April 8, 2014

Annette Garrigues
Environmental Specialist
Williams (Bargath LLC)
4289 County Road 215
Parachute, Colorado 81635

RE: Additional Site Characterization Work Plan - Phase II and Proposed Groundwater Monitoring Changes, Black Sulphur Compressor Station, Rio Blanco County, Colorado, Olsson Project Number 013-0231

Dear Ms. Garrigues:

Olsson Associates, Inc. (Olsson) is pleased to provide Williams (Bargath LLC) with a Site Characterization Work Plan for the Black Sulphur Compressor Station (COGCC Facility Number 428642, Remediation Number 8268) located on County Road 26 (Black Sulphur Creek Road) north of Black Sulphur Creek at latitude 39.856808 north and longitude -108.329129 west, in Rio Blanco County, Colorado.

Introduction

The Black Sulphur Compressor Station (site) is an active compressor station operated by Williams (Bargath LLC). Olsson has prepared this work plan to characterize the hydrocarbon impact within the suspected source areas. This project is being conducted under the jurisdiction of the Colorado Oil and Gas Conservation Commission (COGCC). To date, the majority of site characterization soil samples submitted for laboratory analyses were collected in the capillary fringe just above the groundwater. The intent of this investigation is to profile the vertical and horizontal extent of petroleum impacts for remediation method evaluation.

Prior Site Investigations

In June 2012, a site characterization was performed by HRL Compliance Solutions, Inc. (HCSI) that included advancing 28 soil borings (BH01 to BH24 and CB BH01 to CB BH04). In addition, the site investigation included the installation of six 2-inch diameter monitoring wells and one 1-inch diameter monitoring well (MW1 through MW7). HCSI collected groundwater samples from the seven monitoring wells in June 2012, July 2012, August 2012, and September 2012 for laboratory analysis. Surface water samples from Black Sulphur Creek were collected from locations upstream and downstream of the compressor station in June 2012.

The project transitioned to Olsson in late January 2013. Olsson has collected groundwater samples on a monthly basis beginning in January 2013. Surface water samples from Black Sulphur Creek have been collected from an upstream, midstream, and downstream location

(access permitting), since February 2013. In March 2013, Olsson prepared an Additional Site Characterization Work Plan on behalf of Williams, for submittal to the COGCC as a Form 27. In June 2013, COGCC approved the Form 27, and Olsson conducted the additional site investigation. This included collecting soil samples for laboratory analysis and installing eight groundwater monitoring wells (MW8 through MW15). The locations of monitoring wells MW8 through MW15 are depicted on the attached Figure 1.

Areas of Concern

Laboratory analysis of soil samples collected during the June 2012 site investigation reported petroleum impacted soil south and west of the compressor building, and at the former catchment basin east of the compressor building above the COGCC Series 900, Exploration and Production (E&P) Waste Management, Table 910-1 soil concentration levels. Also, following that site investigation, laboratory analyses reported petroleum constituents in groundwater samples collected from monitoring wells MW-2, MW-3, and MW-7 above COGCC Table 910-1 groundwater concentration levels. Attached Table 1 and Table 2 summarize the groundwater analytical results to date. Table 3 summarizes the field measured parameters for the site to date. Table 4 and Table 5 summarized the soil analyses performed to date.

Soil samples submitted for laboratory analysis during the June 2012 investigation were generally collected from a common interval of approximately 19 to 20 feet below ground surface (ft-bgs). The focus of this proposed investigation is to acquire analytical data from a variety of vertical intervals, to better define soil impacts within the suspected source areas. This will allow us to properly identify an appropriate remediation strategy.

Health and Safety

A site-specific Health and Safety Plan (HASP) has been developed for the project. We expect the field activities can safely be performed using Level D personal protection, consisting of flame resistant clothing (shirt and pants), hard hat, steel-toed boots, safety glasses, hearing protection, leather and/or chemical resistant gloves.

Soil Sampling

The proposed site investigation includes advancing up to 15 borings at selected locations, to groundwater or an estimated maximum depth of 20 ft-bgs. This will be accomplished using a direct-push rig equipped with a continuous Macro-Core sampler or dual-tube sampling systems. The proposed soil boring locations are depicted on the attached Figure 2 and are ultimately subject to subsurface utilities. Olsson will coordinate a hydrovac subcontractor to clear the boring locations to up 5 ft-bgs prior to direct-push sampling. Olsson proposes, at a minimum, to collect soil samples for screening and laboratory analysis from the 5 ft-bgs, 10 ft-bgs, 15 ft-bgs, and 20 ft-bgs boring intervals. The borings will be backfilled with hydrated bentonite chips upon completing sampling.

An Olsson geologist will document the site lithology, examine the soils for suspected environmental impact (i.e. staining and/or odors), and the soils will be field screened using a photo-ionization detector (PID) for the presence of volatile organic vapors as the borings are advanced. The PID measurements will be recorded on the field boring logs.

Soil Sample Analysis

At least two soil samples from each boring will be analyzed for benzene, ethylbenzene, toluene, and total xylenes (BTEX) using EPA Method 8260B. All soil samples will be analyzed for total petroleum hydrocarbons (TPH) in the gasoline (GRO), and diesel fuel (DRO) ranges using EPA Method 8015.

Investigational Derived Waste

Soil cores will be stored on plastic sheeting on-site for management and proper disposal by Williams. Direct push rods will be washed with a pressure washer and potable water which will be discharged on-site.

Summary Report Preparation

A report summarizing the sampling activities, lithologic boring log information, and laboratory analytical results will be presented to Williams, as part of the proposed remediation evaluation and work plan. The analytical results will be compared to soil concentration levels listed in the COGCC Table 910-1 concentration levels.

Investigation Schedule

For safety concerns, Olsson would prefer to begin this investigation when there is no snow cover at the site that may obscure buried utility location markings or other potential subsurface features. It is expected the soil sampling can be performed in three days on-site.

Proposed Groundwater Monitoring Changes

Figure 3 is a pieziometric map depicting the site groundwater flow for February 25, 2014. As illustrated on Figure 3, estimated groundwater flow is east-northeast beneath the site with a hydraulic gradient of 0.005 feet per foot (ft. /ft.) as measured between monitoring wells MW8 and MW6.

Currently, the 15 groundwater monitoring wells and three surface water sampling locations are sampled on a monthly schedule.

- Benzene, toluene, ethylbenzene, and total xylenes (BTEX)
- Gasoline range organics (GRO)
- Diesel range organics (DRO)
- Inorganic parameters - Total dissolved solids (TDS), sulfates, nitrate, nitrite, dissolved iron, and dissolved manganese.
- Field parameters - temperature, specific conductance, dissolved oxygen (DO), oxidation/reduction potential (ORP)
- Check the monitoring wells and surface sampling locations for phase separated hydrocarbon (PSH)

To date, monitoring wells MW1 to MW7 have been sampled 18 times, monitoring wells MW8 to MW15 have been sample nine times, and the three surface water sampling locations have been sampled 14 times. Williams seeks concurrence from XTO Energy, Inc. and the COGCC to modify the current sampling program as follows:

Proposed Monthly Sampling Plan

Included will be monitoring wells MW4, MW5, MW10, MW11, MW12, MW13.

- BTEX
- GRO
- DRO
- Field Parameters
- Check for PSH

Proposed Quarterly Sampling Plan

Included will be monitoring wells MW1 to MW13 (unless otherwise specified).

- BTEX
- GRO
- DRO
- Field parameters
- Check the monitoring wells for phase separated hydrocarbon PSH

In addition, groundwater samples will be collected from monitoring wells MW2, MW3, MW4, and MW7, MW8 quarterly for the following parameters:

- TDS
- Sulfates
- Nitrate
- Nitrite
- Dissolved iron
- Dissolved manganese

Monitoring wells MW14, MW15 and the surface water locations of Black Sulphur Creek will be sampled if groundwater impacts appear to be migrating in that direction. Potential migration of impacts would be detected during our monthly groundwater sampling of monitoring wells MW4, MW5, MW10, MW11, MW12, and MW13.

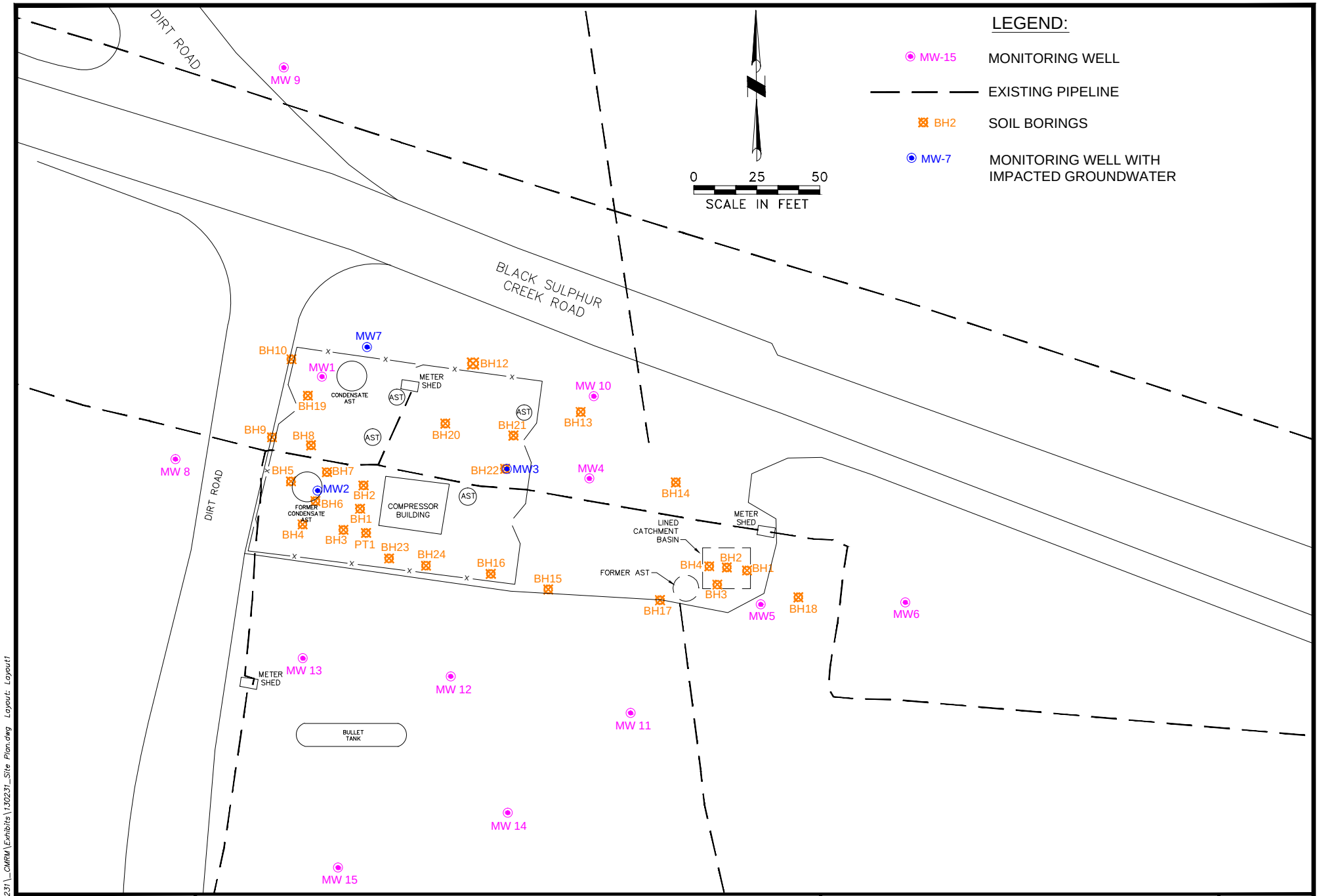
Please call me if you have any questions at (303) 237-2072.

Sincerely,
Olsson Associates, Inc.

Kevin Taylor, P.G.
Senior Geologist

John Lohner
Principal Geologist

Attachment:
Figure 1 - Site Map
Figure 2 – Proposed Direct-Push Boring Locations
Figure 3 – Pieziometric Surface Map – February 25, 2014
Table 1 – Groundwater Analytical Summary – BTEX, DRO, and GRO
Table 2 – Groundwater Analytical Survey – Inorganics
Table 3 – Groundwater Field Measured Parameters
Table 4 – Soil Analytical Summary – BTEX, GRO, DRO, and PID Field Screening Measurement
Table 5 – Soil Analytical Summary - Metals



PROJECT NO:	013-0231
DRAWN BY:	KJT
DATE:	2.14.14

SITE MAP
BLACK SULPHUR COMPRESSOR STATION
WILLIAMS MIDSTREAM
RIO BLANCO COUNTY, COLORADO

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

FIGURE
1

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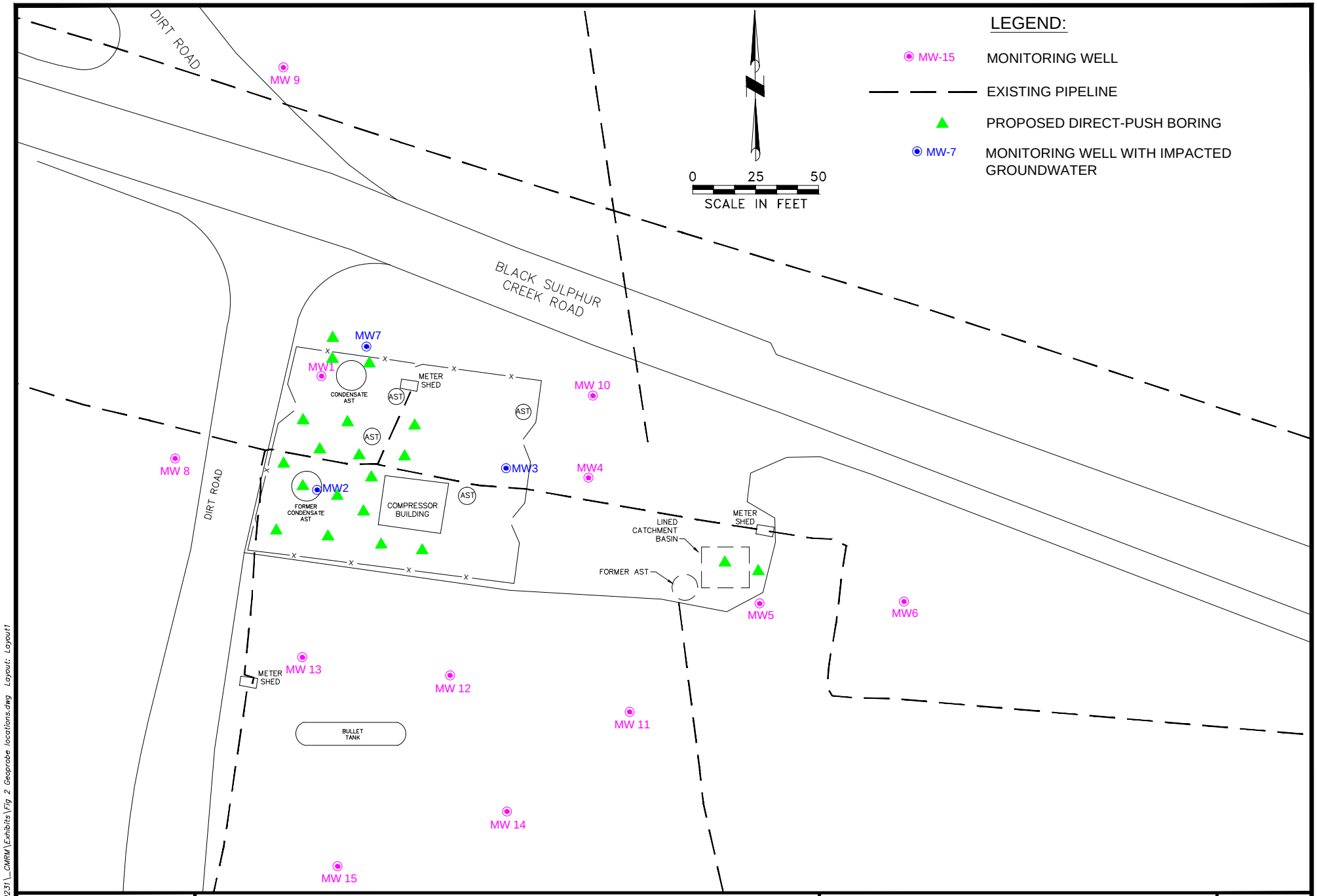

PROJECT NO:	013-0231
DRAWN BY:	KJT
DATE:	2.14.14

PROPOSED DIRECT-PUSH BORING LOCATIONS
BLACK SULPHUR COMPRESSOR STATION
WILLIAMS MIDSTREAM
RIO BLANCO COUNTY, COLORADO

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

FIGURE
2

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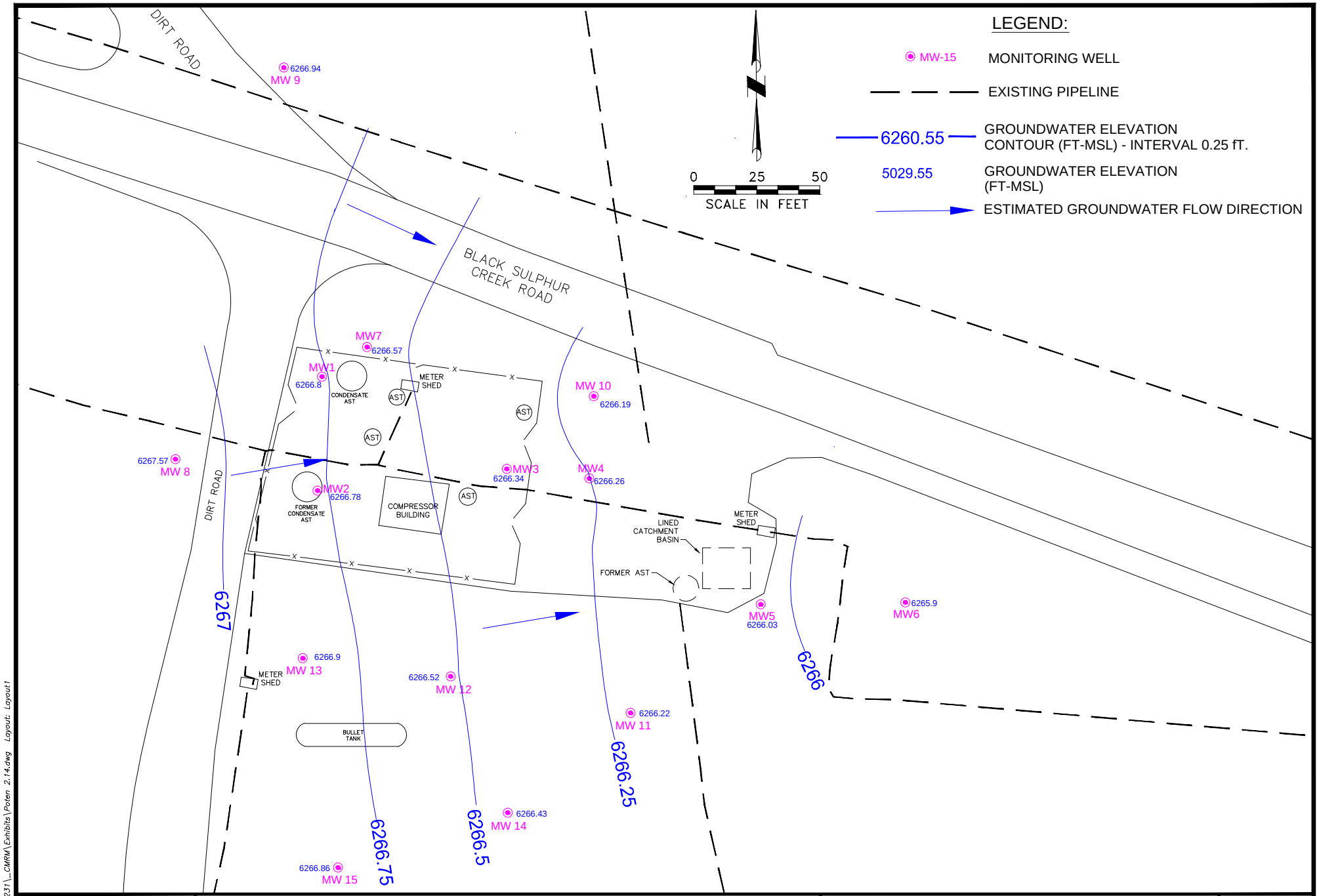

PROJECT NO:	013-0231
DRAWN BY:	KJT
DATE:	3.25.14

PIEZIOMETRIC SURFACE MAP - FEBRUARY 25, 2014
BLACK SULPHUR COMPRESSOR STATION
WILLIAMS MIDSTREAM
RIO BLANCO COUNTY, COLORADO

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

FIGURE
3

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Table 1 - Groundwater Analytical Summary
BTEX, DRO, and GRO

Sample Location	Sampling Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	GRO (mg/L)	DRO (mg/L)
	COGCC Table 910-1 Concentration Levels	5 µg/L	1000 µg/L [1]	700 µg/L	10,000 µg/L [1]	No Concentration Level Established	No Concentration Level Established
MW-1	6/15/2012	ND	ND	23	200	NS	NS
MW-1	7/13/2012	ND	ND	2.8	63	NS	NS
MW-1	8/14/2012	ND	ND	2.7	43	NS	NS
MW-1	9/13/2012	ND	ND	2.6	29	NS	NS
MW-1	1/30/2013	ND	ND	ND	ND	ND	1.7
MW-1	2/28/2013	NS	NS	NS	NS	NS	NS
MW-1	3/29/2013	ND	ND	ND	ND	ND	ND
MW-1	4/26/2013	ND	ND	ND	ND	ND	ND
MW-1	5/28/2013	ND	ND	ND	3.4	ND	ND
MW-1	6/20/2013	ND	ND	ND	ND	ND	ND
MW-1	7/29/2013	ND	ND	ND	ND	ND	ND
MW-1	8/27/2013	ND	ND	ND	ND	ND	ND
MW-1	9/17/2013	ND	ND	ND	ND	ND	ND
MW-1	10/29/2013	ND	ND	ND	ND	ND	ND
MW-1	11/25/2013	ND	ND	ND	ND	ND	ND
MW-1	12/17/2013	ND	ND	ND	ND	ND	ND
MW-1	1/21/2014	NT	NT	NT	NT	NT	NT
MW-1	2/25/2014	ND	ND	ND	ND	ND	ND
MW-2	6/15/2012	5800	14000	860	7500	NS	NS
MW-2	7/13/2012	5500	8900	820	5600	NS	NS
MW-2	8/14/2012	5700	9200	880	6300	NS	NS
MW-2	9/13/2012	4700	5800	700	3700	NS	NS
MW-2	1/30/2013	4500	5400	590	3200	39	ND
MW-2	2/28/2013	4400	6800	560	3600	44	1.4
MW-2	3/29/2013	4800	6900	620	3800	42	1.0
MW-2	4/26/2013	4200	6400	640	4100	39	1.4
MW-2	5/28/2013	4600	7100	570	3700	54	1.6
MW-2	6/20/2013	4100	6400	600	4300	52	1.5
MW-2	7/30/2013	3000	1900	550	2900	30	1.3
MW-2	8/28/2013	2900	3800	530	3000	32	2.7
MW-2	9/17/2013	2200	3900	520	3200	32	1.3
MW-2	10/29/2013	2500	4300	520	3400	37	0.46
MW-2	11/26/2013	5000	9700	780	5900	60	2.10
MW-2	12/18/2013	3700	4600	590	3900	30	2.3
MW-2	1/21/2014	NT	NT	NT	NT	NT	NT
MW-2	2/25/2014	2400	4600	810	5000	39	3.2
MW-3	6/15/2012	1300	780	260	1500	NS	NS
MW-3	7/13/2012	1900	1200	390	2700	NS	NS
MW-3	8/14/2012	2300	1500	480	2900	NS	NS
MW-3	9/13/2012	1700	1200	410	2600	NS	NS
MW-3	1/30/2013	2000	1400	410	2200	19	1.5
MW-3	2/28/2013	NS	NS	NS	NS	NS	NS
MW-3	3/29/2013	1300	1100	250	1500	19	1.3
MW-3	4/26/2013	1600	1700	280	1600	15	1.5
MW-3	5/28/2013	2600	2100	520	2900	26	1.6
MW-3	6/20/2013	2100	2300	410	2400	23	1.2
MW-3	7/30/2013	2000	2600	330	2200	24	0.94
MW-3	8/28/2013	2300	2900	380	2700	24	2.70
MW-3	9/17/2013	1900	2400	270	1800	19	1.40
MW-3	10/29/2013	2500	3200	360	2600	28	0.59
MW-3	11/26/2013	3000	3000	540	3500	29	1.70
MW-3	12/18/2013	2700	2600	440	2900	30	1.6
MW-3	1/21/2014	2000	2800	350	2300	24	1.8
MW-3	2/25/2014	2400	3100	370	2500	21	1.2

Table 1 - Groundwater Analytical Summary
BTEX, DRO, and GRO

Sample Location	Sampling Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	GRO (mg/L)	DRO (mg/L)
	COGCC Table 910-1 Concentration Levels	5 µg/L	1000 µg/L [1]	700 µg/L	10,000 µg/L [1]	No Concentration Level Established	No Concentration Level Established
MW-4	6/15/2012	1.5	ND	ND	ND	NS	NS
MW-4	7/13/2012	2.4	ND	ND	ND	NS	NS
MW-4	8/14/2012	2.2	ND	ND	ND	NS	NS
MW-4	9/13/2012	3.8	ND	ND	ND	NS	NS
MW-4	1/30/2013	ND	ND	ND	ND	ND	ND
MW-4	2/28/2013	NS	NS	NS	NS	NS	NS
MW-4	3/29/2013	ND	ND	ND	ND	ND	ND
MW-4	4/26/2013	ND	ND	ND	ND	ND	ND
MW-4	5/28/2013	ND	ND	ND	ND	ND	ND
MW-4	6/20/2013	ND	ND	ND	ND	ND	ND
MW-4	7/29/2013	ND	ND	ND	ND	ND	ND
MW-4	8/27/2013	ND	ND	ND	ND	ND	ND
MW-4	9/16/2013	ND	ND	ND	ND	ND	ND
MW-4	10/28/2013	ND	ND	ND	ND	ND	ND
MW-4	11/25/2013	ND	ND	ND	ND	ND	ND
MW-4	12/17/2013	ND	ND	ND	ND	ND	ND
MW-4	1/20/2014	ND	ND	ND	ND	ND	ND
MW-4	2/24/2014	ND	ND	ND	ND	ND	ND
MW-5	6/15/2012	ND	ND	ND	ND	NS	NS
MW-5	7/13/2012	ND	ND	ND	ND	NS	NS
MW-5	8/14/2012	ND	ND	ND	ND	NS	NS
MW-5	9/13/2012	ND	ND	ND	ND	NS	NS
MW-5	1/30/2013	0.33 J	ND	0.47 J	ND	ND	ND
MW-5	2/28/2013	ND	ND	ND	ND	ND	ND
MW-5	3/29/2013	ND	ND	ND	ND	ND	ND
MW-5	4/26/2013	ND	ND	ND	ND	ND	ND
MW-5	5/28/2013	ND	ND	ND	ND	ND	ND
MW-5	6/20/2013	ND	ND	ND	ND	ND	ND
MW-5	7/29/2013	ND	ND	ND	ND	ND	0.66
MW-5	8/27/2013	ND	ND	ND	ND	ND	ND
MW-5	9/16/2013	ND	ND	ND	ND	ND	ND
MW-5	10/28/2013	ND	ND	ND	ND	ND	ND
MW-5	11/25/2013	ND	ND	ND	ND	ND	ND
MW-5	12/17/2013	ND	ND	ND	ND	ND	ND
MW-5	1/20/2014	ND	ND	ND	ND	ND	ND
MW-5	2/24/2014	ND	ND	ND	ND	ND	ND
MW-6	6/15/2012	ND	ND	ND	ND	NS	NS
MW-6	7/13/2012	ND	ND	ND	ND	NS	NS
MW-6	8/14/2012	ND	ND	ND	ND	NS	NS
MW-6	9/13/2012	ND	ND	ND	ND	NS	NS
MW-6	1/30/2013	ND	ND	ND	ND	ND	ND
MW-6	2/28/2013	ND	ND	ND	ND	ND	0.59
MW-6	3/29/2013	ND	ND	ND	ND	ND	ND
MW-6	4/26/2013	ND	ND	ND	ND	ND	ND
MW-6	5/28/2013	ND	ND	ND	ND	ND	ND
MW-6	6/20/2013	ND	ND	ND	ND	ND	ND
MW-6	7/29/2013	ND	ND	ND	ND	ND	ND
MW-6	8/27/2013	ND	ND	ND	ND	ND	ND
MW-6	9/16/2013	ND	ND	ND	ND	ND	ND
MW-6	10/28/2013	ND	ND	ND	ND	ND	ND
MW-6	11/25/2013	ND	ND	ND	ND	ND	ND
MW-6	12/17/2013	ND	ND	ND	ND	ND	ND
MW-6	1/20/2014	ND	ND	ND	ND	ND	ND
MW-6	2/24/2014	ND	ND	ND	ND	ND	ND

Table 1 - Groundwater Analytical Summary
BTEX, DRO, and GRO

Sample Location	Sampling Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	GRO (mg/L)	DRO (mg/L)
	COGCC Table 910-1 Concentration Levels	5 µg/L	1000 µg/L [1]	700 µg/L	10,000 µg/L [1]	No Concentration Level Established	No Concentration Level Established
MW-7	6/15/2012	9100	37000	3300	35000	NS	NS
MW-7	7/13/2012	13000	36000	1400	15000	NS	NS
MW-7	8/14/2012	10000	28000	1700	16000	NS	NS
MW-7	9/13/2012	9400	25000	1400	14000	NS	NS
MW-7	1/30/2013	4500	11000	840	7200	56	2.7
MW-7	2/28/2013	NS	NS	NS	NS	NS	NS
MW-7	3/29/2013	1400	3800	490	4300	25	1.7
MW-7	4/26/2013	2000	4600	430	3600	22	1.0
MW-7	5/28/2013	5300	8900	670	5800	57	1.9
MW-7	6/20/2013	4900	8500	790	6500	ND	ND
MW-7	7/30/2013	4000	6800	710	5600	45	1.4
MW-7	8/28/2013	3700	6700	600	4700	41	2.3
MW-7	9/17/2013	2800	5800	520	4000	35	2.0
MW-7	10/29/2013	3200	6200	550	4800	48	0.60
MW-7	11/26/2013	5200	10000	800	7000	67	2.50
MW-7	12/18/2013	5700	6500	810	6500	56	2.2
MW-7	1/21/2014	11000	18000	2200	17000	57	1.5
MW-7	2/25/2014	2200	4200	500	3800	30	1.4
MW-8	7/10/2013	ND	ND	ND	ND	ND	ND
MW-8	7/29/2013	ND	ND	ND	ND	ND	ND
MW-8	8/27/2013	ND	ND	ND	ND	ND	ND
MW-8	9/16/2013	ND	ND	ND	ND	ND	ND
MW-8	10/28/2013	ND	ND	ND	ND	ND	ND
MW-8	11/26/2013	ND	ND	ND	ND	ND	ND
MW-8	12/18/2013	ND	ND	ND	ND	ND	ND
MW-8	1/21/2014	NT	NT	NT	NT	NT	NT
MW-8	2/24/2014	ND	ND	ND	ND	ND	ND
MW-9	7/10/2013	ND	ND	ND	ND	ND	ND
MW-9	7/29/2013	ND	ND	ND	ND	ND	ND
MW-9	8/27/2013	ND	ND	ND	ND	ND	ND
MW-9	9/16/2013	ND	ND	ND	ND	ND	ND
MW-9	10/28/2013	ND	ND	ND	ND	ND	ND
MW-9	11/25/2013	ND	ND	ND	ND	ND	ND
MW-9	12/18/2013	ND	ND	ND	ND	ND	ND
MW-9	1/21/2014	ND	ND	ND	ND	ND	ND
MW-9	2/24/2014	ND	ND	ND	ND	ND	ND
MW-10	7/10/2013	ND	ND	ND	ND	ND	ND
MW-10	7/29/2013	ND	ND	ND	ND	ND	ND
MW-10	8/27/2013	1.4	ND	ND	ND	ND	ND
MW-10	9/16/2013	ND	ND	ND	ND	ND	ND
MW-10	10/28/2013	ND	ND	ND	ND	ND	ND
MW-10	11/25/2013	ND	ND	ND	ND	ND	ND
MW-10	12/18/2013	NT	NT	NT	NT	NT	NT
MW-10	1/21/2014	NT	NT	NT	NT	NT	NT
MW-10	2/24/2014	ND	ND	ND	ND	ND	ND
MW-11	7/10/2013	ND	ND	ND	ND	ND	ND
MW-11	7/30/2013	ND	ND	ND	ND	ND	ND
MW-11	8/28/2013	ND	ND	ND	ND	ND	ND
MW-11	9/17/2013	ND	ND	ND	ND	ND	ND
MW-11	10/29/2013	ND	ND	ND	ND	ND	ND
MW-11	11/26/2013	ND	ND	ND	ND	ND	ND
MW-11	12/18/2013	ND	ND	ND	ND	ND	ND
MW-11	1/21/2014	NT	NT	NT	NT	NT	NT
MW-11	2/25/2014	ND	ND	ND	ND	ND	ND

Table 1 - Groundwater Analytical Summary
BTEX, DRO, and GRO

Sample Location	Sampling Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	GRO (mg/L)	DRO (mg/L)
	COGCC Table 910-1 Concentration Levels	5 µg/L	1000 µg/L [1]	700 µg/L	10,000 µg/L [1]	No Concentration Level Established	No Concentration Level Established
MW-12	7/10/2013	ND	ND	ND	ND	0.25	ND
MW-12	7/30/2013	ND	ND	ND	ND	ND	0.9
MW-12	8/28/2013	ND	ND	ND	ND	ND	ND
MW-12	9/17/2013	ND	ND	ND	ND	ND	ND
MW-12	10/29/2013	ND	ND	ND	ND	ND	ND
MW-12	11/26/2013	ND	ND	ND	ND	ND	ND
MW-12	12/18/2013	ND	ND	ND	ND	ND	ND
MW-12	1/21/2014	ND	ND	ND	ND	ND	ND
MW-12	2/25/2014	ND	ND	ND	ND	ND	ND
MW-13	7/10/2013	ND	ND	ND	ND	ND	ND
MW-13	7/30/2013	ND	ND	ND	ND	ND	ND
MW-13	8/28/2013	ND	ND	ND	ND	ND	ND
MW-13	9/17/2013	ND	ND	ND	ND	ND	ND
MW-13	10/29/2013	ND	ND	ND	ND	ND	ND
MW-13	11/26/2013	ND	ND	ND	ND	ND	ND
MW-13	12/17/2013	ND	ND	ND	ND	ND	1.5
MW-13	1/20/2014	ND	ND	ND	ND	ND	ND
MW-13	2/25/2014	ND	ND	ND	ND	ND	ND
MW-14	7/10/2013	ND	ND	ND	ND	ND	ND
MW-14	7/30/2013	ND	ND	ND	ND	ND	ND
MW-14	8/28/2013	ND	ND	ND	ND	ND	ND
MW-14	9/17/2013	ND	ND	ND	ND	ND	ND
MW-14	10/29/2013	ND	ND	ND	ND	ND	ND
MW-14	11/26/2013	ND	ND	ND	ND	ND	ND
MW-14	12/17/2013	ND	ND	ND	ND	ND	ND
MW-14	1/21/2014	ND	ND	ND	ND	ND	ND
MW-14	2/25/2014	ND	ND	ND	ND	ND	ND
MW-15	7/10/2013	ND	ND	ND	ND	ND	ND
MW-15	7/30/2013	ND	ND	ND	ND	ND	ND
MW-15	8/28/2013	ND	ND	ND	ND	ND	ND
MW-15	9/17/2013	ND	ND	ND	ND	ND	ND
MW-15	10/29/2013	ND	ND	ND	ND	ND	ND
MW-15	11/25/2013	NS	NS	NS	NS	NS	NS
MW-15	12/18/2013	ND	ND	ND	ND	ND	ND
MW-15	1/20/2014	ND	ND	ND	ND	ND	ND
MW-15	2/25/2014	ND	ND	ND	ND	ND	ND
Black Sulfur Crk. UG	6/4/2012	ND	ND	ND	ND	NS	NS
Black Sulfur Crk. UPCREEK	2/28/2013	ND	ND	ND	ND	ND	ND
Black Sulfur Crk. UPCREEK	3/29/2013	ND	ND	ND	ND	ND	ND
UPCREEK	4/26/2013	ND	ND	ND	ND	ND	ND
UPCREEK	5/28/2013	ND	ND	ND	ND	ND	ND
UPCREEK	6/20/2013	ND	ND	ND	ND	ND	ND
UPCREEK	7/29/2013	ND	ND	ND	ND	ND	ND
UPCREEK	8/27/2013	ND	ND	ND	ND	ND	ND
UPCREEK	9/16/2013	ND	ND	ND	ND	ND	ND
UPCREEK	10/28/2013	ND	ND	ND	ND	ND	ND
UPCREEK	11/25/2013	ND	ND	ND	ND	ND	ND
UPCREEK	12/17/2013	ND	ND	ND	ND	ND	ND
UPCREEK	1/20/2014	ND	ND	ND	ND	0.330	ND
UPCREEK	2/24/2014	ND	ND	ND	ND	ND	ND

Table 1 - Groundwater Analytical Summary
BTEX, DRO, and GRO

Sample Location	Sampling Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	GRO (mg/L)	DRO (mg/L)
	COGCC Table 910-1 Concentration Levels	5 µg/L	1000 µg/L[1]	700 µg/L	10,000 µg/L[1]	No Concentration Level Established	No Concentration Level Established
Black Sulfur Crk. DG	6/4/2012	ND	2.3	ND	ND	NS	NS
Black Sulfur Crk. DWCREEK	2/28/2013	ND	ND	ND	ND	ND	ND
Black Sulfur Crk. DWCREEK	3/29/2013	ND	ND	ND	ND	ND	ND
DWCREEK	4/26/2013	ND	ND	ND	ND	ND	ND
DWCREEK	5/28/2013	ND	ND	ND	ND	ND	ND
DWCREEK	6/20/2013	ND	ND	ND	ND	ND	ND
DWCREEK	7/29/2013	ND	ND	ND	ND	ND	ND
DWCREEK	8/27/2013	ND	ND	ND	ND	ND	ND
DWCREEK	9/16/2013	ND	ND	ND	ND	ND	ND
DWCREEK	10/28/2013	ND	ND	ND	ND	ND	ND
DWCREEK	11/25/2013	ND	ND	ND	ND	ND	ND
DWCREEK	12/17/2013	ND	ND	ND	ND	ND	ND
DWCREEK	1/20/2014	ND	ND	ND	ND	ND	ND
DWCREEK	2/24/2014	ND	ND	ND	ND	ND	ND
Black Sulfur Crk. SP1	6/4/2012	ND	ND	ND	ND	NS	NS
Black Sulfur Crk. MIDDLECREEK	2/28/2013	ND	ND	ND	ND	ND	ND
Black Sulfur Crk. MIDDLECREEK	3/29/2013	ND	ND	ND	ND	ND	ND
MIDCREEK	4/26/2013	ND	ND	ND	ND	ND	ND
MIDCREEK	5/28/2013	ND	ND	ND	ND	ND	ND
MIDCREEK	6/20/2013	ND	ND	ND	ND	ND	ND
MIDCREEK	7/29/2013	ND	ND	ND	ND	ND	ND
MIDCREEK	8/27/2013	ND	ND	ND	ND	ND	ND
MIDCREEK	9/16/2013	ND	ND	ND	ND	ND	ND
MIDCREEK	10/28/2013	ND	ND	ND	ND	ND	ND
MIDCREEK	11/25/2013	ND	ND	ND	ND	ND	ND
MIDCREEK	12/17/2013	ND	ND	ND	ND	ND	ND
MIDCREEK	1/20/2014	ND	ND	ND	ND	ND	ND
MIDCREEK	2/24/2014	ND	ND	ND	ND	ND	ND

NS = Not sampled

ND = Non detected at or above laboratory reporting limit

µg/L - Micrograms per Liter

mg/L - Milligrams per Liter

J= Analyte reported below laboratory report limit

Above COGCC Table 910-1 Concentration Level

[1] - Drinking water maximum contaminant level (MCL)

Table 2 - Groundwater Analytical Summary
Inorganics

Sample Location	Sampling Date	TDS (mg/L)	Chlorides (mg/L)	Sulfates (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Dissolved Iron (mg/L)	Dissolved Manganese (mg/L)
	COGCC Table 910-1 Concentration Levels	<1.25 X Background	<1.25 X Background	<1.25 X Background	No COGCC Concentration Level Established			
MW-1	6/15/2012	1700	30	520	NS	NS	NS	NS
MW-1	7/13/2012	1300	21	550	NS	NS	NS	NS
MW-1	8/14/2012	1200	19	500	NS	NS	NS	NS
MW-1	9/13/2012	1400	23	520	NS	NS	NS	NS
MW-1	1/30/2013	1100	NS	480	1.6	0.0049 J	0.032 J	0.13
MW-1	2/28/2013	NS	NS	NS	NS	NS	NS	NS
MW-1	3/29/2013	1100	NS	510	1.6	ND	ND	0.063
MW-1	4/26/2013	1200	NS	480	1.6	ND	ND	0.067
MW-1	5/28/2013	1200	NS	520	1.9	0.0260	ND	0.130
MW-1	6/20/2013	1200	NS	490	1.8	ND	ND	0.120
MW-1	7/29/2013	1100	NS	500	1.9	ND	0.310	0.089
MW-1	8/27/2013	1200	NS	490	2.0	ND	0.110	0.082
MW-1	9/17/2013	1100	NS	450	1.8	ND	0.093	0.073
MW-1	10/29/2013	1200	NS	450	1.6	ND	ND	0.075
MW-1	11/25/2013	970	NS	450	1.6	ND	0.120	0.100
MW-1	12/17/2013	1100	NS	490	1.5	ND	ND	0.092
MW-1	1/20/2014	NT	NT	NT	NT	NT	NT	NT
MW-1	2/25/2014	1000	NS	440	1.6	ND	ND	0.16
MW-2	6/15/2012	2800	100	570	NS	NS	NS	NS
MW-2	7/13/2012	2700	97	460	NS	NS	NS	NS
MW-2	8/14/2012	2900	85	320	NS	NS	NS	NS
MW-2	9/13/2012	2700	91	280	NS	NS	NS	NS
MW-2	1/30/2013	2700	NS	290	ND	0.0062 J	0.068 J	0.25
MW-2	2/28/2013	2800	NS	320	0.048	ND	ND	0.26
MW-2	3/29/2013	3100	NS	240	ND	ND	0.110	0.27
MW-2	4/26/2013	2800	NS	320	0.075	ND	0.120	0.26
MW-2	5/28/2013	3000	NS	260	0.150	ND	0.086	0.33
MW-2	6/20/2013	2800	NS	230	0.038	ND	0.140	0.26
MW-2	7/30/2013	2400	NS	220	0.039	ND	ND	0.20
MW-2	8/28/2013	1900	NS	300	0.048	ND	0.140	0.19
MW-2	9/17/2013	1700	NS	350	0.038	ND	0.280	0.18
MW-2	10/29/2013	1800	NS	320	0.10	ND	0.088	0.21
MW-2	11/26/2013	2300	NS	200	0.07	ND	ND	0.36
MW-2	12/18/2013	2200	NS	240	ND	0.020	0.20	0.19
MW-2	1/21/2014	NT	NT	NT	NT	NT	NT	NT
MW-2	2/25/2014	1400	NS	420	0.28	ND	10	0.098
MW-3	6/15/2012	1500	47	89	NS	NS	NS	NS
MW-3	7/13/2012	1700	41	190	NS	NS	NS	NS
MW-3	8/14/2012	1900	41	220	NS	NS	NS	NS
MW-3	9/13/2012	1500	44	150	NS	NS	NS	NS
MW-3	1/30/2013	1700	NS	120	ND	0.0072 J	0.036 J	0.21
MW-3	2/28/2013	NS	NS	NS	NS	NS	NS	NS
MW-3	3/29/2013	1600	NS	120	0.072	ND	ND	0.20
MW-3	4/26/2013	1600	NS	95	0.086	ND	ND	0.24
MW-3	5/28/2013	2100	NS	270	0.120	ND	ND	0.16
MW-3	6/20/2013	1800	NS	160	ND	ND	0.110	0.13
MW-3	7/30/2013	1600	NS	23	ND	ND	0.120	0.11
MW-3	8/28/2013	1500	NS	26	ND	ND	0.091	0.12
MW-3	9/17/2013	1400	NS	32	ND	ND	0.130	0.10
MW-3	10/29/2013	1600	NS	50	0.083	ND	0.087	0.098
MW-3	11/26/2013	1900	NS	130	0.053	ND	ND	0.088
MW-3	12/18/2013	1800	NS	170	0.042	ND	0.13	0.080
MW-3	1/21/2014	1500	NS	38	0.26	ND	0.09	0.083
MW-3	2/25/2014	1400	NS	28	0.24	ND	0.12	0.087

Table 2 - Groundwater Analytical Summary
Inorganics

Sample Location	Sampling Date	TDS (mg/L)	Chlorides (mg/L)	Sulfates (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Dissolved Iron (mg/L)	Dissolved Manganese (mg/L)
	COGCC Table 910-1 Concentration Levels	<1.25 X Background	<1.25 X Background	<1.25 X Background	No COGCC Concentration Level Established			
MW-4	9/13/2012	1600	25	590	NS	NS	NS	NS
MW-4	1/30/2013	1400	NS	610	3.2	0.0095 J	0.036 J	0.0010 J
MW-4	2/28/2013	NS	NS	NS	NS	NS	NS	NS
MW-4	3/29/2013	1200	NS	520	2.1	ND	ND	ND
MW-4	4/26/2013	1200	NS	500	1.6	ND	0.080	0.0066
MW-4	5/28/2013	1300	NS	510	1.9	ND	1.400	0.1200
MW-4	6/20/2013	1200	NS	490	1.9	ND	0.083	0.0140
MW-4	7/29/2013	1200	NS	490	1.2	ND	0.180	0.0280
MW-4	8/27/2013	1300	NS	490	0.9	ND	0.098	0.3900
MW-4	9/16/2013	1100	NS	440	0.6	ND	ND	0.0590
MW-4	10/28/2013	1200	NS	480	1.1	ND	ND	0.037
MW-4	11/25/2013	1200	NS	500	1.4	ND	ND	0.032
MW-4	12/17/2013	1200	NS	510	0.96	ND	ND	ND
MW-4	1/20/2014	1100	NS	450	1.10	ND	ND	0.0310
MW-4	2/24/2014	940	NS	480	0.87	ND	ND	0.033
MW-5	6/15/2012	1400	51	570	NS	NS	NS	NS
MW-5	7/13/2012	1500	52	1600	NS	NS	NS	NS
MW-5	8/14/2012	1400	26	610	NS	NS	NS	NS
MW-5	9/13/2012	1600	35	690	NS	NS	NS	NS
MW-5	1/30/2013	1700	NS	790	ND	0.0062 J	0.024 J	0.03 J
MW-5	2/28/2013	1600	NS	740	ND	ND	ND	0.30
MW-5	3/29/2013	1300	NS	670	ND	ND	ND	0.33
MW-5	4/26/2013	1500	NS	690	0.063	ND	ND	0.28
MW-5	5/28/2013	1500	NS	680	0.160	ND	ND	0.30
MW-5	6/20/2013	1500	NS	710	0.052	ND	0.094	0.30
MW-5	7/29/2013	1600	NS	750	0.081	0.03	ND	0.34
MW-5	8/27/2013	1700	NS	810	0.110	ND	0.110	0.04
MW-5	9/16/2013	1600	NS	730	0.130	ND	0.082	0.34
MW-5	10/28/2013	1800	NS	860	0.11	ND	ND	0.30
MW-5	11/25/2013	1600	NS	710	0.05	ND	ND	0.26
MW-5	12/17/2013	1600	NS	750	0.19	0.028	0.15	0.25
MW-5	1/20/2014	1500	NS	690	0.29	0.033	ND	0.30
MW-5	2/24/2014	1600	NS	800	0.55	0.039	ND	0.30
MW-6	6/15/2012	3100	73	1500	NS	NS	NS	NS
MW-6	7/13/2012	3100	34	720	NS	NS	NS	NS
MW-6	8/14/2012	3200	52	1400	NS	NS	NS	NS
MW-6	9/13/2012	2900	54	1400	NS	NS	NS	NS
MW-6	1/30/2013	2700	NS	1300	3.0	0.022	0.027 J	0.0012 J
MW-6	2/28/2013	2400	NS	1100	3.2	0.180	ND	0.056
MW-6	3/29/2013	2300	NS	1200	1.5	0.150	ND	0.037
MW-6	4/26/2013	2600	NS	1200	2.5	ND	ND	0.056
MW-6	5/28/2013	2500	NS	1100	2.3	0.021	0.150	0.032
MW-6	6/20/2013	2500	NS	1100	2.1	0.020	0.110	0.022
MW-6	7/29/2013	2400	NS	1100	2.0	0.021	ND	0.017
MW-6	8/27/2013	2400	NS	1100	2.1	ND	ND	0.013
MW-6	9/16/2013	2400	NS	940	2.0	ND	ND	0.015
MW-6	10/28/2013	2300	NS	1000	1.8	ND	ND	0.0084
MW-6	11/25/2013	2300	NS	1000	1.9	ND	ND	ND
MW-6	12/17/2013	2500	NS	1100	1.8	ND	ND	0.0055
MW-6	1/20/2014	2300	NS	1100	1.6	ND	ND	0.019
MW-6	2/24/2014	2100	NS	1000	1.5	ND	ND	0.029

Table 2 - Groundwater Analytical Summary
Inorganics

Sample Location	Sampling Date	TDS (mg/L)	Chlorides (mg/L)	Sulfates (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Dissolved Iron (mg/L)	Dissolved Manganese (mg/L)
	COGCC Table 910-1 Concentration Levels	<1.25 X Background	<1.25 X Background	<1.25 X Background	No COGCC Concentration Level Established			
MW-7	6/15/2012	1500	51	300	NS	NS	NS	NS
MW-7	7/13/2012	2000	59	79	NS	NS	NS	NS
MW-7	8/14/2012	2000	54	78	NS	NS	NS	NS
MW-7	9/13/2012	2300	59	49	NS	NS	NS	NS
MW-7	1/30/2013	1800	NS	340	ND	ND	0.57	0.19
MW-7	2/28/2013	NS	NS	NS	NS	NS	NS	NS
MW-7	3/29/2013	1000	NS	280	ND	ND	0.21	0.29
MW-7	4/26/2013	1600	NS	520	0.087	ND	0.09	0.31
MW-7	5/28/2013	1800	NS	220	0.097	ND	0.10	0.18
MW-7	6/20/2013	1900	NS	210	ND	ND	0.18	0.12
MW-7	7/30/2013	1900	NS	290	0.047	ND	ND	0.14
MW-7	8/28/2013	1700	NS	300	0.180	ND	ND	0.18
MW-7	9/17/2013	1500	NS	340	0.140	ND	0.14	0.18
MW-7	10/29/2013	1600	NS	340	ND	ND	ND	0.15
MW-7	11/26/2013	1900	NS	240	ND	ND	ND	0.13
MW7	12/18/2013	2000	NS	230	ND	ND	0.19	0.11
MW-7	1/21/2014	2000	NS	290	ND	ND	0.18	0.10
MW-7	2/25/2014	1400	NS	330	0.36	ND	0.095	0.19
MW-8	7/10/2013	1800	NS	NS	3.80	0.034	ND	0.0054
MW-8	7/29/2013	1800	NS	940	4.60	ND	ND	ND
MW-8	8/27/2013	1800	NS	950	3.20	ND	0.11	ND
MW-8	9/16/2013	1500	NS	720	3.40	ND	0.09	ND
MW-8	10/28/2013	1400	NS	690	3.2	ND	ND	0.0059
MW-8	11/26/2013	1400	NS	700	3.4	ND	ND	ND
MW-8	12/18/2013	1400	NS	670	3.1	ND	ND	ND
MW-8	1/21/2014	NT	NT	NT	NT	NT	NT	NT
MW-8	2/24/2014	810	NS	840	3.9	ND	ND	ND
MW-9	7/10/2013	1200	NS	NS	1.70	ND	ND	ND
MW-9	7/29/2013	1200	NS	540	1.60	ND	0.22	0.0065
MW-9	8/27/2013	1200	NS	530	1.70	ND	0.12	ND
MW-9	9/16/2013	1100	NS	500	1.40	ND	0.09	0.0110
MW-9	10/28/2013	1100	NS	560	1.6	ND	ND	0.018
MW-9	11/25/2013	1200	NS	570	1.8	ND	0.09	0.051
MW-9	12/18/2013	1100	NS	550	1.5	ND	ND	0.030
MW-9	1/21/2014	1200	NS	510	1.4	ND	0.12	0.055
MW-9	2/24/2014	1100	NS	500	1.4	ND	ND	0.047
MW-10	7/10/2013	1800	NS	NS	2.70	0.054	ND	0.0430
MW-10	7/29/2013	1800	NS	610	1.90	ND	ND	0.0400
MW-10	8/27/2013	1800	NS	530	0.71	ND	0.12	0.2900
MW-10	9/16/2013	1300	NS	480	0.58	ND	0.084	0.1400
MW-10	10/28/2013	1800	NS	600	1.9	0.031	0.17	0.069
MW-10	11/25/2013	1500	NS	560	3.3	ND	ND	0.032
MW-10	12/18/2013	NT	NT	NT	NT	NT	NT	NT
MW-10	1/21/2014	NT	NT	NT	NT	NT	NT	NT
MW-10	2/24/2014	1800	NS	710	3.0	ND	0.78	0.085
MW-11	7/10/2013	1200	NS	NS	0.13	0.160	ND	0.0410
MW-11	7/30/2013	1100	NS	450	0.14	ND	0.47	0.0750
MW-11	8/28/2013	1100	NS	460	0.15	ND	ND	0.0700
MW-11	9/17/2013	1100	NS	410	0.13	ND	ND	0.0640
MW-11	10/29/2013	1100	NS	420	0.24	ND	ND	0.0200
MW-11	11/26/2013	1100	NS	460	0.30	ND	ND	0.0170
MW-11	12/18/2013	1100	NS	470	0.25	ND	ND	ND
MW-11	1/21/2014	NT	NT	NT	NT	NT	NT	NT
MW-11	2/25/2014	1100	NS	450	0.41	ND	ND	ND

Table 2 - Groundwater Analytical Summary
Inorganics

Sample Location	Sampling Date	TDS (mg/L)	Chlorides (mg/L)	Sulfates (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Dissolved Iron (mg/L)	Dissolved Manganese (mg/L)
	COGCC Table 910-1 Concentration Levels	<1.25 X Background	<1.25 X Background	<1.25 X Background	No COGCC Concentration Level Established			
MW-12	7/10/2013	1000	NS	NS	0.18	0.021	0.13	0.3300
MW-12	7/30/2013	970	NS	410	0.13	ND	ND	0.2800
MW-12	8/28/2013	1000	NS	430	0.16	ND	ND	0.2800
MW-12	9/17/2013	970	NS	370	0.17	ND	0.12	0.2200
MW-12	10/29/2013	1000	NS	400	0.23	ND	ND	0.1600
MW-12	11/26/2013	1000	NS	430	0.25	ND	ND	0.2000
MW-12	12/18/2013	1200	NS	450	0.22	ND	ND	0.073
MW-12	1/21/2014	1100	NS	440	0.29	ND	0.095	0.100
MW-12	2/25/2014	1000	NS	440	0.27	ND	0.11	0.088
MW-13	7/10/2013	880	NS	NS	0.42	ND	ND	0.0300
MW-13	7/30/2013	970	NS	380	0.41	ND	0.095	0.0380
MW-13	8/28/2013	920	NS	390	0.41	ND	ND	0.0510
MW-13	9/17/2013	920	NS	350	0.37	ND	0.097	0.0530
MW-13	10/29/2013	960	NS	370	0.40	ND	ND	0.0510
MW-13	11/26/2013	890	NS	390	0.38	ND	ND	0.0460
MW-13	12/17/2013	920	NS	400	0.30	ND	ND	0.036
MW-13	1/20/2014	900	NS	370	0.32	ND	ND	0.046
MW-13	2/25/2014	800	NS	360	0.32	ND	ND	0.028
MW-14	7/10/2013	950	NS	NS	1.40	0.023	0.63	0.0680
MW-14	7/30/2013	990	NS	380	0.93	ND	ND	0.0500
MW-14	8/28/2013	990	NS	410	0.80	ND	ND	0.0690
MW-14	9/17/2013	840	NS	360	0.74	ND	ND	0.0590
MW-14	10/29/2013	1000	NS	370	1.00	0.022	ND	0.052
MW-14	11/26/2013	480	NS	390	0.95	ND	ND	0.038
MW-14	12/17/2013	1000	NS	400	0.74	ND	0.23	0.023
MW-14	1/21/2014	970	NS	380	0.62	ND	ND	0.032
MW-14	2/25/2014	870	NS	360	0.59	ND	ND	0.011
MW-15	7/10/2013	880	NS	NS	0.47	0.026	ND	ND
MW-15	7/30/2013	940	NS	380	0.42	ND	ND	ND
MW-15	8/28/2013	930	NS	380	0.49	ND	ND	0.0066
MW-15	9/17/2013	910	NS	350	0.45	ND	0	0.0160
MW-15	10/29/2013	920	NS	370	0.44	ND	ND	ND
MW-15	11/26/2013	NS	NS	NS	NS	NS	NS	NS
MW-15	12/18/2013	940	NS	370	0.39	ND	ND	ND
MW-15	1/20/2014	880	NS	360	0.39	ND	ND	0.0058
MW-15	2/25/2014	880	NS	360	0.38	ND	ND	ND
Black Sulfur Crk. UG	6/4/2012	770	10	300	NS	NS	NS	NS
Black Sulfur Crk. UPCREEK	2/28/2013	850	NS	370	0.27	ND	ND	0.022
Black Sulfur Crk. UPCREEK	3/29/2013	900	NS	380	0.044	ND	0.11	0.061
UPCREEK	4/26/2013	980	NS	470	0.064	0.027	0.14	0.14
UPCREEK	5/28/2013	850	NS	340	ND	ND	ND	0.03
UPCREEK	6/20/2013	840	NS	370	ND	ND	ND	0.02
UPCREEK	7/29/2013	800	NS	350	ND	ND	ND	0.01
UPCREEK	8/27/2013	770	NS	350	ND	ND	0.13	0.01
UPCREEK	9/16/2013	820	NS	350	ND	ND	ND	0.025
UPCREEK	10/28/2013	860	NS	380	0.037	ND	ND	0.069
UPCREEK	11/25/2013	780	NS	370	0.026	ND	0.12	0.045
UPCREEK	12/17/2013	860	NS	400	0.25	ND	ND	0.031
UPCREEK	1/20/2014	840	NS	360	0.31	ND	ND	0.027
UPCREEK	2/24/2014	800	NS	360	0.12	ND	ND	0.035

Table 2 - Groundwater Analytical Summary
Inorganics

Sample Location	Sampling Date	TDS (mg/L)	Chlorides (mg/L)	Sulfates (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Dissolved Iron (mg/L)	Dissolved Manganese (mg/L)
	COGCC Table 910-1 Concentration Levels	<1.25 X Background	<1.25 X Background	<1.25 X Background	No COGCC Concentration Level Established			
Black Sulfur Crk. DG	6/4/2012	770	10	310	NS	NS	NS	NS
Black Sulfur Crk. DWCREEK	2/28/2013	870	NS	380	0.26	ND	ND	0.038
Black Sulfur Crk. DWCREEK	3/29/2013	890	NS	380	0.049	ND	0.13	0.093
DWCREEK	4/26/2013	860	NS	440	0.110	0	0.14	0.12
DWCREEK	5/28/2013	830	NS	350	ND	ND	ND	0.05
DWCREEK	6/20/2013	850	NS	360	ND	ND	0.13	0.04
DWCREEK	7/29/2013	770	NS	350	ND	ND	ND	0.02
DWCREEK	8/27/2013	780	NS	350	ND	ND	0.11	0.02
DWCREEK	9/16/2013	820	NS	340	ND	ND	ND	0.04
DWCREEK	10/28/2013	850	NS	370	ND	ND	ND	0.078
DWCREEK	11/25/2013	820	NS	360	0.042	ND	0.13	0.068
DWCREEK	12/17/2013	860	NS	380	0.093	ND	ND	0.050
DWCREEK	1/20/2014	840	NS	340	0.320	ND	ND	0.037
DWCREEK	2/24/2014	810	NS	370	ND	ND	ND	0.041
Black Sulfur Crk. SP1	6/4/2012	780	10	300	NS	NS	NS	NS
Black Sulfur Crk. MIDDLECREEK	2/28/2013	880	ND	370	0.27	ND	ND	0.024
Black Sulfur Crk. MIDDLECREEK	3/29/2013	900	NS	370	0.044	ND	0.12	0.053
MIDCREEK	4/26/2013	740	NS	470	0.058	ND	0.12	0.15
MIDCREEK	5/28/2013	840	NS	350	ND	ND	ND	0.03
MIDCREEK	6/20/2013	840	NS	370	ND	ND	0.11	0.03
MIDCREEK	7/29/2013	810	NS	360	0.120	ND	ND	0.02
MIDCREEK	8/27/2013	800	NS	350	ND	ND	0.12	0.01
MIDCREEK	9/16/2013	800	NS	340	ND	ND	0.08	0.031
MIDCREEK	10/28/2013	860	NS	370	0.032	ND	0.09	0.068
MIDCREEK	11/25/2013	820	NS	360	0.031	ND	0.120	0.039
MIDCREEK	12/17/2013	910	NS	400	0.200	ND	ND	ND
MIDCREEK	1/20/2014	840	NS	340	0.32	ND	ND	0.031
MIDCREEK	2/24/2014	810	NS	360	0.11	ND	ND	0.033

NS = Not sampled

ND = Non detected at or above laboratory reporting limit

mg/L - Milligrams per liter

J= Analyte reported below laboratory reporting limit

Above COGCC Table 910-1 Concentration Level

Table 3 - Groundwater Field Measured Parameters

		Temperature	Conductivity	TDS	Dissolved Oxygen (DO)	pH	ORP	Product Levels	Water Levels
Sample Location	Sampling Date	°C	mS/cm	g/L	mg/L		mV	TOC (ft)	TOC (ft)
MW-1	6/15/2012	15.33	1.574	1.255	3.02	6.96	77.50	ND	23.80
MW-1	7/13/2012	13.10	1.421	1.196	1.89	7.54	-24.00	ND	23.19
MW-1	8/14/2012	12.24	1.474	1.269	2.39	7.52	-81.10	ND	23.21
MW-1	9/13/2012	12.38	1.384	1.185	4.16	7.53	34.80	ND	23.35
MW-1	1/30/2013	8.59	1.63	1.000	1.14	8.19	NT	ND	22.85
MW-1	2/28/2013	NT	NT	NT	NT	NT	NT	ND	NT
MW-1	3/29/2013	11.25	1.82	1.200	1.58	8.48	NT	ND	22.75
MW-1	4/26/2013	10.53	1.7	1.100	1.45	8.66	NT	ND	22.15
MW-1	5/28/2013	11.14	0.149	0.100	1.47	8.72	NT	ND	22.10
MW-1	6/20/2013	11.73	1.92	1.200	2.35	8.73	NT	ND	22.80
MW-1	7/29/2013	11.32	1.77	1.100	1.20	8.72	NT	ND	23.36
MW-1	8/27/2013	10.91	1.84	1.200	1.21	8.53	NT	ND	23.50
MW-1	9/17/2013	9.94	1.72	1.100	1.03	8.35	NT	ND	23.12
MW-1	10/29/2013	9.11	1.74	1.100	1.54	8.20	NT	ND	22.60
MW-1	11/25/2013	8.50	1.76	1.100	1.80	8.10	NT	ND	22.40
MW-1	12/17/2013	8.55	0.885	0.6	2.55	8.42	NT	ND	22.64
MW-1	1/21/2014	NT	NT	NT	NT	NT	NT	NT	NT
MW-1	2/25/2014	9.68	1.60	1.1	1.45	8.23	NT	ND	22.07
MW-2	6/15/2012	19.09	3.49	2.550	3.61	7.24	22.50	ND	23.70
MW-2	7/13/2012	12.08	2.924	2.478	2.67	7.84	-145.80	ND	21.73
MW-2	8/14/2012	14.09	3.341	2.741	3.16	8.24	-224.90	ND	21.80
MW-2	9/13/2012	12.97	2.853	2.462	2.82	7.73	-165.70	ND	21.83
MW-2	1/30/2013	9.08	3.72	2.400	0.72	8.61	NT	ND	21.45
MW-2	2/28/2013	9.90	3.68	2.400	0.82	7.58	NT	ND	21.35
MW-2	3/29/2013	11.37	4.33	2.800	0.84	8.63	NT	ND	21.29
MW-2	4/26/2013	10.99	3.71	2.400	0.91.	8.81	NT	ND	20.59
MW-2	5/28/2013	11.16	3.97	2.500	0.24	8.78	NT	ND	20.68
MW-2	6/20/2013	11.32	3.89	2.500	0.36	8.86	NT	ND	21.34
MW-2	7/30/2013	12.38	3.6	2.200	0.33	9.13	NT	ND	22.91
MW-2	8/28/2013	11.98	2.99	1.900	0.53	8.72	NT	ND	21.93
MW-2	9/17/2013	10.32	2.8	1.800	0.74	8.41	NT	ND	21.61
MW-2	10/29/2013	9.73	2.91	1.900	2.00	8.51	NT	ND	21.06
MW-2	11/26/2013	9.64	3.66	2.300	1.20	8.28	NT	ND	20.95
MW-2	12/18/2013	9.28	3.20	2.0	1.97	8.26	NT	ND	21.19
MW-2	1/21/2014	NT	NT	NT	NT	NT	NT	NT	NT
MW-2	2/25/2014	10.02	2.40	1.5	0.45	8.30	NT	ND	20.64
MW-3	6/15/2012	17.73	2.13	1.607	1.49	7.45	-42.30	ND	22.80
MW-3	7/13/2012	12.62	2.19	1.864	1.11	8.16	-166.80	ND	22.18
MW-3	8/14/2012	17.39	2.792	2.122	3.35	7.92	-188.70	ND	21.43
MW-3	9/13/2012	11.79	1.957	1.702	2.21	7.83	-100.60	ND	22.27
MW-3	1/30/2013	8.64	2.77	1.800	0.65	8.50	NT	ND	21.85
MW-3	2/28/2013	NT	NT	NT	NT	NT	NT	ND	NT
MW-3	3/29/2013	11.51	2.86	1.800	1.03	8.67	NT	ND	21.70
MW-3	4/26/2013	12.14	2.36	1.500	0.72	8.95	NT	ND	21.29
MW-3	5/28/2013	11.38	3.1	2.000	0.81	8.81	NT	ND	21.14
MW-3	6/20/2013	10.98	2.87	1.800	0.73	8.86	NT	ND	21.75
MW-3	7/30/2013	12.00	2.49	1.600	1.52	8.91	NT	ND	22.34
MW-3	8/28/2013	11.17	2.49	1.600	1.07	8.64	NT	ND	22.47
MW-3	9/17/2013	10.75	2.47	1.600	12.00	8.40	NT	ND	22.08
MW-3	10/26/2013	9.98	2.78	1.800	1.36	8.41	NT	ND	21.57
MW-3	11/26/2013	9.63	3.02	1.900	0.96	8.55	NT	ND	21.41
MW-3	12/18/2013	10.11	2.92	1.4	0.68	8.33	NT	ND	21.62
MW-3	1/21/2014	10.03	2.49	1.6	1.65	8.35	NT	ND	21.62
MW-3	2/25/2014	10.55	2.49	1.6	0.97	8.34	NT	ND	21.09

Table 3 - Groundwater Field Measured Parameters

		Temperature	Conductivity	TDS	Dissolved Oxygen (DO)	pH	ORP	Product Levels	Water Levels
Sample Location	Sampling Date	°C	mS/cm	g/L	mg/L		mV	TOC (ft)	TOC (ft)
MW-4	6/15/2012	23.06	2.35	1.577	3.92	7.20	45.70	ND	21.50
MW-4	7/13/2012	12.87	1.762	1.491	3.12	7.67	20.10	ND	21.83
MW-4	8/14/2012	18.30	2.276	1.692	2.26	7.80	-37.20	ND	21.87
MW-4	9/13/2012	10.34	1.678	1.515	8.64	7.59	234.30	ND	21.94
MW-4	1/30/2013	9.01	2.06	1.300	1.03	8.36	NT	ND	21.50
MW-4	2/28/2013	NT	NT	NT	NT	NT	NT	ND	NT
MW-4	3/29/2013	9.77	2.1	1.300	0.94	8.53	NT	ND	21.40
MW-4	4/26/2013	18.84	1.91	1.200	1.14	8.62	NT	ND	20.98
MW-4	05/58/2013	10.75	2.1	1.300	1.96	8.70	NT	ND	20.82
MW-4	6/20/2013	10.27	2	1.300	1.23	8.77	NT	ND	21.43
MW-4	7/29/2013	11.05	2.03	1.300	1.09	8.71	NT	ND	21.98
MW-4	8/27/2013	10.61	2.02	1.300	1.66	8.61	NT	ND	22.10
MW-4	9/16/2013	10.24	1.73	1.100	1.66	8.40	NT	ND	21.77
MW-4	10/28/2013	9.39	1.97	1.300	1.15	8.42	NT	ND	21.25
MW-4	11/25/2013	9.71	1.98	1.300	1.83	8.51	NT	ND	21.06
MW-4	12/17/2013	8.48	0.386	0.3	2.35	8.36	NT	ND	21.30
MW-4	1/20/2014	9.46	1.88	1.2	1.65	8.26	NT	ND	21.29
MW-4	2/24/2014	9.90	1.88	1.2	1.76	8.40	NT	ND	20.76
MW-5	6/15/2012	16.92	1.87	1.431	2.85	7.05	63.50	ND	19.30
MW-5	7/13/2012	13.91	1.766	1.457	2.72	7.49	24.50	ND	19.48
MW-5	8/14/2012	15.39	1.924	1.527	6.30	7.76	-35.30	ND	19.42
MW-5	9/13/2012	11.56	1.9	1.661	3.13	7.66	150.50	ND	19.56
MW-5	1/30/2013	9.46	2.46	1.600	1.37	8.66	NT	ND	19.10
MW-5	2/28/2013	10.05	2.19	1.400	3.07	7.51	NT	ND	19.50
MW-5	3/29/2013	10.35	2.21	1.400	2.21	8.58	NT	ND	19.02
MW-5	4/26/2013	11.55	2.31	1.500	1.62	8.68	NT	ND	18.60
MW-5	5/28/2013	10.52	0.34	0.200	1.27	8.81	NT	ND	18.44
MW-5	6/20/2013	10.70	1.65	1.100	1.34	8.75	NT	ND	19.04
MW-5	7/29/2013	10.67	2.66	1.700	1.75	8.80	NT	ND	19.56
MW-5	8/27/2013	10.82	2.61	1.700	1.46	8.57	NT	ND	19.09
MW-5	9/16/2013	10.92	1.316	1.700	2.63	1.63	NT	ND	19.39
MW-5	10/28/2013	10.07	1.362	0.900	1.24	8.34	NT	ND	18.86
MW-5	11/25/2013	9.65	0.326	0.300	2.57	8.34	NT	ND	18.66
MW-5	12/17/2013	9.46	2.47	1.6	1.45	8.47	NT	ND	18.89
MW-5	1/20/2014	9.77	2.45	1.0	1.92	8.40	NT	ND	18.92
MW-5	2/24/2014	10.21	2.74	1.8	1.29	8.52	NT	ND	18.38
MW-6	6/15/2012	17.59	4.31	3.100	3.94	7.45	49.80	ND	19.20
MW-6	7/13/2012	13.15	3.474	2.918	2.82	7.70	1.50	ND	20.45
MW-6	8/14/2012	16.69	3.91	3.010	2.73	8.11	-38.70	ND	18.39
MW-6	9/13/2012	11.47	3.22	2.803	4.74	7.95	283.90	ND	18.55
MW-6	1/30/2013	9.82	3.83	2.500	1.06	8.83	NT	ND	18.09
MW-6	2/28/2013	7.82	3.09	2.000	1.46	7.72	NT	ND	18.50
MW-6	3/29/2013	10.71	3.33	2.600	1.98	8.78	NT	ND	18.01
MW-6	4/26/2013	10.25	3.81	2.400	1.34	8.78	NT	ND	17.64
MW-6	5/28/2013	10.75	3.89	2.500	1.11	8.93	NT	ND	17.44
MW-6	6/20/2013	11.74	3.91	2.500	1.20	8.93	NT	ND	18.04
MW-6	7/29/2013	10.58	3.93	2.500	1.38	8.89	NT	ND	18.56
MW-6	8/27/2013	10.65	3.79	2.400	0.98	8.79	NT	ND	18.66
MW-6	9/16/2013	10.88	2.55	1.600	1.50	8.54	NT	ND	18.35
MW-6	10/28/2013	10.22	3.54	0.300	1.87	8.52	NT	ND	17.88
MW-6	11/25/2013	9.45	3.82	2.400	1.63	8.47	NT	ND	17.65
MW-6	12/17/2013	9.96	3.86	2.500	1.65	8.49	NT	ND	17.89
MW-6	1/20/2014	9.65	3.89	2.500	1.37	8.31	NT	ND	17.89
MW-6	2/24/2014	10.35	3.74	2.400	1.66	8.34	NT	ND	17.40

Table 3 - Groundwater Field Measured Parameters

		Temperature	Conductivity	TDS	Dissolved Oxygen (DO)	pH	ORP	Product Levels	Water Levels
Sample Location	Sampling Date	°C	mS/cm	g/L	mg/L		mV	TOC (ft)	TOC (ft)
MW-7	6/15/2012	16.32	2.418	1.884	14.83	7.18	16.70	ND	25.40
MW-7	7/13/2012	13.04	2.429	2.046	0.32	7.67	-133.30	ND	24.26
MW-7	8/14/2012	17.68	2.895	2.185	17.95	7.90	-114.90	ND	24.37
MW-7	9/13/2012	11.98	2.364	2.045	1.44	7.63	-107.20	ND	24.43
MW-7	1/30/2013	4.86	2.62	1.700	0.26	8.47	NS	ND	24.05
MW-7	2/28/2013	NT	NT	NT	NT	NT	NT	ND	NT
MW-7	3/29/2013	10.80	1.98	1.300	0.51	8.71	NT	ND	23.90
MW-7	4/26/2013	10.39	2.53	1.600	0.45	8.68	NT	ND	23.34
MW-7	5/28/2013	10.70	3.13	2.000	0.96	8.78	NT	ND	23.28
MW-7	6/20/2013	11.16	3.19	2.000	0.39	8.79	NT	ND	24.01
MW-7	7/30/2013	11.69	3.05	2.000	0.25	8.93	NT	ND	24.51
MW-7	8/28/2013	11.59	2.83	1.800	0.44	8.56	NT	ND	24.64
MW-7	9/17/2013	10.93	2.54	1.600	0.60	8.47	NT	ND	24.25
MW-7	10/29/2013	9.38	3.08	2.000	1.01	8.30	NT	ND	23.73
MW-7	11/26/2013	8.63	3.46	2.200	1.08	8.16	NT	ND	23.58
MW-7	12/18/2013	7.90	2.45	1.600	0.83	8.14	NT	ND	23.80
MW-7	1/21/2014	9.29	3.34	2.100	0.46	8.13	NT	ND	23.79
MW-7	2/25/2014	10.21	2.42	1.500	0.96	8.26	NT	ND	23.27
MW-8	7/10/2013	10.18	2.770	1.800	1.53	8.86	NT	ND	20.22
MW-8	7/29/2013	10.19	2.800	1.800	1.70	8.78	NT	ND	20.53
MW-8	8/27/2013	10.56	2.840	1.800	3.59	8.58	NT	ND	20.65
MW-8	9/16/2013	10.40	2.360	1.500	2.11	8.35	NT	ND	20.31
MW-8	10/28/2013	9.54	2.060	1.300	2.41	8.27	NT	ND	19.70
MW-8	11/26/2013	8.63	0.747	0.500	2.00	8.22	NT	ND	19.53
MW-8	12/18/2013	8.94	1.840	1.200	2.06	8.18	NT	ND	19.77
MW-8	1/21/2014	NT	NT	NT	NT	NT	NT	NT	NT
MW-8	2/24/2014	9.21	1.78	1.100	2.03	8.20	NT	ND	19.15
MW-9	7/10/2013	10.29	2.000	1.300	3.62	8.82	NT	ND	20.01
MW-9	7/29/2013	10.68	1.960	1.300	3.60	8.69	NT	ND	26.26
MW-9	8/27/2013	12.33	1.900	1.200	3.72	8.64	NT	ND	26.41
MW-9	9/16/2013	10.54	1.810	1.200	3.14	8.40	NT	ND	26.09
MW-9	10/28/2013	9.59	1.880	1.200	3.33	8.44	NT	ND	25.53
MW-9	11/25/2013	8.93	1.950	1.300	3.49	8.30	NT	ND	25.31
MW-9	12/18/2013	8.88	1.890	1.200	3.64	8.14	NT	ND	25.54
MW-9	1/21/2014	8.71	1.870	1.200	3.19	8.25	NT	ND	25.55
MW-9	2/24/2014	9.21	1.780	1.100	2.84	8.20	NT	ND	25.00
MW-10	7/10/2013	10.97	2.980	1.900	4.58	8.82	NT	ND	23.12
MW-10	7/29/2013	11.07	2.960	1.900	3.59	8.79	NT	ND	23.31
MW-10	8/27/2013	11.45	2.980	1.900	2.82	8.55	NT	ND	23.42
MW-10	9/16/2013	11.48	2.890	1.900	2.89	8.52	NT	ND	23.10
MW-10	10/28/2013	11.00	2.950	1.900	3.43	8.36	NT	ND	22.58
MW-10	11/25/2013	8.69	0.427	0.300	4.04	8.35	NT	ND	22.25
MW-10	12/18/2013	NT	NT	NT	NT	NT	NT	NT	NT
MW-10	1/21/2014	NT	NT	NT	NT	NT	NT	NT	NT
MW-10	2/24/2014	9.98	3.090	2.000	3.28	8.22	NT	ND	22.09
MW-11	7/10/2013	9.93	1.920	1.200	1.12	8.91	NT	ND	16.21
MW-11	7/30/2013	9.88	1.870	1.200	1.60	8.85	NT	ND	16.46
MW-11	8/28/2013	9.73	1.830	1.200	1.65	8.65	NT	ND	16.59
MW-11	9/17/2013	9.38	1.810	1.200	1.77	8.42	NT	ND	16.24
MW-11	12/18/2013	9.14	1.890	1.900	2.48	8.27	NT	ND	15.76
MW-11	10/29/2013	8.99	1.810	1.200	1.90	8.30	NT	ND	15.72
MW-11	11/26/2013	8.85	1.457	0.900	1.73	8.31	NT	ND	15.54
MW-11	1/21/2014	NT	NT	NT	NT	NT	NT	NT	NT
MW-11	2/25/2014	9.03	1.860	1.200	1.63	8.25	NT	ND	15.23
MW-12	7/10/2013	11.50	1.720	1.100	1.21	8.90	NT	ND	16.79
MW-12	7/30/2013	10.28	1.680	1.100	1.34	8.65	NT	ND	17.06
MW-12	8/28/2013	9.35	1.620	1.000	1.86	8.54	NT	ND	17.20
MW-12	9/17/2013	9.54	1.490	1.000	1.62	8.35	NT	ND	16.83
MW-12	10/29/2013	8.87	1.274	0.800	1.93	8.36	NT	ND	16.26
MW-12	11/26/2013	8.68	1.850	1.200	1.80	8.22	NT	ND	16.10
MW-12	12/18/2013	8.52	1.710	1.100	2.52	8.19	NT	ND	16.34
MW-12	1/21/2014	8.80	1.780	1.100	1.28	8.22	NT	ND	16.36
MW-12	2/25/2014	9.08	1.720	1.100	2.09	8.25	NT	ND	15.80

Table 3 - Groundwater Field Measured Parameters

		Temperature	Conductivity	TDS	Dissolved Oxygen (DO)	pH	ORP	Product Levels	Water Levels
Sample Location	**Sampling Date**	**°C**	**mS/cm**	**g/L**	**mg/L**		**mV**	**TOC (ft)**	**TOC (ft)**
MW-13	7/10/2013	10.73	1.580	1.000	1.50	8.61	NT	ND	15.92
MW-13	7/30/2013	10.12	1.550	1.000	1.45	8.72	NT	ND	16.10
MW-13	8/28/2013	10.28	1.550	1.000	1.63	8.44	NT	ND	16.23
MW-13	9/17/2013	9.70	1.510	1.000	1.73	8.37	NT	ND	15.84
MW-13	10/29/2013	9.05	1.510	1.000	1.51	8.23	NT	ND	15.22
MW-13	11/26/2013	8.73	1.540	1.000	1.50	8.21	NT	ND	15.10
MW-13	12/17/2013	8.84	1.520	1.000	1.93	8.22	NT	ND	15.35
MW-13	1/21/2014	8.86	1.510	1.000	1.34	8.21	NT	ND	15.38
MW-13	2/25/2014	8.98	1.467	0.900	1.90	8.17	NT	ND	14.77
MW-14	7/10/2013	10.05	1.580	1.000	2.47	8.78	NT	ND	13.97
MW-14	7/30/2013	10.19	1.590	1.000	1.63	8.73	NT	ND	14.32
MW-14	8/28/2013	9.75	1.540	1.000	1.57	8.44	NT	ND	14.44
MW-14	9/17/2013	9.91	1.530	1.000	1.67	8.50	NT	ND	14.04
MW-14	10/29/2013	8.82	1.520	1.000	1.58	8.20	NT	ND	13.44
MW-14	11/26/2013	8.93	1.540	1.000	1.82	8.24	NT	ND	13.34
MW-14	12/17/2013	8.87	1.540	1.000	1.88	8.27	NT	ND	13.61
MW-14	1/21/2014	8.74	0.184	0.100	2.21	8.24	NT	ND	13.59
MW-14	2/25/2014	8.56	1.483	1.000	1.62	8.18	NT	ND	13.04
MW-15	7/10/2013	10.27	1.570	1.000	2.20	8.68	NT	ND	12.68
MW-15	7/30/2013	9.78	1.510	1.000	1.79	8.81	NT	ND	12.98
MW-15	8/28/2013	10.19	1.530	1.000	1.71	8.40	NT	ND	13.10
MW-15	9/17/2013	9.83	1.550	1.000	1.61	8.43	NT	ND	12.66
MW-15	10/29/2013	8.85	1.426	0.900	1.52	8.24	NT	ND	12.01
MW-15	11/25/2013	NT	NT	NT	NT	NT	NT	NT	NT
MW-15	12/18/2013	8.99	1.560	1.000	1.86	8.20	NT	ND	12.20
MW-15	1/20/2014	9.51	1.480	1.000	1.69	8.32	NT	ND	12.24
MW-15	2/25/2014	8.59	1.490	1.000	1.63	8.16	NT	ND	11.64
Black Sulfur Crk. UPCREEK	3/29/2013	13.02	1.42	0.900	9.26	8.80	NT	ND	NT
UPCREEK	4/26/2013	14.72	1.53	1.000	6.70	8.84	NT	ND	NT
UPCREEK	5/28/2013	9.13	1.33	0.900	9.81	9.01	NT	ND	NT
UPCREEK	6/20/2013	12.70	1.337	0.900	9.67	9.12	NT	ND	NT
UPCREEK	7/29/2013	15.73	1.305	0.800	6.34	9.17	NT	ND	NT
UPCREEK	8/27/2013	13.45	1.098	0.800	5.97	8.90	NT	ND	NT
UPCREEK	9/16/2013	12.24	1.379	0.900	6.17	8.70	NT	ND	NT
UPCREEK	10/28/2013	6.03	1.391	0.900	7.79	8.43	NT	ND	NT
UPCREEK	11/25/2013	3.98	1.354	0.900	7.64	8.56	NT	ND	NT
UPCREEK	12/17/2013	0.04	1.412	0.9	13.14	8.17	NT	ND	NT
UPCREEK	1/20/2014	0.16	1.38	0.9	11.35	8.27	NT	ND	NT
UPCREEK	2/24/2014	2.41	1.344	0.9	11.21	8.36	NT	ND	NT
Black Sulfur Crk. DG	6/4/2012	NT	NT	NT	NT	NT	NT	ND	NT
Black Sulfur Crk. DWCREEK	2/28/2013	1.14	1.266	0.800	11.55	8.08	NT	ND	NT
Black Sulfur Crk. DWCREEK	3/29/2013	10.46	1.436	0.900	9.53	8.74	NT	ND	NT
DWCREEK	4/26/2013	12.06	1.489	1.000	5.87	8.77	NT	ND	NT
DWCREEK	5/28/2013	9.04	1.342	0.900	9.27	9.00	NT	ND	NT
DWCREEK	6/20/2013	10.46	1.946	0.900	9.17	9.04	NT	ND	NT
DWCREEK	7/29/2013	15.68	1.28	0.800	6.60	9.07	NT	ND	NT
DWCREEK	8/27/2013	14.41	1.27	0.800	7.19	8.92	NT	ND	NT
DWCREEK	9/16/2013	12.24	1.329	0.900	7.63	8.72	NT	ND	NT
DWCREEK	10/28/2013	5.40	1.394	0.900	8.98	8.30	NT	ND	NT
DWCREEK	11/25/2013	5.33	1.451	0.900	8.72	8.28	NT	ND	NT
DWCREEK	12/17/2013	0.10	1.421	0.9	12.86	8.18	NT	ND	NT
DWCREEK	1/20/2014	0.22	1.384	0.9	11.11	8.00	NT	ND	NT
DWCREEK	2/24/2014	2.74	1.352	0.9	11.30	8.22	NT	ND	NT
Black Sulfur Crk. SP1	6/4/2012	NT	NT	NT	NT	NT	NT	ND	NT

Table 3 - Groundwater Field Measured Parameters

		Temperature	Conductivity	TDS	Dissolved Oxygen (DO)	pH	ORP	Product Levels	Water Levels
Sample Location	Sampling Date	°C	mS/cm	g/L	mg/L		mV	TOC (ft)	TOC (ft)
Black Sulfur Crk. MIDDLECREEK	2/28/2013	0.73	1.245	0.800	11.82	8.08	NT	ND	NT
Black Sulfur Crk. MIDDLECREEK	3/29/2013	13.48	1.431	0.900	5.87	8.78	NT	ND	NT
MIDCREEK	4/26/2013	14.49	1.550	1.000	5.17	8.05	NT	ND	NT
MIDCREEK	5/28/2013	9.62	1.330	0.500	8.73	9.03	NT	ND	NT
MIDCREEK	6/20/2013	13.57	1.337	0.900	8.58	9.28	NT	ND	NT
MIDCREEK	7/29/2013	15.62	1.301	0.800	7.08	9.13	NT	ND	NT
MIDCREEK	8/27/2013	13.70	1.326	0.900	6.64	8.89	NT	ND	NT
MIDCREEK	9/16/2013	14.14	1.720	1.100	2.33	8.54	NT	ND	NT
MIDCREEK	10/26/2013	5.50	1.401	82.900	8.46	8.39	NT	ND	NT
MIDCREEK	11/25/2013	3.50	1.384	0.900	7.82	8.40	NT	ND	NT
MIDCREEK	12/17/2013	2.12	1.52	1.0	8.99	8.30	NT	ND	NT
MIDCREEK	1/20/2014	0.22	1.38	0.9	11.32	8.20	NT	ND	NT
MIDCREEK	2/24/2014	3.02	1.354	0.9	10.74	8.22	NT	ND	NT

NS = Not sampled

ND = Non detected at or above laboratory reporting limit

NT = Not tested

mV - Millivolts

^{o}C - Degrees Celsius

mS/cm - Millisiemens per centimeter

TDS - Total dissolved solids

g/L - Grams per Liter

mg/l - Milligrams per liter

TOC - Top of casing

ORP - Oxidation reduction potential

Table 4 - Soil Analytical Summary - BTEX, GRO, DRO and PID Field Screening Measurements

Sample Location	Depth	Sampling Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	Total Petroleum Hydrocarbon (DRO+GRO)	PID Field Screening Results (ppm)
COGCC Concentration Levels (mg/kg)			0.17	100	85	175	500	500	500	N/A
BH01	10 ft	5/30/2012	0.05	2.30	2.80	37	3,300	590	3,890	4,873
BH02	10 ft	5/30/2012	0.04	3.30	4.90	74	3,300	370	3,670	4,212
BH03	19-20 ft	5/30/2012	10.00	38.00	220	440	22,000	1,100	23,100	5,000
BH04	19-20 ft	5/30/2012	9.10	14.00	100	160	5,400	250	5,650	5,000
BH05	19-20 ft	5/30/2012	0.02	0.13	0.36	1.90	130	42	172	348
BH06	19-20 ft	5/30/2012	1.90	4.50	18.00	66	4,100	250	4,350	2,290
BH07	19-20 ft	5/30/2012	4.80	11.0	73.0	130	12,000	820	12,820	5,000
BH08	19-20 ft	5/30/2012	0.11	0.93	3.10	12.00	720	170	890	NS
BH09	19-20 ft	6/5/2012	0.11	0.47	2.40	7.60	160	17	177	890
BH10	19-20 ft	6/5/2012	ND	ND	0.17	0.43	ND	9.7	9.7	612
BH11	19-20 ft	6/5/2012	ND	ND	ND	ND	ND	16	16	<1
BH12	19-20 ft	6/5/2012	ND	ND	ND	ND	ND	29	29	6
BH13	19-20 ft	6/5/2012	ND	ND	ND	ND	ND	13	13	9
BH14	19-20 ft	6/5/2012	ND	ND	ND	ND	ND	7.7	7.7	<1
BH15	19-20 ft	6/5/2012	ND	ND	0.06	ND	ND	13	13	6
BH16	19-20 ft	6/5/2012	ND	ND	ND	ND	ND	14	14	<1
BH17	19-20 ft	6/5/2012	ND	ND	ND	ND	ND	6.8	6.8	<1
BH18	19-20 ft	6/5/2012	ND	ND	ND	ND	ND	13	13	<1
BH19	19-20 ft	6/5/2012	ND	ND	ND	ND	ND	17	17	<1
BH20	19-20 ft	6/5/2012	ND	ND	ND	ND	ND	ND	ND	<1
BH21	19-20 ft	6/5/2012	0.50	2.90	2.30	38	1,100	59	1,159	4,067
BH22	19-20 ft	6/5/2012	ND	ND	ND	ND	ND	ND	ND	3
BH23	19-20 ft	6/5/2012	ND	1.20	0.05	19	960	210	1,170	4,788
BH24	19-20 ft	6/5/2012	0.31	0.59	0.44	2.70	120	ND	120	4,712
CB BH01	19-20 ft	5/31/2012	ND	0.03	0.09	0.29	ND	10	10	23
CB BH02	19-20 ft	5/31/2012	6	37	190	620	12,000	9,600	21,600	4,620
CB BH03	19-20 ft	5/31/2012	0.02	ND	0.11	0.14	26	66	92	206
CB BH04	19-20 ft	5/31/2012	0.04	0.03	0.31	0.38	110	280	390	NS
B1	15-22 ft	6/26/2013	ND	ND	ND	ND	ND	10	10	<1
B2	20-27 ft	6/26/2013	ND	ND	ND	ND	ND	10	10	<1
B3	20-22 ft	6/26/2013	ND	ND	ND	ND	ND	10	10	<1
B4	10-12 ft	6/27/2013	ND	ND	ND	ND	ND	25	25	<1
B5	17-19 ft	6/27/2013	ND	ND	ND	ND	36	28	64	<1
B6	12-17 ft	6/27/2013	ND	ND	ND	ND	ND	10	10	2
B7	15-17 ft	6/28/2013	ND	ND	0.17	0.63	ND	37	37	<1
B8	10-12 ft	6/28/2013	ND	ND	ND	ND	ND	23	23	<1

NS = Not sampled (Lab Analytical)

ND = Non detect

NT = Not tested (Field Analytical)

PID - Photo-ionization detector

GRO - Gasoline range hydrocarbons

DRO - Diesel range hydrocarbons

ppm - Parts per million

J - Analyte reported below laboratory report limit

mg/kg - Milligrams per kilogram

Above COGCC Table 910-1 Concentration Soil Level

Table 5 - Soil Ananlytical Summary-Metals

Sample Location	Depth	Sampling Date	Arsenic (mg/kg)	Barium (mg/kg)	Chromium (III) (mg/kg)	Chromium (VI) (mg/kg)	Lead (mg/kg)
COGCC Concentration Levels (mg/kg)			0.39	15,000	120,000	23	400
BH01	10 ft	5/30/2012	2.7	350.0	19.0	19.0	7.20
BH02	10 ft	5/30/2012	4.4	250.0	31.0	31.0	13.0
BH03	19-20 ft	5/30/2012	NS	NS	NS	NS	NS
BH04	19-20 ft	5/30/2012	NS	NS	NS	NS	NS
BH05	19-20 ft	5/30/2012	NS	NS	NS	NS	NS
BH06	19-20 ft	5/30/2012	NS	NS	NS	NS	NS
BH07	19-20 ft	5/30/2012	NS	NS	NS	NS	NS
BH08	19-20 ft	5/30/2012	NS	NS	NS	NS	NS
BH09	19-20 ft	6/5/2012	NS	NS	NS	NS	NS
BH10	19-20 ft	6/5/2012	NS	NS	NS	NS	NS
BH11	19-20 ft	6/5/2012	NS	NS	NS	NS	NS
BH12	19-20 ft	6/5/2012	NS	NS	NS	NS	NS
BH13	19-20 ft	6/5/2012	NS	NS	NS	NS	NS
BH14	19-20 ft	6/5/2012	NS	NS	NS	NS	NS
BH15	19-20 ft	6/5/2012	NS	NS	NS	NS	NS
BH16	19-20 ft	6/5/2012	NS	NS	NS	NS	NS
BH17	19-20 ft	6/5/2012	NS	NS	NS	NS	NS
BH18	19-20 ft	6/5/2012	NS	NS	NS	NS	NS
BH19	19-20 ft	6/5/2012	NS	NS	NS	NS	NS
BH20	19-20 ft	6/5/2012	NS	NS	NS	NS	NS
BH21	19-20 ft	6/5/2012	NS	NS	NS	NS	NS
BH22	19-20 ft	6/5/2012	NS	NS	NS	NS	NS
BH23	19-20 ft	6/5/2012	NS	NS	NS	NS	NS
BH24	19-20 ft	6/5/2012	NS	NS	NS	NS	NS
CB BH01	19-20 ft	5/31/2012	NS	NS	NS	NS	NS
CB BH02	19-20 ft	5/31/2012	NS	NS	NS	NS	NS
CB BH03	19-20 ft	5/31/2012	NS	NS	NS	NS	NS
CB BH04	19-20 ft	5/31/2012	NS	NS	NS	NS	NS
B1	15-22 ft	6/26/2013	NS	NS	NS	NS	NS
B2	20-27 ft	6/26/2013	NS	NS	NS	NS	NS
B3	20-22 ft	6/26/2013	NS	NS	NS	NS	NS
B4	10-12 ft	6/27/2013	NS	NS	NS	NS	NS
B5	17-19 ft	6/27/2013	NS	NS	NS	NS	NS
B6	12-17 ft	6/27/2013	NS	NS	NS	NS	NS
B7	15-17 ft	6/28/2013	NS	NS	NS	NS	NS
B8	10-12 ft	6/28/2013	NS	NS	NS	NS	NS

mg/kg - milligrams per kilogram

ND - Non Detect

NS - Not Sampled

Above COGCC Table 910-1 Soil Concentration Level

Sensitive Area Determination Checklist

Client	**Williams (Bargath, LLC)**		
Field Eval.			
Office Eval.	**Karl Taboga, P.G.**	**Hydrogeologist**	**8/23/2011**
Evaluator Name(s)		*Position*	*Date*
Black Sulphur		**Compressor Station**	
Site Name		*Site Type*	
39.856837 / -108.329057		**T2S R97W Sec19 SWSW**	
Site Lat/Lon (NAD 83)		*Site PLSS*	

Online data available at: http://cogcc.state.co.us/

Is the proposed, new or existing location currently designated as a sensitive area?

■ YES ☐ NO

SURFACE WATER

1. Are there any surface water features or SWSAs adjacent to or within 1/4 mile of the proposed new or existing facility?

■ YES ☐ NO

If yes, list type of surface water feature(s), i.e., rivers, creeks, streams, seeps, springs, wetlands:

- *Black Sulphur Creek*

If yes, describe location relative to facility: *Located ~400' SSW of the south boundary of facility*

2. Could a potential release from the facility reach surface water features?

■ YES ☐ NO

If yes, describe the pathway a release from the facility would likely follow to determine if the potential to impact surface water is high or low:

A potential release could reach the drainage by flowing south across the level facility site for a minimum distance of ~400 feet, progress across a small road and continue across the floodplain to the creek channel.

3. Is the potential to impact surface water from a facility release high or low?

☐ HIGH ■ LOW

GROUNDWATER

1. Will the proposed/new or existing facility have any pits which will contain hydrocarbons and chlorides or other E&P wastes?

☐ YES ■ NO Source: *Williams Bargath, LLC*

If yes, List the pit type(s):

2. Is the site of the proposed facility underlain by an unconfined aquifer or recharge zone?

■ YES ☐ NO

Source: http://www.dwr.state.co.us/WellPermitSearch/default.aspx

3. Is the hydraulic conductivity of the underlying soil or geologic material $\leq$ **1.0 x 10^{-7}** cm/sec?

☐ YES ■ NO

Source for Soils: *SoilDataMart@nrcs.usda.gov*

Source for Geology: USGS Open File Report (OFR) 02-197, Online at: http://pubs.usgs.gov/of/2002/ofr02197/spreadsheets.html

4. Is the proposed facility located within ***1/8*** mile of a domestic water well or 1/4 mile of a public water supply well which would use the same aquifer?

☐ YES ■ NO

Source: http://www.dwr.state.co.us/WellPermitSearch/default.aspx

5. Is the proposed facility located within a 100 year floodplain?

■ YES (Sensitive ***Area)*** ☐ NO (If no, proceed to question ***#6.)***

6. Is the depth to groundwater known?

■ YES ***(If yes,*** follow instructions provided in ***6(a)*** of this section).

☐ NO (if no, follow instructions provided in ***6(b)*** of this section).

(a) If yes, could a potential release **from** the proposed facility reach groundwater?

■ YES ☐ NO

If yes, explain: Groundwater impacts identified in 2012.

(b) If no:

(i) Evaluate surrounding soils, topography, and vegetation which may suggest the presence of shallow groundwater.
(ii) Gather information from surrounding well data in order to determine a depth to groundwater, i.e. State Engineers Office.

See DGW data from DWR, below.

(http://www.dwr.state.co.us/WellPermitSearch/default.aspx)

7. Is the type of soil underlying the facility known?

■ YES ☐ NO

If yes, list: Barcus channery loamy sand

Source: http://cogcc.state.co.us/infosys/Maps/LoadMap.cfm

8. Is the geologic unit underlying the facility known?

■ YES ☐ NO

If yes, list: Quaternary Alluvial Deposits underlain by Uinta formation

Source: http://cogcc.state.co.us/infosys/Maps/LoadMap.cfm

9. Is the potential to impact ground water from the facility in the event of a release high or low?

■ HIGH ☐ LOW

Narrative

Facility: Black Sulphur Compressor Station
Location: T2S R97W S19 SWSW
Operator: Williams (Bargath, LLC)

Facility Description

The Black Sulphur Compressor Station is a natural gas production facility owned and operated by Williams (Bargath, LLC). The facility occupies an area of ~0.25 acres and is located approximately 25 miles southwest of Meeker, in Rio Blanco County, Colorado. The Black Sulphur Compressor Station is not located in a currently COGCC designated Sensitive Area.

On-Site E&P Waste Storage

The facility includes a number of tanks that contain various types of E&P waste and production chemicals. In the event of a spill, the storage tanks are located within secondary containment structures that have net capacities which exceed the storage capacities of the tanks. The facility does not have any on-site pits that will be used to store E&P wastes

The types of E&P waste stored on the facility may include:

- Condensate

Project Potential to Adversely Impact Surface Water

The southern edge of the facility is located approximately 400 feet north of Black Sulphur Creek. A potential release could reach the drainage by flowing south across the level facility site and continue for a minimum distance of ~400 feet, progress across a small road and continue across the floodplain to the creek channel. The potential to impact surface water in the event of a release from this facility is low.

Project Potential to Adversely Impact Groundwater

There are no pits on the facility which contain E&P waste. Currently, wastes are stored on-site in tanks which are located within secondary containment structures that have net capacities that exceed the storage capacities of the tanks. Furthermore, the facility is not located within 1/8 mile of a domestic well or a ¼ mile radius of a municipal water supply well.

NRCS data indicates that Barcus channery loamy sand underlies the facility. Saturated conductivity (Ksat) values for this type of soil range from 4.23×10^{-4} to 1.41×10^{-2} cm/sec (NRCS, 2011). Surface geologic units consist of Quaternary alluvial deposits underlain by Uintah Formation units. Likely hydraulic conductivity

values for stream terrace deposits range from 3.53 x 10^{-4} to 3.53 x 10^{-2} cm/sec (USGS, 2002).

The depth to groundwater (DGW) for the facility varies from approximately 15-ft to 25-ft below ground surface. This is data that has been collected since June 2012.

Based on the available data, it is InterTech Environmental & Engineering, LLC's (InterTech's) opinion that the potential to adversely impact groundwater in the event of a release from this facility is high.

Conclusion

It is InterTech's professional judgment that the facility is located in a sensitive area. Please see the attached checklist for summary and additional data for this facility.

References

COGCC, 2011. Online: http://cogcc.state.co.us/infosys/maps/

DWR, 2011. Online: www.dwr.state.co.us/wellpermitsearch

NRCS, 2011. Online: SoilDataMart@nrcs.usda.gov

Halford, K. J. and E. L. Kuniansky, 2002. Spreadsheets for the Analysis of Aquifer-Test and Slug-Test Data, Version 1.2, Open-File Report 02-197 U. S. Geological Survey, Carson City, NV, 54 p.

InterTech