Denis L. Brown

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Jerry Wickham
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Shell-branded Service Station
2120 Montana Street
Oakland, California
SAP Code 135675
Incident #98995740
ACHCSA Case #RO-0173

Dear Mr. Wickham:

The attached document is provided for your review and comment. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

If you have any questions or concerns, please call me at (707) 865-0251.

Sincerely,

Denis L. Brown
Project Manager

CAMBRIA

August 17, 2006

Mr. Jerry Wickham
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **Remediation System Expansion and Off-Site Investigation Status Report**
Shell-branded Service Station
2120 Montana Street
Oakland, California
SAP Code 135675
Incident #98995740
Cambria Project #248-0733-006
ACHCSA Case #RO-0173

Dear Mr. Wickham:

On behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell), Cambria Environmental Technology, Inc. (Cambria) prepared this *Remediation System Expansion and Off-Site Investigation Status Report* for the referenced site. Cambria's January 23, 2006 *Remedial Action and Site Investigation Work Plan* proposed expanding the existing groundwater extraction (GWE) system. The Alameda County Health Care Services Agency (ACHCSA) approved expansion of the GWE system in their February 3, 2006 letter to Shell. ACHCSA's May 2, 2006 e-mail extended the due date for this report to August 15, 2006, and ACHCSA's August 15, 2006 e-mail extended the due date further to August 22, 2006.

SITE DESCRIPTION

This Shell-branded service station is located at the northwest corner of the Montana Street and Fruitvale Avenue intersection in Oakland, California (Figure 1). Three gasoline underground storage tanks, six dispensers, and a kiosk are located at the site (Figure 2). Commercial properties lie to the north and east of the site, and residential properties lie to the west. Montana Street, a freeway on-ramp, and Highway 580 are located south of the site.

Cambria Environmental Technology, Inc.

5900 Hollis Street
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Emeryville, CA 94608
Tel (510) 420-0700
Fax (510) 420-9170

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GWE SYSTEM EXPANSION

GWE system expansion began on May 15, 2006 and was completed on May 30, 2006. The system is now configured to extract from wells EW-1, EW-2, and/or TBW-N. As-built drawings are presented as Appendix A. Construction permits were not required, and no changes were made to the existing utility connections. The following sections provide installation details.

Contractor: Sustainable Technology, Inc. of Alameda, California (Contractor's License #772329).

Piping Installation: The existing 2-inch- and 3-inch diameter schedule 40 PVC secondary-containment pipes that had been previously dedicated to well MW-1 were extended to well EW-1. The existing 2-inch and 3-inch diameter schedule 40 PVC secondary-containment pipes that had been previously installed for future use in well MW-4 were used to connect to well EW-2. Each 2-inch diameter pipe accommodates a ¾-inch diameter high density polyethylene (HDPE) hose and a ⅜-inch compressed-air hose. The 3-inch diameter pipes were installed for potential future vapor extraction.

Excavation: Following installation of GWE system piping, all trenches were backfilled with native soil and compacted. The trenches were resurfaced to match the existing surface. Approximately 9.3 tons of excess excavated soil was stockpiled on and covered with plastic sheeting. Soil analytical results from June 16, 2005 soil samples were used to profile the stockpile for disposal. Soil was transported by Manley and Sons Trucking, Inc. of Sacramento, California to Forward Landfill in Manteca, California for disposal on June 7, 2006. Soil disposal documentation is presented in Appendix B, and the stockpile sample certified laboratory report used for the soil disposal profile is presented in Appendix C.

Equipment Installation: All aboveground equipment is located in the remediation compound located north of the station kiosk (Appendix A). Groundwater is extracted from wells EW-1 and EW-2 using Clean Environment model AP3/BL submersible pneumatic pumps. Groundwater may be extracted from well TBW-N using an Ingersol Rand diaphragm pump located in the remediation compound. The pump intakes are set at approximately 1 foot above the bottom of each well. An Ingersol Rand 7.5 horse power rotary screw air compressor supplies compressed air to drive the groundwater pumps.

The extracted groundwater is pumped from the wells into an oil-water separator, followed by a storage tank. A Warrick liquid level switch in the storage tank shuts off the pumps when the tank is full to prevent overflow of the tank.

Extracted groundwater is pumped from the storage tank, using a transfer pump, through a series of two silt filters, a series of three 1,000-pound aqueous-phase carbon vessels, and discharged into the sanitary sewer under the authorization of an East Bay Municipal Utility District (EBMUD) wastewater discharge permit. The existing flow meters, pressure gauges, and sample ports will be

used to control and monitor system operation. An electrical control panel for the GWE system is located inside the remediation enclosure. A programmable logic controller within the control panel manages system operation according to system controls and alarms. A telephone autodialer will remotely notify Cambria of system shutdown events.

GWE START-UP

Cambria submitted the revised GWE system layout to EBMUD prior to extracting from the new wells, as required by the wastewater discharge permit. EBMUD required no additional sampling or startup procedures.

June 5, 2006: Cambia completed final inspection of the GWE system.

June 8, 2006: Cambria resumed GWE system operation and collected samples from before the first carbon vessel (influent), before and after the second carbon vessel (midfluent 1 and midfluent 2), and after the third carbon vessel (effluent). The samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg), benzene, ethylbenzene, toluene, and xylenes (BTEX), and methyl tertiary-butyl ether (MTBE) by EPA method 8260. Severn Trent Laboratories Inc. of Pleasanton, California analyzed the samples using permit-specified and/or EPA-approved methods. The laboratory results are in compliance with all permit-specified discharge limits. Operational data was recorded at various times to assess system performance. Tables 1 and 2 summarize GWE system analytical and operational data.

Cambria determined that the GWE system is unable to extract from wells EW-1 and EW-2 simultaneously in its current configuration. The combined influent flow rate exceeds the processing capacity of the oil-water separator and leads to a high-level shutdown alarm. Therefore, the system was set to extract groundwater from well EW-1 only.

June 22, 2006: The GWE system was off at arrival on June 22, 2006. Cambria restarted the GWE system and performed routine operations and maintenance activities.

June 23, 2006: Cambria conducted a site visit on June 23, 2006 to verify the system operational status. Cambria shut off well EW-1 and began extracting from well EW-2 only.

July 7, 2006: Cambria conducted routine operations and maintenance activities on July 7, 2006. Samples were collected from the influent, midfluent 1, midfluent 2, and effluent sample locations and analyzed for TPHg, BTEX, and MTBE by EPA method 8260. The laboratory results are in compliance with all permit-specified discharge limits. On July 7, 2006, a product sheen was detected in well MW-2. On August 2, 2006, 0.03 foot of separate phase hydrocarbons (SPH) was detected in well MW-2.

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Operational Status: Due to the history of periodic SPH at this site, the oil-water separator was a part of the previously existing GWE system. The GWE system expansion plans consisted of replacing well MW-1 (2 inch diameter) with well EW-1 (4 inch diameter) and adding well EW-2 (4 inch diameter). Well EW-2 is closer to the center of the plume at this point, and closer to well MW-2 which is located in Montana Street and is also where SPH were last observed during an SVE test in July 2004. Although product has not been detected in any of the pumping wells, Cambria will leave the oil-water separator in place as a precaution and continue to monitor for SPH. Extracting from well EW-2 appears to be providing significant water level drawdown in the other wells, as demonstrated by the following depth to water (DTW) measurements:

Date	DTW – EW-1	DTW – MW-4	DTW – MW-1
6/8/06	11.56'	12.64'	11.39'
7/7/06	17.09'	16.80'	16.23'
7/18/06	17.43'	17.93'	16.60'
8/2/06	17.76'	18.37'	16.91'

PLANNED ACTIVITIES

Operation and Maintenance Visits: Cambria will continue to conduct semi-monthly site visits to perform routine system maintenance, record meter readings, and measure well parameters. System samples will be collected from the influent, midfluent 1, midfluent 2, and effluent on a monthly basis. Permit compliance samples will be collected and analyzed as specified by the permit. The system data will be reviewed to evaluate system effectiveness and, if needed, modifications will be performed to optimize the system.

Reporting: System data will be provided with quarterly groundwater monitoring reports.

STATUS OF OFF-SITE INVESTIGATION

Cambria has not yet received a signed access agreement from the owners of the residential property located at 2110 Montana Street. Cambria will continue to pursue an access agreement on behalf of Shell, and will implement the work proposed in our January 23, 2006 *Remedial Action and Site Investigation Work Plan* once we obtain access to the property.

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CLOSING

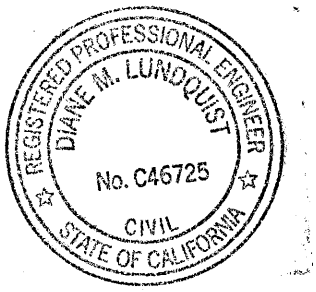
If you have any questions regarding this document, please call Ana Friel at (707) 268-3812.

Sincerely,

Cambria Environmental Technology, Inc.

for Cynthia Vasko
Project Engineer

Diane Lundquist, P.E.
Principal Engineer



Attachments:

Table 1.	Groundwater Extraction – System Analytical Data
Table 2.	Groundwater Extraction – Operation and Mass Removal Data
Figure 1.	Site Vicinity and Area Well Survey Map
Figure 2.	Groundwater Elevation Contour Map
Appendix A.	GWE System As-Built Drawings
Appendix B.	Soil Disposal Documentation
Appendix C.	Laboratory Analytical Report

cc: Denis Brown, Shell Oil Products US, 20945 S. Wilmington Ave., Carson, CA 90810

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05/30/06

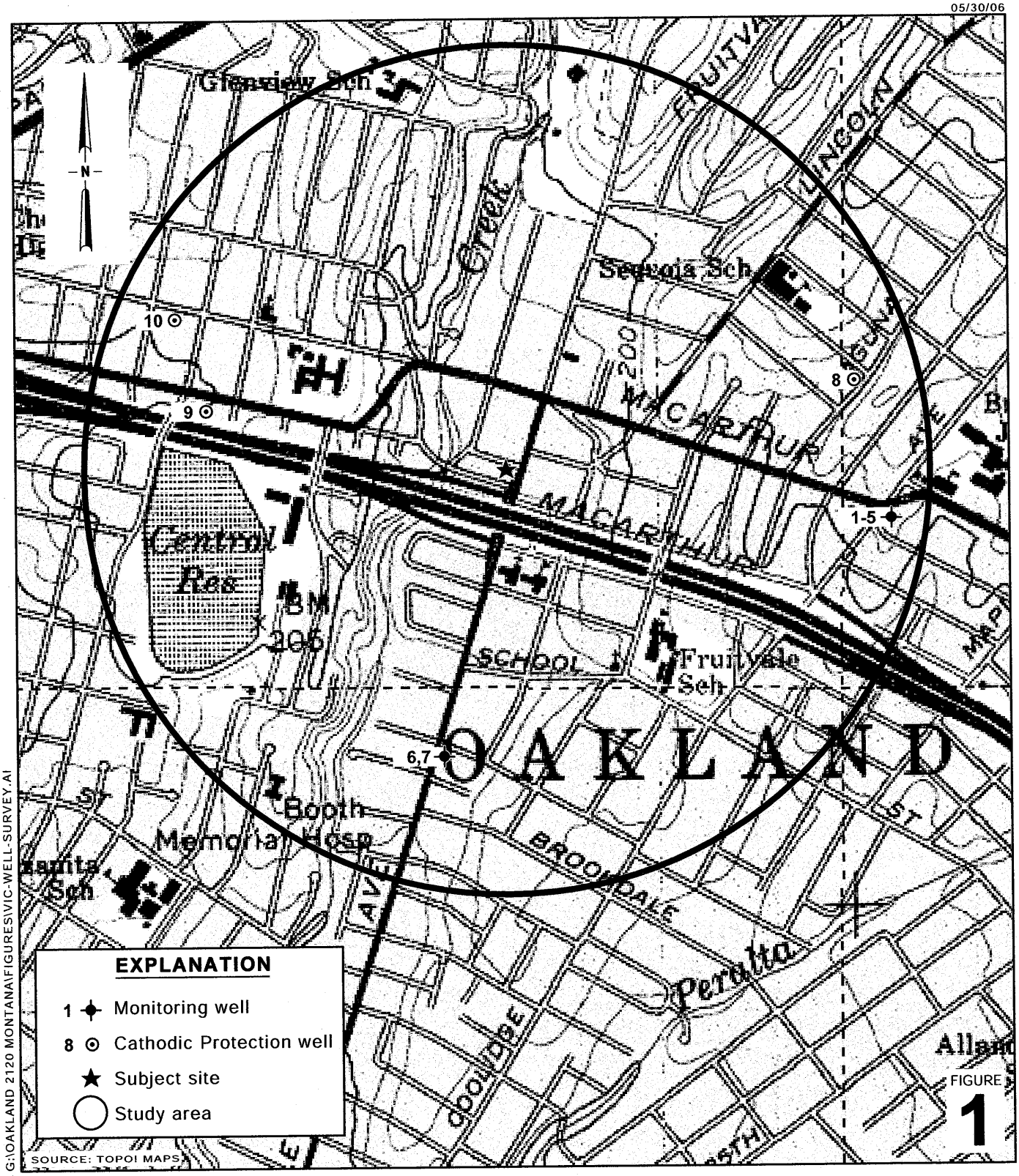

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FIGURE 1

Shell-branded Service Station
2120 Montana Street
Oakland, California
Incident No.98995740

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Site Vicinity and Area Well Survey Map
(1/2-Mile Radius)

07/17/06

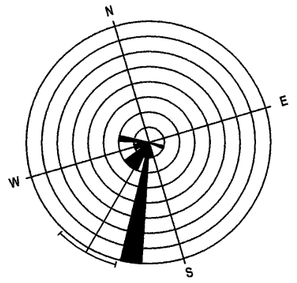
Groundwater Elevation Contour Map

May 12, 2006

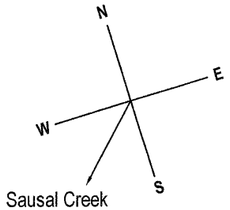
EXPLANATION

- SV-F — Proposed soil vapor probe location
- EW-1 — Extraction well location
- MW-1 — Well used for groundwater extraction
- MW-2 — Monitoring well location
- TBW-N — Tank backfill well location
- SB-1 — Cambria soil boring location (10/99)
- INF — GWE system sampling location
- Remediation piping (R)
- Proposed remediation piping (P-R)
- Discharge line (D)
- Electrical and overhead electric line (E, OE)
- Sanitary sewer (SS)
- Water line (W)
- Telecommunications line (T)
- ❶ Product dispenser number
- NS — Not surveyed
- Groundwater flow direction and gradient
- xx.xx — Groundwater elevation contour, in feet above mean sea level (msl), dashed where inferred
- Well designation
- ELEV — Groundwater elevation, in feet above msl
- Benzene / MTBE — Benzene and MTBE concentrations are in parts per billion and are analyzed by EPA Method 8260.

Notes:
ND = Below laboratory detection limit

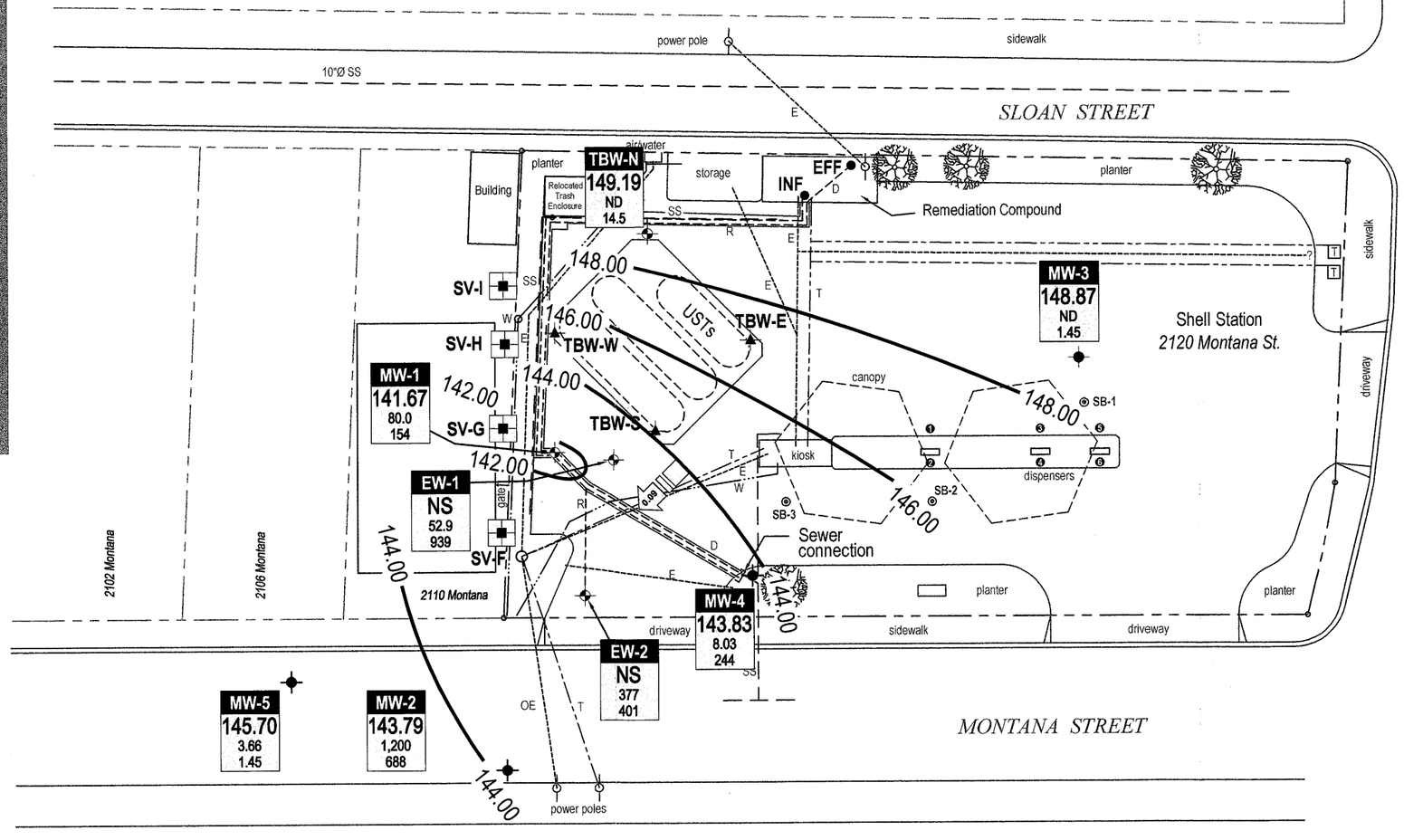


Groundwater Gradient Direction
(1Q01 through 2Q06)



Sausal Creek
(730 ft. SW)

Location of Sensitive Receptor
Relative to Site



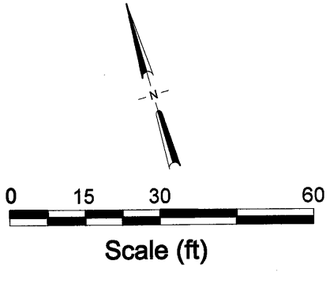


FIGURE
2

Shell-branded Service Station
2120 Montana Street
Oakland, California
Incident No.98995740

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Table 1: Groundwater Extraction - System Analytical Data
Shell-branded Service Station, Incident #98995740, 2120 Montana Street, Oakland, California

Sample Date (mm/dd/yy)	Influent			Midfluent 1			Midfluent 2			Effluent		
	TPHg Conc. (ppb)	Benzene Conc. (ppb)	MTBE Conc. (ppb)	TPHg Conc. (ppb)	Benzene Conc. (ppb)	MTBE Conc. (ppb)	TPHg Conc. (ppb)	Benzene Conc. (ppb)	MTBE Conc. (ppb)	TPHg Conc. (ppb)	Benzene Conc. (ppb)	MTBE Conc (ppb)
04/02/2003	51,000	1,300	7,100	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
04/08/2003	45,000	1,200	8,600	1,600	5.3	3.2	220	<0.50	<0.50	<50	<0.50	<0.50
04/22/2003	<50	<25	1,700	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
05/01/2003	45,000	1,600	8,300	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
05/21/2003	12,000	370	1,500	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
06/03/2003	10,000	470	1,900	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
06/17/2003	1,200	42	29	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
04/21/2004	10,000	540	950	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
06/08/2004	970	26	290	<50	<0.50	<0.50	<50	<0.50	<0.50	94	<0.50	<0.50
06/30/2004	NS	NS	NS	NS	NS	NS	NS	NS	NS	<50	<0.50	<0.50
07/07/2004	1,700	71	500	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
08/03/2004	1,000	52	390	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
09/14/2004	4,100	230	1,100	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
10/12/2004	140	3.9	140	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
11/12/2004	2,600	180	680	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
12/02/2004	690	41	340	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
01/03/2005	<500	17	1,500	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
02/14/2005	<100	<1.0	120	<50	<0.50	<0.50	<50	<0.50	<0.50	150 a	<0.50	<0.50
03/02/2005	4,900	190	1,000	<50	<0.50	<0.50	<50 b	<0.50	<0.50	<50 b	<0.50	<0.50
04/11/2005	440	6.7	320	<50 b	<0.50	<0.50	<50	<0.50	<0.50	<50 b	<0.50	<0.50
05/09/2005	120	<0.50	79	<50 b	<0.50	<0.50	<50 b	<0.50	<0.50	<50 b	<0.50	<0.50
06/09/2005	<500	<0.50	<0.50	<500	<5.0	<5.0	<50	<0.50	<0.50	<50	<0.50	<0.50
07/15/2005	480	18	220	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
08/04/2005	290	18	130	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
09/30/2005	<50	<0.50	52	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
10/14/2005	160	1.9	150	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
11/11/2005	240	4.8	140	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50

Table 1: Groundwater Extraction - System Analytical Data
Shell-branded Service Station, Incident #98995740, 2120 Montana Street, Oakland, California

Sample Date (mm/dd/yy)	Influent			Midfluent 1			Midfluent 2			Effluent		
	TPHg Conc. (ppb)	Benzene Conc. (ppb)	MTBE Conc. (ppb)	TPHg Conc. (ppb)	Benzene Conc. (ppb)	MTBE Conc. (ppb)	TPHg Conc. (ppb)	Benzene Conc. (ppb)	MTBE Conc. (ppb)	TPHg Conc. (ppb)	Benzene Conc. (ppb)	MTBE Conc (ppb)
12/05/2005	770	12	1,100	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
01/05/2006	5,700	140	740	<50	<0.50	0.66	<50	<0.50	<0.50	<50	<0.50	<0.50
02/17/2006	4,300	43	330	77	<0.50	0.85	54	<0.50	<0.50	<50	<0.50	<0.50
03/03/2006	1,900	29	320	<50	<0.50	1.4	50	<0.50	<0.50	<50	<0.50	<0.50
04/13/2006	3,900	180	450	61	<0.50	5.8	76	<0.50	<0.50	51 c	<0.50	<0.50
05/11/2006	1,700	55	140	<50	<0.50	5.3	<50	<0.50	<0.50	<50	<0.50	<0.50
06/08/2006	6,500	450	420	76	<0.50	6.5	96	<0.50	<0.50	86 c	<0.50	<0.50
07/07/2006	270	5.6	82	58	<0.50	8.9	100 c	<0.50	<0.50	75 c	<0.50	<0.50
08/02/2006	140	7.9	31	76	<0.50	8.9	130 c	<0.50	<0.50	110 c	<0.50	<0.50

Abbreviations & Notes:

TPHg = Total purgeable hydrocarbons as gasoline
MTBE = Methyl tertiary butyl ether
Conc. = Concentration
ppb = parts per billion, equivalent to µg/L
µg/L = Micrograms per liter
TPHg, benzene, and MTBE analyzed by EPA Method 8260B
a = TPHg contains a discreet peak of ethylhexanol, which are not believed to be gasoline related
b = Siloxane peaks were found is sample which are not believed to be gasoline related
c = Concentration reported presented individual or discrete peaks not matching a typical fuel pattern but quantitated as Gasoline.
As of February 1, 2006, gasoline range organics reported as TPHg include MTBE, tertiary-butyl alcohol, and di-isopropyl ether concentrations. TPHg concentrations reported prior to February 1, 2006 may not include one or more of these constituents.

Table 2: Groundwater Extraction - Operation and Mass Removal Data
Shell-branded Service Station, Incident #98995740, 2120 Montana Street, Oakland, California

Site Visit (mm/dd/yy)	Hour Meter hours	Flow Meter Reading (gal)	Period Volume (gal)	Period Operational Flow Rate (gpm)	Cumulative Volume (gal)	TPHg			Benzene			MTBE		
						TPHg Conc. (ppb)	Period Removal (pounds)	Cumulative Removal (pounds)	Benzene Conc. (ppb)	Period Removal (pounds)	Cumulative Removal (pounds)	MTBE Conc. (ppb)	Period Removal (pounds)	Cumulative Removal (pounds)
04/02/2003	0.0	393	0	0	0		0.000	0.000		0.000	0.000		0.000	0.000
04/02/2003	5.3	1,006	613	1.93	613	51,000	0.261	0.261	1,300	0.007	0.007	7,100	0.036	0.036
04/08/2003	11.4	2,010	1,004	2.74	1,617	45,000	0.377	0.638	1,200	0.010	0.017	8,600	0.072	0.108
04/22/2003	303.0	15,640	13,630	0.78	15,247	<50	0.003	0.641	<25	0.001	0.018	1,700	0.193	0.302
05/01/2003	399.0	17,840	2,200	0.38	17,447	45,000	0.826	1.47	1,600	0.029	0.047	8,300	0.152	0.454
05/20/2003	784.0	43,320	25,480	1.10	42,927		9.568	11.0		0.340	0.388		1.765	2.22
05/21/2003	808.5	44,639	1,319	0.90	44,246	12,000	0.132	11.2	370	0.004	0.392	1,500	0.017	2.24
06/03/2003	1116.9	59,813	15,174	0.82	59,420	10,000	1.266	12.4	470	0.060	0.451	1,900	0.241	2.48
06/17/2003	1455.5	64,741	4,928	0.24	64,348	1,200	0.049	12.5	42	0.002	0.453	29	0.001	2.48
07/01/2003	1697.4	68,668	3,927	0.27	68,275		0.039	12.5		0.001	0.454		0.001	2.48
07/18/2003	1867.0	69,099	431	0.04	68,706		0.004	12.5		0.000	0.455		0.000	2.48
	System Shutdown due to presence of SPH													
04/21/2004	1984.4	1,516.3	0	0.00	68,706	10,000	0.000	12.5	540	0.000	0.455	950	0.000	2.48
05/25/2004	1984.4	1,516.3	0	0.00	68,706		0.000	12.5		0.000	0.455		0.000	2.48
06/08/2004	2,107.5	4,798.2	3,282	0.44	71,988	970	0.027	12.6	26	0.001	0.455	290	0.008	2.49
06/22/2004	2280.6	10,108	5,310	0.51	77,298		0.043	12.6		0.001	0.456		0.013	2.50
06/30/2004	2475.2	18,527.5	8,420	0.72	85,717		0.068	12.7		0.002	0.458		0.020	2.52
07/07/2004	2494.5	19,377	850	0.73	86,567	1,700	0.012	12.7	71	0.001	0.459	500	0.004	2.52
07/22/2004	2861.5	34,214	14,837	0.67	101,404		0.210	12.9		0.009	0.468		0.062	2.58
08/03/2004	3142.1	59,767	25,553	1.52	126,957	1,000	0.213	13.1	52	0.011	0.479	390	0.083	2.67
08/17/2004	3501.3	81,350	21,583	1.00	148,540		0.180	13.3		0.009	0.488		0.070	2.74
08/31/2004	3813.2	81,571	221	0.01	148,761		0.002	13.3		0.000	0.488		0.001	2.74
09/14/2004	4153.4	101,123	19,552	0.96	168,313	4,100	0.669	13.9	230	0.038	0.526	1,100	0.179	2.92
09/29/2004	4513.1	120,885	19,762	0.92	188,075		0.676	14.6		0.038	0.564		0.181	3.10
10/12/2004	4824.1	134,612	13,727	0.74	201,802	140	0.016	14.6	3.9	0.000	0.564	140	0.016	3.12
10/22/2004	4990.6	145,220	10,608	1.06	212,410		0.012	14.7		0.000	0.564		0.012	3.13
11/02/2004	5021.0	147,500	2,280	1.25	214,690		0.003	14.7		0.000	0.564		0.003	3.13
11/12/2004	5263.0	163,212	15,712	1.08	230,402	2,600	0.341	15.0	180	0.024	0.588	680	0.089	3.22
11/22/2004	5498.2	164,899	1,687	0.12	232,089		0.037	15.0		0.003	0.590		0.010	3.23
12/02/2004	5734.9	172,940	8,041	0.57	240,130	690	0.046	15.1	41	0.003	0.593	340	0.023	3.25
12/13/2004	6001.6	178,400	5,460	0.34	245,590		0.031	15.1		0.002	0.595		0.015	3.27
12/27/2004	6338.4	180,207	1,807	0.09	247,397		0.010	15.1		0.001	0.596		0.005	3.27
01/03/2005	6501.9	182,474	2,267	0.23	249,664	<500	0.005	15.1	17	0.000	0.596	1,500	0.028	3.30

Table 2: Groundwater Extraction - Operation and Mass Removal Data
Shell-branded Service Station, Incident #98995740, 2120 Montana Street, Oakland, California

Site Visit (mm/dd/yy)	Hour Meter hours	Flow Meter Reading (gal)	Period Volume (gal)	Period Operational Flow Rate (gpm)	Cumulative Volume (gal)	TPHg			Benzene			MTBE		
						TPHg Conc. (ppb)	Period Removal (pounds)	Cumulative Removal (pounds)	Benzene Conc. (ppb)	Period Removal (pounds)	Cumulative Removal (pounds)	MTBE Conc. (ppb)	Period Removal (pounds)	Cumulative Removal (pounds)
01/21/2005	6941.6	197,770	15,296	0.58	264,960		0.032	15.2		0.002	0.598		0.191	3.49
01/31/2005	7172.4	209,951	12,181	0.88	277,141		0.025	15.2		0.002	0.600		0.152	3.65
02/14/2005	7512.9	210,719	768	0.04	277,909	<100	0.000	15.2	<1.0	0.000	0.600	120	0.001	3.65
03/02/2005	7897.9	231,103	20,384	0.88	298,293	4,900	0.833	16.0	190	0.032	0.632	1,000	0.170	3.82
03/17/2005	7901.2	231,419	316	1.60	298,609		0.013	16.0		0.001	0.633		0.003	3.82
03/29/2005	8042.9	241,058	9,639	1.13	308,248		0.394	16.4		0.015	0.648		0.080	3.90
04/11/2005	8168.4	249,172	8,114	1.08	316,362	440	0.030	16.5	6.7	0.000	0.649	320	0.022	3.92
04/25/2005	8503.2	269,805	20,633	1.03	336,995		0.076	16.5		0.001	0.650		0.055	3.98
05/09/2005	8841.9	283,739	13,934	0.69	350,929	120	0.014	16.5	<0.50	0.000	0.650	79	0.009	3.99
05/27/2005	9271.3	290,449	6,710	0.26	357,639		0.007	16.6		0.000	0.650		0.004	3.99
06/09/2005	9581.5	290,688	239	0.01	357,878	<500	0.000	16.6	<0.50	0.000	0.650	<0.50	0.000	3.99
06/20/2005	9682.4	291,021	333	0.06	358,211		0.001	16.6		0.000	0.650		0.000	3.99
07/15/2005	10283.3	306,225	15,204	0.42	373,415	480	0.061	16.6	18	0.002	0.652	220	0.028	4.02
07/29/2005	10621.9	313,437	7,212	0.35	380,627		0.029	16.6		0.001	0.653		0.013	4.03
08/04/2005	10762.1	315,854	2,417	0.29	383,044	290	0.006	16.6	18	0.000	0.653	130	0.003	4.03
08/23/2005	11213.3	319,640	3,786	0.14	386,830		0.009	16.7		0.001	0.654		0.004	4.04
09/02/2005	11452.0	319,642	2	0.00	386,832		0.000	16.7		0.000	0.654		0.000	4.04
09/20/2005	11452.0	319,642	0	0.00	386,832		0.000	16.7		0.000	0.654		0.000	4.04
09/30/2005	11693.8	320,701	1,059	0.07	387,891	<50	0.000	16.7	<0.50	0.000	0.654	52	0.000	4.04
10/14/2005	11810.0	324,654	3,953	0.57	391,844	160	0.005	16.7	1.9	0.000	0.654	150	0.005	4.04
10/28/2005	*12146.0*	338,868	14,214	0.71	406,058		0.019	16.7		0.000	0.654		0.018	4.06
11/11/2005	*12482.0*	345,193	6,325	0.31	412,383	240	0.013	16.7	4.8	0.000	0.655	140	0.007	4.07
11/23/2005	*12482.0*	345,259	66	0.00	412,449		0.000	16.7		0.000	0.655		0.000	4.07
12/05/2005	0.5	348,540	3,281	0.19	415,730	770	0.021	16.7	12	0.000	0.655	1,100	0.030	4.10
12/19/2005	26.1	350,253	1,713	1.12	417,443		0.011	16.7		0.000	0.655		0.016	4.11
12/30/2005	286.3	364,949	14,696	0.94	432,139		0.094	16.8		0.001	0.657		0.135	4.25
01/05/2006	427.8	372,368	7,419	0.87	439,558	5,700	0.353	17.2	140	0.009	0.665	740	0.046	4.29
01/20/2006	791.4	390,500	18,132	0.83	457,690		0.862	18.0		0.021	0.686		0.112	4.41
01/30/2006	912.5	398,790	8,290	1.14	465,980		0.394	18.4		0.010	0.696		0.051	4.46
02/17/2006	956.6	401,816	3,026	1.14	469,006	4,300	0.109	18.5	43	0.001	0.697	330	0.008	4.47
03/03/2006	1049.2	408,675	6,859	1.23	475,865	1,900	0.109	18.6	29	0.002	0.699	320	0.018	4.48
03/17/2006	1384.9	433,900	25,225	1.25	501,090		0.400	19.0		0.006	0.705		0.067	4.55

Table 2: Groundwater Extraction - Operation and Mass Removal Data
Shell-branded Service Station, Incident #98995740, 2120 Montana Street, Oakland, California

Site Visit (mm/dd/yy)	Hour Meter hours	Flow Meter Reading (gal)	Period Volume (gal)	Period Operational Flow Rate (gpm)	Cumulative Volume (gal)	TPHg Conc. (ppb)	TPHg Period Removal (pounds)	TPHg Cumulative Removal (pounds)	Benzene Conc. (ppb)	Benzene Period Removal (pounds)	Benzene Cumulative Removal (pounds)	MTBE Conc. (ppb)	MTBE Period Removal (pounds)	MTBE Cumulative Removal (pounds)
03/31/2006	1721.2	458,770	24,870	1.23	525,960		0.394	19.4		0.006	0.711		0.066	4.62
04/13/2006	2030.3	481,365	22,595	1.22	548,555	3,900	0.735	20.2	180	0.034	0.745	450	0.085	4.70
04/27/2006	2063.1	483,653	2,288	1.16	550,843		0.074	20.3		0.003	0.748		0.009	4.71
05/11/2006	2397.6	506,301	22,648	1.13	573,491	1,700	0.321	20.6	55	0.010	0.759	140	0.026	4.74
05/22/2006	2661.1	519,010	12,709	0.80	586,200		0.180	20.8		0.006	0.765		0.015	4.75
06/08/2006	2664.4	519,447	437	2.21	586,637	6,500	0.024	20.8	450	0.002	0.766	420	0.002	4.75
06/22/2006	2664.4	519,670	223	0.00	586,860		0.012	20.8		0.001	0.767		0.001	4.76
06/23/2006	2689.2	522,566	2,896	1.95	589,756		0.157	20.9		0.011	0.778		0.010	4.77
06/26/2006	2763.5	533,562	10,996	2.47	600,752		0.596	21.5		0.041	0.819		0.039	4.80
07/07/2006	3025.9	564,498	30,936	1.96	631,688	270	0.070	21.6	5.6	0.001	0.821	82	0.021	4.83
07/18/2006	3289.3	586,303	21,805	1.38	653,493		0.049	21.7		0.001	0.822		0.015	4.84
08/02/2006	3647.0	613,860	27,557	1.28	681,050	140	0.000	21.7	7.9	0.000	0.822	31	0.000	4.84
			Total Extracted Volume =		**681,050**	**Total Pounds Removed:**		**21.7**	**Total Pounds Removed:**		**0.822**	**Total Pounds Removed:**		**4.84**
			Average Operational Flow Rate =		**0.704**	**Total Gallons Removed:**		**3.56**	**Total Gallons Removed:**		**0.112**	**Total Gallons Removed:**		**0.784**

Abbreviations & Notes:

TPHg = Total purgeable hydrocarbons as gasoline
MTBE = Methyl tertiary butyl ether
Conc. = Concentration
ppb = Parts per billion, equivalent to mg/L
mg/L = Micrograms per liter
L = Liter
gal = Gallon
gpm = Gallons per minute
g = Gram
Mass removed based on the formula: volume extracted (gal) x Concentration (µg/L) x (g/10^6µg) x (pound/453.6g) x (3.785 L/gal)
When constituents are not detected, the concentration is assumed to be equal to half the detection limit in subsequent calculations.
Volume removal data based on the formula: mass (pounds) x $(\text{density})^{-1}$ (cc/g) x 453.6 (g/pound) x (L/1000 cc) * (gal/3.785 L)
Density inputs: TPHg = 0.73 g/cc, benzene = 0.88 g/cc, MTBE = 0.74 g/cc
TPHg, BTEX, and MTBE analyzed by EPA Method 8260B
Italicized hour meter reading is calculated value.

As of February 1, 2006, gasoline range organics reported as TPHg include MTBE, tertiary-butyl alcohol, and di-isopropyl ether concentrations. TPHg concentrations reported prior to February 1, 2006 may not include one or more of these constituents.

APPENDIX A

GWE System As-Built Drawing

08/10/06

REMEDIAL DESIGN PLANS

SHELL-BRANDED SERVICE STATION
2120 Montana Street
Oakland, California

GROUNDWATER EXTRACTION SYSTEM EXPANSION

Prepared for:
SHELL OIL PRODUCTS US

Prepared by:
CAMBRIA ENVIRONMENTAL TECHNOLOGY, INC.

Scope of Work:

The scope of work consist of providing groundwater extraction from wells EW-1 and EW-2, while maintaining groundwater extraction capabilities from TBW-N. Make all necessary connections to the existing groundwater treatment system:

1. Trench to the designated wells as shown on Figure 1 and referenced details.
2. Install remediation pipe as shown on Figure 1 and referenced details.
3. Backfill, compact and resurface trenches as shown on Figure 2.
4. Install well vaults as shown on Figure 2.
5. Install remediation equipment as shown on Figure 4.
6. Install process pipe as shown on Figures 3 and 4.
7. Provide all materials, excluding material provided by Cambria (pneumatic pumps, pump pressure regulators, well caps with quick disconnect fittings, and down-well hose).

Notes:

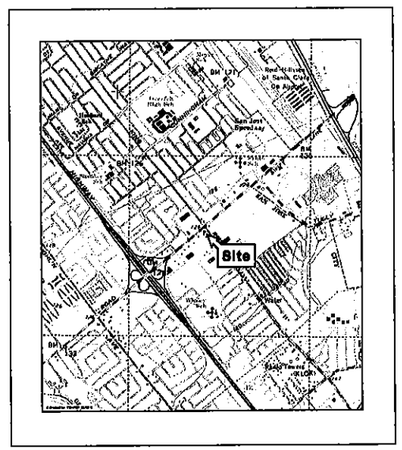
1. The design of this groundwater extraction system is based on the 1997 UBC, 1996 NEC, and the 1997 UFC, where applicable. Contruction is to comply with the design basis and/or local agency requirements.
2. Remedial action is being implemented with the approval of the Alameda County Health Care Services Agency.
3. Treated groundwater is to be discharged to the local sewer system under the authorization of the existing East Bay Municipal Utilities District Wastewater Discharge Permit.

G:\OAKLAND 2120 MONTANA\FIGURES\REMEDIATION\2006 EXPANSION\FIGA TITLE.AI

Shell-branded Service Station
2120 Montana Street
Oakland, California
Incident #98995740

TITLE PAGE

CAMBRIA



Vicinity Map

08/10/06

GENERAL NOTES:

THIS REMEDIATION SYSTEM STANDARDS PACKAGE (STANDARDS) IS FOR THE SOLE USE OF EQUILON ENTERPRISES LLC dba SHELL OIL PRODUCTS US (SHELL) AND IT'S CONSULTANTS. UNAUTHORIZED USE OR DISCLOSURE OF THE STANDARDS SHALL BE CONSIDERED A VIOLATION OF THE SHELL ENVIRONMENTAL SERVICES AGREEMENT (SESA).

THE INTENT OF THE STANDARDS IS TO PROVIDE BOTH A BASIS FOR A UNIT COST PROGRAM AND TO PROVIDE DESIGN CONSISTENCY BETWEEN DIFFERENT REMEDIAL INSTALLATIONS AND CONTRACTORS. THE STANDARDS CANNOT COVER 100% OF ALL THE POSSIBLE PERMUTATIONS OF REMEDIATION SYSTEM INSTALLATIONS. HOWEVER, THE MAJORITY OF 'GASOLINE SERVICE STATION' REMEDIATION SYSTEM INSTALLATIONS WILL BE COVERED BY THE STANDARDS.

FOR A TYPICAL REMEDIATION SYSTEM INSTALLATION, THE CONTRACTOR/ CONSULTANT SHALL USE THE STANDARDS AS A STARTING POINT FOR THE COMPLETION OF THE DRAWINGS AND DOCUMENTS NECESSARY TO PROPERLY DESIGN, PERMIT AND CONSTRUCT THE SYSTEM. IT IS THE SOLE RESPONSIBILITY OF THE MANAGING CONSULTANT TO ASSURE THAT BOTH THE DESIGN AND ACTUAL INSTALLATION COMPLIES WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL CODES, REGULATIONS AND STANDARDS.

THE CONSULTANT SHALL NOTIFY THE SHELL PROJECT ENGINEER WHEN ANY DISPUTE OR CONFLICT ARISES REGARDING THE STANDARDS.

FOR IMPLEMENTATION OF THE STANDARDS, REFER TO THE SESA UNIT COST CONTRACT ADDENDUM.

ANY SCOPE OF WORK CHANGES OR ITEMS NOT COVERED BY THE UNIT COST PROGRAM WHICH ARISE DURING A PRE-CONSTRUCTION SITE VISIT, PERMITTING PHASE OR CONSTRUCTION PHASE SHALL BE COMMUNICATED TO THE RESPECTIVE SHELL PROJECT MANAGER WITHIN 24 HOURS. APPROVAL FROM THE RESPECTIVE SHELL PROJECT MANAGER SHALL BE OBTAINED BEFORE FIELDWORK IS CONTINUED UNLESS DELAY PRESENTS A SAFETY RISK. CONSULTANT SHOULD USE BEST PROFESSIONAL JUDGMENT IN SUCH CASES. A WRITTEN CHANGE ORDER TASK REQUEST WITH DOLLAR AMOUNTS SHALL BE SUBMITTED WITHIN 3 BUSINESS DAYS TO THE SHELL PROJECT MANAGER FOR APPROVAL.

CONSTRUCTION NOTES:

PERFORM ALL WORK IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, STANDARDS AND CODES INCLUDING OSHA AND CALOSHA.

THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY BUILDING PERMITS AND CONDUCTING AGENCY NOTIFICATIONS.

EXECUTE WORK SO AS TO MINIMIZE ANY DISRUPTIONS TO THE FUELING FACILITY OPERATIONS. PROVIDE AND MAINTAIN ACCESS FOR FACILITY OPERATIONS AS DIRECTED. IT IS THE CONSULTANT'S/CONTRACTOR'S RESPONSIBILITY TO ISSUE MDI NOTIFICATIONS.

CONTRACTOR TO VERIFY THE LOCATION OF TANKS, PIPING, APPURTENANCES AND UTILITIES. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS WHICH EFFECT THE WORK PRIOR TO BEGINNING CONSTRUCTION. NOTIFY UNDERGROUND SERVICE ALERT (USA) PRIOR TO ANY SUBSURFACE WORK.

PROTECT EXISTING ITEMS WHICH ARE TO REMAIN IN PLACE, BE REUSED OR REMAIN PROPERTY OF THE STATION OWNER OR SHELL. REPAIR ITEMS WHICH ARE TO REMAIN AND WHICH ARE DAMAGED DURING THE PERFORMANCE OF THE WORK TO THEIR ORIGINAL CONDITION OR REPLACE WITH NEW. DO NOT EXCEED LOADING CAPACITIES OF SITE PAVEMENT.

UNSHORED EXCAVATIONS GREATER THAN 4 FEET DEEP SHALL NOT HAVE A SLOPE GREATER THAN 1:1.

STOCKPILED SOIL SHALL BE PROTECTED FROM WEATHER. CONTAMINATED SOIL SHALL BE COVERED IN ACCORDANCE WITH BAAQMD REQUIREMENTS. PROVIDE STORMWATER RUN-ON AND RUN-OFF CONTROLS FOR TEMPORARY SOIL STOCKPILES AND OPEN EXCAVATIONS. PREVENT CONSTRUCTION OR DEMOLITION MATERIALS FROM ENTERING STORM DRAINS AND SEWER SYSTEMS.

ALL SOIL AND WATER SAMPLING SHALL BE DONE IN ACCORDANCE WITH LOCAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE CHARACTERIZATION, TRANSPORTATION AND DISPOSAL OF MATERIALS AND WASHWATERS ASSOCIATED TRENCH EXCAVATION AND DECONTAMINATION WITH SHELL (RMT) FOR PROPER HANDLING. CONCRETE AND ASPHALT DEBRIS SHALL BE RECYCLED WHERE POSSIBLE.

RESTORE OR PROVIDE ARCHITECTURAL FINISHES IN AREAS AFFECTED BY DEMOLITION TO MATCH PRE-CONSTRUCTION CONDITIONS. WORK TO INCLUDE BUT NOT LIMITED TO PAVEMENT RESTRIPING, CURB PAINTING, LANDSCAPING AND PATCHING SURFACE IRREGULARITIES. ALL LEFT BEHIND SAW CUTS SHOULD BE KEEP TO AN ABSOLUTE MINIMUM.

THE CONVEYANCE PIPING LAYOUT OF THE SITE SHALL BE IN SUCH A MANNER AS TO MINIMIZE THE AMOUNT PRODUCT LINE OR TANK SLAB CROSSINGS.

ALL PROCESS LINES AND CONDUITS SHALL BE FREE OF DIRT AND DEBRIS AFTER INSTALLATION. THE GW SECONDARY CONTAINMENT LINES SHALL BE CLEANED PRIOR TO THE INSTALLATION OF THE PRIMARY LINE.

PRESSURE TEST ALL SVE AND GW SECONDARY LINES TO 5PSI PRIOR TO BACKFILL. PRESSURE TEST GW PRIMARY, COMPRESSED AIR AND AIR SPARGE LINES TO 75% OF THE PROCESS LINE PRESSURE. THERE SHALL BE NO NOTICEABLE CHANGE AFTER 1 HOUR OR ANY VISIBLE LEAK INDICATIONS.

ABBREVIATIONS

A.C.	ASPHALTIC CONCRETE	MAX.	MAXIMUM
BLDG.	BUILDING	MIN.	MINIMUM
BLVD.	BOULEVARD	N	NEW
B.W.	BOTH WAYS	NO(S).	NUMBER(S)
CONC.	CONCRETE	ø	NOMINAL DIAMETER
CONTR.	CONTROL	O.C.	ON CENTER
DIA.	DIAMETER	OWS	OIL WATER SEPARATOR
DBL.	DOUBLE	PSI	POUNDS PER SQUARE INCH
E	EXISTING	R.R.	RAILROAD
EA.	EACH	SS	SANITARY SEWER
EL.	ELEVATION	SCH.	SCHEDULE
FIN.	FINISH	STL.	STEEL
FRP	FIBERGLASS REINFORCED PLASTIC	SD	STORM DRAIN
B.G.S.	BELOW GROUND SURFACE	TC	TOP OF CURB
GAL(S).	GALLON(S)	TYP.	TYPICAL
HPFS	HIGH POINT OF FINISHED SURFACE	U.G	UNDERGROUND
OWS	OIL WATER SEPARATOR	UST(s)	UNDERGROUND STORAGE TANK(s)
		WC	INCHES WATER COL. PRESS

LEGEND

VACUUM BREAKER
CHECK VALVE
BALL VALVE
PRESSURE REG
GLOVE VALVE
FLOW ELEMENT
FILTER
FLOW DIRECTION
PUMP W/UNIONS
SUMP PUMP

(SP) SAMPLE PORT
(FQI) FLOW TOTALZING INDICATOR
(LSHH) LEVEL SW HIGH HIGH
(LSH) LEVEL SW HIGH
(LSL) LEVEL SW LOW
(PI) PRESSURE INDICATOR
(PSH) PRESSURE SW HIGH
(FI) FLOW INDICATOR
(PR) PRESSURE REGULATOR

CONCRETE
ASPHALTIC CONCRETE
EARTH
FILL AND BACKFILL
COARSE AGGREGATE
PEA GRAVEL
SAND AND TOPSOIL

U.G. PIPE AND CONDUIT
FENCE/K-RAIL
U.G. UST ELECTRICAL CONDUIT

WELL ID	WELL SIZE	DEPTH	SCREEN SECTION	PUMP	GPM	SVE	COMMENTS
TBW-N	4"	12.5'	0-12.5'	5U664	5.0	YES	INGERSOL-RAND (E)
EW-1	4"	28'	13-28'	AP3BL	4.0	YES	QED PUMP (E)
EW-2	4"	28'	8-28'	AP3BL	4.0	YES	QED PUMP (E)

ELECTRICAL FIRED SVE SYSTEM

MFG:
TYPE:
SCFM RATING:
PREHEATER:
TEMPERATURE RANGE:
DISCHARGE TEMPERATURE:
STACK SIZE:
VACUUM MOTOR HP:
POWER: VOLTS-
FLA-
HZ-
PH-
CONTROLS VOLTS:

FUEL FIRED SVE SYSTEM

MFG:
TYPE:
FUEL GAS:
SCFM RATING:
BURNER MAX. BTU/HR:
BURNER RATIO:
COMBUSTION BLOWER HP:
PROCESS BLOWER HP:
STACK SIZE:
POWER VOLTS:
FLA-
HZ-
PH-
CONTROLS VOLTS:

CARBON SYSTEM

MFG: US FILTER
TYPE: ASC-1000
VESSEL SIZE: 35 CU FT
MAX. FLOW RATE: 50 GPM
PRESSURE RATING: 15 PSI
MAX. TEMPERATURE: 140 F
CONTACT TIME: 5 MINUTES
BACK WASH FLOW RATE: 25 GPM
POUNDS GAC: 1,000

GROUND WATER UNIT SKID

MFG:
TYPE:
VESSEL SIZE:
MAX. FLOW RATE:
PRESSURE RATING:
MAX. TEMPERATURE:
PUMP HP:
FILTERS:
BAG MESH:
POWER VOLTS:
FLA-
HZ-
PH-
CONTROL VOLTS:

ITEM No	PART	LOCATION	MANUFACTURER INFORMATION
1	WELL SUMP	WELLHEAD	RONCO DIST. HARRINGTON PLASTICS-30 GAL-VPSUMP-2 WELL TUBE W/COVER
2	WELL SUMP	WELLHEAD	RONCO DIST. HARRINGTON PLASTICS-70 GAL-VPSUMP WELL TUBE W/COVER
3	PULL BOX	TRENCHES	BROOKS JENSEN PRE-CAST: 3' X 5' X VARIABLE DEPTH WITH SPRING ASSISTED TRAFFIC RATED COVER
4	TRAFFIC BOX	MONITORING WELL	OPW: MONITORING/OBSERVATION WELL MANHOLE 104ADV-1200 LABELED "DO NOT FILL"
5	TRAFFIC RING	WELLHEAD	POMECO/OPW - CONQUISTADOR MANHOLE MODEL 39CD-WT10 BOLT DOWN, GASKETED WITH RECESSED HANDLE
6	TRAFFIC RING	WELLHEAD	POMECO/OPW - CONQUISTADOR MANHOLE MODEL 44CD-WT10 BOLT DOWN, GASKETED WITH RECESSED HANDLE
7	PROCESS LINE	TRENCHES	WESTFLEX: HDPE W304 100 PSI UTILITY POLYETHYLENE -SILVER LABEL 3/4" OR 1"
8	AIR PUMP	WELL	CLEAN ENVIRONMENT EQUIPMENT: SUBMERSIBLE AIR PUMP AP-B (TYPE FOR REQUIRED FLOW RATE)
9	WELL CAP	WELLHEAD	CLEAN ENVIRONMENT EQUIPMENT: WELL CAP (WATER EXTRACTION ONLY)
10	WELL CAP	WELLHEAD	CLEAN ENVIRONMENT EQUIPMENT: FERNCO WELLHEAD CAP WITH COMPRESSION FITTINGS SIZED TO MEET FLOW RATE (VAPOR AND WATER EXTRACTION)
11	PUMP HOSES	WELL	CLEAN ENVIRONMENT EQUIPMENT: WATER, AIR, VENT SIZED FOR FLOW RATE PLUS PUMP SUPPORT CABLE
12	PULSE COUNTER	WELLHEAD	CLEAN ENVIRONMENT EQUIPMENT: 1/4" NPT PULSE COUNTER (AIR PUMPS ONLY)
13	REGULATOR	WELLHEAD	CLEAN ENVIRONMENT EQUIPMENT: 1/4" OR 3/8" NPT AIR REGULATOR (AIR PUMPS ONLY)
14	ELECTRICAL PUMP	WELL	GRUNDFOS: S SERIES 4" ELECTRICAL SUBMERSIBLE PUMP, CAPACITY, HP, VOLTAGE AND PHASE TO SUIT FLOW RATE AND AVAILABLE POWER SUPPLY
15	WELL SEAL	WELLHEAD	CAMPBELL: CAST IRON SPLIT WELL SEAL SIZED FOR WELL CASING DIAMETER AND NUMBER AND SIZE OF OPENINGS
16	TORQUE ARRESTOR	WELL	CAMPBELL: TORQUE ARRESTOR WITH CLAMPS
17	SENSOR	WELLBOX & TREATMENT AREA	WARRICK CONTROLS: MULTI-PROBE FITTING 3EB3 W/NEOPRENE GASKETS AND STAINLESS STEEL SCREWS. SPECIFY No. OF SS ROD & LENGTH
18	LEVELS	TANKS	WARRICK CONTROLS: MULTI-PROBE FITTING 3E1 THRU 4B W/NEOPRENE GASKETS AND STAINLESS STEEL SCREWS (FOR CONTROL) SPECIFY No. OF SS RODS & LENGTH
19	LEVELS	TANKS	WARRICK CONTROLS: SINGLE-PROBE FITTING 3H0OX (LEVEL CONTROL)
20	FLOW METER	TREATMENT AREA	BADGER: RECORD-ALL COLD WATER BRONZE DISC METER MODEL 25 - 5/8" NPT (FLOW TOTALIZER)
21	FLOW METER	TREATMENT AREA DISCHARGE	BADGER: RECORD-ALL COLD WATER BRONZE DISC METER MODEL 70 - 1" NPT (FLOW TOTALIZER)
22	FLOW SENSOR	VAPOR LINES	DWYER: SERIES DS FLOW SENSOR, MODEL DS-300-(PIPE SIZE) USE WITH DWYER MAGNEHELIC DIFFERENTIAL PRESSURE GAGES
23	VACUUM GAGE	WELL BOX & TREATMENT AREA	ASHCROFT: VACUUM GAGE MODEL 1009 GRADE 1A(L)X F.S.(2.5)" STAINLESS STEEL CONSTRUCTION. *SPECIFY VACUUM RANGE*
24	PRESSURE GAGE	WELL BOX & TREATMENT AREA	ASHCROFT: PRESSURE GAGE MODEL 1009 GRADE 1A(L)X F.S.(2.5)" STAINLESS STEEL CONSTRUCTION. *SPECIFY PRESSURE RANGE*
25	CLAMPS	"HDPE" TUBING	MIKALOR: HEAVY DUTY T-BOLT HOSE CLAMP 823-25 FOR 3/4" HDPE TUBING OR 831-34 FOR 1" HDPE TUBING
26	HOSE BARBS	"HDPE" TUBING	SPEARS: MALE ADAPTER 1436-007 FOR 3/4" TUBING OR 1436-010 FOR 1" TUBING (REDUCING MALE ADAPTERS MAY BE SUBSTITUTED AS REQUIRED)
27	PENETRATION BOOTS	PIPE & SUMP	WEAVER MFG. LLC: PENETRATION FITTINGS (SPECIFY SIZES REQUIRED)
28	FLEXIBLE BELLOWS	PULL BOX	McMASTER-CARR: "PROTECTIVE BELLOWS" NEOPRENE-LATEX DIP-MOULDED BELLOWS
29	SWEEPS	DUAL EXTRACTION PIPING	PWPIPE: [illegible] SCH 40 PBX 90X36 RIGID NONMETALLIC ELECTRICAL CONDUIT SWEEPS FOR DOUBLE CONTAINMENT.
30	HOSE	CARBON FILTERS	PACIFIC ECHO PVC "SPIRALITE" 2"-SUCTION & DISCHARGE HOSE -10" TO 130" (HARRINGTON ORDER NO. 110P-020)
31	PUMP	SUMP	TEEL: 1 1/2" NPT AUTO ECONOMY SUMP PUMP POLYPROPYLENE HOUSING, 1/2" HP 115 V 60 HZ 1ø, FLOW RATE 15.1 GPM @ 20 FT HEAD
32	GRATING	SUMP	McNICHOLS CO 1 1/2"X1/8" 2-2 1/2"X2-2 1/2" OO BANDED GALVANIZED GW TYPE PRESS-LOCKED GRATING (LOAD RATED 1544 @ 2'-0") MINIMUM REQUIRED
33	BULKHEAD FITTING	TANKS	HAYWARD: 2"-FPT X FPT PVC W/ EPDM GASKET TANK BULKHEAD FITTING
34	VACUUM BREAKER	SEAL LOOP	FIP/PLAST-O-MATIC: VACUUM BREAKER W/VITON SEALS
35			
36			
37			
38			
39			
40			

TABLE OF CONTENTS:

Groundwater Extraction System Expansion
Legend & Notes

March 10, 2006

CAMBRIA

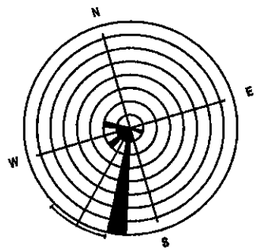
Shell-branded Service Station
2120 Montana Street
Oakland, California
Incident # 98995740

FIGURE
B

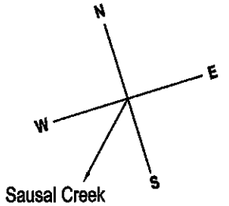
08/10/08

EXPLANATION

- MW-1 — Well used for groundwater extraction
- MW-2 — Monitoring well location
- TBW-N — Tank backfill well location
- INF — GWE system sampling location
- Product dispenser number
- Electrical and overhead electric line (E, OE)
- Sanitary sewer (SS)
- Water line (W)
- Telecommunications line (T)
- Remediation piping (R)
- Proposed remediation piping (P-R)
- Discharge line (D)
- C-3 / 2 — Denotes Shell Standard Drawing Number Drawing Number
- C-4 / 2 — Cross-section Indicator & Detail Designator



Groundwater Gradient Direction
(1Q01 through 4Q05)



Sausal Creek
(730 ft. SW)

Location of Sensitive Receptor
Relative to Site

parking lot

Commercial property

sidewalk

power pole

10"Ø SS

SLOAN STREET

Building

planter

air/water

storage

Relocated Trash Enclosure

EFF

INF

Remediation Compound

Remediation Trench
(4) 3" DIA SCH40 PVC CHASES W/3/4" DIA HDPE HOSE
(4) 2" DIA SCH40 PVC CHASES W/3/8" DIA COMP AIR HOSE
(1) 3" DIA SDR-35 SEWER PIPE

TBW-N

TBW-W

TBW-E

TBW-S

USTs

MW-3

canopy

kiosk

dispensers

driveway

House

EW-1

MW-1

P-R

EW-2

MW-4

Shell-branded Service Station
2120 Montana St.

2102 Montana

2106 Montana

2110 Montana

sidewalk

Sewer connection

MW-5

MW-2

power poles

MONTANA STREET

FRUITVALE AVENUE

INTERSTATE 580 ON-RAMP

0 15 30 60
Scale (ft)

FIGURE
1

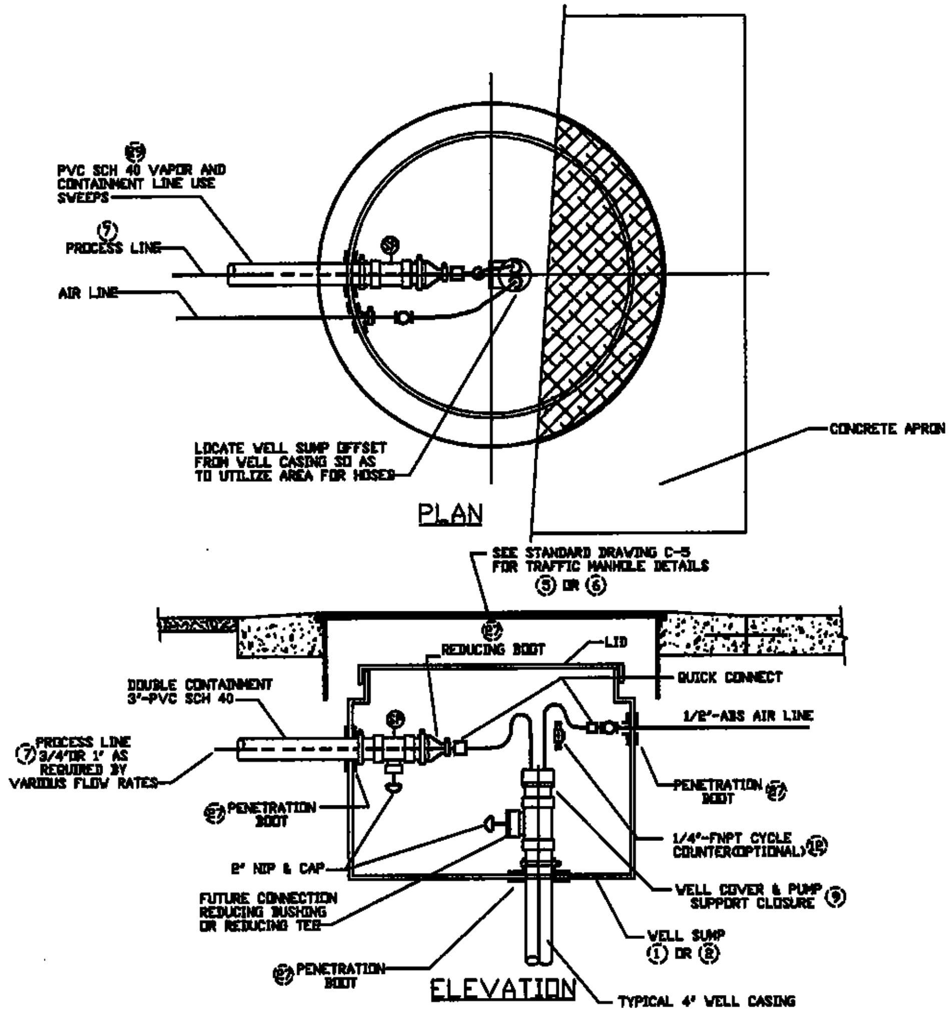
Remediation System Expansion
As-built Layout

August 10, 2006

CAMBRIA

Shell-branded Service Station
2120 Montana Street
Oakland, California
Incident #98995740

G:\OAKLAND 2120 MONTANA\FIGURES\REMEDIATION\2006 EXPANSION\FIG1 SYSTEM LAYOUT.DWG



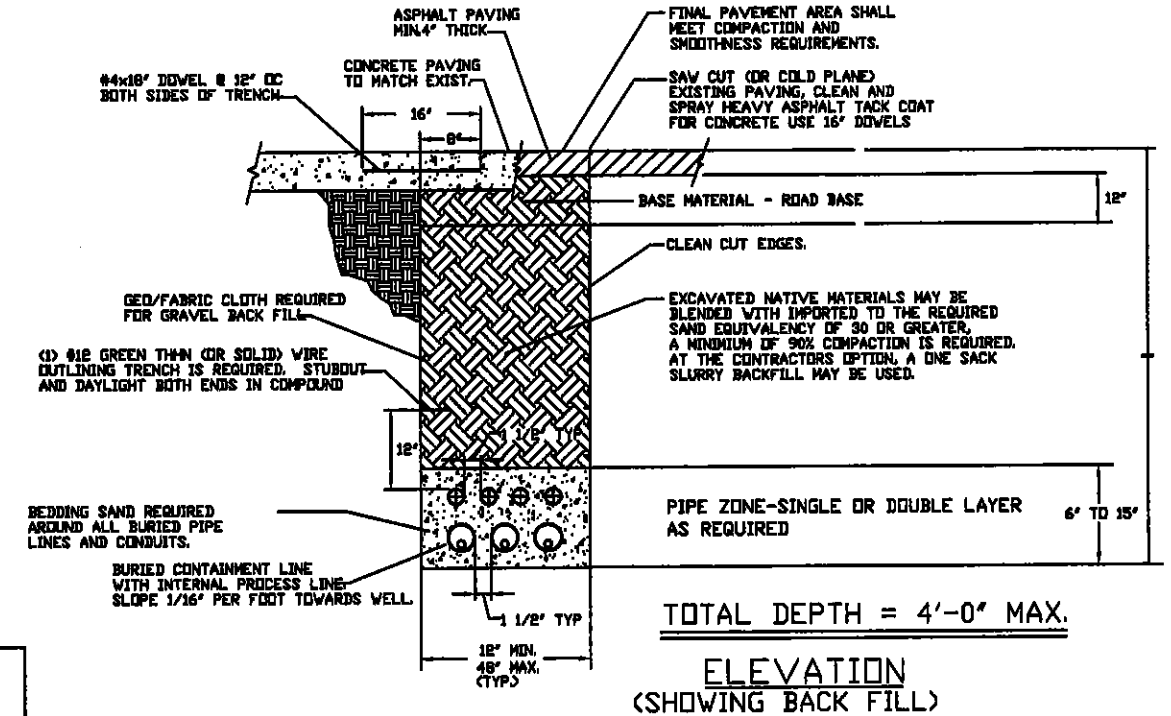
NOTES:

SHOWN IS A PNEUMATIC SUBMERSIBLE PUMP TYPE GROUNDWATER EXTRACTION WELLHEAD WITH INDIVIDUAL CONVEYANCE LINES. A CAPPED VAPOR CONNECTION OF FUTURE USE.

WITH THIS CONFIGURATION, ONLY ONE CONVEYANCE LINE IS RUN TO EACH WELL CONNECTION POINT. A SINGLE BRANCHED PNEUMATIC LINE IS CONNECTED TO EACH WELL.

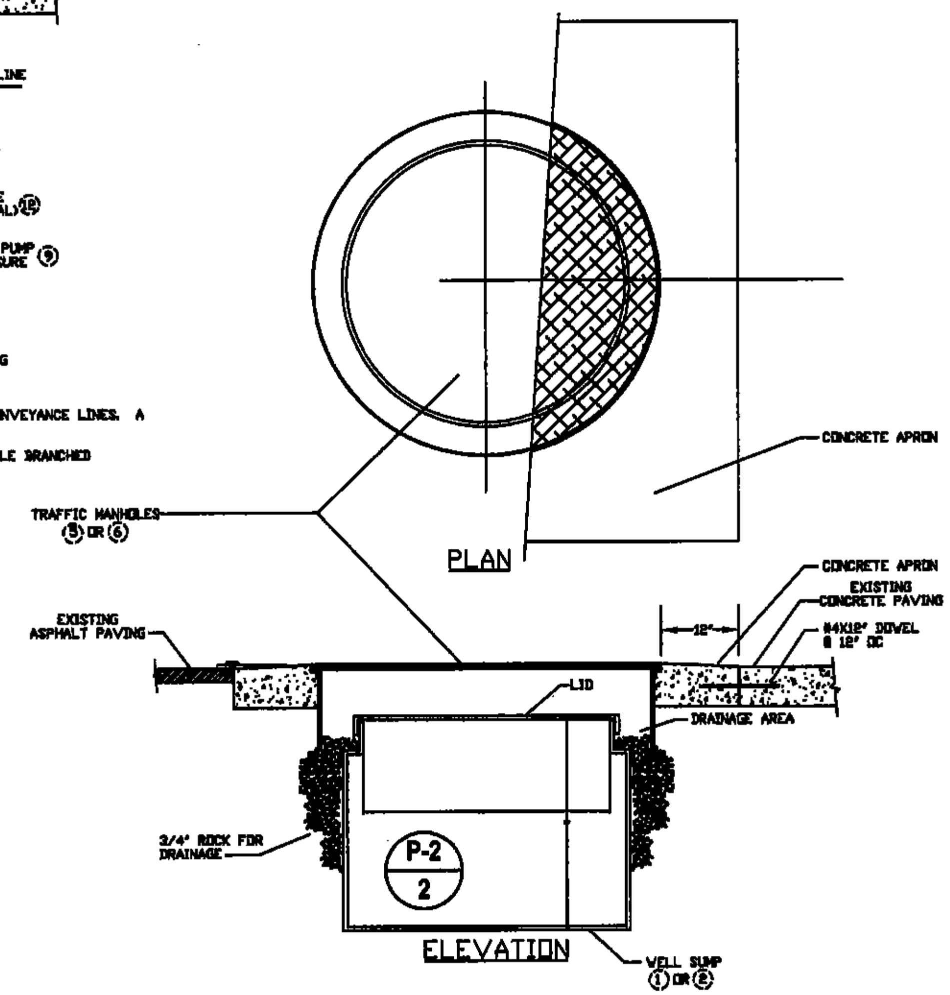
P-2 / 2 **Pneumatic Pump Wellhead Detail**

Not to Scale



C-3 / 2 **Surface/Trench Backfill Detail**

Not to Scale



NOTES:

STANDARD MANHOLE TO BE USED AS PULL BOX.

MANHOLE COVER/GRADE RING IS FOR STATION TRAFFIC ONLY. STREET INSTALLATIONS REQUIRE UTILITY TYPE INSTALLATIONS NOT COVERED IN THIS SPECIFICATION.

INSTALLATION DESIGN SHALL BE APPROVED BY LOCAL BUILDING AUTHORITY IF REQUIRED.

THE HDPE WELL CONTAINMENT SUMP IS USED FOR BOTH FLUID CONTAINMENT AND ISOLATION OF THE WELL HEAD FITTINGS FROM THE BACKFILL. THE DESIGN OF THIS TYPE OF SYSTEM REQUIRES THAT THE GRAVEL FILLED GAP BETWEEN THE HDPE SUMP AND THE TRAFFIC MANHOLE DRAIN ANY SURFACE WATER THAT PASSES THE MANWAY COVER. THE SUMP LID WILL PREVENT DIRT AND CONDENSATION AWAY FROM THE SUMP.

C-4 / 2 **Manhole Installation Detail**

Not to Scale

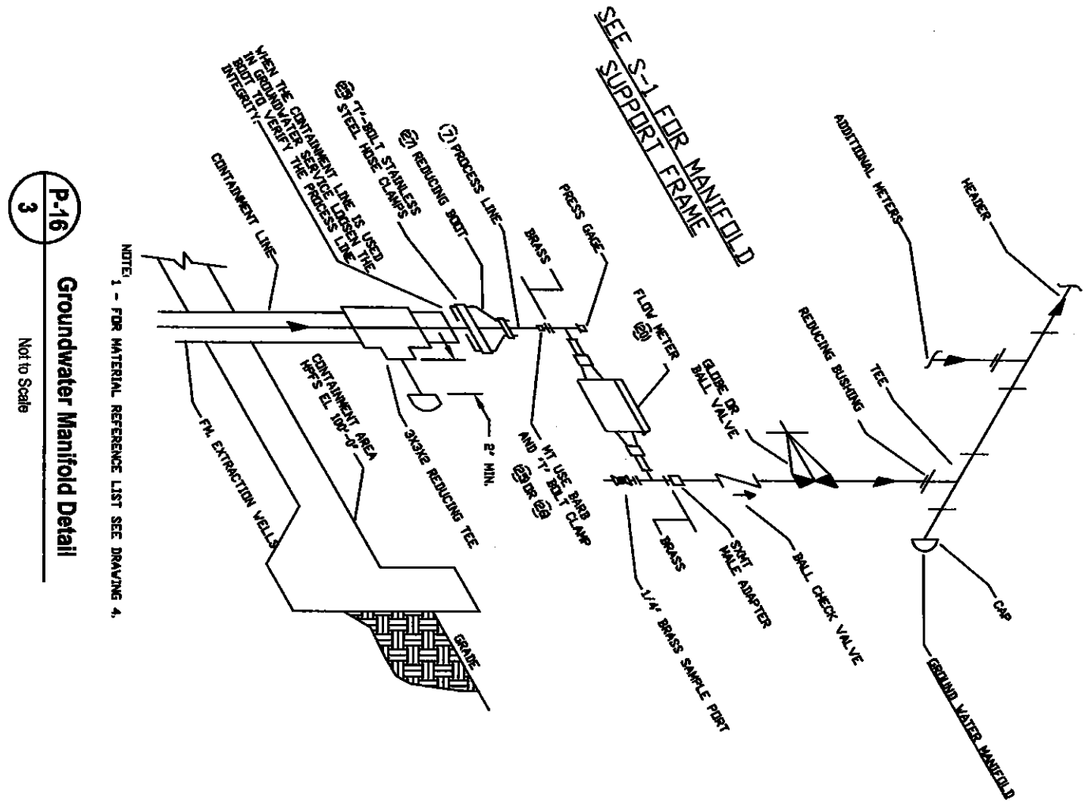
Remediation System Expansion
As-built Civil Details

August 10, 2006

CAMBRIA

Shell-branded Service Station
2120 Montana Street
Oakland, California
Incident # 98995740

FIGURE
2



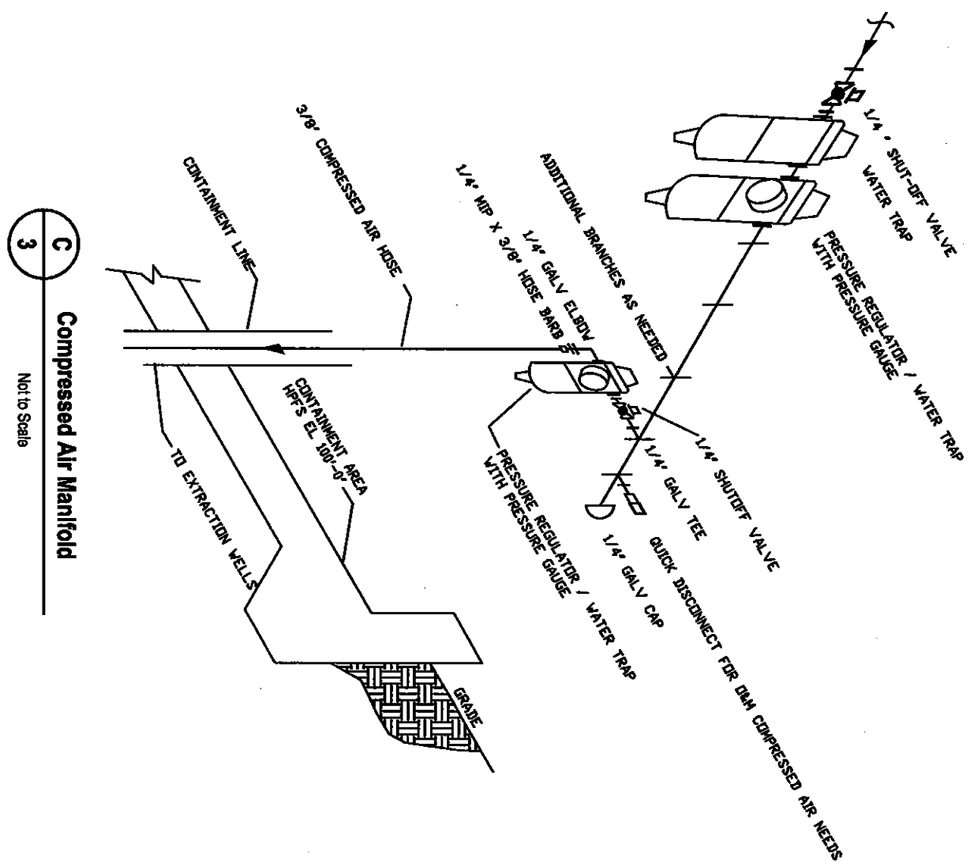


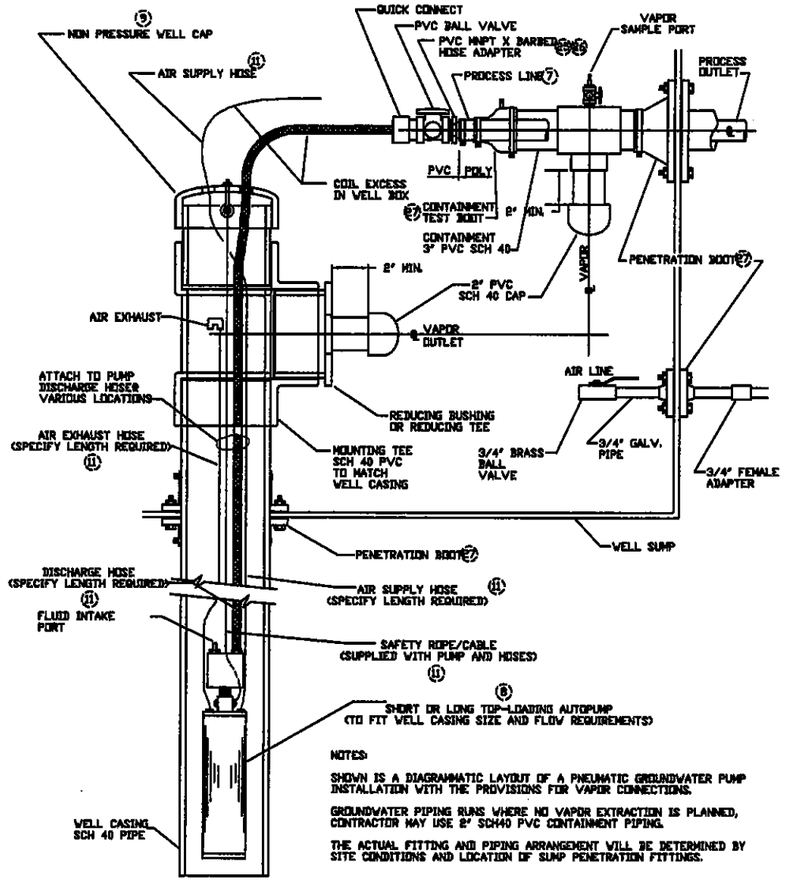
FIGURE 3

Shell-branded Service Station
2120 Montana Street
Oakland, California
Incident # 98995740

CAMBRIA

Remediation System Expansion
As-built Mechanical Details (1)

August 10, 2006



NOTES:

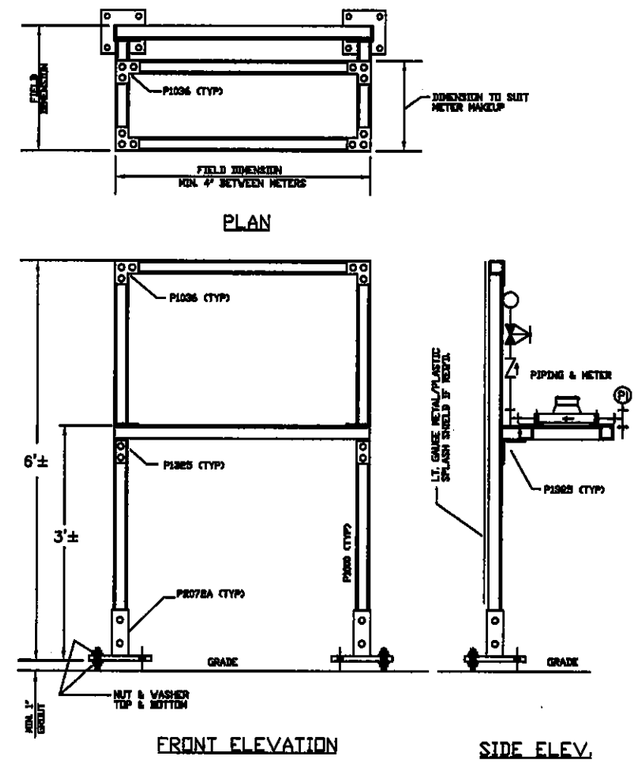
SHOWN IS A DIAGRAMMATIC LAYOUT OF A PNEUMATIC GROUNDWATER PUMP INSTALLATION WITH THE PROVISIONS FOR VAPOR CONNECTIONS.

GROUNDWATER PIPING RUNS WHERE NO VAPOR EXTRACTION IS PLANNED, CONTRACTOR MAY USE 2" SCH40 PVC CONTAINMENT PIPING.

THE ACTUAL FITTING AND PIPING ARRANGEMENT WILL BE DETERMINED BY SITE CONDITIONS AND LOCATION OF SUMP PENETRATION FITTINGS.

P-9 / 4 **Pneumatic GW Pump Detail**

Not to Scale



NOTE:

ALL MATERIAL CALL OUTS ARE AND/OR APPROVED EQUAL.

S-1 / 4 **Groundwater Manifold Support Detail**

Not to Scale

Remediation System Expansion
As-built Mechanical Details (2)

August 10, 2006

CAMBRIA

Shell-branded Service Station
2120 Montana Street
Oakland, California
Incident # 98995740

FIGURE
4

G:\OAKLAND 2120 MONTANA\FIGURES\REMEDIATION\2006 EXPANSION\FIG4 MECH DETAILS 2.DWG

APPENDIX B

Soil Disposal Documentation

☐ **Keller Canyon Sanitary Landfill**
901 Bailey Road
Pittsburg, CA 94565
Phone (925) 458-9800
Fax (925) 458-9891

☐ **Ox Mountain Sanitary Landfill**
12310 San Mateo Road
Half Moon Bay, CA 94019
Phone (650) 726-1819
Fax (650) 726-9183

☐ **Newby Island Sanitary Landfill**
1601 Dixon Landing Road
Milpitas, CA 95035
Phone (408) 945-2800
Fax (408) 262-2871

☐ **Forward Landfill**
9999 S. Austin Road
Manteca, CA 95336
Phone (209) 982-4298
Fax (209) 982-1009

NON-HAZARDOUS WASTE MANIFEST

GENERATOR: Equilon Enterprises, LLC
MAILING ADDRESS: P.O. Box 4935
CITY, STATE, ZIP: Houston, TX 77210
PHONE: 707-865-0251
CONTACT PERSON: Denis Brown
SIGNATURE OF AUTHORIZED AGENT / TITLE: * Sheryl Kim A Manley
DATE:

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or title 22 of the California code of regulations, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

WASTE TYPE:
☐ DISPOSAL ☐ SLUDGE
☐ CONSTRUCTION ☐ WOOD
☐ DEBRIS ☐ OTHER
☐ SPECIAL WASTE

GENERATING FACILITY: 2120 Montana, Oakland, CA

WASTE ACCEPTANCE NO.
– #6246

REQUIRED PERSONAL PROTECTIVE EQUIPMENT
☐ GLOVES ☐ GOGGLES ☐ RESPIRATOR ☐ HARD HAT
☐ TY-VEK ☐ OTHER

SPECIAL HANDLING PROCEDURES:

RECEIVING FACILITY

RIPR# 53395 SAP#
Incident# 98005740 WIC #

TRANSPORTER: Manley & Sons Trucking, Inc.
ADDRESS: 9806 Elder Creek Rd.
CITY, STATE, ZIP: Sacramento, CA 95828
PHONE: (916) 681-9804
SIGNATURE OF AUTHORIZED AGENT OR DRIVER: *
DATE: 6/7/06

NOTES:
VEHICLE LICENSE NUMBER: 6766802
TRUCK NUMBER: 12

END DUMP ☐ BOTTOM DUMP ☐ TRANSFER ☐
ROLL-OFF(S) ☐ FLAT-BED ☐ VAN ☐ DRUMS ☐

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

REMARKS

FACILITY TICKET NUMBER

SIGNATURE OF AUTHORIZED AGENT: *
DATE:

CUBIC YARDS: 8 CY

DISPOSAL METHOD: (TO BE COMPLETED BY LANDFILL)

	DISPOSE	OTHER
☐ SOIL		
☐ CONSTRUCTION DEBRIS		
☐ NON-FRIABLE ASBESTOS		
☐ WOOD		
☐ ASH		
☐ SPECIAL OTHER		

SCHEDULING MUST BE MADE PRIOR TO 3:00 P.M. THE DAY PRIOR TO EXPECTED ARRIVAL • ANY UNSCHEDULED LOADS ARE SUBJECT TO REFUSAL UPON ARRIVAL. ONGOING DAILY DELIVERIES MUST BE SCHEDULED WITH THE LANDFILL THE DAY BEFORE

GENERATOR COPY

MANIFEST # 454797

FORWARD INCORPORATED

9999 South Austin Road/WEIGHING LOCATION
Manteca, CA 95336
Landfill: (209) 982-4298 / WEIGHING LOCATION
Resource Recovery: (209) 982-4936

P.O. Box 6336
Stockton, CA 95206
Main Office: (209) 466-4482
Fax: (209) 465-0631

147670

SITE	TICKET	GRID
01	124020	

SCALE OPERATOR
LIZARRAGA CORPEIE R

DATE IN	TIME IN
7 June 2006	7:27 am

DATE OUT	TIME OUT
7 June 2006	7:27 am

VEHICLE	ROLL OFF
MGN HC	

REFERENCE	ORIGIN
	OAKLAND

006264
SHELL OIL PRODUCTS
DENIS BROWN - RIPR #51702
SITE: 2120 MONTANA ST. OAKLAND
P O BOX 4935, HOUSTON, TX 77210-4935
Contract: 6246#

00 Gross Weight 39,680.00 lb
Stored Tare Weight 21,100.00 lb
Net Weight 18,580.00 lb 9.29 TN

Inbound - SCALE TICKET

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
9.29	TN	29 LCSOIL				

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

GRID

MANIFEST#84797

DRIVER'S SIGNATURE ______________________

APPENDIX C

Laboratory Analytical Report

SEVERN TRENT STL

Submission#: 2005-06-0483

Cambria Environmental Emeryville

June 28, 2005

5900 Hollis Street, Ste. A
Emeryville, CA 94608

Attn.: Cynthia Vasko

Project#: 247-0733-017
Project: 98995740
Site: 2120 Montana, Oakland, CA

Dear Ms. Vasko:

Attached is our report for your samples received on 06/17/2005 09:30
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 08/01/2005 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions,

You can also contact me via email. My email address is: mbrewer@stl-inc.com

Sincerely,

Melissa Brewer

Melissa Brewer
Project Manager

SEVERN TRENT STL

Submission: 2005-06-0483

Total Lead

Cambria Environmental Emeryville
Attn.: Cynthia Vasko

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3344 Fax: (510) 420-9170

Project: 247-0733-017
98995740

Received: 06/17/2005 09:30

Site: 2120 Montana, Oakland, CA

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SP-1	06/16/2005 13:00	Soil	1

Total Lead

Cambria Environmental Emeryville
Attn.: Cynthia Vasko

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3344 Fax: (510) 420-9170

Project: 247-0733-017
98995740

Received: 06/17/2005 09:30

Site: 2120 Montana, Oakland, CA

Prep(s): 3050B
Sample ID: **SP-1**
Sampled: 06/16/2005 13:00
Matrix: Soil

Test(s): 6010B
Lab ID: 2005-06-0483 - 1
Extracted: 6/22/2005 15:02
QC Batch#: 2005/06/22-02.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Lead	42	1.0	mg/Kg	1.00	06/24/2005 10:20	

Total Lead

Cambria Environmental Emeryville
Attn.: Cynthia Vasko

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3344 Fax: (510) 420-9170

Project: 247-0733-017
98995740

Received: 06/17/2005 09:30

Site: 2120 Montana, Oakland, CA

Batch QC Report

Prep(s): 3050B
Method Blank

Soil

Test(s): 6010B
QC Batch # 2005/06/22-02.15

MB: 2005/06/22-02.15-025

Date Extracted: 06/22/2005 15:02

Compound	Conc.	RL	Unit	Analyzed	Flag
Lead	ND	1.0	mg/Kg	06/24/2005 10:06	

Total Lead

Cambria Environmental Emeryville
Attn.: Cynthia Vasko

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3344 Fax: (510) 420-9170

Project: 247-0733-017
98995740

Received: 06/17/2005 09:30

Site: 2120 Montana, Oakland, CA

Batch QC Report

Prep(s): 3050B

Test(s): 6010B

Laboratory Control Spike **Soil** **QC Batch # 2005/06/22-02.15**

LCS 2005/06/22-02.15-026 Extracted: 06/22/2005 Analyzed: 06/24/2005 10:08

LCSD 2005/06/22-02.15-027 Extracted: 06/22/2005 Analyzed: 06/24/2005 10:12

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Lead	103	101	100.0	103.0	101.0	2.0	80-120	20		

SEVERN TRENT STL

Submission: 2005-06-0483

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Cambria Environmental Emeryville
Attn.: Cynthia Vasko

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3344 Fax: (510) 420-9170

Project: 247-0733-017
98995740

Received: 06/17/2005 09:30

Site: 2120 Montana, Oakland, CA

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SP-1	06/16/2005 13:00	Soil	1

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Cambria Environmental Emeryville

Attn.: Cynthia Vasko

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3344 Fax: (510) 420-9170

Project: 247-0733-017
98995740

Received: 06/17/2005 09:30

Site: 2120 Montana, Oakland, CA

Prep(s): 5030B
Sample ID: **SP-1**
Sampled: 06/16/2005 13:00
Matrix: Soil

Test(s): 8260B
Lab ID: 2005-06-0483 - 1
Extracted: 6/26/2005 08:29
QC Batch#: 2005/06/26-1A.66

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	06/26/2005 08:29	
Benzene	ND	0.0050	mg/Kg	1.00	06/26/2005 08:29	
Toluene	ND	0.0050	mg/Kg	1.00	06/26/2005 08:29	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	06/26/2005 08:29	
Total xylenes	ND	0.0050	mg/Kg	1.00	06/26/2005 08:29	
Surrogate(s)						
1,2-Dichloroethane-d4	114.1	76-124	%	1.00	06/26/2005 08:29	
Toluene-d8	93.9	75-116	%	1.00	06/26/2005 08:29	

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Cambria Environmental Emeryville

Attn.: Cynthia Vasko

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3344 Fax: (510) 420-9170

Project: 247-0733-017
98995740

Received: 06/17/2005 09:30

Site: 2120 Montana, Oakland, CA

Batch QC Report

Prep(s): 5030B
Method Blank
MB: 2005/06/26-1A.66-053

Soil

Test(s): 8260B
QC Batch # 2005/06/26-1A.66
Date Extracted: 06/26/2005 07:53

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	06/26/2005 07:53	
Benzene	ND	0.0050	mg/Kg	06/26/2005 07:53	
Toluene	ND	0.0050	mg/Kg	06/26/2005 07:53	
Ethyl benzene	ND	0.0050	mg/Kg	06/26/2005 07:53	
Total xylenes	ND	0.0050	mg/Kg	06/26/2005 07:53	
Surrogates(s)					
1,2-Dichloroethane-d4	110.0	76-124	%	06/26/2005 07:53	
Toluene-d8	94.6	75-116	%	06/26/2005 07:53	

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Cambria Environmental Emeryville
Attn.: Cynthia Vasko

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3344 Fax: (510) 420-9170

Project: 247-0733-017
98995740

Received: 06/17/2005 09:30

Site: 2120 Montana, Oakland, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Soil** **QC Batch # 2005/06/26-1A.66**

LCS 2005/06/26-1A.66-028 Extracted: 06/26/2005 Analyzed: 06/26/2005 07:28

LCSD

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	0.0487		0.05	97.4			69-129	20		
Toluene	0.0522		0.05	104.4			70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	528		500	105.6			76-124			
Toluene-d8	470		500	94.0			75-116			

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Cambria Environmental Emeryville
Attn.: Cynthia Vasko

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3344 Fax: (510) 420-9170

Project: 247-0733-017
98995740

Received: 06/17/2005 09:30

Site: 2120 Montana, Oakland, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD) **Soil** **QC Batch # 2005/06/26-1A.66**

MS/MSD

Lab ID: 2005-06-0452 - 008

MS: 2005/06/26-1A.66-044 Extracted: 06/26/2005 Analyzed: 06/26/2005 09:44

Dilution: 1.00

MSD: 2005/06/26-1A.66-009 Extracted: 06/26/2005 Analyzed: 06/26/2005 10:09

Dilution: 1.00

Compound	Conc. mg/Kg			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	mg/Kg	MS	MSD	RPD	Rec.	RPD	MS	MSD
Benzene	0.0411	0.0435	ND	0.039246	104.8	116.2	10.3	69-129	20		
Toluene	0.0422	0.0471	ND	0.039246	107.7	125.9	15.6	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	604	566		500	120.8	113.2		76-124			
Toluene-d8	469	483		500	93.8	96.6		75-116			

Calscience
Environmental
Laboratories, Inc.

June 30, 2005

Melissa Brewer
Severn Trent Laboratories, Inc.
1220 Quarry Lane
Pleasanton, CA 94566-4756

Subject: **Calscience Work Order No.:** **05-06-1825**
Client Reference: **2005-06-0483 / 247-0733-017 / 98995740**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 6/29/2005 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The original report of any subcontracted analysis is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Ranjit K.F. Clarke

Calscience Environmental
Laboratories, Inc.
Ranjit Clarke
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Severn Trent Laboratories, Inc.
1220 Quarry Lane
Pleasanton, CA 94566-4756

Date Received: 06/29/05
Work Order No: 05-06-1825
Preparation: DHS LUFT
Method: DHS LUFT

Project: 2005-06-0483 / 247-0733-017 / 98995740

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
SP-1	05-06-1825-1	06/16/05	Solid	06/29/05	06/29/05	050629L11

Parameter	Result	RL	DF	Qual	Units
Organic Lead	ND	1.00	1		mg/kg

Method Blank	099-10-020-427	N/A	Solid	06/29/05	06/29/05	050629L11

Parameter	Result	RL	DF	Qual	Units
Organic Lead	ND	0.100	1		mg/kg

RL - Reporting Limit, DF - Dilution Factor, Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Severn Trent Laboratories, Inc.
1220 Quarry Lane
Pleasanton, CA 94566-4756

Date Received: 06/29/05
Work Order No: 05-06-1825
Preparation: DHS LUFT
Method: DHS LUFT

Project 2005-06-0483 / 247-0733-017 / 98995740

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
05-06-1826-1	Solid	FLAA	06/29/05	06/29/05	050629S11

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Organic Lead	50	52	22-148	3	0-18	

RPD - Relative Percent Difference, CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Laboratory Control Sample

Severn Trent Laboratories, Inc.		Date Received:	N/A
1220 Quarry Lane		Work Order No:	05-06-1825
Pleasanton, CA 94566-4756		Preparation:	DHS LUFT
		Method:	DHS LUFT

Project: 2005-06-0483 / 247-0733-017 / 98995740

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	Lab File ID	LCS Batch Number
099-10-020-427	Solid	FLAA	06/29/05	NONE	050629L11

Parameter	Conc Added	Conc Recovered	LCS %Rec	%Rec CL	Qualifiers
Organic Lead	25.0	26.5	106	72-126	

RPD - Relative Percent Difference; CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 05-06-1825

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike or Matrix Spike Duplicate compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

SEVERN TRENT STL

Date Shipped: 6/28/2005

Chain of Custody

(1825)

2005-06-0483 - 1

From:		To:	
STL San Francisco (CL) 1220 Quarry Lane Pleasanton, CA 94566-4756		CalScience Analytical Laboratory 7440 Lincoln Way Garden Grove, CA 92841	
Project Manager:	Melissa Brewer	Phone:	(714) 895-5494 Ext:
Phone:	Ext:	Fax:	() -
Fax:	(925) 484-1096	Contact:	Sample Control
Email:	mbrewer@stl-inc.com	Phone:	(714) 895-5494 Ext:

CL Submission #:	2005-06-0483	Project #:	247-0733-017
CL PO #:		Project Name:	98995740
		EDF Global ID:	T0600102230

Client Sample ID / Analysis		Sampled	Matrix / Method	TAT
SP-1 EDF Field ID: SP-1	1	6/16/2005 1:00:00PM	Soil	
Subcontract - Organic Lead /* Results Due: ~~7/7/05~~ */ 7/1/05			LUFT	5 Day

PLEASE INCLUDE QC WITH FAXED AND HARD-COPY RESULTS

RUSH

RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: [signature] Time: 1500	Signature: Fed Ex Time: 10:00	Signature: Time:
Printed Name: M. VILLANUEVA Date: 06/28/05	Printed Name: Date: 6/29/05	Printed Name: Date:
Company: STL SF	Company:	Company:

RECEIVED BY: 1.	RECEIVED BY: 2.	RECEIVED BY: 3.
Signature: [signature] Time: 10:00	Signature: Time:	Signature: Time:
Printed Name: W. BARTIN Date: 6-29-05	Printed Name: Date:	Printed Name: Date:
Company: CEL	Company:	Company:

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 05 - 06 - 1825

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: STL DATE: 6-29-05

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.
_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

_____ °C Temperature blank.
3.9 °C IR thermometer.
_____ Ambient temperature.

Initial: WB

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: ✓ No (Not Intact): _____ Not Applicable (N/A): _____

Initial: WB

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers for analyses requested	✓		
Proper preservation noted on sample label(s)			✓
VOA vial(s) free of headspace			✓
Tedlar bag(s) free of condensation			✓

Initial: WB

COMMENTS:

IB STL San francisc — **SHELL Chain Of Custody Record** — 116697

3 76
0657

Shell Project Manager to be invoiced:

- ☐ SCIENCE & ENGINEERING
- ☑ TECHNICAL SERVICES
- ☐ CRMT HOUSTON

Dennis Brown

2005-06-0483

INCIDENT NUMBER (S&E ONLY): 9 8 9 9 5 7 4 0

SAP or CRMT NUMBER (TS/CRMT): [redacted] 1 3 5 6 7 5

DATE: 6/16/05

Page 1 of 2

SAMPLING COMPANY	Cambria Environmental
LOG CODE	CETO
SITE ADDRESS (Street and City)	2120 Montana, Oakland, CA
GLOBAL ID NO.	T0600102236
ADDRESS	5900 Hollis Street, Suite A, Emeryville, CA.
EDF DELIVERABLE TO (Responsible Party or Designee)	shelloaklandedf@cambria-env.com
PHONE NO.	510-420-0700
E-MAIL	cvasko@CAMBRIA-ENV.COM
CONSULTANT PROJECT NO.	247-0733-(007 / 8)
PROJECT CONTACT (Hardcopy or PDF Report to)	Cynthia Vasko / Stu Dalie
SAMPLER NAME(S) (Print)	Stu Dalie
TELEPHONE	510-420-3344
FAX	510-420-9170
E-MAIL	cvasko@cambria-env.com
LAB USE ONLY	

TURNAROUND TIME (BUSINESS DAYS): ☑ 10 DAYS ☐ 5 DAYS ☐ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: ____

GC/MS MTBE CONFIRMATION: HIGHEST ____ HIGHEST per BORING ____ ALL ____

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NOT NEEDED ☐

please cc lab results to cvasko@cambria-env.com and sdalie@cambria-env.com

1 4pt comp for waste disposal

REQUESTED ANALYSIS: TPHg (EPA Method 8260); BTEX (EPA Method 8260); TBA (EPA Method 8260); MTBE (8260B - 0.5ppb RL); 5 oxygenates; Ethanol (8260B); Methanol; EDB & 1,2-DCA (8260B); EPA 5035 Extraction for Volatiles; VOCs Halogenated/Aromatic (8021B); TRPH (418.1); Vapor VOCs BTEX / MTBE (TO-15); Vapor VOCs Full List (TO-15); Vapor TPH (ASTM 3416m); Vapor Fixed Gases (ASTM D1946); Test for Disposal (4B-____); Test for Disposal, see attached; TPH - Diesel, Extractable (8015m); MTBE (8260B) Confirmation, See Note

Field Sample Identification	Sampling Date	Sampling Time	Matrix	No. of Cont.	TPHg (EPA Method 8260)	BTEX (EPA Method 8260)	Test for Disposal, see attached	Field Notes
SP-1A	6/16/5	1:00	Soil	1	X	X	X	SP-1
SP-1B	↓	↓	↓	1	X	X	X	SP-1
SP-1C	↓	↓	↓	1	X	X	X	SP-1
SP-1D	↓	↓	↓	1	X	X	X	SP-1

FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes

On ICE; Field point ID

TEMPERATURE ON RECEIPT C°: 3

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
[signature]	[signature]	6/16/05	by 5 pm
[signature]	[signature]	6/17/05	0930
[signature]	[signature]	6.17.05	1200

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client.

10/16/00 Revision

Brewer, Melissa

From: Vasko, Cynthia [cvasko@cambria-env.com]
Sent: Tuesday, June 28, 2005 1:26 PM
To: Brewer, Melissa
Cc: 'Barone, Ron'
Subject: RE: Partial 2120 Montana, Oakland, CA: 2005-06-0483

That should be fine; thanks.

Cynthia Vasko
Project Engineer
Cambria Environmental Technology, Inc.
5900 Hollis Street, Suite A, Emeryville, CA 94608
phone: 510-420-3344
fax: 510-420-9170
cell: 510-385-0137 (change)

-----Original Message-----
From: Brewer, Melissa [mailto:MBrewer@stl-inc.com]
Sent: Tuesday, June 28, 2005 1:00 PM
To: Cynthia Vasko
Cc: Dalle, Stu
Subject: Partial 2120 Montana, Oakland, CA: 2005-06-0483

From: Melissa Brewer <mbrewer@stl-inc.com>

Project# : 247-0733-017
Project Name: 98995740

This email includes reports for the following tests:

- Cover Letter
  File: STLSF2005060483-Finalreport-FRP0000485330.PDF

Sorry, I forgot to mention that we'll need to add Organic Lead to this project and ship the sample to Calscience. What TAT do you need for the Organic Lead? Presently the project is due by this Friday.

Please let me know if you have any questions.

Melissa Brewer
Project Manager

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566-4756
Phone: (925) 484-1919
Fax: (925) 484-1096