April 27, 2016

Annette Garrigues
Williams Midstream
2717 County Road 215, Suite 200
Parachute, CO 81635

Re: **Proposed Soil Vapor Extraction and Air Sparge Expansion**
Black Sulfur Compressor Station – COGCC Facility Number 428642
Remediation Project Number 8268
County Road 26,
Rio Blanco County CO

Dear Ms. Garrigues,

The Black Sulphur Compressor Station (site) is an active compressor station operated by Williams. Olsson Associates, Incorporated (Olsson) is proposing to expand the existing air sparge and soil-vapor extraction remediation system (AS/SVE) to expedite remediation of those impacted areas known to be at the fringe of the current remediation system's physical limits.

PROJECT SUMMARY

A condensate spill (COGCC Spill Number 2229161) was discovered at the site in June 2012. Numerous site characterization and monitoring activities have been conducted by Olsson and others identifying soil and groundwater contamination at the site. An AS/SVE system was installed to remediate impacted soil and groundwater in January 2015. To date, those monitoring wells within the site boundary have had benzene impacts in groundwater reduced to below or approaching Table 910-1 groundwater standards for benzene. Monitoring well MW7 is located outside of the site boundary to the north and cross- to up-gradient of the AS/SVE wells and has persistently shown hydrocarbon impacts exceeding the Table 910-1 benzene standard during the life of the project. The AS/SVE system was expanded to include an existing monitoring well (MW1) in October 2015; however, MW7 benzene concentrations have remained consistent during the two subsequent quarterly monitoring events.

A summary of groundwater monitoring at the site and adjacent area shows:

- MW1, MW6, MW8, MW9, MW10, MW11, MW12, MW13, MW14, and MW15 have not had detections of benzene during the life of the project;
- MW2 benzene concentrations have been reduced from 5,000 micrograms per liter (µg/L) to 6.1 µg/L;
- MW3 benzene concentrations have been reduced from 3,000 µg/L to none-detected;
- MW4 benzene concentrations have been reduced from 10 µg/L to none-detected;

760 Horizon Drive, Suite 102
Grand Junction, Colorado, CO 81506
TEL 970.263.7800
FAX 970.2637456
www.oaconsulting.com

- MW5 experiences seasonal benzene fluctuations between none-detected to 5.4 µg/L;
- MW7 benzene concentrations have ranged from 13,000 µg/L to 1,400 µg/L;
- Groundwater levels range from approximately 18 to 23 feet below grade; and,
- Groundwater flows generally to the east.

The SVE system has removed an estimated 2,317 pounds of total petroleum hydrocarbons and 33 pounds of benzene as of March 24, 2106. MW2 and MW7 are the only monitoring wells showing contaminated groundwater during the first quarter 2016 monitoring event. A graph showing benzene concentrations of select wells at the site is attached.

CONCLUSIONS AND RECOMMENDATIONS

Overall AS/SVE well layout and operation has been effective to reduce benzene concentrations throughout the site and down gradient monitoring wells. MW7 is located cross- to up-gradient of the remediation system layout and continues to exceed the Table 910-1 benzene standard.

Olsson proposes to install one additional SVE well (SVE5) and one additional AS well (AS24) north of the site and up gradient of MW7. The proposed well locations, radii of influence, and existing site equipment layout are shown in the attached **Figure 1**.

The wells will be installed utilizing a 4.25-inch solid stem auger in pre-potholed (hydroexcavation) locations to avoid buried utilities. Soil conditions, lithology, and evidence of soil and/or groundwater impact will be documented during the installation and screened by soil color, odor, and presence of volatile organic compounds. The wells will be completed aboveground and protected from local vehicle traffic.

The SVE well will be completed to approximately 20 feet below ground surface (fbgs; approximately three feet above the groundwater table) with the interval between 5 to 20 fbgs screened with two-inch diameter 0.1-inch slotted PVC and filtered with washed 10-20 silica sand. The interval between 0 to 5 fbgs will be grouted with hydrated bentonite chips to seal the vacuum and prevent surface water intrusion into the well bore.

The AS well will be completed to a depth of 30 fbgs, or approximately seven feet below the water table. The interval from 29-30 fbgs will be screened with one-inch diameter 0.1-inch slotted PVC and filtered with washed 10-20 silica sand. Bentonite will self-hydrate in the interval from approximately 23 to 29.5 fbgs and bentonite installed from 0 to 23 fbgs will be hydrated from the surface in two-foot lifts.

The SVE vacuum line from SVE1/MW1 will be extended from those locations to the new well utilizing 2-inch schedule 80 PVC pipe, ball valves to control the vacuum between the three SVE wells (MW1, SVE1, and SVE5). The air sparge line from AS1 will be extended to the AS24 location with 1-inch polyethylene tubing and valves to control air flow.

Olsson appreciates this opportunity to be of service in performing this remediation system expansion for Williams. Please contact Robert Stockton at (970) 263-7800 if you have any questions.

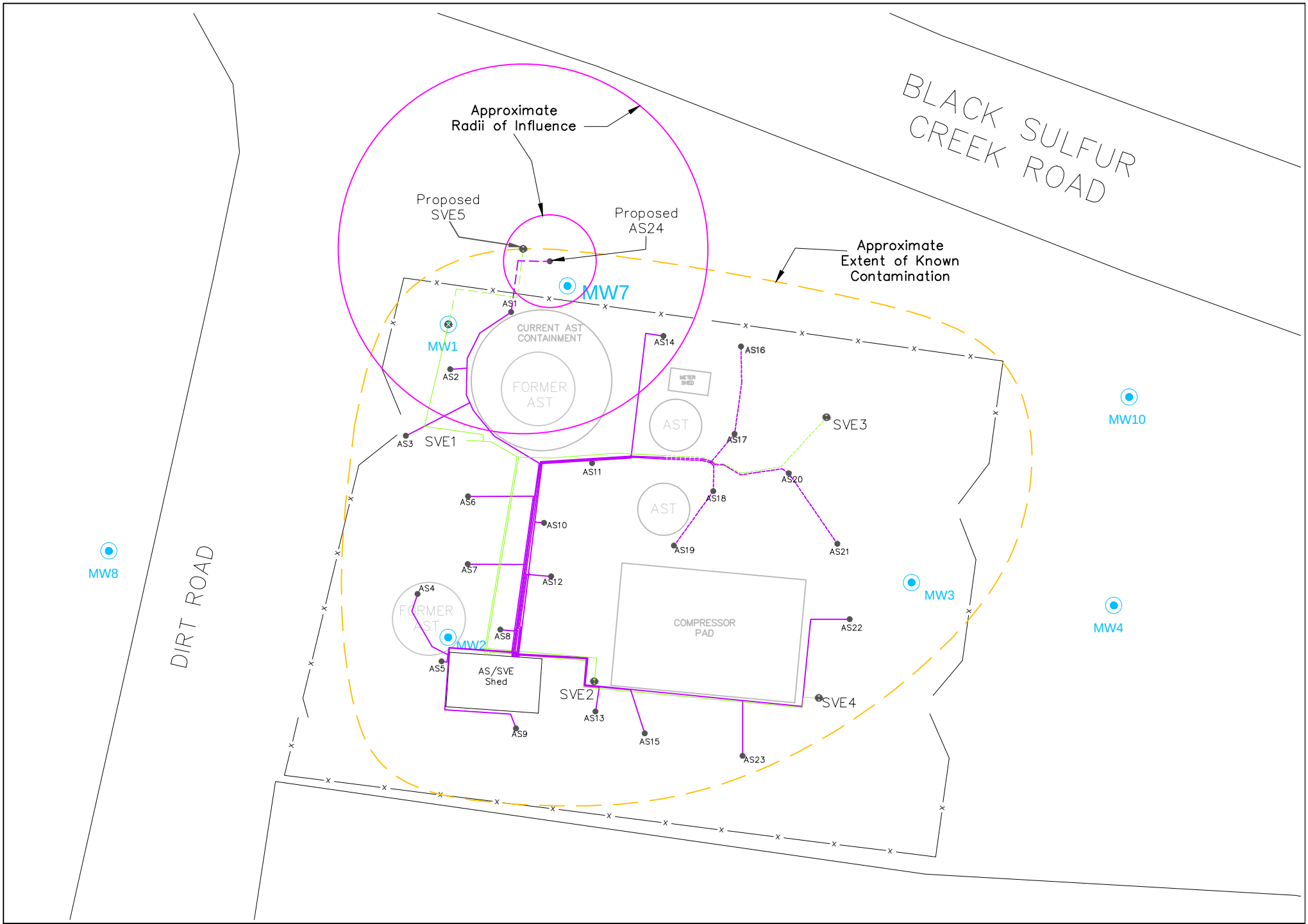
Sincerely,

Olsson Associates, Inc.

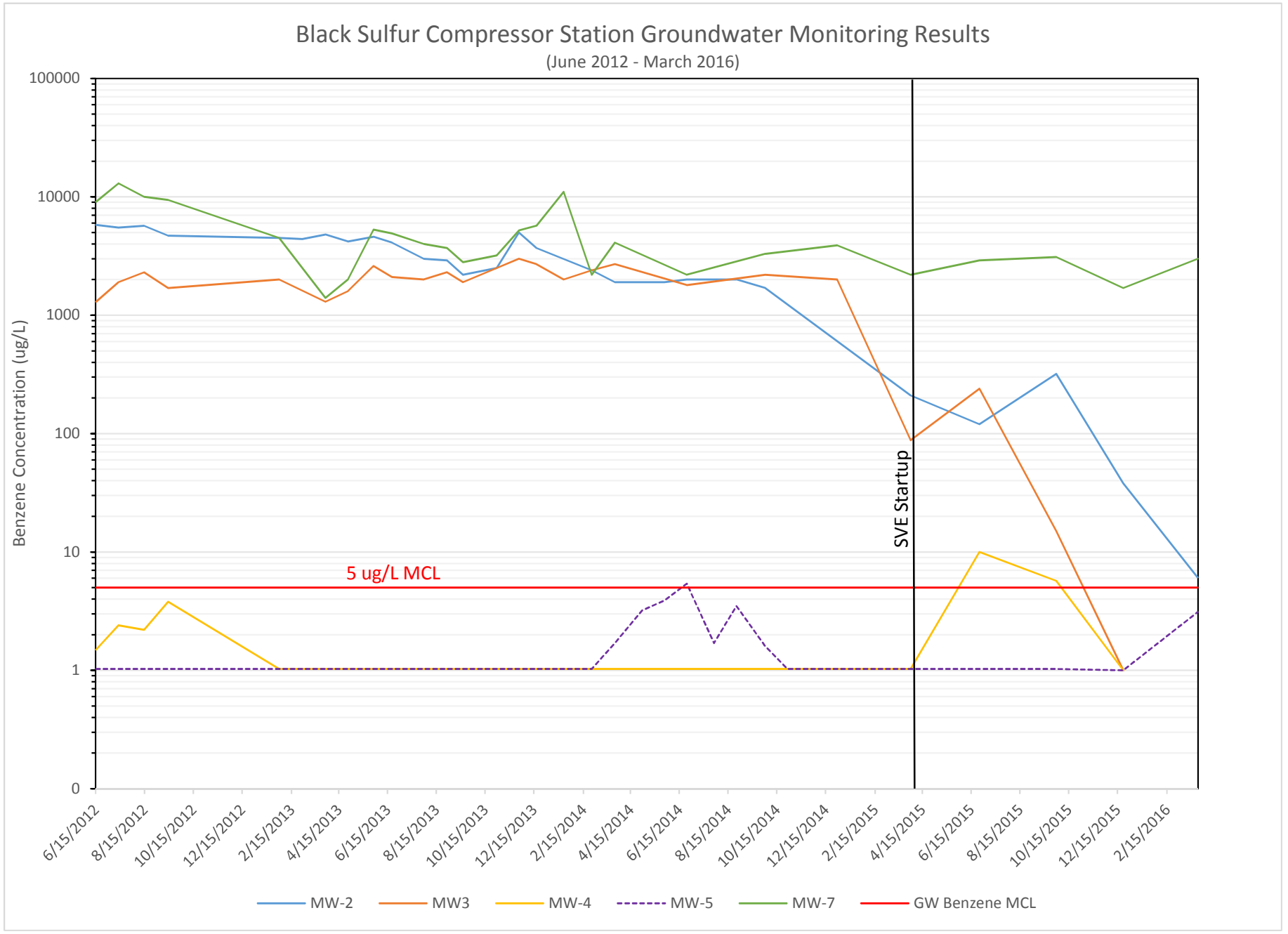
Robert A. Stockton
Project Scientist

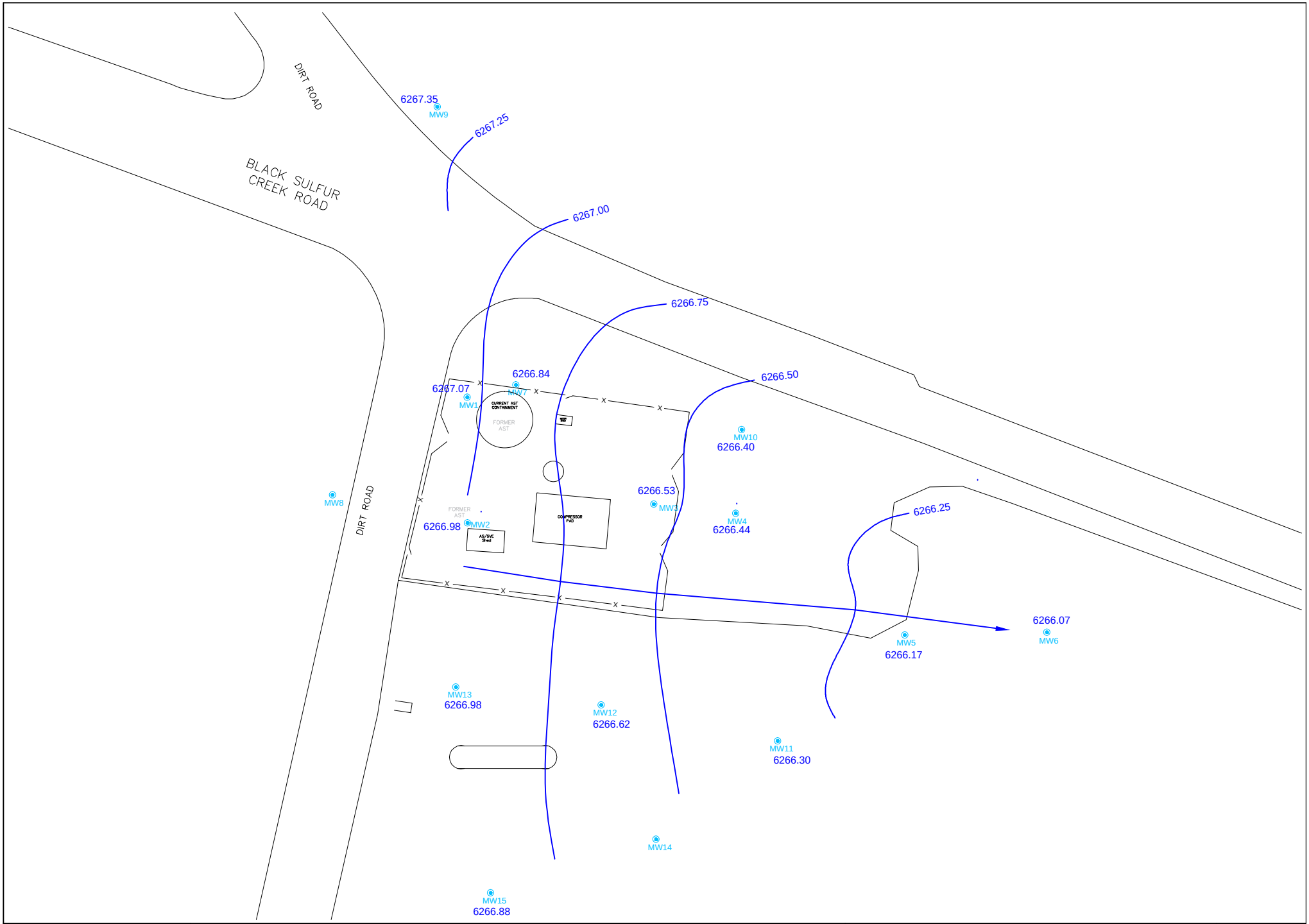
Attachments:

Figure 1 – Proposed Remediation Well Locations
Graph – Black Sulfur Compressor Station Groundwater Monitoring Results
Potentiometric Surface Maps
SVE Effluent Analytical Results
Groundwater Analytical Data
Site Health and Safety Plan



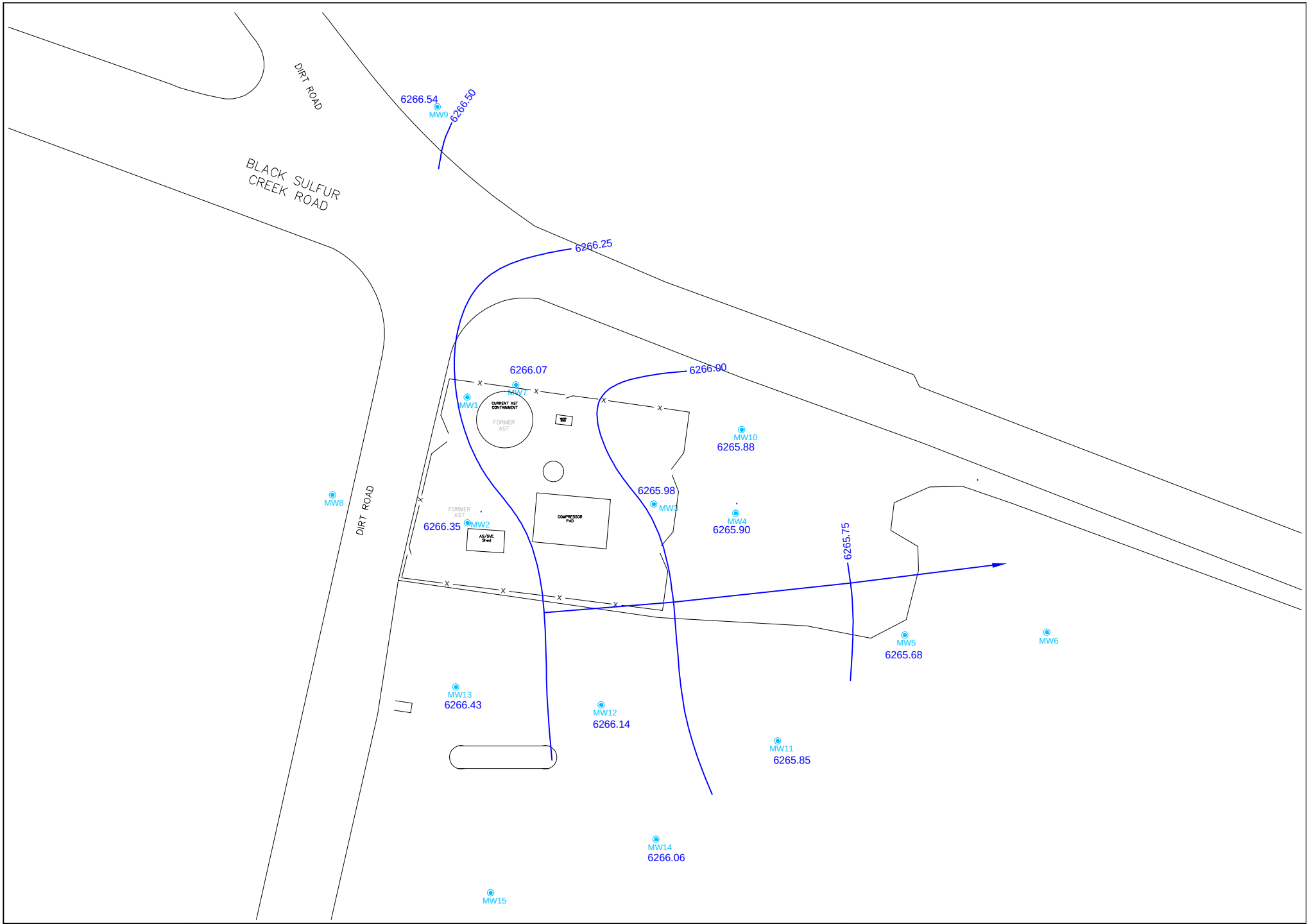
PROJECT NO: 013-0231 DRAWN BY: RAS DATE: 3/23/2016	PROPOSED REMEDIATION WELL LOCATIONS Black Sulfur Compressor Station Rio Blanco County, CO	OLSSON ASSOCIATES 760 Horizon Drive, Suite 102 Grand Junction, CO 81506 TEL 970.263.7800 FAX 970.263.7456	FIGURE 1


Black Sulfur Compressor Station Groundwater Monitoring Results
(June 2012 - March 2016)
Benzene Concentration (ug/L)
100000
10000
1000
100
10
1
0
5 ug/L MCL
SVE Startup
6/15/2012
8/15/2012
10/15/2012
12/15/2012
2/15/2013
4/15/2013
6/15/2013
8/15/2013
10/15/2013
12/15/2013
2/15/2014
4/15/2014
6/15/2014
8/15/2014
10/15/2014
12/15/2014
2/15/2015
4/15/2015
6/15/2015
8/15/2015
10/15/2015
12/15/2015
2/15/2016
MW-2
MW3
MW-4
MW-5
MW-7
GW Benzene MCL



PROJECT NO: 013-0231 DRAWN BY: RAS DATE: 4/5/2016	POTENTIOMETRIC SURFACE MAP Black Sulfur Compressor Station - June 2015 RIO BLANCO COUNTY, CO	OLSSON ASSOCIATES 760 Horizon Drive, Suite 102 Grand Junction, CO 81506 TEL 970.263.7800 FAX 970.263.7456

FIGURE
1



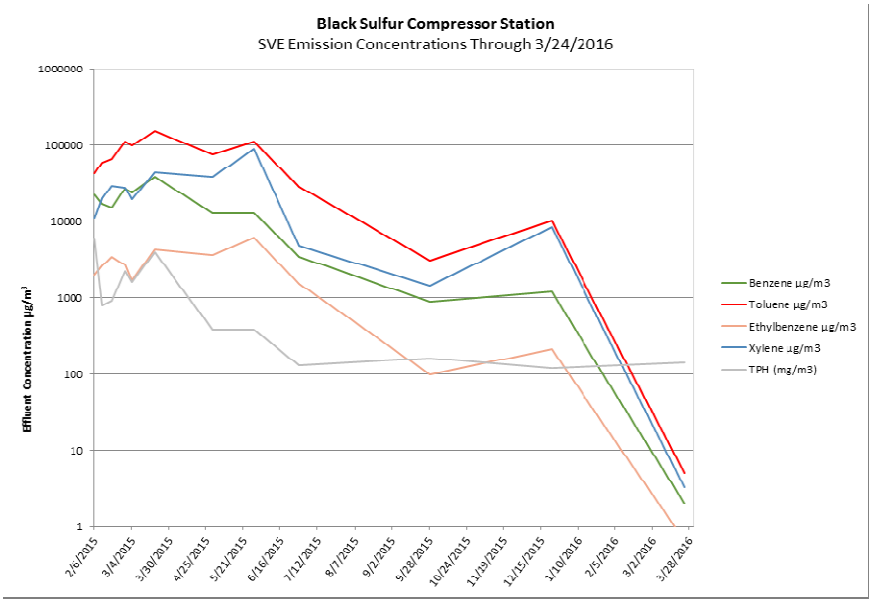
PROJECT NO: 013-0231 DRAWN BY: RAS DATE: 4/6/2016	POTENTIOMETRIC SURFACE MAP Black Sulfur Compressor Station - March 2016 RIO BLANCO COUNTY, CO	OLSSON ASSOCIATES	760 Horizon Drive, Suite 102 Grand Junction, CO 81506 TEL 970.263.7800 FAX 970.263.7456	FIGURE 1

Black Sulfur Compressor Station AS/SVE System

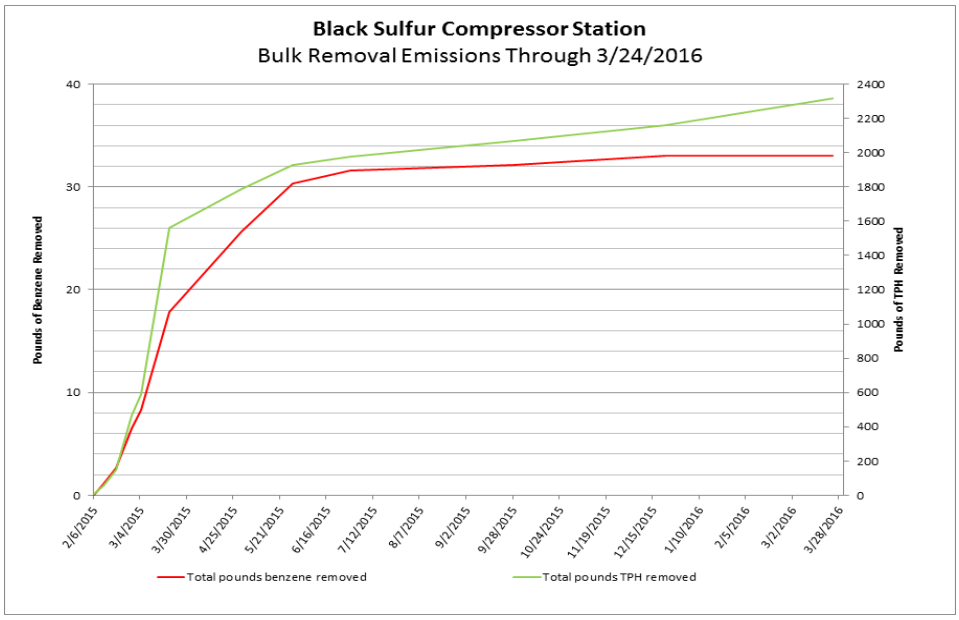
BTEX / TPH Removal - Calculated from Analytical Data

Date	Exhaust Flow (cfm)	Sample Results					SVE Hours	Exhaust Flow (m^3/min)	Pounds benzene removed since last measurement	Total pounds benzene removed	Pounds TPH removed since last measurement	Total pounds TPH removed
		Benzene ug/m^3	Toluene ug/m^3	Ethylbenzene ug/m^3	Xylene ug/m^3	TPH (mg/m^3)						
2/6/2015	0						11483					
2/6/2015	140	22000	43000	2000	11100	5900	11485	3.96	0.02	0.02	6.18	6.18
2/11/2015	145	17000	59000	2600	19900	790	11605	4.11	1.11	1.13	51.44	57.62
2/18/2015	155	15000	65000	3400	29100	910	11775	4.39	1.48	2.61	89.74	147.36
2/27/2015	175	27000	110000	2700	27400	2200	11995	4.96	3.89	6.5	316.97	464.33
3/4/2015	175	24000	97000	1700	19300	1600	12113	4.96	1.85	8.35	123.65	587.98
3/20/2015	175	38000	150000	4300	43200	3900	12494	4.96	9.48	17.84	973.12	1561.1
4/29/2015	175	13000	74000	3600	37900	380	13410	4.96	7.8	25.63	227.96	1789.06
5/28/2015	140	13000	110000	6000	89000	380	14100	3.96	4.7	30.33	137.37	1926.43
6/29/2015	130	3400	28000	1500	4770	130	14870	3.68	1.27	31.61	48.7	1975.13
9/28/2015	80	890	3100	98	1450	160	16816	2.27	0.52	32.13	93.22	2068.35
12/22/2015	100	1200	10000	210	8280	120	18857	2.83	0.92	33.04	91.66	2160.01
3/24/2016	140	2	5	0.65	3.2	140	20994.7	3.96	0.0022	33.04	156.8	2316.8

Concentrations of BTEX are down, but TPH is still substantial. May be due turning on SVE 1 during the sample collection and diluting. PID also indicated higher VOCs (466 ppm).



Here's the bulk removal chart for the current well configuration. MW7 has increased benzene concentration again for groundwater. Previously sent you some potentiometric surface maps. Groundwater is pretty steady flowing largely to the east.



This is looking pretty good for those portions of the site under the influence of the AS/SVE system. I think that in a few months we might think about getting some hand auger samples from 10' or so below surface to see how the soil remediation is responding.

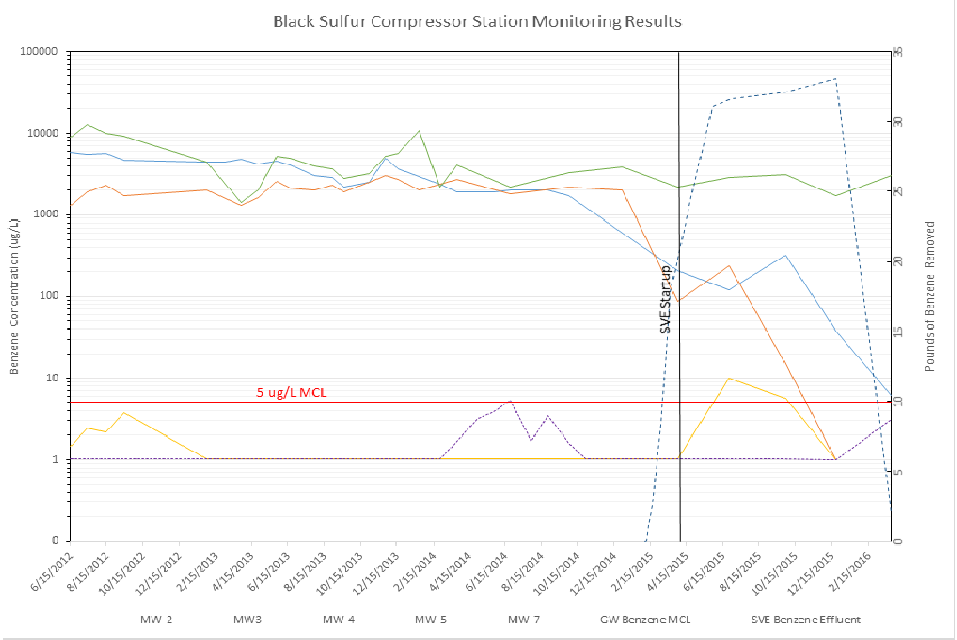


Table 1 - Groundwater Analytical Summary
BTEX, DRO, and GRO

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	NS	NS	NS	NS	NS	NS
MW-1	2/25/2014	ND	ND	ND	ND	ND	ND
MW-1	3/26/2014	ND	ND	ND	ND	ND	ND
MW-1	4/29/2014	NS	NS	NS	NS	NS	NS
MW-1	5/27/2014	NS	NS	NS	NS	NS	NS
MW-1	6/24/2014	ND	ND	ND	ND	ND	ND
MW-1	7/28/2014	NS	NS	NS	NS	NS	NS
MW-1	8/25/2014	NS	NS	NS	NS	NS	NS
MW-1	9/30/2014	ND	ND	ND	ND	ND	ND
MW-1	10/28/2014	NS	NS	NS	NS	NS	NS
MW-1	11/20/2014	NS	NS	NS	NS	NS	NS
MW-1	12/30/2014	ND	ND	ND	ND	ND	ND
MW-1	1/27/2015	NS	NS	NS	NS	NS	NS
MW-1	2/25/2015	NS	NS	NS	NS	NS	NS
MW-1	3/30/2015	ND	ND	ND	ND	ND	ND
MW-1	6/24/2015	ND	ND	ND	ND	ND	ND
MW-1	9/29/2015	ND	ND	ND	ND	ND	ND
MW-1	12/22/2015	ND	ND	ND	ND	ND	ND
MW-1	3/24/2016	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

NS = Not Sampled
ND = Non Detect
NS-F = No Sample, Frozen
J= Analyte reported below laboratory report limit

1 - Drinking Water Maximum Contamination Level (MCL)
µg/L - Micrograms per Liter
mg/L - Milligrams per Liter
Above COGCC Table 910-1 Concentration Level

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-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	NS	NS	NS	NS	NS	NS
MW-2	2/25/2014	2400	4600	810	5000	39	3.2
MW-2	3/26/2014	1900	320	350.0	1600	17	1.2
MW-2	4/29/2014	NS	NS	NS	NS	NS	NS
MW-2	5/27/2014	NS	NS	NS	NS	NS	NS
MW-2	6/24/2014	2000	750	350	1900	20	1.7
MW-2	7/28/2014	NS	NS	NS	NS	NS	NS
MW-2	8/25/2014	NS	NS	NS	NS	NS	NS
MW-2	9/30/2014	1700	590	300	1300	16	ND
MW-2	10/28/2014	NS	NS	NS	NS	NS	NS
MW-2	11/20/2014	NS	NS	NS	NS	NS	NS
MW-2	12/29/2014	NS-F	NS-F	NS-F	NS-F	NS-F	NS-F
MW-2	1/27/2015	NS	NS	NS	NS	NS	NS
MW-2	2/25/2015	NS	NS	NS	NS	NS	NS
MW-2	3/31/2015	210	620	23	940	5	3.1
MW-2	6/25/2015	120	50	16	160	1.7	0.74
MW-2	9/29/2015	320	400	16	1200	7.2	4.00
MW-2	12/22/2015	38	20	16	410	3.1	2.10
MW-2	3/24/2016	6.1	12	ND	93	1.3	1.40
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	6/24/2014	1800	1800	290	1800	21	1.7
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

NS = Not Sampled
ND = Non Detect
NS-F = No Sample, Frozen
J= Analyte reported below laboratory report limit

1 - Drinking Water Maximum Contamination Level (MCL)
µg/L - Micrograms per Liter
mg/L - Milligrams per Liter

Above COGCC Table 910-1 Concentration Level

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-3	2/25/2014	2400	3100	370	2500	21	1.2
MW-3	3/26/2014	2700	3200	450	3000	27	1.4
MW-3	4/29/2014	NS	NS	NS	NS	NS	NS
MW-3	5/27/2014	NS	NS	NS	NS	NS	NS
MW-3	6/24/2014	1800	1800	290	1800	21	2
MW-3	7/28/2014	NS	NS	NS	NS	NS	NS
MW-3	8/25/2014	NS	NS	NS	NS	NS	NS
MW-3	9/30/2014	2200	2000	400	2100	19	ND
MW-3	10/28/2014	NS	NS	NS	NS	NS	NS
MW-3	11/20/2014	NS	NS	NS	NS	NS	NS
MW-3	12/29/2014	2000	1300	440	2000	16	4.2
MW-3	1/27/2015	NS	NS	NS	NS	NS	NS
MW-3	2/25/2015	NS	NS	NS	NS	NS	NS
MW-3	3/31/2015	88	ND	12	34	0.46	1.8
MW-3	6/25/2015	240	ND	18	15	1.10	0.61
MW-3	9/29/2015	15	ND	5.8	3.1	ND	0.94
MW-3	12/22/2015	ND	ND	ND	ND	ND	0.85
MW-3	3/24/2016	ND	ND	ND	ND	ND	0.55
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-4	3/25/2014	ND	ND	ND	ND	ND	ND
MW-4	4/29/2014	ND	ND	ND	ND	ND	ND
MW-4	5/27/2014	ND	ND	ND	ND	ND	ND
MW-4	6/23/2014	ND	ND	ND	ND	ND	ND
MW-4	7/28/2014	ND	ND	ND	ND	ND	ND
MW-4	8/25/2014	ND	ND	ND	ND	ND	ND
MW-4	9/30/2014	ND	ND	ND	ND	ND	ND
MW-4	10/28/2014	ND	ND	ND	ND	ND	ND
MW-4	11/20/2014	ND	ND	ND	ND	ND	ND

NS = Not Sampled
ND = Non Detect
NS-F = No Sample, Frozen
J= Analyte reported below laboratory report limit

1 - Drinking Water Maximum Contamination Level (MCL)
µg/L - Micrograms per Liter
mg/L - Milligrams per Liter
Above COGCC Table 910-1 Concentration Level

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	12/29/2014	ND	ND	ND	ND	ND	1.5
MW-4	1/27/2015	ND	ND	ND	ND	ND	ND
MW-4	2/25/2015	ND	ND	ND	ND	ND	ND
MW-4	3/31/2015	ND	ND	ND	ND	ND	ND
MW-4	6/24/2015	10	ND	ND	ND	ND	ND
MW-4	9/28/2015	5.7	ND	ND	ND	ND	0.78
MW-4	12/21/2015	ND	ND	ND	ND	ND	1.10
MW-4	3/24/2016	ND	ND	ND	ND	ND	0.81
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-5	3/25/2014	1.7	ND	ND	ND	ND	ND
MW-5	4/29/2014	3.2	ND	ND	ND	ND	ND
MW-5	5/27/2014	3.9	ND	ND	ND	ND	ND
MW-5	6/23/2014	5.4	ND	ND	ND	ND	ND
MW-5	7/28/2014	1.7	ND	ND	ND	ND	0.63
MW-5	8/25/2014	3.5	ND	ND	ND	ND	ND
MW-5	9/29/2014	1.6	ND	ND	ND	ND	ND
MW-5	10/28/2014	ND	ND	ND	ND	ND	ND
MW-5	11/20/2014	ND	ND	ND	ND	ND	ND
MW-5	12/30/2014	ND	ND	ND	ND	ND	ND
MW-5	1/27/2015	ND	ND	ND	ND	ND	ND
MW-5	2/25/2015	ND	ND	ND	ND	ND	ND
MW-5	3/30/2015	ND	ND	ND	ND	ND	ND
MW-5	6/24/2015	ND	ND	ND	ND	ND	ND
MW-5	9/28/2015	ND	ND	ND	ND	ND	ND
MW-5	12/21/2015	ND	ND	ND	ND	ND	0.76
MW-5	3/24/2016	3.1	ND	ND	ND	ND	0.50
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

NS = Not Sampled
ND = Non Detect
NS-F = No Sample, Frozen
J= Analyte reported below laboratory report limit

1 - Drinking Water Maximum Contamination Level (MCL)
µg/L - Micrograms per Liter
mg/L - Milligrams per Liter

Above COGCC Table 910-1 Concentration Level

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-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
MW-6	3/25/2014	ND	ND	ND	ND	ND	ND
MW-6	4/29/2014	NS	NS	NS	NS	NS	NS
MW-6	5/27/2014	NS	NS	NS	NS	NS	NS
MW-6	6/23/2014	ND	ND	ND	ND	ND	ND
MW-6	7/28/2014	NS	NS	NS	NS	NS	NS
MW-6	8/25/2014	NS	NS	NS	NS	NS	NS
MW-6	9/29/2014	ND	ND	ND	ND	ND	ND
MW-6	10/28/2014	NS	NS	NS	NS	NS	NS
MW-6	11/20/2014	NS	NS	NS	NS	NS	NS
MW-6	12/30/2014	ND	ND	ND	ND	ND	ND
MW-6	1/27/2015	NS	NS	NS	NS	NS	NS
MW-6	2/25/2015	NS	NS	NS	NS	NS	NS
MW-6	3/30/2015	ND	ND	ND	ND	ND	ND
MW-6	6/24/2015	NS	NS	NS	NS	NS	NS
MW-6	9/28/2015	NS	NS	NS	NS	NS	NS
MW-6	12/21/2015	NS	NS	NS	NS	NS	NS
MW-6	3/24/2016	NS	NS	NS	NS	NS	NS
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

NS = Not Sampled
ND = Non Detect
NS-F = No Sample, Frozen
J= Analyte reported below laboratory report limit

1 - Drinking Water Maximum Contamination Level (MCL)
µg/L - Micrograms per Liter
mg/L - Milligrams per Liter

Above COGCC Table 910-1 Concentration Level

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	1/21/2014	11000	18000	2200	17000	57	1.5
MW-7	2/25/2014	2200	4200	500	3800	30	1.4
MW-7	3/26/2014	4100	9500	910	8000	69	2.7
MW-7	4/29/2014	NS	NS	NS	NS	NS	NS
MW-7	5/27/2014	NS	NS	NS	NS	NS	NS
MW-7	6/24/2014	2200	4700	460	3400	58	1.9
MW-7	7/28/2014	NS	NS	NS	NS	NS	NS
MW-7	8/25/2014	NS	NS	NS	NS	NS	NS
MW-7	9/30/2014	3300	7400	590	4700	51	2.0
MW-7	10/28/2014	NS	NS	NS	NS	NS	NS
MW-7	11/20/2014	NS	NS	NS	NS	NS	NS
MW-7	12/29/2014	3900	7700	800	6100	34	5.1
MW-7	1/27/2015	NS	NS	NS	NS	NS	NS
MW-7	2/25/2015	NS	NS	NS	NS	NS	NS
MW-7	3/31/2015	2200	2100	470	3100	18	4.4
MW-7	6/25/2015	2900	8000	890	6200	47	4.2
MW-7	9/29/2015	3100	6900	820	6200	88	3.1
MW-7	12/22/2015	1700	1400	460	2000	20	2.1
MW-7	3/24/2016	3000	4100	610	3100	30	3.5
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	NS	NS	NS	NS	NS	NS
MW-8	2/24/2014	ND	ND	ND	ND	ND	ND
MW-8	3/25/2014	ND	ND	ND	ND	ND	ND
MW-8	4/29/2014	NS	NS	NS	NS	NS	NS
MW-8	5/27/2014	NS	NS	NS	NS	NS	NS
MW-8	6/24/2014	ND	ND	ND	ND	ND	ND
MW-8	7/28/2014	NS	NS	NS	NS	NS	NS
MW-8	8/25/2014	NS	NS	NS	NS	NS	NS
MW-8	9/30/2014	ND	ND	ND	ND	ND	ND
MW-8	10/28/2014	NS	NS	NS	NS	NS	NS
MW-8	11/20/2014	NS	NS	NS	NS	NS	NS
MW-8	12/29/2014	NS-F	NS-F	NS-F	NS-F	NS-F	NS-F
MW-8	1/27/2015	NS	NS	NS	NS	NS	NS
MW-8	2/25/2015	NS	NS	NS	NS	NS	NS
MW-8	3/31/2015	ND	ND	ND	ND	ND	ND
MW-8	6/24/2015	NS	NS	NS	NS	NS	NS
MW-8	9/28/2015	NS	NS	NS	NS	NS	NS
MW-8	12/21/2015	NS	NS	NS	NS	NS	NS
MW-8	3/24/2016	NS	NS	NS	NS	NS	NS
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

NS = Not Sampled
ND = Non Detect
NS-F = No Sample, Frozen
J= Analyte reported below laboratory report limit

1 - Drinking Water Maximum Contamination Level (MCL)
µg/L - Micrograms per Liter
mg/L - Milligrams per Liter

Above COGCC Table 910-1 Concentration Level

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-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	6/24/2014	ND	ND	ND	ND	ND	ND
MW-9	2/24/2014	ND	ND	ND	ND	ND	ND
MW-9	3/25/2014	ND	ND	ND	ND	ND	ND
MW-9	4/29/2014	NS	NS	NS	NS	NS	NS
MW-9	5/27/2014	NS	NS	NS	NS	NS	NS
MW-9	6/24/2014	ND	ND	ND	ND	ND	ND
MW-9	7/28/2014	NS	NS	NS	NS	NS	NS
MW-9	8/25/2014	NS	NS	NS	NS	NS	NS
MW-9	9/29/2014	ND	ND	ND	ND	ND	ND
MW-9	10/28/2014	NS	NS	NS	NS	NS	NS
MW-9	11/20/2014	NS	NS	NS	NS	NS	NS
MW-9	12/29/2014	ND	ND	ND	ND	ND	ND
MW-9	1/27/2015	NS	NS	NS	NS	NS	NS
MW-9	2/25/2015	NS	NS	NS	NS	NS	NS
MW-9	3/30/2015	ND	ND	ND	ND	ND	ND
MW-9	6/24/2015	ND	ND	ND	ND	ND	ND
MW-9	9/28/2015	ND	ND	ND	ND	ND	ND
MW-9	12/21/2015	ND	ND	ND	ND	ND	4.0
MW-9	3/24/2016	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	NS	NS	NS	NS	NS	NS
MW-10	1/21/2014	NS	NS	NS	NS	NS	NS
MW-10	2/24/2014	ND	ND	ND	ND	ND	ND
MW-10	3/25/2014	ND	ND	ND	ND	ND	ND
MW-10	4/29/2014	ND	ND	ND	ND	ND	ND
MW-10	5/27/2014	ND	ND	ND	ND	ND	0.87
MW-10	6/23/2014	ND	ND	ND	ND	ND	0.93
MW-10	7/28/2014	ND	ND	ND	ND	ND	ND
MW-10	8/25/2014	ND	ND	ND	ND	ND	ND
MW-10	9/30/2014	ND	ND	ND	ND	ND	ND
MW-10	10/28/2014	ND	ND	ND	ND	ND	2.00
MW-10	11/20/2014	ND	ND	ND	ND	ND	ND
MW-10	12/29/2014	NS-F	NS-F	NS-F	NS-F	NS-F	NS-F
MW-10	1/27/2015	NS-F	NS-F	NS-F	NS-F	NS-F	NS-F
MW-10	2/25/2015	ND	ND	ND	ND	ND	0.66
MW-10	3/30/2015	ND	ND	ND	ND	ND	ND
MW-10	6/24/2015	ND	ND	ND	ND	ND	ND
MW-10	9/28/2015	ND	ND	ND	ND	ND	0.91
MW-10	12/21/2015	NS-F	NS-F	NS-F	NS-F	NS-F	NS-F
MW-10	3/24/2016	ND	ND	ND	ND	ND	0.32

NS = Not Sampled
ND = Non Detect
NS-F = No Sample, Frozen
J= Analyte reported below laboratory report limit

1 - Drinking Water Maximum Contamination Level (MCL)
µg/L - Micrograms per Liter
mg/L - Milligrams per Liter

Above COGCC Table 910-1 Concentration Level

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-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	NS	NS	NS	NS	NS	NS
MW-11	2/25/2014	ND	ND	ND	ND	ND	ND
MW-11	3/26/2014	ND	ND	ND	ND	ND	ND
MW-11	4/29/2014	ND	ND	ND	ND	ND	ND
MW-11	5/27/2014	ND	ND	ND	ND	ND	ND
MW-11	6/23/2014	ND	ND	ND	ND	ND	ND
MW-11	7/28/2014	ND	ND	ND	ND	ND	ND
MW-11	8/25/2014	ND	ND	ND	ND	ND	ND
MW-11	9/29/2014	ND	ND	ND	ND	ND	ND
MW-11	10/28/2014	ND	ND	ND	ND	ND	ND
MW-11	11/20/2014	ND	ND	ND	ND	ND	ND
MW-11	12/30/2014	ND	ND	ND	ND	ND	ND
MW-11	1/27/2015	ND	ND	ND	ND	ND	ND
MW-11	2/25/2015	ND	ND	ND	ND	ND	ND
MW-11	3/30/2015	ND	ND	ND	ND	ND	ND
MW-11	6/24/2015	ND	ND	ND	ND	ND	ND
MW-11	9/29/2015	ND	ND	ND	ND	ND	ND
MW-11	12/21/2015	ND	ND	ND	ND	ND	0.82
MW-11	3/24/2016	ND	ND	ND	ND	ND	ND
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-12	3/26/2014	ND	ND	ND	ND	ND	ND
MW-12	4/29/2014	ND	ND	ND	ND	ND	ND
MW-12	5/27/2014	ND	ND	ND	ND	ND	ND
MW-12	6/24/2014	ND	ND	ND	ND	ND	5.5
MW-12	7/28/2014	ND	ND	ND	ND	ND	ND
MW-12	8/25/2014	ND	ND	ND	ND	ND	ND
MW-12	9/29/2014	ND	ND	ND	ND	ND	ND
MW-12	10/28/2014	ND	ND	ND	ND	ND	ND
MW-12	11/20/2014	ND	ND	ND	ND	ND	ND
MW-12	12/30/2014	ND	ND	ND	ND	ND	ND
MW-12	1/27/2015	ND	ND	ND	ND	ND	ND
MW-12	2/25/2015	ND	ND	ND	ND	ND	ND
MW-12	3/30/2015	ND	ND	ND	ND	ND	ND
MW-12	6/24/2015	ND	ND	ND	ND	ND	ND
MW-12	9/29/2015	ND	ND	ND	ND	ND	ND
MW-12	12/21/2015	ND	ND	ND	ND	ND	3.4
MW-12	3/24/2016	ND	ND	ND	ND	ND	ND

NS = Not Sampled
ND = Non Detect
NS-F = No Sample, Frozen
J= Analyte reported below laboratory report limit

1 - Drinking Water Maximum Contamination Level (MCL)
µg/L - Micrograms per Liter
mg/L - Milligrams per Liter

Above COGCC Table 910-1 Concentration Level

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-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-13	3/26/2014	ND	ND	ND	ND	ND	ND
MW-13	4/29/2014	ND	ND	ND	ND	ND	ND
MW-13	5/27/2014	ND	ND	ND	ND	ND	ND
MW-13	6/24/2014	ND	ND	ND	ND	ND	ND
MW-13	7/28/2014	ND	ND	ND	ND	ND	ND
MW-13	8/25/2014	ND	ND	ND	ND	ND	ND
MW-13	9/29/2014	ND	ND	ND	ND	ND	ND
MW-13	10/28/2014	ND	ND	ND	ND	ND	ND
MW-13	11/20/2014	ND	ND	ND	ND	ND	ND
MW-13	12/30/2014	ND	ND	ND	ND	ND	ND
MW-13	1/27/2015	ND	ND	ND	ND	ND	ND
MW-13	2/25/2015	ND	ND	ND	ND	ND	ND
MW-13	3/30/2015	ND	ND	ND	ND	ND	ND
MW-13	6/24/2015	NS	NS	NS	NS	NS	NS
MW-13	12/21/2015	NS	NS	NS	NS	NS	NS
MW-13	3/24/2016	NS	NS	NS	NS	NS	NS
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-14	3/26/2014	ND	ND	ND	ND	ND	ND
MW-14	4/29/2014	NS	NS	NS	NS	NS	NS
MW-14	5/27/2014	NS	NS	NS	NS	NS	NS
MW-14	6/24/2014	NS	NS	NS	NS	NS	NS
MW-14	7/28/2014	NS	NS	NS	NS	NS	NS
MW-14	8/25/2014	NS	NS	NS	NS	NS	NS
MW-14	9/29/2014	NS	NS	NS	NS	NS	NS
MW-14	10/28/2014	NS	NS	NS	NS	NS	NS
MW-14	11/20/2014	NS	NS	NS	NS	NS	NS

NS = Not Sampled
ND = Non Detect
NS-F = No Sample, Frozen
J= Analyte reported below laboratory report limit

1 - Drinking Water Maximum Contamination Level (MCL)
µg/L - Micrograms per Liter
mg/L - Milligrams per Liter

Above COGCC Table 910-1 Concentration Level

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-14	12/29/2014	NS	NS	NS	NS	NS	NS
MW-14	1/27/2015	NS	NS	NS	NS	NS	NS
MW-14	2/25/2015	NS	NS	NS	NS	NS	NS
MW-14	3/30/2015	NS	NS	NS	NS	NS	NS
MW-14	6/24/2015	NS	NS	NS	NS	NS	NS
MW-14	12/21/2015	NS	NS	NS	NS	NS	NS
MW-14	3/24/2016	NS	NS	NS	NS	NS	NS
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
MW-15	3/26/2014	ND	ND	ND	ND	ND	ND
MW-15	4/29/2014	NS	NS	NS	NS	NS	NS
MW-15	5/27/2014	NS	NS	NS	NS	NS	NS
MW-15	6/24/2014	NS	NS	NS	NS	NS	NS
MW-15	7/28/2014	NS	NS	NS	NS	NS	NS
MW-15	8/25/2014	NS	NS	NS	NS	NS	NS
MW-15	9/29/2014	NS	NS	NS	NS	NS	NS
MW-15	10/28/2014	NS	NS	NS	NS	NS	NS
MW-15	11/20/2014	NS	NS	NS	NS	NS	NS
MW-15	12/29/2014	NS	NS	NS	NS	NS	NS
MW-15	1/27/2015	NS	NS	NS	NS	NS	NS
MW-15	2/25/2015	NS	NS	NS	NS	NS	NS
MW-15	3/30/2015	NS	NS	NS	NS	NS	NS
MW-15	6/24/2015	NS	NS	NS	NS	NS	NS
MW-15	12/21/2015	NS	NS	NS	NS	NS	NS
MW-15	3/24/2016	NS	NS	NS	NS	NS	NS
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
UPCREEK	3/25/2014	ND	ND	ND	ND	ND	ND

NS = Not Sampled
ND = Non Detect
NS-F = No Sample, Frozen
J= Analyte reported below laboratory report limit

1 - Drinking Water Maximum Contamination Level (MCL)
µg/L - Micrograms per Liter
mg/L - Milligrams per Liter

Above COGCC Table 910-1 Concentration Level

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
UPCREEK	4/29/2014	NS	NS	NS	NS	NS	NS
UPCREEK	5/27/2014	NS	NS	NS	NS	NS	NS
UPCREEK	6/23/2014	NS	NS	NS	NS	NS	NS
UPCREEK	7/28/2014	NS	NS	NS	NS	NS	NS
UPCREEK	8/25/2014	NS	NS	NS	NS	NS	NS
UPCREEK	9/29/2014	NS	NS	NS	NS	NS	NS
UPCREEK	10/28/2014	NS	NS	NS	NS	NS	NS
UPCREEK	11/20/2014	NS	NS	NS	NS	NS	NS
UPCREEK	12/29/2014	NS	NS	NS	NS	NS	NS
UPCREEK	1/27/2015	NS	NS	NS	NS	NS	NS
UPCREEK	2/25/2015	NS	NS	NS	NS	NS	NS
UPCREEK	3/30/2015	NS	NS	NS	NS	NS	NS
UPCREEK	6/24/2015	NS	NS	NS	NS	NS	NS
UPCREEK	12/21/2015	NS	NS	NS	NS	NS	NS
UPCREEK	3/24/2016	NS	NS	NS	NS	NS	NS
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
DWCREEK	3/25/2014	ND	ND	ND	ND	ND	ND
DWCREEK	4/29/2014	NS	NS	NS	NS	NS	NS
DWCREEK	5/27/2014	NS	NS	NS	NS	NS	NS
DWCREEK	6/23/2014	NS	NS	NS	NS	NS	NS
DWCREEK	7/28/2014	NS	NS	NS	NS	NS	NS
DWCREEK	8/25/2014	NS	NS	NS	NS	NS	NS
DWCREEK	9/29/2014	NS	NS	NS	NS	NS	NS
DWCREEK	10/28/2014	NS	NS	NS	NS	NS	NS
DWCREEK	11/20/2014	NS	NS	NS	NS	NS	NS
DWCREEK	12/29/2014	NS	NS	NS	NS	NS	NS
DWCREEK	1/27/2015	NS	NS	NS	NS	NS	NS
DWCREEK	2/25/2015	NS	NS	NS	NS	NS	NS
DWCREEK	3/31/2015	NS	NS	NS	NS	NS	NS
DWCREEK	6/24/2015	NS	NS	NS	NS	NS	NS
DWCREEK	12/21/2015	NS	NS	NS	NS	NS	NS
DWCREEK	3/24/2016	NS	NS	NS	NS	NS	NS
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

NS = Not Sampled
ND = Non Detect
NS-F = No Sample, Frozen
J= Analyte reported below laboratory report limit

1 - Drinking Water Maximum Contamination Level (MCL)
µg/L - Micrograms per Liter
mg/L - Milligrams per Liter

Above COGCC Table 910-1 Concentration Level

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. 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
MIDCREEK	3/25/2014	ND	ND	ND	ND	ND	ND
MIDCREEK	4/29/2014	NS	NS	NS	NS	NS	NS
MIDCREEK	5/27/2014	NS	NS	NS	NS	NS	NS
MIDCREEK	6/23/2014	NS	NS	NS	NS	NS	NS
MIDCREEK	7/28/2014	NS	NS	NS	NS	NS	NS
MIDCREEK	8/25/2014	NS	NS	NS	NS	NS	NS
MIDCREEK	9/29/2014	NS	NS	NS	NS	NS	NS
MIDCREEK	10/28/2014	NS	NS	NS	NS	NS	NS
MIDCREEK	11/20/2014	NS	NS	NS	NS	NS	NS
MIDCREEK	12/29/2014	NS	NS	NS	NS	NS	NS
MIDCREEK	1/27/2015	NS	NS	NS	NS	NS	NS
MIDCREEK	2/25/2015	NS	NS	NS	NS	NS	NS
MIDCREEK	3/30/2015	NS	NS	NS	NS	NS	NS
MIDCREEK	6/24/2015	NS	NS	NS	NS	NS	NS
MIDCREEK	12/21/2015	NS	NS	NS	NS	NS	NS
MIDCREEK	3/24/2016	NS	NS	NS	NS	NS	NS

NS = Not Sampled
ND = Non Detect
NS-F = No Sample, Frozen
J= Analyte reported below laboratory report limit

1 - Drinking Water Maximum Contamination Level (MCL)
µg/L - Micrograms per Liter
mg/L - Milligrams per Liter

Above COGCC Table 910-1 Concentration Level

SITE SAFETY PLAN

PROJECT NAME Black Sulphur Compressor Station – Site Investigation PROJECT NUMBER: 013-0231

A. SITE DESCRIPTION

Date April 2016 Location 39.856808 latitude and -108.329129 longitude, County Rd, 26, Rio Blanco County, Colorado

Hazards: Driving to and from site, weather, petroleum hydrocarbons, SVE Equipment, site and road traffic, buried utilities, cold weather, biting animals and insects, drilling and hydrovac equipment

Area affected Vicinity of Black Sulphur Compressor Station

Surrounding population Sparsely populated, rural communities

Topography Mountainous - local topography slopes to the east.

Weather conditions Variable, possible snow, cold weather

Wind Direction Variable – mostly from the west

Additional information

B. ENTRY OBJECTIVES: The objective of the initial and following entries to the contaminated area is to:

Install air sparge (AS) and soil vapor extraction (SVE) wells. Connect wells to the current AS/SVE vacuum and air sparge lines

C. ONSITE ORGANIZATION AND COORDINATION: The following personnel are designated to carry out the stated job functions on site. (Note: One person may carry out more than one job function.)

Project Manager	Robert Stockton
Site Safety Officers	Robert Stockton
Field Team Leaders	Robert Stockton
Field Team Members	Robert Stockton

All personnel need to notify Annette Garrigues that they will be onsite on a specified date.

All activities on site must be cleared through the Project Manager or the Site Supervisor. **Annette Garrigues contact – 970-618-3329**

D. ONSITE CONTROL

Williams Midstream has been designated to coordinate access control and security onsite.

A safe perimeter has been established at 50 feet from the control area

Personal air monitors with H_2S. Work space monitoring organic vapors with a PID during drilling.

No unauthorized person(s) should be within this area.

The onsite Command Post and staging area have been established at Company vehicle (north of CR 26)

The prevailing wind conditions are from the west. The Command Post is located upwind from the Exclusion Zone.

Control boundaries have been established for the Exclusion Zone, Contamination Reduction Zone, and Support Zone (clean area).

E. PREVENTION PROGRAMS AND PERSONAL PROTECTIVE EQUIPMENT: No changes to the specified levels of protection shall be made without the approval of the Site Safety Officer and the Project Manager.

F. ONSITE WORK PLANS:

Work Task #	**Task Objective and Description**	**Level of Protection**
1	Drive to Site (refer to attached" Driving" Job Safety Analysis [JSA])	Level D
2	Contractor oversight (refer to attached "Contractor Supervision" Job Safety Analysis [JSA])	Level D
3	Drilling (refer to attached "Drilling and Monitoring Well Installation" Job Safety Analysis [JSA])	Level D
4	Drilling and monitoring well installation –(refer to the attached "Drilling and Monitoring Well Services" JSA)	Level D
5	Soil Sampling – Confirmation Soil samples (refer to the attached "Environmental Sampling" JSA)	Level D

G. COMMUNICATION PROCEDURES

Personnel in the Exclusion Zone will be within sight of the Project Team Leader and all personnel will be assigned a cell phone. Personnel will be alerted of an incident that requires evacuation of the work area by verbal command and/or one long air-horn blast . Emergency numbers are as follows:

AGENCY/FACILITY	PHONE #	CONTACT
Police	911	
Fire	911	
Hospital	911	See attached map to Grand River Hospital in Rifle, CO – 501 Airport Road, Rifle, Colorado
Ambulance	911	

H. Personnel Documentation:

All site personnel have read above plan and are familiar with its provisions.

Name	Company	Signature	Date

I. Site-specific Health and Safety Plan Site Characterization and Analysis Certification

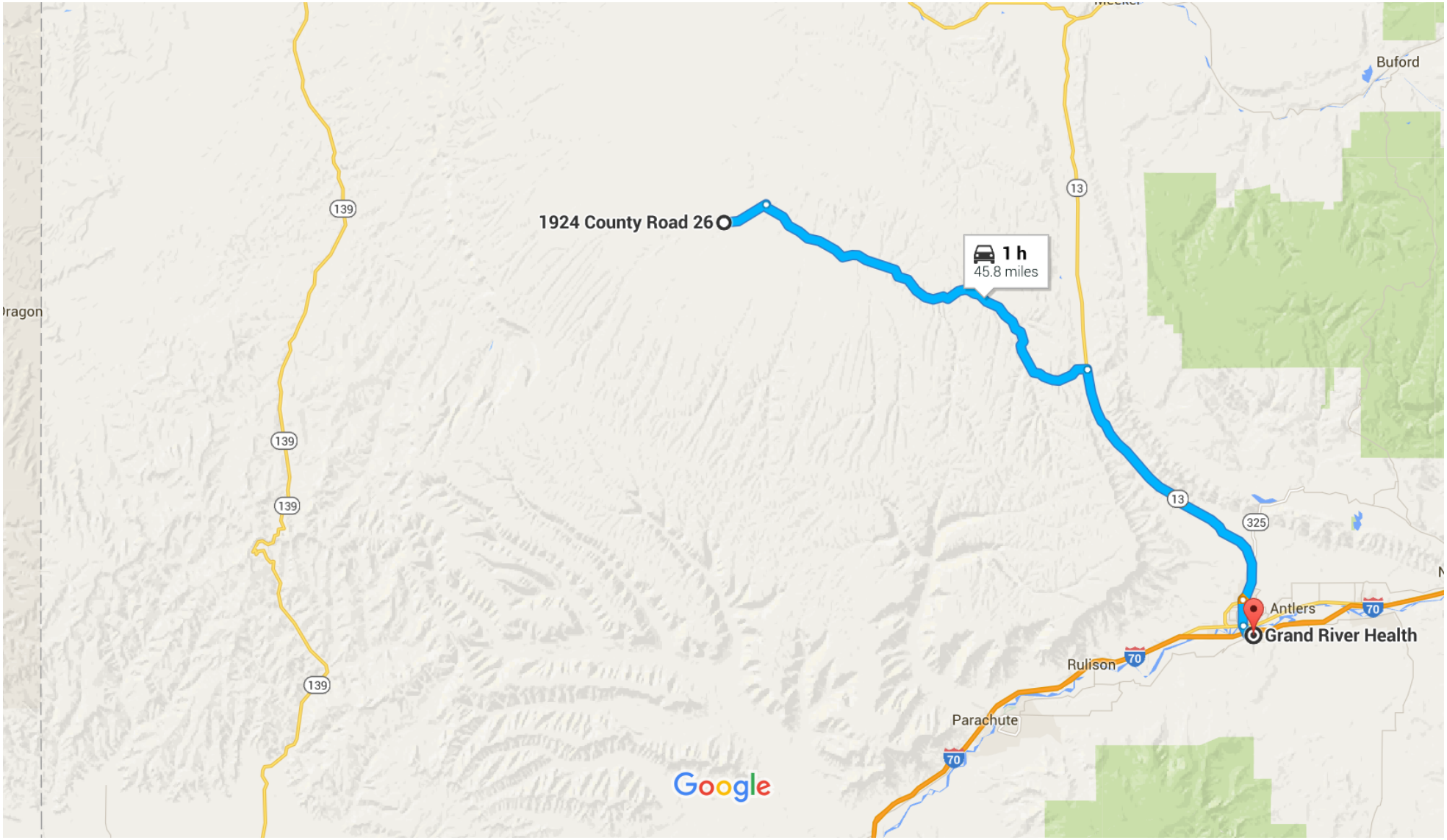
Olsson & Associate's Health and Safety Officer, Project Manager or Site Safety Officer certifies that a site characterization and analysis has been completed to identify site hazards and develop safety control procedures for site work at various locations in Colorado.

Certification Completed by: Robert Stockton

Date: 4/27/2016

Printed Name and Title: Robert Stockton, Project Manager

Google Maps 1924 County Road 26, Rifle, CO 81650 to Grand River Health Drive 45.8 miles, 1 h



1924 County Road 26

Rifle, CO 81650

1. Head east on Co Rd 26 toward Co Rd 29

2.7 mi

2. Turn right onto Co Rd 5

23.5 mi

3. Turn right onto CO-13 S

17.2 mi

4. Turn left onto Whiteriver Ave

1.5 mi

5. Turn left onto CO-13 S

0.5 mi

6. At the traffic circle, take the 1st exit onto Taugenbaugh Blvd

358 ft

7. At the traffic circle, take the 3rd exit onto Airport Rd

Destination will be on the right

0.4 mi

Grand River Health

501 Airport Road, Rifle, CO 81650

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

Google Maps

Job Safety Analysis Worksheet	Date: April 2016
Title of Job/Operation: **Driving to Jobsite**	Review Date:
Employee Name(s) and Job Title(s): Robert Stockton, Project Scientist	Analyst/ Date:
Approved By: Robert Stockton	Approval Date: September 18, 2014
Personal Protective Equipment Recommended or Required: Seat Belt Use= Required; Sun Glasses = Recommended	

Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
Training	NA	• Operating 4-wheel drive (vehicle specific) • Tire changing procedures (vehicle specific) • Testing and operating emergency satellite beacon
Schedule Vehicle	NA	• Reserve vehicle and allow time for the trip • Inform staff of your location and schedule
Inspect Vehicle	Slip, trips, and falls (FS) (FW)	• Shoes with non-skid soles
Load Vehicle	Overexertion (O)	• Lift small loads, take multiple trips • Use proper lifting techniques • Do not store materials or samples in the driver compartment
Fuel and Maintenance	Fumes, Fire, Breakdown (E)	• Check fuel, oil, tires, lights, breaks, windshield washer fluid • Locate emergency shut off switch when fueling • No smoking while fueling • Adjust seat and mirrors
Determine Route	Lost, Rush to jobsite (O)	• Map out directions prior to start of trip
Drive to Site	Adverse Weather (E)	• Check weather conditions • Ensure good tread on tires • Delay trip during adverse weather conditions if possible • Remove frost and snow from the vehicle • Listen to local weather broadcasts • Adjust speeds for the weather conditions • Drive with lights on
	Fatigue (O)	• Get ample rest prior to the trip • Take short breaks • At the onset of drowsiness, stop and take a short nap
	Mechanical (CB) (CW)	• Maintain the mechanical integrity of the vehicle • Check for leaks
	Human Factor (CB) (CW)	• Use defensive driving skills and Follow driving laws • Use off road driving skills in muddy and sandy conditions • Stay aware of other vehicles • Wear seatbelt • Avoid being rushed and allow ample time for the trip • Leave proper distance you and the next driver • Accessional look 8 vehicles ahead
	Road Emergency/vehicle breakdown (CB) (CW)	• Keep vehicle maintained and up-to-date • Keep tools and spare tire in vehicle • Recommended carrying a fire extinguisher, first aid kit, flashlight, jumper cables, first aid kit, cell phone, blanket, water, emergency food, shovel, satellite beacon

*Codes for Potential Hazards:

Struck By (SB)		Caught On (CO)		Fall To Below (FB)	
Struck Against (SA)		Caught In (CI)		Overexertion (O)	
Contacted By (CB)		Caught Between (CBT)		Exposure (E)	
Contact With (CW)		Fall - Same Level (FS)			

Job Safety Analysis Worksheet	Date: April 2016
Title of Job/Operation: **Contractor Supervision**	Review Date
Employee Name(s) and Job Title(s): Robert Stockton, Project Scientist	Analyst/ Date: 9/10/15
Approved by: Robert Stockton	Approval Date: 9/10/15
Personal Protective Equipment Recommended or Required: Hat, Sunscreen, Bug repellent, Snake Boots, Chemical deferent gloves (rubber).	

Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
Prepare for site visitation	Slips Trips Fall	Prepare listing of emergency phone numbers, both on and offsite; complete appropriate training before going on site. Provide appropriate person in district office you itinerary. Familiarize yourself with site prior to visit.
Load Vehicle Fuel Vehicle	Lifting injury Exposure to Fumes	Follow OSHA guidance Employ safe fueling standards. Avoid contact with fuel and fumes.
Drive to/from site	Traffic accidents	Buckle up; Use defensive driving tactics, Obey traffic laws, and keep vehicle in safe operating condition. Observe General Order 7 (EVOC).
Assess the Site	STF	Be alert, watch where you make your steps, wear safety shoes.
Ground Proof Incident	Chemical contact (liquid and vapor), Fire/Explosion/ Reactivity, Heat and Severe Weather.	Wear proper PPE, Snake Boots, Insect Repellent, Seek Shelter from Storms, Take Breaks, Monitor conditions, Engineer safeguards apply foam ventilate.
Establish RP action	Hostile RP	Use communication Skills/Buddy System Task contractor if no RP action.
Contractor Oversight Supervise container Removal Enforce Site Safety Plan	Chemical exposure (liquid and vapor), Fire/ Explosion/Reactivity, Heat and Weather, Heavy Equipment/Objects	Avoid chemical exposure, wear proper PPE, snake Boots, Insect repellent, Take breaks, Wear hat, Seek shelter from storms, Engineer safeguards, monitor worker safety, proceed/cease operation.
Supervise soil or spill excavation	Chemical exposure (liquid and vapor), Heavy Equipment, STF at open excavations, Overhead/underground Utilities (water, sewer, electric), Heat and Weather.	Avoid chemical exposure, Wear proper PPE, Sunscreen, and Bug repellent, Be alert, Stay safe distance, Wear hard hat/steel toed boots, Drink fluids, Take breaks.
Supervise Sampling Operation	Chemical exposure, Heat and Weather	Avoid chemical exposure, Wear proper PPE, sunscreen, wear hat seek shelter from storms.
Secure Waste/Package for Transport	Chemical exposure and Cleaning Solvents	Avoid chemical exposure, Wear proper PPE.
Exit site Supervise labeling and securing of containers. Follow DOT Guide for labels and placards. Complete DEP documentation.	Shifting containers can leak	Block all containers

*Codes for Potential Hazards:

Struck By (SB)		Caught On (CO)		Fall To Below (FB)
Struck Against (SA)		Caught In (CI)		Overexertion (O)
Contacted By (CB)		Caught Between (CBT)		Exposure (E)
Contact With (CW)		Fall - Same Level (FS)		

Job Safety Analysis Worksheet	Date: April 27, 2016
Title of Job/Operation: **Drilling, Soil Sampling, and AS/SVE Well Installation**	Review Date:
Employee Name and Job Title: Robert Stockton – Project Scientist	Analyst/ Date:
Approved By: Robert Stockton	Approval Date: November 6, 2014
Personal Protective Equipment Recommended or Required: Hardhat, safety shoes, eye protection, nitrile or latex gloves, FRC, hearing protection, hi-vis construction vest	

Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
Prepare for Site Visit		• Activate the "One Call" system at least three days before drilling activities • Develop Site Specific HASP
Driving to and from Site	Most Hazardous Work Activity	• Review Driving JSA
Arrival at Site	Slips, trips and falls (FS) (FW)	• Don appropriate PPE • Assess site conditions • Meet with site representatives and contractors • Review site emergency procedures • Avoid muddy, wet, icy, slippery areas, and steep slopes
	Underground utilities and aboveground utilities (CW)	• Verify underground and aboveground utilities locations
Commuting Onsite	Exposure to vehicles and traffic (SB)	• Be attentive to vehicle traffic • Give vehicles and heavy equipment the right-of-way • Avoid standing between vehicles.
Drilling Equipment	Exposure (E) (SB)	• Follow equipment safety procedures • Establish line-of-sight with equipment operator • Keep hands and feet away from pinch points • Stay clear of rotating equipment • Check and fasten all connection points
Sampling	Exposure to Confined Spaces, Trenches, and Excavations (E) (FB)	• Do not enter the confined space, trench, or excavation. Notify the Team Leader and the Corporate Safety and Health officer for instruction • Never lean over or stand near the edge of an excavation to collect samples or observe activities • Stand up-wind of ground-disturbance activities
	Skin and Eye Irritation (E)	• Wear proper PPE, latex gloves and safety glasses
All Activities	Strains and Sprains (OE)	• Use proper lifting techniques • Carry small manageable loads rather than one large load • Stretch and warm-up prior to sampling
	Biological hazards (e.g. Bees, Wasps, Mosquitoes, Rodents, Birds and, Snakes) (E)	• Identify allergies of co-workers, use mosquitoes repellent on exposed skin surfaces during active mosquito season • Avoid areas of accumulated animal and bird droppings • Avoid contact with spiders • Snakes and insects including areas of habitation
	Environmental (E)	• Review SDS if available • Identify the hazardous material exposure and determine the level of personal protective equipment necessary for protection • Wear the proper personal protective equipment appropriate for exposure conditions before sampling

		• Store chemical samples in appropriate containers.
	Fire (CB) (CW)	• Locate fire extinguishers • Wear FRC on sites where highly flammable materials are present • Store flammables in approved containers • Review site emergency action plans and procedures
	Heat Stress and sunburns (E)	• Drink ample fluids before and during work avoiding caffeinated drinks • Wear sunscreen of at least sun protection factor (SPF) of 15 on exposed skin areas • Wear loose clothing, and avoid working in the heat of the day
	Cold Stress (E)	• Wear winter clothing and gloves • Dress in loose layers of dry clothing with wool underneath and water proof top layer • Avoid getting wet • Change clothing immediately if you get wet • Take warm-up breaks and avoid consuming caffeine drinks
	Noise (E)	• Use hearing protection as appropriate
	Contamination (E)	• Wash hands promptly, dispose of contaminated PPE(booties, latex or nitrile gloves, respirator cartridge)

*Codes for Potential Hazards:

Struck By (SB)		Caught On (CO)		Fall To Below (FB)
Struck Against (SA)		Caught In (CI)		Overexertion (OE)
Contacted By (CB)		Caught Between (CBT)		Exposure (E)
Contact With (CW)		Fall - Same Level (FS)		

Job Safety Analysis Worksheet	Date: April 2016
Title of Job/Operation**: Environmental Sampling**	Log Number:
Employee Name and Job Title: Robert Stockton, Project Scientist	Date: February 2006
Approved by: Robert Stockton	Approval Date: April 2016
Personal Protective Equipment Recommended or Required: Hard hat, protective eyewear, steel-toed/shank construction boots, steel-toed/shank chemical resistant boots, ear plugs, protective outerwear, heavy duty gloves and nitrile or latex gloves, safety vest, safety cones, tape or warning signs.	

Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
Prepare for site visit Identify site/activity PPE needs; Check contents of PPE equipment bag for complete inventory.	N/A	Obtain and review site HASP from contractor; familiarize self w/site prior to visit; know contaminants of concern and properties, locations of suspected contaminant areas. Have proper training completed, and identify appropriate PPE needs. Provide itinerary to supervisor, or periodically check in w/office. MAP LOCATION OF NEAREST EMERGENCY MEDICAL FACILITY EQUIPPED TO HANDLE CHEMICAL EXPOSURES!
Carry and load sample coolers and other equipment.	(FS) Trip/fall (OE) back injury from improper lifting	Use a handcart; use the elevator; employ proper ergonomics; get help from a coworker to carry and load coolers and other equipment.
Proceed to vehicle/Travel to and from site	(SB) Moving vehicles on road or in parking areas (SB) Traffic hazards	Be attentive when crossing traffic and walking with parking areas. Map route to site; have area map available; follow defensive driving practices. If using State vehicle: Perform quick vehicle inspection for obvious items such as tire inflation, wind shield wipers, sufficient gas to get to destination, observe State guidelines for of a State Vehicle: make certain procedures regarding accidents, injuries, vehicular break downs or roadside emergencies are available in vehicle.

Initial site arrival- Assess site conditions Be aware of site security/Secure work area Walk about site	(E) Weather conditions	Heat- know signs of heat stroke, have fluids available at site, take frequent rest breaks. Sun- keep body protected, wear sunscreen when not sampling, wide brimmed hat or hardhat. Inclement conditions- seek covered, secure shelter. Extreme cold- layered clothing, gloves, hat, etc.
	(SB) Traffic	Be alert, secure area from through traffic w/safety cones, tape and signs; wear site/activity appropriate PPE.
	Irritated site owner Dangerous surroundings	Be courteous and diplomatic. Do not enter site unless accompanied by another inspector or site personnel.
	(BIO) Animals(dogs), snakes, stinging insects	Identify areas where biohazards may lurk, plan escape route in advance.
	(CW) Chemical release areas	Wear site/action appropriate PPE. Be familiar w/site plan, ID areas of contamination. Survey site for areas of discoloration, puddles, dead or stressed vegetation; Stay reasonably clear of such areas.
	(E) Vapors	Identify escape route, position self-upwind, and evacuate immediately if/when strong odors or irritation noted.
Collecting sanitary sewer samples; Open/close manhole covers Lifting heavy objects (covers, pumps, sampling equipment, coolers, etc.)	Explosive environment	Explosive conditions require use of intrinsically safe equipment at all times. Identify escape route.
	(CBT) Covers falling on fingers and toes	Wear site/activity appropriate PPE; Use tools instead of fingers for prying off fingers.
	(OE) Muscle strain	Use proper ergonomics when lifting heavy objects; use appropriate mechanical assistance and tools when possible to pry and lift off covers.

	(E) Noxious odors, chemical vapors	Identify escape route; evacuate immediately if/when strong odors or irritation noted.
	(BIO) Noxious or stringing insects, pathological hazards	Identify areas where biohazards may lurk, plan escape route in advance; maintain tetanus booster and hepatitis series.
	(CI) Confined Spaces	Wear site/activity appropriate PPE; use appropriate sample equipment to avoid entering confined spaces- DO NOT ENTER CONFINED SPACE UNLESS PROPERLY TRAINED.
Collecting soil gas samples	(E) Encountering electric and gas utility lines, chemical vapors	Before probing, have all utilities located; Identify escape route, position self upwind, evacuate immediately if/when strong odors or irritation noted.
	(E) Loud noise (OE) Muscle and soft tissue injury (SB) Flying debris while probing	Wear site/activity appropriate PPE; use proper ergonomics if driving probes into ground by hand.
Collecting soil samples	(E) Encountering electric and gas utility lines, chemical vapors, contaminated media	Have al utilities located; Identify escape route, position self upwind, evacuate immediately if/when strong odors or irritation noted; Wear site/activity appropriate PPE/ wear site/activity appropriate PPE; monitor atmosphere with applicable equipment.
	(E) Loud noise	
	(BIO) Stinging insects	Use caution when opening monitor well protective covers, watch for biting insects.
	(FS) Slip/trip hazards	BE ALERT; position pumps and other sampling equipment in an orderly and safe fashion.
	(OE) Muscle and soft tissue injury	Use proper ergonomics when positioning and lifting pumps and bailers.
Icing (reicing) sample coolers, transporting coolers	(FS) Slip hazard (OE)Muscle and back injury	Use due care when draining water from coolers, use proper ergonomics

and other equipment back to laboratory		when lifting and moving coolers and other equipment.
Site exit	(CW) Contaminated vehicle	Wash hands promptly. Contaminated PPE (Booties, tyvek, and latex gloves) should be disposed on-site. Remove boots and soiled clothing for secure storage in trunk; decontaminate as soon as possible. Update exposure log
Drive home or to next site	(SB) Traffic hazards	FOLLOW "TRAVEL TO SITE" PROCEDURES.

*Codes for Potential Hazards:

Struck By (SB)		Caught On (CO)		Fall To Below (FB)
Struck Against (SA)		Caught In (CI)		Overexertion
Contacted By (CB)		Caught Between (CBT)		Exposure (E)
Contact With (CW)		Fall - Same Level (FS)		