

September 16, 2009

Bob Legallet
Telegraph Business Properties
1401 Griffith Street
San Francisco, CA 94214

RECEIVED

10:03 am, Sep 23, 2009

Alameda County
Environmental Health

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document is true and correct to the best of my knowledge.

Sincerely

A handwritten signature in black ink, appearing to read "Robert Ceyda", with a long horizontal flourish extending to the right.

Bob Legallet
Telegraph Business Properties

ECM group

September 16, 2009

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

Groundwater Monitoring Report
Second Quarter 2009
Telegraph Business Park
5427 Telegraph Avenue
Oakland, California
ECM Project #07-181-04

Dear Mr. Legallet:

This report provides the results of the semi-annual groundwater monitoring at Telegraph Business Park, 5427 Telegraph Avenue, Oakland, California (Figure 1, Appendix A). On August 28, 2009, ECM personnel visited the site. Groundwater elevations were measured and groundwater samples were collected from the three monitoring wells (MW-1, MW-2, and MW-3). Well locations are shown on Figure 2 (Appendix A).

Depth to groundwater was measured in each of the three wells. Free-phase hydrocarbons were not measured or observed in any of the wells. Water level data and well construction details are tabulated in Table 1 (Appendix B). A groundwater elevation contour map is included as Figure 2 (Appendix A). Groundwater flow was to the west/southwest at an approximate gradient of 0.04 ft/ft.

The samples were forwarded under chain of custody record to Torrent Laboratory Inc., of Milpitas, California, for analysis. Analytical results for groundwater are presented in Tables 2 and 3 (Appendix B). The chain of custody document and laboratory analytical reports are included in Appendix C. Groundwater samples were collected in accordance with ECM Standard Operating Procedure - Groundwater Sampling (Appendix E). The water sampling data sheets are included in Appendix D. Purge water and decon rinseate are stored onsite in DOT-approved 50-gallon drums pending transportation and disposal at an appropriate disposal facility.

p.o. box 802, benicia, ca. 94510-0802 > 707-751-0655 > 707-751-0653 (fax)

Second Quarter 2009 Groundwater Monitoring Results:

In accordance with a guidance letter from Alameda County dated October 27, 2008, samples from site wells were analyzed for Stoddard solvent, Total Petroleum Hydrocarbons as Gasoline (TPH[G]), benzene, toluene, ethylbenzene and xylenes (BTEX), for the oxygenates MTBE, ETBE, DIPE, TAME, and TBA, and for the lead scavengers EDB and EDC.

Source Area Well: MW-2

Monitoring well MW-2 is located near the former site USTs. Concentrations of TPH(G) and Stoddard solvent were highest (3,600 and 19,500 ppb respectively) in MW-2. Benzene and toluene were detected at 16 and 0.69 ppb, respectively. Other BTEX constituents were not detected in the sample. No oxygenates or lead scavengers were detected in the second quarter 2009 sample from MW-2.

Upgradient Well: MW-1

MW-1 is located upgradient of the former site USTs. TPH(G) and Stoddard solvent were detected in MW-1 at 510 and 169 ppb respectively. BTEX constituents, oxygenates, and lead scavengers were not detected in the second quarter 2009 sample from MW-1.

Downgradient Well: MW-3

MW-3 is located downgradient of the former site USTs. TPH(G) and Stoddard solvent were detected in MW-3 at 2,200 and 434 ppb respectively. With the exception of xylenes, BTEX constituents were also detected in the sample (2.8, 0.66, and 1.6, respectively). No oxygenates or lead scavengers were detected in the second quarter 2009 sample from MW-3.

Planned Future Activities:

This site is currently scheduled for semi-annual monitoring. The next monitoring event is scheduled for December 2009. Alameda County, in a guidance letter dated October 27, 2008, directed that a workplan be prepared to install groundwater monitoring wells to assess off-site contaminant concentrations downgradient of the site; to assess the vertical extent of soil contamination; and to collect in-situ soil vapor samples to evaluate vapor concentrations beneath the site building. A workplan was issued on February 12, 2009 and was approved by Alameda County in a letter dated May 8, 2008. The work will be performed when an encroachment permit is approved by the City of Oakland.

Bob Legallet
ECM Group #07-181-04

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Thank you for allowing ECM the opportunity to provide environmental services to you. Please contact us if you have questions or require additional information.

Sincerely,
ECM Group



Rachel Guptel
Staff Scientist



Jim Green
Professional Engineer # C058482



Appendices:

- A - Figures
- B - Tables
- C - Chain of Custody and Laboratory Analytical Report
- D - Water Sampling Data Sheets
- E - Standard Operating Procedures

cc: Barbara J. Jakub, Alameda County Health Care Services Agency
Leroy Griffin, Oakland Fire Department

p.o. box 802, benicia, ca. 94510-0802 > 707-751-0655 > 707-751-0653 (fax)

APPENDIX A

FIGURES

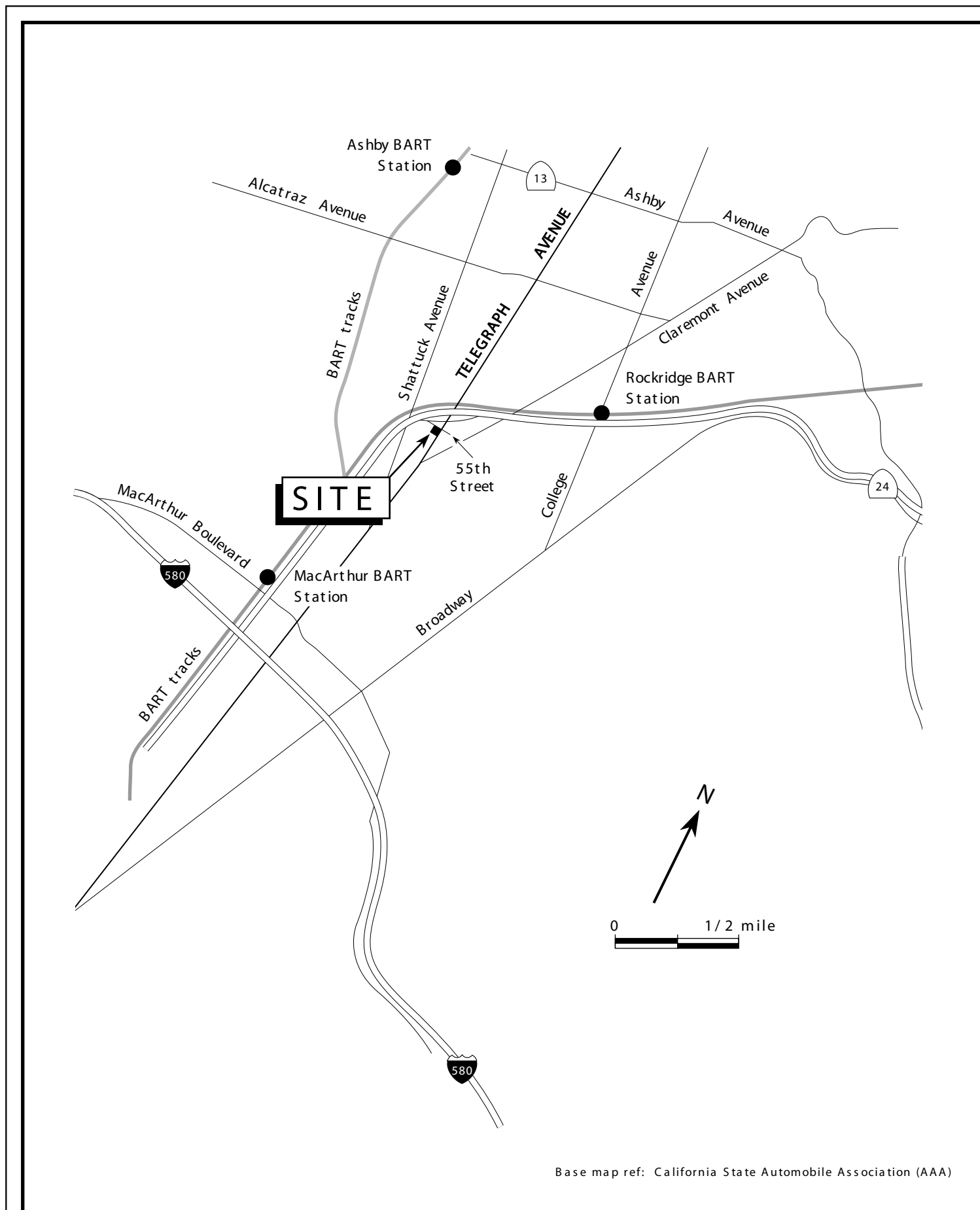


Figure 1. Site Location Map – Telegraph Business Park, 5427 Telegraph Avenue, Oakland, California

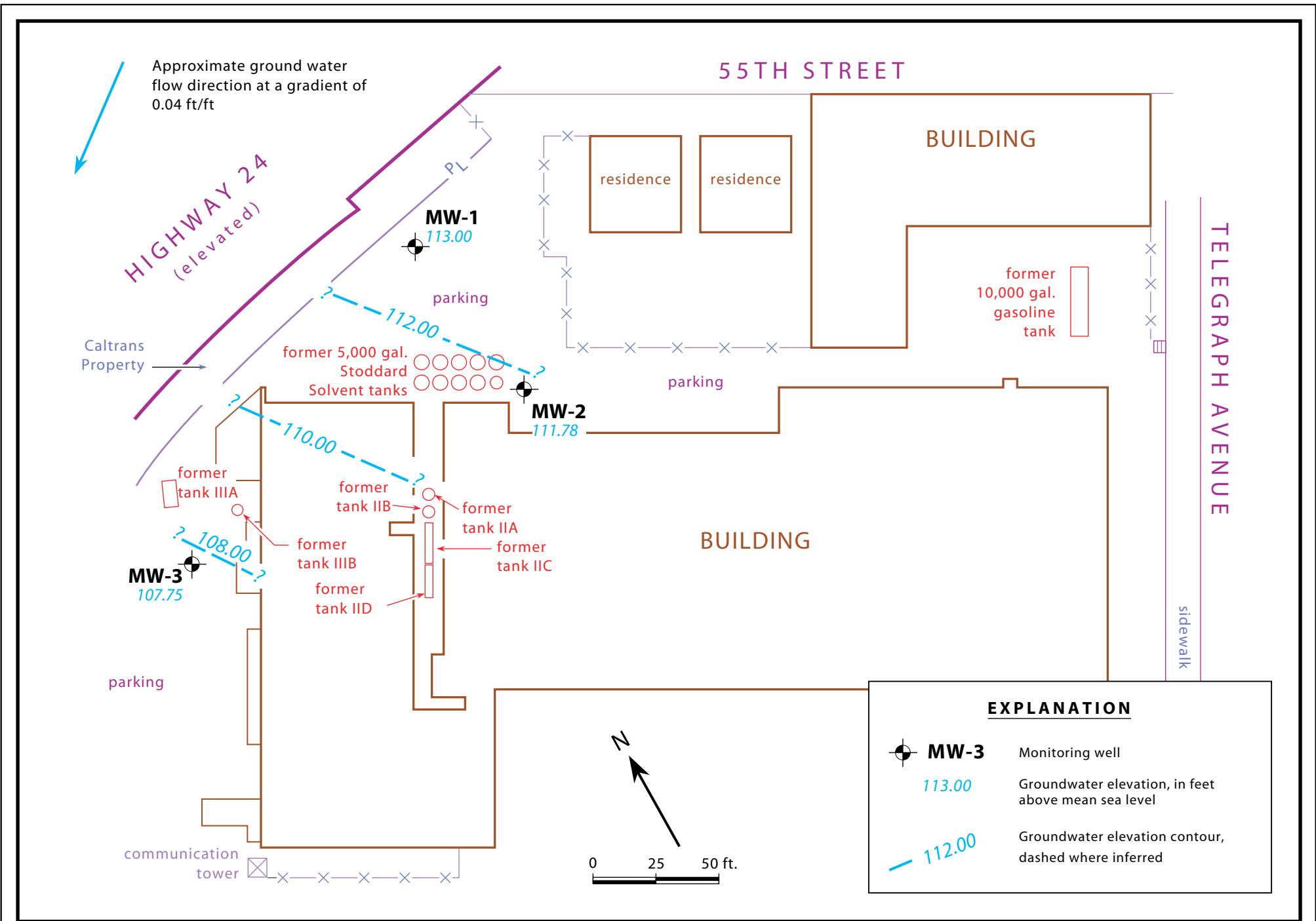


Figure 2. Monitoring Well Location and Ground Water Elevation Contour Map - August 28, 2009 - Telegraph Business Park, 5427 Telegraph Avenue, Oakland, California

APPENDIX B

TABLES

Table 1. Monitoring Well Survey Data, Well Construction Details, and Depth to Groundwater - 5427 Telegraph Avenue, Oakland, California.

Well ID	Date	DTW (Ft)	TOC (Ft, msl)	GWE (Ft, msl)	Screen Interval	Sand Pack Interval	Bentonite/ Grout Interval	Notes
MW-1	1/5/1994	6.40	115.05	108.65	5 - 20	4 - 20	0 - 4	
	2/1/1994	5.93		109.12				
	3/2/1994	5.09		109.96				
	4/6/1994	5.85		109.20				
	5/4/1994	6.37		108.68				
	6/3/1994	6.95		108.10				
	7/7/1994	7.00		108.05				
	8/3/1994	7.30		107.75				
	9/7/1994	7.70		107.35				
	10/11/1994	7.62		107.43				
	1/20/1995	4.78		110.27				
	4/7/1995	5.96		109.09				
	7/26/1995	7.19		107.86				
	10/25/1995	7.74		107.31				
	1/29/1996	4.67		110.38				
	4/26/1996	5.92		109.13				
	7/25/1996	7.10		107.95				
	10/28/1996	7.41		107.64				
	12/4/2008	7.10	120.65	113.55				
8/28/2009	7.65		113.00					
MW-2	1/5/1994	9.42	117.60	108.18	7 - 27	6 - 27	0 - 6	
	2/1/1994	9.15		108.45				
	3/2/1994	9.55		108.05				
	4/6/1994	9.09		108.51				
	5/4/1994	9.18		108.42				
	6/3/1994	9.44		108.16				
	7/7/1994	10.21		107.39				
	8/3/1994	10.96		106.64				
	9/7/1994	10.20		107.40				
	10/11/1994	10.18		107.42				
	1/20/1995	8.64		108.96				
	4/7/1995	9.84		107.76				
	7/26/1995	10.55		107.05				
10/25/1995	10.15	107.45						

Table 1. Monitoring Well Survey Data, Well Construction Details, and Depth to Groundwater - 5427 Telegraph Avenue, Oakland, California.

Well ID	Date	DTW (Ft)	TOC (Ft, msl)	GWE (Ft, msl)	Screen Interval	Sand Pack Interval	Bentonite/ Grout Interval	Notes
MW-2 cont.	1/29/1996	9.35	117.60	108.25	7 - 27	6 - 27	0 - 6	
	4/26/1996	8.57		109.03				
	7/25/1996	10.73		106.87				
	10/28/1996	10.16		107.44				
	12/4/2008	10.84	123.36	112.52				See Note 1
	8/28/2009	11.58		111.78				
MW-3	1/5/1994	10.14	115.33	105.19	5 - 20	4 - 20	0 - 4	
	2/1/1994	8.92		106.41				
	3/2/1994	7.56	115.14	107.58				Note 2: Wells resurveyed on 3/4/94 by Ronald C. Miller, pls 15816
	4/6/1994	10.24		104.90				
	5/4/1994	9.67		105.47				
	6/3/1994	10.38		104.76				
	7/7/1994	11.55		103.59				
	8/3/1994	11.76		103.38				
	9/7/1994	12.20		102.94				
	10/11/1994	12.02		103.12				
	1/20/1995	6.47		108.67				
	4/7/1995	7.98		107.16				
	7/26/1995	11.33		103.81				
	10/25/1995	12.29		102.85				
	1/29/1996	6.28		108.86				
	4/26/1996	9.09		106.05				
	7/25/1996	12.06		103.08				
	10/28/1996	12.32		102.82				
	12/4/2008	11.82	120.91	109.09				See Note 1
	8/28/2009	13.16		107.75				

Table 1. Monitoring Well Survey Data, Well Construction Details, and Depth to Groundwater - 5427 Telegraph Avenue, Oakland, California.

Well ID	Date	DTW (Ft)	TOC (Ft, msl)	GWE (Ft, msl)	Screen Interval	Sand Pack Interval	Bentonite/ Grout Interval	Notes
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Explanation:

DTW = Depth to Water

ft = feet

msl = Mean Sea Level

TOC = Top of Casing

GWE = Ground Water Elevation

Notes:

- 1 Well boxes were replaced, TOC elevations changed, and wells were resurveyed on 11/23/08 and 12/7/08 by Barry Kolstad, pls 5677

Table 2. Analytic Results for Groundwater - Hydrocarbons - 5427 Telegraph Avenue, Oakland, California

Sample ID	Sample Date	TPH-G	Stoddard Solvent	Benzene	Toluene	Ethyl-benzene	Xylenes	Notes
<----- parts per billion ----->								
MW-1	1/5/1994	---	1,000	3.3	1.6	<0.3	6	
	4/6/1994	---	1,400	5.6	4.5	<0.3	11	
	7/7/1994	---	1,200	1.5	0.80	<0.3	1.9	
	10/11/1994	---	700	<0.3	<0.3	<0.3	<0.3	
	1/20/1995	---	1,500	3.9	2	<0.3	3.9	
	4/7/1995	---	500	3.2	1.1	<0.3	1.7	
	7/26/1995	---	1,500	3.1	3.2	12	16	
	10/25/1995	---	660	0.6	1.4	20	14	
	1/29/1996	---	2,500	1.8	0.7	8.0	13	
	4/26/1996	---	4,600	<2.5	<2.5	9.5	21	
	7/25/1996	---	2,200	1.6	1.6	11	51	
	10/28/1996	---	1,300	1.5	1.3	3.6	11	
	12/4/2008	540	841	<0.50	6.55	<0.50	<1.50	1
8/28/2009	510	169	<0.50	6.55	<0.50	<1.50	2	
MW-2	1/5/1994	---	35,000	12	38	<3.0	150	
	4/6/1994	---	94,000	21	22	<6.0	110	
	7/7/1994	---	---	16	16	<1.5	1,510	
	7/11/1994	---	43,000	---	---	---	---	
	10/11/1994	---	31,000	17	13	14	0.3	
	1/20/1995	---	26,000	18	13	12	50	
	4/7/1995	---	70,000	17.5	11	<0.6	74.6	
	7/26/1995	---	21,000	17	<0.5	26	94	
	10/25/1995	---	38,000	63	70	440	1,100	
	1/29/1996	---	74,000	7.4	8.6	66	330	
	4/26/1996	---	81,000	<250	<250	3,100	15,000	
	7/25/1996	---	48,000	17	9.4	59	200	
	10/28/1996	---	6,200	19	30	58	310	
	12/4/2008	6,300	120,000	<22.0	<22.0	<22.0	<66.0	1
8/28/2009	3,600	19,500	16	0.69	<0.50	<1.50	2	
MW-3	1/5/1994	---	1,100	180	20	85	10	
	4/6/1994	---	1,000	140	13	60	<12	
	7/7/1994	---	---	120	7.5	8.0	<3.0	
	7/11/1994	---	1,000	---	---	---	---	

Table 2. Analytic Results for Groundwater - Hydrocarbons - 5427 Telegraph Avenue, Oakland, California

Sample ID	Sample Date	TPH-G	Stoddard Solvent	Benzene	Toluene	Ethyl-benzene	Xylenes	Notes
		<----- parts per billion ----->						
MW-3 cont.	10/11/1994	---	1,100	200	11	23	<0.3	
	1/20/1995	---	2,100	36	3.5	4.8	<0.3	
	4/7/1995	---	600	32.7	1.7	4.7	1.9	
	7/26/1995	---	1,200	98	3.2	12	16	
	10/25/1995	---	2,300	32	3.4	4.7	9.6	
	1/29/1996	---	1,100	22	1.2	6.4	12	
	4/26/1996	---	1,300	5.6	0.6	4.6	14	
	7/25/1996	---	2,900	120	6.4	23	36	
	10/28/1996	---	2,000	170	6.6	16	26	
	12/4/2008	1,600	708	1.15	<0.50	0.720	<1.50	1
	8/28/2009	2,200	434	2.8	0.66	1.6	<1.50	2

Explanation:

TPH-G = Gasoline

--- = not analyzed

Notes:

- 1 TPH(G) was not reported prior to 2008. Samples were analyzed for TPH(D) and Oil&Grease prior to 2008. See report: Sierra Environmental Services, 1996, Quarterly Monitoring Report, Telegraph Business Park, 5427 Telegraph Avenue, Oakland, California, December 26, 1996.
- 2 Sample chromatogram does not resemble gasoline standard pattern. Reported TPH value due to the presence of non-target heavy end hydrocarbons within range of C5-C12 quantified as gasoline.

Table 3. Analytic Results for Groundwater - Oxygenates - 5427 Telegraph Avenue, Oakland, California

Sample ID	Sample Date	MTBE	DIPE	ETBE	TAME	TBA	EDB	EDC (1,2 DCA)	Notes	
		<----- parts per billion ----->								
MW-1	1/5/1994	---	---	---	---	---	---	<0.2		
	4/6/1994	---	---	---	---	---	---	<0.2		
	7/7/1994	---	---	---	---	---	---	<0.5		
	10/11/1994	---	---	---	---	---	---	<2		
	1/20/1995	---	---	---	---	---	---	<2		
	4/7/1995	---	---	---	---	---	---	0.5		
	7/26/1995	---	---	---	---	---	---	<0.5		
	10/25/1995	---	---	---	---	---	---	<0.5		
	1/29/1996	---	---	---	---	---	---	<0.5		
	4/26/1996	---	---	---	---	---	---	<0.5		
	7/25/1996	---	---	---	---	---	---	<0.5		
	10/28/1996	---	---	---	---	---	---	<0.5		
	12/4/2008	<0.50	<0.50	<0.50	<0.50	<10.0	<0.50	<0.50	1	
8/28/2009	<0.50	<0.50	<0.50	<0.50	<10.0	<0.50	<0.50			
MW-2	1/5/1994	---	---	---	---	---	---	2.7		
	4/6/1994	---	---	---	---	---	---	<0.2		
	7/7/1994	---	---	---	---	---	---	0.60		
	10/11/1994	---	---	---	---	---	---	<2		
	1/20/1995	---	---	---	---	---	---	<2		
	4/7/1995	---	---	---	---	---	---	1.4		
	7/26/1995	---	---	---	---	---	---	<0.5		
	10/25/1995	---	---	---	---	---	---	<0.5		
	1/29/1996	---	---	---	---	---	---	<0.5		
	4/26/1996	---	---	---	---	---	---	<0.5		
	7/25/1996	---	---	---	---	---	---	<0.5		
	10/28/1996	---	---	---	---	---	---	<2.5		
	12/4/2008	<22.0	<22.0	<22.0	<22.0	<440	<22.0	<22.0	1	
8/28/2009	<0.50	<0.50	<0.50	<0.50	<10.0	<0.50	<0.50			
MW-3	1/5/1994	---	---	---	---	---	---	0.20		
	4/6/1994	---	---	---	---	---	---	<0.2		
	7/7/1994	---	---	---	---	---	---	<0.5		
	10/11/1994	---	---	---	---	---	---	<2		
	1/20/1995	---	---	---	---	---	---	<2		

Table 3. Analytic Results for Groundwater - Oxygenates - 5427 Telegraph Avenue, Oakland, California

Sample ID	Sample Date	MTBE	DIPE	ETBE	TAME	TBA	EDB	EDC (1,2 DCA)	Notes
		<----- parts per billion ----->							
MW-3 cont.	4/7/1995	---	---	---	---	---	---	0.7	
	7/26/1995	---	---	---	---	---	---	<0.5	
	10/25/1995	---	---	---	---	---	---	<0.5	
	1/29/1996	---	---	---	---	---	---	<0.5	
	4/26/1996	---	---	---	---	---	---	<0.5	
	7/25/1996	---	---	---	---	---	---	<0.5	
	10/28/1996	---	---	---	---	---	---	<0.5	
	12/4/2008	<0.50	<0.50	<0.50	<0.50	<10.0	<0.50	<0.50	1
8/28/2009	<0.50	<0.50	<0.50	<0.50	<10.0	<0.50	<0.50		

Explanation:

- MTBE = Methyl tertiary butyl ether
- DIPE = Di-isopropyl ether
- ETBE = Ethyl tertiary butyl ether
- TAME = Tertiary amyl methyl ether
- TBA = Tertiary butyl alcohol
- EDB = 1,2-Dibromoethane
- EDC = 1,2-Dichloroethane

Notes:

1 MTBE, DIPE, ETBE, TAME, TBA and EDB were not reported prior to 2008. Samples were analyzed for Halogenated Volatile Organic Compounds (HVOCs) and Volatile Organic Compounds (VOCs) prior to 2008. See report: Sierra Environmental Services, 1996, Quarterly Monitoring Report, Telegraph Business Park, 5427 Telegraph Avenue, Oakland, California, December 26, 1996.

APPENDIX C

CHAIN OF CUSTODY
AND
LABORATORY ANALYTICAL REPORTS



483 Sinclair Frontage Road
Milpitas, CA 95035
Phone: 408.263.5258
FAX: 408.263.8293
www.torrentlab.com

CHAIN OF CUSTODY

LAB WORK ORDER NO

0908160

NOTE: SHADED AREAS ARE FOR TORRENT LAB USE ONLY

Company Name: ECM Group Location of Sampling: 5427 Telegraph Ave, Oakland, CA
 Address: P.O. Box 802 Purpose:
 City: Benicia State: CA Zip Code: 94510 Special Instructions / Comments:
 Telephone: 707-751-0655 FAX: 707-751-0653
 REPORT TO: Rachel Gupta SAMPLER: Douglas West P.O.#: 07-181-04 EMAIL: rguptel@ecmgrp.com

TURNAROUND TIME: Standard

SAMPLE TYPE:

REPORT FORMAT:

- 10 Work Days 3 Work Days Noon - Nxt Day
 7 Work Days 2 Work Days 2 - 8 Hours
 5 Work Days 1 Work Day Other

- Storm Water Air
 Waste Water Other
 Ground Water Soil

- QC Level IV
 EDF
 Excel / EDD

ANALYSIS REQUESTED

LAB ID	CLIENT'S SAMPLE I.D.	DATE / TIME SAMPLED	MATRIX	# OF CONT	CONT TYPE	TPH(G)	BTEX	SOLVENT	EDB	EDC	Standard Solvent	REMARKS
001A	MW-1	8-28-09 0950		6 vials 1 L Am		X	X	X	X	X	X	
002A	MW-2	↓ 1107		↓		↓	↓	↓	↓	↓	↓	
003A	MW-3	↓ 1025		↓		↓	↓	↓	↓	↓	↓	

1 Relinquished By: Douglas West Print: D. E. West Date: 8/31/09 Time: 12:26 Received By: SINDY PALENCIA Print: SINDY PALENCIA Date: 8/31/09 Time: 12:26 PM

2 Relinquished By: SINDY PALENCIA Print: SINDY PALENCIA Date: 8/31/09 Time: 12:26 PM Received By: Navin & Sridhar Print: NAVIN & Date: 8/31/09 Time: 1:26 PM

Were Samples Received in Good Condition? Yes NO Samples on Ice? Yes NO Method of Shipment: Gold Bullet Sample seals intact? Yes NO N/A

NOTE: Samples are discarded by the laboratory 30 days from date of receipt unless other arrangements are made.



September 08, 2009

Rachel Guptel
ECM
290 W Channel Rd
Benicia, CA 94510
TEL: (707) 751-0655
FAX
RE: 07-181-04

Order No.: 0908160

Dear Rachel Guptel:

Torrent Laboratory, Inc. received 3 samples on 8/31/2009 for the analyses presented in the following report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Reported data is applicable for only the samples received as part of the order number referenced above.

Torrent Laboratory, Inc, is certified by the State of California, ELAP #1991. If you have any questions regarding these tests results, please feel free to contact the Project Management Team at (408)263-5258;ext: 204.

Sincerely,


Laboratory Director

9/8/09
Date

Nkabir



TORRENT LABORATORY, INC.

483 Sinclair Frontage Road • Milpitas, CA • Phone: (408) 263-5258 • Fax: (408) 263-8293

Visit us at www.torrentlab.com email: analysis@torrentlab.com

Report prepared for: Rachel Guptael
ECM

Date Received: 8/31/2009
Date Reported: 9/8/2009

Client Sample ID: MW-1
Sample Location: 5427 Telegraph Ave. Oakland,C
Sample Matrix: GROUNDWATER
Date/Time Sampled 8/28/2009 9:50:00 AM

Lab Sample ID: 0908160-001
Date Prepared:

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Stoddard Solvent	SW8015B	9/2/2009	0.1	1	0.100	0.169	mg/L	R20832
Surr: Pentacosane	SW8015B	9/2/2009	0	1	53.3-124	81.0	%REC	R20832
Benzene	SW8260B	8/31/2009	0.5	1	0.50	ND	µg/L	R20801
Toluene	SW8260B	8/31/2009	0.5	1	0.50	ND	µg/L	R20801
Ethylbenzene	SW8260B	8/31/2009	0.5	1	0.50	ND	µg/L	R20801
Methyl tert-butyl ether (MTBE)	SW8260B	8/31/2009	0.5	1	0.50	ND	µg/L	R20801
Diisopropyl ether (DIPE)	SW8260B	8/31/2009	0.5	1	0.50	ND	µg/L	R20801
Ethyl tert-butyl ether (ETBE)	SW8260B	8/31/2009	0.5	1	0.50	ND	µg/L	R20801
tert-Amyl methyl ether (TAME)	SW8260B	8/31/2009	0.5	1	0.50	ND	µg/L	R20801
t-Butyl alcohol (t-Butanol)	SW8260B	8/31/2009	10	1	10	ND	µg/L	R20801
1,2-Dibromoethane (EDB)	SW8260B	8/31/2009	0.5	1	0.50	ND	µg/L	R20801
1,2-Dichloroethane (EDC)	SW8260B	8/31/2009	0.5	1	0.50	ND	µg/L	R20801
Xylenes, Total	SW8260B	8/31/2009	1.5	1	1.5	ND	µg/L	R20801
Surr: Dibromofluoromethane	SW8260B	8/31/2009	0	1	61.2-131	110	%REC	R20801
Surr: 4-Bromofluorobenzene	SW8260B	8/31/2009	0	1	64.1-120	122 S	%REC	R20801
Surr: Toluene-d8	SW8260B	8/31/2009	0	1	75.1-127	119	%REC	R20801

Note: S-Surrogate recovery out of limit-high bias. Data deemed acceptable as no target analytes were observed in the sample.

TPH (Gasoline)	SW8260B(TPH)	8/31/2009	50	1	50	510x	µg/L	G20801
Surr: 4-Bromofluorobenzene	SW8260B(TPH)	8/31/2009	0	1	53-118	65.5	%REC	G20801

Note: x- Sample chromatogram does not resemble gasoline standard pattern. Reported TPH value due to the presence of non-target heavy end hydrocarbons within range of C5-C12 quantified as gasoline.

Report prepared for: Rachel Gupta
ECM

Date Received: 8/31/2009

Date Reported: 9/8/2009

Client Sample ID: MW-2
Sample Location: 5427 Telegraph Ave. Oakland, C
Sample Matrix: GROUNDWATER
Date/Time Sampled 8/28/2009 11:07:00 AM

Lab Sample ID: 0908160-002

Date Prepared:

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Stoddard Solvent	SW8015B	9/3/2009	0.1	20	2.00	19.5	mg/L	R20832
Surr: Pentacosane	SW8015B	9/3/2009	0	20	53.3-124	100	%REC	R20832
Benzene	SW8260B	8/31/2009	0.5	1	0.50	16	µg/L	R20801
Toluene	SW8260B	8/31/2009	0.5	1	0.50	0.69	µg/L	R20801
Ethylbenzene	SW8260B	8/31/2009	0.5	1	0.50	ND	µg/L	R20801
Methyl tert-butyl ether (MTBE)	SW8260B	8/31/2009	0.5	1	0.50	ND	µg/L	R20801
Diisopropyl ether (DIPE)	SW8260B	8/31/2009	0.5	1	0.50	ND	µg/L	R20801
Ethyl tert-butyl ether (ETBE)	SW8260B	8/31/2009	0.5	1	0.50	ND	µg/L	R20801
tert-Amyl methyl ether (TAME)	SW8260B	8/31/2009	0.5	1	0.50	ND	µg/L	R20801
t-Butyl alcohol (t-Butanol)	SW8260B	8/31/2009	10	1	10	ND	µg/L	R20801
1,2-Dibromoethane (EDB)	SW8260B	8/31/2009	0.5	1	0.50	ND	µg/L	R20801
1,2-Dichloroethane (EDC)	SW8260B	8/31/2009	0.5	1	0.50	ND	µg/L	R20801
Xylenes, Total	SW8260B	8/31/2009	1.5	1	1.5	ND	µg/L	R20801
Surr: Dibromofluoromethane	SW8260B	8/31/2009	0	1	61.2-131	115	%REC	R20801
Surr: 4-Bromofluorobenzene	SW8260B	8/31/2009	0	1	64.1-120	112	%REC	R20801
Surr: Toluene-d8	SW8260B	8/31/2009	0	1	75.1-127	110	%REC	R20801
TPH (Gasoline)	SW8260B(TPH)	9/1/2009	50	4.4	220	3600x	µg/L	G20818
Surr: 4-Bromofluorobenzene	SW8260B(TPH)	9/1/2009	0	4.4	53-118	57.8	%REC	G20818

Note: x- Sample chromatogram does not resemble gasoline standard pattern. Reported TPH value due to the presence of non-target heavy end hydrocarbons within range of C5-C12 quantified as gasoline.

Report prepared for: Rachel Gupta
ECM

Date Received: 8/31/2009

Date Reported: 9/8/2009

Client Sample ID: MW-3
Sample Location: 5427 Telegraph Ave. Oakland, CA
Sample Matrix: GROUNDWATER
Date/Time Sampled 8/28/2009 10:25:00 AM

Lab Sample ID: 0908160-003
Date Prepared:

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Stoddard Solvent	SW8015B	9/2/2009	0.1	1	0.100	0.434	mg/L	R20832
Surr: Pentacosane	SW8015B	9/2/2009	0	1	53.3-124	79.0	%REC	R20832
Benzene	SW8260B	9/1/2009	0.5	1	0.50	2.8	µg/L	R20818
Toluene	SW8260B	9/1/2009	0.5	1	0.50	0.66	µg/L	R20818
Ethylbenzene	SW8260B	9/1/2009	0.5	1	0.50	1.6	µg/L	R20818
Methyl tert-butyl ether (MTBE)	SW8260B	9/1/2009	0.5	1	0.50	ND	µg/L	R20818
Diisopropyl ether (DIPE)	SW8260B	9/1/2009	0.5	1	0.50	ND	µg/L	R20818
Ethyl tert-butyl ether (ETBE)	SW8260B	9/1/2009	0.5	1	0.50	ND	µg/L	R20818
tert-Amyl methyl ether (TAME)	SW8260B	9/1/2009	0.5	1	0.50	ND	µg/L	R20818
t-Butyl alcohol (t-Butanol)	SW8260B	9/1/2009	10	1	10	ND	µg/L	R20818
1,2-Dibromoethane (EDB)	SW8260B	9/1/2009	0.5	1	0.50	ND	µg/L	R20818
1,2-Dichloroethane (EDC)	SW8260B	9/1/2009	0.5	1	0.50	ND	µg/L	R20818
Xylenes, Total	SW8260B	9/1/2009	1.5	1	1.5	ND	µg/L	R20818
Surr: Dibromofluoromethane	SW8260B	9/1/2009	0	1	61.2-131	105	%REC	R20818
Surr: 4-Bromofluorobenzene	SW8260B	9/1/2009	0	1	64.1-120	101	%REC	R20818
Surr: Toluene-d8	SW8260B	9/1/2009	0	1	75.1-127	122	%REC	R20818
TPH (Gasoline)	SW8260B(TPH)	8/31/2009	50	8.8	440	2200x	µg/L	G20801
Surr: 4-Bromofluorobenzene	SW8260B(TPH)	8/31/2009	0	8.8	53-118	69.8	%REC	G20801

Note: x- Sample chromatogram does not resemble gasoline standard pattern. Reported TPH value due to the presence of non-target heavy end hydrocarbons within range of C5-C12 quantified as gasoline.

Definitions, legends and Notes

Note	Description
ug/kg	Microgram per kilogram (ppb, part per billion).
ug/L	Microgram per liter (ppb, part per billion).
mg/kg	Milligram per kilogram (ppm, part per million).
mg/L	Milligram per liter (ppm, part per million).
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate.
MDL	Method detection limit.
MRL	Modified reporting limit. When sample is subject to dilution, reporting limit times dilution factor yields MRL.
MS/MSD	Matrix spike/matrix spike duplicate.
N/A	Not applicable.
ND	Not detected at or above detection limit.
NR	Not reported.
QC	Quality Control.
RL	Reporting limit.
% RPD	Percent relative difference.
a	pH was measured immediately upon the receipt of the sample, but it was still done outside the holding time.
sub	Analyzed by subcontracting laboratory, Lab Certificate #

CLIENT: ECM
Work Order: 0908160
Project: 07-181-04

ANALYTICAL QC SUMMARY REPORT

BatchID: G20801

Sample ID MB_G20801	SampType: MBLK	TestCode: TPH_GAS_W	Units: µg/L	Prep Date: 8/31/2009	RunNo: 20801						
Client ID: ZZZZZ	Batch ID: G20801	TestNo: SW8260B(TP	Analysis Date: 8/31/2009	SeqNo: 300719							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Gasoline)	ND	50									
Surr: 4-Bromofllurobenzene	7.400	0	11.36	0	65.1	53	118				

Sample ID LCS_G20801	SampType: LCS	TestCode: TPH_GAS_W	Units: µg/L	Prep Date: 8/31/2009	RunNo: 20801						
Client ID: ZZZZZ	Batch ID: G20801	TestNo: SW8260B(TP	Analysis Date: 8/31/2009	SeqNo: 300720							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Gasoline)	193.0	50	227	0	85.0	52.4	127				
Surr: 4-Bromofllurobenzene	7.620	0	11.36	0	67.1	53	118				

Sample ID LCSD_G20801	SampType: LCSD	TestCode: TPH_GAS_W	Units: µg/L	Prep Date: 8/31/2009	RunNo: 20801						
Client ID: ZZZZZ	Batch ID: G20801	TestNo: SW8260B(TP	Analysis Date: 8/31/2009	SeqNo: 300721							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Gasoline)	184.0	50	227	0	81.1	52.4	127	193	4.77	20	
Surr: 4-Bromofllurobenzene	8.640	0	11.36	0	76.1	53	118	0	0	0	

Qualifiers: E Value above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits
 ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

CLIENT: ECM
Work Order: 0908160
Project: 07-181-04

ANALYTICAL QC SUMMARY REPORT

BatchID: G20818

Sample ID MB_G20818	SampType: MBLK	TestCode: TPH_GAS_W	Units: µg/L	Prep Date: 9/1/2009	RunNo: 20818						
Client ID: ZZZZZ	Batch ID: G20818	TestNo: SW8260B(TP)		Analysis Date: 9/1/2009	SeqNo: 300876						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline)	ND	50									
Surr: 4-Bromoflurobenzene	7.900	0	11.36	0	69.5	53	118				

Sample ID LCS_G20818	SampType: LCS	TestCode: TPH_GAS_W	Units: µg/L	Prep Date: 9/1/2009	RunNo: 20818						
Client ID: ZZZZZ	Batch ID: G20818	TestNo: SW8260B(TP)		Analysis Date: 9/1/2009	SeqNo: 300877						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline)	191.0	50	227	0	84.1	52.4	127				
Surr: 4-Bromoflurobenzene	7.800	0	11.36	0	68.7	53	118				

Sample ID LCSD_G20818	SampType: LCSD	TestCode: TPH_GAS_W	Units: µg/L	Prep Date: 9/1/2009	RunNo: 20818						
Client ID: ZZZZZ	Batch ID: G20818	TestNo: SW8260B(TP)		Analysis Date: 9/1/2009	SeqNo: 300878						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline)	196.0	50	227	0	86.3	52.4	127	191	2.58	20	
Surr: 4-Bromoflurobenzene	6.900	0	11.36	0	60.7	53	118	0	0	0	

Qualifiers:	E Value above quantitation range	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike Recovery outside accepted recovery limits

CLIENT: ECM
Work Order: 0908160
Project: 07-181-04

ANALYTICAL QC SUMMARY REPORT

BatchID: R20801

Sample ID	SampType:	TestCode:	Units:	Prep Date:	RunNo:						
MB_R20801	MBLK	8260B_W	µg/L	8/30/2009	20801						
Client ID: ZZZZZ	Batch ID: R20801	TestNo: SW8260B		Analysis Date: 8/30/2009	SeqNo: 300711						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane (EDB)	ND	0.50									
1,2-Dichloroethane (EDC)	ND	0.50									
Benzene	ND	0.50									
Diisopropyl ether (DIPE)	ND	0.50									
Ethyl tert-butyl ether (ETBE)	ND	0.50									
Ethylbenzene	ND	0.50									
Methyl tert-butyl ether (MTBE)	ND	0.50									
t-Butyl alcohol (t-Butanol)	ND	5.0									
tert-Amyl methyl ether (TAME)	ND	0.50									
Toluene	ND	0.50									
Xylenes, Total	ND	1.5									
Surr: Dibromofluoromethane	12.93	0	11.36	0	114	61.2	131				
Surr: 4-Bromofluorobenzene	12.90	0	11.36	0	114	64.1	120				
Surr: Toluene-d8	10.72	0	11.36	0	94.4	75.1	127				

Sample ID	SampType:	TestCode:	Units:	Prep Date:	RunNo:						
LCS_R20801	LCS	8260B_W	µg/L	8/30/2009	20801						
Client ID: ZZZZZ	Batch ID: R20801	TestNo: SW8260B		Analysis Date: 8/30/2009	SeqNo: 300712						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	18.97	0.50	17.04	0	111	66.9	140				
Toluene	18.07	0.50	17.04	0	106	76.6	123				
Surr: Dibromofluoromethane	11.60	0	11.36	0	102	61.2	131				
Surr: 4-Bromofluorobenzene	11.32	0	11.36	0	99.6	64.1	120				
Surr: Toluene-d8	12.98	0	11.36	0	114	75.1	127				

Sample ID	SampType:	TestCode:	Units:	Prep Date:	RunNo:						
LCSD_R20801	LCSD	8260B_W	µg/L	8/30/2009	20801						
Client ID: ZZZZZ	Batch ID: R20801	TestNo: SW8260B		Analysis Date: 8/30/2009	SeqNo: 300713						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	18.73	0.50	17.04	0	110	66.9	140	18.97	1.27	20	
Toluene	19.26	0.50	17.04	0	113	76.6	123	18.07	6.38	20	

Qualifiers: E Value above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits
 ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

CLIENT: ECM
Work Order: 0908160
Project: 07-181-04

ANALYTICAL QC SUMMARY REPORT

BatchID: R20801

Sample ID	LCSD_R20801	SampType:	LCSD	TestCode:	8260B_W	Units:	µg/L	Prep Date:	8/30/2009	RunNo:	20801
Client ID:	ZZZZZ	Batch ID:	R20801	TestNo:	SW8260B	Analysis Date:	8/30/2009	SeqNo:	300713		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	11.47	0	11.36	0	101	61.2	131	0	0	0	
Surr: 4-Bromofluorobenzene	9.270	0	11.36	0	81.6	64.1	120	0	0	0	
Surr: Toluene-d8	12.97	0	11.36	0	114	75.1	127	0	0	0	

Qualifiers: E Value above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits
 ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

CLIENT: ECM
Work Order: 0908160
Project: 07-181-04

ANALYTICAL QC SUMMARY REPORT

BatchID: R20818

Sample ID	SampType:	TestCode:	Units:	Prep Date:	RunNo:						
MB_R20818	MBLK	8260B_W	µg/L	9/1/2009	20818						
Client ID: ZZZZZ	Batch ID: R20818	TestNo: SW8260B		Analysis Date: 9/1/2009	SeqNo: 300872						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane (EDB)	ND	0.50									
1,2-Dichloroethane (EDC)	ND	0.50									
Benzene	ND	0.50									
Diisopropyl ether (DIPE)	ND	0.50									
Ethyl tert-butyl ether (ETBE)	ND	0.50									
Ethylbenzene	ND	0.50									
Methyl tert-butyl ether (MTBE)	ND	0.50									
t-Butyl alcohol (t-Butanol)	ND	5.0									
tert-Amyl methyl ether (TAME)	ND	0.50									
Toluene	ND	0.50									
Xylenes, Total	ND	1.5									
Surr: Dibromofluoromethane	11.56	0	11.36	0	102	61.2	131				
Surr: 4-Bromofluorobenzene	12.19	0	11.36	0	107	64.1	120				
Surr: Toluene-d8	13.47	0	11.36	0	119	75.1	127				

Sample ID	SampType:	TestCode:	Units:	Prep Date:	RunNo:						
LCS_R20818	LCS	8260B_W	µg/L	9/1/2009	20818						
Client ID: ZZZZZ	Batch ID: R20818	TestNo: SW8260B		Analysis Date: 9/1/2009	SeqNo: 300873						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	16.55	0.50	17.04	0	97.1	66.9	140				
Toluene	16.91	0.50	17.04	0	99.2	76.6	123				
Surr: Dibromofluoromethane	11.29	0	11.36	0	99.4	61.2	131				
Surr: 4-Bromofluorobenzene	12.70	0	11.36	0	112	64.1	120				
Surr: Toluene-d8	11.18	0	11.36	0	98.4	75.1	127				

Sample ID	SampType:	TestCode:	Units:	Prep Date:	RunNo:						
LCSD_R20818	LCSD	8260B_W	µg/L	9/1/2009	20818						
Client ID: ZZZZZ	Batch ID: R20818	TestNo: SW8260B		Analysis Date: 9/1/2009	SeqNo: 300874						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	18.23	0.50	17.04	0	107	66.9	140	16.55	9.66	20	
Toluene	19.59	0.50	17.04	0	115	76.6	123	16.91	14.7	20	

Qualifiers: E Value above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits
 ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

CLIENT: ECM
Work Order: 0908160
Project: 07-181-04

ANALYTICAL QC SUMMARY REPORT

BatchID: R20818

Sample ID	LCSD_R20818	SampType:	LCSD	TestCode:	8260B_W	Units:	µg/L	Prep Date:	9/1/2009	RunNo:	20818
Client ID:	ZZZZZ	Batch ID:	R20818	TestNo:	SW8260B	Analysis Date:	9/1/2009	SeqNo:	300874		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	10.96	0	11.36	0	96.5	61.2	131	0	0	0	
Surr: 4-Bromofluorobenzene	12.52	0	11.36	0	110	64.1	120	0	0	0	
Surr: Toluene-d8	12.27	0	11.36	0	108	75.1	127	0	0	0	

Qualifiers: E Value above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits
 ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

CLIENT: ECM
Work Order: 0908160
Project: 07-181-04

ANALYTICAL QC SUMMARY REPORT

BatchID: R20832

Sample ID WD090831A-MB	SampType: MBLK	TestCode: TEPH_W	Units: mg/L	Prep Date: 8/31/2009	RunNo: 20832						
Client ID: ZZZZZ	Batch ID: R20832	TestNo: SW8015B		Analysis Date: 8/31/2009	SeqNo: 300981						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Stoddard Solvent	ND	0.100									
Surr: Pentacosane	0.09800	0	0.1	0	98.0	53.3	124				

Sample ID WD090831A-LCS	SampType: LCS	TestCode: TEPH_W	Units: mg/L	Prep Date: 8/31/2009	RunNo: 20832						
Client ID: ZZZZZ	Batch ID: R20832	TestNo: SW8015B		Analysis Date: 8/31/2009	SeqNo: 300982						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: Pentacosane	0.08900	0	0.1	0	89.0	53.3	124				
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Sample ID WD090831A-LCSD	SampType: LCSD	TestCode: TEPH_W	Units: mg/L	Prep Date: 8/31/2009	RunNo: 20832						
Client ID: ZZZZZ	Batch ID: R20832	TestNo: SW8015B		Analysis Date: 8/31/2009	SeqNo: 300983						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: Pentacosane	0.08700	0	0.1	0	87.0	53.3	124	0	0	0	
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Qualifiers:	E Value above quantitation range	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike Recovery outside accepted recovery limits

APPENDIX D

WATER SAMPLING DATA SHEETS

WATER SAMPLING DATA

Job Name Telegraph Job Number 07-181-04
 Well Number MW-1 Date 8-28-09 Time 0950
 Well Diameter 2" Well Depth (spec.) _____ Well Depth (sounded) 18.99
 Depth to Water (static) 7.65 TOC elev. _____
 G.W. Elev. _____ Maximum Drawdown Limit (if applicable) _____

Initial height of water in casing 11.34 Volume 1.8 gallons
 Total to be evacuated = 3 x Initial Volume 5.4 gallons

Formulas/Conversions

r = well radius in ft
 h = ht of water col. in ft
 vol. in cyl. = $\pi r^2 h$
 7.48 gal/ft³
 V_2 " casing = 0.163 gal/ft
 V_3 " casing = 0.367 gal/ft
 V_4 " casing = 0.653 gal/ft
 V_6 " casing = 1.826 gal/ft
 V_8 " casing = 3.47 gal/ft

Stop Time	Start Time	Bailed	Pumped	Cum. Gal.
-----------	------------	--------	--------	-----------

Pumped or Bailed Dry? Yes No After _____ gallons Recovery Rate _____

Water color _____ Odor _____

Description of sediments or material in sample: _____

Additional Comments: _____

CHEMICAL DATA

Reading No.	1	2	3	4	5	6	7
Time	<u>0938</u>	<u>0941</u>	<u>0945</u>				
Gallons	<u>1.8</u>	<u>1.8</u>	<u>1.8</u>				
Temp. (degree F)	<u>76.0</u>	<u>73.1</u>	<u>71.7</u>				
pH	<u>6.31</u>	<u>6.20</u>	<u>6.28</u>				
EC (umhos/cm)	<u>1112</u>	<u>1070</u>	<u>1055</u>				
Special Conditions	_____						

SAMPLES COLLECTED

Sample ID ml	Bottle/cap	Filtered (size, u)	Preservative (type)	Refrig. (R, NR)	Lab (Inlt)	Analysis Requested
--------------	------------	--------------------	---------------------	-----------------	------------	--------------------

Bottles: P = Polyethylene; Pp = Polypropylene; C or B = Clear/Brown Glass; O = Other (describe)
 Cap Codes: Py = Polysal; V = VOA/Teflon septa; M = Metal.

WATER SAMPLING DATA

Job Name Telegraph Job Number 07-181-04
 Well Number MW-2 Date 8-28-09 Time 1107
 Well Diameter 2" Well Depth (spec.) _____ Well Depth (sounded) 26-65
 Depth to Water (static) 1158 TOC elev. _____
 G.W. Elev. _____ Maximum Drawdown Limit (if applicable) _____

Initial height of water in casing 15.07 Volume 2.5 gallons
 Total to be evacuated = 3 x Initial Volume 7.5 gallons

Formulas/Conversions
 r = well radius in ft
 h = ht of water col. in ft
 vol. in cyl. = $\pi r^2 h$
 7.48 gal/ft³
 V_{2"} casing = 0.163 gal/ft
 V_{3"} casing = 0.367 gal/ft
 V_{4"} casing = 0.653 gal/ft
 V_{6"} casing = 1.826 gal/ft
 V_{8"} casing = 3.47 gal/ft
 Cum. Gal.

<u>Stop Time</u>	<u>Start Time</u>	<u>Bailed</u>	<u>Pumped</u>	<u>Cum. Gal.</u>

Pumped or Bailed Dry? Yes No After _____ gallons Recovery Rate _____
 Water color _____ Odor _____
 Description of sediments or material in sample: _____
 Additional Comments: odor evident

CHEMICAL DATA

Reading No.	1	2	3	4	5	6	7
Time	<u>1050</u>	<u>1057</u>	<u>1103</u>				
Gallons	<u>2.5</u>	<u>2.5</u>	<u>2.5</u>				
Temp. (degree F)	<u>70.4</u>	<u>68.7</u>	<u>67.2</u>				
pH	<u>6.49</u>	<u>6.50</u>	<u>6.53</u>				
EC (umhos/cm)	<u>1318</u>	<u>1296</u>	<u>1289</u>				
Special Conditions							

SAMPLES COLLECTED

Sample ID ml	Bottle/cap	Filtered (size, u)	Preservative (type)	Refrig. (R, NR)	Lab (Init)	Analysis Requested

Bottles: P = Polyethylene; Pp = Polypropylene; C or B = Clear/Brown Glass; O = Other (describe)
 Cap Codes: Py = Polyseal; V = VOA/Teflon septa; M = Metal.

WATER SAMPLING DATA

Job Name Telegraph Job Number 07-181-04
 Well Number MW-3 Date 8-28-09 Time 11025
 Well Diameter 2" Well Depth (spec.) _____ Well Depth (sounded) 19.97
 Depth to Water (static) 13.66 TOC elev. _____
 G.W. Elev. _____ Maximum Drawdown Limit (if applicable) _____

Initial height of water in casing 6.81 Volume 1.1 gallons
 Total to be evacuated = 3 x Initial Volume 3.3 gallons

Formulas/Conversions
 r = well radius in ft
 h = ht of water col. in ft
 vol. in cyl. = $\pi r^2 h$
 7.48 gal/ft³
 V_{2"} casing = 0.163 gal/ft
 V_{3"} casing = 0.367 gal/ft
 V_{4"} casing = 0.653 gal/ft
 V_{4.5"} casing = 0.826 gal/ft
 V_{6"} casing = 1.47 gal/ft
 Cum. Gal.

<u>Stop Time</u>	<u>Start Time</u>	<u>Bailed</u>	<u>Pumped</u>	<u>Cum. Gal.</u>

Pumped or Bailed Dry? Yes No After _____ gallons Recovery Rate _____
 Water color _____ Odor _____
 Description of sediments or material in sample: _____
 Additional Comments: _____

CHEMICAL DATA

Reading No.	1	2	3	4	5	6	7
Time	<u>1013</u>	<u>1018</u>	<u>1022</u>				
Gallons	<u>1.1</u>	<u>1.1</u>	<u>1.1</u>				
Temp. (degree F)	<u>75.2</u>	<u>70.9</u>	<u>69.5</u>				
pH	<u>6.34</u>	<u>6.40</u>	<u>6.48</u>				
EC (umhos/cm)	<u>1032</u>	<u>1028</u>	<u>1053</u>				
Special Conditions							

SAMPLES COLLECTED

Sample ID ml	Bottle/cap	Filtered (size, u)	Preservative (type)	Refrig. (R, NR)	Lab (Init)	Analysis Requested

Bottles: P = Polyethylene; Pp = Polypropylene; C or B = Clear/Brown Glass; O = Other (describe)
 Cap Codes: Py = Polyseal; V = VOA/Teflon septa; M = Metal.

APPENDIX E

ECM STANDARD OPERATING PROCEDURE

ECM STANDARD OPERATING PROCEDURE

GROUND WATER SAMPLING

The following describes sampling procedures used by ECM field personnel to collect and handle ground water samples. Before samples are collected, careful consideration is given to the type of analysis to be performed so that precautions are taken to prevent loss of volatile components or contamination of the sample, and to preserve the sample for subsequent analysis. Wells will be sampled no less than 24 hours after well development. Collection methods specific to ground water sampling are presented below.

Prior to sampling, each well is checked for the presence of free-phase hydrocarbons using an MMC flexi-dip interface probe. Product thickness (measured to the nearest 0.01 foot) is noted on the sampling form. Water level measurements are also made using either a water level meter or the interface probe. The water level measurements are also noted on the sampling form.

Prior to sampling, each well is purged of a minimum of three well casing volumes of water using a steam-cleaned PVC bailer, or a pre-cleaned pump. Temperature, pH and electrical conductivity are measured at least three times during purging. Purging is continued until these parameters have stabilized (i.e., changes in temperature, pH or conductivity do not exceed ± 0.5 F, 0.1 or 5%, respectively).

Ground water samples are collected from the wells with steam-cleaned or disposable Teflon bailers. The water samples are decanted into the appropriate container for the analysis to be performed. Pre-preserved sample containers may be used or the analytic laboratory may add preservative to the sample upon arrival. Duplicate samples are collected from each well as a back-up sample and/or to provide quality control. The samples are labeled to include the project number, sample ID, date, preservative, and the field person's initials. The samples are placed in polyethylene bags and in an ice chest (maintained at 4 C with blue ice or ice) for transport under chain of custody to the laboratory.

The chain of custody form includes the project number, analysis requested, sample ID, date analysis and the ECM field person's name. The form is signed and dated (with the transfer time) by each person who yields or receives the samples beginning with the field personnel and ending with the laboratory personnel.