November 7, 2005

John Gantner
3943 Eagle Parkway
Redding, California 96001

September 2005 Ground Water Monitoring Report
3rd Quarter 2005 Operations and Maintenance Report
Former Service Station
1680 Mendocino Avenue
Santa Rosa, California
ECM Project #98-439-14

Dear Mr. Gantner:

This report provides the results of semi-annual ground water monitoring at the former service station at 1680 Mendocino Avenue in Santa Rosa, California (Figure 1, Appendix A). It also provides the third quarter 2005 report of operations and maintenance for the ground water extraction (GWE) system operating at the site.

Ground Water Monitoring

On September 23, 2005, ECM personnel visited the site for semi-annual monitoring. Ground water elevations were measured in two monitoring wells and three piezometers. Ground water samples were collected from four of the five monitoring wells (MW-1 through MW-4) in accordance with the site monitoring program. Well MW-5 was inaccessible due to pavement resurfacing. Ground water elevations could not be measured in monitoring wells MW-1 and MW-2 due to equipment failure.

On October 27, 2005, ECM personnel measured water levels in the four accessible wells and three piezometers. The well locations are shown on Figure 2 (Appendix A). Well heads and well vaults were observed to be in good condition. Free-phase hydrocarbons were not observed in any of the wells. Water level data is provided in Table 1 (Appendix B). A ground water elevation contour map using ground water elevations from October 27, 2005 is included as Figure 2 (Appendix A).

The samples were forwarded under chain of custody record to Entech Analytical Labs Inc., of Santa Clara, California for analysis. Analytical results for ground water are included in Table 2 (Appendix B). Ground water samples were collected in accordance with ECM Standard Operating Procedure - Ground Water Sampling (Appendix E). Purge water and decon rinseate were transferred to the system holding tank for treatment and permitted discharge. The chain of custody document and laboratory analytical report are included as Appendix C. The water sampling data sheets are included as Appendix D.

Analytical results for samples collected during the September 23, 2005 monitoring event were consistent with results from previous monitoring events. Monitoring wells MW-2, MW-3, and MW-4 represent the most impacted area of the site. Moderate to high concentrations of gasoline and BTEX were detected in the samples from wells MW-2, MW-3, and MW-4. Contaminant concentrations in the sample from MW-2 increased slightly from the previous event after decreasing for several quarters. Contaminant concentrations in the sample from MW-3 decreased slightly from the previous event. Concentrations in samples from wells MW-2 through MW-4 were typical of historical results.

Analytical results for samples collected from wells MW-1 were increased slightly over the previous event. Resuslts were typical of historical results for samples from MW-1. MW-5 is located approximately 350 ft. downgradient of the site. Well MW-5 was covered by pavement resurfacing at the offsite location and was inaccessible for this sampling event. Results for samples from MW-5 have consistently been low or below detection limits for all contaminants of concern.

The next ground water monitoring event is scheduled for March, 2006.

System Operations and Maintenance

System layout and remediation pad details are shown in Figure 2, Appendix A. The system consists of Grundfos submersible, electric pumps set at approximately 34 feet below ground surface in wells EX-1, EX-2, and EX-3. The pumps have been adjusted to extract ground water at approximately 8 gallons per minute (gpm). Extracted ground water is pumped through three 2,000 pound activated carbon vessels and discharged to the sanitary sewer under permit from the Santa Rosa Subregional Water Reclamation System.

GWE system construction was completed in September 2004, and operated for system testing and sampling between September 3 and November 11, 2004. Continuous operations began on November 11, 2004. The system controller was replaced at the beginning of the quarter and the system ran continuously for the remainder of the quarter. Between system startup and October 10, 2005, the system extracted 4,021,011 gallons of ground water, according to system totalizer readings (Table 4, Appendix B). During the third quarter of 2005, the system extracted approximately 585,236 gallons of ground water.

GWE system performance can be evaluated by the mass of hydrocarbons removed. Since hydrocarbons have a low solubility in water, mass of hydrocarbons removed by a ground water extraction system is typically low relative to the quantity of hydrocarbons sorbed to soil. Another measure of system performance is the system's ability to control the offsite migration of impacted ground water.

Mass of hydrocarbon removed is calculated using system totalizer readings and ground water

influent lab data. Between July 5, 2005 and October 4, 2005 approximately 585,236 gallons were extracted by the system, at between 2 and 7 gallons per minute. Analytical results for the influent samples collected on July 5, 2005 and August 15, 2005 reported concentrations of gasoline at <50 ppb, and 650 ppb respectively. Influent analytical results for all contaminants of concern are shown in Table 3, Appendix B. Analytical laboratory reports are included in Appendix C. Assuming analytical results are typical for the period, a total mass of approximately 1.5 kg of hydrocarbon was extracted by the system during the third quarter of 2005. Cumulative hydrocarbon removal is provided in Table 5 and depicted in Graph 1, Appendix B.

Piezometers PZ-1 through PZ-3 have been installed to measure drawdown generated by the extraction system. Drawdown is used to measure the ability of the system to control offsite migration of impacted water. Water levels in piezometers, extraction wells, and ground water wells are measured on a monthly basis to verify system performance. Significant drawdown in the piezometers indicates the system is controlling offsite plume migration. The ground water contour map from October 27, 2005, included as Figure 2, Appendix A, depicts the influence of the remediation system.

Thank you for the opportunity to provide environmental services to you. Please call if you have any questions.

Sincerely,
ECM Group

David Hazard
Environmental Scientist

Chris Bramer
Professional Engineer #C048846

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

cc: Joan Fleck, North Coast Regional Water Quality Control Board
Michael Caesar, Environmental Health and Safety, SRJC

C1:\ECMQMs\43914.Sep05

APPENDIX A

FIGURES

Figure 1. Site Location Map - Former Service Station, 1680 Mendocino Avenue, Santa Rosa, California

98-439- [Sitelocmap] 10/03

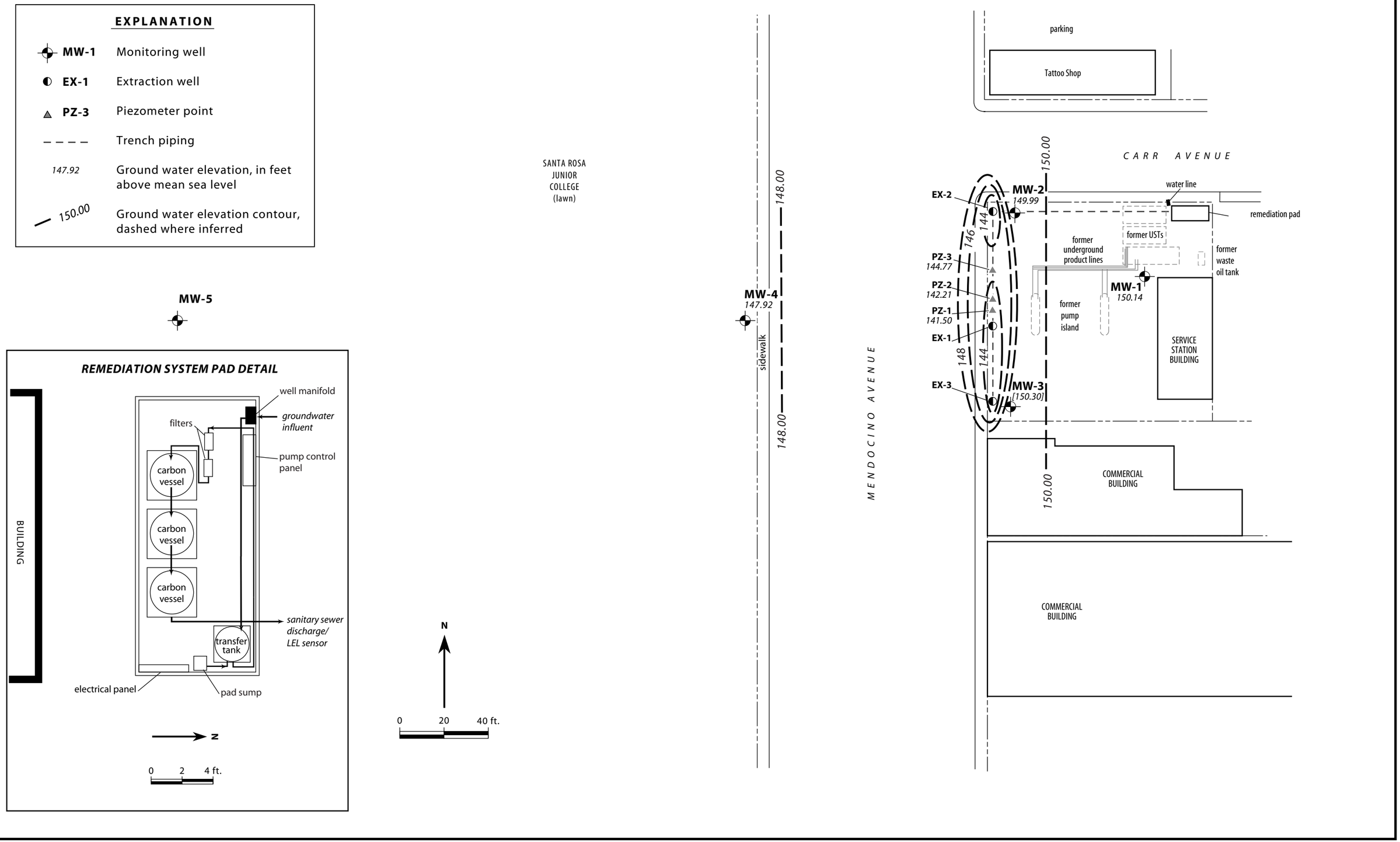


Figure 2. Monitoring Well Locations, Ground Water Contour Map and Remediation System Layout - October 27, 2005 - Former Service Station, 1680 Mendocino Avenue, Santa Rosa, California

98-439-60 [GW 10-05] 11/03/05

APPENDIX B

TABLES AND GRAPHS

Table 1. Monitoring Well Survey Data, Well Construction Details, and Depth to Ground Water - 1680 Mendocino Avenue, Santa Rosa, California

Well ID	Sample Date	TOC (Ft, msl)	DTW (Ft)	GWE (Ft, msl)	Screen Interval	Sand Pack Interval	Bentonite/ Grout Interval	Notes
MW-1	11/23/1998	158.90	9.70	149.20	5 - 15	4 - 15	0 - 4	
	3/9/1999		4.51	154.39				
	6/28/1999		8.71	150.19				
	9/29/1999		10.48	148.82				
	12/30/1999		10.15	148.75				
	3/29/2000		6.17	152.73				
	7/11/2000		9.05	149.85				
	10/27/2000		11.17	147.73				
	12/15/2000		9.59	149.31				
	3/7/2001		5.24	153.66				
	6/20/2001		9.47	149.43				
	9/11/2001		11.00	147.90				
	12/10/2001	161.56	7.92	150.98				Resurveyed for EDF compliance, January 9, 2002.
	3/6/2002		6.79	154.77				
	6/5/2002		8.76	152.80				
	9/23/2002		10.75	150.81				
	3/26/2003		6.46	155.10				
	10/3/2003		10.50	151.06				
	3/10/2004		5.89	155.67				
	9/17/2004		10.76	150.80				
	3/1/2005		6.90	154.66				
	3/9/2005		6.18	155.38				
	5/2/2005		7.90	153.66				
	9/23/2005		**---**	**---**				DTW not measured due to equipment malfunction.
	10/27/2005		**11.42**	**150.14**				

Table 1. Monitoring Well Survey Data, Well Construction Details, and Depth to Ground Water - 1680 Mendocino Avenue, Santa Rosa, California

Well ID	Sample Date	TOC (Ft, msl)	DTW (Ft)	GWE (Ft, msl)	Screen Interval	Sand Pack Interval	Bentonite/ Grout Interval	Notes
MW-2	11/23/1998	158.58	9.49	149.09	5 - 15	4 - 15	0 - 4	
	3/9/1999		5.81	152.77				
	6/28/1999		8.66	149.92				
	9/29/1999		10.53	148.05				
	12/30/1999		10.33	148.25				
	3/29/2000		6.41	152.17				
	7/11/2000		8.98	149.60				
	10/27/2000		10.56	148.02				
	12/15/2000		9.22	149.36				
	3/7/2001		5.00	153.58				
	6/20/2001		9.14	149.44				
	9/11/2001		12.10	146.48				
	12/10/2001	161.10	5.65	152.93				Resurveyed for EDF compliance, January 9, 2002.
	3/6/2002		6.31	154.79				
	6/5/2002		8.42	152.68				
	9/23/2002		10.35	150.75				
	3/26/2003		6.22	154.88				
	10/3/2003		10.26	150.84				
	3/10/2004		5.62	155.48				
	9/17/2004		10.28	150.82				
	3/1/2005		6.84	154.26				
	3/9/2005		5.92	155.18				
	5/2/2005		7.69	153.41				
	9/23/2005		**---**	**---**				DTW not measured due to equipment malfunction.
	10/27/2005		**11.11**	**149.99**				

Table 1. Monitoring Well Survey Data, Well Construction Details, and Depth to Ground Water - 1680 Mendocino Avenue, Santa Rosa, California

Well ID	Sample Date	TOC (Ft, msl)	DTW (Ft)	GWE (Ft, msl)	Screen Interval	Sand Pack Interval	Bentonite/ Grout Interval	Notes
MW-3	11/23/1998	159.31	10.59	148.72	5 - 15	4 - 15	0 - 4	
	3/9/1999		5.49	153.82				
	6/28/1999		9.42	149.89				
	9/29/1999		11.46	147.85				
	12/30/1999		11.07	148.24				
	3/29/2000		7.06	152.25				
	7/11/2000		9.74	149.57				
	10/27/2000	159.38	11.81	147.57				TOCs surveyed on October 20, 2000.
	12/15/2000		10.81	148.57				
	3/7/2001		5.98	153.40				
	6/20/2001		10.18	149.20				
	9/11/2001		10.80	148.58				
	12/10/2001	161.95	7.75	151.63				Resurveyed for EDF compliance, January 9, 2002.
	3/6/2002		7.31	154.64				
	6/5/2002		9.47	152.48				
	9/23/2002		11.86	150.09				
	3/26/2003		7.20	154.75				
	10/3/2003		11.35	150.60				
	3/10/2004		6.54	155.41				
	9/17/2004		11.90	150.05				
	3/1/2005		7.62	154.33				
	3/9/2005		6.63	155.32				
	5/2/2005		8.71	153.24				
	9/23/2005		**11.76**	**150.19**				
	10/27/2005		**11.65**	**150.30**				

Table 1. Monitoring Well Survey Data, Well Construction Details, and Depth to Ground Water - 1680 Mendocino Avenue, Santa Rosa, California

Well ID	Sample Date	TOC (Ft, msl)	DTW (Ft)	GWE (Ft, msl)	Screen Interval	Sand Pack Interval	Bentonite/ Grout Interval	Notes
MW-4	10/27/2000	159.30	12.56	146.74	5 - 20	4 - 20	0 - 4	TOCs surveyed on October 20, 2000.
	12/15/2000		12.05	147.25				
	3/7/2001		7.37	151.93				
	6/20/2001		11.44	147.86				
	9/11/2001		12.88	146.42				
	12/10/2001	161.87	7.45	151.85				Resurveyed for EDF compliance, January 9, 2002.
	3/6/2002		7.85	154.02				
	6/5/2002		10.37	151.50				
	9/23/2002		12.11	149.76				
	3/26/2003		8.25	153.62				
	10/3/2003		12.00	149.87				
	3/10/2004		7.50	154.37				
	9/17/2004		12.22	149.65				
	3/1/2005		7.71	154.16				
	3/9/2005		7.51	154.36				
	5/2/2005		9.24	152.63				
	9/23/2005		**11.59**	**150.28**				
	10/27/2005		**13.95**	**147.92**				
MW-5	10/27/2000	156.88	11.74	145.14	5 - 20	4 - 20	0 - 4	TOCs surveyed on October 20, 2000.
	12/15/2000		11.15	145.73				
	3/16/2001		7.27	149.61				
	6/20/2001		10.69	146.19				
	9/11/2001		12.00	144.88				
	12/10/2001	159.45	7.00	149.88				Resurveyed for EDF compliance, January 9, 2002.
	3/6/2002		7.70	151.75				
	6/5/2002		9.48	149.97				
	9/23/2002		---	---				Well inaccessible.
	3/26/2003		7.53	151.92				
	10/3/2003		11.10	148.35				
	3/10/2004		6.53	152.92				
	9/17/2004		11.61	147.84				
	3/1/2005		6.07	153.38				
	3/9/2005		6.47	152.98				
	5/2/2005		8.32	151.13				

Table 1. Monitoring Well Survey Data, Well Construction Details, and Depth to Ground Water - 1680 Mendocino Avenue, Santa Rosa, California

Well ID	Sample Date	TOC (Ft, msl)	DTW (Ft)	GWE (Ft, msl)	Screen Interval	Sand Pack Interval	Bentonite/ Grout Interval	Notes
	9/23/2005		**---**	**---**				Well inaccessible due to pavement resurfacing.

Table 1. Monitoring Well Survey Data, Well Construction Details, and Depth to Ground Water - 1680 Mendocino Avenue, Santa Rosa, California

Well ID	Sample Date	TOC (Ft, msl)	DTW (Ft)	GWE (Ft, msl)	Screen Interval	Sand Pack Interval	Bentonite/ Grout Interval	Notes
	10/27/2005		**---**	**---**				Well inaccessible due to pavement resurfacing.
PZ-1	3/1/2005	161.89	12.19	149.70				
	5/2/2005		10.61	151.28				
	9/23/2005		**14.80**	**147.09**				
	10/27/2005		**20.39**	**141.50**				
PZ-2	3/1/2005	161.77	10.11	151.66				
	5/2/2005		9.84	151.93				
	9/23/2005		**14.72**	**147.05**				
	10/27/2005		**19.56**	**142.21**				
PZ-3	3/1/2005	161.81	9.25	152.56				
	5/2/2005		9.71	152.10				
	9/23/2005		**13.18**	**148.63**				
	10/27/2005		**17.00**	**144.77**				

Explanation:

TOC = Top of Casing
ft = feet
msl = Mean Sea Level
DTW = Depth to Water
GWE = Ground Water Elevation

Table 2. Analytical Results for Ground Water - Former Service Station, 1680 Mendocino Avenue, Santa Rosa, California

Sample ID	Date Sampled	TPH (G)	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
		<---------- ppb ---------->						
MW-1	11/30/1998	16,000	140	28	900	1,900	<250	
	3/9/1999	4,000	53	8.7	74	79	40	
	6/28/1999	2,400	12	1.1	150	110	19	
	9/29/1999	16,000	180	<50	930	770	<500	
	12/30/1999	10,000	190	43	1,000	710	<100	
	3/29/2000	5,100	120	36	370	190	<100	
	7/11/2000	2,800	110	49	160	80	<50	
	10/27/2000	2,600	34	7.4	120	45	<2.0	
	12/15/2000	7,300	120	39	300	180	<20	
	3/7/2001	4,300	43	15	400	170	223	
	6/20/2001	670	21	9.5	83	42	<5.0	
	9/11/2001	1,700	130	64	110	75	16	
	12/10/2001	2,500	280	160	140	200	9.7	
	3/6/2002	<50	<0.50	<0.50	<0.50	<0.50	<2.0	
	6/5/2002	<50	<0.50	<0.50	<0.50	<0.50	2.3	
	9/23/2002	1,800	240	120	140	440	1.6	
	3/26/2003	380	43	11	26	31	2	
	10/3/2003	640	140	16	39	54	<1	
	3/10/2004	260	45	14	14	34.6	1	
	9/17/2004	220	47	8.6	22	38	<1	
	3/9/2005	<25	<0.5	<0.5	<0.5	<0.5	<1	
	9/23/2005	**740**	**34**	**23**	**32**	**110**	**<1.0**	

Table 2. Analytical Results for Ground Water - Former Service Station, 1680 Mendocino Avenue, Santa Rosa, California

Sample ID	Date Sampled	TPH (G)	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
		<---------- ppb ---------->						
MW-2	11/30/1998	27,000	2,600	200	1,700	3,700	640	
	3/9/1999	49,000	3,400	270	3,400	4,700	530	
	6/28/1999	37,000	4,200	250	3,500	5,000	780	
	9/29/1999	36,000	4,000	230	3,800	4,000	530	
	12/30/1999	31,000	2,900	150	4,400	5,100	<500	
	3/29/2000	26,000	3,100	150	3,100	2,400	520	
	7/11/2000	25,000	2,600	140	3,600	2,200	650	
	10/27/2000	38,000	3,400	130	3,100	2,900	<20	
	12/15/2000	49,000	2,700	110	3,000	2,800	<50	
	3/7/2001	26,000	3,200	88	3,500	2,000	18	Tertiary butanol detected at 12 ppb.
	6/20/2001	21,000	1,900	130	3,500	2,300	<50	
	9/11/2001	22,000	1,600	140	4,100	1,600	<50	
	12/10/2001	20,000	1,900	200	3,000	1,500	<100	
	3/6/2002	<50	9.4	<0.50	<0.50	<0.50	2.7	
	6/5/2002	8,900	410	29	1,400	400	6.6	
	9/23/2002	18,000	1,100	160	2,200	1,100	<100	
	3/26/2003	14,000	810	57	2,500	496	64	
	10/3/2003	20,000	930	61	3,100	470	<40	
	3/10/2004	8,300	410	34	1,200	170	<20	
	9/17/2004	8,600	420	36	1,300	150	<40	
	3/9/2005	1,400	31	2.3	99	9.5	<2	
	9/23/2005	**12,000**	**110**	**33**	**640**	**150**	**<20**	

Table 2. Analytical Results for Ground Water - Former Service Station, 1680 Mendocino Avenue, Santa Rosa, California

Sample ID	Date Sampled	TPH (G)	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
		<---------- ppb ---------->						
MW-3	11/30/1998	56,000	6,600	4,600	1,400	5,800	1,100	
	3/9/1999	220,000	24,000	15,000	5,000	23,000	2,400	
	6/28/1999	89,000	13,000	6,800	2,800	12,000	1,500	
	9/29/1999	100,000	13,000	4,100	3,000	12,000	1,400	
	12/30/1999	58,000	11,000	5,100	2,400	11,000	890	
	3/29/2000	48,000	10,000	3,300	2,000	8,600	1,100	
	7/11/2000	64,000	14,000	2,100	2,600	10,000	<2,500	
	10/27/2000	88,000	16,000	6,100	2,700	10,000	790	Tertiary Butanol detected at 400 ppb. See laboratory analytic reports for detection limits.
	12/15/2000	120,000	15,000	5,800	2,300	9,600	830	
	3/7/2001	44,000	11,000	4,900	2,100	8,200	460	
	6/20/2001	55,000	12,000	3,900	2,500	10,000	340	
	9/11/2001	48,000	13,000	2,100	2,600	9,700	390	
	12/10/2001	76,000	16,000	6,800	3,600	13,000	<500	
	3/6/2002	53,000	11,000	4,800	2,300	12,000	540	
	6/5/2002	25,000	6,300	2,400	1,900	7,500	340	
	9/23/2002	39,000	6,800	950	1,200	5,000	1,100	
	3/26/2003	54,000	7,800	2,500	3,100	11,400	310	TAME was detected at 23 ppb.
	10/3/2003	50,000	9,500	720	2,300	6,400	430	
	3/10/2004	40,000	8,500	800	2,800	9,300	220	
	9/17/2004	40,000	9,200	700	2,600	7,900	290	
	3/9/2005	41,000	5,300	1,200	2,700	11,000	<200	
	9/23/2005	**21,000**	**1,900**	**280**	**1,300**	**4,200**	**<100**	

Table 2. Analytical Results for Ground Water - Former Service Station, 1680 Mendocino Avenue, Santa Rosa, California

Sample ID	Date Sampled	TPH (G)	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
		<---------- ppb ---------->						
MW-4	10/27/2000	18,000	6,200	13	79	15	1,100	Tertiary Butanol detected at 560 ppb.
	12/15/2000	22,000	4,400	<25	110	30	1,700	
	3/7/2001	10,000	4,400	<50	89	55	600	Tertiary butanol detected at 280 ppb.
	6/20/2001	16,000	5,300	50	130	<50	900	
	9/11/2001	8,200	2,800	51	56	<25	2,600	
	12/10/2001	11,000	3,300	68	140	120	1,400	
	3/6/2002	6,600	1,800	23	110	<10	810	
	6/5/2002	7,800	2,700	33	85	23	340	
	9/23/2002	11,000	2,400	27	56	16	980	
	3/26/2003	6,600	1,600	20	64	16	210	TAME detected at 2 ppb.
	10/3/2003	12,000	2,100	<50	80	<100	230	
	3/10/2004	4,600	1,100	28	34	<20	160	
	9/17/2004	3,600	730	13	17	<20	110	
	3/9/2005	8,000	860	17	40	<10	83	
	9/23/2005	**8,400**	**940**	**32**	**36**	**16**	**75**	

Table 2. Analytical Results for Ground Water - Former Service Station, 1680 Mendocino Avenue, Santa Rosa, California

Sample ID	Date Sampled	TPH (G)	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
		<---------- ppb ---------->						
MW-5	10/27/2000	<50	<0.5	<0.5	<0.5	<0.5	<2.0	
	12/15/2000	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
	3/16/2001	92	5.4	5.6	2.3	6.2	<2.0	
	6/20/2001	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	9/11/2001	91	14	11	4	12	<5.0	
	12/10/2001	56	8.2	1.6	1.8	3.3	<5	
	3/6/2002	<50	<0.50	<0.50	<0.50	<0.50	<2.0	
	6/5/2002	<50	<0.50	<0.50	<0.50	<0.50	2.8	
	9/23/025	—	—	—	—	—	---	Well inaccessible.
	3/26/2003	65	12	3	<1	7	<1	
	10/3/2003	110	23	3.6	7.4	12	<1	No other oxygenates were detected.
	3/10/2004	85	15	9.8	5.9	19	1	No other oxygenates were detected.
	9/17/2004	43	6.8	2.2	3.7	8.4	<1	
	3/9/2005	<25	<0.5	<0.5	<0.5	<0.5	<1	
	9/23/2005	**---**	**---**	**---**	**---**	**---**	**---**	Well inaccessible due to pavement resurfacing.

Explanation:

TPPH(G) = Total Purgeable Petroleum Hydrocarbons as Gasoline
MTBE = Methyl tert butyl ether
ppb = parts per billion

Table 3. Analytical Results for Influent Samples - 1680 Mendocino Avenue, Santa Rosa, California

Sample Date	TPH(G)	Benzene	Toluene	Ethyl Benzene	Xylenes	MTBE	Notes
	<----------ppb---------->						
9/3/2004	4,800	480	34	800	170	83	
11/5/2004	450	35	1	35	6	9	
12/7/2004	360	28	2	66	15	9	
1/5/2005	3,100	83	12	340	68	8	
2/11/2005	370	9	2	21	16	7	
4/7/2005	2,100	38	5	130	42	<5	
7/5/2005	**<50**	**0.67**	**<0.50**	**0.70**	**<0.50**	**2.0**	
8/15/2005	**650**	**8.4**	**0.78**	**6.2**	**7.7**	**1.8**	

Table 4. Ground Water Extraction System Performance Data - 1680 Mendocino Ave, Santa Rosa, California

Date	totalizer reading	flow (gallons)	flow rate since previous reading (gpm)	notes
9/3/2004	1,091	---	---	Initial sampling
11/4/2004	1,091	---	---	
11/5/2004	8,372	7,281	---	
11/10/2004	10,933	2,561	---	Beginning of continuous operation
11/11/2004	36,309	25,376	18	
11/12/2004	54,249	17,940	12	
11/15/2004	72,330	18,081	4	
11/18/2004	109,464	37,134	9	
11/19/2004	121,997	12,533	9	
11/24/2004	186,125	64,128	9	
12/1/2004	280,335	94,210	9	
12/6/2004	280,863	528	0	Carbon filter fouling
12/7/2004	281,883	1,020	1	Carbon filter cleaned
12/10/2004	329,715	47,832	11	
12/21/2004	330,187	472	0	System off for transfer pump replacement
12/30/2004	330,949	762	0	System restarted
1/3/2005	434,035	103,086	24	
1/5/2005	489,904	55,869	19	
1/12/2005	689,605	199,701	20	
1/21/2005	947809	258,204	20	
1/28/2005	1,142,497	194,688	19	
2/1/2005	1,254,800	112,303	26	
2/4/2005	1,327,670	72,870	17	
2/10/2005	1,469,620	141,950	16	
2/25/2005	1,824,845	355,225	16	
3/1/2005	1,921,939	97,094	11	
3/4/2005	1,993,682	71,743	17	
3/28/2005	2,294,864	301,182	9	
4/5/2005	2,465,264	170,400	17	
4/20/2005	2,769,862	304,598	14	
5/2/2005	2,865,604	95,742	6	
6/2/2005	3,184,877	319,273	7	
7/5/2005	**3,435,775**	**250,898**	**5**	**system off on arrival - control sensor malfunction**

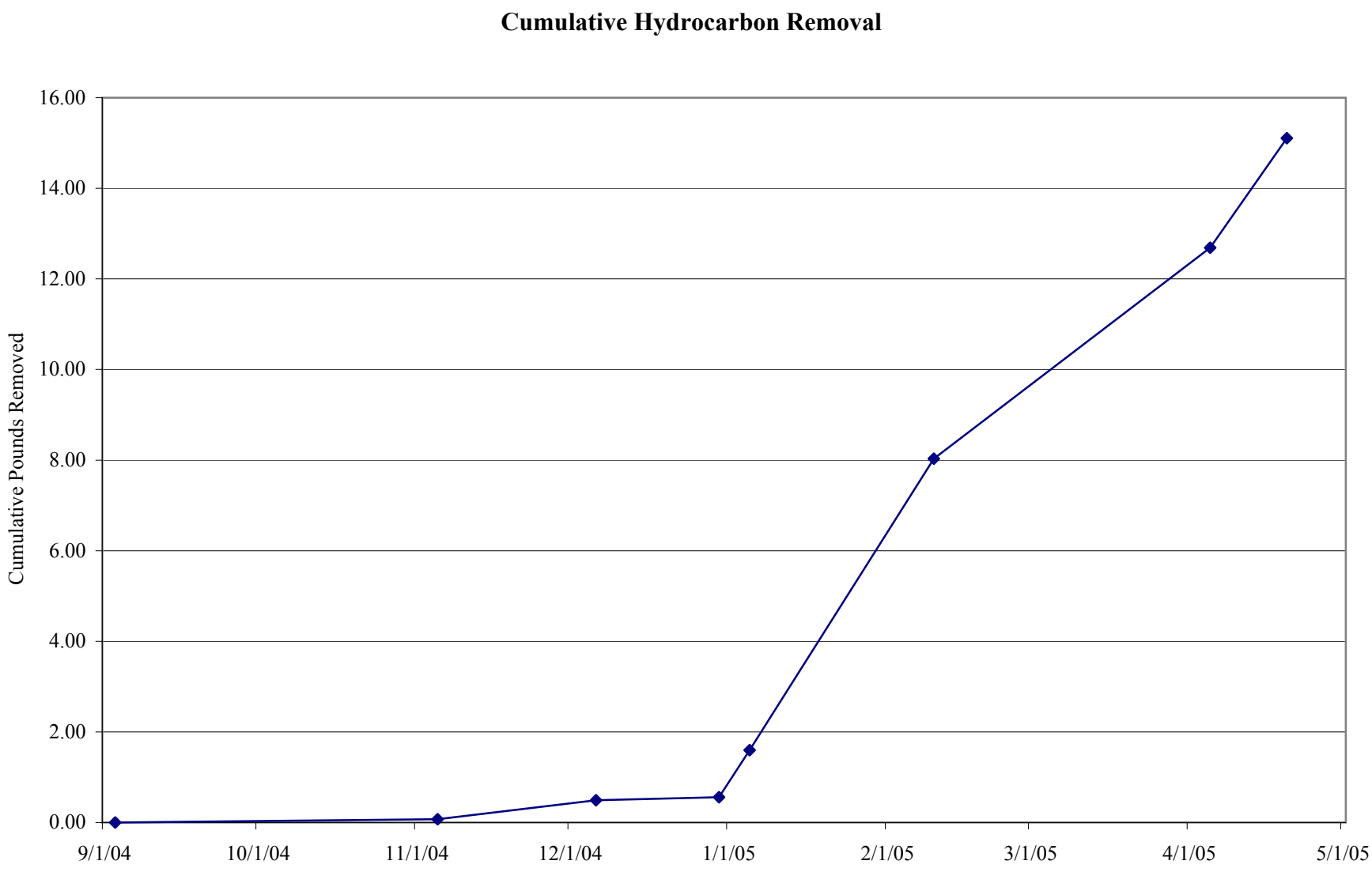
Table 4. Ground Water Extraction System Performance Data - 1680 Mendocino Ave, Santa Rosa, California

Date	totalizer reading	flow (gallons)	flow rate since previous reading (gpm)	notes
8/3/2005	3,520,162	84,387	2	
8/15/2005	3,560,987	40,825	2	
9/9/2005	3,775,496	214,509	6	
9/23/2005	3,912,889	137,393	7	
9/28/2005	3,962,004	49,115	7	

Table 5. Ground Water Extraction System Performance Data - 1680 Mendocino Avenue, Santa Rosa, California

Date	totalizer reading	flow (gallons)	influent concentration TPH(G) ppb	hydrocarbon removal (kg)	cumulative hydrocarbon removal (kg)
9/3/2004	1,091	---	4,800	---	0.00
11/5/2004	8,372	7,281	450	0.07	0.07
12/6/2004	280,863	272,491	360	0.42	0.49
12/30/2004	330,949	50,086	360	0.07	0.56
1/5/2005	489,904	158,955	3,100	1.04	1.60
2/10/2005	1,469,620	979,716	370	6.43	8.03
4/5/2005	2,465,264	995,644	2,100	4.65	12.69
7/5/2005	**3,435,775**	**970,511**	**2,100**	**7.71**	**20.40**
8/3/2005	**3,520,162**	**84,387**	**0**	**0.34**	**20.74**
8/15/2005	**3,560,987**	**40,825**	**650**	**0.05**	**20.79**
10/4/2005	**4,021,011**	**460,024**	**650**	**1.13**	**21.92**

Note: Hydrocarbon removal calculations use an average of the two latest influent concentrations.



Graph 1: Cumulative pounds of hydrocarbon removed by ground water extraction (GWE) system - 1680 Mendocino Avenue, Santa Rosa, California

APPENDIX C

CHAIN OF CUSTODY
AND
LABORATORY ANALYTICAL REPORTS

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Jim Green
ECM Group
290 W. Channel Rd.
Benicia, CA 94510

Certificate ID: 45471 - 10/3/2005 5:34:22 PM

Order Number: 45471
Project Name: Gantner
Project Number: 98-439-14

Date Received: 09/26/2005
P.O. Number: 98-439-14
Global ID: T0609700730

Certificate of Analysis - Final Report

On September 26, 2005, samples were received under chain of custody for analysis.
Entech analyzes samples "as received" unless otherwise noted. The following results are included:

Matrix	Test	Comments
Liquid	EDF	
	EPA 8260B EPA 624	
	TPH as Gasoline - GC-MS	

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,

Laurie Glantz-Murphy
Laboratory Director

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

ECM Group
290 W. Channel Rd.
Benicia, CA 94510
Attn: Jim Green

Date Received: 9/26/2005
Project ID: 98-439-14
Project Name: Gantner
GlobalID: T0609700730
P.O. Number: 98-439-14
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 45471-001 **Sample ID: MW-1** **Matrix:** Liquid **Sample Date:** 9/23/2005 11:40 AM

EPA 5030C EPA 8260B EPA 624 — **8260Petroleum**

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	34		1.0	0.50	µg/L	N/A	N/A	9/30/2005	WM1050930
Toluene	23		1.0	0.50	µg/L	N/A	N/A	9/30/2005	WM1050930
Ethyl Benzene	32		1.0	0.50	µg/L	N/A	N/A	9/30/2005	WM1050930
Xylenes, Total	110		1.0	0.50	µg/L	N/A	N/A	9/30/2005	WM1050930
Methyl-t-butyl Ether	ND		1.0	1.0	µg/L	N/A	N/A	9/30/2005	WM1050930
tert-Butyl Ethyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	9/30/2005	WM1050930
tert-Butanol (TBA)	ND		1.0	10	µg/L	N/A	N/A	9/30/2005	WM1050930
Diisopropyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	9/30/2005	WM1050930
tert-Amyl Methyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	9/30/2005	WM1050930

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	90.7	70 - 130
Dibromofluoromethane	118	70 - 130
Toluene-d8	96.0	70 - 130

Analyzed by: XBian
Reviewed by: MaiChiTu

EPA 5030C GC-MS — **TPH as Gasoline - GC-MS**

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	740		1.0	50	µg/L	N/A	N/A	9/30/2005	WM1050930

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	96.3	70 - 130
Dibromofluoromethane	108	70 - 130
Toluene-d8	93.7	70 - 130

Analyzed by: XBian
Reviewed by: MaiChiTu

Detection Limit = Detection Limit for Reporting.
D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
Qual = Data Qualifier

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

ECM Group
290 W. Channel Rd.
Benicia, CA 94510
Attn: Jim Green

Date Received: 9/26/2005
Project ID: 98-439-14
Project Name: Gantner
GlobalID: T0609700730
P.O. Number: 98-439-14
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 45471-002 **Sample ID: MW-2** **Matrix:** Liquid **Sample Date:** 9/23/2005 11:20 AM

EPA 5030C EPA 8260B EPA 624 — **8260Petroleum**

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	110		20	10	µg/L	N/A	N/A	9/30/2005	WM1050930
Toluene	33		20	10	µg/L	N/A	N/A	9/30/2005	WM1050930
Ethyl Benzene	640		20	10	µg/L	N/A	N/A	9/30/2005	WM1050930
Xylenes, Total	150		20	10	µg/L	N/A	N/A	9/30/2005	WM1050930
Methyl-t-butyl Ether	ND		20	20	µg/L	N/A	N/A	9/30/2005	WM1050930
tert-Butyl Ethyl Ether	ND		20	100	µg/L	N/A	N/A	9/30/2005	WM1050930
tert-Butanol (TBA)	ND		20	200	µg/L	N/A	N/A	9/30/2005	WM1050930
Diisopropyl Ether	ND		20	100	µg/L	N/A	N/A	9/30/2005	WM1050930
tert-Amyl Methyl Ether	ND		20	100	µg/L	N/A	N/A	9/30/2005	WM1050930

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	87.2	70 - 130
Dibromofluoromethane	115	70 - 130
Toluene-d8	101	70 - 130

Analyzed by: XBian
Reviewed by: MaiChiTu

EPA 5030C GC-MS — **TPH as Gasoline - GC-MS**

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	12000		20	1000	µg/L	N/A	N/A	9/30/2005	WM1050930

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	92.6	70 - 130
Dibromofluoromethane	105	70 - 130
Toluene-d8	98.2	70 - 130

Analyzed by: XBian
Reviewed by: MaiChiTu

Detection Limit = Detection Limit for Reporting.
D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
Qual = Data Qualifier

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

ECM Group
290 W. Channel Rd.
Benicia, CA 94510
Attn: Jim Green

Date Received: 9/26/2005
Project ID: 98-439-14
Project Name: Gantner
GlobalID: T0609700730
P.O. Number: 98-439-14
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 45471-003 **Sample ID: MW-3** **Matrix:** Liquid **Sample Date:** 9/23/2005 10:25 AM

EPA 5030C EPA 8260B EPA 624 — **8260Petroleum**

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	1900		100	50	µg/L	N/A	N/A	10/2/2005	WM1051002
Toluene	280		100	50	µg/L	N/A	N/A	10/2/2005	WM1051002
Ethyl Benzene	1300		100	50	µg/L	N/A	N/A	10/2/2005	WM1051002
Xylenes, Total	4200		100	50	µg/L	N/A	N/A	10/2/2005	WM1051002
Methyl-t-butyl Ether	ND		100	100	µg/L	N/A	N/A	10/2/2005	WM1051002
tert-Butyl Ethyl Ether	ND		100	500	µg/L	N/A	N/A	10/2/2005	WM1051002
tert-Butanol (TBA)	ND		100	1000	µg/L	N/A	N/A	10/2/2005	WM1051002
Diisopropyl Ether	ND		100	500	µg/L	N/A	N/A	10/2/2005	WM1051002
tert-Amyl Methyl Ether	ND		100	500	µg/L	N/A	N/A	10/2/2005	WM1051002

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	91.1	70 - 130
Dibromofluoromethane	109	70 - 130
Toluene-d8	103	70 - 130

Analyzed by: XBian
Reviewed by: MaiChiTu

EPA 5030C GC-MS — **TPH as Gasoline - GC-MS**

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	21000		100	5000	µg/L	N/A	N/A	10/2/2005	WM1051002

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	96.7	70 - 130
Dibromofluoromethane	99.7	70 - 130
Toluene-d8	101	70 - 130

Analyzed by: XBian
Reviewed by: MaiChiTu

Detection Limit = Detection Limit for Reporting.
D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
Qual = Data Qualifier

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

ECM Group
290 W. Channel Rd.
Benicia, CA 94510
Attn: Jim Green

Date Received: 9/26/2005
Project ID: 98-439-14
Project Name: Gantner
GlobalID: T0609700730
P.O. Number: 98-439-14
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 45471-004 **Sample ID: MW-4** **Matrix:** Liquid **Sample Date:** 9/23/2005 10:00 AM

EPA 5030C EPA 8260B EPA 624 — **8260Petroleum**

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	940		20	10	µg/L	N/A	N/A	9/30/2005	WM1050930
Toluene	32		20	10	µg/L	N/A	N/A	9/30/2005	WM1050930
Ethyl Benzene	36		20	10	µg/L	N/A	N/A	9/30/2005	WM1050930
Xylenes, Total	16		20	10	µg/L	N/A	N/A	9/30/2005	WM1050930
Methyl-t-butyl Ether	75		20	20	µg/L	N/A	N/A	9/30/2005	WM1050930
tert-Butyl Ethyl Ether	ND		20	100	µg/L	N/A	N/A	9/30/2005	WM1050930
tert-Butanol (TBA)	240		20	200	µg/L	N/A	N/A	9/30/2005	WM1050930
Diisopropyl Ether	ND		20	100	µg/L	N/A	N/A	9/30/2005	WM1050930
tert-Amyl Methyl Ether	ND		20	100	µg/L	N/A	N/A	9/30/2005	WM1050930

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	97.2	70 - 130
Dibromofluoromethane	111	70 - 130
Toluene-d8	110	70 - 130

Analyzed by: XBian
Reviewed by: MaiChiTu

EPA 5030C GC-MS — **TPH as Gasoline - GC-MS**

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	8400		20	1000	µg/L	N/A	N/A	9/30/2005	WM1050930

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	103	70 - 130
Dibromofluoromethane	101	70 - 130
Toluene-d8	107	70 - 130

Analyzed by: XBian
Reviewed by: MaiChiTu

Detection Limit = Detection Limit for Reporting.
D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
Qual = Data Qualifier

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - EPA 8260B - 8260Petroleum

Validated by: MaiChiTu - 10/03/05

QC Batch ID: WM1050930

QC Batch Analysis Date: 9/30/2005

Parameter	Result	DF	PQLR	Units
Benzene	ND	1	0.50	µg/L
Diisopropyl Ether	ND	1	5.0	µg/L
Ethyl Benzene	ND	1	0.50	µg/L
Methyl-t-butyl Ether	ND	1	1.0	µg/L
tert-Amyl Methyl Ether	ND	1	5.0	µg/L
tert-Butanol (TBA)	ND	1	10	µg/L
tert-Butyl Ethyl Ether	ND	1	5.0	µg/L
Toluene	ND	1	0.50	µg/L
Xylenes, Total	ND	1	0.50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	**95.7**	70 - 130
Dibromofluoromethane	**121**	70 - 130
Toluene-d8	**111**	70 - 130

Laboratory Control Sample / Duplicate - Liquid - EPA 8260B - 8260Petroleum

Reviewed by: MaiChiTu - 10/03/05

QC Batch ID: WM1050930

QC Batch ID Analysis Date: 9/30/2005

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
Benzene	<0.50	20	20.0	µg/L	100	70 - 130
Methyl-t-butyl Ether	<1.0	20	18.2	µg/L	91.0	70 - 130
Toluene	<0.50	20	20.0	µg/L	100	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**88.3**	70 - 130
Dibromofluoromethane	**105**	70 - 130
Toluene-d8	**97**	70 - 130

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	<0.50	20	19.5	µg/L	97.5	**2.5**	25.0	70 - 130
Methyl-t-butyl Ether	<1.0	20	19.5	µg/L	97.5	**6.9**	25.0	70 - 130
Toluene	<0.50	20	19.6	µg/L	98.0	**2.0**	25.0	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**87.7**	70 - 130
Dibromofluoromethane	**107**	70 - 130
Toluene-d8	**94.3**	70 - 130

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - EPA 8260B - 8260Petroleum

QC Batch ID: WM1051002

Validated by: MaiChiTu - 10/03/05

QC Batch Analysis Date: 10/2/2005

Parameter	Result	DF	PQLR	Units
Benzene	ND	1	0.50	µg/L
Diisopropyl Ether	ND	1	5.0	µg/L
Ethyl Benzene	ND	1	0.50	µg/L
Methyl-t-butyl Ether	ND	1	1.0	µg/L
tert-Amyl Methyl Ether	ND	1	5.0	µg/L
tert-Butanol (TBA)	ND	1	10	µg/L
tert-Butyl Ethyl Ether	ND	1	5.0	µg/L
Toluene	ND	1	0.50	µg/L
Xylenes, Total	ND	1	0.50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	**96.1**	70 - 130
Dibromofluoromethane	**117**	70 - 130
Toluene-d8	**110**	70 - 130

Laboratory Control Sample / Duplicate - Liquid - EPA 8260B - 8260Petroleum

QC Batch ID: WM1051002

Reviewed by: MaiChiTu - 10/03/05

QC Batch ID Analysis Date: 10/2/2005

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
Benzene	<0.50	20	20.8	µg/L	104	70 - 130
Methyl-t-butyl Ether	<1.0	20	17.3	µg/L	86.5	70 - 130
Toluene	<0.50	20	21.1	µg/L	106	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**86.9**	70 - 130
Dibromofluoromethane	**100**	70 - 130
Toluene-d8	**95.4**	70 - 130

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	<0.50	20	19.4	µg/L	97.0	**7.0**	25.0	70 - 130
Methyl-t-butyl Ether	<1.0	20	17.4	µg/L	87.0	**0.58**	25.0	70 - 130
Toluene	<0.50	20	20.1	µg/L	100	**4.9**	25.0	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**86.7**	70 - 130
Dibromofluoromethane	**101**	70 - 130
Toluene-d8	**96.6**	70 - 130

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Matrix Spike / Matrix Spike Duplicate - Liquid - EPA 8260B - 8260Petroleum

QC Batch ID: WM1051002

Reviewed by: MaiChiTu - 10/03/05

QC Batch ID Analysis Date: 10/2/2005

MS Sample Spiked: 45374-003

Parameter	Sample Result	Spike Amount	Spike Result	Units	Analysis Date	% Recovery	Recovery Limits
Benzene	ND	20	19.1	µg/L	10/2/2005	95.5	70 - 130
Methyl-t-butyl Ether	ND	20	17.4	µg/L	10/2/2005	87.0	70 - 130
Toluene	ND	20	19.8	µg/L	10/2/2005	99.0	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**83**	70 - 130
Dibromofluoromethane	**103**	70 - 130
Toluene-d8	**99.7**	70 - 130

MSD Sample Spiked: 45374-003

Parameter	Sample Result	Spike Amount	Spike Result	Units	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	ND	20	18.1	µg/L	10/2/2005	90.5	5.4	25.0	70 - 130
Methyl-t-butyl Ether	ND	20	15.7	µg/L	10/2/2005	78.5	10	25.0	70 - 130
Toluene	ND	20	18.9	µg/L	10/2/2005	94.5	4.7	25.0	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**85.4**	70 - 130
Dibromofluoromethane	**99.8**	70 - 130
Toluene-d8	**97.3**	70 - 130

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - GC-MS - TPH as Gasoline - GC-MS

QC Batch ID: WM1050930 Validated by: MaiChiTu - 10/03/05

QC Batch Analysis Date: 9/30/2005

Parameter	Result	DF	PQLR	Units
TPH as Gasoline	ND	1	50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	**102**	70 - 130
Dibromofluoromethane	**111**	70 - 130
Toluene-d8	**108**	70 - 130

Laboratory Control Sample / Duplicate - Liquid - GC-MS - TPH as Gasoline - GC-MS

QC Batch ID: WM1050930 Reviewed by: MaiChiTu - 10/03/05

QC Batch ID Analysis Date: 9/30/2005

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Gasoline	<25	120	148	µg/L	118	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**98.2**	70 - 130
Dibromofluoromethane	**97**	70 - 130
Toluene-d8	**103**	70 - 130

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	120	138	µg/L	111	**6.7**	25.0	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**97.8**	70 - 130
Dibromofluoromethane	**99.1**	70 - 130
Toluene-d8	**104**	70 - 130

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - GC-MS - TPH as Gasoline - GC-MS

QC Batch ID: WM1051002 Validated by: MaiChiTu - 10/03/05

QC Batch Analysis Date: 10/2/2005

Parameter	Result	DF	PQLR	Units
TPH as Gasoline	ND	1	50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	**102**	70 - 130
Dibromofluoromethane	**107**	70 - 130
Toluene-d8	**108**	70 - 130

Laboratory Control Sample / Duplicate - Liquid - GC-MS - TPH as Gasoline - GC-MS

QC Batch ID: WM1051002 Reviewed by: MaiChiTu - 10/03/05

QC Batch ID Analysis Date: 10/2/2005

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Gasoline	<25	120	137	µg/L	110	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**97.2**	70 - 130
Dibromofluoromethane	**95.6**	70 - 130
Toluene-d8	**104**	70 - 130

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	120	136	µg/L	109	**0.95**	25.0	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**96.1**	70 - 130
Dibromofluoromethane	**97.1**	70 - 130
Toluene-d8	**103**	70 - 130

Entech Analytical Labs, Inc.

3334 Victor Court (408) 588-0200
Santa Clara, CA 95054 (408) 588-0201 - Fax

Chain of Custody / Analysis Request

Attention to: JIM GREEN	Phone No.: 707-751-0655	Purchase Order No.:	Invoice to: (If Different)	Phone:
Company Name: ECM GROUP	Fax No.: 707-751-0653	Project No.: 98-439-14	Company: SAME	Quote No.:
Mailing Address: P.O. BOX 802	Email Address: ECMGRP@AOL.COM	Project Name: GANTNER	Billing Address: (If Different)	
City: BENICIA	State: CA / Zip Code: 94510	Project Location:	City: / State: / Zip:	

Sampler: MIKE JACKSON

Field Org. Code:

Global ID:

Turn Around Time
- ❑ Same Day
- ❑ 1 Day
- ❑ 2 Day
- ❑ 3 Day
- ❑ 4 Day
- ❑ 5 Day
- ☒ 10 Day

Order ID:

Client ID / Field Point	Lab. No.	Sample Date	Sample Time	Matrix	No. of Containers	EPA 8260B	BTEX ☒ MTBE ❑ TPH Gas ☒ by 8260B	5 Oxygenates (MTBE, TBA, ETBA, DIPE, TAME) ☒ Lead Scavengers (1,2-DCA & EDB) ❑ Ethanol ❑	Base/Neutral/Acid Organics 8270C ❑ PAH - 8270C SIM ❑ PAH - 8270C ❑	TPH Extractable: Diesel ❑ Motor Oil ❑ Other ❑ w/ Si-Gel Cleanup ❑	Pesticides-8081 ❑ PCBs - 8082 ❑	TPH as Gas/BTEX ❑ MTBE ❑ by 8015M/8020	Methanol by 8015M	Anions: F ❑ Cl ❑ Br ❑ SO4 ❑ NO3 ❑ NO2 ❑ PO4 ❑	pH ❑ TSS ❑ SC ❑ TOC ❑ TRPH ❑ O & G ❑	Metals - Circle Below Total ❑ Dissolved ❑ STLC ❑ TCLP ❑	Remarks
MW-1	45471-001	9/23/05	11:40	W	4		X	X									
MW-2	002		11:20	W	4		X	X									
MW-3	003		10:25	W	4		X	X									
MW-4	004		10:00	W	4		X	X									

Relinquished by:	Received by:	Date:	Time:
		9/24/05	1038
Relinquished by:	Received by:	Date:	Time:
		9/26/05	1200
Relinquished by:	Received by:	Date:	Time:

Special Instructions or Comments

- ❑ EDD Report
- ☒ EDF Report
- ❑ Plating
- ❑ LUFT-5
- ❑ RCRA-8
- ❑ PPM-13
- ❑ CAM-17

Metals:
Al, As, Sb, Ba, Be, Bi, B, Cd, Ce, Ca, Cr, Co, Cs, Cu, Fe, Pb, Mg, Mn,
Ga, Ge, Hg, In, Li, Mo, Ni, P, K, Si, Ag, Na, S, Se, Sr, Ta, Te, Tl, Sn, Ti, Zn, V, W, Zr

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Certificate ID: 44253 - 7/14/2005 3:50:25 PM

Jim Green
ECM Group
290 W. Channel Rd.
Benicia, CA 94510

Order Number: 44253
Project Name: Gantner
Project Number: 98-439-55

Date Received: 7/6/2005 3:15:43 PM

Certificate of Analysis - Final Report

On July 06, 2005, samples were received under chain of custody for analysis.
Entech analyzes samples "as received" unless otherwise noted. The following results are included:

Matrix	Test	Comments
Liquid	EPA 8260B - GC/MS	
	TPH as Gasoline by GC/MS	

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,

Laurie Glantz-Murphy
Laboratory Director

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

ECM Group
290 W. Channel Rd.
Benicia, CA 94510
Attn: Jim Green

Project ID: 98-439-55
Date Received: 7/6/2005

Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 44253-001 **Sample ID: Influent** **Matrix:** Liquid **Sample Date:** 7/5/2005 12:35 PM

EPA 5030B EPA 8260B EPA 624 — **8260Petroleum**

Parameter	Result	Qual	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	0.67		1	0.50	µg/L	N/A	N/A	7/11/2005	WMS2050711
Toluene	ND		1	0.50	µg/L	N/A	N/A	7/11/2005	WMS2050711
Ethyl Benzene	0.70		1	0.50	µg/L	N/A	N/A	7/11/2005	WMS2050711
Xylenes, Total	ND		1	0.50	µg/L	N/A	N/A	7/11/2005	WMS2050711
Methyl-t-butyl Ether	2.0		1	1.0	µg/L	N/A	N/A	7/11/2005	WMS2050711
tert-Butyl Ethyl Ether	ND		1	5.0	µg/L	N/A	N/A	7/11/2005	WMS2050711
tert-Butanol (TBA)	ND		1	10	µg/L	N/A	N/A	7/11/2005	WMS2050711
Diisopropyl Ether	ND		1	5.0	µg/L	N/A	N/A	7/11/2005	WMS2050711
tert-Amyl Methyl Ether	ND		1	5.0	µg/L	N/A	N/A	7/11/2005	WMS2050711

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	110	70 - 125
Dibromofluoromethane	106	70 - 125
Toluene-d8	108	70 - 125

Analyzed by: TAF
Reviewed by: BDhabalia

EPA 5030B GC-MS — **TPH as Gasoline - GC-MS**

Parameter	Result	Qual	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1	50	µg/L	N/A	N/A	7/11/2005	WMS2050711

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	102	70 - 125
Dibromofluoromethane	94.2	70 - 125
Toluene-d8	93.6	70 - 125

Analyzed by: TAF
Reviewed by: BDhabalia

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or Prep Factor including sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
Qual = Data Qualifier

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

ECM Group
290 W. Channel Rd.
Benicia, CA 94510
Attn: Jim Green

Project ID: 98-439-55
Date Received: 7/6/2005

Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 44253-002 **Sample ID: Mid-A** **Matrix:** Liquid **Sample Date:** 7/5/2005 12:40 PM

EPA 5030B EPA 8260B EPA 624 — **8260Petroleum**

Parameter	Result	Qual	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.50	µg/L	N/A	N/A	7/8/2005	WMS2050708
Toluene	ND		1	0.50	µg/L	N/A	N/A	7/8/2005	WMS2050708
Ethyl Benzene	ND		1	0.50	µg/L	N/A	N/A	7/8/2005	WMS2050708
Xylenes, Total	ND		1	0.50	µg/L	N/A	N/A	7/8/2005	WMS2050708
Methyl-t-butyl Ether	1.7		1	1.0	µg/L	N/A	N/A	7/8/2005	WMS2050708
tert-Butyl Ethyl Ether	ND		1	5.0	µg/L	N/A	N/A	7/8/2005	WMS2050708
tert-Butanol (TBA)	28		1	10	µg/L	N/A	N/A	7/8/2005	WMS2050708
Diisopropyl Ether	ND		1	5.0	µg/L	N/A	N/A	7/8/2005	WMS2050708
tert-Amyl Methyl Ether	ND		1	5.0	µg/L	N/A	N/A	7/8/2005	WMS2050708

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	113	70 - 125
Dibromofluoromethane	122	70 - 125
Toluene-d8	114	70 - 125

Analyzed by: TAF
Reviewed by: bdhabalia

EPA 5030B GC-MS — **TPH as Gasoline - GC-MS**

Parameter	Result	Qual	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1	50	µg/L	N/A	N/A	7/8/2005	WMS2050708

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	104	70 - 125
Dibromofluoromethane	108	70 - 125
Toluene-d8	99.3	70 - 125

Analyzed by: TAF
Reviewed by: bdhabalia

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or Prep Factor including sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
Qual = Data Qualifier

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

ECM Group
290 W. Channel Rd.
Benicia, CA 94510
Attn: Jim Green

Project ID: 98-439-55
Date Received: 7/6/2005

Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 44253-003 **Sample ID: Mid-B** **Matrix:** Liquid **Sample Date:** 7/5/2005 12:45 PM

EPA 5030B EPA 8260B EPA 624 — **8260Petroleum**

Parameter	Result	Qual	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.50	µg/L	N/A	N/A	7/8/2005	WMS2050708
Toluene	ND		1	0.50	µg/L	N/A	N/A	7/8/2005	WMS2050708
Ethyl Benzene	ND		1	0.50	µg/L	N/A	N/A	7/8/2005	WMS2050708
Xylenes, Total	ND		1	0.50	µg/L	N/A	N/A	7/8/2005	WMS2050708
Methyl-t-butyl Ether	ND		1	1.0	µg/L	N/A	N/A	7/8/2005	WMS2050708
tert-Butyl Ethyl Ether	ND		1	5.0	µg/L	N/A	N/A	7/8/2005	WMS2050708
tert-Butanol (TBA)	25		1	10	µg/L	N/A	N/A	7/8/2005	WMS2050708
Diisopropyl Ether	ND		1	5.0	µg/L	N/A	N/A	7/8/2005	WMS2050708
tert-Amyl Methyl Ether	ND		1	5.0	µg/L	N/A	N/A	7/8/2005	WMS2050708

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	111	70 - 125
Dibromofluoromethane	123	70 - 125
Toluene-d8	114	70 - 125

Analyzed by: TAF
Reviewed by: bdhabalia

EPA 5030B GC-MS — **TPH as Gasoline - GC-MS**

Parameter	Result	Qual	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1	50	µg/L	N/A	N/A	7/8/2005	WMS2050708

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	103	70 - 125
Dibromofluoromethane	109	70 - 125
Toluene-d8	99.5	70 - 125

Analyzed by: TAF
Reviewed by: bdhabalia

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or Prep Factor including sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
Qual = Data Qualifier

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - EPA 8260B - 8260Petroleum

QC Batch ID: WMS2050708

Validated by: BDhabalia - 07/11/05

QC Batch Analysis Date: 7/8/2005

Parameter	Result	DF	PQLR	Units
Benzene	ND	1	0.50	µg/L
Diisopropyl Ether	ND	1	5.0	µg/L
Ethyl Benzene	ND	1	0.50	µg/L
Methyl-t-butyl Ether	ND	1	1.0	µg/L
tert-Amyl Methyl Ether	ND	1	5.0	µg/L
tert-Butanol (TBA)	ND	1	10	µg/L
tert-Butyl Ethyl Ether	ND	1	5.0	µg/L
Toluene	ND	1	0.50	µg/L
Xylenes, Total	ND	1	0.50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	**103**	70 - 125
Dibromofluoromethane	**92.0**	70 - 125
Toluene-d8	**96.4**	70 - 125

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Laboratory Control Sample / Duplicate - Liquid - EPA 8260B - 8260Petroleum

QC Batch ID: WMS2050708

Reviewed by: BDhabalia - 07/11/05

QC Batch ID Analysis Date: 7/8/2005

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
1,1-Dichloroethene	<0.50	20	20.3	µg/L	102	70 - 130
Benzene	<0.50	20	21.1	µg/L	105	70 - 130
Chlorobenzene	<0.50	20	20.1	µg/L	101	70 - 130
Methyl-t-butyl Ether	<1.0	20	18.3	µg/L	91.6	70 - 130
Toluene	<0.50	20	20.9	µg/L	105	70 - 130
Trichloroethene	<0.50	20	21.0	µg/L	105	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**112**	70 - 125
Dibromofluoromethane	**107**	70 - 125
Toluene-d8	**116**	70 - 125

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.50	20	19.6	µg/L	98.1	**3.6**	25.0	70 - 130
Benzene	<0.50	20	20.9	µg/L	105	**0.66**	25.0	70 - 130
Chlorobenzene	<0.50	20	20.5	µg/L	102	**1.6**	25.0	70 - 130
Methyl-t-butyl Ether	<1.0	20	19.0	µg/L	95.0	**3.7**	25.0	70 - 130
Toluene	<0.50	20	20.8	µg/L	104	**0.69**	25.0	70 - 130
Trichloroethene	<0.50	20	21.1	µg/L	105	**0.15**	25.0	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**112**	70 - 125
Dibromofluoromethane	**106**	70 - 125
Toluene-d8	**112**	70 - 125

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - EPA 8260B - 8260Petroleum

QC Batch ID: WMS2050711

Validated by: BDhabalia - 07/14/05

QC Batch Analysis Date: 7/11/2005

Parameter	Result	DF	PQLR	Units
Benzene	ND	1	0.50	µg/L
Diisopropyl Ether	ND	1	5.0	µg/L
Ethyl Benzene	ND	1	0.50	µg/L
Methyl-t-butyl Ether	ND	1	1.0	µg/L
tert-Amyl Methyl Ether	ND	1	5.0	µg/L
tert-Butanol (TBA)	ND	1	10	µg/L
tert-Butyl Ethyl Ether	ND	1	5.0	µg/L
Toluene	ND	1	0.50	µg/L
Xylenes, Total	ND	1	0.50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	**108**	70 - 125
Dibromofluoromethane	**102**	70 - 125
Toluene-d8	**107**	70 - 125

Method Blank - Liquid - GC-MS - TPH as Gasoline - GC-MS

QC Batch ID: WMS2050711

Validated by: BDhabalia - 07/14/05

QC Batch Analysis Date: 7/11/2005

Parameter	Result	DF	PQLR	Units
TPH as Gasoline	ND	1	50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	**99.8**	70 - 125
Dibromofluoromethane	**90.5**	70 - 125
Toluene-d8	**93.1**	70 - 125

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Laboratory Control Sample / Duplicate - Liquid - EPA 8260B - 8260Petroleum

Reviewed by: BDhabalia - 07/14/05

QC Batch ID: WMS2050711

QC Batch ID Analysis Date: 7/11/2005

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
1,1-Dichloroethene	<0.50	20	21.0	µg/L	105	70 - 130
Benzene	<0.50	20	20.9	µg/L	104	70 - 130
Chlorobenzene	<0.50	20	20.5	µg/L	103	70 - 130
Methyl-t-butyl Ether	<1.0	20	18.8	µg/L	93.9	70 - 130
Toluene	<0.50	20	21.1	µg/L	105	70 - 130
Trichloroethene	<0.50	20	20.9	µg/L	105	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**112**	70 - 125
Dibromofluoromethane	**108**	70 - 125
Toluene-d8	**112**	70 - 125

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.50	20	19.0	µg/L	95.2	**9.8**	25.0	70 - 130
Benzene	<0.50	20	19.8	µg/L	99.1	**5.1**	25.0	70 - 130
Chlorobenzene	<0.50	20	20.0	µg/L	100	**2.6**	25.0	70 - 130
Methyl-t-butyl Ether	<1.0	20	17.1	µg/L	85.6	**9.2**	25.0	70 - 130
Toluene	<0.50	20	20.2	µg/L	101	**3.9**	25.0	70 - 130
Trichloroethene	<0.50	20	20.3	µg/L	101	**2.9**	25.0	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**119**	70 - 125
Dibromofluoromethane	**102**	70 - 125
Toluene-d8	**112**	70 - 125

Laboratory Control Sample / Duplicate - Liquid - GC-MS - TPH as Gasoline - GC-MS

Reviewed by: BDhabalia - 07/14/05

QC Batch ID: WMS2050711

QC Batch ID Analysis Date: 7/11/2005

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Gasoline	<25	250	246	µg/L	98.4	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**102**	70 - 125
Dibromofluoromethane	**92.1**	70 - 125
Toluene-d8	**99.1**	70 - 125

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	250	233	µg/L	93.2	**5.5**	25.0	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**101**	70 - 125
Dibromofluoromethane	**89.4**	70 - 125
Toluene-d8	**97.5**	70 - 125

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Matrix Spike / Matrix Spike Duplicate - Liquid - EPA 8260B - 8260Petroleum

Reviewed by: BDhabalia - 07/14/05

QC Batch ID: WMS2050711

QC Batch ID Analysis Date: 7/11/2005

MS

Sample Spiked: 44275-002

Parameter	Sample Result	Spike Amount	Spike Result	Units	Analysis Date	% Recovery	Recovery Limits
Benzene	ND	20	19.4	µg/L	7/11/2005	96.8	70 - 130
Methyl-t-butyl Ether	ND	20	18.0	µg/L	7/11/2005	89.9	70 - 130
Toluene	ND	20	18.9	µg/L	7/11/2005	94.5	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	107	70 - 125
Dibromofluoromethane	105	70 - 125
Toluene-d8	105	70 - 125

MSD

Sample Spiked: 44275-002

Parameter	Sample Result	Spike Amount	Spike Result	Units	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	ND	20	18.8	µg/L	7/11/2005	94.1	2.8	25.0	70 - 130
Methyl-t-butyl Ether	ND	20	17.8	µg/L	7/11/2005	89.1	0.85	25.0	70 - 130
Toluene	ND	20	18.4	µg/L	7/11/2005	92.2	2.4	25.0	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	107	70 - 125
Dibromofluoromethane	106	70 - 125
Toluene-d8	105	70 - 125

Entech Analytical Labs, Inc.

3334 Victor Court (408) 588-0200
Santa Clara, CA 95054 (408) 588-0201 - Fax

Chain of Custody / Analysis Request

Attention to: JIM GREEN	Phone No.: 707-751-0655	Purchase Order No.:	Invoice to: (If Different)	Phone:
Company Name: ECM GROUP	Fax No.: 707-751-0653	Project No.: 98-439-55	Company:	Quote No.:
Mailing Address: P.O. BOX 802	Email Address:	Project Name: GANTNER	Billing Address: (If Different)	
City: BENICIA	State: CA / Zip Code: 94510	Project Location:	City: / State: / Zip:	

Sampler: MIKE JACKSON

Field Org. Code:

Global ID:

Turn Around Time
- ❑ Same Day
- ❑ 1 Day
- ❑ 2 Day
- ❑ 3 Day
- ❑ 4 Day
- ☒ 10 Day
- ❑ 5 Day

Order ID: 44253

Client ID / Field Point	Lab. No.	Sample Date	Sample Time	Matrix	No. of Containers	EPA 8260B	BTEX ☒ MTBE ❑ TPH Gas ☒ by 8260B	5 Oxygenates (MTBE, TBA, ETBA, DIPE, TAME) ☒ Lead Scavengers (1,2-DCA & EDB) ❑ Ethanol ❑	Base/Neutral/Acid Organics 8270C ❑ PAH - 8270C SIM ❑ PAH - 8270C ❑	TPH Extractable: Diesel ❑ Motor Oil ❑ Other ❑ w/ Si-Gel Cleanup ❑	Pesticides-8081 ❑ PCBs - 8082 ❑	TPH as Gas/BTEX ❑ MTBE ❑ by 8015M/8020	Methanol by 8015M	Anions: F ❑ Cl ❑ Br ❑ SO4 ❑ NO3 ❑ NO2 ❑ PO4 ❑	pH ❑ TSS ❑ SC ❑ TOC ❑ TRPH ❑ O & G ❑	Metals - Circle Below Total ❑ Dissolved ❑ STLC ❑ TCLP ❑	Remarks
IN FAVENT	001	7/5/05	12:35	W	4		X	X									
MID-A	002	↓	12:40	W	4		X	X									
MID-B	003	↓	12:45	W	4		X	X									

Relinquished by:	Received by:	Date:	Time:
[signature]	[signature]	7/6/05	1230
Relinquished by:	Received by:	Date:	Time:
[signature]	[signature]	7/06/05	1530
Relinquished by:	Received by:	Date:	Time:

Special Instructions or Comments

Metals:
Al, As, Sb, Ba, Be, Bi, B, Cd, Ce, Ca, Cr, Co, Cs, Cu, Fe, Pb, Mg, Mn,
Ga, Ge, Hg, In, Li, Mo, Ni, P, K, Si, Ag, Na, S, Se, Sr, Ta, Te, Tl, Sn, Ti, Zn, V, W, Zr

- ❑ EDD Report
- ❑ EDF Report
- ❑ Plating
- ❑ LUFT-5
- ❑ RCRA-8
- ❑ PPM-13
- ❑ CAM-17

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Dave Hazard
ECM Group
290 W. Channel Rd.
Benicia, CA 94510

Certificate ID: 44892 - 8/25/2005 4:05:47 PM

Order Number: 44892
Project Name: Gantner
Project Number: 98-439-50

Date Received: 8/17/2005 2:31:51 PM
P.O. Number: 98-439-50

Certificate of Analysis - Final Report

On August 17, 2005, sample was received under chain of custody for analysis.
Entech analyzes samples "as received" unless otherwise noted. The following results are included:

Matrix	Test	Comments
Liquid	EPA 8260B - GC/MS	
	TPH as Gasoline by GC/MS	

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,

Laurie Glantz-Murphy
Laboratory Director

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

ECM Group
290 W. Channel Rd.
Benicia, CA 94510
Attn: Dave Hazard

Project ID: 98-439-50
Date Received: 8/17/2005
P.O. Number: 98-439-50
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 44892-001 **Sample ID: Influent** **Matrix:** Liquid **Sample Date:** 8/15/2005 12:30 PM

EPA 5030C EPA 8260B EPA 624 — **8260Petroleum**

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	8.4		1	0.50	µg/L	N/A	N/A	8/25/2005	WM2050825
Toluene	0.78		1	0.50	µg/L	N/A	N/A	8/25/2005	WM2050825
Ethyl Benzene	6.2		1	0.50	µg/L	N/A	N/A	8/25/2005	WM2050825
Xylenes, Total	7.7		1	0.50	µg/L	N/A	N/A	8/25/2005	WM2050825
Methyl-t-butyl Ether	1.8		1	1.0	µg/L	N/A	N/A	8/25/2005	WM2050825
tert-Butyl Ethyl Ether	ND		1	5.0	µg/L	N/A	N/A	8/25/2005	WM2050825
tert-Butanol (TBA)	22		1	10	µg/L	N/A	N/A	8/25/2005	WM2050825
Diisopropyl Ether	ND		1	5.0	µg/L	N/A	N/A	8/25/2005	WM2050825
tert-Amyl Methyl Ether	ND		1	5.0	µg/L	N/A	N/A	8/25/2005	WM2050825

Analyzed by: TAF
Reviewed by: MaiChiTu

EPA 5030C GC-MS — **TPH as Gasoline - GC-MS**

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	650		1	50	µg/L	N/A	N/A	8/25/2005	WM2050825

Analyzed by: TAF
Reviewed by: MaiChiTu

Detection Limit = Detection Limit for Reporting.
D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
Qual = Data Qualifier

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Laboratory Control Sample / Duplicate - Liquid - EPA 8260B - 8260Petroleum

QC Batch ID: WM2050825 Reviewed by: MaiChiTu - 08/25/05

QC Batch ID Analysis Date: 8/25/2005

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
1,1-Dichloroethene	<0.50	20	17.7	µg/L	88.3	70 - 130
Benzene	<0.50	20	21.1	µg/L	105	70 - 130
Chlorobenzene	<0.50	20	22.1	µg/L	110	70 - 130
Methyl-t-butyl Ether	<1.0	20	19.2	µg/L	96.1	70 - 130
Toluene	<0.50	20	20.9	µg/L	105	70 - 130
Trichloroethene	<0.50	20	22.5	µg/L	113	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**110**	70 - 125
Dibromofluoromethane	**103**	70 - 125
Toluene-d8	**104**	70 - 125

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.50	20	17.9	µg/L	89.6	**1.4**	25.0	70 - 130
Benzene	<0.50	20	20.9	µg/L	104	**1.1**	25.0	70 - 130
Chlorobenzene	<0.50	20	22.1	µg/L	111	**0.15**	25.0	70 - 130
Methyl-t-butyl Ether	<1.0	20	18.2	µg/L	90.9	**5.5**	25.0	70 - 130
Toluene	<0.50	20	21.0	µg/L	105	**0.26**	25.0	70 - 130
Trichloroethene	<0.50	20	22.6	µg/L	113	**0.17**	25.0	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**106**	70 - 125
Dibromofluoromethane	**100**	70 - 125
Toluene-d8	**104**	70 - 125

Laboratory Control Sample / Duplicate - Liquid - GC-MS - TPH as Gasoline - GC-MS

QC Batch ID: WM2050825 Reviewed by: MaiChiTu - 08/25/05

QC Batch ID Analysis Date: 8/25/2005

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Gasoline	<25	250	248	µg/L	99.2	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**99.9**	70 - 125
Dibromofluoromethane	**88**	70 - 125
Toluene-d8	**93.6**	70 - 125

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	250	237	µg/L	94.7	**4.6**	25.0	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**100**	70 - 125
Dibromofluoromethane	**88.5**	70 - 125
Toluene-d8	**93**	70 - 125

Entech Analytical Labs, Inc.

3334 Victor Court (408) 588-0200
Santa Clara, CA 95054 (408) 588-0201 - Fax

Chain of Custody / Analysis Request

Attention to: DAVE HAZARD	Phone No.: 707-751-0655	Purchase Order No (Reqd).:	Send Invoice to (if Different) / Phone
Company Name: ECM GROUP	Fax No.: 707-751-0653	Project Number: 98-439-50	Company
Mailing Address: P.O. BOX 802	email:	Project Name: GANTNER	Billing Address (if Different): SAME
City: BENICIA	State: / Zip:	Project Location:	City: / State / Zip

Sampler: MIKE JACKSON
Field Org. Code:
Global ID:

Turn Around Time
- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Day
- ☐ 3 Day
- ☐ 4 Day
- ☒ Standard (10 Day)

Order ID:			Sampling		Matrix	Composite	Grab	Containers	Preservative	Volatile Organics by GCMS: 601/602 ☐ 8260B ☐ 624 ☐	Fuel Oxygenates by 8260 ☐ 8010 by 8260 ☐ MTBE by 8260B ☐	Pesticides-8081 ☐ PCBs - 8082 ☐	TPH as Gas/BTEX/MTBE ☐ TPH as Gas/BTEX ☐	Base/Neutral/Acid Organics 8270 ☐ 8270-SIM ☐ PNA ☐	Fuel Scan Extractable ☐ Purgeable ☐	Diesel ☐ w/ Sigel Standard Cleanup ☐ Motor Oil ☐ w/ Sigel Column Cleanup ☐	pH	CN	TRPH ☐ Oil & Grease ☐	Metals - Circle Below Total ☐ Dissolved ☐	STLC	TTLC	Remarks
Client ID:	Field PT	Lab. No.	Date	Time																			
INFLUENT	H4892-001		8/15/05	12:30	W		X	4	HCL		X		X										

Relinquished by:	Received by:	Date:	Time:
		8/17/05	1020
		8/17/05	1220

Special Instructions or Comments

- ☐ NPDES Detection Limits
- ☐ EDD Report Required
- ☐ EDF Report Required
- ☐ PDF File Required

Metals:
Al, As, Sb, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, K, Si, Ag, Na, Se, Sr, Tl, Sn, Ti, V, Zn, W : RCRA-8 ☐ CAM-17 ☐ Plating ☐ PPM-13 ☐ LUFT-5 ☐

APPENDIX D

WATER SAMPLING DATA SHEETS

WATER LEVEL &
PRODUCT MEASUREMENTS

ECM group

PROJECT NAME & NUMBER: GANTNER 98-439-14

DATE: 9/23/05

BY: MJJ

WELL ID	TIME MEASURED	DEPTH TO PRODUCT (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH	COMMENTS: (well condition, odor, etc.)
MW-1			—	14.80	2" WATER LEVEL METER STOPPED WORKING
MW-2			—	14.75	2" WATER LEVEL METER STOPPED WORKING
MW-3			11.76	14.75	2"
MW-4			11.59	19.95	2"
MW-5			—	—	2" RE-SURFACING OF PARKING LOT COVERED UP
EX-1			14.39	—	4"
EX-2			—	—	4" WATER LEVEL METER STOPPED WORKING
EX-3			14.29	—	4"
PZ-1			14.80		2"
PZ-2			14.72		2"
PZ-3			13.18		2"

WATER SAMPLING DATA

Job Name GANTNER Job Number 98-439-14

Well Number MW-1 Date 9/23/05 Time

Well Diameter 2" Well Depth (spec.) Well Depth (sounded) 14.80

Depth to Water (static) TOC elev.

G.W. Elev. Maximum Drawdown Limit (if applicable)

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_4" casing = 0.367 gal/ft
V_6" casing = 0.653 gal/ft
V_{8}" casing = 0.826 gal/ft
V_{10}" casing = 1.47 gal/ft

Initial height of water in casing Volume gallons

Total to be evacuated = 3 x Initial Volume gallons

Stop Time	Start Time	Bailed	Pumped	Cum. Gal.

Pumped or Bailed Dry? ___Yes X 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							
Gallons							
Temp. (degree F)	70.4	69.7					
pH	7.20	7.19					
EC (umhos/cm)	218	224					
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

11:40

WATER SAMPLING DATA

Job Name GAWTNER Job Number 98-439-14

Well Number MW-2 Date 9/23/05 Time

Well Diameter 2" Well Depth (spec.) Well Depth (sounded)

Depth to Water (static) — TOC elev.

G.W. Elev. Maximum Drawdown Limit (if applicable)

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
$V_{5.5}$" casing = 0.826 gal/ft
V_6" casing = 1.47 gal/ft

Initial height of water in casing Volume gallons

Total to be evacuated = 3 x Initial Volume 2.75 gallons

Stop Time	Start Time	Bailed	Pumped	Cum. Gal.

Pumped or Bailed Dry? ___Yes X 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							
Gallons							
Temp. (degree F)	72.0	72.9	73.0				
pH	7.17	7.20	7.20				
EC (umhos/cm)	232	218	216				
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

11:20

WATER SAMPLING DATA

Job Name GANTNER Job Number 98-439-14

Well Number MW-3 Date 9/23/05 Time

Well Diameter 2" Well Depth (spec.) Well Depth (sounded) 14.75

Depth to Water (static) 11.76 TOC elev.

G.W. Elev. Maximum Drawdown Limit (if applicable)

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
V₂" casing = 0.163 gal/ft
V₃" casing = 0.367 gal/ft
V₄" casing = 0.653 gal/ft
V₅" casing = 0.826 gal/ft
V₆" casing = 1.47 gal/ft

Initial height of water in casing 2.99 Volume 0.48 gallons

Total to be evacuated = 3 x Initial Volume 1.46 gallons

Stop Time	Start Time	Bailed	Pumped	Cum. Gal.

Pumped or Bailed Dry? ___Yes X 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							
Gallons							
Temp. (degree F)	67.8	67.5					
pH	7.17	7.18					
EC (umhos/cm)	295	278					
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

10:25

WATER SAMPLING DATA

Job Name GANTNER Job Number 98-439-14

Well Number MW-4 Date 9/23/05 Time

Well Diameter 2" Well Depth (spec.) Well Depth (sounded) 19.95

Depth to Water (static) 11.59 TOC elev.

G.W. Elev. Maximum Drawdown Limit (if applicable)

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

Initial height of water in casing 8.36 Volume 1.36 gallons

Total to be evacuated = 3 x Initial Volume 4.08 gallons

Stop Time	Start Time	Bailed	Pumped	Cum. Gal.

Pumped or Bailed Dry? ___Yes X 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							
Gallons							
Temp. (degree F)	65.3	66.5	66.7				
pH	7.12	7.13	7.14				
EC (umhos/cm)	487	381	376				
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.

10:00

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 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 10%).

Ground water samples are collected from the wells/borings 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.