

February 26, 1996

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

ST103160

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, Appendix A).

On January 29, 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 (Appendix B) and ground water elevation contours are included on Figure 2 (Appendix A).

Ground water samples were collected from MW-1, MW-2 and MW-3 on January 29, 1996 in accordance with SES Standard Operating Procedure - Ground Water Sampling (Appendix C). All analyses were performed by Superior Analytical Laboratory, of Martinez, California. Analytic results for ground water are presented in Tables 2 (Appendix B). The chain of custody document and laboratory analytic reports are presented in Appendix D. SES is not responsible for laboratory omissions or errors.

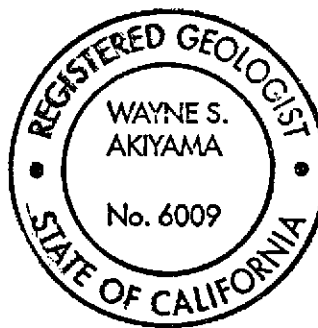


Jon Legallet  
February 26, 1996  
SES Project #4-719-04

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*  
David M. Beardsley  
Senior Environmental Technician

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

MJC/WSA  
71904QM.FB6

Appendices:   A - Figures  
                  B - Tables  
                  C - SES Standard Operating Procedure  
                  D - Chain of Custody Document and Laboratory Analytic Reports  
                  E - Water Sampling Forms

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



SIERRA

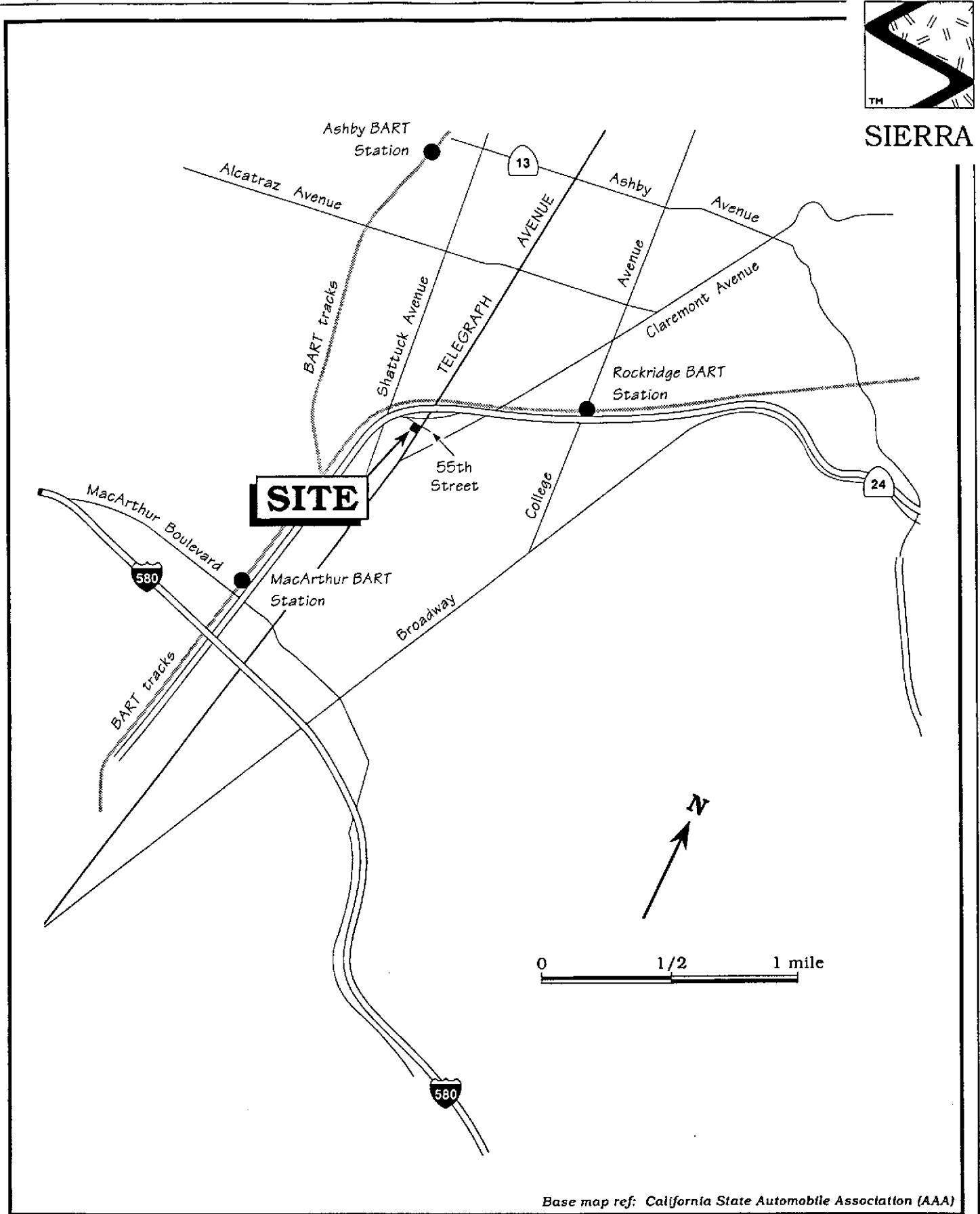
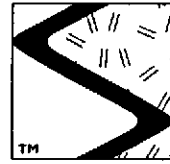


Figure 1. Site Location Map - Telegraph Business Park, 5427 Telegraph Avenue, Oakland, California



SIERRA

TELEGRAPH AVENUE

sidewalk

55TH STREET

Approximate ground water flow direction at a gradient of 0.01 - 0.03 ft/ft

HIGHWAY 24 (elevated)

Caltrans Property

110.38 MW-1

parking

residence

residence

BUILDING

former 10,000 gal. gasoline tank

former 5,000 gal. Stoddard Solvent tanks

108.25 MW-2

parking

BUILDING

former tank IIIA  
former tank IIIB

108.86 MW-3

former tank IIB

former tank IIA

former tank IIC

former tank IID

parking

communication tower

**EXPLANATION**

● MW-3

Monitoring well

108.86

Ground water elevation, in feet

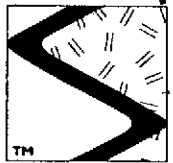
- 109.50

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



0 25 50 ft.

Figure 2. Monitoring Well Location and Ground Water Elevation Contour Map - January 29, 1996 - Telegraph Business Park, 5427 Telegraph Avenue, Oakland, California



SIERRA

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					
<b>1/29/96</b>	<b>4.67</b>	<b>110.38</b>	<b>0</b>							
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					
<b>1/29/96</b>	<b>9.35</b>	<b>108.25</b>	<b>0</b>							
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 <sup>1</sup>	107.58				0	
	4/6/94	10.24		104.90	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	5/4/94	9.67		105.47	0			
(cont)	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			
	<b>1/29/96</b>	<b>6.28</b>		<b>108.86</b>	<b>0</b>			

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.
- <sup>1</sup> 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 <sup>1</sup>	<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 <sup>2,3</sup>	8015/8020	---	1500	---	3.1	3.2	12	16
	10/25/95	8015/8020	---	660	---	0.6	1.4	20	14
	1/29/96	<b>5030/8015/8020</b>	<b>&lt;5.0</b>	<b>2,500</b>	---	<b>1.8</b>	<b>0.7</b>	<b>8.0</b>	<b>13</b>
	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	1100
1/29/96		<b>5030/8015/8020</b>	<b>&lt;5.0</b>	<b>74,000</b>	---	<b>7.4</b>	<b>8.6</b>	<b>66</b>	<b>330</b>
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
	7/26/95 <sup>3</sup>	8015/8020	---	1,200	---	98	3.2	12	16
	10/25/95	8015/8020	---	2,300	---	32	3.4	4.7	9.6
	1/29/96	<b>5030/8015/8020</b>	<b>&lt;5.0</b>	<b>1,100</b>	---	<b>22</b>	<b>1.2</b>	<b>6.4</b>	<b>12</b>
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





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	B	T	E	X
-----ppb-----									
	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
<b>Bailer Blank</b>									
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
	10/25/95	8020	---	---	---	<0.5	<0.5	<0.5	<0.5
	1/29/96	---	---	---	---	---	---	---	---



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

---

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  
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.
- <sup>1</sup> Stoddard gas range hydrocarbon does not match with stoddard gas standard.
- <sup>2</sup> Unknown hydrocarbons in the diesel range were observed in sample.
- <sup>3</sup> Unknown compounds in the motor oil range were observed in sample.



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

Sample ID	Date Sampled	Analytic Method	←-----ppb-----→										
			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 <sup>10</sup>
B-11	11/30/94	8240	<2	<3	<3	<3	<3	<2	<3	<2	<4	---	ND <sup>10</sup>
B-12	11/30/94	8240	<2	<3	<3	<3	<3	<2	<3	<2	<4	---	ND <sup>10</sup>
B-13	11/30/94	8240	430	32	7.9	810	<3	<2	340	360	<4	---	ND <sup>10</sup>
B-14	11/30/94	8240	<2	12	<3	35	<3	<2	21	59	<4	---	ND <sup>10</sup>
B-15	1/23/95	8240	<2	<3	<3	<3	<3	<2	<3	<2	<4	---	ND <sup>10</sup>
B-16	1/23/95	8240	<2	<3	<3	<3	<3	<2	8	290	<4	---	ND <sup>10</sup>
B-17	1/23/95	8240	<2	<3	<3	14	<3	<2	13	53	<4	---	ND <sup>10</sup>
MW-1	1/5/94	8010	<1	<0.3	<0.2	0.44	0.35	<0.2	<0.3	<2	0.36	ND <sup>1</sup>	---
	4/6/94	8010	<1	<0.3	<0.2	0.32	<0.2	<0.2	<0.3	<2	0.21	ND <sup>4</sup>	---
	7/7/94	8010	<1	<0.2	<0.2	<0.2	<0.1	<0.5	<0.2	<2	<0.2	ND <sup>7</sup>	---
	10/11/94	8240	<2	<3	<3	<3	<3	<2	<3	<2	<4	---	ND <sup>10</sup>
	1/20/95	8240	<2	<3	<3	<3	<3	<2	<3	<2	<1	---	ND <sup>11</sup>
	4/7/95	8010	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	ND <sup>14</sup>	---
	7/26/95	8010	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND <sup>14</sup>	---
	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
MW-2	1/5/94	8010	<1	10	1.1	130	5.6	2.7	2.6	<2	0.90	ND <sup>2</sup>	---
	4/6/94	8010	<1	0.40	<0.2	4.3	<0.2	<0.2	<0.3	<2	0.80	ND <sup>5</sup>	---
	7/7/94	8010	<1	3.4	<0.2	15	<0.1	0.60	0.60	<2	0.40	ND <sup>6</sup>	---
	10/11/94	8240	<2	<3	<3	31	<3	<2	<3	<2	<4	---	ND <sup>10</sup>
	1/20/95	8240	<2	5	<3	14	<3	<2	<3	<2	<1	---	ND <sup>11</sup>
	4/7/95	8010	4.9	4.3	<0.5	18	<0.5	1.4	<0.5	0.8	<0.5	ND <sup>12,14</sup>	---
	7/26/95	8010	8.1	5.1	<0.5	20	<0.5	<0.5	<0.5	1.6	<0.5	ND <sup>14</sup>	---
	10/25/95	8010	17	5.4	<0.5	40	<0.5	<0.5	1.7	9.4	<0.5	ND <sup>16</sup>	---
	1/29/96	8010	4.2	4.1	<0.5	27	<0.5	<0.5	1.3	0.9	0.7	ND	ND <sup>18</sup>



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

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
			←-----ppb-----→										
MW-3	1/5/94	8010	<1	0.70	<0.2	5.2	1.3	0.20	<0.3	<2	1.5	ND <sup>3</sup>	---
	4/6/94	8010	<1	0.40	<0.2	4.2	<0.2	<0.2	<0.3	<2	0.80	ND <sup>6</sup>	---
	7/7/94	8010	<1	0.30	<0.2	2.9	<0.1	<0.5	<0.2	<2	1.3	ND <sup>9</sup>	---
	10/11/94	8240	<2	<3	<3	<3	<3	<2	<3	<2	<4	---	ND <sup>10</sup>
	1/20/95	8240	<2	<3	<3	6	<3	<2	<3	<2	1	---	ND <sup>11</sup>
	4/7/95	8010	8.8	<0.5	<0.5	13	<0.5	0.7	<0.5	<0.5	2	ND <sup>13,14</sup>	---
MW-3	7/26/95	8010	9.6	<0.5	<0.5	6.3	<0.5	<0.5	<0.5	<0.5	<0.5	ND <sup>15</sup>	---
	10/25/95	8010	4.2	<0.5	<0.5	4.1	<0.5	<0.5	<0.5	<0.5	1.6	ND <sup>17</sup>	---
	1/29/96	8010	2.0	<0.5	<0.5	2.8	<0.5	<0.5	<0.5	<0.5	1.5	18	18

**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

**NOTES:**

- <sup>1</sup> 1,4-Dichlorobenzene was detected at 0.34 ppb. Other HVOCs not detected at detection limits of 0.2 to 2.0 ppb.
- <sup>2</sup> 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.
- <sup>3</sup> 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.
- <sup>4</sup> 1,4-Dichlorobenzene was detected at 0.21 ppb. Other HVOCs not detected at detection limits of 0.2 to 2.2 ppb.
- <sup>5</sup> Chlorobenzene was detected at 1.7 ppb. Other HVOCs not detected at detection limits of 0.2 to 2.2 ppb.
- <sup>6</sup> Chlorobenzene was detected at 1.6 ppb. Other HVOCs not detected at detection limits of 0.2 to 2.2 ppb.
- <sup>7</sup> 1,4-Dichlorobenzene was detected at 0.26 ppb. Other HVOCs not detected at detection limits of 0.2 to 2.0 ppb.
- <sup>8</sup> 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.
- <sup>9</sup> Other HVOCs not detected at detection limits of 0.2 to 2.0 ppb.
- <sup>10</sup> Benzene, toluene, ethylbenzene and xylene results are included on Table 1. Other

**ANALYTIC LAB:**

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

**ANALYTIC METHODS:**



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

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
-----------	--------------	-----------------	----	---------	-----------	-----------	---	---------	-----	-----	---------	-------------	------------

←-----ppb-----→

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

- 11 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.



**APPENDIX C**  
**SIERRA ENVIRONMENTAL SERVICES**  
**STANDARD OPERATING PROCEDURES**



## 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 Teflon bailers. The bailer are cleaned with a Liquinox solution then double rinsed to remove any residues. 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.

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





**APPENDIX D**  
**CHAIN OF CUSTODY DOCUMENT AND**  
**LABORATORY ANALYTIC REPORTS**

20854

Bill } Jon LEGALLET Directly J.C.  
 Directly } NORMAND ASSOC.

# Chain-of-Custody Record

Facility No. \_\_\_\_\_  
 Facility Address 5427 TELEGRAPH, OAK  
 Consultant Project Number 4-719-04  
 Consultant Name SIERRA ENVIRONMENTAL SERVICES  
 Address P.O. Box 2546, Martinez, CA 94553  
 Project Contact (Name) WAYNE AKIYAMA  
 (Phone) (510) 370-1280  
 (FAX Number) (510) 370-7959

Client Contact (Name) JON LEGALLET  
 (Company) NORMANDY ASSOC.  
 (Phone) \_\_\_\_\_  
 Laboratory Name SAC  
 Samples Collected by (Name) JOE CARTER  
 Collection Date 1/29/96  
 Signature Joe Carter

Laboratory Number	Sample Identification	# - size of Container(s)	Matrix S = Soil W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (yes or no)	ANALYSIS TO BE PERFORMED												Remarks				
								STEX + TPH Gas (602/8020 + 8015/5030)	TEH Q1551 Oil and Grease (9015/5030)	VOC's (9015/5030)	SVOC's (9015/5030)	PCB's (9015/5030)	DDT's (9015/5030)	Chlorinated Hydrocarbons (9015/5030)	Inorganic Compounds (82-782-0)	Total Lead IAA (9015/5030)	Metals: Cd, Ni, Pb, Zn (9015/5030)	Organic Lead (9015/5030)	DOHS LUFF		TPH STANDARD			
	MW-3	3 UOA	W	G	2:08pm	Hcl	Y	✓															ANALYZE IN ORDER SHOWN	
	MW-1				2:40pm			✓																
	MW-2				3:20pm			✓																
	TBL3	2 UOA						✓																
	MW-3	3 UOA			2:08pm	Hcl																		
	MW-3	2 LTR				NONE																		
	MW-1	3 UOA			2:40pm	Hcl																		
		2 LTR				NONE																		
	MW-2	3 UOA			3:20pm	Hcl																		
		2 LTR				NONE																		

Relinquished By (Signature) <u>Joe Carter</u>	Organization <u>SAC</u>	Date/Time <u>1-30-96 OAK</u>	Received By (Signature) <u>[Signature]</u>	Organization <u>Superior</u>	Date/Time <u>1/30/96 9:36</u>	Turn Around Time (Circle One) 24 hours 48 hours <u>5 days</u> 10 days As Contracted
Relinquished By (Signature) <u>[Signature]</u>	Organization <u>Superior</u>	Date/Time <u>1/30/96 9:47</u>	Received By (Signature) <u>[Signature]</u>	Organization <u>[Signature]</u>	Date/Time <u>[Signature]</u>	
Relinquished By (Signature) <u>[Signature]</u>	Organization <u>[Signature]</u>	Date/Time <u>[Signature]</u>	Received for Laboratory by (Signature) <u>[Signature]</u>	Organization <u>[Signature]</u>	Date/Time <u>1/30/96 9:50</u>	

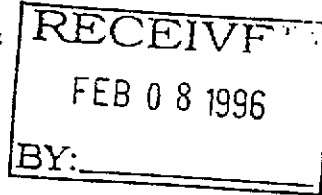


# Superior

## Analytical Laboratory

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

Attn: WAYNE AKIYAMA



Date: February 5, 1996

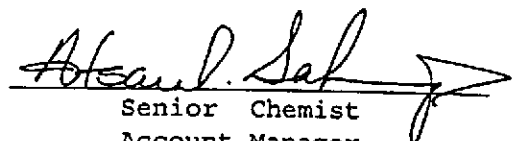
Laboratory Number : 20854

Project Number/Name : 4-719-04  
Facility/Site : TELEGRAPH

---

This report has been reviewed and  
approved for release.

---

  
Senior Chemist  
Account Manager

---

Customer Service: (800) 521-6109 • Laboratory: (510) 313-0850 • Facsimile: (510) 229-0916  
Post Office Box 2648 • 835 Arnold Drive • Suite #106 • Martinez, California 94553  
1555 Burke Street • Suite A • San Francisco, California 94124



# Superior

## Analytical Laboratory

Sierra Environmental - Martinez  
Attn: WAYNE AKIYAMA

Project 4-719-04  
Reported on February 5, 1996

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

Chronology

Laboratory Number 20854

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
MW-3	01/29/96	01/30/96	01/31/96	02/01/96	CA311.42	01
MW-1	01/29/96	01/30/96	01/31/96	02/01/96	CA311.42	02
MW-2	01/29/96	01/30/96	01/31/96	02/01/96	CA311.42	03

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
CA311.42-01	Method Blank	MB	Water	01/31/96	01/31/96
CA311.42-02	Laboratory Spike	LS	Water	01/31/96	01/31/96
CA311.42-03	Laboratory Spike Duplicate	LSD	Water	01/31/96	01/31/96



# Superior

## Analytical Laboratory

Sierra Environmental - Martinez  
Attn: WAYNE AKIYAMA

Project 4-719-04  
Reported on February 5, 1996

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

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
20854-01	MW-3	Water	1.0	-
20854-02	MW-1	Water	1.0	-
20854-03	MW-2	Water	50.0	-

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

Compound	20854-01		20854-02		20854-03	
	Conc.	RL	Conc.	RL	Conc.	RL
	ug/L		ug/L		ug/L	
Stoddard	1100	50	2500	50	74000	2500
Diesel:	NA	50	NA	50	NA	2500
>> Surrogate Recoveries (%) <<						
Tetracosane	103		147		BB	



Superior

Analytical Laboratory

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

Quality Assurance and Control Data

Laboratory Number: 20854  
Method Blank(s)

CA311.42-01

Conc. RL

ug/L

---

Stoddard	ND	50
Diesel:	ND	50

>> Surrogate Recoveries (%) <<

Tetracosane	114
-------------	-----



# Superior

## Analytical Laboratory

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

Quality Assurance and Control Data

Laboratory Number: 20854

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Water Matrix (ug/L)						
CA311.42 02 / 03 - Laboratory Control Spikes						
Diesel:		1000	870/800	87/80	50-150	8
>> Surrogate Recoveries (%) <<						
Tetracosane				135/111	50-150	

BB - Surrogate was diluted out.

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: WAYNE AKIYAMA

Project 4-719-04  
Reported on February 1, 1996

Gasoline Range Petroleum Hydrocarbons and BTXE  
by EPA SW-846 5030/8015M/8020  
Gasoline Range quantitated as all compounds from C6-C10

### Chronology

Laboratory Number 20854

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
MW-3	01/29/96	01/30/96	01/31/96	01/31/96	CA311.37	01
MW-1	01/29/96	01/30/96	01/31/96	01/31/96	CA311.37	02
MW-2	01/29/96	01/30/96	02/01/96	02/01/96	CA311.37	03
TB-LB	01/29/96	01/30/96	01/31/96	01/31/96	CA311.37	04

### QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
CA311.37-02	Laboratory Spike	LS	Water	01/31/96	01/31/96
CA311.37-04	SB-3	MS 20843-03	Water	01/31/96	01/31/96
CA311.37-05	SB-3	MSD 20843-03	Water	01/31/96	01/31/96
CA311.37-01	Method Blank	MB	Water	01/31/96	01/31/96
CA311.37-03	Laboratory Spike	LS	Water	01/31/96	01/31/96
CA311.37-06	SB-3	MS 20843-03	Water	01/31/96	01/31/96
CA311.37-07	SB-3	MSD 20843-03	Water	01/31/96	01/31/96





# Superior

## Analytical Laboratory

Sierra Environmental - Martinez  
Attn: WAYNE AKIYAMA

Project 4-719-04  
Reported on February 1, 1996

Gasoline Range Petroleum Hydrocarbons and BTXE  
by EPA SW-846 5030/8015M/8020  
Gasoline Range quantitated as all compounds from C6-C10

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
20854-01	MW-3	Water	1.0	-
20854-02	MW-1	Water	1.0	-
20854-03	MW-2	Water	10.0	-
20854-04	TB-LB	Water	1.0	-

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

Compound	20854-01		20854-02		20854-03		20854-04	
	Conc.	RL	Conc.	RL	Conc.	RL	Conc.	RL
	ug/L		ug/L		ug/L		ug/L	
Gasoline_Range	ND**	50	ND**	50	ND**	500	ND	50
Benzene	22	0.5	1.8	0.5	7.4	5.0	ND	0.5
Toluene	1.2	0.5	0.7	0.5	8.6	5.0	ND	0.5
Ethyl Benzene	6.4	0.5	8.0	0.5	66	5.0	ND	0.5
Total Xylenes	12	0.5	13	0.5	330	5.0	ND	0.5
>> Surrogate Recoveries (%) <<								
Trifluorotoluene (SS)	76		67		44K		103	



# Superior

## Analytical Laboratory

Gasoline Range Petroleum Hydrocarbons and BTXE  
by EPA SW-846 5030/8015M/8020  
Gasoline Range quantitated as all compounds from C6-C10

### Quality Assurance and Control Data

Laboratory Number: 20854  
Method Blank(s)

CA311.37-01

Conc. RL  
ug/L

---

Gasoline_Range	ND	50
Benzene	ND	0.5
Toluene	ND	0.5
Ethyl Benzene	ND	0.5
Total Xylenes	ND	0.5

>> Surrogate Recoveries (%) <<

Trifluorotoluene (SS) 106



# Superior

## Analytical Laboratory

Gasoline Range Petroleum Hydrocarbons and BTXE  
 by EPA SW-846 5030/8015M/8020  
 Gasoline Range quantitated as all compounds from C6-C10

### Quality Assurance and Control Data

Laboratory Number: 20854

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Water Matrix (ug/L)						
CA311.37 02 / - Laboratory Control Spikes						
Benzene		20	21	105	65-125	
Toluene		20	21	105	65-125	
Ethyl Benzene		20	21	105	65-125	
Total Xylenes		60	60	100	65-125	
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				106	50-150	
For Water Matrix (ug/L)						
CA311.37 03 / - Laboratory Control Spikes						
Gasoline_Range		2000	2000	100	65-135	
For Water Matrix (ug/L)						
CA311.37 04 / 05 - Sample Spiked: 20843 - 03						
Benzene	ND	20	20/21	100/105	65-125	5
Toluene	ND	20	21/21	105/105	65-125	0
Ethyl Benzene	ND	20	21/21	105/105	65-125	0
Total Xylenes	ND	60	60/59	100/98	65-125	2
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				102/105	50-150	
For Water Matrix (ug/L)						
CA311.37 06 / 07 - Sample Spiked: 20843 - 03						
Gasoline_Range	ND	2000	2000/2100	100/105	65-135	5



Superior

Analytical Laboratory

Narrative:

\*\* - Hydrocarbons were found in the range of gasoline, but do not resemble a gasoline fingerprint.

K - The surrogate recovery was low due to matrix effects. The analysis was repeated with similar effects.

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: WAYNE AKIYAMA

Project 4-719-04  
Reported on February 2, 1996

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

Chronology

Laboratory Number 20854

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
MW-3	01/29/96	01/30/96	02/01/96	02/01/96	CB011.06	01
MW-1	01/29/96	01/30/96	02/01/96	02/01/96	CB011.06	02
MW-2	01/29/96	01/30/96	02/01/96	02/01/96	CB011.06	03

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
CB011.06-01	Method Blank	MB	Water	02/01/96	02/01/96
CB011.06-02	Laboratory Spike	LS	Water	02/01/96	02/01/96
CB011.06-03	MW-1	MS 20854-02	Water	02/01/96	02/01/96
CB011.06-04	MW-1	MSD 20854-02	Water	02/01/96	02/01/96



# Superior

## Analytical Laboratory

Sierra Environmental - Martinez  
Attn: WAYNE AKIYAMA

Project 4-719-04  
Reported on February 2, 1996

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

LAB ID	Sample ID	Matrix	Dil. Factor	Moisture
20854-01	MW-3	Water	1.0	-
20854-02	MW-1	Water	1.0	-
20854-03	MW-2	Water	1.0	-

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

Compound	20854-01		20854-02		20854-03	
	Conc.	RL	Conc.	RL	Conc.	RL
	ug/L		ug/L		ug/L	
Chloromethane	ND	0.5	ND	0.5	ND	0.5
Vinyl Chloride	2.0	0.5	0.8	0.5	4.2	0.5
Bromomethane	ND	0.5	ND	0.5	ND	0.5
Chloroethane	ND	0.5	ND	0.5	ND	0.5
Trichlorofluoromethane	ND	0.5	ND	0.5	ND	0.5
1,1-Dichloroethene	ND	0.5	ND	0.5	ND	0.5
Dichloromethane	ND	0.5	ND	0.5	ND	0.5
t-1,2-Dichloroethene	ND	0.5	ND	0.5	ND	0.5
1,1-Dichloroethane	ND	0.5	ND	0.5	4.1	0.5
c-1,2-Dichloroethene	2.8	0.5	ND	0.5	27	0.5
Chloroform	ND	0.5	ND	0.5	ND	0.5
1,1,1-Trichloroethane	ND	0.5	ND	0.5	ND	0.5
Carbon tetrachloride	ND	0.5	ND	0.5	ND	0.5
1,2-Dichloroethane	ND	0.5	ND	0.5	ND	0.5
Trichloroethene	ND	0.5	ND	0.5	1.3	0.5
c-1,3-Dichloropropene	ND	0.5	ND	0.5	ND	0.5
1,2-Dichloropropane	ND	0.5	ND	0.5	ND	0.5
t-1,3-Dichloropropene	ND	0.5	ND	0.5	ND	0.5
Bromodichloromethane	ND	0.5	ND	0.5	ND	0.5
1,1,2-Trichloroethane	ND	0.5	ND	0.5	ND	0.5
Tetrachloroethene	ND	0.5	ND	0.5	0.9	0.5
Dibromochloromethane	ND	0.5	ND	0.5	ND	0.5
Chlorobenzene	5.3	0.5	ND	0.5	ND	0.5
Bromoform	ND	0.5	ND	0.5	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5	ND	0.5	ND	0.5
1,3-Dichlorobenzene	ND	0.5	ND	0.5	ND	0.5
1,2-Dichlorobenzene	1.5	0.5	ND	0.5	0.7	0.5
1,4-Dichlorobenzene	ND	0.5	ND	0.5	ND	0.5

#### >> Surrogate Recoveries (%) <<

4-Bromofluorobenzene	94	89	77
----------------------	----	----	----



# Superior

## Analytical Laboratory

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

Quality Assurance and Control Data

Laboratory Number: 20854

Method Blank(s)

CB011.06-01

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	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5

>> Surrogate Recoveries (%) <<

4-Bromofluorobenzene 87



# Superior

## Analytical Laboratory

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

Quality Assurance and Control Data

Laboratory Number: 20854

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Water Matrix (ug/L)						
CB011.06 02 / - Laboratory Control Spikes						
1,1-Dichloroethene		20	29	145	50-189	
Trichloroethene		20	28	140	53-161	
Chlorobenzene		20	20	100	57-171	
>> Surrogate Recoveries (%) <<						
4-Bromofluorobenzene				86	50-125	
For Water Matrix (ug/L)						
CB011.06 03 / 04 - Sample Spiked: 20854 - 02						
1,1-Dichloroethene	ND	20	19/20	95/100	50-189	5
Trichloroethene	ND	20	27/27	135/135	53-161	0
Chlorobenzene	ND	20	20/20	100/100	57-171	0
>> Surrogate Recoveries (%) <<						
4-Bromofluorobenzene				92/93	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)





**APPENDIX E**  
**WATER SAMPLING FORMS**





### WATER SAMPLING DATA

Job Name TELEGRAPH BUSINESS Job Number 4-719-04  
 Well Number MW-3 Date 1/29/96  
 Sample Point Location/Description ON SITE WEST OF WAREHOUSE Bldg.  
 Depth to Water (static) 6.28 Well Depth (sounded)       
 Initial height of water in casing 13.72 Volume 2.23 gallons  
 Volume to be purged 7 gallons  
 Purged With Sub pump Sampled With DIPPER BAILET  
 Pumped or Bailed Dry?    Yes    No    Time      After      gallons  
 Water level at sampling      Percent Recovery     

Sampler J.C.  
 Well Diameter 8"  
 Well Depth (spec.) 20

**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<sup>3</sup>  
 $V_2$  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  
 $V_7$  casing = 2.61 gal/ft

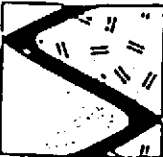
**CHEMICAL DATA**

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°F)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
1.05	1.17	2	2	7.9	61	0.167	
	1.50	3	5	7.6	62	0.165	
	1.52	2	7	7.2	63	0.173	

SAMPLES COLLECTED Time 2:08 Total volume purged (gal.) 7  
 Water color clear Odor clean  
 Description of sediments or material in sample: Some iron sh.  
 Additional Comments:     

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
MW-3	3	1	—	Hel	Y	SAL	g/BTEX
↓	↓	↓	↓	↓	↓	↓	08010
↓	2	2	↓	NONE	↓	↓	STODDARD

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 \_\_\_\_\_



SIERRA

### WATER SAMPLING DATA

Job Name TELEGRAPH BUSINESS Job Number 4-719-04 Sampler J.C.  
 Well Number MW-1 Date 1/29/96 Well Diameter 8"  
 Sample Point Location/Description ON SITE South of 55th street Well Depth (spec.) 19  
 Depth to Water (static) 4.67 Well Depth (sounded)       
 Initial height of water in casing 14.33 Volume 2.33 gallons  
 Volume to be purged 7 gallons  
 Purged With Sub pump Sampled With Disposable Bailor  
 Pumped or Bailed Dry? Yes  No  Time      After      gallons  
 Water level at sampling      Percent Recovery     

**Formulas/Conversions**  
 $r$  = well radius in ft  
 $h$  = ht of water col. in ft  
 vol. in cyl. =  $\pi r^2 h$   
 $7.48 \text{ gal/ft}^3$   
 $V_{2"} \text{ casing} = 0.163 \text{ gal/ft}$   
 $V_{3"} \text{ casing} = 0.367 \text{ gal/ft}$   
 $V_{4"} \text{ casing} = 0.653 \text{ gal/ft}$   
 $V_{5"} \text{ casing} = 0.826 \text{ gal/ft}$   
 $V_{6"} \text{ casing} = 1.47 \text{ gal/ft}$   
 $V_{8"} \text{ casing} = 2.61 \text{ gal/ft}$

### CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp <sup>F</sup> (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
2:19	2:21	2	2	6.5	62	0170	
	2:24	3	5	6.2	62	0170	
	2:50	2	7	6.3	61	0174	

SAMPLES COLLECTED Time 2:50 Total volume purged (gal.) 7  
 Water color Clear Odor (odor)  
 Description of sediments or material in sample: fine sand  
 Additional Comments:     

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
MW-1	3	1	—	Hel	Y	SAL	g/BTEX
↓	↓	↓	↓	↓	↓	↓	08010
↓	2	2	↓	NONE	↓	↓	STODDARD

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 TELEGRAPH BUSINESS Job Number 4-719-04 Sampler J.C.  
 Well Number MW-2 Date 1/29/96 Well Diameter 8"  
 Sample Point Location/Description ON SITE NORTH OF WAREHOUSE Well Depth (spec.) 20  
 Depth to Water (static) 9.35 Well Depth (sounded)       
 Initial height of water in casing 16.65 Volume 2.71 gallons  
 Volume to be purged 8 gallons  
 Purged With Sub pump Sampled With Di 4 post bailer  
 Pumped or Bailed Dry? Yes  No Time      After      gallons  
 Water level at sampling      Percent Recovery     

**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<sup>3</sup>  
 $V_{2"}$  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 <sup>F</sup> (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
2:55	2:58	3	3	6.9	101	0176	
	3:00	2	5	6.9	100	0173	
	3:02	3	8	6.2	100	0176	

SAMPLES COLLECTED Time 3:20 Total volume purged (gal.) 8  
 Water color CLEAR Odor (ODOR)  
 Description of sediments or material in sample: SAND & S.S.  
 Additional Comments: FILM ON WATER

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
MW-2	3	1	—	Hel	Y	SAL	g/BTEX
↓	↓	↓	↓	↓	↓	↓	08010
↓	2	2	↓	NONE	↓	↓	STODDARD

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 \_\_\_\_\_