RO 271

CAMBRIA

December 3, 2002

Alameda County
DEC 13 2002
Environmental Health

Mr. Barney Chan
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Re: **Groundwater Monitoring and System Progress Report**
Third Quarter 2002
Former Exxon Service Station
3055 35th Avenue
Oakland, California
Cambria Project #130-0105

Dear Mr. Chan:

On behalf of Mr. Lynn Worthington of Golden Empire Properties, Cambria Environmental Technology, Inc. (Cambria) has prepared this groundwater monitoring and system progress report for the above-referenced site. Presented in the report are the third quarter 2002 activities and the anticipated fourth quarter 2002 activities.

If you have any questions or comments regarding this report, please call me at (510) 450-1983.

Sincerely,
Cambria Environmental Technology, Inc.

Ron Scheele, RG
Senior Geologist

Attachments: Groundwater Monitoring and System Progress Report, Third Quarter 2002

cc: Mr. Lynn Worthington, Golden Empire Properties, Inc. 5942 MacArthur Boulevard, Suite B, Oakland, CA 94605
Mr. Robert Cave, BAAQMD, Permit Services Division, 939 Ellis Street, San Francisco, CA 94109

Oakland, CA
San Ramon, CA
Sonoma, CA

Cambria Environmental Technology, Inc.

1144 65th Street
Suite B
Oakland, CA 94608
Tel (510) 420-0700
Fax (510) 420-9170

CAMBRIA

GROUNDWATER MONITORING AND SYSTEM PROGRESS REPORT

THIRD QUARTER 2002

Former Exxon Service Station
3055 35th Avenue
Oakland, California
Cambria Project #130-0105

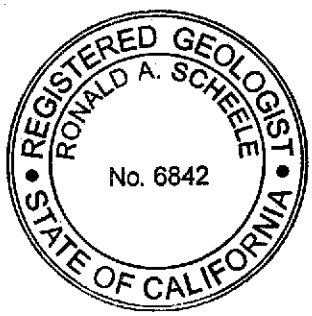
December 3, 2002

Prepared for:

Mr. Lynn Worthington
Golden Empire Properties, Inc.
5942 MacArthur Boulevard, Suite B
Oakland, CA 94605

Prepared by:

Cambria Environmental Technology, Inc.
6262 Hollis Street
Emeryville, California 94608



Oakland, CA
San Ramon, CA
Sonoma, CA

Cambria Environmental Technology, Inc.

1144 65th Street
Suite B
Oakland, CA 94608
Tel (510) 420-0700
Fax (510) 420-9170

Matthew A. Meyers
Staff Geologist

Ron Scheele, RG
Senior Geologist

CAMBRIA

GROUNDWATER MONITORING AND SYSTEM PROGRESS REPORT

THIRD QUARTER 2002

Former Exxon Service Station
3055 35th Avenue
Oakland, California
Cambria Project #130-0105

December 3, 2002

INTRODUCTION

On behalf of Mr. Lynn Worthington of Golden Empire Properties, Cambria Environmental Technology, Inc. (Cambria) has prepared this groundwater monitoring and system progress report for the above-referenced site (see Figure 1). Presented in the report are the third quarter 2002 groundwater monitoring and corrective action activities and the anticipated fourth quarter 2002 activities.

THIRD QUARTER 2002 ACTIVITIES

Monitoring Activities

Field Activities: On September 26, 2002, Cambria conducted quarterly monitoring activities. Cambria gauged and inspected for separate-phase hydrocarbons (SPH) in monitoring wells MW-1, MW-2, MW-3 and MW-4 (Figure 1). Groundwater samples were collected from all scheduled wells not containing SPH. Field data sheets are presented in Appendix A.

Sample Analyses: Groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) and total petroleum hydrocarbons as diesel (TPHd) by modified EPA Method 8015, and benzene, toluene, ethylbenzene and xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA Method 8021B. The groundwater analytical results are summarized in Table 1. The laboratory analytical report is presented as Appendix B.

Monitoring Results

Groundwater Flow Direction: Depth-to-water measurements were collected during Cambria's September 26, 2002 site visit (Figure 1). The groundwater gradient was affected by a two phase extraction (TPE) remediation system in which down-well stingers are used to extract groundwater from wells MW-1, MW-2, MW-3, MW-4, RW-5, RW-6, and RW-12. Since 1994, the primary groundwater flow direction has been towards the northwest with a change towards the southwest usually occurring during the fourth and/or second quarters. Groundwater monitoring data is presented in Table 1.

Hydrocarbon Distribution in Groundwater: Hydrocarbon concentrations have decreased in well MW-2 and increased in wells MW-1, MW-3, and MW-4 as compared with the previous sampling event. No SPH were detected in any of the wells. The increase of concentrations in wells MW-1, MW-3, and MW-4 is likely due to varying TPE system operations and reopening MW-4 after it had been closed for almost a month. Since the start of TPE remediation (June 2000), all monitoring wells exhibit a decreasing hydrocarbon concentration trend (See Appendix D for individual well concentration trend graphs). The maximum TPHg, TPHd, and benzene concentrations were detected in well MW-3 at 50,000, 130,000, and 3,900 micrograms per liter (μg/L), respectively. MTBE concentrations were below laboratory detection limits in all sampled wells. Analytical results are summarized in Table 1. See Appendix E for confirmation of groundwater data submittal to the State's "Geotracker Database".

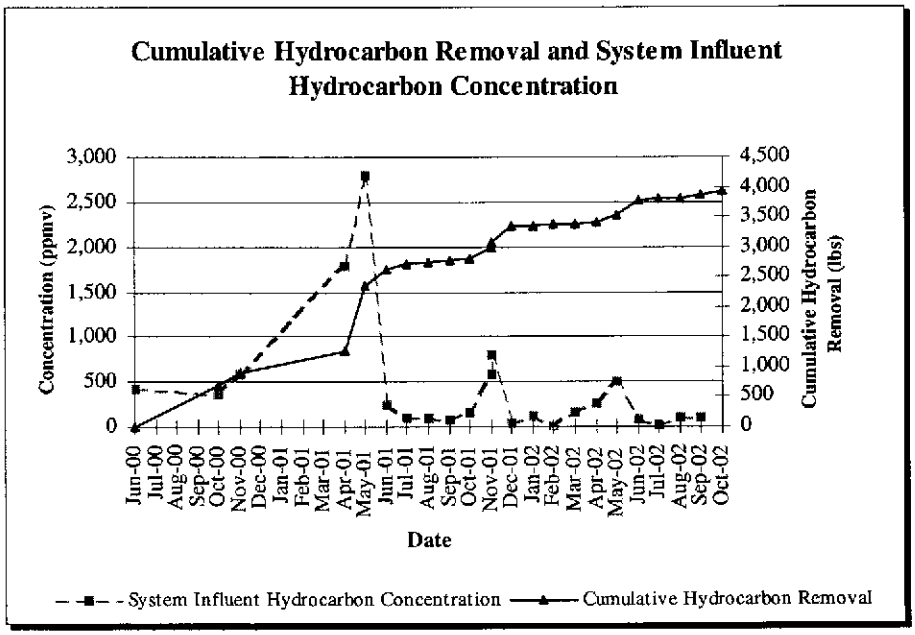
Corrective Action Activities

System Design and Modifications Prior to August 6, 2002, the TPE remediation system consisted of a trailer mounted all-electric catalytic oxidizer, a 300-cfm positive-displacement (PD) blower, a 150-gallon moisture knockout with automatic float controls, a 1 horsepower centrifugal transfer pump, and two 1,000-lb carbon vessels connected in series. On August 6, 2002, the existing extraction equipment was replaced with a new integrated all electric catalytic oxidizer and a 20-hp liquid-ring pump. The system modification will reduce the system noise generated by the previous PD blower that had resulted in several complaints from the nearby neighbors. A new hour meter was also installed as part of the new equipment. Fourteen wells are connected to the remediation system (RW-5 through RW-14, and MW-1 through MW-4) via a 4-inch diameter PVC trunk line. One-inch diameter stingers are inserted into each well to allow the simultaneous extraction of soil vapor and groundwater from the well.

Remediation System Operations and Maintenance Activities: During the third quarter, Cambria performed TPE system operation and maintenance activities approximately 3 times per month. During operation and maintenance activities, individual well flow, vacuum, and hydrocarbon concentration

measurements were collected from all remediation system wells and from the catalytic oxidizer/blower (See Tables 2, 3, and 4). During site visits, system operation parameters were also recorded in specialized field forms for future system optimization and agency inspection. As per the Bay Area Air Quality Management (BAAQMD) permit, a catalytic oxidizer operating temperature greater than 600 degrees Fahrenheit was maintained and system operation parameters were continuously measured using a chart recorder. System influent and effluent vapor samples were collected and submitted for laboratory analysis on a monthly basis. Groundwater treatment system influent and effluent samples were collected on a monthly basis. Table 2 summarizes soil vapor extraction system operations and analytical results. Table 3 summarizes groundwater extraction system parameters and analytical results. Table 4 summarizes the individual extraction well parameters. The system analytical laboratory reports are included as Attachment C.

Remediation System Performance: From July 2 through October 2, the TPE system operated continuously without shutdowns, for a total of 2,367 hours. To maximize site cleanup select remediation wells were opened and closed, and well stinger depths were adjusted to account for seasonal changes in the groundwater table (see Table 4). System influent and effluent vapor samples were collected and submitted for laboratory analysis on July 2, August 6, and September 10, 2002. System influent vapor concentrations increased during the quarter and ranged from 26 to 103 parts per million by volume (ppmv). Hydrocarbon removal rates increased during the quarter and ranged from 0.7 to 5.0 lbs/day. System effluent vapor concentrations were below laboratory detection limits indicating that the catalytic oxidizer was achieving proper destruction efficiency and was operating within permit requirements. To date, a total of 3,921 pounds of hydrocarbons have been destroyed



by vapor extraction (see inserted graph above and Table 2). Please note that all previous flow rate measurements were converted from actual cubic feet per minute (acfm) to standard cubic feet per minute (scfm) to account for air volume affects when the measurements were collected. Flow rate measurements in scfm will provide a more accurate calculation of hydrocarbon removal rates and total mass removed.

From July 2 to October 2, 2002, approximately 38,428 gallons of groundwater was extracted and treated onsite using granular activated carbon. The groundwater extraction rate ranged from 0.3 to 0.6 gallons per minute. The groundwater extraction rates were lower than the previous quarters to due seasonally lower groundwater table. Groundwater treatment system influent and effluent samples were collected on July 2, August 6, and September 10, 2002. System effluent groundwater concentrations for TPHg and BTEX were below laboratory detection limits indicating that no hydrocarbons were discharged to the sanitary sewer system and that the groundwater extraction portion of the TPE system was operating within permit requirements. Groundwater extraction and treatment have removed a total of 1.584 pounds of hydrocarbons to date.

ANTICIPATED FOURTH QUARTER 2002 ACTIVITIES

Monitoring Activities

Cambria will gauge the site wells, check the wells for SPH, and collect groundwater samples from all wells not containing SPH. Groundwater samples will be analyzed for TPHg and TPHd by Modified EPA Method 8015 and BTEX and MTBE by EPA Method 8021B. Cambria will prepare a groundwater monitoring report summarizing the monitoring activities and results. Cambria will submit groundwater monitoring and analytical data to the State's Geotracker database.

Corrective Action Activities:

Cambria will continue to perform TPE operation and maintenance activities twice per month during the fourth quarter of 2002. The depth of extraction stingers will be adjusted in an effort to maximize hydrocarbon removal and TPE operations may vary between select wells to optimize site cleanup. System influent and effluent vapor and groundwater samples will be collected on a monthly basis, and system operation and performance will be evaluated and optimized. Records will be kept for a period of two years for possible future BAAQMD inspection.

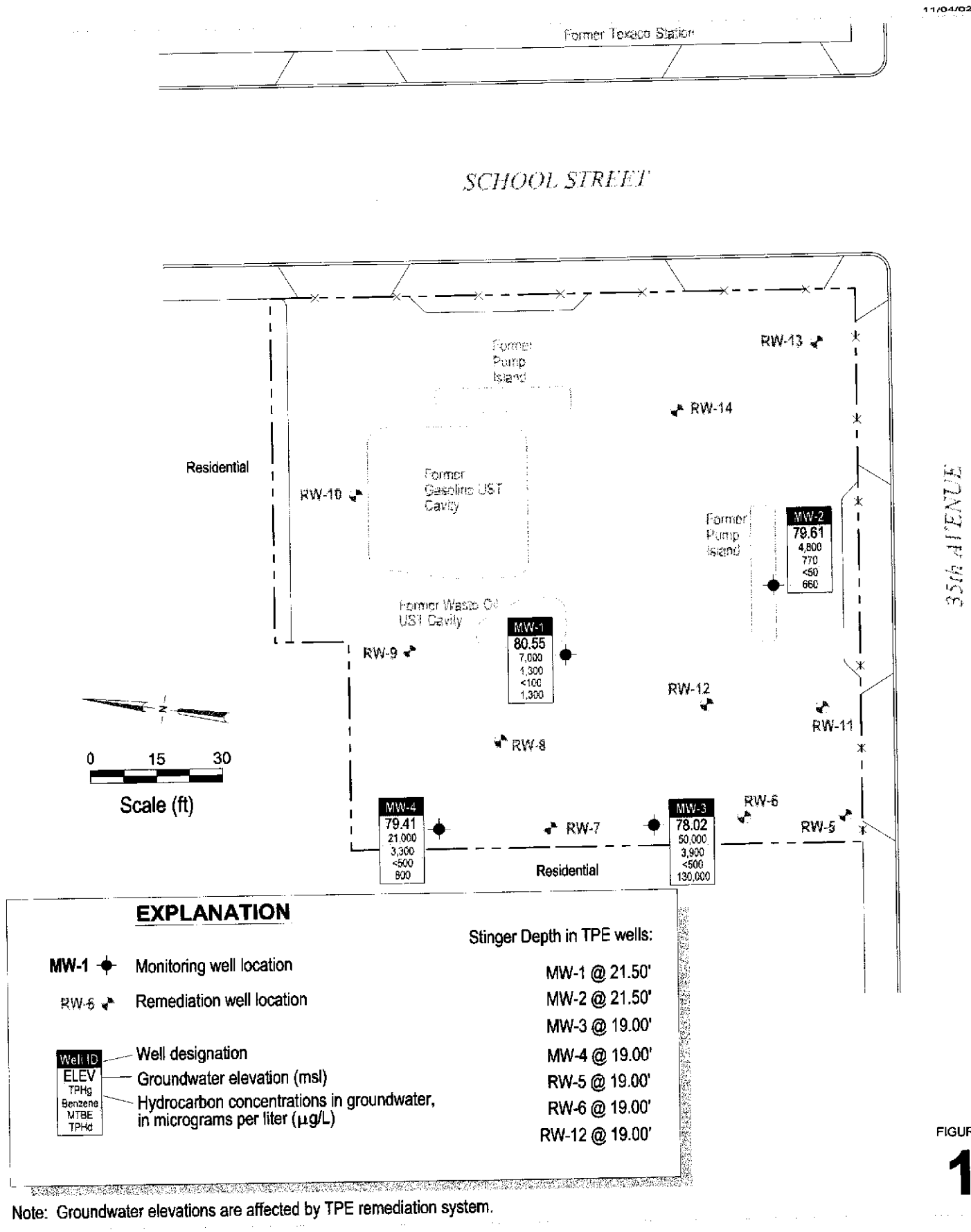
ATTACHMENTS

Figure 1 – Groundwater Elevation and Analytical Summary Map

Table 1 – Groundwater Elevations and Analytical Data
Table 2 – TPE System Performance and Analytical Results - Soil Vapor Extraction
Table 3 – TPE System Performance and Analytical Results - Groundwater Extraction
Table 4 – TPE Well Parameters

Appendix A – Groundwater Monitoring Field Data Sheets
Appendix B – Analytical Results for Quarterly Groundwater Sampling
Appendix C – Analytical Results for TPE System Operation
Appendix D – TPHg and Benzene Concentration Trend Graphs
Appendix E – Electronic Delivery Confirmations

H:\Sb-2004 (UST Fund)\Oakl-002 - Lynn\Qm\2002\Worthington QMR 3q02.doc



EXPLANATION

MW-1 — Monitoring well location

RW-6 — Remediation well location

Well ID
ELEV
TPHg
Benzene
MTBE
TPHd

- Well designation
- Groundwater elevation (msl)
- Hydrocarbon concentrations in groundwater, in micrograms per liter (µg/L)

Stinger Depth in TPE wells:

MW-1 @ 21.50'
MW-2 @ 21.50'
MW-3 @ 19.00'
MW-4 @ 19.00'
RW-5 @ 19.00'
RW-6 @ 19.00'
RW-12 @ 19.00'

Note: Groundwater elevations are affected by TPE remediation system.

FIGURE
1

H:\SB-2004\OAK-002\FIGURES\3QM02-MP.DWG

Former Exxon Station
3055 35th Avenue
Oakland, California

CAMBRIA

Groundwater Elevation and Analytical Summary Map
September 26, 2002

Table 1. Groundwater Elevations and Analytical Data - Former Exxon Service Station, 3055 35th Avenue, Oakland, California

Well ID (TOC)	Date	GW Depth (ft)	SPH (ft)	GW Elev. (ft)	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO (mg/L)
					<---------- Concentrations in parts per billion (µg/L) ---------->								
MW-1	05/25/94	16.79	Sheen	84.06	120,000	25,000	<50,000	22,000	17,000	2,800	16,000	---	---
100.85	07/19/94	20.77	---	80.08	---	---	---	---	---	---	---	---	---
	08/18/94	21.04	Sheen	79.81	925,000	---	---	16,500	6,200	1,000	9,400	---	---
	11/11/94	15.80	---	85.05	57,000	---	---	14,000	4,400	1,400	6,400	---	---
	02/27/95	15.53	---	85.32	45,000	---	---	2,900	2,500	760	4,100	---	---
	05/23/95	15.29	---	85.56	22,000	---	---	9,900	990	790	2,000	---	---
	08/22/95	20.90	---	79.95	23,000	---	---	6,900	340	1,200	1,900	---	---
	11/29/95	22.19	---	78.66	37,000	---	---	9,900	530	1,600	2,900	---	---
	02/21/96	11.69	---	89.16	33,000	4,300	---	10,000	480	1,000	1,800	3,300	---
	05/21/96	14.62	---	86.23	36,000	8,500	---	8,500	1,400	1,300	2,800	1,900	---
	08/22/96	22.30	---	78.55	41,000	6,200	---	8,600	1,300	1,500	2,900	<200	8.0
	11/27/96	17.24	Sheen	83.61	38,000	6,100	---	9,600	950	1,600	3,100	<400	5.6
	03/20/97	16.65	---	84.20	33,000	10,000	---	6,100	560	970	2,200	<400	8.5
	06/25/97	19.77	---	81.08	31,000	7,400[a]	---	7,400	440	890	1,800	<400	3.7
	09/17/97	20.12	---	80.73	32,000[d]	3,500[e]	---	9,100	550	1,000	2,000	<1,000	2.1
	12/22/97	12.95	---	87.90	26,000[d]	5,800[e]	---	7,900	370	920	1,500	<790	0.7
	03/18/98	12.34	Sheen	88.51	30,000[d]	4,200[e,f]	---	7,800	820	840	2,000	<1,100	1.3
	07/14/98	17.34	---	83.51	41,000[d]	8,900[e,f]	---	8,200	1,100	1,200	3,000	<200	1.8
	09/30/98	19.90	---	80.95	37,000	3,300	---	11,000	950	1,200	2,800	<20	2.0
	12/08/98	15.62	---	85.23	22,000	3,700	---	3,000	1,200	730	3,100	<900	---
	03/29/99	11.98	---	88.87	36,000[d]	6,800[e]	---	12,000	750	1,300	2,400	950	0.50
	06/29/99	20.77	---	80.08	28,000[d]	3,500[e]	---	7,300	420	810	1,700	<1,300	0.10
	09/28/99	19.68	---	81.17	13,000[d]	3,600 [e,f]	---	3,200	130	320	1,100	<210	0.55
	12/10/99	17.02	---	83.83	25,000[d]	2,900 [e,f]	---	5,400	130	620	1,400	<1,000	1.03
	03/23/00	12.76	---	88.09	21,000[d]	3,300[f]	---	4,700	140	470	1,100	<350	---
	09/07/00	19.45	---	81.40	40,000[d,g]	12,000[e,g]	---	3,700	1,400	910	4,900	<50	0.17
	12/05/00	18.60	---	82.25	26,000[a]	3,400[e]	---	7,900	150	580	810	<300	0.35
	03/07/01	16.19	---	84.66	13,000	2,400	---	2,700	43	69	300	<100	0.49
	06/06/01	18.47	---	82.38	19,000	4,000	---	4,500	130	270	430	<400	0.39
	08/30/01	21.70	---	79.15	8,800[a]	1,400[d]	---	2,100	45	91	240	<130	0.27

Table 1. Groundwater Elevations and Analytical Data - Former Exxon Service Station, 3055 35th Avenue, Oakland, California

Well ID (TOC)	Date	GW Depth (ft)	SPH (ft)	GW Elev. (ft)	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO (mg/L)
					<---------- Concentrations in parts per billion (µg/L) ---------->								
	12/07/01	26.55	---	74.30	8,700[d]	1,900[e,f]	---	1,300	160	38	730	<20	0.59
	03/11/02	17.13	---	83.72	9,400[d]	1,400[e]	---	2,100	200	74	470	<20	0.39
	06/10/02	24.10	---	76.75	4,200[d]	900[e,k]	---	830	170	110	460	<100	--
	09/26/02	**20.30**	**---**	**80.55**	**7,000[d]**	**1,300[e,f,k]**	**---**	**1,300**	**190**	**200**	**760**	**<100**	**0.70**
MW-2	05/25/94	15.65	---	84.35	61,000	6,900	<5,000	9,900	7,400	960	4,600	---	---
100.00	07/19/94	19.81	---	80.19	---	---	---	---	---	---	---	---	---
	08/18/94	20.37	---	79.63	88,000	---	---	10,750	10,500	1,850	9,600	---	---
	11/11/94	15.52	---	84.48	54,000	---	---	5,900	6,700	1,300	7,500	---	---
	02/27/95	14.46	Sheen	85.54	44,000	---	---	5,100	5,300	930	6,400	---	---
	05/23/95	14.17	---	85.83	33,000	---	---	8,200	5,600	900	6,600	---	---
	08/22/95	19.80	---	80.20	38,000	---	---	6,400	5,000	1,100	5,600	---	---
	11/29/95	21.05	---	78.95	46,000	---	---	7,100	5,300	1,300	6,000	---	---
	02/21/96	10.53	---	89.47	59,000	---	---	8,000	6,000	1,800	8,900	4,500	---
	05/21/96	13.47	---	86.53	51,000	3,400	---	8,200	5,200	1,300	6,600	2,400	---
	08/22/96	19.12	---	80.88	37,000	5,700	---	5,100	3,500	960	4,500	<200	3.0
	11/27/96	16.61	Sheen	83.39	54,000	10,000	---	9,800	7,000	1,800	7,900	<2,000	3.1
	03/20/97	15.39	---	84.61	27,000	6,100	---	3,700	2,300	580	2,800	<400	8.1
	06/25/97	18.62	---	81.38	42,000	7,800[b]	---	7,400	3,800	1,200	5,700	<200	0.9
	09/17/97	19.05	Sheen	80.95	41,000[d]	8,900[e]	---	5,200	3,400	1,300	5,900	<700	1.2
	12/22/97	14.09	---	85.91	47,000[d]	6,100[e]	---	8,500	4,600	1,800	8,400	<1,200	1.2
	03/18/98	10.83	Sheen	89.17	58,000[d]	7,000[e,f]	---	9,300	6,100	1,800	8,200	<1,100	1.1
	07/14/98	16.07	---	83.93	42,000[d]	5,300[e,f]	---	6,000	3,000	1,000	4,800	<200	1.5
	09/30/98	18.71	---	81.29	22,000	2,400	---	3,600	1,300	720	3,200	<30	1.8
	12/08/98	14.80	---	85.20	32,000	3,100	---	9,200	680	1,100	2,300	<2,000	---
	03/29/99	11.81	---	88.19	28,000[d]	7,500[e,f]	---	4,400	1,600	950	4,100	410	1.86
	06/29/99	19.54	---	80.46	28,000[d]	3,300[e]	---	3,500	1,100	690	3,100	<1,000	0.41
	09/28/99	18.61	---	81.39	15,000[d]	3,400[e,f]	---	1,200	540	230	2,300	<36	1.18
	12/10/99	16.53	---	83.47	17,000[d]	2,500[e,f]	---	1,300	780	420	2,700	<40	0.17
	03/23/00	13.56	---	86.44	25,000[d]	3,100[i]	---	1,900	1,100	660	3,700	<500	---
	09/07/00	18.25	---	81.75	62,000[d,g]	32,000[e,g]	---	5,300	2,300	1,500	8,400	<100	0.39

Table 1. Groundwater Elevations and Analytical Data - Former Exxon Service Station, 3055 35th Avenue, Oakland, California

Well ID (TOC)	Date	GW Depth (ft)	SPH (ft)	GW Elev. (ft)	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO (mg/L)
					<---------- Concentrations in parts per billion (µg/L) ---------->								
	12/05/00	17.45	---	82.55	60,000[d,g]	87,000[e,f,g]	---	5,100	2,200	1,600	9,000	<200	0.31
	03/07/01	15.68	---	84.32	34,000	3,900	---	1,200	770	620	4,300	<200	0.44
	06/06/01	17.51	---	82.49	110,000	48,000	---	14,000	9,000	1,900	12,000	<950	0.24
	08/30/01	21.00	---	79.00	43,000[a,h]	15,000[d,h]	---	3,100	720	980	5,500	<200	---
	12/07/01	24.45	---	75.55	4,100[d]	750[e,f]	---	510	88	8.2	580	<20	0.47
	03/11/02	16.95	---	83.05	4,700[d]	590[e]	---	1,200	150	30	310	<50	0.24
	06/10/02	18.59	---	81.41	14,000[d]	2,000[e]	--	2,600	710	150	2,000	<800	--
	09/26/02	**20.39**	**---**	**79.61**	**4,800[d]**	**660[e]**	**--**	**770**	**200**	**140**	**740**	**<50**	**0.29**
MW-3	05/25/94	13.93	Sheen	82.94	56,000	14,000	<50,000	14,000	14,000	1,300	11,000	---	---
96.87	07/19/94	17.04	---	79.83	---	---	---	---	---	---	---	---	---
	08/18/94	17.75	---	79.12	116,000	---	---	28,300	26,000	2,400	15,000	---	---
	11/11/94	17.80	---	79.07	89,000	---	---	1,600	1,900	1,900	14,000	---	---
	02/27/95	11.86	Sheen	85.01	250,000	---	---	22,000	26,000	7,800	21,000	---	---
	05/23/95	11.60	Sheen	85.27	310,000	---	---	18,000	17,000	4,500	2,800	---	---
	08/22/95	17.10	---	79.77	74,000	---	---	14,000	13,000	1,900	11,000	---	---
	11/29/95	16.34	---	80.53	220,000	---	---	25,000	25,000	3,500	19,000	---	---
	02/21/96	7.92	---	88.95	60,000	---	---	10,000	7,800	1,500	8,800	3,400	---
	05/21/96	10.86	Sheen	86.01	69,000	13,000	---	17,000	9,400	1,700	9,400	2,600	---
	08/22/96	16.50	---	80.37	94,000	16,000	---	17,000	15,000	2,100	12,000	330	2.0
	11/27/96	13.47	Sheen	83.40	82,000	24,000	---	14,000	13,000	2,400	13,000	<1,000	2.4
	03/20/97	12.86	---	84.01	56,000	11,000	---	9,900	6,900	1,300	8,000	3,500	9.0
	06/25/97	15.98	---	80.89	49,000	7,700[b]	---	9,700	7,100	1,300	7,000	220	5.8
	09/17/97	16.34	Sheen	80.53	78,000[d]	15,000[e]	---	11,000	9,900	1,800	10,000	<1,200	0.7
	12/22/97	10.71	Sheen	86.16	49,000[d]	14,000[e]	---	7,300	5,300	1,400	7,500	<1,100	3.1
	03/18/98	8.41	Sheen	88.46	120,000[d]	20,000[e,f]	---	21,000	19,000	2,600	15,000	<1,600	1.6
	07/14/98	13.51	---	83.36	94,000[d,g]	65,000[e,f,g]	---	18,000	14,000	1,900	11,000	<1,400	1.8
	09/30/98	16.14	---	80.73	91,000	9,800	---	17,000	13,000	2,100	12,000	<1300	2.0
	12/08/98	11.20	---	85.67	51,000	4,200	---	8,000	6,800	1,400	7,500	<1,100	---
	03/29/99	7.95	---	88.92	39,000[d]	4,600[e]	---	8,900	4,400	940	4,500	810	0.56
	06/29/99	16.98	---	79.89	71,000[d]	6,900[e]	---	12,000	7,300	1,400	8,400	<1,700	0.19

Table 1. Groundwater Elevations and Analytical Data - Former Exxon Service Station, 3055 35th Avenue, Oakland, California

Well ID (TOC)	Date	GW Depth (ft)	SPH (ft)	GW Elev. (ft)	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO (mg/L)
					<---------- Concentrations in parts per billion (µg/L) ---------->								
	09/28/99	15.99	---	80.88	60,000[d]	7,800[e]	---	9,400	9,200	1,000	9,900	200	0.53
	12/10/99	13.31	---	83.56	53,000[d]	5,300[e,f]	---	8,000	6,400	1,100	8,100	<200	0.48
	03/23/00	8.98	---	87.89	77,000[d,g]	11,000[g,j]	---	10,000	9,400	1,600	11,000	<430	---
	09/07/00	15.61	---	81.26	100,000[d,g]	19,000[e,f,g]	---	17,000	12,000	1,600	11,000	<500	---
	12/05/00	14.80	---	82.07	110,000[d,g]	17,000[e,g]	---	17,000	11,000	1,900	12,000	<750	0.37
	03/07/01	14.27	---	82.60	60,000	13,000	---	7,000	4,600	900	7,100	<350	0.49
	06/06/01	14.88	---	81.99	43,000	12,000	---	3,000	1,000	770	5,200	<400	1.71
	08/30/01	12.43	---	84.44	95,000[a,h]	190,000[d,h]	---	6,900	10,000	2,700	15,000	<250	0.24
	12/07/01	24.65	---	72.22	25,000[d]	3,900[e,f]	---	2,500	1,700	64	2,200	<200	0.19
	03/11/02	14.69	---	82.18	30,000[d]	2,800[f,e,k]	---	5,000	2,400	190	1,800	<1,300	0.30
	06/10/02	22.94	---	73.93	9,000[d]	990[e,k]	---	1,800	1,300	96	1,000	<300	--
	09/26/02	**18.85**	**---**	**78.02**	**50,000[d,g]**	**130,000[e,g]**	**---**	**3,900**	**5,400**	**820**	**6,600**	**<500**	**0.19**
MW-4	03/20/97	13.75	---	83.59	47,000	3,100	---	11,000	4,500	1,100	5,200	3,400	8.4
97.34	06/25/97	16.15	---	81.19	61,000	5,800[b]	---	16,000	6,100	1,500	5,900	780[e]	1.4
	09/17/97	17.10	---	80.24	60,000[d]	4,400[e]	---	17,000	4,900	1,500	5,700	<1,500	1.5
	12/22/97	9.21	---	88.13	43,000[d]	3,100[e]	---	13,000	3,900	1,100	4,200	<960	3.7
	03/18/98	9.54	---	87.80	58,000[d]	5,500[e,f]	---	14,000	4,700	1,400	5,700	<1,200	0.8
	07/14/98	14.15	---	83.19	73,000[d]	2,900[e,f]	---	22,000	7,000	1,800	7,300	<200	1.0
	09/30/98	16.84	---	80.50	39,000	2,100	---	12,000	2,700	1,000	3,400	510	1.1
	12/08/98	13.45	---	83.89	27,000	1,600	---	8,900	1,600	730	2,300	<1,500	---
	03/29/99	9.10	---	88.24	48,000[d]	2,400[e,f,h]	---	15,000	3,000	1,300	5,000	1,300	1.32
	06/29/99*	---	---	---	---	---	---	---	---	---	---	---	---
	09/28/99	16.58	---	80.76	24,000[d]	3,200[e,f]	---	7,500	1,200	190	2,200	210	14.29[#]
	12/10/99	13.99	---	83.35	47,000[d]	3,100[e,f]	---	12,000	1,800	1,000	4,400	<100	0.62
	03/23/00	10.22	---	87.12	40,000[d]	3,100[e,f]	---	11,000	1,600	910	3,100	690	---
	09/07/00	16.40	---	80.94	43,000[d]	5,900[e]	---	10,000	1,100	1,100	3,400	<450	1.04
	12/05/00	15.55	---	81.79	69,000[d,g]	2,600[e,g]	---	16,000	1,300	1,300	3,400	<200	0.35
	03/20/01	14.03	---	83.31	46,000	---	---	13,000	1,000	900	2,800	<350	0.39
	06/06/01	15.49	---	81.85	75,000	5,400	---	22,000	1,800	1,900	6,400	<1,200	2.22
	08/30/01	18.00	---	79.34	43,000[a]	3,200[d]	---	6,400	630	510	2,600	<200	0.32
	12/07/01	23.45	---	73.89	32,000[d,g]	11,000[e,f,g]	---	4,500	740	310	2,300	<200	0.21
	03/11/02	14.95	---	82.39	15,000[d]	1,600[e,f,k]	---	3,700	500	92	790	<500	0.30
	06/10/02	22.30	---	75.04	9,400[d]	3,400[e]	--	1,400	50	<5.0	690	<200	--
	09/26/02	**17.93**	**---**	**79.41**	**21,000[d]**	**800[e]**	**--**	**3,300**	**1,300**	**450**	**2,900**	**<500**	**0.24**

Table 1. Groundwater Elevations and Analytical Data - Former Exxon Service Station, 3055 35th Avenue, Oakland, California

Well ID	Date	GW	SPH	GW	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO
(TOC)		Depth (ft)	(ft)	Elev. (ft)	<---------- Concentrations in parts per billion (µg/L) ---------->								(mg/L)
Trip Blank	07/14/98	---	---	---	<50	<50	---	<0.5	<0.5	<0.5	<0.5	<5.0	---
	09/30/98	---	---	---	<50	<50	---	<0.5	<0.5	<0.5	<0.5	<5.0	---
	12/08/98	---	---	---	<50	---	---	<0.5	<0.5	<0.5	<0.5	<5.0	---
	03/29/99	---	---	---	<50	---	---	<0.5	<0.5	<0.5	<0.5	<5.0	---
	06/29/99	---	---	---	<50	---	---	<0.5	<0.5	<0.5	<0.5	<5.0	---
	03/23/00	---	---	---	<50	---	---	<0.5	<0.5	<0.5	<0.5	<5.0	---
	09/07/00	---	---	---	<50	---	---	<0.5	1.1	<0.5	1.1	<5.0	---

Abbreviations:

TOC = Top of casing elevation relative to an aribitrary datum

GW = Groundwater

SPH = Separate-phase hydrocarbons

--- = not observed/not analyzed

TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015

TPHd = Total petroleum hydrocarbons as diesel by modified EPA Method 8015

TPHmo = Total petroleum hydrocarbons as motor oil by modified EPA Method 8015

Benzene, Ethylbenzene, Toluene, and Xylenes by EPA Method 8020

MTBE = Methyl Tertiary Butyl Ether by EPA Method 8020

DO = Dissolved oxygen

µg/L = Micrograms per liter, equivalent to parts per billion in water

mg/L = Milligrams per liter, equivalent to parts per million in water

* = Well inaccessible during site visit

Notes:

a = Result has an atypical pattern for diesel analysis

b = Result appears to be a lighter hydrocarbon than diesel

c = There is a >40% difference between primary and confirmation analysis

d = Unmodified or weakly modified gasoline is significant

e = Gasoline range compounds are significant

f = Diesel range compounds are significant; no recognizable pattern

g = lighter than water immiscible sheen is present

h = one to a few isolated peaks present

i = medium boiling point pattern does not match diesel (stoddard solvent)

j = aged diesel is significant

k = oil range compounds are significant

TOC Elevation of Well MW-4 surveyed relative to an arbitrary site datum by David Hop, Licensed Surveyor on April 19, 1997

= abnormally high reading due to added hydrogen peroxide

Table 2. TPE System Performance and Analytical Results - Soil Vapor Extraction - Golden Empire Properties (Worthington), 3055 35th Street, Oakland, California

Date	Hour Meter Readings (hrs)	System Uptime (per interval) (%)	System Inlet Temp. (degree F)	System Vacuum ("Hg)	System Flow Rate (scfm)	System Influent HC Conc. [1] (ppmv)	System Effluent HC Conc. [1] (ppmv)		HC Removal Rate [2] (lbs/day)	Emission Rate [2] (lbs/day)		TPHg Destruction Efficiency (%)	Gasoline Cumulative Removal [3] (lbs)
						TPHg	TPHg	Benz	TPHg	TPHg	Benz		
6/24/2000	0	--	--	--	--	--	--	--	--	--	--	--	0
9/28/2000	454	20%	789	--	175	420	22	0.24	23.6	1.24	0.012	95	446
10/12/2000	696	72%	950	--	88	360	<10	<0.15	10.1	<0.28	<0.004	*	684
11/9/2000	1251	83%	820	--	55	590	<10	<0.15	10.5	<0.18	<0.002	*	918
1/23/2001	1313	3%	--	--	--	--	--	--	--	--	--	--	945
3/28/2001	0	--	--	--	--	--	--	--	--	--	--	--	945
4/5/2001	194	101%	908	6.0	68	1,800	34	0.52	39.2	0.74	0.010	98	1261
5/3/2001	863	100%	1000	14	29	2,800	<10	<0.15	25.8	<0.09	<0.001	*	2355
6/4/2001	1114	33%	820	6.5	79	240	<10	<0.15	6.1	<0.25	<0.003	*	2625
7/2/2001	1429	47%	804	10.0	73	92	26	0.34	2.1	<0.61	<0.007	72	2705
7/10/2001	1621	100%	900	8.0	110	92	<10	<0.15	3.2	<0.35	<0.005	*	2722
8/2/2001	1759	25%	940	5.0	65	110	<10	<0.15	2.3	<0.21	<0.003	*	2740
9/7/2001	2301	63%	854	12.0	84	81	34	0.52	2.2	<0.92	<0.013	58	2793
10/3/2001	2470	27%	854	9.0	161	160	<10	0.31	8.3	<0.52	<0.015	*	2808
11/6/2001	3015	67%	955	8.5	69	590	31	0.43	13.1	<0.69	<0.009	95	2995

Table 2. TPE System Performance and Analytical Results - Soil Vapor Extraction - Golden Empire Properties (Worthington), 3055 35th Street, Oakland, California

Date	Hour Meter Readings (hrs)	System Uptime (per interval) (%)	System Inlet Temp. (degree F)	System Vacuum ("Hg)	System Flow Rate (scfm)	System Influent HC Conc. [1] (ppmv)	System Effluent HC Conc. [1] (ppmv)		HC Removal Rate [2] (lbs/day)	Emission Rate [2] (lbs/day)		TPHg Destruction Efficiency (%)	Gasoline Cumulative Removal [3] (lbs)
						TPHg	TPHg	Benz	TPHg	TPHg	Benz		
11/14/2001	3184	88%	860	10.0	46	810	<10	<0.15	11.9	<0.15	<0.002	*	3087
12/6/2001	3710	96%	806	11.0	33	50	<10	<0.15	0.5	<0.11	<0.001	*	3349
1/7/2002	4472	99%	841	10.5	27	120	<10	<0.15	1.0	<0.09	<0.001	*	3366
2/4/2002	4938	69%	817	10.5	51	<5	<10	<0.15	0.1	<0.16	<0.002	*	3386
3/5/2002	5396	66%	665	10.5	17	170	<10	<0.15	0.9	<0.05	<0.001	*	3388
4/2/2002	6068	100%	670	12.5	39	260	<10	<0.15	3.3	<0.13	<0.002	*	3413
5/6/2002	6886	100%	667	10.0	50	500	<10	<0.15	8.1	<0.16	<0.002	*	3524
6/5/2002	7608	100%	751	8.5	51	73	<10	<0.15	1.2	<0.16	<0.002	*	3767
7/2/2002	8253	100%	736	9.0	56	26	<15	<0.15	0.5	<0.27	<0.002	*	3799
8/6/2002 **	7	100%	739	13.0	79	97	<10	<0.15	2.5	<0.25	<0.003	*	3815
9/10/2002	528	62%	723	11.5	92	103	<10	<0.15	3.0	<0.30	<0.004	*	3869
10/2/2002	938	78%	828	8.5	89	--	--	--	--	--	--	--	3921

Table 2. TPE System Performance and Analytical Results - Soil Vapor Extraction - Golden Empire Properties (Worthington), 3055 35th Street, Oakland, California

Date	Hour Meter Readings (hrs)	System Uptime (per interval) (%)	System Inlet Temp. (degree F)	System Vacuum ("Hg)	System Flow Rate (scfm)	System Influent HC Conc. [1] (ppmv)	System Effluent HC Conc. [1] (ppmv)		HC Removal Rate [2] (lbs/day)	Emission Rate [2] (lbs/day)		TPHg Destruction Efficiency (%)	Gasoline Cumulative Removal [3] (lbs)
						TPHg	TPHg	Benz	TPHg	TPHg	Benz		

Notes and Abbreviations:

TPHg = Total petroleum hydrocarbons as gasoline
Benz = Benzene
HC Conc. = Hydrocarbon Concentrations
ppmv = Parts per million by volume. Analytical lab results converted from micrograms per liter (µg/l) to ppmv assumes the molecular weight of gasoline to be equal to that of hexane.
at 1 atmosphere of pressure and 20 degrees Celsius.

[1] TPHg and benzene concentrations based on lab results by Modified EPA Methods 8015 and 8020.

[2] The hydrocarbon removal/emission rate is based on the Bay Area Air Quality Management's District's (BAAQMD) Procedures for Soil Vapor Extraction where
Rate = concentration (ppmv) x flow rate (scfm) x 1 lb-mole/386x$10^6$$ft^3$ x molecular weight (86 lb/lb-mole for TPHg, 78 lb/lb-mole for benzene) x 1440 min/day.

[3] Gasoline Cumulative Removal = The previous removal rates multiplied by the interval days of operation plus the previous total removal amount. The total TPHg removal is based on lab analytical results.

8/6/02 TPE system upgrade. Previous system hour meter = 9089

* As per BAAQMD permit conditions, system destruction efficiency need not be calculated for effluent TPHg concentrations less than 10 ppmv
** The TPE system was modified on August 6, 2002, and the PD blower was replaced with a liquid-ring blower. The hour meter was also replaced.
In addition, all previous flow rate mesurements were converted from acfm to scfm adjusting the Hydrocarbon Removal Rates and Gasoline Cumulative Removal.

Table 3. TPE System Performance and Analytical Results - Groundwater Extraction - Golden Empire Properties (Worthington), 3055 35th Street, Oakland, CA

Date	Hour Meter Readings (hrs)	Water Meter Readings (gallons)	Total Groundwater Extracted (gallons)	System Flow Rate Per Period (gpm)	Sample ID	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	HCs Removed Per Period (lbs)	Total HCs Removed (lbs)
10/20/00	878	0	0	NC	Inf Eff	-- --	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	--	--
10/30/00	1004	--	50	NC	Inf Eff	-- --	170 <0.5	140 <0.5	16 <0.5	200 <0.5	--	--
11/9/00	1,251	--	50	NC	Inf Eff	760 <50	120 <0.5	86 <0.5	4.2 <0.5	84 <0.5	NC	NC
12/15/00	1,267	760a	50	NC	--	--	--	--	--	--	--	--
1/23/01	1,313	3,790	3,080	1.1	In Mid Eff	3,000 <50 <50	440 <0.5 <0.5	360 <0.5 <0.5	57 <0.5 <0.5	350 <0.5 <0.5	0.019	0.019
3/28/01	0	3,970	3,210	NC	Replacement Catox System Startup			--	--	--	0.005	0.024
4/13/01	378	17,366	16,606	0.6	IN EF-1	360 <50	45 <0.5	39 <0.5	5.1 <0.5	43 <0.5	0.335	0.359
6/4/01	1,114	36,058	35,298	0.4	IN Mid EF	54 <50 <50	<0.5 <0.5 <0.5	0.69 <0.5 <0.5	<0.5 <0.5 <0.5	3.1 <0.5 <0.5	0.056	0.415

Table 3. TPE System Performance and Analytical Results - Groundwater Extraction - Golden Empire Properties (Worthington), 3055 35th Street, Oakland, CA

Date	Hour Meter Readings (hrs)	Water Meter Readings (gallons)	Total Groundwater Extracted (gallons)	System Flow Rate Per Period (gpm)	Sample ID	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	HCs Removed Per Period (lbs)	Total HCs Removed (lbs)
7/2/01	1,429	39,433	38,673	0.2	IN Mid EF	<50 <50 <50	2.5 <0.5 <0.5	1 <0.5 <0.5	<0.5 <0.5 <0.5	5 <0.5 <0.5	0.002	0.417
9/7/01	2,301	48,566	47,806	0.2	INF EFF-1 EFF-2	4,600 <50 --	24 <0.5 --	57 <0.5 --	15 <0.5 --	140 <0.5 --	0.004	0.421
11/16/01	3,184	61,892	61,132	0.3	INF EFF-1 EFF-2	1100 <50 --	57 <0.5 --	42 <0.5 --	6.5 <0.5 --	110 <0.5 --	0.512	0.932
12/6/01	3,710	80,094	79,334	0.6	INF EFF-1 EFF-2	410 <50 --	31 <0.5 --	14 <0.5 --	3.2 <0.5 --	48 <0.5 --	0.167	1.099
1/7/02	4,472	132,337	131,577	1.1	INF EFF-1 EFF-2	120 <50 --	17 <0.5 --	7.7 <0.5 --	1.5 <0.5 --	13 <0.5 --	0.179	1.278
2/4/02	4,938	164,774	164,014	1.2	INF EFF-1 EFF-2	140 <50 --	18 <0.5 --	5.1 <0.5 --	0.86 <0.5 --	12 <0.5 --	0.032	1.310

Table 3. TPE System Performance and Analytical Results - Groundwater Extraction - Golden Empire Properties (Worthington), 3055 35th Street, Oakland, CA

Date	Hour Meter Readings (hrs)	Water Meter Readings (gallons)	Total Groundwater Extracted (gallons)	System Flow Rate Per Period (gpm)	Sample ID	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	HCs Removed Per Period (lbs)	Total HCs Removed (lbs)
3/5/02	5,396	208,997	208,237	1.6	INF EFF-1 EFF-2	170 <50 --	22 <0.5 --	12 <0.5 --	1.8 <0.5 --	24 <0.5 --	0.052	1.362
4/2/02	6,068	263,563	262,803	1.4	INF EFF-1 EFF-2	160 <50 --	15 <0.5 --	17 <0.5 --	3.3 <0.5 --	20 <0.5 --	0.077	1.439
5/6/02	6,886	306,765	306,005	0.9	INF EFF-1 EFF-2	100 <50 --	3.5 <0.5 --	1.7 <0.5 --	1.0 <0.5 --	4.0 <0.5 --	0.058	1.497
6/5/02	7,608	340,020	339,260	0.8	INF EFF-1 EFF-2	<50 <50 --	2.8 <0.5 --	1.4 <0.5 --	<0.5 <0.5 --	2.5 <0.5 --	0.028	1.525
7/2/02	8,253	361,717	360,957	0.6	INF EFF-1 EFF-2	<50 <50 --	1.5 <0.5 --	<0.5 <0.5 --	<0.5 <0.5 --	0.94 <0.5 --	0.009	1.534
8/6/2002*	7	383,750	382,990	0.4	INF EFF-1 EFF-2	<50 <50 --	1.8 <0.5 --	0.92 <0.5 --	<0.5 <0.5 --	2.0 <0.5 --	0.009	1.543
9/10/02	528	392,405	391,645	0.3	INF EFF-1 EFF-2	570 <50 --	15 <0.5 --	17 <0.5 --	2.9 <0.5 --	30 <0.5 --	0.004	1.547

Table 3. TPE System Performance and Analytical Results - Groundwater Extraction - Golden Empire Properties (Worthington), 3055 35th Street, Oakland, CA

Date	Hour Meter Readings (hrs)	Water Meter Readings (gallons)	Total Groundwater Extracted (gallons)	System Flow Rate Per Period (gpm)	Sample ID	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	HCs Removed Per Period (lbs)	Total HCs Removed (lbs)
10/2/02	938	400,145	399,385	0.3	INF	--	--	--	--	--	0.037	1.584
					Sewer Effluent Discharge Limits: (µg/L)		5.0	5.0	5.0	5.0		

Notes:

TPHg = Total Petroleum Hydrocarbons as Gasoline

BTEX = Benzene, Toluene, Ethylbenzene, Total Xylenes

MTBE = Methyl tertiary butyl ether

µg/L = micrograms per liter

a = Malfunctioning totalizer replaced 12/15/00 (initial reading at 760 gallons)

* = TPE system upgrade. Previous system hour meter = 9089

ND = non detect

<n = below noted practical laboratory quantitation limits

Inf = Influent Sample

Eff = Effluent Sample

NC = Not calculated, insufficient data

CAMBRIA

Table 4. TPE Well Parameters - Former Exxon Service Station, 3055 35th Avenue, Oakland, California

Well ID	Date	Well Status (open/closed)	System/Stinger Vacuum (inches of H_2O)	Well Annulus Vacuum (inches of H_2O)	Flow Rate (cfm)	Hydrocarbon Vapor Concentration (ppmv)	Stinger Depth (ft below TOC)
MW-1	11/6/01	open	80	--	*	--	28
	11/12/01	open	125	--	*	--	28
	11/14/01	open	85	--	*	--	28
	11/21/01	open	95	--	*	--	28
	12/6/01	open	115	--	*	--	28
	12/19/01	open	110	--	*	--	25
	1/17/02	open	130	--	*	--	25
	2/4/02	open	105	--	*	--	28
	2/14/02	closed	--	--	*	--	--
	3/5/02	closed	--	--	*	--	--
	3/11/02	closed	--	--	*	--	--
	3/25/02	open	130	--	*	--	21
	4/2/02	open	130	--	*	--	21
	4/5/02	open	135	50	*	--	21
	4/19/02	open	130	49	*	--	22
	5/6/02	open	100	42	*	--	22
	5/21/02	open	105	49	*	--	23.5
	6/19/02	open	90	42	*	--	24
	6/28/02	open	95	47	*	--	25
	7/10/02	open	97	41	*	--	25
	7/26/02	closed	--	--	*	--	--
	8/6/02	open	--	--	*	--	21.5
	8/26/02	open	95	47	*	--	21.5
	9/16/02	open	105	--	*	--	21.5
	9/20/02	open	85	40	*	--	21.5
	10/2/02	open	75	22	*	--	21.5

Table 4. TPE Well Parameters - Former Exxon Service Station, 3055 35th Avenue, Oakland, California

Well ID	Date	Well Status (open/closed)	System/Stinger Vacuum (inches of H_2O)	Well Annulus Vacuum (inches of H_2O)	Flow Rate (cfm)	Hydrocarbon Vapor Concentration (ppmv)	Stinger Depth (ft below TOC)
MW-2	11/6/01	open	80	--	*	--	27
	11/12/01	open	125	--	*	--	27
	11/14/01	open	85	--	*	--	27
	11/21/01	open	95	--	*	--	27
	12/6/01	open	115	--	*	--	28
	12/19/01	closed	--	--	*	--	--
	1/17/02	closed	--	--	*	--	--
	2/4/02	open	105	--	*	--	28
	2/14/02	closed	--	--	*	--	--
	3/5/02	closed	--	--	*	--	--
	3/11/02	closed	--	--	*	--	--
	3/25/02	open	130	--	*	--	21
	4/2/02	open	130	--	*	--	21
	4/5/02	open	135	70	*	--	21
	4/19/02	open	130	55	*	--	22
	5/6/02	closed	--	--	*	--	--
	5/21/02	closed	--	--	*	--	--
	6/19/02	closed	--	--	*	--	--
	6/28/02	open	95	52	*	--	22
	7/10/02	open	97	51	*	--	22
	7/26/02	open	92	19	*	--	25.5
	8/6/02	open	--	--	*	--	21.5
	8/26/02	open	95	35	*	--	21.5
	9/16/02	open	105	--	*	--	21.5
	9/20/02	open	85	30	*	--	21.5
	10/2/02	open	75	72	*	--	21.5

Table 4. TPE Well Parameters - Former Exxon Service Station, 3055 35th Avenue, Oakland, California

Well ID	Date	Well Status (open/closed)	System/Stinger Vacuum (inches of H_2O)	Well Annulus Vacuum (inches of H_2O)	Flow Rate (cfm)	Hydrocarbon Vapor Concentration (ppmv)	Stinger Depth (ft below TOC)
MW-3	11/6/01	open	80	--	*	--	25
	11/12/01	open	125	--	*	--	25
	11/14/01	open	85	--	*	--	25
	11/21/01	open	95	--	*	--	25
	12/6/01	open	115	--	*	--	25
	12/19/01	open	110	--	*	--	25
	1/17/02	open	130	--	*	--	25
	2/4/02	open	105	--	*	--	25
	2/14/02	closed	--	--	*	--	--
	3/5/02	closed	--	--	*	--	--
	3/11/02	closed	--	--	*	--	--
	3/25/02	closed	--	--	*	--	--
	4/2/02	closed	--	--	*	--	--
	4/5/02	closed	--	--	*	--	--
	4/19/02	closed	--	--	*	--	--
	5/6/02	open	100	28	*	--	20
	5/21/02	open	105	7	*	--	22
	6/19/02	open	90	10	*	--	24
	6/28/02	open	95	11	*	--	24
	7/10/02	open	97	6	*	--	23
	7/26/02	open	92	7	*	--	23
	8/6/02	open	--	--	*	--	19
	8/26/02	open	95	44	*	--	19
	9/16/02	open	105	--	*	--	19
	9/20/02	open	85	50	*	--	19
	10/2/02	open	75	29	*	--	19

Table 4. TPE Well Parameters - Former Exxon Service Station, 3055 35th Avenue, Oakland, California

Well ID	Date	Well Status (open/closed)	System/Stinger Vacuum (inches of H_2O)	Well Annulus Vacuum (inches of H_2O)	Flow Rate (cfm)	Hydrocarbon Vapor Concentration (ppmv)	Stinger Depth (ft below TOC)
MW-4	11/6/01	open	80	--	*	--	25
	11/12/01	open	125	--	*	--	25
	11/14/01	open	85	--	*	--	25
	11/21/01	open	95	--	*	--	25
	12/6/01	open	115	--	*	--	25
	12/19/01	open	110	--	*	--	25
	1/17/02	open	130	--	*	--	25
	2/4/02	open	105	--	*	--	25
	2/14/02	closed	--	--	*	--	--
	3/5/02	closed	--	--	*	--	--
	3/11/02	closed	--	--	*	--	--
	3/25/02	closed	--	--	*	--	--
	4/2/02	closed	--	--	*	--	--
	4/5/02	closed	--	--	*	--	--
	4/19/02	closed	--	--	*	--	--
	5/6/02	open	100	26	*	--	20
	5/21/02	open	105	31	*	--	21
	6/19/02	open	90	26	*	--	21
	6/28/02	closed	--	--	*	--	--
	7/10/02	closed	--	--	*	--	--
	7/26/02	open	92	14	*	--	24.5
	8/6/02	open	--	--	*	--	19
	8/26/02	open	95	39	*	--	19
	9/16/02	open	105	--	*	--	19
	9/20/02	open	85	35	*	--	19
	10/2/02	open	75	34	*	--	19

Table 4. TPE Well Parameters - Former Exxon Service Station, 3055 35th Avenue, Oakland, California

Well ID	Date	Well Status (open/closed)	System/Stinger Vacuum (inches of H_2O)	Well Annulus Vacuum (inches of H_2O)	Flow Rate (cfm)	Hydrocarbon Vapor Concentration (ppmv)	Stinger Depth (ft below TOC)
RW-5	5/24/00	--	80	--	*	--	11.64
	10/6/00	--	100	--	*	--	--
	11/29/00	open	>100	--	*	4320	--
	3/29/01	open	54	--	*	650	--
	4/14/01	open	100	--	*	--	--
	4/26/01	open	85	--	*	--	15
	5/3/01	open	80	--	*	--	15
	5/23/01	open	10	--	*	--	15
	6/4/01	open	50	--	*	--	15
	6/21/01	open	65	--	*	--	15
	7/2/01	open	55	--	*	--	15
	7/16/01	open	45	--	*	--	16
	8/2/01	open	35	--	*	--	--
	8/10/01	open	20	--	*	--	--
	8/15/01	open	20	--	*	--	--
	8/27/01	open	65	--	*	--	--
	9/7/01	closed	--	--	*	--	--
	9/14/01	closed	--	--	*	--	--
	10/3/01	closed	--	--	*	--	--
	10/8/01	closed	--	--	*	--	--
	10/22/01	closed	--	--	*	--	--
	10/29/01	closed	--	--	*	--	--
	11/6/01	closed	--	--	*	--	--
	11/12/01	closed	--	--	*	--	--
	11/14/01	closed	--	--	*	--	--
	11/21/01	closed	--	--	*	--	--
	12/6/01	closed	--	--	*	--	--
	12/19/01	open	110	--	*	--	20
	1/17/02	open	130	--	*	--	20
	2/4/02	closed	--	--	*	--	--
	2/14/02	closed	--	--	*	--	--
	3/5/02	closed	--	--	*	--	--
	3/11/02	closed	--	--	*	--	--
	3/25/02	open	130	--	*	--	16
	4/2/02	open	130	--	*	--	16
	4/5/02	open	135	90	*	--	16
	4/19/02	open	130	72	*	--	18
	5/6/02	open	100	43	*	--	18
	5/21/02	open	105	55	*	--	19
	6/19/02	open	90	33	*	--	19.5
	6/28/02	open	95	48	*	--	20
	7/10/02	closed	--	--	*	--	--
	7/26/02	closed	--	--	*	--	--
	8/6/02	open	--	--	*	--	19
	8/26/02	open	95	27	*	--	19
	9/16/02	open	105	--	*	--	19
	9/20/02	open	85	22	*	--	19
	10/2/02	open	75	32	*	--	19

Table 4. TPE Well Parameters - Former Exxon Service Station, 3055 35th Avenue, Oakland, California

Well ID	Date	Well Status (open/closed)	System/Stinger Vacuum (inches of H_2O)	Well Annulus Vacuum (inches of H_2O)	Flow Rate (cfm)	Hydrocarbon Vapor Concentration (ppmv)	Stinger Depth (ft below TOC)
RW-6	5/24/00	--	80	--	*	--	11.78
	10/6/00	--	--	--	*	--	--
	11/29/00	open	>100	--	*	260	--
	3/29/01	open	54	--	*	2050	--
	4/14/01	open	100	--	*	--	20
	4/26/01	closed	--	--	*	--	--
	5/3/01	closed	--	--	*	--	--
	5/23/01	closed	--	--	*	--	--
	6/4/01	open	50	--	*	--	15
	6/21/01	open	65	--	*	--	15
	7/2/01	open	55	--	*	--	15
	7/16/01	open	45	--	*	--	16
	8/2/01	open	35	--	*	--	--
	8/10/01	open	20	--	*	--	--
	8/15/01	open	20	--	*	--	--
	8/27/01	open	65	--	*	--	--
	9/7/01	closed	--	--	*	--	--
	9/14/01	closed	--	--	*	--	--
	10/3/01	closed	--	--	*	--	--
	10/8/01	closed	--	--	*	--	--
	10/22/01	closed	--	--	*	--	--
	10/29/01	closed	--	--	*	--	--
	11/6/01	closed	--	--	*	--	--
	11/12/01	closed	--	--	*	--	--
	11/14/01	closed	--	--	*	--	--
	11/21/01	closed	--	--	*	--	--
	12/6/01	closed	--	--	*	--	--
	12/19/01	closed	--	--	*	--	--
	1/17/02	closed	--	--	*	--	--
	2/4/02	closed	--	--	*	--	--
	2/14/02	closed	--	--	*	--	--
	3/5/02	closed	--	--	*	--	--
	3/11/02	open	130	--	*	--	16
	3/25/02	open	130	--	*	--	16
	4/2/02	open	12	--	*	--	16
	4/5/02	open	135	85	*	--	16
	4/19/02	open	130	75	*	--	18
	5/6/02	closed	--	--	*	--	--
	5/21/02	closed	--	--	*	--	--
	6/19/02	closed	--	--	*	--	--
	6/28/02	closed	--	--	*	--	--
	7/10/02	open	97	54	*	--	20
	7/26/02	open	92	39	*	--	20
	8/6/02	open	--	--	*	--	19
	8/26/02	open	95	34	*	--	19
	9/16/02	open	105	--	*	--	19
	9/20/02	open	85	45	*	--	19
	10/2/02	open	75	30	*	--	19

Table 4. TPE Well Parameters - Former Exxon Service Station, 3055 35th Avenue, Oakland, California

Well ID	Date	Well Status (open/closed)	System/Stinger Vacuum (inches of H_2O)	Well Annulus Vacuum (inches of H_2O)	Flow Rate (cfm)	Hydrocarbon Vapor Concentration (ppmv)	Stinger Depth (ft below TOC)
RW-7	5/24/00	--	80	--	*	--	12.5
	10/6/00	--	--	--	*	--	--
	11/29/00	open	>100	--	*	0	--
	3/29/01	open	54	--	*	52	--
	4/14/01	open	100	--	*	--	20
	4/26/01	open	85	--	*	--	15
	5/3/01	open	80	--	*	--	15
	5/23/01	open	10	--	*	--	15
	6/4/01	open	50	--	*	--	15
	6/21/01	open	65	--	*	--	15
	7/2/01	open	55	--	*	--	15
	7/16/01	open	45	--	*	--	16
	8/2/01	open	35	--	*	--	--
	8/10/01	open	20	--	*	--	--
	8/15/01	open	20	--	*	--	--
	8/27/01	open	65	--	*	--	--
	9/7/01	closed	--	--	*	--	--
	9/14/01	closed	--	--	*	--	--
	10/3/01	closed	--	--	*	--	--
	10/8/01	closed	--	--	*	--	--
	10/22/01	closed	--	--	*	--	--
	10/29/01	closed	--	--	*	--	--
	11/6/01	closed	--	--	*	--	--
	11/12/01	closed	--	--	*	--	--
	11/14/01	closed	--	--	*	--	--
	11/21/01	closed	--	--	*	--	--
	12/6/01	closed	--	--	*	--	--
	12/19/01	closed	--	--	*	--	--
	1/17/02	closed	--	--	*	--	--
	2/4/02	closed	--	--	*	--	--
	2/14/02	closed	--	--	*	--	--
	3/5/02	closed	--	--	*	--	--
	3/11/02	closed	--	--	*	--	--
	3/25/02	closed	--	--	*	--	--
	4/2/02	closed	--	--	*	--	--
	4/5/02	closed	--	--	*	--	--
	4/19/02	closed	--	--	*	--	--
	5/6/02	closed	--	--	*	--	--
	5/21/02	closed	--	--	*	--	--
	6/19/02	closed	--	--	*	--	--
	6/28/02	closed	--	--	*	--	--
	7/10/02	closed	--	--	*	--	--
	7/26/02	closed	--	--	*	--	--
	8/6/02	closed	--	--	*	--	--
	8/26/02	closed	--	--	*	--	--
	9/16/02	closed	--	--	*	--	--
	9/20/02	closed	--	--	*	--	--
	10/2/02	closed	--	--	*	--	--

Table 4. TPE Well Parameters - Former Exxon Service Station, 3055 35th Avenue, Oakland, California

Well ID	Date	Well Status (open/closed)	System/Stinger Vacuum (inches of H_2O)	Well Annulus Vacuum (inches of H_2O)	Flow Rate (cfm)	Hydrocarbon Vapor Concentration (ppmv)	Stinger Depth (ft below TOC)
RW-8	5/24/00	--	--	--	*	--	--
	10/6/00	--	--	--	*	--	--
	11/29/00	open	>100	--	*	44	--
	3/29/01	open	54	--	*	60	--
	4/14/01	open	100	--	*	--	20
	4/26/01	open	85	--	*	--	15
	5/3/01	open	80	--	*	--	15
	5/23/01	open	10	--	*	--	15
	6/4/01	open	50	--	*	--	15
	6/21/01	open	65	--	*	--	--
	7/2/01	open	55	--	*	--	--
	7/16/01	open	45	--	*	--	--
	8/2/01	open	35	--	*	--	--
	8/10/01	open	20	--	*	--	--
	8/15/01	open	20	--	*	--	--
	8/27/01	open	65	--	*	--	--
	9/7/01	closed	--	--	*	--	--
	9/14/01	closed	--	--	*	--	--
	10/3/01	closed	--	--	*	--	--
	10/8/01	closed	--	--	*	--	--
	10/22/01	closed	--	--	*	--	--
	10/29/01	closed	--	--	*	--	--
	11/6/01	closed	--	--	*	--	--
	11/12/01	closed	--	--	*	--	--
	11/14/01	closed	--	--	*	--	--
	11/21/01	closed	--	--	*	--	--
	12/6/01	closed	--	--	*	--	--
	12/19/01	closed	--	--	*	--	--
	1/17/02	closed	--	--	*	--	--
	2/4/02	closed	--	--	*	--	--
	2/14/02	closed	--	--	*	--	--
	3/5/02	closed	--	--	*	--	--
	3/11/02	open	--	--	*	--	18
	3/25/02	closed	--	--	*	--	--
	4/2/02	closed	--	--	*	--	--
	4/5/02	closed	--	--	*	--	--
	4/19/02	closed	--	--	*	--	--
	5/6/02	closed	--	--	*	--	--
	5/21/02	closed	--	--	*	--	--
	6/19/02	closed	--	--	*	--	--
	6/28/02	closed	--	--	*	--	--
	7/10/02	closed	--	--	*	--	--
	7/26/02	closed	--	--	*	--	--
	8/6/02	closed	--	--	*	--	--
	8/26/02	closed	--	--	*	--	--
	9/16/02	closed	--	--	*	--	--
	9/20/02	closed	--	--	*	--	--
	10/2/02	closed	--	--	*	--	--

Table 4. TPE Well Parameters - Former Exxon Service Station, 3055 35th Avenue, Oakland, California

Well ID	Date	Well Status (open/closed)	System/Stinger Vacuum (inches of H_2O)	Well Annulus Vacuum (inches of H_2O)	Flow Rate (cfm)	Hydrocarbon Vapor Concentration (ppmv)	Stinger Depth (ft below TOC)
RW-9	5/24/00	--	--	--	*	--	12.5
	10/6/00	--	--	--	*	--	--
	11/29/00	--	>100	--	*	43	--
	3/29/01	open	54	--	*	90	--
	4/14/01	open	100	--	*	--	--
	4/26/01	open	85	--	*	--	--
	5/3/01	open	80	--	*	--	--
	5/23/01	open	10	--	*	--	--
	6/4/01	open	50	--	*	--	--
	6/21/01	open	65	--	*	--	--
	7/2/01	open	55	--	*	--	--
	7/16/01	open	45	--	*	--	--
	8/2/01	open	35	--	*	--	--
	8/10/01	open	20	--	*	--	--
	8/15/01	open	20	--	*	--	--
	8/27/01	open	65	--	*	--	--
	9/7/01	closed	--	--	*	--	--
	9/14/01	closed	--	--	*	--	--
	10/3/01	closed	--	--	*	--	--
	10/8/01	closed	--	--	*	--	--
	10/22/01	closed	--	--	*	--	--
	10/29/01	closed	--	--	*	--	--
	11/6/01	closed	--	--	*	--	--
	11/12/01	closed	--	--	*	--	--
	11/14/01	closed	--	--	*	--	--
	11/21/01	closed	--	--	*	--	--
	12/6/01	closed	--	--	*	--	--
	12/19/01	closed	--	--	*	--	--
	1/17/02	closed	--	--	*	--	--
	2/4/02	closed	--	--	*	--	--
	2/14/02	open	125	--	*	--	20
	3/5/02	open	115	--	*	--	20
	3/11/02	closed	--	--	*	--	--
	3/25/02	closed	--	--	*	--	--
	4/2/02	closed	--	--	*	--	--
	4/5/02	closed	--	--	*	--	--
	4/19/02	closed	--	--	*	--	--
	5/6/02	open	100	38	*	--	20
	5/21/02	open	105	56	*	--	20
	6/19/02	open	90	47	*	--	20
	6/28/02	closed	--	--	*	--	--
	7/10/02	closed	--	--	*	--	--
	7/26/02	closed	--	--	*	--	--
	8/6/02	open	--	--	*	--	19
	8/26/02	open	95	15	*	--	19
	9/16/02	closed	--	--	*	--	--
	9/20/02	closed	--	--	*	--	--
	10/2/02	closed	--	--	*	--	--

Table 4. TPE Well Parameters - Former Exxon Service Station, 3055 35th Avenue, Oakland, California

Well ID	Date	Well Status (open/closed)	System/Stinger Vacuum (inches of H_2O)	Well Annulus Vacuum (inches of H_2O)	Flow Rate (cfm)	Hydrocarbon Vapor Concentration (ppmv)	Stinger Depth (ft below TOC)
RW-10	5/24/00	--	--	--	*	--	--
	10/6/00	--	--	--	*	--	--
	11/29/00	--	>100	--	*	>10,000	--
	3/29/01	open	54	--	*	850	--
	4/14/01	open	100	--	*	--	--
	4/26/01	open	85	--	*	--	--
	5/3/01	open	80	--	*	--	--
	5/23/01	open	10	--	*	--	--
	6/4/01	open	50	--	*	--	--
	6/21/01	open	65	--	*	--	--
	7/2/01	open	55	--	*	--	--
	7/16/01	open	45	--	*	--	--
	8/2/01	open	35	--	*	--	--
	8/10/01	open	20	--	*	--	--
	8/15/01	open	20	--	*	--	--
	8/27/01	open	65	--	*	--	--
	9/7/01	closed	--	--	*	--	--
	9/14/01	closed	--	--	*	--	--
	10/3/01	closed	--	--	*	--	--
	10/8/01	closed	--	--	*	--	--
	10/22/01	closed	--	--	*	--	--
	10/29/01	closed	--	--	*	--	--
	11/6/01	closed	--	--	*	--	--
	11/12/01	closed	--	--	*	--	--
	11/14/01	closed	--	--	*	--	--
	11/21/01	closed	--	--	*	--	--
	12/6/01	closed	--	--	*	--	--
	12/19/01	closed	--	--	*	--	--
	1/17/02	closed	--	--	*	--	--
	2/4/02	closed	--	--	*	--	--
	2/14/02	open	125	--	*	--	20
	3/5/02	open	115	--	*	--	20
	3/11/02	open	--	--	*	--	20
	3/25/02	closed	--	--	*	--	--
	4/2/02	closed	--	--	*	--	--
	4/5/02	closed	--	--	*	--	--
	4/19/02	closed	--	--	*	--	--
	5/6/02	open	100	31	*	--	20
	5/21/02	open	105	70	*	--	20
	6/19/02	open	90	56	*	--	20
	6/28/02	closed	--	--	*	--	--
	7/10/02	closed	--	--	*	--	--
	7/26/02	closed	--	--	*	--	--
	8/6/02	open	--	--	*	--	19
	8/26/02	closed	--	--	*	--	--
	9/16/02	closed	--	--	*	--	--
	9/20/02	closed	--	--	*	--	--
	10/2/02	closed	--	--	*	--	--

Table 4. TPE Well Parameters - Former Exxon Service Station, 3055 35th Avenue, Oakland, California

Well ID	Date	Well Status (open/closed)	System/Stinger Vacuum (inches of H_2O)	Well Annulus Vacuum (inches of H_2O)	Flow Rate (cfm)	Hydrocarbon Vapor Concentration (ppmv)	Stinger Depth (ft below TOC)
RW-11	5/24/00	--	80	--	*	--	11.65
	10/6/00	--	--	--	*	--	--
	11/29/00	--	>100	--	*	2280	--
	3/29/01	open	54	--	*	784	--
	4/14/01	open	100	--	*	--	--
	4/26/01	open	85	--	*	--	15
	5/3/01	open	80	--	*	--	15
	5/23/01	open	10	--	*	--	15
	6/4/01	open	50	--	*	--	20
	6/21/01	open	65	--	*	--	15
	7/2/01	open	55	--	*	--	15
	7/16/01	open	45	--	*	--	16
	8/2/01	open	35	--	*	--	--
	8/10/01	open	20	--	*	--	--
	8/15/01	open	20	--	*	--	--
	8/27/01	open	65	--	*	--	--
	9/7/01	closed	--	--	*	--	--
	9/14/01	closed	--	--	*	--	--
	10/3/01	closed	--	--	*	--	--
	10/8/01	closed	--	--	*	--	--
	10/22/01	closed	--	--	*	--	--
	10/29/01	closed	--	--	*	--	--
	11/6/01	closed	--	--	*	--	--
	11/12/01	closed	--	--	*	--	--
	11/14/01	closed	--	--	*	--	--
	11/21/01	closed	--	--	*	--	--
	12/6/01	closed	--	--	*	--	--
	12/19/01	closed	--	--	*	--	--
	1/17/02	closed	--	--	*	--	--
	2/4/02	closed	--	--	*	--	--
	2/14/02	closed	--	--	*	--	--
	3/5/02	closed	--	--	*	--	--
	3/11/02	open	--	--	*	--	18
	3/25/02	closed	--	--	*	--	--
	4/2/02	closed	--	--	*	--	--
	4/5/02	closed	--	--	*	--	--
	4/19/02	closed	--	--	*	--	--
	5/6/02	closed	--	--	*	--	--
	5/21/02	closed	--	--	*	--	--
	6/19/02	closed	--	--	*	--	--
	6/28/02	closed	--	--	*	--	--
	7/10/02	closed	--	--	*	--	--
	7/26/02	closed	--	--	*	--	--
	8/6/02	closed	--	--	*	--	--
	8/26/02	closed	--	--	*	--	--
	9/16/02	closed	--	--	*	--	--
	9/20/02	closed	--	--	*	--	--
	10/2/02	closed	--	--	*	--	--

Table 4. TPE Well Parameters - Former Exxon Service Station, 3055 35th Avenue, Oakland, California

Well ID	Date	Well Status (open/closed)	System/Stinger Vacuum (inches of H_2O)	Well Annulus Vacuum (inches of H_2O)	Flow Rate (cfm)	Hydrocarbon Vapor Concentration (ppmv)	Stinger Depth (ft below TOC)
RW-12	5/24/00	--	--	--	*	--	--
	10/6/00	--	--	--	*	--	--
	11/29/00	open	>100	--	*	24	--
	3/29/01	open	54	--	*	72	--
	4/14/01	open	100	--	*	--	--
	4/26/01	open	85	--	*	--	15
	5/3/01	open	80	--	*	--	15
	5/23/01	open	10	--	*	--	15
	6/4/01	open	50	--	*	--	15
	6/21/01	open	65	--	*	--	15
	7/2/01	open	55	--	*	--	15
	7/16/01	open	45	--	*	--	16
	8/2/01	open	35	--	*	--	--
	8/10/01	open	20	--	*	--	--
	8/15/01	open	20	--	*	--	--
	8/27/01	open	65	--	*	--	--
	9/7/01	closed	--	--	*	--	--
	9/14/01	closed	--	--	*	--	--
	10/3/01	closed	--	--	*	--	--
	10/8/01	closed	--	--	*	--	--
	10/22/01	closed	--	--	*	--	--
	10/29/01	closed	--	--	*	--	--
	11/6/01	closed	--	--	*	--	--
	11/12/01	closed	--	--	*	--	--
	11/14/01	closed	--	--	*	--	--
	11/21/01	closed	--	--	*	--	--
	12/6/01	closed	--	--	*	--	--
	12/19/01	closed	--	--	*	--	--
	1/17/02	closed	--	--	*	--	--
	2/4/02	closed	--	--	*	--	--
	2/14/02	closed	--	--	*	--	--
	3/5/02	closed	--	--	*	--	--
	3/11/02	closed	--	--	*	--	--
	3/25/02	open	130	--	*	--	16
	4/2/02	open	130	--	*	--	16
	4/5/02	open	135	97	*	--	16
	4/19/02	open	130	75	*	--	18
	5/6/02	closed	--	--	*	--	--
	5/21/02	closed	--	--	*	--	--
	6/19/02	closed	--	--	*	--	--
	6/28/02	open	95	16	*	--	20
	7/10/02	open	97	5	*	--	20
	7/26/02	open	92	5	*	--	20
	8/6/02	open	--	--	*	--	19
	8/26/02	open	95	6	*	--	19
	9/16/02	open	105	--	*	--	19
	9/20/02	open	85	6	*	--	19
	10/2/02	open	75	4	*	--	19

Table 4. TPE Well Parameters - Former Exxon Service Station, 3055 35th Avenue, Oakland, California

Well ID	Date	Well Status (open/closed)	System/Stinger Vacuum (inches of H_2O)	Well Annulus Vacuum (inches of H_2O)	Flow Rate (cfm)	Hydrocarbon Vapor Concentration (ppmv)	Stinger Depth (ft below TOC)
RW-13	5/24/00	--	80	--	*	--	12.59
	10/6/00	--	--	--	*	--	--
	11/29/00	--	>100	--	*	77	--
	3/29/01	open	54	--	*	124	--
	4/14/01	open	100	--	*	--	--
	4/26/01	open	85	--	*	--	--
	5/3/01	open	80	--	*	--	--
	5/23/01	open	10	--	*	--	--
	6/4/01	open	50	--	*	--	--
	6/21/01	open	65	--	*	--	--
	7/2/01	open	55	--	*	--	--
	7/16/01	open	45	--	*	--	--
	8/2/01	open	35	--	*	--	--
	8/10/01	open	20	--	*	--	--
	8/15/01	open	20	--	*	--	--
	8/27/01	open	65	--	*	--	--
	9/7/01	closed	--	--	*	--	--
	9/14/01	closed	--	--	*	--	--
	10/3/01	closed	--	--	*	--	--
	10/8/01	closed	--	--	*	--	--
	10/22/01	closed	--	--	*	--	--
	10/29/01	closed	--	--	*	--	--
	11/6/01	closed	--	--	*	--	--
	11/12/01	closed	--	--	*	--	--
	11/14/01	closed	--	--	*	--	--
	11/21/01	closed	--	--	*	--	--
	12/6/01	closed	--	--	*	--	--
	12/19/01	closed	--	--	*	--	--
	1/17/02	closed	--	--	*	--	--
	2/4/02	closed	--	--	*	--	--
	2/14/02	open	125	--	*	--	20
	3/5/02	open	115	--	*	--	20
	3/11/02	open	--	--	*	--	16
	3/25/02	closed	--	--	*	--	--
	4/2/02	closed	--	--	*	--	--
	4/5/02	closed	--	--	*	--	--
	4/19/02	closed	--	--	*	--	--
	5/6/02	closed	--	--	*	--	--
	5/21/02	closed	--	--	*	--	--
	6/19/02	closed	--	--	*	--	--
	6/28/02	closed	--	--	*	--	--
	7/10/02	closed	--	--	*	--	--
	7/26/02	closed	--	--	*	--	--
	8/6/02	closed	--	--	*	--	--
	8/26/02	closed	--	--	*	--	--
	9/16/02	closed	--	--	*	--	--
	9/20/02	closed	--	--	*	--	--
	10/2/02	closed	--	--	*	--	--

Table 4. TPE Well Parameters - Former Exxon Service Station, 3055 35th Avenue, Oakland, California

Well ID	Date	Well Status (open/closed)	System/Stinger Vacuum (inches of H_2O)	Well Annulus Vacuum (inches of H_2O)	Flow Rate (cfm)	Hydrocarbon Vapor Concentration (ppmv)	Stinger Depth (ft below TOC)
RW-14	5/24/00	--	80	--	*	--	12.33
	10/6/00	--	100	--	*	--	--
	11/29/00	--	>100	--	*	5830	--
	3/29/01	open	54	--	*	120	--
	4/14/01	open	100	--	*	--	--
	4/26/01	open	85	--	*	--	--
	5/3/01	open	80	--	*	--	--
	5/23/01	open	10	--	*	--	--
	6/4/01	open	50	--	*	--	--
	6/21/01	open	65	--	*	--	--
	7/2/01	open	55	--	*	--	--
	7/16/01	open	45	--	*	--	--
	8/2/01	open	35	--	*	--	--
	8/10/01	open	20	--	*	--	--
	8/15/01	open	20	--	*	--	--
	8/27/01	open	65	--	*	--	--
	9/7/01	closed	--	--	*	--	--
	9/14/01	closed	--	--	*	--	--
	10/3/01	closed	--	--	*	--	--
	10/8/01	closed	--	--	*	--	--
	10/22/01	closed	--	--	*	--	--
	10/29/01	closed	--	--	*	--	--
	11/6/01	closed	--	--	*	--	--
	11/12/01	closed	--	--	*	--	--
	11/14/01	closed	--	--	*	--	--
	11/21/01	closed	--	--	*	--	--
	12/6/01	closed	--	--	*	--	--
	12/19/01	closed	--	--	*	--	--
	1/17/02	closed	--	--	*	--	--
	2/4/02	closed	--	--	*	--	--
	2/14/02	open	125	--	*	--	20
	3/5/02	open	115	--	*	--	20
	3/11/02	closed	--	--	*	--	--
	3/25/02	closed	--	--	*	--	--
	4/2/02	closed	--	--	*	--	--
	4/5/02	closed	--	--	*	--	--
	4/19/02	closed	--	--	*	--	--
	5/6/02	closed	--	--	*	--	--
	5/21/02	closed	--	--	*	--	--
	6/19/02	closed	--	--	*	--	--
	6/28/02	closed	--	--	*	--	--
	7/10/02	closed	--	--	*	--	--
	7/26/02	closed	--	--	*	--	--
	8/6/02	closed	--	--	*	--	--
	8/26/02	closed	--	--	*	--	--
	9/16/02	closed	--	--	*	--	--
	9/20/02	closed	--	--	*	--	--
	10/2/02	closed	--	--	*	--	--

Table 4. TPE Well Parameters - Former Exxon Service Station, 3055 35th Avenue, Oakland, California

Well ID	Date	Well Status (open/closed)	System/Stinger Vacuum (inches of H_2O)	Well Annulus Vacuum (inches of H_2O)	Flow Rate (cfm)	Hydrocarbon Vapor Concentration (ppmv)	Stinger Depth (ft below TOC)

Notes:

* = Parameter could not be accurately measured due to the presence of water or water vapor.

-- = Data not available or not collected

CAMBRIA

APPENDIX A

Groundwater Monitoring Field Data Sheets

CAMBRIA

WELL SAMPLING FORM

Project Name: Worthington	Cambria Mgr: **RAS**	Well ID: MW-1
Project Number: 130-0105	Date:09/26 /02	Well Yield:
Site Address: 3055 35th St Oakland, Ca	Sampling Method: **Disposable bailer**	Well Diameter: **4" pvc** Technician(s): SG
Initial Depth to Water: 20.30	Total Well Depth:	Water Column Height:
Volume/ft: 0..65	1 Casing Volume:	3 Casing Volumes:
Purging Device: **NO PURGE**	Did Well Dewater?:	Total Gallons Purged:
Start Purge Time:	Stop Purge Time:	Total Time:

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.	pH	Cond.	Comments
					NO PURGE
					DO= 0.70 mg/L

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-1	**09/26/02**	12:15	**4VOAs**	**HCL**	**TPHg BTEX MTBE**	**8260**
			1 Amber		**TPHd**	

D:\TEMPLATE\FORMS\FIELD\WELLSAMP.WPD
NSM 5/31/94

CAMBRIA

WELL SAMPLING FORM

Project Name: Worthington	Cambria Mgr: **RAS**	Well ID: MW-2
Project Number: 130-0105	Date:09/26 /02	Well Yield:
Site Address: 3055 35th St Oakland, Ca	Sampling Method: **Disposable bailer**	Well Diameter: **4" pvc** Technician(s): SG
Initial Depth to Water: 20.39	Total Well Depth:	Water Column Height:
Volume/ft: 0..65	1 Casing Volume:	3 Casing Volumes:
Purging Device: **NO PURGE**	Did Well Dewater?:	Total Gallons Purged:
Start Purge Time:	Stop Purge Time:	Total Time:

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.	pH	Cond.	Comments
					NO PURGE
					DO= 0.29 mg/L

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-2	**09/26/02**	12:30	**4VOAs**	**HCL**	**TPHg BTEX MTBE**	**8260**
			1 Amber		**TPHd**	

D:\TEMPLATE\FORMS\FIELD\WELLSAMP.WPD
NSM 5/31/94

CAMBRIA

WELL SAMPLING FORM

Project Name: Worthington	Cambria Mgr: **RAS**	Well ID: MW-3
Project Number: 130-0105	Date:09/26 /02	Well Yield:
Site Address: 3055 35th St Oakland, Ca	Sampling Method: **Disposable bailer**	Well Diameter: **4" pvc** Technician(s): SG
Initial Depth to Water: 18.85	Total Well Depth:	Water Column Height:
Volume/ft: 0..65	1 Casing Volume:	3 Casing Volumes:
Purging Device: **NO PURGE**	Did Well Dewater?:	Total Gallons Purged:
Start Purge Time:	Stop Purge Time:	Total Time:

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.	pH	Cond.	Comments
					NO PURGE
					DO= 0.19 mg/L

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-3	**09/26/02**	12:45	**4VOAs**	**HCL**	**TPHg BTEX MTBE**	**8260**
			1 Amber		**TPHd**	

CAMBRIA

WELL SAMPLING FORM

Project Name: Worthington	Cambria Mgr: **RAS**	Well ID: MW-4
Project Number: 130-0105	Date:09/26 /02	Well Yield:
Site Address: 3055 35th St Oakland, Ca	Sampling Method: **Disposable bailer**	Well Diameter: **4" pvc** Technician(s): SG
Initial Depth to Water: 17.93	Total Well Depth:	Water Column Height:
Volume/ft: 0..65	1 Casing Volume:	3 Casing Volumes:
Purging Device: **NO PURGE**	Did Well Dewater?:	Total Gallons Purged:
Start Purge Time:	Stop Purge Time:	Total Time:

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.	pH	Cond.	Comments
					NO PURGE
					DO= 0.24mg/L

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-4	**09/26/02**	13:00	**4VOAs**	**HCL**	**TPHg BTEX MTBE**	**8260**
			1 Amber		**TPHd**	

D:\TEMPLATE\FORMS\FIELD\WELLSAMP.WPD
NSM 5/31/94

CAMBRIA

WELL DEPTH MEASUREMENTS

Well ID	Time	Product Depth	Water Depth	Product Thickness	Well Depth	Comments
MW-1	12:00		20.30			Stinger depth / reset at 21.00
MW-2	12:20		20.39			21.00 / 21.00
MW-3	12:40		~~18.20~~ 18.85			19.00 / 19.00
MW-4	12:55		17.93			18.00 / 18.00
						Ythat Sample Remediation wells see Ron

Project Name: Worthington

Project Number: **130-0105**

Measured By: J. Hill

Date: ~~05/11/02~~ 9-26-02

F:\TEMPLATE\FORMS\FIELD\GW-DEPTH.WPD

McCAMPBELL ANALYTICAL INC.
110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Telephone: (925) 798-1620 Fax: (925) 798-1622

FILE COPY

CHAIN OF CUSTODY RECORD

TURN AROUND TIME: ☐ RUSH ☐ 24 HOUR ☐ 48 HOUR ☒ 5 DAY

EDF Required? ☒ Yes ☐ No

Report To: Ron Scheels Bill To: Cambria Env.

Company: Cambria Environmental Technology Inc.

6262 Hollis Street

Emeryville, CA 94608 E-mail:

Tele: 510-450-1983 Fax: 510-450-8295

Project #: 130-0105-341 Project Name: Worthington

Project Location: 3055 35th St. Oakland, Ca

Sampler Signature: S. Hill

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	Soil	Air	Sludge	Other	METHOD PRESERVED Ice	HCl	HNO_3	Other	BTEX & TPH as Gas (602/8020 + 8015)/ MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	Other	Comments
MW-1		9-26-02	12:15	5	VOA Amb	X					X	X			X	X															
MW-2		9-26-02	12:30	5	VOA Amb	X					X	X			X	X															
MW-3		9-26-02	12:45	5	VOA Amb	X					X	X			X	X															
MW-4		9-26-02	13:00	5	VOA Amb	X					X	X			X	X															

Relinquished By:	Date:	Time:	Received By:
S. Hill	9-27-02	9:30pm	secure location

Remarks:

CAMBRIA

APPENDIX B

Analytical Results for Quarterly Groundwater Sampling

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 Env. Technology 6262 Hollis St. Emeryville, CA 94608	Client Project ID: #130-0105-341; Worthington	Date Sampled: 09/26/02
		Date Received: 09/30/02
	Client Contact: Ron Scheele	Date Reported: 10/07/02
	Client P.O.:	Date Completed: 10/07/02

October 07, 2002

Dear Ron:

Enclosed are:

1). the results of **4** analyzed samples from your **#130-0105-341; Worthington 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,

Angela Rydelius, Lab Manager

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 Env. Technology	Client Project ID: #130-0105-341; Worthington	Date Sampled: 09/26/02
6262 Hollis St.		Date Received: 09/30/02
Emeryville, CA 94608	Client Contact: Ron Scheele	Date Extracted: 10/04/02
	Client P.O.:	Date Analyzed: 10/04/02

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0209507

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001B	MW-1	W	7000,a	ND<100	1300	190	200	760	20	100
002B	MW-2	W	4800,a	ND<50	770	200	140	740	10	100
003B	MW-3	W	50,000,a,h	ND<500	3900	5400	820	6600	100	---#
004B	MW-4	W	21,000,a	ND<500	3300	1300	450	2900	100	104
Reporting Limit for DF =1; ND means not detected at or above the reporting limit		W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
		S	NA	NA	NA	NA	NA	NA	1	mg/Kg

*water and vapor samples are reported in ug/L, soil and sludge samples in mg/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L, and TCLP extracts in ug/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

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 Env. Technology	Client Project ID: #130-0105-341; Worthington	Date Sampled: 09/26/02
6262 Hollis St.		Date Received: 09/30/02
Emeryville, CA 94608	Client Contact: Ron Scheele	Date Extracted: 10/08/02
	Client P.O.:	Date Analyzed: 10/08/02

Diesel Range (C10-C23) Extractable Hydrocarbons with Silica Gel Clean-Up*

Extraction method: SW3510C Analytical methods: SW8015C Work Order: 0209507

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0209507-001C	MW-1	W	1300,d,b,g	1	94.2
0209507-002C	MW-2	W	660,d	1	110
0209507-003C	MW-3	W	130,000,d,h	100	---#
0209507-004C	MW-4	W	800,d	2	85.8

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all TCLP / STLC / SPLP extracts in ug/L

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent.

DHS Certification No. 1644

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 Env. Technology	Client Project ID: #130-0105-341; Worthington	Date Sampled: 09/26/02
6262 Hollis St.		Date Received: 09/30/02
Emeryville, CA 94608	Client Contact: Ron Scheele	Date Extracted: 09/30/02
	Client P.O.:	Date Analyzed: 10/01/02-10/04/02

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel*

Extraction method: SW3510C Analytical methods: SW8015C Work Order: 0209507

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0209507-001A	MW-1	W	6200,d,b,g	1	98.7
0209507-002A	MW-2	W	2600,d,b,g	1	100
0209507-003A	MW-3	W	210,000,d,b,h	100	---#
0209507-004A	MW-4	W	6800,d,b,g	1	105

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all TCLP / STLC / SPLP extracts in ug/L

cluttered chromatogram resulting in cocluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel (corn oil?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent; o) sample diluted due to matrix interference.

DHS Certification No. 1644

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

QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W WorkOrder: 0209507

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 4211 Spiked Sample ID: 0209508-003A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(gas)	ND	60	110	110	0.0880	101	102	0.626	80	120
MTBE	ND	10	98.7	95.1	3.71	96.8	88.4	9.11	80	120
Benzene	ND	10	97.4	96.5	0.950	100	96.5	3.66	80	120
Toluene	ND	10	98.3	98.4	0.0894	102	98.7	3.54	80	120
Ethylbenzene	ND	10	100	99.2	1.23	103	99.4	3.41	80	120
Xylenes	ND	30	100	96.7	3.39	103	100	3.28	80	120
%SS:	99.8	100	92.8	90.4	2.58	93	89.6	3.74	80	120

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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

QC SUMMARY REPORT FOR SW8015C

Matrix: W WorkOrder: 0209507

EPA Method: SW8015C	Extraction: SW3510C		BatchID: 4210			Spiked Sample ID: N/A				
Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	N/A	7500	N/A	N/A	N/A	114	113	0.583	70	130
%SS:	N/A	100	N/A	N/A	N/A	108	110	1.59	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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

QC SUMMARY REPORT FOR SW8015C

Matrix: W WorkOrder: 0209507

EPA Method: SW8015C	Extraction: SW3510C	BatchID: 4334	Spiked Sample ID: N/A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	N/A	7500	N/A	N/A	N/A	104	102	1.58	70	130
%SS:	N/A	100	N/A	N/A	N/A	105	103	2.00	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

McCampbell Analytical Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0209507

Client:
Cambria Env. Technology
6262 Hollis St.
Emeryville, CA 94608

TEL: (510) 450-1983
FAX: (510) 450-8295
ProjectNo: #130-0105-341;
PO:

30-Sep-02

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests <>	SW8015C	8021B/8015
0209507-001	MW-1	Water	9/26/02 12:15:00 PM		A	A	B
0209507-002	MW-2	Water	9/26/02 12:30:00 PM			A	B
0209507-003	MW-3	Water	9/26/02 12:45:00 PM			A	B
0209507-004	MW-4	Water	9/26/02 1:00:00 PM			A	B

Comments:

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

0209507

CHAIN OF CUSTODY RECORD

McCAMPBELL ANALYTICAL INC.
110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Telephone: (925) 798-1620 Fax: (925) 798-1622

TURN AROUND TIME: ☐ RUSH ☐ 24 HOUR ☐ 48 HOUR ☒ 5 DAY

EDF Required? ☒ Yes ☐ No

Report To: Ron Scheels Bill To: Cambria Env.

Company: Cambria Environmental Technology Inc.

6262 Hollis Street

Emeryville, CA 94608 E-mail:

Tele: 510-450-1983 Fax: 510-450-8295

Project #: 130-0105-341 Project Name: Worthington

Project Location: 3055 35th St. Oakland, Ca

Sampler Signature: S. Hill

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	BTEX & TPH as Gas (602/8020 + 8015)/ MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	Other: Diesel w/ Silica Gel Cleanup added on 10/8	Comments
MW-1		9-26-02	12:15	5	VOA Amb	X					X	X			X	X														X	
MW-2		9-26-02	12:30	5	VOA Amb	X					X	X			X	X														X	
MW-3		9-26-02	12:45	5	VOA Amb	X					X	X			X	X														X	
MW-4		9-26-02	13:00	5	VOA Amb	X					X	X			X	X														X	

ICE/t _____
GOOD CONDITION _____
HEADSPACE ABSENT _____
DECHLORINATED IN LAB _____

PRESERVATION APPROPRIATE _____
CONTAINERS _____
PRESERVED IN LAB _____

VOAS | O&G | METALS | OTHER

Relinquished By:	Date:	Time:	Received By:
S. Hill	9-27-02	9:30pm	secure location
Relinquished By:	Date:	Time:	Received By:
	9/30	4:35	Mark Valler
Relinquished By:	Date:	Time:	Received By:

Remarks:

LOWEST POSSIBLE DETECTION LIMITS

CAMBRIA

APPENDIX C

Analytical Results for TPE System Operation

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 Env. Technology 6262 Hollis St. Emeryville, CA 94608	Client Project ID: #130-0105-345; WORTHINGTON	Date Sampled: 07/02/02
		Date Received: 07/03/02
	Client Contact: Ron Scheele	Date Reported: 07/10/02
	Client P.O.:	Date Completed: 07/10/02

July 10, 2002

Dear Ron:

Enclosed are:

1). the results of **2** samples from your **#130-0105-345; WORTHINGTON 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,

Angela Rydelius, Lab Manager

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 Env. Technology	Client Project ID: #130-0105-345; WORTHINGTON	Date Sampled: 07/02/02
6262 Hollis St.		Date Received: 07/03/02
Emeryville, CA 94608	Client Contact: Ron Scheele	Date Extracted: 07/03/02-07/04/02
	Client P.O.:	Date Analyzed: 07/03/02-07/04/02

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with MTBE and BTEX*

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0207066

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	INF	A	26,a	ND	0.70	0.23	ND	0.38	0.5	---#
002A	EFF	A	ND	ND	ND	ND	ND	ND	0.5	103

% ppm (mg/L) to ppmv (ul/L) conversion for TPH(g) assumes the molecular weight of gasoline to be equal to that of hexane.

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	A	15	1.5	0.15	0.15	0.15	0.25	1	uL/L
	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

*water and vapor samples are reported in ug/L, soil and sludge samples in mg/kg, wipe samples in ug/wipe, and TCLP extracts in ug/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

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

QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: A WorkOrder: 0207066

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 2783 Spiked Sample ID: 0207061-002A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	uL/L	uL/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(gas)	ND	60	109	102	5.93	97.3	92.4	5.19	80	120
MTBE	ND	10	102	95.9	6.31	107	114	6.63	80	120
Benzene	ND	10	111	107	3.61	111	105	5.55	80	120
Toluene	ND	10	114	110	3.43	112	110	1.79	80	120
Ethylbenzene	ND	10	116	110	5.07	114	107	5.89	80	120
Xylenes	ND	30	117	113	2.90	113	107	6.06	80	120
%SS:	102	100	102	99.3	2.83	104	97.3	7.05	80	120

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike, or analyte concentration in sample exceeds spike amount.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or their RPDs near 0% if: a) the sample is inhomogeneous AND contains significant concentrations of analyze relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

McCampbell Analytical Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0207066

Client:
Cambria Env. Technology
6262 Hollis St.
Emeryville, CA 94608

TEL: (510) 450-1983
FAX: (510) 450-8295
ProjectNo: #130-0105-345;
PO:

03-Jul-02

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests 8021B/8015
0207066-001	INF	Air	7/2/02 1:30:00 PM		A
0207066-002	EFF	Air	7/2/02 1:30:00 PM		A

Comments:

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

052702d6

McCAMPBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HOUR ☐ 48 HOUR ☒ 5 DAY

Report To: Ron Scheele Bill To: SAME

Company: Cambria Environmental Technology
6262 Hollis Street
Emeryville, CA 94608

Tele: (510) 450-1983 Fax: (510) 450-8295

Project #: 130-0105-345 Project Name: WORTHINGTON

Project Location: 3055 35th AVE OAKLAND

Sampler Signature:

SAMPLE ID	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	Analysis Request: BTEX & TPH as Gas (602/8020 + 8015) MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	Other	Comments
INF	Oakland	7/2/02	1:30	1	Bag			X							X																
EFF	Oakland	7/2/02	1:30	1	Bag			X							X																

VOA'S O&G METALS OTHER
PRESERVATION
APPROPRIATE
CONTAINERS
HEAD SPACE ABSENT

Relinquished By:	Date:	Time:	Received By:
	7/2/02	6pm	Samad Loeetvan
Relinquished By:	Date:	Time:	Received By:
	7/3/02	11am	
Relinquished By:	Date:	Time:	Received By:
	7/3/02	1415	

Remarks:
REPORT IN ppmv ; 10 ppmv limit
20 ml injection Volume

PLEASE FAX RESULTS

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 Env. Technology 6262 Hollis St. Emeryville, CA 94608	Client Project ID: #130-0105-343; Worthington	Date Sampled: 07/02/02
		Date Received: 07/03/02
	Client Contact: Ron Scheele	Date Reported: 07/10/02
	Client P.O.:	Date Completed: 07/10/02

July 10, 2002

Dear Ron:

Enclosed are:

1). the results of 28 samples from your **#130-0105-343; Worthington 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,

Angela Rydelius, Lab Manager

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 Env. Technology	Client Project ID: #130-0105-343; Worthington	Date Sampled: 07/02/02
6262 Hollis St.		Date Received: 07/03/02
Emeryville, CA 94608	Client Contact: Ron Scheele	Date Extracted: 07/08/02-07/10/02
	Client P.O.:	Date Analyzed: 07/08/02-07/10/02

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0207064

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	INF	W	ND	ND	1.5	ND	ND	0.94	1	94.5
002A	EFF-1	W	ND	ND	ND	ND	ND	ND	1	97.1
Reporting Limit for DF =1; ND means not detected at or above the reporting limit		W	50	5.0	0.5	0.5	0.5	0.5	ug/L	
		S	1.0	0.05	0.005	0.005	0.005	0.005	mg/Kg	

*water and vapor samples are reported in ug/L, soil and sludge samples in mg/kg, wipe samples in ug/wipe, and TCLP extracts in ug/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

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

QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W WorkOrder: 0207064

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 2783 Spiked Sample ID: 0207061-002A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(gas)	ND	60	109	102	5.93	97.3	92.4	5.19	80	120
MTBE	ND	10	102	95.9	6.31	107	114	6.63	80	120
Benzene	ND	10	111	107	3.61	111	105	5.55	80	120
Toluene	ND	10	114	110	3.43	112	110	1.79	80	120
Ethylbenzene	ND	10	116	110	5.07	114	107	5.89	80	120
Xylenes	ND	30	117	113	2.90	113	107	6.06	80	120
%SS:	102	100	102	99.3	2.83	104	97.3	7.05	80	120

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike, or analyte concentration in sample exceeds spike amount.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or their RPDs near 0% if: a) the sample is inhomogeneous AND contains significant concentrations of analyze relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

0207064

McCAMPBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HOUR ☐ 48 HOUR ☒ 5 DAY

Report To: Ron Scheele Bill To: SAME

Company: Cambria Environmental Technology
6262 Hollis Street
Emeryville, CA 94608

Tele: (510) 450-1983 Fax: (510) 450-8295

Project #: 130-0105-345 Project Name: Worthington

Project Location: 3055 35th AVE OAKLAND, CA

Sampler Signature:

SAMPLE ID	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	Analysis Request: BTEX & TPH as Gas (602/8020 + 8015) MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	Other	Comments
INF	Oakland	7/2/02	12:30	3	Voa	X					X	X			X															
EFF-1	↓	↓	↓	3	Voa	X					X	X			X															
EFF-2	↓	↓	↓	3	Voa	X					X	X			X															

WORK ORDER CONTENTS
PRESERVATION
LOG IN
HEAD SPACE
CONTAINERS

	Date	Time		
Relinquished By:	7/2/02	6pm	Received By:	Several couriers
Relinquished By:	7/3/02	11am	Received By:	
Relinquished By:	7/3/02	1415	Received By:	

Remarks:
ONLY ANALYZE EFF-2 IF HC's DETECTED IN EFF-1.

FAX RESULTS PLEASE.

McCampbell Analytical Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0207064

Client:
Cambria Env. Technology
6262 Hollis St.
Emeryville, CA 94608

TEL: (510) 450-1983
FAX: (510) 450-8295
ProjectNo: #130-0105-343;
PO:

03-Jul-02

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests 8021B/8015
0207064-001	INF	Water	7/2/02 12:30:00 PM		A
0207064-002	EFF-1	Water	7/2/02 12:30:00 PM		A
0207064-003	EFF-2	Water	7/2/02 12:30:00 PM		A

Comments:

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

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 Env. Technology	Client Project ID: #130-0105-345	Date Sampled: 08/06/02
6262 Hollis St.		Date Received: 08/07/02
Emeryville, CA 94608	Client Contact: Ron Scheele	Date Reported: 08/14/02
	Client P.O.:	Date Completed: 08/14/02

August 14, 2002

Dear Ron:

Enclosed are:

1). the results of **2** samples from your **#130-0105-345 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,

Angela Rydelius, Lab Manager

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 Env. Technology	Client Project ID: #130-0105-345	Date Sampled: 08/06/02
6262 Hollis St.		Date Received: 08/07/02
Emeryville, CA 94608	Client Contact: Ron Scheele	Date Extracted: 08/07/02-08/08/02
	Client P.O.:	Date Analyzed: 08/07/02-08/08/02

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with MTBE and BTEX*

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0208104

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	Inf	A	97,a	ND<2.0	2.6	1.1	ND	0.72	1	---#
002A	EFF	A	ND	ND	ND	ND	ND	0.29	1	107

% ppm (mg/L) to ppmv (ul/L) conversion for TPH(g) assumes the molecular weight of gasoline to be equal to that of hexane.

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	A	10	1.5	0.15	0.15	0.15	0.25	1	uL/L
	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

*vapor samples are reported in uL/L, water samples in ug/L, soil and sludge samples in mg/kg, wipe samples in ug/wipe, and TCLP extracts in ug/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

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

QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: A WorkOrder: 0208104

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 3352 Spiked Sample ID: 0208106-002A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	uL/L	uL/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(gas)	ND	60	98.9	101	1.71	96.7	101	4.43	80	120
MTBE	ND	10	83.8	112	29.2	80.5	82.9	2.98	80	120
Benzene	ND	10	91.7	94.3	2.78	91	94.3	3.57	80	120
Toluene	ND	10	101	102	1.78	97.8	101	3.41	80	120
Ethylbenzene	ND	10	102	105	2.72	101	102	1.39	80	120
Xylenes	ND	30	103	107	3.17	100	103	3.28	80	120
%SS:	97.7	100	96.7	94.5	2.32	98.7	99.6	0.965	80	120

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

McCampbell Analytical Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0208104

Client:
Cambria Env. Technology
6262 Hollis St.
Emeryville, CA 94608

TEL: (510) 450-1983
FAX: (510) 450-8295
ProjectNo: #130-0105-345
PO:

07-Aug-02

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests						
					V8021B/8015C						
0208104-001	Inf	Air	8/6/2002 5:30:00 AM		A						
0208104-002	EFF	Air	8/6/2002		A						

Comments:

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

GTC

0208104

McCAMPBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HOUR ☐ 48 HOUR ☒ 5 DAY

Report To: Ron Scheele Bill To: SAME

Company: Cambria Environmental Technology
6262 Hollis Street
Emeryville, CA 94608

Tele: (510) 450-1983 Fax: (510) 450-8295

Project #: 130-0105-345 Project Name: WORTHINGTON

Project Location: 3055 35th AVE OAKLAND

Sampler Signature: Ron Scheele

SAMPLE ID	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX: Water	Soil	Air	Sludge	Other	METHOD PRESERVED: Ice	HCl	HNO_3	Other	Analysis Request: BTEX & TPH as Gas (602/8020 + 8015) MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 502 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	Other	Comments
INF	Oakland	8/6/02	5:30p	1	Bag			X							X																
EFF	Oakland	↓	↓	1	Bag			X							X																

ICE/T: GOOD CONDITION ✓ HEAD SPACE ABSENT DECHLORINATED IN LAB

PRESERVATION APPROPRIATE ✓ CONTAINERS PRESERVED IN LAB

	VOAS	O&G	METALS	OTHER
PRESERVATION APPROPRIATE				
CONTAINERS PRESERVED IN LAB	✓			

Relinquished By:	Date:	Time:	Received By:
Stephanie Gardner	8/6/02	7pm	Sunil Location
Relinquished By:	Date:	Time:	Received By:
[illegible]	8/7/02	9:15	[illegible]
Relinquished By:	Date:	Time:	Received By:
[illegible]	8/7/02	1520	[illegible] 08/07/02

Remarks:
REPORT IN ppmv ; 10 ppmv limit
20 ml injection Volume
PLEASE FAX RESULTS

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 Env. Technology 6262 Hollis St. Emeryville, CA 94608	Client Project ID: #130-0105-345; Worthington	Date Sampled: 08/06/02
		Date Received: 08/07/02
	Client Contact: Ron Scheele	Date Reported: 08/14/02
	Client P.O.:	Date Completed: 08/14/02

August 14, 2002

Dear Ron:

Enclosed are:

1). the results of 3 samples from your **#130-0105-345; Worthington 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,

Angela Rydelius, Lab Manager

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 Env. Technology	Client Project ID: #130-0105-345; Worthington	Date Sampled: 08/06/02
6262 Hollis St.		Date Received: 08/07/02
Emeryville, CA 94608	Client Contact: Ron Scheele	Date Extracted: 08/10/02-08/13/02
	Client P.O.:	Date Analyzed: 08/10/02-08/13/02

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0208106

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	INF	W	ND	ND	1.8	0.92	ND	2.0	1	95.8
002A	EFF-1	W	ND	ND	ND	ND	ND	ND	1	97.7
Reporting Limit for DF =1; ND means not detected at or above the reporting limit		W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
		S	NA	NA	NA	NA	NA	NA	1	mg/Kg

*water and vapor samples are reported in ug/L, soil and sludge samples in mg/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L, and TCLP extracts in ug/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

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

QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W WorkOrder: 0208106

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 3352 Spiked Sample ID: 0208106-002A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(gas)	ND	60	98.9	101	1.71	96.7	101	4.43	80	120
MTBE	ND	10	83.8	112	29.2	80.5	82.9	2.98	80	120
Benzene	ND	10	91.7	94.3	2.78	91	94.3	3.57	80	120
Toluene	ND	10	101	102	1.78	97.8	101	3.41	80	120
Ethylbenzene	ND	10	102	105	2.72	101	102	1.39	80	120
Xylenes	ND	30	103	107	3.17	100	103	3.28	80	120
%SS:	97.7	100	96.7	94.5	2.32	98.7	99.6	0.965	80	120

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

McCampbell Analytical Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0208104

Client:
Cambria Env. Technology
6262 Hollis St.
Emeryville, CA 94608

TEL: (510) 450-1983
FAX: (510) 450-8295
ProjectNo: #130-0105-345
PO:

07-Aug-02

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests						
					V8021B/8015C						
0208104-001	Inf	Air	8/6/2002 5:30:00 AM		A						
0208104-002	EFF	Air	8/6/2002		A						

Comments:

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

GTC

0208104

McCAMPBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HOUR ☐ 48 HOUR ☒ 5 DAY

Report To: Ron Scheele Bill To: SAME

Company: Cambria Environmental Technology
6262 Hollis Street
Emeryville, CA 94608

Tele: (510) 450-1983 Fax: (510) 450-8295

Project #: 130-0105-345 Project Name: WORTHINGTON

Project Location: 3055 35th AVE OAKLAND

Sampler Signature: Ron Scheele

SAMPLE ID	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX: Water	Soil	Air	Sludge	Other	METHOD PRESERVED: Ice	HCl	HNO_3	Other	Analysis Request: BTEX & TPH as Gas (602/8020 + 8015) MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 502 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	Other	Comments
INF	Oakland	8/6/02	5:30p	1	Bag			X							X																
EFF	Oakland	↓	↓	1	Bag			X							X																

ICE/T: GOOD CONDITION ✓ HEAD SPACE ABSENT DECHLORINATED IN LAB

PRESERVATION APPROPRIATE ✓ CONTAINERS PRESERVED IN LAB

	VOAS	O&G	METALS	OTHER
PRESERVATION APPROPRIATE				
CONTAINERS PRESERVED IN LAB	✓			

Relinquished By:	Date:	Time:	Received By:
Stephanie Gardner	8/6/02	7pm	Sunil Location
Relinquished By:	Date:	Time:	Received By:
[illegible]	8/7/02	9:15	[illegible]
Relinquished By:	Date:	Time:	Received By:
[illegible]	8/7/02	1520	[illegible] 08/07/02

Remarks:
REPORT IN ppmv ; 10 ppmv limit
20 ml injection Volume
PLEASE FAX RESULTS

CEXL

020810

McCAMPBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553
Telephone: (925) 798-1620 Fax: (925) 798-1622

Report To: Ron Scheele Bill To: SAME

Company: Cambria Environmental Technology
6262 Hollis Street
Emeryville, CA 94608

Tele: (510) 450-1983 Fax: (510) 450-8295

Project #: 130-0105-3A5 Project Name: WORTHINGTON

Project Location: 3055 35th AVE. OAKLAND, CA

Sampler Signature:

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HOUR ☐ 48 HOUR ☒ 5 DAY

SAMPLE ID	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX: Water	Soil	Air	Sludge	Other	METHOD PRESERVED: Ice	HCl	HNO3	Other	Analysis Request: BTEX & TPH as Gas (602/8020 + 8015) MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 502 / 8010	HTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080 PCB's ONLY	EPA 608 / 8080	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	Other	Comments
INF	Oakland	8/6/02	5pm	3	Vom	X					X	X			X																
EFF-1	↓	↓	↓	3	Vom	X					X	X			X																
EFF-2	↓	↓	↓	3	Vom	X					X	X			X																

ICE/t°
GOOD CONDITION
HEAD SPACE ABSENT
DECHLORINATED IN LAB

PRESERVATION APPROPRIATE
CONTAINERS PRESERVED IN LAB

VOAS | O&G | METALS | OTHER

PRESERVATION APPROPRIATE CONTAINERS PRESERVED IN LAB
GOOD CONDITION HEAD SPACE ABSENT DECHLORINATED IN LAB
VOAS | O&G | METALS | OTHER

Relinquished By:	Date:	Time:	Received By:
	8/6/02	7PM	
Relinquished By:	Date:	Time:	Received By:
	8/7/02	9:15	
Relinquished By:	Date:	Time:	Received By:
	8/7/02	1520	

Remarks:
ONLY ANALYZE EFF-2 IF HC's DETECTED IN EFF-1.

FAX RESULTS PLEASE.

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 Env. Technology 6262 Hollis St. Emeryville, CA 94608	Client Project ID: #130-0105-345; Worthington	Date Sampled: 09/10/02
		Date Received: 09/11/02
	Client Contact: Ron Scheele	Date Reported: 09/17/02
	Client P.O.:	Date Completed: 09/17/02

September 17, 2002

Dear Ron:

Enclosed are:

1). the results of 2 analyzed samples from your **#130-0105-345; Worthington 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,

Angela Rydelius, Lab Manager

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 Env. Technology	Client Project ID: #130-0105-345; Worthington	Date Sampled: 09/10/02
6262 Hollis St.		Date Received: 09/11/02
Emeryville, CA 94608	Client Contact: Ron Scheele	Date Extracted: 09/11/02-09/13/02
	Client P.O.:	Date Analyzed: 09/11/02-09/13/02

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with MTBE and BTEX*

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0209155

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	INF	A	103,a	ND<200	3.2	2.4	0.32	2.0	2	---#
002A	EFF	A	ND	ND	ND	ND	ND	ND	1	100

ppm (mg/L) to ppmv (ul/L) conversion for TPH(g) assumes the molecular weight of gasoline to be equal to that of hexane.

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	A	10	1.5	0.15	0.15	0.15	0.25	1	uL/L
	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

*vapor samples are reported in uL/L, water samples in ug/L, soil and sludge samples in mg/kg, wipe samples in ug/wipe, and TCLP extracts in ug/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

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

QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: A WorkOrder: 0209155

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 3919 Spiked Sample ID: 0209150-002A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	uL/L	uL/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(gas)	ND	60	109	108	0.405	115	112	2.96	80	120
MTBE	7.241	10	88.9	96.3	4.48	96.1	97.1	1.07	80	120
Benzene	ND	10	95.5	99.5	4.10	99.4	97.5	1.94	80	120
Toluene	ND	10	91.9	94.8	3.14	93.7	93.1	0.569	80	120
Ethylbenzene	ND	10	97	99.5	2.55	101	97.8	3.13	80	120
Xylenes	ND	30	93	93.3	0.358	96.7	93	3.87	80	120
%SS:	98.3	100	96.3	98.5	2.29	102	98.8	2.91	80	120

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

McCampbell Analytical Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0209155

Client:
Cambria Env. Technology
6262 Hollis St.
Emeryville, CA 94608

TEL: (510) 450-1983
FAX: (510) 450-8295
ProjectNo: #130-0105-345;
PO:

11-Sep-02

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests						
					V8021B/8015C						
0209155-001	INF	Air	9/10/02 2:00:00 PM		A						
0209155-002	EFF	Air	9/10/02 2:00:00 PM		A						

Comments:

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

0209155

McCAMPBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HOUR ☐ 48 HOUR ☒ 5 DAY

Report To: Ron Scheele Bill To: SAME

Company: Cambria Environmental Technology
6262 Hollis Street
Emeryville, CA 94608

Tele: (510) 450-1983 Fax: (510) 450-8295

Project #: 130-0105-345 Project Name: WORTHINGTON

Project Location: 3055 35th AVE OAKLAND

Sampler Signature:

SAMPLE ID	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX: Water	Soil	Air	Sludge	Other	METHOD PRESERVED: Ice	HCl	HNO_3	Other	BTEX & TPH as Gas (602/8020 + 8015) MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080 PCB's ONLY	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	Other	Comments
INF	Oakland	9/10/02	2pm	1	Bag			X							X																
EFF	Oakland	9/10/02	↓	1	Bag			X							X																

ICE/
GOOD CONDITION
HEAD SPACE ABSENT
DECHLORINATED IN LAB

PRESERVATION
APPROPRIATE
CONTAINERS
PRESERVED IN LAB

VOAS | O&G | METALS | OTHER

Relinquished By:	Date:	Time:	Received By:
	9/10/02	6pm	Samuel Lepitzer
Relinquished By:	Date: 09/11	Time: 1585	Received By:
Relinquished By:	Date: 09/11	Time: 1340	Received By:

Remarks:
REPORT IN ppmv ; 10 ppmv limit
20 ml injection Volume
PLEASE FAX RESULTS

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 Env. Technology 6262 Hollis St. Emeryville, CA 94608	Client Project ID: #130-0105-345; Worthington	Date Sampled: 09/10/02
		Date Received: 09/11/02
	Client Contact: Ron Scheele	Date Reported: 09/17/02
	Client P.O.:	Date Completed: 09/17/02

September 17, 2002

Dear Ron:

Enclosed are:

1). the results of **3** analyzed samples from your **#130-0105-345; Worthington 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,

Angela Rydelius, Lab Manager

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 Env. Technology	Client Project ID: #130-0105-345; Worthington	Date Sampled: 09/10/02
6262 Hollis St.		Date Received: 09/11/02
Emeryville, CA 94608	Client Contact: Ron Scheele	Date Extracted: 09/15/02-09/16/02
	Client P.O.:	Date Analyzed: 09/15/02-09/16/02

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0209157

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	INF	W	570,a	ND	15	17	2.9	30	1	103
002A	EFF-1	W	ND	ND	ND	ND	ND	ND	1	96.9
Reporting Limit for DF =1; ND means not detected at or above the reporting limit		W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
		S	NA	NA	NA	NA	NA	NA	1	mg/Kg

*water and vapor samples are reported in ug/L, soil and sludge samples in mg/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L, and TCLP extracts in ug/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

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

QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W WorkOrder: 0209157

EPA Method: SW8021B/8015Cm	Extraction: SW5030B	BatchID: 3919	Spiked Sample ID: 0209150-002A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(gas)	ND	60	109	108	0.405	115	112	2.96	80	120
MTBE	7.241	10	88.9	96.3	4.48	96.1	97.1	1.07	80	120
Benzene	ND	10	95.5	99.5	4.10	99.4	97.5	1.94	80	120
Toluene	ND	10	91.9	94.8	3.14	93.7	93.1	0.569	80	120
Ethylbenzene	ND	10	97	99.5	2.55	101	97.8	3.13	80	120
Xylenes	ND	30	93	93.3	0.358	96.7	93	3.87	80	120
%SS:	98.3	100	96.3	98.5	2.29	102	98.8	2.91	80	120

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

McCampbell Analytical Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0209157

Client:
Cambria Env. Technology
6262 Hollis St.
Emeryville, CA 94608

TEL: (510) 450-1983
FAX: (510) 450-8295
ProjectNo: #130-0105-345;
PO:

17-Sep-02

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests						
					8021B/8015						
0209157-001	INF	Water	9/10/02 2:00:00 PM	☐	A						
0209157-002	EFF-1	Water	9/10/02 2:00:00 PM	☐	A						
0209157-003	EFF-2	Water	9/10/02 2:00:00 PM	☐	A						

Comments:

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

cche

0209157

McCAMPBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HOUR ☐ 48 HOUR ☑ 5 DAY

Report To: Ron Scheele Bill To: SAME

Company: Cambria Environmental Technology
6262 Hollis Street
Emeryville, CA 94608

Tele: (510) 450-1983 Fax: (510) 450-8295

Project #: 130-0105-345 Project Name: WORTHINGTON

Project Location: 3055 35th AVE OAKLAND CA

Sampler Signature: Ronna Scheele

SAMPLE ID	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	BTEX & TPH as Gas (602/8020 + 8015) MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	HTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	Other	Comments
INF	Oakland	9/10/02	2pm	3	Voa	X					X	X			X																
EFF-1	↓	↓	↓	3	Voa	X					X	X			X																
EFF-2	↓	↓	↓	3	Voa	X					X	X			X																

ICE/t° _____
GOOD CONDITION _____
HEAD SPACE ABSENT _____
DECHLORINATED IN LAB _____

PRESERVATION APPROPRIATE _____
CONTAINERS _____
PRESERVED IN LAB _____

pH	O&G	METALS	OTHER

Relinquished By:	Date:	Time:	Received By:
	9/10/02	6pm	
Relinquished By:	Date:	Time:	Received By:
	09/11	1025	288
Relinquished By: 288	Date:	Time:	Received By:
	09/11	0840	

Remarks:

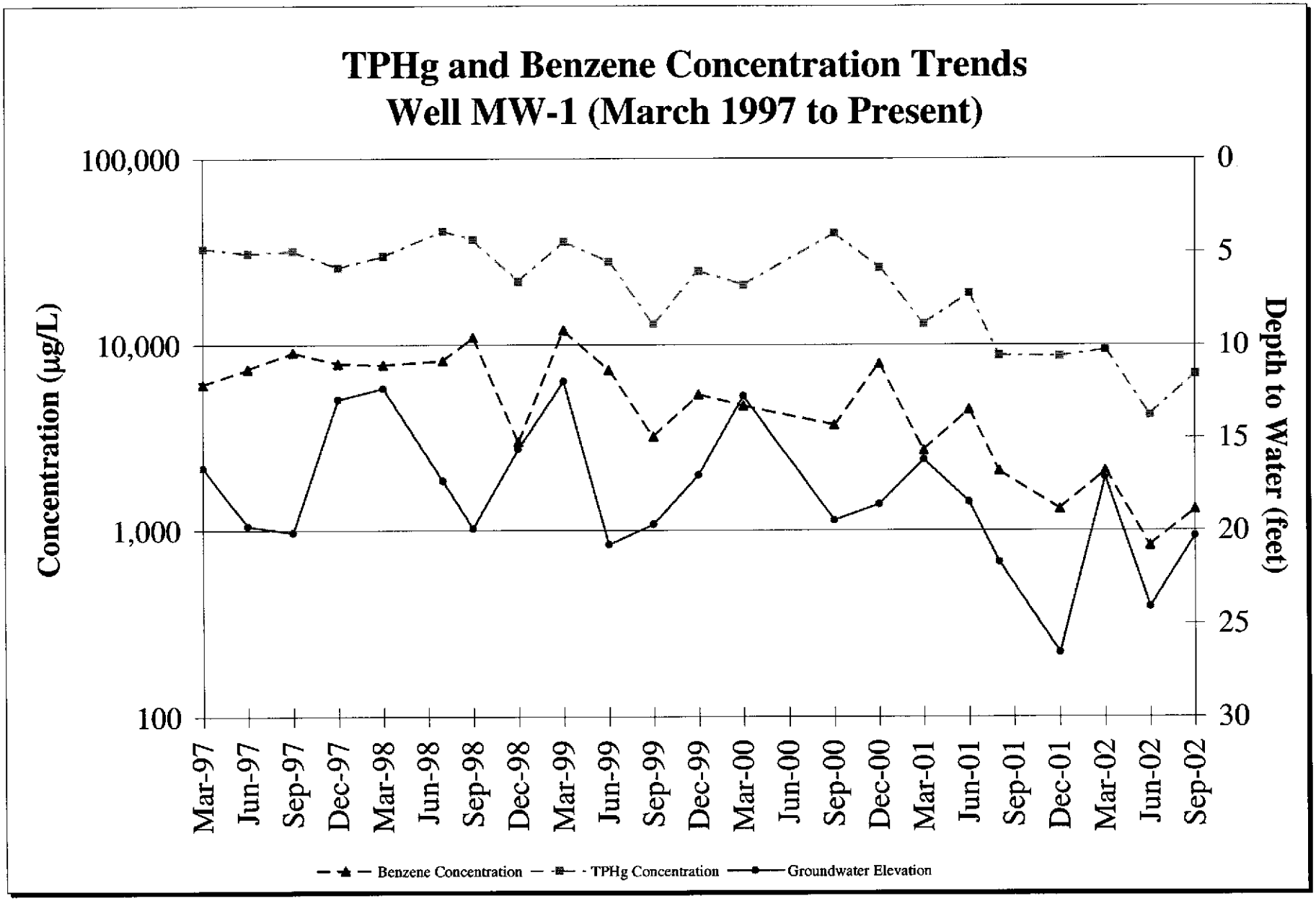
ONLY ANALYZE EFF-2 IF HC's DETECTED IN EFF-1.

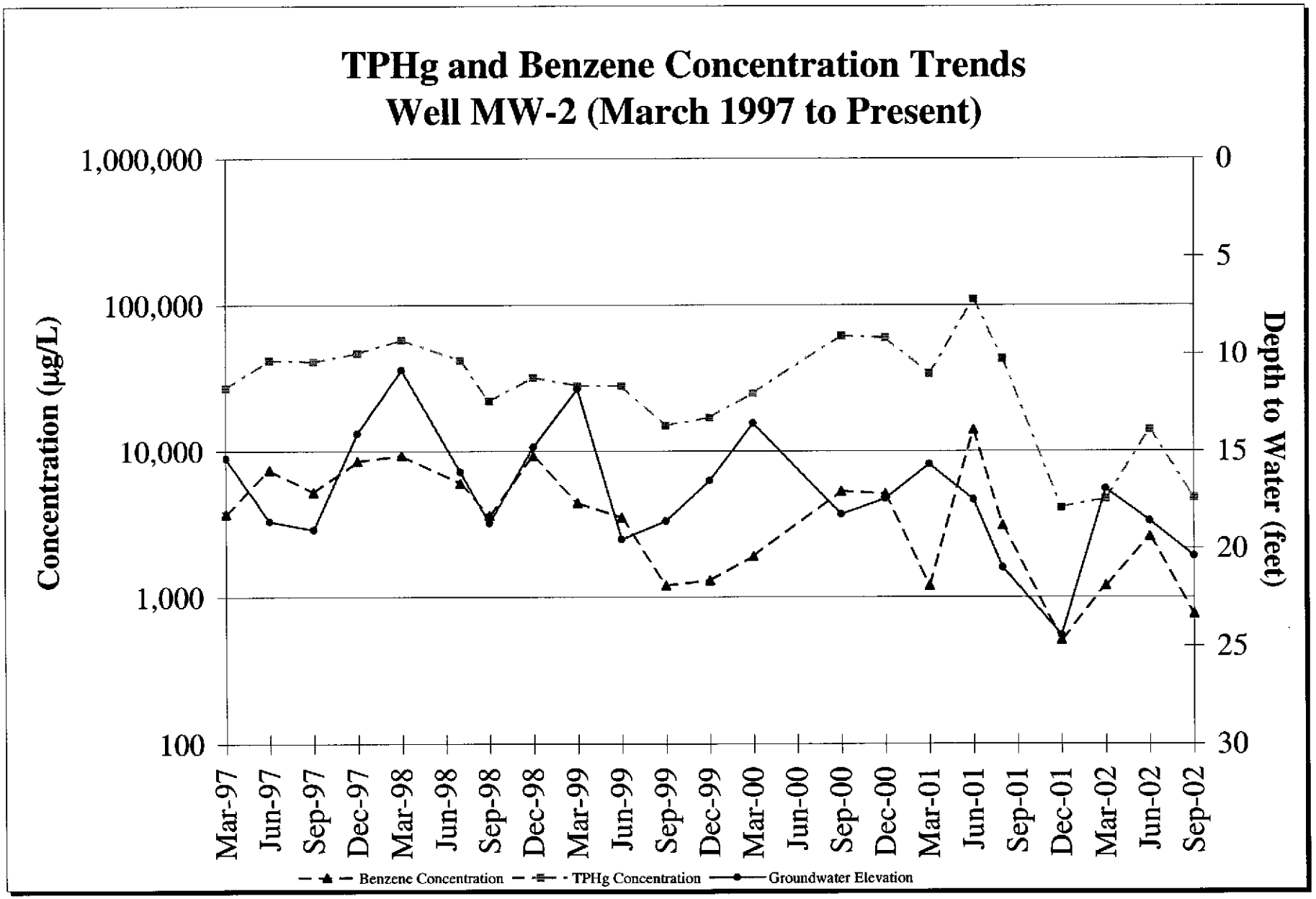
FAX RESULTS PLEASE.

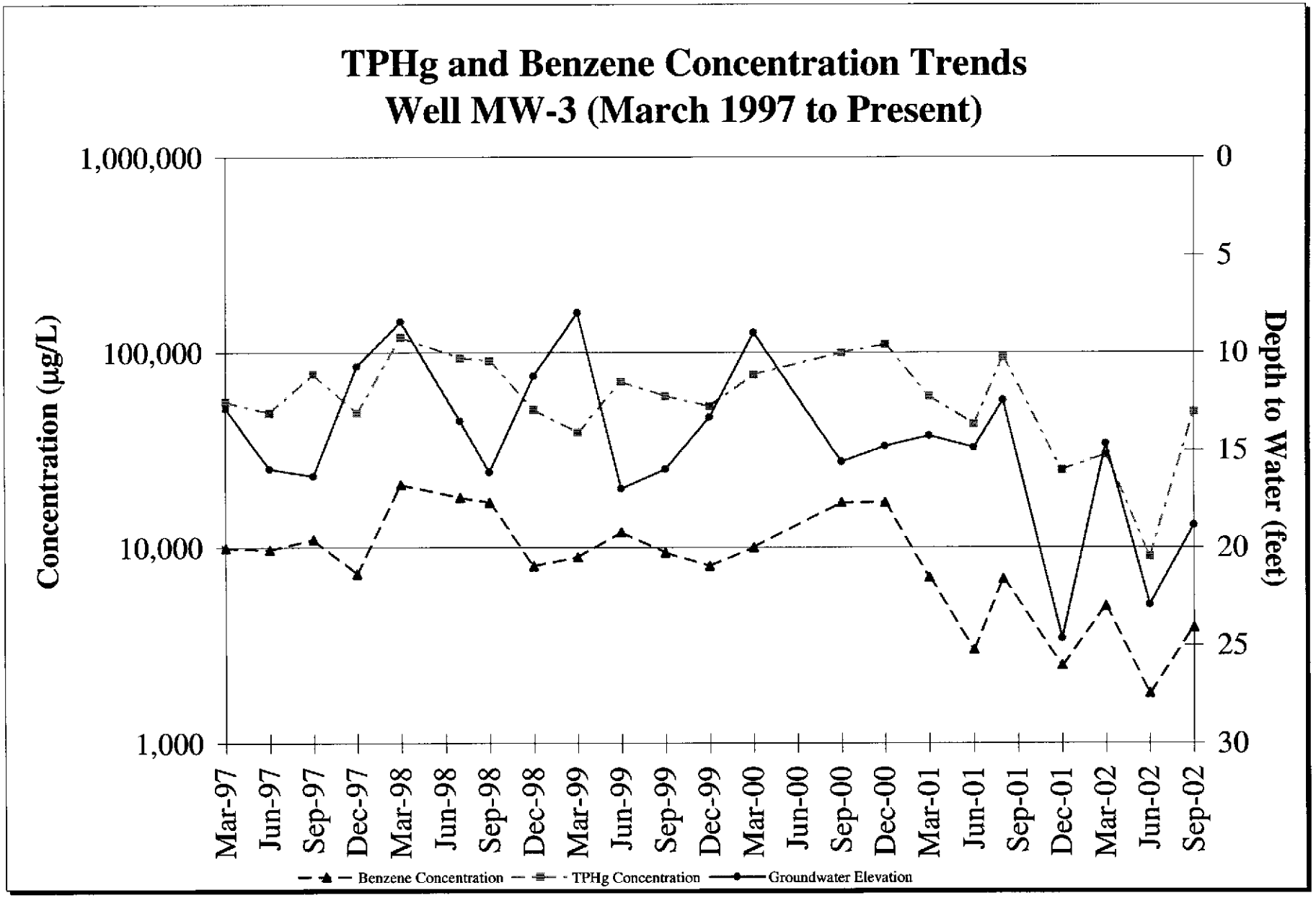
CAMBRIA

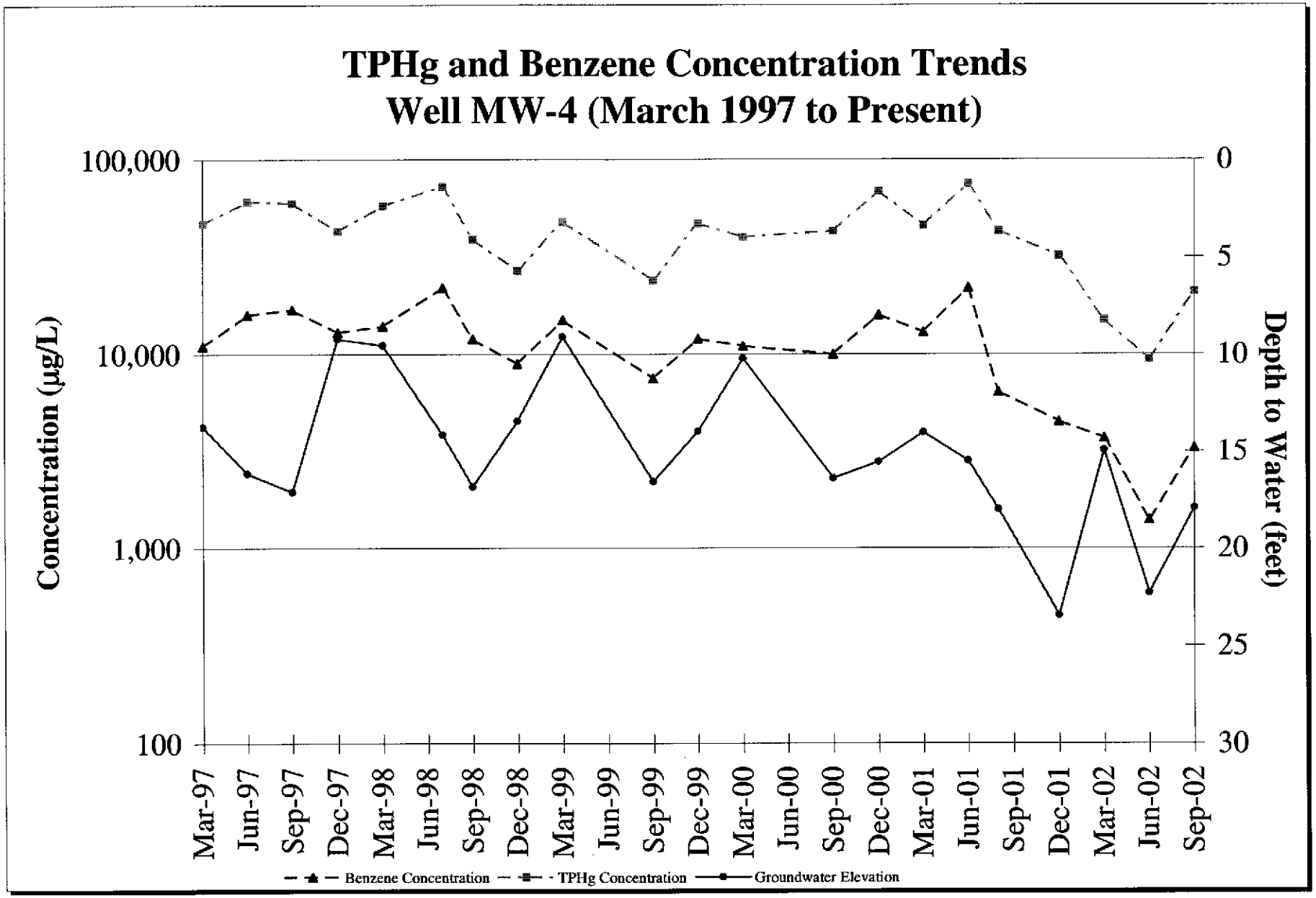
APPENDIX D

TPHg and Benzene Concentration Trend Graphs


TPHg and Benzene Concentration Trends
Well MW-1 (March 1997 to Present)
Concentration (µg/L)
100,000
10,000
1,000
100
Depth to Water (feet)
0
5
10
15
20
25
30
Mar-97
Jun-97
Sep-97
Dec-97
Mar-98
Jun-98
Sep-98
Dec-98
Mar-99
Jun-99
Sep-99
Dec-99
Mar-00
Jun-00
Sep-00
Dec-00
Mar-01
Jun-01
Sep-01
Dec-01
Mar-02
Jun-02
Sep-02
Benzene Concentration
TPHg Concentration
Groundwater Elevation


TPHg and Benzene Concentration Trends
Well MW-2 (March 1997 to Present)
Concentration (µg/L)
1,000,000
100,000
10,000
1,000
100
Depth to Water (feet)
0
5
10
15
20
25
30
Mar-97
Jun-97
Sep-97
Dec-97
Mar-98
Jun-98
Sep-98
Dec-98
Mar-99
Jun-99
Sep-99
Dec-99
Mar-00
Jun-00
Sep-00
Dec-00
Mar-01
Jun-01
Sep-01
Dec-01
Mar-02
Jun-02
Sep-02
Benzene Concentration
TPHg Concentration
Groundwater Elevation


TPHg and Benzene Concentration Trends
Well MW-3 (March 1997 to Present)
Concentration (µg/L)
1,000,000
100,000
10,000
1,000
Depth to Water (feet)
0
5
10
15
20
25
30
Mar-97
Jun-97
Sep-97
Dec-97
Mar-98
Jun-98
Sep-98
Dec-98
Mar-99
Jun-99
Sep-99
Dec-99
Mar-00
Jun-00
Sep-00
Dec-00
Mar-01
Jun-01
Sep-01
Dec-01
Mar-02
Jun-02
Sep-02
Benzene Concentration
TPHg Concentration
Groundwater Elevation


TPHg and Benzene Concentration Trends
Well MW-4 (March 1997 to Present)
Concentration (µg/L)
100,000
10,000
1,000
100
Depth to Water (feet)
0
5
10
15
20
25
30
Mar-97
Jun-97
Sep-97
Dec-97
Mar-98
Jun-98
Sep-98
Dec-98
Mar-99
Jun-99
Sep-99
Dec-99
Mar-00
Jun-00
Sep-00
Dec-00
Mar-01
Jun-01
Sep-01
Dec-01
Mar-02
Jun-02
Sep-02
Benzene Concentration
TPHg Concentration
Groundwater Elevation

CAMBRIA

APPENDIX E

Electronic Delivery Confirmations

AB2886 Electronic Delivery

Main Menu | View/Add Facilities | Upload EDD | Check EDD

UPLOADING A GEO_WELL FILE

Processing is complete. No errors were found!
Your file has been successfully submitted!

Submittal Title:	**3rd Qtr 2002 Groundwater Elevation Data: 3055 35th Avenue, Oakland**
Submittal Date/Time:	**12/10/2002 5:25:14 PM**
Confirmation Number:	**4264378190**

Back to Main Menu

Logged in as CAMBRIA-EM (AUTH_RP)

CONTACT SITE ADMINISTRATOR.

AB2886 Electronic Delivery

Main Menu | View/Add Facilities | Upload EDD | Check EDD

Your EDF file has been succcessfully uploaded!

Confirmation Number: 4434553086
Date/Time of Submittal: 12/10/2002 5:26:32 PM
Facility Global ID: T0600100538
Facility Name: EXXON
Submittal Title: 3rd Qtr 2002, Groundwater Analytical Results
Submittal Type: GW Monitoring Report

Logged in as CAMBRIA-EM (AUTH_RP) CONTACT SITE ADMINISTRATOR.