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SENT VIA EMAIL

January 18, 2018

Dr. Carlos Lujan, Ph. D.
Colorado Oil and Gas Conservation Commission, Northwest Region
796 Megan Avenue, Suite 201
Rifle, CO 81650

RE: Wolf Creek 5 3rd Quarter 2017 Sampling Report Submittal (Remediation Project REM# 7995)

Dear Dr. Lujan:

HRL Compliance Solutions, on behalf of Rocky Mountain Natural Gas LLC, sampled Wolf Creek #5 on September 26 and 27, 2017. As requested during our conference call yesterday, HRL's report summarizing this sampling event is attached for your file.

Should you have any questions or concerns with the attached, please contact me at 719.362.6960.

Sincerely,

Brenda F. Zehr
Sr. Environmental Engineer

Attachment:
WC#5 Sampling Report dated December 20, 2017

CC: Tom Warnes, RMNG
Mark Mumby, HRL
File



December 20, 2017

**Rocky Mountain Natural Gas, LLC
Wolf Creek 5 Quarterly Sampling
Summary Report – 3rd Quarter 2017
HRL Job #13-195**

Introduction

This summary report presents the site background, groundwater sampling, and analytical summary for the Wolf Creek #5 well pad. This report provides sampling results for the second quarter 2017 sampling event. Field work was conducted on September 26 and 27, 2017.

Site Location

The Wolf Creek #5 pad is located in the SW ¼, NE ¼ of Section 1, Township 9 South, Range 90 West of the 6th Prime Meridian in the White River National Forest of Pitkin County, Colorado (39.304106°, -107.386001°). Refer to Appendix A, Figure 1 for a map of the Wolf Creek Storage Unit.

Background

The groundwater sampling investigation was performed in response to the new Bureau of Land Management (BLM) *Notice of Order of the BLM Authorized Officer* (WRNF-WC-2017-1) dated June 6, 2107, the approved Colorado Oil and Gas Conservation commission (COGCC) Form 27 Remediation workplan (Remediation # 21457267), and in accordance with the revised Sampling and Analysis Plan dated July 10, 2017. The following report details information from the third quarter sampling event conducted September 26 and 27 2017.

Groundwater Sampling

HRL personnel were onsite September 26th and 27th to collect groundwater samples from five (5) piezometers (PIEZ 03, PIEZ 09, PIEZ 10, PIEZ 11, and PIEZ 12) in accordance with the new BLM written order. An additional sample was collected from the standing surface water within the low lying depression just to the north of PIEZ 09. Each piezometer was purged prior to samples being collected utilizing a low flow peristaltic pump. The surface water depression sample was collected by the 'dip and pour' method. Static groundwater levels, in the piezometers, were measured with a water level indicator and field parameters were collected utilizing a YSI 556 multi-parameter water quality instrument. Refer to Appendix A, Figure 2 for a sample location map.

Each sample was placed into laboratory provided containers, packed in ice, and shipped via overnight delivery to ALS Environmental in Holland, Michigan following laboratory chain-of-custody protocol. Each sample was analyzed for diesel range organics (DRO), gasoline range organics (GRO), benzene-toluene-ethylbenzene-xylenes (BTEX), and methanol. All samples were collected and analyzed in accordance with the approved SAP dated July 10, 2017 and BLM written order WRNF-WC-2017-1.

All field equipment was calibrated to standards prior to use with the manufacturer's calibration guidelines. All field equipment was decontaminated between sample locations using soap and distilled water to minimize the possibility of cross-contamination.

Groundwater Analytical Results

PIEZ 03

All constituents were non-detect.

PIEZ 09

All constituents were non-detect.

PIEZ 10

All constituents were non-detect.

PIEZ 11

All constituents were non-detect.

PIEZ 12

All constituents were non-detect.

Depression Surface Water

All constituents were non-detect.

Analytical results are presented in Appendix B, Table 1. Water quality field parameters are presented in Appendix B, Table 2. Raw analytical data is presented in Appendix C.

Conclusion

Results from the third quarter 2017 sample event indicate that all constituents were non-detect.

This third quarter sampling event concludes the first year of required BLM sampling at WC5. No contamination is present above regulatory levels and hasn't been throughout the entire sampling period of four (4) years. COGCC has indicated in their 9/13/17 Field Inspection Report (Appendix D), if these analytical results indicate compliance with COGCC Table 910-1, their remediation project will be closed. If BLM also concurs with the No Further Action determination; Black Hills would be of the opinion that no further sampling will be necessary. The twelve (12) existing piezometers would then be abandoned to the State Engineers Office Division of Water Resources (DWR) standards. Well abandonment would be completed in the late spring/early summer of 2018.

Appendix A

Figure 1: Wolf Creek Storage Unit Map

Figure 2: Wolf Creek 5 Piezometer/Sample Location Map

Figure 1: Wolf Creek Storage Unit Map

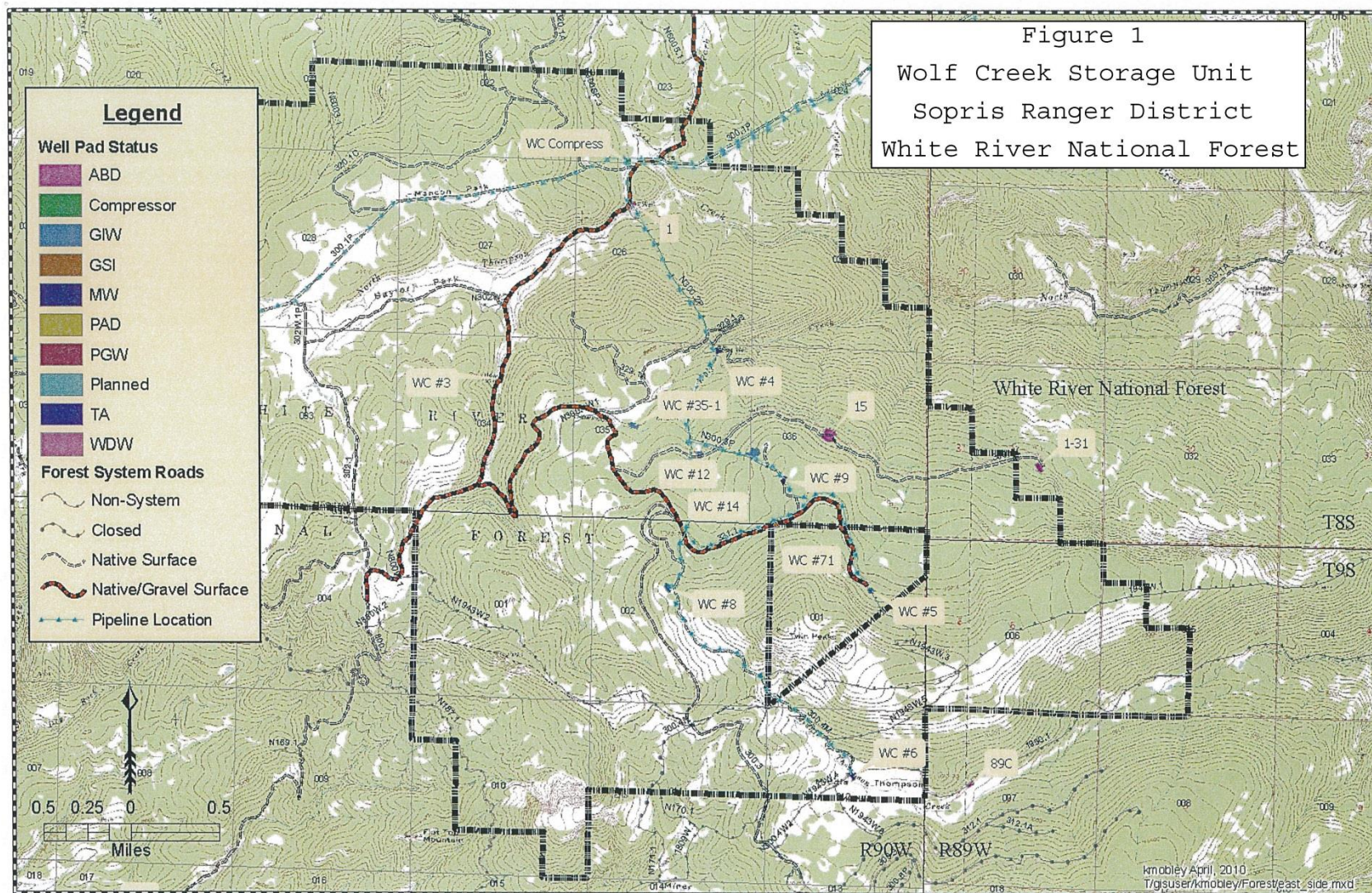
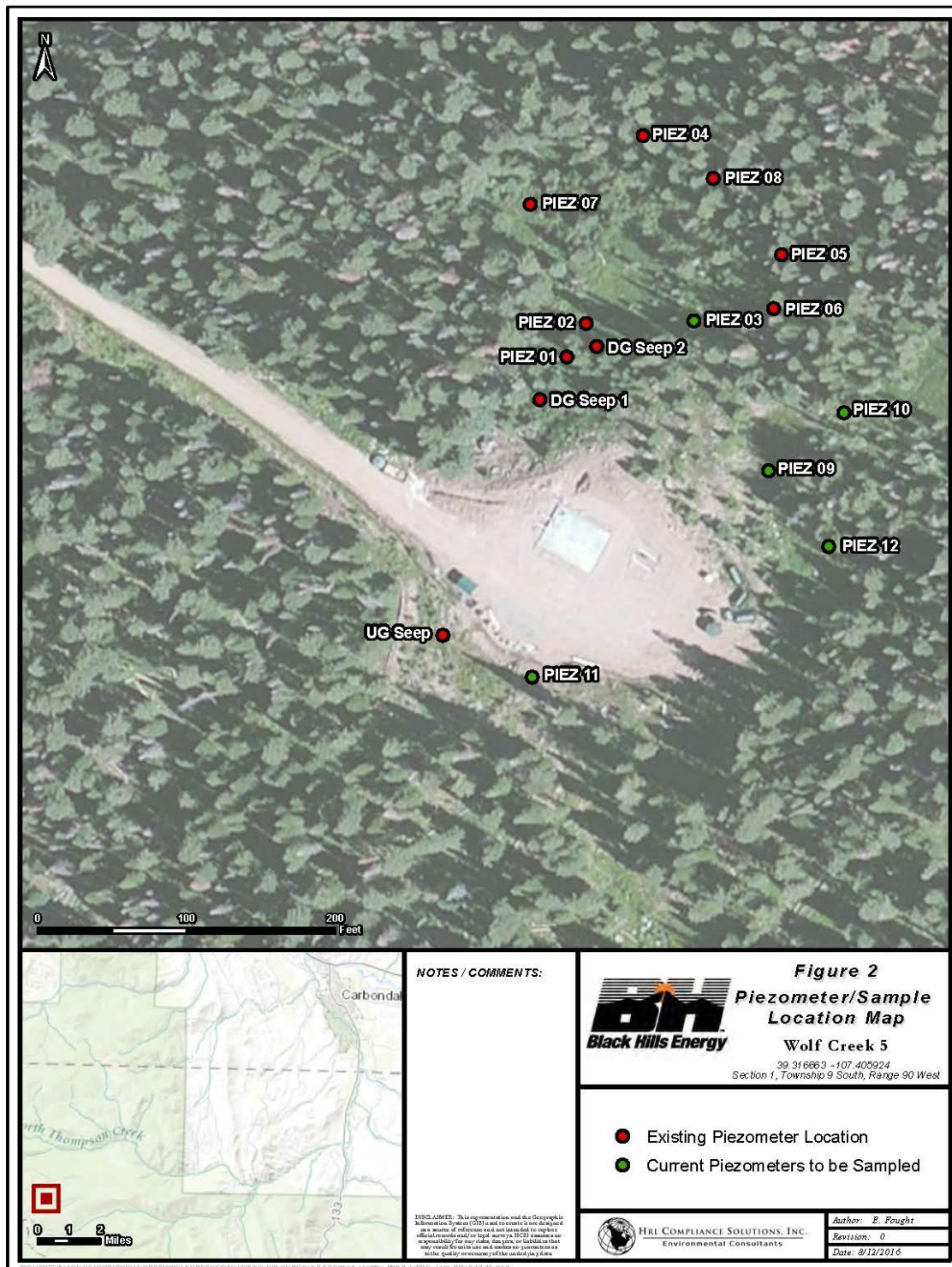


Figure 2: Wolf Creek 5 Piezometer/Sample Location Map



Appendix B

Table 1: Analytical Lab Results

Table 2: Water Quality Field Parameters

Table 1: Analytical Lab Results

Water Analysis		Exceeds Standard	J = Analyte is present at an estimated concentration between the MDL and Report Limit	U = Analyzed but not detected above the MDL			Method	SW8015M [DRLVI_801_5_W]	SW8015 [GRO_8015_W]	SW8015 M [GCFID_8015_W]	SW8260	SW8260	SW8260	SW8260	SW8260	SW8260
			NT = Not Tested	MDL = Method Detection Limit				ND = Non-Detect	Analyte	DRO (C10-C28)	GRO (C6-Cl0)	Methanol	Benzene	Ethylbenzene	m,p-Xylene	o-Xylene
N/A = Not Applicable																
							Units	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
							COGCC Table 910-1 Standards	Below Detection Level	Below Detection Level	N/A	5	700	N/A	N/A	560 to 1,000	1,400 to 10,000
Sample ID	Well #	Latitude	Longitude	Matrix	Sample Date	WO #	CSEV Standards	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PIEZ03	5	39.304551	-107.385874	Groundwater	7/18/2013	1307772-02		0.95	< 0.021 U	< 1.1 U	NT	NT	NT	NT	NT	NT
PIEZ03	5	39.304551	-107.385874	Groundwater	7/19/2013	1307772-16		NT	NT	NT	NT	NT	NT	NT	NT	NT
PIEZ03	5	39.304551	-107.385874	Groundwater	9/30/2013	1310037-03		0.87	<0.20	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
PIEZ03-Duplicate	5	39.304551	-107.385874	Groundwater	9/30/2013	1310037-16		NT	NT	<5.0	NT	NT	NT	NT	NT	NT
PIEZ03	5	39.304551	-107.385874	Groundwater	6/20/2014	14061148-03		1.4	<0.20	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
PIEZ03	5	39.304551	-107.385874	Groundwater	9/23/2014	14091248-03		1.5	<0.20	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
PIEZ03	5	39.304551	-107.385874	Groundwater	6/24/2015	15061628-03		0.72	<0.20	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
PIEZ03	5	39.304546	-107.386128	Groundwater	9/4/2015	1509469-02		1.8	<0.20	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
PIEZ03	5	39.304541	-107.386382	Groundwater	7/7/2017	1707401-01		2.5	<0.20	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
PIEZ03	5	39.304536	-107.386636	Groundwater	9/27/2017	17091796-01		<0.50	<0.20	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
PIEZ09	5	39.304285	-107.385686	Groundwater	7/18/2013	1307772-07		27	0.48	< 1.1 U	NT	NT	NT	NT	NT	NT
PIEZ09	5	39.304285	-107.385686	Groundwater	7/19/2013	1307772-15		NT	NT	NT	NT	NT	NT	NT	NT	NT
PIEZ09	5	39.304285	-107.385686	Groundwater	9/30/2013	1310037-09		2.9	<0.20	<5.0	<1.0	1	<2.0	3	<1.0	4.8
PIEZ09	5	39.304285	-107.385686	Groundwater	6/20/2014	14061148-08		4.5	<0.20	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<15
PIEZ09	5	39.304285	-107.385686	Groundwater	9/23/2014	14091248-09		2.3	<0.20	<5.0	<1.0	1.1	<2.0	2.2	<1.0	4
PIEZ09	5	39.304285	-107.385686	Groundwater	6/24/2015	15061628-09		4.5	<0.20	300	<1.0	1.2	2.3	3.1	<1.0	5.4
PIEZ09	5	39.304285	-107.385686	Groundwater	9/4/2015	1509469-07		3.7	<0.20	<5.0	<1.0	<1.0	<2.0	1.4	<1.0	<3.0
PIEZ09 - Duplicate	5	39.304285	-107.385686	Groundwater	9/4/2015	1509469-10		3.3	<0.20	<5.0	<1.0	1.4	2.2	3.3	<1.0	5.5
PIEZ09	5	39.304285	-107.385686	Groundwater	7/7/2017	1707401-02		7.3	<0.20		<1.0	1.2	<2.0	3.4	<1.0	5.0
PIEZ09	5	39.304285	-107.385686	Groundwater	9/27/2017	17091796-02		<0.50	<0.20	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
PIEZ10	5	39.304396	-107.385505	Groundwater	7/18/2013	1307772-08		< 0.50 U	< 0.021 U	< 1.1 U	NT	NT	NT	NT	NT	NT
PIEZ10	5	39.304396	-107.385505	Groundwater	7/19/2013	1307772-12		NT	NT	NT	NT	NT	NT	NT	NT	NT
PIEZ10	5	39.304396	-107.385505	Groundwater	9/30/2013	1310037-10		<0.10	<0.20	<5.0	NT	NT	NT	NT	NT	NT
PIEZ10	5	39.304396	-107.385505	Groundwater	6/20/2014	14061148-09		<0.10	<0.20	<5.0	NT	NT	NT	NT	NT	NT
PIEZ10	5	39.304396	-107.385505	Groundwater	9/23/2014	14091248-10		<0.10	<0.20	<5.0	NT	NT	NT	NT	NT	NT
PIEZ10	5	39.304396	-107.385505	Groundwater	6/24/2015	15061628-10		<0.10	<0.20	260	<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
PIEZ10	5	39.304396	-107.385505	Groundwater	6/4/2015	NA		DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
PIEZ10	5	39.304396	-107.385505	Groundwater	7/7/2017	1707401-03		<0.50	<0.20		<1.0	<1.0	<2.0	<1.0	5.5	<3.0
PIEZ10-Duplicate	5	39.304396	-107.385505	Groundwater	7/7/2017	1707401-04		<0.50	<0.20		<1.0	<1.0	<2.0	<1.0	3.7	<3.0
PIEZ10	5	39.304396	-107.385505	Groundwater	9/27/2017	17091796-03		<0.50	<0.20	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
PIEZ11	5	39.303896	-107.386232	Groundwater	7/18/2013	1307772-09		< 0.50 U	< 0.021 U	< 1.1 U	NT	NT	NT	NT	NT	NT
PIEZ11	5	39.303896	-107.386232	Groundwater	7/19/2013	1307772-18		1.2	NT	NT	NT	NT	NT	NT	NT	NT
PIEZ11	5	39.303896	-107.386232	Groundwater	9/30/2013	1310037-11		<0.10	<0.20	<5.0	NT	NT	NT	NT	NT	NT
PIEZ11	5	39.303896	-107.386232	Groundwater	6/20/2014	14061148-10		0.92	<0.20	<5.0	NT	NT	NT	NT	NT	NT
PIEZ11-Duplicate	5	39.303896	-107.386232	Groundwater	6/20/2014	14061148-12		0.7	<0.20	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
PIEZ11	5	39.303896	-107.386232	Groundwater	9/23/2014	14091248-11		<0.10	<0.20	<5.0	NT	NT	NT	NT	NT	NT
PIEZ11	5	39.303896	-107.386232	Groundwater	6/24/2015	15061628-11		<0.10	<0.20	77	<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
PIEZ11	5	39.303896	-107.386232	Groundwater	9/4/2015	1509469-08		0.79	<0.20	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
PIEZ11	5	39.303896	-107.386232	Groundwater	7/7/2017	1707401-05		<0.50	<0.20		<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
PIEZ11	5	39.303896	-107.386232	Groundwater	9/27/2017	17091796-04		<0.50	<0.20	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
PIEZ12	5	39.304149	-107.385644	Groundwater	9/30/2013	1310037-12		1.4	<0.20	<5.0	NT	NT	NT	NT	NT	NT
PIEZ12	5	39.304149	-107.385644	Groundwater	6/20/2014	14061148-11		0.85	<0.20	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
PIEZ12	5	39.304149	-107.385644	Groundwater	9/23/2014	14091248-12		<0.10	<0.20	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
PIEZ12	5	39.304149	-107.385644	Groundwater	6/24/2015	15061628-12		0.72	<0.20	24	<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
PIEZ12	5	39.304149	-107.385644	Groundwater	9/4/2015	1509469-09		0.8	<0.20	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
PIEZ12	5	39.304149	-107.385644	Groundwater	7/7/2017	1707401-06		<0.50	<0.20		<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
PIEZ12	5	39.304149	-107.385644	Groundwater	9/27/2017	17091796-05		<0.50	<0.20	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
Trip Blank	5	N/A	N/A	Water	7/18/2013	1307772-10		NT	< 0.021 U	NT	NT	NT	NT	NT	NT	NT
Trip Blank	5	N/A	N/A	Water	9/30/2013	1310037-13		NT	<0.20	NT	<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
Trip Blank	5	N/A	N/A	Water	6/20/2014	14061148-13		NT	NT	NT	<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
Trip Blank	5	N/A	N/A	Water	6/20/2014	14061313-02		NT	<0.20	NT	NT	NT	NT	NT	NT	NT
Trip Blank	5	N/A	N/A	Water	9/23/2014	14091248-17		NT	NT	NT	<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
Trip Blank	5	N/A	N/A	N/A	6/24/2015	15061628		NT	NT	NT	NT	NT	NT	NT	NT	NT
Trip Blank	5	N/A	N/A	Water	9/4/2015	1509469-11		NT	<0.20	NT	<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
Trip Blank	5	N/A	N/A	N/A	7/7/2017	1707401-07		NT	<0.20	NT	<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
Trip Blank	5	N/A	N/A	Water	9/27/2017	17091796-06		NT	NT	NT	<1.0	<1.0	<2.0	<1.0	<1.0	<3.0
Depression Surface Water	5	N/A	N/A	Water	9/27/2017	17091796-07		<0.50	<0.20	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<3.0

Table 2: Water Quality Field Parameters

Rocky Mountain Natural Gas Wolf Creek Seep Investigation Water Quality Parameters																							
Sample ID	Well #	Matrix	Latitude	Longitude	Date	Time	Depth to Water (ft.) Below Ground Surface	Depth of Well (ft.) Below Ground Surface	°C	mS/cm ^c	mS/cm	Ω*cm	TDS g/L	Sal	DO %	DO mg/L	pH	pHmV	ORP	Flow (m/s)	Sampled (Y/N)	Notes	
PIEZ03		5 Groundwater	39.304551	-107.385874	7/9/2013	1135	0.00	2.60	10.06	0.500	0.358	2796.00	0.325	0.24	28.0	3.10	6.94	-20.2	-12.5	N/A	N	Purged apx. 800 mL of water; not enough for sample. Slow recharge; apx. 1 day.	
PIEZ03		5 Groundwater	39.304551	-107.385874	7/17/2013	1434	N/A	2.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N	Purged apx. 400 mL.	
PIEZ03		5 Groundwater	39.304551	-107.385874	7/18/2013	1556	0.00	2.60	12.76	0.466	0.358	2787.50	0.305	0.23	46.7	4.95	6.40	1.0	18.6	N/A	Y	12 voa's + 300 mL. Clear, no odor.	
PIEZ03		5 Groundwater	39.304551	-107.385874	7/19/2013	1258	0.00	2.60	13.74	0.440	0.346	2889.40	0.286	0.21	97.0	9.92	6.30	6.0	87.0	N/A	Y	Added 250 mL to poly container for metals analysis. Mostly clear, no odor.	
PIEZ03		5 Groundwater	39.304551	-107.385874	9/30/2013	1105	0.00	2.60	3.64	0.423	0.251	3977.70	0.276	0.20	37.8	4.37	5.63	16.5	-35.9	N/A	Y	Collected apx. 540 mL.	
PIEZ03		5 Groundwater	39.304551	-107.385874	6/20/2014	1024	0.00	2.60	8.25	0.345	0.236	4226.90	0.224	0.17	23.9	2.79	6.64	2.7	23.9	N/A	Y	Silty, no odor. Collected apx. 1400 mL.	
PIEZ03		5 Groundwater	39.304551	-107.385874	9/23/2014	1251	0.00	2.60	7.85	0.565	0.380	2630.80	0.367	0.28	16.0	1.90	7.15	-7.4	31.6	N/A	Y	Silty, no odor. Collected apx. 690 mL.	
PIEZ03		5 Groundwater	39.304551	-107.385874	6/24/2015	1148	0.95	2.60	8.18	0.237	0.161	6227.40	0.154	0.11	122.6	14.45	6.33	1.2	31.8	N/A	Y	Silty, no odor. Collected apx. 1440 mL.	
PIEZ03		5 Groundwater	39.304551	-107.385874	9/4/2015	917	0.97	2.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y	Clear. No odor. Insufficient sample to collect water quality readings. Very slow recharge.	
PIEZ03		5 Groundwater	39.304551	-107.385874	7/7/2017	1155	1.20	2.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y	Slightly cloudy. No odor. Insufficient sample to collect water quality readings. Very slow to no recovery.	
PIEZ03		5 Groundwater	39.304551	-107.385874	9/27/2017	-	1.35	2.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y	Insufficient sample to collect water quality readings. Slow to moderate recovery.	
PIEZ09		5 Groundwater	39.304285	-107.385686	7/17/2013	1508	DRY	1.30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N	DRY	
PIEZ09		5 Groundwater	39.304285	-107.385686	7/18/2013	1730	0.80	1.30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y	10 voa's. Not enough water for parameters. Murky, slight odor.	
PIEZ09		5 Groundwater	39.304285	-107.385686	7/19/2013	1101	0.90	1.30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y	Collected 200 mL to poly container for metals analysis. Not enough for parameters. Brown, slight odor.	
PIEZ09		5 Groundwater	39.304285	-107.385686	9/30/2013	1255	0.00	1.30	8.22	0.622	0.423	2357.20	0.404	0.30	32.6	3.80	-6.18	257.6	101.9	N/A	Y	Collected apx. 490 mL. Clear, no odor. pH is incorrect due to YSI malfunction.	
PIEZ09		5 Groundwater	39.304285	-107.385686	6/20/2014	1201	0.00	1.30	15.55	0.925	0.795	1316.70	0.602	0.46	11.1	1.05	7.32	-33.6	-93.9	N/A	Y	Gray-green, organic moderate odor. Collected apx. 1700 mL.	
PIEZ09		5 Groundwater	39.304285	-107.385686	9/23/2014	1321	0.00	1.30	11.10	1.264	0.928	1077.40	0.821	0.63	36.8	4.03	7.70	-29.2	-3.8	N/A	Y	Silty, organic odor. Collected apx. 1290 mL.	
PIEZ09		5 Groundwater	39.304285	-107.385686	6/24/2015	1210	0.78	1.30	10.85	0.931	0.679	1472.50	0.605	0.46	17.5	1.93	6.63	-14.1	-17.7	N/A	Y	Silty, no odor. Collected apx. 1440 mL.	
PIEZ09		5 Groundwater	39.304285	-107.385686	9/4/2015	933	0.70	1.30	11.12	0.420	0.308	3241.60	0.273	0.20	68.1	7.48	7.27	39.1	72.6	N/A	Y	Yellow. Some silt. Slight odor. Collected full sample. Collected duplicate sample.	
PIEZ09		5 Groundwater	39.304285	-107.385686	7/7/2017	1245	0.78	1.30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y	Slightly cloudy. No odor. Insufficient sample to collect water quality readings. Very slow to no recovery.	
PIEZ09		5 Groundwater	39.304285	-107.385686	9/27/2017	-	0.78	1.30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y	Insufficient sample to collect water quality readings. Slow to moderate recovery.	
PIEZ10		5 Groundwater	39.304396	-107.385505	7/17/2013	1505	N/A	1.75	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N	Purged apx. 250 mL.	
PIEZ10		5 Groundwater	39.304396	-107.385505	7/18/2013	1718	1.25	1.75	12.98	0.133	0.102	9791.00	0.086	0.06	20.9	2.20	6.03	19.4	75.8	N/A	Y	12 voa's + 100 mL. Brown, no odor.	
PIEZ10		5 Groundwater	39.304396	-107.385505	7/19/2013	1145	1.20	1.75	14.39	25.390	20.260	49.36	16.500	15.52	41.5	3.85	1.65	234.4	498.0	N/A	Y	Added 400 mL to poly container for metals analysis. Brown, no odor.	
PIEZ10		5 Groundwater	39.304396	-107.385505	9/30/2013	1315	1.00	1.75	5.34	0.092	0.057	17423.00	0.060	0.04	44.2	5.52	-6.80	267.1	153.3	N/A	Y	Collected apx. 640 mL. Clear, no odor. pH is incorrect due to YSI malfunction.	
PIEZ10		5 Groundwater	39.304396	-107.385505	6/20/2014	1216	0.35	1.75	12.78	0.117	0.090	11145.00	0.076	0.06	17.8	1.89	6.82	-6.6	15.0	N/A	Y	Mostly clear, no odor. Collected apx. 1700 mL.	
PIEZ10		5 Groundwater	39.304396	-107.385505	9/23/2014	1308	0.90	1.75	8.61	0.128	0.088	11359.00	0.083	0.06	27.9	3.26	6.62	13.7	80.2	N/A	Y	Muddy, no odor. Collected apx. 900 mL.	
PIEZ10		5 Groundwater	39.304396	-107.385505	6/24/2015	1203	1.34	1.75	10.35	0.071	0.051	19615.00	0.046	0.03	21.7	2.42	6.47	-5.9	70.1	N/A	Y	Tan, no odor. Collected apx. 1440 mL.	
PIEZ10		5 Groundwater	39.304396	-107.385505	9/4/2015	-	1.89	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N	Dry. Insuffiecent water to collected sample or water quality readings.	
PIEZ10		5 Groundwater	39.304396	-107.385505	7/7/2017	1210	1.56	1.75	11.75	0.14	0.11	19500.00	0.09	0.07	54.90	5.97	7.27	113.20	145.30	N/A	Y	Clear. No odor. Good recovery. Collected duplicate sample. Well purged on 7.6.17.	
PIEZ10		5 Groundwater	39.304396	-107.385505	9/27/2017	-	1.80	1.75	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y	Insufficient sample to collect water quality readings. Slow to moderate recovery.	
PIEZ11		5 Groundwater	39.303896	-107.386232	7/17/2013	1509	N/A	1.85	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N	Purged apx. 100 mL.	
PIEZ11		5 Groundwater	39.303896	-107.386232	7/18/2013	1745	1.15	1.85	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y	3 voa's. Not enough water for parameters.	
PIEZ11		5 Groundwater	39.303896	-107.386232	7/19/2013	1054	1.15	1.85	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y	1 voa. Murky, no odor.	
PIEZ11		5 Groundwater	39.303896	-107.386232	9/30/2013	1345	1.00	1.85	4.10	0.050	0.030	33375.00	0.032	0.02	60.4	7.81	-6.98	269.3	169.2	N/A	Y	Collected apx. 490 mL. Clear, no odor. pH is incorrect due to YSI malfunction.	
PIEZ11		5 Groundwater	39.303896	-107.386232	6/20/2014	1239	0.45	1.85	13.74	0.156	0.122	8164.90	0.102	0.07	25.2	2.57	6.94	-13.1	21.3	N/A	Y	Mostly clear, no odor. Collected apx. 3400 mL (duplicate).	
PIEZ11		5 Groundwater	39.303896	-107.386232	9/23/2014	1357	0.40	1.85	8.90	0.167	0.115	8663.10	0.108	0.08	39.7	4.59	6.83	5.3	71.3	N/A	Y	Mostly clear. Collected apx. 690 mL.	
PIEZ11		5 Groundwater	39.303896	-107.386232	6/24/2015	1300	1.69	1.85	8.40	0.024	0.016	60658.00	0.016	0.01	111.4	13.07	6.86	-25.5	78.3	N/A	Y	Clear, no odor. Collected apx. 1440 mL.	
PIEZ11		5 Groundwater	39.303896	-107.386232	9/4/2015	1007	1.77	2.85	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y	Clear. No odor. Insufficient sample to collect water quality readings. Very slow recharge.	
PIEZ11		5 Groundwater	39.303896	-107.386232	7/7/2017	1132	1.84	2.85	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y	Mild sed. No odor. Insufficient sample to collect water quality readings. Very slow recovery. Purged well on 7.6.17.	
PIEZ11		5 Groundwater	39.303896	-107.386232	9/27/2017	-	1.98	2.85	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y	Insufficient sample to collect water quality readings. Slow to moderate recovery.	
PIEZ12		5 Groundwater	39.304145	-107.385556	9/30/2013	940	0.70	1.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N	Purged apx. 100 mL prior to sampling.	
PIEZ12		5 Groundwater	39.304145	-107.385556	9/30/2013	1400	0.70	1.70	9.68	0.191	0.135	7387.00	0.124	0.09	72.5	8.16	-7.68	289.7	129.9	N/A	Y	Collected 440 mL. Light brown, no odor. pH is incorrect due to YSI malfunction.	
PIEZ12		5 Groundwater	39.304145	-107.385556	6/20/2014	1254	0.00	1.70	16.21	0.491	0.409	2439.10	0.319	0.24	4.1	0.40	6.72	-0.9	-31.9	N/A	Y	Green-gray, slight odor. Collected apx. 1700 mL.	
PIEZ12		5 Groundwater	39.304145	-107.385556	9/23/2014	1344	0.30	1.70	10.46	0.594	0.429	2331.90	0.386	0.29	13.0	1.44	7.36	-15.9	-1.2	N/A	Y	Mostly clear, Fe odor. Collected apx. 940 mL.	
PIEZ12		5 Groundwater	39.304145	-107.385556	6/24/2015	1225	1.04	1.70	7.18	0.050	0.033	30617.00	0.032	0.02	83.0	10.04	6.85	-25.3	113.3	N/A	Y	Light brown. No odor. Collected apx. 440 mL.	
PIEZ12		5 Groundwater	39.304145	-107.385556	9/4/2015	946	1.14	1.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y	Clear. Partial sample collected due to insufficient sample matrix. Water quality readings not collected.	
PIEZ12		5 Groundwater	39.304145	-107.385556	7/7/2017	1234	1.12	1.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y	Some sed. No odor. Little to no recovery. Insufficient sample to collect water quality readings. Purged well on 7.6.17.	
PIEZ12		5 Groundwater	39.304145	-107.385556	9/27/2017	-	1.23	1.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y	Insufficient sample to collect water quality readings. Slow to moderate recovery.	

Appendix C

Raw Analytical Data



06-Oct-2017

Mark Mumby
HRL Compliance Solutions, Inc
2385 F 1/2 Road
Grand Junction, CO 81505

Re: **Black Hills - Wolf Creek 5 GW Sample Event**

Work Order: **17091796**

Dear Mark,

ALS Environmental received 7 samples on 29-Sep-2017 09:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 20.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Chad Whelton".

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Certificate No: MN 998501

Report of Laboratory Analysis

ADDRESS 3352 128th Ave Holland, Michigan 49424 | PHONE (616) 399-6070 | FAX (616) 399-6185

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental 

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: HRL Compliance Solutions, Inc
Project: Black Hills - Wolf Creek 5 GW Sample Event
Work Order: 17091796

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
17091796-01	PIEZ 03	Groundwater		9/27/2017 12:00	9/29/2017 09:30	<input type="checkbox"/>
17091796-02	PIEZ 09	Groundwater		9/27/2017 11:25	9/29/2017 09:30	<input type="checkbox"/>
17091796-03	PIEZ 10	Groundwater		9/27/2017 11:05	9/29/2017 09:30	<input type="checkbox"/>
17091796-04	PIEZ 11	Groundwater		9/27/2017 12:50	9/29/2017 09:30	<input type="checkbox"/>
17091796-05	PIEZ 12	Groundwater		9/27/2017 10:50	9/29/2017 09:30	<input type="checkbox"/>
17091796-06	Trip Blank	Water		9/27/2017	9/29/2017 09:30	<input type="checkbox"/>
17091796-07	Depression Surface Water	Groundwater		9/27/2017	9/29/2017 09:30	<input type="checkbox"/>

Client: HRL Compliance Solutions, Inc
Project: Black Hills - Wolf Creek 5 GW Sample Event
WorkOrder: 17091796

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<u>Units Reported</u>	<u>Description</u>
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter

ALS Group, USA

Date: 06-Oct-17

Client: HRL Compliance Solutions, Inc
Project: Black Hills - Wolf Creek 5 GW Sample Event
Sample ID: PIEZ 03
Collection Date: 9/27/2017 12:00 PM

Work Order: 17091796
Lab ID: 17091796-01
Matrix: GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			SW8015C	Prep: SW3511 10/4/17 16:12		Analyst: KB
DRO (C10-C28)	ND		0.50	mg/L	1	10/5/2017 05:27 AM
Surr: 4-Terphenyl-d14	88.7		35-161	%REC	1	10/5/2017 05:27 AM
ORGANIC COMPOUNDS BY GC-FID			SW8015M			Analyst: KYM
Methanol	ND		5.0	mg/L	1	10/2/2017 05:37 PM
GASOLINE RANGE ORGANICS BY GC-FID			SW8015D			Analyst: KB
GRO (C6-C10)	ND		0.20	mg/L	1	10/5/2017 06:55 AM
Surr: Toluene-d8	94.3		76-120	%REC	1	10/5/2017 06:55 AM
VOLATILE ORGANIC COMPOUNDS			SW8260B			Analyst: BG
Benzene	ND		1.0	µg/L	1	10/4/2017 05:09 AM
Ethylbenzene	ND		1.0	µg/L	1	10/4/2017 05:09 AM
m,p-Xylene	ND		2.0	µg/L	1	10/4/2017 05:09 AM
o-Xylene	ND		1.0	µg/L	1	10/4/2017 05:09 AM
Toluene	ND		1.0	µg/L	1	10/4/2017 05:09 AM
Xylenes, Total	ND		3.0	µg/L	1	10/4/2017 05:09 AM
Surr: 1,2-Dichloroethane-d4	95.2		75-120	%REC	1	10/4/2017 05:09 AM
Surr: 4-Bromofluorobenzene	98.6		80-110	%REC	1	10/4/2017 05:09 AM
Surr: Dibromofluoromethane	98.8		85-115	%REC	1	10/4/2017 05:09 AM
Surr: Toluene-d8	97.6		85-110	%REC	1	10/4/2017 05:09 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 06-Oct-17

Client: HRL Compliance Solutions, Inc
Project: Black Hills - Wolf Creek 5 GW Sample Event
Sample ID: PIEZ 09
Collection Date: 9/27/2017 11:25 AM

Work Order: 17091796
Lab ID: 17091796-02
Matrix: GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			SW8015C	Prep: SW3511 10/4/17 16:12		Analyst: KB
DRO (C10-C28)	ND		0.50	mg/L	1	10/5/2017 05:56 AM
Surr: 4-Terphenyl-d14	84.7		35-161	%REC	1	10/5/2017 05:56 AM
ORGANIC COMPOUNDS BY GC-FID			SW8015M			Analyst: KYM
Methanol	ND		5.0	mg/L	1	10/2/2017 05:49 PM
GASOLINE RANGE ORGANICS BY GC-FID			SW8015D			Analyst: KB
GRO (C6-C10)	ND		0.20	mg/L	1	10/5/2017 07:24 AM
Surr: Toluene-d8	92.8		76-120	%REC	1	10/5/2017 07:24 AM
VOLATILE ORGANIC COMPOUNDS			SW8260B			Analyst: BG
Benzene	ND		1.0	µg/L	1	10/4/2017 05:35 AM
Ethylbenzene	ND		1.0	µg/L	1	10/4/2017 05:35 AM
m,p-Xylene	ND		2.0	µg/L	1	10/4/2017 05:35 AM
o-Xylene	ND		1.0	µg/L	1	10/4/2017 05:35 AM
Toluene	ND		1.0	µg/L	1	10/4/2017 05:35 AM
Xylenes, Total	ND		3.0	µg/L	1	10/4/2017 05:35 AM
Surr: 1,2-Dichloroethane-d4	98.2		75-120	%REC	1	10/4/2017 05:35 AM
Surr: 4-Bromofluorobenzene	95.6		80-110	%REC	1	10/4/2017 05:35 AM
Surr: Dibromofluoromethane	100		85-115	%REC	1	10/4/2017 05:35 AM
Surr: Toluene-d8	94.6		85-110	%REC	1	10/4/2017 05:35 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 06-Oct-17

Client: HRL Compliance Solutions, Inc
Project: Black Hills - Wolf Creek 5 GW Sample Event
Sample ID: PIEZ 10
Collection Date: 9/27/2017 11:05 AM

Work Order: 17091796
Lab ID: 17091796-03
Matrix: GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			SW8015C	Prep: SW3511 10/4/17 16:12		Analyst: KB
DRO (C10-C28)	ND		0.50	mg/L	1	10/5/2017 06:25 AM
Surr: 4-Terphenyl-d14	71.5		35-161	%REC	1	10/5/2017 06:25 AM
ORGANIC COMPOUNDS BY GC-FID			SW8015M			Analyst: KYM
Methanol	ND		5.0	mg/L	1	10/2/2017 06:02 PM
GASOLINE RANGE ORGANICS BY GC-FID			SW8015D			Analyst: KB
GRO (C6-C10)	ND		0.20	mg/L	1	10/5/2017 07:54 AM
Surr: Toluene-d8	94.2		76-120	%REC	1	10/5/2017 07:54 AM
VOLATILE ORGANIC COMPOUNDS			SW8260B			Analyst: BG
Benzene	ND		1.0	µg/L	1	10/4/2017 06:01 AM
Ethylbenzene	ND		1.0	µg/L	1	10/4/2017 06:01 AM
m,p-Xylene	ND		2.0	µg/L	1	10/4/2017 06:01 AM
o-Xylene	ND		1.0	µg/L	1	10/4/2017 06:01 AM
Toluene	ND		1.0	µg/L	1	10/4/2017 06:01 AM
Xylenes, Total	ND		3.0	µg/L	1	10/4/2017 06:01 AM
Surr: 1,2-Dichloroethane-d4	97.1		75-120	%REC	1	10/4/2017 06:01 AM
Surr: 4-Bromofluorobenzene	94.4		80-110	%REC	1	10/4/2017 06:01 AM
Surr: Dibromofluoromethane	102		85-115	%REC	1	10/4/2017 06:01 AM
Surr: Toluene-d8	97.3		85-110	%REC	1	10/4/2017 06:01 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 06-Oct-17

Client: HRL Compliance Solutions, Inc
Project: Black Hills - Wolf Creek 5 GW Sample Event
Sample ID: PIEZ 11
Collection Date: 9/27/2017 12:50 PM

Work Order: 17091796
Lab ID: 17091796-04
Matrix: GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			SW8015C	Prep: SW3511 10/4/17 16:12		Analyst: KB
DRO (C10-C28)	ND		0.50	mg/L	1	10/5/2017 07:23 AM
Surr: 4-Terphenyl-d14	98.7		35-161	%REC	1	10/5/2017 07:23 AM
GASOLINE RANGE ORGANICS BY GC-FID			SW8015D			Analyst: KB
GRO (C6-C10)	ND		0.20	mg/L	1	10/5/2017 08:23 AM
Surr: Toluene-d8	94.7		76-120	%REC	1	10/5/2017 08:23 AM
VOLATILE ORGANIC COMPOUNDS			SW8260B			Analyst: WH
Benzene	ND		1.0	µg/L	1	10/4/2017 01:20 PM
Ethylbenzene	ND		1.0	µg/L	1	10/4/2017 01:20 PM
m,p-Xylene	ND		2.0	µg/L	1	10/4/2017 01:20 PM
o-Xylene	ND		1.0	µg/L	1	10/4/2017 01:20 PM
Toluene	ND		1.0	µg/L	1	10/4/2017 01:20 PM
Xylenes, Total	ND		3.0	µg/L	1	10/4/2017 01:20 PM
Surr: 1,2-Dichloroethane-d4	99.0		75-120	%REC	1	10/4/2017 01:20 PM
Surr: 4-Bromofluorobenzene	102		80-110	%REC	1	10/4/2017 01:20 PM
Surr: Dibromofluoromethane	96.2		85-115	%REC	1	10/4/2017 01:20 PM
Surr: Toluene-d8	98.7		85-110	%REC	1	10/4/2017 01:20 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 06-Oct-17

Client: HRL Compliance Solutions, Inc
Project: Black Hills - Wolf Creek 5 GW Sample Event
Sample ID: PIEZ 12
Collection Date: 9/27/2017 10:50 AM

Work Order: 17091796
Lab ID: 17091796-05
Matrix: GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			SW8015C	Prep: SW3511 10/4/17 16:12		Analyst: KB
DRO (C10-C28)	ND		0.50	mg/L	1	10/5/2017 07:52 AM
Surr: 4-Terphenyl-d14	85.1		35-161	%REC	1	10/5/2017 07:52 AM
ORGANIC COMPOUNDS BY GC-FID			SW8015M			Analyst: KYM
Methanol	ND		5.0	mg/L	1	10/2/2017 06:14 PM
GASOLINE RANGE ORGANICS BY GC-FID			SW8015D			Analyst: KB
GRO (C6-C10)	ND		0.20	mg/L	1	10/5/2017 08:53 AM
Surr: Toluene-d8	95.2		76-120	%REC	1	10/5/2017 08:53 AM
VOLATILE ORGANIC COMPOUNDS			SW8260B			Analyst: BG
Benzene	ND		1.0	µg/L	1	10/4/2017 06:52 AM
Ethylbenzene	ND		1.0	µg/L	1	10/4/2017 06:52 AM
m,p-Xylene	ND		2.0	µg/L	1	10/4/2017 06:52 AM
o-Xylene	ND		1.0	µg/L	1	10/4/2017 06:52 AM
Toluene	ND		1.0	µg/L	1	10/4/2017 06:52 AM
Xylenes, Total	ND		3.0	µg/L	1	10/4/2017 06:52 AM
Surr: 1,2-Dichloroethane-d4	95.3		75-120	%REC	1	10/4/2017 06:52 AM
Surr: 4-Bromofluorobenzene	94.2		80-110	%REC	1	10/4/2017 06:52 AM
Surr: Dibromofluoromethane	102		85-115	%REC	1	10/4/2017 06:52 AM
Surr: Toluene-d8	100		85-110	%REC	1	10/4/2017 06:52 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA**Date:** 06-Oct-17

Client: HRL Compliance Solutions, Inc
Project: Black Hills - Wolf Creek 5 GW Sample Event
Sample ID: Trip Blank
Collection Date: 9/27/2017

Work Order: 17091796
Lab ID: 17091796-06
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B			Analyst: BG
Benzene	ND		1.0	µg/L	1	10/4/2017 02:34 AM
Ethylbenzene	ND		1.0	µg/L	1	10/4/2017 02:34 AM
m,p-Xylene	ND		2.0	µg/L	1	10/4/2017 02:34 AM
o-Xylene	ND		1.0	µg/L	1	10/4/2017 02:34 AM
Toluene	ND		1.0	µg/L	1	10/4/2017 02:34 AM
Xylenes, Total	ND		3.0	µg/L	1	10/4/2017 02:34 AM
Surr: 1,2-Dichloroethane-d4	96.3		75-120	%REC	1	10/4/2017 02:34 AM
Surr: 4-Bromofluorobenzene	97.2		80-110	%REC	1	10/4/2017 02:34 AM
Surr: Dibromofluoromethane	99.4		85-115	%REC	1	10/4/2017 02:34 AM
Surr: Toluene-d8	96.1		85-110	%REC	1	10/4/2017 02:34 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 06-Oct-17

Client: HRL Compliance Solutions, Inc
Project: Black Hills - Wolf Creek 5 GW Sample Event
Sample ID: Depression Surface Water
Collection Date: 9/27/2017

Work Order: 17091796
Lab ID: 17091796-07
Matrix: GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			SW8015C	Prep: SW3511 10/4/17 16:12		Analyst: KB
DRO (C10-C28)	ND		0.50	mg/L	1	10/5/2017 08:21 AM
Surr: 4-Terphenyl-d14	55.2		35-161	%REC	1	10/5/2017 08:21 AM
ORGANIC COMPOUNDS BY GC-FID			SW8015M			Analyst: KYM
Methanol	ND		5.0	mg/L	1	10/2/2017 06:27 PM
GASOLINE RANGE ORGANICS BY GC-FID			SW8015D			Analyst: KB
GRO (C6-C10)	ND		0.20	mg/L	1	10/5/2017 09:22 AM
Surr: Toluene-d8	94.4		76-120	%REC	1	10/5/2017 09:22 AM
VOLATILE ORGANIC COMPOUNDS			SW8260B			Analyst: WH
Benzene	ND		1.0	µg/L	1	10/4/2017 01:41 PM
Ethylbenzene	ND		1.0	µg/L	1	10/4/2017 01:41 PM
m,p-Xylene	ND		2.0	µg/L	1	10/4/2017 01:41 PM
o-Xylene	ND		1.0	µg/L	1	10/4/2017 01:41 PM
Toluene	ND		1.0	µg/L	1	10/4/2017 01:41 PM
Xylenes, Total	ND		3.0	µg/L	1	10/4/2017 01:41 PM
Surr: 1,2-Dichloroethane-d4	95.4		75-120	%REC	1	10/4/2017 01:41 PM
Surr: 4-Bromofluorobenzene	103		80-110	%REC	1	10/4/2017 01:41 PM
Surr: Dibromofluoromethane	94.4		85-115	%REC	1	10/4/2017 01:41 PM
Surr: Toluene-d8	96.3		85-110	%REC	1	10/4/2017 01:41 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: HRL Compliance Solutions, Inc
Work Order: 17091796
Project: Black Hills - Wolf Creek 5 GW Sample Event

QC BATCH REPORT

Batch ID: **108381** Instrument ID **GC8** Method: **SW8015C**

MBLK		Sample ID: DBLKW1-108381-108381				Units: mg/L		Analysis Date: 10/4/2017 11:11 PM		
Client ID:		Run ID: GC8_171004B				SeqNo: 4679222		Prep Date: 10/4/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	ND	0.10								
<i>Surr: 4-Terphenyl-d14</i>	<i>0.029</i>	<i>0</i>	<i>0.0417</i>	<i>0</i>	<i>69.5</i>	<i>35-161</i>	<i>0</i>			

LCS		Sample ID: DLCSW1-108381-108381				Units: mg/L		Analysis Date: 10/4/2017 11:40 PM		
Client ID:		Run ID: GC8_171004B				SeqNo: 4679223		Prep Date: 10/4/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	4.028	0.10	4.17	0	96.6	60-150	0			
<i>Surr: 4-Terphenyl-d14</i>	<i>0.0315</i>	<i>0</i>	<i>0.0417</i>	<i>0</i>	<i>75.5</i>	<i>35-161</i>	<i>0</i>			

MS		Sample ID: 17091727-04B MS				Units: mg/L		Analysis Date: 10/5/2017 01:07 AM		
Client ID:		Run ID: GC8_171004B				SeqNo: 4679224		Prep Date: 10/4/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	4.222	0.10	4.17	0.147	97.7	60-150	0			
<i>Surr: 4-Terphenyl-d14</i>	<i>0.02133</i>	<i>0</i>	<i>0.0417</i>	<i>0</i>	<i>51.2</i>	<i>35-161</i>	<i>0</i>			

The following samples were analyzed in this batch:

17091796-01B	17091796-02B	17091796-03B
17091796-04B	17091796-05B	17091796-07B

Client: HRL Compliance Solutions, Inc
Work Order: 17091796
Project: Black Hills - Wolf Creek 5 GW Sample Event

QC BATCH REPORT

Batch ID: **R221366** Instrument ID **GC5** Method: **SW8015M**

MBLK		Sample ID: MBLKW1-R221366				Units: mg/L		Analysis Date: 10/2/2017 05:24 PM		
Client ID:		Run ID: GC5_171002A				SeqNo: 4674556		Prep Date: 10/2/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Methanol ND 5.0

LCS		Sample ID: LCSW1-R221366				Units: mg/L		Analysis Date: 10/2/2017 04:34 PM		
Client ID:		Run ID: GC5_171002A				SeqNo: 4674553		Prep Date: 10/2/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Methanol 542.5 5.0 500 0 108 50-150 0

MS		Sample ID: 17091796-01A MS				Units: mg/L		Analysis Date: 10/2/2017 04:46 PM		
Client ID: PIEZ 03		Run ID: GC5_171002A				SeqNo: 4674554		Prep Date: 10/2/2017		DF: 2
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Methanol 1071 10 1000 0 107 50-150 0

MSD		Sample ID: 17091796-01A MSD				Units: mg/L		Analysis Date: 10/2/2017 04:59 PM		
Client ID: PIEZ 03		Run ID: GC5_171002A				SeqNo: 4674555		Prep Date: 10/2/2017		DF: 2
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Methanol 1048 10 1000 0 105 50-150 1071 2.15 30

The following samples were analyzed in this batch:

17091796-01A	17091796-02A	17091796-03A
17091796-05A	17091796-07A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 17091796
Project: Black Hills - Wolf Creek 5 GW Sample Event

QC BATCH REPORT

Batch ID: **R221573** Instrument ID **GC9** Method: **SW8015D**

MBLK		Sample ID: GBLKW1-171004-R221573				Units: µg/L		Analysis Date: 10/5/2017 05:56 AM		
Client ID:		Run ID: GC9_171004B				SeqNo: 4680328		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	200								
<i>Surr: Toluene-d8</i>	<i>90.03</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>90</i>	<i>76-120</i>	<i>0</i>			

LCS		Sample ID: GLCSW1-171004-R221573				Units: µg/L		Analysis Date: 10/5/2017 04:57 AM		
Client ID:		Run ID: GC9_171004B				SeqNo: 4680327		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	10110	200	10000	0	101	76-126	0			
<i>Surr: Toluene-d8</i>	<i>111.2</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>111</i>	<i>76-120</i>	<i>0</i>			

MS		Sample ID: 17091518-10A MS				Units: µg/L		Analysis Date: 10/5/2017 12:49 PM		
Client ID:		Run ID: GC9_171004B				SeqNo: 4680340		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	9921	200	10000	27.13	98.9	76-126	0			
<i>Surr: Toluene-d8</i>	<i>110.8</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>111</i>	<i>76-120</i>	<i>0</i>			

MSD		Sample ID: 17091518-10A MSD				Units: µg/L		Analysis Date: 10/5/2017 01:18 PM		
Client ID:		Run ID: GC9_171004B				SeqNo: 4680341		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	9763	200	10000	27.13	97.4	76-126	9921	1.61	30	
<i>Surr: Toluene-d8</i>	<i>110.2</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>110</i>	<i>76-120</i>	<i>110.8</i>	<i>0.498</i>	<i>30</i>	

The following samples were analyzed in this batch:

17091796-01A	17091796-02A	17091796-03A
17091796-04A	17091796-05A	17091796-07A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 17091796
Project: Black Hills - Wolf Creek 5 GW Sample Event

QC BATCH REPORT

Batch ID: **R221384a** Instrument ID **VMS5** Method: **SW8260B**

MBLK				Sample ID: VBLKW2-171003-R221384a				Units: µg/L		Analysis Date: 10/4/2017 02:09 AM	
Client ID:			Run ID: VMS5_171003B			SeqNo: 4676340		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	ND	1.0									
Ethylbenzene	ND	1.0									
m,p-Xylene	ND	2.0									
o-Xylene	ND	1.0									
Toluene	ND	1.0									
Xylenes, Total	ND	3.0									
Surr: 1,2-Dichloroethane-d4	19.36	0	20	0	96.8	75-120		0			
Surr: 4-Bromofluorobenzene	19	0	20	0	95	80-110		0			
Surr: Dibromofluoromethane	18.99	0	20	0	95	85-115		0			
Surr: Toluene-d8	18.74	0	20	0	93.7	85-110		0			

LCS				Sample ID: VLCSW2-171003-R221384a				Units: µg/L		Analysis Date: 10/4/2017 01:17 AM	
Client ID:			Run ID: VMS5_171003B			SeqNo: 4676339		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	19.12	1.0	20	0	95.6	85-125	0				
Ethylbenzene	19.3	1.0	20	0	96.5	85-125	0				
m,p-Xylene	40.2	2.0	40	0	100	75-130	0				
o-Xylene	19.44	1.0	20	0	97.2	80-125	0				
Toluene	18.84	1.0	20	0	94.2	85-125	0				
Xylenes, Total	59.64	3.0	60	0	99.4	80-126	0				
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>18.86</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>94.3</i>	<i>75-120</i>	<i>0</i>				
<i>Surr: 4-Bromofluorobenzene</i>	<i>20.11</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>101</i>	<i>80-110</i>	<i>0</i>				
<i>Surr: Dibromofluoromethane</i>	<i>19.64</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>98.2</i>	<i>85-115</i>	<i>0</i>				
<i>Surr: Toluene-d8</i>	<i>19.82</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>99.1</i>	<i>85-110</i>	<i>0</i>				

MS				Sample ID: 17091796-07A MS			Units: µg/L		Analysis Date: 10/4/2017 10:45 AM		
Client ID: Depression Surface Water			Run ID: VMS5_171003B			SeqNo: 4676355		Prep Date:		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	195.6	10	200	0	97.8	85-125	0				
Ethylbenzene	195.2	10	200	0	97.6	85-125	0				
m,p-Xylene	403.8	20	400	0	101	75-130	0				
o-Xylene	200	10	200	0	100	80-125	0				
Toluene	197.3	10	200	0	98.6	85-125	0				
Xylenes, Total	603.8	30	600	0	101	80-126	0				
Surr: 1,2-Dichloroethane-d4	190	0	200	0	95	75-120	0				
Surr: 4-Bromofluorobenzene	207.4	0	200	0	104	80-110	0				
Surr: Dibromofluoromethane	205.7	0	200	0	103	85-115	0				
Surr: Toluene-d8	201.3	0	200	0	101	85-110	0				

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 17091796
Project: Black Hills - Wolf Creek 5 GW Sample Event

QC BATCH REPORT

Batch ID: **R221384a** Instrument ID **VMS5** Method: **SW8260B**

MSD				Sample ID: 17091796-07A MSD			Units: µg/L		Analysis Date: 10/4/2017 11:11 AM	
Client ID: Depression Surface Water				Run ID: VMS5_171003B			SeqNo: 4676356		Prep Date:	
									DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	188.5	10	200	0	94.2	85-125	195.6	3.7	30	
Ethylbenzene	192.4	10	200	0	96.2	85-125	195.2	1.44	30	
m,p-Xylene	399.4	20	400	0	99.8	75-130	403.8	1.1	30	
o-Xylene	196.5	10	200	0	98.2	80-125	200	1.77	30	
Toluene	192.9	10	200	0	96.4	85-125	197.3	2.26	30	
Xylenes, Total	595.9	30	600	0	99.3	80-126	603.8	1.32	30	
Surr: 1,2-Dichloroethane-d4	186	0	200	0	93	75-120	190	2.13	30	
Surr: 4-Bromofluorobenzene	197.1	0	200	0	98.6	80-110	207.4	5.09	30	
Surr: Dibromofluoromethane	189	0	200	0	94.5	85-115	205.7	8.46	30	
Surr: Toluene-d8	195.5	0	200	0	97.8	85-110	201.3	2.92	30	

The following samples were analyzed in this batch:

17091796-01A	17091796-02A	17091796-03A
17091796-04A	17091796-05A	17091796-06A
17091796-07A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 17091796
Project: Black Hills - Wolf Creek 5 GW Sample Event

QC BATCH REPORT

Batch ID: **R221415** Instrument ID **VMS7** Method: **SW8260B**

MBLK				Sample ID: VBLKW1-171004-R221415				Units: µg/L		Analysis Date: 10/4/2017 11:35 AM	
Client ID:			Run ID: VMS7_171004A			SeqNo: 4678256		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	ND	1.0									
Ethylbenzene	ND	1.0									
m,p-Xylene	ND	2.0									
o-Xylene	ND	1.0									
Toluene	ND	1.0									
Xylenes, Total	ND	3.0									
Surr: 1,2-Dichloroethane-d4	19.52	0	20	0	97.6	75-120		0			
Surr: 4-Bromofluorobenzene	20.06	0	20	0	100	80-110		0			
Surr: Dibromofluoromethane	19.84	0	20	0	99.2	85-115		0			
Surr: Toluene-d8	20.21	0	20	0	101	85-110		0			

MBLK				Sample ID: MBLK--R221415			Units: µg/Kg-dry		Analysis Date: 10/4/2017 11:56 AM		
Client ID:			Run ID: VMS7_171004A			SeqNo: 4678286		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	ND	30									
Ethylbenzene	ND	30									
m,p-Xylene	ND	60									
o-Xylene	ND	30									
Toluene	ND	30									
Xylenes, Total	ND	90									
Surr: 1,2-Dichloroethane-d4	19.9	0	20	0	99.5	70-130		0			
Surr: 4-Bromofluorobenzene	19.89	0	20	0	99.4	70-130		0			
Surr: Dibromofluoromethane	19.95	0	20	0	99.8	70-130		0			
Surr: Toluene-d8	19.44	0	20	0	97.2	70-130		0			

LCS				Sample ID: VLCSW1-171004-R221415				Units: µg/L		Analysis Date: 10/4/2017 10:32 AM	
Client ID:			Run ID: VMS7_171004A			SeqNo: 4678255		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	20.15	1.0	20	0	101	85-125	0				
Ethylbenzene	19.02	1.0	20	0	95.1	85-125	0				
m,p-Xylene	38.81	2.0	40	0	97	75-130	0				
o-Xylene	19.25	1.0	20	0	96.2	80-125	0				
Toluene	19.19	1.0	20	0	96	85-125	0				
Xylenes, Total	58.06	3.0	60	0	96.8	80-126	0				
Surr: 1,2-Dichloroethane-d4	20.38	0	20	0	102	75-120	0				
Surr: 4-Bromofluorobenzene	19.89	0	20	0	99.4	80-110	0				
Surr: Dibromofluoromethane	20.77	0	20	0	104	85-115	0				
Surr: Toluene-d8	19.72	0	20	0	98.6	85-110	0				

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 17091796
Project: Black Hills - Wolf Creek 5 GW Sample Event

QC BATCH REPORT

Batch ID: **R221415** Instrument ID **VMS7** Method: **SW8260B**

LCS				Sample ID: LCS--R221415				Units: µg/Kg-dry			Analysis Date: 10/4/2017 10:53 AM		
Client ID:			Run ID: VMS7_171004A				SeqNo: 4678285		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Benzene	19.53	30	20	0	97.6	75-125	0			J			
Ethylbenzene	18.46	30	20	0	92.3	75-125	0			J			
m,p-Xylene	37.14	60	40	0	92.8	80-125	0			J			
o-Xylene	19.1	30	20	0	95.5	75-125	0			J			
Toluene	18.73	30	20	0	93.6	70-125	0			J			
Xylenes, Total	56.24	90	60	0	93.7	75-125	0			J			
Surr: 1,2-Dichloroethane-d4	19.97	0	20	0	99.8	70-130	0						
Surr: 4-Bromofluorobenzene	19.59	0	20	0	98	70-130	0						
Surr: Dibromofluoromethane	20.77	0	20	0	104	70-130	0						
Surr: Toluene-d8	19.84	0	20	0	99.2	70-130	0						

MS				Sample ID: 17091558-04A MS			Units: µg/L		Analysis Date: 10/4/2017 07:54 PM		
Client ID:			Run ID: VMS7_171004A			SeqNo: 4678267		Prep Date:		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	98.5	5.0	100	1.3	97.2	85-125	0				
Ethylbenzene	852.3	5.0	100	797.2	55.1	85-125	0			SEO	
m,p-Xylene	531.2	10	200	364.5	83.4	75-130	0				
o-Xylene	101.6	5.0	100	9.4	92.2	80-125	0				
Toluene	106.8	5.0	100	17.95	88.8	85-125	0				
Xylenes, Total	632.8	15	300	373.9	86.3	80-126	0				
Surr: 1,2-Dichloroethane-d4	101.6	0	100	0	102	75-120	0				
Surr: 4-Bromofluorobenzene	103.2	0	100	0	103	80-110	0				
Surr: Dibromofluoromethane	103.4	0	100	0	103	85-115	0				
Surr: Toluene-d8	96.7	0	100	0	96.7	85-110	0				

MSD				Sample ID: 17091558-04A MSD			Units: µg/L		Analysis Date: 10/4/2017 08:15 PM		
Client ID:			Run ID: VMS7_171004A			SeqNo: 4678268		Prep Date:		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	104.9	5.0	100	1.3	104	85-125	98.5	6.29	30		
Ethylbenzene	892.4	5.0	100	797.2	95.2	85-125	852.3	4.6	30	EO	
m,p-Xylene	562.2	10	200	364.5	98.9	75-130	531.2	5.68	30		
o-Xylene	107	5.0	100	9.4	97.6	80-125	101.6	5.22	30		
Toluene	113.1	5.0	100	17.95	95.2	85-125	106.8	5.78	30		
Xylenes, Total	669.3	15	300	373.9	98.5	80-126	632.8	5.61	30		
Surr: 1,2-Dichloroethane-d4	103.2	0	100	0	103	75-120	101.6	1.46	30		
Surr: 4-Bromofluorobenzene	102.8	0	100	0	103	80-110	103.2	0.389	30		
Surr: Dibromofluoromethane	105.2	0	100	0	105	85-115	103.4	1.82	30		
Surr: Toluene-d8	96.9	0	100	0	96.9	85-110	96.7	0.207	30		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 17091796
Project: Black Hills - Wolf Creek 5 GW Sample Event

QC BATCH REPORT

Batch ID: **R221415** Instrument ID **VMS7** Method: **SW8260B**

The following samples were analyzed in this batch:

17091796-04A	17091796-07A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.



ALS Laboratory Group

3352 128th Ave. Holland, MI 49424

TF: (800) 443-1511 PH: (616) 399-8070 FX: (616) 399-6185

Chain-of-Custody

Form 2028

WORKORDER #

17091796

PAGE

1 of 1

DISPOSAL

By Lab or Return to Client

PROJECT NAME	Black Hills - Wolf Creek 5 Groundwater Sample Event	SAMPLER	Casey Richardson	DATE	9/28/2017	TURNAROUND	5 to 5 day
PROJECT No.		SITE ID	Fall 2017 Sample Event				
		EDD FORMAT					
		PURCHASE ORDER					
COMPANY NAME	HRL Compliance Solutions, Inc.	BILL TO COMPANY	HRL Compliance Solutions, Inc.				
SEND REPORT TO	Mark Mumby, Casey Richardson	INVOICE ATTN TO	Missy DeRose, Staci Knob				
ADDRESS	2385 F 1/2 Road	ADDRESS	2385 F 1/2 Road				
CITY / STATE / ZIP	Grand Junction, CO. 81605	CITY / STATE / ZIP	Grand Junction, CO 81605				
PHONE	970-243-3271	PHONE	970-243-3271				
FAX	970-243-3280	FAX					
E-MAIL	mmumby@hrlcomp.com, crichardson@hrlcomp.com	E-MAIL	mderose@hrlcomp.com, sknob@hrlcomp.com				

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	DRO	GRO	BTEX	Methanol
1	PIEZ 03	GW	9/27/17	12:00	7	1.8	II	x	x	x	x
2	PIEZ 09	GW		11:25	10	1.8	II	x	x	x	x
3	PIEZ 10	GW		11:05	10	1.8	II	x	x	x	x
4	PIEZ 11	GW		12:50	3	1.8	II	x	x	x	x
5	PIEZ 12	GW		10:50	6	1.8	II	x	x	x	x
	Duplicate	GW			10	1.8	II	x	x	x	x
6	Trip Blank				1	1.8	II			x	
7	Depression Surface Water	SW			10	1.8	II	x	x	x	x

*Time Zone (Circle): EST CST MST PST Matrix: O=oil S=sol NS=non-sol solid W=water L=liquid E=extract F=filter

For metals or anions, please detail analytes below.

Comments:	Not All Picometers have total containers. Run what you can.
	SPZ 2.8°C
Preservative Key:	1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	[Signature]	Mark E. Mumby	9/28/17	12:15
RECEIVED BY	[Signature]	MA	9-28-17	12:15
RELINQUISHED BY	[Signature]	MA	9-28-17	1:30
RECEIVED BY	[Signature]	Kenna W. Wernick	9/29/17	0930
RELINQUISHED BY				
RECEIVED BY				

Sample Receipt Checklist

Client Name: HRL

Date/Time Received: 29-Sep-17 09:30

Work Order: 17091796

Received by: KRW

Checklist completed by Keith Wurenga
eSignature

29-Sep-17
Date

Reviewed by: Chad Whelton
eSignature

02-Oct-17
Date

Matrices: Water

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>2.8/2.8 C</u>		<u>SR2</u>
Cooler(s)/Kit(s):	<u></u>		
Date/Time sample(s) sent to storage:	<u>9/29/2017 11:45:42 AM</u>		
Water - VOA vials have zero headspace?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>
pH adjusted by:	<u>-</u>		

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

Appendix D

COGCC Field Inspection Report (Doc. # 689100044)

**FORM
INSP**Rev
X/15**State of Colorado
Oil and Gas Conservation Commission**1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109

Inspection Date:

06/29/2017

Submitted Date:

08/28/2017

Document Number:

689100044**FIELD INSPECTION FORM**Loc ID 314165 Inspector Name: LUJAN, CARLOS On-Site Inspection ☐ 2A Doc Num: _____**Operator Information:**OGCC Operator Number: 100321Name of Operator: ROCKY MTN NATURAL GAS LLC ADBA BLACK HILLSAddress: 1515 WYNKOOP STREET #500City: DENVER State: CO Zip: 80202**Status Summary:**

- ☐ THIS IS A FOLLOW UP INSPECTION
- ☐ FOLLOW UP INSPECTION REQUIRED
- ☒ NO FOLLOW UP INSPECTION REQUIRED

Findings:9 Number of Comments0 Number of Corrective Actions☐ Corrective Action Response Requested**Contact Information:**

Contact Name	Phone	Email	Comment
Woolley, Carmia		cwoolley@blm.gov	BLM
Zehr, Brenda		brenda.zehr@blackhillscorp.com	Blackhills
Fischer, Alex		alex.fischer@state.co.us	Environmental Supervisor, NW
Mobley, Karla		kkmobley@fs.fed.us	Forest Service
Lujan, Carlos		carlos.lujan@state.co.us	EPS, NW Region
Ficklin, Steve		sficklin@blm.gov	BLM
Spencer, Stan		stan.spencer@state.co.us	EPS, NW Region

Inspected Facilities:

Facility ID	Type	Status	Status Date	Well Class	API Num	Facility Name	Insp Status
112319	PIT				-	WOLF CREEK 5	EI

General Comment:

Joint Site Inspection conducted with representatives from Blackhills (Brenda Zehr), Forest Service (Karla Mobley), and BLM (Steve Ficklin). Sunny, temp approx 75oF. No weeds, junk or staining observed on site. Labels in place. Site is been prepared for workover. Pit ID #112319 was entered in the database during the 1999 inventory but no information exists on file (electronic or COGCC archives). No signs of existence on the pad. Pit Facility ID #112319 will be closed administratively.

Downgradient of the pad, on the northeast side, there is a depression that resembles a retention pond but could have been used for other purposes.

Sampling events were conducted in 2013 and 2014 and reported to the COGCC. Analytical results indicated that all hydrocarbon parameters analyzed (TPH and BTEX) were well below COGCC Table 910-1 values. A max DRO value was measured in spring 2014 (DRO=4.5 mg/kg). COGCC max value for TPH (DRO+GRO) is 500 mg/L. Based on review of information presented it appears that no further action is necessary at this time, and therefore, remediation project REM #7995 will be closed. However, should future conditions at the site indicate contaminant concentrations in soils exceeding COGCC standards or if ground water is found to be significantly impacted, then further investigation and/or remediation activities may be required at the site.

Inspected Facilities

Facility ID: 112319	Type: PIT	API Number: -	Status:	Insp. Status: EI
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COGCC Comments

Comment	User	Date
Pit Facility ID #112319 will be closed administratively REM #7995 will be closed.	lujanc	08/28/2017

Attached Documents

You can go to COGCC Images (<https://cogcc.state.co.us/weblink/>) and search by document number:

Document Num	Description	URL
689100045	WC05 Pad Photo1	http://ogccweblink.state.co.us/DownloadDocumentPDF.aspx?DocumentId=4238757
689100046	WC05 Pad Photo2	http://ogccweblink.state.co.us/DownloadDocumentPDF.aspx?DocumentId=4238758
689100047	Nearby depression	http://ogccweblink.state.co.us/DownloadDocumentPDF.aspx?DocumentId=4238759