

September 1, 2010

Mr. Brett Middleton  
Encana Oil & Gas (USA) Inc.  
2717 County Rd. 215  
Suite 100  
Parachute, CO 81635

Re: West Divide Seep Area Second Quarter Monitoring Status Report for June 2010

Dear Mr. Middleton:

Olsson Associates (Olsson) has completed the second quarter of 2010 groundwater and surface-water monitoring for Encana Oil & Gas (USA) Inc. (Encana) at the West Divide Creek Gas Seep study area (**Figure 1**).

This report summarizes the status of the remediation system and the analytical results of surface-water and groundwater monitoring that was conducted in June and July 2010 and data collected since 2004 to monitor the impacts of the dissolved phase hydrocarbons comprised primarily of methane and benzene in the study area.

### ***Groundwater and Surface-Water Monitoring***

Olsson collected groundwater samples from 22 out of the 24 monitoring wells and the Eicher domestic water well during the second quarter on June 28 and June 29, 2010 (**Figure 1**). Two duplicate samples were also collected during this monitoring period. Confirmation sampling of some of the wells (MW-1,-2,-4,-7,-11,-16,-17,-25 and -27) was conducted on July 21, 2010 to confirm the laboratory results that were not consistent with previous results obtained for these locations. Prior to sample collection, static water levels were measured in the monitoring wells to within 0.01 feet (ft) from the top of the PVC casing using an electronic water level meter. The wells were purged of static water using dedicated disposable bailers. Field parameters were obtained at the completion of purging activities and included temperature, specific conductance, dissolved oxygen, pH, total dissolved solids and turbidity using a Quanta water quality meter (**Appendix A**). Groundwater samples were collected following field parameter measurements.

Olsson collected eight (8) surface-water samples (DCS-1-8) on June 29, 2010 from West Divide Creek extending from the former seep area to the northern Langegger property line (**Figure 1**). Field parameters including temperature, specific conductance, dissolved oxygen, pH, total dissolved solids, and turbidity were also collected for each sample using the Quanta meter (**Appendix A**).

Water-quality samples collected during this period were analyzed by Accutest Labs (AL), Wheat Ridge, CO for the following analyses:

- BTEX using EPA method 8021b

- Total dissolved methane using method RSK 175M
- Chloride (Cl) using method 300E
- Sodium (Na) using method SW6020

Isotopic methane was analyzed by Isotech Laboratories, Inc of Champaign, IL (Isotech). Stable isotopes of carbon and hydrogen in methane, stable isotopes of carbon in ethane and propane and the gas composition were determined for total dissolved methane gas concentrations at monitoring wells with a history of total dissolved methane greater than 2.0 mg/L (**Appendix B and Appendix C**).

Groundwater and surface-water samples were placed in the appropriate sample containers provided by AL and Isotech, labeled, stored on ice, and delivered under chain-of-custody procedures to AL.

### ***Site Hydrogeology and Hydrology***

For this monitoring period, groundwater was encountered from near surface (in the seep area) to 22.65 (MW-21) feet below ground surface (ft-bgs). The groundwater flow direction continues to be from the seep area towards the north, mimicking the flow direction of the creek (**Figure 2**). The groundwater gradient for this period of monitoring was 0.014 feet/foot (ft/ft) (March 2010 - 0.019 ft/ft).

The flow in the creek was typical for this monitoring period and low compared to the spring flows. Monitoring wells MW-13 and MW-19 are plugged by an obstruction and were not sampled during this monitoring period. These wells will be abandoned during the third quarter 2010 monitoring period, per Colorado Division of Water Resources 2CCR 102-2, Rule 16. A well abandonment report (Form GWS-9) will be submitted Colorado State Engineer's Office within 60 days of abandonment.

### ***Groundwater Monitoring Results***

A summary of laboratory analytical groundwater results for benzene, toluene, ethylbenzene, total xylenes (BTEX), and total dissolved methane for the second quarter 2010 is presented in **Table 1**. The extent of benzene concentrations for this monitoring period is shown in **Figure 3**. The distribution of total dissolved methane concentrations are shown in **Figure 4**. The second quarter 2010 BTEX and total dissolved methane concentrations are depicted in **Figure 5**. The second quarter 2010 field parameters are contained in **Appendix A**. A summary of historical hydrocarbon analyses results for groundwater data collected since 2004 are contained in **Appendix B**. The QA/QC data are contained in **Appendix D**. The thermogenic methane data for this monitoring period are summarized in **Appendix E**. Graphs of chemical concentrations for selected wells are in **Appendix F**. The laboratory reports for June and July 2010 are in **Appendix G**. This report including all of the laboratory reports is enclosed on a disk in the Adobe Acrobat format.

For this monitoring period confirmed laboratory results are summarized as follows:

- Detections of benzene above the lower laboratory reporting limit were found in monitoring wells 2, 4, 9 and 17 (**Table 1**);
- Benzene concentrations were detected above the state standard of 5 µg/L at MW-2 (144 µg/L), at MW-4 (41.2 µg/L) and at MW-17 (13.0 µg/L). These wells have generally been

the only monitoring wells in the seep area that have been consistently above the state standard for benzene.

- A detection of toluene was confirmed in monitoring well MW-2 at a concentration of 2.2 µg/L (**Table 1**). Prior to this monitoring period, toluene had not been detected in any of the monitoring wells since 2008.
- Ethylbenzene was not confirmed in any of the monitoring wells above the state standard of 680 µg/L (**Table 1**).
- Confirmed total xylenes were detected in MW-2 at a concentration of 33.3 µg/L, which is below the state standard of 10,000 µg/L (**Table 1**).

### ***Surface-Water Monitoring Results***

**Table 2** contains the surface-water hydrocarbon results for June 2010. The historical surface-water results for hydrocarbons are contained in **Appendix C**. Laboratory results for this monitoring period indicate that BTEX compounds were not detected above the lower laboratory reporting limit in any of the Divide Creek surface-water samples, with the exception of a toluene detection in DCS-1, which was likely a laboratory artifact concentration as seen in the monitoring well data (**Table 2**). The results to date continue to confirm that hydrocarbon concentrations above the lower laboratory reporting limit have not been detected in the creek since April of 2005 (**Appendix C**).

### ***Methane Results for Groundwater and Surface Water***

The AL laboratory results for methane are reported as total dissolved methane. This includes both biogenic (methane gas generated by biologic reduction of organic matter) and thermogenic methane (methane gas generated by thermal reduction of deeply buried organic matter). Total dissolved methane above the lower method detection level of 0.0008 mg/L was detected in 16 monitoring wells in the study area. Total dissolved methane above a concentration of 2.0 mg/L continues to be found in monitoring wells 2, 4, 9 and 14 (**Table 1 and Figure 4**). Total dissolved methane concentrations above the lower laboratory reporting limit of 0.0008 mg/L were found in all of the Divide Creek sample locations (**Table 2**).

Isotopic samples were collected and analyzed from monitoring wells 2, 4, 9, 14 and 17 during this monitoring period. The results for these locations are contained in **Appendix F**. All of these estimated thermogenic concentrations are less than the initial concentrations, but have remained stable at the estimated concentrations since 2007 (**Appendix B**).

### ***Divide Creek Seep Remediation Status***

The air sparge remediation system was operated during this quarter with minimum downtime. Monitoring has continuously shown that the air sparge remediation system has successfully contained migration of the hydrocarbon plume with the treatment time of 8 hr/day. The treatment time was reduced to 8 hr/day in April 2009 and the data continues to indicate the hydrocarbon concentrations are below the lower laboratory reporting limits within and downgradient of the area of the treatment wells. An air sparging line was reinstalled in MW-4 and was operated continuously for the quarter. The air treatment in this well will continue throughout 2010.

Benzene concentrations greater than the state standard and total dissolved methane concentrations greater than 2.0 mg/L in groundwater are primarily located within 250 feet of the seep and upgradient of the treatment system. Total dissolved methane concentrations have been reduced significantly downgradient of the remediation system. Concentrations of benzene

in the area of treatment influence continue to show reduced concentrations at MW-1 (slightly upgradient of the treatment wells) and at MW-8 (downgradient of the treatment wells).

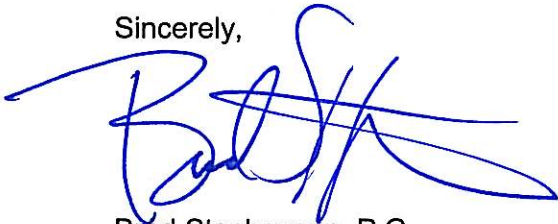
***Planned Activities for the Next Quarter***

The following activities are planned for the next quarter:

- Obtain water levels from all monitoring wells;
- Sample all monitoring well and surface-water locations and the Eicher domestic well for analyses of BTEX, total dissolved methane, chloride and sulfide;
- Obtain water quality samples for methane isotopic analysis at monitoring locations that have historically shown total dissolved methane concentrations greater than 2.0 mg/L at monitoring wells MW-2, 4, 9, 14 and 17;
- Obtain two duplicate samples and one field blank sample;
- Abandon monitoring wells MW-13 and MW-19;
- Continue to sample the Eicher domestic well (Eich2);
- Continue to operate and maintain the air treatment of MW-4; and
- Perform maintenance on the air sparge system, as needed.

Olsson appreciates the opportunity to provide services to Encana Oil & Gas (USA) Inc. If you have any questions or concerns regarding this information, please contact me at (303) 237-2072.

Sincerely,



Brad Stephenson, P.G.  
Senior Hydrogeologist

cc: Linda Spry-O'Rourke  
Lisa Bracken  
Steve Thompson  
Pepi Langegger  
Kathy Friesen

Attachments

# **TABLES**

**Table 1**

Summary of June 2010 Groundwater Analytical Results and Groundwater Elevations  
 Encana, West Divide Creek Seep  
 Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	Groundwater Elevation (ft-msl)
Colorado GWQSs (ug/L)		5	1000	680	10000			
MW-01	28-Jun-10	<1	2.5	<2	<2	<0.0008		5954.06
MW-01 <sup>a</sup>	21-Jul-10	<1	<2	<2	<2			
MW-02	28-Jun-10	<b>72</b>	3.0	<2	24.9	8.71	6.4	5954.19
MW-02 <sup>a</sup>	21-Jul-10	<b>144</b>	2.2	<2	33.3			
MW-04	28-Jun-10	<b>59.4</b>	3.0	2.2	21.7	8.35	6.3	5955.31
MW-04 <sup>a</sup>	21-Jul-20	<b>41.2</b>	<2	<2	15.8			
MW-06	28-Jun-10	<1	<2	<2	<2	0.00989		5953.14
MW-07	28-Jun-10	<1	2.7	<2	<2	<0.0008		5952.88
MW-07 <sup>a</sup>	21-Jul-10	<1	<2	<2	<2			
MW-08	28-Jun-10	<1	<2	<2	<2	0.0192		5951.67
MW-09	28-Jun-10	1.8	<2	<2	<2	6.8	4.3	5960.69
MW-11	28-Jun-10	<1	2.3	<2	2.7	0.0615		5964.86
MW-11 <sup>a</sup>	21-Jul-10	<1	<2	<2	<2			
MW-12	28-Jun-10	<1	<2	<2	<2	0.672		5960.63
MW-13	29-Jun-10							PLUGGED
MW-14	28-Jun-10	<1	<2	<2	<2	4.79	3.1	5959.62
MW-15	29-Jun-10	<1	<2	<2	<2	<0.0008		5957.79
MW-16	28-Jun-10	<1	<2	<2	<2	0.0889		5957.42
MW-16 <sup>a</sup>	21-Jul-10	<1	<2	<2	<2			
MW-16D	28-Jun-10	<1	2.4	<2	<2	0.0135		5957.42
MW-16D <sup>a</sup>	21-Jul-10	<1	<2	<2	<2			
MW-17	28-Jun-10	<1	<2	<2	<2	0.0107	0.0008	5954.44
MW-17 <sup>a</sup>	21-Jul-10	<b>13</b>	<2	<2	<2			
MW-18	29-Jun-10	<1	<2	<2	<2	0.264		5948.42
MW-19	29-Jun-10							PLUGGED
MW-20	29-Jun-10	<1	<2	<2	<2	0.00369		5945.24
MW-21	29-Jun-10	<1	<2	<2	<2	0.00156		5946.80
MW-22	29-Jun-10	<1	<2	<2	<2	<0.0008		5947.72
MW-23	28-Jun-10	<1	<2	<2	<2	<0.0008		5840.83
MW-23D	28-Jun-10	<1	<2	<2	<2	<0.0008		5940.83
MW-24	29-Jun-10	<1	<2	<2	<2	0.00178		5950.06
MW-25	28-Jun-10	<1	2.0	<2	<2	0.0103		5968.39
MW-25 <sup>a</sup>	21-Jul-10	<1	<2	<2	<2			
MW-26	28-Jun-10	<1	<2	<2	<2	0.778		5953.56
MW-27	28-Jun-10	<1	2.1	<2	<2	<0.0008		5949.91
MW-27 <sup>a</sup>	21-Jul-20	<1	<2	<2	<2			
EICH2	29-Jun-10	<1	<2	<2	<2	0.014		

**Bold** - exceeds Colorado Groundwater Quality Standards (GWQS)

<sup>a</sup> - Resampled due to suspected laboratory error

D - Duplicate sample

ft-msl - feet above mean sea level

mg/L - milligrams/Liter

ug/L - micrograms/Liter

NM - Not measured

< - Not detected above indicated reporting level

Blank cell - not analyzed/not collected

BTEX analyzed by EPA Method 8021

Total Dissolved Methane analyzed by EPA Method RSK175MOD

**Table 2**

Summary of Surface-Water Analytical Results for June 2010  
 Encana, West Divide Creek Seep  
 Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado GWQSs (ug/L)		5	1000	680	10,000		
DCS-1	29-Jun-10	<1	2.6	<2	<2	0.00186	
DCS-2	29-Jun-10	<1	<2	<2	<2	0.0013	
DCS-3	29-Jun-10	<1	<2	<2	<2	0.001	
DCS-4	29-Jun-10	<1	<2	<2	<2	0.00165	
DCS-5	29-Jun-10	<1	<2	<2	<2	0.00176	
DCS-6	29-Jun-10	<1	<2	<2	<2	0.00174	
DCS-7	29-Jun-10	<1	<2	<2	<2	0.00186	
DCS-8	29-Jun-10	<1	<2	<2	<2	0.0015	

**200 - Bold** exceeds Colorado Groundwater Quality Standards (GWQS)

D - Duplicate Sample

mg/L - milligrams/Liter

ug/L - micrograms/liter

< - Not detected above indicated reporting level

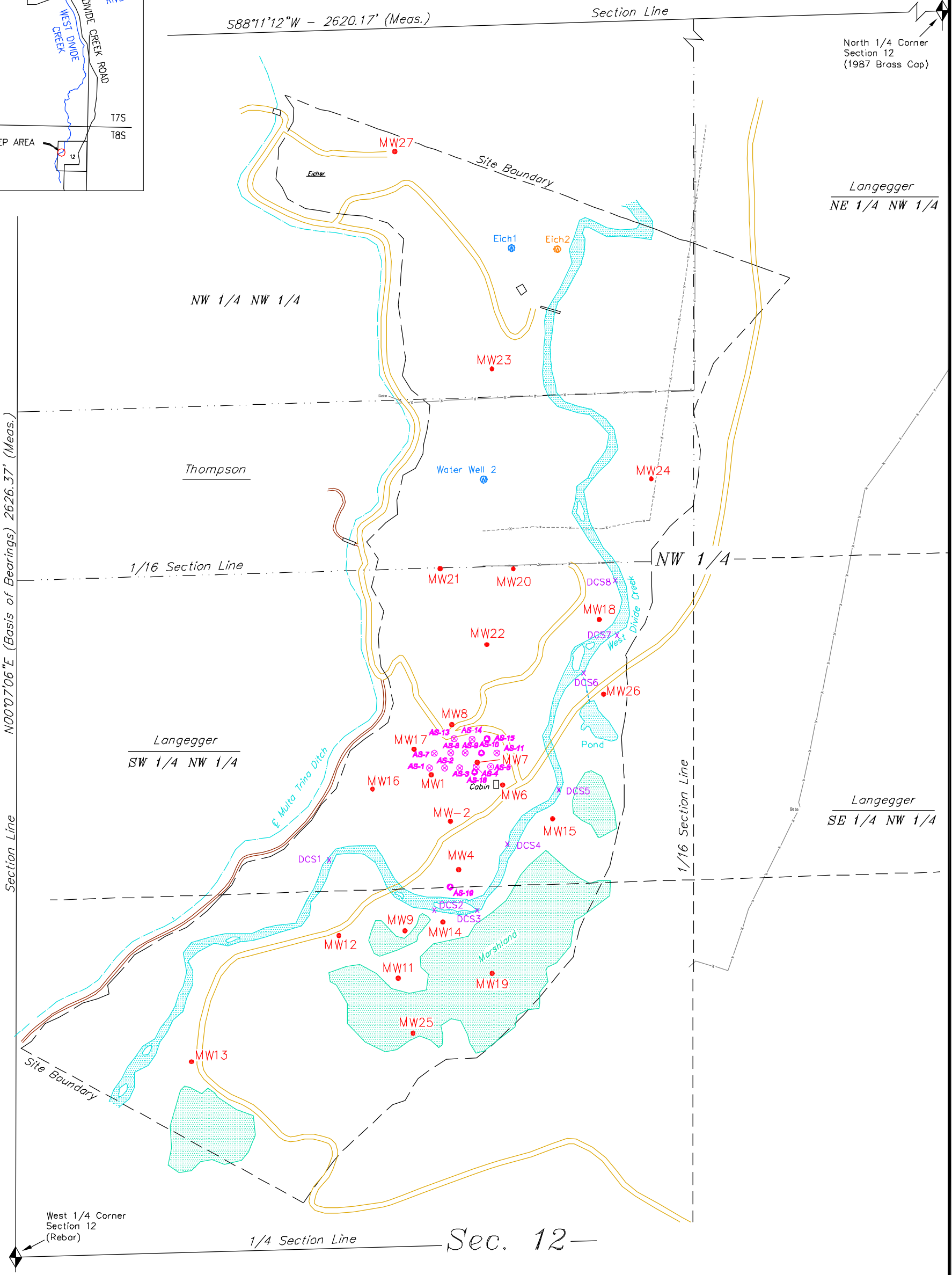
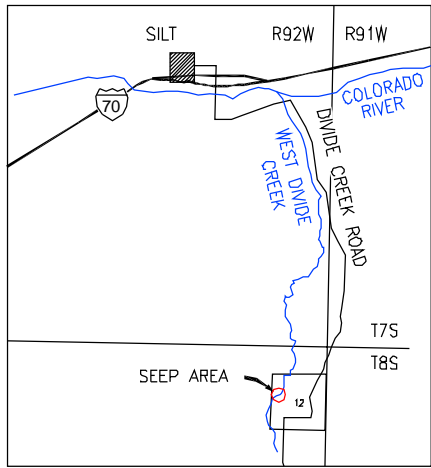
Blank cell - not analyzed/not collected

BTEX analyzed by EPA Method 8021

Total Dissolved Methane analyzed by EPA Method RSK175M

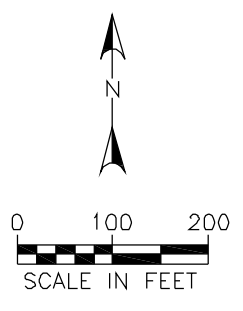
# FIGURES





**LEGEND**

- = SECTION CORNERS FOUND
- = TRAIL
- = ROAD
- = FENCE
- = OLD FENCE
- = PROPERTY LINE
- = DRAINAGE
- = DIVIDE CREEK SAMPLE LOCATION
- = MONITORING WELL LOCATION
- = AIR SPARGE WELL LOCATION
- = NESTED AIR SPARGE WELL LOCATION



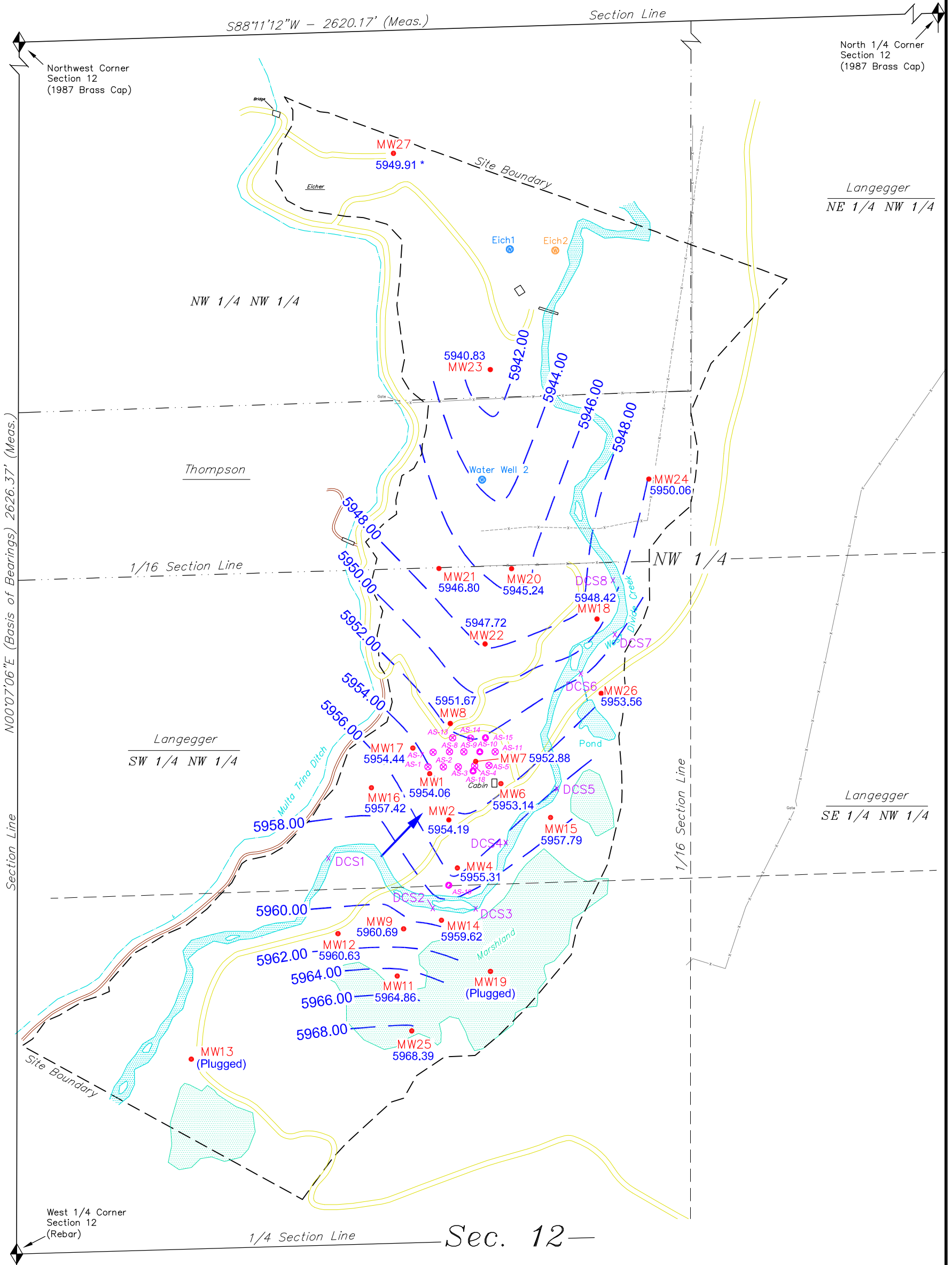
PROJECT NO:	008-2067
DRAWN BY:	FR
DATE:	3/10/10

**WEST DIVIDE CREEK SEEP AREA  
SITE LOCATION MAP**



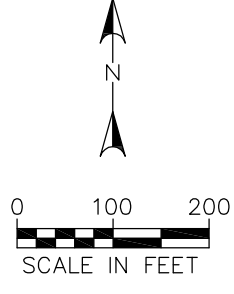
4690 Table Mountain Drive  
Suite 200  
Golden, CO 80403  
TEL 303.237.2072  
FAX 303.237.2659

**FIGURE**  
1



LEGEND

- ◆ = SECTION CORNERS FOUND
- = TRAIL
- = ROAD
- x— = FENCE
- - -x- - - = OLD FENCE
- x—x— = PROPERTY LINE
- x—x— = DRAINAGE
- X = DIVIDE CREEK SAMPLE
- = MONITORING WELL LOCATION
- ⊗ = AIR SPARGE WELL LOCATION
- ⊙ = NESTED AIR SPARGE WELL LOCATION
- 5950— = GROUNDWATER ELEVATION CONTOUR (FEET)
- 5950.33 = GROUNDWATER ELEVATION (FEET)
- = GROUNDWATER FLOW DIRECTION
- \* = DATA NOT USED IN CONTOURING



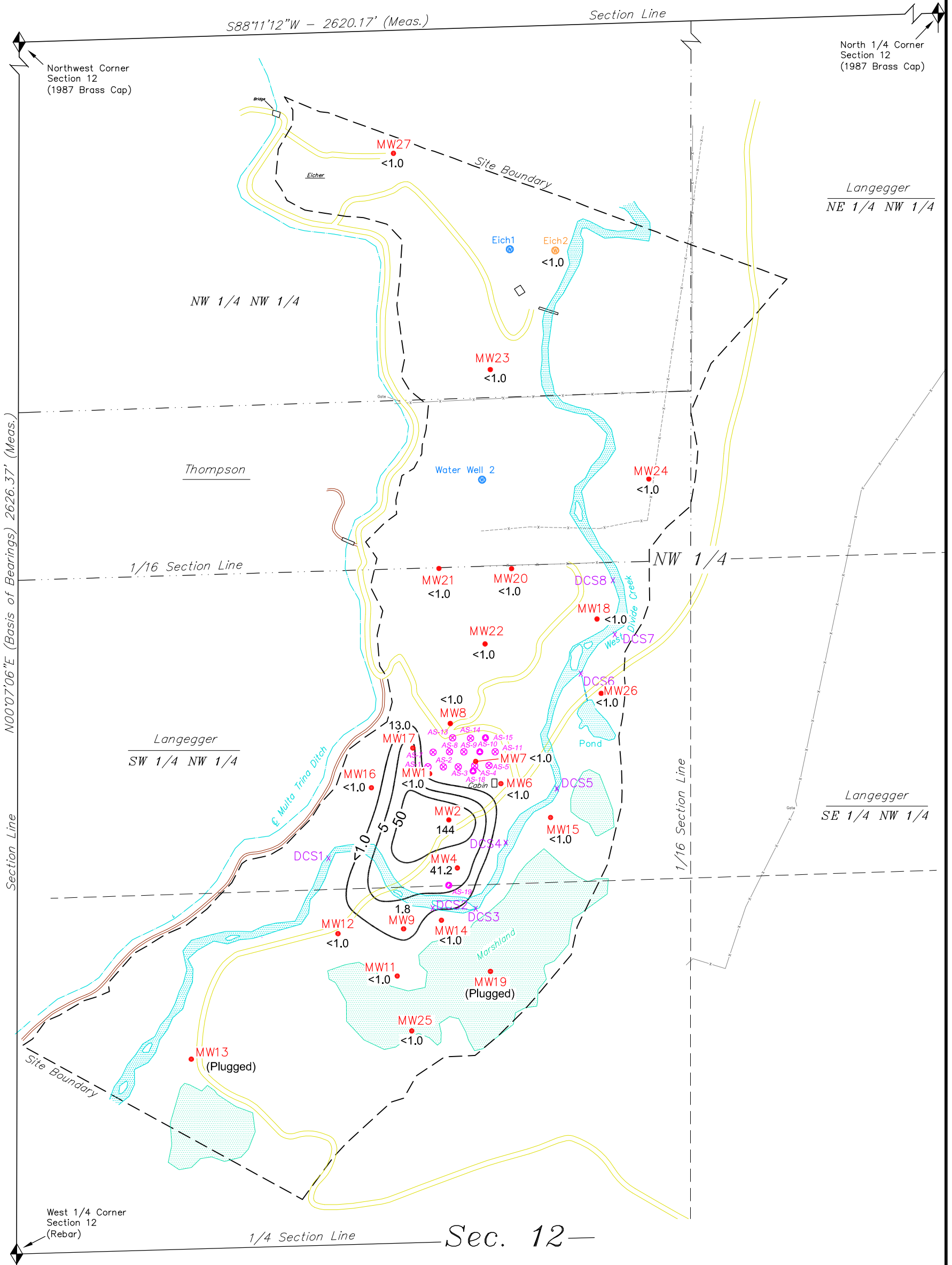
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 DRAWN BY: BLM  
 DATE: 9/7/10

WEST DIVIDE CREEK SEEP AREA GROUNDWATER ELEVATION MAP  
 JUNE 2010  
 GARFIELD COUNTY, COLORADO



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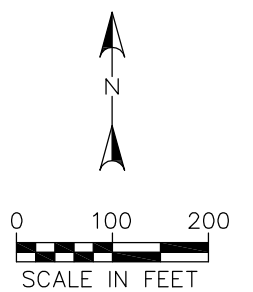
FIGURE  
 2



**LEGEND**

- = SECTION CORNERS FOUND
- = TRAIL
- = ROAD
- = FENCE
- = OLD FENCE
- = PROPERTY LINE
- = DRAINAGE
- = 100 = BENZENE CONCENTRATION CONTOUR IN  $\mu\text{g/L}$
- = 100 = BENZENE CONCENTRATION IN  $\mu\text{g/L}$
- = NS = NOT SAMPLED
- = DIVIDE CREEK SAMPLE LOCATION
- = MONITORING WELL LOCATION
- = AIR SPARGE WELL LOCATION
- = NESTED AIR SPARGE WELL LOCATION

**NOTE:**  
 GROUNDWATER SAMPLES WERE COLLECTED ON JUNE 28 AND JUNE 29, 2010. DUE TO A SUSPECTED LABORATORY ERROR, NINE MONITORING WELLS WERE RESAMPLED ON JULY 21, 2010.



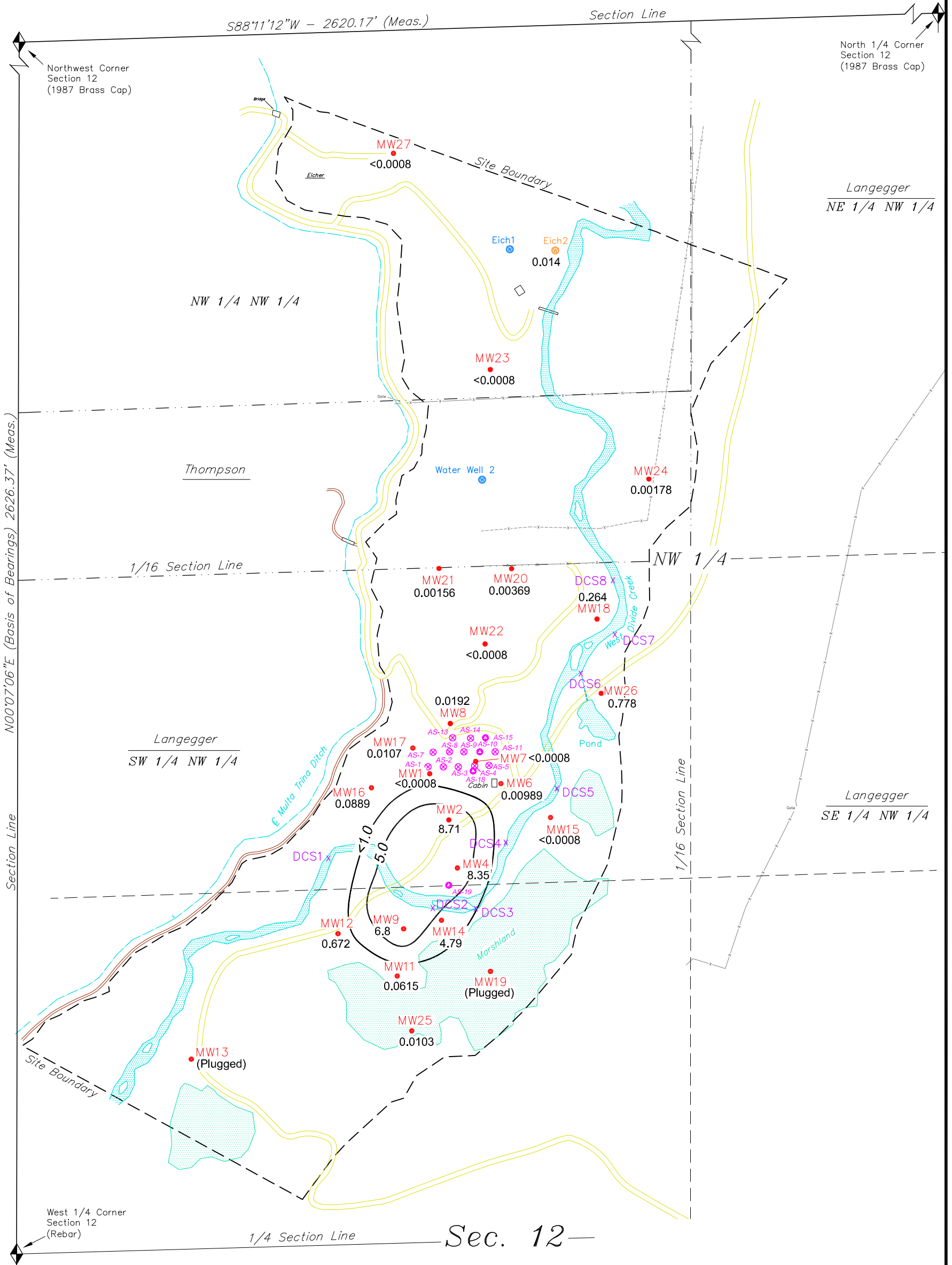
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**WEST DIVIDE CREEK SEEP AREA BENZENE CONCENTRATIONS  
 2ND QUARTER 2010  
 GARFIELD COUNTY, COLORADO**



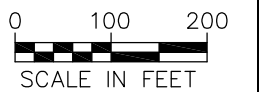
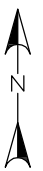
4690 Table Mountain Drive  
 Suite 200  
 Golden, CO 80403  
 TEL 303.237.2072  
 FAX 303.237.2659

**FIGURE**  
 3



LEGEND

- = SECTION CORNERS FOUND
- = TRAIL
- = ROAD
- = FENCE
- = OLD FENCE
- = PROPERTY LINE
- = DRAINAGE
- = 5.0 = THERMOGENIC & BIOGENIC METHANE CONCENTRATION CONTOUR IN mg/L
- = 5.7 = THERMOGENIC & BIOGENIC METHANE CONCENTRATION IN mg/L
- = NS = NOT SAMPLED
- = DIVIDE CREEK SAMPLE
- = MONITORING WELL LOCATION
- = AIR SPARGE WELL LOCATION
- = NESTED AIR SPARGE WELL LOCATION



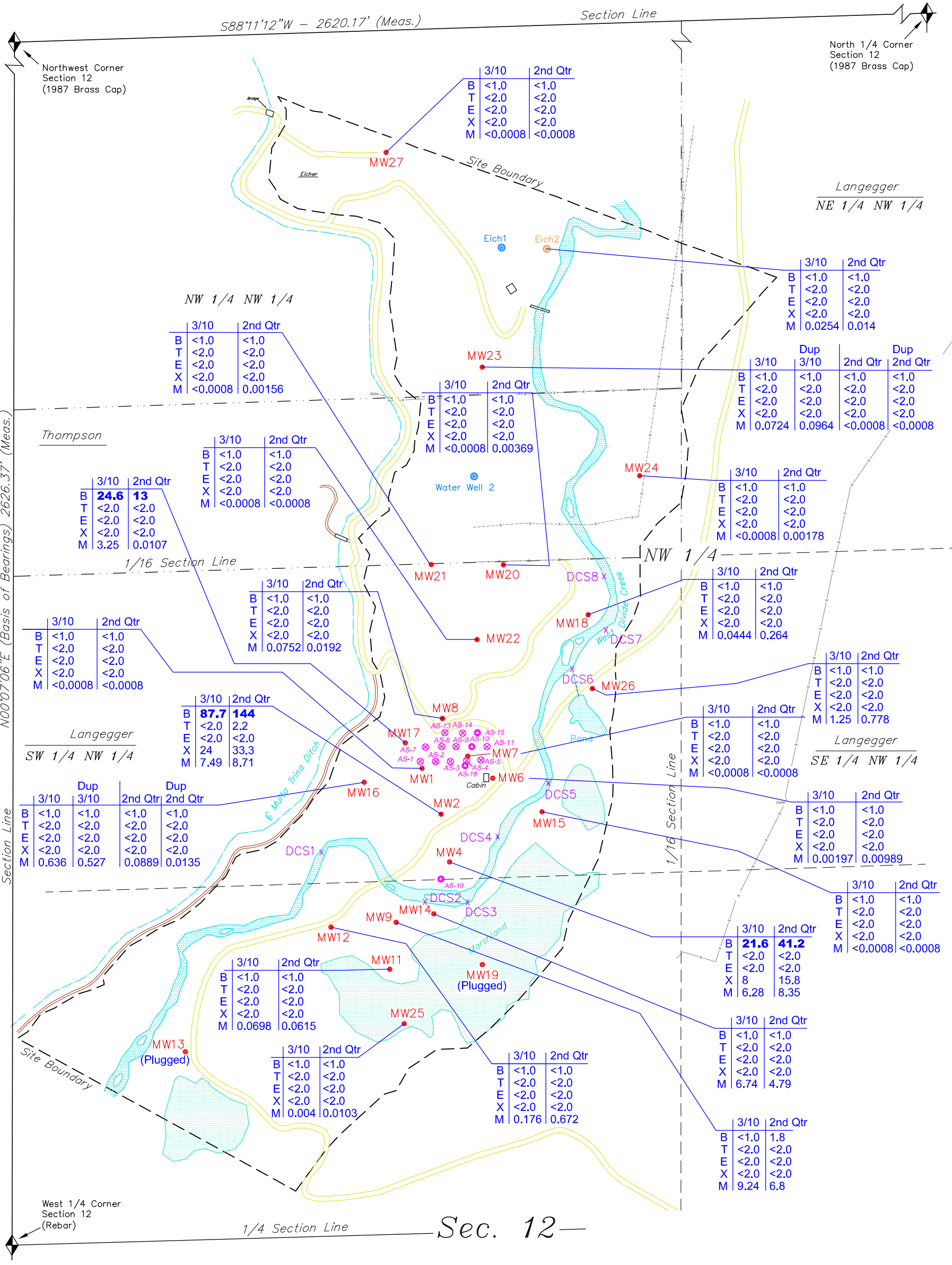
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DATE: 9/7/10

WEST DIVIDE CREEK SEEP AREA TOTAL DISSOLVED METHANE CONCENTRATIONS JUNE 2010  
GARFIELD COUNTY, COLORADO



4690 Table Mountain Drive  
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Golden, CO 80403  
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FAX 303.237.2659

FIGURE  
4



**LEGEND**

- = SECTION CORNERS FOUND
- = TRAIL
- = ROAD
- = FENCE
- = OLD FENCE
- = PROPERTY LINE
- = DRAINAGE

**CHEMICAL DATA**  
**B** = BENZENE (µg/l)  
**T** = TOLUENE (µg/l)  
**E** = ETHYLBENZENE (µg/l)  
**X** = XYLENES (µg/l)  
**M** = TOTAL METHANE (mg/L)

**NOTE:**  
 GROUNDWATER SAMPLES WERE COLLECTED ON JUNE 28 AND JUNE 29, 2010. DUE TO A SUSPECTED LABORATORY ERROR, NINE MONITORING WELLS WERE RESAMPLED ON JULY 21, 2010.

**SCALE IN FEET**

# **APPENDIX A**

**Field Data  
included as .pdf file on CD in back**

**Appendix A**  
 Field Data for March 2010  
 Encana, West Divide Creek Seep  
 Garfield County, Colorado

Date	SampleName	Temp_Field	SpCond_Field	DO_Field	pH_Field	TDS_Field	DO_Percent	Turbidity_Field	DTW
29-Jun-10	EICH2	13.06	1.550	2.04	7.54	3.9	19.6	106	-88.8
28-Jun-10	MW23	9.74	1.64	3.20	7.80	1.0	28.2	248	12.46
28-Jun-10	MW23D	9.74	1.64	3.20	7.80	1.0	28.2	248	12.46
28-Jun-10	MW27	13.32	1.018	2.13	7.88	0.7	20.4	41.6	6.31
21-Jul-10	MW27	17.19	0.978	1.37	9.04	0.6	17.1	97.3	-88.8
29-Jun-10	DCS1	15.4	0.700	6.83	8.54	0.5	68.4	95.8	-88.8
29-Jun-10	DCS2	15.52	0.700	7.47	8.57	0.5	74.9	68.5	-88.8
29-Jun-10	DCS3	15.60	0.700	7.26	8.58	0.5	73.2	42.5	-88.8
29-Jun-10	DCS4	16.09	0.697	7.20	8.60	0.5	73.4	30	-88.8
29-Jun-10	DCS5	16.45	0.696	7.56	8.63	0.5	76.9	102	-88.8
29-Jun-10	DCS6	18.38	0.682	6.18	8.38	0.4	79.0	595	-88.8
29-Jun-10	DCS7	18.63	0.681	6.07	8.45	0.4	78.6	744	-88.8
29-Jun-10	DCS8	19.10	0.678	6.20	8.42	0.4	82.8	90	-88.8
28-Jun-10	MW1	16.4	0.089	2.01	7.61	-88.8	-88.8	-88.8	4.73
21-Jul-10	MW1	12.92	1.54	1.01	7.27	1.0	9.6	32.9	-88.8
28-Jun-10	MW11	8.81	0.669	2.76	7.62	0.4	23.7	546	4.80
21-Jul-10	MW11	16.00	0.236	2.33	8.40	0.2	22.9	278	-88.8
28-Jun-10	MW12	10.27	0.987	2.32	7.48	0.6	20.4	178	2.97
28-Jun-10	MW14	9.40	0.775	3.31	7.65	0.5	28.8	5999	5.44
29-Jun-10	MW15	10.70	0.685	4.05	7.92	0.4	35.9	106	-88.8
28-Jun-10	MW16	16.8	0.504	1.78	8.06	-88.8	-88.8	-88.8	3.03
21-Jul-10	MW16	12.68	1.022	0.88	7.84	0.7	8.2	49.8	-88.8
28-Jun-10	MW16D	16.8	0.504	1.78	8.06	-88.8	-88.8	-88.8	3.03
21-Jul-10	MW16D	12.68	1.022	0.88	7.84	0.7	8.2	49.8	-88.8
28-Jun-10	MW17	14.3	0.072	2.31	8.82	-88.8	-88.8	-88.8	4.05
21-Jul-10	MW17	13.28	1.82	0.71	7.46	1.0	6.6	24.1	-88.8
29-Jun-10	MW18	13.30	0.741	2.06	7.96	0.5	23.5	106	-88.8
28-Jun-10	MW2	15.7	0.926	1.59	6.61	-88.8	-88.8	-88.8	5.09
21-Jul-10	MW2	15.14	0.877	1.25	7.02	0.6	11.3	17.0	-88.8
29-Jun-10	MW20	10.78	0.932	3.07	7.65	0.6	27.3	654	11.64
29-Jun-10	MW21	9.73	1.224	2.70	7.86	0.8	23.7	483	22.65
29-Jun-10	MW22	9.43	1.216	3.80	7.54	0.8	33.3	510	9.36
29-Jun-10	MW24	12.58	0.724	2.65	7.71	0.5	24.5	142	3.85
28-Jun-10	MW25	7.63	0.691	2.94	7.79	0.4	24.1	771	3.40
21-Jul-10	MW25	11.03	0.589	1.16	8.76	0.4	11.5	122	-88.8
28-Jun-10	MW26	15.10	0.644	1.19	6.51	-88.8	-88.8	-88.8	1.09
28-Jun-10	MW4	15.6	0.713	2.35	6.79	-88.8	-88.8	-88.8	8.10
21-Jul-10	MW4	15.25	0.835	0.99	7.69	0.5	9.5	114	-88.8
28-Jun-10	MW6	15.0	0.928	2.32	8.14	-88.8	-88.8	-88.8	6.80
28-Jun-10	MW7	15.3	0.869	2.63	6.55	-88.8	-88.8	-88.8	6.09
21-Jul-10	MW7	14.41	0.996	1.68	7.31	0.6	16.5	296	-88.8
28-Jun-10	MW8	13.93	0.968	1.78	8.52	-88.8	-88.8	-88.8	7.62
28-Jun-10	MW9	12.58	0.795	2.28	7.56	0.5	21.4	382	4.44

**Appendix A**  
 Field Data for March 2010  
 Encana, West Divide Creek Seep  
 Garfield County, Colorado

Date	SampleName	Sample Description	Sampler	SampleSource
29-Jun-10	EICH2	Domestic well; WQ: clear, no odor, no sheen, no effervescence	SH	Well
28-Jun-10	MW23	Divide Creek monitoring well #23; WQ: brown, no odor, no sheen, no effervescence	SH	Well
28-Jun-10	MW23D	Divide Creek monitoring well #23 duplicate; WQ: brown, no odor, no sheen, no effervescence	SH	Well
28-Jun-10	MW27	Divide Creek monitoring well #27; WQ: black, slight sulfur odor, no sheen, no effervescence	SH	Well
21-Jul-10	MW27	Divide Creek monitoring well #27; resample due to suspected laboratory error; WQ: clear, strong sulfur odor, no sheen, noeffervescence	SH	Well
29-Jun-10	DCS1	Divide Creek monitoring station 1	SH	Stream
29-Jun-10	DCS2	Divide Creek monitoring station 2	SH	Stream
29-Jun-10	DCS3	Divide Creek monitoring station 3	SH	Stream
29-Jun-10	DCS4	Divide Creek monitoring station 4	SH	Stream
29-Jun-10	DCS5	Divide Creek monitoring station 5	SH	Stream
29-Jun-10	DCS6	Divide Creek monitoring station 6	KK	Stream
29-Jun-10	DCS7	Divide Creek monitoring station 7	KK	Stream
29-Jun-10	DCS8	Divide Creek monitoring station 8	KK	Stream
28-Jun-10	MW1	Divide Creek monitoring well #1	BS	Well
21-Jul-10	MW1	Divide Creek monitoring well #1; resample due to suspected laboratory error; WQ: clearish, no odor, no sheen, no effervescence	JS	Well
28-Jun-10	MW11	Divide Creek monitoring well #11; WQ: brown, no odor, slight effervescence	SH	Well
21-Jul-10	MW11	Divide Creek monitoring well #11; resample due to suspected laboratory error; WQ: brown, sulfur odor	SH	Well
28-Jun-10	MW12	Divide Creek monitoring well #12; WQ: light brown, no odor	SH	Well
28-Jun-10	MW14	Divide Creek monitoring well #14; WQ: black, slight sulfur odor	SH	Well
29-Jun-10	MW15	Divide Creek monitoring well #15; WQ: clear, no odor, no sheen, no effervescence; Flooded	SH	Well
28-Jun-10	MW16	Divide Creek monitoring well #16	BS	Well
21-Jul-10	MW16	Divide Creek monitoring well #16; resample due to suspected laboratory error; WQ: clear/brown, slight sulfur odor, no sheen, no effervescence	JS	Well
28-Jun-10	MW16D	Divide Creek monitoring well #16 duplicate	BS	Well
21-Jul-10	MW16D	Divide Creek monitoring well #16 duplicate; resample due to suspected laboratory error; WQ: clear/brown, slight sulfur odor, no sheen, no effervescence	JS	Well
28-Jun-10	MW17	Divide Creek monitoring well #17	BS	Well
21-Jul-10	MW17	Divide Creek monitoring well #17; resample due to suspected laboratory error; WQ: brown/clear, slight sulfur odor, no sheen, no effervescence	JS	Well
29-Jun-10	MW18	Divide Creek monitoring well #18	KK	Well
28-Jun-10	MW2	Divide Creek monitoring well #2	BS	Well
21-Jul-10	MW2	Divide Creek monitoring well #2; resample due to suspected laboratory error; WQ: clear, no odor, no sheen, no effervescence	JS	Well
29-Jun-10	MW20	Divide Creek monitoring well #20; WQ: brown, no odor, no sheen, no effervescence	SH	Well
29-Jun-10	MW21	Divide Creek monitoring well #21; WQ: brown, slight sulfur odor, no sheen, no effervescence	SH	Well
29-Jun-10	MW22	Divide Creek monitoring well #22; WQ: brown, slight sulfur odor, no sheen, no effervescence	SH	Well
29-Jun-10	MW24	Divide Creek monitoring well #24	SH	Well
28-Jun-10	MW25	Divide Creek monitoring well #25; WQ: light brown, no odor	SH	Well
21-Jul-10	MW25	Divide Creek monitoring well #25; resample due to suspected laboratory error; WQ: brown, no odor, no sheen, no effervescence	SH	Well
28-Jun-10	MW26	Divide Creek monitoring well #26	BS	Well
28-Jun-10	MW4	Divide Creek monitoring well #4	BS	Well
21-Jul-10	MW4	Divide Creek monitoring well #4; resample due to suspected laboratory error; WQ: clear/brown, no odor, no sheen, no effervescence	JS	Well
28-Jun-10	MW6	Divide Creek monitoring well #6	BS	Well
28-Jun-10	MW7	Divide Creek monitoring well #7	BS	Well
21-Jul-10	MW7	Divide Creek monitoring well #7; resample due to suspected laboratory error; WQ: clear/brown, no odor, no sheen, no effervescence	JS	Well
28-Jun-10	MW8	Divide Creek monitoring well #8	BS	Well
28-Jun-10	MW9	Divide Creek monitoring well #9; WQ: gray/black, no odor	SH	Well



## **APPENDIX B**

**Historical Groundwater Results  
included as .pdf file on CD in back**

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft)	Groundwater Elevation (ft-msl)
MW-01	09-Jul-04	220	NA	NA	NA	11			
MW-01	22-Jul-04	470	NA	NA	NA	9.9		4.09	5954.70
MW-01	03-Aug-04	460	310	10	96	6		9.54	5949.25
MW-01	19-Aug-04	NS	NS	NS	NS	NS		9.96	5948.83
MW-01	15-Sep-04	330	130	8.1	53	8.6	6.9	10.32	5948.47
MW-01	13-Oct-04	190	31	5.3	18.3	7.4		9.87	5948.92
MW-01	09-Nov-04	88	<2	3.1	<2	5.3		9.70	5949.09
MW-01	14-Dec-04	35	<2	<2	<2	5.9		9.23	5949.56
MW-01	12-Jan-05	10	<2	<2	<2	4.7	3.5	8.63	5950.16
MW-01	09-Feb-05	14	<2	<2	<2	2.9	2.3	8.81	5949.98
MW-01	08-Mar-05	4.8	<2	<2	<2	2.6		8.96	5949.83
MW-01	12-Apr-05	<1	<2	<2	<2	0.38		5.73	5953.06
MW-01	10-May-05	<1	<2	<2	<2	0.38	0.3	5.19	5953.60
MW-01	08-Jun-05	<1	<2	<2	<2	<0.0008		3.03	5955.76
MW-01	12-Jul-05	<1	<2	<2	<2	<0.0008		4.13	5954.66
MW-01	09-Aug-05	<1	<2	<2	<2	0.11		5.36	5953.43
MW-01	12-Sep-05	<1	<2	<2	<2	0.068	0.0	6.18	5952.61
MW-01	11-Oct-05	<1	<2	<2	<2	0.17			
MW-01	08-Nov-05	<1	<2	<2	<2	0.12		6.47	5952.32
MW-01	08-Dec-05	<1	<2	<2	<2	0.086		6.72	5952.07
MW-01	11-Jan-06	<1	<2	<2	<2	0.055	0.0	6.31	5952.48
MW-01	15-Mar-06	<1	<2	<2	<2	0.0086		6.01	5952.78
MW-01	12-Apr-06	<1	<2	<2	<2	<0.0008		5.42	5953.37
MW-01	09-May-06	<1	<2	<2	<2	<0.0008		4.45	5954.34
MW-01	12-Jun-06	<1	<2	<2	<2	0.011			
MW-01	07-Sep-06	<1	<5	<2	<2	0.15		7.60	5951.19
MW-01	05-Dec-06	<1	<2	<2	<2	0.00085		6.68	5952.11
MW-01	13-Mar-07	<1	<2	<2	<2	0.0023		6.10	5952.69
MW-01	20-Jun-07	<1	<2	<2	<2	<0.0008			
MW-01	11-Sep-07	<0.5	<0.5	<0.5	<0.5	0.000144		7.95	5950.84
MW-01	11-Sep-07	<1	<2	<2	<2	0.001		7.95	5950.84
MW-01	18-Dec-07	<1	<2	<2	<2	0.0022		6.83	5951.96
MW-01	04-Mar-08	<1	<2	<2	<2	<0.0008		5.85	5952.94
MW-01	17-Jun-08	<1	<2	<2	<2	<0.0008		3.33	5955.46
MW-01	30-Sep-08	<1	4.1	<2	<2	<0.0008		7.50	5951.29
MW-01	09-Dec-08	<1	<2	<2	<2	0.18		6.65	5952.14
MW-01	17-Mar-09	<1	<2	<2	<2	0.0065		6.32	5952.47
MW-01	15-Jun-09	<1	<2	<2	<2	<0.0008		4.10	5954.69
MW-01	16-Sep-09	<1	<2	<2	<2	0.0022		7.24	5951.55
MW-01	15-Dec-09	<1	<2	<2	<2	0.019		6.60	5952.19
MW-01	29-Mar-10	<1	<2	<2	<2	<0.0008		5.66	5953.13
MW-01	28-Jun-10	<1	2.5	<2	<2	<0.0008		4.73	5954.06
MW-01 <sup>a</sup>	21-Jul-10	<1	<2	<2	<2				
MW-02	09-Jul-04	240	NA	NA	NA	12			
MW-02	22-Jul-04	240	NA	NA	NA	12		5.60	5953.68
MW-02	03-Aug-04	420	400	<2	96	4.4		9.10	5950.18
MW-02	19-Aug-04	NS	NS	NS	NS	NS		9.00	5950.28
MW-02	15-Sep-04	340	240	10	95	11	9.5	9.02	5950.26
MW-02	13-Oct-04	370	110	9	78	5.8		8.70	5950.58
MW-02	09-Nov-04	390	<2	<2	<2	3.3		8.70	5950.58
MW-02	13-Dec-04	270	46	8.2	56.4	3.8		8.54	5950.74
MW-02	12-Jan-05	370	4.5	6.5	27.1	6.9	6.5	8.47	5950.81
MW-02	09-Feb-05	420	<10	<10	<10	3	2.6	4.09	5955.19
MW-02	09-Feb-05	420	2.4	8.6	43.5	2.6	3.0	11.95	5947.33
MW-02	09-Feb-05	340	<5	6.7	33	0.65		4.09	5955.19
MW-02	08-Mar-05	280	<10	<10	<10	4.4		8.82	5950.46
MW-02	12-Apr-05	360	<2	<2	<2	6.8		5.01	5954.27

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft)	Groundwater Elevation (ft-msl)
MW-02	09-May-05	330	<10	<10	<10	5.9	5.4	4.49	5954.79
MW-02	08-Jun-05	98	<2	3.4	23.6	6.4		3.22	5956.06
MW-02	12-Jul-05	180	2.8	4.5	30.4	3.8		7.67	5951.61
MW-02	09-Aug-05	430	33	13	113	7.3		5.01	5954.27
MW-02	12-Sep-05	270	<10	<10	<10	4.9	4.3	5.31	5953.97
MW-02	11-Oct-05	350	<10	<10	<10	5.9			
MW-02	07-Nov-05	290	32	<10	<10	3.5			
MW-02	07-Dec-05	270	<10	<10	<10	5.1		5.12	5954.16
MW-02	07-Dec-05	290	35	8.1	49	8.4		5.12	5954.16
MW-02	07-Dec-05	290	<10	<10	<10	6.5		5.12	5954.16
MW-02	11-Jan-06	340	<2	8.8	62.5	9		5.13	5954.15
MW-02	11-Jan-06	174	<2	4.9	36.9	3.1		5.13	5954.15
MW-02	11-Jan-06	310	<2	8.5	63.9	8	6.8	5.13	5954.15
MW-02	14-Feb-06	219	<2	5.8	37.3	9.3		5.19	5954.09
MW-02	15-Mar-06	200	<2	4.8	26.8	0.013		4.98	5954.30
MW-02	12-Apr-06	210	<2	6.6	45.7	7.3		4.51	5954.77
MW-02	09-May-06	240	<2	7.2	53.6	4.1		4.05	5955.23
MW-02	12-Jun-06	280	<2	11	93	12			
MW-02	07-Sep-06	240	<25	<10	<10	7.1	5.7	9.05	5950.23
MW-02	05-Dec-06	260	<2	5.3	22.6	6.7	4.3	5.42	5953.86
MW-02	12-Mar-07	230	<2	5.8	37.8	7.8	6.1	5.20	5954.08
MW-02	12-Mar-07	250	<2	6.5	43.4	9.4		5.20	5954.08
MW-02	12-Mar-07	212	<2	8.05	51.43	0.0691		5.20	5954.08
MW-02	20-Jun-07	220	<2	5.3	36.1	6.1			
MW-02	20-Jun-07	190	NA	4.6	31.6	4.5			
MW-02	20-Jun-07	94	<0.25	5.5	43.49	0.979			
MW-02	12-Sep-07	260	<2	8.1	51.2	3.5	2.7	6.13	5953.15
MW-02	18-Dec-07	180	<2	4.3	29.8	7.4		5.42	5953.86
MW-02	03-Mar-08	120	<2	2.6	<2	5.8	3.6	4.91	5954.37
MW-02	03-Mar-08	186	<0.5	5.1	<0.5	1.86		4.91	5954.37
MW-02	17-Jun-08	230	<2	10	98	6.6	4.9	4.02	5955.26
MW-02	01-Oct-08	160	<2	4.6	27.8	4.7	3.5	6.40	5952.88
MW-02	10-Dec-08	140	<2	4	32	7.3	5.4	6.00	5953.28
MW-02	17-Mar-09	93	<2	<2	13	6.1	3.4	5.50	5953.78
MW-02	15-Jun-09	110	<2	<2	28.8	8.3	6.6	4.45	5954.83
MW-02	15-Jun-09	94	<2	<2	24.1	9.2	7.3	4.45	5954.83
MW-02	16-Sep-09	160	<2	2.5	20.1	7.5	5.7	9.00	5950.28
MW-02	15-Dec-09	110	<2	2.0	30.4	9.1	7.1	5.80	5953.48
MW-02	30-Mar-10	87.7	<2	<2	24.0	7.49	5.2	4.83	5954.45
MW-02	28-Jun-10	72	3.0	<2	24.9	8.71	6.4	5.09	5954.19
MW-02 <sup>a</sup>	21-Jul-10	144	2.2	<2	33.3				
MW-04	12-Jan-04	320	35	8.1	49	6.1			5963.41
MW-04	09-Jul-04	230	NA	NA	NA	11			
MW-04	22-Jul-04	440	NA	NA	NA	11		8.46	5954.95
MW-04	03-Aug-04	400	160	<2	87	6.7		8.60	5954.81
MW-04	15-Sep-04	240	59	6.7	60	27		8.41	5955.00
MW-04	15-Sep-04	320	76	9.5	80.5	9.2	7.4	8.41	5955.00
MW-04	15-Sep-04	330	76	9.1	77.1	8.6		8.41	5955.00
MW-04	14-Oct-04	210	<50	6.1	37	4.4		8.38	5955.03
MW-04	14-Oct-04	300	51	9	59	9.3		8.38	5955.03
MW-04	14-Oct-04	300	37	9	55.2	5.6		8.38	5955.03
MW-04	09-Nov-04	290	41	<2	<2	9.1		4.90	5958.51
MW-04	02-Dec-04	280	19	<10	<10	14			
MW-04	08-Dec-04	280	110	7.8	72	17			
MW-04	13-Dec-04	240	33	12	97	7.8		7.93	5955.48
MW-04	13-Dec-04	270	36	8.1	64.9	14		7.93	5955.48
MW-04	13-Dec-04	270	37	7.7	62.6	12		7.93	5955.48

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft)	Groundwater Elevation (ft-msl)
MW-04	12-Jan-05	350	68	11	71.9	14	11.9	7.40	5956.01
MW-04	12-Jan-05	360	40	11	62.3	14		7.40	5956.01
MW-04	09-Feb-05	280	57	8.5	52.7	10	8.5	8.02	5955.39
MW-04	08-Mar-05	350	160	<10	79	9.8		8.02	5955.39
MW-04	12-Apr-05	130	33	<2	<2	8.9		8.39	5955.02
MW-04	12-Apr-05	130	52	<2	<2	10		8.39	5955.02
MW-04	12-Apr-05	280	<1200	<120	NA	8.7		8.39	5955.02
MW-04	09-May-05	310	66	11	16	10	8.6	7.23	5956.18
MW-04	09-May-05	320	77	11	16	11		7.23	5956.18
MW-04	08-Jun-05	180	17	4.7	4.3	12		7.25	5956.16
MW-04	11-Jul-05	0.69	<1200	<120	NA	<1		7.83	5955.58
MW-04	11-Jul-05	170	40	3.3	38.7	7.8	6.4	7.83	5955.58
MW-04	11-Jul-05	180	32	3.8	34.9	6.1		7.83	5955.58
MW-04	09-Aug-05	270	41	<10	69	8.3		8.15	5955.26
MW-04	09-Aug-05	240	46	<10	65	8.5		8.15	5955.26
MW-04	09-Aug-05	170	29	2.2	62	2.7		8.15	5955.26
MW-04	12-Sep-05	260	7.6	8	74	8.8	7.1	8.22	5955.19
MW-04	11-Oct-05	220	5.1	6.8	66.4	7.3			
MW-04	08-Nov-05	300	<10	<10	96	8.2		8.03	5955.38
MW-04	07-Dec-05	230	<10	<10	<10	8.6		7.93	5955.48
MW-04	10-Jan-06	270	<2	8	73	8.5		7.98	5955.43
MW-04	10-Jan-06	97	<2	<2	37	8.3		7.98	5955.43
MW-04	10-Jan-06	270	<2	6.5	71	8.8	7.1	7.98	5955.43
MW-04	14-Feb-06	249	<2	9	73.6	8.8		7.98	5955.43
MW-04	15-Mar-06	260	<2	8.6	66.6	14		8.04	5955.37
MW-04	12-Apr-06	220	<2	8.6	49.9	9.3		7.10	5956.31
MW-04	09-May-06	150	2.5	6.3	40	3.7		6.98	5956.43
MW-04	12-Jun-06	220	<2	8.3	74	9.2			
MW-04	06-Sep-06	200	<2	7.3	68	10	8.2	8.41	5955.00
MW-04	05-Dec-06	200	<2	7	70.9	10	7.8	7.99	5955.42
MW-04	12-Mar-07	220	<2	7	67.2	9.8		7.85	5955.56
MW-04	12-Mar-07	200	NA	6	55.9	7.6		7.85	5955.56
MW-04	12-Mar-07	172	<0.25	6.73	69.28	0.0592		7.85	5955.56
MW-04	22-Jun-07	110	<2	<2	39.2	6.4			
MW-04	13-Sep-07	170	<2	4.8	57.9	5.6		8.52	5954.89
MW-04	18-Dec-07	170	<2	3.7	53.4	8.4		8.07	5955.34
MW-04	04-Mar-08	130	<2	3.3	31.6	8.5	6.4	7.70	5955.71
MW-04	17-Jun-08	85	2.3	<2	23	3.7	2.6	7.65	5955.76
MW-04	01-Oct-08	110	<2	<2	33.7	6.2	4.8	8.60	5954.81
MW-04	01-Oct-08	120	<2	<2	34.9	5		8.60	5954.81
MW-04	09-Dec-08	100	<2	<2	28.4	8.6	6.5	8.35	5955.06
MW-04	16-Mar-09	81	<2	<2	17.3	9.2	6.6	8.05	5955.36
MW-04	16-Mar-09	83	<2	<2	18.5	9.1	6.5	8.05	5955.36
MW-04	16-Mar-09	73	<1	<1	15.7	5.99		8.05	5955.36
MW-04	16-Jun-09	5.4	<2	<2	7.0	6.8	5.0	8.00	5955.41
MW-04	14-Jul-09	27	<2	2.2	21.6	10		8.09	5955.32
MW-04	16-Sep-09	100	<2	3.7	32.9	8.1	6.1	8.58	5954.83
MW-04	15-Dec-09	35	<2	<2	21.4	8.8		8.40	5955.01
MW-04	30-Mar-10	21.6	<2	<2	8.0	6.28	3.8	7.78	5955.63
MW-04	28-Jun-10	59.4	3	2.2	21.7	8.35	6.3	8.10	5955.31
MW-04 <sup>a</sup>	21-Jul-20	41.2	<2	<2	15.8				
MW-06	09-Jul-04	1.1	NA	NA	NA	0.011			
MW-06	22-Jul-04	0.023	NA	NA	NA	0.023		9.74	5950.20
MW-06	03-Aug-04	1.5	<2	<2	<2	0.083		9.89	5950.05
MW-06	15-Sep-04	<1	<2	<2	<2	0.38	0.4	9.67	5950.27
MW-06	14-Oct-04	<1	<2	<2	<2	0.14		9.48	5950.46
MW-06	10-Nov-04	<1	<2	<2	<2	0.057		9.60	5950.34

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft)	Groundwater Elevation (ft-msl)
MW-06	14-Dec-04	<1	<2	<2	<2	0.054		9.24	5950.70
MW-06	14-Dec-04	<1	<2	<2	<2	0.4		9.24	5950.70
MW-06	14-Dec-04	<0.5	<5	<0.5	NA	0.071		9.24	5950.70
MW-06	13-Jan-05	<1	<2	<2	<2	0.056	0.0	8.87	5951.07
MW-06	09-Feb-05	<1	<2	<2	<2	0.023	0.0	9.06	5950.88
MW-06	08-Mar-05	3.1	<2	<2	<2	0.051		9.15	5950.79
MW-06	12-Apr-05	<b>6.5</b>	<2	<2	<2	0.092		6.59	5953.35
MW-06	10-May-05	<1	<2	<2	<2	0.18	0.2	5.82	5954.12
MW-06	08-Jun-05	1.3	<2	<2	<2	0.18		5.55	5954.39
MW-06	08-Jun-05	2.5	<2	<2	<2	0.22		5.55	5954.39
MW-06	08-Jun-05	2.2	<5	<0.5	NA	0.024		5.55	5954.39
MW-06	12-Jul-05	<1	<2	<2	<2	0.15			
MW-06	09-Aug-05	<1	<2	<2	<2	0.24		7.72	5952.22
MW-06	12-Sep-05	1.9	<5	<0.5	NA	<0.01		6.81	5953.13
MW-06	12-Sep-05	2	<2	<2	<2	0.12	0.0	6.81	5953.13
MW-06	12-Sep-05	1.9	<2	<2	<2	0.16		6.81	5953.13
MW-06	11-Oct-05	4.3	<2	<2	<2	4			
MW-06	08-Nov-05	3.7	<2	<2	<2	0.17			
MW-06	08-Nov-05	3.6	<2	<2	<2	0.17			
MW-06	08-Nov-05	2.1	<5	<0.5	NA	0.41			
MW-06	07-Dec-05	1.6	<2	<2	<2	0.13		6.88	5953.06
MW-06	11-Jan-06	<1	<2	<2	<2	0.14	0.1	6.94	5953.00
MW-06	14-Feb-06	0.6	<0.5	<0.5	<0.5	0.128		6.91	5953.03
MW-06	14-Feb-06	<0.5	<1	<1	<1	0.077		6.91	5953.03
MW-06	14-Feb-06	<0.5	<1	<1	<1	0.15		6.91	5953.03
MW-06	15-Mar-06	<1	<2	<2	<2	0.092		6.89	5953.05
MW-06	12-Apr-06	1.1	<2	<2	<2	0.046		6.15	5953.79
MW-06	12-Apr-06	1	NA	NA	NA	0.034		6.15	5953.79
MW-06	12-Apr-06	1.12	<0.25	<0.25	<0.25	0.125		6.15	5953.79
MW-06	09-May-06	<1	<2	<2	<2	0.029		5.89	5954.05
MW-06	12-Jun-06	<1	<2	<2	<2	0.0026			
MW-06	07-Sep-06	<0.25	<0.25	<0.25	<0.25	0.00523		7.53	5952.41
MW-06	07-Sep-06	<1	<5	<2	<2	0.038		7.53	5952.41
MW-06	07-Sep-06	<1	NA	<2	<2	0.031		7.53	5952.41
MW-06	05-Dec-06	<1	<2	<2	<2	<0.0008		7.04	5952.90
MW-06	13-Mar-07	<1	<2	<2	<2	0.0021		6.85	5953.09
MW-06	20-Jun-07	<1	<2	<2	<2	<0.0008			
MW-06	12-Sep-07	<1	<2	<2	<2	<0.0008		7.95	5951.99
MW-06	17-Dec-07	<0.5	<5	<0.5	<2	0.00846		7.15	5952.79
MW-06	17-Dec-07	<1	<2	<2	<2	0.0081		7.15	5952.79
MW-06	17-Dec-07	<1	<2	<2	<2	0.008		7.15	5952.79
MW-06	03-Mar-08	<1	<2	<2	<2	0.0015		6.75	5953.19
MW-06	17-Jun-08	<1	<2	<2	<2	0.0031		6.20	5953.74
MW-06	30-Sep-08	<1	<2	<2	<2	<0.008		7.60	5952.34
MW-06	30-Sep-08	<1	<2	<2	<2	<0.008		7.60	5952.34
MW-06	09-Dec-08	<1	<2	<2	<2	0.0092	<0.0008	7.25	5952.69
MW-06	16-Mar-09	<1	<2	<2	<2	<0.0008		7.00	5952.94
MW-06	15-Jun-09	<1	<2	<2	<2	0.0071		6.60	5953.34
MW-06	16-Sep-09	<1	<2	<2	<2	0.0014		7.45	5952.49
MW-06	15-Dec-09	<1	<2	<2	<2	0.0051		12.00	5947.94
MW-06	29-Mar-10	<1	<2	<2	<2	0.00197		6.91	5953.03
MW-06	28-Jun-10	<1	<2	<2	<2	0.00989		6.80	5953.14
MW-07	09-Jul-04	<b>200</b>	NA	NA	NA	0.67			5958.97
MW-07	22-Jul-04	<b>110</b>	NA	NA	NA	0.53		10.34	5948.63
MW-07	03-Aug-04	<b>32</b>	<2	<2	<2	0.73		10.46	5948.51
MW-07	15-Sep-04	<b>56</b>	<2	<2	<2	6		11.11	5947.86
MW-07	14-Oct-04	<b>32</b>	<2	<2	<2	0.78		10.70	5948.27

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft)	Groundwater Elevation (ft-msl)
MW-07	10-Nov-04	16	<2	<2	<2	0.65		10.70	5948.27
MW-07	19-Nov-04	19	<2	<2	<2	0.49			
MW-07	23-Nov-04	17	<2	<2	<2	0.67			
MW-07	07-Dec-04	<1	<2	<2	<2	0.04			
MW-07	14-Dec-04	20	<2	<2	<2	0.55		10.24	5948.73
MW-07	13-Jan-05	16	<2	<2	<2	0.53		9.89	5949.08
MW-07	09-Feb-05	5.7	<2	<2	<2	0.47		9.91	5949.06
MW-07	08-Mar-05	4.5	<2	<2	<2	0.58		10.06	5948.91
MW-07	20-Apr-05	<1	<2	<2	<2	<0.0008			
MW-07	10-May-05	<1	<2	<2	<2	<0.0008		6.22	5952.75
MW-07	10-May-05	<1	<2	<2	<2	<0.0008		6.22	5952.75
MW-07	10-May-05	<0.5	<5	<0.5	NA	0.031		6.22	5952.75
MW-07	08-Jun-05	<1	<2	<2	<2	<0.0008		4.47	5954.50
MW-07	12-Jul-05	<1	<2	<2	<2	<0.0008			
MW-07	09-Aug-05	<1	<2	<2	<2	<0.0008		6.13	5952.84
MW-07	12-Sep-05	<1	<2	<2	<2	0.0015		6.62	5952.35
MW-07	11-Oct-05	<1	<2	<2	<2	0.0075			
MW-07	11-Oct-05	<1	<2	<2	<2	0.026			
MW-07	11-Oct-05	<0.5	<5	<0.5	NA	<0.01			
MW-07	08-Nov-05	<1	<2	<2	<2	0.0059			
MW-07	08-Dec-05	<1	<2	<2	<2	0.017		6.92	5952.05
MW-07	11-Jan-06	<1	<2	<2	<2	0.014		6.95	5952.02
MW-07	14-Feb-06	<0.5	<1	<0.5	<1	<0.002		9.08	5949.89
MW-07	15-Mar-06	<1	<2	<2	<2	10		6.83	5952.14
MW-07	12-Apr-06	<1	<2	<2	<2	0.00092		6.23	5952.74
MW-07	09-May-06	<1	<2	<2	<2	0.036		5.67	5953.30
MW-07	12-Jun-06	<1	<2	<2	<2	0.0037			
MW-07	21-Jul-06	<1	<2	<2	<2	<0.0008			
MW-07	28-Jul-06	<1	<2	<2	<2	0.0012			
MW-07	04-Aug-06	<1	<2	<2	<2	<0.0008			
MW-07	11-Aug-06	<1	<2	<2	<2	<0.0008			
MW-07	16-Aug-06	<1	<2	<2	<2	0.0041		17.45	5941.52
MW-07	24-Aug-06	<1	<2	<2	<2	0.00092		7.72	5951.25
MW-07	31-Aug-06	<1	<2	<2	<2	0.0014		7.84	5951.13
MW-07	07-Sep-06	<1	<2	<2	<2	0.047		8.22	5950.75
MW-07	07-Sep-06	<0.25	<0.25	<0.25	<0.25	0.00163		8.22	5950.75
MW-07	13-Sep-06	<1	<2	<2	<2	0.0024		7.98	5950.99
MW-07	21-Sep-06	<0.25	<0.25	<0.25	<0.25	0.000762		7.93	5951.04
MW-07	21-Sep-06	<1	<2	<2	<2	0.002		7.93	5951.04
MW-07	27-Sep-06	<1	<2	<2	<2	0.004		7.82	5951.15
MW-07	06-Oct-06	<1	<2	<2	<2	<0.0008		7.88	5951.09
MW-07	12-Oct-06	<1	<2	<2	<2	0.0025		7.71	5951.26
MW-07	19-Oct-06	<1	<2	<2	<2	<0.0008		7.73	5951.24
MW-07	25-Oct-06	<1	<2	<2	<2	0.00082		7.62	5951.35
MW-07	01-Nov-06	<1	<2	<2	<2	0.0011		7.63	5951.34
MW-07	17-Nov-06	<1	<2	<2	<2	<0.0008		7.42	5951.55
MW-07	05-Dec-06	<1	<2	<2	<2	0.0011		7.37	5951.60
MW-07	03-Jan-07	<1	<2	<2	<2	<0.0008			
MW-07	17-Jan-07	<1	<2	<2	<2	<0.0008			
MW-07	05-Feb-07	<1	<2	<2	<2	<0.0008			
MW-07	22-Feb-07	<1	<2	<2	<2	0.0016		6.92	5952.05
MW-07	07-Mar-07	<1	<2	<2	<2	0.00094		6.75	5952.22
MW-07	13-Mar-07	<1	<2	<2	<2	0.0079		6.80	5952.17
MW-07	26-Mar-07	<1	<2	<2	<2	<0.0008			
MW-07	11-Apr-07	<1	<2	<2	<2	0.001			
MW-07	25-Apr-07	<0.5	<5	<0.5	<2	0.0016			
MW-07	08-May-07	<0.5	<5	<0.5	<2	<0.01			
MW-07	20-Jun-07	<0.25	<0.25	<0.25	<0.25	-88.8			

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft)	Groundwater Elevation (ft-msl)
MW-07	20-Jun-07	<1	<2	<2	<2	<0.0008			
MW-07	20-Jun-07	<1	<2	<2	<2	<0.0008			
MW-07	12-Sep-07	<1	<2	<2	<2	<0.0008		8.21	5950.76
MW-07	17-Dec-07	<1	<2	<2	<2	<0.0008		5.72	5953.25
MW-07	03-Mar-08	<1	<2	<2	<2	<0.0008		6.84	5952.13
MW-07	17-Jun-08	<1	<2	<2	<2	<0.0008		4.53	5954.44
MW-07	09-Dec-08	<1	<2	<2	<2	0.0032		7.60	5951.37
MW-07	16-Mar-09	<1	<2	<2	<2	<0.0008		6.95	5952.02
MW-07	15-Jun-09	<1	<2	<2	<2	<0.0008		5.72	5953.25
MW-07	16-Sep-09	<1	<2	<2	<2	0.0028		7.92	5951.05
MW-07	15-Dec-09	<1	<2	<2	<2	<0.0008		7.60	5951.37
MW-07	29-Mar-10	<1	<2	<2	<2	<0.0008		7.50	5951.47
MW-07	28-Jun-10	<1	2.7	<2	<2	<0.0008		6.09	5952.88
MW-07 <sup>a</sup>	21-Jul-10	<1	<2	<2	<2				
MW-08	09-Jul-04	65	NA	NA	NA	3.4			
MW-08	22-Jul-04	210	NA	NA	NA	2.9		12.45	5946.84
MW-08	03-Aug-04	250	<2	<2	<2	2.8		11.98	5947.31
MW-08	15-Sep-04	200	<2	<2	<2	4.1		13.54	5945.75
MW-08	14-Oct-04	140	<2	<2	<3	3.1		13.18	5946.11
MW-08	10-Nov-04	120	<5	<0.5	NA	3.1		12.80	5946.49
MW-08	10-Nov-04	150	<2	<2	<2	6.5		12.80	5946.49
MW-08	10-Nov-04	140	<2	<2	<2	7.2		12.80	5946.49
MW-08	14-Dec-04	140	<2	<2	<2	7.4		12.00	5947.29
MW-08	13-Jan-05	100	<2	<2	<2	5.7		12.12	5947.17
MW-08	09-Feb-05	58	<2	<2	<2	3.5		11.79	5947.50
MW-08	08-Mar-05	42	<2	<2	<2	3.3		11.86	5947.43
MW-08	12-Apr-05	30	<2	<2	<2	3.2		8.64	5950.65
MW-08	10-May-05	4.8	<2	<2	<2	0.82		7.99	5951.30
MW-08	09-Jun-05	1.8	<2	<2	<2	0.23		6.18	5953.11
MW-08	12-Jul-05	<1	<2	<2	<2	0.12		7.92	5951.37
MW-08	12-Jul-05	120	<5	<0.5	NA	3.1		7.92	5951.37
MW-08	12-Jul-05	<1	<2	<2	<2	0.043		7.92	5951.37
MW-08	09-Aug-05	<1	<2	<2	<2	0.045		8.15	5951.14
MW-08	12-Sep-05	<1	<2	<2	<2	0.22		9.07	5950.22
MW-08	12-Oct-05	<0.5	<5	<0.5	NA	<0.01			
MW-08	12-Oct-05	<1	<2	<2	<2	0.25			
MW-08	12-Oct-05	<1	<2	<2	<3	0.19			
MW-08	08-Nov-05	<1	<2	<2	<4	0.11			
MW-08	08-Dec-05	<1	<2	<2	<5	0.08		8.86	5950.43
MW-08	11-Jan-06	<1	<2	<2	<6	0.13		8.99	5950.30
MW-08	14-Feb-06	<0.5	<1	<1	<1	0.206		9.02	5950.27
MW-08	15-Mar-06	<1	<2	<2	<2	0.23		8.89	5950.40
MW-08	12-Apr-06	<1	<2	<2	<2	0.11		8.34	5950.95
MW-08	11-May-06	<0.5	<0.5	<0.5	<0.5	0.0649		7.50	5951.79
MW-08	11-May-06	<1	<2	<2	<2	0.032		7.50	5951.79
MW-08	11-May-06	<1	<2	<2	<2	0.017		7.50	5951.79
MW-08	12-Jun-06	<1	<2	<2	<2	0.13			
MW-08	21-Jul-06	<1	<2	<2	<2	0.0024			
MW-08	28-Jul-06	<1	<2	<2	<2	0.14			
MW-08	04-Aug-06	<1	<2	<2	<2	0.18			
MW-08	11-Aug-06	<1	<2	<2	<2	0.1			
MW-08	16-Aug-06	<1	<2	<2	<2	0.2		25.03	5934.26
MW-08	24-Aug-06	<1	<2	<2	<2	0.34		9.89	5949.40
MW-08	31-Aug-06	<1	<2	<2	<2	0.7		10.01	5949.28
MW-08	07-Sep-06	<1	<2	<2	<2	0.47		10.11	5949.18
MW-08	13-Sep-06	<1	<2	<2	<2	0.74		10.16	5949.13
MW-08	21-Sep-06	<1	<2	<2	<2	1.1		10.11	5949.18

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft)	Groundwater Elevation (ft-msl)
MW-08	27-Sep-06	<1	<2	<2	<2	0.58		10.04	5949.25
MW-08	06-Oct-06	<1	<2	<2	<2	0.45		10.25	5949.04
MW-08	12-Oct-06	<1	<2	<2	<2	0.39		9.84	5949.45
MW-08	19-Oct-06	<1	<2	<2	<2	0.42		9.75	5949.54
MW-08	25-Oct-06	<1	<2	<2	<2	0.34		10.00	5949.29
MW-08	01-Nov-06	<1	<2	<2	<2	0.28		9.49	5949.80
MW-08	17-Nov-06	<1	<2	<2	<2	0.0043		9.32	5949.97
MW-08	05-Dec-06	<1	<2	<2	<2	0.045		9.42	5949.87
MW-08	03-Jan-07	<1	<2	<2	<2	0.00092			
MW-08	17-Jan-07	<1	<2	<2	<2	0.0034			
MW-08	05-Feb-07	<1	<2	<2	<2	0.12			
MW-08	22-Feb-07	<1	<2	<2	<2	0.22		9.12	5950.17
MW-08	07-Mar-07	<1	<2	<2	<2	0.48		9.06	5950.23
MW-08	13-Mar-07	<1	<2	<2	<2	0.18		9.11	5950.18
MW-08	26-Mar-07	<1	<2	<2	<2	<0.0008			
MW-08	11-Apr-07	<1	<2	<2	<2	0.085			
MW-08	25-Apr-07	<0.5	<5	<0.5	<2	0.0019			
MW-08	08-May-07	<0.5	<5	<0.5	<2	0.06			
MW-08	20-Jun-07	<1	<2	<2	<2	<0.0008			
MW-08	12-Sep-07	<1	<2	<2	<2	<0.0008		10.53	5948.76
MW-08	17-Dec-07	<1	<2	<2	<2	0.13		9.62	5949.67
MW-08	03-Mar-08	<1	<2	<2	<2	0.14		8.92	5950.37
MW-08	17-Jun-08	<1	<2	<2	<2	0.001		5.70	5953.59
MW-08	30-Sep-08	<1	<2	<2	<2	<0.008		10.10	5949.19
MW-08	09-Dec-08	<1	<2	<2	<2	0.11		9.00	5950.29
MW-08	16-Mar-09	<1	<2	<2	<2	0.22		9.00	5950.29
MW-08	15-Jun-09	<1	<2	<2	<2	0.015		6.99	5952.30
MW-08	16-Sep-09	<1	<2	<2	<2	<0.0008		10.05	5949.24
MW-08	15-Dec-09	<1	<2	<2	<2	0.083		9.40	5949.89
MW-08	29-Mar-10	<1	<2	<2	<2	0.0752		8.96	5950.33
MW-08	28-Jun-10	<1	<2	<2	<2	0.0192		7.62	5951.67
MW-09	09-Jul-04	<b>120</b>	NA	NA	NA	11			
MW-09	22-Jul-04	<b>130</b>	NA	NA	NA	10		4.88	5960.25
MW-09	03-Aug-04	<b>150</b>	50	2.8	21.3	9.5		4.85	5960.28
MW-09	15-Sep-04	<b>210</b>	140	6.2	59	11	9.0	4.61	5960.52
MW-09	13-Oct-04	<b>280</b>	230	9.8	96	9.9		4.15	5960.98
MW-09	09-Nov-04	<b>320</b>	170	11	104	9		4.05	5961.08
MW-09	09-Nov-04	<b>280</b>	160	9.8	100	14		4.05	5961.08
MW-09	09-Nov-04	<b>310</b>	160	10	98	10		4.05	5961.08
MW-09	13-Dec-04	<b>350</b>	130	13	127	14		4.06	5961.07
MW-09	12-Jan-05	<b>290</b>	110	12	113	16	13.3	4.18	5960.95
MW-09	09-Feb-05	<b>260</b>	48	<10	86	9.4	8.5	4.53	5960.60
MW-09	08-Mar-05	<b>210</b>	22	<10	<10	11		4.65	5960.48
MW-09	12-Apr-05	<b>210</b>	23	<2	<2	11		4.63	5960.50
MW-09	09-May-05	<b>210</b>	32	9.4	81	12	10.3	4.25	5960.88
MW-09	08-Jun-05	<b>210</b>	39	<2	<2	12		4.25	5960.88
MW-09	11-Jul-05	<b>160</b>	18	5.1	50.5	9.3	7.8	4.58	5960.55
MW-09	08-Aug-05	<b>120</b>	12	<10	<10	7.8		4.52	5960.61
MW-09	12-Sep-05	<b>78</b>	3.6	3	31.4	9.7	7.6	4.49	5960.64
MW-09	11-Oct-05	<b>55</b>	5.5	2.4	24.8	8.7		4.32	5960.81
MW-09	07-Nov-05	<b>35</b>	<2	<2	<2	7.6			
MW-09	08-Dec-05	<b>38</b>	<2	<2	<2	7.7		4.51	5960.62
MW-09	10-Jan-06	<b>40</b>	<2	<2	<2	12	9.9	4.61	5960.52
MW-09	14-Feb-06	<b>34.4</b>	<1	1.2	12.4	6.3		4.63	5960.50
MW-09	15-Mar-06	<b>30</b>	<2	<2	<2	14		5.02	5960.11
MW-09	11-Apr-06	<b>21</b>	<2	<2	<2	9		4.39	5960.74
MW-09	10-May-06	<b>16</b>	<2	<2	<2	9.8	7.8	4.28	5960.85



## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft)	Groundwater Elevation (ft-msl)
MW-09	12-Jun-06	8.6	<2	<2	<2	10			
MW-09	06-Sep-06	8.9	<2	<2	<2	9.3	7.1	4.41	5960.72
MW-09	06-Dec-06	7.2	<2	<2	<2	10	7.6	4.08	5961.05
MW-09	13-Mar-07	7.5	<2	<2	<2	8.3	6.5	4.45	5960.68
MW-09	30-Apr-07	4.8	<5	<0.5	<2	-88.8			
MW-09	21-Jun-07	<1	<2	<2	<2	5.1			
MW-09	13-Sep-07	4.2	<2	<2	<2	5.4		4.49	5960.64
MW-09	18-Dec-07	2.7	<2	<2	<2	7.1		3.82	5961.31
MW-09	05-Mar-08	1	<2	<2	<2	7.2	5.0	4.05	5961.08
MW-09	17-Jun-08	2.2	<2	<2	<2	6.2	4.2	4.39	5960.74
MW-09	30-Sep-08	<1	<2	<2	<2	5.0	3.5	4.20	5960.93
MW-09	09-Dec-08	1.1	<2	<2	<2	8.6		4.46	5960.67
MW-09	17-Mar-09	2.3	<2	<2	<2	8.1	5.5	4.52	5960.61
MW-09	16-Jun-09	1.6	<2	<2	<2	7.2	5.0	4.35	5960.78
MW-09	14-Jul-09	2.5	<2	<2	<2	8.2		4.31	5960.82
MW-09	16-Sep-09	1.3	<2	<2	<2	6.6	4.4	4.38	5960.75
MW-09	15-Dec-09	2	<2	<2	<2	9.2	6.4	4.37	5960.76
MW-09	29-Mar-10	<1	<2	<2	<2	9.24	6.4	4.53	5960.60
MW-09	28-Jun-10	1.8	<2	<2	<2	6.8	4.3	4.44	5960.69
MW-11	09-Jul-04	2	NA	NA	NA	0.16			
MW-11	22-Jul-04	<1	NA	NA	NA	0.25		4.50	5965.16
MW-11	03-Aug-04	<1	<2	<2	<2	0.23		4.49	5965.17
MW-11	15-Sep-04	<1	<2	<2	<2	0.12		4.29	5965.37
MW-11	13-Oct-04	<1	<2	<2	<2	0.017		4.10	5965.56
MW-11	09-Nov-04	<1	<2	<2	<2	0.14		4.10	5965.56
MW-11	12-Jan-05	<1	<2	<2	<2	0.18		3.98	5965.68
MW-11	09-Feb-05	<1	<2	<2	<2	0.12		4.13	5965.53
MW-11	08-Mar-05	<1	<2	<2	<2	0.11		4.45	5965.21
MW-11	12-Apr-05	<1	<2	<2	<2	0.14		4.21	5965.45
MW-11	09-May-05	<1	<2	<2	<2	0.13		3.94	5965.72
MW-11	08-Jun-05	<1	<2	<2	<2	0.13		3.85	5965.81
MW-11	11-Jul-05	<1	<2	<2	<2	0.1		5.25	5964.41
MW-11	08-Aug-05	<1	<2	<2	<2	0.079		4.11	5965.55
MW-11	12-Sep-05	<1	<2	<2	<2	0.13		4.22	5965.44
MW-11	11-Oct-05	<1	<2	<2	<2	0.1		3.98	5965.68
MW-11	07-Nov-05	<1	<2	<2	<2	0.061			
MW-11	08-Dec-05	<1	<2	<2	<2	0.046		4.07	5965.59
MW-11	10-Jan-06	<1	<2	<2	<2	0.037		4.02	5965.64
MW-11	14-Feb-06	<0.5	<1	<1	<1	0.017		4.02	5965.64
MW-11	15-Mar-06	<1	<2	<2	<2	0.06		4.50	5965.16
MW-11	11-Apr-06	<1	<2	<2	<2	0.041		4.05	5965.61
MW-11	10-May-06	<1	<2	<2	<2	0.035		4.08	5965.58
MW-11	12-Jun-06	<1	<2	<2	<2	0.043			
MW-11	06-Sep-06	<1	<2	<2	<2	0.081		4.15	5965.51
MW-11	06-Dec-06	<1	<2	<2	<2	0.0039		3.98	5965.68
MW-11	13-Mar-07	<1	<2	<2	<2	0.02		3.89	5965.77
MW-11	21-Jun-07	<1	<2	<2	<2	0.018			
MW-11	12-Sep-07	<1	<2	<2	<2	0.028		4.30	5965.36
MW-11	05-Mar-08	<1	<2	<2	<2	0.027		4.09	5965.57
MW-11	17-Jun-08	<1	<2	<2	<2	0.012		4.03	5965.63
MW-11	30-Sep-08	<1	<2	<2	<2	0.0017		4.10	5965.56
MW-11	09-Dec-08	<1	<2	<2	<2	0.016		4.20	5965.46
MW-11	17-Mar-09	<1	<2	<2	<2	0.0073		4.65	5965.01
MW-11	15-Jun-09	<1	<2	<2	<2	0.037		4.51	5965.15
MW-11	17-Sep-09	<1	<2	<2	<2	0.16		4.48	5965.18
MW-11	15-Dec-09	<1	<2	<2	<2	0.019		4.23	5965.43
MW-11	29-Mar-10	<1	<2	<2	<2	0.0698		4.25	5965.41

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft)	Groundwater Elevation (ft-msl)
MW-11	28-Jun-10	<1	2.3	<2	2.7	0.0615		4.80	5964.86
MW-11 <sup>a</sup>	21-Jul-10	<1	<2	<2	<2				
MW-12	09-Jul-04	0.86	NA	NA	NA	2.5			5963.60
MW-12	22-Jul-04	2	NA	NA	NA	3.6		6.02	5957.58
MW-12	03-Aug-04	4.6	<2	<2	<2	3.8			
MW-12	15-Sep-04	2.7	<2	<2	<2	4.9	4.1	5.81	5957.79
MW-12	13-Oct-04	<1	<2	<2	<2	0.17		5.13	5958.47
MW-12	13-Oct-04	<1	<2	<2	NA	0.12		5.13	5958.47
MW-12	13-Oct-04	<1	<2	<2	<2	<0.0008		5.13	5958.47
MW-12	09-Nov-04	<1	<2	<2	<2	0.069		4.90	5958.70
MW-12	13-Dec-04	<1	<2	<2	<2	0.046		3.85	5959.75
MW-12	12-Jan-05	<1	<2	<2	<2	1.3	0.8	4.10	5959.50
MW-12	09-Feb-05	<1	<2	<2	<2	2	1.2	4.78	5958.82
MW-12	08-Mar-05	<1	<2	<2	<2	2.6		4.53	5959.07
MW-12	12-Apr-05	<1	<2	<2	<2	0.94		4.63	5958.97
MW-12	09-May-05	<1	<2	<2	<2	0.43	0.4	4.03	5959.57
MW-12	08-Jun-05	<1	<2	<2	<2	0.65		4.39	5959.21
MW-12	11-Jul-05	3.8	<2	<2	<2	3	2.7	2.86	5960.74
MW-12	08-Aug-05	7.1	<2	<2	<2	4.3		3.02	5960.58
MW-12	12-Sep-05	8.4	<2	<2	<2	6.4	5.1	2.82	5960.78
MW-12	11-Oct-05	<1	<2	<2	<2	0.26		1.94	5961.66
MW-12	07-Nov-05	<1	<2	<2	<2	0.11			
MW-12	08-Dec-05	<1	<2	<2	<2	0.25		1.81	5961.79
MW-12	10-Jan-06	<1	<2	<2	<2	0.24	0.2	1.89	5961.71
MW-12	14-Feb-06	0.6	<1	<1	<1	0.53		2.03	5961.57
MW-12	15-Mar-06	<1	<2	<2	<2	1.6		1.85	5961.75
MW-12	15-Mar-06	<0.5	<0.5	<0.5	<0.5	1.51		1.85	5961.75
MW-12	11-Apr-06	<1	<2	<2	<2	1.2		4.10	5959.50
MW-12	10-May-06	<1	<2	<2	<2	0.95	0.5	1.25	5962.35
MW-12	12-Jun-06	1.2	<2	<2	<2	2.1			
MW-12	06-Sep-06	5.3	<2	<2	<2	7.1	4.1	3.31	5960.29
MW-12	06-Dec-06	<1	<2	<2	<2	0.21	0.2	1.52	5962.08
MW-12	13-Mar-07	<1	<2	<2	<2	0.046	0.0	0.00	5963.60
MW-12	21-Jun-07	<1	<2	<2	<2	0.016			
MW-12	12-Sep-07	5.4	<2	<2	<2	3.7	2.8	3.08	5960.52
MW-12	18-Dec-07	<1	<2	<2	<2	0.18		1.92	5961.68
MW-12	05-Mar-08	<1	<2	<2	<2	<0.0008		0.00	5963.60
MW-12	17-Jun-08	<1	<2	<2	<2	0.0011	<0.0011	2.36	5961.24
MW-12	30-Sep-08	2.4	<2	<2	<2	2.8	1.5	3.30	5960.30
MW-12	09-Dec-08	<1	<2	<2	<2	0.13	<0.0008	2.10	5961.50
MW-12	17-Mar-09	<1	<2	<2	<2	0.13	0.04	1.95	5961.65
MW-12	15-Jun-09	<1	<2	<2	<2	0.25	0.02	2.21	5961.39
MW-12	16-Sep-09	1	<2	<2	<2	3.7		2.67	5960.93
MW-12	15-Dec-09	<1	<2	<2	<2	0.07		1.76	5961.84
MW-12	29-Mar-10	<1	<2	<2	<2	0.176		1.94	5961.66
MW-12	28-Jun-10	<1	<2	<2	<2	0.672		2.97	5960.63
MW-13	13-Dec-04	<1	<2	<2	<2	0.15		2.49	5961.11
MW-13	21-Sep-04	<1	<2	<2	<2	0.061			
MW-13	13-Oct-04	<1	<2	<2	<2	0.011		2.89	5969.11
MW-13	09-Nov-04	<1	<2	<2	<2	0.015		2.80	5969.20
MW-13	13-Dec-04	<1	<2	<2	<2	0.029		2.49	5969.51
MW-13	12-Jan-05	<1	<2	<2	<2	0.069		2.24	5969.76
MW-13	09-Feb-05	<1	<2	<2	<2	0.029		2.79	5969.21
MW-13	08-Mar-05	<1	<2	<2	<2	0.037		2.81	5969.19
MW-13	12-Apr-05	<1	<2	<2	<2	0.039		3.12	5968.88
MW-13	09-May-05	<1	<2	<2	<2	0.04		2.42	5969.58

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft)	Groundwater Elevation (ft-msl)
MW-13	08-Jun-05	<1	<2	<2	<2	0.071		2.41	5969.59
MW-13	12-Jun-06	<1	<2	<2	<2	2.8			
MW-13	07-Sep-06	<1	<5	<2	<2	1.4		1.40	5970.60
MW-13	06-Dec-06	<1	<2	<2	<2	0.32		0.58	5971.42
MW-13	13-Mar-07	<1	<2	<2	<2	0.014		0.00	
MW-13	21-Jun-07	<1	<2	<2	<2	0.33			
MW-13	12-Sep-07	<1	<2	<2	<2	0.43		1.05	5970.95
MW-13	17-Jun-08								flooded
MW-13	29-Sep-08							2.65	
MW-13	08-Dec-08								frozen
MW-13	16-Mar-09								flooded
MW-13	15-Jun-09								plugged
MW-13	16-Sep-09								plugged
MW-13	15-Dec-09								plugged
MW-13									plugged
MW-14	21-Sep-04	150	9.6	2.9	19.8	1.4			
MW-14	13-Oct-04	140	12	3.6	27.3	4.8	4.3	6.57	5958.49
MW-14	09-Nov-04	150	8.8	4.7	32.4	6.7		7.02	5958.04
MW-14	13-Dec-04	300	12	7.5	44.2	13		7.01	5958.05
MW-14	12-Jan-05	230	9.7	4.6	30.7	9.4	8.0	6.98	5958.08
MW-14	09-Feb-05	270	13	<10	<10	9.6	8.0	7.24	5957.82
MW-14	08-Mar-05	180	12	3.1	21.5	12		8.05	5957.01
MW-14	12-Apr-05	74	5.2	<2	<2	11		6.97	5958.09
MW-14	09-May-05	8	<2	<2	<2	8.2	6.6	6.19	5958.87
MW-14	08-Jun-05	6	<2	<2	<2	10		6.38	5958.68
MW-14	11-Jul-05	16	<2	<2	<2	4.8	3.8	4.15	5960.91
MW-14	08-Aug-05	<1	<2	<2	<2	3.6		4.25	5960.81
MW-14	12-Sep-05	<1	<2	<2	<2	3.6	2.3	4.25	5960.81
MW-14	11-Oct-05	<1	<2	<2	<2	4.2		4.17	5960.89
MW-14	07-Nov-05	<1	<2	<2	<2	3.9			
MW-14	08-Dec-05	1.6	<2	<2	<2	3.9		4.59	5960.47
MW-14	10-Jan-06	<1	<2	<2	<2	7.4	5.6	4.71	5960.35
MW-14	14-Feb-06	1.9	<1	<1	<1	8.3		4.71	5960.35
MW-14	15-Mar-06	<1	<2	<2	<2	5.8		4.71	5960.35
MW-14	11-Apr-06	<1	<2	<2	<2	1.2		4.55	5960.51
MW-14	10-May-06	<1	<2	<2	<2	2.9	1.9	4.28	5960.78
MW-14	12-Jun-06	<1	<2	<2	<2	7			
MW-14	06-Sep-06	<1	<2	<2	<2	9	6.0	4.22	5960.84
MW-14	06-Dec-06	12	<2	<2	<2	9.1	6.4	4.18	5960.88
MW-14	13-Mar-07	<1	<2	<2	<2	7.6	5.3	4.45	5960.61
MW-14	30-Apr-07	<1	<5	<0.5	<2	-88.8			
MW-14	21-Jun-07	<1	<2	<2	<2	3.4			
MW-14	13-Sep-07	<1	<2	<2	<2	2.8		5.04	5960.02
MW-14	18-Dec-07	1.2	<2	<2	<2	3.2		4.75	5960.31
MW-14	05-Mar-08	<1	<2	<2	<2	5.1	3.1	4.98	5960.08
MW-14	17-Jun-08	<1	<2	<2	<2	3.7	2.1	4.95	5960.11
MW-14	30-Sep-08	<1	<2	<2	<2	2.9	2.0	5.51	5959.55
MW-14	09-Dec-08	<1	<2	<2	<2	4.7	2.9	5.20	5959.86
MW-14	17-Mar-09	1.0	<2	<2	<2	7.0	4.6	5.29	5959.77
MW-14	16-Jun-09	<1	<2	<2	<2	5.6	3.9	5.05	5960.01
MW-14	16-Sep-09	1.9	<2	<2	<2	5.7	3.7	5.10	5959.96
MW-14	15-Dec-09	1.9	<2	<2	<2	5.7	3.4	5.03	5960.03
MW-14	29-Mar-10	<1	<2	<2	<2	6.74	4.4	6.25	5958.81
MW-14	28-Jun-10	<1	<2	<2	<2	4.79	3.1	5.44	5959.62
MW-15	21-Sep-04	<1	<2	<2	<2	0.37			
MW-15	14-Oct-04	<1	<2	<2	<2	0.047		2.80	5954.99

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft)	Groundwater Elevation (ft-msl)
MW-15	10-Nov-04	<1	<2	<2	<2	0.034		2.85	5954.94
MW-15	14-Dec-04	<1	<2	<2	<2	0.017		2.54	5955.25
MW-15	12-Jan-05	<1	<2	<2	<2	0.012		2.50	5955.29
MW-15	08-Mar-05	<1	<2	<2	<2	0.0071		3.62	5954.17
MW-15	12-Apr-05	<1	<2	<2	<2	0.021		2.82	5954.97
MW-15	11-May-05	<1	<2	<2	<2	0.031		2.47	5955.32
MW-15	08-Jun-05	<1	<2	<2	<2	0.059		2.36	5955.43
MW-15	12-Jul-05	<1	<2	<2	<2	0.0055		0.17	5957.62
MW-15	09-Aug-05	<1	<2	<2	<2	0.0069		0.42	5957.37
MW-15	12-Sep-05	<1	<2	<2	<2	0.007		0.36	5957.43
MW-15	11-Oct-05	<1	<2	<2	<2	0.058		0.42	5957.37
MW-15	08-Nov-05	<1	<2	<2	<2	0.025		0.44	5957.35
MW-15	08-Dec-05	<1	<2	<2	<2	0.038		0.56	5957.23
MW-15	11-Jan-06	<1	<2	<2	<2	0.044		0.68	5957.11
MW-15	15-Feb-06	<1	<2	<2	<2	0.026		0.58	5957.21
MW-15	15-Mar-06	<1	<2	<2	<2	0.027		0.40	5957.39
MW-15	11-Apr-06	<1	<2	<2	<2	0.012		0.50	5957.29
MW-15	10-May-06	<1	<2	<2	<2	0.01		0.51	5957.28
MW-15	12-Jun-06	<1	<2	<2	<2	0.01			
MW-15	06-Sep-06	<1	<2	<2	<2	0.036		0.00	5957.79
MW-15	06-Dec-06	<1	<2	<2	<2	0.015		0.00	5957.79
MW-15	13-Mar-07	<1	<2	<2	<2	0.012		0.10	5957.69
MW-15	21-Jun-07	<1	<2	<2	<2	0.015			
MW-15	11-Sep-07	<1	<2	<2	<2	<0.0008		0.00	5957.79
MW-15	18-Dec-07	<1	<2	<2	<2	0.0018		0.05	5957.74
MW-15	17-Jun-08	<1	<2	<2	<2	0.0072		2.12	5955.67
MW-15	29-Sep-08								Flooded
MW-15	08-Dec-08								Frozen
MW-15	16-Mar-09								Frozen
MW-15	15-Jun-09								Flooded
MW-15	16-Sep-09								Flooded
MW-15	15-Dec-09								Flooded
MW-15	30-Mar-10	<1	<2	<2	<2	<0.0008		0.60	5957.19
MW-15	29-Jun-10	<1	<2	<2	<2	<0.0008		0.01	5957.78
MW-16	21-Sep-04	<b>9.5</b>	<2	<2	<2	1.1			
MW-16	13-Oct-04	4.7	<2	<2	<2	0.85		7.79	5952.66
MW-16	09-Nov-04	2.7	<2	<2	<2	0.34		7.29	5953.16
MW-16	14-Dec-04	4.9	<2	<2	<2	0.8		6.92	5953.53
MW-16	12-Jan-05	<b>7.6</b>	<2	<2	<2	1.1		7.20	5953.25
MW-16	09-Feb-05	<b>6.2</b>	<2	<2	<2	0.72	0.5	6.96	5953.49
MW-16	08-Mar-05	<b>6.1</b>	<2	<2	<2	0.83		7.27	5953.18
MW-16	08-Mar-05	<b>6.3</b>	<2	<2	<2	0.66		7.27	5953.18
MW-16	08-Mar-05	<b>6.2</b>	<5	<0.5	NA	1.7		7.27	5953.18
MW-16	12-Apr-05	1.4	<2	<2	<2	0.57		7.39	5953.06
MW-16	09-May-05	1.9	<2	<2	<2	0.35		5.81	5954.64
MW-16	08-Jun-05	1.7	<2	<2	<2	0.37		4.20	5956.25
MW-16	12-Jul-05	4	<2	<2	<2	0.62		2.65	5957.80
MW-16	09-Aug-05	<b>12</b>	<2	<2	<2	1.1		4.83	5955.62
MW-16	12-Sep-05	<b>6.4</b>	<2	<2	<2	1.3		5.45	5955.00
MW-16	11-Oct-05	2.8	<2	<2	<2	0.91			
MW-16	08-Nov-05	4.1	<2	<2	<2	0.62			
MW-16	07-Dec-05	3.4	<2	<2	<2	0.67		4.73	5955.72
MW-16	11-Jan-06	2.1	<2	<2	<2	1.1		5.21	5955.24
MW-16	14-Feb-06	<0.5	<1	<1	<1	0.58		5.25	5955.20
MW-16	15-Mar-06	<1	<2	<2	<2	0.78		5.38	5955.07
MW-16	12-Apr-06	<1	<2	<2	<2	0.59		4.77	5955.68
MW-16	09-May-06	<1	<2	<2	<2	0.2		3.43	5957.02

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft)	Groundwater Elevation (ft-msl)
MW-16	12-Jun-06	<1	<2	<2	<2	0.042			
MW-16	07-Sep-06	3.7	<5	<2	<2	1.7		6.41	5954.04
MW-16	05-Dec-06	<1	<2	<2	<2	1.1		5.21	5955.24
MW-16	13-Mar-07	<1	<2	<2	<2	0.54	0.1	5.50	5954.95
MW-16	20-Jun-07	<1	<2	<2	<2	0.17			
MW-16	12-Sep-07	<1	<2	<2	<2	0.8	0.3	6.45	5954.00
MW-16	18-Dec-07	<1	<2	<2	<2	1.2		8.50	5951.95
MW-16	04-Mar-08	<1	<2	<2	<2	1.2		5.60	5954.85
MW-16	17-Jun-08	<1	<2	<2	<2	0.021	<0.021	2.69	5957.76
MW-16	30-Sep-08	<1	<2	<2	<2	1.3	0.4	6.70	5953.75
MW-16	09-Dec-08	<1	<2	<2	<2	1.2	0.1	5.20	5955.25
MW-16	16-Mar-09	<1	<2	<2	<2	1.4	0.03	5.86	5954.59
MW-16	15-Jun-09	<1	<2	<2	<2	0.076	0.001	2.58	5957.87
MW-16	16-Sep-09	<1	<2	<2	<2	1.8		6.39	5954.06
MW-16	16-Sep-09	<1	<2	<2	<2	1.5		6.39	5954.06
MW-16	15-Dec-09	<1	<2	<2	<2	0.76		5.90	5954.55
MW-16	15-Dec-09	<1	<2	<2	<2	0.75		5.90	5954.55
MW-16	30-Mar-10	<1	<2	<2	<2	0.636		5.05	5955.40
MW-16	30-Mar-10	<1	<2	<2	<2	0.527		5.05	5955.40
MW-16	28-Jun-10	<1	<2	<2	<2	0.0889		3.03	5957.42
MW-16 <sup>a</sup>	21-Jul-10	<1	<2	<2	<2				
MW-16	28-Jun-10	<1	2.4	<2	<2	0.0135		3.03	5957.42
MW-16 <sup>a</sup>	21-Jul-10	<1	<2	<2	<2				
MW-17	21-Sep-04	<1	<2	<2	46.6	8.3			
MW-17	13-Oct-04	<b>230</b>	110	4.1	39.8	7.5	6.2	10.48	5948.01
MW-17	09-Nov-04	<b>140</b>	7.2	3	20.7	7.6		9.60	5948.89
MW-17	14-Dec-04	<b>110</b>	<2	2.1	16.1	9.4		8.76	5949.73
MW-17	12-Jan-05	<b>56</b>	<2	<2	<2	7.1	5.1	8.84	5949.65
MW-17	09-Feb-05	<b>76</b>	<2	<2	<2	6.6	4.9	8.69	5949.80
MW-17	08-Mar-05	<b>63</b>	<2	<2	<2	6.8		8.84	5949.65
MW-17	12-Apr-05	<b>44</b>	<2	<2	<2	6.6		6.19	5952.30
MW-17	10-May-05	<b>16</b>	<2	<2	<2	1.9	1.0	4.90	5953.59
MW-17	08-Jun-05	1.4	<2	<2	<2	1.6		2.43	5956.06
MW-17	12-Jul-05	<1	<2	<2	<2	0.64		3.28	5955.21
MW-17	09-Aug-05	<b>19</b>	<2	<2	<2	2.7		5.53	5952.96
MW-17	12-Sep-05	<b>110</b>	3.6	<2	<2	5.3	3.3	7.02	5951.47
MW-17	11-Oct-05	<b>72</b>	<2	<2	<2	4.7			
MW-17	08-Nov-05	<b>31</b>	<2	<2	<2	3.2			
MW-17	07-Dec-05	<b>31</b>	<2	<2	<2	3.1		6.58	5951.91
MW-17	11-Jan-06	<b>30</b>	<2	<2	<2	3.2	1.8	6.88	5951.61
MW-17	14-Feb-06	<b>26</b>	<1	<1	<1	2.5		6.88	5951.61
MW-17	15-Mar-06	<b>19</b>	<2	<2	<2	3.5		6.55	5951.94
MW-17	12-Apr-06	<b>12</b>	<2	<2	<2	3		5.85	5952.64
MW-17	09-May-06	2.8	<2	<2	<2	1.4		4.20	5954.29
MW-17	12-Jun-06	<1	<2	<2	<2	2.6			
MW-17	07-Sep-06	<b>24</b>	<5	<2	<2	3.5	2.2	8.27	5950.22
MW-17	05-Dec-06	<b>23</b>	<2	<2	<2	2.2	1.2	7.31	5951.18
MW-17	13-Mar-07	<b>66</b>	<2	<2	<2	5.6	0.6	6.65	5951.84
MW-17	20-Jun-07	<1	<2	<2	<2	<0.0008			
MW-17	12-Sep-07	<b>30</b>	<2	<2	<2	2	1.2	9.68	5948.81
MW-17	18-Dec-07	<b>16</b>	<2	<2	<2	2		7.59	5950.90
MW-17	03-Mar-08	<b>6.7</b>	<2	<2	<2	1	0.5	6.90	5951.59
MW-17	17-Jun-08	<1	<2	<2	<2	<0.0008	<0.0008	2.66	5955.83
MW-17	30-Sep-08	<b>31</b>	<2	<2	<2	1.9	1.1	8.20	5950.29
MW-17	09-Dec-08	<b>21</b>	<2	<2	<2	1.9	1.0	6.75	5951.74
MW-17	16-Mar-09	<b>13</b>	<2	<2	<2	2.2	1.0	6.71	5951.78
MW-17	15-Jun-09	<1	<2	<2	<2	0.0027	<0.0008	3.25	5955.24

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft)	Groundwater Elevation (ft-msl)
MW-17	16-Sep-09	41	<2	<2	<2	4.2	2.3	8.10	5950.39
MW-17	15-Dec-09	25	<2	<2	<2	3.2	1.5	8.40	5950.09
MW-17	29-Mar-10	24.6	<2	<2	<2	3.25	1.6	6.52	5951.97
MW-17	28-Jun-10	<1	<2	<2	<2	0.0107	0.0008	4.05	5954.44
MW-17 <sup>a</sup>	21-Jul-10	13.0	<2	<2	<2				
MW-18	21-Sep-04	<1	<2	<2	<2	0.74			
MW-18	14-Oct-04	<1	<2	<2	<2	0.89	0.3	6.75	5945.68
MW-18	10-Nov-04	<1	<2	<2	<2	1.6		6.80	5945.63
MW-18	14-Dec-04	<1	<2	<2	<2	1.1		6.63	5945.80
MW-18	13-Jan-05	<1	<2	<2	<2	1.1	0.4		
MW-18	09-Feb-05	<1	<2	<2	<2	0.71	0.2	6.77	5945.66
MW-18	09-Mar-05	<1	<2	<2	<2	0.69		6.81	5945.62
MW-18	13-Apr-05	<1	<2	<2	<2	0.71		6.98	5945.45
MW-18	10-May-05	<1	<2	<2	<2	0.19	0.1	6.11	5946.32
MW-18	09-Jun-05	<1	<2	<2	<2	0.058		3.55	5948.88
MW-18	12-Jul-05	<1	<2	<2	<2	0.02			
MW-18	09-Aug-05	<1	<2	<2	<2	0.66		4.26	5948.17
MW-18	13-Sep-05	<1	<2	<2	<2	0.3	0.1	4.35	5948.08
MW-18	12-Oct-05	<1	<2	<2	<2	1.1			
MW-18	09-Nov-05	<1	<2	<2	<2	1.1		4.06	5948.37
MW-18	08-Dec-05	<1	<2	<2	<2	0.76		3.93	5948.50
MW-18	08-Dec-05	<1	<2	<2	<2	0.68		3.93	5948.50
MW-18	08-Dec-05	<0.5	<5	<0.5	NA	0.8		3.93	5948.50
MW-18	11-Jan-06	<1	<2	<2	<2	0.6	0.2	3.72	5948.71
MW-18	15-Feb-06	<1	<2	<2	<2	1.2		4.12	5948.31
MW-18	15-Mar-06	<1	<2	<2	<2	1.5		3.94	5948.49
MW-18	12-Apr-06	<1	<2	<2	<2	0.46		3.30	5949.13
MW-18	11-May-06	<1	<2	<2	<2	0.25	0.1	3.33	5949.10
MW-18	13-Jun-06	<0.5	<0.5	<0.5	<0.5	1.46			
MW-18	13-Jun-06	<1	<2	<2	<2	1.4			
MW-18	06-Sep-06	<1	<2	<2	<2	0.99	0.4	4.58	5947.85
MW-18	05-Dec-06	<1	<2	<2	<2	0.0057	0.0	4.02	5948.41
MW-18	13-Mar-07	<1	<2	<2	<2	0.0034	0.0	3.10	5949.33
MW-18	22-Jun-07	<1	<2	<2	<2	0.026			
MW-18	11-Sep-07	<1	<2	<2	<2	<0.0008		3.85	5948.58
MW-18	18-Dec-07	<1	<2	<2	<2	<0.0008		3.35	5949.08
MW-18	04-Mar-08	<1	<2	<2	<2	<0.0008		3.15	5949.28
MW-18	17-Jun-08	<1	<2	<2	<2	0.15		3.78	5948.65
MW-18	30-Sep-08	<1	<2	<2	<2	<0.0008		4.50	5947.93
MW-18	08-Dec-08	<1	<2	<2	<2	0.034		3.40	5949.03
MW-18	16-Mar-09	<1	<2	<2	<2	<0.0008		3.75	5948.68
MW-18	15-Jun-09	<1	<2	<2	<2	0.81		3.91	5948.52
MW-18	16-Sep-09	<1	<2	<2	<2	<0.0008		4.50	5947.93
MW-18	15-Dec-09	<1	<2	<2	<2	0.042		4.10	5948.33
MW-18	29-Mar-10	<1	<2	<2	<2	0.0444		3.90	5948.53
MW-18	29-Jun-10	<1	<2	<2	<2	0.264		4.01	5948.42
MW-19	21-Sep-04	<1	2.4	<2	<2	1.6			
MW-19	13-Oct-04	<1	7.8	<2	<2	0.34		2.94	5966.50
MW-19	09-Nov-04	<1	10	<2	<2	4		4.20	5965.24
MW-19	13-Dec-04	<1	14	<2	<2	3.9		3.42	5966.02
MW-19	12-Jan-05	<1	9	<2	<2	2.6		3.32	5966.12
MW-19	08-Mar-05	<1	13	<2	<2	3.7		4.77	5964.67
MW-19	12-Apr-05	<1	<2	<2	<2	2.2		3.67	5965.77
MW-19	09-May-05	<1	9	<2	<2	1		3.37	5966.07
MW-19	08-Jun-05	<1	<2	<2	<2	2		2.71	5966.73
MW-19	11-Jul-05	<1	2.7	<2	<2	1.2		4.51	5964.93

## Appendix B

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Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft)	Groundwater Elevation (ft-msl)
MW-19	08-Aug-05	<1	5.7	<2	<2	1.7		2.83	5966.61
MW-19	12-Sep-05	<1	2.7	<2	<2	2.1		2.78	5966.66
MW-19	11-Oct-05	<1	3.1	<2	<2	2.2		2.63	5966.81
MW-19	07-Nov-05	<1	<2	<2	<2	2			
MW-19	11-Apr-06	<1	<2	<2	<2	0.95		4.05	5965.39
MW-19	10-May-06	<1	4.5	<2	<2	1.1		3.18	5966.26
MW-19	12-Jun-06	<1	<2	<2	<2	1.3			5969.44
MW-19	17-Jun-08								Flooded
MW-19	29-Sep-08								Lost
MW-19	08-Dec-08								Frozen
MW-19	16-Mar-09								Lost
MW-19	15-Jun-09								Flooded
MW-19	16-Sep-09								Flooded
MW-19	15-Dec-09								Flooded
MW-19									PLUGGED
MW-20	02-Sep-04	<1	<2	<2	<2	0.89			
MW-20	14-Oct-04	<1	<2	<2	<2	0.36		11.90	5941.98
MW-20	10-Nov-04	<1	<2	<2	<2	0.048		11.75	5942.13
MW-20	14-Dec-04	<1	<2	<2	<2	0.0078		11.12	5942.76
MW-20	13-Jan-05	<1	<2	<2	<2	0.0039			
MW-20	09-Feb-05	<1	<2	<2	<2	0.00092		10.54	5943.34
MW-20	09-Mar-05	<1	<2	<2	<2	0.0008		10.33	5943.55
MW-20	13-Apr-05	<1	<2	<2	<2	0.0011		10.23	5943.65
MW-20	10-May-05	<1	<2	<2	<2	0.002		9.83	5944.05
MW-20	09-Jun-05	<1	<2	<2	<2	0.0092		7.12	5946.76
MW-20	12-Jul-05	<1	<2	<2	<2	0.053			
MW-20	09-Aug-05	<1	<2	<2	<2	0.017		1.48	5952.40
MW-20	13-Sep-05	<1	<2	<2	<2	0.002		9.28	5944.60
MW-20	12-Oct-05	<1	<2	<2	<2	<0.0008		9.11	5944.77
MW-20	08-Nov-05	<1	<2	<2	<2	0.00084			
MW-20	08-Dec-05	<1	<2	<2	<2	<0.0008		8.27	5945.61
MW-20	11-Jan-06	<1	<2	<2	<2	<0.0008		8.06	5945.82
MW-20	15-Feb-06	<1	<2	<2	<2	<0.0008		7.96	5945.92
MW-20	15-Mar-06	<1	<2	<2	<2	<0.0008		7.73	5946.15
MW-20	11-Apr-06	<1	<2	<2	<2	<0.0008		7.35	5946.53
MW-20	11-May-06	<1	<2	<2	<2	0.00086		7.01	5946.87
MW-20	13-Jun-06	<1	<2	<2	<2	0.00855			
MW-20	21-Jul-06	<1	<2	<2	<2	<0.0008			
MW-20	28-Jul-06	<1	<2	<2	<2	0.0011			
MW-20	04-Aug-06	<1	<2	<2	<2	<0.0008			
MW-20	11-Aug-06	<1	<2	<2	<2	<0.0008			
MW-20	16-Aug-06	<1	<2	<2	<2	0.0033			
MW-20	24-Aug-06	<1	<2	<2	<2	0.0022		9.71	5944.17
MW-20	31-Aug-06	<1	<2	<2	<2	0.0011		9.85	5944.03
MW-20	06-Sep-06	<1	<2	<2	<2	0.011		10.00	5943.88
MW-20	13-Sep-06	<1	<2	<2	<2	<0.0008		10.04	5943.84
MW-20	21-Sep-06	<1	<2	<2	<2	0.0015		9.96	5943.92
MW-20	27-Sep-06	<1	<2	<2	<2	0.00096		9.82	5944.06
MW-20	06-Oct-06	<1	<2	<2	<2	<0.0008		9.88	5944.00
MW-20	12-Oct-06	<1	<2	<2	<2	<0.0008		9.54	5944.34
MW-20	19-Oct-06	<1	<2	<2	<2	<0.0008		9.43	5944.45
MW-20	25-Oct-06	<1	<2	<2	<2	<0.0008		9.64	5944.24
MW-20	01-Nov-06	<1	<2	<2	<2	<0.0008		9.25	5944.63
MW-20	17-Nov-06	<1	<2	<2	<2	<0.0008		9.03	5944.85
MW-20	06-Dec-06	<1	<2	<2	<2	<0.0008		7.92	5945.96
MW-20	03-Jan-07	<1	<2	<2	<2	<0.0008			
MW-20	17-Jan-07	<1	<2	<2	<2	<0.0008			

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Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft)	Groundwater Elevation (ft-msl)
MW-20	05-Feb-07	<1	<2	<2	<2	<0.0008			
MW-20	22-Feb-07	<1	<2	<2	<2	<0.0008		8.32	5945.56
MW-20	07-Mar-07	<1	<2	<2	<2	<0.0008		8.19	5945.69
MW-20	13-Mar-07	<1	<2	<2	<2	<0.0008		8.20	5945.68
MW-20	26-Mar-07	<1	<2	<2	<2	0.0012			
MW-20	11-Apr-07	<1	<2	<2	<2	<0.0008			
MW-20	25-Apr-07	<0.5	<5	<0.5	<2	<0.01			
MW-20	08-May-07	<0.5	<5	<0.5	<2	<0.01			
MW-20	22-Jun-07	<1	<2	<2	<2	0.0012			
MW-20	11-Sep-07	<1	<2	<2	<2	<0.0008		10.15	5943.73
MW-20	18-Dec-07	<1	<2	<2	<2	<0.0008		8.25	5945.63
MW-20	04-Mar-08	<1	<2	<2	<2	<0.0008		7.69	5946.19
MW-20	17-Jun-08	<1	<2	<2	<2	<0.0008		6.23	5947.65
MW-20	30-Sep-08	<1	<2	<2	<2	0.0035		9.75	5944.13
MW-20	08-Dec-08	<1	<2	<2	<2	0.0011		8.61	5945.27
MW-20	16-Mar-09	<1	<2	<2	<2	<0.0008		7.85	5946.03
MW-20	15-Jun-09	<1	<2	<2	<2	0.00089		6.98	5946.90
MW-20	16-Sep-09	<1	<2	<2	<2	<0.0008		9.96	5943.92
MW-20	15-Dec-09	<1	<2	<2	<2	<0.0008		9.00	5944.88
MW-20	29-Mar-10	<1	<2	<2	<2	<0.0008		8.31	5945.57
MW-20	29-Jun-10	<1	<2	<2	<2	0.00369		8.64	5945.24
MW-21	02-Sep-04	<1	<2	<2	<2	0.0087			
MW-21	14-Oct-04	<1	<2	<2	<2	0.0049		25.20	5944.25
MW-21	10-Nov-04	<1	<2	<2	<2	0.0011		24.80	5944.65
MW-21	14-Dec-04	<1	<2	<2	<2	0.0016		23.54	5945.91
MW-21	13-Jan-05	<1	<2	<2	<2	<0.0009			
MW-21	09-Feb-05	<1	<2	<2	<2	0.00086		23.68	5945.77
MW-21	09-Mar-05	<1	<2	<2	<2	<0.0008		23.56	5945.89
MW-21	13-Apr-05	<1	<2	<2	<2	<0.0008		23.33	5946.12
MW-21	10-May-05	<1	<2	<2	<2	<0.0008		22.79	5946.66
MW-21	09-Jun-05	<1	<2	<2	<2	0.0019		21.93	5947.52
MW-21	13-Jul-05	<1	<2	<2	<2	0.0028		22.24	5947.21
MW-21	09-Aug-05	<1	<2	<2	<2	0.0011		23.42	5946.03
MW-21	13-Sep-05	<1	<2	<2	<2	0.0011		24.43	5945.02
MW-21	12-Oct-05	<1	<2	<2	<2	0.0015		24.34	5945.11
MW-21	08-Nov-05	<1	<2	<2	<2	0.0013		23.89	5945.56
MW-21	08-Dec-05	<1	<2	<2	<2	0.00092		23.52	5945.93
MW-21	12-Jan-06	<1	<2	<2	<2	0.0013		23.37	5946.08
MW-21	15-Feb-06	<1	<2	<2	<2	0.0013		23.22	5946.23
MW-21	15-Mar-06	<1	<2	<2	<2	0.01		20.33	5949.12
MW-21	11-Apr-06	<1	<2	<2	<2	0.0022		22.48	5946.97
MW-21	11-May-06	<1	<2	<2	<2	0.0017		22.00	5947.45
MW-21	13-Jun-06	<1	<2	<2	<2	0.0032			
MW-21	21-Jul-06	<1	<2	<2	<2	0.0016			
MW-21	28-Jul-06	<1	<2	<2	<2	0.0019			
MW-21	04-Aug-06	<1	<2	<2	<2	0.001			
MW-21	11-Aug-06	<1	<2	<2	<2	0.0011			
MW-21	16-Aug-06	<1	<2	<2	<2	0.0023			
MW-21	24-Aug-06	<1	<2	<2	<2	0.0026		24.79	5944.66
MW-21	31-Aug-06	<1	<2	<2	<2	0.0036		24.87	5944.58
MW-21	06-Sep-06	<1	<2	<2	<2	0.0057		24.95	5944.50
MW-21	13-Sep-06	<1	<2	<2	<2	0.0031		25.31	5944.14
MW-21	21-Sep-06	<1	<2	<2	<2	0.0036		25.31	5944.14
MW-21	27-Sep-06	<1	<2	<2	<2	0.0039		25.08	5944.37
MW-21	06-Oct-06	<1	<2	<2	<2	0.0019		25.21	5944.24
MW-21	12-Oct-06	<1	<2	<2	<2	<0.0008		24.85	5944.60
MW-21	19-Oct-06	<1	<2	<2	<2	<0.0008		24.75	5944.70



## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft)	Groundwater Elevation (ft-msl)
MW-21	25-Oct-06	<1	<2	<2	<2	<0.0008		24.68	5944.77
MW-21	01-Nov-06	<1	<2	<2	<2	<0.0008		24.53	5944.92
MW-21	17-Nov-06	<1	<2	<2	<2	<0.0008		24.61	5944.84
MW-21	06-Dec-06	<1	<2	<2	<2	0.0019		24.26	5945.19
MW-21	03-Jan-07	<1	<2	<2	<2	<0.0008			
MW-21	17-Jan-07	<1	<2	<2	<2	<0.0008			
MW-21	05-Feb-07	<1	<2	<2	<2	<0.0008			
MW-21	22-Feb-07	<1	<2	<2	<2	<0.0008		23.68	5945.77
MW-21	07-Mar-07	<1	<2	<2	<2	0.00086		23.82	5945.63
MW-21	13-Mar-07	<1	<2	<2	<2	<0.0008		23.60	5945.85
MW-21	26-Mar-07	<1	<2	<2	<2	<0.0008			
MW-21	11-Apr-07	<1	<2	<2	<2	<0.0008			
MW-21	25-Apr-07	<0.5	<5	<0.5	<2	<0.0008			
MW-21	08-May-07	<0.5	<5	<0.5	<2	<0.0008			
MW-21	22-Jun-07	<1	<2	<2	<2	0.00095			
MW-21	11-Sep-07	<1	<2	<2	<2	0.0012		24.95	5944.50
MW-21	18-Dec-07	<1	<2	<2	<2	0.0038		23.81	5945.64
MW-21	04-Mar-08	<1	<2	<2	<2	<0.0008		23.12	5946.33
MW-21	17-Jun-08	<1	<2	<2	<2	<0.0008		20.80	5948.65
MW-21	30-Sep-08	<1	<2	<2	<2	0.0015		25.00	5944.45
MW-21	08-Dec-08	<1	<2	<2	<2	<0.0008		23.90	5945.55
MW-21	16-Mar-09	<1	<2	<2	<2	<0.0008		23.27	5946.18
MW-21	15-Jun-09	<1	<2	<2	<2	0.0011		21.55	5947.90
MW-21	16-Sep-09	<1	<2	<2	<2	0.002		25.12	5944.33
MW-21	15-Dec-09	<1	<2	<2	<2	<0.0008		24.24	5945.21
MW-21	29-Mar-10	<1	<2	<2	<2	<0.0008		23.76	5945.69
MW-21	29-Jun-10	<1	<2	<2	<2	0.00156		22.65	5946.80
MW-22	21-Sep-04	<1	<2	<2	<2	0.025			
MW-22	14-Oct-04	<1	<2	<2	<2	0.061		13.50	5943.58
MW-22	10-Nov-04	<1	<2	<2	<2	0.023		13.20	5943.88
MW-22	14-Dec-04	<1	<2	<2	<2	0.069		12.42	5944.66
MW-22	13-Jan-05	<1	<2	<2	<2	0.03			
MW-22	09-Feb-05	<1	<2	<2	<2	0.0087		11.95	5945.13
MW-22	09-Mar-05	<1	<2	<2	<2	0.0043		11.89	5945.19
MW-22	09-Mar-05	<1	<2	<2	<2	0.0034		11.89	5945.19
MW-22	09-Mar-05	<0.5	<5	<0.5	<2	<0.01		11.89	5945.19
MW-22	13-Apr-05	<1	<2	<2	<2	0.0013		11.78	5945.30
MW-22	10-May-05	<1	<2	<2	<2	<0.0008		11.14	5945.94
MW-22	09-Jun-05	<1	<2	<2	<2	0.0066		8.11	5948.97
MW-22	12-Jul-05	<1	<2	<2	<2	0.021		8.64	5948.44
MW-22	09-Aug-05	<1	<2	<2	<2	0.0084		9.65	5947.43
MW-22	13-Sep-05	<1	<2	<2	<2	0.0025		10.56	5946.52
MW-22	12-Oct-05	<1	<2	<2	<2	0.004		10.56	5946.52
MW-22	08-Nov-05	<1	<2	<2	<2	0.0042		10.16	5946.92
MW-22	08-Dec-05	<1	<2	<2	<2	<0.0008		9.82	5947.26
MW-22	11-Jan-06	<1	<2	<2	<2	0.007		9.06	5948.02
MW-22	15-Feb-06	<1	<2	<2	<2	0.0015		9.79	5947.29
MW-22	15-Mar-06	<1	<2	<2	<2	0.009		9.51	5947.57
MW-22	11-Apr-06	<1	<2	<2	<2	0.0052		9.05	5948.03
MW-22	11-May-06	<1	<2	<2	<2	<0.0008		9.43	5947.65
MW-22	13-Jun-06	<1	<2	<2	<2	0.0014			
MW-22	06-Sep-06	<1	<2	<2	<2	0.049		10.00	5947.08
MW-22	05-Dec-06	<1	<2	<2	<2	0.00085		10.56	5946.52
MW-22	13-Mar-07	<1	<2	<2	<2	<0.0008		9.95	5947.13
MW-22	22-Jun-07	<1	<2	<2	<2	<0.0008			
MW-22	11-Sep-07	<1	<2	<2	<2	<0.0008		11.45	5945.63
MW-22	18-Dec-07	<1	<2	<2	<2	<0.0008		9.92	5947.16

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft)	Groundwater Elevation (ft-msl)
MW-22	04-Mar-08	<1	<2	<2	<2	<0.0008		9.43	5947.65
MW-22	17-Jun-08	<1	<2	<2	<2	<0.0008		7.21	5949.87
MW-22	30-Sep-08	<1	<2	<2	<2	<0.0008		11.55	5945.53
MW-22	08-Dec-08	<1	<2	<2	<2	<0.0008		10.25	5946.83
MW-22	16-Mar-09	<1	<2	<2	<2	<0.0008		9.67	5947.41
MW-22	15-Jun-09	<1	<2	<2	<2	<0.0008		8.35	5948.73
MW-22	16-Sep-09	<1	<2	<2	<2	<0.0008		11.74	5945.34
MW-22	15-Dec-09	<1	<2	<2	<2	<0.0008		10.60	5946.48
MW-22	29-Mar-10	<1	<2	<2	<2	<0.0008		10.21	5946.87
MW-22	29-Jun-10	<1	<2	<2	<2	<0.0008		9.36	5947.72
MW-23	23-Sep-04	<1	<2	<2	<2	3.7			
MW-23	14-Oct-04	<1	<2	<2	<2	5.5		17.05	5935.64
MW-23	10-Nov-04	<1	<2	<2	<2	6.1		17.20	5935.49
MW-23	14-Dec-04	<1	<2	<2	<2	6.6		15.71	5936.98
MW-23	13-Jan-05	<1	<2	<2	<2	7.2		16.02	5936.67
MW-23	10-Feb-05	<1	<2	<2	<2	4.3	0.0		
MW-23	09-Mar-05	<1	<2	<2	<2	4.1		16.58	5936.11
MW-23	13-Apr-05	<1	<2	<2	<2	7.5		16.08	5936.61
MW-23	11-May-05	<1	<2	<2	<2	4		14.51	5938.18
MW-23	09-Jun-05	<1	<2	<2	<2	4.9		13.15	5939.54
MW-23	13-Jul-05	<1	<2	<2	<2	3.4		13.33	5939.36
MW-23	10-Aug-05	<1	<2	<2	<2	3.6		15.14	5937.55
MW-23	12-Sep-05	<1	<2	<2	<2	4.4		16.93	5935.76
MW-23	11-Oct-05	<1	<2	<2	<2	3.3			
MW-23	09-Nov-05	<1	<2	<2	<2	3.5			
MW-23	08-Dec-05	<1	<2	<2	<2	3.2		16.08	5936.61
MW-23	12-Jan-06	<1	<2	<2	<2	3		16.16	5936.53
MW-23	15-Feb-06	<1	<2	<2	<2	5.5		16.03	5936.66
MW-23	16-Mar-06	<1	<2	<2	<2	7.3		16.15	5936.54
MW-23	11-Apr-06	<1	<2	<2	<2	5.3		14.80	5937.89
MW-23	11-May-06	<1	<2	<2	<2	4.6		13.15	5939.54
MW-23	13-Jun-06	<1	<2	<2	<2	0.92			
MW-23	21-Jul-06	<1	<2	<2	<2	2.4			
MW-23	28-Jul-06	<1	<2	<2	<2	3.6			
MW-23	04-Aug-06	<1	<2	<2	<2	4.2			
MW-23	11-Aug-06	<1	<2	<2	<2	4			
MW-23	16-Aug-06	<1	<2	<2	<2	3.3			
MW-23	24-Aug-06	<1	<2	<2	<2	5.4			
MW-23	31-Aug-06	<1	<2	<2	<2	5		17.39	5935.30
MW-23	06-Sep-06	<1	<2	<2	<2	2.9		17.29	5935.40
MW-23	13-Sep-06	<1	<2	<2	<2	5.5		17.36	5935.33
MW-23	21-Sep-06	<1	<2	<2	<2	4.8		17.45	5935.24
MW-23	27-Sep-06	<1	<2	<2	<2	4		17.22	5935.47
MW-23	06-Oct-06	<1	<2	<2	<2	4.6		17.18	5935.51
MW-23	12-Oct-06	<1	<2	<2	<2	5.7		17.21	5935.48
MW-23	19-Oct-06	<1	<2	<2	<2	4.2		16.64	5936.05
MW-23	25-Oct-06	<1	<2	<2	<2	3.9		16.89	5935.80
MW-23	01-Nov-06	<1	<2	<2	<2	3.1		16.31	5936.38
MW-23	17-Nov-06	<1	<2	<2	<2	1.6		16.25	5936.44
MW-23	06-Dec-06	<1	<2	<2	<2	1.2		16.32	5936.37
MW-23	03-Jan-07	<1	<2	<2	<2	2.3			
MW-23	17-Jan-07	<1	<2	<2	<2	1.7			
MW-23	05-Feb-07	<1	<2	<2	<2	2.2			
MW-23	22-Feb-07	<1	<2	<2	<2	4		15.68	5937.01
MW-23	07-Mar-07	<1	<2	<2	<2	3.4		15.34	5937.35
MW-23	13-Mar-07	<1	<2	<2	<2	3.4	0.2	15.30	5937.39
MW-23	26-Mar-07	<1	<2	<2	<2	3.6			

## Appendix B

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Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft)	Groundwater Elevation (ft-msl)
MW-23	11-Apr-07	<1	<2	<2	<2	2.2			
MW-23	25-Apr-07	<0.5	<5	<2	<2	3.2			
MW-23	08-May-07	<0.5	<5	<2	<2	2.1			
MW-23	22-Jun-07	<1	<2	<2	<2	2.3			
MW-23	10-Sep-07	<1	<2	<2	<2	3.6		17.29	5935.40
MW-23	18-Dec-07	<1	<2	<2	<2	4.5		16.65	5936.04
MW-23	04-Mar-08	<1	<2	<2	<2	1.3		16.17	5936.52
MW-23	17-Jun-08	<1	<2	<2	<2	0.0012		12.16	5940.53
MW-23	29-Sep-08	<1	<2	<2	<2	0.72		17.10	5935.59
MW-23	08-Dec-08	<1	<2	<2	<2	0.45		14.77	5937.92
MW-23	16-Mar-09	<1	<2	<2	<2	0.37		15.52	5937.17
MW-23	15-Jun-09	<1	<2	<2	<2	<0.0008	<0.0008	11.62	5941.07
MW-23	16-Sep-09	<1	<2	<2	<2	<0.0008	<0.0008	17.00	5935.69
MW-23	16-Sep-09	<1	<2	<2	<2	0.0011		17.00	5935.69
MW-23	16-Dec-09	<1	<2	<2	<2	0.37		16.12	5936.57
MW-23	30-Mar-10	<1	<2	<2	<2	0.0724		15.69	5937.00
MW-23	30-Mar-10	<1	<2	<2	<2	0.0964		15.69	5937.00
MW-23	28-Jun-10	<1	<2	<2	<2	<0.0008		11.46	5941.23
MW-23	28-Jun-10	<1	<2	<2	<2	<0.0008		11.86	5940.83
MW-24	21-Sep-04	<1	<2	<2	<2	<0.0008			
MW-24	14-Oct-04	<1	<2	<2	<2	0.00082		5.25	5949.66
MW-24	10-Nov-04	<1	<2	<2	<2	<0.0008		6.00	5948.91
MW-24	14-Dec-04	<1	<2	<2	<2	<0.0008		6.54	5948.37
MW-24	13-Jan-05	<1	<2	<2	<2	<0.0008			
MW-24	10-Feb-05	<1	<2	<2	<2	<0.0008			
MW-24	09-Mar-05	<1	<2	<2	<2	<0.0008		6.95	5947.96
MW-24	13-Apr-05	<1	<2	<2	<2	<0.0008		7.28	5947.63
MW-24	11-May-05	<1	<2	<2	<2	<0.0008		2.64	5952.27
MW-24	09-Jun-05	<1	<2	<2	<2	<0.0008		7.08	5947.83
MW-24	13-Jul-05	<1	<2	<2	<2	<0.0008			
MW-24	10-Aug-05	<1	<2	<2	<2	<0.0008		5.02	5949.89
MW-24	10-Aug-05	<1	<2	<2	<2	<0.0008		5.02	5949.89
MW-24	10-Aug-05	<0.5	<5	<0.5	1.9	<0.01		5.02	5949.89
MW-24	12-Sep-05	<1	<2	<2	<2	<0.0008		5.35	5949.56
MW-24	12-Oct-05	<1	<2	<2	<2	<0.0008		5.83	5949.08
MW-24	09-Nov-05	<1	<2	<2	<2	<0.0008			
MW-24	09-Nov-05	<0.5	<5	<0.5	NA	<0.01			
MW-24	09-Nov-05	<1	<2	<2	<2	<0.0008			
MW-24	08-Dec-05	<1	<2	<2	<2	<0.0008		5.82	5949.09
MW-24	10-Jan-06	<1	<2	<2	<2	<0.0008		5.88	5949.03
MW-24	15-Feb-06	<1	<2	<2	<2	<0.0008		6.18	5948.73
MW-24	15-Feb-06	<1	<2	<2	<2	<0.0008		6.18	5948.73
MW-24	15-Feb-06	<0.5	<0.5	<0.5	<0.5	<0.0034		6.18	5948.73
MW-24	16-Mar-06	<1	<2	<2	<2	0.002		6.45	5948.46
MW-24	13-Apr-06	<1	<2	<2	<2	<0.0008		6.13	5948.78
MW-24	11-May-06	<1	<2	<2	<2	<0.0008		6.78	5948.13
MW-24	13-Jun-06	<1	<2	<2	<2	<0.0008			
MW-24	06-Sep-06	<1	<2	<2	<2	<0.0008		5.23	5949.68
MW-24	06-Dec-06	<1	<2	<2	<2	<0.0008		5.36	5949.55
MW-24	06-Dec-06	<0.25	<0.25	<0.25	<0.25	0.00028		5.36	5949.55
MW-24	12-Mar-07	<1	<2	<2	<2	<0.0008		5.80	5949.11
MW-24	22-Jun-07	<1	<2	<2	<2	<0.0008			
MW-24	10-Sep-07	<1	<2	<2	<2	0.021		5.15	5949.76
MW-24	18-Dec-07	<1	<2	<2	<2	<0.0008		5.41	5949.50
MW-24	05-Mar-08	<1	<2	<2	<2	<0.0008		5.01	5949.90
MW-24	17-Jun-08	<1	<2	<2	<2	<0.0008		6.15	5948.76
MW-24	01-Oct-08	<1	<2	<2	<2	0.004		4.85	5950.06

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft)	Groundwater Elevation (ft-msl)
MW-24	10-Dec-08	<1	<2	<2	<2	<0.0008		4.58	5950.33
MW-24	10-Dec-08	<1	<2	<2	<2	<0.0008		4.58	5950.33
MW-24	10-Dec-08	<1	<1	<1	<1	<0.001		4.58	5950.33
MW-24	17-Mar-09	<1	<2	<2	<2	<0.0008		5.45	5949.46
MW-24	16-Jun-09	<1	<2	<2	<2	0.014		3.89	5951.02
MW-24	17-Sep-09	<1	<2	<2	<2	0.6		4.38	5950.53
MW-24	16-Dec-09	<1	<2	<2	<2	<0.0008		5.52	5949.39
MW-24	31-Mar-10	<1	<2	<2	<2	<0.0008		5.41	5949.50
MW-24	29-Jun-10	<1	<2	<2	<2	0.00178		4.85	5950.06
MW-25	21-Sep-04	<1	<2	<2	<2	0.093			
MW-25	13-Oct-04	<1	<2	<2	<2	0.029		2.57	5969.22
MW-25	09-Nov-04	<1	<2	<2	<2	0.06		3.30	5968.49
MW-25	13-Dec-04	<1	<2	<2	<2	0.087		2.54	5969.25
MW-25	08-Mar-05	<1	<2	<2	<2	0.17		4.02	5967.77
MW-25	12-Apr-05	<1	<2	<2	<2	0.065		4.74	5967.05
MW-25	09-May-05	<1	<2	<2	<2	0.08		2.89	5968.90
MW-25	08-Jun-05	<1	<2	<2	<2	0.067		2.08	5969.71
MW-25	11-Jul-05	<1	<2	<2	<2	0.041			
MW-25	08-Aug-05	<1	<2	<2	<2	0.06		2.51	5969.28
MW-25	12-Sep-05	<1	<2	<2	<2	0.4		2.68	5969.11
MW-25	11-Oct-05	<1	<2	<2	<2	0.0079		2.51	5969.28
MW-25	07-Nov-05	<1	<2	<2	<2	0.034			
MW-25	11-Apr-06	<1	<2	<2	<2	0.13		2.75	5969.04
MW-25	10-May-06	<1	<2	<2	<2	0.14		2.65	5969.14
MW-25	12-Jun-06	<1	<2	<2	<2	0.06			
MW-25	06-Sep-06	<1	<2	<2	<2	0.068		2.42	5969.37
MW-25	13-Mar-07	<1	<2	<2	<2	0.076			
MW-25	21-Jun-07	<1	<2	<2	<2	0.2			
MW-25	12-Sep-07	<1	<2	<2	<2	0.0023		2.71	5969.08
MW-25	17-Jun-08	<1	<2	<2	<2	0.0025		2.51	5969.28
MW-25	29-Sep-08								Lost
MW-25	08-Dec-08								Frozen
MW-25	17-Mar-09	<1	<2	<2	<2	<0.0008		3.30	5968.49
MW-25	15-Jun-09	<1	<2	<2	<2	0.011		4.03	5967.76
MW-25	17-Sep-09	<1	<2	<2	<2	0.11		3.73	5968.06
MW-25	15-Dec-09								Frozen
MW-25	29-Mar-10	<1	<2	<2	<2	0.004		4.04	5967.75
MW-25	28-Jun-10	<1	2	<2	<2	0.0103		3.40	5968.39
MW-25 <sup>a</sup>	21-Jul-10	<1	<2	<2	<2				
MW-26	21-Sep-04	<1	<2	<2	<2	0.82			
MW-26	14-Oct-04	<1	<2	<2	<2	1.4		4.15	5950.50
MW-26	10-Nov-04	<1	<2	<2	<2	4		4.90	5949.75
MW-26	14-Dec-04	<1	<2	<2	<2	2.4		4.81	5949.84
MW-26	13-Jan-05	<0.5	<5	<0.5	NA	0.5		5.79	5948.86
MW-26	13-Jan-05	<1	<2	<2	<2	2.4		5.79	5948.86
MW-26	13-Jan-05	<1	<2	<2	<2	2.1		5.79	5948.86
MW-26	10-Feb-05	<0.5	<5	<0.5	NA	2.9			
MW-26	10-Feb-05	<1	<2	<2	<2	3.2			
MW-26	10-Feb-05	<1	<2	<2	<2	2.9			
MW-26	09-Mar-05	<1	<2	<2	<2	3.4		4.25	5950.40
MW-26	13-Apr-05	<1	<2	<2	<2	3.3		4.15	5950.50
MW-26	13-Apr-05	<1	<2	<2	<2	3.3		4.15	5950.50
MW-26	13-Apr-05	<0.5	<2	<0.5	NA	3.7		4.15	5950.50
MW-26	11-May-05	<1	<2	<2	<2	2.1		1.77	5952.88
MW-26	11-May-05	<0.5	<5	<0.5	NA	0.38		1.77	5952.88
MW-26	11-May-05	<1	<2	<2	<2	2.3		1.77	5952.88

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft)	Groundwater Elevation (ft-msl)
MW-26	08-Jun-05	<1	<2	<2	<2	2.8		1.79	5952.86
MW-26	12-Jul-05	<1	<2	<2	<2	1.5		1.79	5952.86
MW-26	09-Aug-05	<1	<2	<2	<2	1		1.48	5953.17
MW-26	13-Sep-05	<1	<2	<2	<2	0.97		1.32	5953.33
MW-26	13-Sep-05	<1	<2	<2	<2	0.99		1.32	5953.33
MW-26	13-Sep-05	<0.5	<5	<0.5	NA	1.5		1.32	5953.33
MW-26	11-Oct-05	<1	<2	<2	<2	0.48		1.45	5953.20
MW-26	09-Nov-05	<1	<2	<2	<2	1.4		1.79	5952.86
MW-26	08-Dec-05	<1	<2	<2	<2	0.86		1.75	5952.90
MW-26	12-Jan-06	<1	<2	<2	<2	1.2		1.65	5953.00
MW-26	15-Feb-06	<1	<2	<2	<2	1		1.64	5953.01
MW-26	16-Mar-06	<1	<2	<2	<2	0.83		1.48	5953.17
MW-26	16-Mar-06	<0.25	<0.25	<0.25	<0.25	0.000377		1.48	5953.17
MW-26	12-Apr-06	<1	<2	<2	<2	0.45		1.13	5953.52
MW-26	12-Apr-06	<0.25	<0.25	<0.25	<0.25	0.858		1.13	5953.52
MW-26	11-May-06	<1	<2	<2	<2	0.75		1.55	5953.10
MW-26	11-May-06	<0.5	<0.5	<0.5	<0.5	0.877		1.55	5953.10
MW-26	13-Jun-06	<1	<2	<2	<2	0.63			
MW-26	13-Jun-06	<0.5	<0.5	<0.5	<0.5	0.767			
MW-26	07-Sep-06	<1	<5	<2	<2	1.5		1.20	5953.45
MW-26	06-Dec-06	<0.25	<0.25	<0.25	<0.25	0.355		0.98	5953.67
MW-26	06-Dec-06	<1	<2	<2	<2	1.1		0.98	5953.67
MW-26	06-Dec-06	<1	<2	<2	<2	0.76		0.98	5953.67
MW-26	12-Mar-07	<1	<2	<2	<2	0.56		0.70	5953.95
MW-26	21-Jun-07	<1	<2	<2	<2	0.62			
MW-26	11-Sep-07	<1	<2	<2	<2	1.4		1.00	5953.65
MW-26	18-Dec-07	<1	<2	<2	<2	0.036		1.73	5952.92
MW-26	04-Mar-08	<1	<2	<2	<2	0.35		0.60	5954.05
MW-26	17-Jun-08	<1	<2	<2	<2	0.55		1.30	5953.35
MW-26	17-Jun-08	<1	<1	<1	<2			1.30	5953.35
MW-26	01-Oct-08	<1	<2	<2	<2	1		1.60	5953.05
MW-26	09-Dec-08	<1	<2	<2	<2	0.73		1.25	5953.40
MW-26	09-Dec-08	<1	<2	<2	<2	0.79		1.25	5953.40
MW-26	09-Dec-08	<1	<1	<1	<1	0.145		1.25	5953.40
MW-26	17-Mar-09	<1	<2	<2	<2	0.14		1.59	5953.06
MW-26	16-Jun-09	<1	<2	<2	<2	0.33		1.00	5953.65
MW-26	17-Sep-09	<1	<2	<2	<2	0.049		1.60	5953.05
MW-26	16-Dec-09	<1	<2	<2	<2	0.27		1.60	5953.05
MW-26	16-Dec-09	<1	<2	<2	<2	0.33		1.60	5953.05
MW-26	31-Mar-10	<1	<2	<2	<2	1.25		1.24	5953.41
MW-26	28-Jun-10	<1	<2	<2	<2	0.778		1.09	5953.56
MW-27	23-Sep-04	<1	<2	<2	<2	0.00095			
MW-27	14-Oct-04	<1	<2	<2	<2	<0.0008		9.72	5946.50
MW-27	10-Nov-04	<1	<2	<2	<2	0.0011		7.30	5948.92
MW-27	14-Dec-04	<1	<2	<2	<2	0.00091		6.74	5949.48
MW-27	13-Jan-05	<1	<2	<2	<2	<0.0009		7.39	5948.83
MW-27	10-Feb-05	<1	<2	<2	<2	<0.0008			
MW-27	09-Mar-05	<1	<2	<2	<2	<0.0008		9.29	5946.93
MW-27	13-Apr-05	<1	<2	<2	<2	<0.0008		8.02	5948.20
MW-27	11-May-05	<1	<2	<2	<2	<0.0008		5.56	5950.66
MW-27	09-Jun-05	<1	<2	<2	<2	<0.0008		4.67	5951.55
MW-27	13-Jul-05	<1	<2	<2	<2	<0.0008		13.33	5942.89
MW-27	10-Aug-05	<1	<2	<2	<2	<0.0008		8.39	5947.83
MW-27	12-Sep-05	<1	<2	<2	<2	<0.0008		9.87	5946.35
MW-27	11-Oct-05	<1	<2	<2	<2	<0.0008			
MW-27	09-Nov-05	<1	<2	<2	<2	0.00086			
MW-27	08-Dec-05	<1	<2	<2	<2	<0.0008		8.23	5947.99

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft)	Groundwater Elevation (ft-msl)
MW-27	12-Jan-06	<1	<2	<2	<2	<0.0008		9.06	5947.16
MW-27	15-Feb-06	<1	<2	<2	<2	<0.0008		9.57	5946.65
MW-27	16-Mar-06	<1	<2	<2	<2	<0.0008		7.91	5948.31
MW-27	11-Apr-06	<1	<2	<2	<2	0.00083		6.45	5949.77
MW-27	11-May-06	<1	<2	<2	<2	<0.0008		4.15	5952.07
MW-27	13-Jun-06	<1	<2	<2	<2	<0.0008			
MW-27	06-Sep-06	<1	<2	<2	<2	<0.0008		11.04	5945.18
MW-27	06-Dec-06	<1	<2	<2	<2	<0.0008		8.82	5947.40
MW-27	13-Mar-07	<1	<2	<2	<2	<0.0008		5.90	5950.32
MW-27	22-Jun-07	<1	<2	<2	<2	<0.0008			
MW-27	10-Sep-07	<1	<2	<2	<2	<0.0008		11.21	5945.01
MW-27	18-Dec-07	<1	<2	<2	<2	<0.0008		10.95	5945.27
MW-27	04-Mar-08	<1	<2	<2	<2	<0.0008		9.75	5946.47
MW-27	17-Jun-08	<1	<2	<2	<2	<0.0008		5.47	5950.75
MW-27	29-Sep-08	<1	<2	<2	<2	<0.0008	<0.0008	11.35	5944.87
MW-27	09-Dec-08	<1	<2	<2	<2	<0.0008	<0.0008	5.75	5950.47
MW-27	16-Mar-09	<1	<2	<2	<2	<0.0008		8.21	5948.01
MW-27	15-Jun-09	<1	<2	<2	<2	<0.0008		3.85	5952.37
MW-27	16-Sep-09	<1	<2	<2	<2	0.0015		11.42	5944.80
MW-27	16-Dec-09	<1	<2	<2	<2	<0.0008		8.90	5947.32
MW-27	30-Mar-10	<1	<2	<2	<2	<0.0008		6.78	5949.44
MW-27	28-Jun-10	<1	2.1	<2	<2	<0.0008		6.31	5949.91
MW-27 <sup>a</sup>	21-Jul-20	<1	<2	<2	<2				
EP-01	08-Apr-04	<1	<2	<2	<2	0.015			
E2	16-Sep-04	<1	<2	<2	<2	0.16			
E2	20-Apr-05	<1	<2	<2	<2	0.0015			
E2	18-May-05	<1	<2	<2	<2	0.0035			
E2	09-Jun-05	<1	<2	<2	<2	0.43			
E2-D	09-Jun-05	<1	<2	<2	<2	0.51			
E2-S	09-Jun-05	<0.5	<5	<0.5	<1.5	0.13			
E2	13-Jul-05	<1	<2	<2	<2	0.41			
E2	10-Aug-05	<1	<2	<2	<2	0.23			
E2	08-Sep-05	<1	<2	<2	<2	0.11			
E2	06-Oct-05	<1	<2	<2	<2	0.12			
E2	03-Nov-05	<1	<2	<2	<2	0.095			
E2	12-Dec-05	<1	<2	<2	<2	0.0012			
E2	10-Jan-06	<1	<2	<2	<2	0.037			
E2	15-Feb-06	<1	<2	<2	<2	0.027			
E2	16-Mar-06	<1	<2	<2	<2	0.13			
E2	11-Apr-06	<1	<2	<2	<2	0.16			
E2	03-May-06	<1	<2	<2	<2	0.14			
E2	06-Jun-06	<1	<2	<2	<2	0.059			
E2	21-Jul-06	<1	<2	<2	<2	0.16			
E2	28-Jul-06	<1	<2	<2	<2	0.068			
E2	04-Aug-06	<1	<2	<2	<2	0.085			
E2	11-Aug-06	<1	<2	<2	<2	0.051			
E2	16-Aug-06	<1	<2	<2	<2	0.064			
E2	24-Aug-06	<1	<2	<2	<2	0.05			
E2	31-Aug-06	<1	<2	<2	<2	0.041			
E2	06-Sep-06	<1	<2	<2	<2	0.038			
E2	13-Sep-06	<1	<2	<2	<2	0.03			
E2	21-Sep-06	<1	<2	<2	<2	0.052			
E2	27-Sep-06	<1	<2	<2	<2	0.018			
E2	06-Oct-06	<1	<2	<2	<2	0.013			
E2	12-Oct-06	<1	<2	<2	<2	0.028			
E2	19-Oct-06	<1	<2	<2	<2	0.016			
E2	25-Oct-06	<1	<2	<2	<2	0.0061			

## Appendix B

Summary of Historical Groundwater Analytical Results and Groundwater Elevations  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Methane (mg/L)	Estimated Thermogenic Methane (mg/L)	DTW (ft)	Groundwater Elevation (ft-msl)
E2-D	25-Oct-06	<1	<2	<2	<2	0.0098			
E2-S	25-Oct-06	<0.25	<0.25	<0.25	<0.5	0.00274			
E2	01-Nov-06	<1	<2	<2	<2	0.0076			
E2	17-Nov-06	<1	<2	<2	<2	0.0025			
E2	06-Dec-06	<1	<2	<2	<2	0.0067			
E2	03-Jan-07	<1	<2	<2	<2	0.0075			
E2	17-Jan-07	<1	<2	<2	<2	0.0095			
E2	05-Feb-07	<1	<2	<2	<2	0.011			
E2	22-Feb-07	<1	<2	<2	<2	0.024			
E2	07-Mar-07	<1	<2	<2	<2	0.02			
E2	13-Mar-07	<1	<2	<2	<2	0.018			
E2	26-Mar-07	<1	<2	<2	<2	0.032			
E2	11-Apr-07	<1	<2	<2	<2	0.049			
E2	25-Apr-07	<0.5	<5	<0.5	NS	0.055			
E2	08-May-07	<0.5	<5	<0.5	NS	0.054			
E2	30-May-07	<1	<2	<2	<2	0.012			
E2	13-Jun-07	<1	<2	<2	<2	0.0095			
E2	22-Jun-07	<1	<2	<2	<2	0.0096			
E2	05-Jul-07	<1	<2	<2	<2	0.017			
E2	20-Jul-07	<1	<2	<2	<2	0.047			
E2	02-Aug-07	<1	<2	<2	<2	0.082			
E2	15-Aug-07	<1	<2	<2	<2	0.1			
E2	10-Sep-07	<1	<2	<2	<2	0.043			
E2	24-Sep-07	<1	<2	<2	<2	0.11			
E2	09-Oct-07	<1	<2	<2	<2	<0.0008			
E2	24-Oct-07	<0.5	<5	<0.5	<2	<0.0008			
EDC-1	02-Nov-07	<1	<2	<2	<2	0.0041			
EDC-2	02-Nov-07	<0.5	<5	<0.5	NS	0.0089			
E2	07-Nov-07	<0.5	<5	<0.5	<2	<0.0008			
E2	20-Nov-07	<1	<2	<2	<2	<0.0008			
E2	04-Dec-07	<1	<2	<2	<2	<0.0008			
E2	18-Dec-07	<1	<2	<2	<2	<0.0008			
E2	03-Jan-08	<1	<2	<2	<2	0.012			
E2	04-Mar-08	<1	<2	<2	<2	0.0095			
EICH1	21-May-08	<0.5	<5	<0.5	<1.5	<0.01			
ECH2WW	29-Sep-08	<1	<2	<2	<2	<0.0008			
EICH1	01-Dec-08	<0.5	<5	<0.5	<1.5	<0.010			
EICH2	16-Mar-09	<1	<2	<2	<2	<0.0008			
EICH2	15-Jun-09	<1	<2	<2	<2	0.087			
EICH2WW	16-Sep-09	<1	<2	<2	<2	0.1			
EICH2	16-Dec-09	<1	<2	<2	<2	<0.0008			
EICH2	30-Mar-10	<1	<2	<2	<2	0.0254			
EICH2	29-Jun-10	<1	<2	<2	<2	0.014			
LANGWW	17-Sep-09	<1	<2	<2	<2	<0.0008			
<b>Bold - indicates value exceeds state standard</b>				<sup>a</sup> - Resampled due to suspected laboratory error					
mg/l - milligrams/liter		DTW - depth to water below measuring point				ft-msl - feet above mean sea level			
ug/l - micrograms/liter		<b>ft - feet</b>							
Total number of all groundwater samples over all dates = 1160						Blank cell - indicates not analyzed or not obtained			

## **APPENDIX C**

**Historical Surface-Water Results  
included as .pdf file on CD in back**



## Appendix C

Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000		
DCS-1	13-Apr-04	<1	<2	<2	<2	0.0055	
DCS-1	14-Apr-04	<1	<2	<2	<2	0.0039	
DCS-1	15-Apr-04	<1	<2	<2	<2	0.0077	
DCS-1	16-Apr-04	<1	<2	<2	<2	0.011	
DCS-1	17-Apr-04	<1	<2	<2	<2	0.015	
DCS-1	18-Apr-04	<1	<2	<2	<2	0.018	
DCS-1	19-Apr-04	<1	<2	<2	<2	0.0031	
DCS-1	26-Apr-04	<1	<2	<2	<2	0.003	
DCS-1	29-Apr-04	<1	<2	<2	<2	0.0015	
DCS-1	03-May-04	<1	<2	<2	<2	0.0011	
DCS-1	02-Jun-04	<1	<2	<2	<2	0.0013	
DCS-1	08-Jul-04	<1	<2	<2	<2	0.0016	
DCS-1	03-Aug-04	<1	<2	<2	<2	0.0025	
DCS-1	14-Sep-04	<1	<2	<2	<2	0.0014	
DCS-1	12-Oct-04	<1	<2	<2	<2	0.02	
DCS-1	26-Oct-04	<1	<2	<2	<2	0.026	
DCS-1	27-Oct-04	<1	<2	<2	<2	0.021	
DCS-1	28-Oct-04	<1	<2	<2	<2	0.023	
DCS-1	29-Oct-04	<1	<2	<2	<2	0.027	
DCS-1	30-Oct-04	<1	<2	<2	<2	0.026	
DCS-1	31-Oct-04	<1	<2	<2	<2	0.028	
DCS-1	01-Nov-04	<1	<2	<2	<2	0.027	
DCS-1	02-Nov-04	<1	<2	<2	<2	0.05	
DCS-1	03-Nov-04	<1	<2	<2	<2	0.029	
DCS-1	04-Nov-04	<1	<2	<2	<2	0.042	
DCS-1	05-Nov-04	<1	<2	<2	<2	0.035	
DCS-1	06-Nov-04	<1	<2	<2	<2	0.037	
DCS-1	07-Nov-04	<1	<2	<2	<2	0.032	
DCS-1	08-Nov-04	<1	<2	<2	<2	0.018	
DCS-1	09-Nov-04	<1	<2	<2	<2	0.022	
DCS-1	10-Nov-04	<1	<2	<2	<2	0.024	
DCS-1	11-Nov-04	<1	<2	<2	<2	0.026	
DCS-1	12-Nov-04	<1	<2	<2	<2	0.028	
DCS-1	19-Nov-04	<1	<2	<2	<2	0.033	
DCS-1	23-Nov-04	<1	<2	<2	<2	0.057	
DCS-1	02-Dec-04	<1	<2	<2	<2	0.086	
DCS-1	09-Dec-04	<1	<2	<2	<2	0.002	
DCS-1	15-Dec-04	<1	<2	<2	<2	0.0019	
DCS-1	20-Dec-04	<1	<2	<2	<2	0.002	
DCS-1	23-Dec-04	<1	<2	<2	<2	0.0013	
DCS-1	06-Jan-05	<1	<2	<2	<2	0.0015	
DCS-1	10-Jan-05	<1	<2	<2	<2	0.0022	

## Appendix C

Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000		
DCS-1	10-Jan-05	<1	<2	<2	<2	0.0023	
DCS-1	10-Jan-05	<0.5	<5	<0.5	NA	<0.01	
DCS-1	20-Jan-05	<1	<2	<2	<2	0.0013	
DCS-1	26-Jan-05	<1	<2	<2	<2	0.00095	
DCS-1	04-Feb-05	<1	<2	<2	<2	0.0013	
DCS-1	07-Feb-05	<1	<2	<2	<2	0.0013	
DCS-1	16-Feb-05	<1	<2	<2	<2	0.0013	
DCS-1	24-Feb-05	<1	<2	<2	<2	0.0011	
DCS-1	03-Mar-05	<1	<2	<2	<2	0.0013	
DCS-1	07-Mar-05	<1	<2	<2	<2	0.0014	
DCS-1	07-Mar-05	<1	<2	<2	<2	0.0014	
DCS-1	07-Mar-05	<0.5	<5	<0.5	NA	<0.01	
DCS-1	18-Mar-05	<1	<2	<2	<2	0.0011	
DCS-1	23-Mar-05	<1	<2	<2	<2	0.0063	
DCS-1	29-Mar-05	<1	<2	<2	<2	<0.0008	
DCS-1	07-Apr-05	<1	<2	<2	<2	0.0062	
DCS-1	11-Apr-05	<1	<2	<2	<2	0.01	
DCS-1	20-Apr-05	<1	<2	<2	<2	<0.0008	
DCS-1	27-Apr-05	<1	<2	<2	<2	<0.0008	
DCS-1	05-May-05	<1	<2	<2	<2	<0.0008	
DCS-1	09-May-05	<1	<2	<2	<2	<0.0008	
DCS-1	18-May-05	<1	<2	<2	<2	<0.0008	
DCS-1	25-May-05	<1	<2	<2	<2	<0.0008	
DCS-1	02-Jun-05	<1	<2	<2	<2	0.0018	
DCS-1	08-Jun-05	<1	<2	<2	<2	0.0019	
DCS-1	15-Jun-05	<1	<2	<2	<2	0.0026	
DCS-1	21-Jun-05	<1	<2	<2	<2	0.0011	
DCS-1	30-Jun-05	<1	<2	<2	<2	0.0012	
DCS-1	07-Jul-05	<1	<2	<2	<2	0.0013	
DCS-1	11-Jul-05	<1	<2	<2	<2	0.0013	
DCS-1	21-Jul-05	<1	<2	<2	<2	0.0018	
DCS-1	27-Jul-05	<1	<2	<2	<2	0.0011	
DCS-1	03-Aug-05	<1	<2	<2	<2	0.0014	
DCS-1	08-Aug-05	<1	<2	<2	<2	0.0014	
DCS-1	16-Aug-05	<1	<2	<2	<2	0.0022	
DCS-1	24-Aug-05	<1	<2	<2	<2	0.0015	
DCS-1	02-Sep-05	<1	<2	<2	<2	0.0017	
DCS-1	09-Sep-05	<1	<2	<2	<2	0.0021	
DCS-1	13-Sep-05	<1	<2	<2	<2	0.0014	
DCS-1	22-Sep-05	<1	<2	<2	<2	<0.0008	
DCS-1	29-Sep-05	<1	<2	<2	<2	<0.0008	
DCS-1	06-Oct-05	<1	<2	<2	<2	0.006	

## Appendix C

Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000		
DCS-1	10-Oct-05	<1	<2	<2	<2	0.0015	
DCS-1	20-Oct-05	<1	<2	<2	<2	0.0063	
DCS-1	27-Oct-05	<1	<2	<2	<2	0.0061	
DCS-1	03-Nov-05	<1	<2	<2	<2	0.0012	
DCS-1	07-Nov-05	<1	<2	<2	<2	0.0012	
DCS-1	17-Nov-05	<1	<2	<2	<2	0.0011	
DCS-1	22-Nov-05	<1	<2	<2	<2	0.0017	
DCS-1	29-Nov-05	<1	<2	<2	<2	0.0016	
DCS-1	06-Dec-05	<1	<2	<2	<2	0.0013	
DCS-1	14-Dec-05	<1	<2	<2	<2	0.0014	
DCS-1	21-Dec-05	<1	<2	<2	<2	<0.0008	
DCS-1	29-Dec-05	<1	<2	<2	<2	<0.0008	
DCS-1	05-Jan-06	<1	<2	<2	<2	<0.0008	
DCS-1	09-Jan-06	<1	<2	<2	<2	<0.0008	
DCS-1	18-Jan-06	<1	<2	<2	<2	<0.0008	
DCS-1	24-Jan-06	<1	<2	<2	<2	0.0011	
DCS-1	01-Feb-06	<1	<2	<2	<2	0.00089	
DCS-1	09-Feb-06	<0.5	<1	<1	NA	0.003	
DCS-1	13-Feb-06	<0.5	<1	<1	NA	<0.0008	
DCS-1	22-Feb-06	<1	<2	<2	<2	0.00081	
DCS-1	01-Mar-06	<1	<2	<2	<2	<0.0008	
DCS-1	09-Mar-06	<1	<2	<2	<2	0.00084	
DCS-1	14-Mar-06	<1	<2	<2	<2	<0.0008	
DCS-1	22-Mar-06	<1	<2	<2	<2	0.0017	
DCS-1	30-Mar-06	<1	<2	<2	<2	<0.0008	
DCS-1	05-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-1	10-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-1	20-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-1	27-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-1	04-May-06	<1	<2	<2	<2	<0.0008	
DCS-1	09-May-06	<1	<2	<2	<2	<0.0008	
DCS-1	13-Jun-06	<1	<2	<2	<2	0.0016	
DCS-1	05-Sep-06	<1	<5	<2	<2	0.0019	
DCS-1	04-Dec-06	<1	<5	<2	<2	0.0015	
DCS-1	04-Dec-06	<0.25	<0.25	<0.25	NA	0.0005	
DCS-1	12-Mar-07	<1	<5	<2	<2	<0.0008	
DCS-1	21-Jun-07	<1	<2	<2	<2	<0.0008	
DCS-1	13-Sep-07	<1	<2	<2	<2	0.0018	
DCS-1	17-Dec-07	<1	<2	<2	<2	0.0015	
DCS-1	03-Mar-08	<1	<2	<2	<2	<0.0008	
DCS-1	18-Jun-08	<1	<2	<2	<2	0.0012	
DCS-1	29-Sep-08	<1	<2	<2	<2	0.0019	

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Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000		
DCS-1	10-Dec-08	<1	<2	<2	<2	<0.0008	
DCS-1	17-Mar-09	<1	<2	<2	<2	<0.0008	
DCS-1	17-Mar-09	<1	<2	<2	<2	<0.0008	
DCS-1	17-Mar-09	<1	<1	<1	<1	<0.001	
DCS-1	16-Jun-09	<1	<2	<2	<2	0.0015	
DCS-1	17-Sep-09	<1	<2	<2	<2	0.0015	
DCS-1	16-Dec-09	<1	<2	<2	<2	0.0013	
DCS-1	30-Mar-10	<1	<2	<2	<2	0.00094	
DCS-1	29-Jun-10	<1	2.6	<2	<2	0.00186	
DCS-2	13-Apr-04	1.4	<2	<2	<2	0.1	
DCS-2	14-Apr-04	1.1	<2	<2	<2	0.11	
DCS-2	15-Apr-04	1.6	<2	<2	<2	0.12	
DCS-2	16-Apr-04	3.5	2.6	<2	<2	0.24	
DCS-2	17-Apr-04	3.5	2.6	<2	<2	0.28	
DCS-2	18-Apr-04	2.9	2.1	<2	<2	0.19	
DCS-2	19-Apr-04	<1	<2	<2	<2	0.034	
DCS-2	26-Apr-04	<1	<2	<2	<2	0.027	
DCS-2	29-Apr-04	<1	<2	<2	<2	0.0025	
DCS-2	03-May-04	<1	<2	<2	<2	0.007	
DCS-2	02-Jun-04	<1	<2	<2	<2	0.0027	
DCS-2	09-Jun-04	<1	<2	<2	<2	0.0028	
DCS-2	17-Jun-04	<1	<2	<2	<2	0.0023	
DCS-2	24-Jun-04	<1	<2	<2	<2	0.015	
DCS-2	30-Jun-04	<1	<2	<2	<2	0.0052	
DCS-2	08-Jul-04	<1	<2	<2	<2	0.0064	
DCS-2	15-Jul-04	<1	<2	<2	<2	0.0065	
DCS-2	22-Jul-04	<1	<2	<2	<2	0.0077	
DCS-2	29-Jul-04	<1	<2	<2	<2	0.0074	
DCS-2	03-Aug-04	<1	<2	<2	<2	0.011	
DCS-2	11-Aug-04	<1	<2	<2	<2	0.014	
DCS-2	17-Aug-04	1.9	<2	<2	<2	0.012	
DCS-2	14-Sep-04	<1	<2	<2	<2	0.013	
DCS-2	12-Oct-04	4.3	<2	<2	<2	0.36	
DCS-2	12-Oct-04	4.1	<2	<2	<2	0.36	
DCS-2	12-Oct-04	3.6	<2	<2	NA	0.18	
DCS-2	26-Oct-04	2.9	<2	<2	<2	0.29	
DCS-2	27-Oct-04	2.2	<2	<2	<2	0.18	
DCS-2	28-Oct-04	2.5	<2	<2	<2	0.28	
DCS-2	29-Oct-04	2.4	<2	<2	<2	0.25	
DCS-2	30-Oct-04	3.2	<2	<2	<2	0.28	
DCS-2	31-Oct-04	1.3	<2	<2	<2	0.18	

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Encana, West Divide Creek Seep  
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Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000		
DCS-2	01-Nov-04	3.5	<2	<2	<2	0.33	
DCS-2	02-Nov-04	4.1	<2	<2	<2	0.59	
DCS-2	03-Nov-04	3.3	<2	<2	<2	0.32	
DCS-2	04-Nov-04	4.4	<2	<2	<2	0.61	
DCS-2	05-Nov-04	<b>5.9</b>	<2	<2	<2	0.56	
DCS-2	06-Nov-04	4.4	<2	<2	<2	0.46	
DCS-2	07-Nov-04	4.2	<2	<2	<2	0.44	
DCS-2	08-Nov-04	3	<2	<2	<2	0.18	
DCS-2	09-Nov-04	3.7	<2	<2	<2	0.29	
DCS-2	10-Nov-04	4.5	<2	<2	<2	0.37	
DCS-2	11-Nov-04	3.3	<2	<2	<2	0.28	
DCS-2	12-Nov-04	<1	<2	<2	<2	0.3	
DCS-2	19-Nov-04	2.8	<2	<2	<2	0.3	
DCS-2	23-Nov-04	<b>5.1</b>	<2	<2	<2	0.57	
DCS-2	02-Dec-04	2.4	<2	<2	<2	0.42	
DCS-2	09-Dec-04	<1	<2	<2	<2	0.059	
DCS-2	15-Dec-04	<1	<2	<2	<2	0.035	
DCS-2	20-Dec-04	<b>360</b>	130	16	NA	12	
DCS-2	23-Dec-04	<1	<2	<2	<2	0.018	
DCS-2	06-Jan-05	<1	<2	<2	<2	0.0055	
DCS-2	10-Jan-05	<1	<2	<2	<2	0.041	
DCS-2	20-Jan-05	<1	<2	<2	<2	0.0031	
DCS-2	26-Jan-05	<1	<2	<2	<2	0.0035	
DCS-2	04-Feb-05	<1	<2	<2	<2	0.0038	
DCS-2	07-Feb-05	<1	<2	<2	<2	0.0035	
DCS-2	16-Feb-05	<1	<2	<2	<2	0.0045	0.003
DCS-2	24-Feb-05	<1	<2	<2	<2	0.0038	
DCS-2	03-Mar-05	<1	<2	<2	<2	0.003	
DCS-2	07-Mar-05	<1	<2	<2	<2	0.0048	
DCS-2	18-Mar-05	<1	<2	<2	<2	0.0035	
DCS-2	23-Mar-05	<1	<2	<2	<2	0.056	
DCS-2	29-Mar-05	<1	<2	<2	<2	0.0019	
DCS-2	07-Apr-05	1	<2	<2	<2	0.064	
DCS-2	11-Apr-05	2	<2	<2	<2	0.11	
DCS-2	20-Apr-05	<1	<2	<2	<2	<0.0008	
DCS-2	27-Apr-05	<1	<2	<2	<2	0.00088	
DCS-2	05-May-05	<1	<2	<2	<2	<0.0008	
DCS-2	09-May-05	<1	<2	<2	<2	0.0084	
DCS-2	09-May-05	<1	<2	<2	<2	0.0098	
DCS-2	18-May-05	<1	<2	<2	<2	0.001	
DCS-2	25-May-05	<1	<2	<2	<2	0.0018	
DCS-2	02-Jun-05	<1	<2	<2	<2	0.0023	

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Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000		
DCS-2	08-Jun-05	<1	<2	<2	<2	0.003	
DCS-2	15-Jun-05	<1	<2	<2	<2	0.0027	
DCS-2	21-Jun-05	<1	<2	<2	<2	0.0013	
DCS-2	30-Jun-05	<1	<2	<2	<2	0.0015	
DCS-2	07-Jul-05	<1	<2	<2	<2	0.0023	
DCS-2	11-Jul-05	<1	<2	<2	<2	0.0021	
DCS-2	21-Jul-05	<1	<2	<2	<2	0.0036	
DCS-2	27-Jul-05	<1	<2	<2	<2	0.0023	
DCS-2	08-Aug-05	<1	<2	<2	<2	0.0052	
DCS-2	16-Aug-05	<1	<2	<2	<2	0.006	
DCS-2	24-Aug-05	<1	<2	<2	<2	0.0044	
DCS-2	02-Sep-05	<1	<2	<2	<2	0.01	
DCS-2	09-Sep-05	<1	<2	<2	<2	0.014	
DCS-2	13-Sep-05	<1	<2	<2	<2	0.0063	
DCS-2	22-Sep-05	<1	<2	<2	<2	0.0012	
DCS-2	29-Sep-05	<1	<2	<2	<2	0.0014	
DCS-2	06-Oct-05	<1	<2	<2	<2	0.048	
DCS-2	10-Oct-05	<1	<2	<2	<2	0.012	
DCS-2	20-Oct-05	<1	<2	<2	<2	0.043	
DCS-2	27-Oct-05	<1	<2	<2	<2	0.051	
DCS-2	07-Nov-05	<1	<2	<2	<2	0.0022	
DCS-2	17-Nov-05	<1	<2	<2	<2	0.0038	
DCS-2	22-Nov-05	<1	<2	<2	<2	0.0096	
DCS-2	29-Nov-05	<1	<2	<2	<2	0.015	
DCS-2	06-Dec-05	<1	<2	<2	<2	0.005	
DCS-2	14-Dec-05	<1	<2	<2	<2	0.065	
DCS-2	21-Dec-05	<1	<2	<2	<2	0.0062	
DCS-2	29-Dec-05	<1	<2	<2	<2	0.0052	
DCS-2	05-Jan-06	<1	<2	<2	<2	0.0046	
DCS-2	09-Jan-06	<1	<2	<2	<2	0.0035	
DCS-2	18-Jan-06	<1	<2	<2	<2	0.01	
DCS-2	24-Jan-06	<1	<2	<2	<2	0.0098	
DCS-2	01-Feb-06	<1	<2	<2	<2	0.0049	
DCS-2	09-Feb-06	<0.5	<1	<1	<1	0.028	
DCS-2	13-Feb-06	<0.5	<1	<1	<1	-999.9	
DCS-2	22-Feb-06	<1	<2	<2	<2	0.0039	
DCS-2	01-Mar-06	<1	<2	<2	<2	<0.0008	
DCS-2	09-Mar-06	<1	<2	<2	<2	0.0021	
DCS-2	14-Mar-06	<1	<2	<2	<2	0.0014	
DCS-2	22-Mar-06	<1	<2	<2	<2	0.0052	
DCS-2	30-Mar-06	<1	<2	<2	<2	0.0012	
DCS-2	05-Apr-06	<1	<2	<2	<2	<0.0008	

## Appendix C

Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000		
DCS-2	10-Apr-06	<0.25	<0.25	<0.25	<0.25	0.00061	
DCS-2	10-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-2	20-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-2	27-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-2	04-May-06	<1	<2	<2	<2	<0.0008	
DCS-2	09-May-06	<1	<2	<2	<2	<0.0008	
DCS-2	13-Jun-06	<1	<2	<2	<2	0.019	
DCS-2	05-Sep-06	<1	<5	<2	<2	0.0054	0.000
DCS-2	05-Sep-06	<0.25	<0.25	<0.25	<0.25	0.00269	
DCS-2	04-Dec-06	<1	<5	<2	<2	0.014	0.007
DCS-2	12-Mar-07	<1	<5	<2	<2	0.0735	
DCS-2	12-Mar-07	<1	<5	<2	<2	0.072	0.042
DCS-2	12-Mar-07	<1	<5	<2	<2	0.11	
DCS-2	21-Jun-07	<1	<2	<2	<2	0.0019	
DCS-2	21-Jun-07	<0.25	<0.25	<0.25	<0.25	0.991	
DCS-2	13-Sep-07	<1	<2	<2	<2	0.02	
DCS-2	17-Dec-07	<1	<2	<2	<2	0.0018	
DCS-2	03-Mar-08	<1	<2	<2	<2	0.00096	
DCS-2	03-Mar-08	<1	<2	<2	<2	0.0011	0.000
DCS-2	03-Mar-08	<0.5	<0.5	<0.5	<0.5	0.000488	
DCS-2	18-Jun-08	<1	<2	<2	<2	0.0013	<0.0013
DCS-2	29-Sep-08	<1	<2	<2	<2	0.0059	<0.0059
DCS-2	10-Dec-08	<1	<2	<2	<2	0.0022	<0.0008
DCS-2	17-Mar-09	<1	<2	<2	<2	<0.0008	<0.0008
DCS-2	16-Jun-09	<1	<2	<2	<2	0.0017	<0.0008
DCS-2	17-Sep-09	<1	<2	<2	<2	0.0029	<0.0008
DCS-2	16-Dec-09	<1	<2	<2	<2	0.0032	0.002
DCS-2	30-Mar-10	<1	<2	<2	<2	0.0013	<0.0008
DCS-2	29-Jun-10	<1	<2	<2	<2	0.0013	
DCS-3	03-Nov-05	<1	<2	<2	<2	0.0035	
DCS-3	13-Apr-04	3.1	2.6	<2	<2	0.22	
DCS-3	14-Apr-04	2.3	<2	<2	<2	0.15	
DCS-3	15-Apr-04	<b>6.6</b>	5.2	<2	<2	0.35	
DCS-3	16-Apr-04	<b>5.7</b>	4.2	<2	<2	0.38	
DCS-3	16-Apr-04	<b>5.8</b>	4.2	<2	<2	0.33	
DCS-3	17-Apr-04	<b>9.1</b>	7	<2	<2	0.46	
DCS-3	18-Apr-04	<b>6.4</b>	4.7	<2	<2	0.4	
DCS-3	19-Apr-04	1.4	<2	<2	<2	0.098	
DCS-3	26-Apr-04	<1	<2	<2	<2	0.081	
DCS-3	29-Apr-04	<1	<2	<2	<2	0.018	
DCS-3	03-May-04	<1	<2	<2	<2	0.027	

## Appendix C

Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000		
DCS-3	26-May-04	<1	<2	<2	<2	0.023	
DCS-3	02-Jun-04	<1	<2	<2	<2	0.014	
DCS-3	09-Jun-04	<1	<2	<2	<2	0.019	
DCS-3	17-Jun-04	<1	<2	<2	<2	0.013	
DCS-3	24-Jun-04	<1	<2	<2	<2	0.0029	
DCS-3	30-Jun-04	<1	<2	<2	<2	0.02	
DCS-3	08-Jul-04	<1	<2	<2	<2	0.033	
DCS-3	15-Jul-04	<1	<2	<2	<2	0.041	
DCS-3	22-Jul-04	<1	<2	<2	<2	0.048	
DCS-3	29-Jul-04	<1	<2	<2	<2	0.046	
DCS-3	03-Aug-04	<1	<2	<2	<2	0.066	
DCS-3	11-Aug-04	<1	<2	<2	<2	0.072	
DCS-3	17-Aug-04	<1	<2	<2	<2	0.083	
DCS-3	14-Sep-04	<1	<2	<2	<2	0.084	0.049
DCS-3	12-Oct-04	<b>6.2</b>	<2	<2	<2	0.67	
DCS-3	26-Oct-04	<b>5.8</b>	<2	<2	<2	0.64	
DCS-3	27-Oct-04	<b>5.3</b>	<2	<2	<2	0.56	
DCS-3	28-Oct-04	4.4	<2	<2	<2	0.48	
DCS-3	29-Oct-04	4.3	<2	<2	<2	0.43	
DCS-3	30-Oct-04	<1	<2	<2	<2	0.59	
DCS-3	31-Oct-04	<b>6.3</b>	<2	<2	<2	0.58	
DCS-3	01-Nov-04	<b>5.5</b>	<2	<2	<2	0.62	
DCS-3	02-Nov-04	<b>6.5</b>	<2	<2	<2	1.2	
DCS-3	03-Nov-04	<b>5.7</b>	<2	<2	<2	0.53	
DCS-3	04-Nov-04	<b>5.4</b>	<2	<2	<2	0.74	
DCS-3	05-Nov-04	<b>9.7</b>	<2	<2	<2	0.86	
DCS-3	06-Nov-04	4.9	<2	<2	<2	0.71	
DCS-3	07-Nov-04	3.9	<2	<2	<2	0.6	
DCS-3	08-Nov-04	<b>5.1</b>	<2	<2	<2	0.39	
DCS-3	09-Nov-04	<b>5.7</b>	<2	<2	<2	0.58	
DCS-3	10-Nov-04	<b>5.4</b>	<2	<2	<2	0.57	
DCS-3	11-Nov-04	<b>7.1</b>	<2	<2	<2	0.63	
DCS-3	12-Nov-04	1.2	<2	<2	<2	0.77	
DCS-3	19-Nov-04	5.9	<2	<2	<2	0.74	
DCS-3	23-Nov-04	<b>9.2</b>	<2	<2	<2	0.98	
DCS-3	02-Dec-04	<b>12</b>	<2	<2	<2	1.5	
DCS-3	09-Dec-04	<0.5	<5	<0.5	NA	0.058	
DCS-3	09-Dec-04	<1	<2	<2	<2	0.079	
DCS-3	09-Dec-04	<1	<2	<2	<2	0.077	
DCS-3	15-Dec-04	<1	<2	<2	<2	0.006	
DCS-3	20-Dec-04	<1	<2	<2	<2	0.0052	
DCS-3	23-Dec-04	<1	<2	<2	<2	0.03	



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Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000		
DCS-3	06-Jan-05	<1	<2	<2	<2	0.039	
DCS-3	10-Jan-05	<1	<2	<2	<2	0.088	0.045
DCS-3	20-Jan-05	<1	<2	<2	<2	0.022	
DCS-3	26-Jan-05	<1	<2	<2	<2	0.018	
DCS-3	04-Feb-05	<1	<2	<2	<2	0.025	
DCS-3	07-Feb-05	<1	<2	<2	<2	0.02	
DCS-3	16-Feb-05	<1	<2	<2	<2	0.025	0.020
DCS-3	24-Feb-05	<1	<2	<2	<2	0.016	
DCS-3	03-Mar-05	<1	<2	<2	<2	0.014	
DCS-3	07-Mar-05	<1	<2	<2	<2	0.025	
DCS-3	18-Mar-05	<1	<2	<2	<2	0.023	
DCS-3	23-Mar-05	2.1	<2	<2	<2	0.13	
DCS-3	29-Mar-05	<1	<2	<2	<2	0.0089	
DCS-3	07-Apr-05	1.9	<2	<2	<2	0.17	
DCS-3	11-Apr-05	3.5	<2	<2	<2	0.29	
DCS-3	20-Apr-05	<1	<2	<2	<2	<0.0008	
DCS-3	27-Apr-05	<1	<2	<2	<2	0.0026	
DCS-3	05-May-05	<1	<2	<2	<2	0.0028	
DCS-3	09-May-05	<1	<2	<2	<2	0.015	0.002
DCS-3	18-May-05	<1	<2	<2	<2	0.00083	
DCS-3	25-May-05	<1	<2	<2	<2	0.00082	
DCS-3	02-Jun-05	<1	<2	<2	<2	0.0019	
DCS-3	08-Jun-05	<1	<2	<2	<2	0.0037	
DCS-3	08-Jun-05	<0.5	<5	<0.5	NA	<0.01	
DCS-3	08-Jun-05	<1	<2	<2	<2	0.0035	
DCS-3	15-Jun-05	<1	<2	<2	<2	0.0026	
DCS-3	21-Jun-05	<1	<2	<2	<2	0.0013	
DCS-3	30-Jun-05	<1	<2	<2	<2	0.0014	
DCS-3	07-Jul-05	<1	<2	<2	<2	0.0091	
DCS-3	11-Jul-05	<1	<2	<2	<2	0.0069	
DCS-3	11-Jul-05	<0.5	<5	0.53	NA	0.017	
DCS-3	11-Jul-05	<1	<2	<2	<2	0.006	
DCS-3	21-Jul-05	<1	<2	<2	<2	0.017	
DCS-3	27-Jul-05	<1	<2	<2	<2	0.0087	
DCS-3	03-Aug-05	<1	<2	<2	<2	0.016	
DCS-3	08-Aug-05	<1	<2	<2	<2	0.017	
DCS-3	16-Aug-05	<1	<2	<2	<2	0.017	
DCS-3	24-Aug-05	<1	<2	<2	<2	0.014	
DCS-3	02-Sep-05	<1	<2	<2	<2	0.026	
DCS-3	09-Sep-05	<1	<2	<2	<2	0.015	
DCS-3	13-Sep-05	<1	<2	<2	<2	0.017	0.012
DCS-3	22-Sep-05	<1	<2	<2	<2	0.0035	

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Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
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Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000		
DCS-3	29-Sep-05	<1	<2	<2	<2	0.003	
DCS-3	06-Oct-05	<1	<2	<2	<2	0.093	
DCS-3	10-Oct-05	<1	<2	<2	<2	0.015	
DCS-3	20-Oct-05	<1	<2	<2	<2	0.048	
DCS-3	27-Oct-05	<1	<2	<2	<2	0.068	
DCS-3	03-Nov-05	<1	<2	<2	<2	0.011	
DCS-3	07-Nov-05	<1	<2	<2	<2	0.0069	
DCS-3	17-Nov-05	<1	<2	<2	<2	0.0084	
DCS-3	22-Nov-05	<1	<2	<2	<2	0.035	
DCS-3	29-Nov-05	<1	<2	<2	<2	0.048	
DCS-3	06-Dec-05	<1	<2	<2	<2	0.0024	
DCS-3	14-Dec-05	<1	<2	<2	<2	0.061	
DCS-3	21-Dec-05	<1	<2	<2	<2	0.014	
DCS-3	29-Dec-05	<1	<2	<2	<2	0.014	
DCS-3	05-Jan-06	<1	<2	<2	<2	0.011	
DCS-3	09-Jan-06	<1	<2	<2	<2	0.019	0.019
DCS-3	18-Jan-06	<1	<2	<2	<2	0.02	
DCS-3	24-Jan-06	<1	<2	<2	<2	0.04	
DCS-3	01-Feb-06	<1	<2	<2	<2	0.023	
DCS-3	09-Feb-06	<0.5	<1	<1	<1	<0.002	
DCS-3	13-Feb-06	<0.5	<1	<1	<1	0.028	
DCS-3	22-Feb-06	<1	<2	<2	<2	0.015	
DCS-3	01-Mar-06	<1	<2	<2	<2	0.0011	
DCS-3	09-Mar-06	<1	<2	<2	<2	0.0055	
DCS-3	14-Mar-06	<1	<2	<2	<2	0.0028	
DCS-3	22-Mar-06	<1	<2	<2	<2	0.01	
DCS-3	30-Mar-06	<1	<2	<2	<2	0.0011	
DCS-3	05-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-3	10-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-3	20-Apr-06	<1	<2	<2	<2	0.0005	
DCS-3	27-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-3	04-May-06	<1	<2	<2	<2	<0.0008	
DCS-3	09-May-06	<1	<2	<2	<2	<0.0008	0.000
DCS-3	09-May-06	<0.5	<0.5	<0.5	<0.5	0.000849	
DCS-3	09-May-06	<1	<2	<2	<2	<0.0008	
DCS-3	13-Jun-06	<1	<2	<2	<2	0.005	
DCS-3	05-Sep-06	<1	<5	<2	<2	0.015	0.009
DCS-3	04-Dec-06	<1	<5	<2	<2	0.0061	0.000
DCS-3	12-Mar-07	<1	<5	<2	<2	0.0081	0.000
DCS-3	21-Jun-07	<1	<2	<2	<2	0.00082	
DCS-3	13-Sep-07	<1	<2	<2	<2	0.0025	
DCS-3	17-Dec-07	<0.5	<5	<0.5	<2	0.00371	

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Encana, West Divide Creek Seep  
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Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000		
DCS-3	17-Dec-07	<1	<2	<2	<2	0.0032	
DCS-3	03-Mar-08	<1	<2	<2	<2	0.0021	0.000
DCS-3	18-Jun-08	<1	<2	<2	<2	0.001	<0.001
DCS-3	29-Sep-08	<1	<2	<2	<2	0.015	0.008
DCS-3	10-Dec-08	<1	<2	<2	<2	0.067	<0.0008
DCS-3	17-Mar-09	<1	<2	<2	<2	<0.0008	<0.0008
DCS-3	16-Jun-09	<1	<2	<2	<2	0.0014	
DCS-3	16-Jun-09	<1	<2	<2	<2	0.0014	
DCS-3	17-Sep-09	<1	<2	<2	<2	0.0017	
DCS-3	16-Dec-09	<1	<2	<2	<2	0.0016	0.001
DCS-3	30-Mar-10	<1	<2	<2	<2	0.001	
DCS-3	29-Jun-10	<1	<2	<2	<2	0.001	
DCS-4	13-Apr-04	<1	<2	<2	<2	0.11	
DCS-4	14-Apr-04	<1	<2	<2	<2	0.09	
DCS-4	15-Apr-04	1.7	<2	<2	<2	0.15	
DCS-4	16-Apr-04	1.4	<2	<2	<2	0.14	
DCS-4	17-Apr-04	2	<2	<2	<2	0.18	
DCS-4	18-Apr-04	1.7	<2	<2	<2	0.17	
DCS-4	19-Apr-04	<1	<2	<2	<2	0.058	
DCS-4	26-Apr-04	<1	<2	<2	<2	0.043	
DCS-4	29-Apr-04	<1	<2	<2	<2	0.012	
DCS-4	03-May-04	<1	<2	<2	<2	0.013	
DCS-4	02-Jun-04	<1	<2	<2	<2	0.006	
DCS-4	08-Jul-04	<1	<2	<2	<2	0.014	
DCS-4	03-Aug-04	<1	<2	<2	<2	0.022	
DCS-4	14-Sep-04	<1	<2	<2	<2	0.027	
DCS-4	12-Oct-04	1	<2	<2	<2	0.13	
DCS-4	26-Oct-04	1.1	<2	<2	<2	0.15	
DCS-4	27-Oct-04	<1	<2	<2	<2	0.11	
DCS-4	28-Oct-04	<1	<2	<2	<2	0.13	
DCS-4	29-Oct-04	1.1	<2	<2	<2	0.13	
DCS-4	30-Oct-04	1.3	<2	<2	<2	0.15	
DCS-4	31-Oct-04	1.2	<2	<2	<2	0.12	
DCS-4	01-Nov-04	1.2	<2	<2	<2	0.13	
DCS-4	02-Nov-04	1.9	<2	<2	<2	0.3	
DCS-4	03-Nov-04	1.3	<2	<2	<2	0.16	
DCS-4	04-Nov-04	1.7	<2	<2	<2	0.21	
DCS-4	05-Nov-04	1.5	<2	<2	<2	0.15	
DCS-4	06-Nov-04	1.3	<2	<2	<2	0.17	
DCS-4	07-Nov-04	1.3	<2	<2	<2	0.16	
DCS-4	08-Nov-04	1	<2	<2	<2	0.077	

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Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000		
DCS-4	09-Nov-04	1	<2	<2	<2	0.11	
DCS-4	10-Nov-04	<1	<2	<2	<2	0.1	
DCS-4	11-Nov-04	1	<2	<2	<2	0.1	
DCS-4	12-Nov-04	<b>9.8</b>	<2	<2	<2	0.12	
DCS-4	19-Nov-04	1.1	<2	<2	<2	0.14	
DCS-4	23-Nov-04	1.8	<2	<2	<2	0.26	
DCS-4	02-Dec-04	3	<2	<2	<2	0.5	
DCS-4	09-Dec-04	<1	<2	<2	<2	0.029	
DCS-4	15-Dec-04	<1	<2	<2	<2	0.016	
DCS-4	20-Dec-04	<1	<2	<2	<2	0.0023	
DCS-4	23-Dec-04	<1	<2	<2	<2	0.0097	
DCS-4	06-Jan-05	<1	<2	<2	<2	0.019	
DCS-4	10-Jan-05	<1	<2	<2	<2	0.0046	
DCS-4	20-Jan-05	<1	<2	<2	<2	0.0091	
DCS-4	26-Jan-05	<1	<2	<2	<2	0.01	
DCS-4	04-Feb-05	<1	<2	<2	<2	0.0087	
DCS-4	07-Feb-05	<0.5	<5	<0.5	NA	<0.01	
DCS-4	07-Feb-05	<1	<2	<2	<2	0.0096	
DCS-4	07-Feb-05	<1	<2	<2	<2	0.0096	
DCS-4	16-Feb-05	<1	<2	<2	<2	0.01	
DCS-4	24-Feb-05	<1	<2	<2	<2	0.016	
DCS-4	03-Mar-05	<1	<2	<2	<2	0.0069	
DCS-4	07-Mar-05	<1	<2	<2	<2	0.011	
DCS-4	18-Mar-05	<1	<2	<2	<2	0.0075	
DCS-4	23-Mar-05	<1	<2	<2	<2	0.033	
DCS-4	29-Mar-05	<1	<2	<2	<2	0.0042	
DCS-4	07-Apr-05	<1	<2	<2	<2	0.027	
DCS-4	11-Apr-05	<1	<2	<2	<2	0.057	
DCS-4	20-Apr-05	<1	<2	<2	<2	<0.0008	
DCS-4	27-Apr-05	<1	<2	<2	<2	0.0014	
DCS-4	05-May-05	<1	<2	<2	<2	0.0016	
DCS-4	09-May-05	<1	<2	<2	<2	0.00096	
DCS-4	18-May-05	<1	<2	<2	<2	0.0012	
DCS-4	25-May-05	<1	<2	<2	<2	0.0012	
DCS-4	02-Jun-05	<1	<2	<2	<2	0.003	
DCS-4	08-Jun-05	<1	<2	<2	<2	0.0054	
DCS-4	15-Jun-05	<1	<2	<2	<2	0.0033	
DCS-4	21-Jun-05	<1	<2	<2	<2	0.0022	
DCS-4	30-Jun-05	<1	<2	<2	<2	0.0027	
DCS-4	07-Jul-05	<1	<2	<2	<2	0.0042	
DCS-4	11-Jul-05	<1	<2	<2	<2	0.0041	
DCS-4	21-Jul-05	<1	<2	<2	<2	0.0075	

## Appendix C

Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000		
DCS-4	27-Jul-05	<1	<2	<2	<2	0.0035	
DCS-4	03-Aug-05	<1	<2	<2	<2	0.0077	
DCS-4	08-Aug-05	<1	<2	<2	<2	0.0077	
DCS-4	16-Aug-05	<1	<2	<2	<2	0.0089	
DCS-4	24-Aug-05	<1	<2	<2	<2	0.0068	
DCS-4	02-Sep-05	<1	<2	<2	<2	0.0089	
DCS-4	09-Sep-05	<1	<2	<2	<2	0.0072	
DCS-4	13-Sep-05	<1	<2	<2	<2	0.0084	
DCS-4	22-Sep-05	<1	<2	<2	<2	0.0013	
DCS-4	29-Sep-05	<1	<2	<2	<2	0.0019	
DCS-4	06-Oct-05	<1	<2	<2	<2	0.035	
DCS-4	10-Oct-05	<1	<2	<2	<2	0.0085	
DCS-4	20-Oct-05	<1	<2	<2	<2	0.022	
DCS-4	27-Oct-05	<1	<2	<2	<2	0.025	
DCS-4	03-Nov-05	<1	<2	<2	<2	0.0063	
DCS-4	07-Nov-05	<1	<2	<2	<2	0.0044	
DCS-4	07-Nov-05	<1	<2	<2	<2	0.0034	
DCS-4	07-Nov-05	<0.5	<5	<0.5	NA	<0.01	
DCS-4	17-Nov-05	<1	<2	<2	<2	0.0049	
DCS-4	22-Nov-05	<1	<2	<2	<2	0.014	
DCS-4	29-Nov-05	<1	<2	<2	<2	0.024	
DCS-4	06-Dec-05	<1	<2	<2	<2	0.012	
DCS-4	14-Dec-05	<1	<2	<2	<2	0.011	
DCS-4	21-Dec-05	<1	<2	<2	<2	0.0038	
DCS-4	29-Dec-05	<1	<2	<2	<2	0.0038	
DCS-4	05-Jan-06	<1	<2	<2	<2	0.0042	
DCS-4	09-Jan-06	<0.5	<1	<2	<1	0.005	
DCS-4	09-Jan-06	<1	<2	<2	<2	0.0064	
DCS-4	09-Jan-06	<1	<2	<2	<2	0.0064	
DCS-4	18-Jan-06	<1	<2	<2	<2	0.0057	
DCS-4	24-Jan-06	<1	<2	<2	<2	0.019	
DCS-4	01-Feb-06	<1	<2	<2	<2	0.0059	
DCS-4	09-Feb-06	<0.5	<1	<1	<1	0.015	
DCS-4	13-Feb-06	<0.5	<1	<1	<1	<0.002	
DCS-4	22-Feb-06	<1	<2	<2	<2	0.0054	
DCS-4	01-Mar-06	<1	<2	<2	<2	0.0013	
DCS-4	09-Mar-06	<1	<2	<2	<2	0.0032	
DCS-4	14-Mar-06	<1	<2	<2	<2	0.004	
DCS-4	22-Mar-06	<1	<2	<2	<2	0.008	
DCS-4	30-Mar-06	<1	<2	<2	<2	0.0018	
DCS-4	05-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-4	10-Apr-06	<1	<2	<2	<2	<0.0008	

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Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000		
DCS-4	20-Apr-06	<1	<2	<2	<2	0.00078	
DCS-4	27-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-4	04-May-06	<1	<2	<2	<2	<0.0008	
DCS-4	09-May-06	<1	<2	<2	<2	0.00081	
DCS-4	13-Jun-06	<1	<2	<2	<2	0.0038	
DCS-4	05-Sep-06	<1	<5	<2	<2	0.0096	
DCS-4	04-Dec-06	<1	<5	<2	<2	0.014	
DCS-4	12-Mar-07	<1	<5	<2	<2	0.0014	
DCS-4	21-Jun-07	<1	<2	<2	<2	0.0014	
DCS-4	13-Sep-07	<1	<2	<2	<2	0.0058	
DCS-4	17-Dec-07	<1	<2	<2	<2	0.0078	
DCS-4	03-Mar-08	<1	<2	<2	<2	0.0022	
DCS-4	18-Jun-08	<1	<2	<2	<2	0.0028	
DCS-4	29-Sep-08	<1	<2	<2	<2	0.0098	
DCS-4	29-Sep-08	<1	<2	<2	<2	0.0098	
DCS-4	10-Dec-08	<1	<2	<2	<2	0.006	
DCS-4	17-Mar-09	<1	<2	<2	<2	0.00096	
DCS-4	16-Jun-09	<1	<2	<2	<2	0.0029	
DCS-4	17-Sep-09	<1	<2	<2	<2	0.0042	
DCS-4	16-Dec-09	<1	<2	<2	<2	0.0063	
DCS-4	30-Mar-10	<1	<2	<2	<2	0.00263	
DCS-4	29-Jun-10	<1	<2	<2	<2	0.00165	
DCS-5	13-Apr-04	<1	<2	<2	<2	0.11	
DCS-5	14-Apr-04	<1	<2	<2	<2	0.086	
DCS-5	15-Apr-04	1.3	<2	<2	<2	0.13	
DCS-5	16-Apr-04	<1	<2	<2	<2	0.13	
DCS-5	17-Apr-04	1.3	<2	<2	<2	0.15	
DCS-5	18-Apr-04	1.2	<2	<2	<2	0.15	
DCS-5	19-Apr-04	<1	<2	<2	<2	0.057	
DCS-5	26-Apr-04	<1	<2	<2	<2	0.046	
DCS-5	29-Apr-04	<1	<2	<2	<2	0.014	
DCS-5	03-May-04	<1	<2	<2	<2	0.018	
DCS-5	26-May-04	<1	<2	<2	<2	0.015	
DCS-5	02-Jun-04	<1	<2	<2	<2	0.012	
DCS-5	08-Jul-04	<1	<2	<2	<2	0.016	
DCS-5	03-Aug-04	<1	<2	<2	<2	0.014	
DCS-5	14-Sep-04	<1	<2	<2	<2	0.017	
DCS-5	12-Oct-04	<1	<2	<2	<2	0.044	
DCS-5	26-Oct-04	<1	<2	<2	<2	0.055	
DCS-5	27-Oct-04	<1	<2	<2	<2	0.035	
DCS-5	28-Oct-04	<1	<2	<2	<2	0.028	

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Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000		
DCS-5	29-Oct-04	<1	<2	<2	<2	0.053	
DCS-5	30-Oct-04	<1	<2	<2	<2	0.047	
DCS-5	31-Oct-04	<1	<2	<2	<2	0.052	
DCS-5	01-Nov-04	<1	<2	<2	<2	0.049	
DCS-5	02-Nov-04	<1	<2	<2	<2	0.12	
DCS-5	03-Nov-04	<1	<2	<2	<2	0.072	
DCS-5	04-Nov-04	<1	<2	<2	<2	0.088	
DCS-5	05-Nov-04	<1	<2	<2	<2	0.064	
DCS-5	06-Nov-04	<1	<2	<2	<2	0.06	
DCS-5	07-Nov-04	<1	<2	<2	<2	0.054	
DCS-5	08-Nov-04	<1	<2	<2	<2	0.026	
DCS-5	09-Nov-04	<1	<2	<2	<2	0.35	
DCS-5	10-Nov-04	<1	<2	<2	<2	0.035	
DCS-5	11-Nov-04	<1	<2	<2	<2	0.039	
DCS-5	12-Nov-04	3.6	<2	<2	<2	0.048	
DCS-5	19-Nov-04	<1	<2	<2	<2	0.056	
DCS-5	23-Nov-04	<1	<2	<2	<2	0.11	
DCS-5	02-Dec-04	1.1	<2	<2	<2	0.18	
DCS-5	09-Dec-04	<1	<2	<2	<2	0.029	
DCS-5	15-Dec-04	<1	<2	<2	<2	0.017	
DCS-5	20-Dec-04	<1	<2	<2	<2	0.0034	
DCS-5	23-Dec-04	<1	<2	<2	<2	0.026	
DCS-5	06-Jan-05	<1	<2	<2	<2	0.02	
DCS-5	10-Jan-05	<1	<2	<2	<2	0.012	
DCS-5	20-Jan-05	<1	<2	<2	<2	0.0098	
DCS-5	26-Jan-05	<1	<2	<2	<2	0.013	
DCS-5	04-Feb-05	<1	<2	<2	<2	0.011	
DCS-5	07-Feb-05	<1	<2	<2	<2	0.012	
DCS-5	16-Feb-05	<1	<2	<2	<2	0.011	
DCS-5	24-Feb-05	<1	<2	<2	<2	0.014	
DCS-5	03-Mar-05	<1	<2	<2	<2	0.0086	
DCS-5	07-Mar-05	<1	<2	<2	<2	0.012	
DCS-5	18-Mar-05	<1	<2	<2	<2	0.0099	
DCS-5	23-Mar-05	<1	<2	<2	<2	0.021	
DCS-5	29-Mar-05	<1	<2	<2	<2	0.006	
DCS-5	07-Apr-05	<1	<2	<2	<2	0.014	
DCS-5	11-Apr-05	<1	<2	<2	<2	0.044	
DCS-5	20-Apr-05	<1	<2	<2	<2	0.00091	
DCS-5	27-Apr-05	<1	<2	<2	<2	0.0037	
DCS-5	05-May-05	<1	<2	<2	<2	0.0046	
DCS-5	09-May-05	<1	<2	<2	<2	0.0016	
DCS-5	18-May-05	<1	<2	<2	<2	0.0013	

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Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
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Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000		
DCS-5	25-May-05	<1	<2	<2	<2	0.0018	
DCS-5	02-Jun-05	<1	<2	<2	<2	0.0035	
DCS-5	08-Jun-05	<1	<2	<2	<2	0.0049	
DCS-5	15-Jun-05	<1	<2	<2	<2	0.0027	
DCS-5	21-Jun-05	<1	<2	<2	<2	0.0025	
DCS-5	30-Jun-05	<1	<2	<2	<2	0.0052	
DCS-5	07-Jul-05	<1	<2	<2	<2	0.0053	
DCS-5	11-Jul-05	<1	<2	<2	<2	0.0053	
DCS-5	21-Jul-05	<1	<2	<2	<2	0.0079	
DCS-5	27-Jul-05	<1	<2	<2	<2	0.0058	
DCS-5	03-Aug-05	<1	<2	<2	<2	0.0091	
DCS-5	08-Aug-05	<1	<2	<2	<2	0.011	
DCS-5	16-Aug-05	<1	<2	<2	<2	0.0098	
DCS-5	24-Aug-05	<1	<2	<2	<2	0.0074	
DCS-5	02-Sep-05	<1	<2	<2	<2	0.01	
DCS-5	09-Sep-05	<1	<2	<2	<2	0.009	
DCS-5	13-Sep-05	<1	<2	<2	<2	0.0076	
DCS-5	13-Sep-05	<0.5	<5	<0.5	NA	0.012	
DCS-5	13-Sep-05	<1	<2	<2	<2	0.0075	
DCS-5	22-Sep-05	<1	<2	<2	<2	0.002	
DCS-5	29-Sep-05	<1	<2	<2	<2	0.0035	
DCS-5	06-Oct-05	<1	<2	<2	<2	0.028	
DCS-5	10-Oct-05	<1	<2	<2	<2	0.015	
DCS-5	20-Oct-05	<1	<2	<2	<2	0.016	
DCS-5	27-Oct-05	<1	<2	<2	<2	0.018	
DCS-5	03-Nov-05	<1	<2	<2	<2	0.007	
DCS-5	07-Nov-05	<1	<2	<2	<2	0.005	
DCS-5	17-Nov-05	<1	<2	<2	<2	0.0068	
DCS-5	22-Nov-05	<1	<2	<2	<2	0.013	
DCS-5	29-Nov-05	<1	<2	<2	<2	0.023	
DCS-5	06-Dec-05	<1	<2	<2	<2	0.015	
DCS-5	14-Dec-05	<1	<2	<2	<2	0.012	
DCS-5	21-Dec-05	<1	<2	<2	<2	0.0055	
DCS-5	29-Dec-05	<1	<2	<2	<2	0.0048	
DCS-5	05-Jan-06	<1	<2	<2	<2	0.0068	
DCS-5	09-Jan-06	<1	<2	<2	<2	0.0072	
DCS-5	18-Jan-06	<1	<2	<2	<2	0.0074	
DCS-5	24-Jan-06	<1	<2	<2	<2	0.021	
DCS-5	01-Feb-06	<1	<2	<2	<2	0.007	
DCS-5	09-Feb-06	<0.5	<1	<1	<1	0.015	
DCS-5	13-Feb-06	<0.5	<1	<1	<1	<0.002	
DCS-5	13-Feb-06	<0.5	<1	<1	<1	0.009	



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Encana, West Divide Creek Seep  
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Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000		
DCS-5	13-Feb-06	<0.5	<0.5	<0.5	<0.5	0.013	
DCS-5	22-Feb-06	<1	<2	<2	<2	0.0073	
DCS-5	01-Mar-06	<1	<2	<2	<2	0.0019	
DCS-5	09-Mar-06	<1	<2	<2	<2	0.0041	
DCS-5	14-Mar-06	<1	<2	<2	<2	0.0052	
DCS-5	22-Mar-06	<1	<2	<2	<2	0.0085	
DCS-5	30-Mar-06	<1	<2	<2	<2	0.0025	
DCS-5	05-Apr-06	<1	<2	<2	<2	0.00089	
DCS-5	10-Apr-06	<1	<2	<2	<2	0.0009	
DCS-5	20-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-5	27-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-5	04-May-06	<1	<2	<2	<2	<0.0008	
DCS-5	09-May-06	<1	<2	<2	<2	0.00097	
DCS-5	13-Jun-06	<1	<2	<2	<2	0.0045	
DCS-5	13-Jun-06	<0.5	<0.5	<0.5	<0.5	0.00445	
DCS-5	05-Sep-06	<1	<5	<2	<2	0.01	
DCS-5	04-Dec-06	<1	<5	<2	<2	0.012	
DCS-5	12-Mar-07	<1	<5	<2	<2	0.0026	
DCS-5	21-Jun-07	<1	<2	<2	<2	0.0018	
DCS-5	13-Sep-07	<1	<2	<2	<2	0.0055	
DCS-5	17-Dec-07	<1	<2	<2	<2	0.0077	
DCS-5	04-Mar-08	<1	<2	<2	<2	0.0038	
DCS-5	18-Jun-08	<1	<2	<2	<2	0.0019	
DCS-5	29-Sep-08	<1	<2	<2	<2	0.008	
DCS-5	10-Dec-08	<1	<2	<2	<2	0.0066	
DCS-5	10-Dec-08	<1	<2	<2	<2	0.0062	
DCS-5	10-Dec-08	<1	<1	<1	<1	0.003	
DCS-5	17-Mar-09	<1	<2	<2	<2	0.0012	
DCS-5	16-Jun-09	<1	<2	<2	<2	0.0028	
DCS-5	17-Sep-09	<1	<2	<2	<2	0.0042	
DCS-5	16-Dec-09	<1	<2	<2	<2	0.006	
DCS-5	31-Mar-10	<1	<2	<2	<2	0.0013	
DCS-5	29-Jun-10	<1	<2	<2	<2	0.00176	
DCS-6	13-Apr-04	<1	<2	<2	<2	0.087	
DCS-6	14-Apr-04	<1	<2	<2	<2	0.063	
DCS-6	15-Apr-04	<1	<2	<2	<2	0.11	
DCS-6	16-Apr-04	<1	<2	<2	<2	0.083	
DCS-6	17-Apr-04	<1	<2	<2	<2	0.11	
DCS-6	18-Apr-04	<1	<2	<2	<2	0.093	
DCS-6	19-Apr-04	<1	<2	<2	<2	0.048	
DCS-6	26-Apr-04	<1	<2	<2	<2	0.035	

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Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
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Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000		
DCS-6	29-Apr-04	<1	<2	<2	<2	0.011	
DCS-6	29-Apr-04	<1	<2	<2	<2	0.015	
DCS-6	03-May-04	<1	<2	<2	<2	0.014	
DCS-6	02-Jun-04	<1	<2	<2	<2	0.0091	
DCS-6	08-Jul-04	<1	<2	<2	<2	0.014	
DCS-6	03-Aug-04	<1	<2	<2	<2	0.014	
DCS-6	14-Sep-04	<1	<2	<2	<2	0.031	
DCS-6	12-Oct-04	<1	<2	<2	<2	0.032	
DCS-6	26-Oct-04	<1	<2	<2	<2	0.049	
DCS-6	27-Oct-04	<1	<2	<2	<2	0.023	
DCS-6	28-Oct-04	<1	<2	<2	<2	0.06	
DCS-6	29-Oct-04	<1	<2	<2	<2	0.086	
DCS-6	30-Oct-04	<1	<2	<2	<2	0.034	
DCS-6	31-Oct-04	<1	<2	<2	<2	0.045	
DCS-6	01-Nov-04	<1	<2	<2	<2	0.24	
DCS-6	02-Nov-04	<1	<2	<2	<2	0.093	
DCS-6	03-Nov-04	<1	<2	<2	<2	0.16	
DCS-6	04-Nov-04	<1	<2	<2	<2	0.061	
DCS-6	05-Nov-04	<1	<2	<2	<2	0.039	
DCS-6	06-Nov-04	<1	<2	<2	<2	0.043	
DCS-6	07-Nov-04	<1	<2	<2	<2	0.039	
DCS-6	08-Nov-04	<1	<2	<2	<2	0.017	
DCS-6	09-Nov-04	<1	<2	<2	<2	0.034	
DCS-6	10-Nov-04	<1	<2	<2	<2	0.024	
DCS-6	11-Nov-04	<1	<2	<2	<2	0.026	
DCS-6	12-Nov-04	<1	<2	<2	<2	0.022	
DCS-6	19-Nov-04	<1	<2	<2	<2	0.035	
DCS-6	23-Nov-04	<1	<2	<2	<2	0.069	
DCS-6	02-Dec-04	1.5	<2	<2	<2	-88.8	
DCS-6	09-Dec-04	<1	<2	<2	<2	0.028	
DCS-6	15-Dec-04	<1	<2	<2	<2	0.018	
DCS-6	20-Dec-04	<1	<2	<2	<2	0.036	
DCS-6	23-Dec-04	<1	<2	<2	<2	0.021	
DCS-6	06-Jan-05	<1	<2	<2	<2	0.019	
DCS-6	10-Jan-05	<1	<2	<2	<2	0.011	
DCS-6	20-Jan-05	<1	<2	<2	<2	0.0086	
DCS-6	26-Jan-05	<1	<2	<2	<2	0.013	
DCS-6	04-Feb-05	<1	<2	<2	<2	0.0088	
DCS-6	07-Feb-05	<1	<2	<2	<2	0.0091	
DCS-6	16-Feb-05	<1	<2	<2	<2	0.011	
DCS-6	24-Feb-05	<1	<2	<2	<2	0.014	
DCS-6	03-Mar-05	<1	<2	<2	<2	0.0086	

## Appendix C

Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
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Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000		
DCS-6	07-Mar-05	<1	<2	<2	<2	0.013	
DCS-6	18-Mar-05	<1	<2	<2	<2	0.01	
DCS-6	23-Mar-05	<1	<2	<2	<2	0.023	
DCS-6	29-Mar-05	<1	<2	<2	<2	0.0052	
DCS-6	07-Apr-05	<1	<2	<2	<2	0.015	
DCS-6	11-Apr-05	<1	<2	<2	<2	0.034	
DCS-6	27-Apr-05	<1	<2	<2	<2	0.003	
DCS-6	05-May-05	<1	<2	<2	<2	0.0045	
DCS-6	09-May-05	<1	<2	<2	<2	0.0022	
DCS-6	18-May-05	<1	<2	<2	<2	0.0019	
DCS-6	25-May-05	<1	<2	<2	<2	0.0025	
DCS-6	02-Jun-05	<1	<2	<2	<2	0.0031	
DCS-6	08-Jun-05	<1	<2	<2	<2	0.0049	
DCS-6	15-Jun-05	<1	<2	<2	<2	0.0044	
DCS-6	21-Jun-05	<1	<2	<2	<2	0.0027	
DCS-6	30-Jun-05	<1	<2	<2	<2	0.0036	
DCS-6	07-Jul-05	<1	<2	<2	<2	0.0068	
DCS-6	11-Jul-05	<1	<2	<2	<2	0.0064	
DCS-6	21-Jul-05	<1	<2	<2	<2	0.012	
DCS-6	27-Jul-05	<1	<2	<2	<2	0.0066	
DCS-6	03-Aug-05	<1	<2	<2	<2	0.0081	
DCS-6	08-Aug-05	<1	<2	<2	<2	0.018	
DCS-6	16-Aug-05	<1	<2	<2	<2	0.016	
DCS-6	24-Aug-05	<1	<2	<2	<2	0.013	
DCS-6	02-Sep-05	<1	<2	<2	<2	0.013	
DCS-6	09-Sep-05	<1	<2	<2	<2	0.0086	
DCS-6	13-Sep-05	<1	<2	<2	<2	0.011	
DCS-6	22-Sep-05	<1	<2	<2	<2	0.0021	
DCS-6	29-Sep-05	<1	<2	<2	<2	0.0033	
DCS-6	06-Oct-05	<1	<2	<2	<2	0.027	
DCS-6	10-Oct-05	<1	<2	<2	<2	0.014	
DCS-6	10-Oct-05	<1	<2	<2	<2	0.015	
DCS-6	10-Oct-05	<0.5	<5	<0.5	<0.5	0.019	
DCS-6	20-Oct-05	<1	<2	<2	<2	0.014	
DCS-6	27-Oct-05	<1	<2	<2	<2	0.012	
DCS-6	03-Nov-05	<1	<2	<2	<2	0.0066	
DCS-6	07-Nov-05	<1	<2	<2	<2	0.0059	
DCS-6	17-Nov-05	<1	<2	<2	<2	0.007	
DCS-6	22-Nov-05	<1	<2	<2	<2	0.013	
DCS-6	29-Nov-05	<1	<2	<2	<2	0.021	
DCS-6	06-Dec-05	<1	<2	<2	<2	0.015	
DCS-6	06-Dec-05	<1	<2	<2	<2	0.014	

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Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000		
DCS-6	06-Dec-05	<0.5	<5	<0.5	NA	0.014	
DCS-6	14-Dec-05	<1	<2	<2	<2	0.011	
DCS-6	21-Dec-05	<1	<2	<2	<2	0.0064	
DCS-6	29-Dec-05	<1	<2	<2	<2	0.0026	
DCS-6	05-Jan-06	<1	<2	<2	<2	0.0056	
DCS-6	09-Jan-06	<1	<2	<2	<2	0.0078	
DCS-6	18-Jan-06	<1	<2	<2	<2	0.0066	
DCS-6	24-Jan-06	<1	<2	<2	<2	0.036	
DCS-6	01-Feb-06	<1	<2	<2	<2	0.0056	
DCS-6	09-Feb-06	<0.5	<1	<1	<1	0.016	
DCS-6	13-Feb-06	<0.5	<1	<1	<1	<0.002	
DCS-6	22-Feb-06	<1	<2	<2	<2	0.0066	
DCS-6	01-Mar-06	<1	<2	<2	<2	0.0019	
DCS-6	09-Mar-06	<1	<2	<2	<2	0.0056	
DCS-6	14-Mar-06	<0.25	<0.25	<0.25	<0.25	0.0143	
DCS-6	14-Mar-06	<1	<2	<2	<2	0.012	
DCS-6	14-Mar-06	<1	<2	<2	<2	0.012	
DCS-6	22-Mar-06	<1	<2	<2	<2	0.0096	
DCS-6	30-Mar-06	<1	<2	<2	<2	0.0058	
DCS-6	05-Apr-06	<1	<2	<2	<2	0.00089	
DCS-6	10-Apr-06	<1	<2	<2	<2	0.00089	
DCS-6	20-Apr-06	<1	<2	<2	<2	0.00098	
DCS-6	27-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-6	04-May-06	<1	<2	<2	<2	0.00084	
DCS-6	09-May-06	<1	<2	<2	<2	0.00083	
DCS-6	13-Jun-06	<1	<2	<2	<2	0.0054	
DCS-6	05-Sep-06	<1	<5	<2	<2	0.013	
DCS-6	04-Dec-06	<1	<5	<2	<2	0.013	
DCS-6	12-Mar-07	<1	<5	<2	<2	0.0035	
DCS-6	21-Jun-07	<1	<2	<2	<2	0.0025	
DCS-6	13-Sep-07	<1	<2	<2	<2	NA	
DCS-6	17-Dec-07	<1	<2	<2	<2	0.0078	
DCS-6	04-Mar-08	<1	<2	<2	<2	0.0047	
DCS-6	18-Jun-08	<1	<2	<2	<2	0.0029	
DCS-6	29-Sep-08	<1	<2	<2	<2	0.011	
DCS-6	10-Dec-08	<1	<2	<2	<2	0.085	
DCS-6	17-Mar-09	<1	<2	<2	<2	0.0011	
DCS-6	16-Jun-09	<1	<2	<2	<2	0.0056	
DCS-6	17-Sep-09	<1	<2	<2	<2	0.0051	
DCS-6	16-Dec-09	<1	<2	<2	<2	0.0077	
DCS-6	31-Mar-10	<1	<2	<2	<2	0.00153	
DCS-6	29-Jun-10	<1	<2	<2	<2	0.00174	

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Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000		
DCS-7	09-Dec-04	<1	<2	<2	<2	0.026	
DCS-7	15-Dec-04	<1	<2	<2	<2	0.016	
DCS-7	20-Dec-04	<1	<2	<2	<2	0.031	
DCS-7	23-Dec-04	<1	<2	<2	<2	0.019	
DCS-7	06-Jan-05	<1	<2	<2	<2	0.018	
DCS-7	10-Jan-05	<1	<2	<2	<2	0.01	
DCS-7	20-Jan-05	<1	<2	<2	<2	0.0082	
DCS-7	26-Jan-05	<1	<2	<2	<2	0.012	
DCS-7	04-Feb-05	<1	<2	<2	<2	0.0087	
DCS-7	07-Feb-05	<1	<2	<2	<2	0.0092	
DCS-7	16-Feb-05	<1	<2	<2	<2	0.0094	
DCS-7	24-Feb-05	<1	<2	<2	<2	0.012	
DCS-7	03-Mar-05	<1	<2	<2	<2	0.0081	
DCS-7	07-Mar-05	<1	<2	<2	<2	0.01	
DCS-7	18-Mar-05	<1	<2	<2	<2	0.0087	
DCS-7	23-Mar-05	<1	<2	<2	<2	0.017	
DCS-7	29-Mar-05	<1	<2	<2	<2	0.0049	
DCS-7	07-Apr-05	<1	<2	<2	<2	0.0097	
DCS-7	11-Apr-05	<1	<2	<2	<2	0.033	
DCS-7	27-Apr-05	<1	<2	<2	<2	0.0027	
DCS-7	05-May-05	<1	<2	<2	<2	0.0038	
DCS-7	09-May-05	<1	<2	<2	<2	0.0021	
DCS-7	18-May-05	<1	<2	<2	<2	0.0016	
DCS-7	25-May-05	<1	<2	<2	<2	0.0018	
DCS-7	02-Jun-05	<1	<2	<2	<2	0.0031	
DCS-7	08-Jun-05	<1	<2	<2	<2	0.0041	
DCS-7	15-Jun-05	<1	<2	<2	<2	0.0027	
DCS-7	21-Jun-05	<1	<2	<2	<2	0.0027	
DCS-7	30-Jun-05	<1	<2	<2	<2	0.0036	
DCS-7	07-Jul-05	<1	<2	<2	<2	0.0054	
DCS-7	11-Jul-05	<1	<2	<2	<2	0.0051	
DCS-7	21-Jul-05	<1	<2	<2	<2	0.0082	
DCS-7	27-Jul-05	<1	<2	<2	<2	0.0053	
DCS-7	03-Aug-05	<1	<2	<2	<2	0.0074	
DCS-7	08-Aug-05	<1	<2	<2	<2	0.0099	
DCS-7	16-Aug-05	<1	<2	<2	<2	0.0098	
DCS-7	24-Aug-05	<1	<2	<2	<2	0.0085	
DCS-7	02-Sep-05	<1	<2	<2	<2	0.0085	
DCS-7	09-Sep-05	<1	<2	<2	<2	0.0074	
DCS-7	13-Sep-05	<1	<2	<2	<2	0.0079	
DCS-7	22-Sep-05	<1	<2	<2	<2	0.0021	

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Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000		
DCS-7	29-Sep-05	<1	<2	<2	<2	0.0034	
DCS-7	06-Oct-05	<1	<2	<2	<2	0.025	
DCS-7	10-Oct-05	<1	<2	<2	<2	0.013	
DCS-7	20-Oct-05	<1	<2	<2	<2	0.0096	
DCS-7	27-Oct-05	<1	<2	<2	<2	0.01	
DCS-7	03-Nov-05	<1	<2	<2	<2	0.0064	
DCS-7	07-Nov-05	<1	<2	<2	<2	0.0052	
DCS-7	17-Nov-05	<1	<2	<2	<2	0.0066	
DCS-7	22-Nov-05	<1	<2	<2	<2	0.012	
DCS-7	29-Nov-05	<1	<2	<2	<2	0.022	
DCS-7	06-Dec-05	<1	<2	<2	<2	0.015	
DCS-7	14-Dec-05	<1	<2	<2	<2	0.013	
DCS-7	21-Dec-05	<1	<2	<2	<2	0.0067	
DCS-7	29-Dec-05	<1	<2	<2	<2	0.0044	
DCS-7	05-Jan-06	<1	<2	<2	<2	0.0058	
DCS-7	09-Jan-06	<1	<2	<2	<2	0.008	
DCS-7	18-Jan-06	<1	<2	<2	<2	0.0055	
DCS-7	24-Jan-06	<1	<2	<2	<2	0.02	
DCS-7	01-Feb-06	<1	<2	<2	<2	0.0053	
DCS-7	09-Feb-06	<0.5	<1	<1	<1	0.017	
DCS-7	13-Feb-06	<0.5	<1	<1	<1	<0.002	
DCS-7	22-Feb-06	<1	<2	<2	<2	0.004	
DCS-7	01-Mar-06	<1	<2	<2	<2	0.002	
DCS-7	09-Mar-06	<1	<2	<2	<2	0.0039	
DCS-7	14-Mar-06	<1	<2	<2	<2	0.01	
DCS-7	22-Mar-06	<1	<2	<2	<2	0.0084	
DCS-7	30-Mar-06	<1	<2	<2	<2	0.0025	
DCS-7	05-Apr-06	<1	<2	<2	<2	0.00079	
DCS-7	10-Apr-06	<1	<2	<2	<2	0.00077	
DCS-7	20-Apr-06	<1	<2	<2	<2	0.00089	
DCS-7	27-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-7	04-May-06	<1	<2	<2	<2	0.0014	
DCS-7	09-May-06	<1	<2	<2	<2	<0.0008	
DCS-7	13-Jun-06	<1	<2	<2	<2	0.0053	
DCS-7	05-Sep-06	<1	<5	<2	<2	0.01	
DCS-7	04-Dec-06	<1	<5	<2	<2	0.011	
DCS-7	12-Mar-07	<1	<5	<2	<2	0.0027	
DCS-7	21-Jun-07	<1	<2	<2	<2	0.002	
DCS-7	13-Sep-07	<1	<2	<2	<2	-88.8	
DCS-7	17-Dec-07	<1	<2	<2	<2	0.0078	
DCS-7	04-Mar-08	<1	<2	<2	<2	0.004	
DCS-7	18-Jun-08	<1	<2	<2	<2	0.0022	

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Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000		
DCS-7	29-Sep-08	<1	<2	<2	<2	0.0084	
DCS-7	10-Dec-08	<1	<2	<2	<2	0.0083	
DCS-7	17-Mar-09	<1	<2	<2	<2	0.0012	
DCS-7	16-Jun-09	<1	<2	<2	<2	0.0037	
DCS-7	17-Sep-09	<1	<2	<2	<2	0.0054	
DCS-7	16-Dec-09	<1	<2	<2	<2	0.0069	
DCS-7	31-Mar-10	<1	<2	<2	<2	0.00156	
DCS-7	29-Jun-10	<1	<2	<2	<2	0.00186	
DCS-8	09-Dec-04	<1	<2	<2	<2	0.021	
DCS-8	15-Dec-04	<1	<2	<2	<2	0.013	
DCS-8	20-Dec-04	<1	<2	<2	<2	0.026	
DCS-8	23-Dec-04	<1	<2	<2	<2	0.016	
DCS-8	06-Jan-05	<1	<2	<2	<2	0.016	
DCS-8	10-Jan-05	<1	<2	<2	<2	0.0098	
DCS-8	20-Jan-05	<1	<2	<2	<2	0.0075	
DCS-8	26-Jan-05	<1	<2	<2	<2	0.013	
DCS-8	04-Feb-05	<1	<2	<2	<2	0.0075	
DCS-8	07-Feb-05	<1	<2	<2	<2	0.0076	
DCS-8	16-Feb-05	<1	<2	<2	<2	0.0074	
DCS-8	24-Feb-05	<1	<2	<2	<2	0.0099	
DCS-8	03-Mar-05	<1	<2	<2	<2	0.0058	
DCS-8	07-Mar-05	<1	<2	<2	<2	0.0086	
DCS-8	18-Mar-05	<1	<2	<2	<2	0.0075	
DCS-8	23-Mar-05	<1	<2	<2	<2	0.013	
DCS-8	29-Mar-05	<1	<2	<2	<2	0.0041	
DCS-8	07-Apr-05	<1	<2	<2	<2	0.0083	
DCS-8	11-Apr-05	<1	<2	<2	<2	0.025	
DCS-8	27-Apr-05	<1	<2	<2	<2	0.0027	
DCS-8	05-May-05	<1	<2	<2	<2	0.0032	
DCS-8	09-May-05	<1	<2	<2	<2	0.0019	
DCS-8	18-May-05	<1	<2	<2	<2	0.002	
DCS-8	25-May-05	<1	<2	<2	<2	0.0017	
DCS-8	02-Jun-05	<1	<2	<2	<2	0.0032	
DCS-8	08-Jun-05	<1	<2	<2	<2	0.0045	
DCS-8	15-Jun-05	<1	<2	<2	<2	0.0025	
DCS-8	21-Jun-05	<1	<2	<2	<2	0.0024	
DCS-8	30-Jun-05	<1	<2	<2	<2	0.0034	
DCS-8	07-Jul-05	<1	<2	<2	<2	0.0047	
DCS-8	11-Jul-05	<1	<2	<2	<2	0.0044	
DCS-8	21-Jul-05	<1	<2	<2	<2	0.0072	
DCS-8	27-Jul-05	<1	<2	<2	<2	0.0038	

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Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000		
DCS-8	03-Aug-05	<1	<2	<2	<2	0.0099	
DCS-8	08-Aug-05	<0.5	<5	<2	NA	<0.01	
DCS-8	08-Aug-05	<1	<2	<2	<2	0.0075	
DCS-8	08-Aug-05	<1	<2	<2	<2	0.0072	
DCS-8	16-Aug-05	<1	<2	<2	<2	0.0083	
DCS-8	24-Aug-05	<1	<2	<2	<2	0.0065	
DCS-8	02-Sep-05	<1	<2	<2	<2	0.0066	
DCS-8	09-Sep-05	<1	<2	<2	<2	0.0068	
DCS-8	13-Sep-05	<1	<2	<2	<2	0.0064	
DCS-8	22-Sep-05	<1	<2	<2	<2	0.0018	
DCS-8	29-Sep-05	<1	<2	<2	<2	0.0032	
DCS-8	06-Oct-05	<1	<2	<2	<2	0.026	
DCS-8	10-Oct-05	<1	<2	<2	<2	0.0097	
DCS-8	20-Oct-05	<1	<2	<2	<2	0.011	
DCS-8	27-Oct-05	<1	<2	<2	<2	0.0091	
DCS-8	03-Nov-05	<1	<2	<2	<2	0.0065	
DCS-8	07-Nov-05	<1	<2	<2	<2	0.0043	
DCS-8	17-Nov-05	<1	<2	<2	<2	0.0066	
DCS-8	22-Nov-05	<1	<2	<2	<2	0.012	
DCS-8	29-Nov-05	<1	<2	<2	<2	0.021	
DCS-8	06-Dec-05	<1	<2	<2	<2	0.013	
DCS-8	14-Dec-05	<1	<2	<2	<2	0.073	
DCS-8	21-Dec-05	<1	<2	<2	<2	0.0073	
DCS-8	29-Dec-05	<1	<2	<2	<2	-88.8	
DCS-8	05-Jan-06	<1	<2	<2	<2	0.006	
DCS-8	09-Jan-06	<1	<2	<2	<2	0.0081	
DCS-8	18-Jan-06	<1	<2	<2	<2	0.005	
DCS-8	24-Jan-06	<1	<2	<2	<2	0.018	
DCS-8	01-Feb-06	<1	<2	<2	<2	0.0056	
DCS-8	09-Feb-06	<0.5	<1	<2	<1	0.015	
DCS-8	13-Feb-06	<0.5	<1	<2	<1	<0.002	
DCS-8	22-Feb-06	<1	<2	<2	<2	0.0052	
DCS-8	01-Mar-06	<1	<2	<2	<2	0.0018	
DCS-8	09-Mar-06	<1	<2	<2	<2	0.0038	
DCS-8	14-Mar-06	<1	<2	<2	<2	0.0088	
DCS-8	22-Mar-06	<1	<2	<2	<2	0.008	
DCS-8	30-Mar-06	<1	<2	<2	<2	0.0024	
DCS-8	05-Apr-06	<1	<2	<2	<2	0.00083	
DCS-8	10-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-8	20-Apr-06	<1	<2	<2	<2	0.0008	
DCS-8	27-Apr-06	<1	<2	<2	<2	<0.0008	
DCS-8	04-May-06	<1	<2	<2	<2	0.0013	



## Appendix C

Summary of Historical Surface-Water Analytical Results  
Encana, West Divide Creek Seep  
Garfield County, Colorado

Location ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)	Estimated Thermogenic Methane (mg/L)
Colorado RBSLs (ug/L)		5	1000	680	10,000		
DCS-8	09-May-06	<1	<2	<2	<2	0.0011	
DCS-8	13-Jun-06	<1	<2	<2	<2	0.0043	
DCS-8	05-Sep-06	<1	<5	<2	<2	0.0084	
DCS-8	04-Dec-06	<1	<5	<2	<2	0.011	
DCS-8	12-Mar-07	<1	<5	<2	<2	0.0022	
DCS-8	21-Jun-07	<1	<2	<2	<2	0.0017	
DCS-8	13-Sep-07	<1	<2	<2	<2	0.0064	
DCS-8	13-Sep-07	<1	<2	<2	<2	0.005	
DCS-8	17-Dec-07	<1	<2	<2	<2	0.0058	
DCS-8	04-Mar-08	<1	<2	<2	<2	0.0034	
DCS-8	18-Jun-08	<1	<2	<2	<2	0.0023	
DCS-8	29-Sep-08	<1	<2	<2	<2	0.0065	
DCS-8	10-Dec-08	<1	<2	<2	<2	0.006	
DCS-8	17-Mar-09	<1	<2	<2	<2	0.0011	
DCS-8	16-Jun-09	<1	<2	<2	<2	0.0032	
DCS-8	17-Sep-09	<1	<2	<2	<2	0.0038	
DCS-8	16-Dec-09	<1	<2	<2	<2	0.0058	
DCS-8	31-Mar-10	<1	<2	<2	<2	0.0013	
DCS-8	29-Jun-10	<1	<2	<2	<2	0.0015	

**Bold - indicates value exceeds state standard**

mg/l - milligrams/liter

ug/l - micrograms/liter

Total number of observations for all points over all dates = 1020

## **APPENDIX D**

**Historical QA/QC Results for  
Surface and Ground Water Samples  
included as .pdf file on CD in back**

**Appendix D**  
 Summary of Historical QA/QC Samples  
 Encana, West Divide Seep  
 Garfield County, Colorado

Sample ID	Seq	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)
Colorado RBSLs			5	1000	680	10000	
DCS-1		1/10/05	< 1	< 2	< 2	< 2	0.0022
DCS-1	Dup	1/10/05	< 1	< 2	< 2	< 2	0.0023
DCS-1	Split	1/10/05	< 0.5	< 5	< 0.5	< 1.5	< 0.01
DCS-1		3/7/05	< 1	< 2	< 2	< 2	0.0014
DCS-1	Dup	3/7/05	< 1	< 2	< 2	< 2	0.0014
DCS-1	Split	3/7/05	< 0.5	< 5	< 0.5	< 1.5	< 0.01
DCS-1		12/4/06	< 1	< 5	< 2	< 2	0.0015
DCS-1	Dup	12/4/06	< 1	< 5	< 2	< 2	0.0015
DCS-1	Split	12/4/06	< 0.25	< 0.25	< 0.25	< 0.5	0.0005
DCS-1		3/17/09	< 1	< 2	< 2	< 2	< 0.0008
DCS-1	Dup	3/17/09	< 1	< 2	< 2	< 2	0.0062
DCS-1	Split	3/17/09	< 1	< 1	< 1	< 1	< 0.001
DCS-2		10/12/04	4.3	< 2	< 2	< 2	0.36
DCS-2	Dup	10/12/04	4.1	< 2	< 2	< 2	0.36
DCS-2	Split	10/12/04	3.6	< 2	< 2	< 1.5	0.18
DCS-2		5/9/05	< 1	< 2	< 2	< 2	0.0084
DCS-2	Dup	5/9/05	< 1	< 2	< 2	< 2	0.0098
DCS-2	Split	5/9/05	< 0.5	< 5	< 0.5	< 1.5	0.012
DCS-2		4/10/06	< 1	< 2	< 2	< 2	< 0.0008
DCS-2	Dup	4/10/06	< 1	< 2	< 2	< 2	< 0.0008
DCS-2	Split	4/10/06	< 0.25	< 0.25	< 0.25	< 0.5	0.00061
DCS-2		9/5/06	< 1	< 5	< 2	< 2	0.0054
DCS-2	Dup	9/5/06	< 1	< 5	< 2	< 2	0.0057
DCS-2	Split	9/5/06	< 0.25	< 0.25	< 0.25	< 0.5	0.00269
DCS-2		3/12/07	< 1	< 5	< 2	< 2	0.072
DCS-2	Dup.	3/12/07	< 1	< 5	< 2	< 2	0.11
DCS-2	Split	3/12/07	< 1	< 5	< 2	< 2	0.0735
DCS-2		6/21/07	< 1	< 2	< 2	< 2	0.0019
DCS-2	Dup	6/21/07	< 1	< 2	< 2	< 2	0.002
DCS-2	Split	6/21/07	< 0.25	< 0.25	< 0.25	< 0.5	0.991
DCS-2		3/3/08	< 1	< 2	< 2	< 2	0.00096
DCS-2	Dup	3/3/08	< 1	< 2	< 2	< 2	0.0011
DCS-2	Split	3/3/08	< 0.5	< 0.5	< 0.5	< 1	0.000488
DCS-3		4/16/04	<b>5.7</b>	4.2	< 2	< 2	0.38
DCS-3	Dup	4/16/04	<b>5.8</b>	4.2	< 2	2.3	0.33
DCS-3		12/9/04	< 1	< 2	< 2	< 2	0.077
DCS-3	Dup	12/9/04	< 1	< 2	< 2	< 2	0.079
DCS-3	Split	12/9/04	< 0.5	< 5	< 0.5	< 1.5	0.058
DCS-3		6/8/05	< 1	< 2	< 2	< 2	0.0035
DCS-3	Dup	6/8/05	< 1	< 2	< 2	< 2	0.0037
DCS-3	Split	6/8/05	< 0.5	< 5	< 0.5	< 1.5	< 0.01
DCS-3		7/11/05	< 1	< 2	< 2	< 2	0.0069
DCS-3	Dup	7/11/05	< 1	< 2	< 2	< 2	0.006

**Appendix D**  
 Summary of Historical QA/QC Samples  
 Encana, West Divide Seep  
 Garfield County, Colorado

Sample ID	Seq	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)
Colorado RBSLs			5	1000	680	10000	
DCS-3	Split	7/11/05	< 0.5	< 5	0.53	2.6	0.017
DCS-3		5/9/06	< 1	< 2	< 2	< 2	< 0.0008
DCS-3	Dup	5/9/06	< 1	< 2	< 2	< 2	< 0.0008
DCS-3	Split	5/9/06	< 0.5	< 0.5	< 0.5	< 1	0.000849
DCS-3		12/17/07	< 1	< 2	< 2	< 2	0.0032
DCS-3	Dup	12/17/07	< 1	< 2	< 2	< 2	0.0034
DCS-3	Rep	12/17/07	< 0.5	< 5	< 0.5	< 0	0.00371
DCS-3		6/16/09	< 1	< 2	< 2	< 2	0.0014
DCS-3	Dup	6/16/09	< 1	< 2	< 2	< 2	0.0014
DCS-4		2/7/05	< 1	< 2	< 2	< 2	0.0096
DCS-4	Dup	2/7/05	< 1	< 2	< 2	< 2	0.0096
DCS-4	Split	2/7/05	< 0.5	< 5	< 0.5	< 1.5	< 0.01
DCS-4		11/7/05	< 1	< 2	< 2	< 2	0.0044
DCS-4	Dup	11/7/05	< 1	< 2	< 2	< 2	0.0034
DCS-4	Split	11/7/05	< 0.5	< 5	< 0.5	< 1.5	< 0.01
DCS-4		1/9/06	< 1	< 2	< 2	< 2	0.0064
DCS-4	Dup	1/9/06	< 1	< 2	< 2	< 2	0.0064
DCS-4	Split	1/9/06	< 0.5	< 1	< 1	< 2	0.005
DCS-4		9/29/08	< 1	< 2	< 2	< 2	0.0098
DCS-4	Dup	9/29/08	< 1	< 2	< 2	< 2	0.0098
DCS-4	Split	9/29/08	< 0.5	< 0.5	< 0.5	< 0.5	0.012
DCS-5		9/13/05	< 1	< 2	< 2	< 2	0.0076
DCS-5	Dup	9/13/05	< 1	< 2	< 2	< 2	0.0075
DCS-5	Split	9/13/05	0.99	< 5	< 0.5	1.9	0.012
DCS-5		2/13/06	< 0.5	< 1	< 1	< 2	< 0.002
DCS-5	Dup	2/13/06	< 0.5	< 1	< 1	< 2	0.009
DCS-5	Split	2/13/06	< 0.5	< 0.5	< 0.5	< 1	0.013
DCS-5		6/13/06	< 1	< 2	< 2	< 2	0.0045
DCS-5	Split	6/13/06	< 0.5	< 0.5	< 0.5	< 1	0.00445
DCS-5		12/10/08	< 1	< 2	< 2	< 2	0.0066
DCS-5	Dup	12/10/08	< 1	< 2	< 2	< 2	0.0062
DCS-5	Split	12/10/08	< 1	< 1	< 1	< 1	0.003
DCS-6		4/29/04	< 1	< 2	< 2	< 2	0.011
DCS-6	Dup	4/29/04	< 1	< 2	< 2	< 2	0.015
DCS-6		10/10/05	< 1	< 2	< 2	< 2	0.014
DCS-6	Dup	10/10/05	< 1	< 2	< 2	< 2	0.015
DCS-6	Split	10/10/05	< 0.5	< 5	< 0.5	< 1.5	0.019
DCS-6		12/6/05	< 1	< 2	< 2	< 2	0.015
DCS-6	Dup	12/6/05	< 1	< 2	< 2	< 2	0.014
DCS-6	Split	12/6/05	< 0.5	< 5	< 0.5	< 1.5	0.014
DCS-6		3/14/06	< 1	< 2	< 2	< 2	0.012
DCS-6	Dup	3/14/06	< 1	< 2	< 2	< 2	0.012

**Appendix D**  
 Summary of Historical QA/QC Samples  
 Encana, West Divide Seep  
 Garfield County, Colorado

Sample ID	Seq	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)
Colorado RBSLs			5	1000	680	10000	
DCS-6	Split	3/14/06	< 0.25	< 0.25	< 0.25	< 0.5	0.0143
DCS-6		6/18/08	< 1	< 2	< 2	< 2	0.0029
DCS-6	Dup	6/18/08	< 1	< 2	< 2	< 2	0.0027
DCS-6	Split	6/18/08	< 1	< 1	< 1	< 3	NS
DCS-8		8/8/05	< 1	< 2	< 2	< 2	0.0075
DCS-8	Dup	8/8/05	< 1	< 2	< 2	< 2	0.0072
DCS-8	Split	8/8/05	< 0.5	< 5	< 0.5	< 1.5	< 0.01
DCS-8		6/13/06	< 1	< 2	< 2	< 2	0.0043
DCS-8	Dup	6/13/06	< 1	< 2	< 2	< 2	0.0048
DCS-8		9/13/07	< 1	< 2	< 2	< 2	0.0064
DCS-8	Dup	9/13/07	< 1	< 2	< 2	< 2	0.005
MW-1		9/11/07	< 1	< 2	< 2	< 2	0.001
MW-1	Dup	9/11/07	< 1	< 2	< 2	< 2	< 0.0008
MW-1	Split	9/11/07	< 0.5	< 0.5	< 0.5	< 1	0.000144
MW-2		2/9/05	<b>420</b>	< 10	< 10	30	3
MW-2	Dup	2/9/05	<b>420</b>	2.4	8.6	43.5	2.6
MW-2	Split	2/9/05	<b>340</b>	< 5	6.7	33	0.65
MW-2		12/7/05	<b>290</b>	< 10	< 10	46	6.5
MW-2	Dup	12/7/05	<b>270</b>	< 10	< 10	42	5.1
MW-2	Split	12/7/05	<b>290</b>	35	8.1	49	8.4
MW-2		1/11/06	<b>310</b>	< 2	8.5	63.9	8
MW-2	Dup	1/11/06	<b>340</b>	< 2	8.8	62.5	9
MW-2	Split	1/11/06	<b>174</b>	< 2	4.9	36.9	3.1
MW-2		3/12/07	<b>230</b>	< 2	5.8	37.8	7.8
MW-2	Dup.	3/12/07	<b>250</b>	< 2	6.5	43.4	9.4
MW-2	Split	3/12/07	<b>212</b>	< 2	8.05	51.43	0.0691
MW-2		6/20/07	<b>220</b>	< 2	5.3	36.1	6.1
MW-2	Dup	6/20/07	<b>190</b>	< 2	4.6	31.6	4.5
MW-2	Split	6/20/07	<b>94</b>	< 0.25	5.5	43.49	0.979
MW-2		3/3/08	<b>120</b>	< 2	2.6	11	5.8
MW-2	Dup	3/3/08	<b>130</b>	< 2	2.7	12	5.9
MW-2	Split	3/3/08	<b>186</b>	< 0.5	5.1	31.2	1.86
MW-2		6/15/09	<b>110</b>	< 2	< 2	28.8	8.3
MW-2	Dup	6/15/09	<b>94</b>	< 2	< 2	24.1	9.2
MW-4		9/15/04	<b>320</b>	76	9.5	80.5	9.2
MW-4	Dup	9/15/04	<b>330</b>	76	9.1	77.1	8.6
MW-4	Split	9/15/04	<b>240</b>	59	6.7	60	27
MW-4		10/14/04	<b>300</b>	37	9	55.2	5.6
MW-4	Dup	10/14/04	<b>300</b>	51	9	59	9.3
MW-4	Split	10/14/04	<b>210</b>	< 50	6.1	37	4.4
MW-4		12/13/04	<b>270</b>	36	8.1	64.9	14

**Appendix D**  
 Summary of Historical QA/QC Samples  
 Encana, West Divide Seep  
 Garfield County, Colorado

Sample ID	Seq	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)
Colorado RBSLs			5	1000	680	10000	
MW-4	Dup	12/13/04	270	37	7.7	62.6	12
MW-4	Split	12/13/04	240	33	12	97	7.8
MW-4		1/12/05	350	68	11	71.9	14
MW-4	Dup	1/12/05	360	40	11	62.3	14
MW-4	Split	1/12/05	320	35	8.1	49	6.1
MW-4		4/12/05	130	33	< 2	20	8.9
MW-4	Dup	4/12/05	130	52	< 2	24	10
MW-4	Split	4/12/05	280	< 1200	< 120	< 380	8.7
MW-4		5/9/05	310	66	11	88	10
MW-4	Dup	5/9/05	320	77	11	90	11
MW-4		7/11/05	180	32	3.8	34.9	6.1
MW-4	Dup	7/11/05	170	40	3.3	38.7	7.8
MW-4	Split	7/11/05	0.69	< 1200	< 120	< 380	< 1
MW-4		8/9/05	270	41	< 10	69	8.3
MW-4	Dup	8/9/05	240	46	< 10	65	8.5
MW-4	Split	8/9/05	170	29	2.2	62	2.7
MW-4		1/10/06	270	< 2	6.5	71	8.8
MW-4	Dup	1/10/06	270	< 2	8	73	8.5
MW-4	Split	1/10/06	97	< 2	< 2	37	8.3
MW-4		3/12/07	220	< 2	7	67.2	9.8
MW-4	Dup.	3/12/07	200	< 2	6	55.9	7.6
MW-4	Split	3/12/07	172	< 0.25	6.73	69.28	0.0592
MW-4		10/1/08	110	< 2	< 2	33.7	6.2
MW-4	Dup	10/1/08	120	< 2	< 2	34.9	5
MW-4	Split	10/1/08	100	< 0.5	0.69	23.7	4.48
MW-4		3/16/09	81	< 2	< 2	17.3	9.2
MW-4	Dup	3/16/09	83	< 2	< 2	18.5	9.1
MW-4	Split	3/16/09	73	< 1	< 1	15.7	5.99
MW-6		12/14/04	< 1	< 2	< 2	< 2	0.054
MW-6	Dup	12/14/04	< 1	< 2	< 2	< 2	0.4
MW-6	Split	12/14/04	< 0.5	< 5	< 0.5	< 1.5	0.071
MW-6		6/8/05	1.3	< 2	< 2	< 2	0.18
MW-6	Dup	6/8/05	2.5	< 2	< 2	< 2	0.22
MW-6	Split	6/8/05	2.2	< 5	< 0.5	< 1.5	0.024
MW-6		9/12/05	2	< 2	< 2	< 2	0.12
MW-6	Dup	9/12/05	1.9	< 2	< 2	< 2	0.16
MW-6	Split	9/12/05	1.9	< 5	< 0.5	< 1.5	< 0.01
MW-6		11/8/05	3.7	< 2	< 2	< 2	0.17
MW-6	Dup	11/8/05	3.6	< 2	< 2	< 2	0.17
MW-6	Split	11/8/05	2.1	< 5	< 0.5	< 1.5	0.41
MW-6		2/14/06	< 0.5	< 1	< 1	< 2	0.15
MW-6	Dup	2/14/06	< 0.5	< 1	< 1	< 2	0.077
MW-6	Split	2/14/06	0.6	< 0.5	< 0.5	< 1	0.128
MW-6		4/12/06	1.1	< 2	< 2	< 2	0.046



**Appendix D**  
 Summary of Historical QA/QC Samples  
 Encana, West Divide Seep  
 Garfield County, Colorado

Sample ID	Seq	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)
Colorado RBSLs			5	1000	680	10000	
MW-12		10/13/04	< 1	< 2	< 2	< 2	< 0.0008
MW-12	Dup	10/13/04	< 1	< 2	< 2	< 2	0.17
MW-12	Split	10/13/04	< 1	< 2	< 2	< 1.5	0.12
MW-12		3/15/06	< 1	< 2	< 2	< 2	1.6
MW-12	Dup	3/15/06	< 1	< 2	< 2	< 2	1.4
MW-12	Split	3/15/06	< 0.5	< 0.5	< 0.5	< 1	1.51
MW-16		3/8/05	<b>6.1</b>	< 2	< 2	< 2	0.83
MW-16	Dup	3/8/05	<b>6.3</b>	< 2	< 2	< 2	0.66
MW-16	Split	3/8/05	<b>6.2</b>	< 5	< 0.5	< 1.5	1.7
MW-16		9/16/09	<1	<2	<2	<2	1.8
MW-16	Dup	9/16/09	<1	<2	<2	<2	1.5
MW-16		12/15/09	< 1	< 2	< 2	< 2	0.76
MW-16	Dup	12/15/09	< 1	< 2	< 2	< 2	0.75
MW-16		3/30/10	< 1	< 2	< 2	< 2	0.636
MW-16	Dup	3/30/10	< 1	< 2	< 2	< 2	0.527
MW-16		6/28/10	< 1	< 2	< 2	< 2	0.0889
MW-16	Dup	6/28/10	< 1	2.4	< 2	< 2	0.0135
MW-16 <sup>a</sup>		7/21/10	< 1	< 2	< 2	< 2	
MW-16 <sup>a</sup>	Dup	7/21/10	< 1	< 2	< 2	< 2	
MW-18		12/8/05	< 1	< 2	< 2	< 2	0.76
MW-18	Dup	12/8/05	< 1	< 2	< 2	< 2	0.68
MW-18	Split2	12/8/05	< 0.5	< 5	< 0.5	< 1.5	0.8
MW-18		6/13/06	< 1	< 2	< 2	< 2	1.4
MW-18	Dup	6/13/06	< 1	< 2	< 2	< 2	1.2
MW-18	Split	6/13/06	< 0.5	< 0.5	< 0.5	< 1	1.46
MW-18		6/19/08	< 1	< 2	< 2	< 2	0.15
MW-18	Dup	6/19/08	< 1	< 2	< 2	< 2	0.013
MW-18	Split	6/19/08	< 1	< 1	< 1	< 3	NS
MW-22		3/9/05	< 1	< 2	< 2	< 2	0.0043
MW-22	Dup	3/9/05	< 1	< 2	< 2	< 2	0.0034
MW-22	Split2	3/9/05	< 0.5	< 5	< 0.5	< 1.5	< 0.01
MW-23		9/16/09	< 1	< 2	< 2	< 2	<0.0008
MW-23	Dup	9/16/09	< 1	< 2	< 2	< 2	0.0011
MW-23		3/30/10	< 1	< 2	< 2	< 2	0.0724
MW-23	Dup	3/30/10	< 1	< 2	< 2	< 2	0.0964
MW-23		6/28/10	< 1	< 2	< 2	< 2	<0.0008
MW-23	Dup	6/28/10	< 1	< 2	< 2	< 2	<0.0008
MW-24		8/10/05	< 1	< 2	< 2	< 2	< 0.0008
MW-24	Dup	8/10/05	< 1	< 2	< 2	< 2	< 0.0008
MW-24	Split2	8/10/05	< 0.5	< 5	< 0.5	1.9	< 0.01



**Appendix D**  
 Summary of Historical QA/QC Samples  
 Encana, West Divide Seep  
 Garfield County, Colorado

Sample ID	Seq	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)
Colorado RBSLs			5	1000	680	10000	
MW-24		11/9/05	< 1	< 2	< 2	< 2	< 0.0008
MW-24	Dup	11/9/05	< 1	< 2	< 2	< 2	< 0.0008
MW-24	Split2	11/9/05	< 0.5	< 5	< 0.5	< 1.5	< 0.01
MW-24		2/15/06	< 1	< 2	< 2	< 2	< 0.0008
MW-24	Dup	2/15/06	< 1	< 2	< 2	< 2	< 0.0008
MW-24	Split	2/15/06	< 0.5	< 0.5	< 0.5	< 1	< 0.0034
MW-24		12/6/06	< 1	< 2	< 2	< 2	< 0.0008
MW-24	DUP	12/6/06	< 1	< 2	< 2	< 2	< 0.0008
MW-24	Split	12/6/06	< 0.25	< 0.25	< 0.25	< 0.5	0.00028
MW-24		12/10/08	<1	<2	<2	<2	<0.0008
MW-24	Dup	12/10/08	<1	<2	<2	<2	<0.0008
MW-24	Split	12/10/08	<1	<1	<1	<1	<0.001
MW-26		1/13/05	< 1	< 2	< 2	< 2	2.4
MW-26	Dup	1/13/05	< 1	< 2	< 2	< 2	2.1
MW-26	Split	1/13/05	< 0.5	< 5	< 0.5	< 1.5	0.5
MW-26		2/10/05	< 1	< 2	< 2	< 2	2.9
MW-26	Dup	2/10/05	< 1	< 2	< 2	< 2	3.2
MW-26	Split2	2/10/05	< 0.5	< 5	< 0.5	< 1.5	2.9
MW-26		4/13/05	< 1	< 2	< 2	< 2	3.3
MW-26	Dup	4/13/05	< 1	< 2	< 2	< 2	3.3
MW-26	Split2	4/13/05	< 0.5	< 5	< 0.5	< 1.5	3.7
MW-26		5/11/05	< 1	< 2	< 2	< 2	2.3
MW-26	Dup	5/11/05	< 1	< 2	< 2	< 2	2.1
MW-26	Split2	5/11/05	< 0.5	< 5	< 0.5	< 1.5	0.38
MW-26		9/13/05	< 1	< 2	< 2	< 2	0.97
MW-26	Dup	9/13/05	< 1	< 2	< 2	< 2	0.99
MW-26	Split2	9/13/05	< 0.5	< 5	< 0.5	< 1.5	1.5
MW-26		3/16/06	< 1	< 2	< 2	< 2	0.83
MW-26	Dup	3/16/06	< 1	< 2	< 2	< 2	0.79
MW-26	Split	3/16/06	< 0.25	< 0.25	< 0.25	< 0.5	0.000377
MW-26		4/12/06	< 1	< 2	< 2	< 2	0.45
MW-26	Dup	4/12/06	< 1	< 2	< 2	< 2	0.6
MW-26	Split	4/12/06	< 0.25	< 0.25	< 0.25	< 0.5	0.858
MW-26		5/11/06	< 1	< 2	< 2	< 2	0.75
MW-26	Dup	5/11/06	< 1	< 2	< 2	< 2	0.74
MW-26	Split	5/11/06	< 0.5	< 0.5	< 0.5	< 1	0.877
MW-26		6/13/06	< 1	< 2	< 2	< 2	0.63
MW-26	Dup	6/13/06	< 1	< 2	< 2	< 2	0.74
MW-26	Split	6/13/06	< 0.5	< 0.5	< 0.5	< 1	0.767
MW-26		12/6/06	< 1	< 2	< 2	< 2	1.1
MW-26	DUP	12/6/06	< 1	< 2	< 2	< 2	0.76
MW-26	Split	12/6/06	< 0.25	< 0.25	< 0.25	< 0.5	0.355
MW-26		6/17/08	< 1	< 2	< 2	< 2	0.55
MW-26	Dup	6/17/08	< 1	< 2	< 2	< 2	0.51

**Appendix D**  
 Summary of Historical QA/QC Samples  
 Encana, West Divide Seep  
 Garfield County, Colorado

Sample ID	Seq	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylene (ug/L)	Total Dissolved Methane (mg/L)
Colorado RBSLs			5	1000	680	10000	
MW-26	Split	6/17/08	< 1	< 1	< 1	< 3	NS
MW-26		12/9/08	<1	<2	<2	<2	0.73
MW-26	Dup	12/9/08	<1	<2	<2	<2	0.79
MW-26	Split	12/9/08	<1	<1	<1	<1	0.145
MW-26		12/16/09	< 1	< 2	< 2	< 2	0.27
MW-26	Dup	12/16/09	< 1	< 2	< 2	< 2	0.33
E2		6/9/05	< 1	< 2	< 2	< 2	0.43
E2	Dup	6/9/05	< 1	< 2	< 2	< 2	0.51
E2	Split	6/9/05	< 0.5	< 5	< 0.5	< 1.5	0.13
E2		10/25/06	< 1	< 2	< 2	< 2	0.0061
E2	Dup	10/25/06	< 1	< 2	< 2	< 2	0.0098
E2	Split	10/25/06	< 0.25	< 0.25	< 0.25	< 0.5	0.00274
FB	Field Blank	7/21/10	< 1	< 2	< 2	< 2	

Bold - Indicates Value exceeds state standard  
<sup>a</sup> - Resampled due to suspected laboratory error  
 ug/L = micrograms per liter  
 mg/L = milligrams per liter

NS - Not sampled  
 Dup - Duplicate sample  
 Split - Split sample  
 Split2 - Split sample

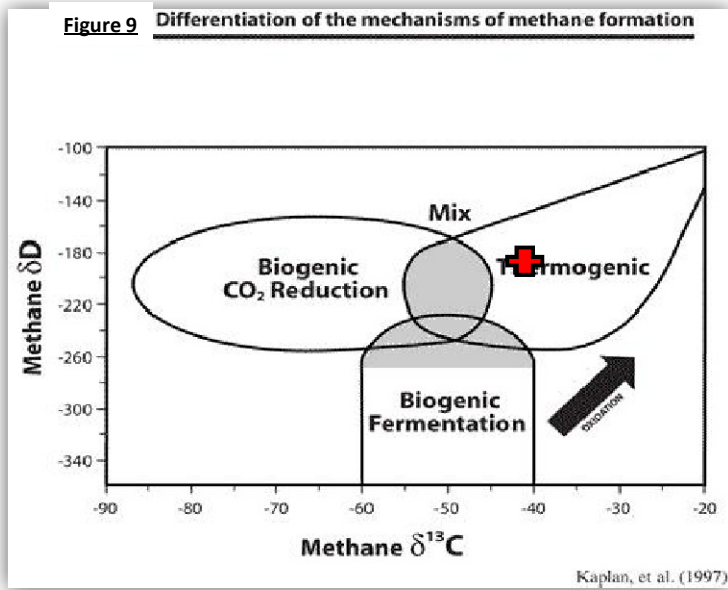
# **APPENDIX E**

**Thermogenic Methane Data  
included as .pdf file on CD in back**

Appendix E - An Estimation of Thermogenic Methane Data for West Divide Creek Seep Study Area

Date	Site ID	Total Methane mg/L	Thermogenic Methane mg/L	$\delta^{13}\text{C}_1$	$\delta\text{DC}_1$	Comment
				per mil	per mil	
28-Jun-10	MW2	8.71	6.4	-39.89	-178.2	Consistent with thermogenic (or mostly thermogenic) formation
28-Jun-10	MW4	8.35	6.3	-40.11	-192.1	Consistent with thermogenic (or mostly thermogenic) formation
28-Jun-10	MW9	6.8	4.3	-41.77	-203.0	Consistent with thermogenic (or mostly thermogenic) formation
28-Jun-10	MW14	4.79	3.1	-40.21	-197.3	Consistent with thermogenic (or mostly thermogenic) formation
28-Jun-10	MW17	0.0107	<0.0008			Consistent with biogenic formation

Ratiod data and Raw data show more information regarding results



Appendix E - Ratioed Thermogenic Methane Data for West Divide Creek Seep Study Area

Date	Site ID	Water Sample Total Methane mg/L	Percentage, Hydrocarbon only basis								$\delta^{13}C_1$ per mil	$\delta DC_1$ per mil	C1/ (C2 + C3)	Biogenic only?	Fraction from Biogenic Source	Biogenic Methane mg/L	Thermog Methane mg/L	Total Methane (check) mg/L
			C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	iC <sub>4</sub>	nC <sub>4</sub>	iC <sub>5</sub>	nC <sub>5</sub>	C <sub>6+</sub>								
28-Jun-10	MW2	8.71	84.437%	11.100%	3.290%	0.462%	0.452%	0.120%	0.059%	0.081%	-39.89	-178.2	5.9E+00		0.261	2.269	6.441	8.71
28-Jun-10	MW4	8.35	84.170%	11.117%	3.447%	0.494%	0.467%	0.133%	0.066%	0.106%	-40.11	-192.1	5.8E+00		0.248	2.070	6.280	8.35
28-Jun-10	MW9	6.8	86.536%	8.547%	3.354%	0.601%	0.619%	0.171%	0.079%	0.092%	-41.77	-203	7.3E+00		0.360	2.450	4.350	6.8
28-Jun-10	MW14	4.79	86.350%	9.055%	3.293%	0.462%	0.561%	0.129%	0.066%	0.084%	-40.21	-197.3	7.0E+00		0.351	1.683	3.107	4.79
28-Jun-10	MW17	0.0107	100.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0	0	>10,000		1.000	0.0107	0.000	0.0107

Appendix E - Raw Thermogenic Methane Data for West Divide Creek Seep Study Area

Water Sample		Isotech Gas Data																
Date	Site ID	Methane mg/L	Ar %	O <sub>2</sub> %	CO <sub>2</sub> %	N <sub>2</sub> %	C <sub>1</sub> %	C <sub>2</sub> %	C <sub>3</sub> %	iC <sub>4</sub> %	nC <sub>4</sub> %	iC <sub>5</sub> %	nC <sub>5</sub> %	C <sub>6</sub> + %	δ <sup>13</sup> C <sub>1</sub> per mil	δDC <sub>1</sub> per mil	δ <sup>13</sup> C <sub>2</sub> per mil	δ <sup>13</sup> C <sub>3</sub> per mil
28-Jun-10	MW2	8.71	0.532	8.36	3.7	24.69	52.87	6.95	2.06	0.289	0.283	0.0753	0.0372	0.0506	-39.89	-178.2	-27.62	-25.33
28-Jun-10	MW4	8.35	0.217	0.57	78.4	9.99	9.01	1.19	0.369	0.0529	0.05	0.0142	0.0071	0.0113	-40.11	-192.1	-27.64	-25
28-Jun-10	MW9	6.8	0.716	4.86	6.19	32.11	48.5	4.79	1.88	0.337	0.347	0.0961	0.0442	0.0518	-41.77	-203.0	-28.34	-26.08
28-Jun-10	MW14	4.79	0.94	0.09	5.33	46.26	40.91	4.29	1.56	0.219	0.266	0.0613	0.0311	0.0398	-40.21	-197.3	-28.25	-25.68
28-Jun-10	MW17	0.0107	1.67	11.46	6.34	80.44	0.0159	0	0	0	0	0	0	0				

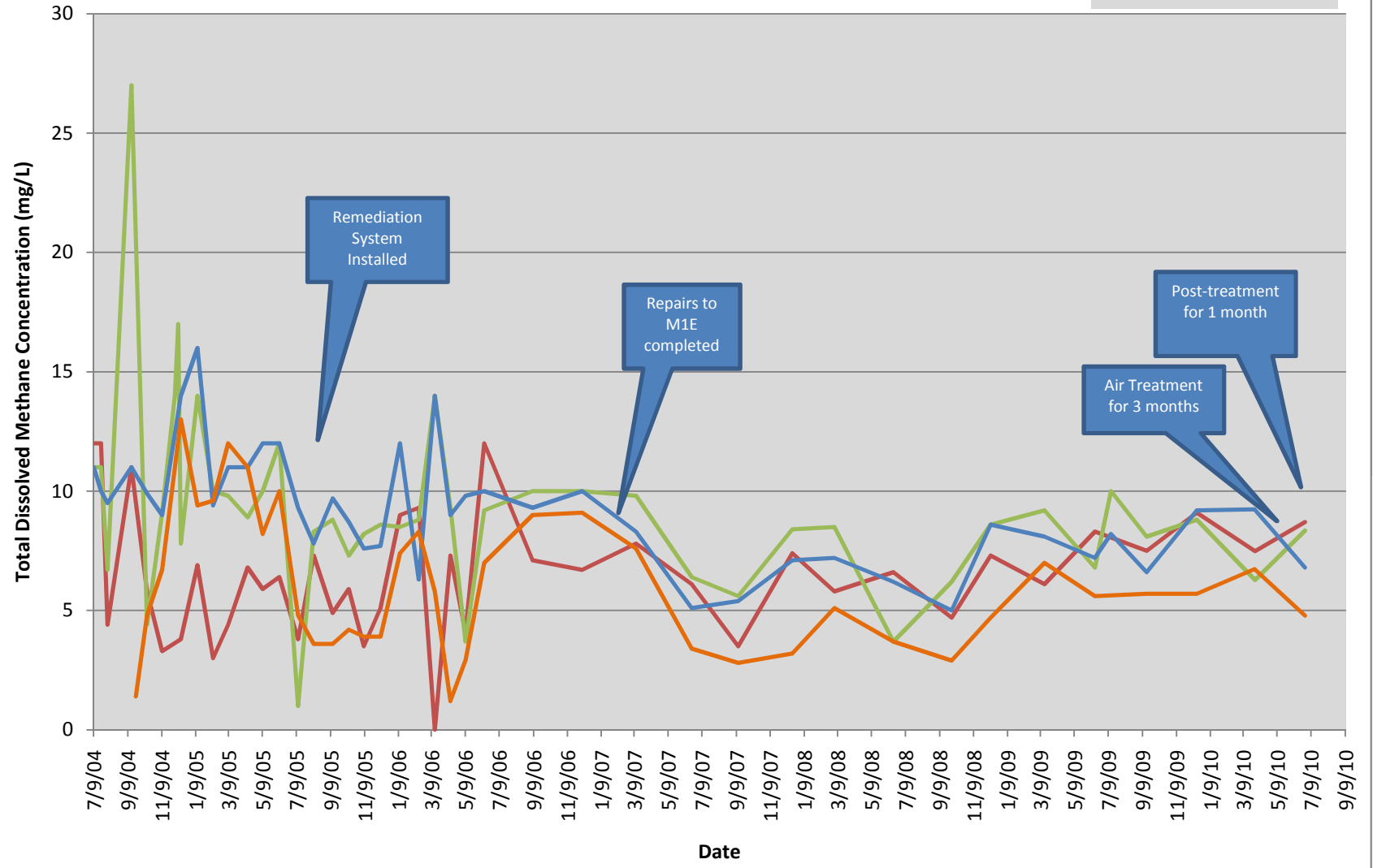
# **APPENDIX F**

**Graphs  
included as .pdf file on CD in back**

# West Divide Creek

## Total Dissolved Methane Concentrations MW2, MW4, MW9, and MW14

- Methane - MW2
- Methane - MW4
- Methane - MW9
- Methane - MW14



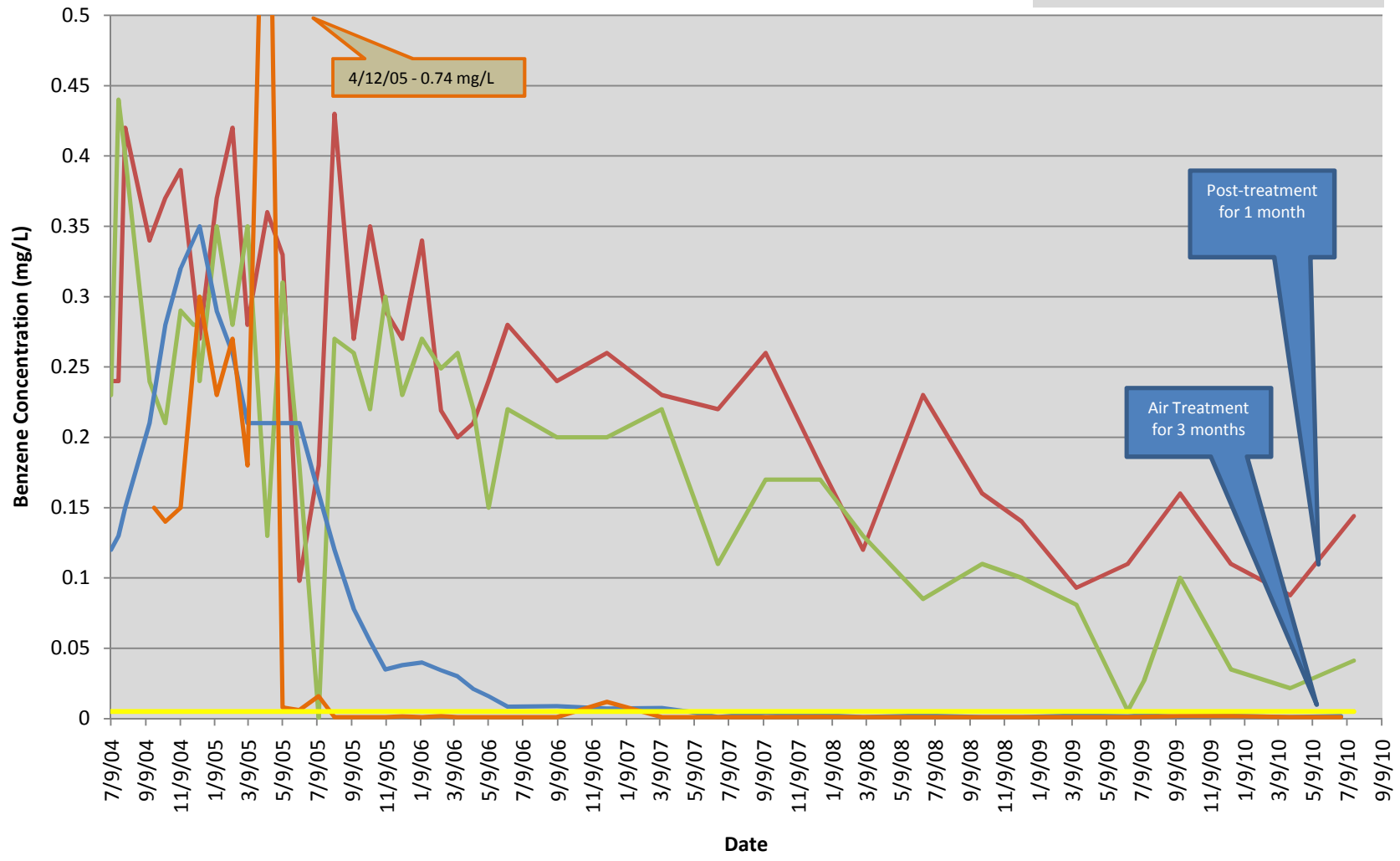


# West Divide Creek

## Benzene Concentrations

### MW2, MW4, MW9, and MW14

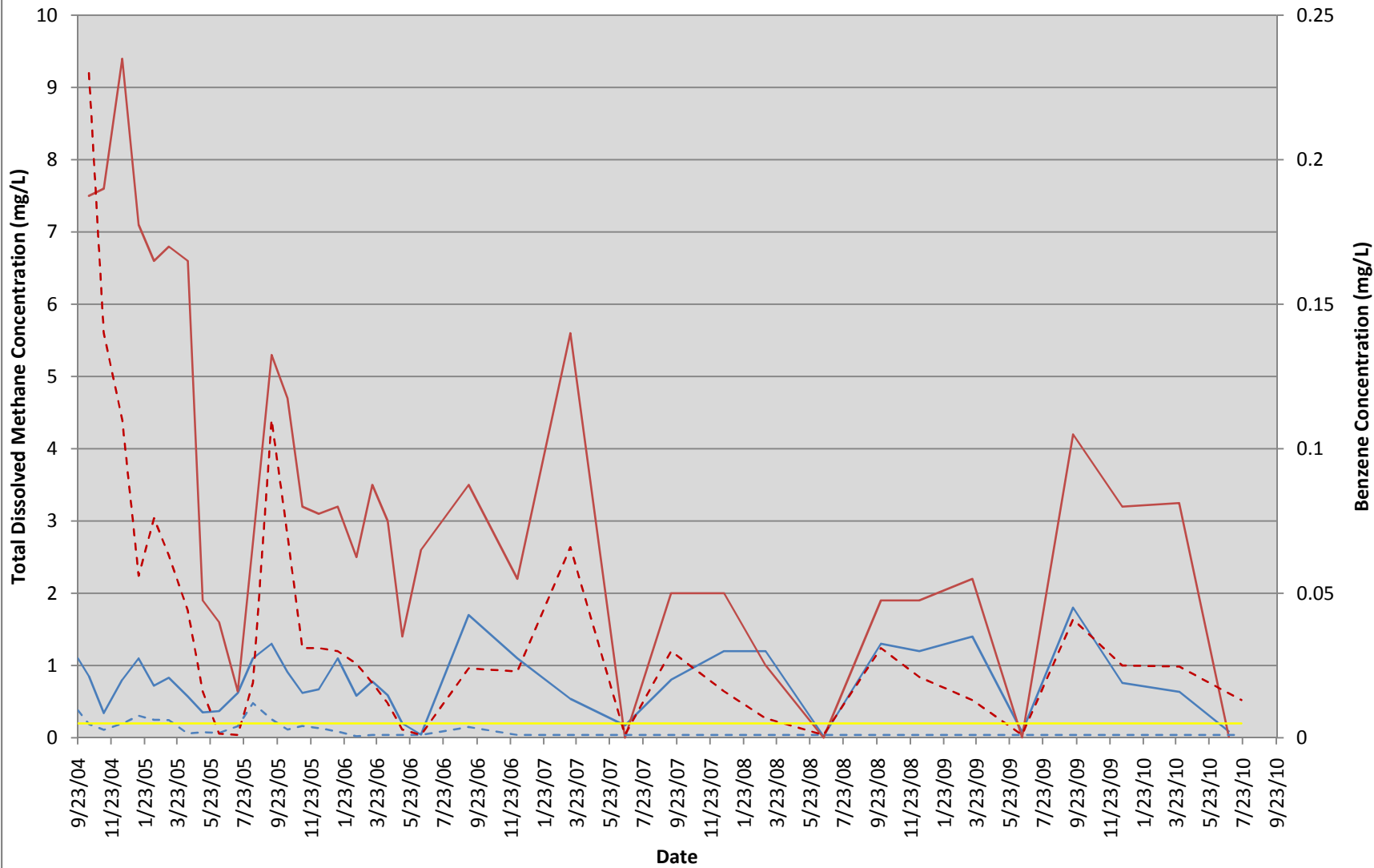
- Benzene - MW2
- Benzene - MW4
- Benzene - MW9
- Benzene - MW14
- Maximum Contaminant Level



# West Divide Creek

## Total Dissolved Methane Concentrations and Benzene Concentrations MW16 and MW17

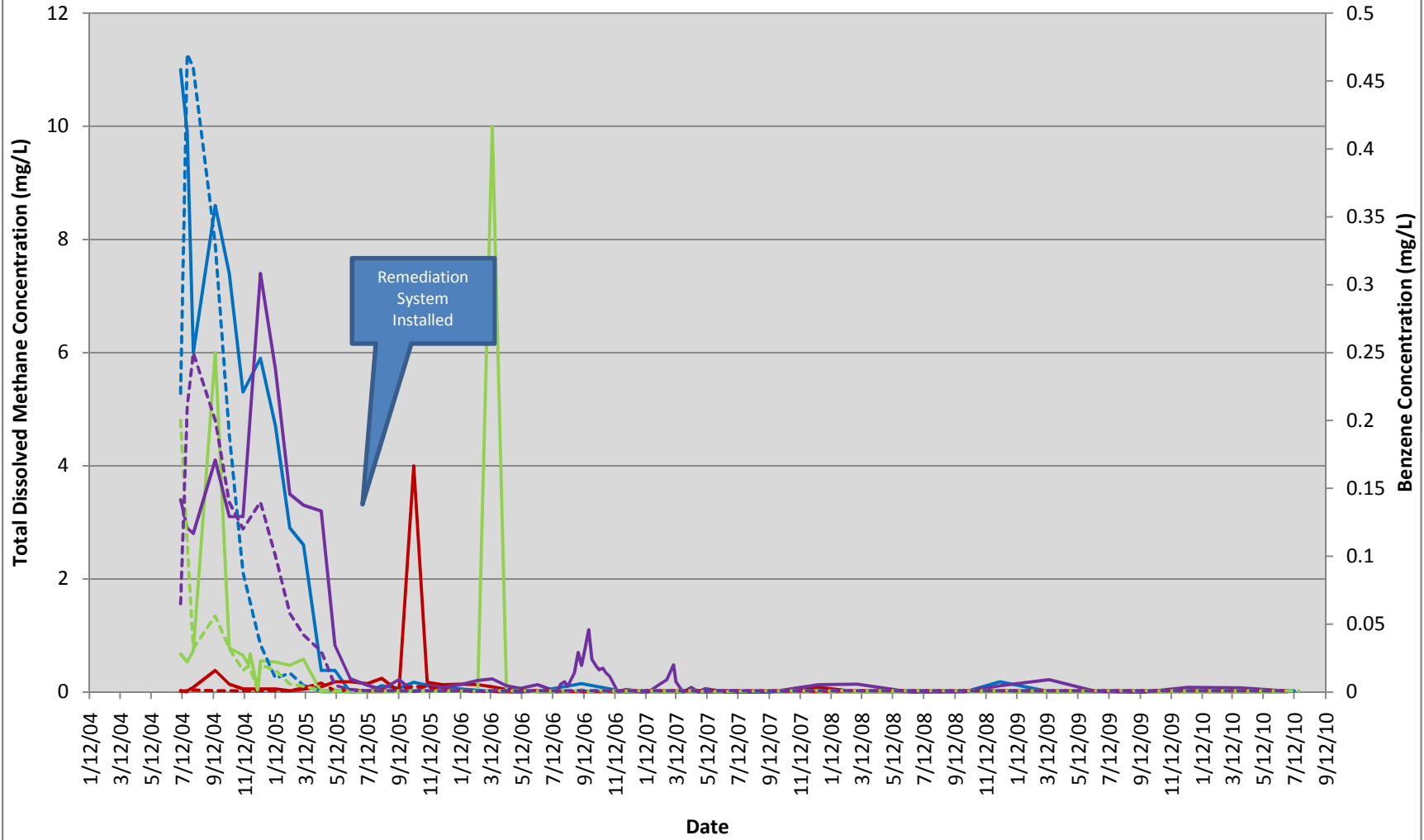
- Methane - MW16
- Methane - MW17
- - - Benzene - MW16
- - - Benzene - MW17
- Maximum Contaminant Level



# West Divide Creek

## Total Dissolved Methane Concentrations MW1, MW6, MW7 and MW8

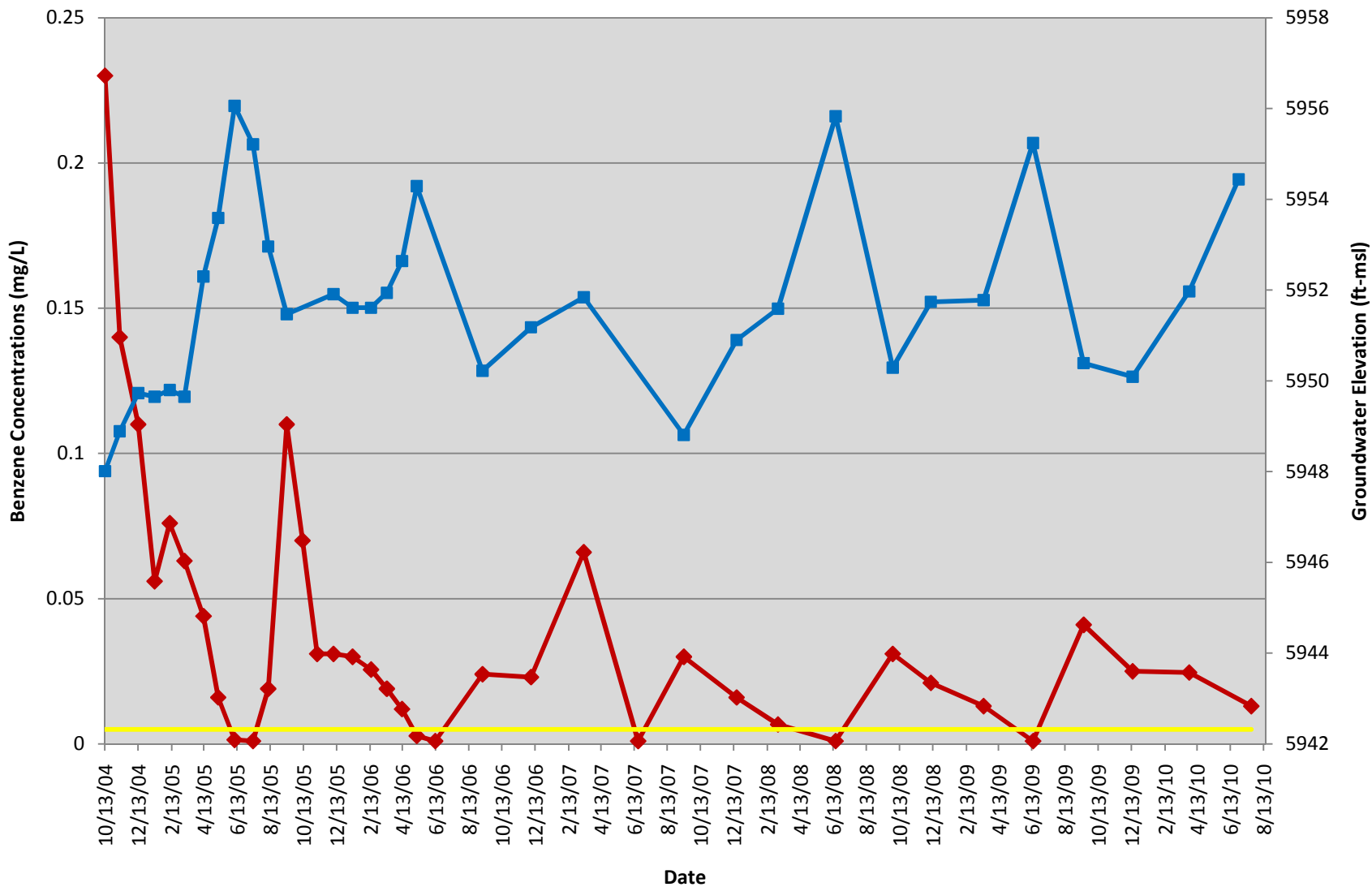
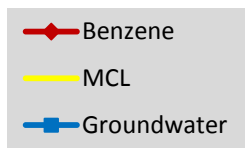
- Methane - MW1
- Methane - MW6
- Methane - MW7
- Methane - MW8
- Benzene - MW1
- Benzene - MW6
- Benzene - MW7
- Benzene - MW8



# West Divide Creek

Benzene Concentration vs. Groundwater Elevation

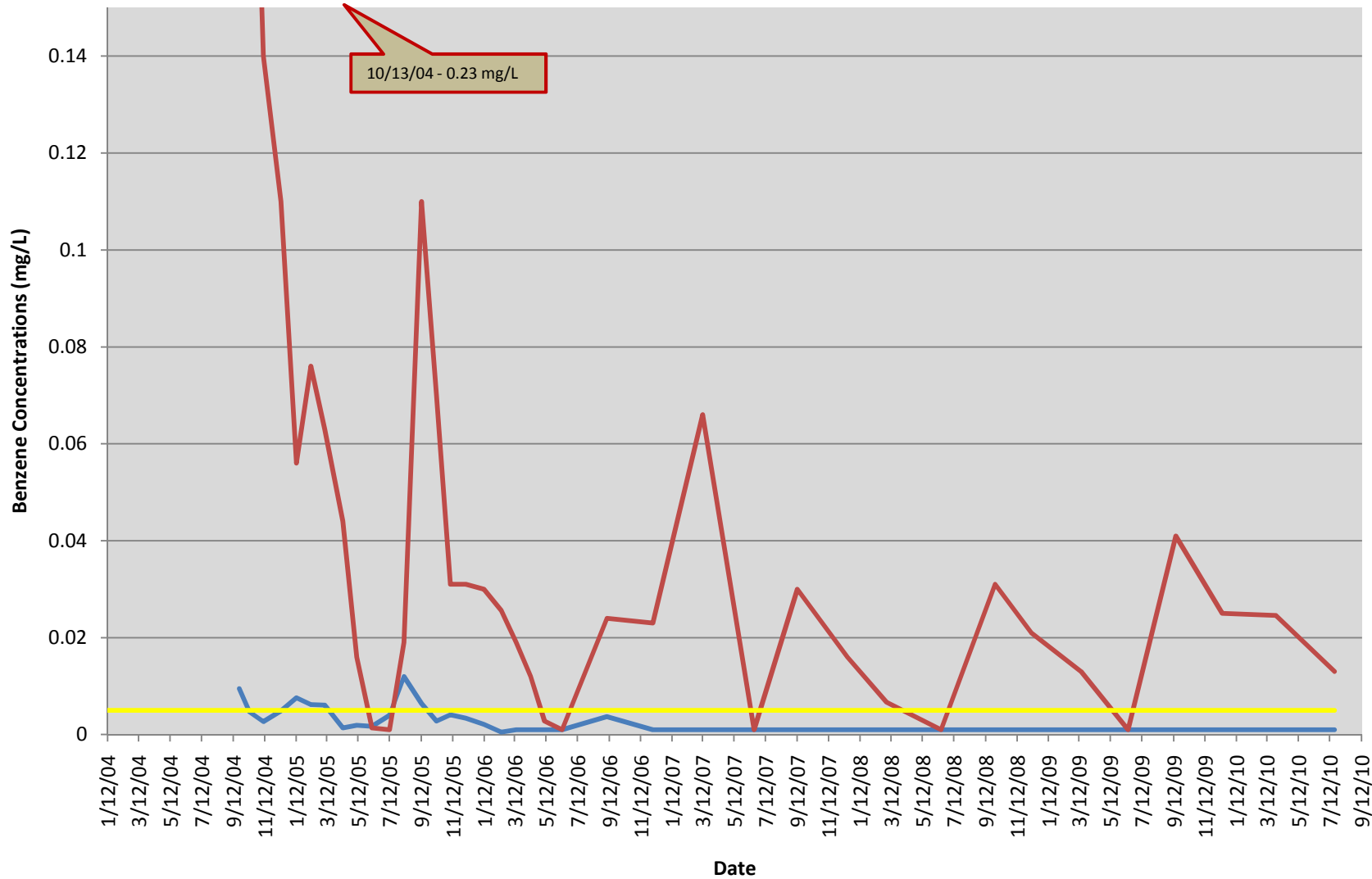
MW17



# West Divide Creek

## Benzene concentrations MW16 and MW17

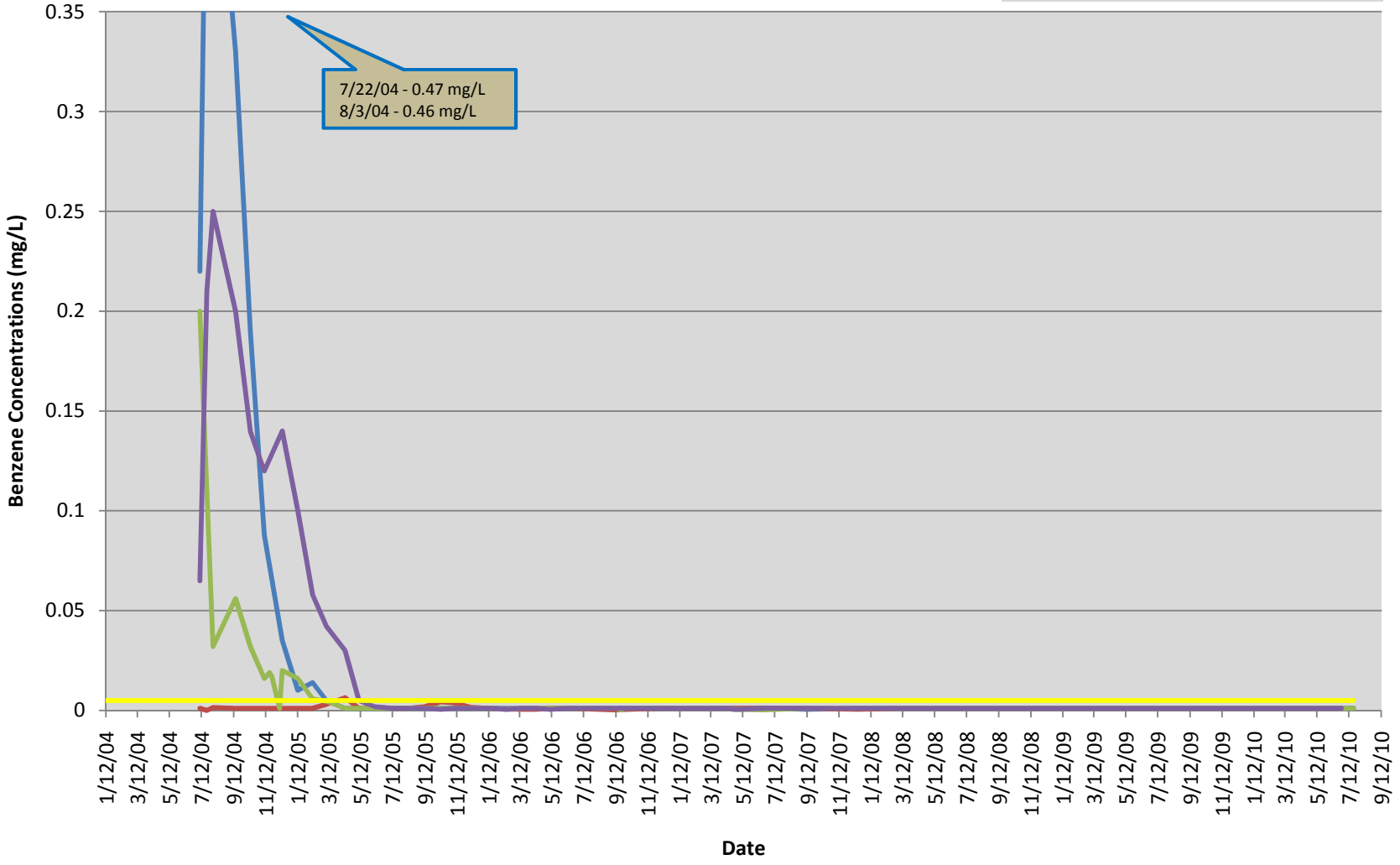
- Benzene - MW16
- Benzene - MW17
- Maximum Contaminant Level



# West Divide Creek

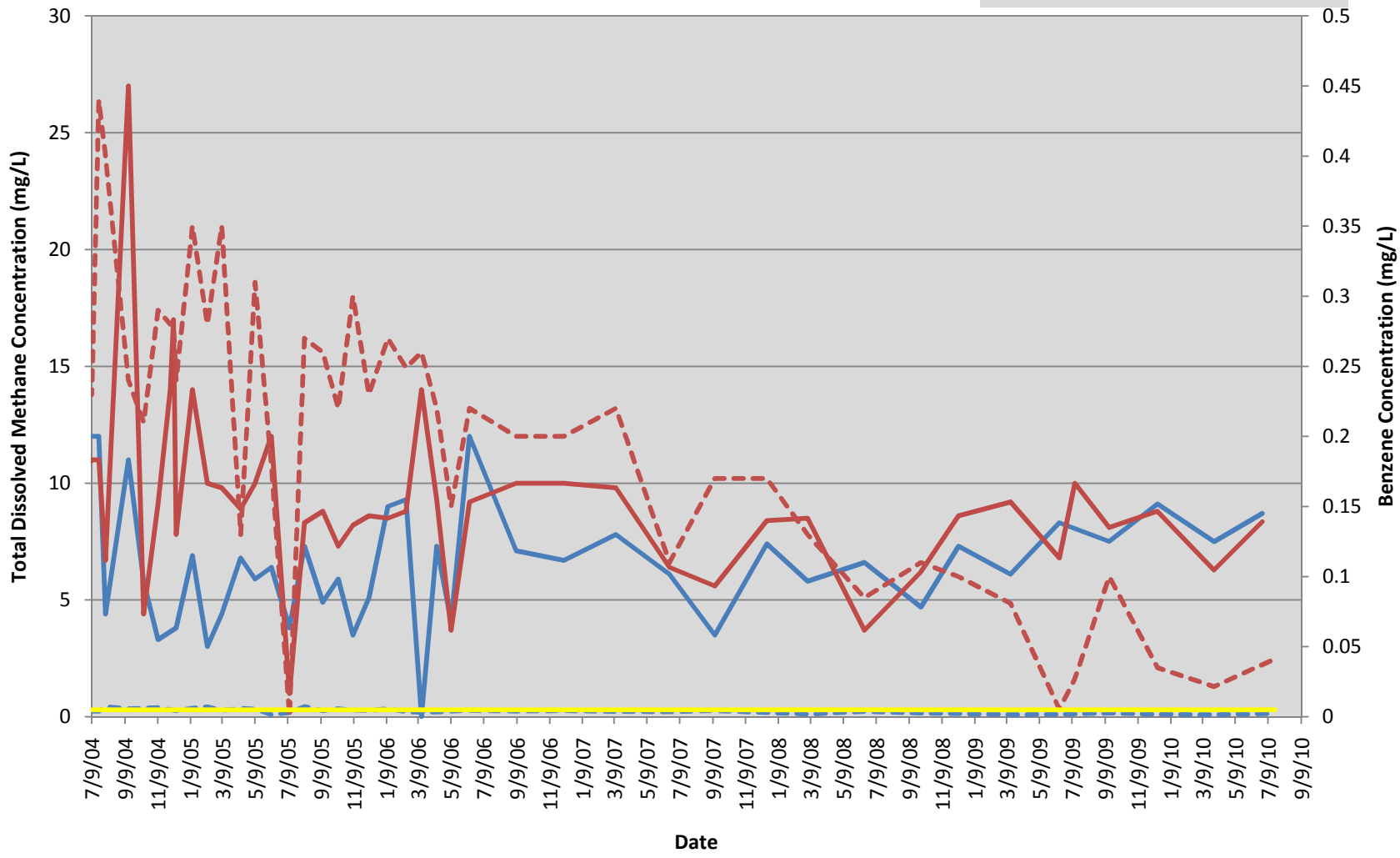
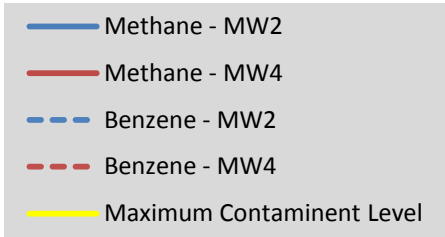
## Benzene concentrations MW1, MW6, MW7 and MW8

- Benzene - MW1
- Benzene - MW6
- Benzene - MW7
- Benzene - MW8
- Maximum Contaminant Level



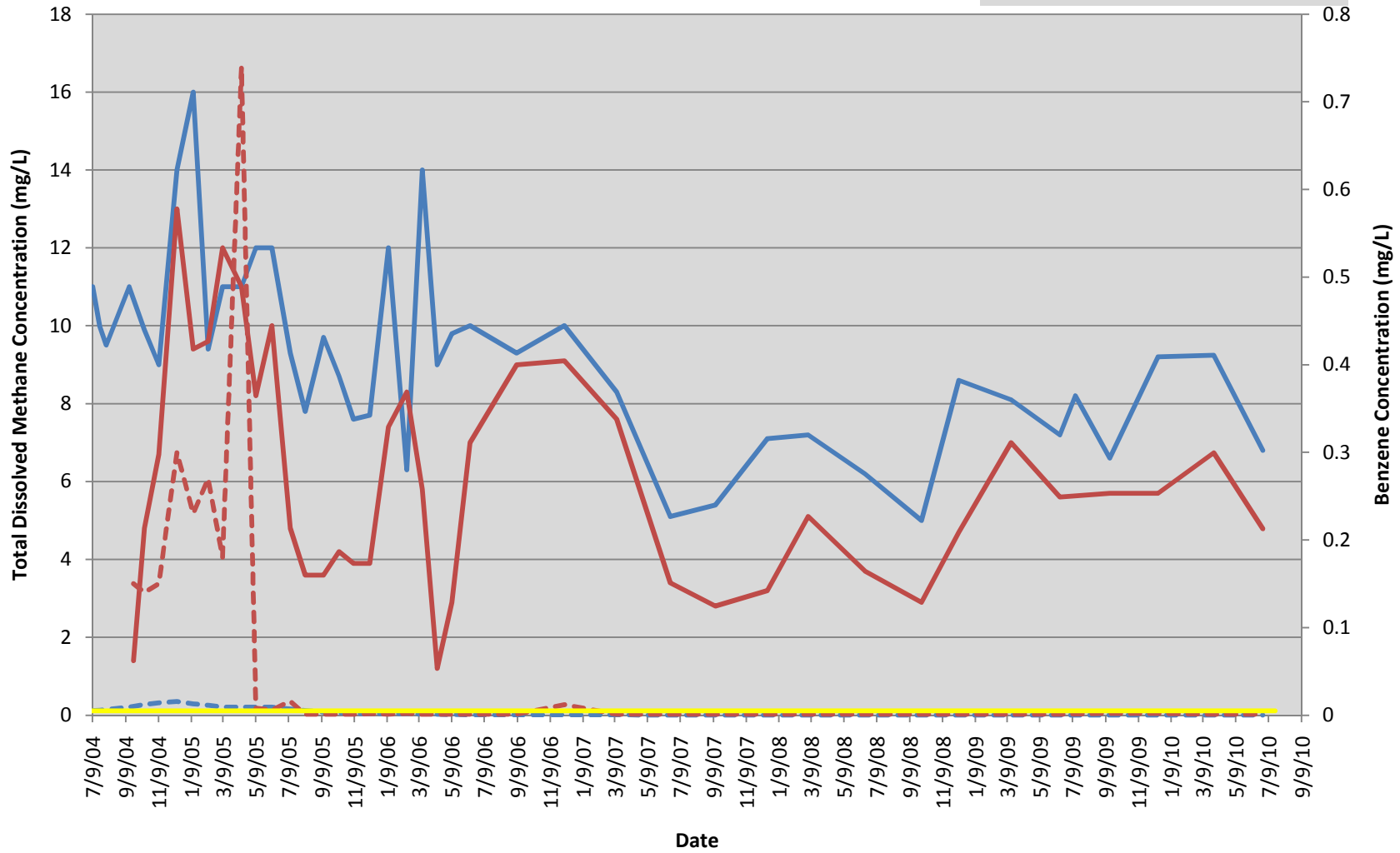
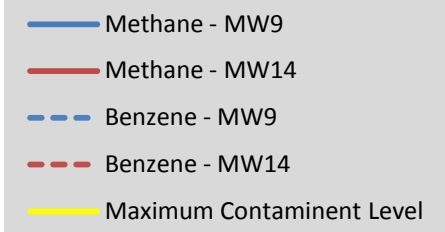
# West Divide Creek

## Total Dissolved Methane Concentrations and Benzene Concentrations MW2 and MW4



# West Divide Creek

## Total Dissolved Methane Concentrations and Benzene Concentrations MW9 and MW14





# **APPENDIX G**

## **Lab Reports**

**Accutest Labs: report included as .pdf file on CD in back**

**Isotech Labs: report included as .pdf file on CD in back**



## Technical Report for

**Olsson Associates**

**Divide Creek Quarterly**

**008-2067**

**Accutest Job Number: D14704**

**Sampling Date: 06/28/10**

### Report to:

**Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO 81505  
bradstephenson@oaconsulting.com**

**ATTN: Brad Stephenson**

**Total number of pages in report: 69**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

**Jesse L. Smith  
Laboratory Director**

**Client Service contact: Amanda Kissell 303-425-6021**

Certifications: CO, ID, NE, NM, ND (R-027) (PW) UT (NELAP CO00049)

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Test results relate only to samples analyzed.



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## Sample Summary

Olsson Associates

**Job No:** D14704

Divide Creek Quarterly  
Project No: 008-2067

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
D14704-1	06/28/10	08:15 BS	06/29/10	AQ	Ground Water	MW6
D14704-1F	06/28/10	08:15 BS	06/29/10	AQ	Groundwater Filtered	MW6
D14704-2	06/28/10	09:00 BS	06/29/10	AQ	Ground Water	MW8
D14704-2F	06/28/10	09:00 BS	06/29/10	AQ	Groundwater Filtered	MW8
D14704-3	06/28/10	09:30 BS	06/29/10	AQ	Ground Water	MW17
D14704-3F	06/28/10	09:30 BS	06/29/10	AQ	Groundwater Filtered	MW17
D14704-4	06/28/10	10:00 BS	06/29/10	AQ	Ground Water	MW16
D14704-4F	06/28/10	10:00 BS	06/29/10	AQ	Groundwater Filtered	MW16
D14704-5	06/28/10	10:00 BS	06/29/10	AQ	Water Dup/MSD	MW16D
D14704-5F	06/28/10	10:00 BS	06/29/10	AQ	Groundwater Filtered	MW16D
D14704-6	06/28/10	10:20 BS	06/29/10	AQ	Ground Water	MW1
D14704-6F	06/28/10	10:20 BS	06/29/10	AQ	Groundwater Filtered	MW1
D14704-7	06/28/10	10:40 BS	06/29/10	AQ	Ground Water	MW2



## Sample Summary

(continued)

Olsson Associates

**Job No:** D14704

Divide Creek Quarterly  
Project No: 008-2067

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
D14704-7F	06/28/10	10:40 BS	06/29/10	AQ	Groundwater Filtered	MW2
D14704-8	06/28/10	13:00 BS	06/29/10	AQ	Ground Water	MW4
D14704-8F	06/28/10	13:00 BS	06/29/10	AQ	Groundwater Filtered	MW4
D14704-9	06/28/10	13:20 BS	06/29/10	AQ	Ground Water	MW7
D14704-9F	06/28/10	13:20 BS	06/29/10	AQ	Groundwater Filtered	MW7
D14704-10	06/28/10	13:45 BS	06/29/10	AQ	Ground Water	MW26
D14704-10F	06/28/10	13:45 BS	06/29/10	AQ	Groundwater Filtered	MW26

## CASE NARRATIVE / CONFORMANCE SUMMARY

**Client:** Olsson Associates

**Job No** D14704

**Site:** Divide Creek Quarterly

**Report Dat** 7/7/2010 11:22:59 AM

On 06/29/2010, 10 sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 6 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D14704 was assigned to the project. The lab sample IDs, client sample IDs, and dates of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

### Volatiles by GC By Method RSK175 MOD

<b>Matrix</b> AQ	<b>Batch ID:</b> GFB45
------------------	------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples D14704-1MS and D14704-1MSD were used as the QC samples indicated.

### Volatiles by GC By Method SW846 8021B

<b>Matrix</b> AQ	<b>Batch ID:</b> GTA435
------------------	-------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples D14704-1MS and D14704-1MSD were used as the QC samples indicated.

### Metals By Method SW846 6010B

<b>Matrix</b> AQ	<b>Batch ID:</b> MP2214
------------------	-------------------------

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples D14617-1FMS and D14617-1FMSD were used as the QC samples for metals.

### Wet Chemistry By Method EPA 300/SW846 9056

<b>Matrix</b> AQ	<b>Batch ID:</b> GP2273
------------------	-------------------------

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples D14704-1MS and D14704-1MSD were used as the QC samples for Chloride.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.



## Sample Results

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## Report of Analysis

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## Report of Analysis

3.1  
3

<b>Client Sample ID:</b> MW6	
<b>Lab Sample ID:</b> D14704-1	<b>Date Sampled:</b> 06/28/10
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/29/10
<b>Method:</b> RSK175 MOD	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB1940.D	1	06/29/10	AS	n/a	n/a	GFB45
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.00989	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

3.1  
3

<b>Client Sample ID:</b> MW6	
<b>Lab Sample ID:</b> D14704-1	<b>Date Sampled:</b> 06/28/10
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/29/10
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA7346.D	1	07/02/10	DG	n/a	n/a	GTA435
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	107%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW6	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14704-1	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	21.8	2.5	mg/l	5	06/30/10 10:44	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW6	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14704-1F	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	97500	400	ug/l	1	06/30/10	07/01/10 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA791

(2) Prep QC Batch: MP2214

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW8		<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14704-2		<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> RSK175 MOD		
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB1943.D	1	06/29/10	AS	n/a	n/a	GFB45
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.0192	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW8	
<b>Lab Sample ID:</b> D14704-2	<b>Date Sampled:</b> 06/28/10
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/29/10
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA7349.D	1	07/02/10	DG	n/a	n/a	GTA435
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	114%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW8	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14704-2	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	32.2	2.5	mg/l	5	06/30/10 10:56	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW8	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14704-2F	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	168000	400	ug/l	1	06/30/10	07/01/10 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA791

(2) Prep QC Batch: MP2214

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RL = Reporting Limit



## Report of Analysis

<b>Client Sample ID:</b> MW17		
<b>Lab Sample ID:</b> D14704-3		<b>Date Sampled:</b> 06/28/10
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/29/10
<b>Method:</b> RSK175 MOD		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB1944.D	1	06/29/10	AS	n/a	n/a	GFB45
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.0107	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW17	
<b>Lab Sample ID:</b> D14704-3	<b>Date Sampled:</b> 06/28/10
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/29/10
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA7350.D	1	07/02/10	DG	n/a	n/a	GTA435
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	115%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW17	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14704-3	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	24.3	2.5	mg/l	5	06/30/10 11:07	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW17	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14704-3F	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	335000	400	ug/l	1	06/30/10	07/01/10 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA791

(2) Prep QC Batch: MP2214

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RL = Reporting Limit

## Report of Analysis

37  
3

<b>Client Sample ID:</b> MW16	
<b>Lab Sample ID:</b> D14704-4	<b>Date Sampled:</b> 06/28/10
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/29/10
<b>Method:</b> RSK175 MOD	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB1945.D	1	06/29/10	AS	n/a	n/a	GFB45
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.0889	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> MW16		
<b>Lab Sample ID:</b> D14704-4		<b>Date Sampled:</b> 06/28/10
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/29/10
<b>Method:</b> SW846 8021B		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA7351.D	1	07/02/10	DG	n/a	n/a	GTA435
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	110%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW16	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14704-4	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	21.6	2.5	mg/l	5	06/30/10 11:18	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis



<b>Client Sample ID:</b> MW16	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14704-4F	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	197000	400	ug/l	1	06/30/10	07/01/10 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA791

(2) Prep QC Batch: MP2214

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RL = Reporting Limit



## Report of Analysis

3.9  
3

<b>Client Sample ID:</b> MW16D	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14704-5	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Water Dup/MSD	<b>Percent Solids:</b> n/a
<b>Method:</b> RSK175 MOD	
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB1946.D	1	06/29/10	AS	n/a	n/a	GFB45
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.0135	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW16D	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14704-5	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Water Dup/MSD	<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8021B	
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA7352.D	1	07/02/10	DG	n/a	n/a	GTA435
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	2.4	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	112%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW16D	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14704-5	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Water Dup/MSD	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	22.4	2.5	mg/l	5	06/30/10 11:29	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW16D	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14704-5F	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	209000	400	ug/l	1	06/30/10	07/01/10 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA791

(2) Prep QC Batch: MP2214

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW1		
<b>Lab Sample ID:</b> D14704-6		<b>Date Sampled:</b> 06/28/10
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/29/10
<b>Method:</b> RSK175 MOD		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB1947.D	1	06/29/10	AS	n/a	n/a	GFB45
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> MW1		
<b>Lab Sample ID:</b> D14704-6		<b>Date Sampled:</b> 06/28/10
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/29/10
<b>Method:</b> SW846 8021B		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA7353.D	1	07/02/10	DG	n/a	n/a	GTA435
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	2.5	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	113%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW1	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14704-6	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	31.1	2.5	mg/l	5	06/30/10 11:40	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW1	
<b>Lab Sample ID:</b> D14704-6F	<b>Date Sampled:</b> 06/28/10
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Date Received:</b> 06/29/10
	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	268000	400	ug/l	1	06/30/10	07/01/10 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA791

(2) Prep QC Batch: MP2214

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RL = Reporting Limit



## Report of Analysis

<b>Client Sample ID:</b> MW2		
<b>Lab Sample ID:</b> D14704-7		<b>Date Sampled:</b> 06/28/10
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/29/10
<b>Method:</b> RSK175 MOD		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB1949.D	25	06/29/10	AS	n/a	n/a	GFB45
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	8.71	0.020	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW2	
<b>Lab Sample ID:</b> D14704-7	<b>Date Sampled:</b> 06/28/10
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/29/10
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA7354.D	1	07/02/10	DG	n/a	n/a	GTA435
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	72.0	1.0	1.0	ug/l	
108-88-3	Toluene	3.0	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	21.3	2.0	2.0	ug/l	
95-47-6	o-Xylene	3.6	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	116%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW2	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14704-7	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	42.9	2.5	mg/l	5	06/30/10 11:51	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW2	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14704-7F	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	108000	400	ug/l	1	06/30/10	07/01/10 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA791

(2) Prep QC Batch: MP2214

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW4		<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14704-8		<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> RSK175 MOD		
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB1951.D	25	06/29/10	AS	n/a	n/a	GFB45
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	8.35	0.020	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> MW4		
<b>Lab Sample ID:</b> D14704-8		<b>Date Sampled:</b> 06/28/10
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/29/10
<b>Method:</b> SW846 8021B		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA7355.D	1	07/02/10	DG	n/a	n/a	GTA435
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	59.4	1.0	1.0	ug/l	
108-88-3	Toluene	3.0	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	2.2	2.0	2.0	ug/l	
	m,p-Xylene	18.6	2.0	2.0	ug/l	
95-47-6	o-Xylene	3.1	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	117%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW4	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14704-8	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	33.2	2.5	mg/l	5	06/30/10 12:03	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW4	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14704-8F	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	111000	400	ug/l	1	06/30/10	07/01/10 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA791

(2) Prep QC Batch: MP2214

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RL = Reporting Limit



## Report of Analysis

<b>Client Sample ID:</b> MW7		
<b>Lab Sample ID:</b> D14704-9		<b>Date Sampled:</b> 06/28/10
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/29/10
<b>Method:</b> RSK175 MOD		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB1952.D	1	06/29/10	AS	n/a	n/a	GFB45
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> MW7		
<b>Lab Sample ID:</b> D14704-9		<b>Date Sampled:</b> 06/28/10
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/29/10
<b>Method:</b> SW846 8021B		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA7357.D	1	07/02/10	DG	n/a	n/a	GTA435
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	2.7	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	114%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW7	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14704-9	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	22.8	2.5	mg/l	5	06/30/10 12:14	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW7	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14704-9F	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	117000	400	ug/l	1	06/30/10	07/01/10 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA791

(2) Prep QC Batch: MP2214

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW26		<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14704-10		<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> RSK175 MOD		
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB1954.D	5	06/29/10	AS	n/a	n/a	GFB45
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.778	0.0040	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW26	
<b>Lab Sample ID:</b> D14704-10	<b>Date Sampled:</b> 06/28/10
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/29/10
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA7358.D	1	07/02/10	DG	n/a	n/a	GTA435
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	112%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW26	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14704-10	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	5.3	0.50	mg/l	1	06/30/10 17:27	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW26	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14704-10F	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	80900	400	ug/l	1	06/30/10	07/01/10 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA791

(2) Prep QC Batch: MP2214

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RL = Reporting Limit





## Misc. Forms

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### Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody





## GC Volatiles

5

## QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

## Method Blank Summary

**Job Number:** D14704  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFB45-MB	FB1936.D	1	06/29/10	AS	n/a	n/a	GFB45

The QC reported here applies to the following samples:

Method: RSK175 MOD

D14704-1, D14704-2, D14704-3, D14704-4, D14704-5, D14704-6, D14704-7, D14704-8, D14704-9, D14704-10

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.00080	0.00080	mg/l	

## Method Blank Summary

**Job Number:** D14704  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTA435-MB	TA7344.D	1	07/02/10	DG	n/a	n/a	GTA435

The QC reported here applies to the following samples:

Method: SW846 8021B

D14704-1, D14704-2, D14704-3, D14704-4, D14704-5, D14704-6, D14704-7, D14704-8, D14704-9, D14704-10

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
120-82-1	1,2,4-Trichlorobenzene	113% 60-140%

# Blank Spike Summary

**Job Number:** D14704  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTA435-BS	TA7345.D	1	07/02/10	DG	n/a	n/a	GTA435

The QC reported here applies to the following samples:

Method: SW846 8021B

D14704-1, D14704-2, D14704-3, D14704-4, D14704-5, D14704-6, D14704-7, D14704-8, D14704-9, D14704-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	27.2	27.9	103	70-130
100-41-4	Ethylbenzene	45.6	47.7	105	70-130
108-88-3	Toluene	212	216	102	70-130
95-47-6	o-Xylene	65.9	69.8	106	70-130
	m,p-Xylene	150	162	108	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	122%	60-140%

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** D14704  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFB45-BS	FB1937.D	1	06/29/10	AS	n/a	n/a	GFB45
GFB45-BSD	FB1938.D	1	06/29/10	AS	n/a	n/a	GFB45

The QC reported here applies to the following samples:

Method: RSK175 MOD

D14704-1, D14704-2, D14704-3, D14704-4, D14704-5, D14704-6, D14704-7, D14704-8, D14704-9, D14704-10

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
74-82-8	Methane	0.5094	0.586	115	0.549	108	7	70-130/30

5.3.1  
5

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** D14704  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D14704-1MS	FB1941.D	10	06/29/10	AS	n/a	n/a	GFB45
D14704-1MSD	FB1942.D	10	06/29/10	AS	n/a	n/a	GFB45
D14704-1	FB1940.D	1	06/29/10	AS	n/a	n/a	GFB45

The QC reported here applies to the following samples:

Method: RSK175 MOD

D14704-1, D14704-2, D14704-3, D14704-4, D14704-5, D14704-6, D14704-7, D14704-8, D14704-9, D14704-10

CAS No.	Compound	D14704-1 mg/l	Spike Q mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
74-82-8	Methane	0.00989	0.5094	0.550	106	0.553	107	0	70-130/30

5.4.1  
5



# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** D14704  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D14704-1MS	TA7347.D	1	07/02/10	DG	n/a	n/a	GTA435
D14704-1MSD	TA7348.D	1	07/02/10	DG	n/a	n/a	GTA435
D14704-1	TA7346.D	1	07/02/10	DG	n/a	n/a	GTA435

**The QC reported here applies to the following samples:** **Method:** SW846 8021B

D14704-1, D14704-2, D14704-3, D14704-4, D14704-5, D14704-6, D14704-7, D14704-8, D14704-9, D14704-10

CAS No.	Compound	D14704-1 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	27.2	27.1	100	27.8	102	3	70-130/30
100-41-4	Ethylbenzene	ND	45.6	46.2	101	47.2	104	2	62-130/30
108-88-3	Toluene	ND	212	207	98	212	100	2	70-130/30
95-47-6	o-Xylene	ND	65.9	67.4	102	69.2	105	3	63-130/30
	m,p-Xylene	ND	150	157	105	161	107	3	70-134/30

CAS No.	Surrogate Recoveries	MS	MSD	D14704-1	Limits
120-82-1	1,2,4-Trichlorobenzene	122%	121%	107%	60-140%

5.4.2  
5



## Metals Analysis

### QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: D14704  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

QC Batch ID: MP2214  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date: 06/30/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	7	49		
Antimony	30	1.7	13		
Arsenic	25	2.8	6.5		
Barium	10	.14	2.4		
Beryllium	10	1.4	4.4		
Boron	50	3.5	19		
Cadmium	10	.22	1.2		
Calcium	400	17	9.2		
Chromium	10	.27	1.6		
Cobalt	5.0	.48	.3		
Copper	5.0	1.6	2.7		
Iron	70	7.7	10		
Lead	50	1.3	3.2		
Lithium	2.0	.76	1.6		
Magnesium	200	5.8	12		
Manganese	5.0	.21	.7		
Molybdenum	10	.41	1.2		
Nickel	30	.38	.6		
Phosphorus	100	15	54		
Potassium	1000	380	540		
Selenium	50	2.8	7.2		
Silicon	50	12	20		
Silver	30	.98	.3		
Sodium	400	230	23	51.2	<400
Strontium	5.0	.091	3.4		
Thallium	10	3.1	2.1		
Tin	50	14	4.4		
Titanium	10	.098	.7		
Uranium	50	2.2	3.9		
Vanadium	10	.27	.3		
Zinc	30	.76	1.7		

Associated samples MP2214: D14704-1F, D14704-2F, D14704-3F, D14704-4F, D14704-5F, D14704-6F, D14704-7F, D14704-8F, D14704-9F, D14704-10F

Results < IDL are shown as zero for calculation purposes

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: D14704  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

QC Batch ID: MP2214  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date:

Metal

(\*) Outside of QC limits  
(anr) Analyte not requested

6.1.1  
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D14704  
 Account: CORCCOGJ - Olsson Associates  
 Project: Divide Creek Quarterly

QC Batch ID: MP2214  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 06/30/10

Metal	D14617-1F Original MS	SpikeLot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silicon				
Silver				
Sodium	5790	31500	25000	102.8 75-125
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP2214: D14704-1F, D14704-2F, D14704-3F, D14704-4F, D14704-5F, D14704-6F, D14704-7F, D14704-8F, D14704-9F, D14704-10F

Results < IDL are shown as zero for calculation purposes

6.1.2  
 6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D14704  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

QC Batch ID: MP2214  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date:

Metal

(\* ) Outside of QC limits  
(N) Matrix Spike Rec. outside of QC limits  
(anr) Analyte not requested

61.2

6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D14704  
 Account: CORCCOGJ - Olsson Associates  
 Project: Divide Creek Quarterly

QC Batch ID: MP2214  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 06/30/10

Metal	D14617-1F Original MSD	SpikeLot MPICPALL	% Rec	MSD RPD	QC Limit	
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Boron						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium						
Silicon						
Silver						
Sodium	5790	31600	25000	103.2	0.3	20
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP2214: D14704-1F, D14704-2F, D14704-3F, D14704-4F, D14704-5F, D14704-6F, D14704-7F, D14704-8F, D14704-9F, D14704-10F

Results < IDL are shown as zero for calculation purposes

6.1.2  
 6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D14704  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

QC Batch ID: MP2214  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date:

Metal

(\* ) Outside of QC limits  
(N) Matrix Spike Rec. outside of QC limits  
(anr) Analyte not requested

6.1.2

6



SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D14704  
 Account: CORCCOGJ - Olsson Associates  
 Project: Divide Creek Quarterly

QC Batch ID: MP2214  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 06/30/10

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silicon				
Silver				
Sodium	26000	25000	104.0	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP2214: D14704-1F, D14704-2F, D14704-3F, D14704-4F, D14704-5F, D14704-6F, D14704-7F, D14704-8F, D14704-9F, D14704-10F

Results < IDL are shown as zero for calculation purposes

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D14704  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

QC Batch ID: MP2214  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date:

Metal

(\*) Outside of QC limits  
(anr) Analyte not requested

6.1.3

6



## General Chemistry

---

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D14704  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GP2273/GN5165	0.50	0.0	mg/l	20	21.0	105.0	90-110%

Associated Samples:

Batch GP2273: D14704-1, D14704-10, D14704-2, D14704-3, D14704-4, D14704-5, D14704-6, D14704-7, D14704-8, D14704-9  
(\* ) Outside of QC limits

7.1

7

MATRIX SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D14704  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP2273/GN5165	D14704-1	mg/l	21.8	50	72.8	102.0	80-120%

Associated Samples:

Batch GP2273: D14704-1, D14704-10, D14704-2, D14704-3, D14704-4, D14704-5, D14704-6, D14704-7, D14704-8, D14704-9

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

7.2  
7

MATRIX SPIKE DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D14704  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Chloride	GP2273/GN5165	D14704-1	mg/l	21.8	50	73.0	0.3	20%

Associated Samples:

Batch GP2273: D14704-1, D14704-10, D14704-2, D14704-3, D14704-4, D14704-5, D14704-6, D14704-7, D14704-8, D14704-9

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits



Technical Report for

Olsson Associates

Divide Creek Quarterly

Accutest Job Number: D14705

Sampling Date: 06/28/10

Report to:

Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO 81505  
bradstephenson@oaconsulting.com

ATTN: Brad Stephenson

Total number of pages in report: **61**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Jesse L. Smith  
Laboratory Director

Client Service contact: Amanda Kissell 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW) UT (NELAP CO00049)

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Test results relate only to samples analyzed.



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## Sample Summary

Olsson Associates

**Job No:** D14705

Divide Creek Quarterly

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
D14705-1	06/28/10	10:00 SH	06/29/10	AQ	Ground Water	MW23
D14705-1F	06/28/10	10:00 SH	06/29/10	AQ	Groundwater Filtered	MW23
D14705-2	06/28/10	10:00 SH	06/29/10	AQ	Ground Water	MW23-D
D14705-2F	06/28/10	10:00 SH	06/29/10	AQ	Groundwater Filtered	MW23-D
D14705-3	06/28/10	10:30 SH	06/29/10	AQ	Ground Water	MW27
D14705-3F	06/28/10	10:30 SH	06/29/10	AQ	Groundwater Filtered	MW27
D14705-4	06/28/10	11:05 SH	06/29/10	AQ	Ground Water	MW14
D14705-4F	06/28/10	11:05 SH	06/29/10	AQ	Groundwater Filtered	MW14
D14705-5	06/28/10	11:25 SH	06/29/10	AQ	Ground Water	MW9
D14705-5F	06/28/10	11:25 SH	06/29/10	AQ	Groundwater Filtered	MW9
D14705-6	06/28/10	12:00 SH	06/29/10	AQ	Ground Water	MW25
D14705-6F	06/28/10	12:00 SH	06/29/10	AQ	Groundwater Filtered	MW25
D14705-7	06/28/10	12:20 SH	06/29/10	AQ	Ground Water	MW11



### Sample Summary (continued)

Olsson Associates

Job No: D14705

Divide Creek Quarterly

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
D14705-7F	06/28/10	12:20 SH	06/29/10	AQ	Groundwater Filtered	MW11
D14705-8	06/28/10	12:45 SH	06/29/10	AQ	Ground Water	MW12
D14705-8F	06/28/10	12:45 SH	06/29/10	AQ	Groundwater Filtered	MW12

## CASE NARRATIVE / CONFORMANCE SUMMARY

**Client:** Olsson Associates

**Job No** D14705

**Site:** Divide Creek Quarterly

**Report Dat** 7/7/2010 1:25:17 PM

On 06/29/2010, eight (8) samples, 0 Trip Blanks, and 0 Field Blanks were received at Accutest Mountain States (AMS) at a temperature of 6.0°C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D14705 was assigned to the project. The lab sample IDs, client sample IDs, and dates of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

### Volatiles by GC By Method RSK175 MOD

<b>Matrix</b> AQ	<b>Batch ID:</b> GFB45
------------------	------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples D14704-1MS and D14704-1MSD were used as the QC samples indicated.

### Volatiles by GC By Method SW846 8021B

<b>Matrix</b> AQ	<b>Batch ID:</b> GTA435
------------------	-------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples D14704-1MS and D14704-1MSD were used as the QC samples indicated.

### Metals By Method SW846 6010B

<b>Matrix</b> AQ	<b>Batch ID:</b> MP2214
------------------	-------------------------

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples D14617-1FMS and D14617-1FMSD were used as the QC samples for the metals analysis.

### Wet Chemistry By Method EPA 300/SW846 9056

<b>Matrix</b> AQ	<b>Batch ID:</b> GP2280
------------------	-------------------------

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples D14705-3MS and D14705-3MSD were used as the QC samples for the Chloride analysis.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.



## Sample Results

---

## Report of Analysis

---

## Report of Analysis

3.1  
3

<b>Client Sample ID:</b> MW23		
<b>Lab Sample ID:</b> D14705-1		<b>Date Sampled:</b> 06/28/10
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/29/10
<b>Method:</b> RSK175 MOD		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB1956.D	1	06/29/10	AS	n/a	n/a	GFB45
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW23		
<b>Lab Sample ID:</b> D14705-1		<b>Date Sampled:</b> 06/28/10
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/29/10
<b>Method:</b> SW846 8021B		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA7359.D	1	07/02/10	DG	n/a	n/a	GTA435
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	112%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW23	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14705-1	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	27.8	1.0	mg/l	2	06/30/10 14:28	GH	EPA 300/SW846 9056

RL = Reporting Limit



## Report of Analysis

<b>Client Sample ID:</b> MW23	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14705-1F	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	329000	400	ug/l	1	06/30/10	07/01/10 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA791

(2) Prep QC Batch: MP2214

---

RL = Reporting Limit

## Report of Analysis



<b>Client Sample ID:</b> MW23-D	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14705-2	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> RSK175 MOD	
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB1957.D	1	06/29/10	AS	n/a	n/a	GFB45
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> MW23-D		
<b>Lab Sample ID:</b> D14705-2		<b>Date Sampled:</b> 06/28/10
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/29/10
<b>Method:</b> SW846 8021B		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA7360.D	1	07/02/10	DG	n/a	n/a	GTA435
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	113%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW23-D	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14705-2	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	28.2	1.0	mg/l	2	06/30/10 14:39	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW23-D	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14705-2F	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	332000	400	ug/l	1	06/30/10	07/01/10 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA791

(2) Prep QC Batch: MP2214

---

RL = Reporting Limit

## Report of Analysis

3.5  
3

<b>Client Sample ID:</b> MW27		
<b>Lab Sample ID:</b> D14705-3		<b>Date Sampled:</b> 06/28/10
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/29/10
<b>Method:</b> RSK175 MOD		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB1958.D	1	06/29/10	AS	n/a	n/a	GFB45
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

3.5  
3

<b>Client Sample ID:</b> MW27	
<b>Lab Sample ID:</b> D14705-3	<b>Date Sampled:</b> 06/28/10
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/29/10
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA7361.D	1	07/02/10	DG	n/a	n/a	GTA435
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	2.1	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	112%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW27	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14705-3	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	22.1	1.0	mg/l	2	06/30/10 15:13	GH	EPA 300/SW846 9056

RL = Reporting Limit



## Report of Analysis

<b>Client Sample ID:</b> MW27	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14705-3F	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	155000	400	ug/l	1	06/30/10	07/01/10 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA791

(2) Prep QC Batch: MP2214

---

RL = Reporting Limit

## Report of Analysis

37  
3

<b>Client Sample ID:</b> MW14	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14705-4	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> RSK175 MOD	
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB1960.D	10	06/29/10	AS	n/a	n/a	GFB45
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	4.79	0.0080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

37  
3

<b>Client Sample ID:</b> MW14	
<b>Lab Sample ID:</b> D14705-4	<b>Date Sampled:</b> 06/28/10
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/29/10
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA7362.D	1	07/02/10	DG	n/a	n/a	GTA435
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	109%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW14	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14705-4	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	12.5	1.0	mg/l	2	06/30/10 15:47	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW14	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14705-4F	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	43000	400	ug/l	1	06/30/10	07/01/10 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA791

(2) Prep QC Batch: MP2214

---

RL = Reporting Limit

## Report of Analysis

3.9  
3

<b>Client Sample ID:</b> MW9	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14705-5	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> RSK175 MOD	
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB1962.D	25	06/29/10	AS	n/a	n/a	GFB45
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	6.80	0.020	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

3.9  
3

<b>Client Sample ID:</b> MW9	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14705-5	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8021B	
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA7363.D	1	07/02/10	DG	n/a	n/a	GTA435
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	1.8	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	114%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW9	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14705-5	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	19.8	1.0	mg/l	2	06/30/10 15:58	GH	EPA 300/SW846 9056

RL = Reporting Limit



## Report of Analysis

<b>Client Sample ID:</b> MW9	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14705-5F	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	53400	400	ug/l	1	06/30/10	07/01/10 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA791

(2) Prep QC Batch: MP2214

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW25		
<b>Lab Sample ID:</b> D14705-6		<b>Date Sampled:</b> 06/28/10
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/29/10
<b>Method:</b> RSK175 MOD		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB1963.D	1	06/29/10	AS	n/a	n/a	GFB45
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.0103	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW25	
<b>Lab Sample ID:</b> D14705-6	<b>Date Sampled:</b> 06/28/10
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/29/10
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA7364.D	1	07/02/10	DG	n/a	n/a	GTA435
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	2.0	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	114%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW25	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14705-6	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	16.5	1.0	mg/l	2	06/30/10 16:09	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW25	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14705-6F	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	33100	400	ug/l	1	06/30/10	07/01/10 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA791

(2) Prep QC Batch: MP2214

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW11	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14705-7	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> RSK175 MOD	
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB1964.D	1	06/29/10	AS	n/a	n/a	GFB45
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.0615	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW11	
<b>Lab Sample ID:</b> D14705-7	<b>Date Sampled:</b> 06/28/10
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/29/10
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA7365.D	1	07/02/10	DG	n/a	n/a	GTA435
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	2.3	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	2.7	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	119%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW11	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14705-7	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	19.7	1.0	mg/l	2	06/30/10 16:20	GH	EPA 300/SW846 9056

RL = Reporting Limit



## Report of Analysis

<b>Client Sample ID:</b> MW11	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14705-7F	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	35900	400	ug/l	1	06/30/10	07/01/10 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA791

(2) Prep QC Batch: MP2214

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW12		<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14705-8		<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> RSK175 MOD		
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB1966.D	5	06/29/10	AS	n/a	n/a	GFB45
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.672	0.0040	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> MW12		
<b>Lab Sample ID:</b> D14705-8		<b>Date Sampled:</b> 06/28/10
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 06/29/10
<b>Method:</b> SW846 8021B		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA7366.D	1	07/02/10	DG	n/a	n/a	GTA435
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	115%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW12	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14705-8	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	23.2	1.0	mg/l	2	06/30/10 16:31	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW12	<b>Date Sampled:</b> 06/28/10
<b>Lab Sample ID:</b> D14705-8F	<b>Date Received:</b> 06/29/10
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	81200	400	ug/l	1	06/30/10	07/01/10 JM	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA791

(2) Prep QC Batch: MP2214

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RL = Reporting Limit



## Misc. Forms

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### Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job #

Client / Reporting Information			Project Information			Requested Analysis (see TEST CODE sheet)										Matrix Codes
Company Name <b>Olsson Associates</b>			Project Name <b>Divide Creek Quarterly</b>													DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LO - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank
Street Address			Street													
City State Zip			City State													
Project Contact			Project #													
Phone # Fax #			Client Purchase Order #													
Sample(s) Name(s) <b>Stuart Hall</b>			Project Manager													
Field ID / Point of Collection			MEOH/DI Vial #													
MW23			6/23/10													
MW23-D			1000													
MW24			1030													
MW14			1105													
MW9			1125													
MW25			1200													
MW11			1220													
MW18			1245													

Turnaround Time (Business days)	Data Deliverable Information	Comments / Special Instructions
<input type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> UST Analysis 3-5 Days <input type="checkbox"/> 6 - 9 Day RUSH <input type="checkbox"/> 3 - 5 Day RUSH <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 1 Day EMERGENCY	Approved By (Accutest PM) / Date: _____ <input type="checkbox"/> Level 1 <input type="checkbox"/> Level 2 <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 Level 1 = Results Only Level 2 = Results + QC Summary + Case Narrative Level 3 = Results + QC Summary + Partial Raw data Level 4 = Full Deliverable	Note: D14705-7 one each for methane and BTX 11 limited Rinal/Rinal BRD/BRD

Sample Custody must be documented below each time samples change possession, including courier delivery.					
Relinquished by Sampler:	Date Time:	Received By:	Date Time:	Relinquished By:	Date Time:
1 <i>[Signature]</i>	6/23/10 1630	1		2	
Relinquished by Sampler:	Date Time:	Received By:	Date Time:	Relinquished By:	Date Time:
3		3		4	
Relinquished by:	Date Time:	Received By:	Date Time:	Custody Seal #	<input checked="" type="checkbox"/> Intact <input type="checkbox"/> Not Intact
5		5			Preserved where applicable On Ice <input checked="" type="checkbox"/> Cooler Temp. 6.0



## GC Volatiles

5

## QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries



## Method Blank Summary

**Job Number:** D14705  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFB45-MB	FB1936.D	1	06/29/10	AS	n/a	n/a	GFB45

The QC reported here applies to the following samples:

Method: RSK175 MOD

D14705-1, D14705-2, D14705-3, D14705-4, D14705-5, D14705-6, D14705-7, D14705-8

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.00080	0.00080	mg/l	

## Method Blank Summary

**Job Number:** D14705  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTA435-MB	TA7344.D	1	07/02/10	DG	n/a	n/a	GTA435

The QC reported here applies to the following samples:

Method: SW846 8021B

D14705-1, D14705-2, D14705-3, D14705-4, D14705-5, D14705-6, D14705-7, D14705-8

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
120-82-1	1,2,4-Trichlorobenzene	113% 60-140%

# Blank Spike Summary

**Job Number:** D14705  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTA435-BS	TA7345.D	1	07/02/10	DG	n/a	n/a	GTA435

The QC reported here applies to the following samples:

Method: SW846 8021B

D14705-1, D14705-2, D14705-3, D14705-4, D14705-5, D14705-6, D14705-7, D14705-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	27.2	27.9	103	70-130
100-41-4	Ethylbenzene	45.6	47.7	105	70-130
108-88-3	Toluene	212	216	102	70-130
95-47-6	o-Xylene	65.9	69.8	106	70-130
	m,p-Xylene	150	162	108	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	122%	60-140%

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** D14705  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFB45-BS	FB1937.D	1	06/29/10	AS	n/a	n/a	GFB45
GFB45-BSD	FB1938.D	1	06/29/10	AS	n/a	n/a	GFB45

The QC reported here applies to the following samples:

Method: RSK175 MOD

D14705-1, D14705-2, D14705-3, D14705-4, D14705-5, D14705-6, D14705-7, D14705-8

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
74-82-8	Methane	0.5094	0.586	115	0.549	108	7	70-130/30

5.3.1  
5

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** D14705  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D14704-1MS	FB1941.D	10	06/29/10	AS	n/a	n/a	GFB45
D14704-1MSD	FB1942.D	10	06/29/10	AS	n/a	n/a	GFB45
D14704-1	FB1940.D	1	06/29/10	AS	n/a	n/a	GFB45

The QC reported here applies to the following samples:

Method: RSK175 MOD

D14705-1, D14705-2, D14705-3, D14705-4, D14705-5, D14705-6, D14705-7, D14705-8

CAS No.	Compound	D14704-1 mg/l	Spike Q mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
74-82-8	Methane	0.00989	0.5094	0.550	106	0.553	107	0	70-130/30

5.4.1  
5

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** D14705  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D14704-1MS	TA7347.D	1	07/02/10	DG	n/a	n/a	GTA435
D14704-1MSD	TA7348.D	1	07/02/10	DG	n/a	n/a	GTA435
D14704-1	TA7346.D	1	07/02/10	DG	n/a	n/a	GTA435

**The QC reported here applies to the following samples:** **Method:** SW846 8021B

D14705-1, D14705-2, D14705-3, D14705-4, D14705-5, D14705-6, D14705-7, D14705-8

CAS No.	Compound	D14704-1 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	27.2	27.1	100	27.8	102	3	70-130/30
100-41-4	Ethylbenzene	ND	45.6	46.2	101	47.2	104	2	62-130/30
108-88-3	Toluene	ND	212	207	98	212	100	2	70-130/30
95-47-6	o-Xylene	ND	65.9	67.4	102	69.2	105	3	63-130/30
	m,p-Xylene	ND	150	157	105	161	107	3	70-134/30

CAS No.	Surrogate Recoveries	MS	MSD	D14704-1	Limits
120-82-1	1,2,4-Trichlorobenzene	122%	121%	107%	60-140%

5.4.2  
5



## Metals Analysis

### QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: D14705  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

QC Batch ID: MP2214  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date: 06/30/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	7	49		
Antimony	30	1.7	13		
Arsenic	25	2.8	6.5		
Barium	10	.14	2.4		
Beryllium	10	1.4	4.4		
Boron	50	3.5	19		
Cadmium	10	.22	1.2		
Calcium	400	17	9.2		
Chromium	10	.27	1.6		
Cobalt	5.0	.48	.3		
Copper	5.0	1.6	2.7		
Iron	70	7.7	10		
Lead	50	1.3	3.2		
Lithium	2.0	.76	1.6		
Magnesium	200	5.8	12		
Manganese	5.0	.21	.7		
Molybdenum	10	.41	1.2		
Nickel	30	.38	.6		
Phosphorus	100	15	54		
Potassium	1000	380	540		
Selenium	50	2.8	7.2		
Silicon	50	12	20		
Silver	30	.98	.3		
Sodium	400	230	23	51.2	<400
Strontium	5.0	.091	3.4		
Thallium	10	3.1	2.1		
Tin	50	14	4.4		
Titanium	10	.098	.7		
Uranium	50	2.2	3.9		
Vanadium	10	.27	.3		
Zinc	30	.76	1.7		

Associated samples MP2214: D14705-1F, D14705-2F, D14705-3F, D14705-4F, D14705-5F, D14705-6F, D14705-7F, D14705-8F

Results < IDL are shown as zero for calculation purposes



BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: D14705  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

QC Batch ID: MP2214  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date:

Metal

(\*) Outside of QC limits  
(anr) Analyte not requested

6.1.1  
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D14705  
 Account: CORCCOGJ - Olsson Associates  
 Project: Divide Creek Quarterly

QC Batch ID: MP2214  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 06/30/10

Metal	D14617-1F Original MS	SpikeLot MPICPALL % Rec	QC Limits
Aluminum			
Antimony			
Arsenic			
Barium			
Beryllium			
Boron			
Cadmium			
Calcium			
Chromium			
Cobalt			
Copper			
Iron			
Lead			
Lithium			
Magnesium			
Manganese			
Molybdenum			
Nickel			
Phosphorus			
Potassium			
Selenium			
Silicon			
Silver			
Sodium	5790 31500	25000	102.8 75-125
Strontium			
Thallium			
Tin			
Titanium			
Uranium			
Vanadium			
Zinc			

Associated samples MP2214: D14705-1F, D14705-2F, D14705-3F, D14705-4F, D14705-5F, D14705-6F, D14705-7F, D14705-8F

Results < IDL are shown as zero for calculation purposes

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D14705  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

QC Batch ID: MP2214  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date:

Metal

(\* ) Outside of QC limits  
(N) Matrix Spike Rec. outside of QC limits  
(anr) Analyte not requested

61.2

6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D14705  
 Account: CORCCOGJ - Olsson Associates  
 Project: Divide Creek Quarterly

QC Batch ID: MP2214  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 06/30/10

Metal	D14617-1F Original MSD	SpikeLot MPICPALL % Rec	MSD RPD	QC Limit		
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Boron						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium						
Silicon						
Silver						
Sodium	5790	31600	25000	103.2	0.3	20
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP2214: D14705-1F, D14705-2F, D14705-3F, D14705-4F, D14705-5F, D14705-6F, D14705-7F, D14705-8F

Results < IDL are shown as zero for calculation purposes

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D14705  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

QC Batch ID: MP2214  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date:

Metal

(\* ) Outside of QC limits  
(N) Matrix Spike Rec. outside of QC limits  
(anr) Analyte not requested

6.1.2

6

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D14705  
 Account: CORCCOGJ - Olsson Associates  
 Project: Divide Creek Quarterly

QC Batch ID: MP2214  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 06/30/10

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silicon				
Silver				
Sodium	26000	25000	104.0	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP2214: D14705-1F, D14705-2F, D14705-3F, D14705-4F, D14705-5F, D14705-6F, D14705-7F, D14705-8F

Results < IDL are shown as zero for calculation purposes

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D14705  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

QC Batch ID: MP2214  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date:

Metal

(\*) Outside of QC limits  
(anr) Analyte not requested

6.1.3

6



## General Chemistry

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries



METHOD BLANK AND SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D14705  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GP2280/GN5165	0.50	0.30	mg/l	20	21.2	106.0	90-110%

Associated Samples:

Batch GP2280: D14705-1, D14705-2, D14705-3, D14705-4, D14705-5, D14705-6, D14705-7, D14705-8

(\*) Outside of QC limits

7.1  
7

MATRIX SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D14705  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP2280/GN5165	D14705-3	mg/l	22.1	20	44.3	111.0	80-120%

Associated Samples:

Batch GP2280: D14705-1, D14705-2, D14705-3, D14705-4, D14705-5, D14705-6, D14705-7, D14705-8

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

7.2  
7

MATRIX SPIKE DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D14705  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Chloride	GP2280/GN5165	D14705-3	mg/l	22.1	20	44.1	0.5	20%

Associated Samples:

Batch GP2280: D14705-1, D14705-2, D14705-3, D14705-4, D14705-5, D14705-6, D14705-7, D14705-8

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits



Technical Report for

Olsson Associates

Divide Creek Quarterly

Accutest Job Number: D14773

Sampling Date: 06/29/10

Report to:

Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO 81505  
bradstephenson@oaconsulting.com

ATTN: Brad Stephenson

Total number of pages in report: **97**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Jesse L. Smith  
Laboratory Director

Client Service contact: Amanda Kissell 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW) UT (NELAP CO00049)

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Test results relate only to samples analyzed.



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## Sample Summary

Olsson Associates

**Job No:** D14773

Divide Creek Quarterly

Sample Number	Collected		Matrix Received	Code	Type	Client Sample ID
	Date	Time By				
D14773-1	06/29/10	09:10 SH	06/30/10	AQ	Water	DCS1
D14773-1F	06/29/10	09:10 SH	06/30/10	AQ	Water	DCS1
D14773-2	06/29/10	09:20 SH	06/30/10	AQ	Water	DCS2
D14773-2F	06/29/10	09:20 SH	06/30/10	AQ	Water	DCS2
D14773-3	06/29/10	09:25 SH	06/30/10	AQ	Water	DCS3
D14773-3F	06/29/10	09:25 SH	06/30/10	AQ	Water	DCS3
D14773-4	06/29/10	09:45 SH	06/30/10	AQ	Water	MW15
D14773-4F	06/29/10	09:45 SH	06/30/10	AQ	Water	MW15
D14773-5	06/29/10	10:00 SH	06/30/10	AQ	Water	DCS4
D14773-5F	06/29/10	10:00 SH	06/30/10	AQ	Water	DCS4
D14773-6	06/29/10	10:15 SH	06/30/10	AQ	Water	DCS5
D14773-6F	06/29/10	10:15 SH	06/30/10	AQ	Water	DCS5
D14773-7	06/29/10	10:30 SH	06/30/10	AQ	Water	MW20



## Sample Summary

(continued)

Olsson Associates

**Job No:** D14773

Divide Creek Quarterly

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
D14773-7F	06/29/10	10:30 SH	06/30/10	AQ	Water	MW20
D14773-8	06/29/10	11:00 SH	06/30/10	AQ	Water	MW21
D14773-8F	06/29/10	11:00 SH	06/30/10	AQ	Water	MW21
D14773-9	06/29/10	11:20 SH	06/30/10	AQ	Water	MW22
D14773-9F	06/29/10	11:20 SH	06/30/10	AQ	Water	MW22
D14773-10	06/29/10	11:50 SH	06/30/10	AQ	Water	EICH2
D14773-10F	06/29/10	11:50 SH	06/30/10	AQ	Water	EICH2
D14773-11	06/29/10	12:25 SH	06/30/10	AQ	Water	MW24
D14773-11F	06/29/10	12:25 SH	06/30/10	AQ	Water	MW24
D14773-12	06/29/10	11:30 SH	06/30/10	AQ	Water	DCS6
D14773-12F	06/29/10	11:30 SH	06/30/10	AQ	Water	DCS6
D14773-13	06/29/10	11:50 SH	06/30/10	AQ	Water	DCS7
D14773-13F	06/29/10	11:50 SH	06/30/10	AQ	Water	DCS7





### Sample Summary (continued)

Olsson Associates

Job No: D14773

Divide Creek Quarterly

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
D14773-14	06/29/10	12:10 SH	06/30/10	AQ	Water	MW18
D14773-14F	06/29/10	12:10 SH	06/30/10	AQ	Water	MW18
D14773-15	06/29/10	12:30 SH	06/30/10	AQ	Water	DCS8
D14773-15F	06/29/10	12:30 SH	06/30/10	AQ	Water	DCS8

## CASE NARRATIVE / CONFORMANCE SUMMARY

**Client:** Olsson Associates

**Job No** D14773

**Site:** Divide Creek Quarterly

**Report Dat** 7/9/2010 2:38:39 PM

On 06/30/2010, 15 samples, 0 Trip Blanks, and 0 Field Blanks were received at Accutest Mountain States (AMS) at a temperature of 4.0°C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D14773 was assigned to the project. The lab sample IDs, client sample IDs, and dates of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

### Volatiles by GC By Method RSK175 MOD

<b>Matrix</b> AQ	<b>Batch ID:</b> GFB46
------------------	------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples D14707-1MS and D14707-1MSD were used as the QC samples indicated.

<b>Matrix</b> AQ	<b>Batch ID:</b> GFB47
------------------	------------------------

- All samples were analyzed within the recommended method holding time.
- Samples D14773-11MS and D14773-11MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

### Volatiles by GC By Method SW846 8021B

<b>Matrix</b> AQ	<b>Batch ID:</b> GTB300
------------------	-------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples D14773-1MS and D14773-1MSD were used as the QC samples indicated.

### Metals By Method SW846 6010B

<b>Matrix</b> AQ	<b>Batch ID:</b> MP2243
------------------	-------------------------

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples D14834-1FMS and D14834-1FMSD were used as the QC samples for the metals analysis.

<b>Matrix</b> AQ	<b>Batch ID:</b> MP2249
------------------	-------------------------

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples D14676-1MS and D14676-1MSD were used as the QC samples for the metals analysis.

## Wet Chemistry By Method EPA 300/SW846 9056

**Matrix** AQ

**Batch ID:** GP2283

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples D14773-4MS and D14773-4MSD were used as the QC samples for the Chloride analysis.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.



## Sample Results

---

## Report of Analysis

---

## Report of Analysis

3.1  
3

<b>Client Sample ID:</b> DCS1	
<b>Lab Sample ID:</b> D14773-1	<b>Date Sampled:</b> 06/29/10
<b>Matrix:</b> AQ - Water	<b>Date Received:</b> 06/30/10
<b>Method:</b> RSK175 MOD	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB1992.D	1	07/02/10	AS	n/a	n/a	GFB46
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.00186	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

3.1  
3

<b>Client Sample ID:</b> DCS1	
<b>Lab Sample ID:</b> D14773-1	<b>Date Sampled:</b> 06/29/10
<b>Matrix:</b> AQ - Water	<b>Date Received:</b> 06/30/10
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB5500.D	1	07/03/10	DG	n/a	n/a	GTB300
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	2.6	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	97%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> DCS1	
<b>Lab Sample ID:</b> D14773-1	<b>Date Sampled:</b> 06/29/10
<b>Matrix:</b> AQ - Water	<b>Date Received:</b> 06/30/10
	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

## General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	10.6	1.0	mg/l	2	07/02/10 09:48	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> DCS1	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-1F	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	64300	400	ug/l	1	07/02/10	07/08/10 SH	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA806

(2) Prep QC Batch: MP2243

---

RL = Reporting Limit



## Report of Analysis

<b>Client Sample ID:</b> DCS2		
<b>Lab Sample ID:</b> D14773-2		<b>Date Sampled:</b> 06/29/10
<b>Matrix:</b> AQ - Water		<b>Date Received:</b> 06/30/10
<b>Method:</b> RSK175 MOD		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB1993.D	1	07/02/10	AS	n/a	n/a	GFB46
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.0013	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> DCS2	
<b>Lab Sample ID:</b> D14773-2	<b>Date Sampled:</b> 06/29/10
<b>Matrix:</b> AQ - Water	<b>Date Received:</b> 06/30/10
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB5503.D	1	07/03/10	DG	n/a	n/a	GTB300
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	104%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> DCS2	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-2	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	10.5	1.0	mg/l	2	07/02/10 09:59	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> DCS2	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-2F	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	64600	400	ug/l	1	07/02/10	07/08/10 SH	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA806

(2) Prep QC Batch: MP2243

---

RL = Reporting Limit

## Report of Analysis

3.5  
3

<b>Client Sample ID:</b> DCS3	
<b>Lab Sample ID:</b> D14773-3	<b>Date Sampled:</b> 06/29/10
<b>Matrix:</b> AQ - Water	<b>Date Received:</b> 06/30/10
<b>Method:</b> RSK175 MOD	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB1994.D	1	07/02/10	AS	n/a	n/a	GFB46
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.0010	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

3.5  
3

<b>Client Sample ID:</b> DCS3	
<b>Lab Sample ID:</b> D14773-3	<b>Date Sampled:</b> 06/29/10
<b>Matrix:</b> AQ - Water	<b>Date Received:</b> 06/30/10
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB5504.D	1	07/03/10	DG	n/a	n/a	GTB300
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	101%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> DCS3	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-3	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	10.5	1.0	mg/l	2	07/02/10 10:10	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> DCS3	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-3F	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	63200	400	ug/l	1	07/02/10	07/08/10 SH	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA806

(2) Prep QC Batch: MP2243

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RL = Reporting Limit



## Report of Analysis

<b>Client Sample ID:</b> MW15	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-4	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Method:</b> RSK175 MOD	
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB1995.D	1	07/02/10	AS	n/a	n/a	GFB46
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW15	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-4	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8021B	
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB5505.D	1	07/03/10	DG	n/a	n/a	GTB300
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	100%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW15	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-4	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	3.8	0.50	mg/l	1	07/02/10 13:09	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW15	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-4F	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	46700	400	ug/l	1	07/06/10	07/07/10 SH	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA805

(2) Prep QC Batch: MP2249

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RL = Reporting Limit

## Report of Analysis

3.9  
3

<b>Client Sample ID:</b> DCS4	
<b>Lab Sample ID:</b> D14773-5	<b>Date Sampled:</b> 06/29/10
<b>Matrix:</b> AQ - Water	<b>Date Received:</b> 06/30/10
<b>Method:</b> RSK175 MOD	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB1996.D	1	07/02/10	AS	n/a	n/a	GFB46
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.00165	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> DCS4		
<b>Lab Sample ID:</b> D14773-5		<b>Date Sampled:</b> 06/29/10
<b>Matrix:</b> AQ - Water		<b>Date Received:</b> 06/30/10
<b>Method:</b> SW846 8021B		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB5506.D	1	07/03/10	DG	n/a	n/a	GTB300
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	103%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> DCS4	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-5	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	10.4	1.0	mg/l	2	07/02/10 10:33	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> DCS4	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-5F	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	61500	400	ug/l	1	07/06/10	07/07/10 SH	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA805

(2) Prep QC Batch: MP2249

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RL = Reporting Limit



## Report of Analysis

<b>Client Sample ID:</b> DCS5	
<b>Lab Sample ID:</b> D14773-6	<b>Date Sampled:</b> 06/29/10
<b>Matrix:</b> AQ - Water	<b>Date Received:</b> 06/30/10
<b>Method:</b> RSK175 MOD	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB1997.D	1	07/02/10	AS	n/a	n/a	GFB46
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.00176	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> DCS5		
<b>Lab Sample ID:</b> D14773-6		<b>Date Sampled:</b> 06/29/10
<b>Matrix:</b> AQ - Water		<b>Date Received:</b> 06/30/10
<b>Method:</b> SW846 8021B		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB5507.D	1	07/03/10	DG	n/a	n/a	GTB300
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	103%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> DCS5	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-6	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	10.2	1.0	mg/l	2	07/02/10 10:44	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> DCS5	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-6F	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	61300	400	ug/l	1	07/06/10	07/07/10 SH	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA805

(2) Prep QC Batch: MP2249

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW20		
<b>Lab Sample ID:</b> D14773-7		<b>Date Sampled:</b> 06/29/10
<b>Matrix:</b> AQ - Water		<b>Date Received:</b> 06/30/10
<b>Method:</b> RSK175 MOD		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB1998.D	1	07/02/10	AS	n/a	n/a	GFB46
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.00369	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> MW20		
<b>Lab Sample ID:</b> D14773-7		<b>Date Sampled:</b> 06/29/10
<b>Matrix:</b> AQ - Water		<b>Date Received:</b> 06/30/10
<b>Method:</b> SW846 8021B		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB5508.D	1	07/03/10	DG	n/a	n/a	GTB300
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	109%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW20	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-7	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	19.0	1.0	mg/l	2	07/02/10 10:55	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW20	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-7F	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	93500	400	ug/l	1	07/06/10	07/07/10 SH	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA805

(2) Prep QC Batch: MP2249

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RL = Reporting Limit



## Report of Analysis

<b>Client Sample ID:</b> MW21	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-8	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Method:</b> RSK175 MOD	
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB1999.D	1	07/02/10	AS	n/a	n/a	GFB46
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.00156	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW21	
<b>Lab Sample ID:</b> D14773-8	<b>Date Sampled:</b> 06/29/10
<b>Matrix:</b> AQ - Water	<b>Date Received:</b> 06/30/10
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB5510.D	1	07/03/10	DG	n/a	n/a	GTB300
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	108%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW21	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-8	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	18.3	1.0	mg/l	2	07/02/10 11:06	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW21	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-8F	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	214000	400	ug/l	1	07/06/10	07/07/10 SH	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA805

(2) Prep QC Batch: MP2249

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW22		
<b>Lab Sample ID:</b> D14773-9		<b>Date Sampled:</b> 06/29/10
<b>Matrix:</b> AQ - Water		<b>Date Received:</b> 06/30/10
<b>Method:</b> RSK175 MOD		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB2000.D	1	07/02/10	AS	n/a	n/a	GFB46
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW22	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-9	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8021B	
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB5511.D	1	07/03/10	DG	n/a	n/a	GTB300
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	105%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW22	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-9	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	39.7	1.0	mg/l	2	07/02/10 11:17	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW22	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-9F	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	137000	400	ug/l	1	07/06/10	07/07/10 SH	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA805

(2) Prep QC Batch: MP2249

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RL = Reporting Limit



## Report of Analysis

<b>Client Sample ID:</b> EICH2		
<b>Lab Sample ID:</b> D14773-10		<b>Date Sampled:</b> 06/29/10
<b>Matrix:</b> AQ - Water		<b>Date Received:</b> 06/30/10
<b>Method:</b> RSK175 MOD		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB2001.D	1	07/02/10	AS	n/a	n/a	GFB46
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.0140	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> EICH2		
<b>Lab Sample ID:</b> D14773-10		<b>Date Sampled:</b> 06/29/10
<b>Matrix:</b> AQ - Water		<b>Date Received:</b> 06/30/10
<b>Method:</b> SW846 8021B		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB5512.D	1	07/03/10	DG	n/a	n/a	GTB300
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	93%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> EICH2	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-10	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	36.0	1.0	mg/l	2	07/02/10 11:28	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> EICH2	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-10F	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	162000	400	ug/l	1	07/06/10	07/07/10 SH	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA805

(2) Prep QC Batch: MP2249

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW24	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-11	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Method:</b> RSK175 MOD	
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB2010.D	1	07/07/10	AS	n/a	n/a	GFB47
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.00178	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> MW24		
<b>Lab Sample ID:</b> D14773-11		<b>Date Sampled:</b> 06/29/10
<b>Matrix:</b> AQ - Water		<b>Date Received:</b> 06/30/10
<b>Method:</b> SW846 8021B		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB5513.D	1	07/03/10	DG	n/a	n/a	GTB300
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	102%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW24	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-11	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	4.4	0.50	mg/l	1	07/02/10 14:06	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW24	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-11F	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	39500	400	ug/l	1	07/06/10	07/07/10 SH	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA805

(2) Prep QC Batch: MP2249

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RL = Reporting Limit



## Report of Analysis

<b>Client Sample ID:</b> DCS6	
<b>Lab Sample ID:</b> D14773-12	<b>Date Sampled:</b> 06/29/10
<b>Matrix:</b> AQ - Water	<b>Date Received:</b> 06/30/10
<b>Method:</b> RSK175 MOD	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB2013.D	1	07/07/10	AS	n/a	n/a	GFB47
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.00174	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> DCS6	
<b>Lab Sample ID:</b> D14773-12	<b>Date Sampled:</b> 06/29/10
<b>Matrix:</b> AQ - Water	<b>Date Received:</b> 06/30/10
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB5514.D	1	07/03/10	DG	n/a	n/a	GTB300
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	105%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> DCS6	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-12	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	10.7	0.50	mg/l	1	07/02/10 14:40	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> DCS6	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-12F	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	58300	400	ug/l	1	07/06/10	07/07/10 SH	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA805

(2) Prep QC Batch: MP2249

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> DCS7	
<b>Lab Sample ID:</b> D14773-13	<b>Date Sampled:</b> 06/29/10
<b>Matrix:</b> AQ - Water	<b>Date Received:</b> 06/30/10
<b>Method:</b> RSK175 MOD	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB2014.D	1	07/07/10	AS	n/a	n/a	GFB47
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.00186	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> DCS7	
<b>Lab Sample ID:</b> D14773-13	<b>Date Sampled:</b> 06/29/10
<b>Matrix:</b> AQ - Water	<b>Date Received:</b> 06/30/10
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB5515.D	1	07/03/10	DG	n/a	n/a	GTB300
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	104%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> DCS7	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-13	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	10.7	0.50	mg/l	1	07/02/10 14:51	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> DCS7	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-13F	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	59200	400	ug/l	1	07/06/10	07/07/10 SH	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA805

(2) Prep QC Batch: MP2249

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RL = Reporting Limit



## Report of Analysis

3.27  
3

<b>Client Sample ID:</b> MW18	
<b>Lab Sample ID:</b> D14773-14	<b>Date Sampled:</b> 06/29/10
<b>Matrix:</b> AQ - Water	<b>Date Received:</b> 06/30/10
<b>Method:</b> RSK175 MOD	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB2015.D	1	07/07/10	AS	n/a	n/a	GFB47
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.264	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW18	
<b>Lab Sample ID:</b> D14773-14	<b>Date Sampled:</b> 06/29/10
<b>Matrix:</b> AQ - Water	<b>Date Received:</b> 06/30/10
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB5516.D	1	07/03/10	DG	n/a	n/a	GTB300
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	104%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW18	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-14	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	7.6	0.50	mg/l	1	07/02/10 15:02	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW18	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-14F	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	58300	400	ug/l	1	07/06/10	07/07/10 SH	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA805

(2) Prep QC Batch: MP2249

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RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> DCS8	
<b>Lab Sample ID:</b> D14773-15	<b>Date Sampled:</b> 06/29/10
<b>Matrix:</b> AQ - Water	<b>Date Received:</b> 06/30/10
<b>Method:</b> RSK175 MOD	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB2016.D	1	07/07/10	AS	n/a	n/a	GFB47
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.0015	0.00080	0.00080	mg/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> DCS8	
<b>Lab Sample ID:</b> D14773-15	<b>Date Sampled:</b> 06/29/10
<b>Matrix:</b> AQ - Water	<b>Date Received:</b> 06/30/10
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB5517.D	1	07/03/10	DG	n/a	n/a	GTB300
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	99%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> DCS8	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-15	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	10.8	0.50	mg/l	1	07/02/10 15:13	GH	EPA 300/SW846 9056

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> DCS8	<b>Date Sampled:</b> 06/29/10
<b>Lab Sample ID:</b> D14773-15F	<b>Date Received:</b> 06/30/10
<b>Matrix:</b> AQ - Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	58600	400	ug/l	1	07/06/10	07/07/10 SH	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA805

(2) Prep QC Batch: MP2249

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RL = Reporting Limit





## Misc. Forms

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### Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody







## GC Volatiles

## QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

# Method Blank Summary

**Job Number:** D14773  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFB46-MB	FB1973.D	1	07/02/10	AS	n/a	n/a	GFB46

The QC reported here applies to the following samples:

Method: RSK175 MOD

D14773-1, D14773-2, D14773-3, D14773-4, D14773-5, D14773-6, D14773-7, D14773-8, D14773-9, D14773-10

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.00080	0.00080	mg/l	

5.1.1  
5

## Method Blank Summary

**Job Number:** D14773  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFB47-MB	FB2006.D	1	07/07/10	AS	n/a	n/a	GFB47

The QC reported here applies to the following samples:

Method: RSK175 MOD

D14773-11, D14773-12, D14773-13, D14773-14, D14773-15

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.00080	0.00080	mg/l	

## Method Blank Summary

**Job Number:** D14773  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTB300-MB	TB5498.D	1	07/03/10	DG	n/a	n/a	GTB300

The QC reported here applies to the following samples:

Method: SW846 8021B

D14773-1, D14773-2, D14773-3, D14773-4, D14773-5, D14773-6, D14773-7, D14773-8, D14773-9, D14773-10, D14773-11, D14773-12, D14773-13, D14773-14, D14773-15

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
120-82-1	1,2,4-Trichlorobenzene	101% 60-140%

# Blank Spike Summary

**Job Number:** D14773  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTB300-BS	TB5499.D	1	07/03/10	DG	n/a	n/a	GTB300

The QC reported here applies to the following samples:

Method: SW846 8021B

D14773-1, D14773-2, D14773-3, D14773-4, D14773-5, D14773-6, D14773-7, D14773-8, D14773-9, D14773-10, D14773-11, D14773-12, D14773-13, D14773-14, D14773-15

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	27.2	23.6	87	70-130
100-41-4	Ethylbenzene	45.6	41.6	91	70-130
108-88-3	Toluene	212	209	99	70-130
95-47-6	o-Xylene	65.9	62.5	95	70-130
	m,p-Xylene	150	150	100	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	118%	60-140%



# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** D14773  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFB46-BS	FB1974.D	1	07/02/10	AS	n/a	n/a	GFB46
GFB46-BSD	FB1975.D	1	07/02/10	AS	n/a	n/a	GFB46

The QC reported here applies to the following samples: Method: RSK175 MOD

D14773-1, D14773-2, D14773-3, D14773-4, D14773-5, D14773-6, D14773-7, D14773-8, D14773-9, D14773-10

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
74-82-8	Methane	0.5094	0.547	107	0.557	109	2	70-130/30

5.3.1  
5

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** D14773  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFB47-BS	FB2007.D	10	07/07/10	AS	n/a	n/a	GFB47
GFB47-BSD	FB2008.D	10	07/07/10	AS	n/a	n/a	GFB47

The QC reported here applies to the following samples:

Method: RSK175 MOD

D14773-11, D14773-12, D14773-13, D14773-14, D14773-15

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
74-82-8	Methane	0.5094	0.562	110	0.575	113	2	70-130/30

5.3.2  
5

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** D14773  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D14707-1MS	FB1978.D	10	07/02/10	AS	n/a	n/a	GFB46
D14707-1MSD	FB1979.D	10	07/02/10	AS	n/a	n/a	GFB46
D14707-1	FB1977.D	1	07/02/10	AS	n/a	n/a	GFB46

The QC reported here applies to the following samples:

Method: RSK175 MOD

D14773-1, D14773-2, D14773-3, D14773-4, D14773-5, D14773-6, D14773-7, D14773-8, D14773-9, D14773-10

CAS No.	Compound	D14707-1 mg/l	Spike Q mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
74-82-8	Methane	0.145	0.5094	0.620	93	0.618	93	0	70-130/30

5.4.1  
5

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** D14773  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D14773-11MS	FB2011.D	10	07/07/10	AS	n/a	n/a	GFB47
D14773-11MSD	FB2012.D	10	07/07/10	AS	n/a	n/a	GFB47
D14773-11	FB2010.D	1	07/07/10	AS	n/a	n/a	GFB47

The QC reported here applies to the following samples:

Method: RSK175 MOD

D14773-11, D14773-12, D14773-13, D14773-14, D14773-15

CAS No.	Compound	D14773-11 mg/l	Spike Q mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
74-82-8	Methane	0.00178	0.5094	0.564	110	0.563	110	0	70-130/30

5.4.2  
5

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** D14773  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D14773-1MS	TB5501.D	1	07/03/10	DG	n/a	n/a	GTB300
D14773-1MSD	TB5502.D	1	07/03/10	DG	n/a	n/a	GTB300
D14773-1	TB5500.D	1	07/03/10	DG	n/a	n/a	GTB300

The QC reported here applies to the following samples:

Method: SW846 8021B

D14773-1, D14773-2, D14773-3, D14773-4, D14773-5, D14773-6, D14773-7, D14773-8, D14773-9, D14773-10, D14773-11, D14773-12, D14773-13, D14773-14, D14773-15

CAS No.	Compound	D14773-1 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	27.2	25.2	93	26.0	96	3	70-130/30
100-41-4	Ethylbenzene	ND	45.6	43.9	96	45.4	100	3	62-130/30
108-88-3	Toluene	2.6	212	222	104	232	108	4	70-130/30
95-47-6	o-Xylene	ND	65.9	66.6	101	67.6	103	1	63-130/30
	m,p-Xylene	ND	150	160	107	165	110	3	70-134/30

CAS No.	Surrogate Recoveries	MS	MSD	D14773-1	Limits
120-82-1	1,2,4-Trichlorobenzene	119%	115%	97%	60-140%

5.4.3  
5



## Metals Analysis

### QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: D14773  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

QC Batch ID: MP2243  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date: 07/02/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	7	49		
Antimony	30	1.7	13		
Arsenic	25	2.8	6.5		
Barium	10	.14	2.4		
Beryllium	10	1.4	4.4		
Boron	50	3.5	19		
Cadmium	10	.22	1.2		
Calcium	400	17	9.2		
Chromium	10	.27	1.6		
Cobalt	5.0	.48	.3		
Copper	5.0	1.6	2.7		
Iron	70	7.7	10		
Lead	50	1.3	3.2		
Magnesium	200	5.8	12		
Manganese	5.0	.21	.7		
Molybdenum	10	.41	1.2		
Nickel	30	.38	.6		
Phosphorus	100	15	54		
Potassium	1000	380	540		
Selenium	50	2.8	7.2		
Silicon	50	12	20		
Silver	30	.98	.3		
Sodium	400	230	23	51.0	<400
Strontium	5.0	.091	3.4		
Thallium	10	3.1	2.1		
Tin	50	14	4.4		
Titanium	10	.098	.7		
Uranium	50	2.2	3.9		
Vanadium	10	.27	.3		
Zinc	30	.76	1.7		

Associated samples MP2243: D14773-1F, D14773-2F, D14773-3F

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D14773  
 Account: CORCCOGJ - Olsson Associates  
 Project: Divide Creek Quarterly

QC Batch ID: MP2243  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 07/02/10

Metal	D14834-1F Original MS	SpikeLot MPICPALL % Rec	QC Limits
Aluminum			
Antimony			
Arsenic	anr		
Barium			
Beryllium			
Boron			
Cadmium			
Calcium	anr		
Chromium			
Cobalt			
Copper	anr		
Iron	anr		
Lead			
Magnesium	anr		
Manganese	anr		
Molybdenum			
Nickel			
Phosphorus	anr		
Potassium	anr		
Selenium			
Silicon			
Silver			
Sodium	65900 93200	25000 109.2	75-125
Strontium			
Thallium			
Tin			
Titanium			
Uranium			
Vanadium			
Zinc	anr		

Associated samples MP2243: D14773-1F, D14773-2F, D14773-3F

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D14773  
 Account: CORCCOGJ - Olsson Associates  
 Project: Divide Creek Quarterly

QC Batch ID: MP2243  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 07/02/10

Metal	D14834-1F Original MSD	SpikeLot MPICPAL	% Rec	MSD RPD	QC Limit	
Aluminum						
Antimony						
Arsenic	anr					
Barium						
Beryllium						
Boron						
Cadmium						
Calcium	anr					
Chromium						
Cobalt						
Copper	anr					
Iron	anr					
Lead						
Magnesium	anr					
Manganese	anr					
Molybdenum						
Nickel						
Phosphorus	anr					
Potassium	anr					
Selenium						
Silicon						
Silver						
Sodium	65900	94100	25000	112.8	1.0	20
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc	anr					

Associated samples MP2243: D14773-1F, D14773-2F, D14773-3F

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D14773  
 Account: CORCCOGJ - Olsson Associates  
 Project: Divide Creek Quarterly

QC Batch ID: MP2243  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 07/02/10

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	anr			
Chromium				
Cobalt				
Copper	anr			
Iron	anr			
Lead				
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel				
Phosphorus	anr			
Potassium	anr			
Selenium				
Silicon				
Silver				
Sodium	25800	25000	103.2	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	anr			

Associated samples MP2243: D14773-1F, D14773-2F, D14773-3F

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (anr) Analyte not requested

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: D14773  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

QC Batch ID: MP2249  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date: 07/06/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	7	49		
Antimony	30	1.7	13		
Arsenic	25	2.8	6.5		
Barium	10	.14	2.4		
Beryllium	10	1.4	4.4		
Boron	50	3.5	19		
Cadmium	10	.22	1.2		
Calcium	400	17	9.2		
Chromium	10	.27	1.6		
Cobalt	5.0	.48	.3		
Copper	5.0	1.6	2.7		
Iron	70	7.7	10		
Lead	50	1.3	3.2		
Magnesium	200	5.8	12		
Manganese	5.0	.21	.7		
Molybdenum	10	.41	1.2		
Nickel	30	.38	.6		
Phosphorus	100	15	54		
Potassium	1000	380	540		
Selenium	50	2.8	7.2		
Silicon	50	12	20		
Silver	30	.98	.3		
Sodium	400	230	23	158	<400
Strontium	5.0	.091	3.4		
Thallium	10	3.1	2.1		
Tin	50	14	4.4		
Titanium	10	.098	.7		
Uranium	50	2.2	3.9		
Vanadium	10	.27	.3		
Zinc	30	.76	1.7		

Associated samples MP2249: D14773-4F, D14773-5F, D14773-6F, D14773-7F, D14773-8F, D14773-9F, D14773-10F, D14773-11F, D14773-12F, D14773-13F, D14773-14F, D14773-15F

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D14773  
 Account: CORCCOGJ - Olsson Associates  
 Project: Divide Creek Quarterly

QC Batch ID: MP2249  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 07/06/10

Metal	D14676-1		Spike/lot		QC
	Original	MS	MPICPAL	% Rec	Limits
Aluminum	anr				
Antimony					
Arsenic	anr				
Barium	anr				
Beryllium					
Boron	anr				
Cadmium	anr				
Calcium	anr				
Chromium					
Cobalt					
Copper	anr				
Iron	anr				
Lead	anr				
Magnesium	anr				
Manganese	anr				
Molybdenum					
Nickel	anr				
Phosphorus	anr				
Potassium	anr				
Selenium	anr				
Silicon					
Silver					
Sodium	42400	65900	25000	94.0	75-125
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc	anr				

Associated samples MP2249: D14773-4F, D14773-5F, D14773-6F, D14773-7F, D14773-8F, D14773-9F, D14773-10F, D14773-11F, D14773-12F, D14773-13F, D14773-14F, D14773-15F

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D14773  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

QC Batch ID: MP2249  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

6.2.2

6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D14773  
 Account: CORCCOGJ - Olsson Associates  
 Project: Divide Creek Quarterly

QC Batch ID: MP2249  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 07/06/10

Metal	D14676-1 Original MSD	Spikelot MPICPALL % Rec	MSD RPD	QC Limit		
Aluminum	anr					
Antimony						
Arsenic	anr					
Barium	anr					
Beryllium						
Boron	anr					
Cadmium	anr					
Calcium	anr					
Chromium						
Cobalt						
Copper	anr					
Iron	anr					
Lead	anr					
Magnesium	anr					
Manganese	anr					
Molybdenum						
Nickel	anr					
Phosphorus	anr					
Potassium	anr					
Selenium	anr					
Silicon						
Silver						
Sodium	42400	66100	25000	94.8	0.3	20
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc	anr					

Associated samples MP2249: D14773-4F, D14773-5F, D14773-6F, D14773-7F, D14773-8F, D14773-9F, D14773-10F, D14773-11F, D14773-12F, D14773-13F, D14773-14F, D14773-15F

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D14773  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

QC Batch ID: MP2249  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D14773  
 Account: CORCCOGJ - Olsson Associates  
 Project: Divide Creek Quarterly

QC Batch ID: MP2249  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 07/06/10

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum	anr			
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Boron	anr			
Cadmium	anr			
Calcium	anr			
Chromium				
Cobalt				
Copper	anr			
Iron	anr			
Lead	anr			
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Phosphorus	anr			
Potassium	anr			
Selenium	anr			
Silicon				
Silver				
Sodium	24000	25000	96.0	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	anr			

Associated samples MP2249: D14773-4F, D14773-5F, D14773-6F, D14773-7F, D14773-8F, D14773-9F, D14773-10F, D14773-11F, D14773-12F, D14773-13F, D14773-14F, D14773-15F

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (anr) Analyte not requested





## General Chemistry

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### QC Data Summaries

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Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D14773  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GP2283/GN5187	0.50	0.0	mg/l	20	21.4	107.0	90-110%
Sulfate	GP2283/GN5187	0.50	0.0	mg/l	30	30.0	100.0	90-110%

Associated Samples:

Batch GP2283: D14773-1, D14773-10, D14773-11, D14773-12, D14773-13, D14773-14, D14773-15, D14773-2, D14773-3, D14773-4, D14773-5, D14773-6, D14773-7, D14773-8, D14773-9

(\*) Outside of QC limits

7.1  
7

MATRIX SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D14773  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP2283/GN5187	D14773-4	mg/l	3.8	10	13.3	95.0	80-120%
Sulfate	GP2283/GN5187	D14773-4	mg/l	16.5	10	27.6	111.0	80-120%

Associated Samples:

Batch GP2283: D14773-1, D14773-10, D14773-11, D14773-12, D14773-13, D14773-14, D14773-15, D14773-2, D14773-3, D14773-4, D14773-5, D14773-6, D14773-7, D14773-8, D14773-9

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

7.2  
7

MATRIX SPIKE DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D14773  
Account: CORCCOGJ - Olsson Associates  
Project: Divide Creek Quarterly

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Chloride	GP2283/GN5187	D14773-4	mg/l	3.8	10	13.2	0.8	20%
Sulfate	GP2283/GN5187	D14773-4	mg/l	16.5	10	27.5	0.4	20%

Associated Samples:

Batch GP2283: D14773-1, D14773-10, D14773-11, D14773-12, D14773-13, D14773-14, D14773-15, D14773-2, D14773-3, D14773-4, D14773-5, D14773-6, D14773-7, D14773-8, D14773-9

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits



Technical Report for

Olsson Associates

Divide Creek Quarterly

008-2067

Accutest Job Number: D15458

Sampling Date: 07/21/10

Report to:

Olsson Associates  
826 21 1/2 Road  
Grand Junction, CO 81505  
bradstephenson@oaconsulting.com

ATTN: Brad Stephenson

Total number of pages in report: **22**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Jesse L. Smith  
Laboratory Director

Client Service contact: Amanda Kissell 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW) UT (NELAP CO00049)

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Test results relate only to samples analyzed.



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## Sample Summary

Olsson Associates

**Job No:** D15458

Divide Creek Quarterly  
Project No: 008-2067

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
D15458-1	07/21/10	10:25 JS	07/21/10	AQ	Ground Water	MW2
D15458-2	07/21/10	10:41 JS	07/21/10	AQ	Ground Water	MW1
D15458-3	07/21/10	10:57 JS	07/21/10	AQ	Ground Water	MW17
D15458-4	07/21/10	11:11 JS	07/21/10	AQ	Ground Water	MW16
D15458-5	07/21/10	11:11 JS	07/21/10	AQ	Ground Water	MW16D
D15458-6	07/21/10	11:31 JS	07/21/10	AQ	Ground Water	MW7
D15458-7	07/21/10	11:50 JS	07/21/10	AQ	Ground Water	MW4
D15458-8	07/21/10	12:03 JS	07/21/10	AQ	Field Blank Water	FB
D15458-9	07/21/10	10:45 JS	07/21/10	AQ	Ground Water	MW27
D15458-10	07/21/10	11:20 JS	07/21/10	AQ	Ground Water	MW25
D15458-11	07/21/10	11:35 JS	07/21/10	AQ	Ground Water	MW11

## CASE NARRATIVE / CONFORMANCE SUMMARY

**Client:** Olsson Associates

**Job No** D15458

**Site:** Divide Creek Quarterly

**Report Dat** 7/24/2010 12:04:20 PM

On 07/21/2010, 10 sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 5 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D15458 was assigned to the project. The lab sample IDs, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

### Volatiles by GC By Method SW846 8021B

**Matrix** AQ

**Batch ID:** GTB329

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples D15458-1MS and D15458-1MSD were used as the QC samples indicated.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.





## Sample Results

---

## Report of Analysis

---

## Report of Analysis

3.1  
3

<b>Client Sample ID:</b> MW2	
<b>Lab Sample ID:</b> D15458-1	<b>Date Sampled:</b> 07/21/10
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 07/21/10
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB6072.D	1	07/22/10	CK	n/a	n/a	GTB329
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	144	1.0	1.0	ug/l	
108-88-3	Toluene	2.2	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	29.0	2.0	2.0	ug/l	
95-47-6	o-Xylene	4.3	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	103%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> MW1		
<b>Lab Sample ID:</b> D15458-2		<b>Date Sampled:</b> 07/21/10
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 07/21/10
<b>Method:</b> SW846 8021B		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB6073.D	1	07/22/10	CK	n/a	n/a	GTB329
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	85%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> MW17		
<b>Lab Sample ID:</b> D15458-3		<b>Date Sampled:</b> 07/21/10
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 07/21/10
<b>Method:</b> SW846 8021B		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB6074.D	1	07/22/10	CK	n/a	n/a	GTB329
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	13.0	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	100%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> MW16		
<b>Lab Sample ID:</b> D15458-4		<b>Date Sampled:</b> 07/21/10
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 07/21/10
<b>Method:</b> SW846 8021B		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB6075.D	1	07/22/10	CK	n/a	n/a	GTB329
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	98%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW16D	
<b>Lab Sample ID:</b> D15458-5	<b>Date Sampled:</b> 07/21/10
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 07/21/10
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB6076.D	1	07/22/10	CK	n/a	n/a	GTB329
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	92%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

3.6  
3

<b>Client Sample ID:</b> MW7	
<b>Lab Sample ID:</b> D15458-6	<b>Date Sampled:</b> 07/21/10
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 07/21/10
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB6077.D	1	07/22/10	CK	n/a	n/a	GTB329
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	90%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

37  
3

<b>Client Sample ID:</b> MW4	<b>Date Sampled:</b> 07/21/10
<b>Lab Sample ID:</b> D15458-7	<b>Date Received:</b> 07/21/10
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8021B	
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB6079.D	1	07/22/10	CK	n/a	n/a	GTB329
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	41.2	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	13.6	2.0	2.0	ug/l	
95-47-6	o-Xylene	2.2	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	91%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Report of Analysis

3.8  
3

<b>Client Sample ID:</b> FB	
<b>Lab Sample ID:</b> D15458-8	<b>Date Sampled:</b> 07/21/10
<b>Matrix:</b> AQ - Field Blank Water	<b>Date Received:</b> 07/21/10
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB6080.D	1	07/23/10	CK	n/a	n/a	GTB329
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	96%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

3.9  
3

<b>Client Sample ID:</b> MW27	
<b>Lab Sample ID:</b> D15458-9	<b>Date Sampled:</b> 07/21/10
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 07/21/10
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB6081.D	1	07/23/10	CK	n/a	n/a	GTB329
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	88%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW25	
<b>Lab Sample ID:</b> D15458-10	<b>Date Sampled:</b> 07/21/10
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 07/21/10
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB6082.D	1	07/23/10	CK	n/a	n/a	GTB329
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	87%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> MW11		
<b>Lab Sample ID:</b> D15458-11		<b>Date Sampled:</b> 07/21/10
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 07/21/10
<b>Method:</b> SW846 8021B		<b>Percent Solids:</b> n/a
<b>Project:</b> Divide Creek Quarterly		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB6083.D	1	07/23/10	CK	n/a	n/a	GTB329
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	90%		60-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Misc. Forms

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### Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody

Client / Reporting Information			Project Information			Requested Analysis ( see TEST CODE sheet)										Matrix Codes		
Company Name: <b>Olsen Associates</b>			Project Name: <b>Divide Creek</b>													DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank		
Street Address: <b>826 21 1/2 Rd</b>			Street: <b>Divide Creek</b>															
City: <b>Grand Jct. CO</b> State: <b>CO</b> Zip: <b>81505</b>			City: _____ State: _____															
Project Contact: <b>Brad Stephenson</b> <small>brsteph@olsenassoc.com</small>			Project #: <b>008-20617</b>															
Phone #: <b>303-227-2012</b> Fax #: _____			Client Purchase Order #: _____															
Signature (Name): <b>Jessica Surma</b> Phone #: <b>970-263-7803</b>			Project Manager: _____															
MECH/ID Vial #			Collection			Number of preserved bottles										LAB USE ONLY		
Field ID / Point of Collection			Date			Time			Sampled by			Matrix			# of bottles			
mw0			7/21/10			1025			JS			GW			3			01
mw1			7/21/10			1041			JS			GW			3			02
mw17			7/21/10			1057			JS			GW			3			03
mw16			7/21/10			1111			JS			GW			3			04
mw16D			7/21/10			1111			JS			GW			3			05
mw7			7/21/10			1131			JS			GW			3			06
mw14			7/21/10			1150			JS			GW			3			07
FB			7/21/10			1203			JS			GW			3			08
mw07			7/21/10			1045			SH			GW			3			09
mw25			7/21/10			1120			SH			GW			3			10
mw11			7/21/10			1135			SH			GW			3			11
TRIP BLANK																		12
Turnaround Time (Business days)			Approved By (Accutest PM) / Date:			Data Deliverable Information			Comments / Special Instructions									
<input type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> UST Analysis 3-5 Days <input type="checkbox"/> 6 - 9 Day RUSH <input type="checkbox"/> 3 - 5 Day RUSH <input checked="" type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 1 Day EMERGENCY						<input type="checkbox"/> Level 1 <input type="checkbox"/> Level 2 <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 Level 1 = Results Only Level 2 = Results + QC Summary + Case Narrative Level 3 = Results + QC Summary + Partial Raw data Level 4 = Full Deliverable			<input type="checkbox"/> PDF <input type="checkbox"/> EDD Format <input type="checkbox"/> Other									
Emergency & Rush TIA data available VIA Lablink			Sample Custody must be documented below each time samples change possession, including courier delivery.															
Relinquished by Sampler: <b>Jessica Surma</b>			Date/Time: <b>7/21/10 220</b>			Received By: _____			Date/Time: _____			Relinquished By: _____			Date/Time: _____			
Relinquished by: _____			Date/Time: _____			Received By: _____			Date/Time: _____			Relinquished By: _____			Date/Time: _____			
Relinquished by: _____			Date/Time: _____			Received By: _____			Date/Time: _____			Relinquished By: _____			Date/Time: _____			
						Custody Seal #			<input checked="" type="checkbox"/> Intact <input type="checkbox"/> Not Intact			Preserved where applicable			Cooler Temp. <b>5.0</b>			



## GC Volatiles

## QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

## Method Blank Summary

**Job Number:** D15458  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTB329-MB	TB6068.D	1	07/22/10	CK	n/a	n/a	GTB329

The QC reported here applies to the following samples:

Method: SW846 8021B

D15458-1, D15458-2, D15458-3, D15458-4, D15458-5, D15458-6, D15458-7, D15458-8, D15458-9, D15458-10, D15458-11

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	2.0	ug/l	
108-88-3	Toluene	ND	2.0	2.0	ug/l	
95-47-6	o-Xylene	ND	2.0	2.0	ug/l	
	m,p-Xylene	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
120-82-1	1,2,4-Trichlorobenzene	105% 60-140%



# Blank Spike Summary

**Job Number:** D15458  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTB329-BS	TB6069.D	1	07/22/10	CK	n/a	n/a	GTB329

The QC reported here applies to the following samples:

Method: SW846 8021B

D15458-1, D15458-2, D15458-3, D15458-4, D15458-5, D15458-6, D15458-7, D15458-8, D15458-9, D15458-10, D15458-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	27.2	27.1	100	70-130
100-41-4	Ethylbenzene	45.6	44.4	97	70-130
108-88-3	Toluene	212	235	111	70-130
95-47-6	o-Xylene	65.9	65.7	100	70-130
	m,p-Xylene	150	164	109	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	110%	60-140%

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** D15458  
**Account:** CORCCOGJ Olsson Associates  
**Project:** Divide Creek Quarterly

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D15458-1MS	TB6070.D	1	07/22/10	CK	n/a	n/a	GTB329
D15458-1MSD	TB6071.D	1	07/22/10	CK	n/a	n/a	GTB329
D15458-1	TB6072.D	1	07/22/10	CK	n/a	n/a	GTB329

**The QC reported here applies to the following samples:** **Method:** SW846 8021B

D15458-1, D15458-2, D15458-3, D15458-4, D15458-5, D15458-6, D15458-7, D15458-8, D15458-9, D15458-10, D15458-11

CAS No.	Compound	D15458-1 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	144	27.2	170	96	174	110	2	70-130/30
100-41-4	Ethylbenzene	ND	45.6	45.8	100	46.4	102	1	62-130/30
108-88-3	Toluene	2.2	212	231	108	237	111	3	70-130/30
95-47-6	o-Xylene	4.3	65.9	70.1	100	71.1	101	1	63-130/30
	m,p-Xylene	29.0	150	199	113	202	115	1	70-134/30

CAS No.	Surrogate Recoveries	MS	MSD	D15458-1	Limits
120-82-1	1,2,4-Trichlorobenzene	106%	113%	103%	60-140%

5.3.1  
5

Lab #: 190407 Job #: 13293  
 Sample Name: MW-14 Co. Lab#:  
 Company: Olsson Associates  
 Date Sampled: 6/28/2010  
 Container: Dissolved Gas Bottle  
 Field/Site Name: Divide Creek Quarterly  
 Location:  
 Formation/Depth:  
 Sampling Point:  
 Date Received: 7/01/2010 Date Reported: 8/11/2010

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Hydrogen Sulfide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.940			
Oxygen -----	0.090			
Nitrogen -----	46.26			
Carbon Dioxide -----	5.33			
Methane -----	40.91	-40.21	-197.3	
Ethane -----	4.29	-28.25		
Ethylene -----	nd			
Propane -----	1.56	-25.68		
Iso-butane -----	0.219			
N-butane -----	0.266			
Iso-pentane -----	0.0613			
N-pentane -----	0.0311			
Hexanes + -----	0.0398			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 552  
 Specific gravity, calculated: 0.851

Remarks: Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.69  
 \*Addition of helium negates the ability to detect native helium or hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen is relative to VSMOW. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 190408 Job #: 13293  
 Sample Name: MW-9 Co. Lab#:  
 Company: Olsson Associates  
 Date Sampled: 6/28/2010  
 Container: Dissolved Gas Bottle  
 Field/Site Name: Divide Creek Quarterly  
 Location:  
 Formation/Depth:  
 Sampling Point:  
 Date Received: 7/01/2010 Date Reported: 8/11/2010

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	0.078			
Hydrogen Sulfide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.716			
Oxygen -----	4.86			
Nitrogen -----	32.11			
Carbon Dioxide -----	6.19			
Methane -----	48.50	-41.77	-203.0	
Ethane -----	4.79	-28.34		
Ethylene -----	nd			
Propane -----	1.88	-26.08		
Iso-butane -----	0.337			
N-butane -----	0.347			
Iso-pentane -----	0.0961			
N-pentane -----	0.0442			
Hexanes + -----	0.0518			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 655  
 Specific gravity, calculated: 0.835

Remarks: Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.68  
 \*Addition of helium negates the ability to detect native helium or hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen is relative to VSMOW. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 190409 Job #: 13293  
 Sample Name: MW-17 Co. Lab#:  
 Company: Olsson Associates  
 Date Sampled: 6/28/2010  
 Container: Dissolved Gas Bottle  
 Field/Site Name: Divide Creek Quarterly  
 Location:  
 Formation/Depth:  
 Sampling Point:  
 Date Received: 7/01/2010 Date Reported: 8/11/2010

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	0.070			
Hydrogen Sulfide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	1.67			
Oxygen -----	11.46			
Nitrogen -----	80.44			
Carbon Dioxide -----	6.34			
Methane -----	0.0159			
Ethane -----	nd			
Ethylene -----	nd			
Propane -----	nd			
Iso-butane -----	nd			
N-butane -----	nd			
Iso-pentane -----	nd			
N-pentane -----	nd			
Hexanes + -----	nd			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 0  
 Specific gravity, calculated: 1.025

Remarks: Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.76  
 \*Addition of helium negates the ability to detect native helium or hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen is relative to VSMOW. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 190410 Job #: 13293  
 Sample Name: MW-4 Co. Lab#:  
 Company: Olsson Associates  
 Date Sampled: 6/28/2010  
 Container: Dissolved Gas Bottle  
 Field/Site Name: Divide Creek Quarterly  
 Location:  
 Formation/Depth:  
 Sampling Point:  
 Date Received: 7/01/2010 Date Reported: 8/11/2010

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	0.11			
Hydrogen Sulfide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.217			
Oxygen -----	0.57			
Nitrogen -----	9.99			
Carbon Dioxide -----	78.40			
Methane -----	9.01	-40.11	-192.1	
Ethane -----	1.19	-27.64		
Ethylene -----	nd			
Propane -----	0.369	-25.00		
Iso-butane -----	0.0529			
N-butane -----	0.0500			
Iso-pentane -----	0.0142			
N-pentane -----	0.0071			
Hexanes + -----	0.0113			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 127  
 Specific gravity, calculated: 1.369

Remarks: Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.55  
 \*Addition of helium negates the ability to detect native helium or hydrogen.  
 \*\*propane isotopes obtained online via GC-C-IRMS

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen is relative to VSMOW. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 190411 Job #: 13293  
 Sample Name: MW-2 Co. Lab#:  
 Company: Olsson Associates  
 Date Sampled: 6/28/2010  
 Container: Dissolved Gas Bottle  
 Field/Site Name: Divide Creek Quarterly  
 Location:  
 Formation/Depth:  
 Sampling Point:  
 Date Received: 7/01/2010 Date Reported: 8/11/2010

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	0.10			
Hydrogen Sulfide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.532			
Oxygen -----	8.36			
Nitrogen -----	24.69			
Carbon Dioxide -----	3.70			
Methane -----	52.87	-39.89	-178.2	
Ethane -----	6.95	-27.62		
Ethylene -----	nd			
Propane -----	2.06	-25.33		
Iso-butane -----	0.289			
N-butane -----	0.283			
Iso-pentane -----	0.0753			
N-pentane -----	0.0372			
Hexanes + -----	0.0506			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 737  
 Specific gravity, calculated: 0.808

Remarks: Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.68  
 \*Addition of helium negates the ability to detect native helium or hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen is relative to VSMOW. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.