

C A M B R I A



## Transmittal

<b>To:</b>	Ms. Susan Hugo
<b>Organization:</b>	Alameda County
<b>Address:</b>	1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577
<b>Phone:</b>	(510) 567-6780
<b>From:</b>	Bob Clark-Riddell
<b>Phone:</b>	(510) 420-3303
<b>Date:</b>	July 18, 2001
<b>Re:</b>	Connell Automobile Dealership

Dear Ms. Hugo:

**JUL 24 2001**

Please find enclosed Cambria's First Quarter Monitoring Report for the above-referenced site.

As we have discussed, Cambria is awaiting ACHCSA written authorization to prepare a corrective action plan for this site, as previously requested by your agency. If you have any questions, please call me at (510) 420-3303.

Thank you,

Bob Clark-Riddell

C A M B R I A



## Transmittal

<b>To:</b>	Mr. Gordon Linden
<b>Organization:</b>	Connell Trust
<b>Address:</b>	101 Gleneden Avenue Oakland, CA 94611
<b>Phone:</b>	510-273-3631
<b>To:</b>	Mr. George Hill
<b>Organization:</b>	Connell Trust
<b>Address:</b>	305 Sheridan Avenue Piedmont, California 94611
<b>Phone:</b>	
<b>To:</b>	Mr. Paul Kibel
<b>Organization:</b>	Fitzgerald, Abbot & Beardsley, LLP
<b>Address:</b>	1221 Broadway, 21 <sup>st</sup> Floor Oakland, CA 94612
<b>Phone:</b>	510-451-3300
<b>From:</b>	Bob Clark-Riddell
<b>Phone:</b>	(510) 420-3303
<b>Date:</b>	July 18, 2001
<b>Re:</b>	1st Quarter 2001 Monitoring Report

Dear Messrs. Linden, Hill, and Kibel:

Please find enclosed a copy of Cambria's First Quarter 2001 Monitoring Report for the Connell Automotive Trust site at 3093 Broadway in Oakland. I have also sent a copy of the report directly to lead case worker Ms. Susan Hugo of the ACHCSA.

Please call me at the above-listed phone number if you have any questions. Thank you.

Sincerely,

Bob Clark-Riddell

# C A M B R I A

June 29, 2001

Ms. Susan Hugo  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502

Re: **First Quarter 2001 Monitoring Report**  
Connell Automobile Dealership  
3093 Broadway  
Oakland, California  
StID #469

JUL 24 2001



Dear Ms. Hugo:

On behalf of Messrs. George Hill and Gordon Linden, and as required by the Alameda County Health Care Services Agency (ACHCSA), Cambria Environmental Technology, Inc. (Cambria) has prepared this quarterly monitoring report for the above-referenced site. This report satisfies the quarterly reporting requirements prescribed by 23 CCR 2652d. The site background, first quarter 2001 activities and results, and anticipated second quarter 2001 activities are presented below.

## SITE BACKGROUND

Three underground storage tanks (USTs) which previously contained gasoline, diesel, and waste oil were removed from the subject site in December 1989. Soil and groundwater investigation has been ongoing since 1990. Between October 1996 and March 1998, operation of a soil vapor extraction (SVE) remediation system removed approximately 1,421 lbs of hydrocarbons. Manual removal of separate-phase hydrocarbons (SPH) from site monitoring wells has been ongoing since 1991.


## FIRST QUARTER 2001 ACTIVITIES AND RESULTS

**Groundwater Monitoring:** Cambria monitored site groundwater following the sampling protocol described in Cambria's May 8, 2000 *Workplan Addendum*. The monitoring protocol (Attachment A) involves quarterly sampling of downgradient and crossgradient wells, and annual sampling of source area wells. Semi-volatile organic compound (SVOC) and LUFT metal analyses are conducted annually during the 1<sup>st</sup> quarter of each year. Consistent with this protocol, on March 1 and 2, 2001, Cambria gauged monitoring wells MW-1, MW-4, MW-6, MW-7, MW-8, MW-9, MW-13, MW-14, and MW-15, and inspected the wells for SPH. Groundwater samples were collected from wells MW-4, MW-7, MW-8, MW-9, and MW-13. The samples were analyzed by a California Department of Health Services (DHS) certified analytical laboratory for total

Oakland, CA  
San Ramon, CA  
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petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, xylenes (BTEX), methyl tertiary butyl ether (MTBE), TPH as diesel (TPHd), TPH as motor oil (TPHmo), and EPA List 8010 halogenated volatile organic compounds (HVOCs). As part of the annual sample analyses, all samples were also analyzed for well MW-9 were for SVOCs by EPA Method 8270, the MW-9 sample was filtered by the laboratory and analyzed for LUFT metals. The groundwater elevations, groundwater flow direction, and gradient are shown on Figure 1. The groundwater elevation, petroleum hydrocarbon, and HVOC data are presented in Tables 1 and 2. Dissolved metals data is presented in Table 3, and SPH thicknesses and quantities removed are presented in Table 4. The analytical laboratory report is included as Attachment B. Field data sheets are included as Attachment C.

**Groundwater Flow Direction:** Based on the March 1 and 2, 2001 depth-to-water measurements, groundwater flowed northeastward with a gradient of approximately 0.010 ft/ft during the first quarter of 2001 (Figure 1). This result is consistent with the historical local groundwater flow direction.

**Contaminant Distribution in Groundwater:** In general, monitoring results were consistent with past results for this site. SPH were detected in wells MW-1, MW-6, MW-14, and MW-15 (Figure 1). The primary contaminants of concern (COCs) in site groundwater are benzene, 1,2 dichloroethane (1,2-DCA), naphthalene, lead and nickel; these COCs are typically associated with releases from USTs containing gasoline, diesel, and/or motor oil. The maximum benzene concentration detected in groundwater was 10,000 micrograms per liter (ug/l) in MW-4, the maximum 1,2-DCA concentration was 620 ug/l in MW-9, the maximum TPHd concentration was 57,000 ug/l in MW-4, and the maximum TPHmo concentration was 2,800 ug/l, also in MW-4 (Table 1). The contaminant plumes are adequately defined cross-gradient (south) and downgradient (east) of the former UST complex location by wells MW-7 and MW-13, respectively.

**Separate-Phase Hydrocarbon Removal:** During site visits on January 4 and February 2, 2001, Cambria inspected the passive SPH recovery devices in wells MW-1, MW-6, and MW-14. On January 4, 2001, product sheen was detected in MW-1 and MW-6; Cambria removed and replaced the absorbent sock in MW-1, and emptied and reset the skimmer in MW-6. On February 2, 2001, product sheen was again detected in wells MW-1 and MW-6. Product was removed from the sock in well MW-1, and the skimmer in MW-6 was emptied and reset. Cambria recovered a total of approximately 4.46 lbs of SPH from the site monitoring wells during the first quarter of 2001. As of March 31, 2001, a total of approximately 924.95 lbs of SPH had been recovered since liquid-phase hydrocarbon removal began in December 1991. Table 4 presents the SPH thickness measurements, the amount of SPH removed from the wells during each site visit, and the cumulative mass of SPH removed from each well.

## ANTICIPATED SECOND QUARTER 2001 ACTIVITIES

***Groundwater Monitoring and Reporting:*** Cambria will monitor site groundwater following the sampling protocol in Attachment A, from Cambria's May 8, 2000 *Workplan Addendum*. During the second, third and fourth quarters of 2001, Cambria will gauge all site wells and analyze groundwater samples from wells MW-4, MW-7, MW-8, MW-9 and MW-13 for TPHd, TPHmo, TPHg, BTEX, MTBE, and EPA List 8010 HVOCs. Cambria will prepare a quarterly monitoring report that will include tabulated groundwater elevation and analytical data and a potentiometric surface map.



***Separate-Phase Hydrocarbon Removal:*** Cambria will conduct monthly SPH recovery events. Proper functioning of the recovery devices in MW-1, MW-6, and MW-14 will be verified. Collected SPH will be transferred to labeled, DOT-approved steel drums pending disposal or recycling.

***Continued Implementation of the May 8, 2000 Workplan Addendum:*** Cambria will continue to implement the May 8, 2000 *Workplan Addendum*.

***Feasibility Testing and Corrective Action Plan (CAP) Preparation:*** Cambria described results of feasibility testing conducted in September 2000 in the *Feasibility Test Report* dated March 16, 2001. The report concluded that remediation would be feasible at the site and that the dissolved plume may not be stable. Because CAP preparation was approved by the ACHCSA and the Fund approximately 2 years ago, Cambria has commenced preparation of a CAP that evaluates several remedial techniques and recommends a cost-effective approach based on site conditions. However, Cambria has delayed further CAP preparation until the ACHCSA concurs Cambria's recommendation to continue CAP preparation, as described in the March 16, 2001.

Ms. Susan Hugo  
June 29, 2001

**CLOSING**

We trust that this report meets your requirements. If you have any questions or comments concerning this report, please call Bob Clark-Riddell at (510) 420-3303.

Sincerely,  
**Cambria Environmental Technology, Inc.**

*Bob Clark-Riddell for*

Ian Young  
Staff Geologist

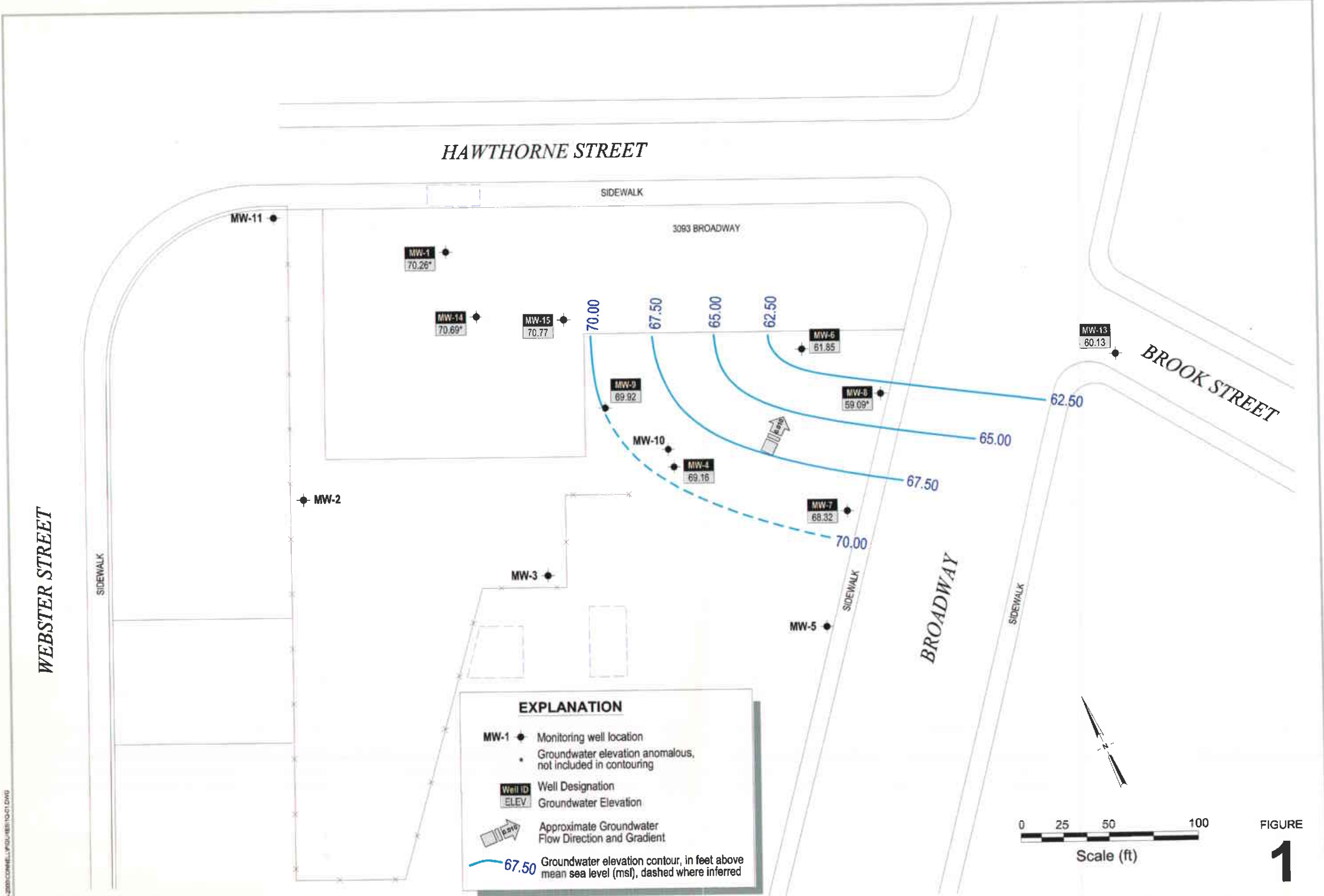
*Bob Clark-Riddell*

Bob Clark-Riddell, P.E.  
Principal Engineer



- Figures:           1 - Groundwater Elevation Contour Map
- Tables:            1 - Groundwater Elevation and Analytical Data: Volatile Hydrocarbons and  
                          HVOCs  
                          2 - Groundwater Elevation and Analytical Data: Extractable Hydrocarbons and  
                          SVOCs  
                          3 - LUFT Metals in Groundwater  
                          4 - Liquid Phase Hydrocarbon Removal
- Attachments:    A - Groundwater Monitoring Protocol  
                          B - Analytical Laboratory Report  
                          C - Field Data Sheets

cc:           Mr. George Hill, 305 Sheridan Avenue, Piedmont, CA 94611  
              Mr. Gordon Linden, 150 La Salle Avenue, Piedmont, CA 94611  
              Mr. Paul Kibel, Fitzgerald, Abbott & Beardsley, LLP, 1221 Broadway, 21<sup>st</sup> Floor,  
              Oakland, CA 94612  
              Mr. Leroy Griffin, Hazardous Materials Manager, Fire Department - OES, 1605 MLK Jr.  
              Way, Oakland, CA 94612



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Basemap from Subsurface Consultants, Inc.

Groundwater Elevation Contours

March 1, 2001



C A M B R I A

Connell Automobile Dealership

3093 Broadway  
Oakland, California

FIGURE 1

# CAMBRIA

**Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons and HVOCs**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	←-----μg/l-----→								
				TVH	TPHg	Benzene	Toluene	Ethyl- benzene	Xylenes	MTBE	1,2-DCA	Other HVOCs
MW-1	10/5/90	26.40	68.08	620,000	--	33,000	50,000	7,900	41,000	--	2,900	ND
94.48	3/1/91	27.46	67.02	SPH	--	--	--	--	--	**	--	--
	10/12/92	26.44	68.04	490,000	--	51,000	59,000	5,000	27,000	--	1,300	--
	11/24/92	26.63	67.85	320,000	--	35,000	43,000	4,200	22,000	--	1,600	ND
	4/5/93	23.77	70.71	270,000	--	50,000	58,000	4,600	25,000	--	1,800	ND
	7/21/93	24.51	69.97	SPH	--	--	--	--	--	--	--	--
	11/9/93	26.06	68.42	SPH	--	--	--	--	--	--	--	--
	8/30/95	21.73	72.75	SPH	--	--	--	--	--	--	--	--
	12/4/95	21.94	72.54	SPH	--	--	--	--	--	<200	--	--
	5/2/96	20.65	73.83	340,000	--	57,000	73,000	7,200	38,000	--	1,200	--
	11/5/96	24.29	70.19	270,000	--	43,000	56,000	4,500	34,000	--	--	--
	5/9/97	22.79	71.69	240,000	--	36,000	45,000	3,300	17,900	--	930	--
	11/5/97	25.06	69.42	240,000	--	42,000	48,000	3,600	18,800	<1,000	1,200	--
	2/9/98	22.64	71.84	220,000	--	47,000	60,000	5,200	29,800	<1,000	1,500	ND
	5/1/98	19.95	74.53	160,000	--	35,000	42,000	2,800	16,000	<1,000	1,100	ND
	11/3/98	23.29	71.19	200,000	--	39,000	49,000	4,400	26,000	<500	1,200	ND
	3/24/99	22.30	72.18	SPH	--	--	--	--	--	--	--	--
	7/1/99	22.70	71.78	SPH	--	--	--	--	--	--	--	--
	9/21/99	23.81	70.67	SPH	--	--	--	--	--	--	--	--
	2/9/00	23.95	70.59	SPH	--	--	--	--	--	--	--	--
	5/31/00	22.05	72.43	--	SPH	--	--	--	--	--	--	--
	8/8/00	22.49	71.99	--	SPH	--	--	--	--	--	--	--
	11/14/00	24.65	69.83	--	SPH	--	--	--	--	--	--	--
	3/1/01	24.22	70.28	--	SPH(0.03')	--	--	--	--	--	--	--
MW-2	3/1/91	27.86	66.95	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
94.81	11/24/92	27.91	66.90	<50	--	<0.5	1.1	<0.5	1.5	--	<1.0	ND
	4/5/93	25.95	68.86	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	7/21/93	25.59	69.22	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	11/10/93	26.72	68.09	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND



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**Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons and HVOCs**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH ←	TPHg	Benzene	Toluene	Ethyl- benzene μg/l	Xylenes	MTBE	1,2-DCA	Other HVOCs →
MW-2	8/30/95	25.75	69.06	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	--
94.81	5/3/96	23.28	71.53	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
(cont'd)	5/8/97	24.58	70.23	<50	--	<0.5	0.7	<0.5	<0.5	--	<1.0	--
	4/29/98	22.18	72.63	<50	--	<0.5	<0.5	<0.5	<0.5	<2	<1.0	ND
MW-3	3/1/91	23.17	66.91	<50	--	<50	0.6	<0.5	<0.5	--	<1.0	ND
90.08	11/25/92	23.01	67.07	50	--	<0.5	0.9	<0.5	2	--	<1.0	ND
	4/5/93	22.11	67.97	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	7/21/93	23.93	66.15	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	11/10/93	23.14	66.94	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	8/30/95	20.61	69.47	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	--
	5/3/96	18.43	71.65	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	5/8/97	19.77	70.31	<50	--	<0.5	0.7	<0.5	<0.5	--	<1.0	--
	4/29/98	17.92	72.16	<50	--	<0.5	<0.5	<0.5	<0.5	<2	<1.0	ND
MW-4	3/1/91	23.79	65.05	150,000	--	20,000	38,000	2,800	14,000	**	610	ND
88.84	10/12/92	22.48	66.36	230,000	--	15,000	32,000	2,500	14,000	--	430	--
	11/24/92	22.60	66.24	210,000	--	14,000	31,000	2,500	14,000	--	500	ND
	4/2/93	20.11	68.73	SPH	--	--	--	--	--	--	--	--
	7/21/93	20.48	68.36	SPH	--	--	--	--	--	--	--	--
	11/9/93	21.71	67.13	SPH	--	--	--	--	--	--	--	--
	8/30/95	19.90	68.94	SPH	--	--	--	--	--	--	--	--
	12/1/95	19.40	69.44	SPH	--	--	--	--	--	--	--	--
	5/2/96	17.50	71.34	140,000	--	24,000	50,000	3,000	15,100	--	420	ND
	11/4/96	20.13	68.71	160,000	--	16,000	38,000	2,700	14,000	--	380	ND
	5/8/97	18.63	70.21	170,000	--	16,000	37,000	2,400	15,900	--	290	--
	11/5/97	20.19	68.65	190,000	--	15,000	31,000	2,200	14,600	<400	290	--
	2/9/98	18.28	70.56	110,000	--	19,000	42,000	2,500	18,300	<500	300	--
	5/1/98	16.11	72.73	130,000	--	15,000	31,000	2,000	13,400	<1,000	260	ND
	8/4/98	17.54	71.30	130,000	--	16,000	34,000	2,400	15,700	<400	240	ND

# CAMBRIA

**Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons and HVOCs**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	←-----µg/l-----→								
				TVH	TPHg	Benzene	Toluene	Ethyl- benzene	Xylenes	MTBE	1,2-DCA	Other HVOCs
MW-4	11/2/98	19.21	69.63	140,000	--	16,000	32,000	2,300	15,500	<400	230	ND
88.84	3/26/99	17.51	71.33	110,000	--	15,000	30,000	1,600	15,000	450 <sup>4</sup>	210	<sup>5</sup>
(cont'd)	7/1/99	18.80	70.04	110,000	--	13,000	23,000	1,600	12,000	<83	170	<sup>5</sup>
	9/21/99	19.85	68.99	140,000	--	16,000	31,000	2,400	14,800	ND	<1000	<sup>5</sup>
	2/9/00	19.76	69.08	--	140,000	16,000	28,000	2,100	14,000	<400	100	DCB: 5.9, MCB: 5.9
	5/31/00	17.90	70.94	--	15,000	17,000	28,000	2,400	14,000	<0.5 <sup>6</sup>	<0.5	ND
	8/8/00	18.62	70.22	--	140,000	15,000	25,000	2,100	13,000	<300	110	ND
	11/14/00	19.63	69.21	--	150,000	19,000	36,000	2,900	17,000	< 200	120	ND
	<b>3/1/01</b>	<b>19.68</b>	<b>69.16</b>	<b>--</b>	<b>120,000</b>	<b>10,000</b>	<b>15,000</b>	<b>1,300</b>	<b>10,000</b>	<b>&lt;2000</b>	<b>110</b>	<b>ND</b>
MW-5	3/15/91	26.31	58.53	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
84.84	11/10/92	26.83	58.01	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	4/2/93	26.62	58.22	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	7/21/93	26.60	58.24	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	11/9/93	27.24	57.60	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	8/30/95	27.46	57.38	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	--
	5/3/96	26.02	58.82	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	5/8/97	26.76	58.08	<50	--	<0.5	0.5	<0.5	<0.5	--	<1.0	--
	4/29/98	26.55	58.29	<50	--	<0.5	0.5	<0.5	<0.5	<2	<1.0	ND
MW-6	3/15/91	25.82	59.80	80,000	--	12,000	13,000	1,100	5,400	--	1,400	DBCM: 160
85.62	10/12/92	25.02	60.60	19,000	--	3,200	1,400	200	560	--	840	--
	12/1/92	28.87	56.75	SPH	--	--	--	--	--	--	--	--
	4/2/93	26.96	58.66	SPH	--	--	--	--	--	--	--	--
	7/21/93	26.17	59.45	SPH	--	--	--	--	--	--	--	--
	11/9/93	27.51	58.11	SPH	--	--	--	--	--	--	--	--
	8/30/95	28.00	57.62	SPH	--	--	--	--	--	--	--	--
	12/1/95	27.58	58.04	SPH	--	--	--	--	--	<8,000,000	71	--
86.94	5/3/96	28.15	58.79	130,000	--	37,000	50,000	3,200	14,200	--	2,400	ND
	5/9/97	26.54	60.40	1,700,000	--	14,000	27,000	4,000	28,200	--	1,200	--
	11/5/97	26.16	60.78	160,000	--	13,000	19,000	1,900	14,300	<200	790	--
85.82	5/1/98	22.96	62.86	130,000	--	15,000	23,000	1,700	13,200	<500	1,100	ND
	11/3/98	24.35	61.47	110,000	--	17,000	21,000	1,800	10,700	<200	990	ND

# CAMBRIA

**Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons and HVOCs**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH ←	TPHg	Benzene	Toluene	Ethyl- benzene μg/l	Xylenes	MTBE	1,2-DCA	Other HVOCs →
MW-6	3/26/99	23.82	62.00	SPH	--	--	--	--	--	--	--	--
85.82	7/1/99	24.45	61.37	SPH	--	--	--	--	--	--	--	--
(cont'd)	9/21/99	24.58	61.24	SPH	--	--	--	--	--	--	--	--
	2/9/00	24.93	61.24	SPH	--	--	--	--	--	--	--	--
	5/31/00	23.47	62.41	--	SPH	--	--	--	--	--	--	--
	8/8/00	23.85	61.97	--	SPH	--	--	--	--	--	--	--
	11/14/00	24.61	61.21	--	SPH	--	--	--	--	--	--	--
	3/1/01	23.97	61.85	--	SPH(sheen)	--	--	--	--	--	--	--
MW-7	3/15/91	21.63	63.78	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
85.41	11/24/92	21.52	63.89	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	4/2/93	20.08	65.33	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	7/21/93	19.59	65.82	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	11/9/93	20.65	64.76	<50	--	<0.5	1	<0.5	1.7	--	<1.0	ND
	8/30/95	18.78	66.63	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	--
	12/1/95	19.47	65.94	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	5/2/96	17.15	68.26	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	8/8/96	18.48	66.93	<50	--	<0.5	<0.5	<0.5	<0.5	<2	<1.0	ND
	11/4/96	18.69	66.72	<50	--	<1	<1	<1	<1	--	<1.0	ND
	2/6/97	17.44	67.97	<50	--	<0.5	<0.5	<0.5	<0.5	<2	<1.0	ND
	5/8/97	17.72	67.69	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	--
	8/7/97	18.49	66.92	<50	--	<0.5	<0.5	<0.5	<0.5	<2	<1.0	ND
	11/5/97	18.86	66.55	<50	--	<0.5	<0.5	<0.5	<0.5	<2	1	--
	2/9/98	17.56	67.85	<50	--	<0.5	<0.5	<0.5	<0.5	<2	<1.0	--
	4/29/98	16.23	69.18	<50	--	<0.5	<0.5	<0.5	<0.5	<2	<1.0	ND
	8/4/98	17.24	68.17	<50	--	<0.5	<0.5	<0.5	<0.5	<2	1.1	ND
	11/2/98	17.91	67.50	<50	--	<0.5	<0.5	<0.5	<0.5	<2	1.2	ND
	3/26/99	16.42	68.99	<50	--	<0.5	<0.5	<0.5	<0.5	<2	ND	ND
	7/1/99	17.90	67.51	85	--	<0.5	1.1	0.55	2.5	<0.5	1.0	5
	9/21/99	18.91	66.50	<50	--	0.7	1.8	<0.5	1.5	<5.0	<5.0	ND

# CAMBRIA

**Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons and HVOCs**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Ethyl- benzene Xylenes MTBE 1,2-DCA Other HVOCs μg/l								
				TVH	TPHg	Benzene	Toluene	Xylenes	MTBE	1,2-DCA	Other HVOCs	
MW-7	2/9/00	16.74	68.67	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
85.41	5/31/00	16.21	69.20	--	<50	3	6	1	9	<0.5	<0.5	ND
(cont'd)	8/8/00	16.92	68.49	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.52	ND
	11/14/00	17.00	68.41	--	<50	<0.5	0.63	<0.5	<0.5	<5.0	<0.5	ND
	3/1/01	17.09	68.32	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	ND
MW-8	10/12/92	27.70	57.80	70	--	20	1	1	3	--	210	--
85.50	11/25/92	27.62	57.88	<50	--	<0.5	<0.5	<0.5	<0.5	--	200	ND
	4/8/93	26.64	58.86	490	--	15	45	5.1	73	--	210	ND
	7/21/93	26.60	58.90	180	--	2.5	3	<0.5	1.9	--	350	ND
	11/11/93	27.18	58.32	310	--	23	<0.5	<0.5	<0.5	--	240	ND
	8/30/95	26.35	59.15	660	--	360	6.8	13	2.8	--	130	--
	12/4/95	26.72	58.78	250	--	46	0.9	4.9	<0.5	--	94	ND
	5/3/96	25.47	60.03	69	--	110	<0.5	<0.5	1.5	--	100	ND
	8/8/96	26.41	59.09	120	--	11	<0.5	<0.5	<0.5	<2	93	ND
	11/5/96	26.77	58.73	110	--	20	<1	1	<1	--	98	ND
	2/6/97	25.84	59.66	67 <sup>1,2</sup>	--	51	<0.5	0.56	<0.5	<2	81	ND
	5/9/97	26.39	59.11	110 <sup>1,2</sup>	--	59	<0.5	<0.5	<0.5	--	76	--
	8/7/97	26.72	58.78	<50	--	12 <sup>3</sup>	<0.5	<0.5	<0.5	<2	79	ND
	11/5/97	26.82	58.68	<50	--	9.4	<0.5	<0.5	<0.5	<2	84	--
	2/9/98	25.57	59.93	<50	--	6	<0.5	<0.5	<0.5	<2	85	--
	5/1/98	25.64	59.86	430	--	490	7.1	27	26	<10	85	ND
	8/5/98	25.96	59.54	140	--	19	<0.5	5.2	5.3	<2	69	ND
	11/3/98	26.27	59.23	150	--	110	1.1	4.3	4.5	<2	67	ND
	3/31/99	20.93	64.57	54	--	170	1.5	4.1	1.9	4.4 <sup>4</sup>	5.9	1,1 DCA: 0.7 <sup>5</sup>
	7/1/99	26.59	58.91	140	--	58	0.9	3	2.3	<0.5	55	
	9/21/99	26.89	58.61	670	--	170	2.6	11	7.9	<5	41	ND
	2/9/00	26.60	58.90	--	300	60	1.2	4.8	1.2	<5.0	40	<0.5
	8/8/00	26.43	59.07	--	270	56	1.2	4.1	1.0	<5.0	39	ND
	11/14/00	26.60	58.90	--	330	64	1.3	3.5	0.60	<5.0	47	ND
	3/1/01	26.41	59.09	--	400	140	<0.5	<0.5	0.55	<5.0	16	ND

# CAMBRIA

**Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons and HVOCs**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH	TPHg	Benzene	Toluene	Ethyl- benzene μg/l	Xylenes	MTBE	1,2-DCA	Other HVOCs
MW-9 90.37	11/24/92	23.51	66.86	19,000	--	180	590	23	2000	--	340	TCM: 15
	4/5/93	21.14	69.23	2,300	--	48	4	0.6	13	--	600	TCM: 2
	7/21/93	21.54	68.83	2,300	--	170	8.1	15	<0.5	--	1100	ND
	11/10/93	27.53	62.84	4,400	--	69	7.3	21	9.7	--	900	ND
	8/30/95	19.59	70.78	3,200	--	3,900	49	80	22.8	--	960	--
	12/4/95	20.65	69.72	--	--	--	--	--	--	<2	--	--
	5/2/96	18.63	71.74	<1300	--	2,600	<13	200	<13	--	550	ND
	11/5/96	20.69	69.68	1,800	--	280	<5	65	<5	--	770	ND
	5/9/97	19.96	70.41	1,100	--	160	<0.5	42	<0.5	--	690	--
	8/8/97	20.84	69.53	570 <sup>1,2</sup>	--	<0.5	<0.5	<0.5	0.78 <sup>3</sup>	<2	680	ND
	11/5/97	21.55	68.82	490 <sup>1</sup>	--	<0.5	<0.5	6	<0.5	<2	500	--
	2/9/98	20.21	70.16	270 <sup>1</sup>	--	48	17	5.8	<0.5	<2	520	--
	5/1/98	19.27	71.10	550	--	70	<0.5	22	2.2	<2	390	ND
	8/5/98	19.35	71.02	550 <sup>1</sup>	--	88	<0.5	13	1.9 <sup>3</sup>	<2	420	ND
	11/2/98	20.43	69.94	580	--	<0.5	<0.5	7.5 <sup>3</sup>	1.6 <sup>3</sup>	<2	430	ND
	3/25/99	18.46	71.91	1,100	--	160	<0.5	21	2.1 <sup>3</sup>	5.7 <sup>4</sup>	550	ND
	7/1/99	19.95	70.42	540	--	100	7.4	26	16.9	<1.3	400	<sup>5</sup>
	9/21/99	21.15	69.22	2,700	--	320	98	88	47	<20	540	ND
	2/9/00	21.08	69.29	--	1,600	81	3.6	19	18	<5.0	360	<0.5
	5/31/00	19.11	71.26	--	1,500	170	13	25	<1.0	<0.5	300	ND
8/8/00	19.86	70.51	--	1,300	140	2.1	19	<0.5	<5.0	330	ND	
11/14/00	20.90	69.47	--	1,700	250	2.6	44	2.1	<5.0	610	ND	
3/1/01	20.45	69.92	--	1,800	170	5.6	30	2.5	<20	620	ND	
MW-10 88.60	10/12/92	21.55	67.05	28,000	--	2,700	3,800	210	1,300	--	150	--
	11/24/92	21.86	66.74	130,000	--	9,700	19,000	1,400	8,400	--	370	ND
	4/5/93	19.14	69.46	63,000	--	6,300	14,000	1,100	7,500	--	70	ND
	7/21/93	19.79	68.81	140,000	--	16,000	31,000	2,200	13,000	--	700	ND
	8/30/95	17.99	70.61	92,000	--	13,000	24,000	1,800	9,100	--	300	--
	5/3/96	17.04	71.56	81,000	--	17,000	29,000	2,100	8,500	--	320	ND
	5/9/97	18.36	70.24	63,000	--	7,400	13,000	940	4,100	--	150	--
5/1/98	15.84	72.76	60,000	--	7,100	14,000	1100	5,300	<250	120	ND	

# CAMBRIA

**Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons and HVOCs**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH ←	TPHg	Benzene	Toluene	Ethyl- benzene μg/l	Xylenes	MTBE	1,2-DCA	Other HVOCs →
MW-11 102.06	11/24/92	33.65	68.41	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	12/8/92***	33.37	68.69	<50	--	<0.1	<0.1	<0.1	<0.1	--	--	--
	12/8/92	33.37	68.69	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--
	4/5/93	31.03	71.03	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	7/21/93	31.90	70.16	160	--	<0.5	1.8	<0.5	<0.5	--	<1.0	ND
	11/9/93	32.60	69.46	80	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	8/30/95	28.92	73.14	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	--
	5/3/96	28.00	74.06	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	5/8/97	29.93	72.13	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	--
	4/29/98	27.22	74.84	<50	--	<0.5	<0.5	<0.5	<0.5	<2	<1.0	ND
MW-13 84.06	11/24/92	26.05	58.01	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	12/8/92***	25.08	58.98	<50	--	<0.1	<0.1	<0.1	<0.1	--	--	--
	12/8/92	25.08	58.98	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--
	4/5/93	24.64	59.42	<50	--	<0.5	0.9	<0.5	<0.5	--	<1.0	ND
	7/21/93	24.29	59.77	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	11/9/93	24.23	59.83	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	8/30/95	23.30	60.76	<50	--	49	<0.5	<0.5	<0.5	--	3.6	--
	12/1/95	23.80	60.26	<50	--	<0.5	<0.5	<0.5	<0.5	--	4.1	ND
	5/3/96	23.19	60.87	<50	--	<0.5	<0.5	<0.5	<0.5	--	4	ND
	8/8/96	23.44	60.62	<50	--	32	<0.5	<0.5	<0.5	<2	6.4	ND
	11/5/96	24.04	60.02	<50	--	<1	<1	<1	<1	--	5.7	ND
	2/6/97	23.24	60.82	<50	--	<0.5	<0.5	<0.5	<0.5	<2	3.5	ND
	5/8/97	23.46	60.60	<50	--	81	<0.5	<0.5	<0.5	--	5.5	--
	8/8/97	23.92	60.14	<50	--	<0.5	<0.5	<0.5	<0.5	<2	6.8	ND
	11/5/97	24.27	59.79	<50	--	<0.5	<0.5	<0.5	<0.5	<2	5.5	--
	2/9/98	22.89	61.17	<50	--	<0.5	<0.5	<0.5	<0.5	<2	2.9	--
	4/29/98	22.27	61.79	<50	--	24	<0.5	<0.5	<0.5	<2	5.7	ND
	8/4/98	22.75	61.31	120	--	200	<1	<1	<1	<4	6.2	ND
	11/3/98	23.90	60.16	59 <sup>1</sup>	--	33	<0.5	<0.5	<0.5	<2	6.1	ND
	3/31/99	23.11	60.95	130	--	0.56	<0.5	<0.5	<0.5	<2	1.4	ND

# CAMBRIA

**Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons and HVOCs**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	←-----µg/l-----→								
				TVH	TPHg	Benzene	Toluene	Ethyl- benzene	Xylenes	MTBE	1,2-DCA	Other HVOCs
MW-13	7/1/99	23.40	60.66	160	--	370	19	1.2	3.5	<1	4.2	5
84.06	9/21/99	21.91	62.15	370	--	150	1.0	0.8	0.8	<5.0	<5.0	ND
(cont'd)	2/9/00	23.84	60.22	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.1	<0.5
	8/8/00	23.31	60.75	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	3.6	ND
	11/14/00	24.00	60.06	--	<50	<0.5	0.52	<0.5	<0.5	<5.0	3.3	ND
	<b>3/1/01</b>	<b>23.93</b>	<b>60.13</b>	--	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>&lt;0.5</b>	<b>ND</b>
MW-14	5/26/98	21.67	72.99	41,000	--	7,100	11,000	720	3,900	<1000	440	ND
94.66	7/1/99	22.95	71.71	SPH	--	--	--	--	--	--	--	--
	9/21/99	24.26	70.40	SPH	--	--	--	--	--	--	--	--
	2/9/00	24.13	70.53	--	92,000	12,000	17,000	1,300	8,700	<140	450	<0.5
	5/31/00	22.09	72.57	--	SPH	--	--	--	--	--	--	--
	8/8/00	22.88	71.78	--	SPH	--	--	--	--	--	--	--
	11/14/00	23.90	70.76	--	SPH	--	--	--	--	--	--	--
	<b>3/1/01</b>	<b>23.97</b>	<b>70.69</b>	--	<b>SPH(sheen)</b>	--	--	--	--	--	--	--
MW-15	5/26/98	21.87	72.89	130,000	--	30,000	38,000	2,500	12,600	<1000	1,200	ND
94.76	7/1/99	22.25	72.51	SPH	--	--	--	--	--	--	--	--
	9/21/99	24.12	70.64	SPH	--	--	--	--	--	--	--	--
	2/9/00	24.42	70.34	--	180,000	32,000	37,000	2,800	14,000	<200	1,100	<0.5
	5/31/00	22.40	72.36	--	SPH	--	--	--	--	--	--	--
	8/8/00	23.17	71.59	--	SPH	--	--	--	--	--	--	--
	11/14/00	24.15	70.61	--	SPH	--	--	--	--	--	--	--
	<b>3/1/01</b>	<b>23.99</b>	<b>70.77</b>	--	<b>SPH(sheen)</b>	--	--	--	--	--	--	--

# CAMBRIA

**Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons and HVOCs**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH	TPHg	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE	1,2-DCA	Other HVOCs
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**Abbreviations and Notes:**

TOC Elev. (ft) = Top of casing elevation in feet above mean sea level

µg/l = micrograms per liter = parts per billion = ppb

TVH = Total Volatile Hydrocarbons

TPHg = Total petroleum hydrocarbons as gasoline

MTBE = Methyl tert-butyl ether

1,2-DCA = 1,2 Dichloroethane

HVOCs = Halogenated volatile organic compounds by EPA Method 8010

DCB = 1, 3 Dichlorobenzene

MCB = Chlorobenzene

DBCM = Dibromochloromethane

TCM = Chloroform = trichloromethane

ND = None detected above laboratory reporting limit, see laboratory report for individual reporting limits.

-- = Sample not analyzed

SPH = Free product encountered in well (thickness in feet)

<n = Chemical not present at a concentration in excess of detection limit shown

MW-1 was initially referred to as Sample 5.

\* = Suspect laboratory contamination contributing to test result.

\*\* = Fuel fingerprint analysis indicates MTBE is not present in the free product sample collected from this well.

\*\*\* = Duplicate sample sent to a different chemical laboratory.

1 = Sample exhibits fuel pattern which does not resemble standard

2 = Lighter hydrocarbons than indicated standard

3 = Presence of this compound confirmed by second column, however, the confirmation concentration differed from the reported result by more than a factor of two

4 = Detection may potentially be a false positive, to be checked during the next event.

5 = One or more of the following substances found: Acetone, 1,2-Dibromoethane, 1,3,5-Trimethylbenzene, 2-Chlorotoluene, 1,2,4-Trimethylbenzene, n-Butylbenzene, and Naphthalene. See laboratory results for details.

6 = Confirmed by GC/MS.



# CAMBRIA

**Table 2. Groundwater Elevation and Analytical Data: Extractable Hydrocarbons and SVOCs**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to water (ft)	Groundwater Elevation (ft)	TEH	TPHd	TPHmo	2-Methyl naphthalene	Naphthalene	Other SVOCs
				←----- μg/l -----→					
MW-1 94.48	10/5/90	26.40	68.08	<500	--	--	--	--	--
	3/1/91	27.46	67.02	SPH	--	--	--	--	--
	10/12/92	26.44	68.04	--	--	--	--	--	--
	11/24/92	26.63	67.85	4,600	--	--	--	--	--
	4/5/93	23.77	70.71	25,000	--	--	--	--	--
	7/21/93	24.51	69.97	SPH	--	--	--	--	--
	11/9/93	26.06	68.42	SPH	--	--	--	--	--
	8/30/95	21.73	72.75	SPH	--	--	630	1,200	ND
	12/4/95	21.94	72.54	SPH	--	--	--	--	--
	5/2/96	20.65	73.83	32,000	--	--	250	640	ND
	11/5/96	24.29	70.19	--	--	--	--	--	--
	5/9/97	22.79	71.69	28,000	--	--	280	650	ND
	11/5/97	25.06	69.42	28,000	--	--	720	1,500	ND
	2/9/98	22.64	71.84	27,000	--	--	160	570	ND
	5/1/98	19.95	74.53	29,000	--	--	--	--	--
	5/27/98	--	--	--	--	--	120	630	ND
	11/3/98	23.29	71.19	37,000	--	--	500	1,100	ND
	3/24/99	22.30	72.18	SPH	--	--	--	--	--
	7/1/99	22.70	71.78	SPH	--	--	--	--	--
	9/21/99	23.81	70.67	SPH	--	--	--	--	--
2/9/00	23.95	70.59	--	SPH	--	--	--	--	
5/31/00	22.05	72.43	--	SPH	--	--	--	--	
11/14/00	24.65	69.83	--	SPH	--	--	--	--	
3/1/01	24.22	70.28	--	SPH	--	--	--	--	
MW-2 94.81	3/1/91	27.86	66.95	<50	--	--	--	--	--
	11/24/92	27.91	66.90	<50	--	--	--	--	--
	4/5/93	25.95	68.86	870	--	--	--	--	--
	7/21/93	25.59	69.22	<50	--	--	--	--	--
	11/10/93	26.72	68.09	240	--	--	--	--	--
	8/30/95	25.75	69.06	150	--	--	--	--	--

# CAMBRIA

**Table 2. Groundwater Elevation and Analytical Data: Extractable Hydrocarbons and SVOCs**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to water (ft)	Groundwater Elevation (ft)	TEH ←	TPHd	TPHmo	2-Methyl naphthalene μg/l	Naphthalene	Other SVOCs →
MW-2	5/3/96	23.28	71.53	<50	--	--	--	--	--
94.81	5/8/97	24.58	70.23	<50	--	--	--	--	--
(cont'd)	4/29/98	22.18	72.63	<47	--	--	--	--	--
MW-3	3/1/91	23.17	66.91	<50	--	--	--	--	--
90.08	11/25/92	23.01	67.07	160	--	--	--	--	--
	4/5/93	22.11	67.97	<50	--	--	--	--	--
	7/21/93	23.93	66.15	<50	--	--	--	--	--
	11/10/93	23.14	66.94	<50	--	--	--	--	--
	8/30/95	20.61	69.47	<50	--	--	--	--	--
	5/3/96	18.43	71.65	<50	--	--	--	--	--
	5/8/97	19.77	70.31	<50	--	--	--	--	--
	4/29/98	17.92	72.16	<47	--	--	--	--	--
MW-4	3/1/91	23.79	65.05	<500	--	--	--	--	--
88.84	10/12/92	22.48	66.36	--	--	--	--	--	--
	11/24/92	22.60	66.24	1,600	--	--	--	--	--
	4/2/93	20.11	68.73	SPH	--	--	--	--	--
	7/21/93	20.48	68.36	SPH	--	--	--	--	--
	11/9/93	21.71	67.13	SPH	--	--	--	--	--
	8/30/95	19.90	68.94	SPH	--	--	--	--	--
	12/1/95	19.40	69.44	SPH	--	--	--	--	--
	5/2/96	17.50	71.34	9,200	--	--	--	--	--
	11/4/96	20.13	68.71	4,700	--	--	--	--	--
	5/8/97	18.63	70.21	5,100	--	--	--	--	--
	11/5/97	20.19	68.65	3,700	--	--	--	--	--
	2/9/98	18.28	70.56	4,800	--	--	--	--	--
	5/1/98	16.11	72.73	5,000	--	--	--	--	--
	8/4/98	17.54	71.30	3,500	--	--	--	--	--
	11/2/98	19.21	69.63	7,200	--	--	--	--	--
	3/26/99	17.51	71.33	14,000	--	--	--	--	--

# CAMBRIA

**Table 2. Groundwater Elevation and Analytical Data: Extractable Hydrocarbons and SVOCs**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID	Sampling Date	Depth to water (ft)	Groundwater Elevation (ft)	TEH	TPHd	TPHmo	2-Methyl naphthalene	Naphthalene	Other SVOCs
TOC Elev. (ft)				←----- μg/l -----→					
MW-4	7/1/99	18.80	70.04	17,000	--	--	370	860	ND
88.84	9/21/99	19.85	68.99	14,000	--	--	360	820	ND
(cont'd)	2/9/00	19.76	69.08	--	12,000	1,000	290	700	ND
	5/31/00	17.90	70.94	--	14,000 **	<500	--	--	--
	11/14/00	19.63	69.21	--	8,000	290	--	--	--
	<b>3/1/01</b>	<b>19.68</b>	<b>69.16</b>	<b>--</b>	<b>57,000</b>	<b>2,800</b>	<b>210</b>	<b>510</b>	<b>ND</b>
MW-5	3/15/91	26.31	58.53	<50	--	--	--	--	--
84.84	11/10/92	26.83	58.01	50	--	--	--	--	--
	4/2/93	26.62	58.22	<50	--	--	--	--	--
	7/21/93	26.60	58.24	190	--	--	--	--	--
	11/9/93	27.24	57.60	170	--	--	--	--	--
	8/30/95	27.46	57.38	180	--	--	--	--	--
	5/3/96	26.02	58.82	<50	--	--	--	--	--
	5/8/97	26.76	58.08	<50	--	--	--	--	--
	4/29/98	26.55	58.29	<47	--	--	--	--	--
MW-6	3/15/91	25.82	59.80	<50	--	--	--	--	--
85.62	10/12/92	25.02	60.60	--	--	--	--	--	--
	12/1/92	28.87	56.75	SPH	--	--	--	--	--
	4/2/93	26.96	58.66	SPH	--	--	--	--	--
	7/21/93	26.17	59.45	SPH	--	--	--	--	--
	11/9/93	27.51	58.11	SPH	--	--	--	--	--
	8/30/95	28.00	57.62	SPH	--	--	--	--	--
	12/1/95	27.58	58.04	SPH	--	--	--	--	--
	5/3/96	26.83	58.79	9,000	--	--	--	--	--
86.94	5/9/97	26.54	60.40	53,000	--	--	--	--	--
	11/5/97	26.16	60.78	65,000	--	--	--	--	--
85.82	5/1/98	22.96	62.86	25,000	--	--	--	--	--
	11/3/98	24.35	61.47	30,000	--	--	--	--	--
	3/26/99	23.82	62.00	SPH	--	--	--	--	--

# CAMBRIA

**Table 2. Groundwater Elevation and Analytical Data: Extractable Hydrocarbons and SVOCs**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to water (ft)	Groundwater Elevation (ft)	TEH	TPHd	TPHmo	2-Methyl naphthalene	Naphthalene	Other SVOCs
				←----- μg/l -----→					
MW-6	7/1/99	24.45	61.37	SPH	--	--	--	--	--
85.82	9/21/99	24.58	61.24	SPH	--	--	--	--	--
(cont'd)	2/9/00	24.93	61.24	--	SPH	--	--	--	--
	5/31/00	23.47	62.41	--	SPH	--	--	--	--
	11/14/00	24.61	61.21	--	SPH	--	--	--	--
	3/1/01	23.97	61.85	--	SPH	--	--	--	--
MW-7	3/15/91	21.63	63.78	<50	--	--	--	--	--
85.41	11/24/92	21.52	63.89	<50	--	--	--	--	--
	4/2/93	20.08	65.33	<50	--	--	--	--	--
	7/21/93	19.59	65.82	150	--	--	--	--	--
	11/9/93	20.65	64.76	200	--	--	--	--	--
	8/30/95	18.78	66.63	170	--	--	--	--	--
	12/1/95	19.47	65.94	<50	--	--	--	--	--
	5/2/96	17.15	68.26	<50	--	--	--	--	--
	8/8/96	18.48	66.93	<50	--	--	--	--	--
	11/4/96	18.69	66.72	<50	--	--	--	--	--
	2/6/97	17.44	67.97	<50	--	--	--	--	--
	5/8/97	17.72	67.69	<50	--	--	--	--	--
	8/7/97	18.49	66.92	<50	--	--	--	--	--
	11/5/97	18.86	66.55	<50	--	--	--	--	--
	2/9/98	17.56	67.85	<50	--	--	--	--	--
	4/29/98	16.23	69.18	<47	--	--	--	--	--
	8/4/98	17.24	68.17	<50	--	--	--	--	--
	11/2/98	17.91	67.50	<50	--	--	--	--	--
	3/26/99	16.42	68.99	<50	--	--	--	--	--
	7/1/99	17.90	67.51	<50	--	--	<10	<10	ND
	9/21/99	18.91	66.50	<48	--	--	<9.5	<9.5	ND
	2/9/00	16.74	68.67	--	<50	<250	<10	<10	ND
	5/31/00	16.21	69.20	--	<50	<500	--	--	--
	11/14/00	17.00	68.41	--	< 50	< 250	--	--	--
	3/1/01	17.09	68.32	--	<50	<250	<10	<10	ND

# CAMBRIA

**Table 2. Groundwater Elevation and Analytical Data: Extractable Hydrocarbons and SVOCs**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to water (ft)	Groundwater Elevation (ft)	TEH ←	TPHd	TPHmo	2-Methyl naphthalene μg/l	Naphthalene	Other SVOCs →
MW-8	10/12/92	27.70	57.80	--	--	--	--	--	--
85.50	11/25/92	27.62	57.88	170	--	--	--	--	--
	4/8/93	26.64	58.86	100	--	--	--	--	--
	7/21/93	26.60	58.90	90	--	--	--	--	--
	11/11/93	27.18	58.32	170	--	--	--	--	--
	8/30/95	26.35	59.15	240	--	--	--	--	--
	12/4/95	26.72	58.78	<50	--	--	--	--	--
	5/3/96	25.47	60.03	94	--	--	--	--	--
	8/8/96	26.41	59.09	250	--	--	--	--	--
	11/5/96	26.77	58.73	<50	--	--	--	--	--
	2/6/97	25.84	59.66	130	--	--	--	--	--
	5/9/97	26.39	59.11	120	--	--	--	--	--
	8/7/97	26.72	58.78	150	--	--	--	--	--
	11/5/97	26.82	58.68	110	--	--	--	--	--
	2/9/98	25.57	59.93	75	--	--	--	--	--
	5/1/98	25.64	59.86	210	--	--	--	--	--
	8/5/98	25.96	59.54	260	--	--	--	--	--
	11/3/98	26.27	59.23	190	--	--	--	--	--
	3/31/99	20.93	64.57	200	--	--	--	--	--
	7/1/99	26.59	58.91	170	--	--	<9.6	<9.6	ND
	9/21/99	26.89	58.61	420	--	--	<9.4	<9.4	ND
	2/9/00	26.60	58.90	--	120	280	<10	<10	ND
	5/31/00	26.16	59.34	--	160 **	<500	--	--	--
	11/14/00	26.60	58.90	--	150	< 250	--	--	--
	3/1/01	26.41	59.09	--	54	<250	<10	<10	Phenol: 25
MW-9	11/24/92	23.51	66.86	320	--	--	--	--	--
90.37	4/5/93	21.14	69.23	920	--	--	--	--	--
	7/21/93	21.54	68.83	450	--	--	--	--	--
	11/10/93	27.53	62.84	450	--	--	--	--	--
	8/30/95	19.59	70.78	680	--	--	--	--	--

# CAMBRIA

**Table 2. Groundwater Elevation and Analytical Data: Extractable Hydrocarbons and SVOCs**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to water (ft)	Groundwater Elevation (ft)	TEH	TPHd	TPHmo	2-Methyl naphthalene	Naphthalene	Other SVOCs
				←----- μg/l -----→					
MW-9	12/4/95	20.65	69.72	--	--	--	--	--	--
90.37	5/2/96	18.63	71.74	710	--	--	--	--	--
(cont'd)	11/5/96	20.69	69.68	420	--	--	--	--	--
	5/9/97	19.96	70.41	490	--	--	--	--	--
	8/8/97	20.84	69.53	480	--	--	--	--	--
	11/5/97	21.55	68.82	370	--	--	--	--	--
	2/9/98	20.21	70.16	410	--	--	--	--	--
	5/1/98	19.27	71.10	450	--	--	--	--	--
	8/5/98	19.35	71.02	630	--	--	--	--	--
	11/2/98	20.43	69.94	500	--	--	--	--	--
	3/25/99	18.46	71.91	630	--	--	--	--	--
	7/1/99	19.95	70.42	570	--	--	<9.5	<9.5	ND
	9/21/99	21.15	69.22	770	--	--	<9.4	<9.4	ND
	2/9/00	21.08	69.29	--	320	<250	<10	<10	ND
	5/31/00	19.11	71.26	--	390 **	<500	--	--	--
	11/14/00	20.90	69.47	--	160	<250	--	--	--
	3/1/01	20.45	69.92	--	220	<250	<10	<10	ND
MW-10	10/12/92	21.55	67.05	--	--	--	--	--	--
88.60	11/24/92	21.86	66.74	1,300	--	--	--	--	--
	4/5/93	19.14	69.46	5,000	--	--	--	--	--
	7/21/93	19.79	68.81	20,000	--	--	--	--	--
	8/30/95	17.99	70.61	5,900	--	--	--	--	--
	5/3/96	17.04	71.56	5,600	--	--	--	--	--
	5/9/97	18.36	70.24	2,500	--	--	--	--	--
	5/1/98	15.84	72.76	2,000	--	--	--	--	--
MW-11	11/24/92	33.65	68.41	220	--	--	--	--	--
102.06	12/8/92*	33.37	68.69	140	--	--	--	--	--
	12/8/92	33.37	68.69	120	--	--	--	--	--
	4/5/93	31.03	71.03	<50	--	--	--	--	--
	7/21/93	31.90	70.16	150	--	--	--	--	--

# CAMBRIA

**Table 2. Groundwater Elevation and Analytical Data: Extractable Hydrocarbons and SVOCs**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to water (ft)	Groundwater Elevation (ft)	TEH ←	TPHd	TPHmo	2-Methyl naphthalene μg/l	Naphthalene	Other SVOCs →
MW-11	11/9/93	32.60	69.46	60	--	--	--	--	--
102.06	8/30/95	28.92	73.14	240	--	--	--	--	--
(cont'd)	5/3/96	28.00	74.06	<50	--	--	--	--	--
	5/8/97	29.93	72.13	<50	--	--	--	--	--
	4/29/98	27.22	74.84	<47	--	--	--	--	--
MW-13	11/24/92	26.05	58.01	3,600	--	--	--	--	--
84.06	12/8/92*	25.08	58.98	210	--	--	--	--	--
	12/8/92	25.08	58.98	100	--	--	--	--	--
	4/5/93	24.64	59.42	<50	--	--	--	--	--
	7/21/93	24.29	59.77	<50	--	--	--	--	--
	11/9/93	24.23	59.83	160	--	--	--	--	--
	8/30/95	23.30	60.76	<50	--	--	--	--	--
	12/1/95	23.80	60.26	<50	--	--	--	--	--
	5/3/96	23.19	60.87	<50	--	--	--	--	--
	8/8/96	23.44	60.62	<50	--	--	--	--	--
	11/5/96	24.04	60.02	<50	--	--	--	--	--
	2/6/97	23.24	60.82	<50	--	--	--	--	--
	5/8/97	23.46	60.60	<50	--	--	--	--	--
	8/8/97	23.92	60.14	<50	--	--	--	--	--
	11/5/97	24.27	59.79	<50	--	--	--	--	--
	2/9/98	22.89	61.17	<50	--	--	--	--	--
	4/29/98	22.27	61.79	<47	--	--	--	--	--
	8/4/98	22.75	61.31	78	--	--	--	--	--
	11/3/98	23.90	60.16	<50	--	--	--	--	--
	3/31/99	23.11	60.95	<48	--	--	--	--	--
	7/1/99	23.40	60.66	100	--	--	<9.6	<9.6	ND
	9/21/99	21.91	62.15	<48	--	--	<9.4	<9.4	ND
	2/9/00	23.84	60.22	--	<50	<250	<10	<10	ND
	5/31/00	22.97	61.09	--	<50	<500	--	--	--
	11/14/00	24.00	60.06	--	65	<250	--	--	--
	3/1/01	23.93	60.13	--	<50	<250	<10	<10	ND

# CAMBRIA

**Table 2. Groundwater Elevation and Analytical Data: Extractable Hydrocarbons and SVOCs**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID	Sampling Date	Depth to water (ft)	Groundwater Elevation (ft)	TEH	TPHd	TPHmo	2-Methyl naphthalene	Naphthalene	Other SVOCs
TOC Elev. (ft)				←----- μg/l -----→					
MW-14 94.66	5/26/98	21.67	72.99	7,700	--	--	--	--	--
	7/1/99	22.95	71.71	SPH	--	--	--	--	--
	9/21/99	24.26	70.40	SPH	--	--	--	--	--
	2/9/00	24.13	70.53	--	14,000	1,500	290	600	ND
	5/31/00	22.09	72.57	--	SPH	--	--	--	--
	11/14/00	23.90	70.76	--	SPH	--	--	--	--
	3/1/01	23.97	70.69	--	SPH	--	--	--	--
MW-15 94.76	5/26/98	21.87	72.89	1,700	--	--	--	--	--
	7/1/99	22.25	72.51	SPH	--	--	--	--	--
	9/21/99	24.12	70.64	SPH	--	--	--	--	--
	2/9/00	24.42	70.34	--	4,000	1,200	50	270	ND
	5/31/00	22.40	72.36	--	SPH	--	--	--	--
	11/14/00	24.15	70.61	--	SPH	--	--	--	--
	3/1/01	23.99	70.77	--	SPH	--	--	--	--

**Abbreviations and Notes:**

TOC Elev. (ft) = Top of casing elevation, surveyed to an arbitrary datum

TEH = Total extractable hydrocarbons

TPHd = Total petroleum hydrocarbons as diesel

TPHmo = Total petroleum hydrocarbons as motor oil

SVOCs = Semi-volatile organic compounds

Other SVOC's = All other compounds analyzed by EPA Method 8270

μg/l = micrograms per liter = parts per billion = ppb

ND = None detected above laboratory reporting limit, see laboratory report for individual reporting limits

< n = Not detected above n ug/l

-- = Not analyzed/not available

\* = Duplicate sample sent to a different chemical laboratory

\*\* = Does not match diesel pattern



# CAMBRIA

**Table 3. LUFT Metals in Groundwater**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID	Sampling Date	Cadmium	Chromium	Lead	Nickel	Zinc
		<-----ug/l----->				
MW-4	7/1/99	<5	<10	59	<20	<20
	9/21/99	<5	<10	66	<20	33
	2/9/00	<5	17	68	<50	<50
MW-7	7/1/99	<5	<10	<3	<20	<20
	9/21/99	<5	<10	<3	<20	<20
	2/9/00	<5	14	8.6	59	<50
MW-8	7/1/99	<5	<10	<3	<20	<20
	9/21/99	<5	<10	<3	<20	<20
	2/9/00	<5	<5	<5	<50	<50
MW-9	7/1/99	<5	<10	<3	34	<20
	9/21/99	<5	<10	<3	25	37
	2/9/00	<5	82	29	160	130
	3/1/01	<5	47	<5	72	<50
MW-13	7/1/99	<5	<10	<3	<20	<20
	9/21/99	<5	<10	<3	<20	<20
	2/9/00	<5	12	15	<50	<50
MW-14	2/9/00	<5	210	24	2,500	280
MW-15	2/9/00	<5	140	1,800	220	150

**Abbreviations and Notes:**

LUFT metals analyzed by EPA Method 6010 and filtered by laboratory prior to analysis

ug/l = micrograms per liter

# CAMBRIA

**Table 4. Liquid-Phase Hydrocarbon Removal**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID <i>TOC Elev.</i> <i>(ft)</i>	Sampling Date	Depth to Water (ft)	LPH Thickness (ft)	Hydrocarbons Removed (gallons)	Hydrocarbons Removed (lbs)	Cumulative Hydrocarbons Removed (lbs)	Notes
MW-1	12/23/1991	26.86	1.15	2.00	12.20	12.20	1
94.48	12/26/1991	26.08	0.22	0.50	3.05	15.25	1
	1/13/1992	26.53	0.66	1.00	6.10	21.35	1
	2/28/1992	27.75	0.42	2.00	12.20	33.55	1
	11/9/1993	26.06	1.17	0.50	3.05	36.60	1
	11/3/1995	23.10	0.76	0.75	4.58	41.18	1
	11/30/1995	23.38	0.70	0.25	1.53	42.70	1
	1/3/1996	23.30	0.78	0.53	3.23	45.93	1
	2/2/1996	22.96	0.84	0.75	4.58	50.51	1
	3/1/1996	21.69	0.14	0.10	0.61	51.12	1
	4/4/1996	21.11	0.00	0.00	0.00	51.12	1
	5/2/1996	20.96	0.00	0.00	0.00	51.12	1
	6/5/1996	20.98	0.04	0.10	0.61	51.73	1
	7/9/1996	21.64	0.20	0.10	0.61	52.34	1
	8/8/1996	22.43	0.33	0.05	0.31	52.64	1
	9/10/1996	23.25	0.60	0.10	0.61	53.25	1
	10/1/1996	23.58	0.60	0.25	1.53	54.78	1
	11/4/1996	24.29	0.78	0.13	0.79	55.57	1
	12/2/1996	24.63	0.88	0.26	1.59	57.16	1
	1/3/1997	24.08	0.81	0.39	2.38	59.54	1
	2/6/1997	22.46	0.30	0.01	0.06	59.60	1
	3/5/1997	23.00	0.00	0.00	0.00	59.60	1
	4/1/1997	22.29	0.20	0.01	0.06	59.66	1
	5/8/1997	22.79	0.33	0.02	0.12	59.78	1
	6/6/1997	24.33	1.69	0.26	1.59	61.37	1
	7/8/1997	24.00	0.96	0.20	1.22	62.59	1
	8/7/1997	24.58	1.29	1.00	6.10	68.69	1
	9/10/1997	24.93	1.21	1.50	9.15	77.84	1
	10/1/1997	24.89	0.86	0.26	1.59	79.42	1
	11/4/1997	25.06	0.77	0.26	1.59	81.01	1
	12/4/1997	24.76	0.54	0.19	1.16	82.17	1
	1/8/1998	23.66	0.00	0.00	0.00	82.17	1
	2/5/1998	22.64	0.00	0.00	0.00	82.17	1
	3/6/1998	20.80	0.00	0.00	0.00	82.17	1
	4/2/1998	20.31	0.00	0.00	0.00	82.17	1
	4/29/1998	19.95	0.00	0.00	0.00	82.17	1
	6/3/1998	20.41	0.00	0.00	0.00	82.17	1
	7/9/1998	20.97	0.07	0.00	0.00	82.17	1
	8/4/1998	21.40	trace	trace	0.00	82.17	1

# CAMBRIA

**Table 4. Liquid-Phase Hydrocarbon Removal**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID	Sampling TOC Elev. (ft)	Depth to Water (ft)	LPIH Thickness (ft)	Hydrocarbons Removed (gallons)	Hydrocarbons Removed (lbs)	Cumulative Hydrocarbons Removed (lbs)	Notes
MW-1	8/26/1998	21.85	0.10	trace	0.00	82.17	1
(cont'd)	11/2/1998	22.92	0.39	trace	0.00	82.17	1
	12/4/1998	23.29	0.29	0.01	0.06	82.23	1
	1/5/1999	23.51	0.42	0.03	0.18	82.41	1
	2/8/1999	23.08	0.05	0.25	1.53	83.94	1
	3/24/1999	21.90	0.01	0.01	0.06	84.00	1
	4/30/1999	21.52	0.00	0.00	0.00	84.00	1
	7/1/1999	22.70	0.03	0.01	0.06	84.06	1
	9/21/1999	23.81	0.08	0.20	1.22	85.28	1
	10/20/1999	23.90	0.10	0.01	0.06	85.34	1
	12/13/1999	24.24	trace	0.00	0.00	85.34	1
	2/9/2000	23.95	0.07	0.05	0.31	85.64	1
	2/15/2000	--	0.00	0.00	0.00	85.64	2
	2/25/2000	23.69	0.00	0.06	0.38	86.03	2
	3/3/2000	23.27	0.00	0.05	0.31	86.33	2
	3/28/2000	22.39	0.00	0.13	0.79	87.13	2
	5/2/2000	22.29	0.00	0.05	0.29	87.42	2
	5/31/2000	22.05	0.00	0.00	0.00	87.42	2
	7/3/2000	22.10	trace	0.02	0.12	87.54	2
	8/4/2000	22.40	0.00	0.01	0.06	87.60	2
	10/6/2000	23.47	0.46	0.01	0.06	87.66	1
	11/3/2000	24.14	0.78	0.00	0.00	87.66	
	12/1/2000	25.40	0.83	1.75	10.50	98.16	1,2
	1/4/2001	25.13	0.09	0.25	1.53	99.69	2
	2/2/2001	25.12	0.03	0.13	0.79	100.48	2
MW-4	12/23/1991	22.63	0.98	2.50	15.25	15.25	1
88.84	12/26/1991	22.52	0.96	6.00	36.60	51.85	1
	1/10/1992	22.74	0.99	5.00	30.50	82.35	1
	2/28/1992	22.00	0.67	4.00	24.40	106.75	1
	3/11/1992	21.71	0.55	3.50	21.35	128.10	1
	3/13/1992	21.56	0.49	3.50	21.35	149.45	1
	3/17/1992	25.46	0.44	2.25	13.73	163.18	1
	3/18/1992	21.38	0.44	2.50	15.25	178.43	1
	3/19/1992	21.33	0.48	1.50	9.15	187.58	1
	3/23/1992	21.29	0.42	4.00	24.40	211.98	1
	3/24/1992	21.31	0.38	1.50	9.15	221.13	1
	3/25/1992	21.17	0.36	1.00	6.10	227.23	1
	3/26/1992	21.08	0.35	1.00	6.10	233.33	1
	3/27/1992	20.92	0.26	0.50	3.05	236.38	1

# CAMBRIA

**Table 4. Liquid-Phase Hydrocarbon Removal**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to Water (ft)	LPH Thickness (ft)	Hydrocarbons Removed (gallons)	Hydrocarbons Removed (lbs)	Cumulative Hydrocarbons Removed (lbs)	Notes
MW-4	3/31/1992	21.15	0.44	0.50	3.05	239.43	1
(cont'd)	4/1/1992	20.90	0.24	0.25	1.53	240.95	1
	4/2/1992	20.90	0.17	0.13	0.79	241.74	1
	4/6/1992	--	--	0.13	0.79	242.54	1
	4/10/1992	20.91	0.33	0.25	1.53	244.06	1
	4/13/1992	21.04	0.42	0.25	1.53	245.59	1
	4/20/1992	20.74	0.19	0.13	0.79	246.38	1
	5/4/1992	20.83	0.33	0.13	0.79	247.17	1
	5/18/1992	21.33	0.23	0.13	0.79	247.97	1
	5/26/1992	20.83	0.17	0.13	0.79	248.76	1
	6/1/1992	20.85	0.19	0.06	0.37	249.12	1
	6/29/1992	21.38	0.53	0.25	1.53	250.65	1
	7/29/1992	21.69	0.56	1.11	6.77	257.42	1
	8/28/1992	21.35	0.63	1.68	10.25	267.67	1
	4/3/1993	20.11	0.51	0.13	0.79	268.46	1
	11/9/1993	20.48	0.52	0.03	0.18	268.64	1
	8/30/1995	21.71	0.63	1.75	10.68	279.32	1
	10/2/1995	19.90	2.20	0.50	3.05	282.37	1
	11/3/1995	18.76	0.57	0.25	1.53	283.89	1
	11/30/1995	19.17	0.65	0.25	1.53	285.42	1
	1/3/1996	19.45	0.44	0.05	0.31	285.72	1
	2/2/1996	19.50	0.32	0.10	0.61	286.33	1
	3/1/1996	19.31	0.20	0.20	1.22	287.55	1
	4/4/1996	17.53	0.18	0.20	1.22	288.77	1
	5/2/1996	17.50	0.25	0.20	1.22	289.99	1
	6/5/1996	17.67	0.39	0.15	0.92	290.91	1
	7/9/1996	18.29	0.50	0.16	0.98	291.89	1
	8/8/1996	18.84	0.00	0.00	0.00	291.89	1
	9/10/1996	19.31	0.34	0.05	0.31	292.19	1
	10/1/1996	19.51	0.29	0.05	0.31	292.50	1
	11/4/1996	20.13	0.35	0.02	0.12	292.62	1
	12/2/1996	20.23	0.33	0.02	0.12	292.74	1
	1/3/1997	19.33	0.10	0.02	0.12	292.86	1
	2/6/1997	18.13	0.01	0.01	0.06	292.92	1
	4/30/1999	17.28	trace	0.00	0.00	292.92	1
	2/9/2000	19.76	0.00	0.00	0.00	292.92	1
	2/15/2000	--	0.00	0.00	0.00	292.92	2
	2/25/2000	19.30	0.00	0.00	0.00	292.92	2

# CAMBRIA

**Table 4. Liquid-Phase Hydrocarbon Removal**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID <i>TOC Elev.</i> <i>(ft)</i>	Sampling Date	Depth to Water (ft)	LPH Thickness (ft)	Hydrocarbons Removed (gallons)	Hydrocarbons Removed (lbs)	Cumulative Hydrocarbons Removed (lbs)	Notes
MW-6	12/23/1991	28.40	3.21	7.50	45.75	45.75	1
85.62	12/26/1991	27.25	1.67	2.00	12.20	57.95	1
	1/10/1992	27.23	0.90	1.00	6.10	64.05	1
	2/4/1992	27.71	2.04	2.00	12.20	76.25	1
	2/28/1992	27.92	3.00	3.00	18.30	94.55	1
	3/10/1992	27.16	2.06	2.75	16.78	111.33	1
	3/12/1992	25.96	0.52	2.00	12.20	123.53	1
	3/23/1992	26.34	1.09	1.00	6.10	129.63	1
	3/30/1992	25.73	0.35	0.50	3.05	132.68	1
	4/10/1992	25.29	0.05	0.25	1.53	134.20	1
	4/13/1992	25.52	0.21	0.13	0.79	134.99	1
	4/20/1992	25.38	0.10	0.13	0.79	135.79	1
	5/4/1992	25.40	--	0.13	0.79	136.58	1
	5/8/1992	25.50	0.17	0.06	0.37	136.95	1
	5/26/1992	25.46	0.13	0.13	0.79	137.74	1
	6/1/1992	25.46	0.09	0.06	0.37	138.10	1
	6/29/1992	25.59	0.14	0.19	1.16	139.26	1
	7/29/1992	26.90	1.71	0.60	3.66	142.92	1
	8/28/1992	25.09	2.62	2.40	14.64	157.56	1
	12/2/1992	--	--	0.00	0.00	157.56	1
	4/3/1993	26.96	2.86	1.75	10.68	168.24	1
	11/9/1993	27.51	3.06	0.83	5.06	173.30	1
	8/30/1995	28.00	7.96	4.50	27.45	200.75	1
	10/2/1995	28.24	6.14	4.00	24.40	225.15	1
	11/3/1995	28.39	6.13	3.00	18.30	243.45	1
	11/30/1995	26.91	3.44	2.50	15.25	258.70	1
	1/3/1996	27.58	4.41	2.50	15.25	273.95	1
	2/2/1996	27.58	4.37	5.00	30.50	304.45	1
	3/1/1996	27.96	5.15	4.00	24.40	328.85	1
	4/4/1996	27.96	5.41	5.00	30.50	359.35	1
	5/2/1996	26.83	4.66	4.50	27.45	386.80	1
	6/5/1996	27.15	5.17	4.00	24.40	411.20	1
	7/9/1996	27.08	4.86	4.50	27.45	438.65	1
	8/8/1996	26.71	4.05	4.00	24.40	463.05	1
	9/10/1996	26.83	3.82	3.50	21.35	484.40	1
	10/1/1996	26.96	3.77	4.00	24.40	508.80	1
	11/4/1996	--	--	NM	NM	NM	4
86.94	12/2/1996	--	--	NM	NM	NM	4
	1/3/1997	--	--	NM	NM	NM	4
	2/6/1997	25.08	0.20	NM	NM	NM	4

# CAMBRIA

**Table 4. Liquid-Phase Hydrocarbon Removal**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID	Sampling TOC Elev. (ft)	Depth to Water (ft)	LPH Thickness (ft)	Hydrocarbons Removed (gallons)	Hydrocarbons Removed (lbs)	Cumulative Hydrocarbons Removed (lbs)	Notes
MW-6	3/5/1997	24.20	0.00	NM	NM	NM	4
(cont'd)	4/1/1997	24.04	0.00	NM	NM	NM	4
85.82	5/8/1997	26.54	1.88	0.40	2.44	511.24	1
	6/6/1997	25.33	0.21	0.03	0.18	511.42	1
	7/8/1997	25.30	0.07	0.00	0.00	511.42	1
	8/7/1997	25.52	0.00	0.00	0.00	511.42	1
	9/10/1997	25.76	0.00	0.00	0.00	511.42	1
	10/1/1997	25.12	0.00	0.00	0.00	511.42	1
	11/4/1997	26.16	0.18	0.02	0.12	511.55	1
	12/4/1997	26.08	0.16	0.05	0.31	511.85	1
	1/8/1998	25.79	0.10	0.66	4.03	515.88	1
	2/5/1998	25.31	0.89	NM	NM	NM	4
	3/6/1998	24.63	0.46	0.04	0.24	516.12	1
	4/2/1998	24.45	0.59	0.10	0.61	516.73	1
	4/29/1998	22.96	0.55	0.09	0.55	517.28	1
	6/3/1998	22.81	0.41	0.03	0.18	517.46	1
	7/9/1998	23.04	0.35	0.05	0.31	517.77	1
	8/4/1998	23.29	0.35	0.04	0.24	518.01	1
	8/26/1998	23.50	0.31	0.01	0.06	518.07	1
	11/2/1998	24.24	0.43	0.02	0.12	518.20	1
	12/4/1998	24.35	0.32	0.01	0.06	518.26	1
	1/5/1999	24.51	0.40	0.03	0.18	518.44	1
	2/8/1999	24.00	0.03	0.13	0.76	519.20	1
	3/24/1999	23.82	0.19	0.03	0.18	519.38	1
	4/30/1999	23.60	1.13	0.10	0.61	519.99	1
	7/1/1999	24.45	0.42	0.06	0.38	520.38	1
	7/27/1999	25.35	0.24	0.06	0.38	520.76	1
	8/19/1999	24.87	0.24	0.06	0.37	521.12	1
	9/21/1999	24.58	0.10	0.20	1.22	522.34	1
	10/20/1999	25.05	0.17	0.20	1.22	523.56	1
	12/13/1999	25.08	0.10	0.06	0.37	523.93	1
	2/9/2000	24.93	0.44	0.25	1.53	525.45	1
	2/15/2000	--	0.00	0.07	0.43	525.88	3
	2/25/2000	24.23	0.00	0.01	0.06	525.94	3
	3/3/2000	24.00	0.00	0.00	0.01	525.95	3
	3/28/2000	23.54	0.00	0.05	0.31	526.26	3
	5/2/2000	23.52	0.06	0.03	0.15	526.41	3
	5/31/2000	23.39	0.08	0.00	0.00	526.41	3
	7/3/2000	23.61	trace	0.02	0.12	526.53	3
	8/4/2000	23.80	0.10	0.01	0.06	526.59	3

# CAMBRIA

**Table 4. Liquid-Phase Hydrocarbon Removal**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID <i>TOC Elev.</i> <i>(ft)</i>	Sampling Date	Depth to Water (ft)	LPH Thickness (ft)	Hydrocarbons Removed (gallons)	Hydrocarbons Removed (lbs)	Cumulative Hydrocarbons Removed (lbs)	Notes
MW-6	10/6/2000	24.22	0.04	0.01	0.06	526.65	
<i>(cont'd)</i>	11/3/2000	24.30	0.09	0.00	0.00	526.65	
85.82	12/1/2000	24.38	0.07	0.03	0.18	526.83	2, 3
	1/4/2001	24.65	0.17	0.00	0.00	526.83	5
	2/2/2001	24.72	0.22	0.25	1.53	528.36	3
MW-9 <i>90.37</i>	8/8/1996	19.89	0.35	0.10	0.61	0.61	1
MW-14 <i>94.66</i>	12/4/1998	23.42	0.23	0.01	0.06	0.06	1
	1/5/1999	23.36	0.12	0.01	0.06	0.12	1
	2/8/1999	23.17	trace	0.01	0.06	0.18	1
	3/24/1999	22.08	trace	trace	0.00	0.18	1
	4/30/1999	21.17	0.01	trace	0.00	0.18	1
	7/1/1999	22.95	0.04	trace	0.00	0.18	1
	9/21/1999	24.26	trace	trace	0.00	0.18	1
	10/20/1999	24.10	0.00	0.00	0.00	0.18	1
	2/9/2000	24.13	0.00	0.00	0.00	0.18	1
	2/15/2000	--	0.00	0.00	0.00	0.18	1
	2/25/2000	--	0.00	0.00	0.00	0.18	2
	3/3/2000	23.27	0.00	0.05	0.31	0.49	2
	3/28/2000	22.40	0.00	0.13	0.76	1.25	2
	5/2/2000	22.22	0.00	0.04	0.24	1.49	2
	5/31/2000	22.09	0.00	0.00	0.00	1.49	2
	7/3/2000	22.35	trace	0.01	0.06	1.55	2
	8/4/2000	22.78	0.00	0.03	0.18	1.73	2
	10/6/2000	23.48	0.00	0.00	0.00	1.73	
	11/3/2000	23.60	0.00	0.00	0.00	1.73	
	12/1/2000	23.90	0.04	0.04	0.24	1.97	1, 2
	1/4/2001	24.10	0.00	0.00	0.00	1.97	
	2/2/2001	24.27	0.00	0.10	0.61	2.58	2
MW-15 <i>94.76</i>	9/20/1999	24.12	trace	trace	0.00	0.00	1
	10/20/1999	24.40	0.00	0.00	0.00	0.00	1
	12/13/1999	24.61	0.00	0.00	0.00	0.00	1

# CAMBRIA

**Table 4. Liquid-Phase Hydrocarbon Removal**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID	Sampling	Depth to	LPH	Hydrocarbons	Hydrocarbons	Cumulative	Notes
<i>TOC Elev.</i>	Date	Water	Thickness	Removed	Removed	Hydrocarbons	
<i>(ft)</i>		(ft)	(ft)	(gallons)	(lbs)	Removed (lbs)	

**Abbreviations and Notes:**

*TOC Elev. (ft)* = Top of casing elevation, surveyed to an arbitrary datum

-- = Not measured or not applicable

NM = product was being removed by vapor extraction at time of measurement.

1 = LPH removed by manual bailing

2 = LPH removed from well by absorbent sock

3 = LPH removed from well by passive skimmer

4 = vapor extraction system operating in well

5 = No product removed; skimmer adjusted incorrectly and filled with water.

Liquid-phase hydrocarbons (LPH) converted from volume to weight using the relation 1 gallon LPH= 6.1 pounds.



**ATTACHMENT A**

Groundwater Monitoring Protocol

## ATTACHMENT A

### Well Sampling Protocol - May 8, 2000 Workplan Addendum

<b>Well Sampling Protocol - May 8, 2000 Workplan Addendum</b>				
Well	Sampling Frequency	Analytes	Additions from Prior Protocol	Reductions/Removals from Prior Protocol
<b>Source Area Wells</b>				
MW-1				
MW-6	<b>Annually</b> (1 <sup>st</sup> Qtr) <i>(Gauge Quarterly)</i>	TPHd, TPHmo, TPHg, BTEX, MTBE, HVOCs, SVOCs, LUFT Metals, DO	DO	Reduced Well Sampling Frequency
MW-14				
MW-15				
<b>Down-Gradient/Cross-Gradient Wells</b>				
MW-4	<b>Quarterly</b> <i>(Annually for SVOCs - 1<sup>st</sup> Qtr)</i>	TPHd, TPHmo, TPHg, BTEX, MTBE, HVOCs, DO (SVOCs - 1 <sup>st</sup> qtr only)	DO	LUFT Metals, Annual SVOCs
MW-7				
MW-13				
MW-8				
MW-9	<b>Quarterly</b> <i>(Annually for SVOCs and LUFT Metals - 1<sup>st</sup> Qtr)</i>	TPHd, TPHmo, TPHg, BTEX, MTBE, HVOCs, DO (SVOCs, LUFT Metals - 1 <sup>st</sup> qtr only)	DO	Annual LUFT Metals, Annual SVOC
Per the May 3, 1999, ACHCSA letter to Messrs. Hill and Linden, monitoring wells MW-2, MW-3, MW-5, MW-10, and MW-11 were dropped from the monitoring program.				

**ATTACHMENT B**

Analytical Laboratory Reports



McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560  
Telephone : 925-798-1620 Fax : 925-798-1622  
<http://www.mccampbell.com> E-mail: [main@mccampbell.com](mailto:main@mccampbell.com)

Cambria Environmental Technology 1144 65 <sup>th</sup> Street, Suite C Oakland, CA 94608	Client Project ID: #425-1580; Connel	Date Sampled: 03/01-03/02/01
		Date Received: 03/02/01
	Client Contact: Bob Schultz	Date Extracted: 03/02/01
	Client P.O:	Date Analyzed: 03/02/01

03/09/2001

Dear Bob:

Enclosed are:

- 1). the results of 6 samples from your #425-1580; Connel project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Edward Hamilton, Lab Director





McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560  
 Telephone : 925-798-1620 Fax : 925-798-1622  
<http://www.mccampbell.com> E-mail: main@mccampbell.com

Cambria Environmental Technology 1144 65 <sup>th</sup> Street, Suite C Oakland, CA 94608	Client Project ID: #425-1580; Connel	Date Sampled: 03/01-03/02/01
	Client Contact: Bob Schultz	Date Received: 03/02/01
	Client P.O:	Date Extracted: 03/05-03/06/01
		Date Analyzed: 03/05-03/06/01

**Volatile Halocarbons**

EPA method 601 or 8010

Lab ID	61482	61483	61484	61485
Client ID	MW-4	MW-7	MW-8	MW-9
Matrix	W	W	W	W
Compound	Concentration			
Bromodichloromethane	ND<25	ND	ND	ND<5.0
Bromoform <sup>(b)</sup>	ND<25	ND	ND	ND<5.0
Bromomethane	ND<25	ND	ND	ND<5.0
Carbon Tetrachloride <sup>(c)</sup>	ND<25	ND	ND	ND<5.0
Chlorobenzene	ND<25	ND	ND	ND<5.0
Chloroethane	ND<25	ND	ND	ND<5.0
2-Chloroethyl Vinyl Ether <sup>(d)</sup>	ND<25	ND	ND	ND<5.0
Chloroform <sup>(e)</sup>	ND<25	ND	ND	ND<5.0
Chloromethane	ND<25	ND	ND	ND<5.0
Dibromochloromethane	ND<25	ND	ND	ND<5.0
1,2-Dichlorobenzene	ND<25	ND	ND	ND<5.0
1,3-Dichlorobenzene	ND<25	ND	ND	ND<5.0
1,4-Dichlorobenzene	ND<25	ND	ND	ND<5.0
Dichlorodifluoromethane	ND<25	ND	ND	ND<5.0
1,1-Dichloroethane	ND<25	ND	ND	ND<5.0
1,2-Dichloroethane	110	ND	16	620
1,1-Dichloroethene	ND<25	ND	ND	ND<5.0
cis 1,2-Dichloroethene	ND<25	ND	ND	ND<5.0
trans 1,2-Dichloroethene	ND<25	ND	ND	ND<5.0
1,2-Dichloropropane	ND<25	ND	ND	ND<5.0
cis 1,3-Dichloropropene	ND<25	ND	ND	ND<5.0
trans 1,3-Dichloropropene	ND<25	ND	ND	ND<5.0
Methylene Chloride <sup>(f)</sup>	ND<25	ND	ND	ND<5.0
1,1,2,2-Tetrachloroethane	ND<25	ND	ND	ND<5.0
Tetrachloroethene	ND<25	ND	ND	ND<5.0
1,1,1-Trichloroethane	ND<25	ND	ND	ND<5.0
1,1,2-Trichloroethane	ND<25	ND	ND	ND<5.0
Trichloroethene	ND<25	ND	ND	ND<5.0
Trichlorofluoromethane	ND<25	ND	ND	ND<5.0
Vinyl Chloride <sup>(g)</sup>	ND<25	ND	ND	ND<5.0
% Recovery Surrogate	106	108	106	106
Comments	h			

\* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil and sludge samples in ug/kg, wipe samples in ug/wipe  
 Reporting limit unless otherwise stated: water/TCLP/SPLP extracts, ND<0.5ug/L; soils and sludges, ND<5ug/kg; wipes, ND<0.2ug/wipe  
 ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

(b) tribromomethane; (c) tetrachloromethane; (d) (2-chloroethoxy) ethene; (e) trichloromethane; (f) dichloromethane; (g) chloroethene; (h) a lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~5 vol. % sediment; (j) sample diluted due to high organic content.

DHS Certification No. 1644

Edward Hamilton, Lab Director



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Cambria Environmental Technology 1144 65 <sup>th</sup> Street, Suite C Oakland, CA 94608	Client Project ID: #425-1580; Connel	Date Sampled: 03/01-03/02/01
	Client Contact: Bob Schultz	Date Received: 03/02/01
	Client P.O:	Date Extracted: 03/05-03/06/01
		Date Analyzed: 03/05-03/06/01

**Volatile Halocarbons**


EPA method 601 or 8010

Lab ID	61486		
Client ID	MW-13		
Matrix	W		
Compound	Concentration		
Bromodichloromethane	ND		
Bromoform <sup>(b)</sup>	ND		
Bromomethane	ND		
Carbon Tetrachloride <sup>(c)</sup>	ND		
Chlorobenzene	ND		
Chloroethane	ND		
2-Chloroethyl Vinyl Ether <sup>(d)</sup>	ND		
Chloroform <sup>(e)</sup>	ND		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
Dichlorodifluoromethane	ND		
1,1-Dichloroethane	ND		
1,2-Dichloroethane	ND		
1,1-Dichloroethene	ND		
cis 1,2-Dichloroethene	ND		
trans 1,2-Dichloroethene	ND		
1,2-Dichloropropane	ND		
cis 1,3-Dichloropropene	ND		
trans 1,3-Dichloropropene	ND		
Methylene Chloride <sup>(f)</sup>	ND		
1,1,2,2-Tetrachloroethane	ND		
Tetrachloroethene	ND		
1,1,1-Trichloroethane	ND		
1,1,2-Trichloroethane	ND		
Trichloroethene	ND		
Trichlorofluoromethane	ND		
Vinyl Chloride <sup>(g)</sup>	ND		
% Recovery Surrogate	107		
Comments			

\* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil and sludge samples in ug/kg, wipe samples in ug/wipe  
Reporting limit unless otherwise stated: water/TCLP/SPLP extracts, ND<0.5ug/L; soils and sludges, ND<5ug/kg; wipes, ND<0.2ug/wipe  
ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

(b) tribromomethane; (c) tetrachloromethane; (d) (2-chloroethoxy) ethene; (e) trichloromethane; (f) dichloromethane; (g) chloroethene; (h) a lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~5 vol. % sediment; (j) sample diluted due to high organic content.

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### QC REPORT

Date: 03/02/01-03/03/01 Matrix: Water

Extraction: TTLC

Compound	Concentration: ug/L				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	

SampleID: 22601

Instrument: GC-7

Surrogate1	0.000	89.0	92.0	100.00	89	92	3.3
Xylenes	0.000	28.6	28.8	30.00	95	96	0.7
Ethyl Benzene	0.000	9.3	9.0	10.00	93	90	3.3
Toluene	0.000	9.1	9.1	10.00	91	91	0.0
Benzene	0.000	8.4	8.7	10.00	84	87	3.5
MTBE	0.000	9.4	9.1	10.00	94	91	3.2
GAS	0.000	97.6	94.9	100.00	98	95	2.8

SampleID: 22601

Instrument: GC-11 A

Surrogate1	0.000	100.0	101.0	100.00	100	101	1.0
TPH (diesel)	0.000	7225.0	7100.0	7500.00	96	95	1.7

$$\% \text{ Recovery} = \frac{(MS - \text{Sample})}{\text{Amount Spiked}} \cdot 100$$

$$RPD = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2 \cdot 100$$

RPD means Relative Percent Deviation





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## QC REPORT

### EPA 8010/8020/EDB

Date: 03/05/01-03/06/01 Matrix: Water

Extraction: N/A

Compound	Concentration: ug/L			%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	

SampleID: 30601

Instrument: GC-1

Surrogate1	0.000	106.0	102.0	100.00	106	102	3.8
Chlorobenzene	0.000	84.0	90.0	100.00	84	90	6.9
Trichloroethane	0.000	84.0	85.0	100.00	84	85	1.2
1,1-DCE	0.000	94.0	96.0	100.00	94	96	2.1

$$\% \text{ Recovery} = \frac{(MS - \text{Sample})}{\text{AmountSpiked}} \cdot 100$$

$$RPD = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2100$$

RPD means Relative Percent Deviation





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Cambria Environmental Technology 1144 65 <sup>th</sup> Street, Suite C Oakland, CA 94608	Client Project ID: #425-1580; Connell	Date Sampled: 03/01-03/02/01
		Date Received: 03/06/01
	Client Contact: Bob Schultz	Date Extracted: 03/06/01
	Client P.O:	Date Analyzed: 03/06/01

03/13/2001

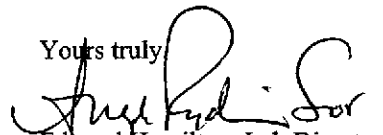
Dear Bob:

Enclosed are:

- 1). the results of 5 samples from your #425-1580; Connell project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly

  
Edward Hamilton, Lab Director





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Cambria Environmental Technology 1144 65 <sup>th</sup> Street, Suite C Oakland, CA 94608	Client Project ID: #425-1580; Connell	Date Sampled: 03/01-03/02/01
	Client Contact: Bob Schultz	Date Received: 03/06/01
	Client P.O:	Date Extracted: 03/07/01
		Date Analyzed: 03/07-03/09/01

**Semi-Volatile Organics By GC/MS**

EPA method 625 and 3510 or 8270 and 3550

Lab ID	61638
Client ID	MW-4
Matrix	W

Compound	Concentration*	Reporting Limit		Compound	Concentration	Reporting Limit	
		W	S			W	S
Acenaphthene	ND<50	10	0.33	Di-n-octyl phthalate	ND<50	10	0.33
Acenaphthylene	ND<50	10	0.33	1,2-Diphenylhydrazine	ND<50	10	0.33
Anthracene	ND<50	10	0.33	Fluoranthene	ND<50	10	0.33
Benidine	ND<50	50	1.6	Fluorene	ND<50	10	0.33
Benzoic Acid	ND<50	50	1.6	Hexachlorobenzene	ND<50	10	0.33
Benzo(a)anthracene	ND<50	10	0.33	Hexachlorobutadiene	ND<50	10	0.33
Benzo(b)fluoranthene	ND<50	10	0.33	Hexachlorocyclopentadiene	ND<50	50	1.6
Benzo(k)fluoranthene	ND<50	10	0.33	Hexachloroethane	ND<50	10	0.33
Benzo(g,h,i)perylene	ND<50	10	0.33	Indeno(1,2,3-cd)pyrene	ND<50	10	0.33
Benzo(a)pyrene	ND<50	10	0.33	Isophorone	ND<50	10	0.33
Benzyl alcohol	ND<50	20	0.66	2-Methylnaphthalene	210	10	0.33
Bis(2-chloroethoxy)methane	ND<50	10	0.33	2-Methylphenol (o-Cresol)	ND<50	10	0.33
Bis(2-chloroethyl) ether	ND<50	10	0.33	3 &/or 4-Methylphenol (m &/or p-Cresol)	ND<50	10	0.33
Bis(2-chloroisopropyl)ether	ND<50	10	0.33	Naphthalene	510	10	0.33
Bis(2-ethylhexyl) phthalate	ND<50	10	0.33	2-Nitroaniline	ND<50	50	1.6
4-Bromophenyl phenyl ether	ND<50	10	0.33	3-Nitroaniline	ND<50	50	1.6
Butylbenzyl phthalate	ND<50	10	0.33	4-Nitroaniline	ND<50	50	1.6
4-Chloroaniline	ND<50	20	0.66	Nitrobenzene	ND<50	50	1.6
4-Chloro-3-methylphenol	ND<50	10	0.33	2-Nitrophenol	ND<50	50	1.6
2-Chloronaphthalene	ND<50	10	0.33	4-Nitrophenol	ND<50	10	0.33
2-Chlorophenol	ND<50	10	0.33	N-Nitrosodimethylamine	ND<50	10	0.33
4-Chlorophenyl phenyl ether	ND<50	10	0.33	N-Nitrosodiphenylamine	ND<50	10	0.33
Chrysene	ND<50	10	0.33	N-Nitrosodi-n-propylamine	ND<50	10	0.33
Dibenzo(a,h)anthracene	ND<50	10	0.33	Pentachlorophenol	ND<50	50	1.6
Dibenzofuran	ND<50	10	0.33	Phenanthrene	ND<50	10	0.33
Di-n-butyl phthalate	ND<50	10	0.33	Phenol	ND<50	10	0.33
1,2-Dichlorobenzene	ND<50	10	0.33	Pyrene	ND<50	10	0.33
1,3-Dichlorobenzene	ND<50	10	0.33	1,2,4-Trichlorobenzene	ND<50	10	0.33
1,4-Dichlorobenzene	ND<50	10	0.33	2,4,5-Trichlorophenol	ND<50	10	0.33
3,3-Dichlorobenzidine	ND<50	20	0.66	2,4,6-Trichlorophenol	ND<50	10	0.33
2,4-Dichlorophenol	ND<50	10	0.33	Comments:			
Diethyl phthalate	ND<50	10	0.33	<b>Surrogate Recoveries (%)</b>			
2,4-Dimethylphenol	ND<50	10	0.33	2-Fluorophenol			---
Dimethyl phthalate	ND<50	10	0.33	Phenol-d5			---
4,6-Dinitro-2-methylphenol	ND<50	50	1.6	Nitrobenzene-d5			39
2,4-Dinitrophenol	ND<50	50	1.6	2-Fluorobiphenyl			48
2,4-Dinitrotoluene	ND<50	10	0.33	2,4,6-Tribromophenol			44
2,6-Dinitrotoluene	ND<50	10	0.33	p-Terphenyl-d14			49

\*water samples are reported in ug/L, soil and sludge samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / SPLP extracts in ug/L

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range

h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) sample diluted due to high organic content

DHS Certification No. 1644

Edward Hamilton, Lab Director



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Cambria Environmental Technology 1144 65 <sup>th</sup> Street, Suite C Oakland, CA 94608	Client Project ID: #425-1580; Connell	Date Sampled: 03/01-03/02/01
	Client Contact: Bob Schultz	Date Received: 03/06/01
	Client P.O:	Date Extracted: 03/07/01
		Date Analyzed: 03/07-03/09/01

**Semi-Volatile Organics By GC/MS**

EPA method 625 and 3510 or 8270 and 3550

Lab ID	61639
Client ID	MW-7
Matrix	W

Compound	Concentration*	Reporting Limit		Compound	Concentration	Reporting Limit	
		W	S			W	S
Acenaphthene	ND	10	0.33	Di-n-octyl phthalate	ND	10	0.33
Acenaphthylene	ND	10	0.33	1,2-Diphenylhydrazine	ND	10	0.33
Anthracene	ND	10	0.33	Fluoranthene	ND	10	0.33
Benzidine	ND	50	1.6	Fluorene	ND	10	0.33
Benzoic Acid	ND	50	1.6	Hexachlorobenzene	ND	10	0.33
Benzo(a)anthracene	ND	10	0.33	Hexachlorobutadiene	ND	10	0.33
Benzo(b)fluoranthene	ND	10	0.33	Hexachlorocyclopentadiene	ND	50	1.6
Benzo(k)fluoranthene	ND	10	0.33	Hexachloroethane	ND	10	0.33
Benzo(g,h,i)perylene	ND	10	0.33	Indeno(1,2,3-cd)pyrene	ND	10	0.33
Benzo(a)pyrene	ND	10	0.33	Isophorone	ND	10	0.33
Benzyl alcohol	ND	20	0.66	2-Methylnaphthalene	ND	10	0.33
Bis(2-chloroethoxy)methane	ND	10	0.33	2-Methylphenol (o-Cresol)	ND	10	0.33
Bis(2-chloroethyl) ether	ND	10	0.33	3 &/or 4-Methylphenol (m &/or p-Cresol)	ND	10	0.33
Bis(2-chloroisopropyl)ether	ND	10	0.33	Naphthalene	ND	10	0.33
Bis(2-ethylhexyl) phthalate	ND	10	0.33	2-Nitroaniline	ND	50	1.6
4-Bromophenyl phenyl ether	ND	10	0.33	3-Nitroaniline	ND	50	1.6
Butylbenzyl phthalate	ND	10	0.33	4-Nitroaniline	ND	50	1.6
4-Chloroaniline	ND	20	0.66	Nitrobenzene	ND	50	1.6
4-Chloro-3-methylphenol	ND	10	0.33	2-Nitrophenol	ND	50	1.6
2-Chloronaphthalene	ND	10	0.33	4-Nitrophenol	ND	10	0.33
2-Chlorophenol	ND	10	0.33	N-Nitrosodimethylamine	ND	10	0.33
4-Chlorophenyl phenyl ether	ND	10	0.33	N-Nitrosodiphenylamine	ND	10	0.33
Chrysene	ND	10	0.33	N-Nitrosodi-n-propylamine	ND	10	0.33
Dibenzo(a,h)anthracene	ND	10	0.33	Pentachlorophenol	ND	50	1.6
Dibenzofuran	ND	10	0.33	Phenanthrene	ND	10	0.33
Di-n-butyl phthalate	ND	10	0.33	Phenol	ND	10	0.33
1,2-Dichlorobenzene	ND	10	0.33	Pyrene	ND	10	0.33
1,3-Dichlorobenzene	ND	10	0.33	1,2,4-Trichlorobenzene	ND	10	0.33
1,4-Dichlorobenzene	ND	10	0.33	2,4,5-Trichlorophenol	ND	10	0.33
3,3-Dichlorobenzidine	ND	20	0.66	2,4,6-Trichlorophenol	ND	10	0.33
2,4-Dichlorophenol	ND	10	0.33	Comments:			
Diethyl phthalate	ND	10	0.33	<b>Surrogate Recoveries (%)</b>			
2,4-Dimethylphenol	ND	10	0.33	2-Fluorophenol		43	
Dimethyl phthalate	ND	10	0.33	Phenol-d5		50	
4,6-Dinitro-2-methylphenol	ND	50	1.6	Nitrobenzene-d5		49	
2,4-Dinitrophenol	ND	50	1.6	2-Fluorobiphenyl		54	
2,4-Dinitrotoluene	ND	10	0.33	2,4,6-Tribromophenol		51	
2,6-Dinitrotoluene	ND	10	0.33	p-Terphenyl-d14		57	


\*water samples are reported in ug/L, soil and sludge samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / SPL extracts in ug/L

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range

h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) sample diluted due to high organic content

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	Client P.O:	Date Analyzed: 03/07-03/09/01
		Date Extracted: 03/07/01

**Semi-Volatile Organics By GC/MS**

EPA method 625 and 3510 or 8270 and 3550

Lab ID	61640
Client ID	MW-8
Matrix	W

Compound	Concentration*	Reporting Limit		Compound	Concentration	Reporting Limit	
		W	S			W	S
Acenaphthene	ND	10	0.33	Di-n-octyl phthalate	ND	10	0.33
Acenaphthylene	ND	10	0.33	1,2-Diphenylhydrazine	ND	10	0.33
Anthracene	ND	10	0.33	Fluoranthene	ND	10	0.33
Benzidine	ND	50	1.6	Fluorene	ND	10	0.33
Benzoic Acid	ND	50	1.6	Hexachlorobenzene	ND	10	0.33
Benzo(a)anthracene	ND	10	0.33	Hexachlorobutadiene	ND	10	0.33
Benzo(b)fluoranthene	ND	10	0.33	Hexachlorocyclopentadiene	ND	50	1.6
Benzo(k)fluoranthene	ND	10	0.33	Hexachloroethane	ND	10	0.33
Benzo(g,h,i)perylene	ND	10	0.33	Indeno(1,2,3-cd)pyrene	ND	10	0.33
Benzo(a)pyrene	ND	10	0.33	Isophorone	ND	10	0.33
Benzyl alcohol	ND	20	0.66	2-Methylnaphthalene	ND	10	0.33
Bis(2-chloroethoxy)methane	ND	10	0.33	2-Methylphenol (o-Cresol)	ND	10	0.33
Bis(2-chloroethyl) ether	ND	10	0.33	3 &/or 4-Methylphenol (m &/or p-Cresol)	ND	10	0.33
Bis(2-chloroisopropyl)ether	ND	10	0.33	Naphthalene	ND	10	0.33
Bis(2-ethylhexyl) phthalate	ND	10	0.33	2-Nitroaniline	ND	50	1.6
4-Bromophenyl phenyl ether	ND	10	0.33	3-Nitroaniline	ND	50	1.6
Butylbenzyl phthalate	ND	10	0.33	4-Nitroaniline	ND	50	1.6
4-Chloroaniline	ND	20	0.66	Nitrobenzene	ND	50	1.6
4-Chloro-3-methylphenol	ND	10	0.33	2-Nitrophenol	ND	50	1.6
2-Chloronaphthalene	ND	10	0.33	4-Nitrophenol	ND	10	0.33
2-Chlorophenol	ND	10	0.33	N-Nitrosodimethylamine	ND	10	0.33
4-Chlorophenyl phenyl ether	ND	10	0.33	N-Nitrosodiphenylamine	ND	10	0.33
Chrysene	ND	10	0.33	N-Nitrosodi-n-propylamine	ND	10	0.33
Dibenzo(a,h)anthracene	ND	10	0.33	Pentachlorophenol	ND	50	1.6
Dibenzofuran	ND	10	0.33	Phenanthrene	ND	10	0.33
Di-n-butyl phthalate	ND	10	0.33	Phenol	25	10	0.33
1,2-Dichlorobenzene	ND	10	0.33	Pyrene	ND	10	0.33
1,3-Dichlorobenzene	ND	10	0.33	1,2,4-Trichlorobenzene	ND	10	0.33
1,4-Dichlorobenzene	ND	10	0.33	2,4,5-Trichlorophenol	ND	10	0.33
3,3-Dichlorobenzidine	ND	20	0.66	2,4,6-Trichlorophenol	ND	10	0.33
2,4-Dichlorophenol	ND	10	0.33	Comments:			
Diethyl phthalate	ND	10	0.33	<b>Surrogate Recoveries (%)</b>			
2,4-Dimethylphenol	ND	10	0.33	2-Fluorophenol		53	
Dimethyl phthalate	ND	10	0.33	Phenol-d5		53	
4,6-Dinitro-2-methylphenol	ND	50	1.6	Nitrobenzene-d5		57	
2,4-Dinitrophenol	ND	50	1.6	2-Fluorobiphenyl		63	
2,4-Dinitrotoluene	ND	10	0.33	2,4,6-Tribromophenol		56	
2,6-Dinitrotoluene	ND	10	0.33	p-Terphenyl-d14		60	

\*water samples are reported in ug/L, soil and sludge samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / SPLP extracts in ug/L

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

\* surrogate diluted out of range

h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) sample diluted due to high organic content

DHS Certification No. 1644

Edward Hamilton, Lab Director



**McCAMPBELL ANALYTICAL INC.**

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 Telephone : 925-798-1620 Fax : 925-798-1622  
<http://www.mccampbell.com> E-mail: main@mccampbell.com

Cambria Environmental Technology 1144 65 <sup>th</sup> Street, Suite C Oakland, CA 94608	Client Project ID: #425-1580; Connell	Date Sampled: 03/01-03/02/01
	Client Contact: Bob Schultz	Date Received: 03/06/01
	Client P.O:	Date Analyzed: 03/07-03/09/01
		Date Extracted: 03/07/01

**Semi-Volatile Organics By GC/MS**

EPA method 625 and 3510 or 8270 and 3550

Lab ID	61641
Client ID	MW-9
Matrix	W

Compound	Concentration*	Reporting Limit		Compound	Concentration	Reporting Limit	
		W	S			W	S
Acenaphthene	ND	10	0.33	Di-n-octyl phthalate	ND	10	0.33
Acenaphthylene	ND	10	0.33	1,2-Diphenylhydrazine	ND	10	0.33
Anthracene	ND	10	0.33	Fluoranthene	ND	10	0.33
Benidine	ND	50	1.6	Fluorene	ND	10	0.33
Benzoic Acid	ND	50	1.6	Hexachlorobenzene	ND	10	0.33
Benzo(a)anthracene	ND	10	0.33	Hexachlorobutadiene	ND	10	0.33
Benzo(b)fluoranthene	ND	10	0.33	Hexachlorocyclopentadiene	ND	50	1.6
Benzo(k)fluoranthene	ND	10	0.33	Hexachloroethane	ND	10	0.33
Benzo(g,h,i)perylene	ND	10	0.33	Indeno(1,2,3-cd)pyrene	ND	10	0.33
Benzo(a)pyrene	ND	10	0.33	Isophorone	ND	10	0.33
Benzyl alcohol	ND	20	0.66	2-Methylnaphthalene	ND	10	0.33
Bis(2-chloroethoxy)methane	ND	10	0.33	2-Methylphenol (o-Cresol)	ND	10	0.33
Bis(2-chloroethyl) ether	ND	10	0.33	3 &/or 4-Methylphenol (m &/or p-Cresol)	ND	10	0.33
Bis(2-chloroisopropyl)ether	ND	10	0.33	Naphthalene	ND	10	0.33
Bis(2-ethylhexyl) phthalate	ND	10	0.33	2-Nitroaniline	ND	50	1.6
4-Bromophenyl phenyl ether	ND	10	0.33	3-Nitroaniline	ND	50	1.6
Butylbenzyl phthalate	ND	10	0.33	4-Nitroaniline	ND	50	1.6
4-Chloroaniline	ND	20	0.66	Nitrobenzene	ND	50	1.6
4-Chloro-3-methylphenol	ND	10	0.33	2-Nitrophenol	ND	50	1.6
2-Chloronaphthalene	ND	10	0.33	4-Nitrophenol	ND	10	0.33
2-Chlorophenol	ND	10	0.33	N-Nitrosodimethylamine	ND	10	0.33
4-Chlorophenyl phenyl ether	ND	10	0.33	N-Nitrosodiphenylamine	ND	10	0.33
Chrysene	ND	10	0.33	N-Nitrosodi-n-propylamine	ND	10	0.33
Dibenzo(a,h)anthracene	ND	10	0.33	Pentachlorophenol	ND	50	1.6
Dibenzofuran	ND	10	0.33	Phenanthrene	ND	10	0.33
Di-n-butyl phthalate	ND	10	0.33	Phenol	ND	10	0.33
1,2-Dichlorobenzene	ND	10	0.33	Pyrene	ND	10	0.33
1,3-Dichlorobenzene	ND	10	0.33	1,2,4-Trichlorobenzene	ND	10	0.33
1,4-Dichlorobenzene	ND	10	0.33	2,4,5-Trichlorophenol	ND	10	0.33
3,3-Dichlorobenzidine	ND	20	0.66	2,4,6-Trichlorophenol	ND	10	0.33
2,4-Dichlorophenol	ND	10	0.33	Comments:			
Diethyl phthalate	ND	10	0.33	<b>Surrogate Recoveries (%)</b>			
2,4-Dimethylphenol	ND	10	0.33	2-Fluorophenol		53	
Dimethyl phthalate	ND	10	0.33	Phenol-d5		51	
4,6-Dinitro-2-methylphenol	ND	50	1.6	Nitrobenzene-d5		57	
2,4-Dinitrophenol	ND	50	1.6	2-Fluorobiphenyl		70	
2,4-Dinitrotoluene	ND	10	0.33	2,4,6-Tribromophenol		68	
2,6-Dinitrotoluene	ND	10	0.33	p-Terphenyl-d14		69	

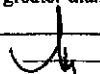
\*water samples are reported in ug/L, soil and sludge samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / SPL extracts in ug/L

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

\* surrogate diluted out of range

h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) sample diluted due to high organic content

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Cambria Environmental Technology 1144 65 <sup>th</sup> Street, Suite C Oakland, CA 94608	Client Project ID: #425-1580; Connell	Date Sampled: 03/01-03/02/01
	Client Contact: Bob Schultz	Date Received: 03/06/01
	Client P.O:	Date Extracted: 03/07/01
		Date Analyzed: 03/07-03/09/01

**Semi-Volatile Organics By GC/MS**

EPA method 625 and 3510 or 8270 and 3550

Lab ID		61642					
Client ID		MW-13					
Matrix		W					
Compound	Concentration*	Reporting Limit		Compound	Concentration	Reporting Limit	
		W	S			W	S
Acenaphthene	ND	10	0.33	Di-n-octyl phthalate	ND	10	0.33
Acenaphthylene	ND	10	0.33	1,2-Diphenylhydrazine	ND	10	0.33
Anthracene	ND	10	0.33	Fluoranthene	ND	10	0.33
Benzidine	ND	50	1.6	Fluorene	ND	10	0.33
Benzoic Acid	ND	50	1.6	Hexachlorobenzene	ND	10	0.33
Benzo(a)anthracene	ND	10	0.33	Hexachlorobutadiene	ND	10	0.33
Benzo(b)fluoranthene	ND	10	0.33	Hexachlorocyclopentadiene	ND	50	1.6
Benzo(k)fluoranthene	ND	10	0.33	Hexachloroethane	ND	10	0.33
Benzo(g,h,i)perylene	ND	10	0.33	Indeno(1,2,3-cd)pyrene	ND	10	0.33
Benzo(a)pyrene	ND	10	0.33	Isophorone	ND	10	0.33
Benzyl alcohol	ND	20	0.66	2-Methylnaphthalene	ND	10	0.33
Bis(2-chloroethoxy)methane	ND	10	0.33	2-Methylphenol (o-Cresol)	ND	10	0.33
Bis(2-chloroethyl) ether	ND	10	0.33	3 &/or 4-Methylphenol (m &/or p-Cresol)	ND	10	0.33
Bis(2-chloroisopropyl)ether	ND	10	0.33	Naphthalene	ND	10	0.33
Bis(2-ethylhexyl) phthalate	ND	10	0.33	2-Nitroaniline	ND	50	1.6
4-Bromophenyl phenyl ether	ND	10	0.33	3-Nitroaniline	ND	50	1.6
Butylbenzyl phthalate	ND	10	0.33	4-Nitroaniline	ND	50	1.6
4-Chloroaniline	ND	20	0.66	Nitrobenzene	ND	50	1.6
4-Chloro-3-methylphenol	ND	10	0.33	2-Nitrophenol	ND	50	1.6
2-Chloronaphthalene	ND	10	0.33	4-Nitrophenol	ND	10	0.33
2-Chlorophenol	ND	10	0.33	N-Nitrosodimethylamine	ND	10	0.33
4-Chlorophenyl phenyl ether	ND	10	0.33	N-Nitrosodiphenylamine	ND	10	0.33
Chrysene	ND	10	0.33	N-Nitrosodi-n-propylamine	ND	10	0.33
Dibenzo(a,h)anthracene	ND	10	0.33	Pentachlorophenol	ND	50	1.6
Dibenzofuran	ND	10	0.33	Phenanthrene	ND	10	0.33
Di-n-butyl phthalate	ND	10	0.33	Phenol	ND	10	0.33
1,2-Dichlorobenzene	ND	10	0.33	Pyrene	ND	10	0.33
1,3-Dichlorobenzene	ND	10	0.33	1,2,4-Trichlorobenzene	ND	10	0.33
1,4-Dichlorobenzene	ND	10	0.33	2,4,5-Trichlorophenol	ND	10	0.33
3,3-Dichlorobenzidine	ND	20	0.66	2,4,6-Trichlorophenol	ND	10	0.33
2,4-Dichlorophenol	ND	10	0.33	Comments:			
Diethyl phthalate	ND	10	0.33	<b>Surrogate Recoveries (%)</b>			
2,4-Dimethylphenol	ND	10	0.33	2-Fluorophenol		47	
Dimethyl phthalate	ND	10	0.33	Phenol-d5		47	
4,6-Dinitro-2-methylphenol	ND	50	1.6	Nitrobenzene-d5		51	
2,4-Dinitrophenol	ND	50	1.6	2-Fluorobiphenyl		56	
2,4-Dinitrotoluene	ND	10	0.33	2,4,6-Tribromophenol		57	
2,6-Dinitrotoluene	ND	10	0.33	p-Terphenyl-d14		57	


\*water samples are reported in ug/L, soil and sludge samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / SPLP extracts in ug/L

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range

h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) sample diluted due to high organic content

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Cambria Environmental Technology 1144 65 <sup>th</sup> Street, Suite C Oakland, CA 94608	Client Project ID: #425-1580; Connell	Date Sampled: 03/01-03/02/01
	Client Contact: Bob Schultz	Date Received: 03/06/01
	Client P.O:	Date Analyzed: 03/07/01
		Date Extracted: 03/06/01

**LUFT Metals\***

EPA analytical methods 6010/200.7, 239.2<sup>+</sup>

Lab ID	Client ID	Matrix	Extraction <sup>o</sup>	Cadmium	Chromium	Lead	Nickel	Zinc	% Recovery Surrogate
61641	MW-9	W	TTLC	ND	0.047	ND	0.072	ND	109
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	S	TTLC	0.5 mg/kg	0.5	3.0	2.0	1.0		
	W	TTLC	0.005 mg/L	0.02	0.005	0.05	0.05		
	---	STLC, TCLP	0.01 mg/L	0.05	0.2	0.05	0.05		

\* water samples are reported in mg/L, soil and sludge samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / SPLP extracts in mg/L  
<sup>+</sup> Lead is analysed using EPA method 6010 (ICP)for soils, STLC & TCLP extracts and method 239.2 (AA Furnace) for water samples  
<sup>o</sup> EPA extraction methods 1311(TCLP), 3010/3020(water,TTLC), 3040(organic matrices,TTLC), 3050(solids,TTLC); STLC - CA Title 22  
<sup>@</sup> DISTLC extractions are performed using STLC methodology except that deionized water is substituted for citric acid buffer as the extraction fluid. DISTLC results are not applicable to STLC regulatory limits.  
<sup>\*</sup> surrogate diluted out of range; N/A means surrogate not applicable to this analysis  
<sup>\*</sup> reporting limit raised due to matrix interference  
i) liquid sample that contains greater than ~2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations.



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## QC REPORT

Date: 03/07/01 Matrix: Water

Extraction: TTLC

Compound	Concentration: ug/L			%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	

SampleID: 22601

Instrument: GC-3

Surrogate1	0.000	103.0	99.0	100.00	103	99	4.0
Xylenes	0.000	29.0	27.8	30.00	97	93	4.2
Ethyl Benzene	0.000	9.6	9.3	10.00	96	93	3.2
Toluene	0.000	10.0	9.6	10.00	100	96	4.1
Benzene	0.000	10.2	9.8	10.00	102	98	4.0
MTBE	0.000	8.7	9.4	10.00	87	94	7.7
GAS	0.000	72.1	70.1	100.00	72	70	2.8

SampleID: 22601

Instrument: GC-2 A

Surrogate1	0.000	107.0	106.0	100.00	107	106	0.9
TPH (diesel)	0.000	8425.0	8225.0	7500.00	112	110	2.4

$$\% \text{ Recovery} = \frac{(MS - \text{Sample})}{\text{Amount Spiked}} \cdot 100$$

$$RPD = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2 \cdot 100$$

RPD means Relative Percent Deviation



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## QC REPORT

### SVOCs (EPA 8270/625/525)

Date: 03/07/01-03/08/01 Matrix: Water

Extraction: N/A

Compound	Concentration: ug/L			%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	

SampleID: 30701

Instrument: GC-8

Surrogate1	0.000	680.0	650.0	1000.00	68	65	4.5
Pyrene	0.000	570.0	550.0	1000.00	57	55	3.6
Pentachlorophenol	0.000	1430.0	1290.0	2000.00	72	65	10.3
2,4-Dinitrotoluene	0.000	450.0	440.0	1000.00	45	44	2.2
4-Nitrophenol	0.000	1130.0	1150.0	2000.00	57	58	1.8
Acenaphtene	0.000	580.0	550.0	1000.00	58	55	5.3
4-Chloro-3-metylphenol	0.000	1130.0	1050.0	2000.00	57	53	7.3
1,2,4-trichlorobenzene	0.000	510.0	490.0	1000.00	51	49	4.0
N-nitroso-di-n-propyl	0.000	510.0	510.0	1000.00	51	51	0.0
1,4-Dichlorobenzene	0.000	530.0	510.0	1000.00	53	51	3.8
2-Chlorophenol	0.000	1080.0	1030.0	2000.00	54	52	4.7
Phenol	0.000	1020.0	990.0	2000.00	51	50	3.0

$$\% \text{ Recovery} = \frac{(MS - \text{Sample})}{\text{Amount Spiked}} \cdot 100$$

$$RPD = \frac{(MS - MSD)}{(MS + MSD)} \cdot 100$$

RPD means Relative Percent Deviation



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## QC REPORT

### LUFT

Date: 03/06/01-03/07/01 Matrix: Water

Extraction: TTLC

Compound	Concentration: mg/L				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	
SampleID: 30601				Instrument: ICP-1   AA			
Surrogate1	0.000	98.0	95.7	100.00	98	96	2.4
Copper	0.000	5.3	5.1	5.00	106	102	3.8
Zinc	0.000	5.4	5.3	5.00	108	106	1.9
Lead	0.000	8.0	8.2	5.00	160	164	2.5
Nickel	0.000	5.4	5.3	5.00	108	106	1.9
Chromium	0.000	5.7	5.7	5.00	114	114	0.0
Cadmium	0.000	6.2	6.0	5.00	124	120	3.3

$$\% \text{ Recovery} = \frac{(MS - \text{Sample})}{\text{Amount Spiked}} \cdot 100$$

$$RPD = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2 \cdot 100$$

RPD means Relative Percent Deviation

24704 20 321

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PACIFIC, CA 94553

Telephone: (925) 798-1620

Fax: (925) 798-1622

Report To: Bob Schultz Bill To: Cambria Env.

Company: Cambria Environmental Technology

1144 65<sup>th</sup> Street, Suite C

Oakland, CA 94608

Tele: (510) 420-0700

Fax: (510) 420-9170

Project #: 425-1580

Project Name: Connell

Project Location: 3093 Broadway

Oakland, Ca

Sampler Signature: S. Hull

CHAIN OF CUSTODY RECORD

TURN AROUND TIME

RUSH  24 HOUR  48 HOUR  5 DAY

Analysis Request

Analysis Request	Other	Comments
BTEX & TPH as Gas (602/8020 - 3015) MTBE		
TPH as Diesel (8015) + MO Per B.S. 3/7		
Total Petroleum Oil & Grease (\$520 E3,F7,B&F)		
Total Petroleum Hydrocarbons (418.1)		
EPA 601 / 8010		
BTEX ONLY (EPA 602 / 8020)		
EPA 608 / 3080		
EPA 608 / 3080 PCB's ONLY		
EPA 624 / 8240 / 8260		
EPA 625 / 8270 Per B.S. 3/7		
PAH's / PNA's by EPA 625 / 8270 / 8310		
CAM-17 Metals		
LUFT 5 Metals		
Lead (7240/7421/239,2/6010)		
RCI		
Luft 5 metals - Pb, Cr, Cd, Zn, Ni		

SAMPLE ID	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED					
		Date	Time			Water	Soil	Air	Sludge	Other	Ice	HCl	HNO <sub>3</sub>	Other		
MW-4		3-1-01	13:24	2	Ambi	X						X				
MW-7		3-2-01	6:12	2	Ambi	X						X				
MW-8		3-2-01	7:05	2	Ambi	X						X				
MW-9		3-1-01	12:33	3	Ambi 2012	X						X				
MW-13		3-2-01	5:47	2	Ambi	X						X				

61638 (+)

61639 (+)

61640 (+)

61641 (+)

61642 (+)

Relinquished By: S. Hull	Date: 3/4/01	Time: 1120	Received By: STEVE DUNG 234
Relinquished By: Steve Dong 234	Date: 3/6/01	Time: 1705	Received By: [Signature] V (MAD)
Relinquished By:	Date:	Time:	Received By:

Remarks: ICE?  PRESERVATION   
 GOOD CONDITION  APPROPRIATE CONTAINERS   
 HEAD SPACE ABSENT

2







## WELL DEPTH MEASUREMENTS

Well ID	Time	Product Depth	Water Depth	Product Thickness	Well Depth	Comments
MW-1	12:05	24.19	24.22			SPI-1
MW-4	11:40		19.68		24.00	
MW-6	11:55	not measurable	23.97			Sheen
MW-7	11:37		17.09		30.00	
MW-8	11:35		26.41		39.40	
MW-9	11:43		20.45		30.50	
MW-13	11:30		23.93		39.45	
MW-14	12:00	not measurable	23.97			SPI Sheen odor
MW-15	11:48	not measurable	23.99		37.00	Sheen

Project Name: ConnellProject Number: 425-1580Measured By: L. HillDate: 3-01-01

WELL SAMPLING FORM

Project Name: <b>Connell</b>	Cambria Mgr: <b>RWS</b>	Well ID: <b>MW-4</b>
Project Number: <b>425-1580</b>	Date: <b>3-09/01</b>	Well Yield: -----
Site Address: <b>3093 Broadway Oakland, California</b>	Sampling Method:  <b>Disposable bailer</b>	Well Diameter: <b>"pvc 2</b>
		Technician(s): <b>SS</b>
Initial Depth to Water: <b>19.68</b>	Total Well Depth: <b>24.00</b>	Water Column Height: <b>4.32</b>
Volume/ft: <b>0.16</b>	1 Casing Volume: <b>0.69</b>	3 Casing Volumes: <b>2.07</b>
Purging Device: <b>disposable bailer</b>	Did Well Dewater?: <b>no</b>	Total Gallons Purged: <b>2</b>
Start Purge Time: <b>13:15</b>	Stop Purge Time: <b>13:18</b>	Total Time: <b>3mins</b>

1 Casing Volume = Water column height x Volume/ ft.

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.65
6"	1.47

Time	Casing Volume	Temp. °C	pH	Cond. µS	Comments
<b>13:16</b>	<b>1</b>	<b>16.4</b>	<b>7.87</b>	<b>871</b>	
<b>13:17</b>	<b>1.5</b>	<b>16.4</b>	<b>7.39</b>	<b>759</b>	
<b>13:19</b>	<b>2</b>	<b>16.5</b>	<b>7.36</b>	<b>716</b>	
					<b>DO = 0.13 mg/l</b>

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
<b>MW-4</b>	<b>3-09-01</b>	<b>13:24</b>	<b>6 voa's -</b>	<b>HCL</b>	<b>TPHg, BTEX, MTBE SVOCs HVOCs</b>	<b>8015M/8020, confirm MTBE 8260, SVOCs by 8270, 8010 list</b>
			<b>2- 1L ambers</b>	<b>none</b>	<b>TPHd/TPHmo</b>	<b>8015 multi- range</b>
			<b>1- 0.5L plastic</b>	<b>none</b>	<b>Luft 5 Metals - Pb, Cr, Cd, Zn, Ni</b>	

WELL SAMPLING FORM

Project Name: <b>Connell</b>	Cambria Mgr: <b>RWS</b>	Well ID: <b>MW-7</b>
Project Number: <b>425-1580</b>	Date: <b>3-09-01</b>	Well Yield: -----
Site Address: <b>3093 Broadway Oakland, California</b>	Sampling Method: <b>Disposable bailer</b>	Well Diameter: <b>" pvc 2</b>
		Technician(s): <b>SG</b>
Initial Depth to Water: <b>17.09</b>	Total Well Depth: <b>30.00</b>	Water Column Height: <b>12.91</b>
Volume/ft: <b>0.16</b>	1 Casing Volume: <b>2.06</b>	3 Casing Volumes: <b>6.19</b>
Purging Device: <b>disposable bailer</b>	Did Well Dewater?: <b>no</b>	Total Gallons Purged: <b>6</b>
Start Purge Time: <b>6:00</b>	Stop Purge Time: <b>6:06</b>	Total Time: <b>6 mins</b>

1 Casing Volume = Water column height x Volume/ft.

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.65
6"	1.47

Time	Casing Volume	Temp. °C	pH	Cond. µS	Comments
<b>6:02</b>	<b>2</b>	<b>14.7</b>	<b>7.05</b>	<b>1824</b>	
<b>6:04</b>	<b>4</b>	<b>14.4</b>	<b>7.31</b>	<b>1579</b>	
<b>6:07</b>	<b>6</b>	<b>14.1</b>	<b>7.24</b>	<b>1540</b>	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
<b>MW-7</b>	<b>3-09-01</b>	<b>6:12</b>	<b>6 vov's</b>	<b>HCL</b>	<b>TPHg, BTEX, MTBE SVOCs HVOCs</b>	<b>8015M/8020, confirm MTBE 8260, SVOCs by 8270, 8010 list</b>
			<b>2- 1L ambers</b>	<b>none</b>	<b>TPHd/TPHmo</b>	<b>8015 multi- range</b>
			<b>1- 0.5L plastic</b>	<b>none</b>	<b>Luft 5 Metals - Pb, Cr, Cd, Zn, Ni</b>	

WELL SAMPLING FORM

Project Name: <b>Connell</b>	Cambria Mgr: <b>RWS</b>	Well ID: <b>MW-8</b>
Project Number: <b>425-1580</b>	Date: <b>3-09-01</b>	Well Yield: -----
Site Address: <b>3093 Broadway Oakland, California</b>	Sampling Method:  <b>Disposable bailer</b>	Well Diameter: <b>" pvc 6"</b>
		Technician(s): <b>SG</b>
Initial Depth to Water: <b>26.41</b>	Total Well Depth: <b>39.40</b>	Water Column Height: <b>12.99</b>
Volume/ft: <b>1.47</b>	1 Casing Volume: <b>19.09</b>	3 Casing Volumes: <b>57.28</b>
Purging Device: <b>whole pump</b>	Did Well Dewater?: <b>no</b>	Total Gallons Purged: <b>58</b>
Start Purge Time: <b>6:25</b>	Stop Purge Time: <b>7:00</b>	Total Time: <b>35mins</b>

1 Casing Volume = Water column height x Volume/ ft.

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.65
6"	1.47

Time	Casing Volume	Temp. °C	pH	Cond. µS	Comments
<b>6:40</b>	<b>20</b>	<b>14.1</b>	<b>7.90</b>	<b>1159</b>	
<b>6:50</b>	<b>40</b>	<b>14.3</b>	<b>7.61</b>	<b>1168</b>	
<b>7:00</b>	<b>58</b>	<b>14.6</b>	<b>7.77</b>	<b>1124</b>	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
<b>MW-8</b>	<b>3-09-01</b>	<b>7:05</b>	<b>6 voa's</b>	<b>HCL</b>	<b>TPHg, BTEX, MTBE SVOCs HVOCs</b>	<b>8015M/8020, confirm MTBE 8260, SVOCs by 8270, 8010 list</b>
			<b>2- 1L ambers</b>	<b>none</b>	<b>TPHd/TPHmo</b>	<b>8015 multi- range</b>
			<b>1- 0.5L plastic</b>	<b>none</b>	<b>Luft 5 Metals - Pb, Cr, Cd, Zn, Ni</b>	

WELL SAMPLING FORM

Project Name: <b>Connell</b>	Cambria Mgr: <b>RWS</b>	Well ID: <b>mw-9</b>
Project Number: <b>425-1580</b>	Date: <b>3-09-01</b>	Well Yield: -----
Site Address: <b>3093 Broadway Oakland, California</b>	Sampling Method:  <b>Disposable bailer</b>	Well Diameter: <b>"pvc 2</b>
		Technician(s): <b>SG</b>
Initial Depth to Water: <b>20.45</b>	Total Well Depth: <b>30.50</b>	Water Column Height: <b>10.05</b>
Volume/ft: <b>0.16</b>	1 Casing Volume: <b>1.60</b>	3 Casing Volumes: <b>4.80</b>
Purging Device: <b>disposable bailer</b>	Did Well Dewater?: <b>no</b>	Total Gallons Purged: <b>5</b>
Start Purge Time: <b>12:30</b>	Stop Purge Time: <b>12:33</b>	Total Time: <b>3 mins</b>

1 Casing Volume = Water column height x Volume/ft.

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.65
6"	1.47

Time	Casing Volume	Temp. °C	pH	Cond. µS	Comments
12:31	1.5	17.7	7.57	1402	
12:32	3	17.8	7.62	1571	
12:34	5	17.4	7.69	1584	
					DO = 0.3 mg/L

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
<b>mw-9</b>	<b>3-09-01</b>	<b>12:33</b>	<b>6 voa's ✓</b>	<b>HCL</b>	<b>TPHg, BTEX, MTBE SVOCs HVOCs</b>	<b>8015M/8020, confirm MTBE 8260, SVOCs by 8270, 8010 list</b>
			<b>2- 1L ambers ✓</b>	<b>none</b>	<b>TPHd/TPHmo</b>	<b>8015 multi- range</b>
			<b>1- 0.5L plastic ✓</b>	<b>none</b>	<b>Luft 5 Metals - Pb, Cr, Cd, Zn, Ni</b>	

## WELL SAMPLING FORM

Project Name: <b>Connell</b>	Cambria Mgr: <b>RWS</b>	Well ID: <b>MW-13</b>
Project Number: <b>425-1580</b>	Date: <b>3-01-01</b>	Well Yield: -----
Site Address: <b>3093 Broadway Oakland, California</b>	Sampling Method:	Well Diameter: <b>"pvc 2"</b>
	<b>Disposable bailer</b>	Technician(s): <b>SG</b>
Initial Depth to Water: <b>23.93</b>	Total Well Depth: <b>39.45</b>	Water Column Height: <b>15.52</b>
Volume/ft: <b>0.16</b>	1 Casing Volume: <b>2.48</b>	3 Casing Volumes: <b>7.44</b>
Purging Device: <b>disposable bailer</b>	Did Well Dewater?: <b>no</b>	Total Gallons Purged: <b>7.5</b>
Start Purge Time: <b>5:30</b>	Stop Purge Time: <b>5:41</b>	Total Time: <b>11 mins</b>

1 Casing Volume = Water column height x Volume/ ft.

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.65
6"	1.47

Time	Casing Volume	Temp. °C	pH	Cond. µS	Comments
<b>5:33</b>	<b>2.5</b>	<b>14.1</b>	<b>7.54</b>	<b>1217</b>	
<b>5:37</b>	<b>5</b>	<b>14.3</b>	<b>7.13</b>	<b>1522</b>	
<b>5:42</b>	<b>7.5</b>	<b>14.1</b>	<b>7.09</b>	<b>1587</b>	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
<b>MW-13</b>	<b>3-02-01</b>	<b>5:47</b>	<b>6 vov's</b>	<b>HCL</b>	<b>TPHg, BTEX, - MTBE SVOCs HVOCs</b>	<b>8015M/8020, confirm MTBE 8260, SVOCs by 8270, 8010 list</b>
			<b>2- 1L ambers</b>	<b>none</b>	<b>TPHd/TPHmo</b>	<b>8015 multi- range</b>
			<b>1- 0.5L plastic</b>	<b>none</b>	<b>Luft 5 Metals - Pb, Cr, Cd, Zn, Ni</b>	