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ENVIRONMENTAL PROTECTION
98 MAY 21 AM 9:01

18 May 1998

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

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- fp prevalent - not addressed in RMP

Subject: Groundwater Sampling Results for January 1998
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 January 1998 at the property located at 4200 Alameda Avenue in Oakland, California ("the site"). These analytical results represent the first semiannual monitoring event for 1998.

GROUNDWATER MONITORING WELL SAMPLING PROCEDURES

EKI sampled the five existing monitoring wells at the site on 28 January 1998. Prior to collecting water samples, EKI measured depths to groundwater, the depths to floating product, if any, and the total depths of wells to determine the casing volume of each well to be purged. Any floating product present was first purged with a peristaltic pump. A compilation of hydrocarbon thickness and groundwater elevation measurements performed at the site is presented in Table 1.

A hand bailer was then used to purge groundwater from each well. The peristaltic pump tubing and bailer were 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 the until the well dewatered. Groundwater purge records are included as Attachment A.

EKI used a new disposable polyethylene 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 JANUARY 1998

Immiscible hydrocarbons were noted in two of the five monitoring wells constructed at the site. 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. On 28 January 1998, floating hydrocarbons measured 0.48 feet thick in well MW-4 and 1.81 feet thick in well MW-5.

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 hydrocarbons by modified EPA Method 8015
- Halogenated volatile organic compounds by EPA Method 8010

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. Review of these tables and figures indicates that chemical concentrations in groundwater at the site remain essentially unchanged from the results of previous sampling events.

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. To further assess the nature of the hydrocarbons, Sequoia Analytical conducted Fuel Fingerprints of collected groundwater samples. These additional analyses are compiled in Attachment B. The laboratory analytical reports describe the Fuel Fingerprints of petroleum hydrocarbons as unidentified petroleum hydrocarbons with carbon chain lengths in the range of C_9 to C_{40}.

diesel + m.o.

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. The detected concentrations for January 1998 are set forth in Tables 3 and 4 and shown on Figure 2. The actual dissolved concentrations of these chemicals in groundwater are unknown, however. Because 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.

QUALITY ASSURANCE/QUALITY CONTROL PROCEDURES

Review of matrix spike, matrix spike duplicate, and laboratory control spike analytical results included with the laboratory reports (Attachment B) indicate that acceptable accuracy and precision were achieved.

Please call if you have questions or wish to discuss this report in greater detail.

Very truly yours,

ERLER & KALINOWSKI, INC.

Andrew N. Safford, P.E.
Project Manager

Theodore G. Erler, P.E.
President

TABLE 1
SUMMARY OF WATER LEVEL MEASUREMENTS

4200 Alameda Avenue, Oakland, California

Well ID	Reference Elevation (ft, msl); (a)	Sample Date	Depth to Hydrocarbon (ft)	Depth to Groundwater (ft)	Thickness of Hydrocarbon (ft)	Groundwater Surface Elevation (ft, msl); (b)
MW-1	15.00	7/26/95	-	10.07	-	4.93
		8/28/95	-	10.75	-	4.25
		9/12/95	11.03	11.05	0.02	3.97
		1/2/96	-	10.38	-	4.62
		1/3/96	-	10.23	-	4.77
	14.86 (c)	5/8/96	-	8.77	-	6.09
		6/3/96	-	8.99	-	5.87
		6/24/96	-	9.36	-	5.50
		7/8/96	-	9.76	-	5.10
		8/7/96	10.41	10.42	0.01	4.45
		9/4/96	10.66	10.70	0.04	4.20
		9/18/96	10.88	10.94	0.06	3.97
		10/1/96	11.02	11.11	0.09	3.83
	14.58 (d)	11/7/96	11.75	11.91	0.16	2.82
		12/6/96	11.86	11.93	0.07	2.72
		1/8/97	12.01	12.17	0.16	2.56
		1/24/97	-	10.95	-	3.63
		1/27/97	-	9.57	-	5.01
		2/4/97	-	9.08	-	5.50
		3/7/97	-	9.70	-	4.88
		4/8/97	10.80	10.83	0.03	3.78
		5/8/97	11.10	11.12	0.02	3.48
		6/6/97	9.78	12.51	2.73	4.03
		7/24/97	10.31	10.32	0.01	4.27
		9/3/97	10.46	10.52	0.06	4.12
		1/28/98	-	10.50	-	4.08

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Well ID	Reference Elevation (ft, msl); (a)	Sample Date	Depth to Hydrocarbon (ft)	Depth to Groundwater (ft)	Thickness of Hydrocarbon (ft)	Groundwater Surface Elevation (ft, msl); (b)
MW-2	14.10	7/26/95	-	6.39	-	7.71
		8/28/95	-	8.10	-	6.00
		9/12/95	-	8.63	-	5.47
		1/2/96	-	7.89	-	6.21
		1/3/96	-	7.39	-	6.71
	14.12 (c)	5/8/96	-	6.43	-	7.69
		6/3/96	-	7.04	-	7.08
		6/24/96	-	7.78	-	6.34
		7/8/96	-	7.97	-	6.15
		8/7/96	8.08	8.09	0.01	6.04
		9/4/96	8.64	8.66	0.02	5.48
		9/18/96	8.76	8.78	0.02	5.36
		10/1/96	-	8.64	-	5.48
		11/7/96	8.84	8.87	0.03	5.28
		12/6/96	8.23	8.26	0.03	5.89
		1/8/97	-	7.24	-	6.88
		1/24/97	-	7.12	-	7.00
		1/27/97	-	7.31	-	6.81
		2/4/97	-	7.03	-	7.09
		3/7/97	-	7.01	-	7.11
		4/8/97	8.35	8.38	0.03	5.77
		5/8/97	7.86	7.87	0.01	6.26
		6/6/97	-	7.76	-	6.36
		7/24/97	7.98	7.99	0.01	6.14
		9/3/97	-	7.94	-	6.18
		1/28/98	-	6.85	-	7.27

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MW-3	12.59	7/26/95	-	8.65	-	3.94
		8/28/95	-	9.27	-	3.32
		9/12/95	-	9.55	-	3.04
		1/2/96	-	4.06	-	8.53
		1/3/96	-	3.83	-	8.76
		5/8/96	-	5.92	-	6.67
		6/3/96	-	7.05	-	5.54
		6/24/96	-	8.62	-	3.97
		7/8/96	8.85	8.86	0.01	3.74
		8/7/96	9.28	9.29	0.01	3.31
		9/4/96	-	9.60	-	2.99
		9/18/96	-	9.78	-	2.81
		10/1/96	-	9.78	-	2.81
		11/7/96	-	7.96	-	4.63
		12/6/96	-	7.20	-	5.39
		1/8/97	-	4.34	-	8.25
		1/24/97	-	3.81	-	8.78
		1/27/97	-	3.92	-	8.67
		2/4/97	-	4.84	-	7.75
		3/7/97	-	6.34	-	6.25
		4/8/97	-	7.81	-	4.78
		5/8/97	-	7.94	-	4.65
		6/6/97	-	7.90	-	4.69
		7/24/97	-	9.41	-	3.18
		9/3/97	-	7.43	-	5.16
		1/28/98	-	4.68	-	7.91

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MW-4	13.47	7/26/95	-	9.95	-	3.52
		8/28/95	10.54	10.75	0.21	2.91
		9/12/95	10.72	11.13	0.41	2.71
		1/2/96	10.57	11.29	0.72	2.83
		1/3/96	11.23	11.23	0.00	2.24
	13.18 (c)	5/8/96	8.94	9.62	0.02	4.17
		6/3/96	9.14	9.83	0.02	3.97
		6/24/96	9.22	9.68	0.46	3.91
		7/8/96	9.41	9.92	0.51	3.72
		8/7/96	9.91	10.54	0.63	3.21
		9/4/96	10.27	11.06	0.79	2.83
		9/18/96	10.47	11.42	0.95	2.62
		10/1/96	10.60	11.57	0.97	2.48
		11/7/96	10.90	12.35	1.45	2.14
		12/6/96	10.57	11.72	1.15	2.50
		1/8/97	8.61	9.46	0.85	4.49
		1/24/97	8.41	9.16	0.75	4.70
		1/27/97	8.01	8.04	0.03	5.17
		2/4/97	8.12	8.35	0.23	5.04
		3/7/97	9.04	9.43	0.39	4.10
		4/8/97	9.59	10.02	0.43	3.55
		5/8/97	9.86	10.27	0.41	3.28
		6/6/97	10.13	10.65	0.52	3.00
		7/24/97	10.61	11.55	0.94	2.48
		9/3/97	10.68	11.69	1.01	2.40
		1/28/98	7.82	8.30	0.48	5.31

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MW-5	13.41	7/25/95	8.83	8.88	0.05	4.58
		8/28/95	9.30	11.32	2.02	3.91
		9/12/95	9.48	11.99	2.51	3.68
		1/2/96	8.63	10.93	2.30	4.55
		1/3/96	11.17	11.17	0.00	2.24
	14.41 (c)	5/8/96	8.10	13.34	0.02	5.79
		6/3/96	8.81	13.89	0.02	5.09
		6/24/96	8.84	11.21	2.37	5.33
		7/8/96	9.33	11.96	0.02	4.82
		8/7/96	9.90	13.10	3.20	4.19
		9/4/96	10.35	13.55	3.20	3.74
		9/18/96	10.58	13.74	3.16	3.51
		10/1/96	10.67	16.00	5.33	3.21
	14.08 (d)	11/7/96	10.70	13.59	2.89	3.09
		12/6/96	10.39	12.66	2.27	3.46
		1/8/97	8.96	10.84	1.88	4.93
		1/24/97	8.71	10.92	2.21	5.15
		1/27/97	8.76	9.23	0.47	5.27
		2/4/97	8.46	9.00	0.54	5.57
		3/7/97	9.01	10.47	1.46	4.93
		4/8/97	9.57	11.61	2.04	4.31
		5/8/97	9.65	12.05	2.40	4.19
		6/6/97	9.78	12.51	2.73	4.03
		7/24/97	10.30	13.25	2.95	3.49
		9/3/97	10.39	13.12	2.73	3.42
		1/28/98	8.15	9.96	1.81	5.75

Notes:

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

(b) Groundwater elevations have been adjusted for effect of floating hydrocarbons, if any, measured in wells. A specific gravity of 0.90 was assumed when compensating for the depression of the groundwater surface due to floating hydrocarbons.

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

(d) Monitoring well MW-1 casing was trimmed 0.275 feet and monitoring well MW-5 casing was trimmed 0.328 feet on 1 October 1996 to allow additional clearance for locking seals below surface completion of these wells.

TABLE 2
TOTAL PETROLEUM HYDROCARBON (TPH) ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
4200 Alameda Avenue, Oakland, California

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
	1/24/97	**7,900**	Pattern characteristic of gasoline	**30,000**	Unidentifiable pattern of hydrocarbons in C_9-C_{24} range
	7/24/97	**8,200**	Pattern characteristic of gasoline	**24,000**	Unidentifiable pattern of hydrocarbons in C_9-C_{24} range
	1/28/98	**6,500**	Pattern characteristic of gasoline	**59,000**	Unidentifiable pattern of hydrocarbons in C_9-C_{24} 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
	1/24/97	**4,300**	Pattern characteristic of gasoline	**7,200**	Pattern characteristic of weathered diesel or unidentified hydrocarbons in C_9-C_{24} range
	7/24/97	**2,000**	Pattern characteristic of gasoline	**5,400**	Unidentifiable pattern of hydrocarbons in C_9-C_{24} range
	7/24/97 dup	**2,000**	Pattern characteristic of gasoline	**6,200**	Unidentifiable pattern of hydrocarbons in C_9-C_{24} range
	1/28/98	**6,500**	Pattern characteristic of gasoline and unidentified hydrocarbons $>C_{10}$	**30,000**	Unidentifiable pattern of hydrocarbons in C_9-C_{24} range

TABLE 2
TOTAL PETROLEUM HYDROCARBON (TPH) ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
4200 Alameda Avenue, Oakland, California

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-3	7/25/95	**200**	Pattern characteristic of gasoline and unidentified hydrocarbons greater than C_8	**5,600**	Unidentified 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**	Unidentified pattern of hydrocarbons in C_9-C_{38} range
	6/24/96	**57**	Pattern characteristic of gasoline	**4,900**	Unidentified pattern of hydrocarbons in C_9-C_{38} range
	1/24/97	**170**	Pattern characteristic of gasoline and unidentified hydrocarbons greater than C_8	**2,100**	Pattern characteristic of weathered diesel or unidentified hydrocarbons in C_9-C_{24} range
	7/24/97	**1,500**	Pattern characteristic of gasoline and unidentified hydrocarbons in C_6-C_{12} range	**1,500**	Unidentifiable pattern of hydrocarbons in C_9-C_{24} range
	1/28/98	**210**	Pattern characteristic of gasoline and unidentified hydrocarbons in C_6-C_{12} range	**1,700**	Unidentifiable pattern of hydrocarbons in C_9-C_{24} 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**	Unidentified pattern of hydrocarbons in C_9-C_{40} range
	1/24/97	**3,500**	Pattern characteristic of gasoline and unidentified hydrocarbons greater than C_8	**33,000**	Pattern characteristic of weathered diesel or unidentified hydrocarbons in C_9-C_{24} range
	7/24/97	**3,400**	Pattern characteristic of gasoline	**6,400,000**	Pattern characteristic of weathered diesel or unidentified hydrocarbons in C_9-C_{24} range
	1/28/98	**3,000**	Pattern characteristic of gasoline and unidentified hydrocarbons in C_6-C_{12} range	**19,000**	Unidentifiable pattern of hydrocarbons in C_9-C_{24} range

TABLE 2
TOTAL PETROLEUM HYDROCARBON (TPH) ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
4200 Alameda Avenue, Oakland, California

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-5	7/26/95	**4,800**	Pattern characteristic of gasoline and unidentified hydrocarbons greater than C_{10}	**7,500**	Unidentified pattern of hydrocarbons in C_9-C_{34} range
	6/24/96	**2,000**	Pattern characteristic of gasoline	**520,000**	Unidentified pattern of hydrocarbons in C_9-C_{40} range
	6/24/96 dup	**2,200**	Pattern characteristic of gasoline	**360,000**	Unidentified pattern of hydrocarbons in C_9-C_{40} range
	1/24/97	**2,700**	Pattern characteristic of gasoline and unidentified hydrocarbons greater than C_8	**89,000**	Pattern characteristic of weathered diesel or unidentified hydrocarbons in C_9-C_{24} range
	1/24/97 dup	**4,200**	Pattern characteristic of gasoline and unidentified hydrocarbons greater than C_8	**25,000**	Pattern characteristic of weathered diesel or unidentified hydrocarbons in C_9-C_{24} range
	7/24/97	**3,000**	Pattern characteristic of gasoline	**3,000,000**	Pattern characteristic of weathered diesel or unidentified hydrocarbons in C_9-C_{24} range
	1/28/98	**2,500**	Pattern characteristic of gasoline	**18,000**	Unidentified pattern of hydrocarbons in C_9-C_{24} 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

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
	1/24/97	470	540	130	830
	7/24/97	480	310	120	720
	1/28/98	450	150	130	850
MW-2	7/26/95	36	37	130	660
	6/24/96	19	<10 (a)	170	340
	1/24/97	31	11	120	250
	7/24/97	25	5.9	56	150
	7/24/97 dup	62	2.3	<0.5	<0.5
	1/28/98	28	8.6	86	190
MW-3	7/25/95	6.2	<0.5	<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
	1/24/97	5.2	0.59	<0.5	1.0
	1/28/98	5.9	1.0	<0.5	0.89
MW-4	7/25/95	64	12	28	49
	6/24/96	140	13	87	150
	1/24/97	170	25	60	100
	7/24/97	86	<10	72	94
	1/28/98	230	21	83	67
MW-5	7/26/95	78	160	56	190
	6/24/96	97	160	48	150
	6/24/96 dup	95	150	50	160
	1/24/97	100	190	62	190
	1/24/97 dup	99	190	63	200
	7/24/97	100	210	69	210
	1/28/98	88	180	57	180

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

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	Tetrachloroethene	Trichloroethene	cis-1,2-dichloroethene	trans-1,2-dichloroethe	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
	1/24/97	41	43	<20	66	<20	68	31	<20	<20	750	68	1,100
	7/24/97	31	42	10	72	<10	34	21	<10	<10	480	50	650
	1/28/98	23	35	<10	68	<10	14	27	<10	<10	170	39	330
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
	1/24/97	<1.2	79	4.5	19	<1.2	7.9	11	<1.2	<1.2	2.0	<1.2	<2.5
	7/24/97	5.5	88	4.2	18	<2.5	4.0	7.4	<2.5	<2.5	<2.5	<2.5	<2.5
	7/24/97 dup	6.1	73	3.9	16	<1.0	4.3	7.4	<1.0	<1.0	1.4	<1.0	<1.0
	1/28/98	9.0	130	6.5	32	<2.5	2.6	5.7	<2.5	<2.5	<2.5	<2.5	<5.0
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
	1/24/97	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0
	7/24/97	<0.5	1.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0
	1/28/98	<0.5	2.4	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<1.0
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
	1/24/97	28	29	<25	<25	<25	42	43	<25	<25	1,500	49	2,000
	7/24/97	93	370	<50	160	<50	<50	<100	<50	<50	1,200	<50	1,900
	1/28/98	18	15	<10	<10	<10	12	30	<10	<10	210	23	360

TABLE 4
HALOGENATED VOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS OF GROUNDWATER SAMPLES

4200 Alameda Avenue, Oakland, California

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	Tetrachloroethene	Trichloroethene	cis-1,2-dichloroethene	trans-1,2-dichloroethe	Vinyl Chloride
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**
	1/24/97	<100	<100	<100	<100	<100	**190**	<100	<100	<100	**670**	**220**	**4,300**
	1/24/1997 dup	<100	<100	<100	<100	<100	**230**	<100	<100	<100	**840**	**260**	**4,900**
	7/24/97	<50	<50	<50	<50	<50	**210**	<100	<50	<50	**620**	**200**	**3,800**
	1/28/98	<25	<25	<25	<25	<25	**190**	**40**	<25	<25	**70**	**170**	**1,500**

Notes:

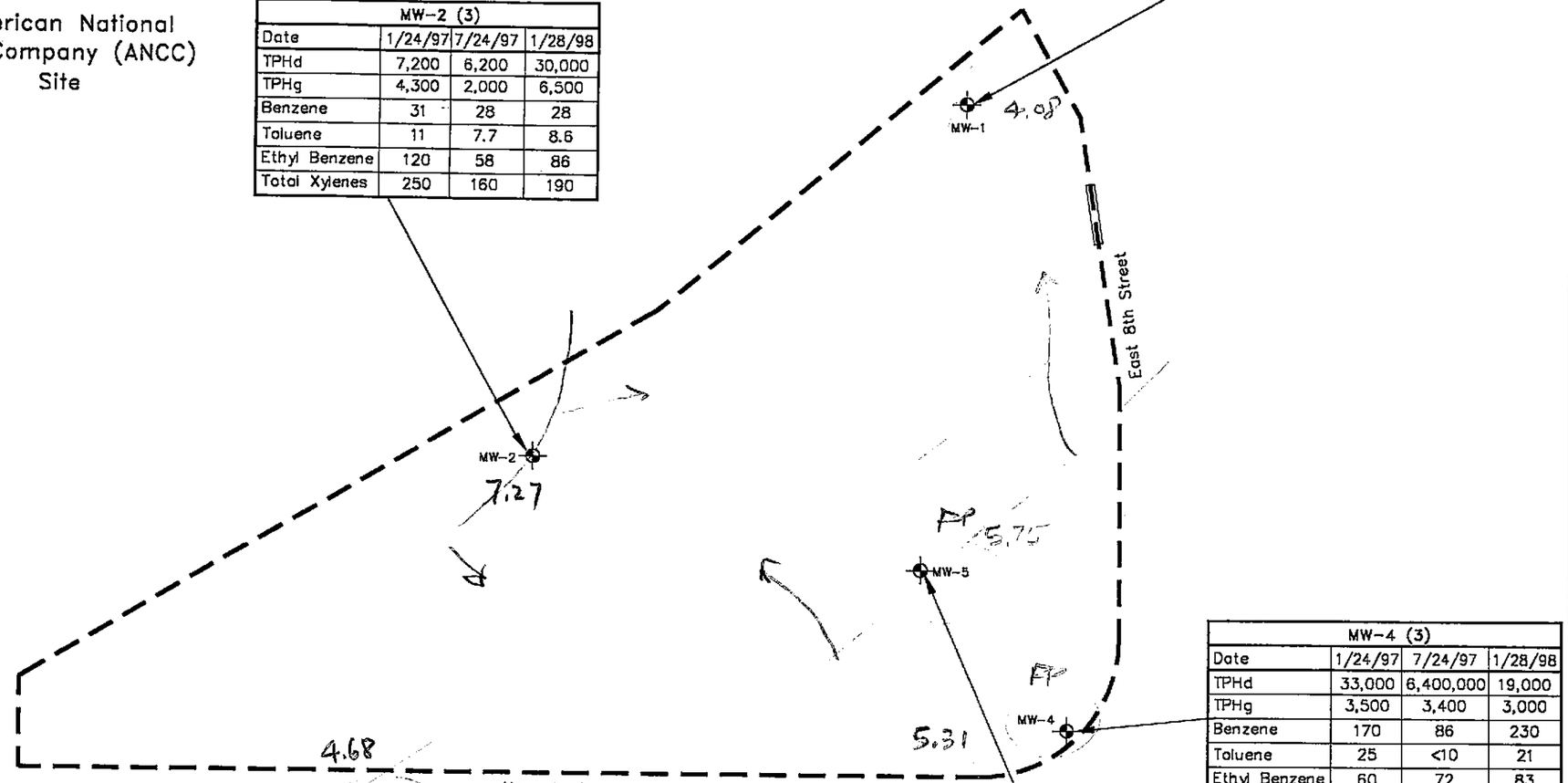
(a) Less than symbol ("<") denotes that compound was not present above the detection limit shown.

(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	1/24/97	7/24/97	1/28/98
TPHd	30,000	24,000	59,000
TPHg	7,900	8,200	6,500
Benzene	470	480	450
Toluene	540	310	150
Ethyl Benzene	130	120	130
Total Xylenes	830	720	850

MW-2 (3)			
Date	1/24/97	7/24/97	1/28/98
TPHd	7,200	6,200	30,000
TPHg	4,300	2,000	6,500
Benzene	31	28	28
Toluene	11	7.7	8.6
Ethyl Benzene	120	58	86
Total Xylenes	250	160	190



MW-4 (3)			
Date	1/24/97	7/24/97	1/28/98
TPHd	33,000	6,400,000	19,000
TPHg	3,500	3,400	3,000
Benzene	170	86	230
Toluene	25	<10	21
Ethyl Benzene	60	72	83
Total Xylenes	100	94	67

MW-5 (3)			
Date	1/24/97	7/24/97	1/28/98
TPHd	89,000	3,000,000	18,000
TPHg	4,200	3,000	2,500
Benzene	100	100	88
Toluene	190	210	180
Ethyl Benzene	63	69	57
Total Xylenes	200	210	180

MW-3 (3)			
Date	1/24/97	7/24/97	1/28/98
TPHd	2,100	1,500	1,700
TPHg	170	62	210
Benzene	5.2	2.3	5.9
Toluene	0.59	<0.5	1.0
Ethyl Benzene	<0.5	<0.5	<0.5
Total Xylenes	1.0	<0.5	0.89

N

0 40 80

(Approximate Scale in Feet)

LEGEND

Site Boundary

Monitoring Well

Abbreviations

TPHd Total Petroleum Hydrocarbons as Diesel Fuel

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.

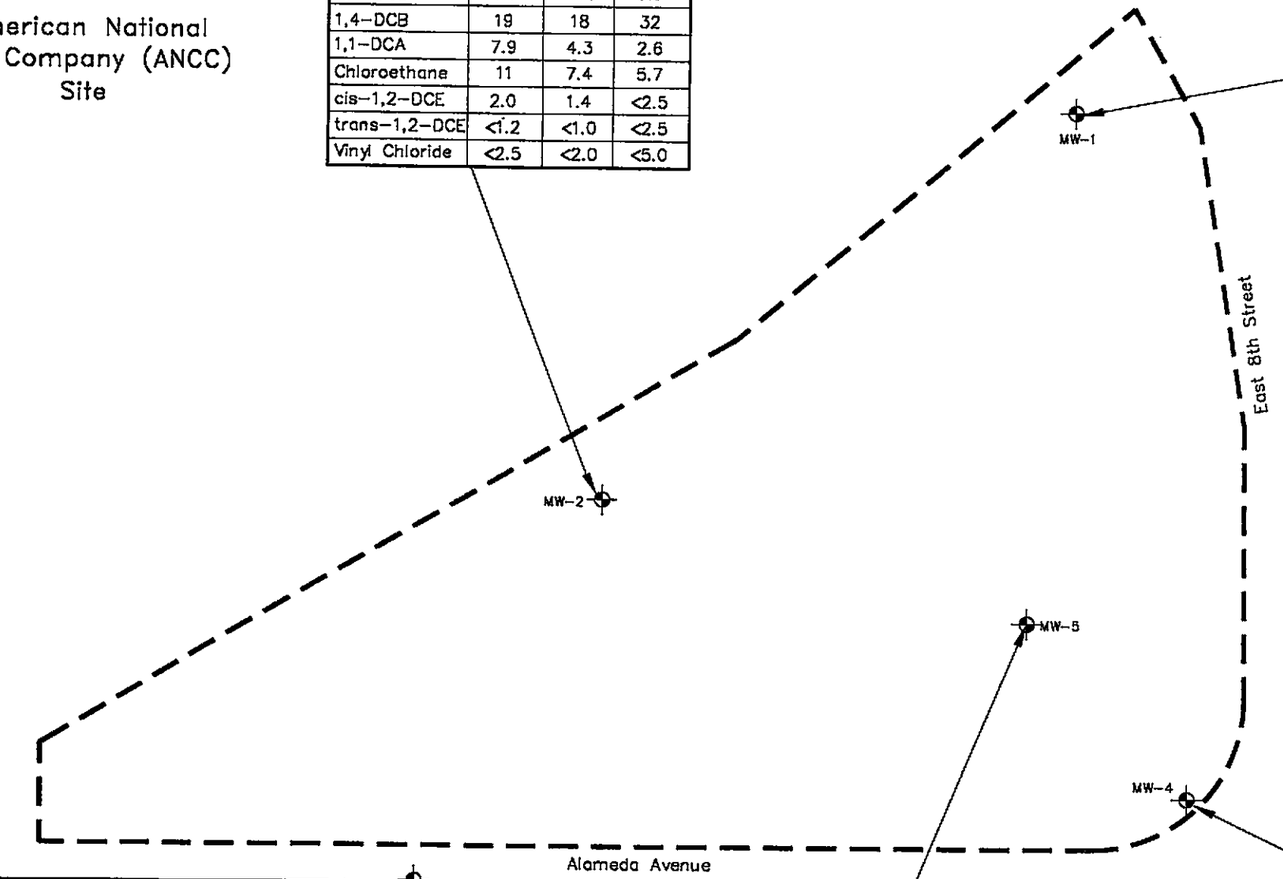
Erler & Kalinowski, Inc.

Petroleum Hydrocarbons and BTEX in Groundwater

4200 Alameda Avenue
Oakland, CA
May 1998
EKI 930040.04
Figure 1

98 May 08 10:51:29 G:\930040.04\MAY98\Tph-01.dwg

American National Can Company (ANCC) Site



MW-2 (3)			
Date	1/24/97	7/24/97	1/28/98
Chlorobenzene	<1.2	6.1	9.0
1,2-DCB	79	88	130
1,3-DCB	4.5	4.2	6.5
1,4-DCB	19	18	32
1,1-DCA	7.9	4.3	2.6
Chloroethane	11	7.4	5.7
cis-1,2-DCE	2.0	1.4	<2.5
trans-1,2-DCE	<1.2	<1.0	<2.5
Vinyl Chloride	<2.5	<2.0	<5.0

MW-1 (3)			
Date	1/24/97	7/24/97	1/28/98
Chlorobenzene	41	31	23
1,2-DCB	43	42	35
1,3-DCB	<20	10	<10
1,4-DCB	66	72	68
1,1-DCA	7.9	34	14
Chloroethane	11	21	27
cis-1,2-DCE	750	480	170
trans-1,2-DCE	68	50	39
Vinyl Chloride	1,100	650	330

MW-3 (3)			
Date	1/24/97	7/24/97	1/28/98
Chlorobenzene	<0.5	<0.5	<0.5
1,2-DCB	<0.5	1.7	2.4
1,3-DCB	<0.5	<0.5	<0.5
1,4-DCB	<0.5	<0.5	<0.5
1,1-DCA	<0.5	<0.5	<0.5
Chloroethane	<0.5	<1.0	<1.0
cis-1,2-DCE	<0.5	<0.5	<0.5
trans-1,2-DCE	<0.5	<0.5	<0.5
Vinyl Chloride	<1.0	<1.0	<1.0

MW-5 (3)			
Date	1/24/97	7/24/97	1/28/98
Chlorobenzene	<100	<50	<25
1,2-DCB	<100	<50	<25
1,3-DCB	<100	<50	<25
1,4-DCB	<100	<50	<25
1,1-DCA	230	210	190
Chloroethane	<100	<100	40
cis-1,2-DCE	840	620	70
trans-1,2-DCE	260	200	170
Vinyl Chloride	4,900	3,800	1,500

MW-4 (3)			
Date	1/24/97	7/24/97	1/28/98
Chlorobenzene	28	93	18
1,2-DCB	29	370	15
1,3-DCB	<25	<50	<10
1,4-DCB	<25	160	<10
1,1-DCA	42	<50	12
Chloroethane	43	<100	30
cis-1,2-DCE	1,500	1,200	210
trans-1,2-DCE	49	<50	23
Vinyl Chloride	2,000	1,900	360

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
May 1998
EKI 930040.04
Figure 2

98-May 08 10:52:08 G:\930040.04\MAY98\Voc-02.dwg

Daily Inspection Report No. _____

Erler & Kalinowski, Inc.

Sheet: 1 of _____

Contractor: —

Date: 1/29/98

EKI Staff On-site: ROGER LEON

Project: EKOTEK

Weather: CLOUDY

EKI Job No.: 930040.04

Temperature: _____ F Max _____ F Min

Work Hours: 11:15 to ____ Memos Issued: _____

Photos: _____

Special Conditions, Delays, Changes: _____

Accidents, Damage: _____

Sampling, Testing: MEASURE WATER LEVELS, PURGE & SAMPLE WELLS

Visitors to Site: _____

Work Report (Work done, Personnel/Equipment working):

11:15 I ARRIVED ON SITE AND OPENED WELLS TO A WATER LEVEL SURVEY.

12:05 I DECONNED EQUIPMENT THEN MEASURED WATER LEVELS / OIL LEVELS

13:06 I BAILED 3+ CASING VOLUMES OF WATER (WITH A TRACE OF SHEEN ON IT) THEN SAMPLED MW-3 WITH A DISPOSABLE BAILER. THE SAMPLE WAS PLACED ON ICE IN A COOLER.

13:45 I PURGED MW-2 WITH A DISPOSABLE BAILER, THEN COLLECTED A SAMPLE.

14:40 I PURGED MW-3 AS ABOVE, THEN SAMPLED THE WELL.

15:31 I PURGED MW-5 WITH A PERISTALTIC PUMP (TO REMOVE FREE PRODUCT WITHOUT AGITATING OR MIXING THE WELL WATER, THEN CONTINUED PURGING WITH A BAILER.

16:37 I STARTED PURGING MW-4 WITH THE PERISTALTIC PUMP, THEN RETURNED TO MW-5 TO COLLECT A SAMPLE.

17:10 I COLLECTED A SAMPLE FROM MW-4, THEN CLOSED ALL WELLS.

PPE, PURGE/DECON WATER WAS LEFT IN DRUMS AT THE SITE. THERE IS 1 DRUM OF PPE, 6 DRUMS OF WATER AND 2 EMPTY DRUMS AT THE SITE. DISPOSABLE BAILERS WERE LEFT IN THE WELLS

17:50 I LEFT THE SITE, LOCKING THE GATE

(GATE AND WELL PADLOCKS = #0712)

Distribution: Project Inspection File (orig)
Project Manager

By: Roger Leon

_____

_____

Kalinowski, Inc.

Job Name: EKOTEK Date: 1/29/98

EKI Job No.: 930040.04 Personnel: RDL CO.

Well Number: / Condition of well:	MW-1	MW-2	MW-3	MW-4	MW-5					
Type of Cover	FLUSH →									
Covered?	YES	YES	YES	YES	YES					
Locked?	YES	YES	YES	YES	YES					
Sealed?	YES POSITIVE PRESSURE	YES	YES, ~~POSITIVE PRESSURE~~	YES	YES					
Standing water?	NO →									
Dia. of casing	4"	4"	4"	4"	4"					
Measuring point										
Elevation of well										
Time opened	11:21	11:17	11:23 ~~11:19~~	11:22	11:22					
Time of measurement	12:10	12:07	12:05	12:13	12:15					
Depth probe used										
Depth to water	10.50	6.85	4.68	8.30	9.96					
Depth to ~~of well~~ OIL	—	—	NONE ~~4.10~~	7.82	8.15					
~~Conductivity~~ vs Depth, mMhos/cm	0.00	0.00	0.00	0.48	1.81	PRODUCT THICKNESS				
~~Temperature~~ vs Depth, Deg. C.	3	2	1	4	5	MEASURING	ORDER			

COMMENTS:

GROUNDWATER PURGE SAMPLE FORM

Erler & Kalinowski, Inc.

PROJECT NAME: EXXTEX
PROJECT NUMBER: 930040.04 WELL NUMBER: MW-1
DATE: 1/28/98
PERSONNEL: R.D-Lion

WELL VOLUME CALCULATION:

Depth of Well (ft.)		Depth to Water (ft.)		Water Column (ft.)		Multiplier (below)		Casing Vol. (gallons)
16.30	-	10.50	=	5.8	*	0.64	=	3.712

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: 0

PURGE METHOD: DISPOSABLE BAILER

PURGE DEPTH: VARIABLE, TO BOTTOM

START TIME: 14:40 END TIME: 15:20

TOTAL GALLONS PURGED: 12.5

INSTRUMENT CALIBRATION

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

SAMPLES:

Field I.D.	Time Collected	Containers & Preservation
MW-1	15:45	3 6 - VOAs + HCl
		1 - 1 L. AMBER

COMMENTS:

Time	15:00	15:20					
Volume Purged (gallons)	5	12.5					
Temperature (degrees F or C)	—	—					
pH	—	—					
Specific Conductivity (millimhos)	—	—					
Turbidity/Color (NTU)	FREE PRODUCT	—					
Odor	STRONG ODOR	—					
Depth to Water during purge (feet)	—	15.6					
Number of Casing Volumes removed	1.35	3.37					
Purge Rate (gallons/minute)	—	—					

GROUNDWATER PURGE SAMPLE FORM

Erler & Kalinowski, Inc.

PROJECT NAME: EKOTEK
PROJECT NUMBER: 930040.04 WELL NUMBER: MW-2 DATE: 1/29/98 PERSONNEL: R.D.Leon

WELL VOLUME CALCULATION:

Depth of Well (ft.)		Depth to Water (ft.)		Water Column (ft.)		Multiplier (below)		Casing Vol. (gallons)
16.36	-	6.85	=	9.51	*	0.64	=	6.086

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: 0

PURGE METHOD: DISPOSABLE BAILER

PURGE DEPTH: VARIABLE, TO BOTTOM

START TIME: 13:45 END TIME: 14:20

TOTAL GALLONS PURGED: 14.5

INSTRUMENT CALIBRATION

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

SAMPLES:

Field I.D.	Time Collected	Containers & Preservation
MW-2	14:26	3 VOA's+HCl, 1-1 l. Amber

COMMENTS:

Time	13:53	14:06	14:20				
Volume Purged (gallons)	4.0	10.0	14.5				
Temperature (degrees F or C)	—	—	—				
pH	—	—	—				
Specific Conductivity (millimhos)	—	—	—				
Turbidity/Color (NTU)	SHEEN →	→	→				
Odor	YES →	→	→				
Depth to Water during purge (feet)	—	—	15.5				
Number of Casing Volumes removed	0.657	1.64	2.38				
Purge Rate (gallons/minute)	—	—	—				

GROUNDWATER PURGE SAMPLE FORM

Erler & Kalinowski, Inc.

PROJECT NAME: EKOTEK
PROJECT NUMBER: 930040.04 WELL NUMBER: MW-3
DATE: 1/29/98
PERSONNEL: R.D.L.

WELL VOLUME CALCULATION:

Depth of Well (ft.)		Depth to Water (ft.)		Water Column (ft.)		Multiplier (below)		Casing Vol. (gallons)
12.70	-	4.68	=	8.02	*	0.64	=	5.13

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: Ø

PURGE METHOD: DISPOSIBLE BAILER

PURGE DEPTH: VARIABLE, TO BOTTOM

START TIME: 12:38 END TIME: 13:20

TOTAL GALLONS PURGED: 16.0

INSTRUMENT CALIBRATION

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

SAMPLES:

Field I.D.	Time Collected	Containers & Preservation
MW-3	13:25	3 VOAS+HCl, 1-1 l. AMBER

COMMENTS:

Time	13:06	13:20					
Volume Purged (gallons)	11.0	16.					
Temperature (degrees F or C)	—	—					
pH	—	—					
Specific Conductivity (millimhos)	—	—					
Turbidity/Color (NTU)	TRACE of SHEEN →						
Odor	yes	yes					
Depth to Water during purge (feet)	9 ft	10.36					
Number of Casing Volumes removed	2.14	3.11					
Purge Rate (gallons/minute)	/	/					

GROUNDWATER PURGE SAMPLE FORM

Erler & Kalinowski, Inc.

PROJECT NAME:

PROJECT NUMBER: 930040.04 WELL NUMBER: MW-4 DATE: 1/29/98 PERSONNEL: RDL/CM

WELL VOLUME CALCULATION:

Depth of Well (ft.)		Depth to Water (ft.)		Water Column (ft.)		Multiplier (below)		Casing Vol. (gallons)
14.76	-	7.82	=	6.94	*	0.64	=	4.44

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: Ø

PURGE METHOD: Peristaltic Pump

PURGE DEPTH: 8.0 ft

START TIME: 16:37 END TIME: 17:10

TOTAL GALLONS PURGED: 15.0

INSTRUMENT CALIBRATION

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

SAMPLES:

Field I.D.	Time Collected	Containers & Preservation
MW-4	17:10	6 VOAs + HCl 1 - 1 l. AMBER

COMMENTS: PERISTALTIC Pump used to remove FREE PRODUCT, THEN PURGE WATER

Time	17:00	17:10					
Volume Purged (gallons)	9½	15.0					
Temperature (degrees F or C)	—	—					
pH	—	—					
Specific Conductivity (millimhos)	—	—					
Turbidity/Color (NTU)	FREE PRODUCT →						
Odor	yes →						
Depth to Water during purge (feet)	—	—					
Number of Casing Volumes removed	2.13	3.38					
Purge Rate (gallons/minute)	—	—					

1 PE, 6 W, 2 E

GROUNDWATER PURGE SAMPLE FORM

Erler & Kalinowski, Inc.

PROJECT NAME: EKOTEK
PROJECT NUMBER: 930040.04 WELL NUMBER: MW-5 DATE: 1/29/98 PERSONNEL: R.D. Lion

WELL VOLUME CALCULATION:

Depth of Well (ft.)		Depth to Water (ft.)		Water Column (ft.)		Multiplier (below)		Casing Vol. (gallons)
15.99	-	8.15	=	7.84	*	0.64	=	5.018

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: 0

PURGE METHOD: PERISTALTIC Pump / DISPOSABLE BAILER

PURGE DEPTH: 8.30

START TIME: 15:31 END TIME: 16:34

TOTAL GALLONS PURGED: 14.0

INSTRUMENT CALIBRATION

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

SAMPLES:

Field I.D.	Time Collected	Containers & Preservation
MW-5	16:51	6-VOA's+HCl 1-1 l Amber

COMMENTS: PERISTALTIC PUMP WAS USED TO REMOVE FREE PRODUCT

Time	1615	16:39					
Volume Purged (gallons)	7.5	14.0					
Temperature (degrees F or C)	—	—					
pH	—	—					
Specific Conductivity (millimhos)	—	—					
Turbidity/Color (NTU)	FREE PRODUCT →						
Odor	STRONG ODOR →						
Depth to Water during purge (feet)							
Number of Casing Volumes removed	1.49	2.79					
Purge Rate (gallons/minute)							

CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

Erler & Kalinowski, Inc.

Project Number: EKI 930040.04 Page 1 of 1

Project Name: EKOTEK

Source of Samples: GW monitoring wells

Location: 4200 Alameda Avenue, Oakland, CA

Analytical Laboratory: Sequoia Analytical

Date Sampled: 1/28/98

Sampled By: R.D.Lion

Report Results To: Roger D. Lion

Phone Number: 650) 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)
	MW-1	Water	1 each-1 L. Amber	15:45	EPA 8015 mod TPH-diesel	standard
		Water	6-40 ml. VOA w/ HCl	15:45	EPA 8010 & 8015M/8020 (note 1)	standard
	MW-2	Water	1 each-1 L. Amber	14:26	EPA 8015 mod TPH-diesel	standard
		Water	6-40 ml. VOA w/ HCl	14:26	EPA 8010 & 8015M/8020 (note 1)	standard
	MW-3	Water	1 each-1 L. Amber	13:25	EPA 8015 mod TPH-diesel	standard
		Water	6-40 ml. VOA w/ HCl	13:25	EPA 8010 & 8015M/8020 (note 1)	standard
	MW-4	Water	1 each-1 L. Amber	17:10	EPA 8015 mod TPH-diesel	standard
		Water	6-40 ml. VOA w/ HCl	17:10	EPA 8010 & 8015M/8020 (note 1)	standard
	ERB	Water	1 each-1 L. Amber		EPA 8015 mod TPH-diesel	standard
		Water	6-40 ml. VOA w/ HCl		EPA 8010 & 8015M/8020 (note 1)	standard
	MW-5	Water	1 each-1 L. Amber	16:51	EPA 8015 mod TPH-diesel	standard
		Water	6-40 ml. VOA w/ HCl	16:51	EPA 8010 & 8015M/8020 (note 1)	standard

Special Instructions:

Note 1: EPA 8010 HVOCs and EPA 8015M/8020 Fuel Fingerprint w/ BTEX NOTE SAMPLES ARE ERRONEOUSLY MARKED 1/29/98

Relinquished By: Name / Signature / Affiliation	Date	Time	Received By: Name / Signature / Affiliation
Roger D. Lion Roger D. Lion /EKI	1/28/9	18:35	Tina R. /Sequoia

EKOCOC4 XLS

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 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

COPY

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

Attention: Roger D. Lion

Client Proj. ID: 930040.04/EKOTEK
Sample Descript: MW-1
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9801H40-01

Sampled: 01/28/98
Received: 01/28/98
Extracted: 02/04/98
Analyzed: 02/05/98
Reported: 02/12/98

QC Batch Number: GC0204980HBPEXB
Instrument ID: GCHP19B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	5000	59000
Chromatogram Pattern: **Unidentified HC**		C9-C24

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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Erler & Kalinowski, Inc.	Client Proj. ID: 930040.04/EKOTEK	Sampled: 01/28/98
1730 South Amphlett, Ste 320	Sample Descript: MW-1	Received: 01/28/98
San Mateo, CA 94402	Matrix: LIQUID	Extracted: 02/04/98
	Analysis Method: EPA 8015 Mod	Analyzed: 02/05/98
Attention: Roger D. Lion	Lab Number: 9801H40-01	Reported: 02/12/98

QC Batch Number: GC0204980HBPEXB
Instrument ID: GCHP19B

Fuel Fingerprint

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable Hydrocarbons	5000	94000
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.

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Erler & Kalinowski, Inc.	Client Proj. ID: 930040.04/EKOTEK	Sampled: 01/28/98
1730 South Amphlett, Ste 320	Sample Descript: MW-1	Received: 01/28/98
San Mateo, CA 94402	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 02/08/98
Attention: Roger D. Lion	Lab Number: 9801H40-01	Reported: 02/12/98

QC Batch Number: GC020898BTEX18A
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	2000	6500
Benzene	20	450
Toluene	20	150
Ethyl Benzene	20	130
Xylenes (Total)	20	850
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	87

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

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Erler & Kalinowski, Inc.	Client Proj. ID: 930040.04/EKOTEK	Sampled: 01/28/98
1730 South Amphlett, Ste 320	Sample Descript: MW-1	Received: 01/28/98
San Mateo, CA 94402	Matrix: LIQUID	
	Analysis Method: EPA 8010	Analyzed: 02/05/98
Attention: Roger D. Lion	Lab Number: 9801H40-01	Reported: 02/12/98

QC Batch Number: GC013098801024A
Instrument ID: GCHP24_2

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	10	N.D.
Bromoform	10	N.D.
Bromomethane	20	N.D.
Carbon Tetrachloride	10	N.D.
Chlorobenzene	**10**	**23**
Chloroethane	**20**	**27**
2-Chloroethylvinyl ether	20	N.D.
Chloroform	10	N.D.
Chloromethane	20	N.D.
Dibromochloromethane	10	N.D.
1,2-Dichlorobenzene	**10**	**35**
1,3-Dichlorobenzene	10	N.D.
1,4-Dichlorobenzene	**10**	**68**
1,1-Dichloroethane	**10**	**14**
1,2-Dichloroethane	10	N.D.
1,1-Dichloroethene	10	N.D.
cis-1,2-Dichloroethene	**10**	**170**
trans-1,2-Dichloroethene	**10**	**39**
1,2-Dichloropropane	10	N.D.
cis-1,3-Dichloropropene	10	N.D.
trans-1,3-Dichloropropene	10	N.D.
Methylene chloride	100	N.D.
1,1,2,2-Tetrachloroethane	10	N.D.
Tetrachloroethene	10	N.D.
1,1,1-Trichloroethane	10	N.D.
1,1,2-Trichloroethane	10	N.D.
Trichloroethene	10	N.D.
Trichlorofluoromethane	10	N.D.
Vinyl chloride	**20**	**330**

Surrogates	Control Limits %		% Recovery
1-Chloro-2-fluorobenzene	70	130	122

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

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Erler & Kalinowski, Inc.	Client Proj. ID: 930040.04/EKOTEK	Sampled: 01/28/98
1730 South Amphlett, Ste 320	Sample Descript: MW-2	Received: 01/28/98
San Mateo, CA 94402	Matrix: LIQUID	Extracted: 02/04/98
	Analysis Method: EPA 8015 Mod	Analyzed: 02/05/98
Attention: Roger D. Lion	Lab Number: 9801H40-02	Reported: 02/12/98

QC Batch Number: GC0204980HBPEXB
Instrument ID: GCHP19B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	**5000**	**30000**
Chromatogram Pattern:		
Unidentified HC		**C9-C24**

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

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

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Erler & Kalinowski, Inc.	Client Proj. ID: 930040.04/EKOTEK	Sampled: 01/28/98
1730 South Amphlett, Ste 320	Sample Descript: MW-2	Received: 01/28/98
San Mateo, CA 94402	Matrix: LIQUID	Extracted: 02/04/98
	Analysis Method: EPA 8015 Mod	Analyzed: 02/05/98
Attention: Roger D. Lion	Lab Number: 9801H40-02	Reported: 02/12/98

QC Batch Number: GC0204980HBPEXB
Instrument ID: GCHP19B

Fuel Fingerprint

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable Hydrocarbons	**5000**	**74000**
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.

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

Attention: Roger D. Lion

Client Proj. ID: 930040.04/EKOTEK
Sample Descript: MW-2
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9801H40-02

Sampled: 01/28/98
Received: 01/28/98

Analyzed: 02/11/98
Reported: 02/12/98

QC Batch Number: GC021198BTEX18A
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500	6500
Benzene	5.0	28
Toluene	5.0	8.6
Ethyl Benzene	5.0	86
Xylenes (Total)	5.0	190
Chromatogram Pattern:		GAS
Gas & Unidentified HC		+ >C10

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	99

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

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

Attention: Roger D. Lion

Client Proj. ID: 930040.04/EKOTEK
Sample Descript: MW-2
Matrix: LIQUID
Analysis Method: EPA 8010
Lab Number: 9801H40-02

Sampled: 01/28/98
Received: 01/28/98

Analyzed: 02/05/98
Reported: 02/12/98

QC Batch Number: GC020598801009A
Instrument ID: GCHP09

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	2.5	N.D.
Bromoform	2.5	N.D.
Bromomethane	5.0	N.D.
Carbon Tetrachloride	2.5	N.D.
Chlorobenzene	**2.5**	**9.0**
Chloroethane	**5.0**	**5.7**
2-Chloroethylvinyl ether	5.0	N.D.
Chloroform	2.5	N.D.
Chloromethane	5.0	N.D.
Dibromochloromethane	2.5	N.D.
1,2-Dichlorobenzene	**2.5**	**130**
1,3-Dichlorobenzene	**2.5**	**6.5**
1,4-Dichlorobenzene	**2.5**	**32**
1,1-Dichloroethane	**2.5**	**2.6**
1,2-Dichloroethane	2.5	N.D.
1,1-Dichloroethene	2.5	N.D.
cis-1,2-Dichloroethene	2.5	N.D.
trans-1,2-Dichloroethene	2.5	N.D.
1,2-Dichloropropane	2.5	N.D.
cis-1,3-Dichloropropene	2.5	N.D.
trans-1,3-Dichloropropene	2.5	N.D.
Methylene 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.
1,1,2-Trichloroethane	2.5	N.D.
Trichloroethene	2.5	N.D.
Trichlorofluoromethane	2.5	N.D.
Vinyl chloride	5.0	N.D.

Surrogates	Control Limits %		% Recovery
1-Chloro-2-fluorobenzene	70	130	96

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

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Erler & Kalinowski, Inc.	Client Proj. ID: 930040.04/EKOTEK	Sampled: 01/28/98
1730 South Amphlett, Ste 320	Sample Descript: MW-3	Received: 01/28/98
San Mateo, CA 94402	Matrix: LIQUID	Extracted: 02/04/98
	Analysis Method: EPA 8015 Mod	Analyzed: 02/06/98
Attention: Roger D. Lion	Lab Number: 9801H40-03	Reported: 02/12/98

QC Batch Number: GC0204980HBPEXB
Instrument ID: GCHP5A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	100	1700
Chromatogram Pattern: **Unidentified HC**		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	130

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

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Erler & Kalinowski, Inc.	Client Proj. ID: 930040.04/EKOTEK	Sampled: 01/28/98
1730 South Amphlett, Ste 320	Sample Descript: MW-3	Received: 01/28/98
San Mateo, CA 94402	Matrix: LIQUID	Extracted: 02/04/98
	Analysis Method: EPA 8015 Mod	Analyzed: 02/06/98
Attention: Roger D. Lion	Lab Number: 9801H40-03	Reported: 02/12/98

QC Batch Number: GC0204980HBPEXB
Instrument ID: GCHP5A

Fuel Fingerprint

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable Hydrocarbons	100	2800
Chromatogram Pattern:		
Unidentified HC		C9-C40

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	130

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

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Erler & Kalinowski, Inc.	Client Proj. ID: 930040.04/EKOTEK	Sampled: 01/28/98
1730 South Amphlett, Ste 320	Sample Descript: MW-3	Received: 01/28/98
San Mateo, CA 94402	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 02/07/98
Attention: Roger D. Lion	Lab Number: 9801H40-03	Reported: 02/12/98

QC Batch Number: GC020798BTEX03A
Instrument ID: GCHP3

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**210**
Benzene	**0.50**	**5.9**
Toluene	**0.50**	**1.0**
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	**0.50**	**0.89**
Chromatogram Pattern:		
Gas & Unidentified HC		C6-C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	212 Q

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

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

Attention: Roger D. Lion

Client Proj. ID: 930040.04/EKOTEK
Sample Descript: MW-3
Matrix: LIQUID
Analysis Method: EPA 8010
Lab Number: 9801H40-03

Sampled: 01/28/98
Received: 01/28/98

Analyzed: 02/05/98
Reported: 02/12/98

QC Batch Number: GC020598801009A
Instrument ID: GCHP09

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	1.0	N.D.
Carbon Tetrachloride	0.50	N.D.
Chlorobenzene	0.50	N.D.
Chloroethane	1.0	N.D.
2-Chloroethylvinyl ether	1.0	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	**0.50**	**2.4**
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	1.0	N.D.

Surrogates	Control Limits %		% Recovery
1-Chloro-2-fluorobenzene	70	130	97

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

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Erler & Kalinowski, Inc.	Client Proj. ID: 930040.04/EKOTEK	Sampled: 01/28/98
1730 South Amphlett, Ste 320	Sample Descript: MW-4	Received: 01/28/98
San Mateo, CA 94402	Matrix: LIQUID	Extracted: 02/04/98
	Analysis Method: EPA 8015 Mod	Analyzed: 02/06/98
Attention: Roger D. Lion	Lab Number: 9801H40-04	Reported: 02/12/98

QC Batch Number: GC0204980HBPEXB
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	**1000**	**19000**
Chromatogram Pattern: **Unidentified HC**		**C9-C24**

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	461 Q

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

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

Attention: Roger D. Lion

Client Proj. ID: 930040.04/EKOTEK
Sample Descript: MW-4
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9801H40-04

Sampled: 01/28/98
Received: 01/28/98
Extracted: 02/04/98
Analyzed: 02/06/98
Reported: 02/12/98

QC Batch Number: GC0204980HBPEXB
Instrument ID: GCHP4B

Fuel Fingerprint

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable Hydrocarbons	1000	30000
Chromatogram Pattern: **Unidentified HC**		C9-C40

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	461 Q

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

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

Attention: Roger D. Lion

Client Proj. ID: 930040.04/EKOTEK
Sample Descript: MW-4
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9801H40-04

Sampled: 01/28/98
Received: 01/28/98

Analyzed: 02/07/98
Reported: 02/12/98

QC Batch Number: GC020798BTEX03A
Instrument ID: GCHP3

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500	3000
Benzene	5.0	230
Toluene	5.0	21
Ethyl Benzene	5.0	83
Xylenes (Total)	5.0	67
Chromatogram Pattern:		
Gas & Unidentified HC		C6-C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	118

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.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Roger D. Lion

Client Proj. ID: 930040.04/EKOTEK
Sample Descript: MW-4
Matrix: LIQUID
Analysis Method: EPA 8010
Lab Number: 9801H40-04

Sampled: 01/28/98
Received: 01/28/98

Analyzed: 02/05/98
Reported: 02/12/98

QC Batch Number: GC013098801024A
Instrument ID: GCHP24_2

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	10	N.D.
Bromoform	10	N.D.
Bromomethane	20	N.D.
Carbon Tetrachloride	10	N.D.
Chlorobenzene	**10**	**18**
Chloroethane	**20**	**30**
2-Chloroethylvinyl ether	20	N.D.
Chloroform	10	N.D.
Chloromethane	20	N.D.
Dibromochloromethane	10	N.D.
1,2-Dichlorobenzene	**10**	**15**
1,3-Dichlorobenzene	10	N.D.
1,4-Dichlorobenzene	10	N.D.
1,1-Dichloroethane	**10**	**12**
1,2-Dichloroethane	10	N.D.
1,1-Dichloroethene	10	N.D.
cis-1,2-Dichloroethene	**10**	**210**
trans-1,2-Dichloroethene	**10**	**23**
1,2-Dichloropropane	10	N.D.
cis-1,3-Dichloropropene	10	N.D.
trans-1,3-Dichloropropene	10	N.D.
Methylene chloride	100	N.D.
1,1,2,2-Tetrachloroethane	10	N.D.
Tetrachloroethene	10	N.D.
1,1,1-Trichloroethane	10	N.D.
1,1,2-Trichloroethane	10	N.D.
Trichloroethene	10	N.D.
Trichlorofluoromethane	10	N.D.
Vinyl chloride	**20**	**360**

Surrogates	Control Limits %		% Recovery
1-Chloro-2-fluorobenzene	70	130	96

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

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

Attention: Roger D. Lion

Client Proj. ID: 930040.04/EKOTEK
Sample Descript: MW-5
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9801H40-05

Sampled: 01/28/98
Received: 01/28/98
Extracted: 02/04/98
Analyzed: 02/06/98
Reported: 02/12/98

QC Batch Number: GC0204980HBPEXB
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	1000	18000
Chromatogram Pattern: **Unidentified HC**		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	700 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.	Client Proj. ID: 930040.04/EKOTEK	Sampled: 01/28/98
1730 South Amphlett, Ste 320	Sample Descript: MW-5	Received: 01/28/98
San Mateo, CA 94402	Matrix: LIQUID	Extracted: 02/04/98
	Analysis Method: EPA 8015 Mod	Analyzed: 02/06/98
Attention: Roger D. Lion	Lab Number: 9801H40-05	Reported: 02/12/98

QC Batch Number: GC0204980HBPEXB
Instrument ID: GCHP4A

Fuel Fingerprint

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable Hydrocarbons	1000	31000
Chromatogram Pattern: **Unidentified HC**		C9-C40

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	700 Q

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

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

Attention: Roger D. Lion

Client Proj. ID: 930040.04/EKOTEK
Sample Descript: MW-5
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9801H40-05

Sampled: 01/28/98
Received: 01/28/98

Analyzed: 02/08/98
Reported: 02/12/98

QC Batch Number: GC020898BTEX18A
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	1000	2500
Benzene	10	88
Toluene	10	180
Ethyl Benzene	10	57
Xylenes (Total)	10	180
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	82

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

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Project Manager

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

Attention: Roger D. Lion

Client Proj. ID: 930040.04/EKOTEK
Sample Descript: MW-5
Matrix: LIQUID
Analysis Method: EPA 8010
Lab Number: 9801H40-05

Sampled: 01/28/98
Received: 01/28/98

Analyzed: 02/05/98
Reported: 02/12/98

QC Batch Number: GC013098801024A
Instrument ID: GCHP24_2

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	25	N.D.
Bromoform	25	N.D.
Bromomethane	50	N.D.
Carbon Tetrachloride	25	N.D.
Chlorobenzene	25	N.D.
Chloroethane	**50**	**40**
2-Chloroethylvinyl ether	50	N.D.
Chloroform	25	N.D.
Chloromethane	50	N.D.
Dibromochloromethane	25	N.D.
1,2-Dichlorobenzene	25	N.D.
1,3-Dichlorobenzene	25	N.D.
1,4-Dichlorobenzene	25	N.D.
1,1-Dichloroethane	**25**	**190**
1,2-Dichloroethane	25	N.D.
1,1-Dichloroethene	25	N.D.
cis-1,2-Dichloroethene	**25**	**70**
trans-1,2-Dichloroethene	**25**	**170**
1,2-Dichloropropane	25	N.D.
cis-1,3-Dichloropropene	25	N.D.
trans-1,3-Dichloropropene	25	N.D.
Methylene chloride	250	N.D.
1,1,2,2-Tetrachloroethane	25	N.D.
Tetrachloroethene	25	N.D.
1,1,1-Trichloroethane	25	N.D.
1,1,2-Trichloroethane	25	N.D.
Trichloroethene	25	N.D.
Trichlorofluoromethane	25	N.D.
Vinyl chloride	**50**	**1500**

Surrogates	Control Limits %		% Recovery
1-Chloro-2-fluorobenzene	70	130	104

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

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

Attention: Roger D. Lion

Client Proj. ID: 930040.04/EKOTEK
Sample Descript: Method Blank
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9801H40-06

Sampled:
Received: 01/28/98

Analyzed: 02/07/98
Reported: 02/12/98

QC Batch Number: GC020798BTEX03A
Instrument ID: GCHP3

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	90

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: Roger D. Lion

Client Proj. ID: 930040.04/EKOTEK
Sample Descript: Method Blank
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9801H40-06

Sampled:
Received: 01/28/98
Extracted: 02/04/98
Analyzed: 02/05/98
Reported: 02/12/98

QC Batch Number: GC0204980HBPEXB
Instrument ID: GCHP5A

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	86

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
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Erler & Kalinowski, Inc.	Client Proj. ID: 930040.04/EKOTEK	Sampled:
1730 South Amphlett, Ste 320	Sample Descript: Method Blank	Received: 01/28/98
San Mateo, CA 94402	Matrix: LIQUID	Extracted: 02/04/98
	Analysis Method: EPA 8015 Mod	Analyzed: 02/05/98
Attention: Roger D. Lion	Lab Number: 9801H40-06	Reported: 02/12/98

QC Batch Number: GC0204980HBPEXB
Instrument ID: GCHP5A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	86

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.	Client Proj. ID: 930040.04/EKOTEK	Sampled:
1730 South Amphlett, Ste 320	Sample Descript: Method Blank	Received: 01/28/98
San Mateo, CA 94402	Matrix: LIQUID	
	Analysis Method: EPA 8010	Analyzed: 02/05/98
Attention: Roger D. Lion	Lab Number: 9801H40-06	Reported: 02/12/98

QC Batch Number: GC013098801024A
Instrument ID: GCHP24_2

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	1.0	N.D.
Carbon Tetrachloride	0.50	N.D.
Chlorobenzene	0.50	N.D.
Chloroethane	1.0	N.D.
2-Chloroethylvinyl ether	1.0	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	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	1.0	N.D.

Surrogates	Control Limits %		% Recovery
1-Chloro-2-fluorobenzene	70	130	109

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

SEQUOIA ANALYTICAL - ELAP #1210

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

Attention: Roger D. Lion

Client Proj. ID: 930040.04/EKOTEK
Sample Descript: Method Blank
Matrix: LIQUID
Analysis Method: EPA 8010
Lab Number: 9801H40-07

Sampled:
Received: 01/28/98

Analyzed: 02/04/98
Reported: 02/12/98

QC Batch Number: GC020598801009A
Instrument ID: GCHP09

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	1.0	N.D.
Carbon Tetrachloride	0.50	N.D.
Chlorobenzene	0.50	N.D.
Chloroethane	1.0	N.D.
2-Chloroethylvinyl ether	1.0	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	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	1.0	N.D.

Surrogates	Control Limits %		% Recovery
1-Chloro-2-fluorobenzene	70	130	101

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: Roger D. Lion

Client Proj. ID: 930040.04/EKOTEK
Sample Descript: Method Blank
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9801H40-07

Sampled:
Received: 01/28/98

Analyzed: 02/08/98
Reported: 02/12/98

QC Batch Number: GC020898BTEX18A
Instrument ID: GCHP18

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	87

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: Roger D. Lion

Client Proj. ID: 930040.04/EKOTEK
Sample Descript: Method Blank
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9801H40-08

Sampled:
Received: 01/28/98

Analyzed: 02/11/98
Reported: 02/12/98

QC Batch Number: GC021198BTEX18A
Instrument ID: GCHP18

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	73

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: Roger D. Lion

Client Proj. ID: 930040.04/EKOTEK
Lab Proj. ID: 9801H40

Received: 01/28/98
Reported: 02/12/98

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 41 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

Q - Surrogate diluted out.
#Q - Surrogate coelution was confirmed.

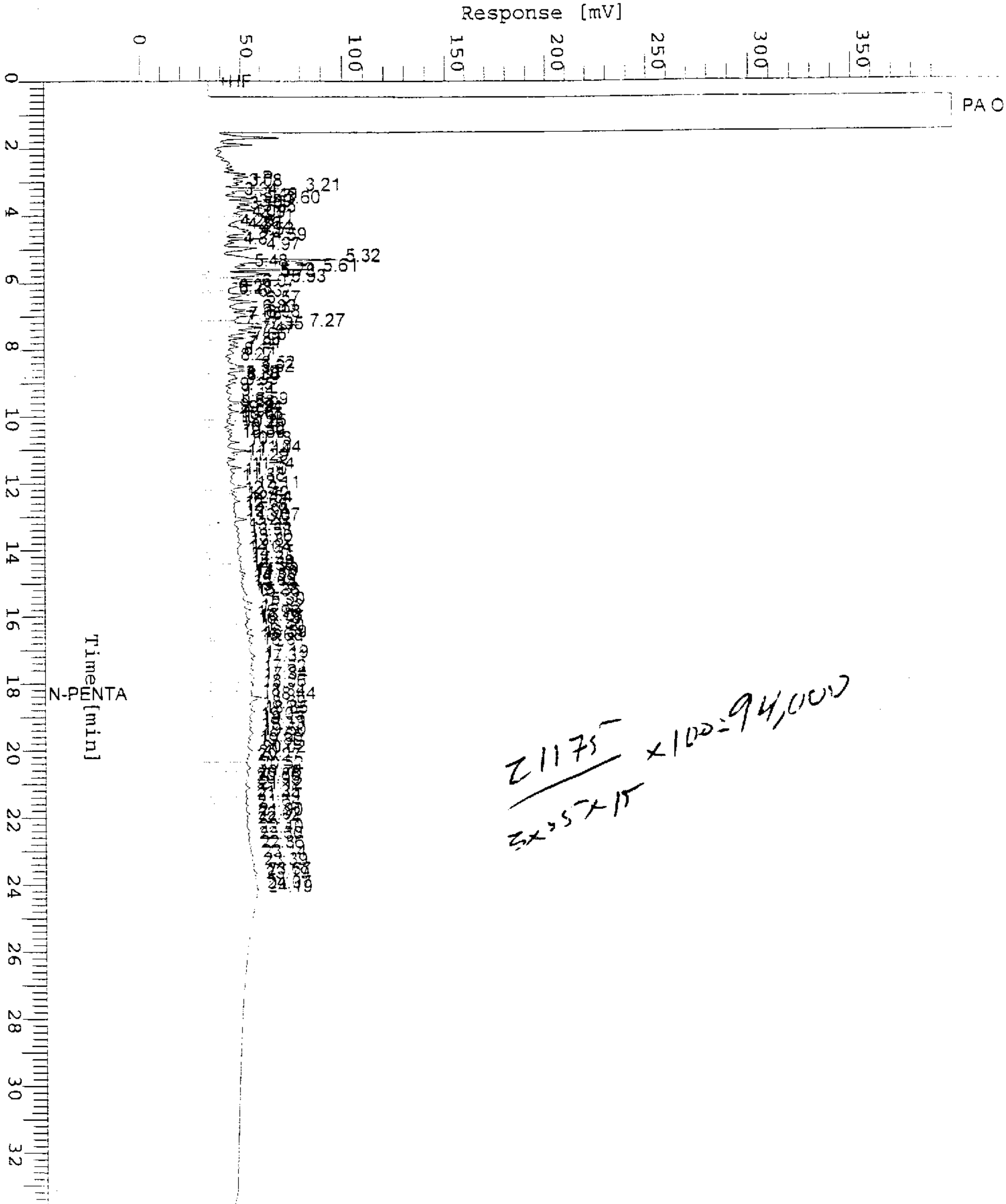
SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Chromatogram

Sample Name : DW9801H40-1 (500:1*100)
FileName : S:\GHP_19\0208\204B033.raw
Method : TPH19A
Start Time : 0.00 min   End Time : 33.65 min
Scale Factor: 0.0   Plot Offset: 0 mV

Sample #: MW-1
Date : 2/5/98 09:15
Time of Injection: 2/5/98 08:41
Low Point : 0.00 mV   High Point : 400.00 mV
Plot Scale: 400.0 mV

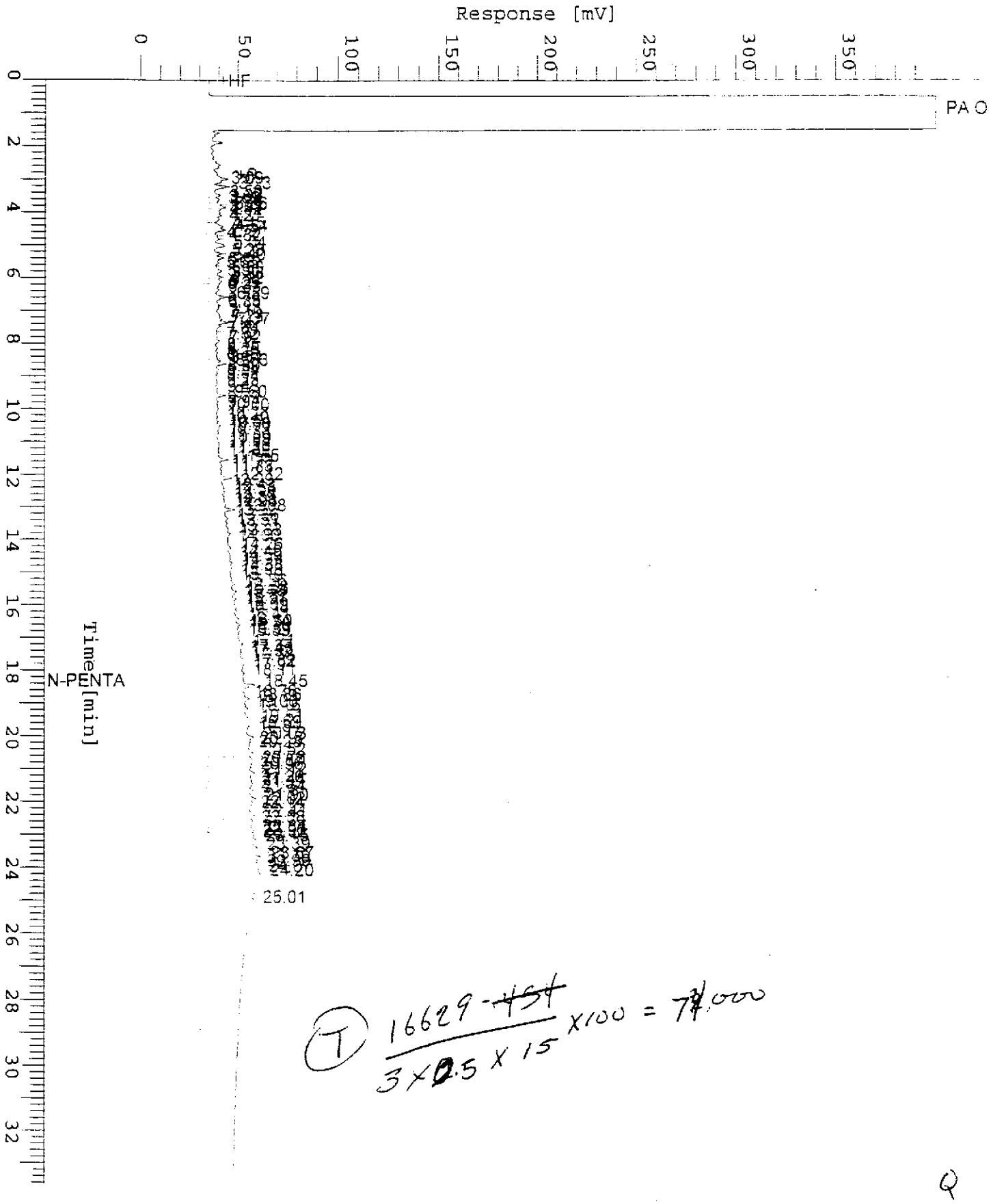


2117.5 / (5x5x15) x100=94,000

Chromatogram

Sample Name : DW9801H40-2 (500:1*100)
FileName : S:\GHP_19\0208\204B032.raw
Method : TPH19A
Start Time : 0.00 min End Time : 33.65 min
Scale Factor: 0.0 Plot Offset: 0 mV

Sample #: MW-2 Page 1 of 1
Date : 2/5/98 08:33
Time of Injection: 2/5/98 07:59
Low Point : 0.00 mV High Point : 400.00 mV
Plot Scale: 400.0 mV



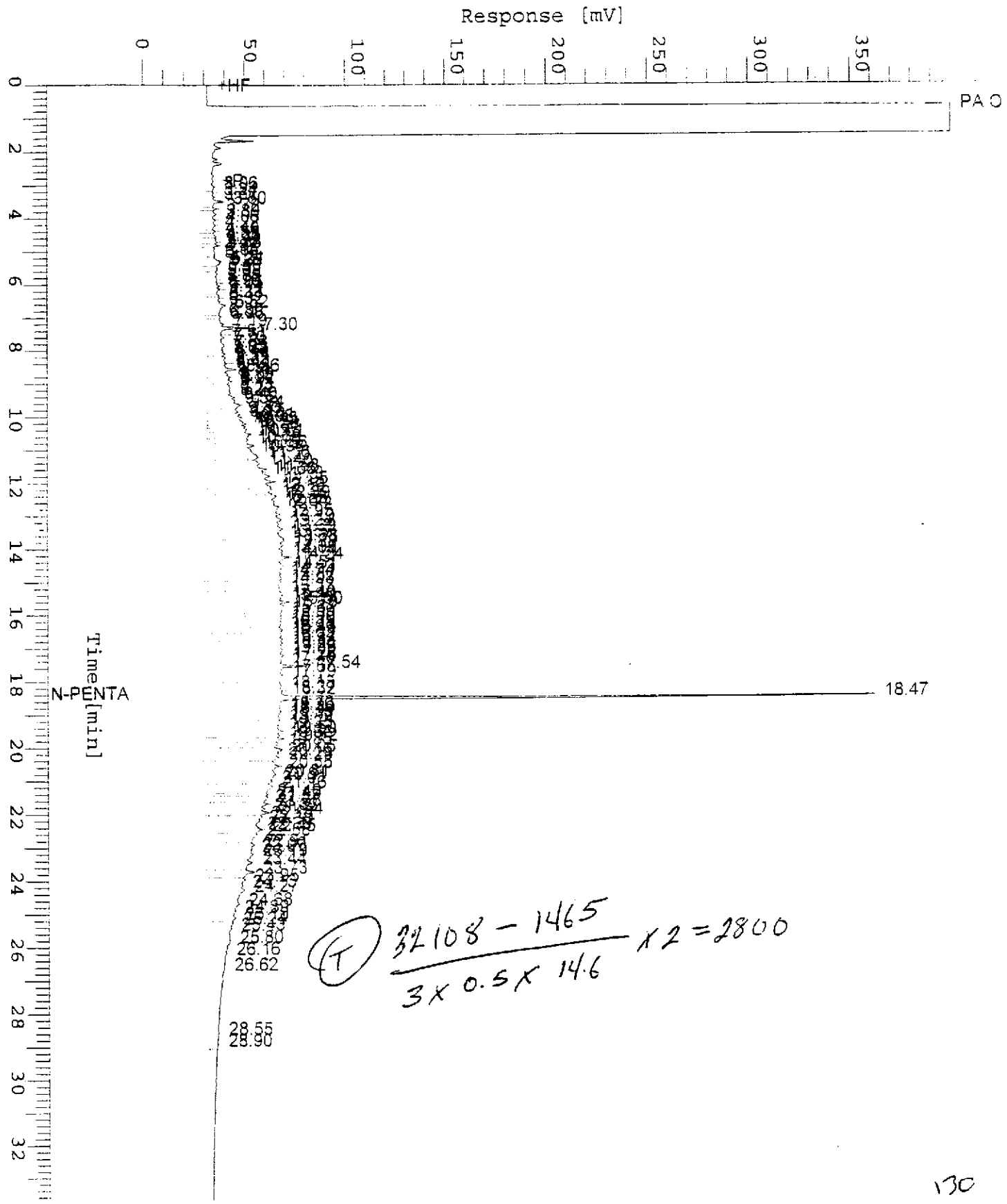
(T) $\frac{16629 - 454}{3 \times 2.5 \times 15} \times 100 = 7\%,000$

Q

Chromatogram

Sample Name : DW9801H40-3 (500:1*2) RS1
FileName : S:\GHP_05\0208\205A013.raw
Method : TPH05A
Start Time : 0.00 min End Time : 33.65 min
Scale Factor: 0.0 Plot Offset: 0 mV

Sample #: MW-3 Page 1 of 1
Date : 2/6/98 07:32
Time of Injection: 2/6/98 06:59
Low Point : 0.00 mV High Point : 400.00 mV
Plot Scale: 400.0 mV



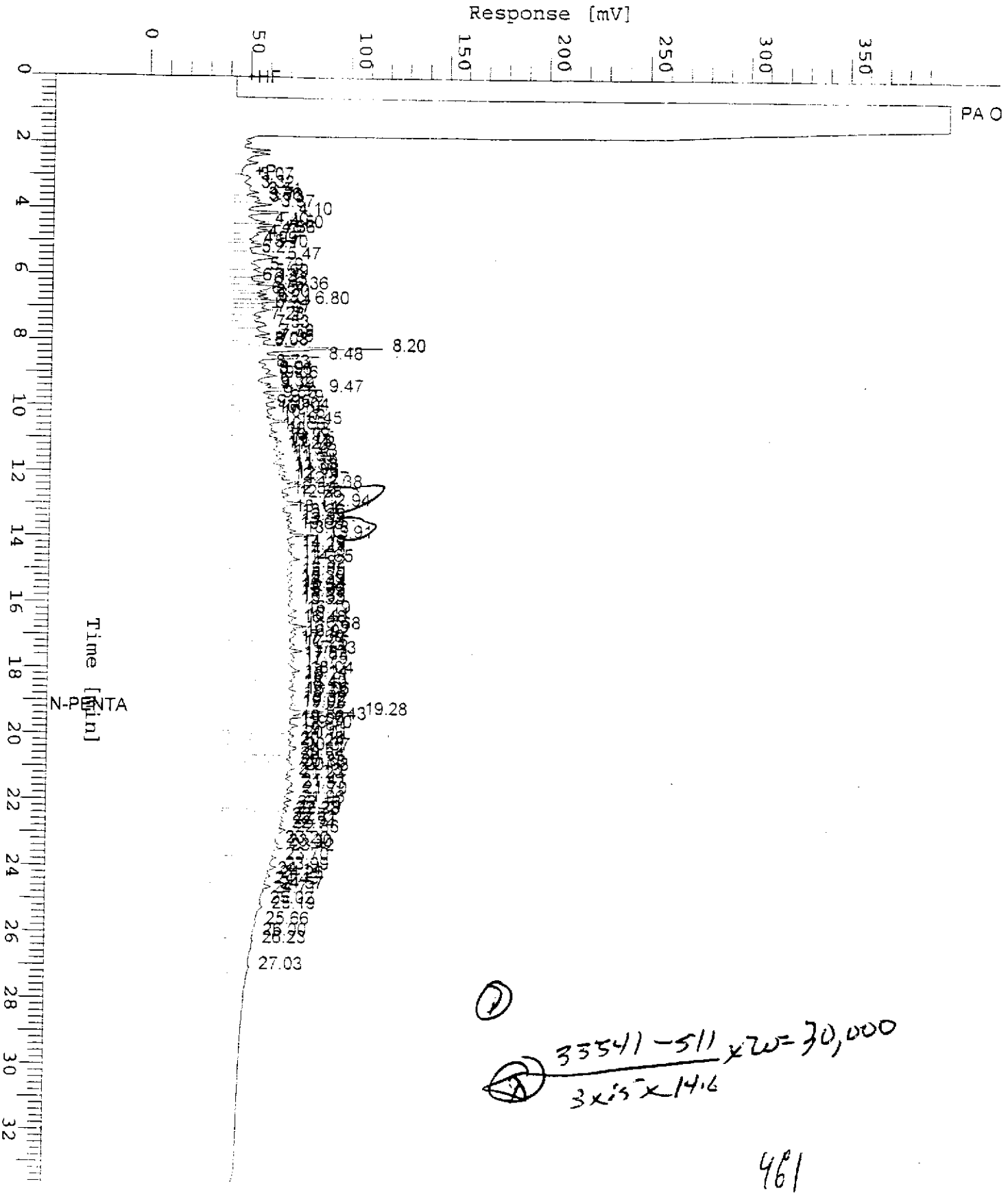
(T) $\frac{32108 - 1465}{3 \times 0.5 \times 14.6} \times 2 = 2800$

130

Chromatogram

Sample Name : DW980H40-4 (500:1*20) RS2
FileName : S:\GHP_04\0208\205B037.raw
Method : TPH04A
Start Time : 0.00 min End Time : 33.65 min
Scale Factor: 0.0 Plot Offset: 0 mV

Sample #: MW-4 Page 1 of 1
Date : 2/6/98 19:12
Time of Injection: 2/6/98 18:38
Low Point : 0.00 mV High Point : 400.00 mV
Plot Scale: 400.0 mV



(1)

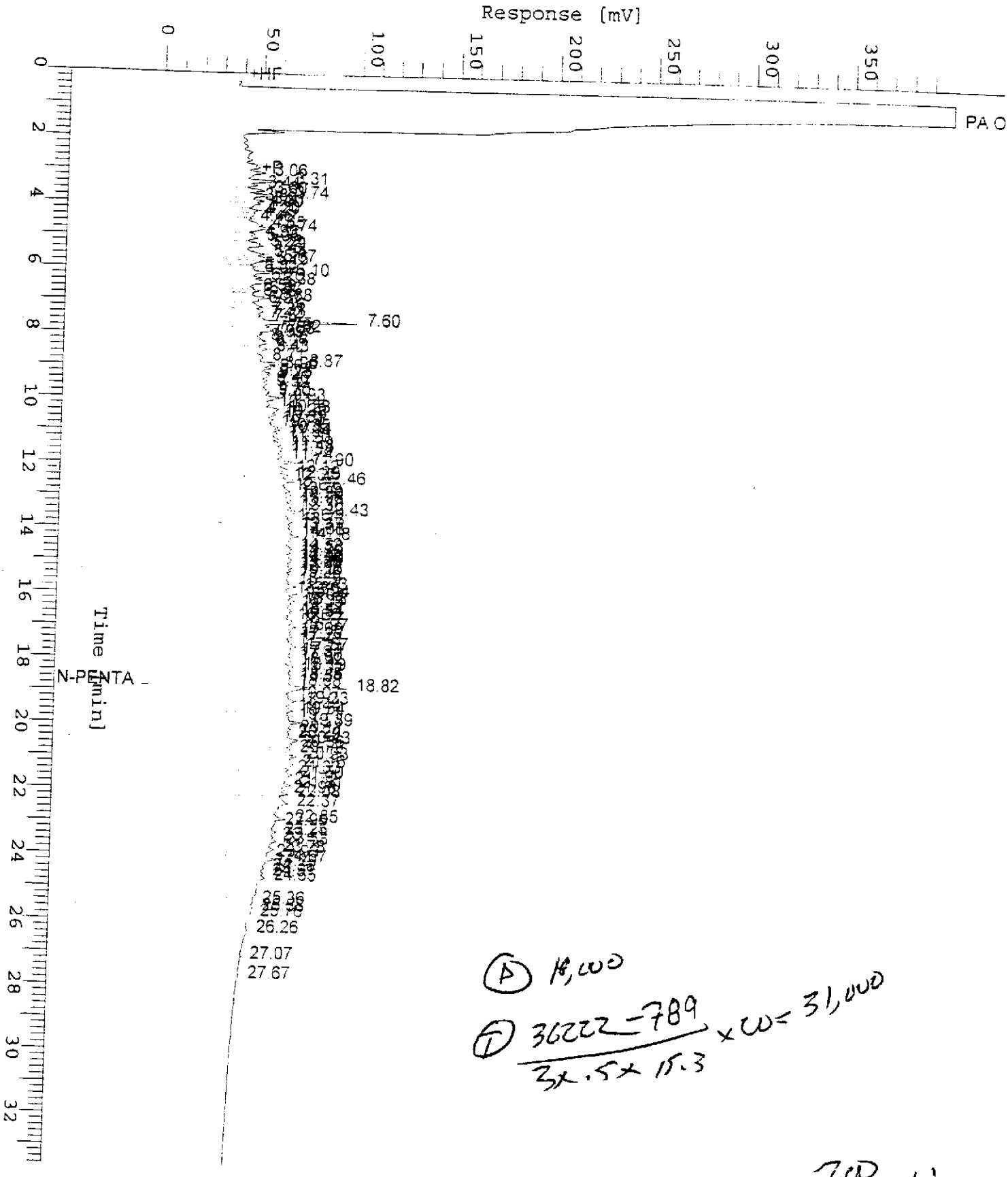
(2) $\frac{35541 - 511}{3 \times 15 \times 14.6} \times 20 = 30{,}000$

461

Chromatogram

Sample Name : DW980H40-S (500:1*20) RS4
FileName : S:\GHP_04\0208\205A041.raw
Method : TPH04A
Start Time : 0.00 min
End Time : 33.65 min
Scale Factor: 0.0
Plot Offset: 0 mV

Sample #: MW-5
Date : 2/6/98 21:55
Time of Injection: 2/6/98 21:22
Low Point : 0.00 mV
High Point : 400.00 mV
Plot Scale: 400.0 mV



(A) 16,000

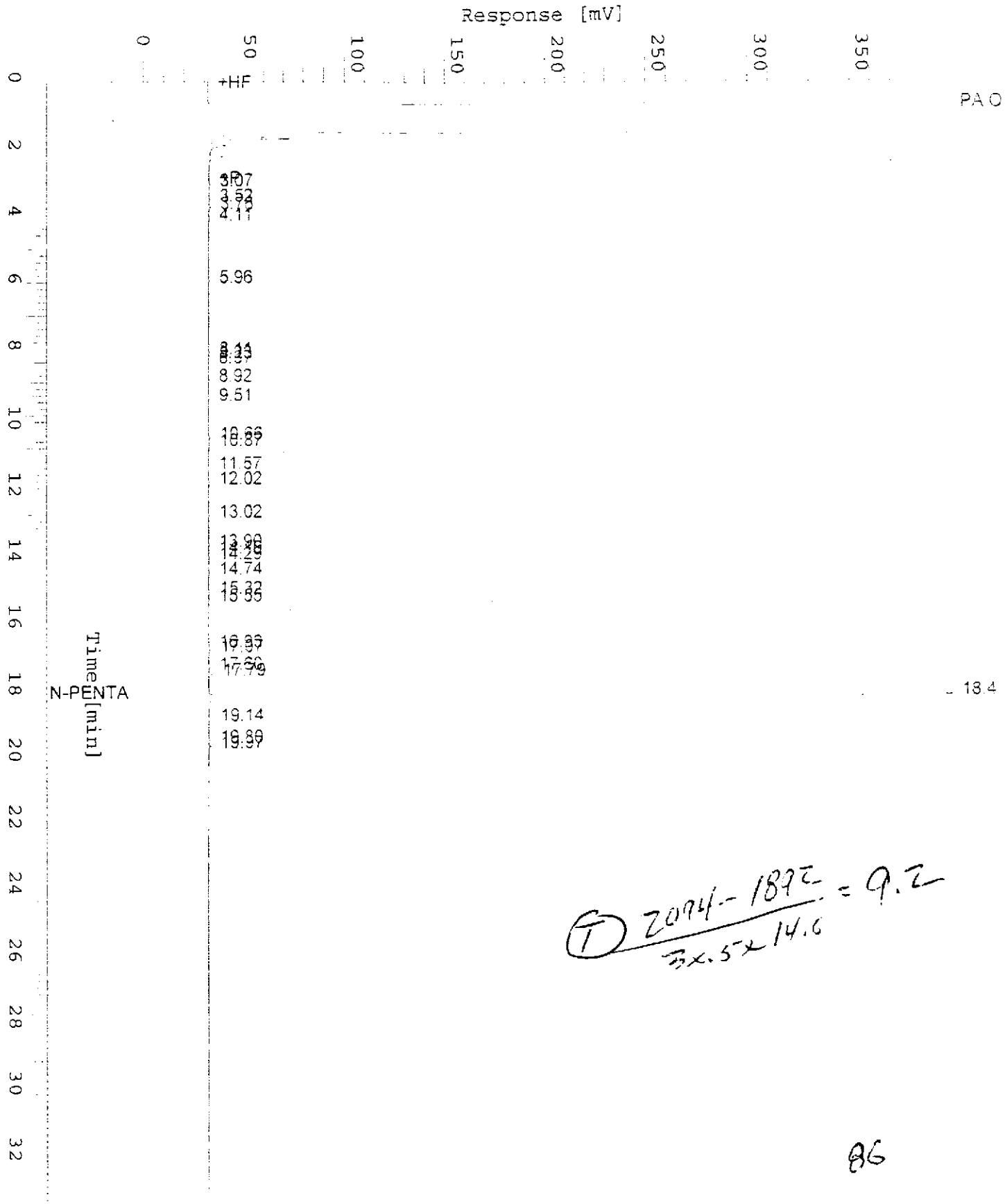
(B) $\frac{36222 - 789}{3 \times .5 \times 15.3} \times 10 = 31,000$

700 dilution

Chromatogram

Sample Name : GC0204980HBPEXB (500:1) 3510 RSI
FileName : S:\GHP_05\0208\204A032.raw
Method : TPH05A
Start Time : 0.00 min End Time : 33.65 min
Scale Factor: 0.0 Plot Offset: 0 mV

Sample #: BLK020498B Page 1 of 1
Date : 2/5/98 09:19
Time of Injection: 2/5/98 08:46
Low Point : 0.00 mV High Point : 400.00 mV
Plot Scale: 400.0 mV



18.4

(T) $\frac{2094 - 1872}{3 \times .5 \times 14.6} = 9.2$

86

Sequoia Analytical

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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:	930040.04/EKOTEK	
1730 So. Amphlett Blvd., Suite 320	Matrix:	LIQUID	
San Mateo, CA 94402	Sample Descript.:	XSD	
Attention: Roger D. Lion	Work Order #:	9801H40 -03, 04, 06	Reported: Mar 3, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC020798BTEX03A	GC020798BTEX03A	GC020798BTEX03A	GC020798BTEX03A	GC020798BTEX03A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	A. Miraftab	A. Miraftab	A. Miraftab	A. Miraftab	A. Miraftab
MS/MSD #:	9801E80-07-XSD	9801E80-07-XSD	9801E80-07-XSD	9801E80-07-XSD	9801E80-07-XSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	02/07/98	02/07/98	02/07/98	02/07/98	02/07/98
Analyzed Date:	02/07/98	02/07/98	02/07/98	02/07/98	02/07/98
Instrument I.D.#:	GCHP3	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	9.6	9.6	9.7	30	61
MS % Recovery:	96	96	97	100	102
Dup. Result:	8.5	8.4	8.4	25	53
MSD % Recov.:	85	84	84	83	88
RPD:	12	13	14	18	14
RPD Limit:	0-25	0-25	0-25	0-25	0-25
LCS #:	LCS020798-LCS	LCS020798-LCS	LCS020798-LCS	LCS020798-LCS	LCS020798-LCS
Prepared Date:	02/07/98	02/07/98	02/07/98	02/07/98	02/07/98
Analyzed Date:	02/07/98	02/07/98	02/07/98	02/07/98	02/07/98
Instrument I.D.#:	GCHP3	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	9.3	9.2	9.3	28	58
LCS % Recov.:	93	92	93	93	97
MS/MSD Control Limits	60-140	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130	70-130

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.

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Erler & Kalinowski, Inc.	Client Project ID:	930040.04/EKOTEK	
1730 So. Amphlett Blvd., Suite 320	Matrix:	LIQUID	
San Mateo, CA 94402	Sample Descript.:	XSD	
Attention: Roger D. Lion	Work Order #:	9801H40-01, 05, 07	Reported: Mar 3, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC020898BTEX18A	GC020898BTEX18A	GC020898BTEX18A	GC020898BTEX18A	GC020898BTEX18A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	J. Minkel	J. Minkel	J. Minkel	J. Minkel	J. Minkel
MS/MSD #:	9801E75-02-XSD	9801E75-02-XSD	9801E75-02-XSD	9801E75-02-XSD	9801E75-02-XSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	02/08/98	02/08/98	02/08/98	02/08/98	02/08/98
Analyzed Date:	02/08/98	02/08/98	02/08/98	02/08/98	02/08/98
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	11	11	10	33	68
MS % Recovery:	110	110	100	110	113
Dup. Result:	10	10	10	32	67
MSD % Recov.:	100	100	100	107	112
RPD:	9.5	9.5	0.0	3.1	1.5
RPD Limit:	0-25	0-25	0-25	0-25	0-25
LCS #:	LCS020898-LCS	LCS020898-LCS	LCS020898-LCS	LCS020898-LCS	LCS020898-LCS
Prepared Date:	02/08/98	02/08/98	02/08/98	02/08/98	02/08/98
Analyzed Date:	02/08/98	02/08/98	02/08/98	02/08/98	02/08/98
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	10	11	10	32	67
LCS % Recov.:	100	110	100	107	112
MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130	70-130
Control Limits					

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

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Erler & Kalinowski, Inc.	Client Project ID:	930040.04/EKOTEK	
1730 So. Amphlett Blvd., Suite 320	Matrix:	LIQUID	
San Mateo, CA 94402	Sample Descript.:	XSD	
Attention: Roger D. Lion	Work Order #:	9801H40-02, 08	Reported: Mar 3, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC021198BTEX18A	GC021198BTEX18A	GC021198BTEX18A	GC021198BTEX18A	GC021198BTEX18A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	J. Minkel	J. Minkel	J. Minkel	J. Minkel	J. Minkel
MS/MSD #:	9802301-02-XSD	9802301-02-XSD	9802301-02-XSD	9802301-02-XSD	9802301-02-XSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	02/11/98	02/11/98	02/11/98	02/11/98	02/11/98
Analyzed Date:	02/11/98	02/11/98	02/11/98	02/11/98	02/11/98
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	8.6	8.6	8.5	27	56
MS % Recovery:	86	86	85	90	93
Dup. Result:	10	10	9.8	30	65
MSD % Recov.:	100	100	98	100	108
RPD:	15	15	14	11	15
RPD Limit:	0-25	0-25	0-25	0-25	0-25
LCS #:	LCS021198-LCS	LCS021198-LCS	LCS021198-LCS	LCS021198-LCS	LCS021198-LCS
Prepared Date:	02/11/98	02/11/98	02/11/98	02/11/98	02/11/98
Analyzed Date:	02/11/98	02/11/98	02/11/98	02/11/98	02/11/98
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	10	10	10	30	65
LCS % Recov.:	100	100	100	100	108
MS/MSD Control Limits	60-140	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

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Erler & Kalinowski, Inc.	Client Project ID:	930040.04/EKOTEK	
1730 So. Amphlett Blvd., Suite 320	Matrix:	LIQUID	
San Mateo, CA 94402	Sample Descript.:	XSD	
Attention: Roger D. Lion	Work Order #:	9801H40-01-06	Reported: Mar 3, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Diesel
QC Batch#:	GC0204980HBPEXB
Analy. Method:	EPA 8015M
Prep. Method:	EPA 3510
Analyst:	D. Lockhart
MS/MSD #:	9801E29-02-XSD
Sample Conc.:	N.D.
Prepared Date:	02/04/98
Analyzed Date:	02/05/98
Instrument I.D.#:	GCHP19
Conc. Spiked:	1000 µg/L
Result:	670
MS % Recovery:	67
Dup. Result:	710
MSD % Recov.:	71
RPD:	5.8
RPD Limit:	0-50

LCS #:	LCS020498-LCS
Prepared Date:	02/04/98
Analyzed Date:	02/05/98
Instrument I.D.#:	GCHP19
Conc. Spiked:	1000 µg/L
LCS Result:	700
LCS % Recov.:	70

MS/MSD	50-150
LCS	60-140
Control Limits	

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

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Erler & Kalinowski, Inc.	Client Project ID:	930040.04/EKOTEK	
1730 So. Amphlett Blvd., Suite 320	Matrix:	LIQUID	
San Mateo, CA 94402	Sample Descript.:	XSD	
Attention: Roger D. Lion	Work Order #:	9801H40-01, 04, 05, 06	Reported: Mar 3, 1998

QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloro-ethene	Trichloro-ethene	Chloro-Benzene
QC Batch#:	GC013098801024A	GC013098801024A	GC013098801024A
Analy. Method:	EPA 8010	EPA 8010	EPA 8010
Prep. Method:	EPA 5030	EPA 5030	EPA 5030
Analyst:	E. Cunanan	E. Cunanan	E. Cunanan
MS/MSD #:	9801E66-01-XSD	9801E66-01-XSD	9801E66-01-XSD
Sample Conc.:	N.D.	N.D.	N.D.
Prepared Date:	01/29/98	01/29/98	01/29/98
Analyzed Date:	01/30/98	01/30/98	01/30/98
Instrument I.D.#:	GCHP24	GCHP24	GCHP24
Conc. Spiked:	25 µg/L	25 µg/L	25 µg/L
Result:	26	24	25
MS % Recovery:	104	96	100
Dup. Result:	26	24	25
MSD % Recov.:	104	96	100
RPD:	0.0	0.0	0.0
RPD Limit:	0-25	0-25	0-25

LCS #:	LCS020598-LCS	LCS020598-LCS	LCS020598-LCS
Prepared Date:	02/05/98	02/05/98	02/05/98
Analyzed Date:	02/05/98	02/05/98	02/05/98
Instrument I.D.#:	GCHP24	GCHP24	GCHP24
Conc. Spiked:	25 µg/L	25 µg/L	25 µg/L
LCS Result:	28	25	25
LCS % Recov.:	112	100	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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Erler & Kalinowski, Inc.	Client Project ID:	930040.04/EKOTEK	
1730 So. Amphlett Blvd., Suite 320	Matrix:	LIQUID	
San Mateo, CA 94402	Sample Descript.:	MW-1	
Attention: Roger D. Lion	Work Order #:	9801H40-02, 03, 07	Reported: Mar 3, 1998

QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloro-ethene	Trichloro-ethene	Chloro-Benzene
QC Batch#:	GC020598801009A	GC020598801009A	GC020598801009A
Analy. Method:	EPA 8010	EPA 8010	EPA 8010
Prep. Method:	EPA 5030	EPA 5030	EPA 5030
Analyst:	M. McLachlan	M. McLachlan	M. McLachlan
MS/MSD #:	9801H40-01-MSD	9801H40-01-MSD	9801H40-01-MSD
Sample Conc.:	N.D.	N.D.	28
Prepared Date:	02/04/98	02/04/98	02/04/98
Analyzed Date:	02/05/98	02/05/98	02/05/98
Instrument I.D.#:	GCHP9	GCHP9	GCHP9
Conc. Spiked:	125 µg/L	125 µg/L	125 µg/L
Result:	120	120	150
MS % Recovery:	96	96	98
Dup. Result:	140	120	160
MSD % Recov.:	112	96	106
RPD:	15	0.0	6.5
RPD Limit:	0-25	0-25	0-25

LCS #:	LCS020498-LCS	LCS020498-LCS	LCS020498-LCS
Prepared Date:	02/04/98	02/04/98	02/04/98
Analyzed Date:	02/05/98	02/05/98	02/05/98
Instrument I.D.#:	GCHP9	GCHP9	GCHP9
Conc. Spiked:	25 µg/L	25 µg/L	25 µg/L
LCS Result:	24	23	24
LCS % Recov.:	96	92	96

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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9801H40

CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

Erler & Kalinowski, Inc.

Project Number: EKI 930040.04 Page 1 of 1

Project Name: EKOTEK

Source of Samples: GW monitoring wells

Location: 4200 Alameda Avenue, Oakland, CA

Analytical Laboratory: Sequoia Analytical

Date Sampled: 1/28/98

Sampled By: R.D.Lion

Report Results To: Roger D. Lion

Phone Number: 650) 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)
	MW-1	Water	1 each-1 L. Amber	15:45	EPA 8015 mod TPH-diesel	standard
		Water	6-40 ml. VOA w/ HCl	15:45	EPA 8010 & 8015M/8020 (note 1)	standard
	MW-2	Water	1 each-1 L. Amber	14:26	EPA 8015 mod TPH-diesel	standard
		Water	6-40 ml. VOA w/ HCl	14:26	EPA 8010 & 8015M/8020 (note 1)	standard
	MW-3	Water	1 each-1 L. Amber	13:25	EPA 8015 mod TPH-diesel	standard
		Water	6-40 ml. VOA w/ HCl	13:25	EPA 8010 & 8015M/8020 (note 1)	standard
	MW-4	Water	1 each-1 L. Amber	17:10	EPA 8015 mod TPH-diesel	standard
		Water	6-40 ml. VOA w/ HCl	17:10	EPA 8010 & 8015M/8020 (note 1)	standard
	ERB	Water	1 each-1 L. Amber		EPA 8015 mod TPH-diesel	standard
		Water	6-40 ml. VOA w/ HCl		EPA 8010 & 8015M/8020 (note 1)	standard
	MW-5	Water	1 each-1 L. Amber	16:57	EPA 8015 mod TPH-diesel	standard
		Water	6-40 ml. VOA w/ HCl	16:51	EPA 8010 & 8015M/8020 (note 1)	standard

Special Instructions:

Note 1: EPA 8010 HVOCs and EPA 8015M/8020 Fuel Fingerprint w/ BTEX NOTE SOME VOAS ARE ERRONEOUSLY MARKED 1/29/98

Relinquished By: Name / Signature / Affiliation	Date	Time	Received By: Name / Signature / Affiliation
Roger D Lion Roger D Lion /EKI	1/28/9	18:35	Tarah /Sequoia

EKOCOC4.XLS