



Via Email and U.S. Mail

April 9, 2014

Colorado Department of Public Health and Environment
Water Quality Control Division / WQCD-B2-CAS
Compliance Assurance Section
Attention: Michael Harris
4300 Cherry Creek Drive South
Denver, CO 80246-1530

Subject: March 2014 Surface Water Monitoring Data for Sampling Stations SW-AWD
and SW-BPL on Ralston Creek at the Schwartzwalder Mine

References: Paragraph 26, WQCD Notice of Violation/Cease and Desist Order, Number:
IO-100601-1, June 1, 2010

Dear Mr. Harris:

Per Paragraph 26 of the above referenced Order, please find enclosed data reports from Energy Laboratories as received by Cotter Corporation (N.S.L.) for surface water sampling conducted in March 2014 at monitoring stations SW-AWD and SW-BPL at the Schwartzwalder Mine. These results reflect the continuing effect of flood conditions across the entire site and subsequent destruction of groundwater capture infrastructure.

If you have any questions, please contact me at 719-275-7413 (ext. 202).

Sincerely,

John S. Hamrick
Vice President, Mill Operations

Enclosures

cc: Daniel J. Arnold, Esq. (Denver Water)
Tom Kaldenbach (DRMS)

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



John S. Hamrick
Vice President, Mill Operations

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Cotter Corporation
Project: Schwartz-SW 3/4/14 S27428
Lab ID: C14030090-001
Client Sample ID: SW-AWD (S27428)

Report Date: 04/07/14
Collection Date: 03/04/14 09:15
Date Received: 03/05/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO ₃	67	mg/L		1		A2320 B	03/05/14 17:18 / jba
Bicarbonate as HCO ₃	82	mg/L		1		A2320 B	03/05/14 17:18 / jba
Calcium	31.0	mg/L		0.1		E200.7	03/11/14 15:20 / sf
Chloride	39	mg/L		3		E300.0	03/06/14 13:12 / wc
Fluoride	0.3	mg/L		0.1		A4500-F C	03/06/14 13:04 / jba
Magnesium	8.5	mg/L		0.1		E200.7	03/11/14 15:20 / sf
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	03/10/14 12:47 / lr
Phosphate, Total	0.07	mg/L	D	0.03		Calculation	03/17/14 07:55 / kbh
Phosphorus, Total as P	0.02	mg/L		0.01		E365.1	03/11/14 14:09 / eli-b
Potassium	1.8	mg/L		0.1		E200.7	03/11/14 15:20 / sf
Sodium	13.4	mg/L	D	0.4		E200.7	03/11/14 15:20 / sf
Sulfate	16	mg/L		5		E300.0	03/06/14 13:12 / wc
NON-METALS							
Cyanide, Weak Acid Dissociable	ND	mg/L		0.005		D2036C	03/07/14 12:37 / eli-b
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	180	mg/L	D	10		A2540 C	03/05/14 15:07 / alp
Solids, Total Suspended TSS @ 105 C	ND	mg/L		10		A2540 D	03/05/14 13:41 / alp
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.2		E200.8	03/06/14 18:52 / clm
Antimony	ND	mg/L		0.001		E200.8	03/06/14 18:52 / clm
Copper	ND	mg/L		0.001		E200.8	03/06/14 18:52 / clm
Iron	ND	mg/L		0.03		E200.7	03/11/14 15:20 / sf
Manganese	0.023	mg/L		0.005		E200.8	03/06/14 18:52 / clm
Molybdenum	ND	mg/L		0.005		E200.8	03/06/14 18:52 / clm
Silver	ND	mg/L		0.00005		E200.8	03/06/14 18:52 / clm
Thallium	ND	mg/L		0.0002		E200.8	03/06/14 18:52 / clm
Uranium	0.0036	mg/L		0.0002		E200.8	03/06/14 18:52 / clm
Zinc	ND	mg/L		0.005		E200.8	03/06/14 18:52 / clm
METALS - TOTAL							
Aluminum	ND	mg/L		0.2		E200.8	03/26/14 20:50 / clm
Antimony	ND	mg/L		0.001		E200.8	03/26/14 20:50 / clm
Arsenic	ND	mg/L		0.001		E200.8	03/26/14 20:50 / clm
Boron	ND	mg/L		0.1		E200.7	03/26/14 17:34 / sf
Chromium	ND	mg/L		0.001		E200.8	04/03/14 18:55 / cp
Copper	ND	mg/L		0.001		E200.8	03/26/14 20:50 / clm
Iron	0.17	mg/L		0.03		E200.7	03/26/14 17:34 / sf
Lead	ND	mg/L		0.005		E200.8	03/26/14 20:50 / clm
Manganese	0.028	mg/L		0.005		E200.8	03/26/14 20:50 / clm
Mercury	ND	mg/L		0.0001		E245.1	03/14/14 13:20 / kja
Molybdenum	ND	mg/L		0.005		E200.8	03/26/14 20:50 / clm

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Cotter Corporation
Project: Schwartz-SW 3/4/14 S27428
Lab ID: C14030090-001
Client Sample ID: SW-AWD (S27428)

Report Date: 04/07/14
Collection Date: 03/04/14 09:15
Date Received: 03/05/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS - TOTAL							
Silver	ND	mg/L		0.00005		E200.8	03/26/14 20:50 / clm
Thallium	ND	mg/L		0.0002		E200.8	03/26/14 20:50 / clm
Uranium	0.0032	mg/L		0.0002		E200.8	03/26/14 20:50 / clm
Zinc	ND	mg/L		0.005		E200.8	03/26/14 20:50 / clm
RADIONUCLIDES - DISSOLVED							
Radium 226	0.07	pCi/L	U			E903.0	03/17/14 09:52 / lmc
Radium 226 precision (±)	0.12	pCi/L				E903.0	03/17/14 09:52 / lmc
Radium 226 MDC	0.19	pCi/L				E903.0	03/17/14 09:52 / lmc
RADIONUCLIDES - TOTAL							
Gross Alpha	5.2	pCi/L				E900.0	03/14/14 13:44 / lbb
Gross Alpha precision (±)	1.1	pCi/L				E900.0	03/14/14 13:44 / lbb
Gross Alpha MDC	1.2	pCi/L				E900.0	03/14/14 13:44 / lbb
Gross Beta	1.3	pCi/L	U			E900.0	03/14/14 13:44 / lbb
Gross Beta precision (±)	1.5	pCi/L				E900.0	03/14/14 13:44 / lbb
Gross Beta MDC	2.5	pCi/L				E900.0	03/14/14 13:44 / lbb
Radium 226	-0.09	pCi/L	U			E903.0	03/24/14 12:52 / lmc
Radium 226 precision (±)	0.07	pCi/L				E903.0	03/24/14 12:52 / lmc
Radium 226 MDC	0.17	pCi/L				E903.0	03/24/14 12:52 / lmc
Radium 228	-0.2	pCi/L	U			RA-05	03/18/14 12:31 / plj
Radium 228 precision (±)	0.76	pCi/L				RA-05	03/18/14 12:31 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	03/18/14 12:31 / plj
DATA QUALITY							
A/C Balance (± 5)	1.54	%				A1030 E	03/14/14 07:59 / kbh
Anions	2.79	meq/L				A1030 E	03/14/14 07:59 / kbh
Cations	2.88	meq/L				A1030 E	03/14/14 07:59 / kbh
Solids, Total Dissolved Calculated	170	mg/L				A1030 E	03/14/14 07:59 / kbh
TDS Balance (0.80 - 1.20)	1.08					A1030 E	03/14/14 07:59 / kbh
FIELD PARAMETERS							
Field Conductivity	283	umhos/cm				FIELD	03/04/14 09:15 / ***
Field pH	7.10	s.u.				FIELD	03/04/14 09:15 / ***
Field Temperature, C	2.5	°C				FIELD	03/04/14 09:15 / ***

*** Field data provided by client

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Cotter Corporation
Project: Schwartz-SW 3/4/14 S27429
Lab ID: C14030087-001
Client Sample ID: SW-BPL (S27429)

Report Date: 03/26/14
Collection Date: 03/04/14 10:15
Date Received: 03/05/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO ₃	84	mg/L		1		A2320 B	03/05/14 17:03 / jba
Bicarbonate as HCO ₃	102	mg/L		1		A2320 B	03/05/14 17:03 / jba
Calcium	42.2	mg/L		0.1		E200.7	03/11/14 14:56 / sf
Chloride	37	mg/L		3		E300.0	03/06/14 12:02 / wc
Fluoride	0.3	mg/L		0.1		A4500-F C	03/06/14 12:58 / jba
Magnesium	15.1	mg/L		0.1		E200.7	03/11/14 14:56 / sf
Nitrogen, Nitrate+Nitrite as N	0.6	mg/L		0.1		E353.2	03/10/14 12:39 / lr
Phosphate, Total	ND	mg/L	D	0.03		Calculation	03/17/14 07:55 / kbh
Phosphorus, Total as P	ND	mg/L		0.01		E365.1	03/11/14 14:08 / eli-b
Potassium	2.4	mg/L		0.1		E200.7	03/11/14 14:56 / sf
Sodium	17.4	mg/L	D	0.4		E200.7	03/11/14 14:56 / sf
Sulfate	63	mg/L		5		E300.0	03/06/14 12:02 / wc
NON-METALS							
Cyanide, Weak Acid Dissociable	ND	mg/L		0.002		D2036C	03/07/14 12:05 / eli-b
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	257	mg/L		10		A2540 C	03/05/14 15:07 / alp
Solids, Total Suspended TSS @ 105 C	ND	mg/L		10		A2540 D	03/05/14 13:40 / alp
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.2		E200.8	03/06/14 18:46 / clm
Antimony	ND	mg/L		0.001		E200.8	03/06/14 18:46 / clm
Copper	ND	mg/L		0.001		E200.8	03/06/14 18:46 / clm
Iron	0.07	mg/L		0.03		E200.7	03/11/14 14:56 / sf
Manganese	0.043	mg/L		0.005		E200.8	03/06/14 18:46 / clm
Molybdenum	0.008	mg/L		0.005		E200.8	03/06/14 18:46 / clm
Silver	ND	mg/L		0.00005		E200.8	03/06/14 18:46 / clm
Thallium	ND	mg/L		0.0002		E200.8	03/06/14 18:46 / clm
Uranium	0.0208	mg/L		0.0002		E200.8	03/06/14 18:46 / clm
Zinc	ND	mg/L		0.005		E200.8	03/06/14 18:46 / clm
METALS - TOTAL							
Aluminum	ND	mg/L		0.2		E200.7	03/07/14 12:34 / sf
Antimony	ND	mg/L		0.001		E200.8	03/10/14 20:35 / cp
Arsenic	0.002	mg/L		0.001		E200.8	03/10/14 20:35 / cp
Boron	ND	mg/L		0.1		E200.7	03/07/14 12:34 / sf
Chromium	ND	mg/L		0.001		E200.8	03/14/14 19:13 / cp
Copper	ND	mg/L		0.001		E200.8	03/10/14 20:35 / cp
Iron	0.12	mg/L		0.03		E200.7	03/07/14 12:34 / sf
Lead	ND	mg/L		0.005		E200.8	03/10/14 20:35 / cp
Manganese	0.046	mg/L		0.005		E200.7	03/07/14 12:34 / sf
Mercury	ND	mg/L		0.0001		E245.1	03/14/14 13:09 / kja
Molybdenum	0.006	mg/L		0.005		E200.7	03/07/14 12:34 / sf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Cotter Corporation
Project: Schwartz-SW 3/4/14 S27429
Lab ID: C14030087-001
Client Sample ID: SW-BPL (S27429)

Report Date: 03/26/14
Collection Date: 03/04/14 10:15
Date Received: 03/05/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS - TOTAL							
Silver	ND	mg/L	D	0.00008		E200.8	03/10/14 20:35 / cp
Thallium	ND	mg/L		0.0002		E200.8	03/10/14 20:35 / cp
Uranium	0.0207	mg/L		0.0002		E200.8	03/10/14 20:35 / cp
Zinc	ND	mg/L		0.005		E200.7	03/07/14 12:34 / sl
RADIONUCLIDES - DISSOLVED							
Radium 226	0.33	pCi/L				E903.0	03/17/14 09:52 / lmc
Radium 226 precision (±)	0.16	pCi/L				E903.0	03/17/14 09:52 / lmc
Radium 226 MDC	0.20	pCi/L				E903.0	03/17/14 09:52 / lmc
RADIONUCLIDES - TOTAL							
Gross Alpha	16.8	pCi/L				E900.0	03/14/14 13:43 / lbb
Gross Alpha precision (±)	1.7	pCi/L				E900.0	03/14/14 13:43 / lbb
Gross Alpha MDC	1.3	pCi/L				E900.0	03/14/14 13:43 / lbb
Gross Beta	4.4	pCi/L				E900.0	03/14/14 13:43 / lbb
Gross Beta precision (±)	1.5	pCi/L				E900.0	03/14/14 13:43 / lbb
Gross Beta MDC	2.4	pCi/L				E900.0	03/14/14 13:43 / lbb
Radium 226	0.09	pCi/L	U			E903.0	03/24/14 12:52 / lmc
Radium 226 precision (±)	0.10	pCi/L				E903.0	03/24/14 12:52 / lmc
Radium 226 MDC	0.15	pCi/L				E903.0	03/24/14 12:52 / lmc
Radium 228	-0.7	pCi/L	U			RA-05	03/18/14 12:31 / plj
Radium 228 precision (±)	0.66	pCi/L				RA-05	03/18/14 12:31 / plj
Radium 228 MDC	1.2	pCi/L				RA-05	03/18/14 12:31 / plj
DATA QUALITY							
A/C Balance (± 5)	0.91	%				A1030 E	03/14/14 07:59 / kbh
Anions	4.09	meq/L				A1030 E	03/14/14 07:59 / kbh
Cations	4.16	meq/L				A1030 E	03/14/14 07:59 / kbh
Solids, Total Dissolved Calculated	250	mg/L				A1030 E	03/14/14 07:59 / kbh
TDS Balance (0.80 - 1.20)	1.04					A1030 E	03/14/14 07:59 / kbh
FIELD PARAMETERS							
Field Conductivity	405	umhos/cm				FIELD	03/04/14 10:15 / ***
Field pH	7.05	s.u.				FIELD	03/04/14 10:15 / ***
Field Temperature, C	3.5	°C				FIELD	03/04/14 10:15 / ***

*** Field data provided by client

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.