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**Groundwater Monitoring Report  
January to June 2004**

**64<sup>th</sup> Street Properties  
Emeryville, California**

Alameda County  
MAR 02 2004

Environmental Health

Prepared for:

SIMEON Commercial Properties  
San Francisco, California

Prepared by:

Erler & Kalinowski, Inc.  
(EKI 990016.05)

26 February 2004

**Erler &  
Kalinowski, Inc.**

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Consulting Engineers and Scientists  
1870 Ogden Drive  
Burlingame, California 94010  
(650) 292-9100  
Fax: (650) 552-9012



**Erler &  
Kalinowski,  
Inc.**

Consulting Engineers and Scientists

1870 Ogden Drive  
Burlingame, CA 94010  
(650) 292-9100  
Fax: (650) 552-9012

26 February 2004

Betty Graham  
California Regional Water Quality Control Board  
San Francisco Bay Region  
1515 Clay Street, Suite 1400  
Oakland, California 94612

Susan Hugo  
Alameda County Health Agency  
Department of Environmental Health  
1131 Harbor Bay Parkway, 2<sup>nd</sup> Floor  
Alameda, California 94502

Alameda County  
MAR 02 2004  
Environmental Health

Subject: Groundwater Monitoring Report  
January to June 2004  
64<sup>th</sup> Street Properties, Emeryville, California  
(EKI 990016.05)

Dear Ms. Graham and Ms. Hugo:

On behalf of SIMEON Commercial Properties, Erler & Kalinowski, Inc. is pleased to present this report summarizing results of groundwater monitoring activities conducted at the 64<sup>th</sup> Street Properties located at 1480 64<sup>th</sup> Street, Emeryville, California on 4 February 2004. Please call with any questions or comments (650) 292-9100.

Very truly yours,

ERLER & KALINOWSKI, INC.

Hae Won Lee  
Staff Engineer

Derby Davidson, P.E.  
Project Engineer

cc: Pierson Forbes (2 copies), SIMEON Commercial Properties  
Maurice Kaufman, City of Emeryville

**Groundwater Monitoring Report  
January to June 2004  
64<sup>th</sup> Street Properties  
Emeryville, California**

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## 1.0 INTRODUCTION

On behalf of SIMEON Commercial Properties ("SIMEON"), Erler & Kalinowski, Inc. ("EKI") is pleased to present this report summarizing the results of groundwater monitoring activities conducted at the 64<sup>th</sup> Street Properties located at 1480 64<sup>th</sup> Street in Emeryville, California ("Site") on 4 February 2004. The location of the Site is shown on Figure 1.

Groundwater monitoring at the Site was conducted in accordance with the *Final Risk Management Plan for the 64<sup>th</sup> Street Properties*, dated 30 August 1999 ("RMP"). The RMP was approved by the California Regional Water Quality Control Board, San Francisco Bay Region ("RWQCB"), and the Alameda County Department of Environmental Health ("ACDEH") in a letter dated 15 October 1999. The RMP requires the measurement of water levels and the collection of groundwater samples from four monitoring wells (i.e., SMW-1, SMW-2, SMW-3, and SMW-4) installed at the Site. The approximate locations of these wells are shown on Figure 2.

The groundwater monitoring specified in the RMP is required to be performed quarterly for the first year, semi-annually for the second year, and annually thereafter. As recommended in the July to December 2002 Groundwater Monitoring Report, monitoring is being performed on a semi-annual basis to verify that downgradient TEPH concentrations remain stable. All groundwater samples are required to be analyzed for total extractable petroleum hydrocarbons as diesel ("TEPH"). The groundwater samples are also required to be analyzed for volatile organic compounds ("VOCs") on an annual basis. Data from the monitoring events are reported to the RWQCB and the ACDEH.

The objectives of the groundwater monitoring program established in the RMP are to monitor TEPH and VOC concentrations in groundwater at the perimeter and downgradient of the Site and to verify the stability or decline of TEPH concentrations over time. Groundwater samples collected from the four monitoring wells on 4 February 2004 were analyzed for TEPH and VOCs.



## 2.0 GROUNDWATER MONITORING

Per the RMP, monitoring at the Site includes measuring groundwater levels and collecting groundwater samples from Site monitoring wells SMW-1 through SMW-4 (Figure 2). EKI conducted monitoring activities at the Site on 4 February 2004 as described below.

### 2.1 Water Level Monitoring

Prior to sampling, EKI measured water levels in each well using a pre-cleaned electronic sounding tape. Water level data obtained by EKI were used to assess the magnitude and direction of the hydraulic gradient in the shallow water-bearing zone at the Site (see Section 3.1 below). Historic measured water level data and water level data collected on 4 February 2004 are summarized in Table 1.

### 2.2 Groundwater Sampling and Laboratory Analyses

Prior to sampling, groundwater was purged until at least three of four parameters (temperature, specific conductance, pH, and turbidity) stabilized. Approximately three well-casing volumes of groundwater were removed from each well. Groundwater samples were collected from wells SMW-1, SMW-2, SMW-3, and SMW-4. Copies of groundwater purge sample forms are included in Appendix A.

Groundwater samples from the wells were collected using PVC bailers suspended by nylon string. Separate disposable PVC bailers were used at each well. Well SMW-4 was sampled through a stilling tube. A sheen and dark colored sediment were observed at well SMW-4, though no free product layer was observed.

Rinsate from equipment cleaning and purged groundwater from the wells was contained and stored on-site in 55-gallon drums. SIMEON will dispose of the rinse water and purged groundwater in accordance with applicable laws and regulations.

Groundwater samples were labeled, logged on a chain-of-custody document, and packed on ice in a chilled ice chest for transport to the laboratory. Samples were analyzed by Curtis & Tompkins, Ltd., of Emeryville, California, for TEPH using EPA Method 8015M with silica gel cleanup and for VOCs using EPA Method 8260B. Analytical results for the 4 February 2004 monitoring event are summarized in Tables 2 and 3 and are shown on Figures 3 and 4. Copies of laboratory reports from these groundwater analyses are included in Appendix B. Groundwater analytical results are discussed in Section 3.2 below.

### 3.0 EVALUATION OF HYDRAULIC GRADIENT AND GROUNDWATER SAMPLING RESULTS

This section summarizes (a) hydraulic groundwater gradient information obtained at the Site on 4 February 2004, (b) groundwater analytical results from on-site groundwater monitoring conducted on 4 February 2004, and (c) quality control results.

#### 3.1 Hydraulic Gradient

The groundwater potentiometric surface contour map for the Site shallow water-bearing zone shown on Figure 2 is based on water levels measured in wells SMW-1, SMW-2, SMW-3, and SMW-4 on 4 February 2004. As shown on Figure 2, the direction of the hydraulic gradient in the shallow water-bearing zone is westerly across the southwestern portion of the Site. The estimated magnitude of the hydraulic gradient across the Site is 0.007 ft/ft. This groundwater gradient is consistent with prior monitoring events.

#### 3.2 Groundwater Analytical Results

##### 3.2.1 TEPH Groundwater Sampling Data

Current and historic TEPH data detected in groundwater samples collected from wells SMW-1, SMW-2, SMW-3, and SMW-4 are summarized in Table 2 and on Figure 3.

TEPH was not detected at a concentration above 50 micrograms per liter ("ug/L") in the groundwater samples collected on 4 February 2004 from downgradient monitoring wells SMW-1, SMW-2, and SMW-3. TEPH was detected at a concentration of 900 ug/L in the groundwater sample collected from monitoring well SMW-4. As indicated above, the groundwater sample from monitoring well SMW-4 was collected through a stilling tube. Although the measured TEPH concentration from well SMW-4 should represent levels dissolved in groundwater on the southern property boundary, it is possible that free-phase hydrocarbons became entrained in the sample collected from well SMW-4.

##### 3.2.2 VOC Groundwater Sampling Data

Current and historic VOC data detected in groundwater samples collected from wells SMW-1, SMW-2, SMW-3, and SMW-4 are summarized in Table 3 and on Figure 4. Cis-1,2-dichloroethene ("c-1,2-DCE") was detected at a concentration of 5.8 ug/L in the groundwater sample collected from well SMW-3. No other VOCs were detected in this sample. VOCs analyzed using EPA Method 8260B were not detected in the groundwater samples collected from wells SMW-1, SMW-2, and SMW-4.

In general, the results of the VOC analyses are consistent with results from previous groundwater samples.

### 3.3 Quality Control Results

All QA/QC analytical results, including laboratory blanks, blank spikes, and surrogates were within (a) generally accepted laboratory QA/QC protocols and (b) requirements of the laboratory's internal quality control procedures. The data collected during the 4 February 2004 monitoring event are considered acceptable and useable for their intended purpose.

**TABLE 1**  
**SUMMARY OF GROUNDWATER ELEVATION DATA**

64th Street Properties, Emeryville, California

Well Number	Date	Well Elevation (1) (Feet Above MSL)	Depth to Water (Feet)	Groundwater Elevation (Feet Above MSL)
SMW-1	1-Feb-01	12.21	5.68	6.53
	24-May-01	12.21	5.67	6.54
	7-Aug-01	12.21	5.92	6.29
	2-Nov-01	12.21	5.78	6.43
	5-Feb-02	12.21	6.12	6.09
	21-Aug-02	12.21	5.95	6.26
	6-Feb-03	12.21	6.09	6.12
	7-Aug-03	12.21	6.61	5.60
	4-Feb-04	12.21	5.25	6.96
SMW-2	1-Feb-01	11.54	4.67	6.87
	24-May-01	11.54	4.92	6.62
	7-Aug-01	11.54	5.35	6.19
	2-Nov-01	11.54	5.08	6.46
	5-Feb-02	11.54	5.25	6.29
	21-Aug-02	11.54	5.23	6.31
	6-Feb-03	11.54	5.36	6.18
	7-Aug-03	11.54	5.92	5.62
	4-Feb-04	11.54	4.39	7.15
SMW-3	1-Feb-01	12.31	5.60	6.71
	24-May-01	12.31	5.63	6.68
	7-Aug-01	12.31	6.10	6.21
	2-Nov-01	12.31	5.95	6.36
	5-Feb-02	12.31	6.11	6.20
	21-Aug-02	12.31	6.05	6.26
	6-Feb-03	12.31	6.20	6.11
	7-Aug-03	12.31	6.81	5.50
	4-Feb-04	12.31	5.25	7.06
SMW-4	1-Feb-01	12.25	2.41 (2)	9.84 (2)
	24-May-01	12.25	2.43 (2)	9.82 (2)
	7-Aug-01	12.25	2.20 (2)	10.05 (2)
	2-Nov-01	12.25	2.10 (2)	10.15 (2)
	5-Feb-02	12.25	2.43 (2)	9.82 (2)
	21-Aug-02	12.25	2.23 (2)	10.02 (2)
	6-Feb-03	12.25	2.43 (2)	9.82 (2)
	7-Aug-03	12.25	2.54 (2)	9.71 (2)
	4-Feb-04	12.25	2.25 (3)	10.00 (3)

**TABLE 1**  
***SUMMARY OF GROUNDWATER ELEVATION DATA***

64th Street Properties, Emeryville, California

**Notes:**

- (1) Surveyed elevation from mark on the top of the PVC casing; feet above mean sea level.
- (2) A thin layer of floating product was observed in this well. The floating product thickness was less than 0.03 feet.
- (3) A sheen was observed, along with dark colored sediment but no free product layer.

**TABLE 2**  
**SUMMARY OF GROUNDWATER**  
**CHEMICAL ANALYTICAL DATA - TEPH**

64th Street Properties, Emeryville, California

Date	TEPH (ug/L) (1)			
	SMW-1	SMW-2	SMW-3	SMW-4
1-Feb-01	<50	<50	140	360
24-May-01	<50	<50	74	300
7-Aug-01	<50	<50	140	280
2-Nov-01	<50	<50	<50	260
5-Feb-02	<50	84	100	3,600
21-Aug-02	<50	69	<50	8,000
6-Feb-03	<50	<50	<50	2,100
7-Aug-03	<50	<50	<50	1,100
4-Feb-03	<50	<50	<50	900

**Notes and abbreviations:**

(1) TEPH is quantified as diesel. Samples were analyzed by EPA Method 8015M after performance of a silica gel cleanup in the laboratory.

TEPH = total extractable petroleum hydrocarbons

ug/L = micrograms per liter (ppb)

<50 = not detected at laboratory detection limit of 50 ug/L

**TABLE 3**  
**SUMMARY OF GROUNDWATER**  
**CHEMICAL ANALYTICAL DATA - VOCs**

64th Street Properties, Emeryville, California

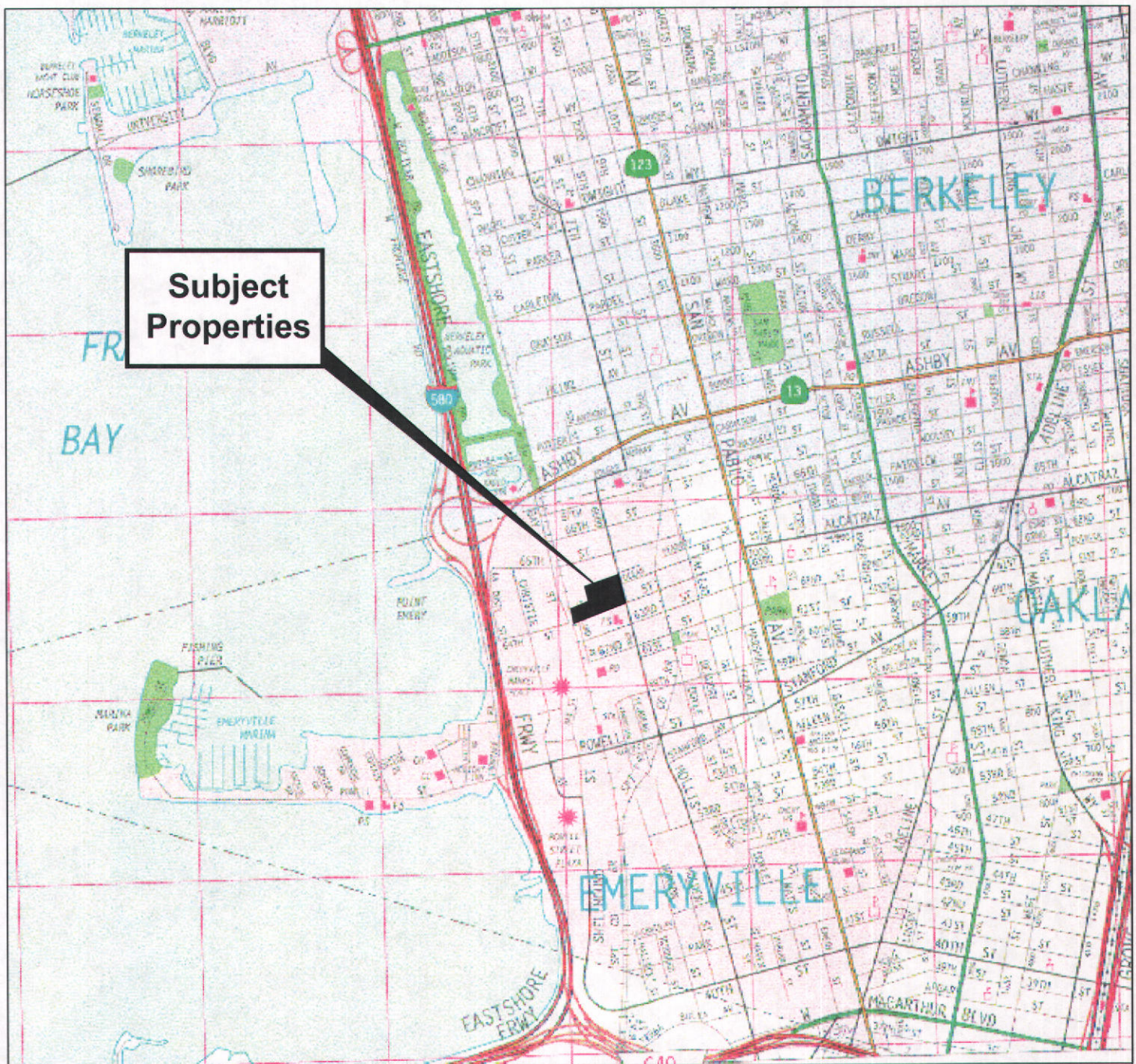
Sample	Date (2)	VOC Concentrations (ug/L) (1)			
		MTBE	t-1,2-DCE	c-1,2-DCE	TCE
SMW-1	1-Feb-01	<5	<5	<5	<5
	5-Feb-02	<5	<5	<5	<5
	4-Feb-04	<5	<5	<5	<5
SMW-2	1-Feb-01	<5	<5	<5	<5
	5-Feb-02	<b>5.1</b>	<5	<5	<5
	4-Feb-04	<5	<5	<5	<5
SMW-3	1-Feb-01	<5	<5	<b>14</b>	<5
	5-Feb-02	<5	<b>5.6</b>	<b>13</b>	<b>8.9</b>
	4-Feb-04	<5	<5	<b>5.8</b>	<5
SMW-4	1-Feb-01	<5	<5	<5	<5
	5-Feb-02	<5	<5	<5	<5
	4-Feb-04	<5	<5	<5	<5

**Notes and abbreviations:**

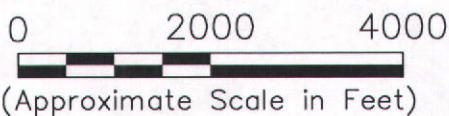
- (1) VOCs not listed were not detected using EPA Method 8260B.
- (2) Groundwater samples for VOC analysis were inadvertently not collected in 2003.

VOC = volatile organic compound  
 MTBE = methyl tertiary-butyl ether  
 t-1,2-DCE = trans-1,2-dichloroethene  
 c-1,2-DCE = cis-1,2-dichloroethene  
 TCE = trichloroethene  
 ug/L = micrograms per liter (ppb)  
 <5 = not detected at laboratory detection limit of 5 ug/L.





Basemap Source: Thomas Guide Maps.



**Notes:**

- 1. All locations are approximate.

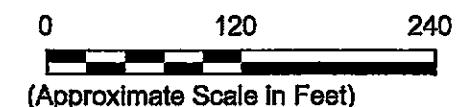
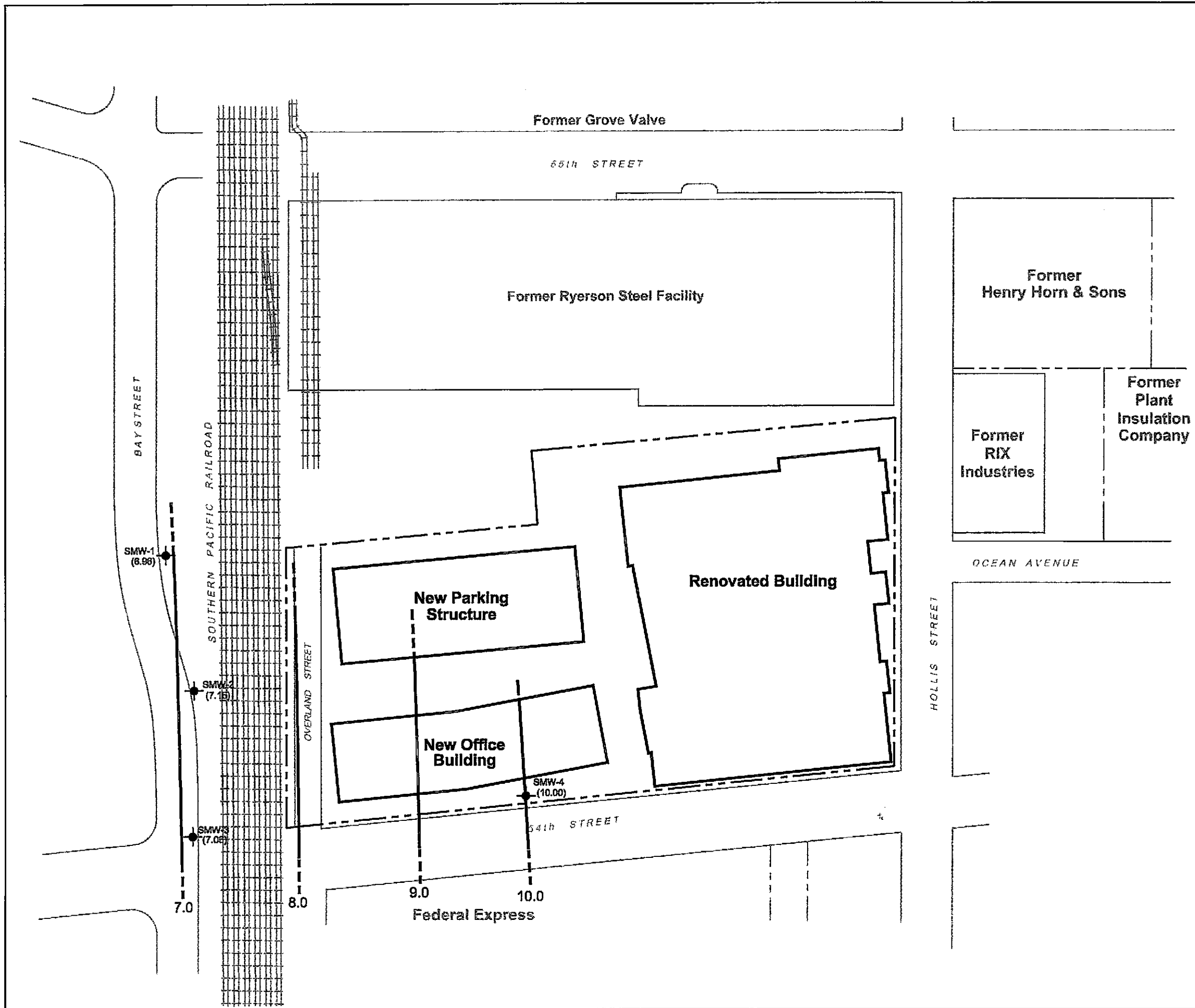
**Erler &  
Kalinowski, Inc.**

Site Location

64th Street Properties  
Emeryville, CA  
February 2004  
EKI 990016.05

Figure 1





**LEGEND**

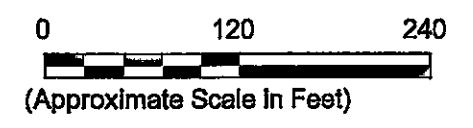
- Railroad Tracks
- Approximate Property Boundary
- Boundary of 64th Street Properties
- 7.0 Estimated Groundwater Potentiometric Surface, in Feet Above Mean Sea Level
- Monitoring Well Constructed After Redevelopment
- (6.88) Water Level in Feet Above Mean Sea Level

**Notes:**

1. All locations are approximate.
2. Basemap taken from Sanborn maps dated 1911 and 1967.
3. Groundwater elevations measured 4 February 2004.

**Erler & Kalinowski, Inc.**

Estimated Groundwater Potentiometric Surface Contour Map  
 64th Street Properties  
 Emeryville, CA  
 February 2004  
 EKI 990016.05  
 Figure 2



**LEGEND**

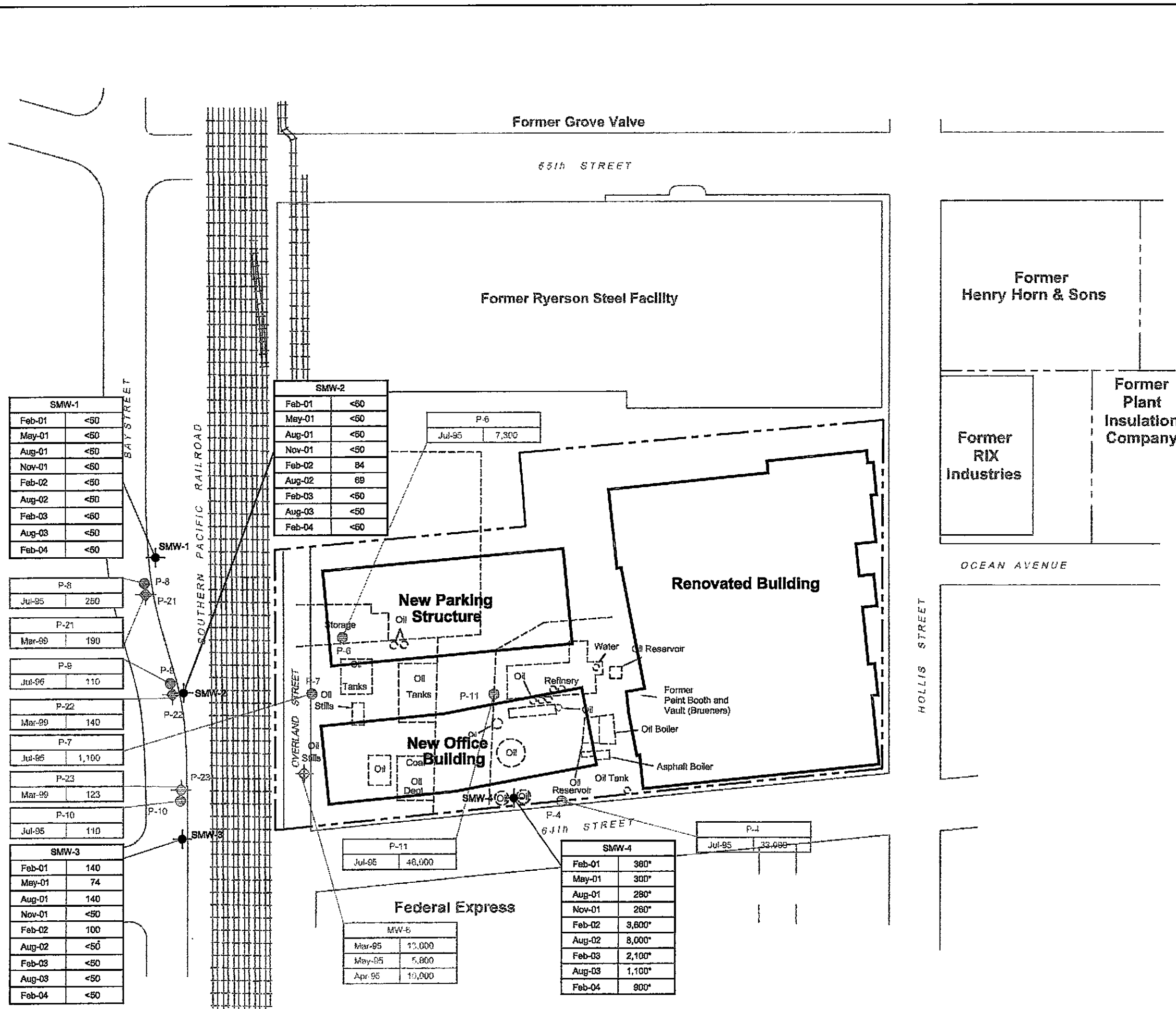
- Railroad Tracks
- Approximate Property Boundary
- Boundary of 64th Street Properties
- Historical Site Features (1911 Sanborn Map)
- Grab Groundwater Sampling Location Collected by EKI, 1995
- Grab Groundwater Sampling Location Collected by EKI, 1999
- Monitoring Well Destroyed Prior to Redevelopment
- Monitoring Well Constructed After Redevelopment

**Notes:**

1. All locations are approximate.
2. Basemap taken from Sanborn maps dated 1911 and 1987.
3. Concentrations are in ug/L.
4. \*\*\* Indicates that a sheen was observed in this well. Groundwater sample was collected through a stilling tube.

**Erler & Kalinowski, Inc.**

Concentrations of Total Extractable Petroleum Hydrocarbons in Groundwater  
 64th Street Properties  
 Emeryville, CA  
 August 2003  
 EKI 990016.05  
 Figure 3



SMW-1	
Feb-01	<50
May-01	<50
Aug-01	<50
Nov-01	<50
Feb-02	<50
Aug-02	<50
Feb-03	<50
Aug-03	<50
Feb-04	<50

SMW-2	
Feb-01	<50
May-01	<50
Aug-01	<50
Nov-01	<50
Feb-02	84
Aug-02	69
Feb-03	<50
Aug-03	<50
Feb-04	<50

P-6	
Jul-95	7,300

P-8	
Jul-95	250

P-21	
Mar-99	190

P-6	
Jul-96	110

P-22	
Mar-99	140

P-7	
Jul-95	1,100

P-23	
Mar-99	123

P-10	
Jul-95	110

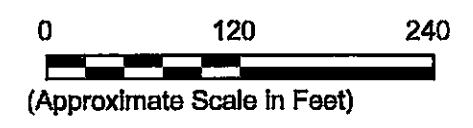
SMW-3	
Feb-01	140
May-01	74
Aug-01	140
Nov-01	<50
Feb-02	100
Aug-02	<50
Feb-03	<50
Aug-03	<50
Feb-04	<50

P-11	
Jul-95	46,000

MW-5	
Mar-95	13,000
May-95	5,800
Apr-95	10,000

SMW-4	
Feb-01	360*
May-01	300*
Aug-01	280*
Nov-01	260*
Feb-02	3,600*
Aug-02	8,000*
Feb-03	2,100*
Aug-03	1,100*
Feb-04	900*

P-4	
Jul-95	33,088



**LEGEND**

- Railroad Tracks
- Approximate Property Boundary
- Boundary of 64th Street Properties
- Historical Site Features (1911 Sanborn Map)
- Grab Groundwater Sampling Location Collected by EKI, 1999
- Monitoring Well Constructed After Redevelopment

**Abbreviations:**

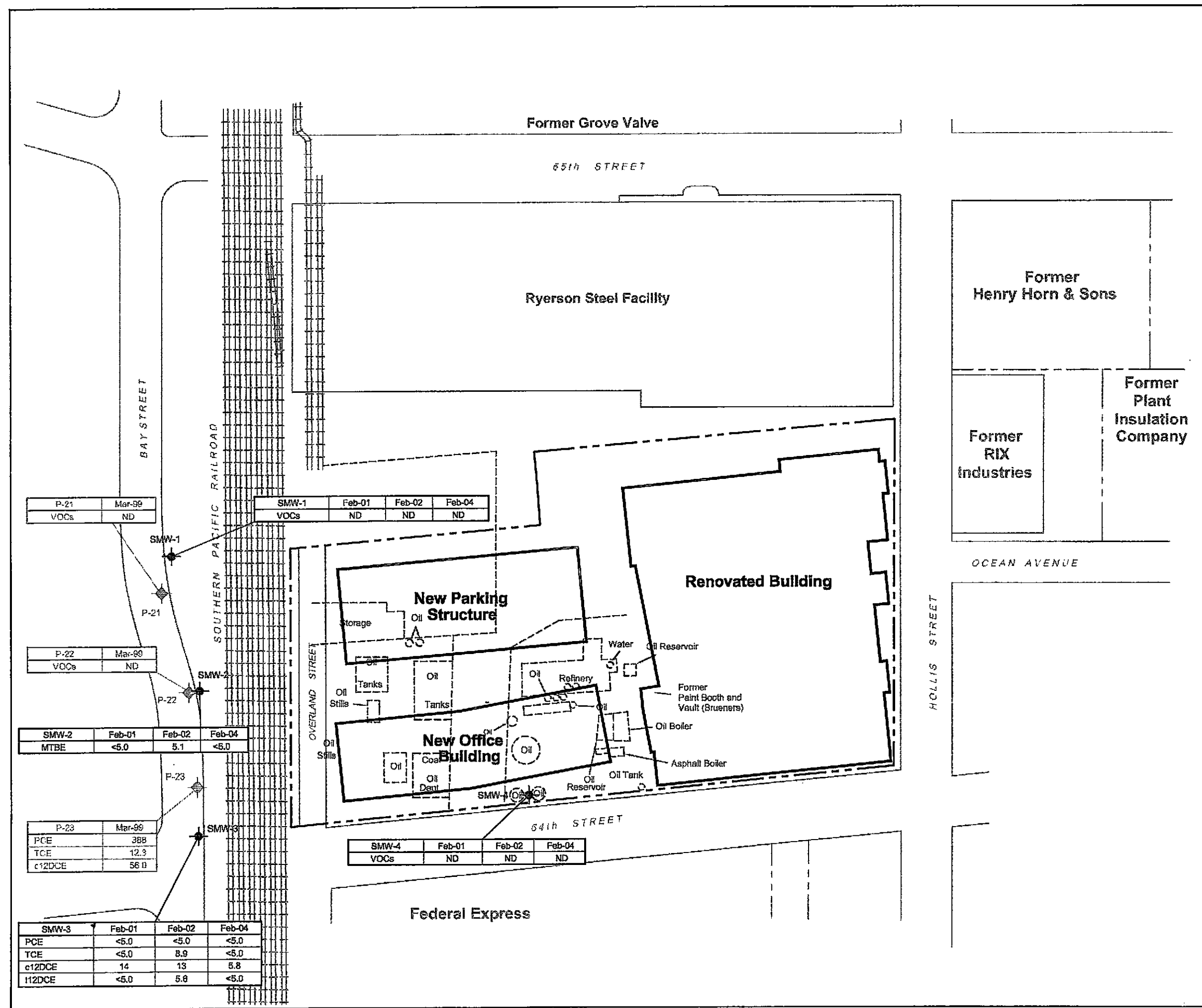
- VOCs = Volatile Organic Compounds
- PCE = Tetrachloroethene
- TCE = Trichloroethene
- c12DCE = cis-1,2-Dichloroethene
- ND = Not Detected at Laboratory Detection Limit
- MTBE = Methyl Tertiary-Butyl Ether

**Notes:**

1. All locations are approximate.
2. Basemap taken from Sanborn maps dated 1911 and 1967.
3. Concentrations are in ug/L.

**Erler & Kalinowski, Inc.**

Concentrations of Volatile Organic Compounds in Groundwater  
 64th Street Properties  
 Emeryville, CA  
 February 2004  
 EKI 990016.05  
 Figure 4



P-21	Mar-99
VOCs	ND

SMW-1	Feb-01	Feb-02	Feb-04
VOCs	ND	ND	ND

P-22	Mar-99
VOCs	ND

SMW-2	Feb-01	Feb-02	Feb-04
MTBE	<5.0	5.1	<5.0

P-23	Mar-99
PCE	388
TCE	12.3
c12DCE	56.0

SMW-3	Feb-01	Feb-02	Feb-04
PCE	<5.0	<5.0	<5.0
TCE	<5.0	8.9	<5.0
c12DCE	14	13	5.8
112DCE	<5.0	5.8	<5.0

SMW-4	Feb-01	Feb-02	Feb-04
VOCs	ND	ND	ND

**APPENDIX A**

Groundwater Purge Sample Forms for 4 February 2004

Contractor: \_\_\_\_\_

Sheet: 1 of \_\_\_\_\_  
 Date: 02/04/04  
 Project: SIMEON - EMERYVILLE  
 EKI Job No.: 990016-05

I OPENED WELLS & MEASURED DEPTH-TO-WATER

WELL	TIME OPENED	TIME MEASURED	DEPTH TO WATER
SMW-1	08:55	09:06	5.25
SMW-2	09:02	09:43	4.39
SMW-3	09:03	09:44	5.25
SMW-4			2.25

09:08 I STARTED PURGING SMW-1 AND CALIBRATED FIELD INSTRUMENTS.  
 10:12 I SAMPLED SMW-1 WITH A DEDICATED BAILER AND PLACED SAMPLES ON ICE.  
 10:33 I PURGED, THEN SAMPLED SMW-2 IN THE SAME MANNER.  
 11:48 I PURGED, THEN SAMPLED SMW-3 IN THE SAME MANNER.  
 12:50 I TRANSFERRED WATER TO DRUMS AT THE PARKING GARAGE.  
 13:40 I PURGED SMW-4 WITH DEDICATED BAILERS, THEN MADE A STILLING TUBE OF NEW 2-INCH PVC AND ALUMINUM FOIL TAPED ON. A NEW BAILER WAS USED TO COLLECT A SAMPLE. WATER WAS TRANSFERRED TO STORAGE DRUMS AND THEN TOOK SAMPLES TO CURTIS & TOMPKINS IN BERKELEY.

Distribution: Project Inspection File (orig)  
 Project Manager

By: [Signature]

GROUNDWATER PURGE SAMPLE FORM

PROJECT NAME: SIMEON-EMERYVILLE DATE: 04 FEB 04  
 PROJECT NUMBER: 990016.05 WELL NUMBER: Smw-1 PERSONNEL: R. Sullivan

WELL VOLUME CALCULATION:

Depth of Well (ft.)	Depth to Water (ft.)	Water Column (ft.)	Multiplier (below)	Casing Vol. (gallons)
<u>15.23</u>	<u>5.25</u>	<u>9.98</u>	<u>* 0.64</u>	<u>= 6.39</u>

Mult. for casing diam. = 1-inch=0.041; 2-inch=0.16; 4-inch=0.64

PURGE METHOD:

Submersible pump  Dedicated Bailer  BOTH  
 Peristaltic pump  Other

INSTRUMENT CALIBRATION

Instrument	Field measure	Standard measure
Conductivity, (millimhos/cm @ 25C)		<u>1.000</u>
pH	<u>4.0</u>	<u>4.0</u>
pH	<u>7.0</u>	<u>7.0</u>
Turbidity, NTU	<u>0.02</u>	<u>0.02</u>
Temperature		
Depth Probe#		

PURGE DEPTH: \_\_\_\_\_

START TIME: 09:08 END TIME: 10:10

TOTAL GALLONS PURGED: 22

SAMPLES: Field I.D. Smw-1 Time Collected 10:12 Containers & Preservation { 3 - 40-ml VOAs w/ HCL  
1 - 1-liter amber glass

SAMPLE METHOD: Dedicated Bailer  Peristaltic Pump  other

COMMENTS:

Time		<u>09:23</u>	<u>09:33</u>	<u>09:49</u>	<u>10:10</u>				
Volume Purged (gallons)		<u>5.0</u>	<u>8.5</u>	<u>15.0</u>	<u>22.</u>				
Temperature (degrees C)		<u>17.3</u>	<u>17.5</u>	<u>17.4</u>	<u>17.5</u>				
pH		<u>6.6</u>	<u>6.6</u>	<u>6.6</u>	<u>6.8</u>				
Specific Conductivity @ 25 C (millimhos/cm)		<u>1.388</u>	<u>1.405</u>	<u>1.406</u>	<u>1.407</u>				
Turbidity (NTU) / Appearance		<u>86.3</u>	<u>—</u>	<u>33.7</u>	<u>98.5</u>				
Depth to Water during purge (feet)		<u>6.02</u>	<u>5.95</u>	<u>6.00</u>	<u>—</u>				
Number of Casing Volumes removed		<u>0.78</u>	<u>1.33</u>	<u>2.4</u>	<u>3.44</u>				
Purge Rate (gallons/minute)		<u>0.33</u>	<u>0.35</u>	<u>0.41</u>	<u>0.33</u>				

GROUNDWATER PURGE SAMPLE FORM

PROJECT NAME: \_\_\_\_\_ DATE: 04 FEB 04  
 PROJECT NUMBER: 990016.05 WELL NUMBER: SMW-2 PERSONNEL: R.D. León

WELL VOLUME CALCULATION:  
 Depth of Well (ft.) 15.13 - Depth to Water (ft.) 4.39 = Water Column (ft.) 10.74 \* Multiplier (below) 0.64 = Casing Vol. (gallons) 6.87  
 Mult. for casing diam. = 1-inch=0.041; 2-inch=0.16; 4-inch=0.64

PURGE METHOD:  
 Submersible pump  Dedicated Bailer   
 Peristaltic pump  Other \_\_\_\_\_  
 PURGE DEPTH: VARIABLE  
 START TIME: 10:33 END TIME: 11:27  
 TOTAL GALLONS PURGED: 21.0

INSTRUMENT CALIBRATION  
 Instrument \_\_\_\_\_ Field measure \_\_\_\_\_ Standard measure \_\_\_\_\_  
 Conductivity, (millimhos/cm @ 25C)  
 pH \_\_\_\_\_  
 pH \_\_\_\_\_ (see SMW-1)  
 Turbidity, NTU \_\_\_\_\_  
 Temperature \_\_\_\_\_  
 Depth Probe# \_\_\_\_\_

SAMPLES: Field I.D. SMW-2 Time Collected 11:27 Containers & Preservation  
 { 3 - 40-ml VOAs w/ HCL  
 1 - 1-liter amber glass

SAMPLE METHOD: Dedicated Bailer  Peristaltic Pump  other \_\_\_\_\_

COMMENTS:

Time	10:42	10:53	11:06	11:19	11:27			
Volume Purged (gallons)	3.5	7.2	14.0	19.0	21.0			
Temperature (degrees C)	17.1	17.3	17.3	17.4	-			
pH	6.7	6.7	6.8	6.8	-			
Specific Conductivity @ 25 C (millimhos/cm)	0.648	0.667	0.680	0.689	-			
Turbidity (NTU) / Appearance	58.5	27.9	25.7	7.31	-			
Depth to Water during purge (feet)	5.22	5.58	5.15	5.11	-			
Number of Casing Volumes removed	0.51	1.05	2.04	2.76	3.06			
Purge Rate (gallons/minute)	0.32	0.34	0.52	0.38	0.25			

GROUNDWATER PURGE SAMPLE FORM

PROJECT NAME: SIMEON, EMERYVILLE DATE: 04 FEB 04  
 PROJECT NUMBER: 990016.05 WELL NUMBER: SMW-3 PERSONNEL: R.D. LON

WELL VOLUME CALCULATION:

Depth of Well (ft.)	Depth to Water (ft.)	Water Column (ft.)	Multiplier (below)	Casing Vol. (gallons)
<u>15.21</u>	<u>5.25</u>	<u>9.96</u>	<u>* 0.64</u>	<u>= 6.08</u>

Mult. for casing diam. = 1-inch=0.041; 2-inch=0.16; 4-inch=0.64

PURGE METHOD:

Submersible pump  Dedicated Bailer  BOTH  
 Peristaltic pump  Other

INSTRUMENT CALIBRATION

Instrument	Field measure	Standard measure
Conductivity, (millimhos/cm @ 25C)		
pH		
pH		
Turbidity, NTU		
Temperature		
Depth Probe#		

(SEE SMW-1)

PURGE DEPTH: VARIABLE

START TIME: 11:48 END TIME: 12:29

TOTAL GALLONS PURGED: 19.0

SAMPLES:	Field I.D.	Time Collected	Containers & Preservation
	<u>SMW-3</u>	<u>12:32</u>	<u>3 - 40-ml VOAs w/ HCL</u> <u>3 - 1-liter amber glass for ms/m SO</u>

SAMPLE METHOD: Dedicated Bailer  Peristaltic Pump  other

COMMENTS:

Time		<u>12:00</u>	<u>12:11</u>	<u>12:23</u>	<u>12:29</u>				
Volume Purged (gallons)		<u>5.0</u>	<u>10.0</u>	<u>15.5</u>	<u>19.0</u>				
Temperature (degrees C)		<u>17.7</u>	<u>19.6</u>	<u>21.7</u>	<u>22.0</u>				
pH		<u>6.7</u>	<u>6.8</u>	<u>6.9</u>	<u>6.9</u>				
Specific Conductivity @ 25 C (millimhos/cm)		<u>1.113</u>	<u>1.117</u>	<u>0.749</u>	<u>0.723</u>				
Turbidity (NTU) / Appearance		<u>33.0</u>	<u>31.6</u>	<u>—</u>	<u>38.2</u>				
Depth to Water during purge (feet)		<u>7.5</u>	<u>8.58</u>	<u>9.65</u>	<u>—</u>				
Number of Casing Volumes removed		<u>7.41</u>	<u>1.65</u>	<u>2.55</u>	<u>3.13</u>				
Purge Rate (gallons/minute)		<u>0.42</u>	<u>0.45</u>	<u>0.46</u>	<u>0.58</u>				



GROUNDWATER PURGE SAMPLE FORM

PROJECT NAME: SIMEON-EMERYVILLE DATE: 04 FEBRUARY 04  
 PROJECT NUMBER: 990016.05 WELL NUMBER: SMW-4 PERSONNEL: R. Dixon

WELL VOLUME CALCULATION:

Depth of Well (ft.)	Depth to Water (ft.)	Water Column (ft.)	Multiplier (below)	Casing Vol. (gallons)
<u>15.20</u>	<u>2.25</u>	<u>12.95</u>	<u>0.64</u>	<u>8.29</u>
Mult. for casing diam. = 1-inch=0.041; 2-inch=0.16; 4-inch=0.64				

PURGE METHOD:

Submersible pump  Dedicated Bailers   
 Peristaltic pump  Other

INSTRUMENT CALIBRATION

Instrument	Field measure	Standard measure
Conductivity, (millimhos/cm @ 25C)		
pH		
pH		
Turbidity, NTU		
Temperature		
Depth Probe#		

(SEE SMW-4)

PURGE DEPTH: VARIABLE, TO BOTTOM

START TIME: 13:40 END TIME: 14:17

TOTAL GALLONS PURGED: 27

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

SMW-4 14:22 { 3 - 40-ml VOAs w/ HCL  
1 - 1-liter amber glass

A SHEEN WAS OBSERVED, ALONG WITH DARK COLORED SEDIMENT BUT NO FREE PRODUCT LAYER

SAMPLE METHOD: Dedicated Bailer  Peristaltic Pump  other  NEW BAILER, THROUGH NEW STILLING TUBE w/ FOIL BOTTOM.

COMMENTS:

Time	<u>13:50</u>	<u>14:05</u>	<u>14:17</u>					
Volume Purged (gallons)	<u>7.5</u>	<u>10.</u>	<u>27.</u>					
Temperature (degrees C)	<u>17.4</u>	<u>17.2</u>	<u>16.9</u>					
pH	<u>7.3</u>	<u>6.9</u>	<u>6.9</u>					
Specific Conductivity @ 25 C (millimhos/cm)	<u>1.116</u>	<u>1.163</u>	<u>1.172</u>					
Turbidity (NTU) /Appearance	<u>—</u>	<u>214.</u>	<u>239.</u>					
Depth to Water during purge (feet)	<u>—</u>	<u>3.5</u>	<u>3.5</u>					
Number of Casing Volumes removed	<u>0.90</u>	<u>1.93</u>	<u>3.26</u>					
Purge Rate (gallons/minute)	<u>0.75</u>	<u>0.57</u>	<u>0.92</u>					

# Erler & Kalinowski, Inc.

# CHAIN OF CUSTODY RECORD

CONSULTING ENGINEERS AND SCIENTISTS

1730 South Amphlett Blvd. Suite 320 San Mateo CA 94402

PHONE: 650-578-1172

FAX: 650-578-9131

650-292-9100

Project Name		Project No.		ANALYSES REQUESTED							EKI COC No.		
Simeon		9900016.05		EPA 8260	EPA 3630-Silica Gel Cleanup	EPA 8015M TPH diesel	MS/MSD					EXPECTED TURNAROUND	Remarks
Emeryville, CA		Curtis & Tompkins											
Report Results to:		Sampled By:											
DERBY DAVIDSON		ROBERT LION											
Field Sample Identification	Lab Sample No.	Date	Time	Type of Sample	No. of Containers / Preservative								
SMW-1		04 FEB 04	10:12	WATER	3 VOLS + HCL 1 - 1-L amber	X	X	X					10 day
SMW-2		04 FEB 04	11:27	WATER	3 VOLS + HCL 1 - 1-L amber	X	X	X					10 day
SMW-3		04 FEB 04	12:32	WATER	3 VOLS + HCL 3 - 1-L amber	X	X	X	X				10 day
SMW-4		04 FEB 04	14:22	WATER	3 VOLS + HCL 1 - 1-L amber	X	X	X					10 day
Special Instructions:													
Relinquished by: (Signature)		Date	Time	Received by: (Signature)									
ROBERT LION		2/4/4	15:35	2/4/04 3:35									
Relinquished by: (Signature)		Date	Time	Received by: (Signature)									
Relinquished by: (Signature)		Date	Time	Received by: (Signature)									

Received  On ice  
 Cold  Ambient  Intact

lion roger

---

**From:** lion roger  
**Sent:** Thursday, February 05, 2004 8:14 AM  
**To:** 'anna@ctberk.com'  
**Subject:** Additional analysis

Anna Pajarillo,

I dropped samples off at Curtis & Topmkins yesterday, and have now discovered 2 errors:

The Project number should be 990016.05, not 990016.04 as was shown on the COC.

The four samples, SMW-1 through SMW-4, should all be analyzed for volatile organic compounds by method EPA method 8260, in addition to EPA method 8015M TPHd.

Please make these changes to the COC.

Roger D Lion  
Erler & Kalinowski, Inc.  
1870 Ogden Drive  
Burlingame, California 94010--5305  
telephone; 650-292-9100  
fax: 650-552-9012

## **APPENDIX B**

Laboratory Analytical Reports and Chain of Custody Documents  
for 4 February 2004



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L   R E P O R T

Prepared for:

Erler & Kalinowski, Inc.  
1870 Ogden Drive  
Burlingame, CA 94010-5306

Date: 23-FEB-04  
Lab Job Number: 170412  
Project ID: 9900016.04  
Location: Simeon

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by:   
Project Manager

Reviewed by:   
Operations Manager

This package may be reproduced only in its entirety.

# Erler & Kalinowski, Inc.

# CHAIN OF CUSTODY RECORD

170412

CONSULTING ENGINEERS AND SCIENTISTS

1730 South Amphlett Blvd. Suite 320 San Mateo CA 94402

PHONE: 650-578-1172

FAX: 650-578-9131

650-292-9100

Project Name <b>Simeon</b>			Project No. <b>9900016.04</b>			ANALYSES REQUESTED						EKI COC No.											
Project Location <b>Emeryville, CA</b>			Laboratory <b>Curtis &amp; Tompkins</b>			EPA 3630-Silica Gel Cleanup	EPA 8015M TPH diesel	MS/MSD						EXPECTED TURNAROUND	Remarks								
Report Results to: <i>DERBY DAVIDSON</i>			Sampled By: <i>ROGER LION</i>																				
Field Sample Identification	Lab Sample No.	Date	Time	Type of Sample	No. of Containers / Preservative																		
-1 SMW-1		04 FEB 04	10:12	WATER	3 VOLS + HCL 1 - 1-L amber	X	X							10 day									
-2 SMW-2		04 FEB 04	11:27	WATER	3 VOLS + HCL 1 - 1-L amber	X	X							10 day									
-3 SMW-3		04 FEB 04	12:32	WATER	3 VOLS + HCL 3 - 1-L amber	X	X	X						10 day									
-4 SMW-4		04 FEB 04	14:22	WATER	3 VOLS + HCL 1 - 1-L amber	X	X							10 day									
<b>Special Instructions:</b>																							
Relinquished by: (Signature) <i>Roger Lion</i>			Date	Time	Received by: (Signature) <i>[Signature]</i> 2/4/04 3:35																		
Relinquished by: (Signature)			Date	Time	Received by: (Signature) <i>[Signature]</i>																		
Relinquished by: (Signature)			Date	Time	Received by: (Signature)																		

Received  On ice  
 Cold  Ambient  Intact





# Chromatogram

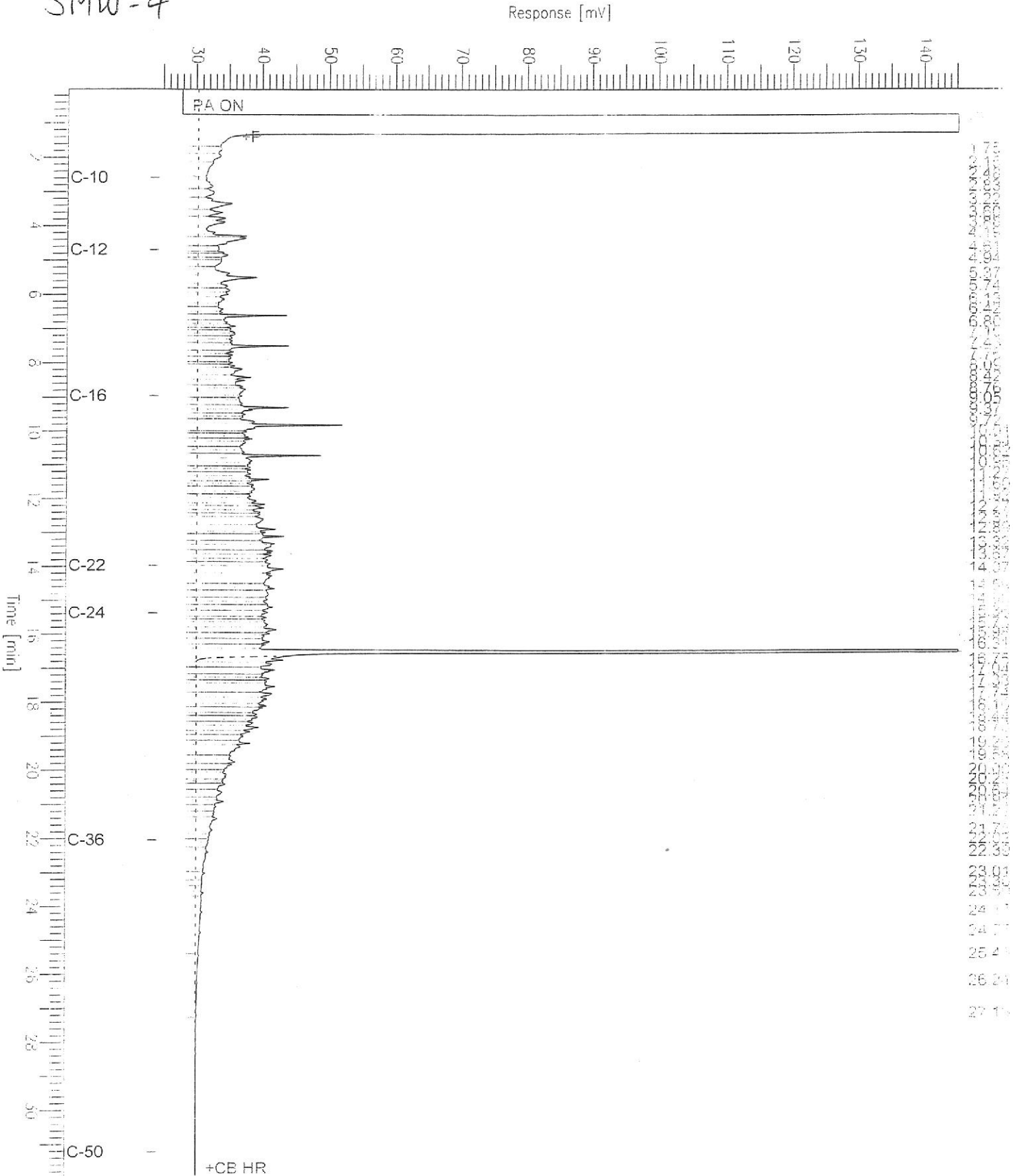
Sample Name : 170412-004sg,88322  
FileName : G:\GC17\CHA\042A011.RAW  
Method : ATEH356.MTH  
Start Time : 0.01 min  
Scale Factor: 0.0

End Time : 31.91 min  
Plot Offset: 24 mV

Sample #: 88322  
Date : 2/12/04 08:50 AM  
Time of Injection: 2/11/04 09:10 PM  
Low Point : 24.37 mV  
Plot Scale: 120.8 mV

Page 1 of 1  
High Point : 145.18 mV

SMW-4





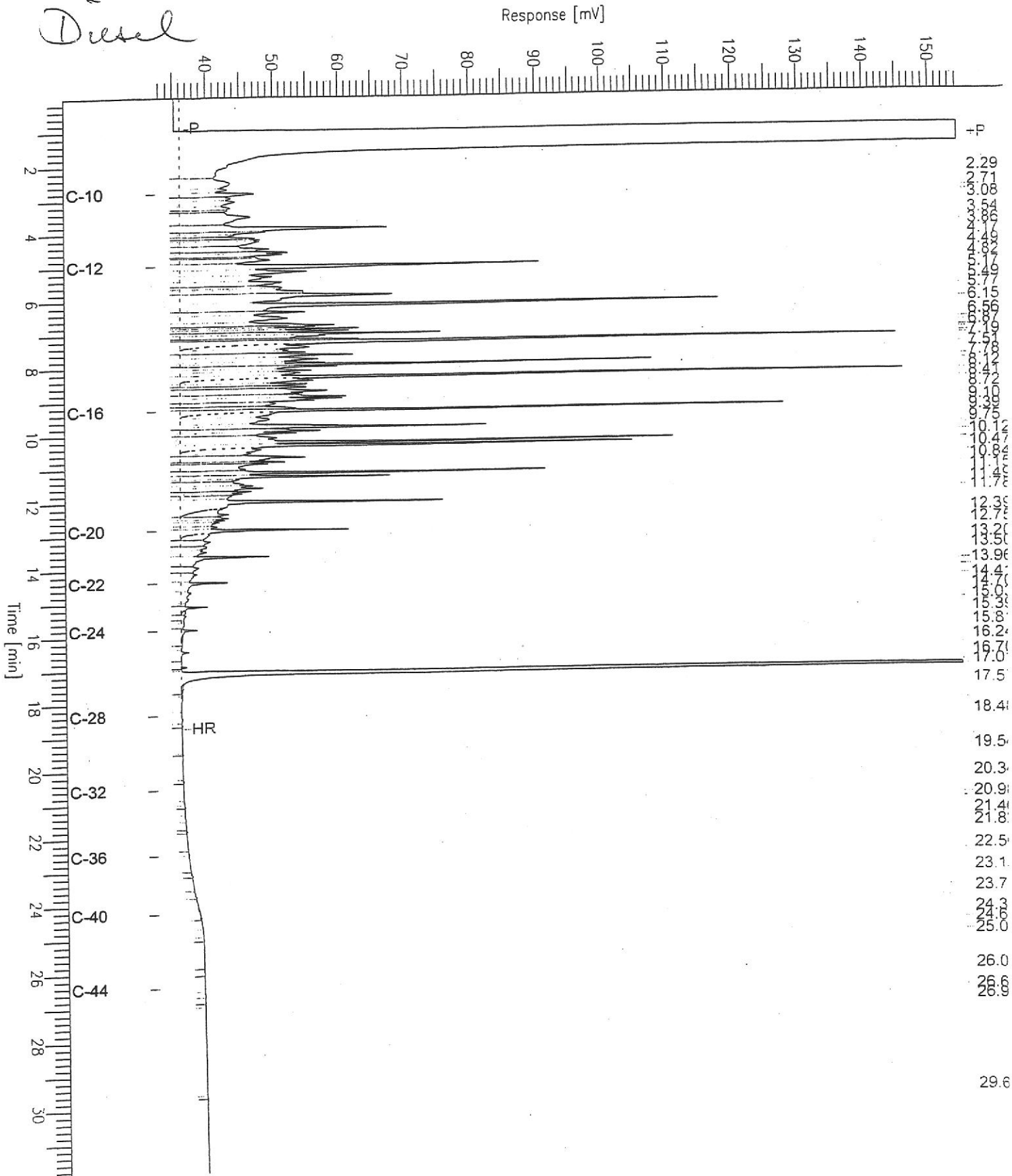
# Chromatogram

Sample Name : ccv,03ws2077,ds1  
FileName : G:\GC13\CHB\041B013.RAW  
Method : BTEH041.MTH  
Start Time : 0.01 min  
Scale Factor: 0.0

End Time : 31.91 min  
Plot Offset: 33 mV

Sample #: 250mg/L  
Date : 2/11/04 09:54 AM  
Time of Injection: 2/11/04 02:35 AM  
Low Point : 32.65 mV  
Plot Scale: 121.5 mV  
High Point : 154.20 mV

*Diesel*



**Total Extractable Hydrocarbons**

Lab #:	170412	Location:	Simeon
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 3520C
Project#:	9900016.04	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC240400	Batch#:	88322
Matrix:	Water	Prepared:	02/09/04
Units:	ug/L	Analyzed:	02/11/04

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,150	86	38-137

Surrogate	%REC	Limits
Hexacosane	84	44-146



## Purgeable Organics by GC/MS

Lab #:	170412	Location:	Simeon
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 5030B
Project#:	9900016.04	Analysis:	EPA 8260B
Field ID:	SMW-1	Batch#:	88459
Lab ID:	170412-001	Sampled:	02/04/04
Matrix:	Water	Received:	02/04/04
Units:	ug/L	Analyzed:	02/13/04
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	10
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected

RL= Reporting Limit

Page 1 of 2

## Purgeable Organics by GC/MS

Lab #:	170412	Location:	Simeon
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 5030B
Project#:	9900016.04	Analysis:	EPA 8260B
Field ID:	SMW-1	Batch#:	88459
Lab ID:	170412-001	Sampled:	02/04/04
Matrix:	Water	Received:	02/04/04
Units:	ug/L	Analyzed:	02/13/04
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-121
1,2-Dichloroethane-d4	101	77-129
Toluene-d8	97	80-120
Bromofluorobenzene	100	80-123

ND= Not Detected  
 RL= Reporting Limit  
 Page 2 of 2

## Purgeable Organics by GC/MS

Lab #:	170412	Location:	Simeon
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 5030B
Project#:	9900016.04	Analysis:	EPA 8260B
Field ID:	SMW-2	Batch#:	88459
Lab ID:	170412-002	Sampled:	02/04/04
Matrix:	Water	Received:	02/04/04
Units:	ug/L	Analyzed:	02/13/04
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	10
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected

RL= Reporting Limit

Page 1 of 2

## Purgeable Organics by GC/MS

Lab #:	170412	Location:	Simeon
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 5030B
Project#:	9900016.04	Analysis:	EPA 8260B
Field ID:	SMW-2	Batch#:	88459
Lab ID:	170412-002	Sampled:	02/04/04
Matrix:	Water	Received:	02/04/04
Units:	ug/L	Analyzed:	02/13/04
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-121
1,2-Dichloroethane-d4	103	77-129
Toluene-d8	95	80-120
Bromofluorobenzene	101	80-123

ND= Not Detected  
 RL= Reporting Limit  
 Page 2 of 2



## Purgeable Organics by GC/MS

Lab #:	170412	Location:	Simeon
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 5030B
Project#:	9900016.04	Analysis:	EPA 8260B
Field ID:	SMW-3	Batch#:	88459
Lab ID:	170412-003	Sampled:	02/04/04
Matrix:	Water	Received:	02/04/04
Units:	ug/L	Analyzed:	02/13/04
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	5.8	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	10
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected

RL= Reporting Limit

Page 1 of 2



## Purgeable Organics by GC/MS

Lab #:	170412	Location:	Simeon
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 5030B
Project#:	9900016.04	Analysis:	EPA 8260B
Field ID:	SMW-3	Batch#:	88459
Lab ID:	170412-003	Sampled:	02/04/04
Matrix:	Water	Received:	02/04/04
Units:	ug/L	Analyzed:	02/13/04
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-121
1,2-Dichloroethane-d4	102	77-129
Toluene-d8	97	80-120
Bromofluorobenzene	101	80-123

ND= Not Detected  
 RL= Reporting Limit  
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## Purgeable Organics by GC/MS

Lab #:	170412	Location:	Simeon
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 5030B
Project#:	9900016.04	Analysis:	EPA 8260B
Field ID:	SMW-4	Batch#:	88459
Lab ID:	170412-004	Sampled:	02/04/04
Matrix:	Water	Received:	02/04/04
Units:	ug/L	Analyzed:	02/13/04
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	10
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected

RL= Reporting Limit

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## Purgeable Organics by GC/MS

Lab #:	170412	Location:	Simeon
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 5030B
Project#:	9900016.04	Analysis:	EPA 8260B
Field ID:	SMW-4	Batch#:	88459
Lab ID:	170412-004	Sampled:	02/04/04
Matrix:	Water	Received:	02/04/04
Units:	ug/L	Analyzed:	02/13/04
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-121
1,2-Dichloroethane-d4	101	77-129
Toluene-d8	98	80-120
Bromofluorobenzene	101	80-123

ND= Not Detected  
 RL= Reporting Limit  
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## Purgeable Organics by GC/MS

Lab #:	170412	Location:	Simeon
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 5030B
Project#:	9900016.04	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC240898	Batch#:	88459
Matrix:	Water	Analyzed:	02/13/04
Units:	ug/L		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	10
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0

ND= Not Detected

RL= Reporting Limit

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## Purgeable Organics by GC/MS

Lab #:	170412	Location:	Simeon
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 5030B
Project#:	9900016.04	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC240898	Batch#:	88459
Matrix:	Water	Analyzed:	02/13/04
Units:	ug/L		

Analyte	Result	RL
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-121
1,2-Dichloroethane-d4	103	77-129
Toluene-d8	97	80-120
Bromofluorobenzene	101	80-123

ND= Not Detected  
 RL= Reporting Limit  
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## Purgeable Organics by GC/MS

Lab #:	170412	Location:	Simeon
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 5030B
Project#:	9900016.04	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	88459
Units:	ug/L	Analyzed:	02/13/04
Diln Fac:	1.000		

Type: BS Lab ID: QC240896

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	50.00	44.24	88	73-126
Benzene	50.00	42.11	84	80-120
Trichloroethene	50.00	43.40	87	79-125
Toluene	50.00	42.26	85	80-120
Chlorobenzene	50.00	42.95	86	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-121
1,2-Dichloroethane-d4	103	77-129
Toluene-d8	100	80-120
Bromofluorobenzene	101	80-123

Type: BSD Lab ID: QC240897

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	50.00	44.22	88	73-126	0	20
Benzene	50.00	41.72	83	80-120	1	20
Trichloroethene	50.00	43.39	87	79-125	0	20
Toluene	50.00	41.69	83	80-120	1	20
Chlorobenzene	50.00	42.20	84	80-120	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-121
1,2-Dichloroethane-d4	103	77-129
Toluene-d8	98	80-120
Bromofluorobenzene	102	80-123