.44 gals/ft.

No. of bailers prior to start of purge: _____

PURGE METHOD: Hand Bail

PURGE DEPTH: _____

START TIME: 13:30 END TIME: 13:50

TOTAL GALLONS PURGED:

INSTRUMENT CALIBRATION

Instrument	Field measure	Standard measure
Conductivity	1001	1,000
pH	4.41	4
pH	9.64	10
Turbidity	6.02	0.02 NTU
Temperature		
Depth Probe		

SAMPLES: Field I.D. Time Collected Containers & Preservation

COMMENTS:

Time	13:30	13:38	13:48				
Volume Purged (gallons)	4	6	7				
Temperature (degrees F or C)	20.6	20.0	19.6				
pH	6.40	6.80	6.82				
Specific Conductivity (millimhos)	1.134	1.246	0.632				
Turbidity/Color (NTU)	7200	7200	7200				
Odor							
Depth to Water during purge (feet)	11.44	12.20	12.16	← Purged Dry			
Number of Casing Volumes removed							
Purge Rate (gallons/minute)							

Erler & Kalinowski, Inc.

GROUNDWATER PURGE SAMPLE FORM

PROJECT NAME: Ekotek — DATE: 6/24/96

PROJECT NUMBER: 930040.01 — WELL NUMBER: MW-4 — PERSONNEL: BBH/CDL

WELL VOLUME CALCULATION:

Depth of Well (ft.)		Depth to Water (ft.)		Water Column (ft.)		Multiplier (below)		Casing Vol. (gallons)
14.76	-	9.22 oil / 9.68 H2O	=	5.53	*	0.64	=	3.54

Mult. for casing diam. = 2-inch=0.16; 4-inch=0.64; 6-inch=1.44 gals/ft.

No. of bailers prior to start of purge: _____

PURGE METHOD: Hand Bail

PURGE DEPTH: _____

START TIME: _____ END TIME: _____

TOTAL GALLONS PURGED:

INSTRUMENT CALIBRATION

Instrument	Field measure	Standard measure
Conductivity		
pH	See MW-3	
pH		
Turbidity		
Temperature		
Depth Probe		

SAMPLES:

Field I.D.	Time Collected	Containers & Preservation
	16:35	No oil
	16:43	No oil
	18:22	9.33 oil, 9.51 water (.18 sheen)

COMMENTS:

Time	16:15	16:20	16:25	16:35			
Volume Purged (gallons)	2.5	5	8	11			
Temperature (degrees F or C)	24.0	20.7	20.7	20.3			
pH	6.80	6.81	6.86	6.90			
Specific Conductivity (millimhos)	2.32	2.28	2.28	2.26			
Turbidity/Color (NTU)	148	150	128	168			
Odor							
Depth to Water during purge (feet)	9.91/9.98	10.49/10.50	10.78/10.79	10.01/11.99			
Number of Casing Volumes removed							
Purge Rate (gallons/minute)							

Erler & Kalinowski, Inc.

GROUNDWATER PURGE SAMPLE FORM

PROJECT NAME: Exotek DATE 6/24/96

PROJECT NUMBER: 930040.01 WELL NUMBER: MW-5 PERSONNEL: CDA/BBA

WELL VOLUME CALCULATION:

Depth of Well (ft.)		Depth to Water (ft.)		Water Column (ft.)		Multiplier (below)		Casing Vol. (gallons)
15.99	-	8.84 oil / 11.21 H_2O	=	7.15	*	0.64	=	4.5

Mult. for casing diam. = 2-inch=0.16; 4-inch=0.64; 6-inch=1.44 gals/ft.

No. of bailers prior to start of purge: _____

PURGE METHOD: Hand Bail

PURGE DEPTH: _____

START TIME: 4:50 END TIME: _____

TOTAL GALLONS PURGED:

INSTRUMENT CALIBRATION

Instrument	Field measure	Standard measure
Conductivity		
pH		
pH		See MW-3
Turbidity		
Temperature		
Depth Probe		

SAMPLES: Field I.D. Time Collected Containers & Preservation

COMMENTS:

Time	5:00	5:05	5:10	5:15	5:20		
Volume Purged (gallons)	3	6	9	11.5	13.5		
Temperature (degrees F or C)	18.8	19.2	19.8	21.5	21.4		
pH	7.04	7.06	7.18	7.22	7.24		
Specific Conductivity (millimhos)	1.043	2.15	2.07	1.016	1.000		
Turbidity/Color (NTU)	>200	>200	>200	>200	>200		
Odor							
Depth to Water during purge (feet)		10.91 / 11.15			11.44 / 11.86		
Number of Casing Volumes removed							
Purge Rate (gallons/minute)							

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COPY

Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: MW-1
Matrix: LIQUID
Analysis Method: EPA 8010
Lab Number: 9606E90-01

Sampled: 06/24/96
Received: 06/25/96

Analyzed: 07/08/96
Reported: 07/10/96

QC Batch Number: GC070596801009A
Instrument ID: GCHP9

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	50	N.D.
Bromoform	50	N.D.
Bromomethane	50	N.D.
Carbon Tetrachloride	50	N.D.
Chlorobenzene	50	N.D.
Chloroethane	50	N.D.
2-Chloroethylvinyl ether	50	N.D.
Chloroform	50	N.D.
Chloromethane	50	N.D.
Dibromochloromethane	50	N.D.
1,2-Dichlorobenzene	50	N.D.
1,3-Dichlorobenzene	50	N.D.
1,4-Dichlorobenzene	50	N.D.
1,1-Dichloroethane	**50**	**88**
1,2-Dichloroethane	50	N.D.
1,1-Dichloroethene	50	N.D.
cis-1,2-Dichloroethene	**50**	**2800**
trans-1,2-Dichloroethene	**50**	**110**
1,2-Dichloropropane	50	N.D.
cis-1,3-Dichloropropene	50	N.D.
trans-1,3-Dichloropropene	50	N.D.
Methylene chloride	500	N.D.
1,1,2,2-Tetrachloroethane	50	N.D.
Tetrachloroethene	50	N.D.
1,1,1-Trichloroethane	50	N.D.
1,1,2-Trichloroethane	50	N.D.
Trichloroethene	50	N.D.
Trichlorofluoromethane	50	N.D.
Vinyl chloride	**50**	**3100**
Freon 113	50	N.D.

Surrogates	Control Limits %		% Recovery
1-Chloro-2-fluorobenzene	70	130	98

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: MW-1
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9606E90-01

Sampled: 06/24/96
Received: 06/25/96
Extracted: 06/28/96
Analyzed: 07/02/96
Reported: 07/10/96

QC Batch Number: GC0626960HBPEXA
Instrument ID: GCHP5B

Fuel Fingerprint

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable Hydrocarbons	1000	39000
Chromatogram Pattern:	C9-C14	DIESEL+

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

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Project Manager

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San Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: MW-1
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9606E90-01

Sampled: 06/24/96
Received: 06/25/96

Analyzed: 07/01/96
Reported: 07/10/96

QC Batch Number: GC070196BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	5000	7800
Benzene	50	530
Toluene	50	1000
Ethyl Benzene	50	130
Xylenes (Total)	50	860
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	110

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

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Project Manager

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Erler & Kalinowski, Inc.
730 South Amphlett, Ste 320
an Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: MW-2
Matrix: LIQUID
Analysis Method: EPA 8010
Lab Number: 9606E90-02

Sampled: 06/24/96
Received: 06/25/96

Analyzed: 07/08/96
Reported: 07/10/96

Batch Number: GC070596801009A
Instrument ID: GCHP9

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/L	Sample Results ug/L
romodichloromethane	2.5	N.D.
romoform	2.5	N.D.
Bromomethane	2.5	N.D.
Carbon Tetrachloride	2.5	N.D.
hlorobenzene	**2.5**	**7.4**
hloroethane	**2.5**	**6.2**
2-Chloroethylvinyl ether	2.5	N.D.
Chloroform	2.5	N.D.
hloromethane	2.5	N.D.
bromochloromethane	2.5	N.D.
1,2-Dichlorobenzene	**2.5**	**88**
1,3-Dichlorobenzene	**2.5**	**4.0**
4-Dichlorobenzene	**2.5**	**18**
1-Dichloroethane	**2.5**	**15**
1,2-Dichloroethane	2.5	N.D.
1,1-Dichloroethene	2.5	N.D.
s-1,2-Dichloroethene	**2.5**	**20**
ans-1,2-Dichloroethene	2.5	N.D.
1,2-Dichloropropane	2.5	N.D.
cis-1,3-Dichloropropene	2.5	N.D.
ans-1,3-Dichloropropene	2.5	N.D.
ethylene chloride	25	N.D.
1,1,2,2-Tetrachloroethane	2.5	N.D.
Tetrachloroethene	2.5	N.D.
1,1,1-Trichloroethane	2.5	N.D.
1,2-Trichloroethane	2.5	N.D.
Trichloroethene	**2.5**	**3.8**
Trichlorofluoromethane	2.5	N.D.
nyl chloride	**2.5**	**4.1**
eon 113	2.5	N.D.

Surrogates	Control Limits %		% Recovery
Chloro-2-fluorobenzene	70	130	94

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

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Erler & Kalinowski, Inc.
[illegible]30 South Amphlett, Ste 320
[illegible]n Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: MW-2
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9606E90-02

Sampled: 06/24/96
Received: 06/25/96
Extracted: 06/28/96
Analyzed: 06/30/96
Reported: 07/10/96

QC Batch Number: GC0626960HBPEXA
Instrument ID: GCHP4B

Fuel Fingerprint

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable Hydrocarbons	250	12000
Chromatogram Pattern:		
Unidentified HC		C9-C36

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	357 Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

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1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: MW-2
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9606E90-02

Sampled: 06/24/96
Received: 06/25/96

Analyzed: 07/01/96
Reported: 07/10/96

QC Batch Number: GC070196BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	1000	2700
Benzene	10	19
Toluene	10	N.D.
Ethyl Benzene	10	170
Xylenes (Total)	10	340
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	105

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

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[illegible]30 South Amphlett, Ste 320
[illegible]n Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: MW-3
Matrix: LIQUID
Analysis Method: EPA 8010
Lab Number: 9606E90-03

Sampled: 06/24/96
Received: 06/25/96

Analyzed: 07/08/96
Reported: 07/10/96

QC Batch Number: GC070896801009A
Instrument ID: GCHP9

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/L	Sample Results ug/L
[illegible]omodichloromethane	0.50	N.D.
[illegible]omoform	0.50	N.D.
Bromomethane	0.50	N.D.
Carbon Tetrachloride	0.50	N.D.
[illegible]hlorobenzene	0.50	N.D.
[illegible]hloroethane	**0.50**	**1.0**
2-Chloroethylvinyl ether	0.50	N.D.
Chloroform	0.50	N.D.
[illegible]hloromethane	0.50	N.D.
[illegible]bromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	0.50	N.D.
1,3-Dichlorobenzene	0.50	N.D.
[illegible]4-Dichlorobenzene	0.50	N.D.
[illegible]1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	0.50	N.D.
[illegible]s-1,2-Dichloroethene	0.50	N.D.
[illegible]ans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
[illegible]ans-1,3-Dichloropropene	0.50	N.D.
[illegible]ethylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	N.D.
[illegible]1,1-Trichloroethane	0.50	N.D.
[illegible]1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	0.50	N.D.
[illegible]nyl chloride	0.50	N.D.
[illegible]eon 113	0.50	N.D.

Surrogates	Control Limits %		% Recovery
[illegible]Chloro-2-fluorobenzene	70	130	85

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: MW-3
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9606E90-03

Sampled: 06/24/96
Received: 06/25/96
Extracted: 06/28/96
Analyzed: 06/30/96
Reported: 07/10/96

QC Batch Number: GC0626960HBPEXA
Instrument ID: GCHP4B

Fuel Fingerprint

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable Hydrocarbons	100	4900
Chromatogram Pattern:		
Unidentified HC		C9-C36

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	251 Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

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San Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: MW-3
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9606E90-03

Sampled: 06/24/96
Received: 06/25/96

Analyzed: 07/02/96
Reported: 07/10/96

QC Batch Number: GC070296BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**57**
Benzene	**0.50**	**6.3**
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		**Gas**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	106

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

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San Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: MW-4
Matrix: LIQUID
Analysis Method: EPA 8010
Lab Number: 9606E90-04

Sampled: 06/24/96
Received: 06/25/96

Analyzed: 07/08/96
Reported: 07/10/96

QC Batch Number: GC070596801009A
Instrument ID: GCHP9

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
Carbon Tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethylvinyl ether	100	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,2-Dichlorobenzene	100	N.D.
1,3-Dichlorobenzene	100	N.D.
1,4-Dichlorobenzene	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	**100**	**3100**
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Methylene chloride	1000	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl chloride	**100**	**4200**
Freon 113	100	N.D.

Surrogates	Control Limits %		% Recovery
Chloro-2-fluorobenzene	70	130	93

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

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San Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: MW-4
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9606E90-04

Sampled: 06/24/96
Received: 06/25/96
Extracted: 06/28/96
Analyzed: 07/02/96
Reported: 07/10/96

QC Batch Number: GC0626960HBPEXA
Instrument ID: GCHP5B

Fuel Fingerprint

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable Hydrocarbons	100000	850000
Chromatogram Pattern:		
Unidentified HC		C9-C40

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

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Erler & Kalinowski, Inc.
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San Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: MW-4
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9606E90-04

Sampled: 06/24/96
Received: 06/25/96

Analyzed: 07/02/96
Reported: 07/10/96

QC Batch Number: GC070296BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	1000	5500
Benzene	10	140
Toluene	10	13
Ethyl Benzene	10	87
Xylenes (Total)	10	150
Chromatogram Pattern:		Gas
Unidentified HC		>C11

Surrogates	Control Limits %		% Recovery
4-Bromofluorotoluene	70	130	108

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

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1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: MW-5
Matrix: LIQUID
Analysis Method: EPA 8010
Lab Number: 9606E90-05

Sampled: 06/24/96
Received: 06/25/96

Analyzed: 07/08/96
Reported: 07/10/96

QC Batch Number: GC070596801009A
Instrument ID: GCHP9

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
Carbon Tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethylvinyl ether	100	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,2-Dichlorobenzene	100	N.D.
1,3-Dichlorobenzene	100	N.D.
1,4-Dichlorobenzene	100	N.D.
1,1-Dichloroethane	**100**	**150**
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	**100**	**2800**
trans-1,2-Dichloroethene	**100**	**160**
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Methylene chloride	1000	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl chloride	**100**	**4200**
Freon 113	100	N.D.

Surrogates	Control Limits %		% Recovery
1-Chloro-2-fluorobenzene	70	130	95

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: MW-5
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9606E90-05

Sampled: 06/24/96
Received: 06/25/96
Extracted: 06/28/96
Analyzed: 07/02/96
Reported: 07/10/96

QC Batch Number: GC0626960HBPEXA
Instrument ID: GCHP5B

Fuel Fingerprint

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable Hydrocarbons	5000	520000
Chromatogram Pattern:		
Unidentified HC		C9-C40

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

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[illegible]n Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: MW-5
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9606E90-05

Sampled: 06/24/96
Received: 06/25/96

Analyzed: 07/02/96
Reported: 07/10/96

QC Batch Number: GC070296BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	1000	2000
Benzene	10	97
Toluene	10	160
Ethyl Benzene	10	48
Xylenes (Total)	10	150
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	104

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
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1[illegible]0 South Amphlett, Ste 320
S[illegible]n Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: Method Blank
Matrix: LIQUID
Analysis Method: EPA 8010
Lab Number: 9606E90-06

Sampled:
Received: 06/25/96

Analyzed: 07/08/96
Reported: 07/10/96

QC Batch Number: GC0705968801009A
Instrument ID: GCHP9

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	0.50	N.D.
Carbon Tetrachloride	0.50	N.D.
Chlorobenzene	0.50	N.D.
Chloroethane	0.50	N.D.
2-Chloroethylvinyl ether	0.50	N.D.
Chloroform	0.50	N.D.
Chloromethane	0.50	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	0.50	N.D.
1,3-Dichlorobenzene	0.50	N.D.
1,4-Dichlorobenzene	0.50	N.D.
1,1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	0.50	N.D.
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	N.D.
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	0.50	N.D.
Freon 113	0.50	N.D.

Surrogates	Control Limits %		% Recovery
1-Chloro-2-fluorobenzene	70	130	82

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

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Erler & Kalinowski, Inc.
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[illegible]n Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: Method Blank
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9606E90-06

Sampled:
Received: 06/25/96

Analyzed: 07/02/96
Reported: 07/10/96

QC Batch Number: GC070296BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	108

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

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Erler & Kalinowski, Inc.
1330 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: Method Blank
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9606E90-06

Sampled:
Received: 06/25/96
Extracted: 06/28/96
Analyzed: 06/29/96
Reported: 07/10/96

QC Batch Number: GC0626960HBPEXA
Instrument ID: GCHP4A

Fuel Fingerprint

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable Hydrocarbons Chromatogram Pattern:	50	N.D.

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	129

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

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Erler & Kalinowski, Inc.
730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: MW-5 DUP
Matrix: LIQUID
Analysis Method: EPA 8010
Lab Number: 9606E90-07

Sampled: 06/24/96
Received: 06/25/96

Analyzed: 07/08/96
Reported: 07/10/96

QC Batch Number: GC070596801009A
Instrument ID: GCHP9

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
Carbon Tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethylvinyl ether	100	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,2-Dichlorobenzene	100	N.D.
1,3-Dichlorobenzene	100	N.D.
1,4-Dichlorobenzene	100	N.D.
1,1-Dichloroethane	**100**	**140**
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	**100**	**2800**
trans-1,2-Dichloroethene	**100**	**170**
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Methylene chloride	1000	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl chloride	**100**	**4100**
Freon 113	100	N.D.

Surrogates	Control Limits %		% Recovery
4-Chloro-2-fluorobenzene	70	130	93

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

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San Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: MW-5 DUP
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9606E90-07

Sampled: 06/24/96
Received: 06/25/96
Extracted: 06/28/96
Analyzed: 07/01/96
Reported: 07/10/96

QC Batch Number: GC0626960HBPEXA
Instrument ID: GCHP5B

Fuel Fingerprint

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable Hydrocarbons	5000	360000
Chromatogram Pattern:		
Unidentified HC		C9-C40

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

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San Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: MW-5 DUP
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9606E90-07

Sampled: 06/24/96
Received: 06/25/96

Analyzed: 07/02/96
Reported: 07/10/96

QC Batch Number: GC070296BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	1000	2200
Benzene	10	95
Toluene	10	150
Ethyl Benzene	10	50
Xylenes (Total)	10	160
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	105

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

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Erler & Kalinowski, Inc.
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San Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: ERB-1
Matrix: LIQUID
Analysis Method: EPA 8010
Lab Number: 9606E90-08

Sampled: 06/24/96
Received: 06/25/96

Analyzed: 07/08/96
Reported: 07/10/96

QC Batch Number: GC070596801009A
Instrument ID: GCHP9

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	0.50	N.D.
Carbon Tetrachloride	0.50	N.D.
Chlorobenzene	0.50	N.D.
Chloroethane	0.50	N.D.
2-Chloroethylvinyl ether	0.50	N.D.
Chloroform	0.50	N.D.
Chloromethane	0.50	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	0.50	N.D.
1,3-Dichlorobenzene	0.50	N.D.
1,4-Dichlorobenzene	0.50	N.D.
1,1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	0.50	N.D.
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	N.D.
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	0.50	N.D.
Freon 113	0.50	N.D.

Surrogates	Control Limits %		% Recovery
1-Chloro-2-fluorobenzene	70	130	89

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
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[illegible]n Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: ERB-1
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9606E90-08

Sampled: 06/24/96
Received: 06/25/96
Extracted: 06/28/96
Analyzed: 06/29/96
Reported: 07/10/96

QC Batch Number: GC0626960HBPEXA
Instrument ID: GCHP4B

Fuel Fingerprint

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable Hydrocarbons Chromatogram Pattern:	50	N.D.

Surrogates	Control Limits %		% Recovery
Pentacosane (C25)	50	150	127

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

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n Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: ERB-1
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9606E90-08

Sampled: 06/24/96
Received: 06/25/96

Analyzed: 07/01/96
Reported: 07/10/96

Batch Number: GC070196BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
PH as Gas	50	N.D.
nzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
enes (Total)	0.50	N.D.
romatogram Pattern:		

Surrogates	Control Limits %		% Recovery
fluorotoluene	70	130	110

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

e Gregory
ect Manager

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Erler & Kalinowski, Inc.
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S[illegible]n Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: TB-1
Matrix: LIQUID
Analysis Method: EPA 8010
Lab Number: 9606E90-09

Sampled: 06/24/96
Received: 06/25/96

Analyzed: 07/08/96
Reported: 07/10/96

QC Batch Number: GC070596801009A
Instrument ID: GCHP9

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	0.50	N.D.
Carbon Tetrachloride	0.50	N.D.
Chlorobenzene	0.50	N.D.
Chloroethane	0.50	N.D.
2-Chloroethylvinyl ether	0.50	N.D.
Chloroform	0.50	N.D.
Chloromethane	0.50	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	0.50	N.D.
1,3-Dichlorobenzene	0.50	N.D.
1,4-Dichlorobenzene	0.50	N.D.
1,1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	0.50	N.D.
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	N.D.
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	0.50	N.D.
Freon 113	0.50	N.D.

Surrogates	Control Limits %		% Recovery
Chloro-2-fluorobenzene	70	130	88

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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San Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: TB-1
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9606E90-09

Sampled: 06/24/96
Received: 06/25/96
Extracted: 06/28/96
Analyzed: 06/29/96
Reported: 07/10/96

QC Batch Number: GC0626960HBPEXA
Instrument ID: GCHP4B

Fuel Fingerprint

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable Hydrocarbons	50	92
Chromatogram Pattern:		
Unidentified HC		C9-C32

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	134

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Erler & Kalinowski, Inc.
[illegible]30 South Amphlett, Ste 320
[illegible]n Mateo, CA 94402

Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Sample Descript: TB-1
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9606E90-09

Sampled: 06/24/96
Received: 06/25/96

Analyzed: 07/01/96
Reported: 07/10/96

QC Batch Number: GC070196BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	109

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402
Attention: Andy Safford

Client Proj. ID: 930040.01/ EKOTEK
Lab Proj. ID: 9606E90

Received: 06/25/96
Reported: 07/10/96

LABORATORY NARRATIVE

DIESEL: Some of the samples contain heavy oil.
#Q- High surrogate recovery due to co-ellution.
Q- No surrogate recovery due to dilution.

SEQUOIA ANALYTICAL

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Project Manager

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Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Andy Safford

Client Project ID: 930040.01/EKOTEK
Matrix: LIQUID
Sample Descript: XSD
Work Order #: 9606E90 01, 02, 04, 05, 07-09

Reported: Jul 11, 1996

QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloro-ethene	Trichloro-ethene	Chloro-benzene
QC Batch#:	GC070596801009A	GC070596801009A	GC070596801009A
Analy. Method:	EPA 8010	EPA 8010	EPA 8010
Prep. Method:	EPA 5030	EPA 5030	EPA 5030
Analyst:	R. Vincent	R. Vincent	R. Vincent
MS/MSD #:	9606E91-01-XSD	9606E91-01-XSD	9606E91-01-XSD
Sample Conc.:	ND.	ND.	ND.
Prepared Date:	07/05/96	07/05/96	07/05/96
Analyzed Date:	07/05/96	07/05/96	07/05/96
Instrument I.D.#:	GCHP9	GCHP9	GCHP9
Conc. Spiked:	25 µg/L	25 µg/L	25 µg/L
Result:	21	21	23
MS % Recovery:	84	84	92
Dup. Result:	21	21	23
MSD % Recov.:	84	84	92
RPD:	0.0	0.0	0.0
RPD Limit:	0-25	0-25	0-25

LCS #:	LCS070896-LCS	LCS070896-LCS	LCS070896-LCS
Prepared Date:	07/08/96	07/08/96	07/08/96
Analyzed Date:	07/08/96	07/08/96	07/08/96
Instrument I.D.#:	GCHP9	GCHP9	GCHP9
Conc. Spiked:	25 µg/L	25 µg/L	25 µg/L
LCS Result:	28	29	25
LCS % Recov.:	112	116	100

MS/MSD	60-140	60-140	60-140
LCS	65-135	70-130	70-130
Control Limits			

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Erler & Kalinowski, Inc.	Client Project ID:	930040.01/EKOTEK	
1730 So. Amphlett Blvd., Suite 320	Matrix:	LIQUID	
San Mateo, CA 94402	Sample Descript:	MW-3	
Attention: Andy Safford	Work Order #:	9606E90 -03	Reported: Jul 11, 1996

QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloro-ethene	Trichloro-ethene	Chloro-benzene
QC Batch#:	GC070896801009A	GC070896801009A	GC070896801009A
Analy. Method:	EPA 8010	EPA 8010	EPA 8010
Prep. Method:	EPA 5030	EPA 5030	EPA 5030
Analyst:	R. Vincent	R. Vincent	R. Vincent
MS/MSD #:	9606E90-03-MSD	9606E90-03-MSD	9606E90-03-MSD
Sample Conc.:	ND.	ND.	ND.
Prepared Date:	07/08/96	07/08/96	07/08/96
Analyzed Date:	07/08/96	07/08/96	07/08/96
Instrument I.D.#:	GCHP9	GCHP9	GCHP9
Conc. Spiked:	50 µg/L	50 µg/L	50 µg/L
Result:	51	50	47
MS % Recovery:	102	100	94
Dup. Result:	54	57	52
MSD % Recov.:	108	114	104
RPD:	5.7	13	10.0
RPD Limit:	0-25	0-25	0-25

LCS #:	LCS070896-LCS	LCS070896-LCS	LCS070896-LCS
Prepared Date:	07/08/96	07/08/96	07/08/96
Analyzed Date:	07/10/96	07/10/96	07/10/96
Instrument I.D.#:	GCHP9	GCHP9	GCHP9
Conc. Spiked:	25 µg/L	25 µg/L	25 µg/L
LCS Result:	28	29	25
LCS % Recov.:	112	116	100
MS/MSD	60-140	60-140	60-140
LCS	65-135	70-130	70-130
Control Limits			

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Erler & Kalinowski, Inc.	Client Project ID:	930040.01/EKOTEK	
1730 So. Amphlett Blvd., Suite 320	Matrix:	LIQUID	
San Mateo, CA 94402	Sample Descript:	BLK	
Attention: Andy Safford	Work Order #:	9606E90 -01 - 09	Reported: Jul 11, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Diesel
QC Batch#:	GC062696HBPEXA
Analy. Method:	EPA 8015 M
Prep. Method:	EPA 3510
Analyst:	J. Minkel
MS/MSD #:	BLK062696-BLK
Sample Conc.:	N.D.
Prepared Date:	06/26/96
Analyzed Date:	06/26/96
Instrument I.D.#:	GCHP4B
Conc. Spiked:	1000 µg/L
Result:	740
MS % Recovery:	74
Dup. Result:	720
MSD % Recov.:	72
RPD:	2.7
RPD Limit:	0-50

LCS #:	
Prepared Date:	
Analyzed Date:	
Instrument I.D.#:	
Conc. Spiked:	
LCS Result:	
LCS % Recov.:	

MS/MSD LCS Control Limits	60-140

SEQUOIA ANALYTICAL

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Project Manager

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Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Andy Safford

Client Project ID: 930040.01/EKOTEK
Matrix: LIQUID
Sample Descript: XSD
Work Order #: 9606E90 -01, 02, 08, 09

Reported: Jul 11, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC070196BTEX21A	GC070196BTEX21A	GC070196BTEX21A	GC070196BTEX21A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	J. Woo	J. Woo	J. Woo	J. Woo
MS/MSD #:	9606A76-07-XSD	9606A76-07-XSD	9606A76-07-XSD	9606A76-07-XSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	07/01/96	07/01/96	07/01/96	07/01/96
Analyzed Date:	07/01/96	07/01/96	07/01/96	07/01/96
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 ug/L	10 ug/L	10 ug/L	30 ug/L
Result:	10	9.9	10	30
MS % Recovery:	100	99	100	100
Dup. Result:	10	9.9	10	30
MSD % Recov.:	100	99	100	100
RPD:	0.0	0.0	0.0	0.0
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	LCS070196-LCS	LCS070196-LCS	LCS070196-LCS	LCS070196-LCS
Prepared Date:	07/01/96	07/01/96	07/01/96	07/01/96
Analyzed Date:	07/01/96	07/01/96	07/01/96	07/01/96
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 ug/L	10 ug/L	10 ug/L	30 ug/L
LCS Result:	11	10	10	32
LCS % Recov.:	110	100	100	107
MS/MSD Control Limits	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130

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SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

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Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Andy Safford

Client Project ID: 930040.01/EKOTEK
Matrix: LIQUID
Sample Descript: XSD
Work Order #: 9606E90 -03- 07

Reported: Jul 11, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC070296BTEX17A	GC070296BTEX17A	GC070296BTEX17A	GC070296BTEX17A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	J. Woo	J. Woo	J. Woo	J. Woo
MS/MSD #:	9606E61-03-XSD	9606E61-03-XSD	9606E61-03-XSD	9606E61-03-XSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	07/02/96	07/02/96	07/02/96	07/02/96
Analyzed Date:	07/02/96	07/02/96	07/02/96	07/02/96
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 ug/L	10 ug/L	10 ug/L	30 ug/L
Result:	9.1	9.0	8.9	26
MS % Recovery:	91	90	89	87
Dup. Result:	9.4	9.2	9.1	27
MSD % Recov.:	94	92	91	90
RPD:	3.2	2.2	2.2	3.8
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	LCS070296-LCS	LCS070296-LCS	LCS070296-LCS	LCS070296-LCS
Prepared Date:	07/02/96	07/02/96	07/02/96	07/02/96
Analyzed Date:	07/02/96	07/02/96	07/02/96	07/02/96
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 ug/L	10 ug/L	10 ug/L	30 ug/L
LCS Result:	11	11	11	32
LCS % Recov.:	110	110	110	107
MS/MSD	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130
Control Limits				

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

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9606190

CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

Erler & Kalinowski, Inc.

Project Number: EKI 93004001

Project Name: Ekotek

Source of Samples: monitoring wells

Location: 4200 Alameda Avenue, Oakland

Analytical Laboratory: Sequoia Analytical

Date Sampled: 24 June 1996

Sampled By: BBH / CDH

Report Results To: Andy Saffel

Phone Number: 415) 578-1172

Lab Sample I D	Field Sample I D	Sample Type	Number and Type of Containers	Time Collected	Analyses Requested (EPA Method Number)	Results Required By (Date/Time)
1 A, C-G	MW-1	water w/ product	6 40 ml VOA's w/ HCL	6:30p	~~TPPH~~ TPPH w/ BTEX (8015m), Halogenated VOCs (8010)	standard Turnaround Time
1 B	MW-1		1 amber liter	6:30p	TEPH - fuel fingerprint (8015m)	
2 A, C-G	MW-2		6 40ml VOA's w/ HCL	7:00p	TPPH w/ BTEX (8015m), Hal. VOCs (8010)	
2 B	MW-2		1 amber liter	7:00p	TEPH - fuel fingerprint (8015m) ~~Halogenated VOCs (8010)~~	
3 A, C-G	MW-3		6 or 40 ml VOA's w/ HCL	7:15p	TPPH w/ BTEX (8015m), Hal. VOCs (8010)	
3 B	MW-3		1 amber liter ~~6 40 ml VOA's w/ HCL~~	7:15p	TEPH - fuel fingerprint (8015m)	
4 A, C-G	MW-4		6 40 ml VOA's w/ HCl	6:15p	TPPH w/ BTEX (8015m), Hal. VOCs (8010)	
4 B	MW-4		1 amber liter	6:15p	TEPH - fuel fingerprint (8015m)	
5 A, C-G	MW-5		6 40 ml VOAs w/ HCl	6:00p	TPPH w/ BTEX (8015m), Hal. VOCs (8010)	
5 B	MW-5		1 amber liter	6:00p	TEPH - fuel fingerprint (8015m)	
7 A, C	MW-5 DUP		~~2~~ 2-40 ml VOA's w/ HCl	6:00p	TPPH w/ BTEX (8015m), Hal. VOCs (8010)	

Special Instructions:

Relinquished By: Name / Signature / Affiliation	Date	Time	Received By: Name / Signature / Affiliation
C. David Umeaki / C. D — / EKI	6/24	8:00p	
	6/25/96	1105	Mike Lee / Sequoia

9606190

CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

Erler & Kalinowski, Inc.

Project Number: EKI 930040.01

Project Name: Elcotek

Source of Samples: Monitoring wells

Location: 4200 Alameda Ave., Oakland

Analytical Laboratory: Sequoia Analytical

Date Sampled: 24 June 1996

Sampled By: BBH/CDL

Report Results To: Andy Safford

Phone Number: 415) 578-1172

Lab Sample I D	Field Sample I D	Sample Type	Number and Type of Containers	Time Collected	Analyses Requested (EPA Method Number)	Results Required By (Date/Time)
7 B	MW-5 DUP	water w/ preservative	1 amber liter	6:00p	TEPH - fuel fingerprint (8015m)	Standard TAT
8 B	ERB-1		1 amber liter	6:00p	TEPH - fuel fingerprint (8015m)	
8 A,C	ERB-1		2 40ml VOA's	6:00p	TPPH w/ BTEX (8015m), Hal. VOCs (8010)	
9 B	TB-1		1 amber liter	6:00p	TEPH - fuel fingerprint (8015m)	
9 A,C	TB-1		2 40 ml VOA's	6:00p	TPPH w/ BTEX (8015m), Hal. VOCs (8010)	

Special Instructions:

Relinquished By: Name / Signature / Affiliation	Date	Time	Received By: Name / Signature / Affiliation
A. David Umezaki /s/ D. U. /EKI	6/24	8:00p	
	6/25/96	1105	U. Hicks / [signature] / Sequoia