



826 21 ½ Road
Grand Junction, CO 81505
T: 970.263.7800
F: 970.263.7456

November 10, 2006

EnCana Oil & Gas (USA) Inc.
370 17th St., Suite 1700
Denver, CO 80202
Attn: Mr. Chris Williams

Dear Mr. Williams:

Cordilleran Compliance Services, Inc. (Cordilleran) has been retained by EnCana Oil & Gas (USA) Inc. to perform technical environmental services including; quarterly groundwater and surface water assessment and remediation of groundwater that has been impacted by dissolved phase volatile hydrocarbons comprised primarily of methane and benzene in the area of the West Divide Creek Gas Seep (Figure 1).

Executive Summary

The objective of the continued operation of the remediation system and quarterly water sampling is to mitigate and control migration of the dissolved phase hydrocarbons in the down gradient direction and into nearby Divide Creek; and surrounding area groundwater wells and to treat the source of the hydrocarbons.

This report summarizes sampling results of surface water and groundwater samples collected in September 2006 at the seep site in a continued effort to monitor the possible migration of the benzene plume prior to the COGCC staff rendering a decision on the reduction of the sampling frequency. Samples collected during this period were analyzed by Evergreen Analytical Laboratory (EAL) of Wheat Ridge, CO for BTEX/MTBE using EPA method 8021, dissolved methane using method RSK 175M, chloride (Cl) using method 300E, sodium (Na) using method SW6020, pH using EPA method 150.1 and total dissolved solids (TDS) using method SM240C and specific conductivity using method SM251B. Isotopic methane was determined by Isotech Laboratories, Inc of Champaign, IL. Stable isotopes of carbon and hydrogen in methane and stable isotopes of carbon in ethane and propane and gas composition was determined where dissolved gasses were sufficient.

Groundwater Status

Cordilleran collected groundwater samples from twenty-three monitoring wells during September 2006. Twenty of these monitoring wells are located on the Langerger property, one well is located on the Thompson property, and two wells are located on the Eicher property. Groundwater samples and field parameters (temperature, specific conductance, dissolved oxygen, pH, total dissolved solids and turbidity), were collected from September 6, 2006 through September 7, 2006 from monitoring wells (MW-1, 2, 4, 6-9, 11-18, 20-27) (Figure 1). Prior to sample collection, static water levels were measured in monitoring wells to within 0.01 feet (ft) from the top of the PVC casing using an electronic water level indicator. Groundwater elevations are graphically illustrated in Figure 2. A total of three casing volumes were removed prior to sampling each well using dedicated disposable bailers with bottom loading valve assemblies. Field parameters were obtained at the completion of purging activities (Table 1). Groundwater samples were collected following field parameter measurements. Groundwater samples were placed in the appropriate sample containers provided by EAL, labeled, stored on ice, and delivered under chain-of-custody procedures to EAL. Groundwater was analyzed for BTEX/MTBE, dissolved methane, Cl, Na, TDS and SpC.

Benzene

Monitoring wells 2, 4, 9, 12, 16 and 17 have benzene concentrations of $240 \mu\text{g/l}$, $200 \mu\text{g/l}$, $8.9 \mu\text{g/l}$, $5.3 \mu\text{g/l}$, $3.7 \mu\text{g/l}$ and $24 \mu\text{g/l}$ respectively. Monitoring wells 2, 4, 9 and 17 have benzene concentrations exceeding the Colorado Oil & Gas Conservation (COGCC) ground water standard of $5 \mu\text{g/l}$. The laboratory results for benzene concentrations for each monitoring well are summarized in Table 2. Benzene concentrations are graphically illustrated in Figure 3. Benzene was not detected in monitoring wells 1, 6, 7, 8, 11, 13, 14, 15, 18, 20, 21, 22, 23, 24, 25, 26 and 27. The size of the area underlain by groundwater that is impacted by benzene at concentrations above $1.0 \mu\text{g/l}$ is approximately $89,428 \text{ ft}^2$.

Toluene

Toluene was not detected in Divide Creek monitoring wells during the September quarter of 2006 (Table 3).

Ethylbenzene

Ethylbenzene was present in monitoring well 4 at a concentration of $7.3 \mu\text{g} / \text{l}$. This concentration is below the COGCC groundwater standard of $680 \mu\text{g} / \text{l}$. Ethylbenzene was not detected in any other monitoring wells (Table 4).

Total Xylenes

Total Xylenes were present in monitoring wells 2, 4 and 9 at concentrations of $28 \mu\text{g} / \text{l}$, $58 \mu\text{g} / \text{l}$ and $4.2 \mu\text{g} / \text{l}$ respectively. These concentrations are far below the COGCC basic groundwater standard of $10,000 \mu\text{g} / \text{l}$. Total xylenes were not detected in the remaining monitoring wells. The laboratory results for total xylenes concentrations are summarized in Table 5.

MTBE

Laboratory results indicate that MTBE (methyl tertiary-butyl ether) was not present above the detectable limit in the groundwater samples collected in the monitoring area during the September quarter of 2006 (Table 6).

Methane

Total dissolved methane was detected in all monitoring wells except monitoring well 24 and monitoring well 27. Total dissolved methane is summarized in Table 7. In general the highest concentrations of dissolved methane in the groundwater are located near the seep.

The laboratory results for methane were reported as total dissolved. This included 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). Then, using the reported total dissolved methane concentration, the concentration of thermogenic methane was calculated. Hydrocarbon gas from 'biogenic only' sources contains a high proportion of methane (>99%) and has characteristic carbon and hydrogen isotopes ratios. Typically, thermogenic methane is indicated by isotope ratios that are less negative than ratios for biogenic methane. To estimate the fraction of total methane in a water sample that can be attributed to thermogenic sources, an algebraic mixing calculation was used after the data were evaluated on the basis of the laboratory-determined values of methane carbon-13 isotope ratio ($\delta^{13}\text{C}_1$), methane hydrogen isotope ratio (δDC_1) and ratio of methane to ethane and propane ($\text{C}_1 / \text{C}_2 + \text{C}_3$).

Initially ‘biogenic-only’ sources are easily identified by comparing the laboratory data to literature values of the parameters discussed above. The methane fraction of a ‘reservoir-typical’ thermogenic source (79%) is used as a baseline in the mixing calculations. The biogenic source is assumed to be 100% methane and then an algebraic mixing calculation is used to determine what percentage of the total methane comes for biogenic versus thermogenic sources.

Isotopic samples were collected from monitoring wells 2, 4, 9, 12, 13, 17, 18 during the September quarter sampling. These wells have shown high concentration of dissolved methane in the past. Remaining wells have showed minor concentration of dissolved methane therefore isotopic samples were collected in April 2006. A compilation of isotopic data was analyzed from September 2004 to September 2006 of all monitoring stations with significant amount of methane to understand the thermogenic methane in the subsurface. Graphical results (Figures 4-12) indicate that thermogenic methane has fluctuated but remained the same in the vicinity of the seep. Thermogenic methane concentrations have dropped dramatically down gradient of the seep within the remediation system.

Surface-Water Quality

Cordilleran collected eight surface water samples (DCS-1-8) and field parameters (temperature, specific conductance, dissolved oxygen, pH, total dissolved solids, and turbidity) from the West Divide Creek stream located on the Langegger property (Table 8). Surface water samples were placed in the appropriate sample containers provided by EAL, labeled, stored on ice, and delivered under strict chain-of-custody procedures to EAL, Wheat Ridge, Colorado. Surface water was analyzed for BTEX/MTBE, dissolved methane, Cl, Na, TDS and SpC.

Laboratory results indicate that BTEX/MTBE compounds were not detected in any of the Divide Creek surface water samples (Tables 9-14) Dissolved methane was detected in all eight samples; all with concentrations measuring less than 0.02 *mg/l* (Table 15). The only area where thermogenic methane is present is in the vicinity of the seep. DCS-3 had a thermogenic methane concentration of 0.009 *mg/l*. A compilation of isotopic data was analyzed from September 2004 to September 2006 for DCS-3 (Figure 13). Graphical results indicate that thermogenic methane has dropped considerably within the seep at DCS-3.

Site Chemistry

Monitoring wells and surface water results for inorganics, chloride (Cl), sodium (Na), total dissolved solids (TDS), and ph, specific conductivity (SpC) are indicated in tables 18, 19. The water continues to be high in TDS and sodium which can be attributed to the high amount of suspended solids within the Wasatch Formation. Chloride specific conductivity and pH are within normal parameters. To fully understand the interconnection between the groundwater and West Divide Creek an extended analytes (alkalinity, cations and anions) analysis is required.

QA/QC

Laboratory and field quality assurance and quality control (QA/QC) consisted of analyzing duplicate samples, matrix spikes and duplicate analyses. For quality assurance, duplicate water samples were acquired at an approximate rate of 1 for every 10 samples. In addition replicate/split samples were also obtained at an approximate rate of 1 for every 10 samples. Replicate/split samples were sent to ESN Rocky Mountain, Golden, Colorado. During the September quarter of 2006 three duplicate and three replicate/split samples were obtained. Analytical results indicate insignificant differences between actual and replicate samples. Laboratory analytical reports and chain-of-custody forms are included in Appendix A.

Site Hydrology

In the vicinity of the seep area groundwater was encountered at depths ranging from near surface to 25 ft-bgs (Tables 18 and 19). The groundwater flow direction continues to be from the seep area towards the North, mimicking the creek flow direction. The shallow, unconfined groundwater is in communication with surface water of West Divide Creek, and is generally of good quality. Groundwater found in the area, east of West Divide Creek is influenced by springs that originate from unlined irrigation ditched located on the mesa to the East.

The hydraulic gradient was determined to be 2.4×10^{-2} ft/ft. The interaction between groundwater and the creek based on water level measurements to evaluate water gain/loss was determined by measuring water levels in the stream and piezometers on the stream banks. The results generally indicate that the creek is losing water to groundwater on the west side of the creek and the creek is gaining water from the wetlands area groundwater from the east.

Divide Creek Seep Status

The air sparge remediation system has operated nearly continuously throughout the quarter. Since the start up of the system in April of 2004, the number of wells with benzene concentrations above the maximum contaminant level (MCL) in the area has been reduced to 5. The size of the area underlain by groundwater that is impacted by benzene at concentrations above $1.0 \mu\text{g} / \text{l}$ has been reduced from 134,974 ft^2 in June of 2005 to approximately 89,428 ft^2 in September of 2006, a total reduction of 45,545 ft^2 . Benzene was not detected in any well located within or down gradient of the remediation system during the September 2006 sampling event. Benzene greater than $1.0 \mu\text{g} / \text{l}$ in the groundwater is primarily located within 300 feet of the seep. Thermogenic methane has fluctuated but remained the same in the vicinity of the seep. Thermogenic methane concentrations have dropped dramatically down gradient of the seep within the remediation system. BTEX/MTBE was not detected in the surface water samples.

Dissolved methane was not detected above 0.02 mg/l in the surface water samples. Dissolved methane in the groundwater greater than 1.0 mg/l is predominantly found within 200 feet of the seep. Thermogenic methane was present at one station within West Divide Creek (DCS-3) within the seep at a concentration of 0.009 mg/l .

The plume comprised primarily of methane and benzene size has decreased dramatically since the start of the air sparge remediation system and dissolved oxygen readings have increased since the implementation. Therefore, the remediation system has been effectively mitigating the plume. Although thermogenic methane and benzene have showed fluctuations in monitoring wells 16 and 17 it is recommended that an air sparge well be implemented between monitoring well 12 (up gradient) and monitoring well 16 (down gradient) to further aid in the process of remediating the plume and mitigation the seep.

Cordilleran appreciates the opportunity to provide services to EnCana Oil & Gas (USA) Inc. If you have any questions or concerns regarding this information, please contact our offices.

Sincerely,
Cordilleran Compliance Services, Inc.

Prepared by:

Scotty Mann
Field Technician

Reviewed by

Dion Plsek, P.E
Principal Engineer

Enclosures

TABLES

Date	Sample ID	Monitoring station	pH, Field (SU)	SpCond, Field (mS/cm)	TDS, Field (g/L)	Temp, Field (°C)	Turbidity, Field (NTU)	DO, Field (mg/L)	DO (%)
9/6/06	090606-MW11	Monitoring Well 11	7.46	0.549	0.4	10.53	372	2.88	30.1
9/6/06	090606-MW12	Monitoring Well 12	7.66	0.744	0.5	10.57	1277	2.34	25.5
9/6/06	090606-MW14	Monitoring Well 14	7.49	0.647	0.4	15.88	5999	0.42	7.1
9/6/06	090606-MW15	Monitoring Well 15	7.79	0.552	0.4	12.98	205	3.65	42.8
9/6/06	090606-MW18	Monitoring Well 18	7.2	0.865	0.6	14.4	70.6	0.74	8.5
9/6/06	090606-MW20	Monitoring Well 20	7.18	1.325	0.9	12.73	5999	2.48	28.6
9/6/06	090606-MW21	Monitoring Well 21	7.25	1.436	0.9	12.86	1120	1.25	14.3
9/6/06	090606-MW22	Monitoring Well 22	7.1	1.313	0.8	13.05	2000	1.41	15.9
9/6/06	090606-MW23	Monitoring Well 23	7.23	1.62	1	13.17	2000	1.81	20.9
9/6/06	090606-MW24	Monitoring Well 24	7.15	0.852	0.6	16.97	593	2.03	25.2
9/6/06	090606-MW25	Monitoring Well 25	7.7	0.547	0.4	12.47	371	2.78	31.5
9/6/06	090606-MW27	Monitoring Well 27	7.42	1.59	1	14.44	2000	1.49	17.6
9/6/06	090606-MW4	Monitoring Well 4	8.85	0.67	0.4	17.9	601	1.64	21.4
9/6/06	090606-MW9	Monitoring Well 9	7.71	0.69	0.4	13.8	200	1.9	22.3
9/7/06	090706-MW1	Monitoring Well 1	7.49	1.087	0.7	12.39	2000	2.12	23.4
9/7/06	090706-MW13	Monitoring Well 13	8.07	0.87	0.6	16.13	5999	3.15	39.5
9/7/06	090706-MW16	Monitoring Well 16	8.39	0.904	0.6	13.79	808	2.25	25.3
9/7/06	090706-MW17	Monitoring Well 17	7.85	1.037	0.7	12.12	2000	1.76	19.4
9/7/06	090706-MW2	Monitoring Well 2	7.62	0.711	0.5	12.84	1642	1.88	21.6
9/7/06	090706-MW26	Monitoring Well 26	7.42	0.735	0.5	11.68	2000	2.28	255
9/7/06	090706-MW6	Monitoring Well 6	7.04	0.999	0.6	14.85	649	1.66	29.2
9/7/06	090706-MW6 (Split)	Monitoring Well 6	7.04	0.999	0.6	14.85	649	1.66	29.2
9/7/06	090706-MWXX (Dup)	Monitoring Well 6	7.04	0.999	0.6	14.85	649	1.66	29.2
9/7/06	090706-MW7	Monitoring Well 7	7.42	1.086	0.7	12.41	1246	2.73	30.9
9/7/06	090706-MW7 (Split)	Monitoring Well 7	7.42	1.086	0.7	12.41	1246	2.73	30.9
9/7/06	090706-ZZ (Dup)	Monitoring Well 7	7.42	1.086	0.7	12.41	1246	2.73	30.9
9/7/06	090706-MW8	Monitoring Well 8	7.51	1.115	0.7	12.48	12.63	2.85	31.5

Table 1 (Divide Creek monitoring wells field parameters)

Date	Sample ID	Monitoring station	Benzene (µg/L)	BenzeneDL (µg/L)
9/6/06	090606-MW11	Monitoring Well 11	Non Detect	1
9/6/06	090606-MW12	Monitoring Well 12	5.3	1
9/6/06	090606-MW14	Monitoring Well 14	Non Detect	1
9/6/06	090606-MW15	Monitoring Well 15	Non Detect	1
9/6/06	090606-MW18	Monitoring Well 18	Non Detect	1
9/6/06	090606-MW20	Monitoring Well 20	Non Detect	1
9/6/06	090606-MW21	Monitoring Well 21	Non Detect	1
9/6/06	090606-MW22	Monitoring Well 22	Non Detect	1
9/6/06	090606-MW23	Monitoring Well 23	Non Detect	1
9/6/06	090606-MW24	Monitoring Well 24	Non Detect	1
9/6/06	090606-MW25	Monitoring Well 25	Non Detect	1
9/6/06	090606-MW27	Monitoring Well 27	Non Detect	1
9/6/06	090606-MW4	Monitoring Well 4	200	1
9/6/06	090606-MW9	Monitoring Well 9	8.9	1
9/7/06	090706-MW1	Monitoring Well 1	Non Detect	1
9/7/06	090706-MW13	Monitoring Well 13	Non Detect	1
9/7/06	090706-MW16	Monitoring Well 16	3.7	1
9/7/06	090706-MW17	Monitoring Well 17	24	1
9/7/06	090706-MW2	Monitoring Well 2	240	5
9/7/06	090706-MW26	Monitoring Well 26	Non Detect	1
9/7/06	090706-MW6	Monitoring Well 6	Non Detect	1
9/7/06	090706-MW6 (Split)	Monitoring Well 6	Non Detect	0.25
9/7/06	090706-MWXX (Dup)	Monitoring Well 6	Non Detect	1
9/7/06	090706-MW7	Monitoring Well 7	Non Detect	1
9/7/06	090706-MW7 (Split)	Monitoring Well 7	Non Detect	0.25
9/7/06	090706-ZZ (Dup)	Monitoring Well 7	Non Detect	1
9/7/06	090706-MW8	Monitoring Well 8	Non Detect	1

Table 2 (Summary of the Analytical Benzene results for Divide Creek monitoring wells)

Date	Sample ID	Monitoring station	Toluene (µg/L)	TolueneDL (µg/L)
9/6/06	090606-MW11	Monitoring Well 11	Non Detect	2
9/6/06	090606-MW12	Monitoring Well 12	Non Detect	2
9/6/06	090606-MW14	Monitoring Well 14	Non Detect	2
9/6/06	090606-MW15	Monitoring Well 15	Non Detect	2
9/6/06	090606-MW18	Monitoring Well 18	Non Detect	2
9/6/06	090606-MW20	Monitoring Well 20	Non Detect	2
9/6/06	090606-MW21	Monitoring Well 21	Non Detect	2
9/6/06	090606-MW22	Monitoring Well 22	Non Detect	2
9/6/06	090606-MW23	Monitoring Well 23	Non Detect	2
9/6/06	090606-MW24	Monitoring Well 24	Non Detect	2
9/6/06	090606-MW25	Monitoring Well 25	Non Detect	2
9/6/06	090606-MW27	Monitoring Well 27	Non Detect	2
9/6/06	090606-MW4	Monitoring Well 4	Non Detect	2
9/6/06	090606-MW9	Monitoring Well 9	Non Detect	2
9/7/06	090706-MW1	Monitoring Well 1	Non Detect	5
9/7/06	090706-MW13	Monitoring Well 13	Non Detect	5
9/7/06	090706-MW16	Monitoring Well 16	Non Detect	5
9/7/06	090706-MW17	Monitoring Well 17	Non Detect	5
9/7/06	090706-MW2	Monitoring Well 2	Non Detect	25
9/7/06	090706-MW26	Monitoring Well 26	Non Detect	5
9/7/06	090706-MW6	Monitoring Well 6	Non Detect	5
9/7/06	090706-MW6 (Split)	Monitoring Well 6	Non Detect	0.25
9/7/06	090706-MWXX (Dup)	Monitoring Well 6	Non Detect	5
9/7/06	090706-MW7	Monitoring Well 7	Non Detect	2
9/7/06	090706-MW7 (Split)	Monitoring Well 7	Non Detect	0.25
9/7/06	090706-ZZ (Dup)	Monitoring Well 7	Non Detect	5
9/7/06	090706-MW8	Monitoring Well 8	Non Detect	2

Table 3 (Summary of the Analytical Toluene results for Divide Creek monitoring wells)

Date	Sample ID	Monitoring station	Ethylbenzene (µg/L)	EthylbenzeneDL (µg/L)
9/6/06	090606-MW11	Monitoring Well 11	Non Detect	2
9/6/06	090606-MW12	Monitoring Well 12	Non Detect	2
9/6/06	090606-MW14	Monitoring Well 14	Non Detect	2
9/6/06	090606-MW15	Monitoring Well 15	Non Detect	2
9/6/06	090606-MW18	Monitoring Well 18	Non Detect	2
9/6/06	090606-MW20	Monitoring Well 20	Non Detect	2
9/6/06	090606-MW21	Monitoring Well 21	Non Detect	2
9/6/06	090606-MW22	Monitoring Well 22	Non Detect	2
9/6/06	090606-MW23	Monitoring Well 23	Non Detect	2
9/6/06	090606-MW24	Monitoring Well 24	Non Detect	2
9/6/06	090606-MW25	Monitoring Well 25	Non Detect	2
9/6/06	090606-MW27	Monitoring Well 27	Non Detect	2
9/6/06	090606-MW4	Monitoring Well 4	7.3	2
9/6/06	090606-MW9	Monitoring Well 9	Non Detect	2
9/7/06	090706-MW1	Monitoring Well 1	Non Detect	2
9/7/06	090706-MW13	Monitoring Well 13	Non Detect	2
9/7/06	090706-MW16	Monitoring Well 16	Non Detect	2
9/7/06	090706-MW17	Monitoring Well 17	Non Detect	2
9/7/06	090706-MW2	Monitoring Well 2	Non Detect	10
9/7/06	090706-MW26	Monitoring Well 26	Non Detect	2
9/7/06	090706-MW6	Monitoring Well 6	Non Detect	2
9/7/06	090706-MW6 (Split)	Monitoring Well 6	Non Detect	0.25
9/7/06	090706-MWXX (Dup)	Monitoring Well 6	Non Detect	2
9/7/06	090706-MW7	Monitoring Well 7	Non Detect	2
9/7/06	090706-MW7 (Split)	Monitoring Well 7	Non Detect	0.25
9/7/06	090706-ZZ (Dup)	Monitoring Well 7	Non Detect	2
9/7/06	090706-MW8	Monitoring Well 8	Non Detect	2

Table 4 (Summary of the Analytical Ethylbenzene results for Divide Creek monitoring wells)

Date	Sample ID	Monitoring station	mp-Xylene (µg/L)	mp-XyleneDL (µg/L)	o-Xylene (µg/L)	o-XyleneDL (µg/L)
9/6/06	090606-MW11	Monitoring Well 11	Non Detect	2	Non Detect	2
9/6/06	090606-MW12	Monitoring Well 12	Non Detect	2	Non Detect	2
9/6/06	090606-MW14	Monitoring Well 14	Non Detect	2	Non Detect	2
9/6/06	090606-MW15	Monitoring Well 15	Non Detect	2	Non Detect	2
9/6/06	090606-MW18	Monitoring Well 18	Non Detect	2	Non Detect	2
9/6/06	090606-MW20	Monitoring Well 20	Non Detect	2	Non Detect	2
9/6/06	090606-MW21	Monitoring Well 21	Non Detect	2	Non Detect	2
9/6/06	090606-MW22	Monitoring Well 22	Non Detect	2	Non Detect	2
9/6/06	090606-MW23	Monitoring Well 23	Non Detect	2	Non Detect	2
9/6/06	090606-MW24	Monitoring Well 24	Non Detect	2	Non Detect	2
9/6/06	090606-MW25	Monitoring Well 25	Non Detect	2	Non Detect	2
9/6/06	090606-MW27	Monitoring Well 27	Non Detect	2	Non Detect	2
9/6/06	090606-MW4	Monitoring Well 4	58	2	10	2
9/6/06	090606-MW9	Monitoring Well 9	4.2	2	Non Detect	2
9/7/06	090706-MW1	Monitoring Well 1	Non Detect	2	Non Detect	2
9/7/06	090706-MW13	Monitoring Well 13	Non Detect	2	Non Detect	2
9/7/06	090706-MW16	Monitoring Well 16	Non Detect	2	Non Detect	2
9/7/06	090706-MW17	Monitoring Well 17	Non Detect	2	Non Detect	2
9/7/06	090706-MW2	Monitoring Well 2	28	10	Non Detect	10
9/7/06	090706-MW26	Monitoring Well 26	Non Detect	2	Non Detect	2
9/7/06	090706-MW6	Monitoring Well 6	Non Detect	2	Non Detect	2
9/7/06	090706-MW6 (Split)	Monitoring Well 6	Non Detect	0.5	Non Detect	0.25
9/7/06	090706-MWXX (Dup)	Monitoring Well 6	Non Detect	2	Non Detect	2
9/7/06	090706-MW7	Monitoring Well 7	Non Detect	2	Non Detect	2
9/7/06	090706-MW7 (Split)	Monitoring Well 7	Non Detect	0.5	Non Detect	0.25
9/7/06	090706-ZZ (Dup)	Monitoring Well 7	Non Detect	2	Non Detect	2
9/7/06	090706-MW8	Monitoring Well 8	Non Detect	2	Non Detect	2

Table 5 (Summary of the Analytical Total Xylenes results for Divide Creek monitoring wells)

Date	Sample ID	Monitoring station	MTBE (µg/L)	MTBE_DL (µg/L)
9/6/06	090606-MW11	Monitoring Well 11	Non Detect	4
9/6/06	090606-MW12	Monitoring Well 12	Non Detect	4
9/6/06	090606-MW14	Monitoring Well 14	Non Detect	4
9/6/06	090606-MW15	Monitoring Well 15	Non Detect	4
9/6/06	090606-MW18	Monitoring Well 18	Non Detect	4
9/6/06	090606-MW20	Monitoring Well 20	Non Detect	4
9/6/06	090606-MW21	Monitoring Well 21	Non Detect	4
9/6/06	090606-MW22	Monitoring Well 22	Non Detect	4
9/6/06	090606-MW23	Monitoring Well 23	Non Detect	4
9/6/06	090606-MW24	Monitoring Well 24	Non Detect	4
9/6/06	090606-MW25	Monitoring Well 25	Non Detect	4
9/6/06	090606-MW27	Monitoring Well 27	Non Detect	4
9/6/06	090606-MW4	Monitoring Well 4	Non Detect	4
9/6/06	090606-MW9	Monitoring Well 9	Non Detect	4
9/7/06	090706-MW1	Monitoring Well 1	Non Detect	4
9/7/06	090706-MW13	Monitoring Well 13	Non Detect	4
9/7/06	090706-MW16	Monitoring Well 16	Non Detect	4
9/7/06	090706-MW17	Monitoring Well 17	Non Detect	4
9/7/06	090706-MW2	Monitoring Well 2	Non Detect	20
9/7/06	090706-MW26	Monitoring Well 26	Non Detect	4
9/7/06	090706-MW6	Monitoring Well 6	Non Detect	4
9/7/06	090706-MW6 (Split)	Monitoring Well 6	Non Detect	0.25
9/7/06	090706-MWXX (Dup)	Monitoring Well 6	Non Detect	4
9/7/06	090706-MW7	Monitoring Well 7	Non Detect	4
9/7/06	090706-MW7 (Split)	Monitoring Well 7	Non Detect	0.25
9/7/06	090706-ZZ (Dup)	Monitoring Well 7	Non Detect	4
9/7/06	090706-MW8	Monitoring Well 8	Non Detect	4

Table 6 (Summary of the Analytical MTBE results for Divide Creek monitoring wells)

Date	Sample ID	Monitoring station	Methane (mg/L)	methaneDL (mg/L)
9/6/06	090606-MW11	Monitoring Well 11	0.081	0.0008
9/6/06	090606-MW12	Monitoring Well 12	7.1	0.008
9/6/06	090606-MW14	Monitoring Well 14	9	0.016
9/6/06	090606-MW15	Monitoring Well 15	0.036	0.0008
9/6/06	090606-MW18	Monitoring Well 18	0.99	0.008
9/6/06	090606-MW20	Monitoring Well 20	0.011	0.0008
9/6/06	090606-MW21	Monitoring Well 21	0.0057	0.0008
9/6/06	090606-MW22	Monitoring Well 22	0.049	0.0008
9/6/06	090606-MW23	Monitoring Well 23	2.9	0.016
9/6/06	090606-MW24	Monitoring Well 24	Non Detect	0.0008
9/6/06	090606-MW25	Monitoring Well 25	0.068	0.0008
9/6/06	090606-MW27	Monitoring Well 27	Non Detect	0.0008
9/6/06	090606-MW4	Monitoring Well 4	10	0.016
9/6/06	090606-MW9	Monitoring Well 9	9.3	0.016
9/7/06	090706-MW1	Monitoring Well 1	0.15	0.0008
9/7/06	090706-MW13	Monitoring Well 13	1.4	0.008
9/7/06	090706-MW16	Monitoring Well 16	1.7	0.008
9/7/06	090706-MW17	Monitoring Well 17	3.5	0.008
9/7/06	090706-MW2	Monitoring Well 2	7.1	0.008
9/7/06	090706-MW26	Monitoring Well 26	1.5	0.008
9/7/06	090706-MW6	Monitoring Well 6	0.038	0.0008
9/7/06	090706-MW6 (Split)	Monitoring Well 6	0.00523	0.000068
9/7/06	090706-MWXX (Dup)	Monitoring Well 6	0.031	0.0008
9/7/06	090706-MW7	Monitoring Well 7	0.047	0.0008
9/7/06	090706-MW7 (Split)	Monitoring Well 7	0.00163	0.000068
9/7/06	090706-ZZ (Dup)	Monitoring Well 7	0.039	0.0008
9/7/06	090706-MW8	Monitoring Well 8	0.47	0.0008

Table 7 (Summary of the Analytical Dissolved Methane results for Divide Creek monitoring wells)

Date (month/year)	Monitoring Well	Thermogenic Methane (mg/L)
Sep-04	MW1	6.29
Jan-05	MW1	3.5
May-05	MW1	0.295
Sep-05	MW1	0.34
Jan-06	MW1	0.18
May-06	MW1	0
Sep-04	MW2	9.535
Jan-05	MW2	6.464
May-05	MW2	5.431
Sep-05	MW2	4.265
Jan-06	MW2	6.776
May-06	MW2	3.428
Sep-06	MW2	5.748
Sep-04	MW4	7.352
Jan-05	MW4	11.86
May-05	MW4	8.592
Sep-05	MW4	7.073
Jan-06	MW4	7.139
May-06	MW4	2.818
Sep-06	MW4	8.17
Sep-04	MW6	0.382
Jan-05	MW6	0
May-05	MW6	0.17
Sep-05	MW6	0.038
Jan-06	MW6	0.12
May-06	MW6	0.006
Sep-04	MW9	9.044
Jan-05	MW9	13.289
May-05	MW9	10.348
Sep-05	MW9	7.614
Jan-06	MW9	9.928
May-06	MW9	7.78
Sep-06	MW9	7.057
Sep-04	MW12	4.101
Jan-05	MW12	0.836
May-05	MW12	0.399
Sep-05	MW12	5.127
Jan-06	MW12	0.24
May-06	MW12	0.516
Sep-06	MW12	4.077
Oct-04	MW14	4.347
Jan-05	MW14	8.043
May-05	MW14	6.576
Sep-05	MW14	2.335
Jan-06	MW14	5.628
May-06	MW14	1.94
Sep-06	MW14	5.956

Oct-04	MW17	6.175
Jan-05	MW17	5.105
May-05	MW17	1.024
Sep-05	MW17	3.289
Jan-06	MW17	1.848
May-06	MW17	0.612
Sep-06	MW17	2.171
Oct-04	MW18	0.266
Jan-05	MW18	0.374
May-05	MW18	0.05
Sep-05	MW18	0.085
Jan-06	MW18	0.203
May-06	MW18	0.086
Sep-06	MW18	0.377

Table 8 (Summary of Historical Analytical Thermogenic methane results Divide Creek monitoring wells)

Date	Sample ID	Monitoring station	pH, Field (SU)	SpCond, Field (mS/cm)	TDS, Field (g/L)	Temp, Field (°C)	Turbidity, Field (NTU)	DO, Field (mg/L)	DO (%)
9/5/06	090506-DCS1	Divide Creek Station 1	9.12	0.773	0.5	13.45	20	9.77	114.4
9/5/06	090506-DCS2	Divide Creek Station 2	9.24	0.772	0.5	13.89	18.2	9.79	127.3
9/5/06	090506-DCS2 (Split)	Divide Creek Station 3	9.24	0.772	0.5	13.89	18.2	9.79	127.3
9/5/06	090506-DCSXX (Dup)	Divide Creek Station 4	9.24	0.772	0.5	13.89	18.2	9.79	127.3
9/5/06	090506-DCS3	Divide Creek Station 5	9.14	0.763	0.5	13.48	15.4	9.79	115.8
9/5/06	090506-DCS4	Divide Creek Station 6	9.19	0.763	0.5	14.6	22	9.54	114.9
9/5/06	090506-DCS5	Divide Creek Station 7	9.13	0.757	0.5	14.77	14.7	9.49	114.2
9/5/06	090506-DCS6	Divide Creek Station 8	9.09	0.753	0.5	14.99	16.1	9.57	115.9
9/5/06	090506-DCS7	Divide Creek Station 9	9.12	0.748	0.5	15.33	30.7	9.33	113.5
9/5/06	090506-DCS8	Divide Creek Station 10	9.2	0.74	0.5	15.68	18.3	8.59	105.2

Table 9 (Divide Creek surface water field parameters results)

Date	Sample ID	Monitoring station	Benzene (µg/L)	BenzeneDL (µg/L)
9/5/06	090506-DCS1	Divide Creek Station 1	Non Detect	1
9/5/06	090506-DCS2	Divide Creek Station 2	Non Detect	1
9/5/06	090506-DCS2 (Split)	Divide Creek Station 3	Non Detect	0.25
9/5/06	090506-DCSXX (Dup)	Divide Creek Station 4	Non Detect	1
9/5/06	090506-DCS3	Divide Creek Station 5	Non Detect	1
9/5/06	090506-DCS4	Divide Creek Station 6	Non Detect	1
9/5/06	090506-DCS5	Divide Creek Station 7	Non Detect	1
9/5/06	090506-DCS6	Divide Creek Station 8	Non Detect	1
9/5/06	090506-DCS7	Divide Creek Station 9	Non Detect	1
9/5/06	090506-DCS8	Divide Creek Station 10	Non Detect	1

Table 10 (Summary of the Analytical Benzene results for Divide Creek Surface water)

Date	Sample ID	Monitoring station	Toluene (µg/L)	TolueneDL (µg/L)
9/5/06	090506-DCS1	Divide Creek Station 1	Non Detect	5
9/5/06	090506-DCS2	Divide Creek Station 2	Non Detect	5
9/5/06	090506-DCS2 (Split)	Divide Creek Station 3	Non Detect	0.25
9/5/06	090506-DCSXX (Dup)	Divide Creek Station 4	Non Detect	5
9/5/06	090506-DCS3	Divide Creek Station 5	Non Detect	5
9/5/06	090506-DCS4	Divide Creek Station 6	Non Detect	5
9/5/06	090506-DCS5	Divide Creek Station 7	Non Detect	5
9/5/06	090506-DCS6	Divide Creek Station 8	Non Detect	5
9/5/06	090506-DCS7	Divide Creek Station 9	Non Detect	5
9/5/06	090506-DCS8	Divide Creek Station 10	Non Detect	5

Table 11 (Summary of the Analytical Toluene results for Divide Creek Surface water)

Date	Sample ID	Monitoring station	Ethylbenzene (µg/L)	EthylbenzeneDL (µg/L)
9/5/06	090506-DCS1	Divide Creek Station 1	Non Detect	2
9/5/06	090506-DCS2	Divide Creek Station 2	Non Detect	2
9/5/06	090506-DCS2 (Split)	Divide Creek Station 3	Non Detect	0.25
9/5/06	090506-DCSXX (Dup)	Divide Creek Station 4	Non Detect	2
9/5/06	090506-DCS3	Divide Creek Station 5	Non Detect	2
9/5/06	090506-DCS4	Divide Creek Station 6	Non Detect	2
9/5/06	090506-DCS5	Divide Creek Station 7	Non Detect	2
9/5/06	090506-DCS6	Divide Creek Station 8	Non Detect	2
9/5/06	090506-DCS7	Divide Creek Station 9	Non Detect	2
9/5/06	090506-DCS8	Divide Creek Station 10	Non Detect	2

Table 12 (Summary of the Analytical Ethylbenzene results for Divide Creek surface water)

Date	Sample ID	Monitoring station	mp-Xylene (µg/L)	mp-XyleneDL (µg/L)	o-Xylene (µg/L)	o-XyleneDL (µg/L)
9/5/06	090506-DCS1	Divide Creek Station 1	Non Detect	2	Non Detect	2
9/5/06	090506-DCS2	Divide Creek Station 2	Non Detect	2	Non Detect	2
9/5/06	090506-DCS2 (Split)	Divide Creek Station 3	Non Detect	0.5	Non Detect	0.25
9/5/06	090506-DCSXX (Dup)	Divide Creek Station 4	Non Detect	2	Non Detect	2
9/5/06	090506-DCS3	Divide Creek Station 5	Non Detect	2	Non Detect	2
9/5/06	090506-DCS4	Divide Creek Station 6	Non Detect	2	Non Detect	2
9/5/06	090506-DCS5	Divide Creek Station 7	Non Detect	2	Non Detect	2
9/5/06	090506-DCS6	Divide Creek Station 8	Non Detect	2	Non Detect	2
9/5/06	090506-DCS7	Divide Creek Station 9	Non Detect	2	Non Detect	2
9/5/06	090506-DCS8	Divide Creek Station 10	Non Detect	2	Non Detect	2

Table 13 (Summary of the Analytical Total Xylenes results for Divide Creek surface water)

Date	Sample ID	Monitoring station	MTBE (µg/L)	MTBE_DL (µg/L)
9/5/06	090506-DCS1	Divide Creek Station 1	Non Detect	4
9/5/06	090506-DCS2	Divide Creek Station 2	Non Detect	4
9/5/06	090506-DCS2 (Split)	Divide Creek Station 3	Non Detect	0.25
9/5/06	090506-DCSXX (Dup)	Divide Creek Station 4	Non Detect	4
9/5/06	090506-DCS3	Divide Creek Station 5	Non Detect	4
9/5/06	090506-DCS4	Divide Creek Station 6	Non Detect	4
9/5/06	090506-DCS5	Divide Creek Station 7	Non Detect	4
9/5/06	090506-DCS6	Divide Creek Station 8	Non Detect	4
9/5/06	090506-DCS7	Divide Creek Station 9	Non Detect	4
9/5/06	090506-DCS8	Divide Creek Station 10	Non Detect	4

Table 14 (Summary of the Analytical MTBE results for Divide Creek surface water)

Date	Sample ID	Monitoring station	Methane (mg/L)	methaneDL (mg/L)
9/5/06	090506-DCS1	Divide Creek Station 1	0.0019	0.0008
9/5/06	090506-DCS2	Divide Creek Station 2	0.0054	0.0008
9/5/06	090506-DCS2 (Split)	Divide Creek Station 3	0.00269	0.000068
9/5/06	090506-DCSXX (Dup)	Divide Creek Station 4	0.0057	0.0008
9/5/06	090506-DCS3	Divide Creek Station 5	0.015	0.0008
9/5/06	090506-DCS4	Divide Creek Station 6	0.0096	0.0008
9/5/06	090506-DCS5	Divide Creek Station 7	0.01	0.0008
9/5/06	090506-DCS6	Divide Creek Station 8	0.013	0.0008
9/5/06	090506-DCS7	Divide Creek Station 9	0.01	0.0008
9/5/06	090506-DCS8	Divide Creek Station 10	0.0084	0.0008

Table 15 (Summary of the Analytical Dissolved Methane results for Divide Creek surface water)

Date	Sample ID	Monitoring station	Chloride (mg/L)	CL_DL (mg/L)	Sodium (Na) (mg/L)	Na_DL (mg/L)	TDS (mg/L)	TDS_DL (mg/L)	ph, Lab (SU)	SpCond, Lab (µmhos/cm)
9/6/06	090606-MW11	Monitoring Well 11	7.2	0.5	38	0.4	389	10	7.34	533
9/6/06	090606-MW12	Monitoring Well 12	22.4	0.5	100	0.4	547	10	7.35	726
9/6/06	090606-MW14	Monitoring Well 14	17.2	0.5	46	0.4	461	10	7.28	625
9/6/06	090606-MW15	Monitoring Well 15	3.7	0.5	67	0.4	434	10	7.42	622
9/6/06	090606-MW18	Monitoring Well 18	7.2	0.5	82	0.4	471	10	7.42	680
9/6/06	090606-MW20	Monitoring Well 20	28.1	0.5	150	0.4	735	10	7.22	1040
9/6/06	090606-MW21	Monitoring Well 21	16.3	0.5	250	0.4	810	10	7.53	1120
9/6/06	090606-MW22	Monitoring Well 22	29.8	0.5	160	0.4	738	10	7.28	1050
9/6/06	090606-MW23	Monitoring Well 23	41.6	0.5	180	0.4	982	10	7.48	1350
9/6/06	090606-MW24	Monitoring Well 24	3.3	0.5	49	0.4	463	10	7.42	664
9/6/06	090606-MW25	Monitoring Well 25	10.3	0.5	40	0.4	380	10	7.57	528
9/6/06	090606-MW27	Monitoring Well 27	24.4	0.5	310	0.4	944	10	7.79	1280
9/6/06	090606-MW4	Monitoring Well 4	37.6	0.5	120	0.4	461	10	7.86	663
9/6/06	090606-MW9	Monitoring Well 9	7.4	0.5	64	0.4	474	10	7.48	668
9/7/06	090706-MW1	Monitoring Well 1	23.4	0.5	220	0.4	797	10	7.07	1100
9/7/06	090706-MW13	Monitoring Well 13	3.3	0.5	99	0.4	591	10	7.56	863
9/7/06	090706-MW16	Monitoring Well 16	57.1	1	220	0.4	792	10	7.9	932
9/7/06	090706-MW17	Monitoring Well 17	47.3	0.5	200	0.4	804	10	7.35	1140
9/7/06	090706-MW2	Monitoring Well 2	41.8	0.5	140	0.4	514	10	7.25	758
9/7/06	090706-MW26	Monitoring Well 26	5.8	0.5	95	0.4	530	10	7.09	741
9/7/06	090706-MW6	Monitoring Well 6	14.4	0.5	120	0.4	710	10	6.75	989
9/7/06	090706-MW6 (Split)	Monitoring Well 6	14.1	1	130	5	656	10	6.82	1120
9/7/06	090706-MWXX (Dup)	Monitoring Well 6	15.1	1	110	0.4	711	10	6.84	1000
9/7/06	090706-MW7	Monitoring Well 7	33.1	1	140	0.4	775	10	6.92	1100
9/7/06	090706-MW7 (Split)	Monitoring Well 7	23.2	1	150	5	650	10	6.99	1280
9/7/06	090706-ZZ (Dup)	Monitoring Well 7	32.2	0.5	140	0.4	780	10	6.91	1110
9/7/06	090706-MW8	Monitoring Well 8	31.2	0.5	170	0.4	813	10	7.04	1160

Table 16 (Summary of the Analytical Inorganics, pH and SpC results for Divide Creek monitoring wells)

Date	Sample ID	Monitoring station	Chloride (mg/L)	CL_DL (mg/L)	Sodium (Na) (mg/L)	Na_DL (mg/L)	TDS (mg/L)	TDS_DL (mg/L)	ph, Lab (SU)	SpCond, Lab (µmhos/cm)
9/5/06	090506-DCS1	Divide Creek Station 1	19.3	0.5	96	0.4	569	10	8.61	798
9/5/06	090506-DCS2	Divide Creek Station 2	19.5	0.5	95	0.4	569	10	8.62	810
9/5/06	090506-DCS2 (Split)	Divide Creek Station 3	18.2	1	110	5	575	10	8.36	870
9/5/06	090506-DCSXX (Dup)	Divide Creek Station 4	19.4	0.5	95	0.4	561	10	8.62	776
9/5/06	090506-DCS3	Divide Creek Station 5	19.1	0.5	93	0.4	546	10	8.6	791
9/5/06	090506-DCS4	Divide Creek Station 6	19.2	0.5	92	0.4	545	10	8.6	778
9/5/06	090506-DCS5	Divide Creek Station 7	18.9	0.5	90	0.4	545	10	8.59	774
9/5/06	090506-DCS6	Divide Creek Station 8	18.4	0.5	89	0.4	545	10	8.6	777
9/5/06	090506-DCS7	Divide Creek Station 9	18.1	0.5	87	0.4	537	10	8.59	776
9/5/06	090506-DCS8	Divide Creek Station 10	18.1	0.5	89	0.4	537	10	8.6	779

Table 17 (Summary of the Analytical Inorganics, pH and SpC results for Divide Creek surface water)

MW #	PVC elevation MSL (ft)	DTW (ft)	DTW elevation MSL (ft)
1	5958.79	7.6	5951.19
2	5959.28	9.05	5950.23
4	5963.41	8.41	5955
6	5959.94	7.53	5952.41
7	5958.97	8.22	5950.75
8	5959.29	10.11	5949.18
9	5965.13	4.41	5960.72
11	5969.66	4.15	5965.51
12	5963.6	3.31	5960.29
13	5972	1.4	5970.6
14	5965.06	4.22	5960.84
15	5957.79	0	5957.79
16	5960.45	6.41	5954.04
17	5958.49	8.27	5950.22
18	5952.43	4.58	5947.85
19	5969.44	non-serviceable	NA
20	5953.88	10	5943.88
21	5969.45	24.95	5944.5
22	5957.08	10.01	5947.07
23	5952.69	17.29	5935.4
24	5954.91	5.23	5949.68
25	5971.79	2.42	5969.37
26	5954.65	1.2	5953.45
27	5956.22	11.04	5945.18

Table 18 (September water elevations for monitoring wells)

Piezometer #	PVC elevation MSL (ft)	DTW (ft)	DTW elevation MSL (ft)
1	5965.81	2.83	5962.98
2	5966.6	4.39	5962.21
3	5961.3	2.35	5958.95
4	5959.38	3.55	5955.83
5	5962.43	Silted in	NA
6	5959.38	5.55	5953.83
7	5952.08	2.4	5949.68
8	5953.41	5.35	5948.06

Table 19 (September water levels for piezometers)

FIGURES