



ENVIRONMENTAL
PROTECTION

97 JAN -2 PM 2:14

December 26, 1996

Jon Legallet
Telegraph Business Properties
1401 Griffith Street
San Francisco, CA 94124

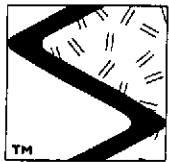
Re: Telegraph Business Park
5427 Telegraph Avenue
Oakland, California
SES Project #4-719-04

Dear Mr. Legallet:

Sierra Environmental Services (SES) is pleased to submit this report summarizing the results of the ground water sampling at Telegraph Business Park, located at 5427 Telegraph Avenue in Oakland, California (Figure 1, Attachment 1).

On October 28, 1996, SES personnel visited the site. Water levels were measured in all wells and all wells were checked for the presence of free-phase hydrocarbons. Free-phase hydrocarbons were not present in any of the site wells. Water level data are shown in Table 1 (Attachment 2) and ground water elevation contours are included on Figure 2 (Attachment 1).

Ground water samples were collected from MW-1, MW-2 and MW-3 on October 28, 1996 in accordance with SES Standard Operating Procedure - Ground Water Sampling (Attachment 3). All analyses were performed by Superior Analytical Laboratory, of Martinez, California. Analytic results for ground water are presented in Table 2 (Attachment 2). The chain of custody document and laboratory analytic reports are presented in Attachment 4. SES is not responsible for laboratory omissions or errors.



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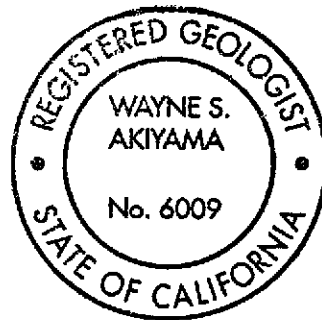
Jon Legallet
December 26, 1996
SES Project #4-719-04


Page 2

Thank you for allowing us to provide services to Telegraph Business Properties. Please call if you have any questions.

Sincerely,
Sierra Environmental Services


David M. Beardsley
Senior Environmental Technician




Wayne S. Akiyama R.G. R.E.A.
Senior Hydrogeologist #6009

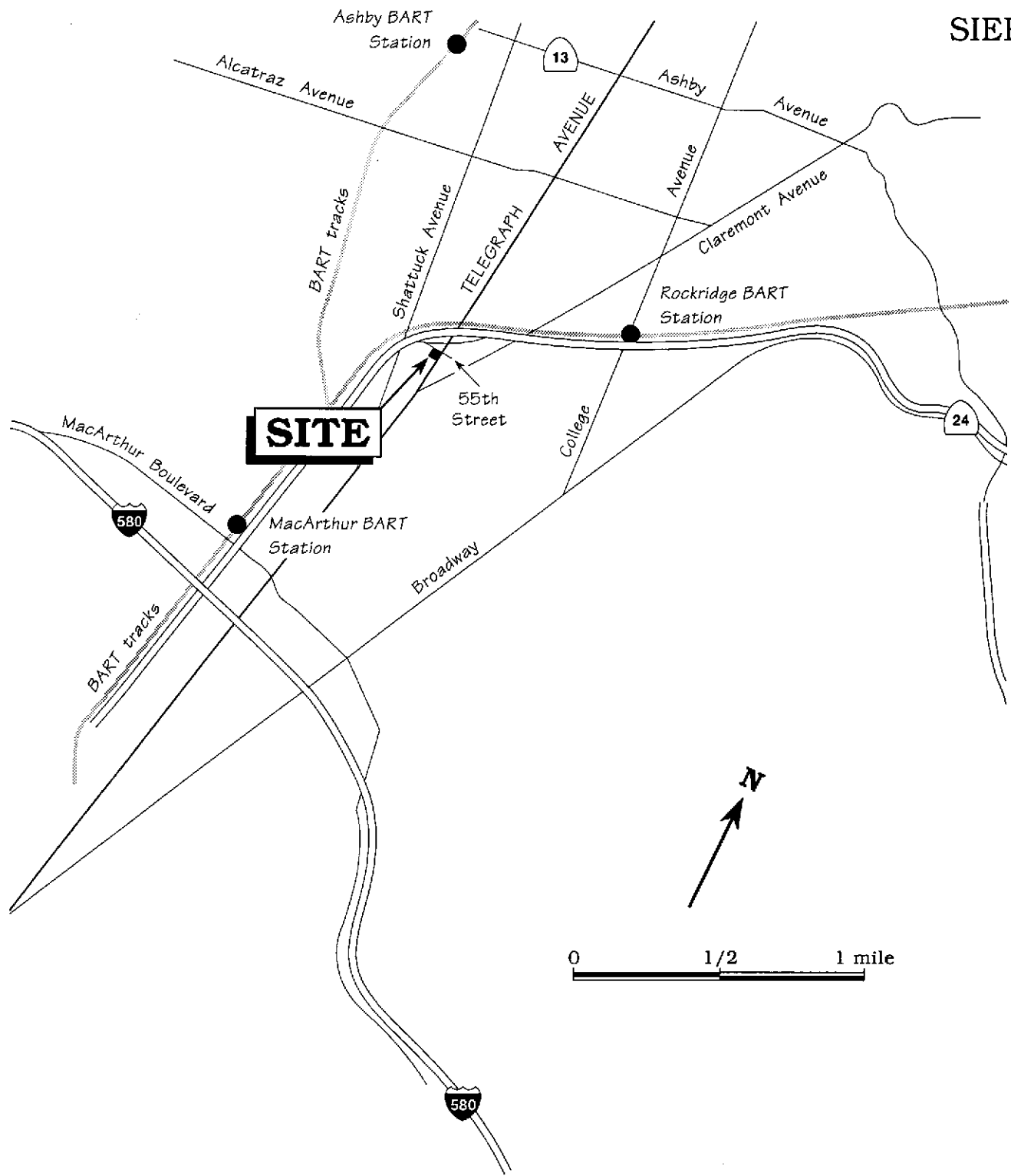
DMB/WSA/db
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Attachments: Figures
 Tables
 SES Standard Operating Procedure
 Chain of Custody Document and Laboratory Analytic Reports
 Water Sampling Forms

cc: Susan Hugo - Alameda County Health Care Services Agency ✓

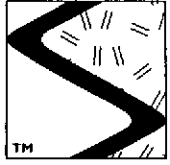


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Base map ref: California State Automobile Association (AAA)

Figure 1. Site Location Map - Telegraph Business Park, 5427 Telegraph Avenue, Oakland, California



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TELEGRAPH AVENUE

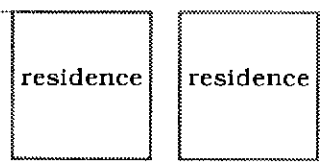
Sidewalk

55TH STREET

Approximate ground water flow direction at a gradient of 0.015 ft/ft

HIGHWAY 24 (elevated)

Caltrans Property



BUILDING

former 10,000 gal. gasoline tank

parking

parking

BUILDING

parking

communication tower

107.64 MW-1

107.44 MW-2

102.82 MW-3

former 5,000 gal. Stoddard Solvent tanks

former tank IIB

former tank IIIA

former tank IIIB

former tank IID

former tank IIA

former tank IIC

107.00

105.00

103.00

105.00

103.00

107.00

105.00

103.00

N

0 25 50 ft.

EXPLANATION

MW-3

Monitoring well

102.82

Ground water elevation, in feet above mean sea level

107.00

Ground water elevation contour, dashed where inferred, queried where uncertain

Figure 2. Monitoring Well Location and Ground Water Elevation Contour Map - October 28, 1996 - Telegraph Business Park, 5427 Telegraph Avenue, Oakland, California



Table 1. Water Level Data and Well Construction Details - Telegraph Business Park, 5427 Telegraph Avenue, Oakland, California

Well ID	Date Measured	DTW (ft)	TOC (ft)	GWE (msl)	Product Thickness* (ft)	Screen Interval	Sand Pack Interval	Bentonite/Grout Interval
						<-----feet below grade----->		
MW-1	1/5/94	6.40	115.05	108.65	0	5 - 20	4 - 20	0 - 4
	2/1/94	5.93		109.12	0			
	3/2/94	5.09		109.96	0			
	4/6/94	5.85		109.20	0			
	5/4/94	6.37		108.68	0			
	6/3/94	6.95		108.10	0			
	7/7/94	7.00		108.05	0			
	8/3/94	7.30		107.75	0			
	9/7/94	7.70		107.35	0			
	10/11/94	7.62		107.43	0			
	1/20/95	4.78		110.27	0			
	4/7/95	5.96		109.09	0			
	7/26/95	7.19		107.86	0			
	10/25/95	7.74		107.31	0			
	1/29/96	4.67		110.38	0			
	4/26/96	5.92		109.13	0			
	7/25/96	7.10		107.95	0			
	10/28/96	7.41		107.64	0			
MW-2	1/5/94	9.42	117.60	108.18	0	7 - 27	6 - 27	0 - 6
	2/1/94	9.15		108.45	0			
	3/2/94	9.55		108.05	0			
	4/6/94	9.09		108.51	0			
	5/4/94	9.18		108.42	0			
	6/3/94	9.44		108.16	0			
	7/7/94	10.21		107.39	0			
	8/3/94	10.96		106.64	0			
	9/7/94	10.20		107.40	0			
	10/11/94	10.18		107.42	0			
	1/20/95	8.64		108.96	0			
	4/7/95	9.84		107.76	0			
	7/26/95	10.55		107.05	0			
10/25/95	10.15	107.45	0					



Table 1. Water Level Data and Well Construction Details - Telegraph Business Park, 5427 Telegraph Avenue, Oakland, California, (continued).

Well ID	Date Measured	DTW (ft)	TOC (ft)	GWE (msl)	Product Thickness* (ft)	Screen Interval	Sand Pack Interval	Bentonite/Grout Interval
						<-----feet below grade----->		
MW-2	1/29/96	9.35		108.25	0			
cont.	4/26/96	8.57		109.03	0			
	7/25/96	10.73		106.87	0			
	10/28/96	10.16		107.44	0			
MW-3	1/5/94	10.14	115.33	105.19	0	5 - 20	4 - 20	0 - 4
	2/1/94	8.92		106.41	0			
	3/2/94	7.56	115.14 ¹	107.58	0			
	4/6/94	10.24		104.90	0			
	5/4/94	9.67		105.47	0			
	6/3/94	10.38		104.76	0			
	7/7/94	11.55		103.59	0			
	8/3/94	11.76		103.38	0			
	9/7/94	12.20		102.94	0			
	10/11/94	12.02		103.12	0			
	1/20/95	6.47		108.67	0			
	4/7/95	7.98		107.16	0			
	7/26/95	11.33		103.81	0			
	10/25/95	12.29		102.85	0			



Table 1. Water Level Data and Well Construction Details - Telegraph Business Park, 5427 Telegraph Avenue, Oakland, California, (continued).

Well ID	Date Measured	DTW (ft)	TOC (ft)	GWE (msl)	Product Thickness* (ft)	Screen Interval	Sand Pack Interval	Bentonite/Grout Interval
						<-----feet below grade----->		
MW-3	1/29/96	6.28		108.86	0			
cont.	4/26/96	9.09		106.05	0			
	7/25/96	12.06		103.08	0			
	10/28/96	12.32		102.82	0			

EXPLANATION:

DTW = Depth to water
 TOC = Top of casing elevation
 GWE = Ground water elevation
 msl = Measurements referenced relative to mean sea level

NOTES:

All top of casing elevations were surveyed by Ronald C. Miller, Professional Engineer #15816 on January 13, 1994.

- * Product thickness was measured with an MMC flexi-dip interface probe.
- ¹ Well resurveyed March 4, 1994 by Ronald C. Miller, Professional Engineer #15816.



Table 2. Analytic Results for Ground Water - Petroleum Hydrocarbons - Telegraph Business Park, 5427 Telegraph Avenue, Oakland, California

Sample ID	Date Sampled	Analytic Method	TPH(D)	Stoddard Solvent	O&G	←-----ppb----->			
						B	T	E	X
B-1	12/13/93	LUFT	1,200	93,000	---	---	---	---	---
B-2	12/13/93	LUFT	4,000	1,400,000	---	---	---	---	---
B-3	12/13/93	LUFT	3,700	780,000	---	---	---	---	---
B-4	12/13/93	LUFT	90	15,000	---	---	---	---	---
B-5	12/14/93	LUFT	100	1,600	---	---	---	---	---
B-6	12/14/93	LUFT	460	9,000	---	---	---	---	---
B-7	12/14/93	LUFT	390	18,000	---	---	---	---	---
B-8	12/14/93	LUFT	<50	<50	---	---	---	---	---
B-9	12/14/93	LUFT	<50	60	---	---	---	---	---
B-10	11/30/94	LUFT/5520/602	---	120,000	<10,000	<0.3	<0.3	<0.3	<0.3
B-11	11/30/94	LUFT/5520/602	---	210	<10,000	<0.3	<0.3	<0.3	<0.3
B-12	11/30/94	LUFT/5520/602	---	150	<10,000	<0.3	<0.3	<0.3	<0.3
B-13	11/30/94	LUFT/5520/602	---	220	<10,000	2.3	0.80	<0.3	4
B-14	11/30/94	LUFT/5520/602	---	150	<10,000	<0.3	<0.3	<0.3	0.80
B-15	1/23/95	LUFT/5520/602	---	9,100	<10,000	40	<3.0	60	<3.0
B-16	1/23/95	LUFT/5520/602	---	52 ¹	<13,000	<0.3	<0.3	<0.3	1.3
B-17	1/23/95	LUFT/5520/602	---	<50	<10,000	<0.3	<0.3	<0.3	<0.3



Table 2. Analytic Results for Ground Water - Petroleum Hydrocarbons - Telegraph Business Park, 5427 Telegraph Avenue, Oakland, California (continued)

Sample ID	Date Sampled	Analytic Method	TPH(D)	Stoddard Solvent	O&G	ppb			
						B	T	E	X
MW-1	1/5/94	LUFT/602	500	1,000	6,300*	3.3	1.6	<0.3	6
	4/6/94	LUFT/602/5520	800	1,400	<5,000	5.6	4.5	<0.3	11
	7/7/94	LUFT/602/5520	400	1,200	8,300*	1.5	0.80	<0.3	1.9
	10/11/94	LUFT/602/5520	<5.0	700	<5,000	<0.3	<0.3	<0.3	<0.3
	1/20/95	LUFT/602	---	1,500	---	3.9	2	<0.3	3.9
	4/7/95	602/5030	2,500	500	---	3.2	1.1	<0.3	1.7
	7/26/95 ^{2,3}	8015/8020	---	1,500	---	3.1	3.2	12	16
	10/25/95	8015/8020	---	660	---	0.6	1.4	20	14
	1/29/96	8015/8020/5030	---	2,500	---	1.8	0.7	8.0	13
	4/26/96	8015/8020/5030	---	4,600	---	<2.5	<2.5	9.5	21
	7/25/96	8015/8020/5030	---	2,200	---	1.6	1.6	11	51
	10/28/96	8015/8020/5030	---	1,300	---	1.5	1.3⁵	3.6⁵	11⁵
	MW-2	1/5/94	LUFT/602	200	35,000	<5,000	12	38	<3.0
4/6/94		LUFT/602/5520	2,200	94,000	15,600	21	22	<6.0	110
7/7/94		602	---	---	---	16	16	<1.5	1,510
7/11/94		LUFT/5520	800	43,000	14,500*	---	---	---	---
10/11/94		LUFT/5520/602	<5.0	31,000	<5,000	17	13	14	0.3
1/20/95		LUFT/602	---	26,000	---	18	13	12	50
4/7/95		602/5030	900	70,000	---	17.5	11	<0.6	74.6
7/26/95		8015/8020	---	21,000	---	17	<0.5	26	94
10/25/95		8015/8020	---	38,000	---	63	70	440	1,100
1/29/96		8015/8020/5030	---	74,000	---	7.4	8.6	66	330
4/26/96		8015/8020/5030	---	81,000	---	<250	<250	3,100	15,000
7/25/96		8015/8020/5030	---	48,000	---	17	9.4	59	200
10/28/96		8015/8020/5030	---	6,200	---	19	30	58⁵	310⁵
MW-3	1/5/94	LUFT/5520/602	70	1,100	<5,000	180	20	85	10
	4/6/94	LUFT/5520/602	<50	1,000	<5,000	140	13	60	<12
	7/7/94	602	---	---	---	120	7.5	8.0	<3.0
	7/11/94	LUFT/5520	270	1,000	<5,000*	---	---	---	---
	10/11/94	LUFT/5520/602	<5.0	1,100	<5,000	200	11	23	<0.3
	1/20/95	LUFT/602	---	2,100	---	36	3.5	4.8	<0.3
	4/7/95	602/5030	90	600	---	32.7	1.7	4.7	1.9



Table 2. Analytic Results for Ground Water - Petroleum Hydrocarbons - Telegraph Business Park, 5427 Telegraph Avenue, Oakland, California (continued)

Sample ID	Date Sampled	Analytic Method	TPH(D)	Stoddard Solvent	O&G	ppb			
						B	T	E	X
MW-3	7/26/95 ^s	8015/8020	---	1,200	---	98	3.2	12	16
(cont.)	10/25/95	8015/8020	---	2,300	---	32	3.4	4.7	9.6
	1/29/96	8015/8020/5030	---	1,100	---	22	1.2	6.4	12
	4/26/96	8015/8020/5030	---	1,300	---	5.6	0.6	4.6	14
	7/25/96	8015/8020/5030	---	2,900	---	120	6.4	23	36
	10/28/96	8015/8020/5030	---	2,000	---	170	6.6	16^s	26^s
Trip Blank									
TB-LB	1/5/94	602	---	---	---	<0.3	<0.3	<0.3	<0.3
	4/6/94	602	---	---	---	<0.3	<0.3	<0.3	<0.6
	7/7/94	602	---	---	---	<0.3	<0.3	<0.3	<0.3
	10/11/94	602	---	---	---	<0.3	<0.3	<0.3	<0.3
	11/30/94	602	---	---	---	<0.3	<0.3	<0.3	<0.3
	1/20/95	LUFT/602	---	<50	---	<0.3	<0.3	<0.3	<0.3
	1/23/95	LUFT/602	---	<50	---	<0.3	<0.3	<0.3	<0.3
	4/7/95	602	---	---	---	<0.3	<0.3	<0.3	<0.3
	7/26/95	8020	---	---	---	<0.5	<0.5	<0.5	<0.5
	10/25/95	8020	---	---	---	<0.5	<0.5	<0.5	<0.5
	1/29/96	8020	---	---	---	<0.5	<0.5	<0.5	<0.5
	4/26/96	8020	---	---	---	<0.5	<0.5	<0.5	<0.5
	7/25/96	8020	---	---	---	<0.5	<0.5	<0.5	<0.5
	10/28/96	8020	---	---	---	<0.5	<0.5	<0.5	<0.5
Bailer Blank									
BB	1/5/94	602	---	---	---	<0.3	<0.3	<0.3	<0.3
	4/6/94	602	---	---	---	<0.3	0.8	<0.3	<0.6
	7/11/94	602	---	---	---	<0.3	<0.3	<0.3	<0.3
	11/30/94	602	---	---	---	<0.3	<0.3	<0.3	<0.3
	1/20/95	LUFT/602	---	<50	---	<0.3	<0.3	<0.3	<0.3
	1/23/95	LUFT/602	---	<50	---	<0.3	<0.3	<0.3	<0.3
	4/7/95	602	---	---	---	<0.3	<0.3	<0.3	<0.3
	7/26/95	8020	---	---	---	<0.5	<0.5	<0.5	<0.5



Table 2. Analytic Results for Ground Water - Petroleum Hydrocarbons - Telegraph Business Park, 5427 Telegraph Avenue, Oakland, California (continued)

Sample ID	Date Sampled	Analytic Method	TPH(D)	Stoddard Solvent	O&G	ppb			
						B	T	E	X
BB	10/25/95	8020	---	---	---	<0.5	<0.5	<0.5	<0.5
(cont)	1/29/96	---	---	---	---	---	---	---	---
	4/26/96	8020	---	---	---	<0.5	<0.5	<0.5	<0.5
	7/25/96	---	---	---	---	---	---	---	---
	10/28/96	---	---	---	---	---	---	---	---

EXPLANATION:

TPH(D) = Total Petroleum Hydrocarbons as Diesel
 O&G = Oil and Grease
 B = Benzene
 T = Toluene
 E = Ethylbenzene
 X = Xylenes
 ppb = Parts per billion
 --- = Not analyzed/Not applicable

ANALYTIC LABORATORY:

Samples were analyzed by Percision Analytical Laboratory, of Richmond, California, prior to July 1995.

Samples were analyzed by Chromolab Environmental Services, of Pleasanton, California July 26, 1995.

Samples were analyzed by Superior Analytical Laboratory of Martinez, California from October, 1995 to present.

ANALYTIC METHODS:

LUFT = Department of Health Services LUFT Manual Method for TPH(D), Stoddard Solvent, and O&G
 602 = EPA Method 602 for BTEX.
 8020/5030 = EPA Method 8020/5030 for BTEX.
 8015 = EPA Method 8015 for Stoddard.
 5520 = Standard Methods Method 5520 F for non-polar O&G

NOTES:

- * This result represents both naturally occurring organics and petroleum hydrocarbons due to its analysis by Standard Methods Method 5520B.
- ¹ Stoddard gas range hydrocarbon does not match with stoddard gas standard.
- ² Unknown hydrocarbons in the diesel range were observed in sample.
- ³ Unknown compounds in the motor oil range were observed in sample.
- ⁴ Sample appears to be a mixture of stoddard and heavier unknown hydrocarbons.
- ⁵ There is a greater than 25% difference for detected concentration between the two GC columns. TPH extractables are interfering with results.



Table 3. Analytic Results for Ground Water - Volatile Organic Compounds - Telegraph Business Park, 5427 Telegraph Avenue, Oakland, California

Sample ID	Date Sampled	Analytic Method	VC	1,1-DCA	t-1,2-DCE	c-1,2-DCE	C	1,2-DCA	TCE	PCE	1,2-DCB	Other HVOCs	Other VOCs
B-10	11/30/94	8240	<2	<3	<3	<3	<3	<2	<3	<2	<4	---	ND ¹⁰
B-11	11/30/94	8240	<2	<3	<3	<3	<3	<2	<3	<2	<4	---	ND ¹⁰
B-12	11/30/94	8240	<2	<3	<3	<3	<3	<2	<3	<2	<4	---	ND ¹⁰
B-13	11/30/94	8240	430	32	7.9	810	<3	<2	340	360	<4	---	ND ¹⁰
B-14	11/30/94	8240	<2	12	<3	35	<3	<2	21	59	<4	---	ND ¹⁰
B-15	1/23/95	8240	<2	<3	<3	<3	<3	<2	<3	<2	<4	---	ND ¹⁰
B-16	1/23/95	8240	<2	<3	<3	<3	<3	<2	8	290	<4	---	ND ¹⁰
B-17	1/23/95	8240	<2	<3	<3	14	<3	<2	13	53	<4	---	ND ¹⁰
MW-1	1/5/94	8010	<1	<0.3	<0.2	0.44	0.35	<0.2	<0.3	<2	0.36	ND ¹	---
	4/6/94	8010	<1	<0.3	<0.2	0.32	<0.2	<0.2	<0.3	<2	0.21	ND ⁴	---
	7/7/94	8010	<1	<0.2	<0.2	<0.2	<0.1	<0.5	<0.2	<2	<0.2	ND ⁷	---
	10/11/94	8240	<2	<3	<3	<3	<3	<2	<3	<2	<4	---	ND ¹⁰
	1/20/95	8240	<2	<3	<3	<3	<3	<2	<3	<2	<1	---	ND ¹¹
	4/7/95	8010	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	ND ¹⁴	---
	7/26/95	8010	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND ¹⁴	---
	10/25/95	8010	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---
	1/29/96	8010	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	ND
	4/26/96	8010	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	ND
	7/25/96	8010	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	ND
	10/28/96	8010	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
MW-2	1/5/94	8010	<1	10	1.1	130	5.6	2.7	2.6	<2	0.90	ND ²	---
	4/6/94	8010	<1	0.40	<0.2	4.3	<0.2	<0.2	<0.3	<2	0.80	ND ⁵	---
	7/7/94	8010	<1	3.4	<0.2	15	<0.1	0.60	0.60	<2	0.40	ND ⁶	---
	10/11/94	8240	<2	<3	<3	31	<3	<2	<3	<2	<4	---	ND ¹⁰
	1/20/95	8240	<2	5	<3	14	<3	<2	<3	<2	<1	---	ND ¹¹
	4/7/95	8010	4.9	4.3	<0.5	18	<0.5	1.4	<0.5	0.8	<0.5	ND ^{12,14}	---
7/26/95	8010	8.1	5.1	<0.5	20	<0.5	<0.5	<0.5	1.6	<0.5	ND ¹⁴	---	



Table 3. Analytic Results for Ground Water - Volatile Organic Compounds - Telegraph Business Park, 5427 Telegraph Avenue, Oakland, California

Sample ID	Date Sampled	Analytic Method	VC	1,1-DCA	t-1,2-DCE	c-1,2-DCE	C	1,2-DCA	TCE	PCE	1,2-DCB	Other HVOCs	Other VOCs
MW-2	10/25/95	8010	17	5.4	<0.5	40	<0.5	<0.5	1.7	9.4	<0.5	ND ¹⁶	---
	1/29/96	8010	4.2	4.1	<0.5	27	<0.5	<0.5	1.3	0.9	0.7	ND	ND ¹⁸
	4/26/96	8010	3.3	0.8	<0.5	4.4	<0.5	<0.5	<0.5	<0.5	1.0	¹⁹	ND
	7/25/96	8010	0.8	2.3	<0.5	1.5	<0.5	<0.5	<0.5	<0.5	0.5	²¹	ND ¹⁸
	10/28/96	8010	<2.5	4.3	<2.5	36	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	ND
MW-3	1/5/94	8010	<1	0.70	<0.2	5.2	1.3	0.20	<0.3	<2	1.5	ND ³	---
	4/6/94	8010	<1	0.40	<0.2	4.2	<0.2	<0.2	<0.3	<2	0.80	ND ⁹	---
	7/7/94	8010	<1	0.30	<0.2	2.9	<0.1	<0.5	<0.2	<2	1.3	ND ⁹	---
	10/11/94	8240	<2	<3	<3	<3	<3	<2	<3	<2	<4	---	ND ¹⁰
	1/20/95	8240	<2	<3	<3	6	<3	<2	<3	<2	1	---	ND ¹¹
	4/7/95	8010	8.8	<0.5	<0.5	13	<0.5	0.7	<0.5	<0.5	2	ND ^{13,14}	---
	7/26/95	8010	9.6	<0.5	<0.5	6.3	<0.5	<0.5	<0.5	<0.5	<0.5	ND ¹⁵	---
	10/25/95	8010	4.2	<0.5	<0.5	4.1	<0.5	<0.5	<0.5	<0.5	1.6	ND ¹⁷	---
	1/29/96	8010	2.0	<0.5	<0.5	2.8	<0.5	<0.5	<0.5	<0.5	1.5	¹⁸	¹⁸
	4/26/96	8010	3.6	<0.5	<0.5	3.4	<0.5	<0.5	<0.5	<0.5	2.7	²⁰	ND
	7/25/96	8010	1.5	<0.5	<0.5	1.0	<0.5	<0.5	<0.5	<0.5	2.0	²²	ND ¹⁸
	10/28/96	8010	1.2	<0.5	<0.5	5.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	23

EXPLANATION:

VC = Vinyl Chloride
 1,1-DCA = 1,1-Dichloroethane
 t-1,2-DCE = trans-1,2-Dichloroethene
 c-1,2-DCE = cis-1,2-Dichloroethene
 C = Chloroform
 1,2-DCA = 1,2-Dichloroethane
 TCE = Trichloroethene
 PCE = Tetrachloroethene
 1,2-DCB = 1,2-Dichlorobenzene
 HVOCs = Halogenated Volatile Organic Compounds
 VOCs = Volatile Organic Compounds
 ppb = Parts per billion
 ND = Not detected

ANALYTIC LAB:

All samples analyzed by Chromolab Environmental Services, of Pleasanton, California.

ANALYTIC METHODS:

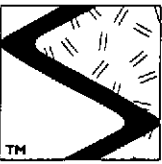
8010 = EPA Method 8010 for HVOCs
 8240 = EPA Method 8240 for VOCs



Table 3. Analytic Results for Ground Water - Volatile Organic Compounds - Telegraph Business Park, 5427 Telegraph Avenue, Oakland, California.

NOTES:

- ¹ 1,4-Dichlorobenzene was detected at 0.34 ppb. Other HVOCs not detected at detection limits of 0.2 to 2.0 ppb.
- ² 1,2-Dichloropropene, T-1,3-Dichloropropene, and 1,4-Dichlorobenzene were detected at 18, 1.0 and 1.0 ppb, respectively. Other HVOCs not detected at detection limits of 0.2 to 2.0 ppb.
- ³ Chlorobenzene and 1,4-Dichlorobenzene were detected at 0.70 and 0.30 ppb, respectively. Other HVOCs not detected at detection limits of 0.2 to 2.0 ppb.
- ⁴ 1,4-Dichlorobenzene was detected at 0.21 ppb. Other HVOCs not detected at detection limits of 0.2 to 2.2 ppb.
- ⁵ Chlorobenzene was detected at 1.7 ppb. Other HVOCs not detected at detection limits of 0.2 to 2.2 ppb.
- ⁶ Chlorobenzene was detected at 1.6 ppb. Other HVOCs not detected at detection limits of 0.2 to 2.2 ppb.
- ⁷ 1,4-Dichlorobenzene was detected at 0.26 ppb. Other HVOCs not detected at detection limits of 0.2 to 2.0 ppb.
- ⁸ 1,2-Dichloropropene, tetrachloroethene and 1,4-Dichlorobenzene were detected at 6.5, 1.4 and 0.34 ppb, respectively. Other HVOCs not detected at detection limits of 0.2 to 2.0 ppb.
- ⁹ Other HVOCs not detected at detection limits of 0.2 to 2.0 ppb.
- ¹⁰ Benzene, toluene, ethylbenzene and xylene results are included on Table 1. Other VOCs not detected at detection limits of 2 to 50 ppb.
- ¹¹ Benzene, toluene, ethylbenzene and xylene results are included on Table 1. Other VOCs not detected at detection limits of 1 to 7 ppb.
- ¹² 1,2-dichloropropane was detected at 8.0 ppb.
- ¹³ Chlorobenzene was detected at 7.3 ppb.
- ¹⁴ Other HVOCs were not detected at a detection limit of 0.5 ppb.
- ¹⁵ Chlorobenzene was detected at 4.0 ppb.
- ¹⁶ 1,2 Dichloropropane was detected at 9.0 ppb.
- ¹⁷ Chlorobenzene was detected at 1.7 ppb.
- ¹⁸ Benzene, toluene, ethylbenzene and xylene results included in Table 1.
- ¹⁹ 1,2-Dichloropropane was detected at 2.0 ppb.
- ²⁰ Chlorobenzene was detected at 6.1 ppb.
- ²¹ 1,2-Dichloropropane was detected at 4.1 ppb.
- ²² Chlorobenzene was detected at 3.2 ppb.
- ²³ Chlorobenzene was detected at 1.6 ppb.



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SES STANDARD OPERATING PROCEDURE GROUND WATER SAMPLING - QUARTERLY MONITORING

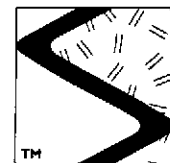
The following describes sampling procedures used by SES field personnel to collect and handle ground water samples. Before samples are collected, careful consideration is given to the type of analysis to be performed so that precautions are taken to prevent loss of volatile components or contamination of the sample, and to preserve the sample for subsequent analysis. Wells will be sampled no less than 24 hours after well development. Collection methods specific to ground water sampling are presented below.

Prior to sampling, each well is checked for the presence of free-phase hydrocarbons using an MMC flexi-dip interface probe. Product thickness (measured to the nearest 0.01 foot) is noted on the sampling form. Water level measurements are also made using either a water level meter or the interface probe. The water level measurements are also noted on the sampling form.

Prior to sampling, each well is purged of a minimum of three well casing volumes of water using a steam-cleaned PVC bailer, or a pre-cleaned pump. Temperature, pH and electrical conductivity are measured during purging. Purging is continued until these parameters have stabilized for consecutive readings.

Ground water samples are collected from the wells with pre-cleaned Disposable bailers or Teflon bailers. The Teflon bailers are cleaned with a Liquinox solution then double rinsed to remove any residuals. The water samples are decanted into the appropriate container for the analysis to be performed. Pre-preserved sample containers may be used or the analytic laboratory may add preservative to the sample upon arrival. Duplicate samples are collected from each well as a back-up sample and/or to provide quality control. The samples are labeled to include the project number, sample ID, date, preservative, and the field person's initials. The samples are placed in polyethylene bags and in an ice chest (maintained at 4°C with blue ice or ice) for transport under chain of custody to the laboratory.

The chain of custody form includes the project number, analysis requested, sample ID, date analysis and the SES field person's name. The form is signed and dated (with the transfer time) by each person who yields or receives the samples beginning with the field personnel and ending with the laboratory personnel.



SIERRA

A trip blank and bailer blank accompanies each sampling set, or 5% trip blanks and 5% bailer blanks are included for sets of greater than 20 samples. The bailer blank is prepared by pouring previously boiled water into a steam-cleaned Teflon bailer prior to sampling a well. The trip and bailer blanks are analyzed for some or all of the same compounds as the ground water samples.

GWS-QMP2.SOP

22027

Chain-of-Custody Record

Facility No. TELEGRAPH BUS. PARK
 Facility Address 5427 TELEGRAPH AVE, OAKLAND
 Consultant Project Number 4-719-04
 Consultant Name SIERRA ENVIRONMENTAL SERVICES
 Address P.O. Box 2546, Martinez, CA 94553
 Project Contact (Name) MARIO STERNAD
 (Phone) (510) 370-1280
 (FAX Number) (510) 370-7959

Client Contact (Name) JON LEGALLET
 (Company) NORMANDY ASSOC.
 (Phone) _____
 Laboratory Name SUPERIOR
 Samples Collected by (Name) MARIO STERNAD
 Collection Date 10-28-96
 Signature Mario Sternad

Laboratory Number	Sample Identification	# - size of Container(s)	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Leed (yes or no)	ANALYSIS TO BE PERFORMED											Remarks				
								BTEX + TPH Gas (602/8020 + 8015/5030)	TPH Diesel (8015/3550/3510)	Oil and Grease (Non-polar) (5520 B/E/F)	Halogenated Hydrocarbons (601/8010)	Volatile Organic Compounds (624/9240)	Total Lead (AA)	Metals: Cd, Cr, Ni, Pb, Zn (ICAP or AA)	Organic lead (DHS LUFT)	BTEX (EPA 8020) ONLY	(EPA 8010) HVOC'S	STANDARD SOLVENT (EPA 8015)					
	MW-1	6 VOA W	W	G		NONE	Y																
	MW-1	2 AMLT				NONE																	NO HCL ADDED TO VOA'S MW-1, REACTION TO ACID.
	MW-3	6 VOA				HCL																	
	MW-3	2 AMLT				NONE																	
	MW-2	6 VOA				HCL																	
	MW-2	2 AMLT				NONE																	
	PTB	2 VOA	W	G		HCL	Y																
	Samples Stored in ice.		✓		5.9°C																		
	Appropriate containers		✓																				
	Samples preserved		✓																				
	VOA's without headspace		✓																				
	Comments:																						

Relinquished By (Signature) <u>Mario Sternad</u>	Organization <u>BES</u>	Date/Time <u>10-29-96 0810</u>	Received By (Signature) <u>Joseph W. Poulton</u>	Organization <u>SAL</u>	Date/Time <u>10/29/96 0810</u>	Turn Around Time (Circle One) 24 hours 48 hours <u>5 days</u> 10 days As Contracted
Relinquished By (Signature) <u>Joseph W. Poulton</u>	Organization <u>SAL</u>	Date/Time <u>10/29/96 0810</u>	Received By (Signature)	Organization	Date/Time	
Relinquished By (Signature)	Organization	Date/Time	Received for Laboratory by (Signature)		Date/Time	



Superior

Analytical Laboratory

Sierra Environmental - Martinez
P.O. Box 2546
Martinez, CA 94553

Date: November 10, 1996

Attn: MARIO STERNAO

Laboratory Number : 22027

Project Number/Name : 4-719-04
Facility/Site : TELEGRAPH BUS PARK
5427 TELEGRAPH AVE
OAKLAND

Dear MARIO STERNAO:

Attached is Superior Analytical Laboratory report for the samples received on October 28, 1996. This report has been reviewed and approved for release. Following the cover letter is the Case Narrative detailing sample receipt and analysis. Also enclosed is a copy of the original Chain-of-Custody record confirming receipt of samples.

Please note that any unused portion of the sample will be discarded after November 27, 1996, unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please contact our Laboratory at (510) 313-0850.

Sincerely,


Afsaneh Salimpour
Project Manager



Superior

Analytical Laboratory

CASE NARRATIVE

Sierra Environmental - Martinez
Project Number/Name: 4-719-04
Laboratory Number: 22027

Sample Receipt

Four water samples were received by
Superior Analytical Laboratory on October 28, 1996.

Cooler temperature was 5.9°C

No abnormalities were noted with sample receiving.

Sample Analysis

The samples were analysed for methods 8010, 8015M and 8020.

I / I



Superior

Analytical Laboratory

Sierra Environmental - Martinez
Attn: MARIO STERNAO

Project 4-719-04
Reported on November 7, 1996

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

Chronology

Laboratory Number 22027

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
MW-1	10/28/96	10/28/96	11/06/96	11/06/96	CK061.37	01
MW-3	10/28/96	10/28/96	11/02/96	11/02/96	CK022.37	02
MW-2	10/28/96	10/28/96	11/02/96	11/02/96	CK022.37	03
TB	10/28/96	10/28/96	11/02/96	11/02/96	CK022.37	04

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
CK022.37-01	Method Blank	MB	Water	11/02/96	11/02/96
CK022.37-02	Laboratory Spike	LS	Water	11/02/96	11/02/96
CK022.37-03	Laboratory Spike Duplicate	LSD	Water	11/02/96	11/02/96
CK022.37-04	B-102-W	MS 22023-01	Water	11/02/96	11/02/96
CK022.37-05	B-102-W	MSD 22023-01	Water	11/02/96	11/02/96
CK061.37-01	Method Blank	MB	Water	11/06/96	11/06/96
CK061.37-02	Laboratory Spike	LS	Water	11/06/96	11/06/96
CK061.37-03	Laboratory Spike Duplicate	LSD	Water	11/06/96	11/06/96
CK061.37-04	G-13	MS 22043-05	Water	11/06/96	11/06/96
CK061.37-05	G-13	MSD 22043-05	Water	11/06/96	11/06/96



Superior

Analytical Laboratory

Sierra Environmental - Martinez
Attn: MARIO STERNAO

Project 4-719-04
Reported on November 7, 1996

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
22027-01	MW-1	Water	1.0	-
22027-02	MW-3	Water	5.0	-
22027-03	MW-2	Water	1.0	-
22027-04	TB	Water	1.0	-

R E S U L T S O F A N A L Y S I S

Compound	22027-01		22027-02		22027-03		22027-04	
	Conc.	RL	Conc.	RL	Conc.	RL	Conc.	RL
	ug/L		ug/L		ug/L		ug/L	
Benzene	1.5	0.5	170	2.5	19	0.5	ND	0.5
Toluene	1.3P	0.5	6.6	2.5	30	0.5	ND	0.5
Ethyl Benzene	3.6P	0.5	16P	2.5	58P	0.5	ND	0.5
Xylenes	11P	0.5	26P	2.5	310P	0.5	ND	0.5
>> Surrogate Recoveries (%) <<								
Trifluorotoluene (SS)	92		93		97		85	



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Analytical Laboratory

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

Quality Assurance and Control Data

Laboratory Number: 22027

Method Blank(s)

CK022.37-01	CK061.37-01
Conc. RL	Conc. RL
ug/L	ug/L

Benzene	ND	0.5	ND	0.5
Toluene	ND	0.5	ND	0.5
Ethyl Benzene	ND	0.5	ND	0.5
Xylenes	ND	0.5	ND	0.5

>> Surrogate Recoveries (%) <<

Trifluorotoluene (SS)	95	133
-----------------------	----	-----



Superior

Analytical Laboratory

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

Quality Assurance and Control Data

Laboratory Number: 22027

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Water Matrix (ug/L)						
CK022.37 02 / 03 - Laboratory Control Spikes						
Benzene		20	21/21	105/105	65-135	0
Toluene		20	20/20	100/100	65-135	0
Ethyl Benzene		20	20/20	100/100	65-135	0
Xylenes		60	61/61	102/102	65-135	0
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				98/95	50-150	
For Water Matrix (ug/L)						
CK061.37 02 / 03 - Laboratory Control Spikes						
Benzene		20	18/18	90/90	65-135	0
Toluene		20	18/18	90/90	65-135	0
Ethyl Benzene		20	18/18	90/90	65-135	0
Xylenes		60	55/54	92/90	65-135	2
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				97/82	50-150	
For Water Matrix (ug/L)						
CK022.37 04 / 05 - Sample Spiked: 22023 - 01						
Benzene	5.3	20	23/24	89/94	65-135	5
Toluene	1.1	20	19/20	90/95	65-135	5
Ethyl Benzene	1.5	20	20/20	93/93	65-135	0
Xylenes	1.5	60	57/59	93/96	65-135	3
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				88/98	50-150	



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Analytical Laboratory

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

Quality Assurance and Control Data

Laboratory Number: 22027

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Water Matrix (ug/L)						
CK061.37 04 / 05 - Sample Spiked: 22043 - 05						
Benzene	2.9	20	23/23	101/101	65-135	0
Toluene	1.2	20	19/20	89/94	65-135	5
Ethyl Benzene	21	20	39/39	90/90	65-135	0
Xylenes	58	60	110/110	87/87	65-135	3
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				84/90	50-150	

P - There is a greater than 25% difference for detected concentration between the two GC columns. TPH extractables ARE interfering with results.

Definitions:

ND = Not Detected

RL = Reporting Limit

NA = Not Analysed

RPD = Relative Percent Difference

ug/L = parts per billion (ppb)

mg/L = parts per million (ppm)

ug/kg = parts per billion (ppb)

mg/kg = parts per million (ppm)



Superior

Analytical Laboratory

Sierra Environmental - Martinez
Attn: MARIO STERNAO

Project 4-719-04
Reported on October 31, 1996

Total Extractable Petroleum Hydrocarbons
by EPA SW-846 Method 8015M

Chronology

Laboratory Number 22027

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
MW-1	10/28/96	10/28/96	10/29/96	10/30/96	CJ291.46	01
MW-3	10/28/96	10/28/96	10/29/96	10/30/96	CJ291.46	02
MW-2	10/28/96	10/28/96	10/29/96	10/30/96	CJ291.46	03

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
CJ291.46-01	Method Blank	MB	Water	10/29/96	10/29/96
CJ291.46-02	Laboratory Spike	LS	Water	10/29/96	10/29/96
CJ291.46-03	Laboratory Spike Duplicate	LSD	Water	10/29/96	10/29/96



Superior

Analytical Laboratory

Sierra Environmental - Martinez
Attn: MARIO STERNAO

Project 4-719-04
Reported on October 31, 1996

Total Extractable Petroleum Hydrocarbons
by EPA SW-846 Method 8015M

LAB ID	Sample ID	Matrix	Dil. Factor	Moisture
22027-01	MW-1	Water	1.0	-
22027-02	MW-3	Water	1.0	-
22027-03	MW-2	Water	4.0	-

RESULTS OF ANALYSIS

Compound	22027-01		22027-02		22027-03	
	Conc.	RL	Conc.	RL	Conc.	RL
	ug/L		ug/L		ug/L	
Stoddard Diesel:	1300	50	2000	50	6200	200
	NA	50	NA	50	NA	200
>> Surrogate Recoveries (%) <<						
Tetracosane	93		94		168I	



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Analytical Laboratory

Total Extractable Petroleum Hydrocarbons
by EPA SW-846 Method 8015M

Quality Assurance and Control Data

Laboratory Number: 22027
Method Blank(s)

CJ291.46-01
Conc. RL
ug/L

Stoddard	ND	50
Diesel:	ND	50

>> Surrogate Recoveries (%) <<
Tetracosane 107



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Analytical Laboratory

Total Extractable Petroleum Hydrocarbons
by EPA SW-846 Method 8015M

Quality Assurance and Control Data

Laboratory Number: 22027

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Water Matrix (ug/L)						
CJ291.46 02 / 03 - Laboratory Control Spikes						
Diesel:		1000	960/1230	96/123	50-150	25
>> Surrogate Recoveries (%) <<						
Tetracosane				112/114	50-150	

I - The surrogate recovery was high due to the presence of interfering compounds in the sample.

Definitions:

ND = Not Detected

RL = Reporting Limit

NA = Not Analysed

RPD = Relative Percent Difference

ug/L = parts per billion (ppb)

mg/L = parts per million (ppm)

ug/kg = parts per billion (ppb)

mg/kg = parts per million (ppm)



Superior

Analytical Laboratory

Sierra Environmental - Martinez
Attn: MARIO STERNAO

Project 4-719-04
Reported on November 6, 1996

Halogenated Volatile Organics by EPA SW-846 Methods 5030/8010

Chronology

Laboratory Number 22027

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
MW-1	10/28/96	10/28/96	11/05/96	11/05/96	CK052.08	01
MW-3	10/28/96	10/28/96	11/05/96	11/05/96	CK052.08	02
MW-2	10/28/96	10/28/96	11/05/96	11/05/96	CK052.08	03

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
CK052.08-01	Method Blank	MB	Water	11/05/96	11/05/96
CK052.08-02	Laboratory Spike	LS	Water	11/05/96	11/05/96
CK052.08-03	Laboratory Spike Duplicate	LSD	Water	11/05/96	11/05/96
CK052.08-04	MW-6	MS 22040-08	Water	11/05/96	11/05/96
CK052.08-05	MW-6	MSD 22040-08	Water	11/05/96	11/05/96



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Analytical Laboratory

Sierra Environmental - Martinez
Attn: MARIO STERNAO

Project 4-719-04
Reported on November 6, 1996

Halogenated Volatile Organics by EPA SW-846 Methods 5030/8010

LAB ID	Sample ID	Matrix	Dil. Factor	Moisture
22027-01	MW-1	Water	1.0	-
22027-02	MW-3	Water	1.0	-
22027-03	MW-2	Water	5.0	-

RESULTS OF ANALYSIS

Compound	22027-01		22027-02		22027-03	
	Conc.	RL	Conc.	RL	Conc.	RL
	ug/L		ug/L		ug/L	
Chloromethane	ND	0.5	ND	0.5	ND	2.5
Vinyl Chloride	ND	0.5	1.2	0.5	ND	2.5
Bromomethane	ND	0.5	ND	0.5	ND	2.5
Chloroethane	ND	0.5	ND	0.5	ND	2.5
Trichlorofluoromethane	ND	0.5	ND	0.5	ND	2.5
1,1-Dichloroethene	ND	0.5	ND	0.5	ND	2.5
Dichloromethane	ND	0.5	ND	0.5	ND	2.5
t-1,2-Dichloroethene	ND	0.5	ND	0.5	ND	2.5
1,1-Dichloroethane	ND	0.5	ND	0.5	4.3	2.5
c-1,2-Dichloroethene	ND	0.5	5.9	0.5	36	2.5
Chloroform	ND	0.5	ND	0.5	ND	2.5
1,1,1-Trichloroethane	ND	0.5	ND	0.5	ND	2.5
Carbon tetrachloride	ND	0.5	ND	0.5	ND	2.5
1,2-Dichloroethane	ND	0.5	ND	0.5	ND	2.5
Trichloroethene	ND	0.5	ND	0.5	ND	2.5
c-1,3-Dichloropropene	ND	0.5	ND	0.5	ND	2.5
1,2-Dichloropropane	ND	0.5	ND	0.5	ND	2.5
t-1,3-Dichloropropene	ND	0.5	ND	0.5	ND	2.5
Bromodichloromethane	ND	0.5	ND	0.5	ND	2.5
1,1,2-Trichloroethane	ND	0.5	ND	0.5	ND	2.5
Tetrachloroethene	ND	0.5	ND	0.5	ND	2.5
Dibromochloromethane	ND	0.5	ND	0.5	ND	2.5
Chlorobenzene	ND	0.5	1.6	0.5	ND	2.5
Bromoform	ND	0.5	ND	0.5	ND	2.5
1,1,2,2-Tetrachloroethane	ND	0.5	ND	0.5	ND	2.5
1,3-Dichlorobenzene	ND	0.5	ND	0.5	ND	2.5
1,2-Dichlorobenzene	ND	0.5	ND	0.5	ND	2.5
1,4-Dichlorobenzene	ND	0.5	ND	0.5	ND	2.5

>> Surrogate Recoveries (%) <<

Bromochloromethane	95	93	95
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Superior

Analytical Laboratory

Halogenated Volatile Organics by EPA SW-846 Methods 5030/8010

Quality Assurance and Control Data

Laboratory Number: 22027

Method Blank(s)

CK052.08-01

Conc. RL

ug/L

Chloromethane	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	0.5
Chloroethane	ND	0.5
Trichlorofluoromethane	ND	0.5
1,1-Dichloroethene	ND	0.5
Dichloromethane	ND	0.5
t-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
c-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
c-1,3-Dichloropropene	ND	0.5
1,2-Dichloropropane	ND	0.5
t-1,3-Dichloropropene	ND	0.5
Bromodichloromethane	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	0.6B	0.5
1,3-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5

>> Surrogate Recoveries (%) <<

Bromochloromethane 91



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Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Water Matrix (ug/L)						
CK052.08 02 / 03 - Laboratory Control Spikes						
1,1-Dichloroethene		20	24/23	120/115	50-189	4
Trichloroethene		20	21/21	105/105	53-161	0
Chlorobenzene		20	22/22	110/110	57-171	0
>> Surrogate Recoveries (%) <<						
Bromochloromethane				93/93	50-125	
For Water Matrix (ug/L)						
CK052.08 04 / 05 - Sample Spiked: 22040 - 08						
1,1-Dichloroethene	ND	20	23/24	115/120	50-189	4
Trichloroethene	ND	20	23/24	115/120	53-161	4
Chlorobenzene	ND	20	24/24	120/120	57-171	0
>> Surrogate Recoveries (%) <<						
Bromochloromethane				90/87	50-125	

Definitions:

ND = Not Detected
 RL = Reporting Limit
 NA = Not Analysed
 RPD = Relative Percent Difference
 ug/L = parts per billion (ppb)
 mg/L = parts per million (ppm)

ug/kg = parts per billion (ppb)
 mg/kg = parts per million (ppm)



WATER SAMPLING DATA

Job Name: 5427 TYLEMAN - BAK Job Number: 4-79-01
 Well Number: MW-1 Date: 10-28-96
 Sample Point Location/Description: NW OF BLDG
 Depth to Water (static): 7.61 Well Depth (sounded): 19.27
 Initial height of water in casing: 11.86 Volume: 2 gallons
 Volume to be purged: 6 gallons
 Purged With: PUMP Sampled With: DIS. TALES
 Pumped or Bailed Dry? Yes No Time: After gallons
 Water level at sampling: 8.10 Percent Recovery: 91%

Sampler: MAE
 Well Diameter: 2"
 Well Depth (spec.):

Formulas/Conversions
 r = well radius in ft
 h = ht of water col. in ft
 vol. in cyl. = $\pi r^2 h$
 $V_{2"}$ casing = 0.163 gal/ft
 $V_{3"}$ casing = 0.367 gal/ft
 $V_{4"}$ casing = 0.653 gal/ft
 $V_{4.5"}$ casing = 0.826 gal/ft
 $V_{6"}$ casing = 1.47 gal/ft
 $V_{8"}$ casing = 2.61 gal/ft

CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
8:25	8:36	3.0	3.0	6.15	70	1110	-
8:36	8:40	2.0	5.0	6.25	70	1120	-
8:40	8:50	2.0	7.0	6.30	70	1130	-

SAMPLES COLLECTED Time: 8:50 Total volume purged (gal.): 7.0 Gallons
 Water color: CLEAR Odor: SLIGHTLY SWEET
 Description of sediments or material in sample:
 Additional Comments: SAMPLES W/ ACID PURGED, Poured out PRIOR TO FILL FOR SAMPLE

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
MW1	6	VOA	-	NONE	Y		
MW1	7	AW LIT	-	NONE	Y		

Container Type Codes: 1 = 40 ml clear VOA/Teflon septa; 2 = Brown glass/teflon lined cap (specify size);
 3 = Clear glass/teflon lined cap (specify size); 4 = Polyethylene/polyethylene cap (specify size);
 5 = Other ; 6 = Other



WATER SAMPLING DATA

Job Name SU27 TELEGRAPH, OAK Job Number U.719-04
 Well Number MW-2 Date 10-28-96
 Sampler MAS
 Sample Point Location/Description NORTH EAST OF BLDG. Well Diameter 3 INCH
 Depth to Water (static) 10.16 Well Depth (sounded) 26.74
 Initial height of water in casing 16.58 Volume 2.7 gallons
 Volume to be purged 9 gallons
 Purged With PUMP Sampled With DISP. BAKER
 Pumped or Bailed Dry? Yes No Time After gallons
 Water level at sampling 10.61 Percent Recovery 97%

Formulas/Conversions

r = well radius in ft
 h = ht of water col. in ft
 vol. in cyl. = $\pi r^2 h$
 7.48 gal/ft³

V_{2"} casing = 0.163 gal/ft
 V_{3"} casing = 0.367 gal/ft
 V_{4"} casing = 0.653 gal/ft
 V_{4.5"} casing = 0.826 gal/ft
 V_{5"} casing = 1.47 gal/ft
 V_{6"} casing = 2.61 gal/ft

CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
10:06	10:08	2	2	6.33	68	140	—
10:12	10:14	5	3	6.34	68	140	—
10:16	10:18	9	4	6.39	69	140	—

SAMPLES COLLECTED Time 11:50 AM Total volume purged (gal.) 9 GALLONS
 Water color CLEAR Odor STRONG ODOUR / SWEET
 Description of sediments or material in sample: _____
 Additional Comments: STRONG ODOUR

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
MW-2	6	VOA	—	HCL	Y		
MW-2	2	AM LIT	—	NONE	Y		

Container Type Codes: 1 = 40 ml clear VOA/Teflon septa; 2 = Brown glass/teflon lined cap (specify size);
 3 = Clear glass/teflon lined cap (specify size); 4 = Polyethylene/polyethylene cap (specify size);
 5 = Other _____; 6 = Other _____



WATER SAMPLING DATA

Job Name 5427 TELETYPE DAK Job Number 4-719-04 Sampler WAS
 Well Number MW-3 Date 2-28-90 Well Diameter 2.00 in
 Sample Point Location/Description WEST OF BLDG Well Depth (spec.) _____
 Depth to Water (static) 12.32 Well Depth (sounded) 20.65
 Initial height of water in casing 7.73 Volume 1.26 gallons
 Volume to be purged 4 gallons
 Purged With PUMP Sampled With DISP. BOTTLE
 Pumped or Bailed Dry? Yes No Time 9:10 After 3 gallons
 Water level at sampling 2.42 ~ 14 feet Percent Recovery UNK
Measured w/ system

Formulas/Conversions
 r = well radius in ft
 h = ht of water col. in ft
 vol. in cyl. = $\pi r^2 h$
 7.48 gal/ft^3
 $V_{2"} \text{ casing} = 0.163 \text{ gal/ft}$
 $V_{3"} \text{ casing} = 0.367 \text{ gal/ft}$
 $V_{4"} \text{ casing} = 0.653 \text{ gal/ft}$
 $V_{4.5"} \text{ casing} = 0.826 \text{ gal/ft}$
 $V_{6"} \text{ casing} = 1.47 \text{ gal/ft}$
 $V_{8"} \text{ casing} = 2.61 \text{ gal/ft}$

CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
9:10	9:11	2	2	6.32	70	770	—
9:15	9:16	1	3	6.53	70	750	—
9:21	9:22	1	4	6.70	68	580	—

SAMPLES COLLECTED Time 9:10 Total volume purged (gal.) 4 gallons
 Water color 2100 Odor Slight pet odor
 Description of sediments or material in sample: _____
 Additional Comments: NOTE: NO RVN TO ACID

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
MW-3	6	PET	—	DISC	Y		
MW-3	2	PET	—	NONE	Y		

Container Type Codes: 1 = 40 ml clear VOA/Teflon septa; 2 = Brown glass/teflon lined cap (specify size);
 3 = Clear glass/teflon lined cap (specify size); 4 = Polyethylene/polyethylene cap (specify size);
 5 = Other _____; 6 = Other _____